

MCHENRY COUNTY COLLEGE

VISITING TEAM CHANGING ROOMS

8900 US Hwy 14
Crystal Lake, IL 60012

ISSUED FOR BID - NOT FOR CONSTRUCTION

04/28/2023

DKA PROJECT NO: 22-006

OWNER BID NO: #230427



ARCHITECT

DEMONICA KEMPER ARCHITECTS
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CHICAGO, IL 60661
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MEP-FP-T ENGINEER

20/10 ENGINEERING GROUP, LLC
1216 TOWER ROAD,
SCHAUMBURG, IL 60173
P: 847.882.2010 F: 847.882.2201



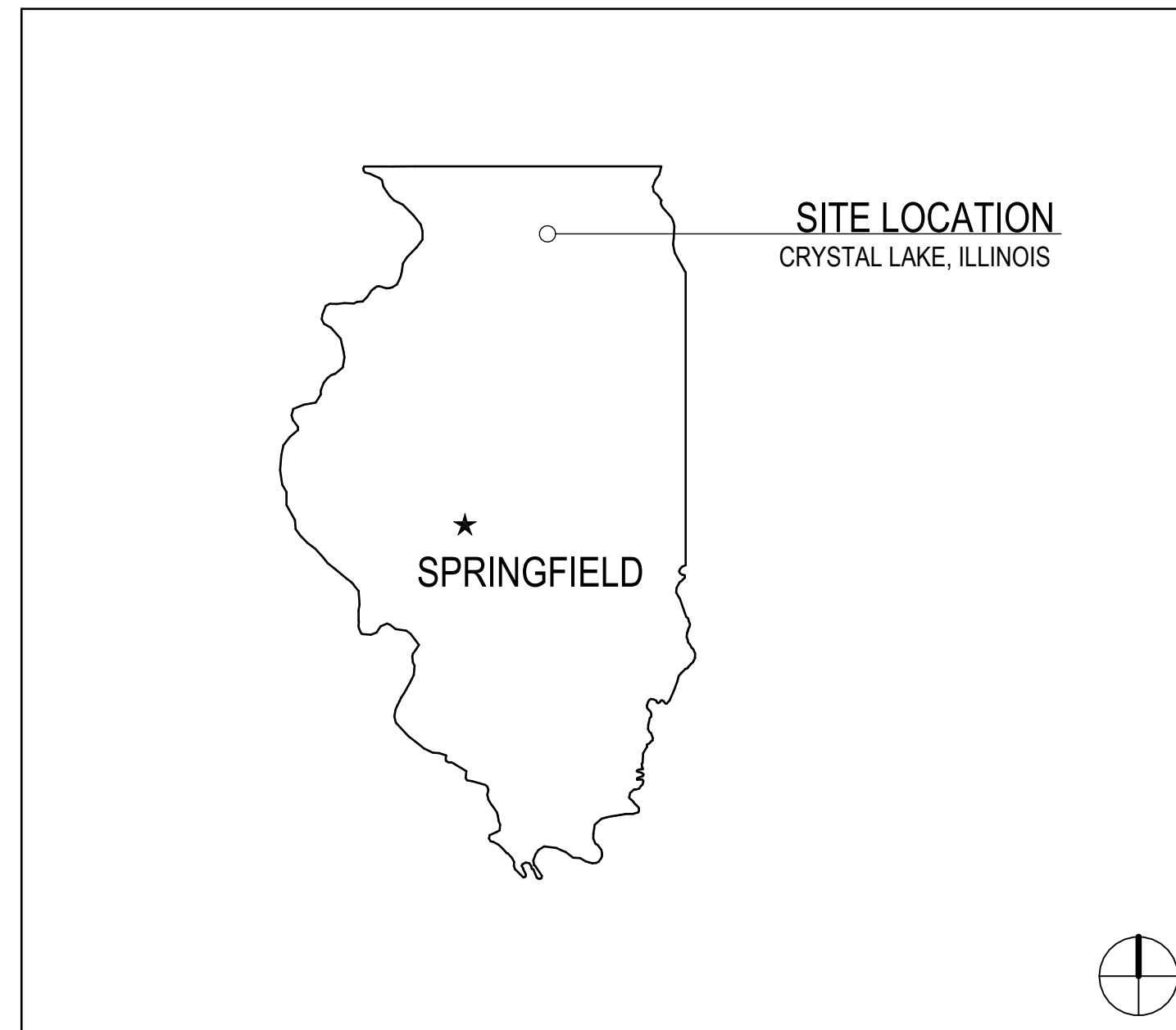
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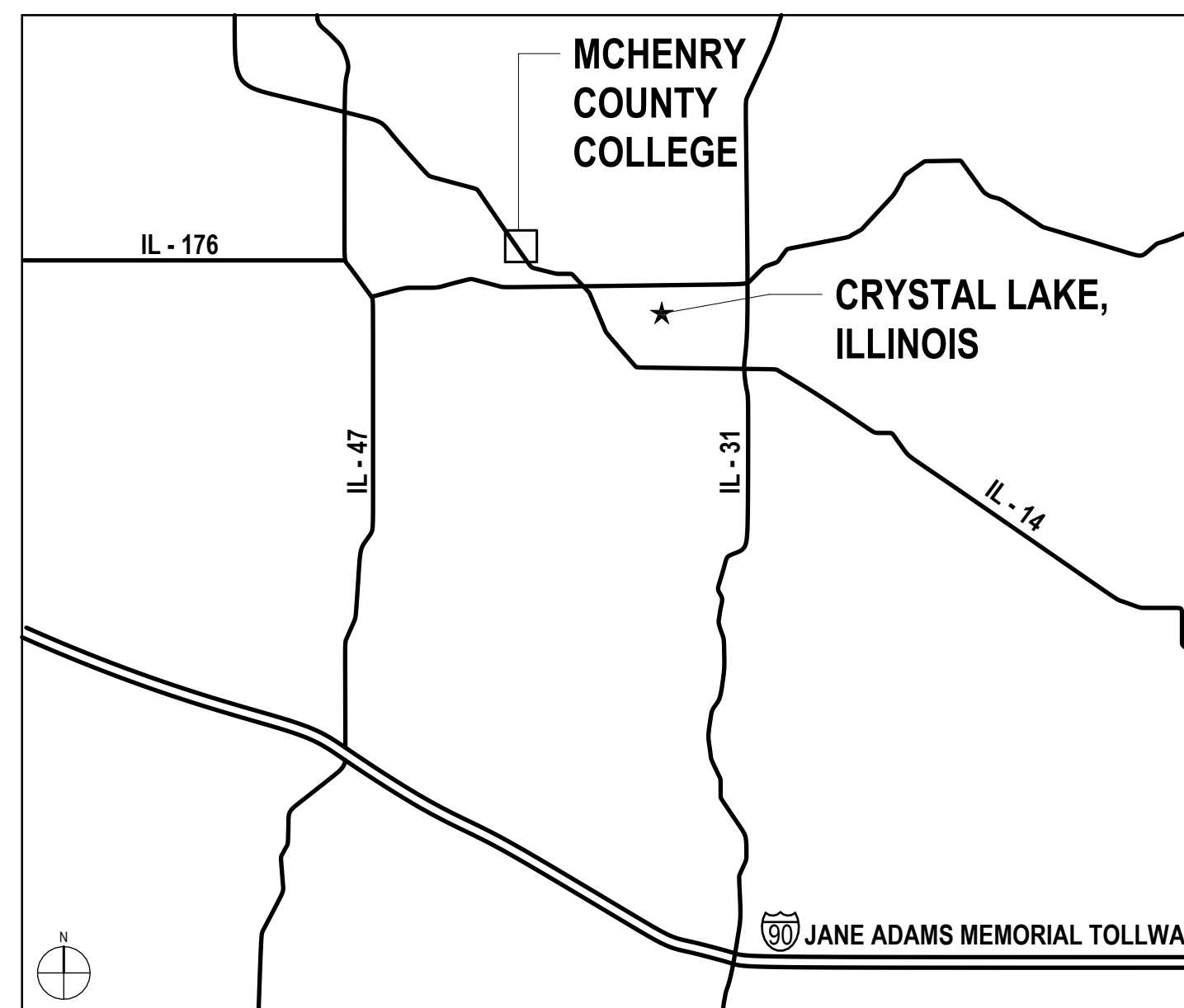
ABBREVIATIONS

AP ACCESS PANEL	HDW HARDWARE	TEL TELEPHONE
ACOUST ACUSTICAL	HDWD HARDWOOD	TV TELEVISION
ACT ACUSTICAL CEILING TILE	HDR HEADER	TRZ TERRAZZO
ADJ ADJACENT	HTG HEATING	TB TILE BASE
A.F.F. ABOVE FINISH FLOOR	HVAC HEATING, VENTILATING, AIR CONDITIONING	THK THICK
AGGR AGGREGATE	HT HEIGHT	T.O.C. TOP OF CURB
A/C AIR CONDITIONING	HC HOLLOW CORE	TOP TOP OF PAVEMENT
ALT ALTERNATE	HM HOLLOW METAL	TOW TOP OF WALL
ALUM ALUMINUM	HMF HOLLOW METAL FRAME	T&G TONGUE AND GROOVE
I ANGLE	HORZ HORIZONTAL	TYP TYPICAL
APPD APPROVED	HB HOSE BIB	
APPROX APPROXIMATE	HR HOUR	UNF UNFINISHED
ARCH ARCHITECTURAL OR ARCHITECT	INC INCLUDE	UN.O. UNLESS NOTED OTHERWISE
AD AREA DRAIN	I.D. INSIDE DIAMETER	UR URINAL
ASB ASBESTOS	INSUL INSULATION	
ASPH ASPHALT	INTR INTERIOR	VB VINYL BASE
AV AUDIO VISUAL	INV INVERT	VERT VERTICAL
		VEST VESTIBULE
		VCT VINYL COMPOSITION TILE
		VW VINYL WALLCOVERING
BSMT BASEMENT	JAN JANITOR	WSCT WAINSCOT
BRG BEARING	JT JOINT	WC WATER CLOSET
BM BEAM	KIT KITCHEN	WLK WALK-OFF MAT
BTW BETWEEN	LAM LAMINATE	WR WATER RESISTANT
BITUM BITUMINOUS	LAV LAVATORY	WT WALL TILE OR WEIGHT
BLK BLOCK	LH LEFT HAND	LT LIGHT
BLKG BLOCKING	LGTH LENGTH	W WEST
BD BOARD	LT LIGHT	W WIDE FLANGE "W16x21"
BRK BRICK	LWC LIGHT WEIGHT CONCRETE	W WIDTH
BLDG BUILDING	LTL LINTEL	W/ WITH
	LN LINOLEUM	W/O WITHOUT
CAB CABINET	LL LIVE LOAD	WD WOOD
CIP CAST IN PLACE		WDP WOOD PANEL
CIPC CAST IN PLACE CONCRETE		X EXISTING
CI CURB INLET	MH MANHOLE	
CB CATCH BASIN	MFR MANUFACTURER	
CLG CEILING	MAS MASONRY	
CTR CENTER	MO MASONRY OPENING	
CJ CONTROL JOINT	MTL METAL	
CL CENTER LINE	MAX MAXIMUM	
CPT CARPET	MECH MECHANICAL	
CT CERAMIC TILE	MTC MECHANICAL TRADES CONTRACTOR	
CLR CLEAR	MEMB MEMBRANE	
CLO CLOSET	MT MARBLE TILE	
COL COLUMN	MIN MINIMUM	
CONC CONCRETE	MISC MISCELLANEOUS	
CONN CONNECTION	MTD MOUNDED	
CONST CONSTRUCTION	MTG MOUNTING	
CM CONSTRUCTION MANAGER	MUL MULLION	
CONT CONTINUOUS OR CONTINUE		
CONTR CONTRACTOR	NOM NOMINAL	
CK CORK	N NORTH	
CORR CORRIDOR	N.I.C. NOT IN CONTRACT	
CNSK COUNTERSUNK	N.T.S. NOT TO SCALE	
CRS COURSE	NO OR # NUMBER	
DEMO DEMOLISH OR DEMOLITION	OBS OBSCURE	
DEPT DEPARTMENT	OFF OFFICE	
DL DEAD LOAD	O.C. ON CENTER	
DIA DIAMETER	OPNG OPENING	
DIM DIMENSION	OPP OPPOSITE	
DISP DISPENSER	OSB ORIENTED STRAND BOARD	
DIV DIVISION	O.D. OUTSIDE DIAMETER	
DR DOOR	OA OVERALL	
DO DOOR OPENING	OFD OVERFLOW DRAIN	
DBL DOUBLE		
DS DOWNSPOUT	PT PAINT	
DRW DRAWER	PTD PAINTED	
DWG DRAWING	PR PAIR	
DF DRINKING FOUNTAIN	PNL PANEL	
DS DRY STANDPIPE	PBD PARTICLE BOARD	
DWT DETECTABLE WARNING TILE	PTN PARTITION	
	PLAS PLASTIC	
E EAST	P-LAM PLASTIC LAMINATE	
EA EACH	PL PLATE	
EIFS EXTERIOR INSULATION FINISH SYSTEM	PTC PLUMBING TRADES CONTRACTOR	
ELEC ELECTRICAL	PLYWD PLYWOOD	
ETC ELECTRICAL TRADES CONTRACTOR	PSI POUNDS PER SQUARE INCH	
EWG ELECTRICAL WATER COOLER	PC PRECAST	
EP ELECTRICAL PANEL BOARD	PCC PRECAST CONCRETE	
EL ELEVATION		
ELEV ELEVATION	QT QUARRY TILE	
ELVTR ELEVATOR	R RADIUS	
ENCL ENCLOSURE	RWL RAIN WATER LEADER	
EMER EMERGENCY	RFRG REFRIGERATOR	
EP PT EPOXY PAINT	RGTR REGISTER	
EPF EPOXY FLOORING	REINF REINFORCED	
EQ EQUAL	REQD REQUIRED	
EQPMT EQUIPMENT	RES RESILIENT	
EXSTG EXISTING	RA RETURN AIR	
EXP EXPANSION	RAG RETURN AIR GRILLE	
EXP JT EXPANSION JOINT	RH RIGHT HAND	
EXPD EXPOSED	ROW RIGHT OF WAY	
EXTR EXTERIOR	R RISER	
	RD ROOF DRAIN	
	RM ROOM	
	R.O. ROUGH OPENING	
	RB RUBBER BASE	
FOC FACE OF CONCRETE	SECT SECTION	
FOF FACE OF FINISH	SK SINK	
FOS FACE OF STUD	SCHED SCHEDULE	
FR FIBERGLASS REINFORCED PANEL	SHTG SHEATHING	
FIN FINISH OR FINISHED	SHT SHEET	
FA FIRE ALARM	SV SHEET VINYL	
FE FIRE EXTINGUISHER	SHWR SHOWER	
FEC FIRE EXTINGUISHER CABINET	SIM SIMILAR	
FHC FIRE HOSE CABINET	SC SEALED CONCRETE	
FRRF FIREPROOF	SPM SINGLE PLY MEMBRANE	
FB FLAT BAR STOCK	S SOUTH	
FL FLOOR	SFRM SPRAY APPLIED FIRE RESISTIVE MATERIAL	
FD FLOOR DRAIN	SPECIFICATION SPECIFICATION	
FLUOR FLUORESCENT	SQ SQUARE	
FT FOOT OR FEET	S.S. STAINLESS STEEL	
FTG FOOTING	STD STANDARD	
FDN FOUNDATION	STA STATION	
FRM FRAME	STL STEEL	
FRMG FRAMING	STOR STORAGE	
FS FULL SIZE	STRUCT STRUCTURE OR STRUCTURAL	
FURR FURRING	SUSP SUSPENDED	
FUTR FUTURE	SUSPENDED ACOUSTICAL TILE	
FW FABRIC WALLCOVERING	SYM SYMMETRICAL	
GA GAUGE		
GALV GALVANIZED		
GEN GENERAL		
GC GENERAL CONTRACTOR		
GTC GENERAL TRADES CONTRACTOR		
GL GLASS OR GLAZING		
GD GRADE		
GND GROUND		
GYP BD GYPSUM BOARD		

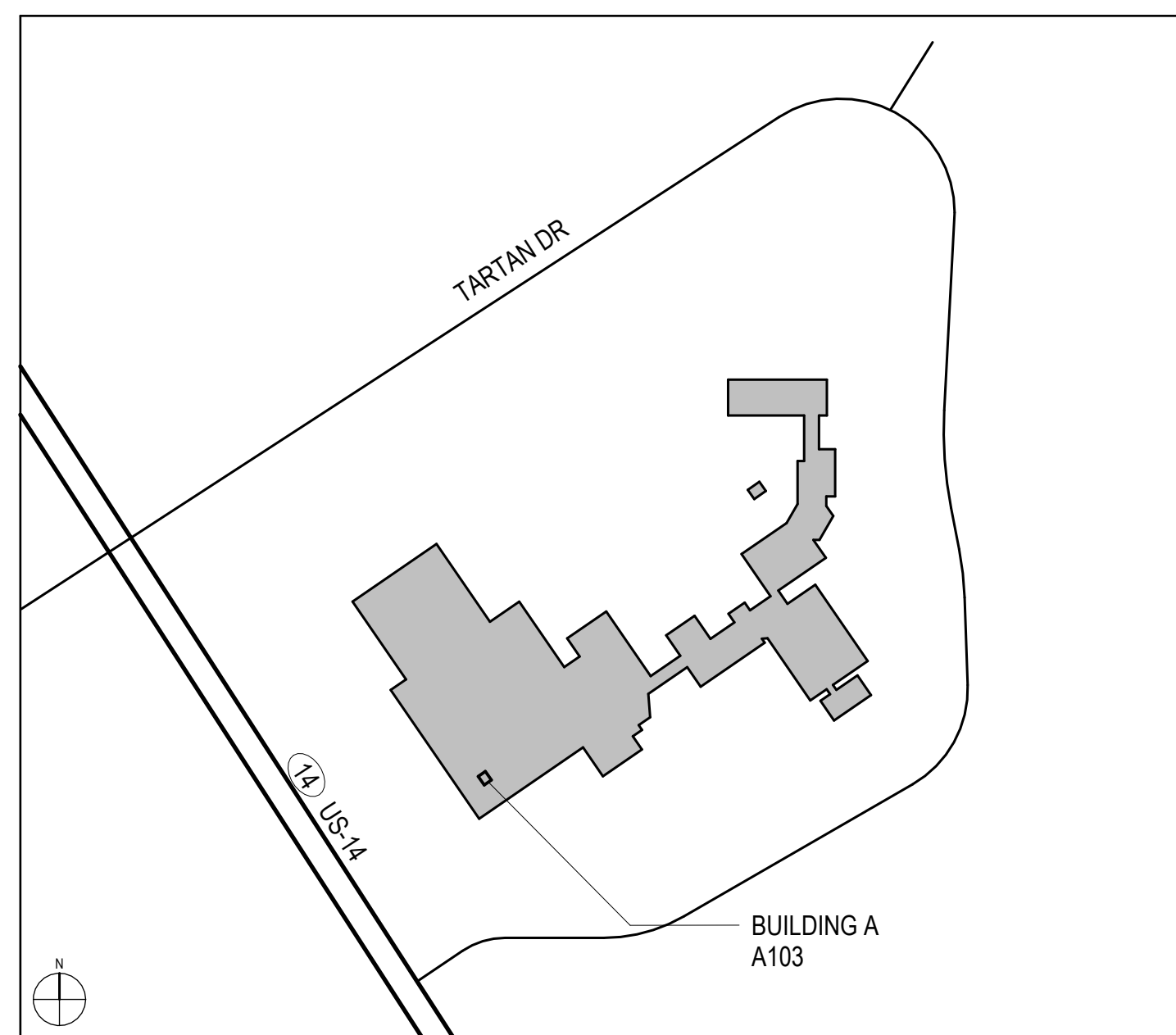
STATE LOCATION MAP



AREA MAP

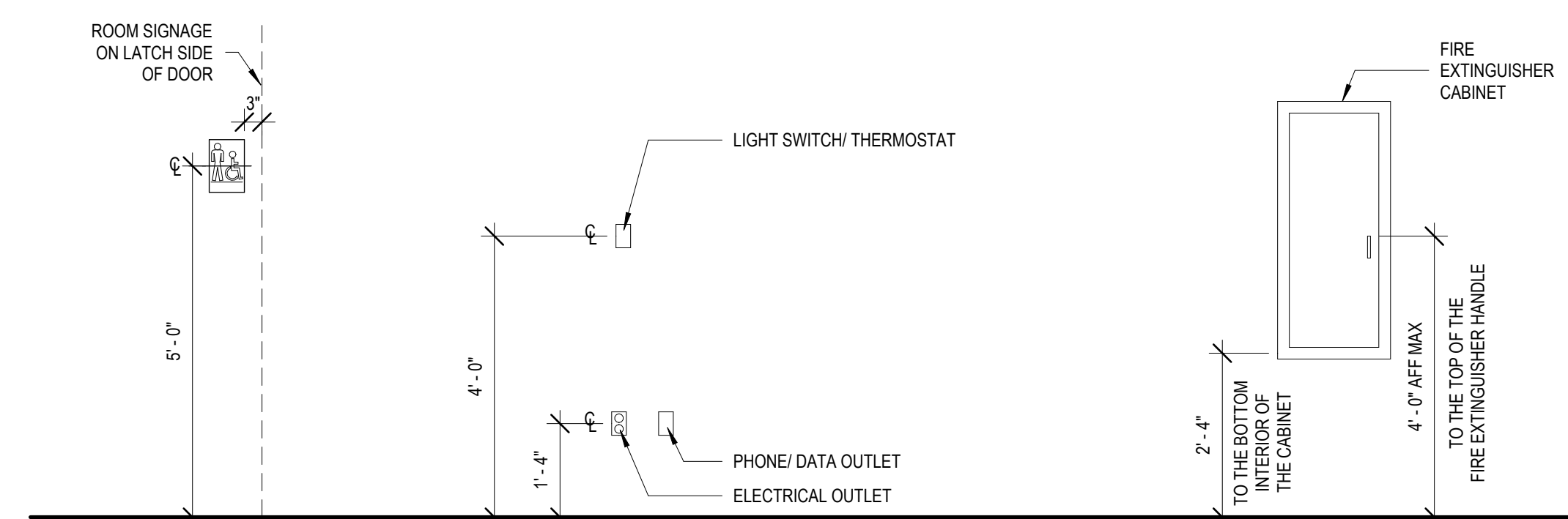


CAMPUS MAP



SHEET INDEX

GENERAL	G1.00 SHEET INDEX, ABBREVIATIONS, SYMBOLS & NOTES	FIRE PROTECTION	FP1.10 FIRE PROTECTION PLANS
ARCHITECTURAL	AD1.10 DEMO PLAN & RCP A1.10 FLOOR PLAN & RCP	ELECTRICAL	E1.10 ELECTRICAL PLANS E2.00 ELECTRICAL SYMBOL LIST AND NOTES E3.00 ELECTRICAL DETAILS E4.00 ELECTRICAL SPECIFICATIONS
MECHANICAL	ME1.10 MECHANICAL / ELECTRICAL / PLUMBING COORDINATION HV1.10 HVAC PLANS - VISITING TEAM CHANGING ROOMS		



NOTE: IN THE EVENT OF A CONFLICT BETWEEN DIMENSIONS SHOWN ON THIS DRAWING AND ANY OTHER ARCHITECTURAL, ELECTRICAL, OR MECHANICAL SHEETS OR SPECIFICATIONS, NOTIFY ARCHITECT OF DISCREPANCY.

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SHEET TITLE:
DEMO PLAN & RCP

SHEET NUMBER:

AD1.10

4/28/2023 10:45:39 AM

DEMO SYMBOLS LEGEND:

NOTE: REFER TO M.E.P.P. DRAWINGS FOR ADDITIONAL INFORMATION ON MECHANICAL, ELECTRICAL, AND FIRE PROTECTION SYSTEMS

- GYPSUM BOARD OR PLASTER PARTITION TO BE REMOVED
- CMU PARTITION TO BE REMOVED
- FRAME AND DOOR TO BE REMOVED, SALVAGE HARDWARE TO OWNER
- HATCH INDICATES AREA NOT IN SCOPE
- SUSPENDED ACOUSTICAL TILE CEILING TO BE REMOVED
- SUSPENDED ACOUSTICAL TILE CEILING TO REMAIN
- GYPSUM BOARD OR PLASTER CEILING TO BE REMOVED
- GYPSUM BOARD OR PLASTER CEILING TO REMAIN
- RECESSED 2'x2' LAY-IN LIGHT FIXTURE TO BE REMOVED
- RECESSED 2'x2' LAY-IN LIGHT FIXTURE TO REMAIN
- RECESSED 2'x2' LAY-IN LIGHT FIXTURE TO REMAIN
- RETURN AIR GRILLE TO REMAIN
- SUPPLY AIR GRILLE TO REMAIN
- RETURN AIR GRILLE TO BE REMOVED
- SUPPLY AIR GRILLE TO BE REMOVED

DEMOLITION GENERAL NOTES:

- PRIOR TO AND DURING ANY DEMOLITION THE CONTRACTOR SHALL VERIFY AND MAINTAIN THE BUILDING'S STRUCTURAL INTEGRITY.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DEMOLITION AS REQUIRED TO INSTALL ALL NEW WORK. REPAIR, PATCH AND FINISH EXISTING FLOORS, WALLS AND CEILINGS DESIGNATED TO REMAIN TO MATCH EXISTING CONDITIONS.
- REMOVE ALL HANGERS, SUSPENSION SYSTEMS, SUPPORT FRAMING, EQUIPMENT PADS, ANCHORS, ATTACHMENT HARDWARE AND RELATED APPURTENANCES CONNECTED WITH THE WORK TO BE DEMOLISHED. IF COMPLETE REMOVAL IS NOT POSSIBLE, CUT DEVICES AS CLOSE AS POSSIBLE TO ADJACENT SURFACES OR ORIGIN OF SUPPORT.
- DURING THE BIDDING PERIOD, EACH BIDDING CONTRACTOR SHALL VISIT THE SITE AND THE FACILITY TO DETERMINE EXISTING CONDITIONS. CONTRACTOR'S FAILURE TO REASONABLY DETERMINE AND/OR ANTICIPATE THE EFFECT OF EXISTING CONDITIONS AND THE WORK INVOLVED THEREBY SHALL NOT BE JUSTIFICATION FOR ADDITIONAL COMPENSATION. NOTIFY ARCHITECT OF ANY DISCREPANCIES.
- ALL MATERIALS, EQUIPMENT, FIXTURES, SYSTEMS, AND ACCESSORIES WHICH ARE TO REMAIN IN SERVICE SHALL BE CLEANED, REPAIRED, ADJUSTED AND PLACED INTO PROPER OPERATIONS IN ALL MODES WITH THE ORIGINAL SYSTEM.
- WHEN TEMPORARY SHORING AND BRACING IS REQUIRED, CONTRACTOR SHALL RETAIN AND PAY FOR THE SERVICES OF A PROFESSIONAL ENGINEER, LICENSED TO PRACTICE IN THE STATE WHERE THE PROJECT IS LOCATED, TO DESIGN AND PREPARE DETAILED DRAWINGS.
- CONTRACTOR SHALL COORDINATE SCHEDULE OF DEMOLITION WORK WITH THE OVERALL PHASING PLAN. ALL AREAS SURROUNDING EACH PHASE OF DEMOLITION/CONSTRUCTION WILL BE OCCUPIED BY THE OWNER DURING THE OWNER'S NORMAL BUSINESS HOURS. DEMOLITION WORK SHALL NOT ENCOMPASS THE USE OF EXISTING ADJACENT SPACES.
- EACH CONTRACTOR SHALL FOLLOW THE PROGRESS OF THE GENERAL DEMOLITION AND REMODELING WORK TO ASSURE THE ACCESSIBILITY AND SAFETY OF EQUIPMENT AND SYSTEMS IN SERVICE IN ORDER TO PROVIDE FOR THE TIMELY REMOVAL AND/OR RELOCATION OF EQUIPMENT, PIPING, ETC.
- REMOVE ALL ABANDONED CONDUIT BOXES, CONDUCTORS, TELEPHONE LINES, ELECTRIC PANELS, AND ANY OTHER MISCELLANEOUS EQUIPMENT NOT REQUIRED FOR THE NEW FACILITY.
- REMOVE ALL RECESSED FLOOR BOXES, WALKER DUCTS, FLOOR SINKS, HUB DRAINS, ELECTRICAL RECEPTACLES, ETC. AND FILL VOIDS AS REQUIRED.
- REMOVE ALL DOOR STOPS AT ASSOCIATED DOORS TO BE DEMOLISHED.
- NO TOXIC SUBSTANCES HAVE BEEN NOTED ON THE SITE. SHOULD THE CONTRACTOR ENCOUNTER ANY ASBESTOS, ASBESTOS PRODUCTS, PCBs OR OTHER TOXIC SUBSTANCES, THE CONTRACTOR SHOULD REPORT THIS IMMEDIATELY TO THE OWNER IN WRITING PRIOR TO CONTINUING WORK IN THIS AREA. WORK SHALL NOT BE RESUMED EXCEPT BY WRITTEN AUTHORIZATION OR AGREEMENT.
- ALL CONSTRUCTION DEBRIS AND EXCESS MATERIAL IS TO BE REMOVED BY THE CONTRACTOR AT THE END OF EACH WORK DAY. THE JOB SITE IS TO BE LEFT SUFFICIENTLY CLEAN AS TO WARRANT OWNER'S APPROVAL.
- REMOVE ALL CEILING SYSTEMS IN THEIR ENTIRETY, INCLUDING TILE, GRID, SUSPENSION WIRING, ANCHORS AND ALL ASSOCIATED APPURTENANCES.
- CONTRACTOR SHALL SALVAGE ALL EXISTING CEILING TILES FOR POSSIBLE REUSE OR AS EXTRA STOCK FOR OWNER. SALVAGE ONLY UN-CUT TILES WITH NO VISIBLE DAMAGE. ONCE REMOVED, OWNER AND ARCHITECT WILL FIELD REVIEW AND APPROVE SALVAGED TILES PRIOR TO REUSE OR STORAGE.

DEMOLITION REFERENCED NOTES:

FLOOR DEMOLITION KEYED NOTES

- F1. REMOVE CARPET FLOORING SYSTEM AND ASSOCIATED BASE COMPLETE. PREP CONCRETE SLAB AS REQUIRED FOR NEW FLOORING INSTALLATION.

WALL DEMOLITION KEYED NOTES

- W1. REMOVE 8" CMU WALL AS REQUIRED FOR NEW OPENINGS. PROVIDE LINTEL AS INDICATED IN NEW WORK DETAILS AT HEAD OF EACH NEW OPENING. REMOVE PARTIAL CMU BLOCKS REMAINING AT EACH JAMB AND INFILL WITH FULL CMU BLOCKS FOR FLUSH FINISHED JAMB CONDITIONS. GRIND EXPOSED CORNERS OF CMU TO REMAIN.
- W2. REMOVE 8" CMU WALL TO DECK ABOVE FOR EXTENTS INDICATED. BRACE EXISTING TO REMAIN CMU AND PREP EXPOSED EDGE AS REQUIRED FOR NEW WORK.

