GLENVILLE High School

DRAWING INDEX

HVAC DEMOLITION AND NEW

MECHANICAL SPECIFICATIONS

PLUMBING FLOOR PLANS, SCHEDULES

LIGHTING AND POWER

SYMBOL LEGEND AND LUMINAIRE

SCHEDULE

LIGHTING AND POWER PLANS

ELECTRICAL SPECIFICATIONS

HVAC SCHEDULES & DETAILS

DEMOLITION PLAN

METROHEALTH, OHIO DEPT. OF HEALTH AND SCHOOL-BASED HEALTH CENTER ALLIANCE

NEW HEALTH CARE EXPANSION PROGRAM

INTERIOR ALTERATION

650 EAST 113TH STREET CLEVELAND, OH 44108

PREPARED FOR:



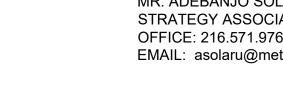
MS. HOLLIE DELLISANTI, EXEC. DIR. ARCHITECTURAL PROJECTS, CAPITAL PROGRAMS 1111 SUPERIOR AVENUE E CLEVELAND, OHIO 44114 EMAIL: Hollie.Dellisanti@clevelandmetroschools.org

MetroHealth

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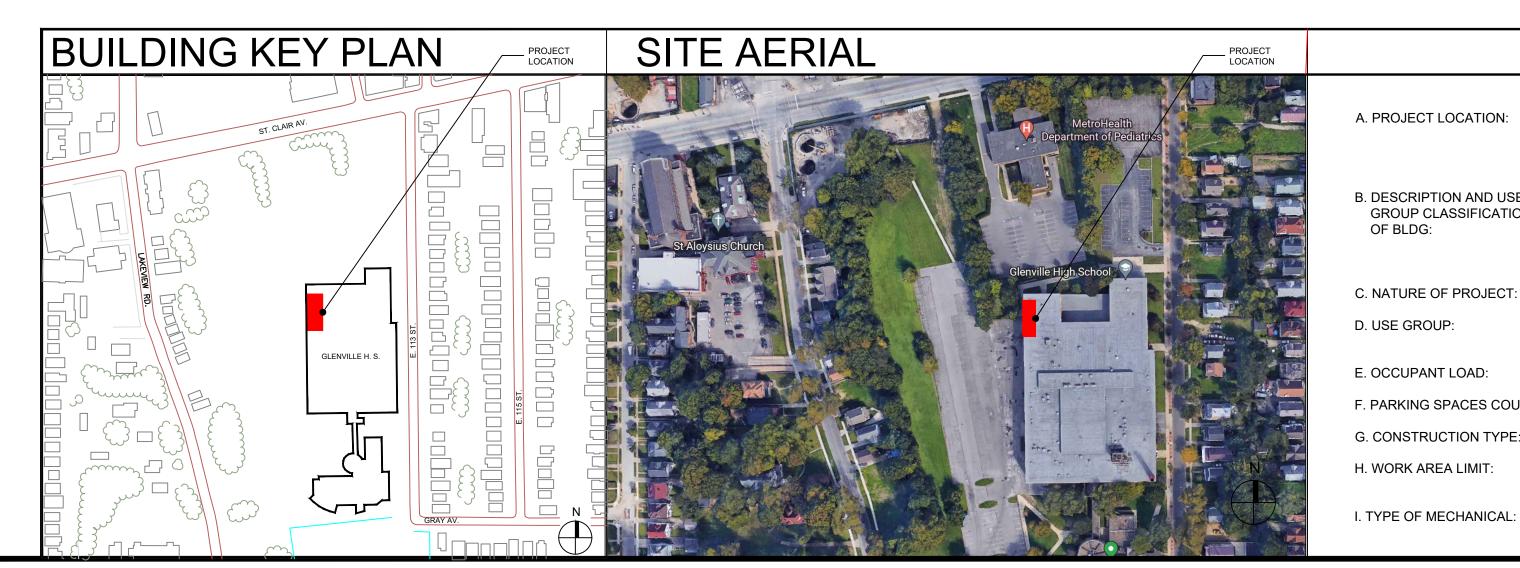
PREPARED BY:







MAIN ENTRANCE



B. DESCRIPTION AND USER GROUP CLASSIFICATION OF BLDG:

C. NATURE OF PROJECT: D. USE GROUP:

E. OCCUPANT LOAD: F. PARKING SPACES COUNT: G. CONSTRUCTION TYPE: H. WORK AREA LIMIT:

INTERIOR ALTERATION 1,800 SF / 100 = 18 occp.

650 EAST 113TH STREET CLEVELAND, OHIO 44108

WE ARE SEEKING TO TRANSFORM SEVERAL EXISTING CLASSROOMS AND A TEACHERS WORK ROOM INTO A NEW COMMUNITY HEALTH BASED

BUILDING: [E] EDUCATION PROJECT AREA: [B] BUSINESS

FIRST LEVEL ROOMS 107, 108 & 109

TWO NEW FAN COIL UNITS

CODE INFORMATION

REFERENCED CODES

IN ALL CASES, IF THERE IS A DISCREPENCY BETWEEN CODE REQUIREMENTS, BETWEEN ANY REFERENCED CODES, THE MORE STRINGENT CODE ALWAYS APPLIES.

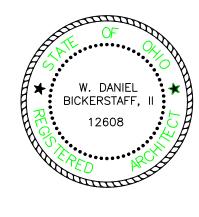
2017 OHIO BUILDING CODE (OBC)

2017 OHIO PLUMBING CODE (OPC) NFPA NATIONAL ELECTRICAL CODE 2017 LIFE SAFETY CODE, NFPA 101- 2017

2017 OHIO MECHANICAL CODE (OMC)

2017 NFPA 13 SPRINKLER CODE 2017 DEPT. OF JUSTICE ADA STANDARDS FOR ACCESSIBLE DESIGN

2009 ICC/ANSI A117.1



SYMBOL LEGEND EARTH POROUS FILL POURED CONCRETE CONCRETE BLOCK BRICK DOOR NUMBER STEEL ROUGH WOOD FINISHED WOOD PLYWOOD RIGID INSULATION SECTION A1 A1 BELEVATION MATERIAL NOTE DOOR NUMBER TREVISION NUMBER EXISTING DOORS

ABBREVIATIONS

AIR CONDITIONING

ACOUSTIC(AL)

FACE OF STUD

BATT INSULATION

GYPSUM BOARD

ADD	ACOUSTIC(AL)	T I I I I	FLOOD ONLY	PLDG	
ADD	ADDENDUM	FS 	FLOOR SINK	PT	PAINTED(ED)
ADJ	ADJACENT	FT	FOOT, FEET	PSF	POUNDS PER SQUARE FOOT
AFF	ABOVE FINISHED FLOOR	FUT	FUTURE	PSI	POUNDS PER SQUARE INCH
ALUM	ALUMINUM			PVC	POLYVINYL CHLORIDE
ALT	ALTERNATE, ALTERNATIVE	GA	GAUGE	PWD	PLYWOOD
		GALV		1 110	1 21 11000
APPROV	APPROVED		GALVANIZED		OLIANITITY/
ARCH	ARCHITECT(URAL)	GB	GRAB BAR	QTY	QUANTITY
AUTO	AUTOMATIC	GC	GENERAL CONTRACTOR		
		GR	GRILLE		
BD	BOARD	GWB	GYPSUM WALL BOARD	RAD	RADIUS
BET	BETWEEN	GYP	GYPSUM	RE	REFERENCE, REFER TO
		011	OTT COM	REINF	REINFORCEMENT
BLDG	BUILDING	1.1	111011	REQ	REQUIRE(ED), (MENT)
BOT	BOTTOM	Н	HIGH	RM	ROOM
		HDCP	HANDICAPPED	IXIVI	ROOM
CAB	CABINET	HDW	HARDWARE		
СВ	CERAMIC BASE	HM	HOLLOW METAL	SAC	SUSPENDED ACOUSTICAL CLG
CFM	CUBIC FEET PER MINUTE	HOR	HORIZONTAL	SC	SOLID CORE
CG		HR	HOUR	SCH	SCHEDULE
	CORNER GUARD			SEC	SECTION
CLG	CEILING	HT	HEIGHT		
CLR	CLEAR(ANCE)	HVAC	HEATING/VENTILATING/AC	SH	SHELF, SHELVING
CTR	CENTER			SHT	SHEET
COL	COLUMN	IN	INCH(ES)	SIM	SIMILAR
CONC	CONCRETE	INCAND	INCANDESCENT	SPEC	SPECIFICATION(S)
				SQ	SQUARE
CONST	CONSTRUCTION	INCL	INCLUDE(ED), (ING)	SS	
CONT	CONTINUE, CONTINUOUS	INFO	INFORMATION		STAINLESS STEEL
CONTR	CONTRACTOR	INS	INSULATION	STD	STANDARD
COORD	COORDINATE, COORDINATOR	INT	INTERIOR	STL	STEEL
COR	CORRIDOR			STOR	STORAGE
		JT	JOINT	STRUCT	STRUCTURE, STRUCTURAL
CRI	CASH REGISTER INSTALLER	01	001141	SUSP	SUSPEND(ED)
CT	CERAMIC TILE				
		LAM	LAMINATE	SYM	SYMETRIC(AL)
DDI	501151.5	LAV	LAVATORY	SV	SHEET VINYL
DBL	DOUBLE	LB	POUND(S)		
DEM	DEMOLISH	LIN	LINEAL	TEN	TENANT
DES	DESIGN(ER)	LT	LIGHT	T&G	TOUNGE AND GROOVE
DIA	DIAMETÈR [']	LI	LIGITI	TEL	TELEPHONE
DIM	DIMENSION	NAAINIT			
		MAINT	MAINTENACE	TEMP	TEMPERATURE
DN	DOWN	MSY	MASONRY	THK	THICK(NESS)
DR	DOOR	MAX	MAXIMUM	THRU	THROUGH
DTL	DETAIL	MC	MILLWORK CONTRACTOR	TYP	TYPICAL
DWG	DRAWING	MECH	MECHANICAL		
		MFGR	MANUFACTURER	UL	UNDERWRITERS LABORATORY
EA	EACH	MTL	METAL		
EC	ELECTRICAL CONTRACTOR			UNFIN	UNFINISHED
EL	ELEVATION	MIN	MINIMUM		
		MIR	MIRROR	VAR	VARIABLE, VARIES
ELECT	ELECTRIC, ELECTRICAL	MISC	MISCELLANEOUS	VERT	VERTICAL
ENT	ENTRANCE	MR	MOISTURE RESISTANT	VIF	VERIFY IN FIELD
EQ	EQUAL	MNT	MOUNT(ED)		
EQUIP	EQUIPMENT	IVIINI	WOONT(LD)	VIN	VINYL
EWH	ELECTRIC WATER HEATER	NO	NUMBER		
		NO	NUMBER	W	WIDE
EXH	EXHAUST	NOM	NOMINAL	W/	WITH
EXIST	EXISTING	NTS	NOT TO SCALE	W/O	
EXT	EXTERNAL				WITHOUT
		OC	ON CENTER	WC	WATER CLOSET
FD	FLOOR DRAIN	OH	OVERHEAD	WD	WOOD
FEC	FIRE EXTINGUISHER CABINET	OPP	OPPOSITE	WP(G)	WATERPROOF(ING)
				WR [`]	WATER RESISTANT
FEX	FIRE EXTINGUISHER	OWN	OWNER		
FFE	FINISHED FLOOR ELEVATION	OZ	OUNCE(S)		
FIN	FINISHED				
FLUOR	FLUORESCENT				
FLR	FLOOR			NOTE: NOT	ALL ABBREVIATIONS AND SYMBOLS ARE
FOS	FACE OF STUD				AWINGS CONTAINED IN THIS SET

ENLARGED PLAN

EL 90.0' VERTICAL ELEVATION

FIRE RESISTIVE

FIBER REINFORCED PANEL

BUILDING AND CODE INFORMATION

EXIT ACCESS CORRIDORS SHALL NOT SERVE AS AIR DUCTS/PLENUMS

COMPLY WITH VENTILATION, TEMP. CONTROL, LIGHTING, DIMENSION REQUIREMENTS

COMPLY WITH "ASHRAE ENCY. 1" OR "INTERNATIONAL ENERGY CONSERVATION CODE"

LIVE LOAD- 100 PSF UNIFORM LOAD (CORRIDORS); 50 PSF UNIFORM LOAD (OFFICES) HANDRAILS TO RESIST LOAD OF 50# PER FT., CONCENTRATED LOAD OF 200#; GRAB

BARS AND SHOWER SEATS TO RESIST CONCENTRATED LOAD OF 250#

COMPLY WITH ACCESSIBILITY GUIDELINES

1016.4

PLASTIC LAMINATE PLUMBING

USED IN DRAWINGS CONTAINED IN THIS SET

CHAPTER 11- ACCESSIBILITY

CHAPTER 12- INTERIOR ENVIRONMENT

N/A (EXISTING)

N/A (EXISTING)

STRUCTURAL DESIGN

CHAPTER 18- SOILS AND FOUNDATIONS

CHAPTER 19- CONCRETE

CHAPTER 15- ROOF ASSEMBLIES AND ROOFTOP STRUCTURES

CHAPTER 17- STRUCTURAL TESTS AND SPECIAL INSPECTIONS

N/A (EXISTING)

CHAPTER 13- ENERGY EFFICIENCY

CHAPTER 14- EXTERIOR WALLS

(BASED ON 20°	17 OHIO BUILDING CODE)		
(2/1022 011 20		CHAPTER 20-	ALUMINUM N/A
CHAPTER 3-	USE AND OCCUPANCY CLASSIFICATION		IN/A
302.1.1	INCIDENTAL USE AREAS	CHAPTER 21-	MASONRY
	STORAGE ROOMS > 100 S.F 1 HR. SEPARATION OR AUTO, FIRE EXTINGUISH, SYS. WASTE/LINEN COLLECTION ROOMS > 100 S.F 1 HR. SEPARATION OR AUTO, FIRE EXTINGUISH,	2103.1	CONC. MASONRY UNITS TO CONFORM TO ASTM C90
	SYS.	2103.7	MORTAR TO CONFORM TO ASTM C270
308.3	EXISTING BUILDING: USE GROUP E EDUCATION		
	THE PROJECT AREA IS CONSIDERED AN ACCESSORY OCCUPANCY:	CHAPTER 22-	STEEL
	USE GROUP B, BUSINESS. OUTPATIENT CLINIC		N/A
CHAPTER 4-	SPECIAL DETAILED REQUIREMENTS BASED ON USE AND OCCUPANCY N/A	CHAPTER 23-	WOOD
OLIADTED 5	OFNEDAL BUILDING LIFLOUTO AND ABEAG NUMBER OF OTORIES	2303.2	FIRE-RETARDANT TREATED WOOD SHALL BEAR I.D. MARK OF AN APPROVED
CHAPTER 5-	GENERAL BUILDING HEIGHTS AND AREAS NUMBER OF STORIES TWO		AGENCY
CHAPTER 6-	TYPE OF CONSTRUCTION		
602.2	TYPE II-A	CHAPTER 24-	GLASS AND GLAZING
TABLE 601	FIRE-RESISTANCE RATINGS	2406	COMPLY WITH SAFETY GLAZING REQUIREMENTS
	STRUCTURAL FRAME 0-HR. (W/ SPRINKLERS)	CHAPTER 25-	GYPSUM BOARD AND PLASTER
	BEARING WALLS 0-HR. (W/ SPRINKLERS)	CHAPTER 25-	COMPLY WITH REQUIREMENTS OF TABLE 2506.2
	FLOOR CONSTRUCTION 0-HR. (W/ SPRINKLERS)		COMILET WITH REGUITEMENTO OF TABLE 2000.2
	ROOF CONSTRUCTION 1-HR	CHAPTER 26-	PLASTIC
CHAPTER 7-	FIRE-RESISTANCE-RATED CONSTRUCTION	2604.1	PLASTIC MATERIALS INSTALLED AS INTERIOR FINISH SHALL COMPLY WITH
709.0	SMOKE BARRIERS TO HAVE 1-HR. FIRE-RESISTANCE RATING, 20 -MIN. RATING FOR		CHAPTER 8
	OPENING PROTECTIVE, OPP. SWINGING DOORS ACROSS CORRIDORS		EL ECTRICAL
715.3	OPENING PROTECTIVE RATINGS PER TABLE 715.3	CHAPTER 27-	ELECTRICAL COMPONENTS, EQUIPMENT, AND SYSTEMS DESIGNED AND CONSTRUCTED IN
716.5	SMOKE DAMPER WHERE DUCTS PENETRATE SMOKE BARRIERS		ACCORDANCE WITH NFPA 70
OLIADTED 0	INTERIOR FINIOLIES		ACCORDANCE WITH IN A TO
CHAPTER 8- 803.5	INTERIOR FINISHES INTERIOR WALL / CEILING FINISH REQUIREMENTS PER TABLE 803.5	CHAPTER 28-	MECHANICAL SYSTEMS
003.3	805.1CURTAINS, DRAPERIES, HANGINGS, OTHER DECORATIVE MATERIALS TO BE FLAME		MECHANICAL EQUIPMENT AND SYSTEMS TO BE IN ACCORDANCE WITH THE
	RESISTANT:		MECHANICAL CODE
	COMBUSTIBLE DECORATIONS SHALL BE FLAME-RETARDANT	CHAPTER 29-	PLUMBING SYSTEMS
		2902.1	MINIMUM FACILITIES PER TABLE 2902.1
CHAPTER 9-	FIRE PROTECTION SYSTEMS	2002.1	WIINIWOW FAOIEITIEG FEIX TABLE 2002.1
903.2.5	AUTO, SPRINKLER SYSTEM REQUIRED (MODIFY EXISTING)	CHAPTER 30-	ELEVATORS AND CONVEYING SYSTEMS
903.3 906.1	COMPLY WITH NFPA 13 FIRE EXTINGUISHERS REQUIRED		N/A
907.2.6	MANUAL FIRE ALARM SYSTEM (EXISTING)		
301.2.0		CHAPTER 31-	SPECIAL CONSTRUCTION
CHAPTER 10-	MEANS OF EGRESS		N/A
1003.2	7" MINIMUM CEILING HEIGHT	CHAPTER 32-	ENCROACHMENTS INTO THE PUBLIC RIGHT-OF-WAY
1003.3.3	4" MAX. PROJECTION BETWEEN THE HEIGHTS OF 27" AND 80"	011/11 TER 02	N/A
1003.4	SLIP-RESISTANT FLOOR FINISH		
1004.1 1006.1	NUMBER OF OCCUPANTS (PER TABLE 1004.1.2): SEE TITLE SHEET MEANS OF EGRESS ILLUMINATION REQUIRED AT ALL TIMES BUILDING IS OCCUPIED	CHAPTER 33-	SAFEGUARDS DURING CONSTRUCTION
1008.1.1	32" MIN. WIDTH FOR MEANS OF EGRESS DOORS, MAX. WIDTH 48"; DOORS USED FOR		COMPLY WITH SAFEGUARDS, DEMOLITION, SANITARY, FIRE EXTINGUISHER, AND
	EXIT SIGNS REQUIRED, NO POINT IN CORR. > 100" FROM AN EXIT SIGN		EXIT REQUIREMENTS
1013.2.2	HABITABLE ROOMS TO HAVE DIRECT ACCESS TO AN EXIT ACCESS TO AN EXIT ACCESS	CHAPTER 34-	EXISTING STRUCTURES
	CORRIDOR	OHAFTER 34-	N/A
1015.1	200' MAX. EXIT ACCESS TRAVEL DISTANCE		
1016.2	96" CORRIDOR WIDTH WHERE REQUIRED FOR BED MOVEMENT		
1016.3	20' MAX. DEAD-END CORRIDOR LENGTH		