CEILING DEMOLITION KEYED NOTES

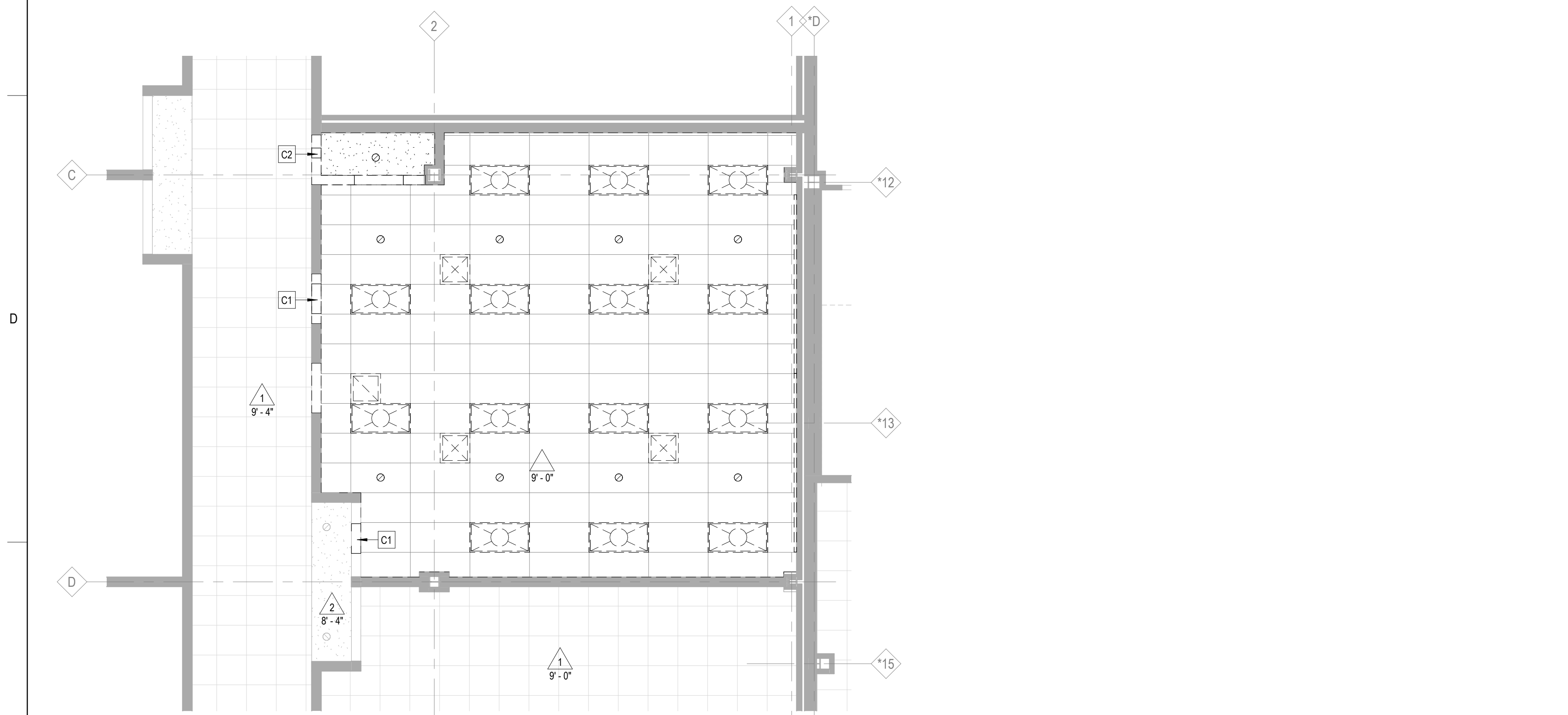
- C1. REMOVE 8" X 24" SECTION OF CMU AS INDICATED FOR NEW TRANSFER DUCT PENETRATIONS (REFER TO MECH / NEW WORK PLANS FOR DETAILS)
- C2. REMOVE 8" X 8" SECTION OF CMU AS INDICATED FOR NEW TRANSFER DUCT PENETRATIONS (REFER TO MECH / NEW WORK PLANS FOR DETAILS)

MISCELLANEOUS DEMOLITION KEYED NOTES

- M1. FURNITURE - REMOVED BY OWNER
- M2. WALL PHONE - REMOVE AND STORE FOR RE-INSTALLATION IN NEW WORK.
- M3. REMOVE SURFACE MOUNT CONDUIT COMPLETE. PATCH AND PREP WALLS FOR FINAL PAINTED FINISH.
- M4. REMOVE (2) 4" X 12" MARKERBOARDS AND STORE FOR RE-INSTALLATION IN NEW WORK. PATCH AND PREP WALLS FOR FINAL PAINTED FINISH.



1 OVERALL DEMOLITION PLAN
 3/16" = 1'-0"
 TRUE NORTH



2 OVERALL DEMOLITION RCP
 3/16" = 1'-0"
 TRUE NORTH

FLOOR PLAN SYMBOLS LEGEND:

NOTE: REFER TO M.E.P.P. DRAWINGS FOR ADDITIONAL INFORMATION ON MECHANICAL, ELECTRICAL, AND FIRE PROTECTION SYSTEMS

- GREY TONE LINES DEPICT EXISTING CONSTRUCTION
- EXISTING DOOR
- NEW WALL CONSTRUCTION
- NEW DOOR
- ROOM NAME TAG
- ROOM TAG
- DOOR / FRAME TAG
- PARTITION TYPE (REFER TO WALL TYPES)
- PARTITION MODIFIERS (REFER TO WALL TYPES)
- PLAN AND SECTION DETAIL CALLOUT
- SECTION CULLOUT
- ELEVATION CULLOUT
- DATUM TAG

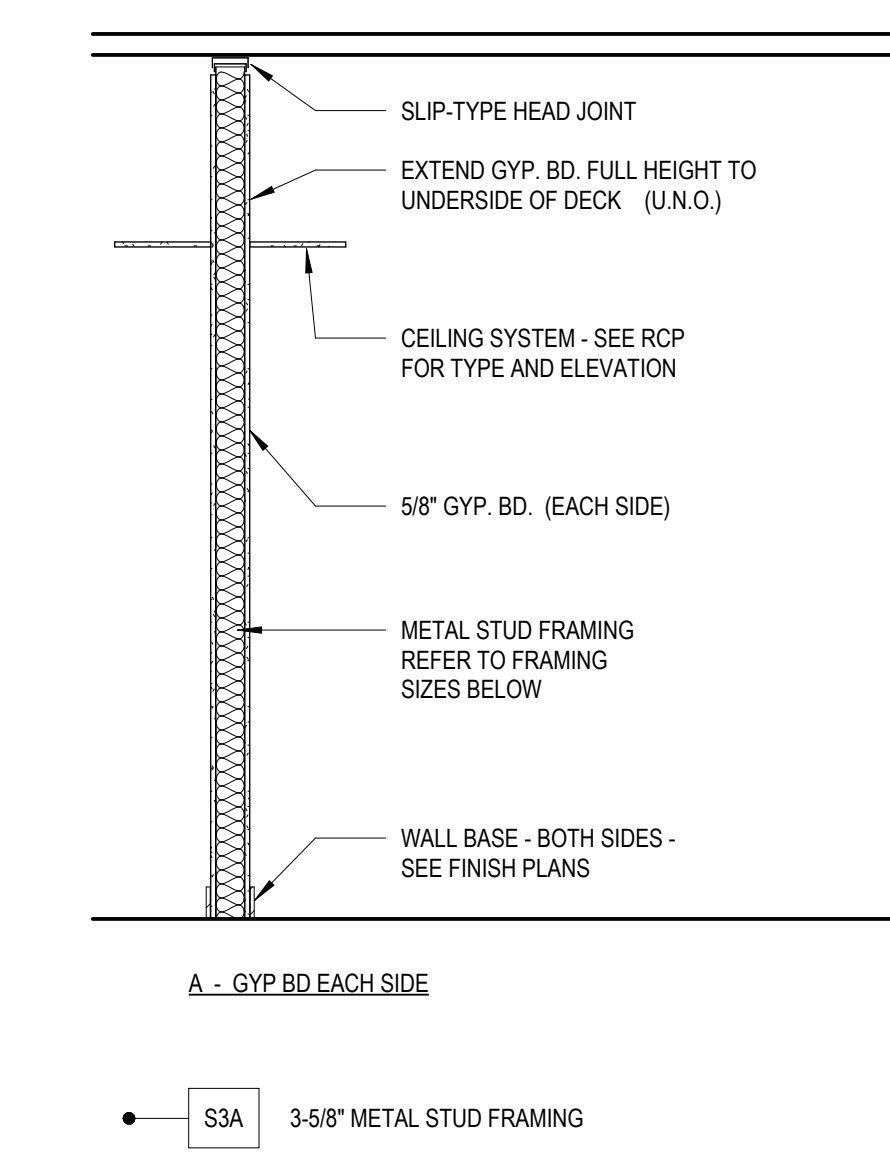
RCP SYMBOLS LEGEND:

NOTE: REFER TO M.E.P.P. DRAWINGS FOR ADDITIONAL INFORMATION ON MECHANICAL, ELECTRICAL, AND FIRE PROTECTION SYSTEMS

- CEILING TYPE
- CEILING ELEVATION AFF
- SUSPENDED ACOUSTICAL TILE CEILING
- GYPSON BOARD CEILING OR SOFFIT
- RECESSED 2x4 LIGHT FIXTURE
- RECESSED 2x2 FIXTURE
- RECESSED DOWN LIGHT
- SOLID HATCH DENOTES EXIT SIGN FACE PLATE
- DIRECTION OF EGRESS
- EXIT SIGN, WALL MOUNTED
- HEAT DETECTOR
- SMOKE DETECTOR
- FIRE ALARM DEVICE
- OCCUPANT SENSOR
- RETURN AIR GRILLE
- SUPPLY AIR GRILLE

CEILING TYPES:

TYPE	DESCRIPTION
1	1/2" PAINTED GYP BOARD ON METAL FRAMING
2	2X2 ACOUSTICAL PANEL SYSTEM



WALL PARTITION TYPES
 1/2" = 1'-0"

FLOOR PLAN GENERAL NOTES:

- FINISH FLOOR ELEVATION OF 0'-0" IS EXISTING FIRST FINISH FLOOR ELEVATION. ELEVATIONS SHOWN ON ARCHITECTURAL DRAWINGS ARE RELATIVE TO 0'-0".
- DO NOT SCALE DRAWINGS.
- NOTIFY ARCHITECT OF ANY DISCREPANCIES IN THE DOCUMENTS PRIOR TO START OF WORK.
- NOTES ON DRAWINGS SHALL APPLY TO ALL SIMILAR CONDITIONS WHETHER THEY ARE REPEATED OR NOT.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE VERIFICATION OF EXISTING CONDITIONS AND IN-FIELD DIMENSIONS PRIOR TO COMMENCING WORK.
- ALL INTERIOR DIMENSIONS ARE TO FACE OF FINISHED WALL UNLESS NOTED OTHERWISE.
- PROVIDE ACCESS PANELS AT LOCATIONS INDICATED AND AS REQUIRED FOR ACCESS TO EQUIPMENT AND DEVICES INCLUDING, BUT NOT LIMITED TO, MECHANICAL, PLUMBING AND ELECTRICAL WORK. PAINT ACCESS PANELS TO MATCH ADJACENT WALL OR CEILING FINISH.
- ALL INTERIOR PARTITIONS SHALL BE TYPE S3A (U.N.O.)
- PROVIDE SOLID FIRE RETARDANT TREATED WOOD BLOCKING, FLAT METAL STRIPS, OR METAL BACKING PLATES AT ALL WALL MOUNTED FIXTURES AND ACCESSORIES, INCLUDING BUT NOT LIMITED TO, DOOR STOPS, MILLWORK, DIGITAL DISPLAYS, VISUAL DISPLAY BOARDS, TOILET PARTITIONS, AND SIMILAR CONDITIONS.
- SEE SPECIFICATIONS FOR ORIENTATION OF GYP BD PANELS, SIZING, AND SPACING OF METAL STUD FRAMING.

RCP GENERAL NOTES:

- ALL HEATING, VENTILATION, ELECTRICAL, PLUMBING, AND FIRE PROTECTION ITEMS ARE SHOWN ON ARCHITECTURAL REFLECTED CEILING PLANS FOR REFERENCE AND FIRE PROTECTION DRAWINGS FOR ACTUAL QUANTITIES. IN CASE OF CONFLICT THE ARCHITECTURAL REFLECTED CEILING PLAN SHALL GOVERN LOCATION OF THESE ITEMS.
- IN AREAS THAT DO NOT HAVE ARCHITECTURAL REFLECTED CEILING PLANS YET REQUIRE NEW ITEMS TO BE INSTALLED IN OR ABOVE THE CEILING PLANE, CONTRACTOR SHALL REMOVE AND REINSTALL, REPLACE OR MODIFY EXISTING CEILING CONSTRUCTION TO ACCOMMODATE NEW WORK. ANY NEW CEILING AREAS SHALL MATCH EXISTING ADJACENT FINISHES.
- CENTER ALL FIXTURES IN CEILING TILES AND FIELD VERIFY GRID LAYOUT FOR PROPER FIXTURE LOCATION. ALIGN ALL FIXTURES IN BOTH DIRECTIONS OF CEILING TILE (UNO)
- CENTER ALL SPRINKLER HEADS IN CEILING TILES.

FLOOR PLAN / RCP REFERENCED NOTES:

- NEW LOCATION OF WALL PHONE SALVAGED DURING DEMOLITION. PROVIDE SURFACE MOUNT CONDUIT TO CMU WALL TO ABOVE CEILING.
- REINSTALL SALVAGED 12" X 4" MARKERBOARD. PROVIDE NEW EDGE TRIM AT ONE SIDE WHERE CENTER TRIM WAS REMOVED.
- LOCKERS BY OWNER. COORDINATE FINAL LAYOUT WITH OWNER PRIOR TO INSTALLATION OF FURRING WALLS.
- ALIGN FACE OF NEW WALL WITH ADJACENT EXISTING CMU WALL TO REMAIN - PROVIDE CONT. SEALANT JOINT BETWEEN EXISTING AND NEW CONSTRUCTION.
- SOLID WOOD BENCH - 9" TYP. D X 5'-0" L X 17" H, MAPLE WITH CLEAR FINISH BENCH, BLACK POWDER COAT FINISHED LEGS ANCHORED TO CONCRETE SLAB. CONFIRM LAYOUT WITH OWNER PRIOR TO ORDER / INSTALLATION.
- ADA SOLID WOOD BENCH - 20" X 42" L X 17" H, MAPLE WITH CLEAR FINISH BENCH, BLACK POWDER COAT FINISHED LEGS ANCHORED TO CONCRETE SLAB. CONFIRM LAYOUT WITH OWNER PRIOR TO ORDER / INSTALLATION.
- PROVIDE FROSTED PRESSURE APPLIED VINYL FILM AT INSIDE FACE OF EXISTING DOOR VISION PANEL AND SIDELITE.
- NEW OPENING IN CMU WALL - TOOTH IN NEW CMU AT JAMBS AS REQUIRED FOR SOID FINISHED EDGE CONDITIONS. PROVIDE UNTEL ABOVE DOOR AS INDICATED ON DOOR DETAILS.
- NEW OPENING FOR 2" WIDE TRANSFER DUCTS IN CMU WALL - 8" X 32" X 5/16" STL PLATE ACROSS TOP OF OPENING, MIN. 4" PAST EACH SIDE OF CMU BLOCK ABOVE.

FINISH PLAN SYMBOLS LEGEND:

- WALL FINISH TYPE
- WALL BASE TYPE
- FLOOR FINISH TYPE

FINISH PLAN GENERAL NOTES:

- PAIN ALL EXPOSED CONDUIT, DUCTWORK, PIPING, ETC. IN ALL FINISHED SPACES. REFER TO INTERIOR FINISH PLANS AND REFLECTED CEILING PLANS FOR CLARIFICATIONS.
- PROVIDE CEMENTITIOUS SELF-LEVELING UNDERLAYMENT AT REMOVAL OF EXISTING FLOOR DRAINS AS REQUIRED TO PROVIDE A LEVEL SUBSTRATE FOR NEW FLOOR FINISH.
- ALL FINISHES ARE MONUMENTAL PER ROOM UNLESS NOTED OTHERWISE.
- AT ALL LOCATIONS WHERE LOCKERS ARE TO BE INSTALLED, THE SUBSEQUENT BASE TYPE SPECIFIED FOR EACH ROOM SHALL BE INSTALLED OVER THE KICKS U.N.O.

WALL FINISH TYPES:

TYPE	DESCRIPTION	MANUFACTURER	NAME# / COLOR
PT-X	GENERAL PAINT	BENJAMIN MOORE	PROVIDED AND INSTALLED BY OWNER. CONTRACTOR TO PREP WALLS (I.E. CLEAN, PATCH, SMOKE COAT, ETC.) AS REQUIRED FOR PAINTED FINISH.

WALL BASE TYPES:

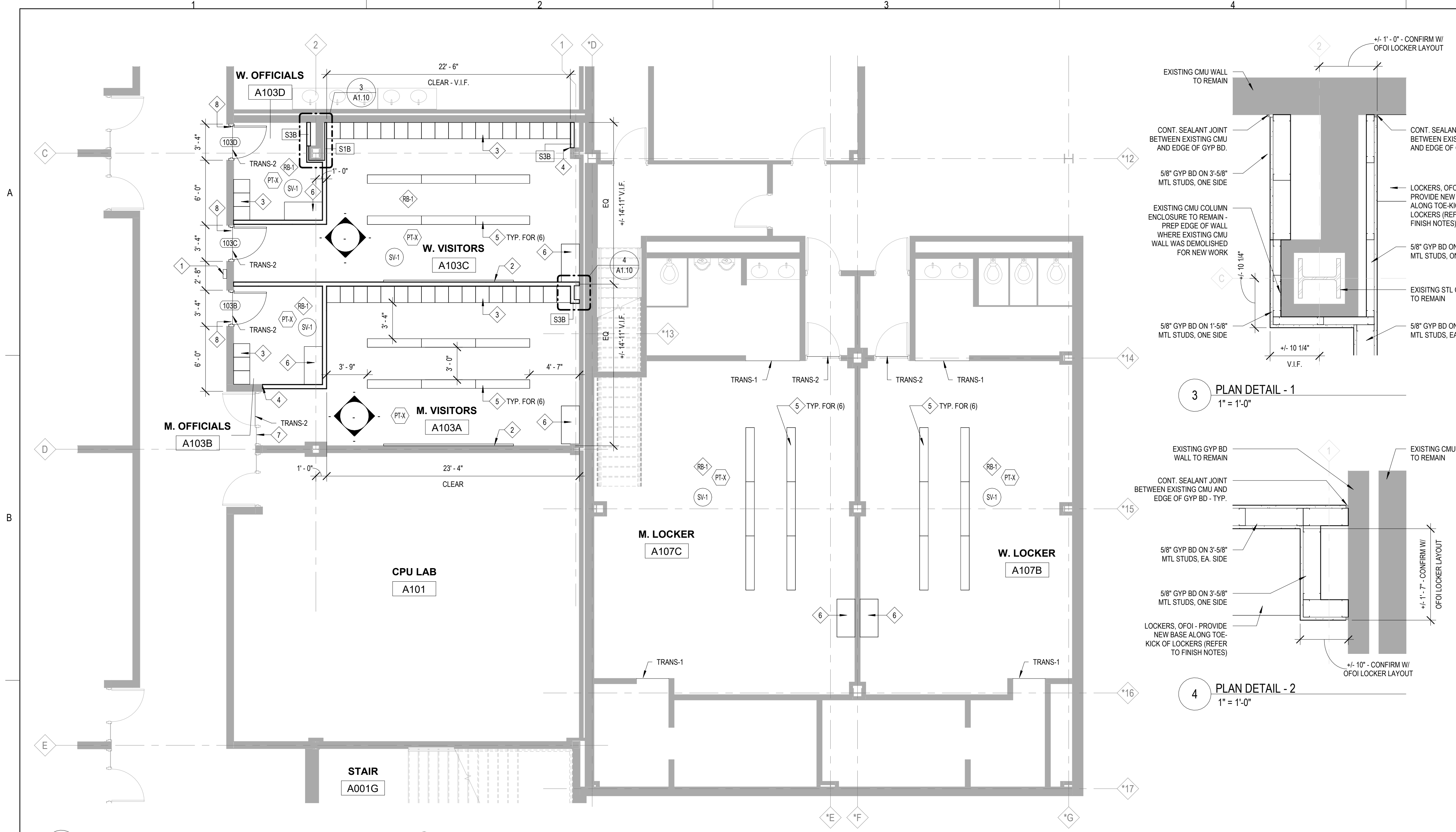
TYPE	DESCRIPTION	MANUFACTURER	NAME# / COLOR
RB-1	4" RUBBER COVE BASE	TARKETT	TBD

FLOOR FINISH TYPES:

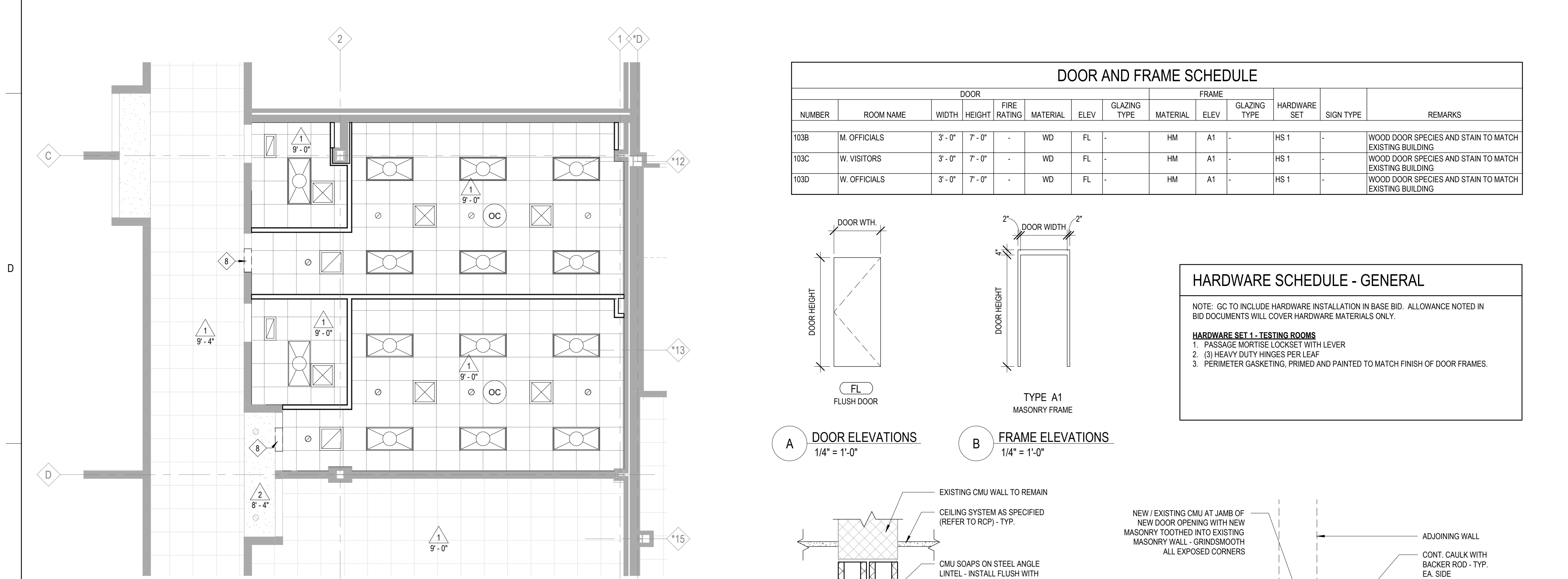
TYPE	DESCRIPTION	MANUFACTURER	NAME# / COLOR
SV-1	SHEET VINYL	AVA FLOOR	REV. ARLINGTON NICKEL REAL0003

FLOOR TRANSITION TYPES:

TYPE	DESCRIPTION	MANUFACTURER	NAME# / COLOR
TRANS-1	SV TO CERAMIC TILE	TARKETT	CD-XX-B, TBD
TRANS-2	SV TO VCT	TARKETT	SUMLINE, SL-XX-B, TBD



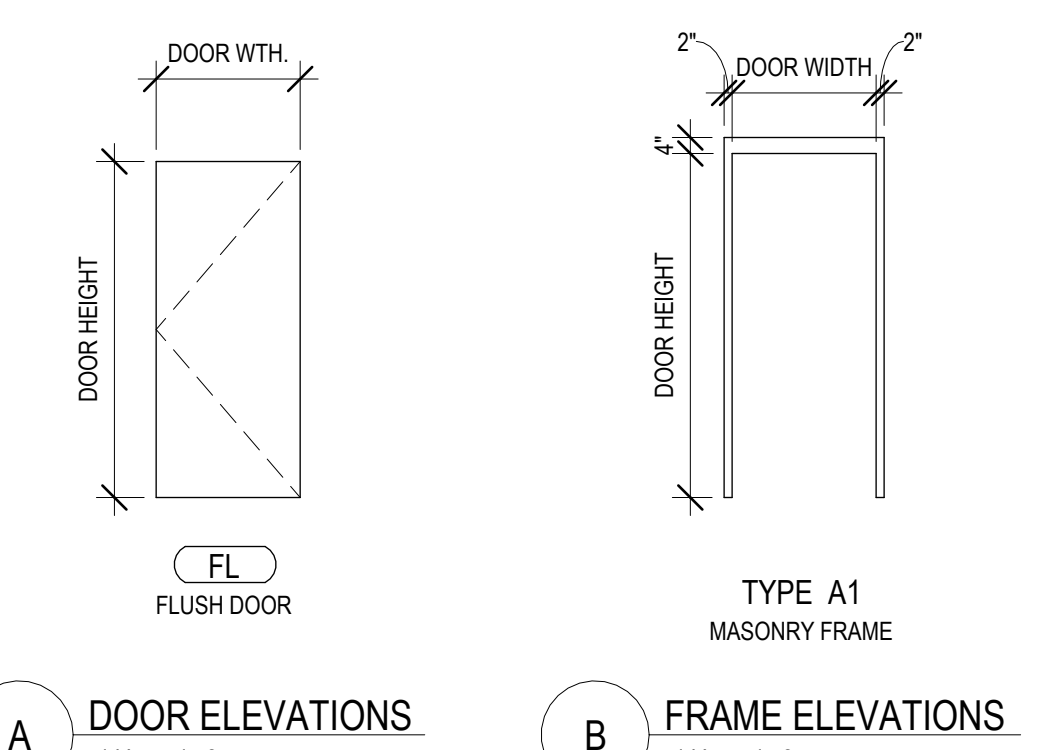
1 OVERALL FLOOR PLAN
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2 OVERALL REFLECTED CEILING PLAN
 3/16" = 1'-0"

DOOR AND FRAME SCHEDULE

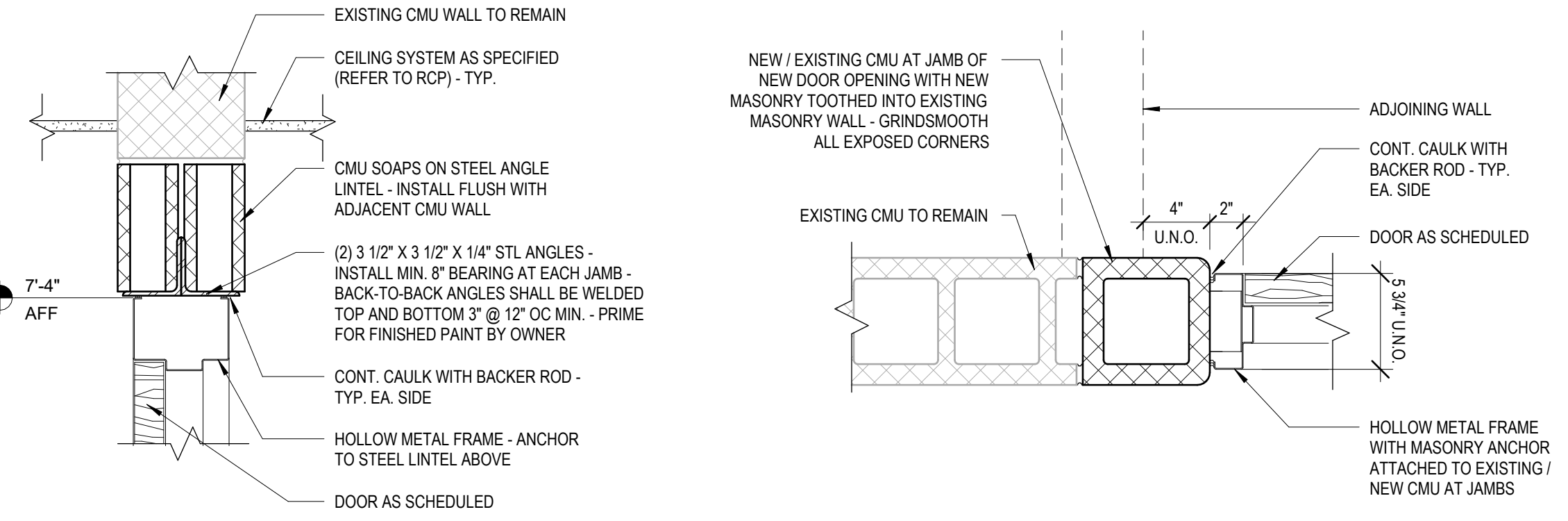
NUMBER	ROOM NAME	DOOR				FRAME				HARDWARE SET	SIGN TYPE	REMARKS	
		WIDTH	HEIGHT	FIRE RATING	MATERIAL	ELEV.	GLAZING TYPE	MATERIAL	ELEV.				GLAZING TYPE
103B	M. OFFICIALS	3'-0"	7'-0"	-	WD	FL	-	HM	A1	-	HS 1	-	WOOD DOOR SPECIES AND STAIN TO MATCH EXISTING BUILDING
103C	W. VISITORS	3'-0"	7'-0"	-	WD	FL	-	HM	A1	-	HS 1	-	WOOD DOOR SPECIES AND STAIN TO MATCH EXISTING BUILDING
103D	W. OFFICIALS	3'-0"	7'-0"	-	WD	FL	-	HM	A1	-	HS 1	-	WOOD DOOR SPECIES AND STAIN TO MATCH EXISTING BUILDING



DOOR ELEVATIONS 1/4" = 1'-0"
FRAME ELEVATIONS 1/4" = 1'-0"

HARDWARE SCHEDULE - GENERAL

- NOTE: GC TO INCLUDE HARDWARE INSTALLATION IN BASE BID. ALLOWANCE NOTED IN BID DOCUMENTS WILL COVER HARDWARE MATERIALS ONLY.
- HARDWARE SET 1 - TESTING ROOMS**
- PASSAGE MORTISE LOCKSET WITH LEVER
 - (3) HEAVY DUTY HINGES PER LEAF
 - PERIMETER GASKETING, PRIMED AND PAINTED TO MATCH FINISH OF DOOR FRAMES.



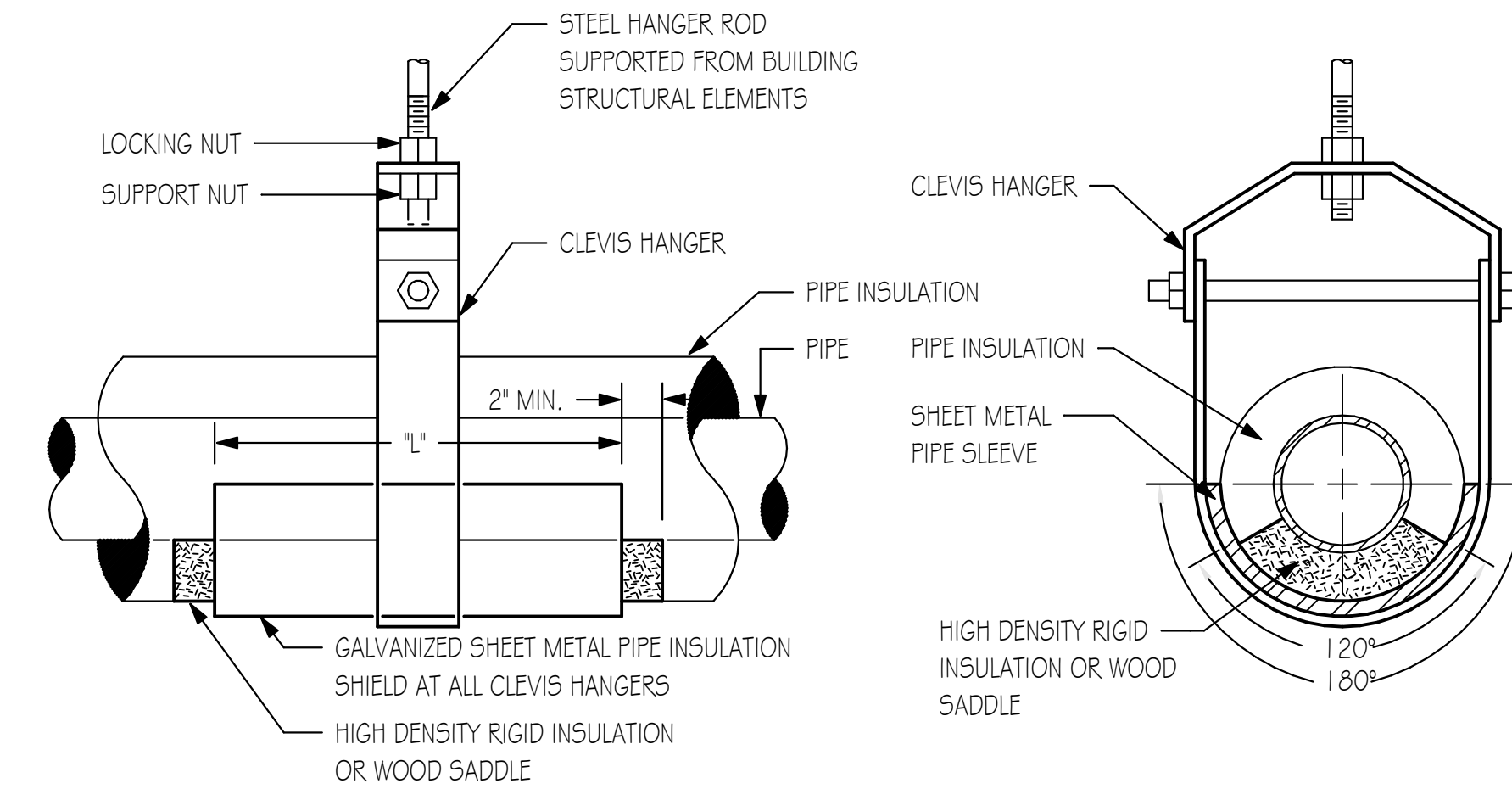
HOLLOW METAL FRAME - HEAD & SILL 1 1/2" = 1'-0"
HOLLOW METAL FRAME - JAMB 1 1/2" = 1'-0"

WALL PARTITION TYPES 1/2" = 1'-0"

GENERAL REMODELING NOTES - ALL CONTRACTORS

- ALL WORK SHOWN ON DRAWINGS SHALL BE CONSIDERED NEW AND IN CONTRACT UNLESS SPECIFICALLY INDICATED OTHERWISE.
- DRAWINGS ARE GENERALLY DIAGRAMMATIC. ROUTING OF PIPING, DUCTWORK, CONDUITS, RACEWAYS, ETC., AS SHOWN ON DRAWINGS, DOES NOT INTEND TO SHOW EVERY RISE, DROP, OFFSET, FITTING NOR EVERY STRUCTURAL ELEMENT THAT MAY BE ENCOUNTERED DURING THE INSTALLATION OF THIS WORK. EACH CONTRACTOR SHALL MAKE ANY REQUIRED CHANGES FROM THE GENERAL ROUTING SHOWN ON THESE DRAWINGS, SUCH AS OFFSETS, BENDS OR CHANGES IN ELEVATION DUE TO COORDINATION WITH THE WORK OF OTHER TRADES AND BUILDING CONSTRUCTION. ALL CHANGES SHALL BE MADE WITHOUT ADDITIONAL COST TO THE OWNER OR DELAY IN COMPLETION DATE OF THE PROJECT.
- IT IS INTENDED THAT EQUIPMENT SHALL BE LOCATED SYMMETRICALLY WITH THE ARCHITECTURAL ELEMENTS OF THE BUILDING, NOTWITHSTANDING THE FACT THAT LOCATIONS INDICATED BY THESE DRAWINGS MAY BE DISTORTED FOR CLARITY OF PRESENTATION.
- CONTRACTOR SHALL CHECK DRAWINGS OF OTHER TRADES TO VERIFY THAT SPACES IN WHICH THEIR WORK WILL BE INSTALLED ARE CLEAR OF OBSTRUCTIONS. WORK SHALL BE INSTALLED TO MAINTAIN MAXIMUM HEADROOM AND SPACE CONDITIONS AT ALL POINTS IN THE BUILDING. WHERE HEADROOM OR SPACE CONDITIONS APPEAR INADEQUATE, CONTRACTOR SHALL NOTIFY OWNER/ARCHITECT/ENGINEER BEFORE PROCEEDING WITH THE INSTALLATION OF THEIR WORK.
- CONTRACTOR SHALL FURNISH OTHER TRADES ADVANCE INFORMATION AND/OR SHOP DRAWINGS ON LOCATIONS AND SIZES OF PIPING, DUCTWORK, CONDUIT, RACEWAYS, EQUIPMENT, FRAMES, BOXES, SLEEVES AND OPENINGS, ETC. NEEDED FOR THEIR WORK TO PERMIT OTHER TRADES AFFECTED TO INSTALL THEIR WORK PROPERLY AND WITHOUT DELAY.
- WHERE THERE IS EVIDENCE THAT WORK OF ONE TRADE WILL INTERFERE WITH WORK OF OTHER TRADES, ALL TRADES SHALL MEET ON JOB SITE TO WORK OUT SPACE CONDITIONS AND MAKE SATISFACTORY ADJUSTMENTS TO INSTALLATION OF THE NEW WORK. CONTRACTORS SHALL VERIFY EXACT LOCATIONS OF ALL DEVICES AND EQUIPMENT WITH FIELD CONDITIONS, SHOP DRAWINGS, AND WORK OF OTHER TRADES PRIOR TO ROUGH-IN. EACH CONTRACTOR SHALL BE RESPONSIBLE, AT THEIR OWN EXPENSE, FOR THE REMOVAL AND REINSTALLATION OF ANY PART OF THEIR WORK IF SAME WAS INSTALLED WITHOUT CONSULTING WITH OTHER TRADES BEFORE INSTALLING THEIR WORK.
- CONTRACTOR SHALL PROVIDE SLEEVES IN BEAMS, FLOORS, COLUMNS AND WALLS AS SHOWN IN THE DRAWINGS, AS REQUIRED BY JOB SITE CONDITIONS, AND/OR AS SPECIFIED, WHEN INSTALLING THEIR WORK. ALL BEAMS AND COLUMNS WHICH ARE REQUIRED TO BE SLEEVED SHALL BE CUT AND REINFORCED AS REQUIRED BY FIELD CONDITIONS AND LOCATIONS AND SIZES SHALL BE CHECKED AND APPROVED BY ARCHITECT BEFORE CONTRACTOR CUTS ANY STRUCTURAL BUILDING MEMBER.
- THE SEQUENCE FOR THE INSTALLATION OF ALL WORK SHALL BE COORDINATED BETWEEN ALL CONTRACTORS ON THE PROJECT AND IN STRICT ACCORDANCE WITH ARCHITECT/ENGINEER AND OWNERS STIPULATION AS DIRECTED.
- CONTRACTOR SHALL REFER TO THE ARCHITECTURAL AND STRUCTURAL CONTRACT DRAWINGS BEFORE SUBMITTING THEIR BIDS TO FAMILIARIZE THEMSELVES WITH THE EXTENT OF THE GENERAL CONTRACTORS WORK, CEILING HEIGHTS AND CLEARANCE FOR INSTALLING THEIR WORK.
- CONTRACTOR SHALL BE RESPONSIBLE AND PAY FOR ALL CORING, CUTTING, PATCHING, REPAIRING, REFINISHING AND REMOVAL/REPLACEMENT OF NEW OR EXISTING BUILDING CONSTRUCTION REQUIRED TO ACCOMMODATE THE INSTALLATION OR REMOVAL OF THEIR WORK. ALL PATCHING, REPAIRING AND REFINISHING WORK SHALL BE PERFORMED BY THOSE REGULARLY INVOLVED IN THAT TRADE AND SHALL MATCH THE ADJACENT CONSTRUCTION AS CLOSELY AS POSSIBLE. CARE SHALL BE TAKEN SO AS NOT TO DAMAGE ANY EXISTING BUILDING CONSTRUCTION OR ITEMS THAT ARE TO REMAIN. ANY EXISTING FINISHES THAT ARE DAMAGED DURING THE INSTALLATION OF NEW WORK OR REMOVAL OF EXISTING WORK SHALL BE REPAIRED, REPLACED AND PAID FOR BY THE INSTALLING CONTRACTOR, TO THE SATISFACTION OF THE ARCHITECT AND OWNER. REFER TO ARCHITECTURAL DRAWINGS FOR EXISTING BUILDING CONSTRUCTION THAT IS TO REMAIN AND, THEREFORE, SUBJECT TO PATCHING, REPAIRING, REFINISHING, AND REMOVAL/REPLACEMENT.
- SOME OF THE EXISTING ITEMS AND EQUIPMENT SCHEDULED TO BE REMOVED SHALL BE TURNED OVER TO THE OWNER. ANY ITEMS THAT THE OWNER WANTS TO RETAIN SHALL BE REMOVED CAREFULLY SO AS NOT TO DAMAGE THEM. ALL OTHER ITEMS TO BE REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND REMOVED FROM THE SITE.
- CONTRACTOR SHALL BE RESPONSIBLE FOR THEIR OWN CLEAN-UP DURING CONSTRUCTION. IF CONTRACTOR FAILS TO PROVIDE SUCH CLEAN-UP, THE ARCHITECT/ENGINEER WILL DIRECT ANOTHER CONTRACTOR TO PERFORM THE CLEAN-UP AND THE NEGLIGENT CONTRACTOR SHALL PAY THE ASSOCIATED BACK-CHARGES AS DEEMED APPROPRIATE BY THE ARCHITECT/ENGINEER.
- CONTRACTOR SHALL INSTALL ALL AUXILIARY SUPPORTING STEEL AS REQUIRED FOR THE SUPPORTING OF THEIR PIPING, DUCTWORK, CONDUIT, TANKS, EQUIPMENT, ETC. ALL SUPPORTING STEEL FOR ITEMS ABOVE A SUSPENDED CEILING SHALL BE FROM BUILDING STRUCTURAL MEMBERS ONLY.
- IT IS MANDATORY THAT THE COMPLETE EXISTING BUILDING REMAIN IN CONTINUOUS AND NON-INTERRUPTED OPERATION DURING REMODELING/ALTERING OF SAID EXISTING BUILDING. THE SPECIFIC AREA(S) BEING REMODELED/ALTERED AT ANY SCHEDULED TIME ARE OBVIOUSLY EXCLUSIVE OF THIS STATEMENT. SERVICES TO EXISTING BUILDING SHALL BE KEPT IN CONTINUOUS OPERATION INCLUDING POWER, SIGNAL SYSTEMS, LIGHTING, TELEPHONE, HEATING, COOLING, VENTILATING, TEMPERATURE CONTROL, SEWERS AND HOT AND COLD WATER. ANY ABSOLUTELY NECESSARY INTERRUPTION OF THESE SERVICES TO ACCOMPLISH CONTRACT WORK SHALL BE ARRANGED WITH THE OWNER A MINIMUM OF TEN (10) WORKING DAYS IN ADVANCE. SUCH INTERRUPTIONS SHALL BE KEPT TO AN ABSOLUTE MINIMUM AS FAR AS TIME INTERVAL IS INVOLVED AND TEMPORARY SERVICES SHALL BE FURNISHED AND INSTALLED UNDER THIS CONTRACT WHERE NECESSARY TO ACCOMPLISH THIS PURPOSE. TEMPORARIES SHALL BE REMOVED BY THE CONTRACTOR ONLY AFTER NEW PERMANENT SERVICES ARE INSTALLED AND FULLY OPERATIONAL.

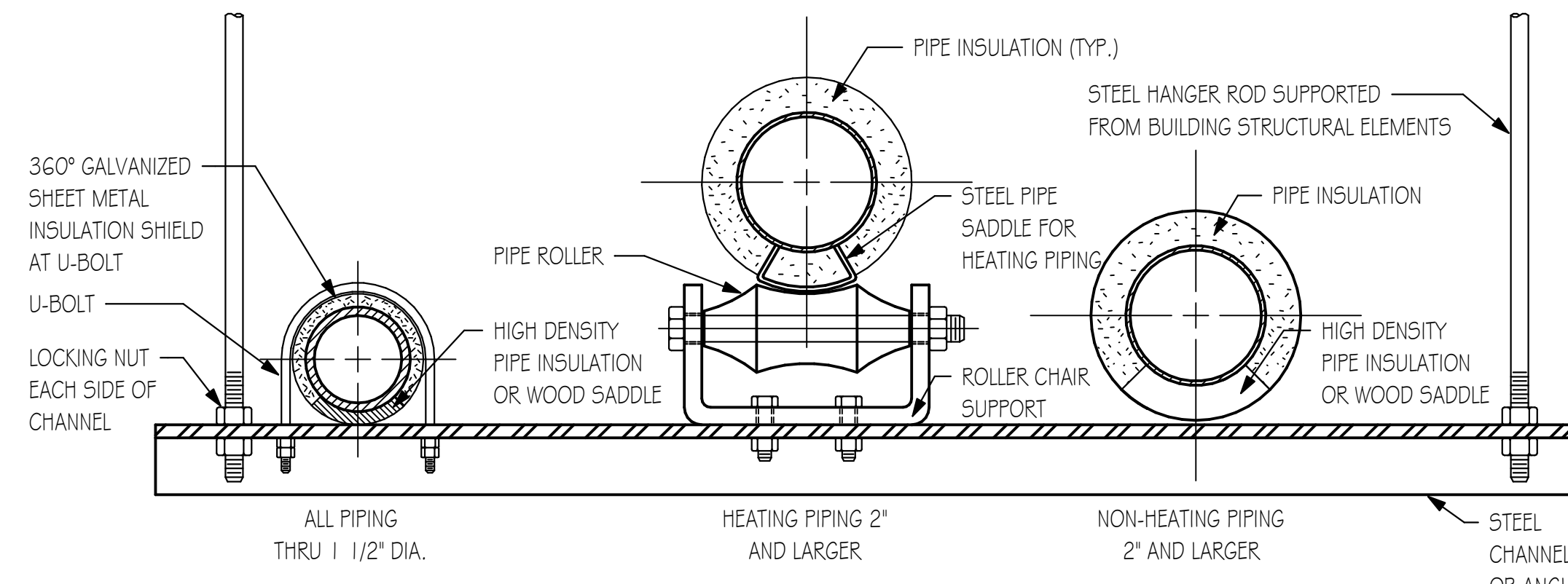
- UNLESS INDICATED OTHERWISE, THE ARCHITECT/ENGINEER MAKES NO REPRESENTATION AS TO WHETHER OR NOT ANY HAZARDOUS OR CONTAMINATED MATERIALS (INCLUDING BUT NOT LIMITED TO ASBESTOS, PCB'S, CONTAMINATED SOILS, ETC.) ARE PRESENT WITHIN THE EXISTING BUILDING OR ON THE SITE. WORK SHOWN ON THE DRAWINGS AND/OR INDICATED IN THE SPECIFICATIONS SHALL NOT BE CONSTRUED TO CALL FOR CONTACT WITH ANY OF THESE MATERIALS. IF THESE MATERIALS ARE ENCOUNTERED OR SUSPECTED, THE CONTRACTOR SHALL NOT DISTURB THEM AND SHALL CONTACT THE ARCHITECT/ENGINEER IMMEDIATELY.
- WHERE WORK CALLED FOR ON THE DRAWINGS OR IN THE SPECIFICATIONS INVOLVES THE REMOVAL OR RELOCATION OF PIPING OR EQUIPMENT CONTAINING REFRIGERANT, ALL REFRIGERANT SHALL BE RECOVERED BY APPROVED METHODS PER EPA REGULATIONS.
- CONTRACTOR SHALL STORE ALL MATERIALS AND EQUIPMENT SHIPPED TO THE SITE IN A PROTECTED AREA. IF MATERIAL IS STORED OUTSIDE OF THE BUILDING, IT MUST BE STORED OFF THE GROUND A MINIMUM OF SIX INCHES (6") SET ON 6 X 6 PLANKS AND/OR WOOD PALLETS. ALL MATERIAL AND EQUIPMENT MUST BE COMPLETELY COVERED WITH WATERPROOF TARPS OR VISQUIN. ALL PIPING AND DUCTWORK WILL HAVE THE ENDS CLOSED TO KEEP OUT DIRT AND OTHER DEBRIS. NO EQUIPMENT WILL BE ALLOWED TO BE STORED OUTSIDE THE BUILDING ON THE SITE UNLESS IT IS SUPPORTED OFF THE GROUND AND COMPLETELY PROTECTED WITH WEATHERPROOF COVERS.
- THE DRAWINGS, SCHEDULES AND SPECIFICATIONS HAVE BEEN PREPARED USING ONE MANUFACTURER FOR EACH PIECE OF EQUIPMENT AS THE BASIS FOR DIMENSIONAL DESIGN. IF THE CONTRACTOR PURCHASES EQUIPMENT FROM A SPECIFIED ACCEPTABLE MANUFACTURER, BUT NOT THE SCHEDULED MANUFACTURER USED FOR THE BASE DESIGN, THE CONTRACTOR SHALL BE RESPONSIBLE FOR CHECKING ALL THE DIMENSIONS OF THE EQUIPMENT TO VERIFY THAT IT WILL FIT IN THE SPACE SHOWN ON THE DRAWINGS. MINOR DEVIATIONS IN DIMENSIONS WILL BE PERMITTED, PROVIDED THE RATINGS MEET THOSE SHOWN ON THE DRAWINGS AND EQUIPMENT WILL PHYSICALLY FIT INTO THE SPACE ALLOCATED WITH SUITABLE ACCESS AROUND EQUIPMENT FOR OPERATION AND MAINTENANCE OF THE EQUIPMENT. WHEN EQUIPMENT SUBMITTED FOR REVIEW DOES NOT MEET THE PHYSICAL SIZE OR ARRANGEMENT OF THAT SCHEDULED AND SPECIFIED, CONTRACTOR SHALL PAY FOR ALL ALTERATIONS REQUIRED TO ACCOMMODATE SUCH EQUIPMENT AT NO ADDITIONAL COST TO THE OWNER. CONTRACTOR WILL ALSO PAY ALL COSTS FOR ADDITIONAL WORK REQUIRED BY OTHER CONTRACTORS, OWNER, ARCHITECT OR ENGINEER TO MAKE CHANGES WHICH WOULD ALLOW THE EQUIPMENT TO FIT IN THE SPACE AND FUNCTION AS INTENDED.
- CONTRACTOR AND/OR MANUFACTURER SHALL VERIFY THAT THE CHARACTERISTICS OF THE EQUIPMENT HE SUBMITS FOR REVIEW MEET THE CAPACITY AND DUTY SPECIFIED. WHEN EQUIPMENT SUBMITTED FOR REVIEW REQUIRES MODIFICATIONS TO THE WORK OF OTHER CONTRACTORS, SUBMITTING CONTRACTOR SHALL PAY FOR ALL COSTS FOR ADDITIONAL WORK REQUIRED BY OTHER CONTRACTORS, OWNER, ARCHITECT OR ENGINEER TO MAKE CHANGES WHICH WOULD ALLOW THE EQUIPMENT FUNCTION SAFELY AND PROPERLY.
- CONTRACTOR SHALL FIELD VERIFY THE SIZE OF EXISTING OPENINGS, WINDOWS, DOORS, CORRIDORS, ROOMS, ETC. FOR ACCESS OF THE NEW EQUIPMENT INTO OR REMOVAL OF EXISTING EQUIPMENT FROM THE BUILDING. IF OPENINGS ARE TOO SMALL FOR ACCESS THEN CONTRACTOR SHALL, AT HIS OWN EXPENSE, PROVIDE NEW OR ENLARGED OPENINGS AND RESTORE SAME TO ORIGINAL SIZE AND CONDITION. CONTRACTOR MAY ELECT TO ORDER THE EQUIPMENT DISASSEMBLED AND/OR WITH SPLIT HOUSING FOR ENTRANCE INTO THE EXISTING SPACE OR BUILDING. CONTRACTOR SHALL REASSEMBLE EQUIPMENT AFTER IT IS IN THE SPACE AT HIS OWN EXPENSE.
- CONTRACTOR SHALL SUBMIT ELECTRONIC COPIES OF SHOP DRAWINGS OF ALL EQUIPMENT, DIFFUSERS, REGISTERS, TEMPERATURE CONTROL SYSTEM, FPB BOXES, DUCT SILENCERS, FIRE DAMPERS, LIGHTING FIXTURES, PANELBOARDS, ELECTRICAL DEVICES, PLUMBING FIXTURES, ETC. TO ENGINEER FOR APPROVAL PRIOR TO ORDERING ANY ITEMS OR FABRICATING ANY DUCTWORK.
- CONTRACTOR SHALL PROVIDE OWNER TRAINING ON ALL EQUIPMENT AND BUILDING SYSTEMS PROVIDED/ALTERED BY HIS WORK. TRAINING SHALL BE ACCOMPLISHED DURING TIME DEDICATED FOR THAT PURPOSE, NOT IN CONJUNCTION WITH SERVICE WORK. SEE SPECIAL TEMPERATURE CONTROL TRAINING INSTRUCTIONS ELSEWHERE.
- AT COMPLETION OF PROJECT, CONTRACTOR SHALL SUBMIT ELECTRONIC COPIES OF OPERATION AND MAINTENANCE MANUALS FOR ALL WORK PROVIDED BY HIM ON PROJECT. MANUALS SHALL BE CLEARLY ORGANIZED AND CONTAIN COPIES OF APPROVED EQUIPMENT, SHOP DRAWINGS, EQUIPMENT PARTS LISTS, SERVICE CONTACTS, CONTRACTOR AND MANUFACTURER WARRANTIES, AND "AS BUILT" FLOOR PLANS.
- CONTRACTOR SHALL PROVIDE WARRANTY FOR ALL MATERIAL AND GUARANTEE ALL WORKMANSHIP PROVIDED BY HIM FOR 1 (ONE) YEAR FROM SUBSTANTIAL COMPLETION OF WORK INVOLVED.
- CONTRACTOR SHALL MAINTAIN A CURRENT CITY OF CRYSTAL LAKE LICENSE THROUGHOUT ALL PHASES OF CONSTRUCTION. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO COORDINATE ALL INSPECTIONS WITH THE CITY OF CRYSTAL LAKE. THE CITY OF CRYSTAL LAKE REQUIRES MINIMUM ONE DAY PRIOR NOTICE FOR ALL INSPECTIONS.
- IDENTIFY ALL PIPING AND DUCTWORK WITH PLASTIC LABELS INDICATING CONTENTS AND FLOW DIRECTION. MARKERS TO BE PLACED AT A MAXIMUM OF 50 FT. INTERVALS AT BRANCH CONNECTIONS, AND AT BOTH SIDES OF WALL/FLOOR PENETRATIONS. IDENTIFY VALVES, EQUIPMENT, AND PANELS WITH ENGRAVED 3-LAYER PLASTIC LAMINATED TAGS OR SIGNS. IN ADDITION TO PROVIDING ENGRAVED PLASTIC NAMEPLATES ON THE VAV AND FPB BOXES, PROVIDE ENGRAVED PLASTIC NAMEPLATES ON THE CEILING GRID BELOW THE BOX. THE NAMEPLATE SHALL BE NO WIDER THAN THE WIDTH OF THE GRID (WHITE WITH BLACK LETTERS).



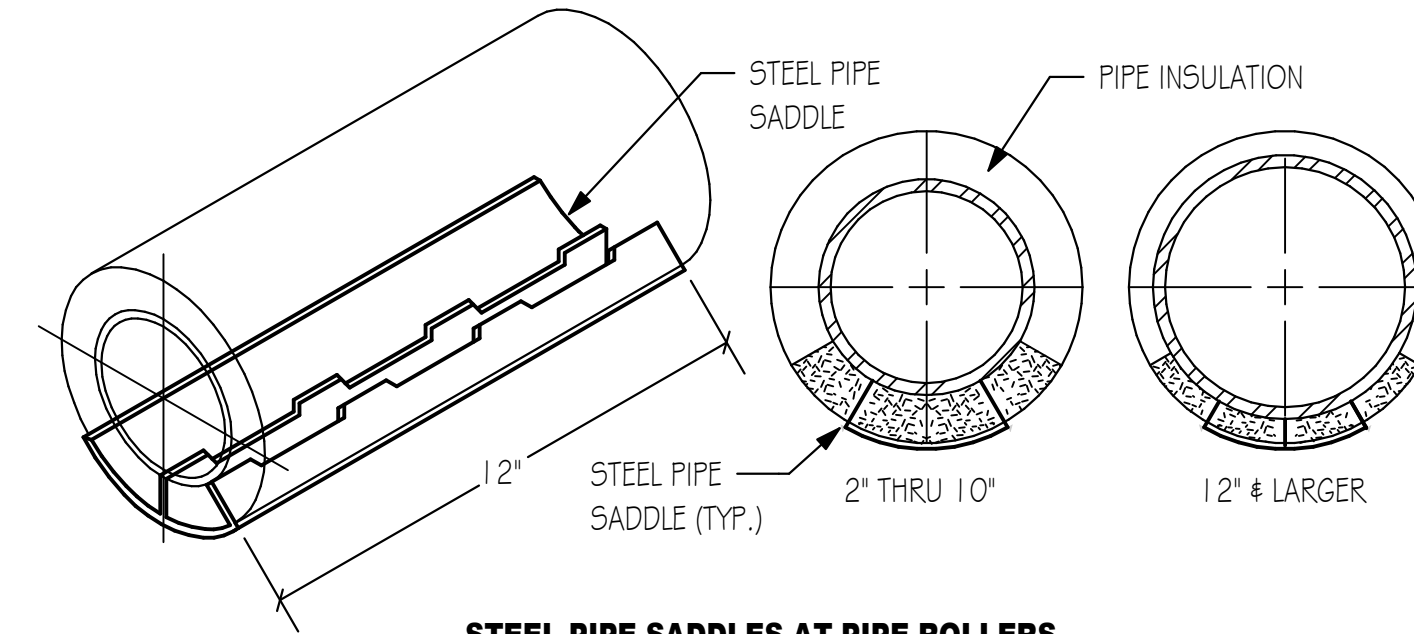
CLEVIS HANGER

PIPE SIZE	LENGTH	GAUGE
UP TO 3/4"	6"	20 GA.
1" - 2"	12"	18 GA.
2 1/2" - 4"	12"	16 GA.
5" # 6"	18"	16 GA.
8" # 4 UP	24"	14 GA.

NOTE: 1. CONFER WITH ARCHITECT AND REFER TO STRUCTURAL DRAWINGS FOR ADDITIONAL INFORMATION ON ACCEPTABLE METHODS AND LOCATIONS FOR HANGER SUPPORTS



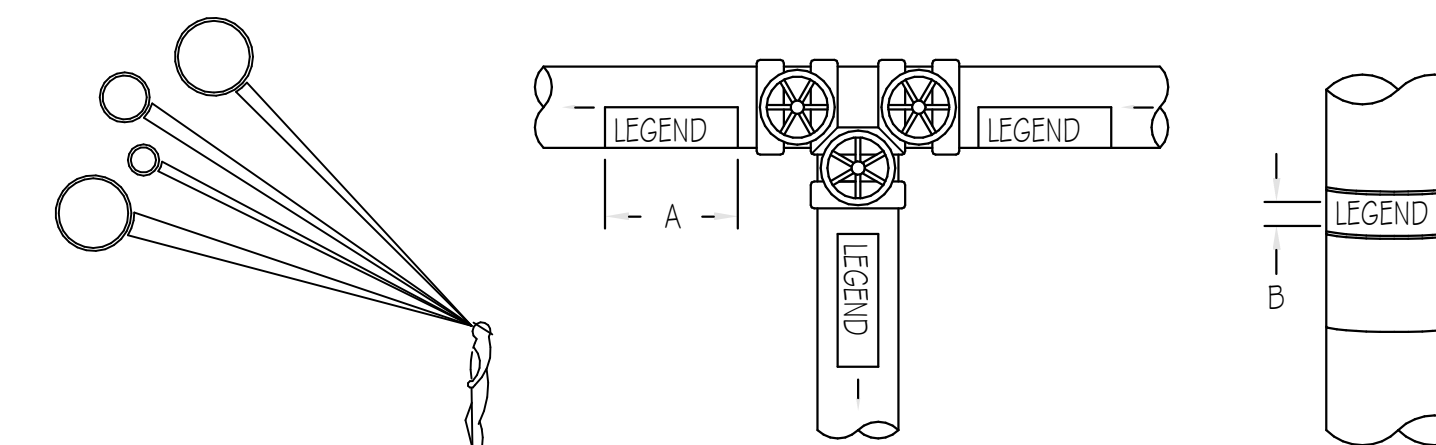
TRAPEZE HANGER



STEEL PIPE SADDLES AT PIPE ROLLERS

TYPICAL PIPE HANGER DETAILS

NO SCALE



NOTE: IDENTIFICATION MARKERS OR STRIPS TO BE PLACED ON ALL EXPOSED COVERED AND UNCOVERED PIPES AT 50'-0" INTERVALS, ADJACENT TO ALL VALVES OR BRANCHES, AND AT BOTH SIDES OF WALL/FLOOR PENETRATIONS. ARROWS OF SAME COLOR AS IDENTIFICATION MARKERS SHALL ALSO BE PLACED ON PIPES POINTING AWAY FROM MARKER INDICATING DIRECTION OF FLOW.