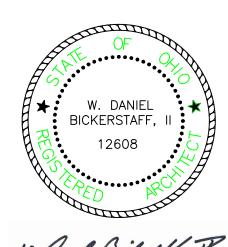
CLEVELAND METROPOLITAN SCHOOL DISTRICT

Project Team:

Architect



UBIQUITOUS DESIGN, LTD.
ARCHITECTS



W. Daniel Bickerstaff, II License No. 12608
Expiration Date: December 31, 2023

PERMIT ISSUANCE WDB, II 08.26.2022 SSUED BY DATE

GLENVILLE HIGH SCHOOL

Interior Alteration

New MetroHealth
ODH
SBHC
Health Care Expansion Program

650 East 113th Street Cleveland, OH 44108



MEDICAL CENTER 2500 METROHEALTH DR. CLEVELAND, OH 44109

Approval:

Hollie Dellisanti EDUCATOR, Exec. Dir.
Architectural Projects, Capital Projects

Date

Itant Project #

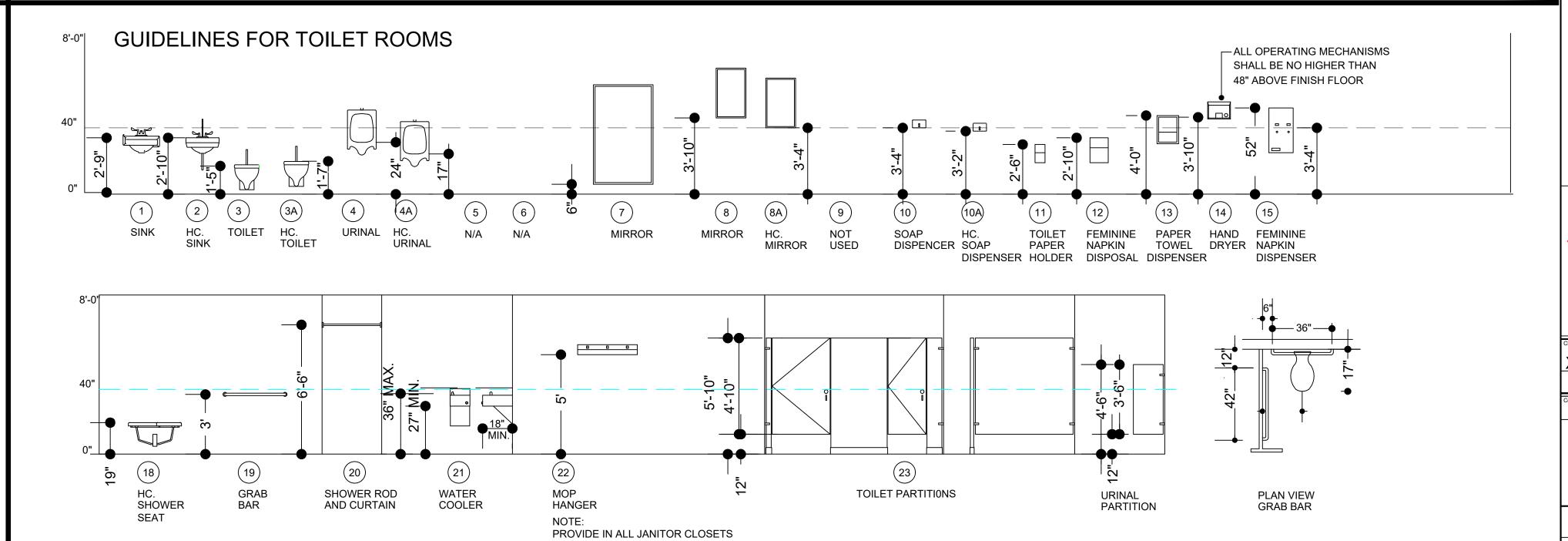
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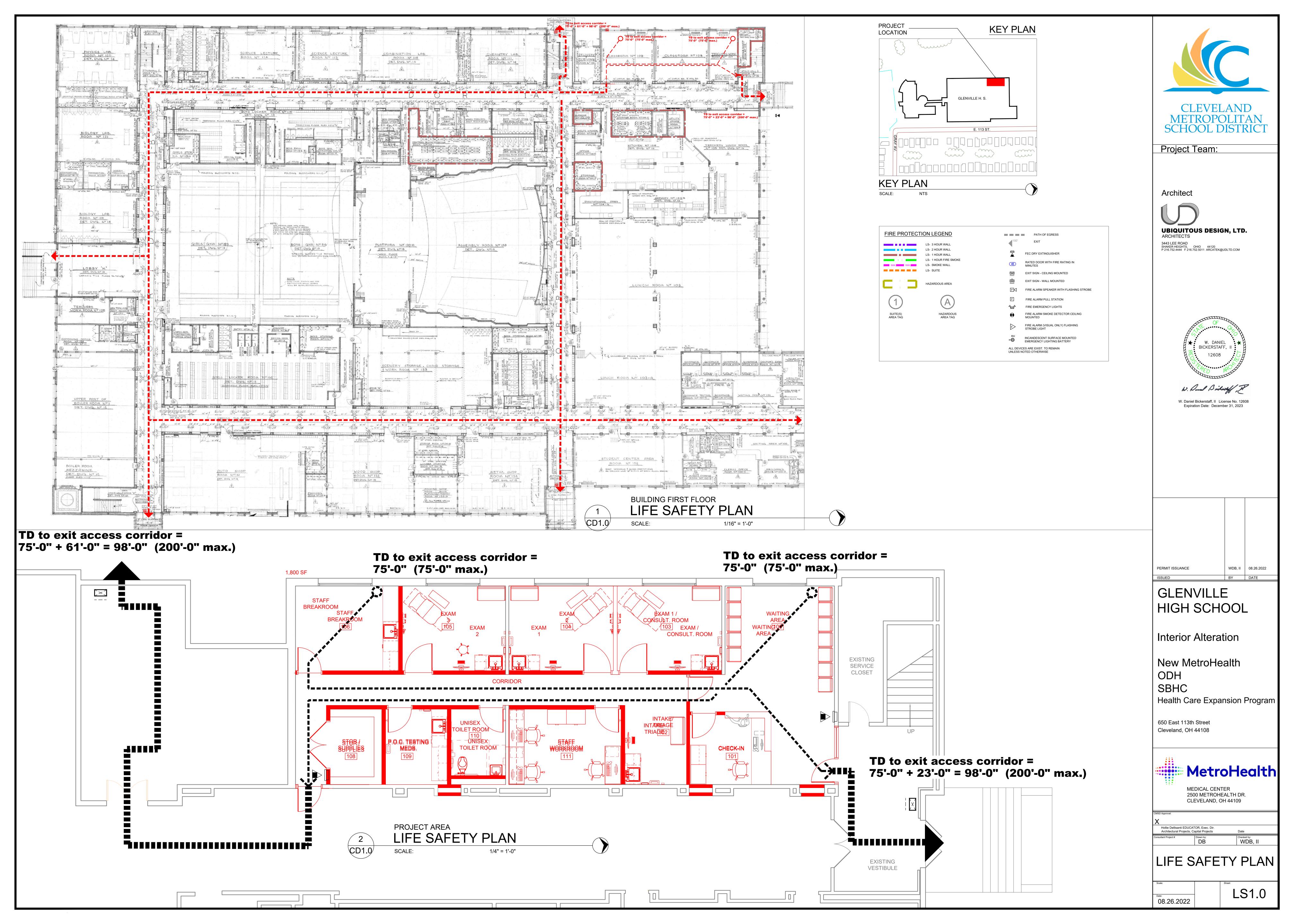
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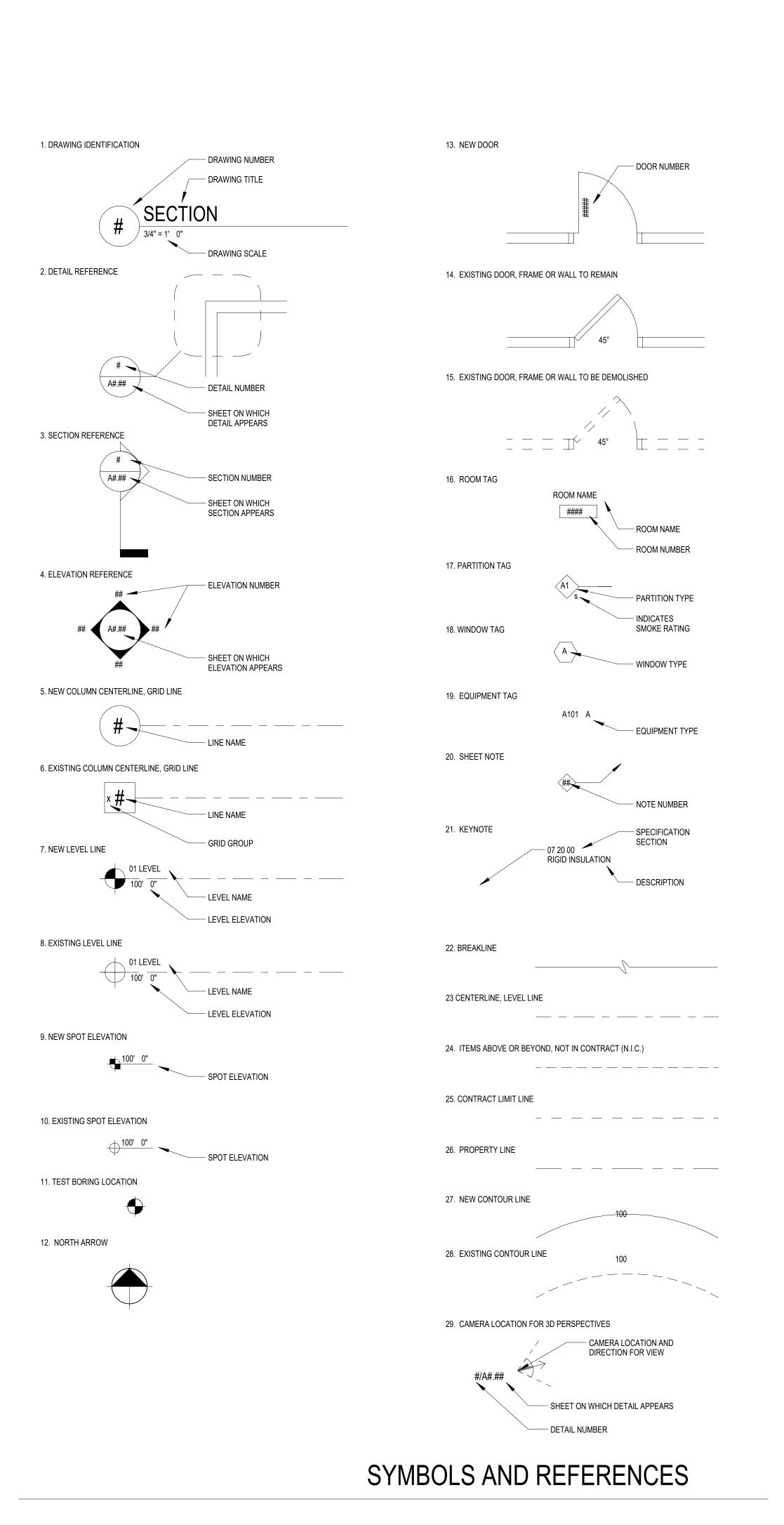
PROJECT DATA