SIZE OF LEGEND LETTERS		
OUTSIDE DIAMETER OF PIPE OR COVERING	LENGTH OF COLOR FIELD A	SIZE OF LETTERS B
3/4" TO 1 1/4"	8"	1/2"
1 1/2" TO 2"	8"	3/4"
2 1/2" TO 6"	12"	1 1/4"
8" TO 10"	24"	2 1/2"
OVER 10"	32"	3 1/2"

SERVICE	BACKGROUND OR COLOR BAND	LETTER COLOR
FIRE PROTECTION (SPRINKLER)	SAFETY RED	WHITE

TYPICAL PIPE IDENTIFICATION MARKERS

NO SCALE



ARCHITECT OF RECORD
DEMONICA KEMPER ARCHITECTS
 125 N. HALSTED STREET, SUITE 301
 CHICAGO, IL 60661
 P: 312.496.0000

MEP/FP ENGINEER
2010 ENGINEERING GROUP
 1216 TOWER ROAD
 SCHAUMBURG, IL 60193
 P: 847.882.2010

MCHENRY COUNTY COLLEGE
VISITING TEAM CHANGING ROOMS

8900 US Hwy 14
 Crystal Lake, IL 60012
 DKA PROJECT NO: 22-006

KEY PLAN:

SHEET STATUS: 04/28/2023

ISSUED FOR BIDS - NOT FOR CONSTRUCTION

NO.	DESCRIPTION:	DATE:

SHEET TITLE:

**MECHANICAL/
 ELECTRICAL/
 PLUMBING
 COORDINATION**

SHEET NUMBER:

ME1.10



ARCHITECT OF RECORD
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MEP/FP ENGINEER
 2010 ENGINEERING GROUP
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**MCHENRY COUNTY COLLEGE
 VISITING TEAM CHANGING ROOMS**

8900 US Hwy 14
 Crystal Lake, IL 60012
 DKA PROJECT NO: 22-006

KEY PLAN:

SHEET STATUS: 04/28/2023
**ISSUED FOR BIDS - NOT
 FOR CONSTRUCTION**

NO.	DESCRIPTION:	DATE:

SHEET TITLE:
**HVAC PLANS,
 DETAILS, LEGENDS,
 NOTES, AND
 SCHEDULES**

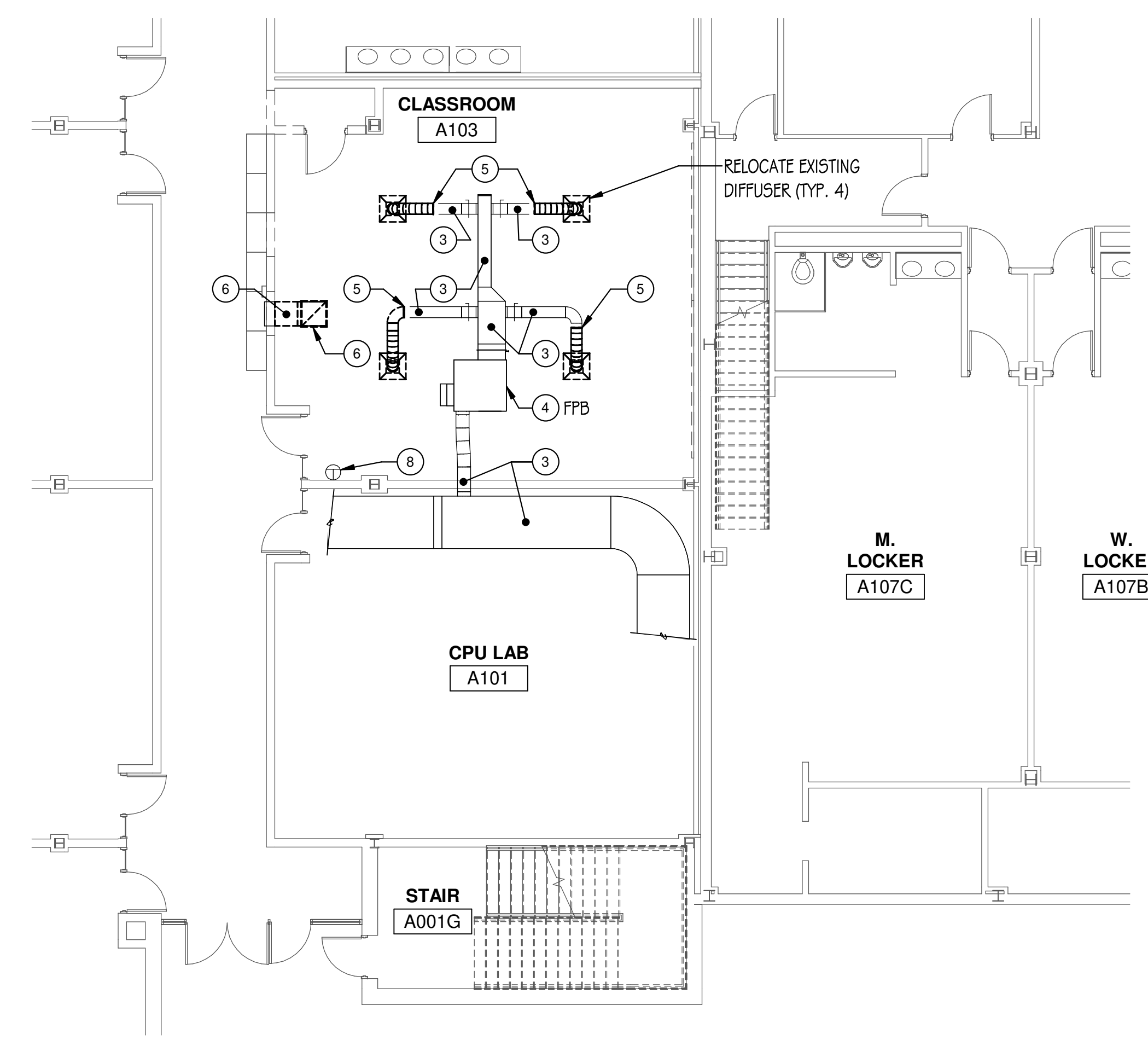
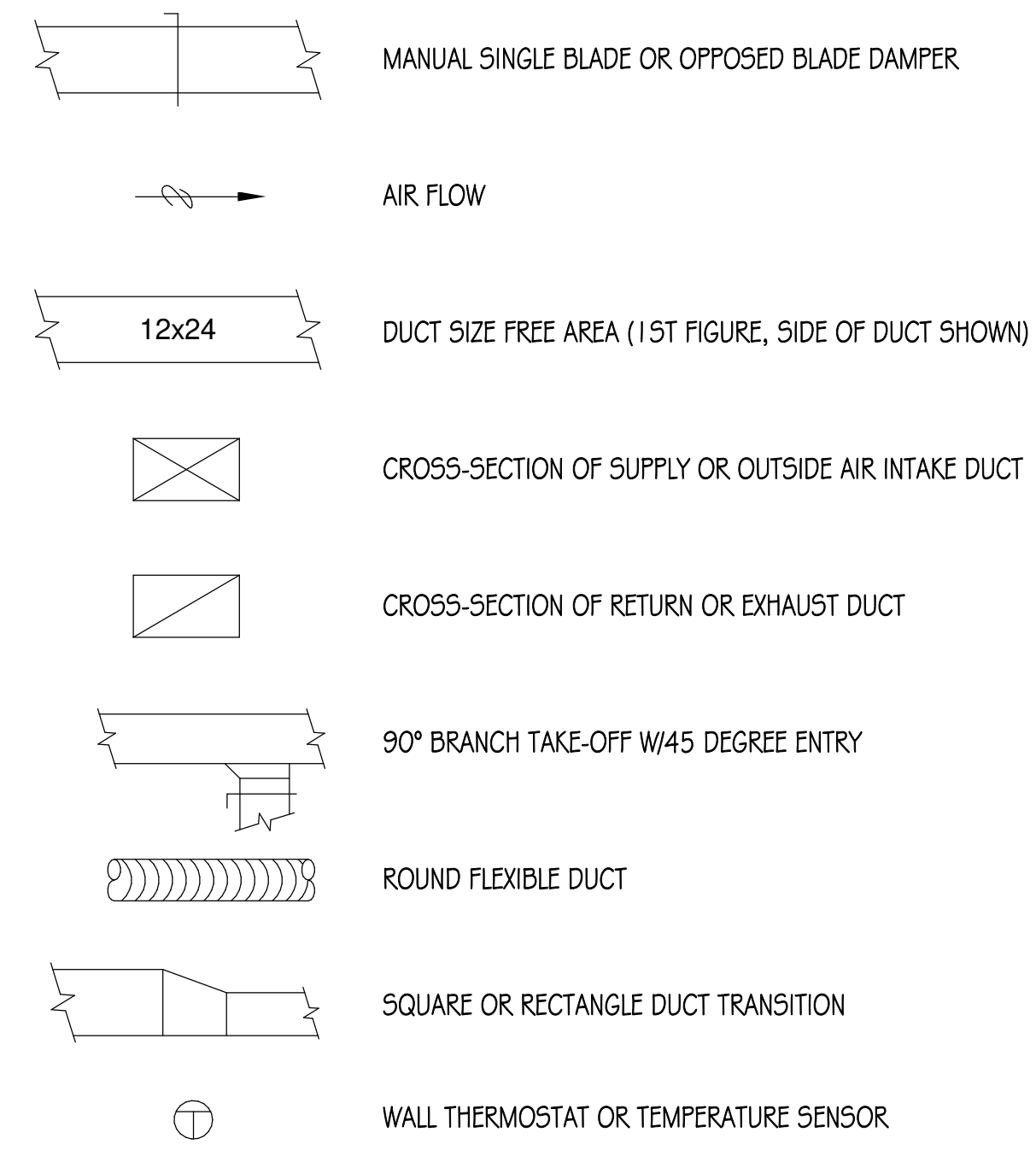
SHEET NUMBER:
HV1.10

DRAWING NOTES

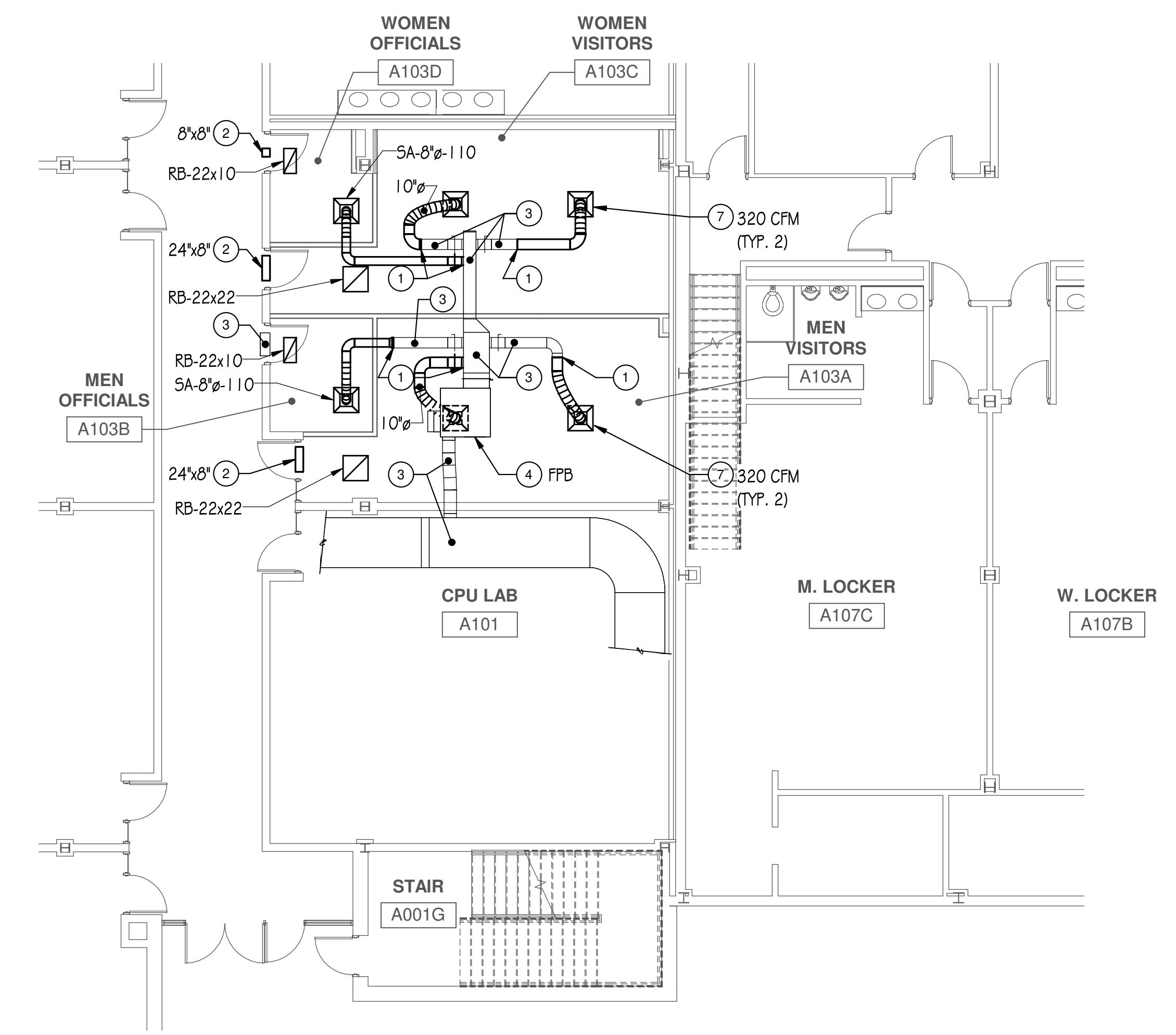
- 1 MAKE NEW CONNECTION TO EXISTING DUCTWORK AT THIS LOCATION.
- 2 TRANSFER OPENING OF SIZE INDICATED IN WALL ABOVE CEILING. SEE ARCHITECTURAL DRAWINGS FOR MORE COMMENTS.
- 3 EXISTING DUCTWORK, DIFFUSERS, REGISTERS, AND GRILLES TO REMAIN.
- 4 EXISTING HVAC EQUIPMENT TO REMAIN.
- 5 NEW CONNECTION TO BE MADE AT THIS LOCATION. REMOVE ALL DUCTWORK, DIFFUSERS, REGISTERS, HANGERS, INSULATION, ETC. SHOWN DASHED BEYOND THIS POINT.
- 6 REMOVE ALL DUCTWORK, DIFFUSERS, REGISTERS, HANGERS, INSULATION, ETC. SHOWN DASHED.
- 7 NEW LOCATION OF EXISTING DIFFUSER. BALANCE TO AIRFLOW RATE INDICATED.
- 8 EXISTING THERMOSTAT TO REMAIN.

HVAC SYMBOLS AND ABBREVIATIONS

- AD ACCESS DOOR
- BAS BUILDING AUTOMATION SYSTEM
- CFM CUBIC FEET PER MINUTE
- DN. DOWN
- ESP EXTERNAL STATIC PRESSURE
- F FAHRENHEIT
- FPB PARALLEL FAN POWERED BOX
- FFM FEET PER MINUTE
- FV FACE VELOCITY
- GC GENERAL CONTRACTOR
- NC NEW CONNECTION
- NK NECK
- N.C. NORMALLY CLOSED
- N.I.C. NOT IN CONTRACT
- N.O. NORMALLY OPEN
- PD PRESSURE DROP
- SP STATIC PRESSURE
- TC TEMPERATURE CONTROL
- TSP TOTAL STATIC PRESSURE
- UC UNDERCUT DOOR
- VD VOLUME DAMPER



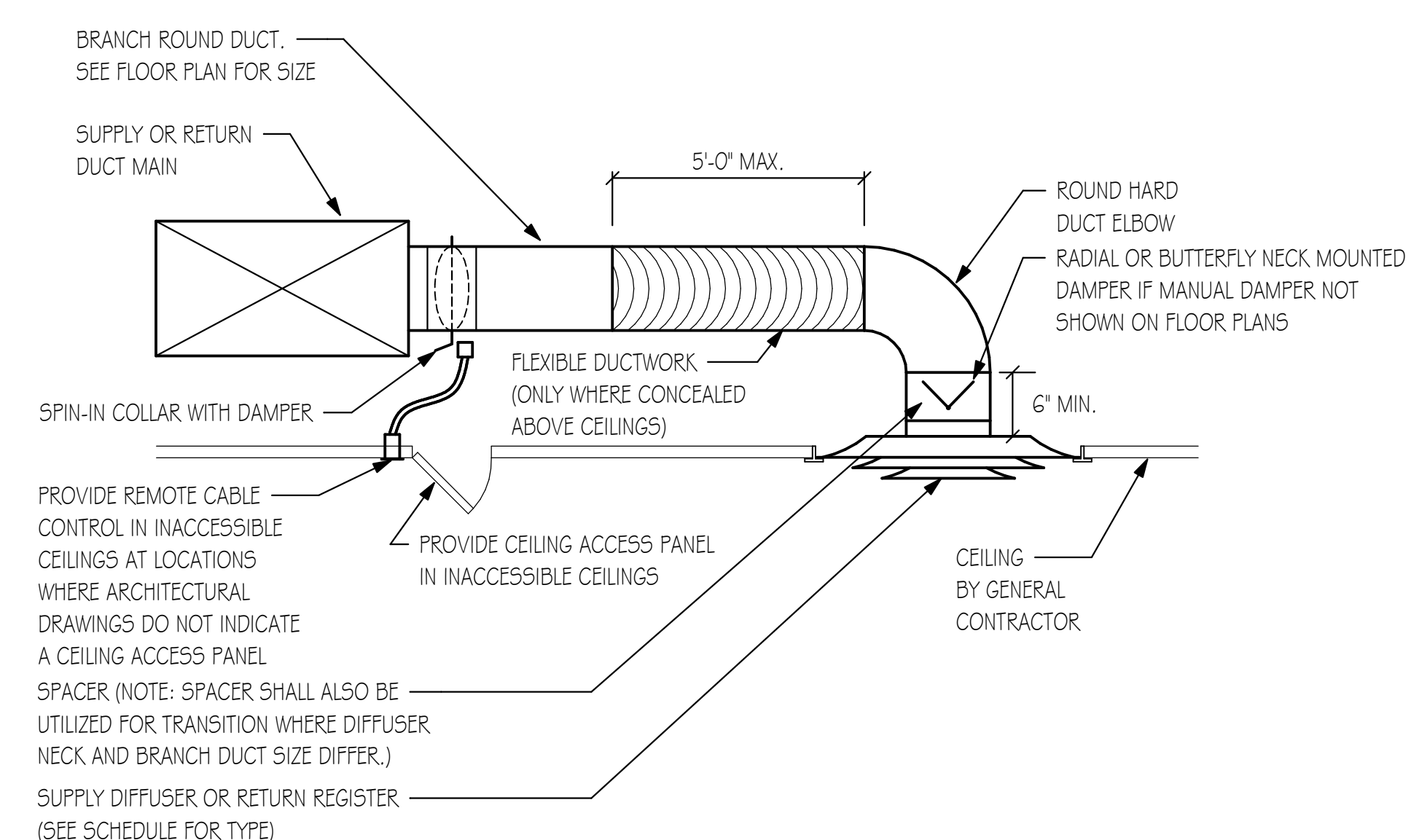
1 HVAC DEMOLITION PLAN
 1/8" = 1'-0"



2 HVAC PLAN
 1/8" = 1'-0"

GENERAL NOTES - HVAC WORK:

1. ALL NEW WORK AND MATERIALS SHALL CONFORM TO CITY OF CRYSTAL LAKE CODE AND COMMUNITY COLLEGE BUILDING STANDARDS.
2. NOISE AND VIBRATION WILL NOT BE TOLERATED. CONTRACTOR SHALL BID ON FURNISHING EVERY DETAIL TO ASSURE THIS END.
3. PATCH AND REFINISH ALL DAMAGED INSULATED SURFACES OF ALL EXISTING DUCTWORK, PIPING AND ASSOCIATED FITTINGS TO MATCH EXISTING WHERE NEW CONNECTIONS ARE BEING MADE.
4. THE LOCATIONS SHOWN FOR ALL DIFFUSERS, REGISTERS AND GRILLES, ETC. ARE DIAGRAMMATIC. EXACT LOCATION SHALL BE DETERMINED FROM THE REFLECTED CEILING PLANS AND/OR ON THE JOB SITE BY THE ARCHITECT/ENGINEER REPRESENTATIVES.
5. EXCEPT AS NOTED OTHERWISE, ALL SUPPLY, RETURN, AND EXHAUST DUCTWORK SHALL BE GALVANIZED SHEET METAL WITH SEALED JOINTS CONSTRUCTED AND INSTALLED IN ACCORDANCE WITH CURRENT SMACNA MANUAL. SIZES SHOWN ARE INSIDE FACE TO INSIDE FACE.
6. THE GAUGES OF IRON FOR DUCTS AND CASINGS AND SIZE OF STRUCTURAL REINFORCING ANGLES FOR DUCTS AND CASING SHALL BE SUCH AS TO PROVIDE ABSOLUTELY AIR TIGHT CONSTRUCTION FREE FROM PULSATION, DEFORMATION, OR VIBRATION AT NORMAL OPERATING PRESSURES.
7. ALL NEW CONCEALED SUPPLY DUCTWORK SHALL BE EXTERNALLY INSULATED 1 1/2" THICK WITH FLEXIBLE FIBERGLASS INSULATION WITH VAPOR BARRIER JACKET.
8. ALL ROUND CONCEALED FLEXIBLE DUCT SHALL BE WIREMOLD OR THERMOFLEX FACTORY INSULATED 1" THICK MAXIMUM OF 5'-0" LONG TO DIFFUSERS/REGISTERS.
9. PROVIDE MANUAL VOLUME DAMPERS AT EACH BRANCH DUCT TAKEOFF IN SUPPLY DUCTWORK (DOWNSTREAM OF VAV BOXES) AND IN RETURN/EXHAUST DUCTWORK. PROVIDE TURNING VANES IN ALL SQUARE DUCT ELBOWS.
10. BALANCE DUCT SYSTEMS TO ACCOMPLISH AIR QUANTITIES SHOWN AT ALL INLETS/OUTLETS (NEW AND EXISTING) AS SHOWN ON DRAWING AND SUBMIT TEST REPORT FOR REVIEW BY OWNER AND ENGINEER.



DIFFUSER/REGISTER INSTALLATION DETAIL
 NO SCALE

DIFFUSER, REGISTER, AND GRILLE SCHEDULE							
TAG	MANUFACTURER	MODEL	TYPE	NOMINAL FACE SIZE	MATERIAL	MAX. N.C.	NOTES
A	TITUS	OMNI	SQUARE PANEL FACE	24x24"	STEEL	30	1,2,3
B	TITUS	50F	EGG CRATE	VARIES	ALUMINUM	30	1,2,4

NOTES:
 1. OTHER ACCEPTABLE MANUFACTURERS: EQUAL.
 2. FINISH AS SELECTED BY ARCHITECT.
 3. OPPOSED BLADE DAMPER.
 4. 1/2"x1/2"x1" OR 1/2"x1/2"x1/2" W/ 45 DEG. DEFLECTION GRID.

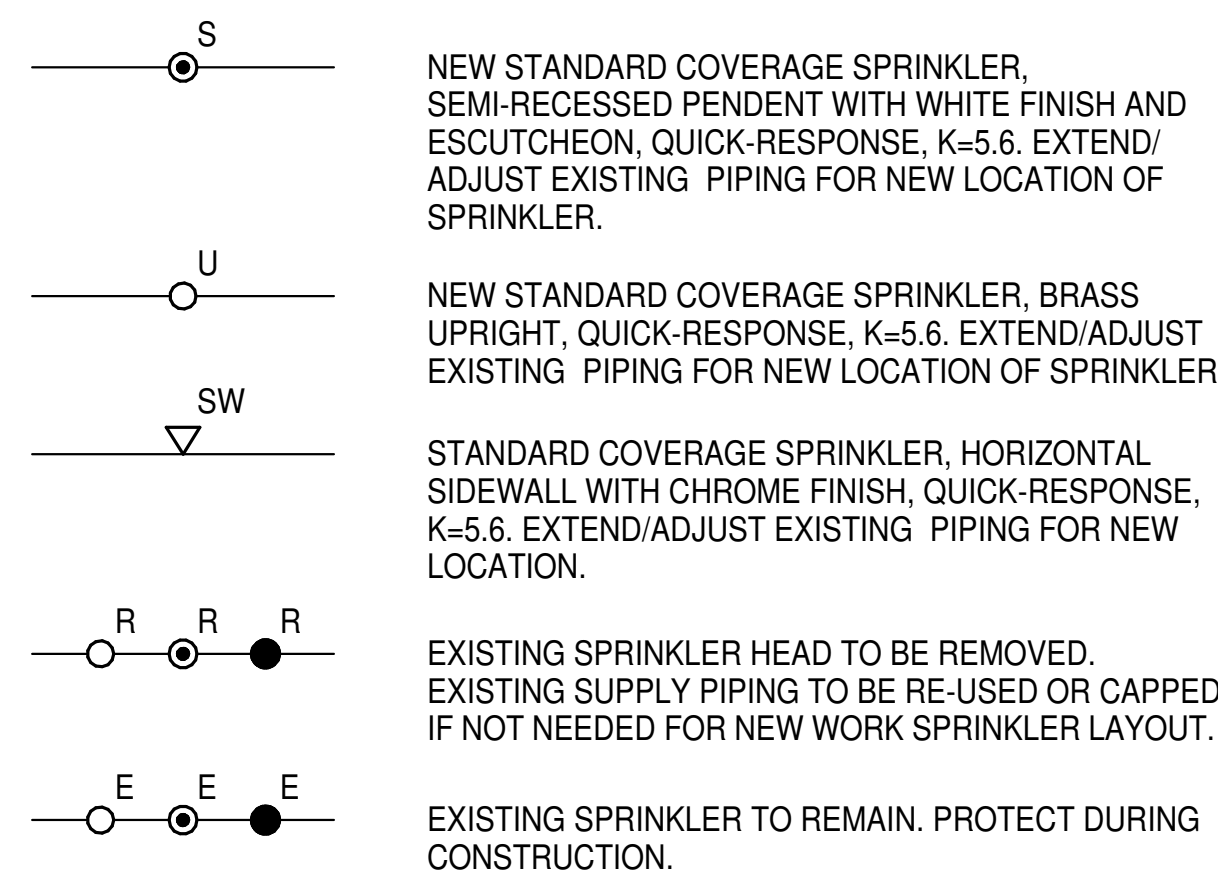
FLOOR PLAN TAG LEGEND:
 S= SUPPLY
 R= RETURN/RELIEF
 E= EXHAUST
 AIR FLOW (CFM)
 NECK SIZE (IN.)

BIDDING NOTE:
 SEE DRAWINGS ME.1.10 FOR GENERAL NOTES AND ADDITIONAL DETAILS APPLICABLE TO THIS TRADES WORK.

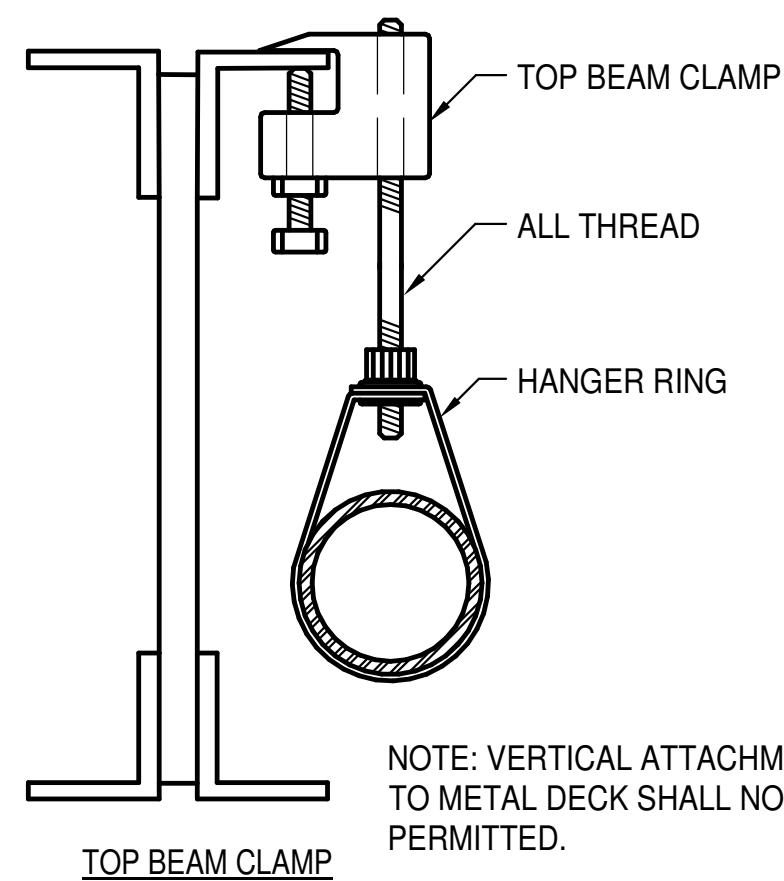
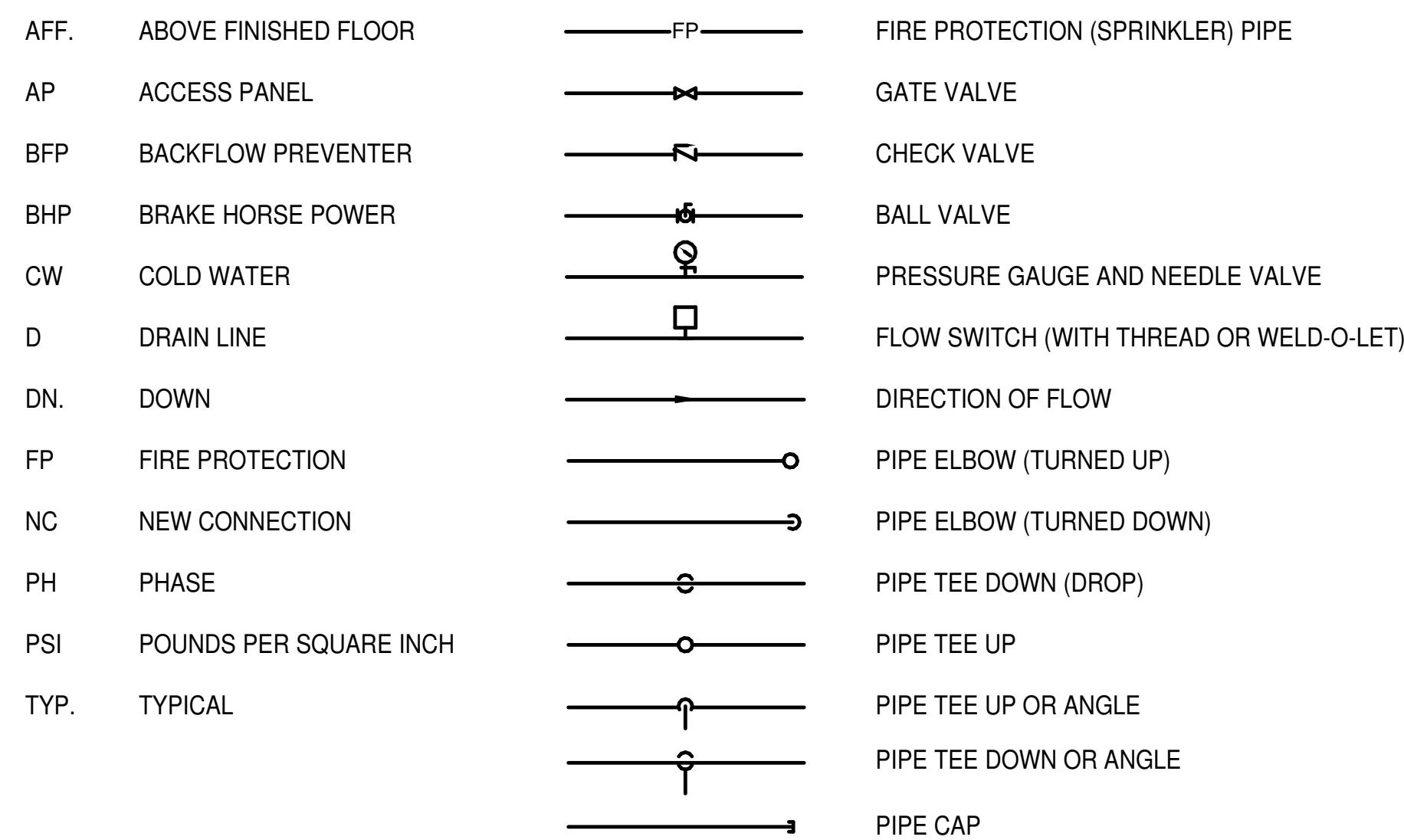
GENERAL NOTES - FIRE PROTECTION