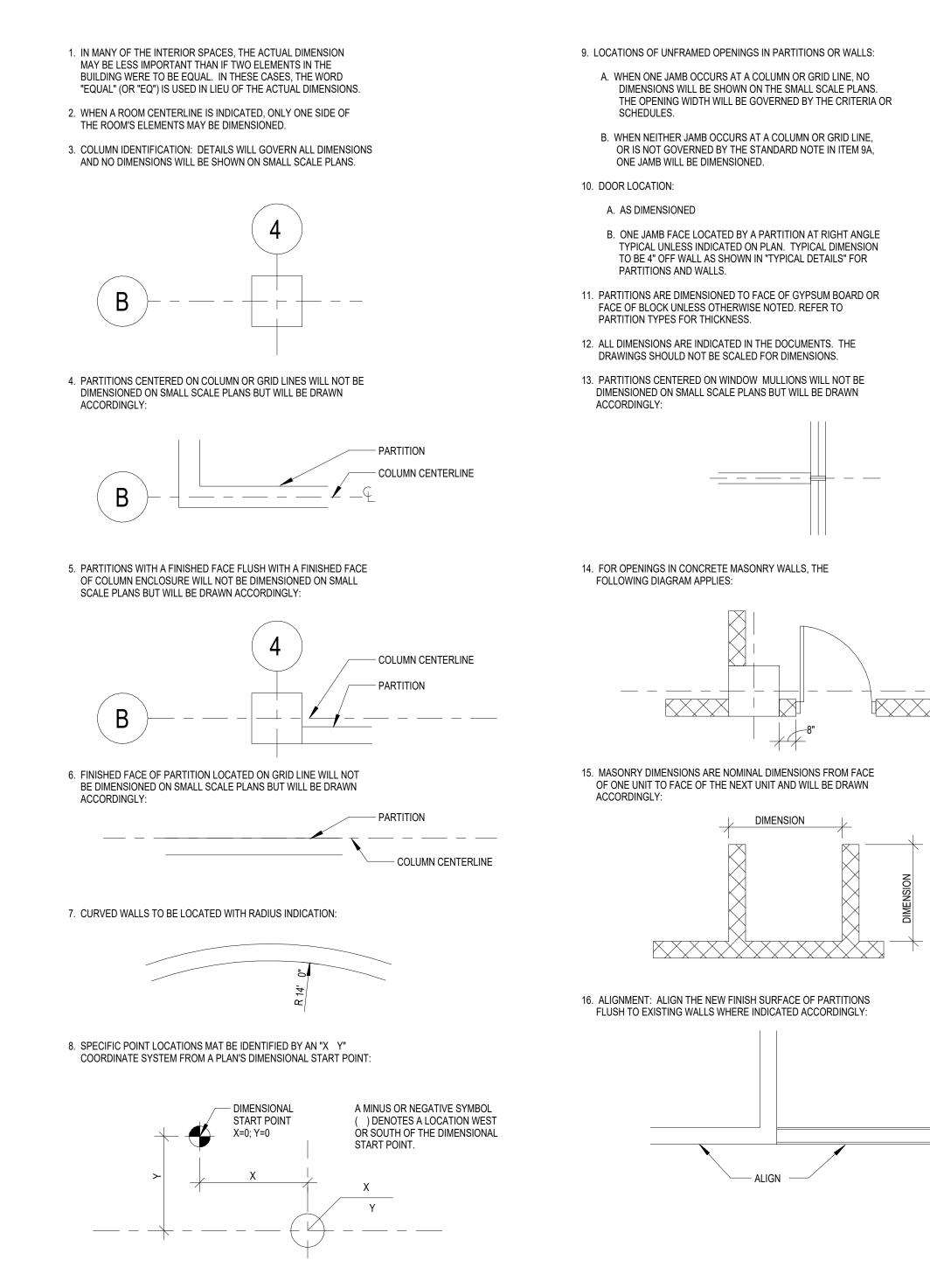
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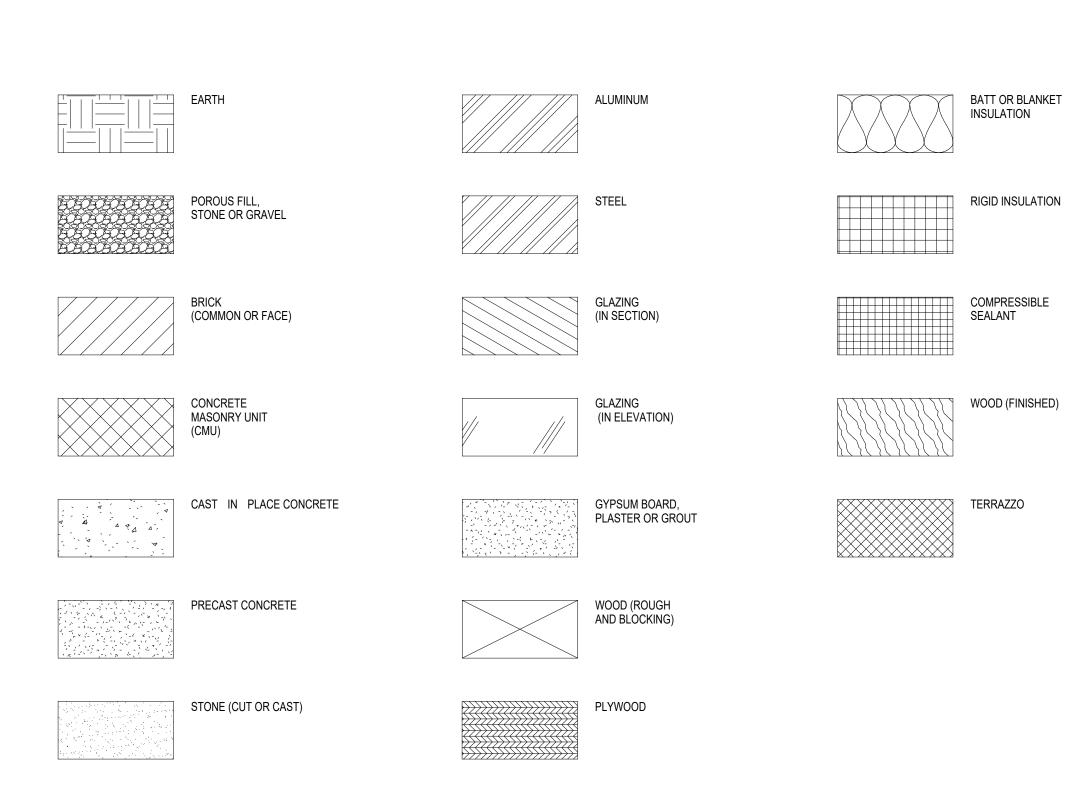








DIMENSIONING AND BUILDING LAYOUT



MATERIAL LEGEND

DRAWING SET / ARCHITECTURAL GENERAL NOTES

- 1. THE WORK IS BASED ON A COMPLETE SET OF CONTRACT DOCUMENTS. CONTRACTORS ARE RESPONSIBLE TO COORDINATE INFORMATION CONTAINED IN SITE, ARCHITECTURAL, STRUCTURAL, FIRE SUPPRESSION, PLUMBING, HVAC, ELECTRICAL, TECHNOLOGY, CIVIL, LANDSCAPE DRAWINGS AND REFERENCE DRAWINGS, SPECIFICATIONS AND PROJECT MANUAL.
- REFER TO OTHER SHEETS, DRAWINGS AND SCHEDULES FOR ADDITIONAL NOTES.
 DRAWINGS ARE DIAGRAMMATIC REPRESENTATIONS OF DESIGN INTENT. DO NOT SCALE DRAWINGS TO DETERMINE DIMENSIONS. SIZES, LOCATIONS AND DETAILING SHALL BE AS REQUIRED BY THE INTENT OF THE CONTRACT DOCUMENTS. CONTRACTORS ARE RESPONSIBLE TO VERIFY EXISTING CONDITIONS AND COORDINATE ALL WORK WITH ACTUAL FIELD CONDITIONS.
 REPRESENTATIONS OF EQUIPMENT, FURNISHINGS, ETC. ARE DIAGRAMMATIC. CONTRACTOR SHALL COORDINATE ACTUAL SIZES WITH INTENDED LOCATIONS AND
- REPRESENTATIONS OF EQUIPMENT, FURNISHINGS, ETC. ARE DIAGRAMMATIC. CONTRACTOR SHALL COORDINATE ACTUAL SIZES WITH INTENDED LOCATIONS AND VERIFY FIT AND CLEARANCES. CONTRACTOR SHALL ADVISE ARCHITECT OF ANY DISCREPANCIES.
 TYPICAL SECTIONS AND PLAN DETAILS APPLY TO SIMILAR CONDITIONS THAT MAY NOT BE SPECIFICALLY DRAWN.
 FIRST FLOOR GRADE ELEVATION IS DESIGNATED ON ARCHITECTURAL DRAWINGS AS 0' 0". REFER TO SITE DRAWINGS FOR REFERENCE GRADE.

ABBREVIATION SYSTEM IDENTIFICATION: SEE BELOW FOR ALL ABBREVIATIONS, IDENTIFICATIONS AND DESCRIPTIONS.

- 8. "TAGS" ARE ABBREVIATIONS FOLLOWED BY A DASH AND A NUMBER (TAG #). TAGS INDICATE A SPECIFIC FINISH, MATERIAL OR PRODUCT IDENTIFIED ON THE "FINISH, MATERIAL & PRODUCT LEGEND."
 9. THE KEYNOTING SYSTEM CORRELATES THE DRAWINGS TO THE SPECIFICATIONS. THE KEYNOTE SYSTEM IS NOT INTENDED TO COMPLETELY DEFINE OR DELINEATE WORK PROCESS OR SCOPE FOR INDIVIDUAL CONTRACTORS / SUBCONTRACTORS.
- 10.KEYNOTES BEGIN WITH A SPECIFICATION SECTION FOLLOWED BY A PERIOD AND A LETTER. THE LETTER IS FOR INTERNAL USE AND IS TO BE DISREGARDED BY THE CONTRACTOR.

 11.THIS SHEET INCLUDES TYPICAL REFERENCES, GRAPHICS, ETC. THAT MAY BE (BUT ARE NOT NECESSARILY) FOUND THROUGHOUT THE CONTRACT DOCUMENTS.

air conditioning fabric air barrier access flooring fabric ceiling system aluminum composite material panel face brick floor drain ACOUS acoustic(cal) fire extinguisher cabinet acoustical panel ceiling assembly / fire extinguisher Furniture, Fixtures and Equipment acoustical ceiling tile assembly flashing adhesive FLUOR adjustable framed mirror architecturally exposed structural fire protection rated glazing above finish floor fiberglass reinforced plastic panel air handling unit formed sheet metal, flashing and trim aluminum folding shower seat alternate foot or feet aluminum facial tissue dispenser anodized fire valve cabinet for fire department Architect(ural) acoustical tile ceilings hose connection Bottom of Stee grade beam bottom of grab bar building glass fiber reinforced concrete glass fiber reinforced plaster GMU glass masonry ur GYP BD gypsum board brick flooring glass masonry unit, glass block built up roofing hand dryer, electric HDWR sheet carpet hardware Height HGT catch basin horizontal louver blinds chalkboard cubicle curtain track system hollow metal HOR horizontal high point control joint high performance coating center line handrail HSKG concrete masonry unit housekeeping column HTG heating CONC heating, ventilating, and air concrete CONST construction hot water heater continuous or continue inside diameter carpet tile insulating glass unit intumescent mastic fireproofing concrete sealer include(d), (ing) cast stone masonry INSUL ceramic tile insulate(d), (ion) cementitious coatings interior combination towel dispenser, waste intumescent paint cabinet unit heater cement waterproofing, polymer joint sealant diaper changing station direct applied exterior finish system length laboratory leaded glass, for radiation protection diagonal laminated glass dimension left hand linear or lineal locker downspout long leg vertical LNLM linoleum flooring drawing low point elastomeric coatings exhaust fan entrance floor grille expansion joint expansion joint cover elevation electric(al) elevator cab electronic markerboard emergency

equipment

existing exposed

epoxy resin countertop

exposed structure

existing to remain

MACH support bracket (for countertops) machine seat cover dispenser schedule metal base shower curtain rod SCRF static control resilient flooring markerboard mop and broom holder storm drain soap dish medicine cabinet soap dispenser section mechanic(al) spray applied fire resistive material manufacture(r security glazing similar miscellaneous sanitary napkin disposal receptacle sanitary napkin vendor masonry opening mortar specification(s) metal roof panels square stainless steel metal ceiling system solid surface material mounted solid sheet vinyl metal locker standard metal wall panel stone flooring not in contract structural stone tile number NOM nominal swimsuit water extractor NRC NTS noise reduction coefficient sheet wall protection symmetry(ical) system OPH OPNG OPP opening opposite tongue and groove OVHD overhead top of curb top of masonry top of steel precast architectural concrete pounds per cubic foot top of partition mounted child seat towel bar PERF PERIM tackboard perforate(d) toilet compartment perimeter property line or plate telephone PLAM terrazzo (portland cement or resinous PLAS PLBG matrix) tempered glass PLG PLYWD plastic glazing toilet, or toilet room paint(ed) traffic coating PREFABprefabricate(d) purse shelf transition strip pounds per square foot toilet tissue dispenser pounds per square inch television typical paper towel dispenser under cabinet refrigerator paper towel receptacle unit heater polyvinyl chloride unless noted otherwise utility shelf radius vinyl composition tile return air vertical verify in field resilient base (vinvl or rubber Reflected Ceiling Plan vertical louver blinds vapor retarder solid vinyl floor tile refrigerator REQ D reveal with revision(s), revised without wood athletic flooring remove existing resinous flooring wall covering water closet wood (transparent finish) right hand wood ceiling WDF wood flooring rough opening Work Point waste receptacle resilient stair accessories resilient sheet flooring resilient tile flooring

roller window shade

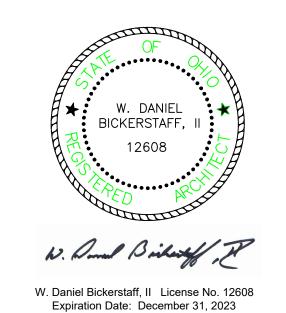
ABBREVIATIONS

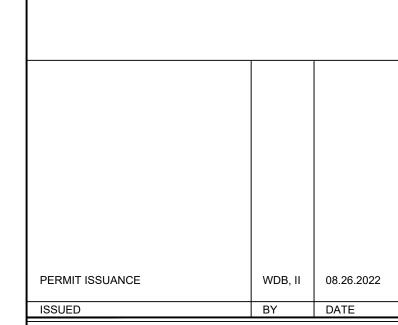


Project Team:

Architect







GLENVILLE HIGH SCHOOL

Interior Alteration

New MetroHealth
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Health Care Expansion Program

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MEDICAL CENTER
2500 METROHEALTH DR.
CLEVELAND, OH 44109

Hollie Dellisanti EDUCATOR, Exec. Dir.
Architectural Projects, Capital Projects

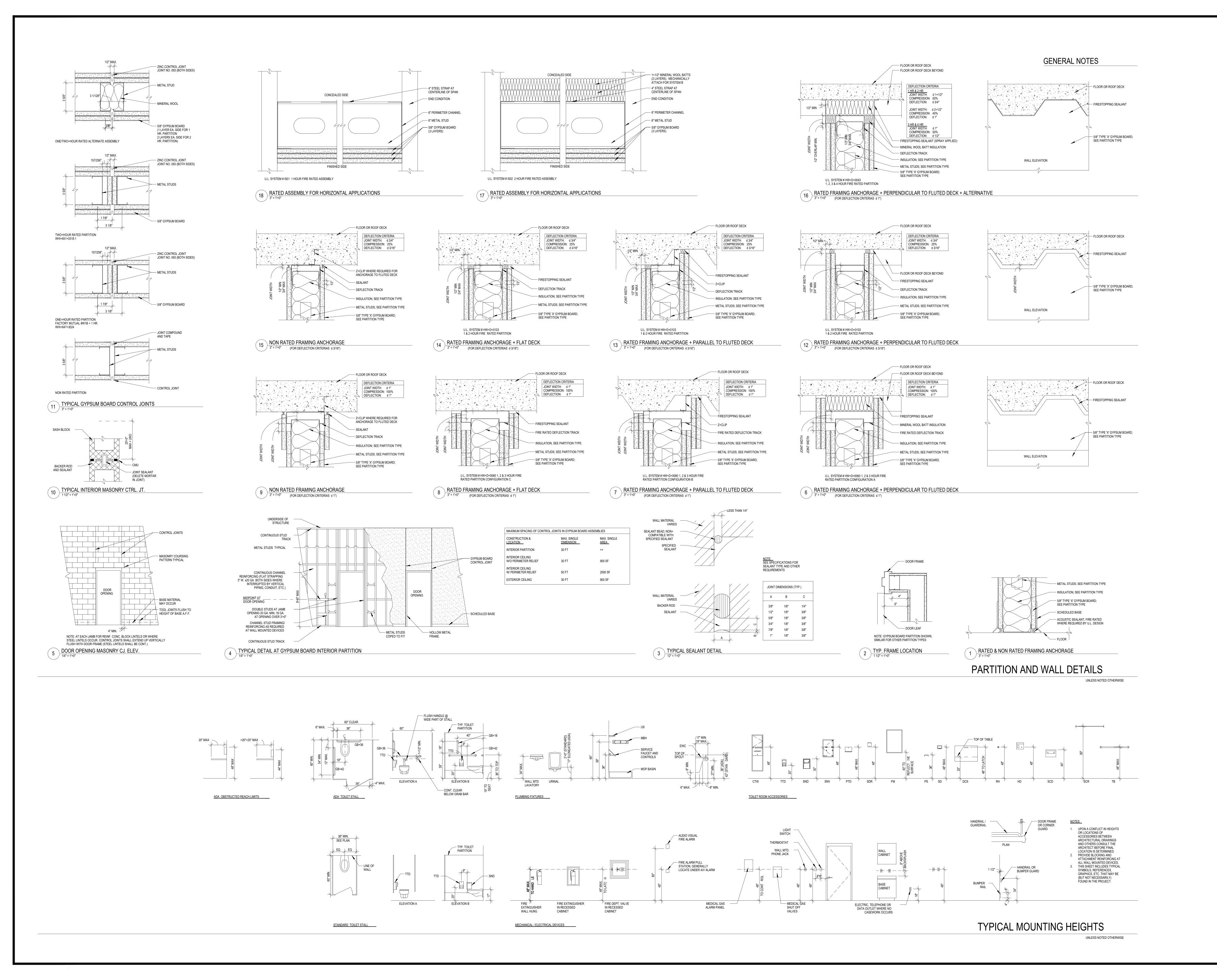
Date

Consultant Project # Drawn by:
DB Checked by:
WDB, II

GENERAL NOTES
AND LEGENDS

Date: 08.26.2022

GN1.0

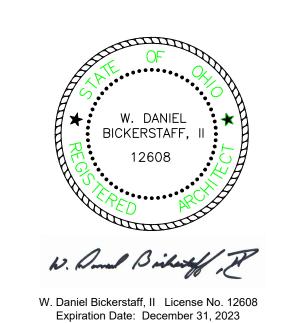


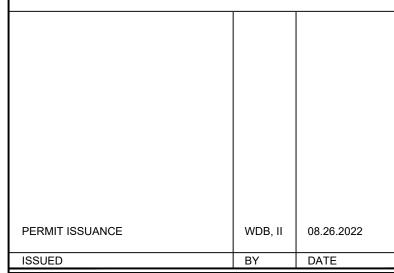


Project Team:

Architect







GLENVILLE HIGH SCHOOL

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MEDICAL CENTER 2500 METROHEALTH DR. CLEVELAND, OH 44109

Hollie Dellisanti EDUCATOR, Exec. Dir.
Architectural Projects, Capital Projects

Drawn by:
DB

Checked by:
WDB, II

TYPICAL DETAILS

O8.26.2022 GN2.0

DEMOLITION GENERAL NOTES:

1. SEE FLOOR PLAN GENERAL NOTES ON SHEET A1.1 FOR DESCRIPTION OF REFERENCE "ORTHO LINE".

- 2. DEMOLITION PLAN SHOWS APPROXIMATE LAYOUT OF EXISTING BUILDING AND IS NOT INTENDED TO REPRESENT "AS-BUILT" CONDITIONS. CONTRACTOR SHALL VISIT THE SITE AND OTHERWISE BECOME FAMILIAR WITH ACTUAL CONDITIONS WHEN BIDDING THE WORK. PRIOR TO STARTING OF WORK, CONTRACTOR SHALL VERIFY EXISTING CONDITIONS, DIMENSIONS AND SIZES, ETC. OR ITEMS NOT INDICATED ON DRAWINGS, THAT MAY REQUIRE DEMOLITION BUT NOT DESCRIBED OR SHOWN.
- 3. EXISTING FIRE ALARM OR SPRINKLER MONITORING SYSTEM: MAINTAIN EXISTING SYSTEM IN SERVICE UNTIL NEW SYSTEM IS ACCEPTED. DISABLE SYSTEM ONLY TO MAKE SWITCHOVERS AND CONNECTIONS. NOTIFY AND OBTAIN PERMISSION FROM LANDLORD AND LOCAL FIRE SERVICE IN ADVANCE IN ACCORDANCE WITH AHJ REQUIREMENTS BEFORE PARTIALLY OR COMPLETELY DISABLING SYSTEM. MINIMIZE OUTAGE DURATION. MAKE TEMPORARY CONNECTIONS TO MAINTAIN SERVICE IN AREA ADJACENT TO WORK
- 4. PRIOR TO ANY DEMOLITION WORK, CONTRACTOR MUST FIELD VERIFY ALL EXISTING MECHANICAL, PLUMBING AND ELECTRICAL WORK LOCATED IN THE TENANT SPACE.
- 5. WALLS, PARTITIONS, DOORS, FRAMES, AND OTHER ITEMS TO BE REMOVED ARE SHOWN DASHED. SERVICES WITHIN WALLS AND PARTITIONS SHALL ALSO BE REMOVED. REPAIR AND PATCH EXISTING WALLS SHOWN TO REMAIN WHERE INTERSECTING WALLS, DOORS, FRAMES, ETC. ARE SHOWN TO BE REMOVED AND WHERE EXISTING CONSTRUCTION WILL NOW BE EXPOSED IN THE NEW CONSTRUCTION.
- 6. EXISTING CONSTRUCTION SHOWN TO REMAIN SHALL BE PROTECTED DURING DEMOLITION. DAMAGE TO EXISTING CONSTRUCTION SHOWN TO REMAIN SHALL BE RESTORED TO MATCH PRE-DAMAGED CONDITION. ALL DAMAGED EXISTING STRUCTURAL FIREPROOFING MATERIAL IS TO BE PATCHED/REPAIRED AS REQUIRED.
- 7. REMOVE ALL EXISTING OBSOLETE MISCELLANEOUS NON-LOADBEARING ITEMS IN THEIR ENTIRETY THROUGHOUT TENANT SPACE, PARTICULARLY WHERE EXISTING ITEMS WILL INTERFERE WITH THE INSTALLATION OF NEW CONSTRUCTION, OR WHERE EXISTING ITEMS WILL BE EXPOSED IN THE NEW CONSTRUCTION, UNLESS SPECIFICALLY SHOWN ELSEWHERE IN THE CONTRACT DOCUMENTS TO REMAIN. REPAIR AND PATCH ALL SURFACES TO REMAIN, WITH MATERIALS MATCHING EXISTING CONSTRUCTION. COORDINATE WITH NEW CONSTRUCTION.
- 8. REMOVE ALL EXISTING OBSOLETE PLUMBING, MECHANICAL, AND ELECTRICAL EQUIPMENT IN THEIR ENTIRETY THROUGHOUT TENANT SPACE PARTICULARLY WHERE EXISTING ITEMS WILL INTERFERE WITH THE INSTALLATION OF NEW CONSTRUCTION, OR WHERE EXISTING ITEMS WILL BE EXPOSED IN THE NEW CONSTRUCTION, UNLESS SPECIFICALLY SHOWN ELSEWHERE IN THE CONTRACT DOCUMENTS TO REMAIN. COORDINATE WITH NEW CONSTRUCTION.
- 9. IN ALL AREAS WHERE DEMOLITION CAUSES UNEVENNESS AND/OR VOIDS IN THE FLOORS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PATCHING AND FLOOR LEVELING TO LEVEL FLOOR WITH ADJACENT SURFACES. FLOOR LEVELING MATERIAL SHALL BE COMPATIBLE WITH NEW FLOOR FINISH MATERIALS.
- 10. IN ALL AREAS WHERE DEMOLITION CAUSES UNEVENNESS AND/OR VOIDS IN GYPSUM BOARD WALLS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PATCHING AND LEVELING THE THE WALL WITH ADJACENT SURFACES. APPLY A SKIM COATING TO WALL SURFACES WITH EXTENSIVE VOIDS AND/OR UNEVENNESS.
- 11. ALL BUILDING SERVICES REQUIRED TO MAINTAIN BUILDING OPERATION OF OTHER AREAS SHALL BE MAINTAINED. BUILDING SERVICES IN FINISHED SPACES SHALL BE CONCEALED, UNLESS OTHERWISE INDICATED. BUILDING SERVICES ENCOUNTERED IN DEMOLISHED PARTITIONS AND CEILINGS WHICH ARE TO REMAIN SHALL BE REROUTED AND CONCEALED. THOSE BUILDING SERVICES THAT ARE INDICATED TO BE ABANDONED SHALL BE CAPPED AND CONCEALED IN THE FLOOR, WALL OR CEILING. CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY ALL SERVICES PRIOR TO REMOVAL AND DISCONNECTION INCLUDING ELECTRICAL, HVAC, PLUMBING, SECURITY, AND TELEPHONE/DATA FOR ADJOINING OCCUPIED SPACES.
- 12. ALL EXISTING CONCRETE FLOORS SHALL BE PREPARED TO RECEIVE NEW FLOOR FINISHES. THIS SHALL CONSIST OF BUT NOT LIMITED TO SCRAPING, GRINDING, APPLYING FLOOR LEVELING MATERIAL, ETC.

WALL LEGEND

EXIST. WALLS

CEEEEEE WALLS AND MILLWORK TO BE REMOVED

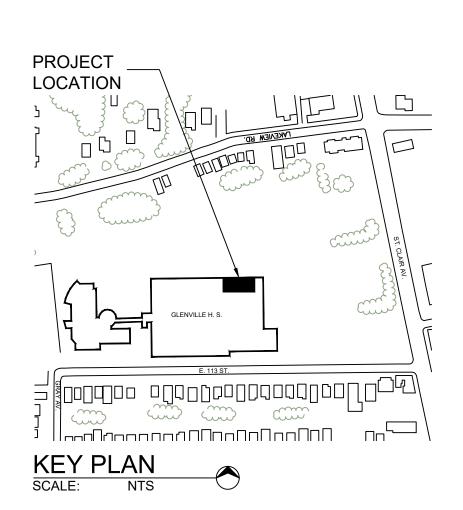
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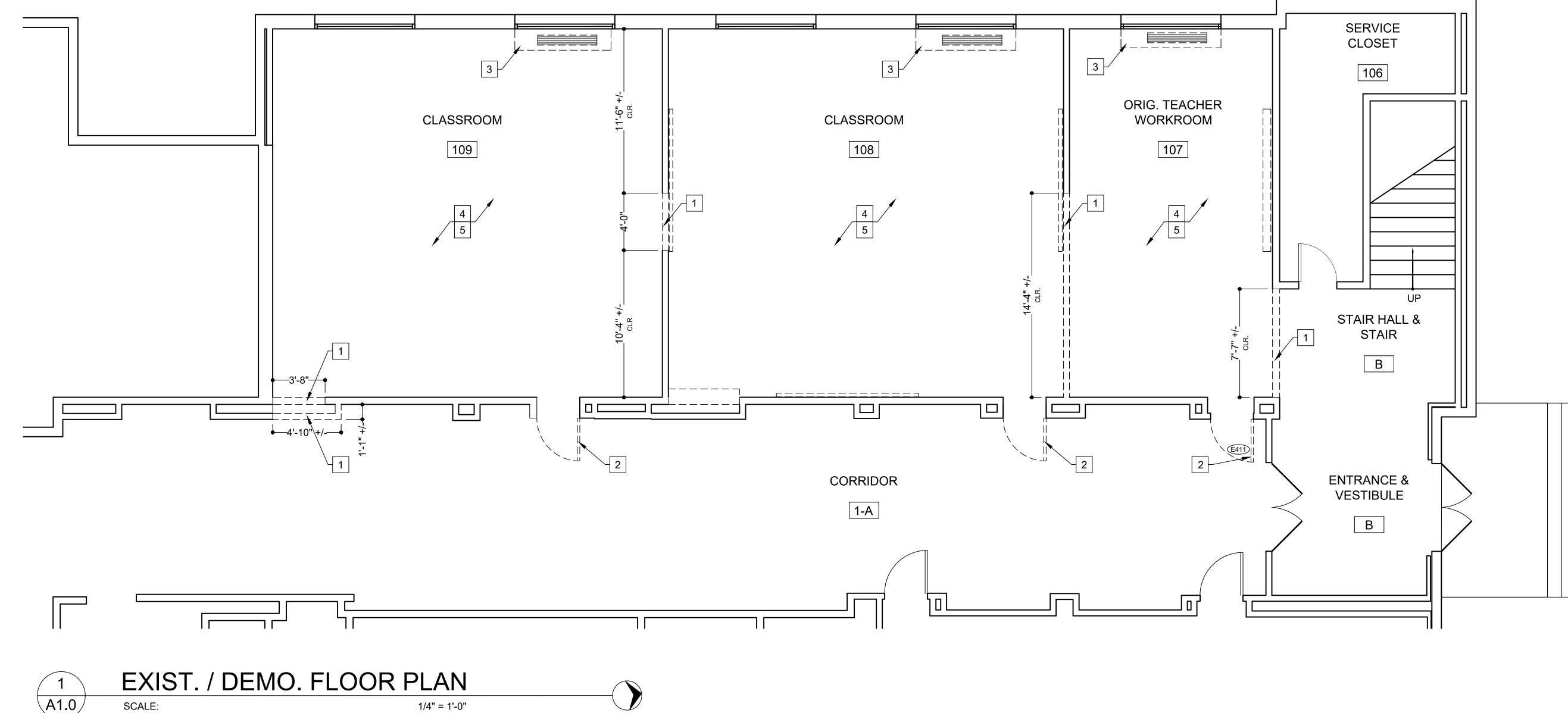
- INDICATED BY REMOVE PORTION OF EXIST. INTERIOR MSY. WALLS TO CREATE A NEW OPNG.; PROVIDE STL. LINTELS AT EACH OPEN; SEE LINTEL SCHEDULE FOR SIZE
- REMOVE EXIST. DOORS AND MTL. FRAME
- REMOVE EXIST. THROUGH WALL A.C. / VENTILATOR 4. REMOVE
 - -FLOORING -WALL BASE -ACOUST. CLG. TILES ETC.

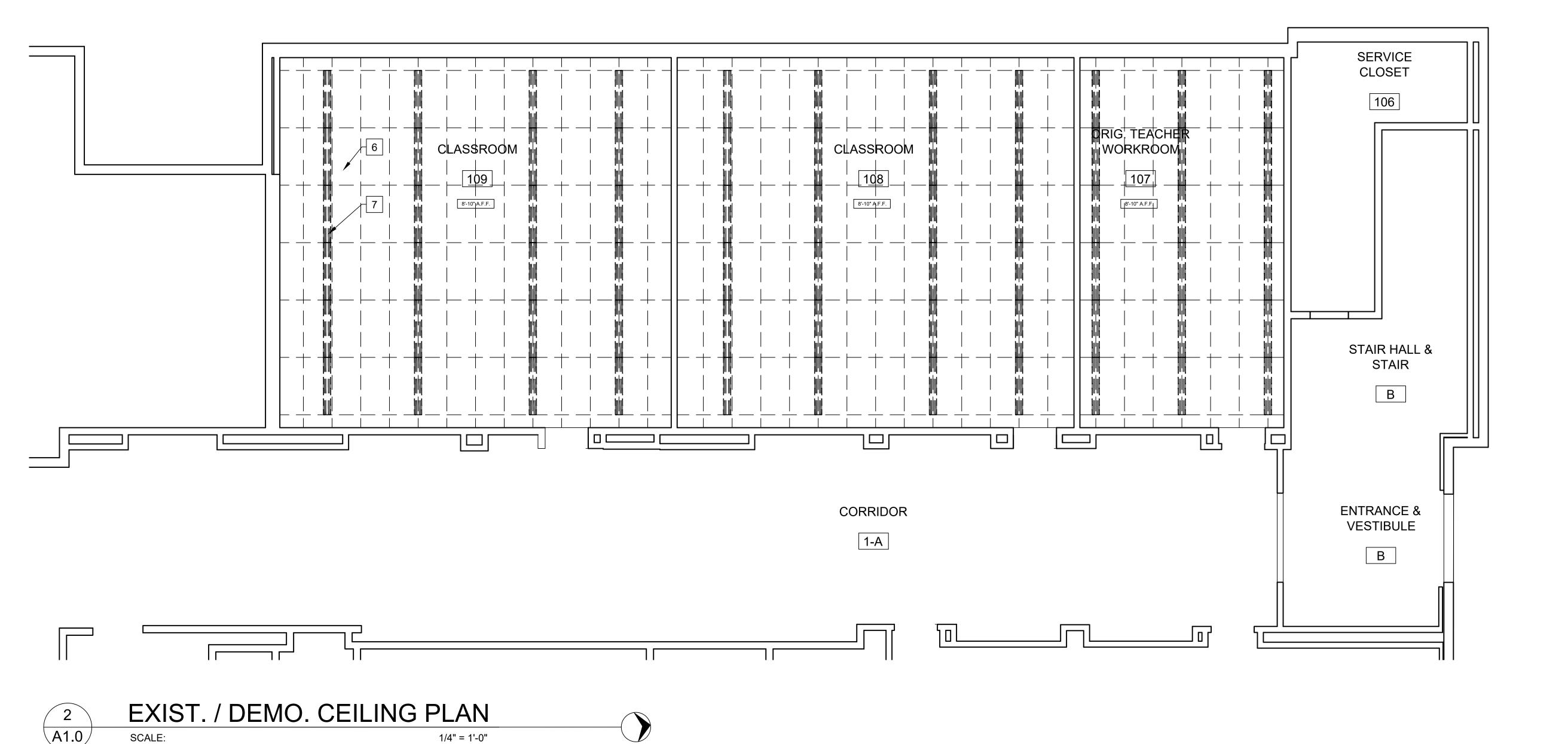
-CHALK/MARKER BOARDS -ACCESSORIES (CLOCKS, MIRRORS, FIRE EXTINGUISHERS

-ADHESIVE -A/V TECH. EQUIPMENT CMSD SHALL REMOVE ALL FURNISHINGS, DEHUMIDIFIERS, WALL MNTD. POSTERS.

*SALVAGE ALL ACCESSORIES AND TECH. EQUIP.; CONTRACTOR TO REMOVE AND CMSD SHALL STORE







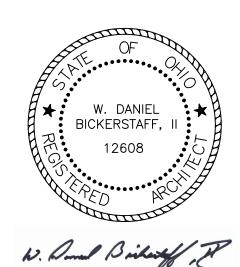


Project Team:

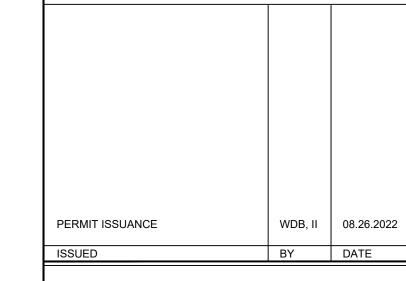
Architect







W. Daniel Bickerstaff, II License No. 12608 Expiration Date: December 31, 2023



GLENVILLE HIGH SCHOOL

Interior Alteration

New MetroHealth ODH Health Care Expansion Program

650 East 113th Street Cleveland, OH 44108



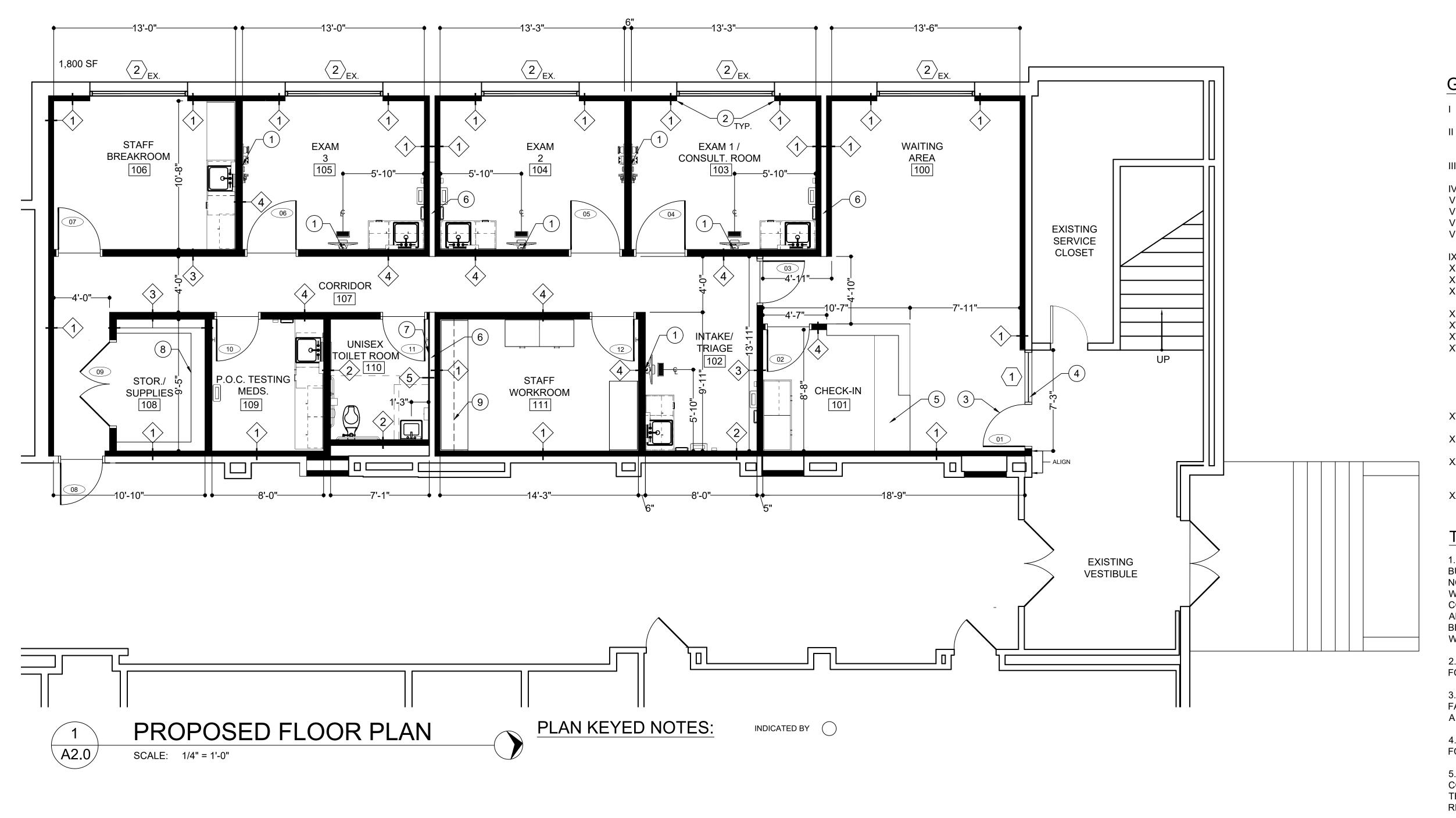
CLEVELAND, OH 44109

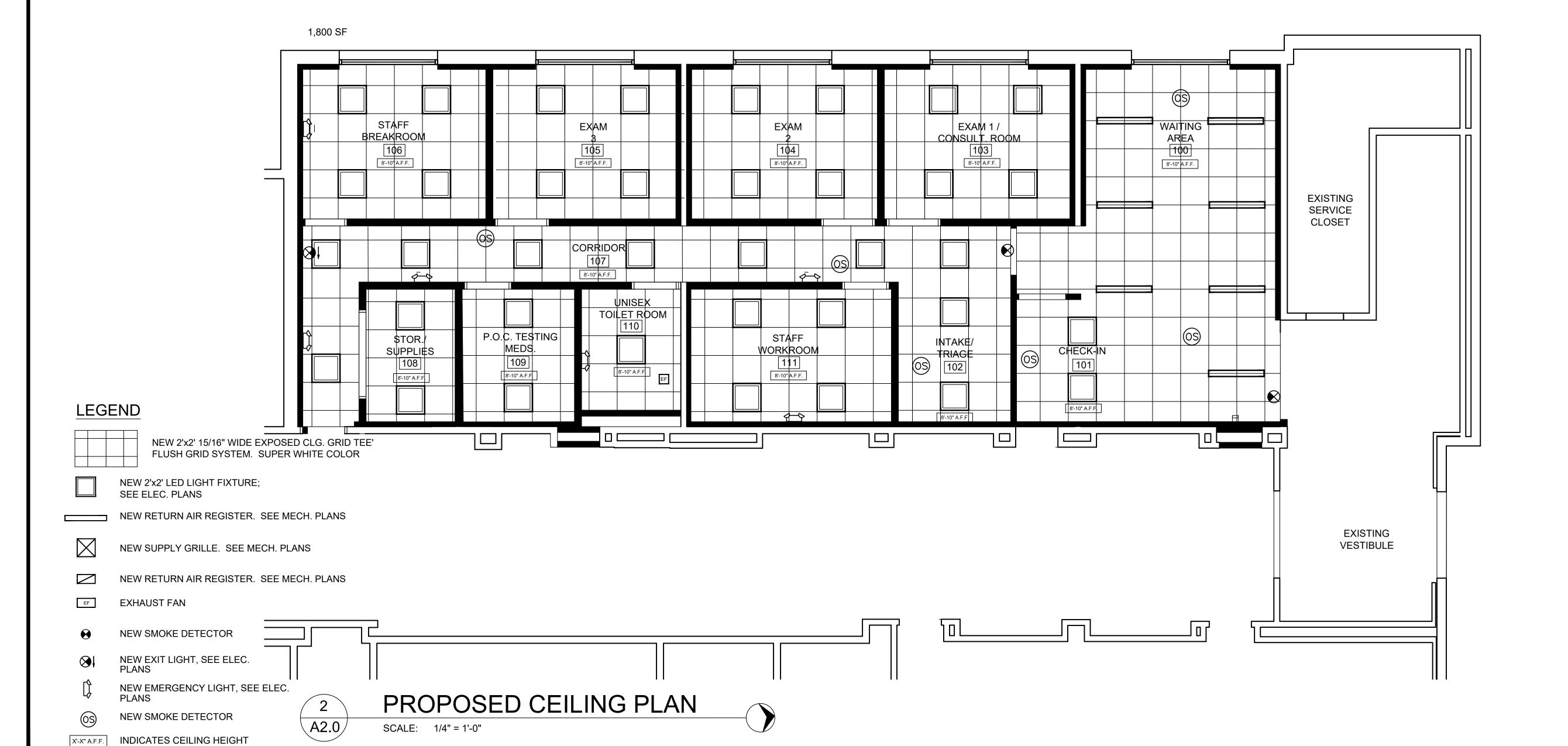
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EXIST. / DEMO **PLANS**

08.26.2022

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GENERAL NOTES:

- I ALL WORK, ITEMS AND MATERIALS ARE **NEW** UNLESS PRECEDED BY THE
- WORD "EXISTING".

 II PATCHING- ALL EXISTING SURFACES DISTURBED BY RENOVATIONS.

 WALLS SHALL BE PATCHED TO MATCH EXIST. THEN APPLY NEW
- III SOUND- ALL PARTITIONS SHALL INCLUDE SOUND ATTENUATION BATTS
- AND EXTEND TO UNDERSIDE OF STRUCTURE.

 IV FURNISHINGS- BY OWNER.
- V EQUIP- PER PLAN.
- VI COMPUTERS- PER PLAN.
 VII TELEPHONES/DATA- PER OWNER
- VIII CEILINGS- NEW THROUGHOUT; PATCH, SEAL, CLOSE AND RELOCATE
- ITEMS AS REQUIRED.

 IX WALLS- PAINT.
- X FLOORS- NEW.
- XI POWER- AS REQUIRED BY PLAN.
- XII THE METHOD OF ATTACHMENT FOR ALL ITEMS THAT ARE TO BE SUSPENDED ARE TO BE SUSPENDED FROM THE FLR. STRUCT. ABOVE.
- XIV REFERENCE FINISH FLOOR AT 0'-0".
- XV REFER TO AX.X FOR PARTITION TYPES. XVI REFER TO AX.X FOR DOOR SCHEDULE.
- XVII THESE DRAWINGS HAVE BEEN COORDINATED WITH EXISTING CONDITIONS AS THEY ARE BELIEVED TO EXIST. THE CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AND NOTIFY THE ARCHITECT/OWNER, IN A TIMELY MANNER, REGARDING ANY AND ALL DISCREPANCIES BETWEEN THE CONTRACT DOCUMENTS AND ACTUAL
- XVIII REFER TO MECHANICAL AND ELECTRICAL DRAWINGS FOR ADDITIONAL
- WORK.
 XIX UPON COMPLETE REMOVAL OF EXIST. FLRNG. ARCHITECT AND OWNER
- TO PERFORM DETAIL REVIEW AND INSPECTION OF EXIST. SUBFLOOR
 XX NEW WALLS SHALL BE INSTALLED WITH THE INTENT OF PROVIDING
 ACCESS TO ALL EXIST. OUTLETS AND DEVICES IDENTIFIED AS EXIST. TO
- XXI REFER TO INTERIOR DRAWINGS FOR CASEWORK INFORMATION AND DIMENSIONS

TYPICAL NOTES

CONDITIONS.

1. ALL WORK SHALL COMPLY WITH ALL APPLICABLE LOCAL AND STATE BUILDING CODES, FIRE SAFETY CODES AND REGULATIONS INCLUDING, BUT NOT LIMITED TO, THE OHIO BUILDING CODE (OBC) AND THE AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES (ADAAG). ANY CONFLICTS BETWEEN THE WORK INDICATED WITHIN THESE DOCUMENTS AND SAID CODES OR REGULATIONS NOTED BY THE CONTRACTOR SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT PRIOR TO PROCEEDING WITH THE WORK.

2. MAKE ARRANGEMENTS 72 HOURS MINIMUM IN ADVANCE WITH THE OWNER FOR ANY INTERRUPTIONS OF UTILITY SERVICE.

3. EACH CONTRACTOR AND VENDOR SHALL VISIT THE SITE AND BECOME FAMILIAR WITH ALL CONDITIONS AND CLEARANCES PRIOR TO SUBMITTING A PROPOSAL.

4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING AND PAYING FOR ALL PERMITS AND INSPECTIONS AS REQUIRED.

5. SHOULD ANY OF THE DETAILED INSTRUCTIONS ON THE DRAWINGS CONFLICT WITH THE NOTES OR SPECIFICATIONS OR WITH EACH OTHER, THE STRICTEST PROVISION SHALL APPLY. ANY SUCH CONFLICT SHALL BE REPORTED TO THE ARCHITECT.

6. ALL SECTIONS AND DETAILS SHALL BE CONSIDERED TYPICAL AND APPLY FOR THE SAME AND SIMILAR SITUATIONS THROUGHOUT THE STRUCTURE UNLESS SPECIFICALLY NOTED OTHERWISE.

7. THE CONTRACTOR SHALL VERIFY ALL RELEVANT DIMENSIONS, ELEVATIONS ANGLES AND EXISTING CONDITIONS BEFORE PROCEEDING WITH THE AFFECTED WORK AND NOTIFY THE ARCHITECT OF ANY DISCREPANCIES IMMEDIATELY.

8. INSTALL ALL MATERIALS AND EQUIPMENT IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS.

9. ALL LOOSE DEBRIS/TRASH SHALL BE DEPOSITED IN A COVERED TRASH RECEPTACLE OR REMOVED FROM THE SITE. NO LOOSE DEBRIS/TRASH SHALL BE LEFT ON ROOFS, SPACES OPEN TO AIRPORT OPERATIONS AREA (AOA), NEAR CONVEYANCE SYSTEMS, OR IN ANY OPEN TRASH CONTAINERS.

10. ALL CONTRACTORS AND SUBCONTRACTORS FOR THE WORK OF THIS CONTRACT SHALL BE PROPERLY LICENSED AND REGISTERED IN ACCORDANCE WITH THE REGULATIONS OF CLEVELAND, OHIO.

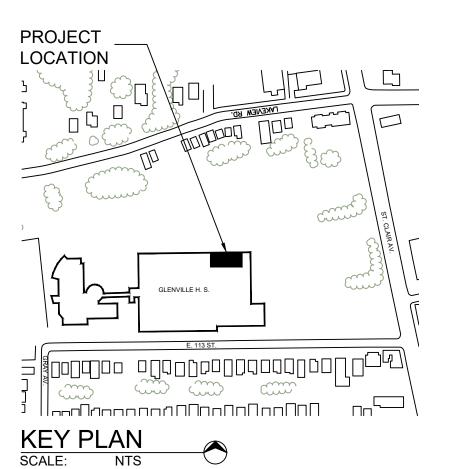
11. AT ALL TIMES WHEN WORK IS IN PROGRESS, A REPRESENTATIVE OF THE CONTRACTOR OR SUB-CONTRACTOR SHALL BE ON SITE AND AUTHORIZED TO ANSWER QUESTIONS OR RECEIVE INSTRUCTIONS FROM THE OWNER OR ARCHITECT.

12. ALL UNUSED/ABANDONED FLOOR/WALL OPENINGS SHALL BE SEALED OR FIRE STOPPED.

13. DUE TO HEALTH RELATED REASONS, USE OF CHINESE-MADE GYPSUM WALLBOARD IS NOT PERMITTED TO BE USED ON THE PROJECT.

14. ALL "LOUD" WORK (CUTTING, CORING, SAWING, ETC.) WILL BE CONDUCTED AT NIGHT WHEN THE CONCOURSE IS NOT OCCUPIED BY PASSENGERS (AFTER 10PM, BEFORE 5AM)

15. PROVIDE LOCKS AT ALL CABINETRY DOORS AND DRAWERS





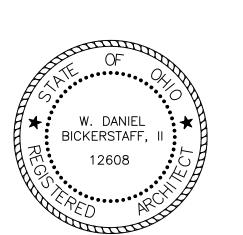
CLEVELAND METROPOLITAN SCHOOL DISTRICT

Project Team:

Architect



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Expiration Date: December 31, 2023



WDB, II 08.26.2022

Interior Alteration

PERMIT ISSUANCE

New MetroHealth ODH SBHC

Health Care Expansion Program

650 East 113th Street Cleveland, OH 44108



MEDICAL CENTER 2500 METROHEALTH DR. CLEVELAND, OH 44109

Hollie Dellisanti EDUCATOR, Exec. Dir.
Architectural Projects, Capital Projects

Date

Drawn by:
DB

Checked by:
WDB, II

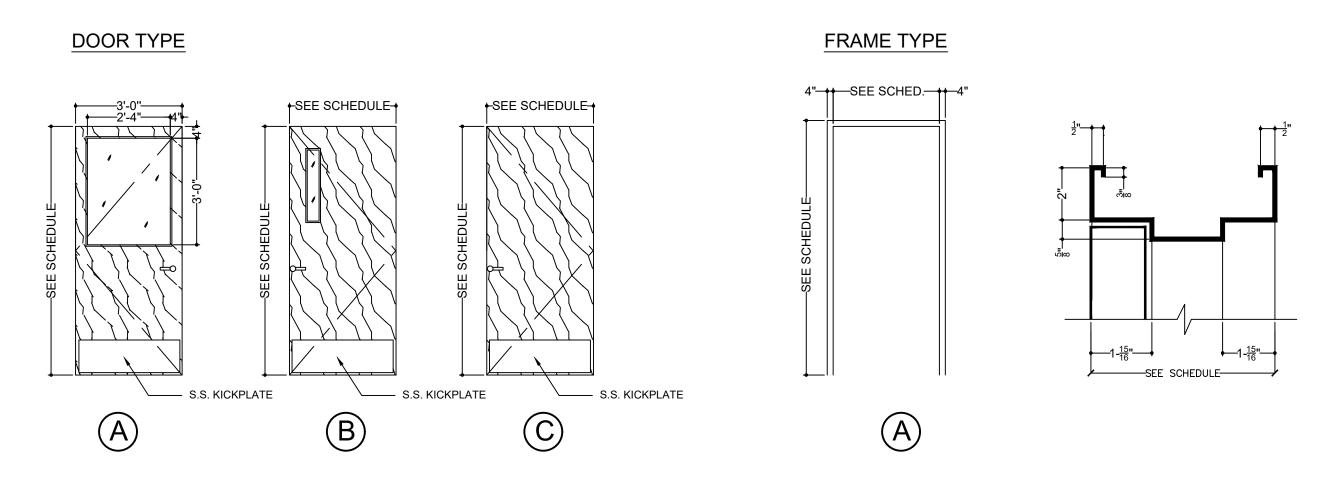
FLOOR AND CEILING
PLANS
Scale: Sheet:

Date: 08.26.2022

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			DO	OOR SC	HEDULE							
			OPENING				FRAI	ME				
OPEN'G	TVDE	DOOM	WIDTH/HEIGHT/ DOOD THICKNESS	DAA T	OL AZINIO		NAA TI	LANAD	DETAIL		ATING	REMARKS
NO.)1	TYPE A	ROOM ENTRANCE	WIDTH/HEIGHT/ DOOR THICKNESS 3'-0" x 7'-0" x 1 3/4"	MAT.	GLAZING YES	ELEV.	MATL.	JAMB 1	HEAD 1	YES	<u>₩</u> 1-HR	NEW HALF DOOR INTEGRATED WITH FRONT DESK MILLWORK
2	С	CHECK-IN	3'-0" x 7'-0" x 1 3/4"	WD.	NO	A	НМ	1	1	-	-	
3	В	CORRIDOR	6'-0" x 7'-0" x 1 3/4"	WD.	YES	A	НМ	1	1	-	-	
4	С	EXAM 1 / CONSULT ROOM	3'-6" x 7'-0" x 1 3/4"	WD.	NO	A	НМ	1	1	-	-	
5	С	EXAM ROOM 2	3'-6" x 7'-0" x 1 3/4"	WD.	NO	A	НМ	1	1	-	-	
6	С	EXAM ROOM 3	3'-6" x 7'-0" x 1 3/4"	WD.	NO	A	НМ	1	1	-	-	
7	С	STAFF BREAKROOM	3'-0" x 7'-0" x 1 3/4"	WD.	NO	A	НМ	1	1	-	-	
8	В	EGRESS	3'-0" x 7'-0" x 1 3/4"	WD.	YES	A	НМ	1	1	YES	1-HR	
9	С	STORAGE / SUPPLY	(2) 3'-0" x 7'-0" x 1 3/4"	WD.	NO	A	НМ	1	1	-	-	
0	В	P.O.C. TESTING	3'-0" x 7'-0" x 1 3/4"	WD.	NO	A	НМ	1	1	-	-	
1	С	UNISEX TOILET ROOM	3'-0" x 7'-0" x 1 3/4"	WD.	NO	A	НМ	1	1	-	-	
2	С	STAFF WORKROOM	3'-0" x 7'-0" x 1 3/4"	WD.	NO	A	НМ	1	1	-	-	

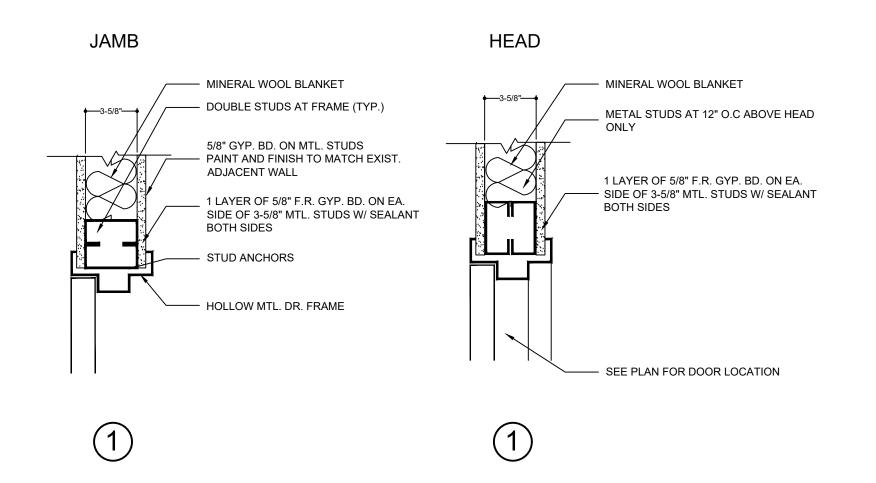
DOOR TYPE AND FRAME

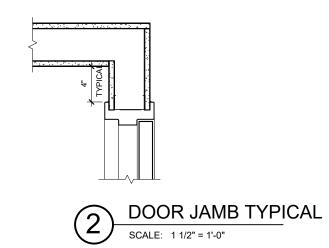


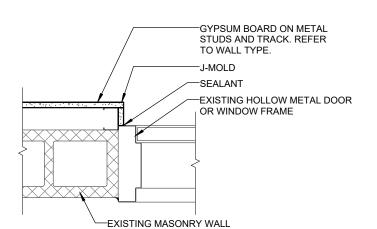
HARDWARE NOTES

- 1. ALL DOORS (UNLESS NOTED OTHERWISE) SHALL HAVE LEVER-OPERATED HARDWARE PER SECTION 4.13.9 ADAAG. ALLOWING FOR EASY OPERATION WITHOUT GRASPING PINCHING OR TWISTING OF THE WRIST.
- 2. ALL EGRESS DOORS SHALL BE READILY OPENABLE FROM THE SIDE FROM WHICH EGRESS IS TO BE MADE WITHOUT THE USE OF A KEY OR SPECIAL KNOWLEDGE OR EFFORT PER 1017.4.1 OBBC
- B. DOOR OPENING FORCE SHALL COMPLY WITH ANSI A117.1(2009), SECTION 4.13.11
- 4. PROVIDE COSMETIC SEALANT AT JOINT WHERE FRAMES MEET WALL (TYP.). COLOR TO MATCH WALL PAINT

HEAD AND JAMB DETAILS







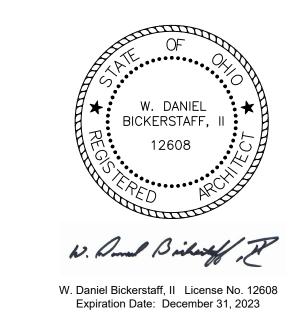


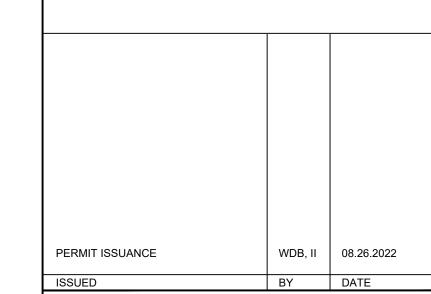


Project Team:

Architect







GLENVILLE HIGH SCHOOL

Interior Alteration

New MetroHealth
ODH
SBHC
Health Care Expansion Program

650 East 113th Street Cleveland, OH 44108



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	DUCATOR, Exec. Dir. ects, Capital Projects	Date
Consultant Project #	Drawn by:	Checked by:
	l DB	WDB, II

DOOR SCHEDULE AND DETAILS

Date: 08.26.2022

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- B. IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO CROSS-CHECK THE INTERIOR DRAWINGS WITH THE ARCHITECTURAL DRAWINGS PRIOR TO THE ORDERING / INSTALLATION OF CASEWORK. ANY DISCREPANCIES BETWEEN THE ARCHITECTURAL AND INTERIOR DRAWINGS SHALL BE BROUGHT TO THE ARCHITECTS ATTENTION FOR IMMEDIATE CLARIFICATION.
- C. COORDINATE THE INSTALLATION WITH OTHER TRADES AS REQUIRED TO ENSURE A NEAT AND ORDERLY INSTALLATION. NOTIFY ARCHITECT/ENGINEER OF ANY DISCREPANCIES BEFORE STARTING WORK. D. GENERAL CONTRACTOR AND SUB-CONTRACTORS SHALL CAREFULLY REVIEW THE CONSTRUCTION DOCUMENTS. INFORMATION REGARDING THE COMPLETE WORK IS DISPERSED THROUGHOUT THE DOCUMENT SET AND CANNOT BE ACCURATELY DETERMINED WITHOUT REFERENCE TO THE COMPLETE
- E. WHERE THERE MAY BE A CONFLICT IN THE SPECIFICATIONS AND/OR DRAWINGS, THEN THE MORE EXPENSIVE LABOR, MATERIALS AND EQUIPMENT SHALL BE ASSUMED TO BE REQUIRED AND SHALL BE PROVIDED BY THE GENERAL CONTRACTOR TO THE SATISFACTION OF THE TENANT. F. WHEN WORK, NOT SPECIFICALLY CALLED OUT, IS REQUIRED TO COMPLETE THE PROJECT, IT SHALL BE PROVIDED BY THE GENERAL CONTRACTOR WITH THE BEST MATERIALS AND WORKMANSHIP. G. THE PROPER RECEIPT AND UNLOADING OF ALL NEW MATERIALS AND EQUIPMENT AT THE JOBSITE IS
- THE RESPONSIBILITY OF THE GENERAL CONTRACTOR. SECURE AND SAFE STORAGE OF ALL MATERIALS AND EQUIPMENT WILL BE PROVIDED BY THE GENERAL CONTRACTOR, GENERAL CONTRACTOR SHALL ADVISE ARCHITECT & OWNER OF ALL DAMAGED, DEFICIENT OR OVERSHIPMENTS OF OWNER SUPPLIED MATERIALS. GENERAL CONTRACTOR SHALL COMPLETE AND SUBMIT ALL NECESSARY PAPERWORK AND ARRANGE INSPECTIONS OF DAMAGED GOODS AND RETURN AS PER CONSTRUCTION REQUIREMENTS. H. FINISHES SHALL BE SUBMITTED TO THE ARCHITECT FOR APPROVAL PRIOR TO ORDERING OR INSTALLATION, WHERE DIRECTED IN THE SPECIFICATIONS.
- I. ENSURE THAT ALL SURFACES TO RECEIVE FINISHES ARE CLEAN, TRUE AND FREE OF IRREGULARITIES. DO NOT PROCEED WITH WORK UNTIL UNSATISFACTORY CONDITIONS HAVE BEEN CORRECTED. J. REFER TO ELEVATIONS FOR FINISHES THAT MAY NOT BE NOTED ON THE FINISH PLAN. TRANSITION IN FLOORING SHALL BE LOCATED AT CENTER OF DOOR OR OPENING UNLESS NOTED OTHERWISE (U.N.O.). K. PATCH, SMOOTH AND OTHERWISE PREPARE FLOOR SLAB AS REQUIRED FOR INSTALLATION OF
- L. PROVIDE RESILIENT BASE IN ALL FINISHED FLOORING AREAS UNLESS SCHEDULED OTHERWISE. M. DO NOT INSTALL FLOORING MATERIALS OVER EXPANSION JOINTS. PROVIDE EXPANSION JOINT COVERS. N. SEE FINISH SCHEDULE, INTERIOR ELEVATIONS AND REFLECTED CEILING PLANS FOR ADDITIONAL FINISH
- O. CORNER GUARDS TO BE PLACED ON ALL EXTERIOR GYPSUM BOARD CORNERS. REFER TO SPECIFICATION SECTION 10 26 00 FOR ADDITIONAL INFORMATION. P. PROVIDE TRANSITION AT ALL CHANGES IN FLOOR MATERIALS. UNO. Q. PATCH, SMOOTH AND OTHERWISE PREPARE FLOOR SLAB AS REQUIRED FOR INSTALLATION OF
- R. INSTALL A SOAP DISPENSER AND PAPER TOWEL DISPENSER AT EACH SINK. S. THE INTENT OF THESE ELEVATIONS IS TO SHOW LOCATIONS OF MAJOR INTERIOR ELEMENTS. ELEVATIONS MAY NOT SHOW ALL ITEMS IN ALL ROOMS. T. SEE TYPICAL MOUNTING HEIGHTS ON SHEET I-201. VERIFY MOUNTING HEIGHTS SHOWN FOR TOILET ACCESSORIES WILL ALLOW FOR FULL OPERATION OF UNITS. NOTIFY ARCHITECT OF ANY POSSIBLE
- U. SEE INTERIOR DETAILS FOR ADDITIONAL CASEWORK INFORMATION. V. CASEWORK SHALL HAVE A 4" BACKSPLASH AND/OR SIDESPLASH AND 4" TOE KICK UNLESS NOTED
- W. ALL CASEWORK SHALL LOCK. LOCKS WITHIN A GIVEN ROOM SHALL BE KEYED ALIKE UNLESS OTHERWISE DIRECTED BY OWNER. COORDINATE MASTER KEYING AND OVERALL KEYING SCHEDULE
- X. WALL CABINETS 24" HIGH SHALL HAVE ONE ADJUSTABLE SHELF. WALL CABINETS 25"-36" HIGH SHALL HAVE TWO ADJUSTABLE SHELVES UNLESS INDICATED OTHERWISE ON ELEVATIONS. Y. BASE CABINETS SHALL HAVE ADJUSTABLE SHELVES AS INDICATED ON ELEVATIONS AND DETAILS (MINIMUM OF ONE SHELF).
- AA. INSTALL CHAIN STOPS IN ALL LOCATIONS WHERE CABINET DOOR IS ADJACENT TO A WALL OR OTHER BB. INSTALL FILLER PANELS WHERE REQUIRED. PROVIDE AT WALL JUNCTION TO ALLOW DOORS TO OPEN COMPLETELY (MINIMUM 100 DEGREES). FILLERS SHALL EXTEND THE FULL DEPTH OF CABINET TO
- CC. BASE AND TALL CABINETS SHALL BE 24" DEEP U.N.O. WALL CABINETS SHALL BE 14"-15" DEEP U.N.O. DD. INSTALL HEAVY-DUTY WORKSURFACE SUPPORT BRACKETS AS REQUIRED TO FULLY SUPPORT WORKSURFACE. BRACKETS SHALL BE METAL WITH WIREWAY OPENING (A&M HYBRID BRACKETS OR EQUAL). COLOR TO BE SELECTED BY ARCHITECT FROM MANUFACTURER'S FULL RANGE. EE. INSTALL GROMMETS IN WORKSURFACES FOR ACCESS TO ELECTRIC AND DATA OUTLETS. COLOR TO BE

PLAN KEYED NOTES:

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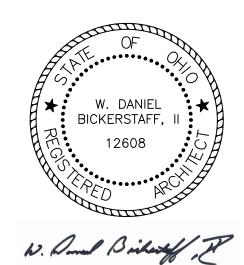


Project Team:

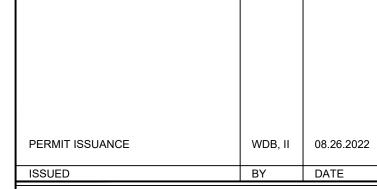
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W. Daniel Bickerstaff, II License No. 12608 Expiration Date: December 31, 2023



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Interior Alteration

New MetroHealth ODH SBHC

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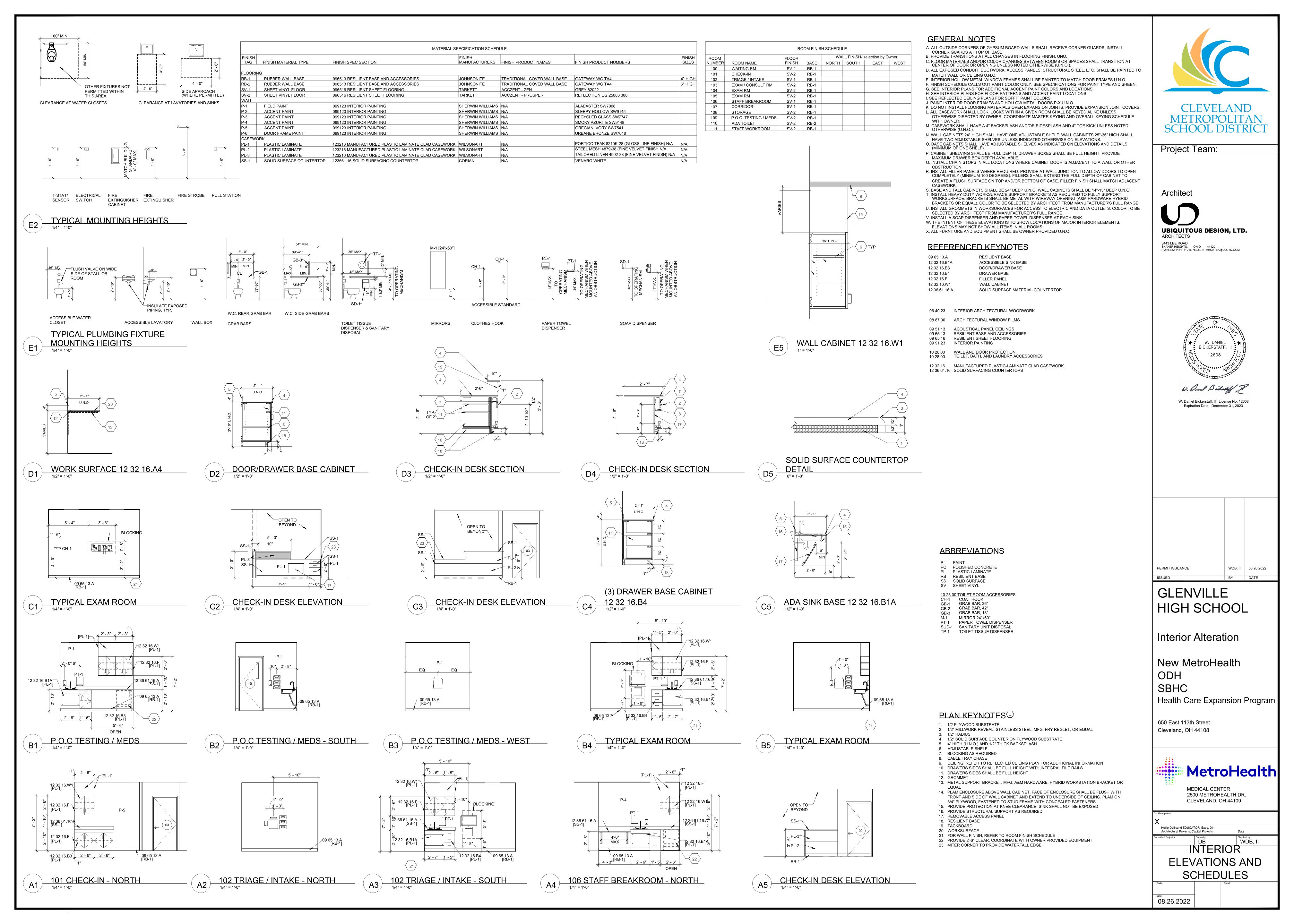
Cleveland, OH 44108