- SYSTEM TO PROVIDE COVERAGE FOR RENOVATED AREAS. SYSTEM SHALL CONFORM TO THE DESIGN CRITERIA REQUIRED BY NFPA-13 AND THE LOCAL AUTHORITY HAVING JURISDICTION. WORKING PLANS AND CALCULATIONS SHALL BE SUBMITTED TO LOCAL APPROVAL AGENCIES AND TO OWNER'S FIRE PROTECTION CONSULTANT FOR APPROVAL.
- ALL WORK SHALL BE INSTALLED AND ALL MATERIALS SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE RULES AND REGULATIONS OF NFPA-13, 2010 EDITION AND ALL LOCAL AMENDMENTS.
- IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE ALL INSPECTIONS WITH THE LOCAL AUTHORITY HAVING JURISDICTION.
- CONTRACTOR SHALL PROVIDE WARRANTY FOR ALL MATERIAL AND GUARANTEE ALL WORKMANSHIP FOR (1) ONE YEAR FROM SUBSTANTIAL COMPLETION OF WORK.
- DRAWINGS ARE GENERALLY DIAGRAMMATIC. ROUTING OF PIPING, ETC., AS SHOWN ON DRAWINGS, DOES NOT INTEND TO SHOW EVERY RISE, DROP, OFFSET, FITTING NOR EVERY STRUCTURAL ELEMENT THAT MAY BE ENCOUNTERED DURING THE INSTALLATION OF THIS WORK. CONTRACTOR SHALL MAKE ANY REQUIRED CHANGES FROM THE GENERAL ROUTING SHOWN ON THESE DRAWINGS, SUCH AS OFFSETS, BENDS OR CHANGES IN ELEVATION DUE TO COORDINATION WITH THE WORK OF OTHER TRADES AND BUILDING CONSTRUCTION. ALL CHANGES SHALL BE MADE WITHOUT ADDITIONAL COST TO THE OWNER OR DELAY IN COMPLETION DATE OF THE PROJECT.
- ALL EXISTING PIPING INFORMATION SHOWN ON THIS DRAWING HAS BEEN OBTAINED FROM OWNER'S EXISTING CONSTRUCTION DOCUMENTS AND LIMITED FIELD SURVEY. EXACT LOCATION OF EXISTING SPRINKLER SYSTEM COMPONENTS SHALL BE FIELD VERIFIED BEFORE STARTING INSTALLATION.
- CONTRACTOR SHALL VERIFY EXISTING AVAILABLE FLOW DATA WITH OWNER'S FIRE PUMP SYSTEM AND FIELD CONDITIONS. CONTRACTOR TO CONTACT ARCHITECT/ENGINEER AND LOCAL MUNICIPALITY 48 HOURS PRIOR TO FLOW TEST.
- CONTRACTOR SHALL REVIEW ALL FLOOR PLANS AND DETERMINE EACH ROOM SPECIFIC HAZARD PER THE REQUIREMENTS OF NFPA-13. SPRINKLER DESIGN SHALL ADHERE TO THE STANDARDS SET FORTH IN NFPA-13.
- LIGHT HAZARD AREAS** SHALL BE DESIGNED TO 0.10 GPM PER SQUARE FOOT, 225 SQ.FT PER HEAD WITH A REMOTE AREA OF 1500 SQUARE FEET. AN AREA OF LESS THAN 1,500 SQUARE FEET MAY BE PERMITTED WHEN THE USE OF QUICK RESPONSE HEADS QUALIFIES FOR AN AREA REDUCTION. AREA SIZES SHALL BE DETERMINED BY THE REGULATIONS OF NFPA-13. ROOM TYPES SHALL INCLUDE BUT NOT BE LIMITED TO CLASSROOMS, TOILET ROOMS, CORRIDORS, VESTIBULES, MULTI-PURPOSE ROOMS, STAIRWAYS, EXAM ROOMS, OFFICE SPACES, ETC.
- ALL FIRE PROTECTION PIPING SHALL BE SUSPENDED WITH APPROVED/LISTED PIPE HANGERS IN COMPLIANCE WITH NFPA STANDARDS. CUTTING STRUCTURAL MEMBERS TO RUN PIPING, OR TO FACILITATE HANGER FASTENING IS NOT PERMITTED.
- VERTICAL ATTACHMENT TO METAL DECK AND WOOD TRUSS'S SHALL NOT BE PERMITTED. HORIZONTAL ATTACHMENT TO WOOD TRUSS SHALL BE MADE BY HORIZONTAL SUPPORT TO BOTTOM CORD OF TRUSS.
- FIRE PROTECTION SYSTEM SHALL INCLUDE ALL ITEMS FOR A COMPLETE SYSTEM. SPECIFICALLY THIS IS TO INCLUDE BUT NOT LIMITED TO: PIPE SUPPORTS, VALVES, GAUGES, TRIM, ALARMS, SPECIALTY DEVICES, CONTROLS, AND ITEMS INCIDENTAL TO A COMPLETE SYSTEM.
- CONTRACTOR SHALL PROVIDE ALL MEANS TO SHUT-DOWN EXISTING PIPING SYSTEMS WHERE REQUIRED TO COMPLETE WORK UNDER THIS CONTRACT. CONTRACTOR SHALL PROVIDE ALL NECESSARY VALVES TO ISOLATE RENOVATED SECTIONS OF THE BUILDING WITHOUT DISTURBING SECTIONS OF THE BUILDING NOT UNDER RENOVATION.
- INSTALL VALVES WITH STEMS UPRIGHT OR HORIZONTAL, NOT INVERTED.
- PROVIDE ACCESS TO ALL VALVES AND SYSTEM COMPONENTS REQUIRING ACCESS. ALL PIPING ACCESSORIES AND EQUIPMENT SUCH AS VALVES SHALL BE INSTALLED AT A REASONABLE HEIGHT AND POSITION IN ORDER TO FACILITATE MAINTENANCE.
- ALL SPRINKLER HEADS SHALL BE LOCATED IN THE CENTER OF 2x2 TILE OR QUARTER POINT OF 2x4 CEILING TILE UNLESS OTHERWISE NOTED OR DIRECTED BY THE ARCHITECT/ENGINEER OR LOCAL FIRE DEPARTMENT AUTHORITIES.
- OPTION FOR EXTENDED COVERAGE SPRINKLERS ALLOWED WHERE PRESSURE PERMITS.
- ALL SPRINKLER HEADS BELOW 7'-0" FEET OR IN MECHANICAL ROOMS, STORAGE ROOMS, GYMNASIUMS OR IN AREAS SUBJECT TO MECHANICAL INJURY SHALL HAVE AN APPROVED HEAD GUARD.
- CONTRACTOR SHALL PROVIDE ADDITIONAL SPRINKLER HEADS ABOVE AND BELOW MECHANICAL/ ELECTRICAL DUCTS AND EQUIPMENT WHICH EXCEEDS 48 INCHES IN WIDTH.
- FLEXIBLE CONNECTION TO SPRINKLER HEADS SHALL NOT BE PERMITTED.
- SPRINKLER HEADS SHOWN ARE MINIMUMS. CONTRACTOR SHALL PROVIDE ADDITIONAL HEADS AS REQUIRED TO COORDINATE WITH ARCHITECTURAL REFLECTED CEILING PLANS OR TO PROVIDE ADEQUATE COVERAGE AS SPECIFIED OR REQUIRED BY APPROPRIATE HAZARD CLASS.
- MINIMUM PIPE SIZE SHALL BE 1 INCH. ANY REDUCING OF SIZE SHALL OCCUR AT SPRINKLER HEAD CONNECTION.
- SPRINKLER PIPING SHALL NOT BE INSTALLED DIRECTLY OVER ANY ELECTRICAL EQUIPMENT PANELS, TELEPHONE OR LOW VOLTAGE EQUIPMENT OR SIMILAR TYPE OF EQUIPMENT. ALL PIPE AND FITTINGS SHALL BE INSTALLED IN RUST-FREE CONDITION.
- THE USE OF THREADED BUSHINGS WILL NOT BE PERMITTED IN ANY AREA OF THIS INSTALLATION.
- ALL PIPING SHALL BE HYDROSTATICALLY TESTED @ 200 PSI FOR NO LESS THAN 2 HOURS. THE FIRE DEPARTMENT SHALL BE NOTIFIED (NO LESS THAN 48 HOURS PRIOR) OF THE DATE AND TIME OF THE TEST AND MAY WITNESS IT IF SO DESIRED OR REQUIRED.
- ALL PIPING PASSING THRU' FLOOR CONSTRUCTION SHALL HAVE A SCHEDULE 40 STEEL PIPE SLEEVE INSTALLED AROUND PIPE ONLY. ALL PIPE PASSING THRU WALLS SHALL HAVE A GALVANIZED SHEET METAL OR SCHEDULE 40 STEEL PIPE SLEEVE INSTALLED AROUND THE PIPE. ALL EXPOSED PIPE WHICH PASSES THROUGH A WALL OR CEILING SHALL BE EQUIPPED WITH AN ESCUTCHEON PLATE.
- ALL PIPING SHALL BE INSTALLED TO ALLOW FOR PROPER DRAINING OF ENTIRE SYSTEM PER NFPA-13.
- SCREWED UNIONS SHALL NOT BE PERMITTED ON PIPING LARGER THAN 2 INCHES.
- ALL NEW CONNECTIONS MADE TO AN EXISTING SYSTEM MAIN SHALL BE ACCOMPLISHED WITH A CUT-IN OR TEE FITTING OF EQUAL SIZE TO THAT OF THE EXISTING MAIN.
- PROVIDE PIPE LABELING IDENTIFICATION PER ASME A13.1. SEE DETAIL FOR ADDITIONAL INFORMATION. PIPE LABELS SHALL BE WRAP AROUND TYPE. SELF ADHESIVE TYPE SHALL NOT BE PERMITTED.
- GENERAL PURPOSE FIRE STOPPING SEALANT SHALL BE DOW CORNING, NELSON OR 3M COMPANY; WATER BASED, NON SLUMPING, PREMIXED SEALANT WITH INTUMESCENT PROPERTIES, RATED FOR 3 HOURS PER ASTM E814, NFPA AND UL-1479. FILL ALL VOIDS AROUND ALL PIPING PENETRATIONS THROUGH WALLS AND CEILINGS WITH A MINIMUM 1 HOUR FIRE RATING. PROVIDE PVC COLLAR ASSEMBLY AT ALL PVC PIPING PENETRATIONS THROUGH FIRE WALLS, FLOORS OR CEILING WHERE REQUIRED BY LOCAL FIRE DISTRICT.

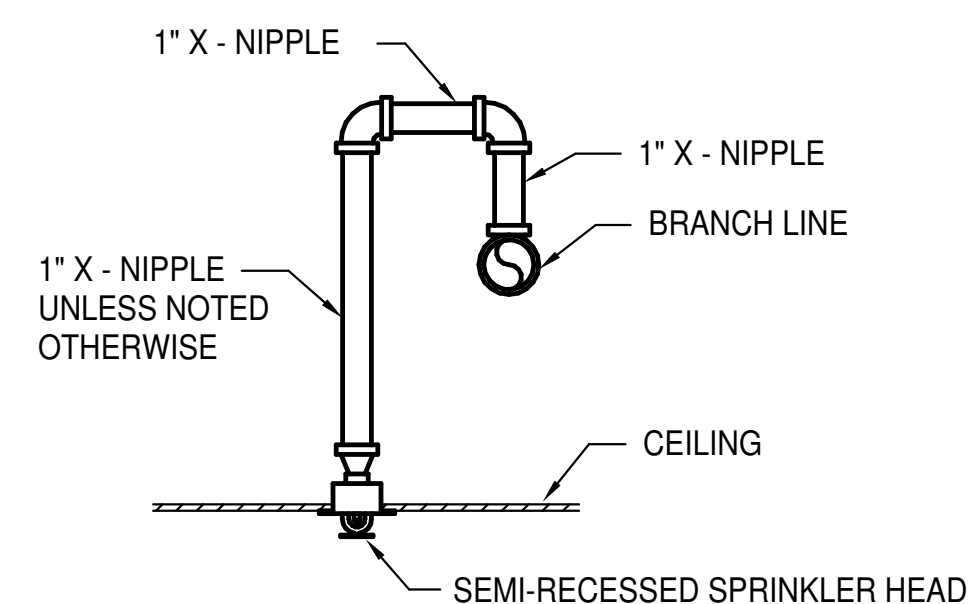
SPRINKLER SYMBOLS AND ABBREVIATIONS



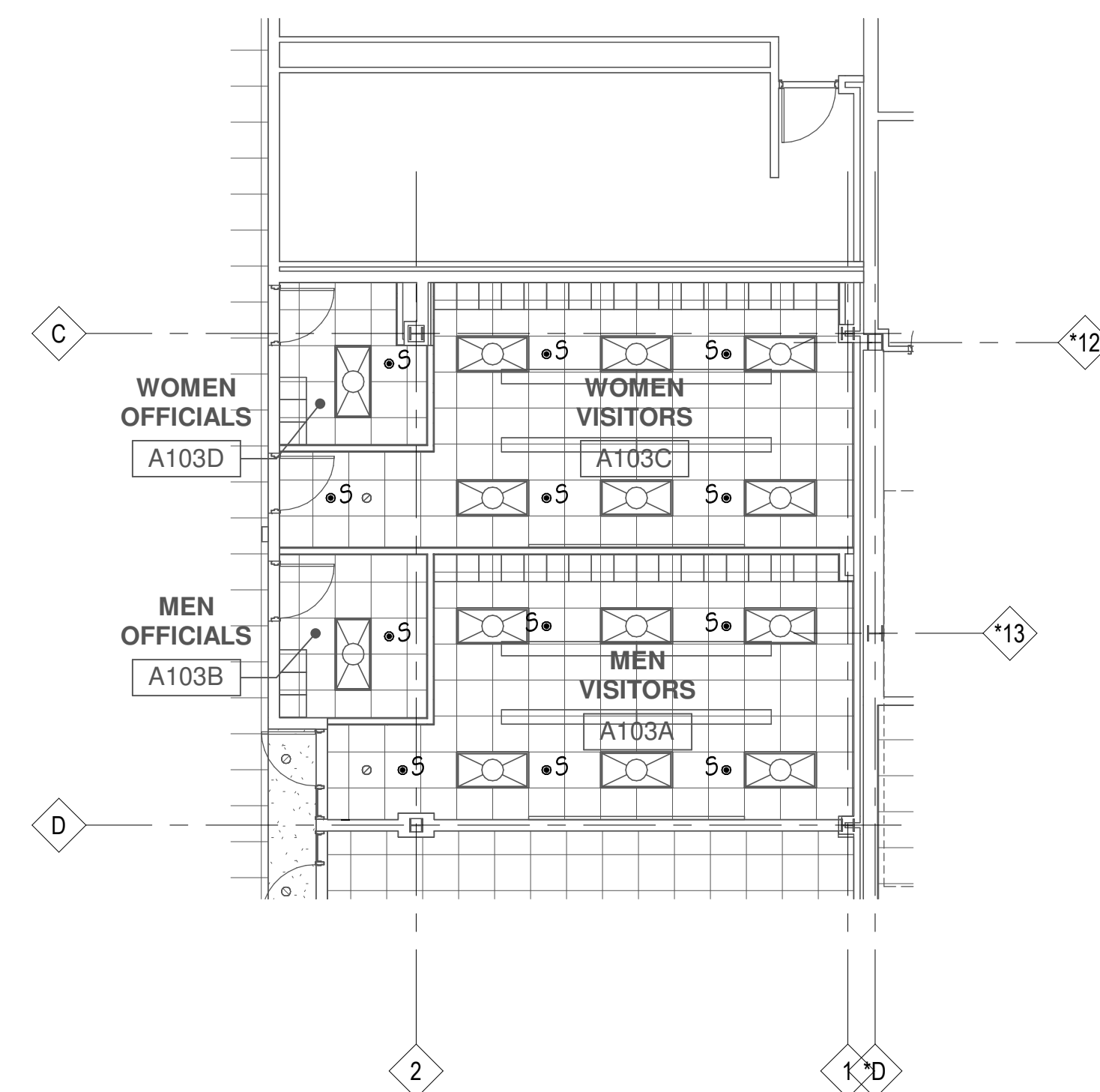
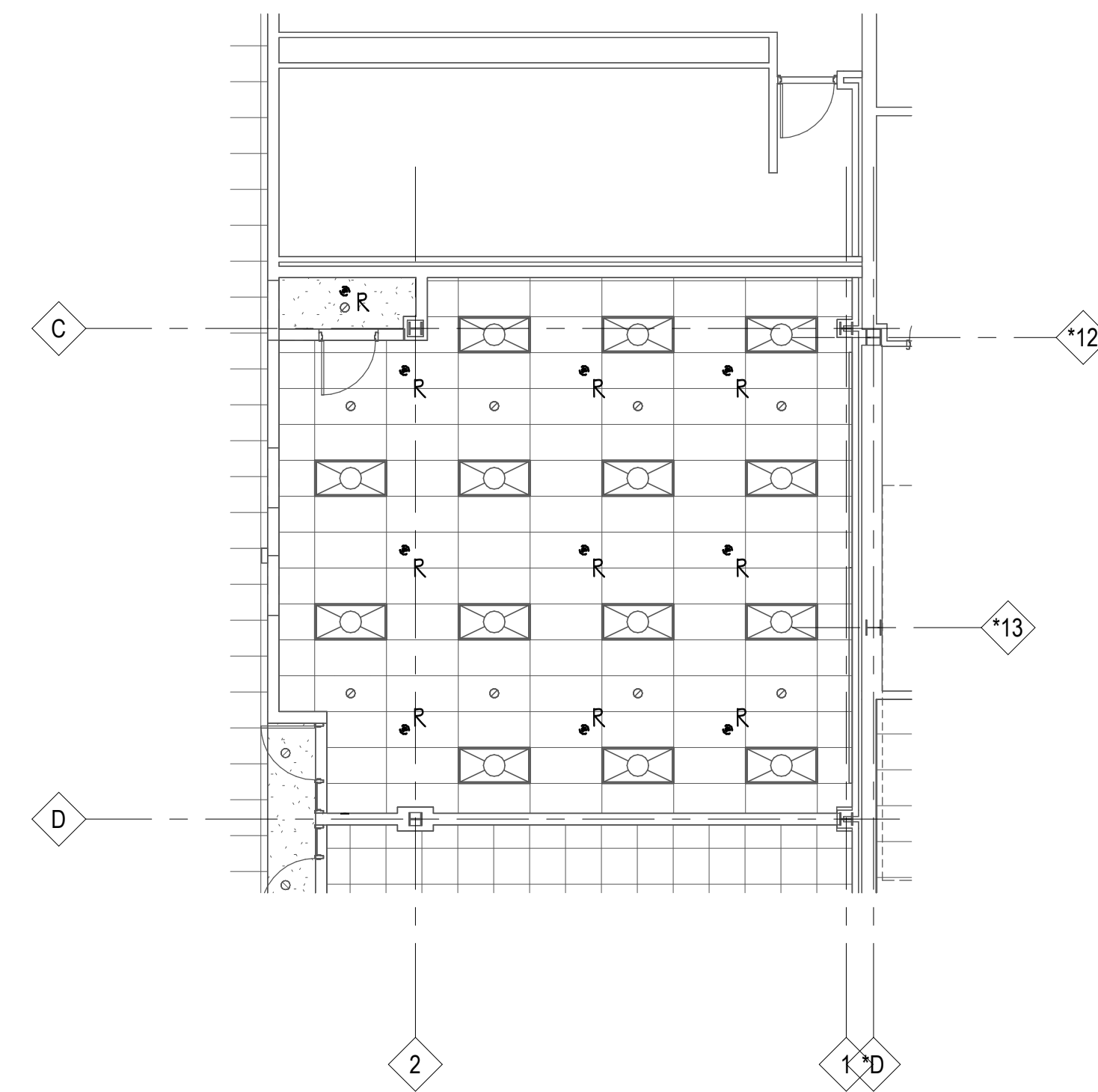
FIRE PROTECTION SYMBOLS AND ABBREVIATIONS



TYPICAL HANGER DETAILS
NO SCALE



RETURN BEND DETAIL
NO SCALE



THE FOLLOWING ITEMS ARE CLARIFICATIONS TO THE CONTRACTOR REGARDING THE SHUT DOWN OF THE EXISTING SPRINKLER SYSTEM AND FIRE DEPARTMENT OPERATIONAL REQUIREMENTS

- FIRE PROTECTION SPRINKLER SYSTEM MUST REMAIN OPERATIONAL DURING TIMES THAT BUILDING IS OCCUPIED BY STUDENTS AND STAFF.
- DAILY ACTIVATION AND DEACTIVATION OF THE SPRINKLER SYSTEM FOR MODIFICATION OF PIPING AND SPRINKLER INSTALLATION IS THE CONTRACTOR'S RESPONSIBILITY. CONTRACTOR SHALL DRAIN ZONE AS NEEDED TO PERFORM WORK. SPRINKLER SYSTEM MUST BE RESTORED TO OPERATIONAL CONDITION INCLUDING REFILLING AND VENTING OF SYSTEM AT COMPLETION OF EACH DAY'S WORK.
- ALL TIMES OF SPRINKLER SYSTEM SHUT-DOWN ARE SUBJECT TO OWNERS DISCRETION AND MAY HAVE RESTRICTIONS BASED ON SCHEDULED EVENTS AT FACILITY. ALL ASPECTS OF SPRINKLER SYSTEM SHUT-DOWN SHALL BE COORDINATED WITH OWNER. CONTRACTOR MAY REQUEST TO DEVIATE FROM SCHEDULED AVAILABLE SHUT-DOWN TIMES HOWEVER OWNER SHALL REVIEW EACH REQUEST AND APPROVE OR DENY ANY SUCH REQUEST.

BIDDING NOTE
SEE DRAWING ME1.10 FOR GENERAL NOTES AND ADDITIONAL DETAILS APPLICABLE TO THIS TRADE'S WORK.



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MCHENRY COUNTY COLLEGE
VISITING TEAM CHANGING ROOMS

8900 US Hwy 14
Crystal Lake, IL 60012
DKA PROJECT NO: 22-006

KEY PLAN:

SHEET STATUS: 04/28/2023
ISSUED FOR BIDS - NOT FOR CONSTRUCTION

NO.	DESCRIPTION:	DATE:

SHEET TITLE:
FIRE PROTECTION PLANS

SHEET NUMBER:
FP1.10



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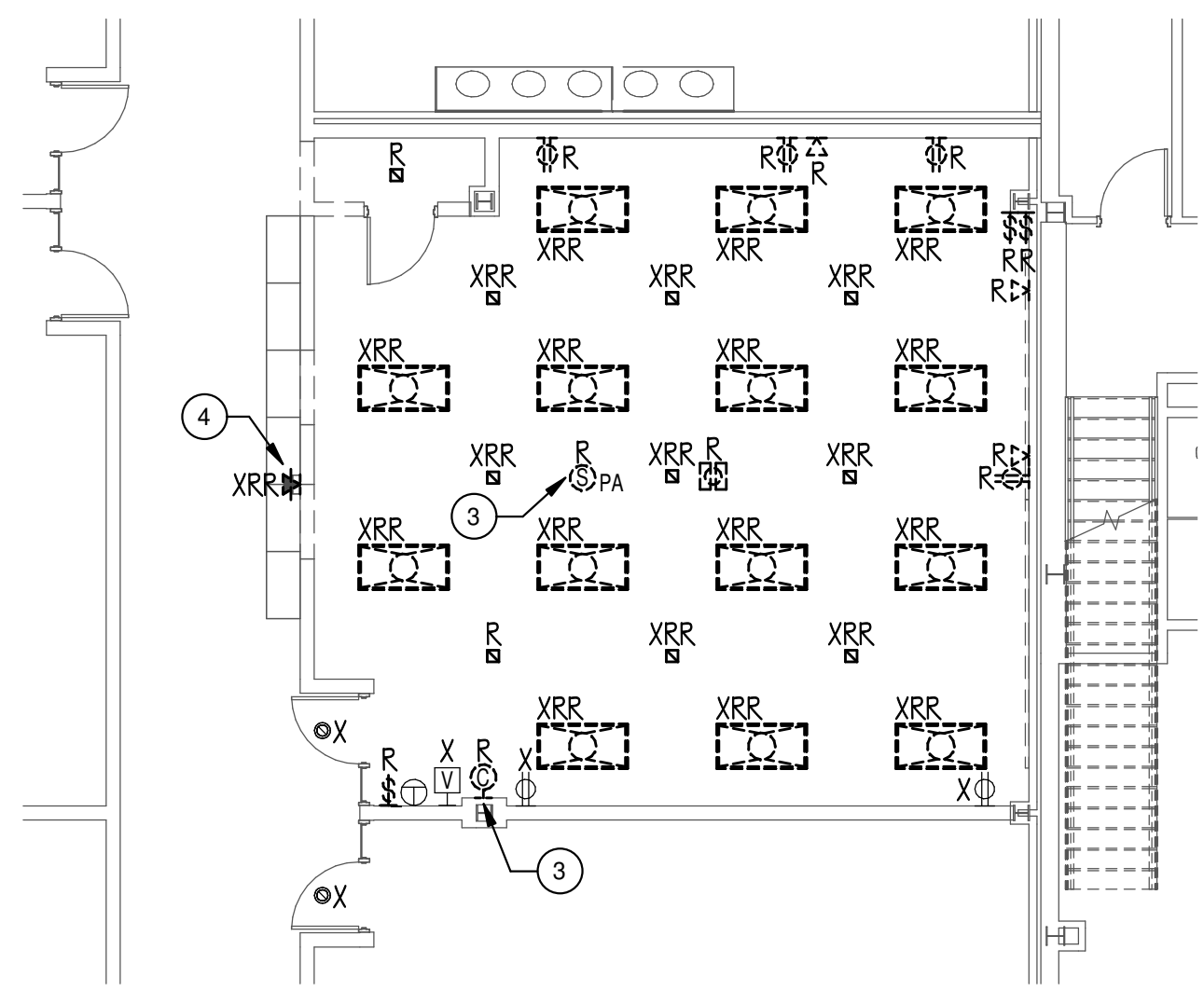
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ELECTRICAL PLANS

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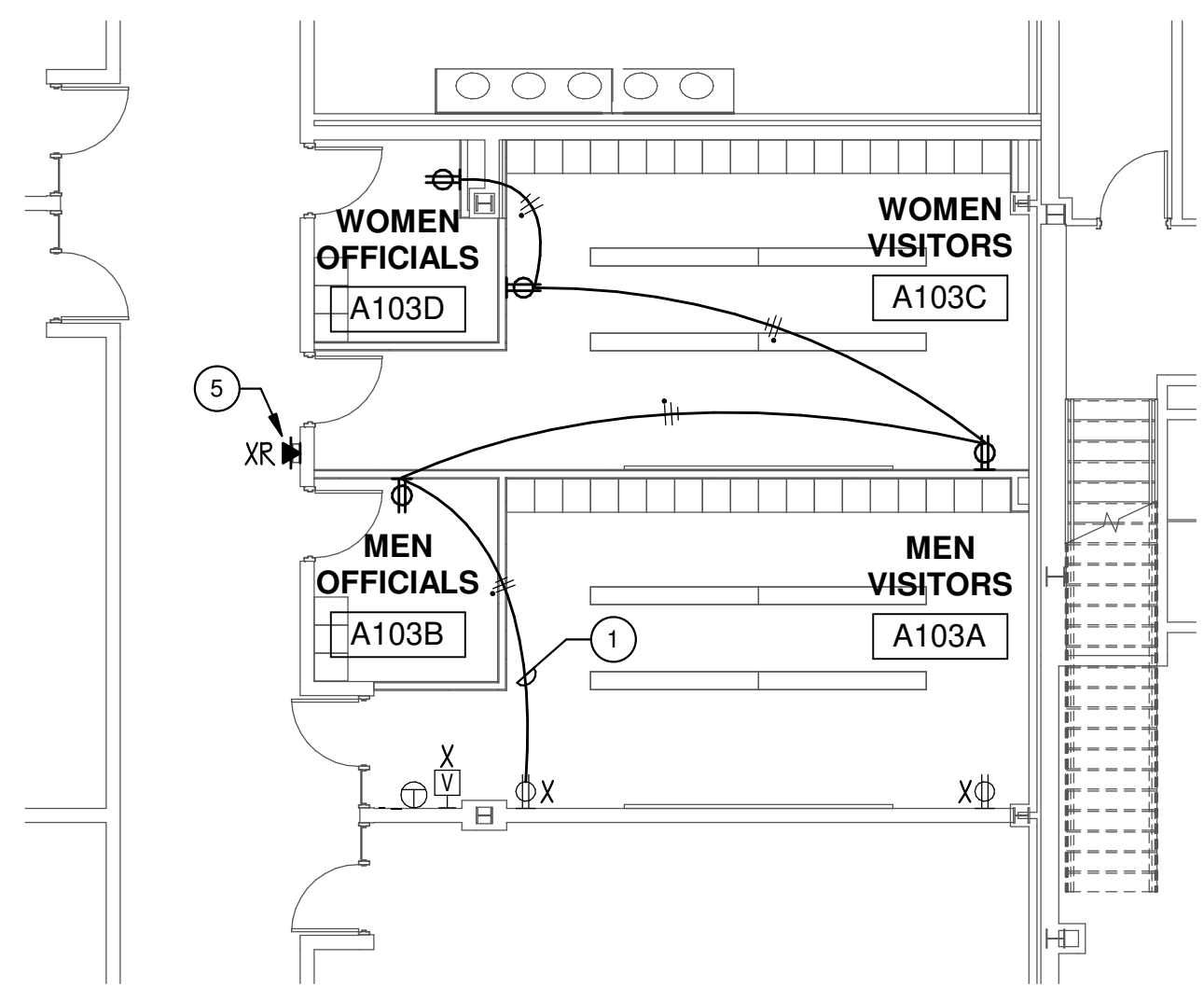
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DRAWING NOTES

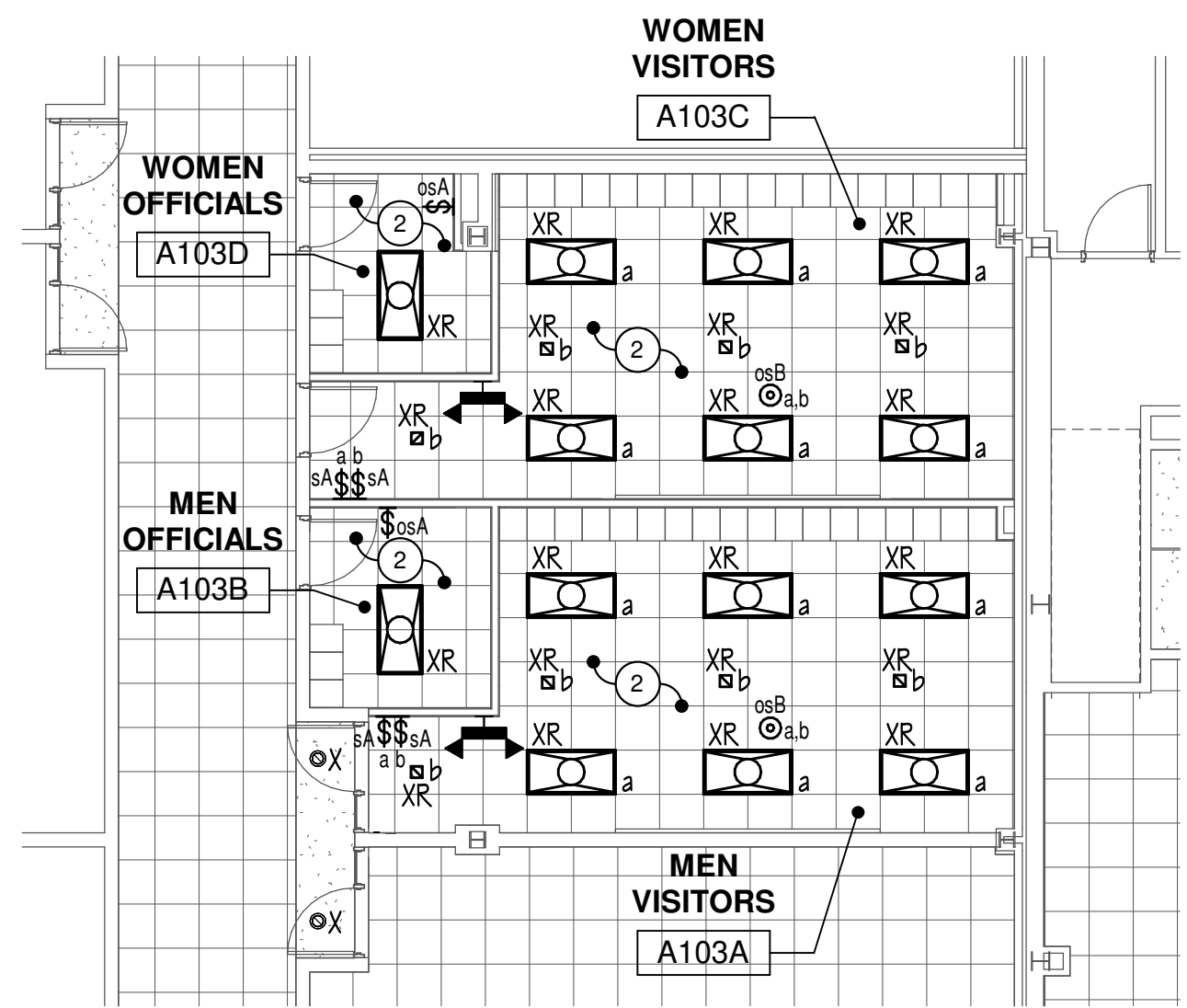
- 1 WIRE TO EXISTING RECEPTACLE BRANCH CIRCUIT CURRENTLY SERVING THIS AREA WITH CAPACITY. FIELD VERIFY EXACT REQUIREMENTS.
- 2 LUMINAIRES SHALL RECONNECT TO EXISTING LIGHTING BRANCH CIRCUIT SERVING AREA. PROVIDE NEW LIGHTING CONTROL AS INDICATED. FIELD VERIFY EXACT REQUIREMENTS.
- 3 CAREFULLY DISCONNECT, REMOVE AND TURN OVER EQUIPMENT TO OWNER'S REPRESENTATIVE.
- 4 CAREFULLY DISCONNECT, REMOVE, STORE AND PROTECT EXISTING WALL PHONE FOR RE-INSTALLATION AT NEW LOCATION. EXISTING CABLES SHALL BE PULLED BACK TO THE ACCESSIBLE CEILING SPACE AND PROTECTED DURING CONSTRUCTION FOR RE-USE.
- 5 RE-INSTALL WALL PHONE AT NEW LOCATION. RE-ROUTE EXISTING CABLE IN NEW SURFACE MOUNTED RACEWAY, WIREMOLD 700 SERIES OR EQUAL, FOR TERMINATION AT WALL PHONE. FIELD VERIFY EXACT REQUIREMENTS.



1 VISITING TEAM LOCKERS ELECTRICAL DEMOLITION PLAN
 1/8" = 1'-0"



2 VISITING TEAM LOCKERS ELECTRICAL PLAN
 1/8" = 1'-0"



3 VISITING TEAM LOCKERS LIGHTING PLAN
 1/8" = 1'-0"

EMERGENCY LIGHTING SCHEDULE

SYMBOL	TAG	DESCRIPTION	MOUNTING	LAMPS	VOLTAGE	MANUFACTURER & CATALOG NUMBER	ALTERNATIVE MANUFACTURER	NOTES
	EM1	DUAL HEAD EMERGENCY LIGHTING UNIT WITH WHITE CONTEMPORARY THERMOPLASTIC ENCLOSURE	SURFACE/WALL	LED	UVOLT	LITHONIA LIGHTING #ELM2L-UVOLT-LTP-SDRT	DUAL-LITE, HE WILLIAMS	1

NOTES:
 1. CONNECT ALL BATTERY LIGHT FIXTURES TO LOCAL UNSWITCHED NORMAL LIGHTING CIRCUIT.

GENERAL NOTES:
 a. CONTRACTOR TO PROVIDE ALL NECESSARY MOUNTING HARDWARE AND LABOR FOR ALL DEVICES.
 b. BATTERIES SHALL BE CAPABLE OF PROVIDING ILLUMINATION FOR A MINIMUM OF 90 MINUTES.

LIGHTING CONTROL DEVICES SCHEDULE

SYMBOL	TYPE	DESCRIPTION	MOUNTING	MANUFACTURER & CATALOG NUMBER	ACCEPTABLE MANUFACTURERS
	osA	WALL SWITCH SENSOR, LOW VOLTAGE, DUAL TECHNOLOGY	WALL	ACUITY HLIGHT #N5XA-PDT-LV	HUBBELL LIGHTING CONTROLS, LUTRON
	osB	EXTENDED RANGE 360°, LOW VOLTAGE, DUAL TECHNOLOGY	CEILING	ACUITY HLIGHT #ICM-PDT-10-RJB	HUBBELL LIGHTING CONTROLS, LUTRON
	sa	ON/OFF SINGLE ZONE PUSH-BUTTON CONTROL STATION	WALL	ACUITY HLIGHT #nPODMA	HUBBELL LIGHTING CONTROLS, LUTRON

GENERAL NOTES:
 a. ALL SENSOR LOCATIONS ARE APPROXIMATE, REFER TO MANUFACTURERS INSTALLATION INSTRUCTIONS PRIOR TO INSTALLATION.
 b. ULTRASONIC CEILING MOUNT SENSORS SHOULD BE LOCATED A MINIMUM OF SIX FEET FROM HVAC SUPPLY/RETURN VENTS.
 c. CONTRACTOR IS RESPONSIBLE FOR: PROPER SENSITIVITY & TIME DELAY SETTINGS (FOR NON-ADAPTIVE PRODUCTS) RECOMMENDED PLACEMENT, AND FIELD VERIFICATION OF CIRCUITS WITH IN RESPECT TO POWER PLACEMENT.
 d. CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFICATION OF REQUIRED NUMBER OF POWER PACKS:
 • ONE POWER PACK IS REQUIRED FOR EACH CIRCUIT TO BE CONTROLLED.
 • ONE POWER PACK IS REQUIRED FOR EACH ZONE.
 • IF MULTIPLE CIRCUITS ARE TO BE CONTROLLED BY A SENSOR, AN AUXILIARY RELAY CAN BE USED IN CONJUNCTION WITH THE POWER PACK.
 • THE MAXIMUM NUMBER OF SENSORS THAT CAN BE PUT ON A POWER PACK IS TO BE REDUCED BY ONE FOR EACH SLAVE PACK USED.
 e. MOUNT CONTROL UNITS WITHIN JUNCTION BOXES INSTALLED PER ALL CODE REQUIREMENTS.
 f. CONTROL WIRING BETWEEN SENSORS AND CONTROLS UNITS SHALL BE CLASS II, 18-24 AWG, STRANDED UL CLASSIFIED. WHERE RETURN AIR PLENUM IS UTILIZED, ALL CONTROL WIRING SHALL BE PLENUM-RATED.
 g. SENSORS MOUNTED OVER THE DOOR MUST BE PLACED ONE FOOT INSIDE THE THRESHOLD.
 h. SENSOR PLACEMENT ON PLANS IS APPROXIMATE. CONTRACTOR IS RESPONSIBLE FOR ENGAGING A MANUFACTURER TO PRODUCE A MOTION SENSOR LAYOUT THAT IS COMPLIANT WITH THE GOVERNING ENERGY CODE.
 i. CONTRACTOR IS RESPONSIBLE FOR ENSURING MOTION CONTROL OF ALL LOCATIONS SHOWN ON PLAN.
 j. CONTRACTOR IS RESPONSIBLE FOR INSTALLING EQUIPMENT IN COMPLIANCE WITH LOCAL CODE.
 k. PRODUCTS FROM SPECIFIED AND ACCEPTABLE MANUFACTURERS SHALL PROVIDE SAME LEVEL OF CONTROL.

ELECTRICAL SYMBOL LIST (NOTE: NOT ALL SYMBOLS ARE USED IN THE PROJECT.)

	2' X 4' LUMINAIRE, RECESSED OR SURFACE MOUNTED PER LUMINAIRE SCHEDULE.
	1' X 4' LUMINAIRE, RECESSED OR SURFACE MOUNTED PER LUMINAIRE SCHEDULE.
	2' X 2' LUMINAIRE, RECESSED OR SURFACE MOUNTED PER LUMINAIRE SCHEDULE.
	HALF SHADING DENOTES FIXTURE UNSWITCHED 'NIGHTLIGHT'.
	STRIP LUMINAIRE PER LUMINAIRE SCHEDULE.
	RECESSED OR SURFACE CEILING MOUNTED LUMINAIRE PER LUMINAIRE SCHEDULE.
	ILLUMINATED EXIT OR STAIR SIGN, SURFACE CEILING MOUNTED, SINGLE OR DOUBLE FACE, WITH OR WITHOUT DIRECTIONAL ARROWS PER SCHEDULE. - 'WG' DENOTES WIRE GUARD.
	ILLUMINATED EXIT OR STAIR SIGN, SURFACE WALL MOUNTED, SINGLE OR DOUBLE FACE, WITH OR WITHOUT DIRECTIONAL ARROWS PER SCHEDULE. - 'WG' DENOTES WIRE GUARD.
	SELF-CONTAINED EMERGENCY LUMINAIRE, WITH BATTERY BACK-UP AND SOLID STATE CHARGER PER SCHEDULE. - 'WG' DENOTES WIRE GUARD.
	SINGLE POLE 20 AMP 120-277 VOLT TOGGLE SWITCH INSTALLED 48" A.F.F. - 'K' DENOTES KEYPED SWITCH.
	THREE-WAY 20 AMP 120-277 VOLT TOGGLE SWITCH INSTALLED 48" A.F.F. - 'K' DENOTES KEYPED SWITCH.
	WALL MOUNT COMBINATION OCCUPANCY SENSOR AND SWITCH PER SCHEDULE.
	OCCUPANCY SENSOR, LETTER INDICATES MODEL AND TYPE PER SCHEDULE.
	ELECTRICAL DEVICE MOUNTED ON SURFACE RACEWAY, WIREMOLD 700 SERIES U.N.O.
	SURFACE MOUNTED (EXPOSED) CONDUIT, BACKBOX FOR DEVICE AS SHOWN.
	20A, 2P, 3 WIRE, GROUNDING TYPE, 125V, SPECIFICATION-GRADE, TAMPER-RESISTANT TYPE DUPLEX RECEPTACLE NEMA 5-20R INSTALLED +16" A.F.F. UNLESS NOTED OTHERWISE. - 'GFI' DENOTES RECEPTACLE EQUIPPED WITH INTEGRAL GROUND FAULT CIRCUIT INTERRUPTER. - 'USB' DENOTES RECEPTACLE EQUIPPED WITH (2) USB PORTS. - 'WP' DENOTES WEATHER-RESISTANT RECEPTACLE WITH LOW-PROFILE WHILE-IN-USE WEATHERPROOF COVER.
	20A, 2P, 3 WIRE, GROUNDING TYPE, 125V, SPECIFICATION-GRADE, TAMPER-RESISTANT TYPE DUPLEX RECEPTACLE NEMA 5-20R INSTALLED 6" ABOVE COUNTER TOP OR +42" A.F.F. UNLESS NOTED OTHERWISE. - 'GFI' DENOTES RECEPTACLE EQUIPPED WITH INTEGRAL GROUND FAULT CIRCUIT INTERRUPTER. - 'USB' DENOTES RECEPTACLE EQUIPPED WITH (2) USB PORTS.
	TWO 20A, 2P, 3 WIRE, GROUNDING TYPE, SPECIFICATION-GRADE, TAMPER-RESISTANT TYPE DUPLEX RECEPTACLES NEMA 5-20R INSTALLED +16" A.F.F. UNLESS NOTED OTHERWISE. - 'GFI' DENOTES RECEPTACLE EQUIPPED WITH INTEGRAL GROUND FAULT CIRCUIT INTERRUPTER. - 'USB' DENOTES RECEPTACLE EQUIPPED WITH (2) USB PORTS.
	CIRCUIT BREAKER PANELBOARD.
	CEILING JUNCTION BOX.
	WALL MOUNTED JUNCTION BOX.
	JUNCTION BOX WITH FLEXIBLE CONDUIT FOR FINAL CONNECTION TO EQUIPMENT.
	THERMOSTAT, PROVIDE RECESSED JUNCTION BOX AND CONDUIT STUB-UP, REFER TO MECHANICAL PLANS FOR EXACT QUANTITY AND LOCATION.
	CO2 SENSOR, PROVIDE RECESSED JUNCTION BOX AND CONDUIT STUB-UP, REFER TO MECHANICAL PLANS FOR EXACT QUANTITY AND LOCATION.
	CONDUIT ROUTED CONCEALED IN WALLS AND CEILING. HASH MARKS DENOTE QUANTITY OF #12 MINIMUM AWG CONDUCTORS OR AS NOTED.
	CONDUIT ROUTED EXPOSED. INSTALL PARALLEL TO WALLS AND CEILINGS. HASH MARKS DENOTE QUANTITY OF #12 MINIMUM AWG CONDUCTORS OR AS NOTED.
	DENOTES CONDUIT HOMERUN, 3/4" MINIMUM, PANEL DESTINATION AND CIRCUIT NUMBER(S) AS INDICATED.
	SHORT TICK MARK DENOTES LINE (HOT) OR SWITCH LEG CONDUCTOR, #12 MINIMUM AWG.
	LONG TICK MARK DENOTES NEUTRAL CONDUCTOR, #10 AWG MINIMUM.
	DENOTES INSULATED GROUND WIRE, #12 AWG MINIMUM.
	CONDUIT END CAP.
	CONDUIT WALL SLEEVES FOR ROUTING OF LOW VOLTAGE CABLING. EACH PENETRATION IS TO PROVIDE A MINIMUM OF (1) 1 1/4" CONDUIT (DATA) # (1) 1" CONDUIT (FIRE ALARM/INTERCOM) U.N.O.
	DATA OUTLET LOCATION INSTALLED 16" A.F.F. U.N.O.
	DATA OUTLET LOCATION INSTALLED 42" A.F.F. U.N.O.
	DATA OUTLET LOCATION, CEILING MOUNTED.
	FLUSH CEILING SPEAKER, ROUND OR SQUARE.
	CLOCK, COMPATIBLE WITH EXISTING MASTER CLOCK SYSTEM.
	VOLUME CONTROL SWITCH INSTALLED 48" A.F.F. TO TOP OF DEVICE.
	CALL SWITCH, COMPATIBLE WITH EXISTING INTERCOM SYSTEM, INSTALLED 48" A.F.F. TO TOP OF DEVICE.
	CEILING MOUNTED WIRELESS ACCESS POINT.
	FIRE ALARM SYSTEM PULL STATION INSTALLED 48" A.F.F.
	FIRE ALARM SYSTEM STROBE NOTIFICATION DEVICE INSTALLED 80" A.F.F. - 'WG' DENOTES WIRE GUARD.
	FIRE ALARM SYSTEM HORN/STROBE NOTIFICATION DEVICE INSTALLED 80" A.F.F. - 'WG' DENOTES WIRE GUARD.
	FIRE ALARM SYSTEM STROBE NOTIFICATION DEVICE, CEILING MOUNTED. - 'WG' DENOTES WIRE GUARD.
	FIRE ALARM SYSTEM HORN/STROBE NOTIFICATION DEVICE, CEILING MOUNTED. - 'WG' DENOTES WIRE GUARD.
	FIRE ALARM SYSTEM CEILING SMOKE DETECTOR. - 'WG' DENOTES WIRE GUARD.
	FIRE ALARM SYSTEM CEILING HEAT DETECTOR. - 'FT' DENOTES FIXED TEMPERATURE. - 'WG' DENOTES WIRE GUARD.
	FIRE ALARM CONTROL PANEL.
	FIRE ALARM ANNUNCIATOR PANEL.
	SECURITY CAMERA. (WALL MOUNT)
	SECURITY CAMERA. (MOUNTED IN THE ACOUSTIC CEILING TILE)
	ACCESS CONTROL CREDENTIAL READER.

GENERAL REMODELING NOTE: (APPLICABLE TO ALL SHEETS.)

- WORK SHOWN ON DRAWINGS SHALL BE CONSIDERED NEW AND IN CONTRACT UNLESS SPECIFICALLY INDICATED OTHERWISE.
- DRAWINGS ARE GENERALLY DIAGRAMMATIC. ROUTING OF CONDUITS, RACEWAYS, ETC., AS SHOWN ON DRAWINGS, DOES NOT INTEND TO SHOW EVERY RISE, DROP, OFFSET, FITTING NOR EVERY STRUCTURAL ELEMENT THAT MAY BE ENCOUNTERED DURING THE INSTALLATION OF THIS WORK. EACH CONTRACTOR SHALL MAKE ANY REQUIRED CHANGES FROM THE GENERAL ROUTING SHOWN ON THESE DRAWINGS, SUCH AS OFFSETS, BENDS OR CHANGES IN ELEVATION DUE TO COORDINATION WITH THE WORK OF OTHER TRADES AND BUILDING CONSTRUCTION. ALL CHANGES SHALL BE MADE WITHOUT ADDITIONAL COST TO THE OWNER OR DELAY IN COMPLETION DATE OF THE PROJECT.
- IT IS INTENDED THAT EQUIPMENT SHALL BE LOCATED SYMMETRICALLY WITH THE ARCHITECTURAL ELEMENTS OF THE BUILDING, NOTWITHSTANDING THE FACT THAT LOCATIONS INDICATED BY THESE DRAWINGS MAY BE DISTORTED FOR CLEARNESS OF PRESENTATION.
- CONTRACTOR SHALL CHECK DRAWINGS OF OTHER TRADES TO VERIFY THAT SPACES IN WHICH THEIR WORK WILL BE INSTALLED ARE CLEAR OF OBSTRUCTIONS. WORK SHALL BE INSTALLED TO MAINTAIN MAXIMUM HEADROOM AND SPACE CONDITIONS AT ALL POINTS IN THE BUILDING. WHERE HEADROOM OR SPACE CONDITIONS APPEAR INADEQUATE, CONTRACTOR SHALL NOTIFY ARCHITECT/ENGINEER BEFORE PROCEEDING WITH THE INSTALLATION OF THEIR WORK.
- CONTRACTOR SHALL FURNISH OTHER TRADES ADVANCE INFORMATION AND/OR SHOP DRAWINGS ON LOCATIONS AND SIZES OF PIPING, DUCTWORK, CONDUIT, RACEWAYS, EQUIPMENT, FRAMES, BOXES, SLEEVES AND OPENINGS, ETC. NEEDED FOR THEIR WORK TO PERMIT OTHER TRADES AFFECTED TO INSTALL THEIR WORK PROPERLY AND WITHOUT DELAY.
- WHERE THERE IS EVIDENCE THAT WORK OF ONE TRADE WILL INTERFERE WITH WORK OF OTHER TRADES, ALL TRADES SHALL MEET ON JOB SITE TO WORK OUT SPACE CONDITIONS AND MAKE SATISFACTORY ADJUSTMENTS TO INSTALLATION OF THE NEW WORK. CONTRACTORS SHALL VERIFY EXACT LOCATIONS OF ALL DEVICES AND EQUIPMENT WITH FIELD CONDITIONS, SHOP DRAWINGS, AND WORK OF OTHER TRADES PRIOR TO ROUGH-IN. EACH CONTRACTOR SHALL BE RESPONSIBLE, AT THEIR OWN EXPENSE, FOR THE REMOVAL AND REINSTALLATION OF ANY PART OF THEIR WORK IF SAME WAS INSTALLED WITHOUT CONSULTING WITH OTHER TRADES BEFORE INSTALLING THEIR WORK.
- CONTRACTOR SHALL PROVIDE SLEEVES IN BEAMS, FLOORS, COLUMNS AND WALLS AS SHOWN ON THE DRAWINGS, AS REQUIRED BY JOB SITE CONDITIONS, AND/OR AS SPECIFIED, WHEN INSTALLING THEIR WORK. ALL BEAMS AND COLUMNS WHICH ARE REQUIRED TO BE SLEEVED SHALL BE CUT AND REINFORCED AS REQUIRED BY FIELD CONDITIONS AND LOCATIONS AND SIZES SHALL BE CHECKED AND APPROVED BY ARCHITECT BEFORE CONTRACTOR CUTS ANY STRUCTURAL BUILDING MEMBER.
- THE SEQUENCE FOR THE INSTALLATION OF ALL WORK SHALL BE COORDINATED BETWEEN ALL CONTRACTORS ON THE PROJECT AND IN STRICT ACCORDANCE WITH ARCHITECT/ENGINEER AND OWNER'S STIPULATION AS DIRECTED.
- CONTRACTOR SHALL REFER TO THE ARCHITECTURAL AND STRUCTURAL CONTRACT DRAWINGS (BEFORE SUBMITTING THEIR BIDS) TO FAMILIARIZE THEMSELVES WITH THE EXTENT OF THE GENERAL CONTRACTORS WORK, CEILING HEIGHTS AND CLEARANCE FOR INSTALLING THEIR WORK.
- CONTRACTOR SHALL BE RESPONSIBLE AND PAY FOR ALL CORING, CUTTING, PATCHING, REPAIRING, REFINISHING AND REMOVAL/REPLACEMENT OF NEW BUILDING CONSTRUCTION REQUIRED TO ACCOMMODATE THE INSTALLATION OR REMOVAL OF THEIR WORK. REMOVE, STORE AND REINSTALL CEILING TILES AS REQUIRED TO INSTALL WORK ABOVE EXISTING CEILINGS WHICH REMAIN. REPLACE TILES BROKEN OR DAMAGED DURING CONSTRUCTION. ALL PATCHING, REPAIRING AND REFINISHING WORK SHALL BE PERFORMED BY THOSE REGULARLY INVOLVED IN THAT TRADE AND SHALL MATCH THE ADJACENT CONSTRUCTION AS CLOSELY AS POSSIBLE. CARE SHALL BE TAKEN SO AS NOT TO DAMAGE ANY EXISTING BUILDING CONSTRUCTION OR ITEMS THAT ARE TO REMAIN. ANY EXISTING FINISHES THAT ARE DAMAGED DURING THE INSTALLATION OF NEW WORK OR REMOVAL OF EXISTING WORK SHALL BE REPAIRED, REPLACED AND PAID FOR BY THE INSTALLING CONTRACTOR, TO THE SATISFACTION OF THE ARCHITECT AND OWNER. REFER TO ARCHITECTURAL DRAWINGS FOR EXISTING BUILDING CONSTRUCTION THAT IS TO REMAIN AND, THEREFORE, SUBJECT TO PATCHING, REPAIRING, REFINISHING, AND REMOVAL/REPLACEMENT.
- CONTRACTOR SHALL BE RESPONSIBLE FOR THEIR OWN CLEAN-UP DURING CONSTRUCTION. IF CONTRACTOR FAILS TO PROVIDE SUCH CLEAN-UP, THE ARCHITECT/ENGINEER WILL DIRECT ANOTHER CONTRACTOR TO PERFORM THE CLEAN-UP AND THE NEGLIGENT CONTRACTOR SHALL PAY THE ASSOCIATED BACK-CHARGES AS DEEMED APPROPRIATE BY THE ARCHITECT/ENGINEER.
- CONTRACTOR SHALL INSTALL ALL AUXILIARY SUPPORTING STEEL AS REQUIRED FOR THE SUPPORTING OF THEIR CONDUIT, EQUIPMENT, ETC. ALL SUPPORTING STEEL FOR ITEMS ABOVE A SUSPENDED CEILING SHALL BE FROM BUILDING STRUCTURAL MEMBERS ONLY.
- IT IS MANDATORY THAT THE COMPLETE EXISTING BUILDING REMAIN IN CONTINUOUS AND NON-INTERRUPTED OPERATION DURING REMODELING/ALTERING OF SAID EXISTING BUILDING. THE SPECIFIC AREAS) BEING REMODELED/ALTERED AT ANY SCHEDULED TIME ARE OBVIOUSLY EXCLUSIVE OF THIS STATEMENT. SERVICES TO EXISTING BUILDING SHALL BE KEPT IN CONTINUOUS OPERATION INCLUDING POWER, SIGNAL SYSTEMS, LIGHTING, TELEPHONE, HEATING, COOLING, VENTILATING, TEMPERATURE CONTROL. ANY ABSOLUTELY NECESSARY INTERRUPTION OF THESE SERVICES TO ACCOMPLISH CONTRACT WORK SHALL BE ARRANGED WITH THE OWNER A MINIMUM OF TEN (10) WORKING DAYS IN ADVANCE. SUCH INTERRUPTIONS SHALL BE KEPT TO AN ABSOLUTE MINIMUM AS FAR AS TIME INTERVAL IS INVOLVED AND TEMPORARY SERVICES SHALL BE FURNISHED AND INSTALLED UNDER THIS CONTRACT WHERE NECESSARY TO ACCOMPLISH THIS PURPOSE. TEMPORARIES SHALL BE REMOVED BY THE CONTRACTOR ONLY AFTER NEW PERMANENT SERVICES ARE INSTALLED AND FULLY OPERATIONAL.
- UNLESS INDICATED OTHERWISE, THE ARCHITECT/ENGINEER MAKES NO REPRESENTATION AS TO WHETHER OR NOT ANY HAZARDOUS OR CONTAMINATED MATERIALS (INCLUDING BUT NOT LIMITED TO ASBESTOS, PCB'S, CONTAMINATED SOILS, ETC.) ARE PRESENT WITHIN THE EXISTING BUILDING OR ON THE SITE. WORK SHOWN ON THE DRAWINGS AND/OR INDICATED IN THE SPECIFICATIONS SHALL NOT BE CONSTRUED TO CALL FOR CONTACT WITH ANY OF THESE MATERIALS. IF THESE MATERIALS ARE ENCOUNTERED OR SUSPECTED, THE CONTRACTOR SHALL NOT DISTURB THEM AND SHALL CONTACT THE ARCHITECT/ENGINEER IMMEDIATELY.
- CONTRACTOR SHALL STORE ALL MATERIALS AND EQUIPMENT SHIPPED TO THE SITE IN A PROTECTED AREA. IF MATERIAL IS STORED OUTSIDE OF THE BUILDING, IT MUST BE STORED OFF THE GROUND A MINIMUM OF SIX INCHES (6") SET ON G X G FLANKS AND/OR WOOD PALLETS. ALL MATERIAL AND EQUIPMENT MUST BE COMPLETELY COVERED WITH WATERPROOF TARP'S OR VISQUIN. ALL CONDUIT WILL HAVE THE ENDS CLOSED TO KEEP OUT DIRT AND OTHER DEBRIS. NO EQUIPMENT WILL BE ALLOWED TO BE STORED ON THE SITE UNLESS IT IS SITTING ON WOOD PLANKS AND COMPLETELY PROTECTED WITH WEATHERPROOF COVERS.
- THE DRAWINGS, SCHEDULES AND SPECIFICATIONS HAVE BEEN PREPARED USING ONE MANUFACTURER FOR EACH PIECE OF EQUIPMENT AS THE BASIS FOR DIMENSIONAL DESIGN. IF THE CONTRACTOR PURCHASES EQUIPMENT FROM A SPECIFIED ACCEPTABLE MANUFACTURER, BUT NOT THE SCHEDULED MANUFACTURER USED FOR THE BASE DESIGN, THE CONTRACTOR SHALL BE RESPONSIBLE FOR CHECKING ALL THE DIMENSIONS OF THE EQUIPMENT TO VERIFY THAT IT WILL FIT IN THE SPACE SHOWN ON THE DRAWINGS. MINOR DEVIATIONS IN DIMENSIONS WILL BE PERMITTED, PROVIDED THE RATINGS MEET THOSE SHOWN ON THE DRAWINGS AND EQUIPMENT WILL PHYSICALLY FIT INTO THE SPACE ALLOCATED WITH SUITABLE ACCESS AROUND EQUIPMENT FOR OPERATION AND MAINTENANCE OF THE EQUIPMENT. WHEN EQUIPMENT SUBMITTED FOR REVIEW DOES NOT MEET THE PHYSICAL SIZE OR ARRANGEMENT OF THAT SCHEDULED AND SPECIFIED, CONTRACTOR SHALL PAY FOR ALL ALTERATIONS REQUIRED TO ACCOMMODATE SUCH EQUIPMENT AT NO ADDITIONAL COST TO THE OWNER. CONTRACTOR WILL ALSO PAY ALL COSTS FOR ADDITIONAL WORK REQUIRED BY OTHER CONTRACTORS, OWNER, ARCHITECT OR ENGINEER TO MAKE CHANGES WHICH WOULD ALLOW THE EQUIPMENT TO FIT IN THE SPACE AND FUNCTION AS INTENDED.
- CONTRACTOR AND/OR MANUFACTURER SHALL VERIFY THAT THE CHARACTERISTICS OF THE EQUIPMENT HE SUBMITS FOR REVIEW MEET THE CAPACITY AND DUTY SPECIFIED.
- CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND THEIR ASSOCIATED FEES.