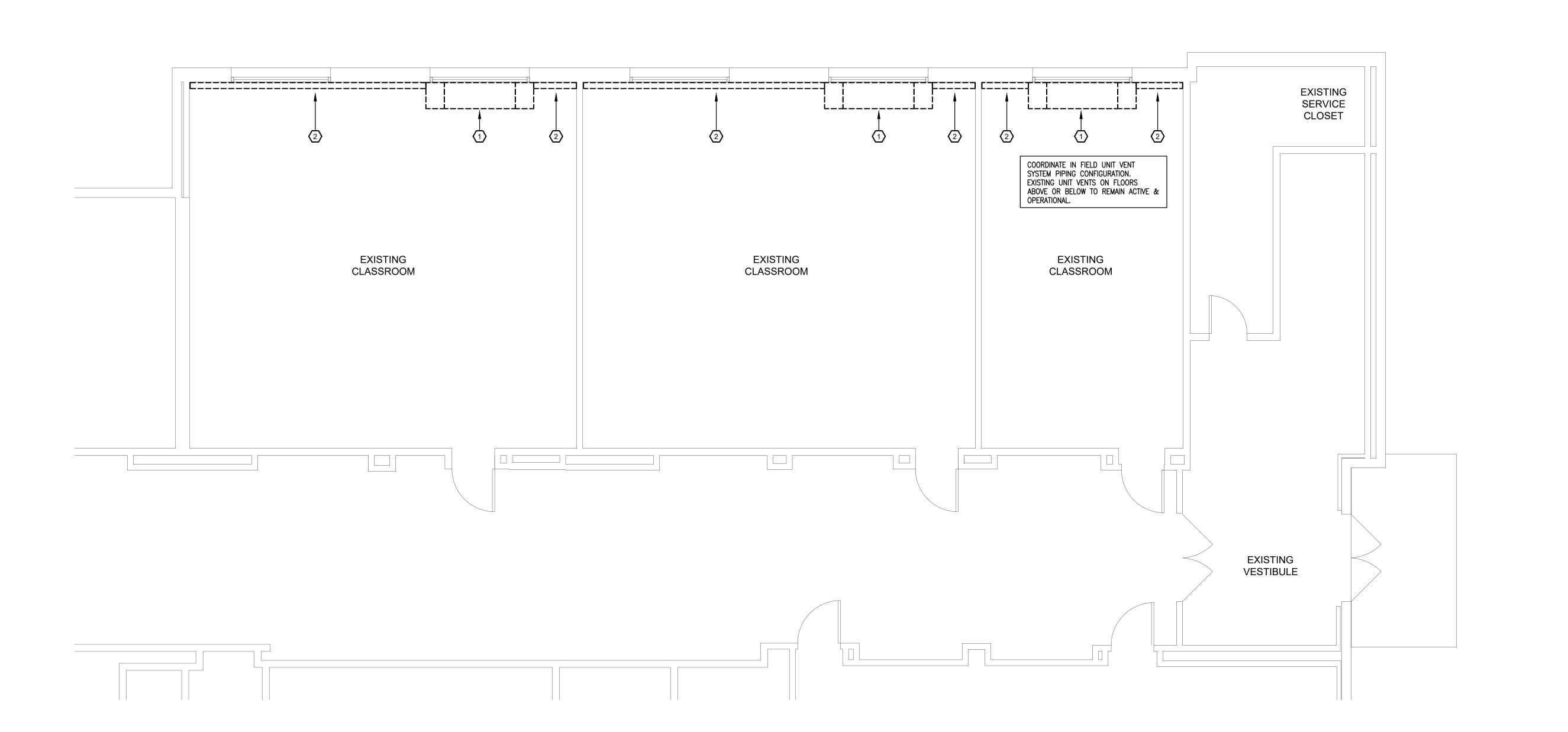


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FINISHES AND **EQUIPMENT PLANS**

08.26.2022





FLOOR PLAN - H.V.A.C. DEMOLITION
SCALE: 1/4"=1'-0"

GENERAL H.V.A.C. NOTES:

- 1. ALL ROUND BRANCH DUCT CONNECTIONS TO THE MAIN DUCT SHALL BE MADE WITH CONICAL SPIN-IN FITTINGS.
- 2. TRANSITION SA & RA DUCTWORK TO FURNACE AND ALL FAN CONNECTION SIZES. REFER TO PLAN FOR DUCT SIZES.
- 3. PROVIDE TURNING VANES AT ALL SQUARE AND RECTANGULAR DUCT ELBOWS.
- 4. PROVIDE BALANCING DAMPERS IN ALL BRANCH DUCT CONNECTIONS TO GRILLES, REGISTERS AND DIFFUSERS.
- 5. VERIFY LOCATION OF ROOM THERMOSTAT WITH THE OWNER.6. BRANCH DUCTWORK TO DIFFUSERS, GRILLES AND REGISTERS
- ARE TO BE SAME SIZE AS THE NECK OR INLET OPENINGS.

 7. RIGID SHEET METAL DUCTWORK IS REQUIRED FOR ALL
- EXPOSED DUCTWORK.

 8. INSTALL ALL EQUIPMENT REQUIRING AN ELECTRICAL
- CONNECTION TO ENSURE THAT PROPER CLEARANCE IS PROVIDED FOR SERVICING IN ACCORDANCE WITH THE NATIONAL ELECTRIC CODE.
- 9. USE OF FLEXIBLE DUCTWORK FOR BRANCH RUNOUTS TO DIFFUSERS SHALL BE LIMITED TO 6'-0" LONG.

PLAN CODED NOTES:

- EXISTING CLASSROOM UNIT VENTILATOR TO BE REMOVED ALONG WITH ALL RELATED CONTROLS. EXISTING O.A. INTAKE LOUVER & BE BLANKED OFF & SEALED WITH SHEETMETAL PANEL FROM THE INTERIOR. INFILL WALL CAVITY WITH INSULATION. COORDINATE W/ ARCHITECT OR ARCHITECTURAL DWGS FOR ANY ALTERNATIVE TREATMENT TO EXISTING LOUVERS & SEALING OF OPENINGS.
- 2 EXISTING PIPING & ENCLOSURE TO BE REMOVED.
- 3 RETURN AIR DUCT W/ 1" ACOUSTICAL LINING
- 4 6"ø O.A. DUCT DN TO R.A. INLET PLENUM OF FCU. PROVIDE MOTORIZED & VOLUME DAMPER. BALANCE TO O.A. CFM INDICATED ON FCU SCHEDULE.
- NEW VERTICAL FAN COIL UNIT: REFER TO SCHEDULE. UNIT TO BE MOUNTED ON ELEVATED ANGLE IRON FRAME. PROVIDE FLEXIBLE CONNECTOR FOR SUPPLY DISCHARGE & SIDE ACCESS FILTER HOUSING (MERV 8) AT RETURN AIR PLENUM INLET. HEATING/COOLING PIPING W/ 2-WAY CONTROL VALVE, REFER TO PIPING PLAN.
- 6 NEW 1-1/4" HEATING/COOLING WATER PIPING TO CONNECT TO EXISTING BRANCH PIPING FROM REMOVED PERIMETER PIPING. COORDINATION IN FIELD IS REQ'D TO DETERMINE ACTUAL CONNECTION LOCATION.
- 7 PIPE 3/4" CONDENSATE DRAIN LINE TO FLOOR DRAIN, REFER TO PLUMBING DWGS. 6"Ø OUTSIDE AIR DUCT SHALL CONNECT TO RETURN PLENUM.
- 8 EXHAUST FAN DISCHARGING WITH WALL CAP PROVIDED WITH FAN. FINAL TERMINATION POINT TO BE COORDINATED IN FIELD SUCH THAT DISCHARGE IS MAINTAINED 10'-0" CLEAR OF ANY CLASSROOM UNIT VENT INTAKE OR OTHER MECHANICAL INTAKES.

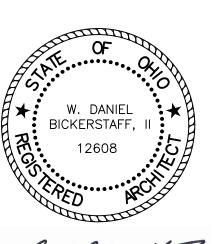


Project Team:

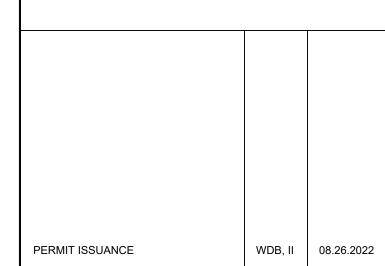
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GLENVILLE HIGH SCHOOL

Interior Alteration

New MetroHealth
ODH
SBHC

650 East 113th Street Cleveland, OH 44108



Health Care Expansion Program

MEDICAL CENTER 2500 METROHEALTH DR. CLEVELAND, OH 44109

CMSD Approval:

X

Hollie Dellisanti EDUCATOR, Exec. Dir.
Architectural Projects, Capital Projects

Date

Consultant Project # Drawn by: Checked by: WDB, II

FLOOR PLANS H.V.A.C.

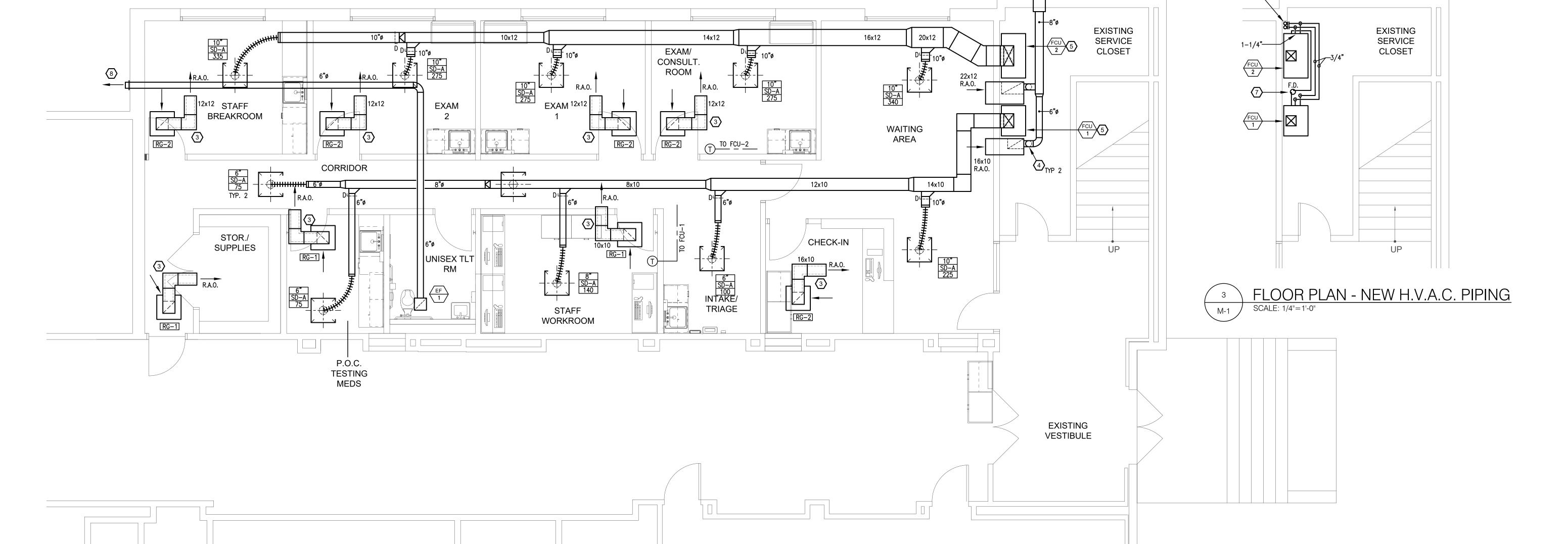
3.2022

Date: 07.13.2022

FLOOR PLAN - NEW H.V.A.C.

SCALE: 1/4"=1'-0"

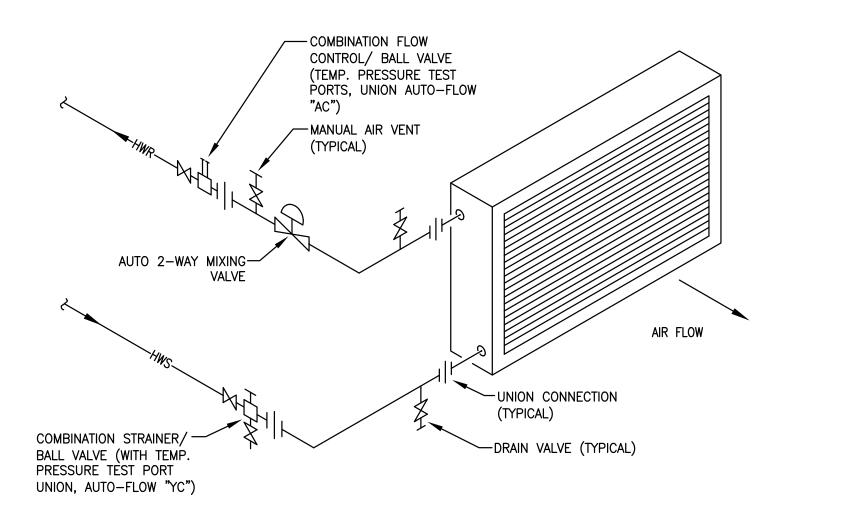
NORTH



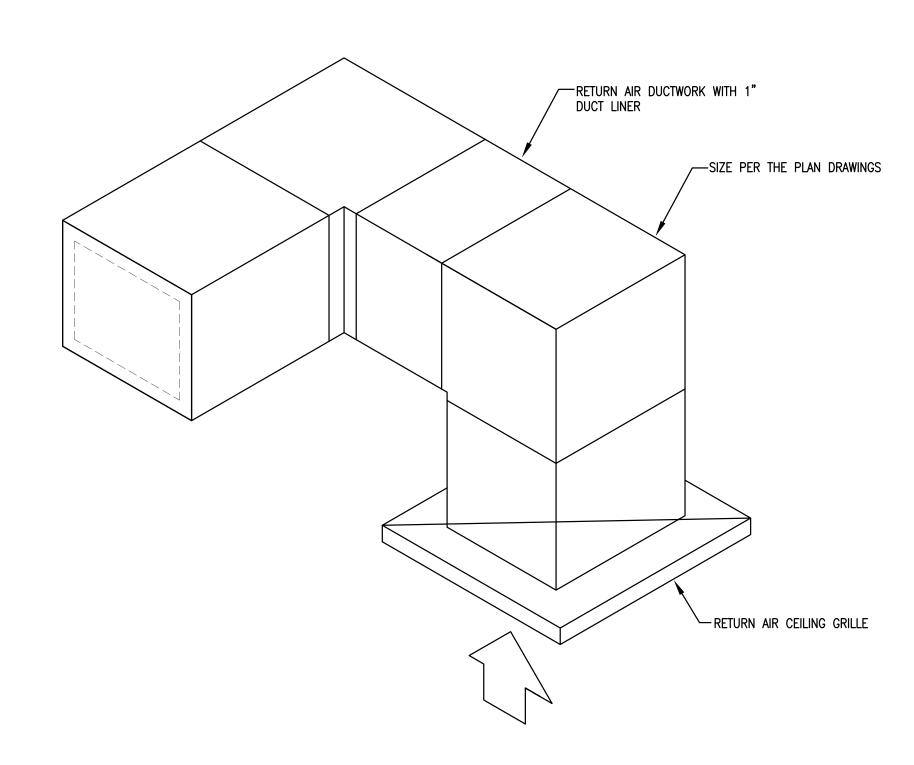
FCU F	AN COIL U	NIT SCH	EDUL	E																								
		GENERAL DATA		SU	JPPLY F	AN DA	TA				Ch	ILLED W	ATER COOLING	COIL							HOT WAT	ER HEATING	COIL			ELE	CTRICAL	_
MARK	AREA SERVED	MANUFACTURER	MODEL	TOTAL CFM	E.S.P. "WG	T.S.P.	MOTOR HP	O.A. CFM	E.A.T DB/WB	L.A.T DB/WB	A.P.D.	GPM	TOTAL LOAD MBH	SENSIBLE LOAD MBH	W.P.D	EWT	LWT	E.A.T DB	L.A.T DB	A.P.D.	GPM	CAPACITY MBH	W.P.D	EWT	LWT	VOLTAGE	MCA	M.O.C.P.
FCU-1	INTERIOR ZONE	TITUS	TBV-08	700	0.6"	1.2"	1/2	100	78/65	57/56	0.28"	3.3	16.5	12.8	1.35'	44	54	57	69	0.12"	1.5	6.3	0.27	170	160	120V-1ø	7.8	15
FCU-2	EXTERIOR ZONE	TITUS	TBV-16	1500	0.6"	1.2"	3/4	120	77/65	59/58	0.28"	6.8	33.7	30.1	1.35'	44	54	66	89	0.12"	4.6	22.4	0.27'	170	160	120V-1ø	10.6	15