GENERAL NOTE:
CONTRACTOR SHALL MAINTAIN FIRE RATING OF ALL PARTITIONS FOR NEW PENETRATIONS. ANY PENETRATIONS THROUGH WALLS AND FLOORS SHALL BE PROPERLY SEALED AND TREATED TO MAINTAIN THE FIRE STOPPING RATING OF THE WALL. CABLING SHALL NOT PENETRATE WALLS UNLESS ROUTED THROUGH RACEWAY SYSTEM OR ROUTED ABOVE ACCESSIBLE CEILINGS THROUGH METALLIC CONDUIT SLEEVES, EXTENDING A MINIMUM OF 6" EACH SIDE OF THE WALL WITH PROTECTIVE END BUSHINGS TO PREVENT DAMAGE TO CABLES. VOIDS AROUND SLEEVES SHALL BE SEALED WITH APPROPRIATE MATERIALS AS TO MAINTAIN THE ACOUSTIC OR FIRE RATING OF WALLS ABOVE AND BELOW CEILINGS. CABLES RAN THROUGH VOIDS WITHOUT SLEEVES OR RACEWAYS WILL NOT BE ACCEPTABLE. CONTRACTOR SHALL VERIFY EXISTING FIRE PARTITIONS IN THE FIELD.

GENERAL NOTE:
REFER TO ARCHITECTURAL FLOOR PLANS FOR ADDITIONAL INFORMATION REGARDING MOUNTING HEIGHTS AND LOCATIONS OF ELECTRICAL DEVICES BEFORE ROUGH-IN.

WHERE CONFLICTS BETWEEN ELECTRICAL & ARCHITECTURAL ELEVATIONS ARISE, CONTRACTOR TO VERIFY WITH ARCHITECT/ENGINEER TEAM PRIOR TO ROUGH-IN.

GENERAL NOTE:
EXISTING CONDITIONS WERE OBTAINED FROM EXISTING AS-BUILT DRAWINGS AND CURSORY FIELD OBSERVATION. THIS CONTRACTOR SHALL IDENTIFY ANY DISCREPANCIES IN THE FIELD AND REPORT THEM TO THE ENGINEER.

BIDDING NOTE:
SEE DRAWINGS ME1.10 FOR GENERAL NOTES AND ADDITIONAL DETAILS APPLICABLE TO THIS TRADES WORK.

GENERAL NOTE:
INCIDENTAL WORK MAY ALSO BE NECESSARY DUE TO CHANGES AFFECTING, FIRE ALARM, ELECTRICAL, OR OTHER SYSTEMS. SUCH INCIDENTAL WORK IS ALSO PART OF THIS CONTRACT. INSPECT THOSE AREAS, ASCERTAIN WORK NEEDED, AND DO THAT WORK IN ACCORD WITH THE CONTRACT REQUIREMENTS, AT NO ADDITIONAL COST. THE REMOVAL & REINSTALLATION OF EXISTING WORK TO ACCOMMODATE CHANGES TO EXISTING, OR INSTALLATION OF, ELECTRICAL, OTHER SYSTEMS IS ALSO PART OF THIS CONTRACT.

GENERAL ELECTRICAL DEMOLITION NOTES: (APPLICABLE TO ALL SHEETS.)

- ALL INDICATED ELECTRICAL EQUIPMENT, LUMINAIRES, DEVICES, AND RELATED CONDUIT AND CABLING TO BE REMOVED UNLESS NOTED OTHERWISE.
- ALL DEMOLITION OF THE ELECTRICAL SYSTEM AS NOTED ON THE DEMOLITION DRAWINGS SHALL BE COORDINATED WITH THE RENOVATION REQUIREMENTS TO DETERMINE THIS CONTRACTOR'S WORK.
- IT IS THE INTENT OF THE ELECTRICAL DEMOLITION DRAWING(S) TO INDICATE AREAS IN WHICH ELECTRICAL EQUIPMENT, CONDUIT, LUMINAIRES, DEVICES, ETC. NEED TO BE REMOVED, RELOCATED, OR MODIFIED BY THIS CONTRACTOR TO ALLOW FOR THE RENOVATION PHASE OF CONSTRUCTION. THE ELECTRICAL DEMOLITION PLAN IS FOR REFERENCE PURPOSES ONLY AND IT IS NOT INTENDED TO BE THE SOLE SOURCE OF EXISTING CONDITIONS.
- CONTRACTOR SHALL VISIT THE BUILDING, BEFORE SUBMITTING THEIR BID, TO VERIFY THE EXISTING CONDITIONS WHICH WILL AFFECT THEIR WORK.
- CONTRACTOR SHALL BE RESPONSIBLE FOR THE COMPLETE ELECTRICAL DEMOLITION REQUIRED TO ACCOMMODATE THE RENOVATION. REMOVE AS REQUIRED ALL LUMINAIRES, CONNECTIONS TO MECHANICAL EQUIPMENT, DEVICES, ETC.. PULL OUT ALL UNUSED CONDUCTORS AND CABLES, AND REMOVE ALL ABANDONED CONDUIT. ELECTRICALLY DISCONNECT AIR HANDLING UNITS, PUMPS, BOILERS, AND OTHER SUCH EQUIPMENT FOR REMOVAL BY OTHERS. BACKFEED AS REQUIRED ALL DOWNSTREAM DEVICES WHICH REMAIN. (THE CONTRACTOR SHALL COORDINATE WITH THE OWNER WHICH ITEMS INDICATED TO BE REMOVED & DISCONNECTED SHALL BE SALVAGED AND PRESENTED TO THE OWNER PRIOR TO ANY DISPOSAL OF THESE ITEMS.)
- ALL REMOVED EQUIPMENT SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE SITE. WHERE WORK CALLED FOR ON THE DRAWINGS OR IN THE SPECIFICATIONS INVOLVES THE REMOVAL OF FLUORESCENT LAMPS CONTAINING MERCURY OR CLOTH INSULATED CONDUCTORS, THEY SHALL BE PROPERLY HANDLED AND REMOVED FROM SITE BY APPROVED METHODS PER EPA REGULATIONS.
- ALL EXISTING RECEPTACLES/DATA OUTLETS/DEVICES/EQUIPMENT THAT ARE NOT PART OF DEMOLITION SHALL REMAIN AS IS UNLESS NOTED OTHERWISE. CONTRACTOR SHALL CHECK AND VERIFY FOR CONTINUING OPERATION OF THESE DEVICES PRIOR TO SUBSTANTIAL COMPLETION. IF ANY EXISTING CIRCUITS TO REMAIN ARE INTERRUPTED BY DEMOLITION OR NEW CONSTRUCTION, CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACEMENT/REMOVAL/ROUTING/MODIFICATION OF CONDUITS AND WIRES INCLUDING EXTENSION, AS REQUIRED TO MAINTAIN FUNCTIONALITY OF DOWNSTREAM RECEPTACLES/DATA OUTLETS/DEVICES/EQUIPMENT.
- THE CONTRACTOR SHALL COORDINATE WITH THE PROJECT PHASING AND MAINTAIN EXISTING SYSTEMS ACTIVE IN AREAS WHICH REMAIN OCCUPIED.
- EXISTING CEILING MOUNTED SPEAKERS, PROGRAM BELLS, FIRE ALARM DEVICES, AND SIMILAR ELECTRICAL EQUIPMENT AND DEVICES TO REMAIN SHALL BE EXTENDED AND REINSTALLED AS REQUIRED IN NEW CEILINGS. FIELD VERIFY EXACT QUANTITIES AND REQUIREMENTS.
- SUPPORT ALL CABLING DRAPED OR LYING LOOSE ABOVE EXISTING CEILINGS WHICH ARE SCHEDULED TO BE REMOVED. TIE WRAP CABLING TO JOISTS OR OTHER STRUCTURAL MEMBERS AS REQUIRED. UPON THE COMPLETION OF THE PROJECT, NO CABLING SHALL BE LYING ON ACCESSIBLE CEILINGS.
- WHERE EXISTING DEVICE IS REMOVED FROM WALL WITH NO NEW DEVICE GOING BACK AT SAME LOCATION, PROVIDE BLANK BRUSHED STAINLESS STEEL COVER PLATES AS REQUIRED. COVER PLATES SHALL BE OF PROPER SIZE AND INSTALLED FLUSH WITH WALL.

GENERAL ELECTRICAL NOTES: (APPLICABLE TO ALL SHEETS.)

- THE MINIMUM WIRE SIZE SHALL BE #12 AWG. THE MINIMUM CONDUIT SIZE FOR HOMERUNS AND BRANCH FEEDS TO POWER OUTLETS SHALL BE 3/4". 1/2" CONDUIT IS ACCEPTABLE FOR BRANCH WIRING TO END OF THE LINE RECEPTACLES ONLY. ALL BRANCH CIRCUITS SHALL TERMINATE AT 20A-1P CIRCUIT BREAKERS IN PANELBOARD INDICATED UNLESS NOTED OTHERWISE.
- PROVIDE ALL PENETRATIONS, SLEEVES, AND SEALANT AS REQUIRED THROUGH PARTITIONS TO ACCOMMODATE THE FIRE ALARM, PAGING, CLOCK, VOICE, AND DATA CABLING. ANY PENETRATIONS THROUGH WALLS AND FLOORS SHALL BE PROPERLY SEALED AND TREATED TO MAINTAIN THE FIRE STOPPING RATING OF THE WALLS, FLOORS, AND CEILINGS.
- BACKBOXES ARE TO BE MOUNTED OFFSET, NOT BACK TO BACK.
- CIRCUIT NUMBER(S), WHERE SHOWN, ARE TO INDICATE QUANTITY OF CIRCUITS REQUIRED. VERIFY EXACT CIRCUIT NUMBER TO BE UTILIZED IN FIELD. CONTRACTOR SHALL PROVIDE ACTUAL CIRCUITING AS PART OF 'AS BUILT' DRAWINGS.
- UNLESS INDICATED OTHERWISE, ALL MATERIALS REQUIRED TO PROVIDE BRANCH CIRCUITS AND FEEDERS ARE TO BE NEW.
- DURING THE COURSE OF INVESTIGATION AND DEMOLITION, IF IT IS DETERMINED THAT IT MAY BE FEASIBLE TO UTILIZE EXISTING MATERIALS FOR BRANCH CIRCUITS AND FEEDERS, CONTRACTOR SHALL NOTIFY ENGINEER FOR APPROVAL PRIOR TO PERFORMING ANY WORK.
- ANY ELECTRICAL DEVICES ON NEW WALLS SHALL BE FLUSH MOUNTED. NO WIREMOLDS ARE ACCEPTABLE ON NEW WALLS UNLESS NOTED OTHERWISE.
- VERIFY RECEPTACLE LOCATIONS WITH ARCHITECTURAL FURNITURE LAYOUT TO ENSURE PROPER ACCESSIBILITY.
- DRAWINGS DO NOT REPRESENT ALL EXISTING FIRE ALARM DEVICES. INITIATING AND NOTIFICATION DEVICES NOT SHOWN ON THE DRAWINGS ARE EXISTING TO REMAIN. IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN OPERATION OF THE EXISTING DEVICES NOT SHOWN.
- EXISTING FIRE ALARM SYSTEM SHALL BE OPERATIONAL AT ALL TIMES. THE OCCUPIED AREA OF THE BUILDING SHALL NOT BE LEFT UNPROTECTED AT ANY TIME. IF AN INTERRUPTION OF FIRE ALARM SYSTEM IS REQUIRED TO FACILITATE DEVICE INSTALLATION, PROVIDE 48 HOURS OF ADVANCE NOTICE TO THE OWNER AND THE LOCAL FIRE DEPARTMENT. CONTRACTOR SHALL HIRE AN AUTHORIZED PERSONNEL TO WATCH/GUARD ANY UNPROTECTED AREAS OF THE BUILDING WHERE NECESSARY.
- REMOVE AND REINSTALL CEILING MOUNTED DEVICES AS REQUIRED TO ALLOW INSTALLATION OF FEEDERS, BRANCH CIRCUITS, MECHANICAL PIPING, AND DUCT WORK. DEVICES INCLUDE BUT ARE NOT LIMITED TO: LUMINAIRES, SPEAKERS, FIRE ALARM, AND PAGING DEVICES.
- PROVIDE PULL BOX(ES) BETWEEN PULL POINTS AS REQUIRED TO COMPLY WITH NEC 344.26 SUCH THAT THERE SHALL NOT BE MORE THAN THE EQUIVALENT OF FOUR QUARTER BENDS (360 DEGREE TOTAL) BETWEEN PULL POINTS.
- SPECIAL ATTENTION SHALL BE PAID TO ALL CONDUIT ROUTING IN OPEN CEILING SPACE FOR AESTHETIC PURPOSES. ALL EXPOSED CONDUITS SHALL BE ROUTED PERPENDICULAR AND PARALLEL TO BUILDING LINES AND TIGHT TO CEILING/STRUCTURAL CORNERS. WHERE THIS IS NOT FEASIBLE, SUBMIT CONDUIT ROUTING PLAN TO ARCHITECT/ENGINEER FOR APPROVAL PRIOR TO INSTALLATION.
- IN RENOVATIONS, IF AN EXISTING RECEPTACLE/JUNCTION BOX LOCATION WILL END UP HIDDEN BEHIND PERMANENTLY INSTALLED EQUIPMENT OR CASEWORK, PROCEED AS NOTED BELOW:
A. IF THE RECEPTACLE IS AN END OF LINE DEVICE (IT DOES NOT FEED OTHER DEVICES), IT SHALL BE REMOVED INCLUDING ASSOCIATED WIRING BACK TO LAST ACTIVE DEVICE OR JUNCTION BOX AND A BLANK COVER PLATE INSTALLED.
B. IF THE RECEPTACLE DOES SERVE DOWNSTREAM DEVICES, REMOVE RECEPTACLE AND REWORK WIRING TO A NEW OR EXISTING JUNCTION BOX ABOVE CEILING SUCH THAT NO WIRES ARE PRESENT IN THE JUNCTION BOX. A BLANK COVER PLATE SHALL BE INSTALLED.
- CONTRACTOR SHALL PROVIDE DEDICATED NEUTRAL FOR EACH BRANCH CIRCUIT TO MEET THE REQUIREMENTS OF NEC ARTICLE 210.4(B).
- IN JUNCTION BOXES WHERE CURRENT CARRYING CONDUCTORS ARE SPICED OR TERMINATED, PROVIDE BOND TO JUNCTION BOX FROM EQUIPMENT GROUNDING CONDUCTOR.
- IN AREAS OF THE BUILDING WHERE NEW CEILING HEIGHT IS HIGHER THAN THE EXISTING CEILING HEIGHT, ANY EXISTING CONDUITS/CONDUCTORS AND JUNCTION BOXES SERVING EXISTING DEVICES/EQUIPMENT TO REMAIN SHALL BE RE-ROUTED, RELOCATED, AND MODIFIED AS REQUIRED TO ACCOMMODATE NEW CEILING HEIGHT. FIELD VERIFY EXACT CONDITIONS.
- IN AREAS OF THE BUILDING WHERE NEW DRYWALL OR PLASTER CEILING IS SCHEDULED TO BE INSTALLED, ANY EXISTING JUNCTION BOXES AND ASSOCIATED CONDUITS/CONDUCTORS SHALL BE MODIFIED AND RELOCATED AS REQUIRED TO AN ACCESSIBLE LOCATION UNLESS NEW ACCESS PANELS ARE PERMITTED TO BE INSTALLED IN NEW CEILING BY THE ARCHITECT.
- REFER TO MECHANICAL PLANS FOR EXACT LOCATIONS OF THERMOSTAT/CARBON DIOXIDE DETECTORS. PROVIDE SINGLE GANG BACKBOX AND EMPTY 3/4" CONDUIT WITH PULL STRING STUBBED INTO ACCESSIBLE CEILING SPACE FOR INSTALLATION OF THERMOSTAT/CARBON DIOXIDE DETECTORS. CABLING AND DEVICE SHALL BE BY OTHERS.
- CONDUCTORS FOR EQUIPMENT RATED 100AMP, AND BELOW ARE SIZED PER ARTICLE 110.14(C)(1)(a)(2) WHICH INDICATES TO UTILIZE THE 60° TEMPERATURE RATING COLUMN OF TABLE 310.15(B)(1) REGARDLESS OF CONDUCTOR INSULATION RATING.



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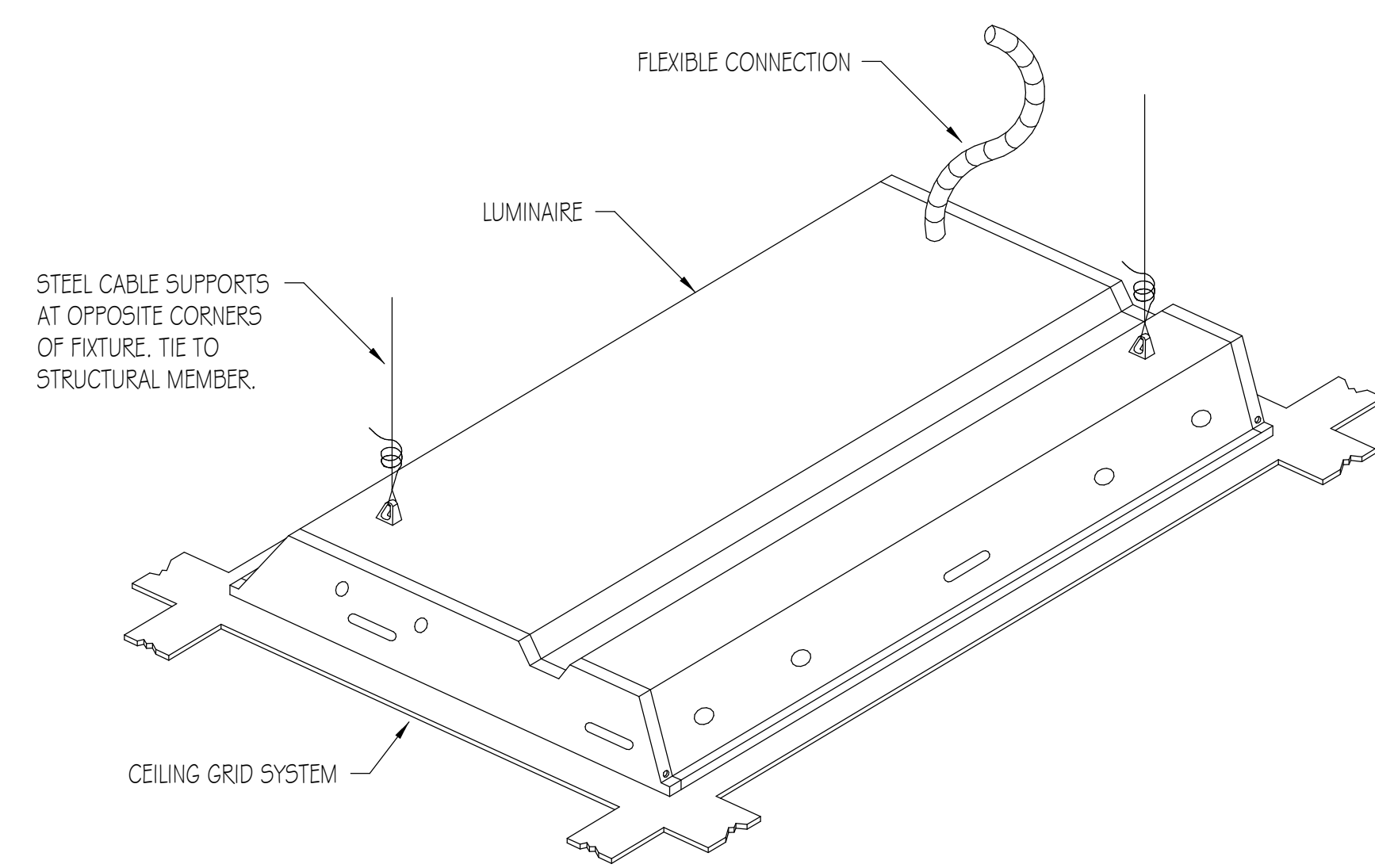
8900 US Hwy 14
Crystal Lake, IL 60012
DKA PROJECT NO: 22-006

KEY PLAN:

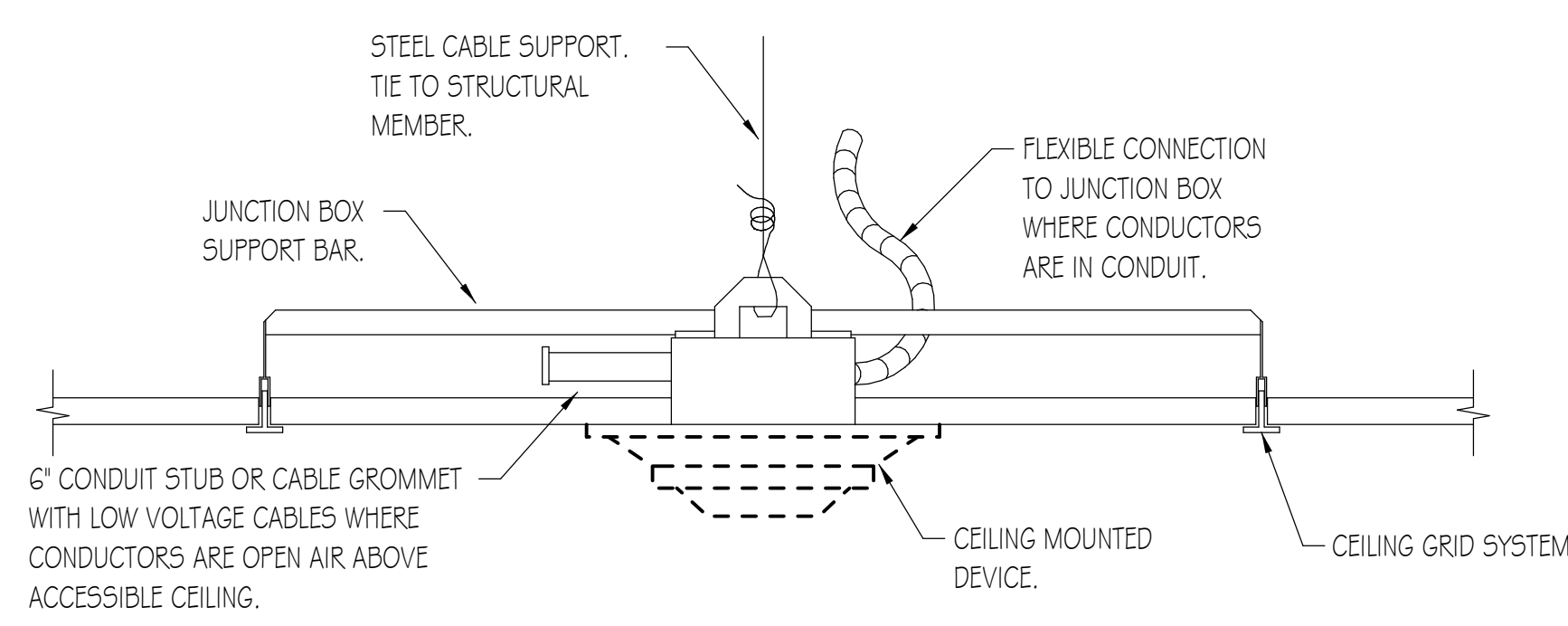
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SHEET TITLE:
ELECTRICAL SYMBOL LIST AND NOTES

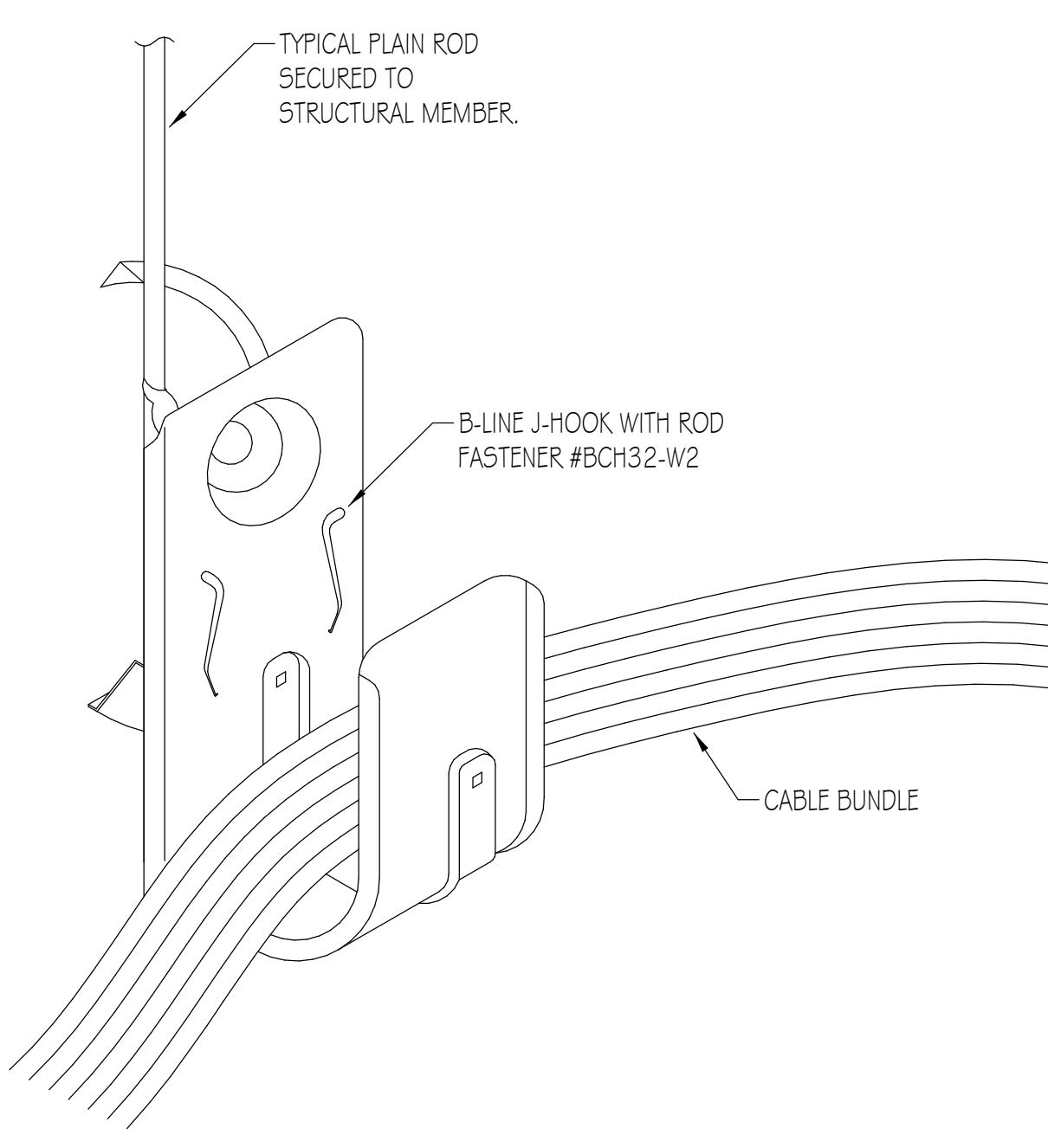
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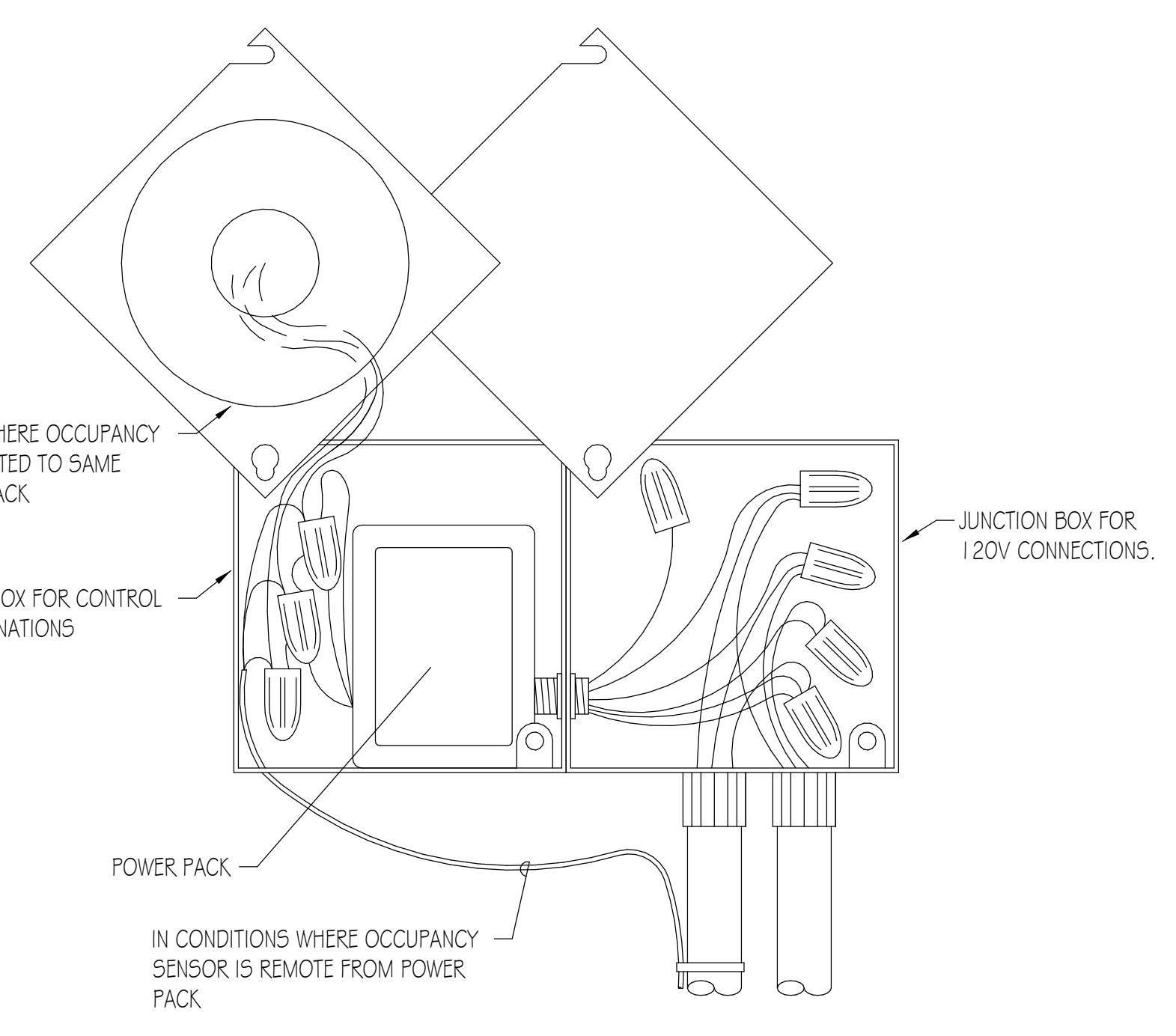
LUMINAIRE SUPPORT DETAIL
 NO SCALE



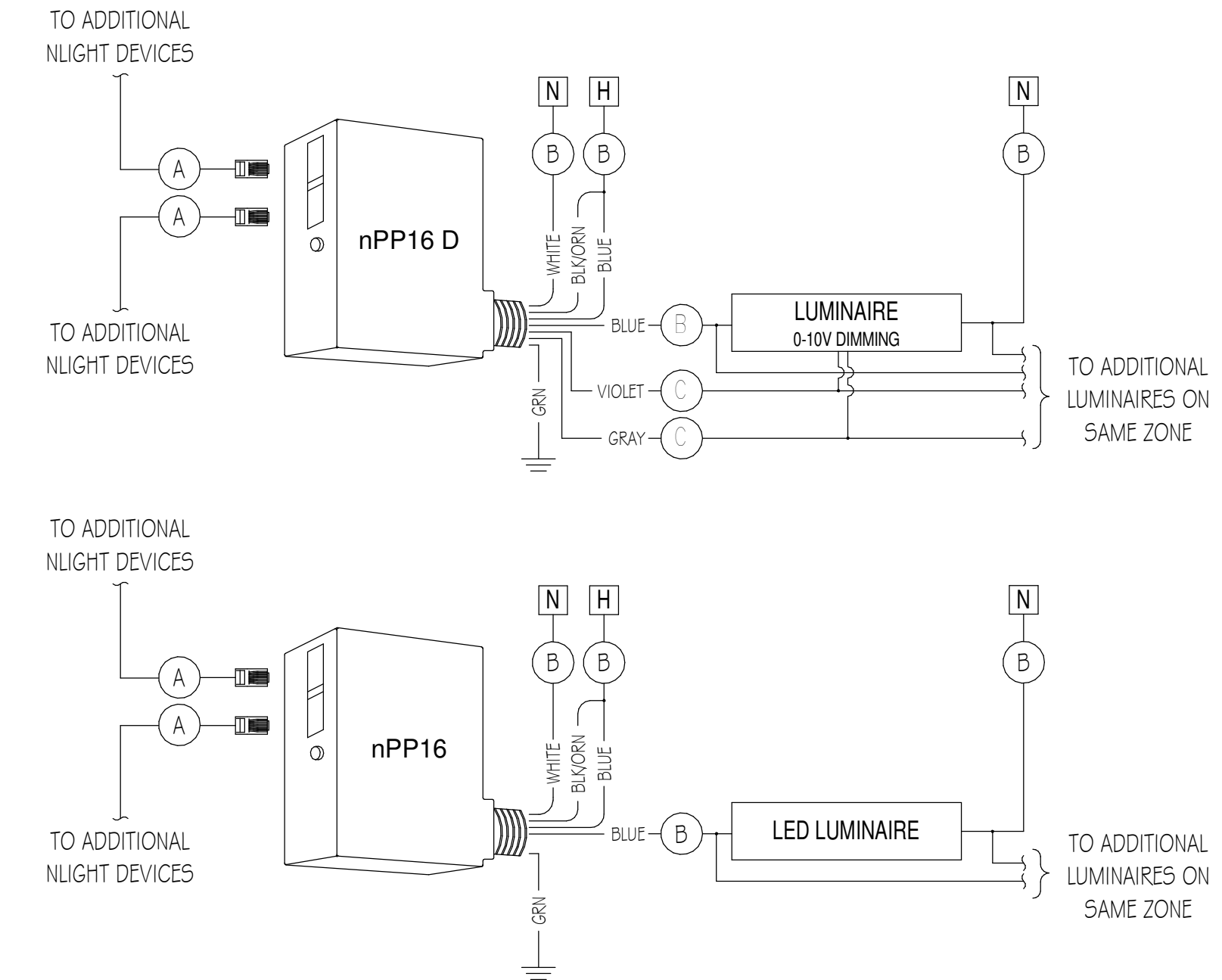
CEILING MOUNTED DEVICE SUPPORT DETAIL
 NO SCALE



CABLE BUNDLE SUPPORT DETAIL
 NO SCALE



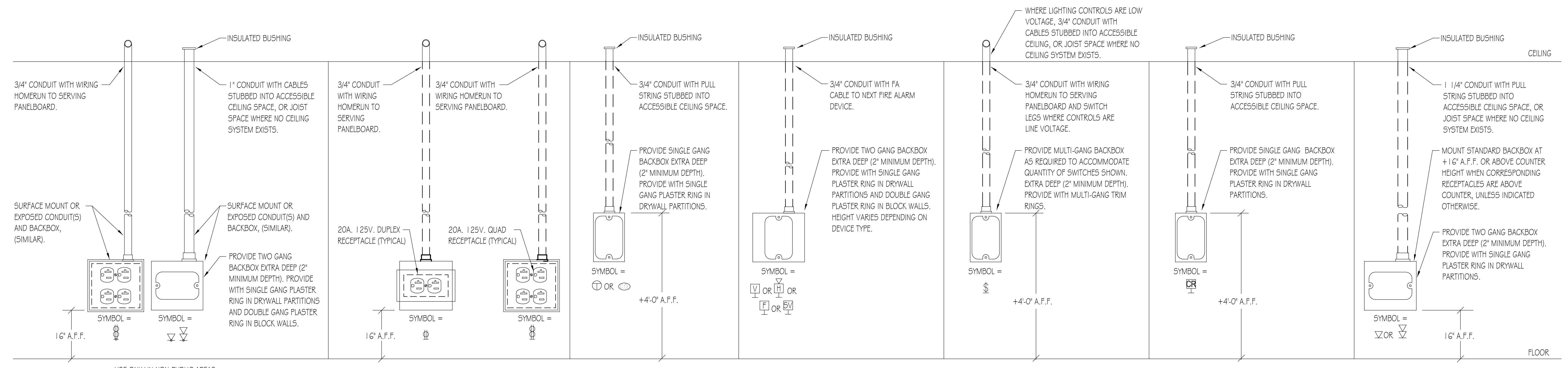
OCCUPANCY SENSOR POWER PACK DETAIL
 NO SCALE



WIRE LEGEND	
(A)	PLENUM-RATED CAT 5e (CLASS 2)
(B)	LINE VOLTAGE
(C)	0-10 VDC

TYPICAL POWER PACK WIRING DIAGRAM
 NO SCALE

NOTES:
 1. DETAIL FOR REFERENCE ONLY FOR BASIS OF DESIGN. REFER TO MANUFACTURER'S WIRING DIAGRAMS IF ALTERNATE MANUFACTURER IS USED.



JUNCTION BOX ROUGH-IN DETAIL
 NO SCALE

NOTES:
 1. DETAILS ARE FOR REFERENCE ONLY.
 2. NOT ALL DEVICES ARE REQUIRED FOR THIS PROJECT.
 3. PROVIDE TWO GANG BACKBOXES (2" MINIMUM DEPTH) WITH ALL RECEPTACLE OUTLETS.

USE ONLY IN NON-PUBLIC AREAS
 (E.G. MECHANICAL/ELECTRICAL ROOMS)
 WHERE FLUSH/RECESS INSTALLATION IS NOT REQUIRED.
 SEE PLAN DRAWINGS FOR LOCATIONS.

KEY PLAN:

SHEET STATUS: 04/28/2023
ISSUED FOR BIDS - NOT FOR CONSTRUCTION

NO.	DESCRIPTION:	DATE:

SHEET TITLE:
ELECTRICAL DETAILS

SHEET NUMBER:
E3.00



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ELECTRICAL SPECIFICATIONS

1. SCOPE
 THE WORK COVERED BY THIS SPECIFICATION INCLUDES THE COMPLETE ELECTRICAL SYSTEM.

THE WORK TO BE PERFORMED UNDER THE ELECTRICAL SPECIFICATIONS AND DRAWINGS CONSISTS OF FURNISHING ALL LABOR AND MATERIAL FOR THE COMPLETE INSTALLATION OF ELECTRICAL SYSTEMS, INCLUDING BUT NOT LIMITED TO THE FOLLOWING:

A. CONDUIT AND WIRING
 B. WIRING DEVICES
 C. LUMINAIRES
 D. LIGHTING CONTROL SYSTEM

2. GENERAL
 THIS SPECIFICATION IS INCLUSIVE FOR EACH ITEM REQUIRING ALL LABOR, MATERIAL, AND EQUIPMENT NECESSARY TO PROPERLY INSTALL, ALTER, ADJUST, AND PUT INTO OPERATION THE COMPLETE ELECTRICAL SYSTEM.

THE CONTRACTOR IS RESPONSIBLE FOR THE PROPER LAYOUT AND CONSTRUCTION OF THE WORK INCLUDED IN THIS CONTRACT.

THE DRAWINGS AND SPECIFICATIONS SHALL BE UNDERSTOOD TO COVER, ACCORDING TO THEIR INTENT AND MEANING, COMPLETE SYSTEMS AS DESCRIBED HEREIN.

MINOR ITEMS, ACCESSORIES, AND DEVICES REASONABLY INFERABLE AS NECESSARY FOR THE COMPLETE AND PROPER OPERATION OF ANY SYSTEM SHALL BE PROVIDED BY THE CONTRACTOR FOR SUCH SYSTEM(S) WHETHER OR NOT THEY ARE SPECIFICALLY CALLED FOR BY THE DRAWINGS AND/OR SPECIFICATIONS.

THE COMPLETE INSTALLATION SHALL MEET ALL APPLICABLE CODE REQUIREMENTS.

3. VISIT TO SITE
 ATTENTION IS DIRECTED TO THE NECESSITY OF THE CONTRACTOR TO VISIT THE SITE AND EXAMINE ALL CONDITIONS AFFECTING THE PROPER EXECUTION OF THIS CONTRACT. SUBMISSION OF PROPOSALS SHALL BE CONSIDERED EVIDENCE THAT THE CONTRACTOR HAS VISITED AND EXAMINED THE SITE.

NO EXTRA PAYMENT WILL BE ALLOWED TO THE CONTRACTOR FOR EXTRA WORK CAUSED BY FAILURE TO VISIT, EXAMINE, AND CLARIFY.

4. LAWS, ORDINANCES, AND REGULATIONS
 ALL SYSTEMS SHALL CONFORM IN FULL AND/OR PART TO ALL PERTINENT LAWS, ORDINANCES, AND REGULATIONS OF ALL BODIES HAVING JURISDICTION AT ALL GOVERNING LEVELS, NOTWITHSTANDING ANYTHING IN THESE DRAWINGS OR SPECIFICATIONS TO THE CONTRARY. IN THE CASE OF CONFLICT BETWEEN GOVERNING LEVELS, THE MORE STRINGENT LAWS SHALL APPLY.

WHERE APPLICABLE, ALL NEW MATERIAL SHALL BEAR THE UNDERWRITER'S SEAL OF APPROVAL, AS WELL AS THOSE SEALS OF ALL MUNICIPALITIES HAVING JURISDICTION. CERTIFICATES TO THIS EFFECT SHALL BE FURNISHED TO THE ARCHITECT UPON REQUEST.

THE CONTRACTOR SHALL SECURE AND PAY FOR ALL LICENSES REQUIRED BY THE GOVERNING BODIES TO OPERATE AS AN ELECTRICAL CONTRACTOR FOR THIS PROJECT.

5. WORKMANSHIP
 ALL WORK TO BE PERFORMED SHALL BE DONE BY QUALIFIED MECHANICS IN THE EMPLOY OF THE CONTRACTOR ON THIS PROJECT; MECHANICS SHALL BE SKILLED IN THE PHASES OF THE WORK TO WHICH THEY ARE USED.

THE COMPLETE SYSTEM SHALL MEET THE REQUIREMENTS OF THE CURRENT EDITION OF THE NATIONAL ELECTRICAL CODE AND AS MAY BE MODIFIED BY THE LOCAL ELECTRICAL CODE.

6. MATERIALS AND EQUIPMENT
 ALL MATERIALS AND EQUIPMENT SHALL BE NEW AND SHALL CONFORM TO THE GRADE, QUALITY, AND STANDARD SPECIFIED HEREIN.

ALL EQUIPMENT OFFERED UNDER THESE SPECIFICATIONS SHALL BE LIMITED TO PRODUCTS REGULARLY PRODUCED AND RECOMMENDED FOR SERVICE IN ACCORDANCE WITH ENGINEERING DATA, RATINGS, OR OTHER COMPREHENSIVE LITERATURE MADE AVAILABLE TO THE PUBLIC AND IN EFFECT AT THE TIME OF OPENING BIDS.

EQUIPMENT SHALL BE INSTALLED IN STRICT ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS FOR TYPE AND CAPACITY OF EACH PIECE OF EQUIPMENT USED.

7. COORDINATION WITH OTHER TRADES
 THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THEIR WORK WITH THE WORK OF OTHER TRADES. THE CONTRACTOR IS COMPLETELY RESPONSIBLE IF FAILURE ON THEIR PART TO COORDINATE EFFORTS RESULTS IN EXTRA WORK HAVING TO BE DONE TO COMPLETE A TASK. AS SUCH, THEIR FAILURE SHALL NOT BE THE BASIS FOR ANY EXTRA CHARGES AGAINST THE OWNER.

8. GROUNDING
 PROVIDE ALL ELECTRICAL SYSTEM AND EQUIPMENT GROUNDS AS REQUIRED BY THE NATIONAL ELECTRICAL CODE AND AS MAY BE MODIFIED BY THE LOCAL ELECTRICAL CODE, THE NATIONAL SAFETY CODE, AND ALL AGENCIES/AUTHORITIES NOTED ABOVE.

9. WIRING - MANNER OF INSTALLATION
 ALL WIRES SHALL BE INSTALLED IN METALLIC CONDUIT. PROVIDE THIN WALL CONDUIT (EMT) IN ALL LOCATIONS EXCEPT WHERE PROHIBITED BY CODE, EXPOSED TO WEATHER, EXPOSED TO MECHANICAL INJURY, OR WHERE BURIED IN OR BELOW SLABS ON GRADE; IN THOSE LOCATIONS PROVIDE RIGID STEEL CONDUIT.

THE ENTIRE CONDUIT SYSTEM SHALL BE INSTALLED BOTH ELECTRICALLY AND MECHANICALLY CONTINUOUS. CONDUIT FITTINGS SHALL BE SUITABLE FOR THEIR PURPOSE AND SHALL BE COMPRESSION TYPE ONLY. INDENTER TYPE FITTINGS ARE STRICTLY PROHIBITED.

10. WIRE AND CABLE
 WIRE AND CABLE FOR BRANCH CIRCUITS AND SECONDARY FEEDERS WITHIN THE BUILDING SHALL BE COPPER, THERMOPLASTIC INSULATED, TYPE THWN OR THHN, AND 600V RATED. TYPE THW MAY BE USED IN LIEU OF TYPE THWN OR THHN IN SIZES OF #12 AWG AND #10 AWG IN DRY LOCATIONS AT THE CONTRACTOR'S OPTION. WIRE BENEATH OR IN THE GROUND FLOOR AND OTHER WET LOCATIONS SHALL BE TYPE THWN.

NO WIRE SMALLER THAN #12 AWG SHALL BE USED ON THIS PROJECT UNLESS INDICATED. LOW VOLTAGE CONTROL AND SIGNAL CIRCUITS MAY BE A MINIMUM OF #18 AWG.

PROVIDE COLOR CODED WIRING AS FOLLOWS:

	120/208V	120/240V DELTA	277/480V
PHASE A	BLACK	BLACK	BROWN
PHASE B	RED	ORANGE	ORANGE
PHASE C	BLUE	BLUE	YELLOW
NEUTRAL	WHITE	WHITE	GRAY
GROUND	GREEN	GREEN	GREEN WITH YELLOW STRIPE

BRANCH CIRCUIT WIRING FOR 20 AMP RECEPTACLES AND LIGHTING CIRCUITS SHALL BE ADJUSTED FOR VOLTAGE DROP:

A. 120/208V: 0-75' - #12AWG MINIMUM
 75'-150' - #10AWG MINIMUM
 150'-225' - #8AWG MINIMUM

B. 277/480V: 0-100' - #12AWG MINIMUM
 100'-200' - #10AWG MINIMUM
 200'-300' - #8AWG MINIMUM

WIRE SIZES #12 AWG AND #10 AWG SHALL BE SOLID. WIRE SIZE #8 AWG AND LARGER SHALL BE STRANDED.

CONDUCTORS OF DIFFERENT VOLTAGES (LOW VOLTAGE vs. 120/208 VOLT) SHALL NOT OCCUPY THE SAME WIRING ENCLOSURE, CABLE, OR RACEWAY.

ALL WIRING SHALL BE ENCLOSED WITHIN A COMPLETE AND CONTINUOUS METAL RACEWAY.

11. SPLICING
 SPLICING WIRES SHALL BE DONE ONLY IN ACCESSIBLE OUTLET, JUNCTION, OR PULL BOXES. SPLICES SHALL BE MADE STRICTLY IN ACCORDANCE WITH THE INSTRUCTIONS OF THE CABLE MANUFACTURER USING THE METHODS AND MATERIALS RECOMMENDED BY THE MANUFACTURER.

FOR #10 AWG AND #12 AWG WIRE, SPLICES SHALL BE MADE WITH SCOTCHLOK CONNECTORS.

WIRE #8 AWG AND LARGER:
 BURNED OR EQUAL SOLDERLESS MECHANICAL LUG AND PAINTED WITH INSULATING VARNISH.
 POLARIS OR EQUAL SOLDERLESS MECHANICAL LUG WITH FACTORY APPLIED CHEMICAL AND ABRASION RESISTANT, UV RATED INSULATION.

ALL CONNECTIONS SHALL BE PROPERLY TAPED WITH SCOTCH ELECTRICAL TAPE #22, #33, OR APPROVED EQUAL.

12. JUNCTION AND PULL BOXES
 JUNCTION BOXES, PULL BOXES, AND TERMINAL BOXES SHALL BE INSTALLED WHERE SHOWN ON THE DRAWINGS AND AT OTHER LOCATIONS AS REQUIRED TO FACILITATE THE PULLING OF CABLES. THEY SHALL BE CODE SIZED AND SHALL BE CONSTRUCTED OF CODE GAUGE GALVANIZED SHEET STEEL. EACH BOX SHALL BE PROVIDED WITH A SCREW-ON REMOVABLE COVER. PROVIDE FLANGED COVERS ON FLUSH BOXES. BOXES SHALL BE SMOOTH, SQUARE, AND SET PARALLEL WITH WALLS AND CEILING. MINIMUM SIZE OF JUNCTION BOXES SHALL BE 4" X 4" X 2" SQUARE.

13. CONDUIT AND ELECTRIC METALLIC TUBING
 CONDUIT AND ELECTRIC METALLIC TUBING SHALL BE IN ACCORDANCE WITH APPLICABLE ARTICLES OF THE NATIONAL ELECTRICAL CODE AND AS MAY BE MODIFIED BY THE LOCAL ELECTRICAL CODE.

INTERMEDIATE METAL CONDUIT (IMC) - ARTICLE 342
 RIGID METAL CONDUIT (RMC) - ARTICLE 344
 FLEXIBLE METAL CONDUIT (FMC) - ARTICLE 24B
 LIQUID TIGHT FLEXIBLE METAL CONDUIT (LFMC) - ARTICLE 350
 RIGID POLYVINYL CHLORIDE CONDUIT (PVC) ARTICLE 352
 ELECTRICAL METALLIC TUBING (EMT) - ARTICLE 358

IMC, RMC, AND EMT SHALL BE GALVANIZED STEEL.

THE CONDUIT SHALL BE INSTALLED PERPENDICULAR AND PARALLEL TO BUILDING LINES.

ALL CONDUIT INSTALLED OVERHEAD SHALL BE RIGIDLY SUPPORTED FROM THE STRUCTURE ABOVE AND NOT FROM ANY PART OF THE ROOFING SYSTEM OR CEILING SYSTEM. CEILING SYSTEM TO INCLUDE T-BAR GRID, SUPPORT WIRES, ETC.

ALL CONDUIT INSTALLATION SHALL BE AS FOLLOWS UNLESS NOTED OTHERWISE:
 A. SINGLE PHASE 120 VOLT BRANCH CIRCUITS, COMMUNICATIONS WIRING, AND OTHER SIGNALING CIRCUITS FOR INTERIOR LOCATIONS: USE EMT.
 B. THREE PHASE 208 VOLT FEEDERS AND SINGLE PHASE BRANCH CIRCUITS FOR INTERIOR LOCATIONS: UP TO 2" USE EMT, OVER 2" USE IMC.
 C. EXTERIOR CONDUITS ABOVE GRADE SHALL BE IMC OR RMC.
 D. EXTERIOR CONDUITS BELOW GRADE SHALL RMC OR PVC.
 E. PROVIDE METALLIC TRACER WIRE OR TAPE FOR ALL BELOW GRADE NON-METALLIC CONDUITS.

14. OUTLET BOXES
 GENERALLY, OUTLET BOXES OF PROPER TYPE AND NOT LESS THAN 4 INCHES SQUARE OR OCTAGONAL AS REQUIRED BY BUILDING CONDITIONS SHALL BE PLACED AT ALL LIGHT, RECEPTACLE, AND SWITCH OUTLETS. OUTLET BOXES SHALL BE FIRMLY SECURED IN PLACE AND SHALL BE SET TRUE, SQUARE, AND FLUSH WITH THE FINISHED SURFACES. THE CONTRACTOR SHALL MOVE ANY OUTLET BOX UP TO 5 FEET IN ANY DIRECTION WITHOUT COST IF RELOCATED PRIOR TO INSTALLATION. MINIMUM DEPTH SHALL BE 2 INCHES.

15. WIRING DEVICES
 ACCEPTABLE MANUFACTURERS: PASS & SEYMOUR, LEVITON, COOPER, OR HUBBELL

SWITCHES SHALL BE OF THE HEAVY DUTY GRADE, 120/277 VOLT, FLUSH TOGGLE TYPE RATED AT 20 AMPERES AND UL APPROVED. ALL SWITCHES SHALL HAVE POLES AS REQUIRED AND SHALL BE SIMILAR TO PASS & SEYMOUR #PS20AC1. RECEPTACLES SHALL BE POLARIZED, GROUNDED, DUPLEX, BACK AND SIDE WIRED, RATED 20 AMPERES, AND UL APPROVED. ALL GENERAL PURPOSE RECEPTACLES SHALL BE SPECIFICATION GRADE, TAMPER-RESISTANT TYPE SIMILAR TO PASS & SEYMOUR #TR5362. ALL RECEPTACLES WITH GROUND-FAULT CIRCUIT INTERRUPTER SHALL BE TAMPER-RESISTANT TYPE SIMILAR TO PASS & SEYMOUR #2097TR. ALL WEATHER-RESISTANT RECEPTACLES WITH GROUND-FAULT CIRCUIT INTERRUPTER SHALL BE SIMILAR TO PASS & SEYMOUR #2095TRWR. DEVICE COLORS TO BE SELECTED BY ARCHITECT.

CONTRACTOR TO SUBMIT SHOP DRAWINGS ON THIS ITEM.

16. DEVICE WALLPLATES
 SWITCH AND RECEPTACLE PLATES IN FINISHED AREAS SHALL BE TYPE 302/304 BRUSHED STAINLESS STEEL. ALL PLATES IN UNFINISHED AREAS AREA SHALL BE FORMED STEEL (GARVIN COVERS).

CONTRACTOR TO SUBMIT SHOP DRAWINGS ON THIS ITEM.

17. LUMINAIRES
 LUMINAIRES SHALL BE PROVIDED AS SPECIFIED ON DRAWINGS. LUMINAIRES SHALL BE HUNG AND MOUNTED IN PLACE, PROPERLY WIRED, TESTED, AND LEFT READY FOR OPERATION BY THE CONTRACTOR.

LED LUMINAIRES: DESIGNED AND TESTED TO IESNA STANDARDS LM-80 AND LM-79, WITH 5 YEAR MANUFACTURER'S WARRANTY.

WHERE LOCATED BENEATH DUCTWORK, THE CONTRACTOR IS PROHIBITED FROM PUNCTURING THE DUCTWORK OR MOUNTING LUMINAIRES DIRECTLY TO THE DUCTWORK. THE CONTRACTOR MAY MOUNT THE LUMINAIRES TO THE DUCTWORK SUPPORT MEMBERS, HANGING DEVICES, BRACKETS, ENCLOSURES, AND OTHER ACCESSORIES SHALL BE PROVIDED FOR A COMPLETE INSTALLATION AND SHALL BE INSTALLED BY THE CONTRACTOR. LUMINAIRES SHALL BE HUNG PLUMB AND SET SQUARE AGAINST THE WALL OR CEILING, OR SUSPENDED AS DESIGNATED. THE MOUNTING HEIGHT OF LUMINAIRES SHALL BE CONFIRMED BEFORE INSTALLATION.

CONTRACTOR TO SUBMIT SHOP DRAWINGS ON THIS ITEM.

18. LIGHTING CONTROL SYSTEM
 LIGHTING CONTROLS SHALL BE PROVIDED AS SPECIFIED ON DRAWINGS. ALL SENSORS SHALL BE MOUNTED IN PLACE, PROPERLY WIRED, PROGRAMMED AND TESTED FOR OPERATION BY THE CONTRACTOR.

TIME-BASED, SENSOR-BASED AND MANUAL LIGHTING CONTROL WITHOUT THE USE OF ANY CENTRALLY HARDWIRED SWITCHING EQUIPMENT (RELAY PANELS). THE SYSTEM'S CONTROL SHALL BE EXERTED BY DIRECTLY SWITCHING LOADS ON/OFF AND/OR DIMMING LIGHTS.

COVERAGE OF SENSORS SHALL REMAIN CONSTANT AFTER SENSITIVITY CONTROL HAS BEEN SET. NO AUTOMATIC REDUCTION SHALL OCCUR IN COVERAGE DUE TO THE CYCLING OF AIR CONDITIONER OR HEATING FANS.

ALL SENSORS SHALL HAVE READILY ACCESSIBLE, USER ADJUSTABLE CONTROLS FOR TIME DELAY AND SENSITIVITY.

IN THE EVENT OF FAILURE, A BYPASS MANUAL OVERRIDE SHALL BE PROVIDED ON EACH SENSOR. WHEN BYPASS IS UTILIZED, LIGHTING SHALL REMAIN ON CONSTANTLY OR CONTROL SHALL DIVERT TO A WALL SWITCH UNTIL SENSOR IS REPLACED.

ALL SENSORS SHALL PROVIDE A METHOD OF INDICATION TO VERIFY THAT MOTION IS BEING DETECTED DURING TESTING AND THAT THE UNIT IS WORKING.

POWER PACKS: FLEMING RATED, SELF-CONTAINED LOW VOLTAGE CLASS 2 TRANSFORMER AND RELAY COMPATIBLE WITH SPECIFIED LOW VOLTAGE OCCUPANCY SENSORS FOR SWITCHING OF LINE VOLTAGE LOADS. PROVIDE QUANTITY, TYPE AND CONFIGURATION OF POWER AND SLAVE PACKS WITH ALL ASSOCIATED WIRING AND ACCESSORIES AS REQUIRED TO CONTROL THE LOAD INDICATED ON DRAWINGS.

CONTRACTOR TO SUBMIT SHOP DRAWINGS ON THIS ITEM.

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CONTRACTOR TO SUBMIT SHOP DRAWINGS ON THIS ITEM.

20. FIRESTOPPING
 THE CONTRACTOR SHALL FIRE STOP ALL PENETRATIONS THROUGH FIRE RATED WALLS, PARTITIONS, ROOFS, AND/OR FLOORS SO THAT THE INTEGRITY OF THE FIRE RATING IS NOT COMPROMISED BY THE CONTRACTOR'S INSTALLATION OF ANY BOX, CABLE TRAY, RACEWAY, AND/OR CONDUIT. FIRE STOPPING METHODS AND MATERIALS SHALL CONFORM TO LOCAL CODE AUTHORITY REQUIREMENTS. AT A MINIMUM, THE CONTRACTOR SHALL GROUT AROUND ALL BOXES, CABLE TRAYS, RACEWAYS, CONDUITS, ETC., IN PENETRATION RATED PARTITION/FLOOR CONSTRUCTION WITH NON-SHRINK GROUT SO THAT ALL OPEN SPACES ARE FILLED IN SOLIDLY.

THE CONTRACTOR SHALL PROVIDE SUITABLY RATED LUMINAIRES OR UTILIZE APPROVED MATERIALS AND METHODS TO MAINTAIN THE INTEGRITY OF THE FIRE RATED CEILING. THE CONTRACTOR SHALL REFER TO ARCHITECTURAL PLANS FOR THE LOCATION OF ALL FIRE RATED CEILINGS, PARTITIONS, AND WALLS.

21. BALANCING
 THE SYSTEM OF FEEDERS AND BRANCH CIRCUITS FOR POWER AND LIGHTING SHALL BE CONNECTED IN SUCH A MANNER THAT THE CONNECTED LOADS ARE BALANCED ELECTRICALLY ON THE THREE PHASES AS CLOSELY AS POSSIBLE (WITHIN 10 PERCENT). SHOULD THE POWER COMPANY FIND AN UNFAVORABLE OPERATING CONDITION REACTING ON THE SERVICE, THE CONTRACTOR SHALL MAKE SUCH CHANGES REQUIRED TO BALANCE THE LOAD WITHOUT ADDITIONAL COST TO THE OWNER.

22. TESTING AND ADJUSTMENTS
 ALL WORK SHALL BE TESTED BY THE CONTRACTOR. ALL MATERIAL, LABOR, AND EQUIPMENT SHALL BE FURNISHED BY THE CONTRACTOR TO ACCOMPLISH SUCH TESTS AS REQUIRED BY THE ARCHITECT/ENGINEER.

UPON COMPLETION OF THIS WORK, THE PROJECT SHALL BE FREE FROM SHORT CIRCUITS AND GROUNDS AND A THOROUGH TEST SHALL BE MADE. ALL OVERLOAD DEVICES, INCLUDING THOSE FURNISHED UNDER OTHER CONTRACTS SHALL BE ADJUSTED TO SUIT LOAD CONDITIONS BY THE CONTRACTOR. ALL SYSTEMS SHALL BE TESTED AND THEIR OPERATION DEMONSTRATED.

LIGHTING EQUIPMENT SHALL BE ADJUSTED TO THE SATISFACTION OF THE OWNER.

23. GUARANTEE
 THE CONTRACTOR SHALL UNCONDITIONALLY GUARANTEE IN WRITING ALL MATERIAL, EQUIPMENT, AND WORKMANSHIP FOR A PERIOD OF ONE YEAR FROM DATE OF SUBSTANTIAL COMPLETION. THE CONTRACTOR SHALL PROVIDE FREE SERVICE FOR ALL EQUIPMENT INVOLVED IN THEIR CONTRACT DURING THIS GUARANTEE PERIOD.

THE GUARANTEE SHALL INCLUDE RESTORATION TO ITS ORIGINAL CONDITION OF ALL ADJACENT WORK THAT MUST BE DISTURBED IN FULFILLING THIS GUARANTEE.

ALL SUCH REPAIRS AND/OR REPLACEMENTS SHALL BE MADE WITHOUT DELAY AND AT THE CONVENIENCE OF THE OWNER.

24. SUBSTITUTIONS
 APPROVALS OF SUBSTITUTIONS FOR 'APPROVED EQUAL' MUST BE MADE IN WRITING AND SUBSTITUTIONS MUST BE APPROVED BEFORE INSTALLATION. INSTALLATION WITHOUT PRIOR APPROVAL MAY RESULT IN THE CONTRACTOR REMOVING SUBSTITUTION AND REPLACING IT WITH SPECIFIED ITEM AT THEIR EXPENSE.

APPROVAL MAY BE GIVEN BY ARCHITECT OR ENGINEER.

KEY PLAN:

NO.	DESCRIPTION:	DATE:

SHEET TITLE:
ELECTRICAL SPECIFICATIONS

SHEET NUMBER:
E4.00

SHEET STATUS: 04/28/2023

ISSUED FOR BIDS - NOT FOR CONSTRUCTION