OWNER FURNISHED, CONTRACTOR INSTALLED
 MERV 8 FILTERS
 VAV-0C-1 SHALL PROVIDE CONSTANT VOLUME PRE-CONDITIONED OUTSIDE AIR AT 52 DEG F TO MECHANICAL CLOSET CONTAINING FCU

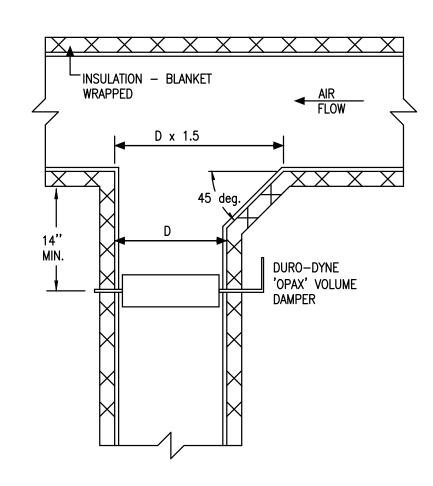
MARK	AREA SERVED	MANUFACTURER	TYPE	MODEL	PURPOSE	TOTAL CFM	E.S.P. "WG	H.P./WATT	POWER V/PH	DRIVE	SONES	WEIGHT	CONTROL	TON
EF-1	UNI-SEX TOILET RM	GREENHECK	CEILING IN-LINE	SP-A125	EXHAUST	100	0.1"	52 W	120V-1ø	DIRECT	0.3	16	Α	1



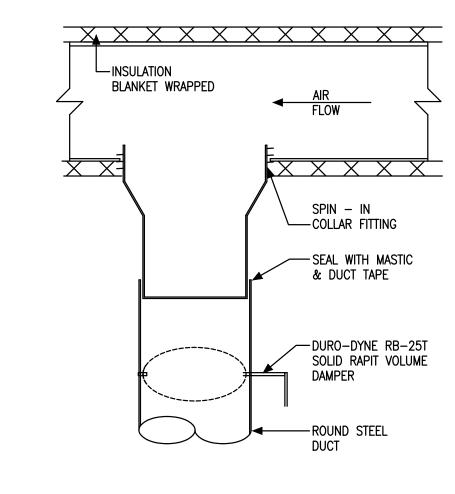
WATER COIL W/ 2-WAY VALVE DETAIL



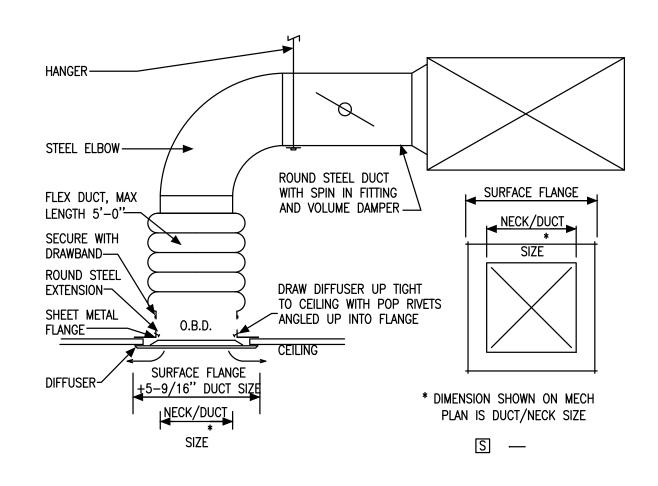
RETURN AIR BOOT DETAIL



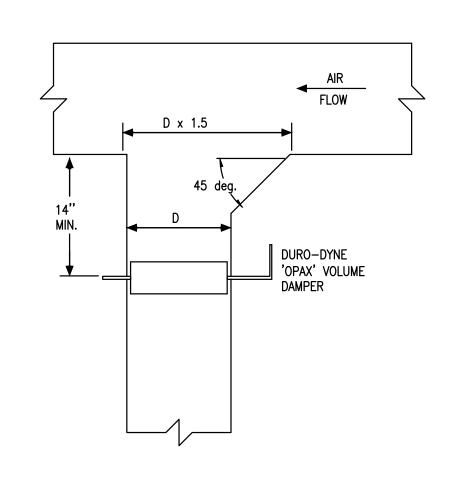
RECTANGULAR DUCT BRANCH



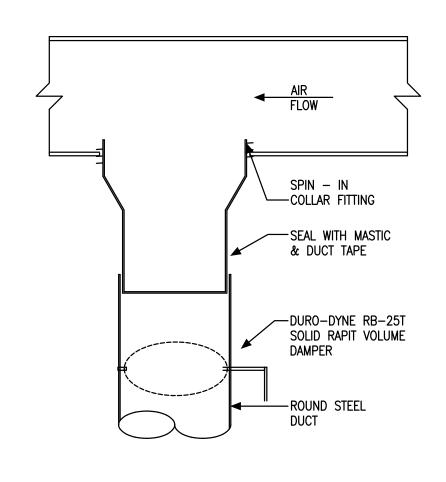
INSULATED SUPPLY DUCT
RECTANGULAR DUCT BRANCH



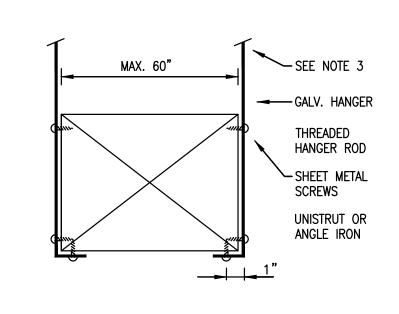
SURFACE MT'D DIFFUSER DETAIL







NON-INSULATED DUCT
RECTANGULAR DUCT BRANCH



1. ON DUCTS OVER 48" WIDE, BOTTOM SHALL BE BRACED BY ANGLE. FOR CROSS SECTION AREA MORE THAN 8 SQ FT, DUCT SHALL BE BRACED BY ANGLES ON ALL FOUR SIDES.

2. CUTTING AND PATCHING SHALL BE LIMITED TO A MINIMUM AS REQUIRED FOR PROPER INSTALLATION. 3. SUPPORTS SHALL BE SPACED AND SIZED AS PER SMACNA.

DUCT HANGER SUPPORT

OI W		ERS AN							
MARK	PURPOSE	MANUFACTURER	MODEL	NECK SIZE	MATERIAL	MOUNTING	FACE	MAX NC	NOTES
SD-A	SUPPLY	TITUS	#SCDA	SEE PLAN	STEEL	LAY-IN	24"x24"	25	0.B.D.
RG-1	RETURN	TITUS	50FF	10"x10"	STEEL	LAY-IN	24"x24"	25	
RG-2	RETURN	TITUS	50FF	12"x12"	STEEL	LAY-IN	24"x24"	25	

SPACE NAME	OCCUPANCY CLASSIFICATION (TABLE 403.3)	SPACE FLOOR AREA (ft2) (Az)	AREA OUTDOOR AIR RATE (CFM/ft2) (Ra)	TIME AVG'D OCCUPANCY (PEOPLE) (Pz)	PEOPLE OUTDOOR AIR RATE (CFM/PER P) (Rp)	SPACE OUTDOO (CFM) (Voz)
WAITING AREA (INT)	RECEPTION AREA	215	0.06	4	5	33
INTAKE/TRIAGE	EXAM RM	82	0.06	2	5	10
STAFF WORKROOM	OFFICE	142	0.06	2	5	10
P.O.C. TESTING/MEDS	EXAM RM	78	0.06	2	5	15
CORRIDOR	CORRIDOR	244	0.06	0	5	15
NOTES:	CONTRIBUTE	211	0.00	<u> </u>	CALC TOTAL =	83
1. FCU-1 TO HAVE C	.A. BALANCED TO 10	O CFM.		AC'	TUAL PROVIDED =	100

SPACE NAME	OCCUPANCY CLASSIFICATION (TABLE 403.3)	SPACE FLOOR AREA (ft2) (Az)	AREA OUTDOOR AIR RATE (CFM/ft2) (Ra)	TIME AVG'D OCCUPANCY (PEOPLE) (Pz)	PEOPLE OUTDOOR AIR RATE (CFM/PER P) (Rp)	SPACE OUT (CFM) (Voz)
WAITING AREA (EXT)	RECEPTION AREA	215	0.06	6	5	43
EXAM/CONSULT RM	EXAM RM	149	0.06	2	5	15
EXAM 1	EXAM RM	149	0.06	2	5	15
EXAM 2	EXAM RM	147	0.06	2	5	15
STAFF BREAKROOM	BREAKROOM	147	0.12	2	5	15
NOTES:	3.12.11.100.11		0.12		CALC TOTAL =	10
	O.A. BALANCED TO 12	O CFM.		۸	CALC TOTAL = TUAL PROVIDED =	10

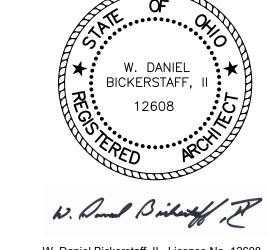


Project Team:

Architect



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W. Donal Britary J. W. Daniel Bickerstaff, II License No. 12608 Expiration Date: December 31, 2023

PERMIT ISSUANCE	WDB, II	08.26.
ISSUED	BY	DATE

GLENVILLE HIGH SCHOOL

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	H.V.A.	C.
S	CHEDUL	ES &
	DETAIL	_S

07.13.2022

M-2

200100 GENERAL MECHANICAL REQUIREMENTS

1.1 GENERAL NOTE:

A. THIS SPECIFICATION SECTION APPLIES TO PLUMBING WORK AND HVAC WORK. CONTRACTOR SHALL USE THESE PARAGRAPHS THAT APPLY TO HIS WORK.

1.2 GENERAL CONDITIONS:

A. THE REQUIREMENTS OF THE GENERAL CONDITIONS, INSTRUCTIONS TO BIDDERS AND GENERAL

ARCHITECT OR AS SHALL BE PREPARED BY THE GENERAL CONTRACTOR.

REQUIREMENTS ARE A PART OF THIS CONTRACT. 1.3 SEQUENCE OF CONSTRUCTION:

A. A SEQUENCE OF CONSTRUCTION INDICATING THE MANNER IN WHICH THE WORK IN VARIOUS AREAS WILL BE PERFORMED SHALL BE AS OUTLINED IN THE CONSTRUCTION SCHEDULE PREPARED BY THE

A. THIS WORK INVOLVES ADDITION TO EXISTING BUILDING. CONTRACTOR SHALL VISIT THE SITE DURING BIDDING PERIOD AND BECOME FAMILIAR WITH EXISTING CONDITIONS AFFECTING HIS WORK. THE SUBMISSION OF HIS PROPOSAL SHALL BE CONSTRUED AS INDICATING SUCH KNOWLEDGE. NO ADDITIONAL PAYMENT WILL BE MADE ON CLAIMS THAT ARISE OF A LACK OF KNOWLEDGE OF THE EXISTING CONDITIONS.

1.5 CODES AND PERMITS:

- A. INSTALL ALL WORK IN FULL ACCORDANCE WITH CODES, RULES AND REGULATIONS OF MUNICIPAL, COUNTY, STATE, PUBLIC UTILITY, AND ALL OTHER AUTHORITIES HAVING JURISDICTION OVER THE PREMISES (I.E. OBC, OHIO PLUMBING CODE, AMERICANS WITH DISABILITIES GUIDELINES, ASHRAE, SMACNA, NFPA, NEC ETC.)
- B. CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS AND CERTIFICATES OF INSPECTION REQUIRED FOR HIS WORK BY THE FOREGOING AUTHORITIES. ALL SUCH CERTIFICATES SHALL BE DELIVERED TO THE ARCHITECT IN DUPLICATE BEFORE FINAL PAYMENT ON CONTRACT WILL BE ALLOWED.
- C. CONTRACTOR SHALL PROVIDE ALL NECESSARY COMPONENTS AS REQUIRED BY LOCAL CODES TO PROVIDE COMPLETE SYSTEM.

1.6 WORK INCLUDED:

- A. THE WORK REQUIRED UNDER THIS SPECIFICATION SHALL CONSIST OF ALL LABOR, MATERIALS. TOOLS. EQUIPMENT, POWER, TRANSPORTATION, HOISTING IMPLEMENTS, ETC. OF EVERY DESCRIPTION NECESSARY FOR THE ENTIRE COMPLETION OF THE MECHANICAL WORK OF THE CONTRACT, ALL AS SPECIFIED HEREIN, SHOWN ON THE DRAWINGS OR REASONABLY IMPLIED BY EITHER, COMPLETE IN EVERY RESPECT UNLESS SPECIFICALLY EXCEPTED HEREIN. THE WORK INCLUDED IN THIS CONTRACT. SHALL CONSIST OF THE INSTALLATION, TEST AND GUARANTEE OF ALL WORK. AT ALL TIMES KEEP PREMISES AND BUILDING IN NEAT AND ORDERLY CONDITION; FOLLOW EXPLICITLY ANY INSTRUCTIONS OF GENERAL CONTRACTOR IN REGARD TO STORING OF MATERIALS, PROTECTIVE MEASURES AND DISPOSING OF DEBRIS.
- B. CONTRACTOR SHALL EXAMINE THE WORK OF OTHER TRADES THAT COMES IN CONTACT WITH OR IS COVERED BY THIS WORK. CONTRACTOR SHALL IN NO CASE ATTACH TO, COVER UP, OR FINISH AGAINST ANY DEFECTIVE WORK, OR INSTALL HIS WORK IN A MANNER THAT WILL PREVENT PROPER INSTALLATION OF THE WORK OF OTHER TRADES. CONTRACTOR SHALL CONSULT ALL DRAWINGS. SPECIFICATIONS AND DETAILS OF OTHER DIVISIONS OF THE WORK ON THIS PROJECT SHALL CONFORM TO ALL REQUIREMENTS OF SAME AFFECTING HIS WORK. CONTRACTOR SHALL DO ALL PLUMBING, HEATING VENTILATING AND AIR CONDITIONING WORK NECESSARY TO BE DONE IN CONNECTION WITH THE INSTALLATION OF OTHER DIVISIONS OF THE WORK UNLESS SPECIFICALLY OTHERWISE SPECIFIED UNDER THAT DIVISION. LACK OF COORDINATING WORK WILL NOT BE ACCEPTED AS CAUSE FOR ADDITIONAL COMPENSATION.

1.7 WORK BY OTHERS:

A. ALL WALL AND FLOOR OPENINGS SHALL BE PROVIDED BY THE GENERAL CONTRACTOR, BUT CONTRACTOR SHALL INSTRUCT THE GENERAL CONTRACTOR AS TO THE EXACT SIZE AND LOCATION OF SUCH

B. PAINTING SHALL BE WORK OF GENERAL TRADES CONTRACTOR.

1.8 LAYOUT OF WORK:

- A. CONTRACTOR SHALL BE GOVERNED BY THE GENERAL, MECHANICAL, ELECTRICAL AND STRUCTURAL DRAWINGS AND EXISTING CONDITIONS, AND SHALL COORDINATE HIS WORK WITH ALL OTHER SUB-TRADES DURING CONSTRUCTION AND PRIOR TO ANY EQUIPMENT INSTALLATION. THE FINAL LOCATIONS OF ALL EQUIPMENT, DIFFUSERS, ETC., ARE SUBJECT TO REASONABLE CHANGES BY THE ARCHITECT OR OWNER BEFORE ROUGHING-IN AT NO ADDITIONAL COST TO THE OWNER.
- B. CONTRACTOR SHALL VERIFY ALL MEASUREMENTS AT THE BUILDING SITE BEFORE STARTING FABRICATION OR DOING ANY WORK IN THE FIELD AND SHALL BE RESPONSIBLE FOR THE CORRECT AND PROPER MEASUREMENTS OF HIS WORK ALONG WITH RESOLUTIONS FOR ANY CONFLICT OF SPACE WITH OTHER
- C. EQUIPMENT, PIPING, ETC. SHALL NOT BE SUPPORTED FROM CEILINGS, OTHER PIPING, CONDUIT OR DUCTWORK, ROOF DECK, OR JOIST BRIDGING. EQUIPMENT SHALL BE SUPPORTED FROM ACCEPTABLE BUILDING STRUCTURE COMPONENTS AS DETERMINED BY THE ARCHITECT AND STRUCTURAL ENGINEER. EQUIPMENT SHALL BE INSTALLED WITH CAREFUL ATTENTION TO FULL ACCESS FOR SERVICE AND REMOVAL OF EQUIPMENT WITHOUT ANY MAJOR INTERRUPTION TO OTHER EQUIPMENT.
- D. CONTRACTOR SHALL PROVIDE ALL PIPE AND EQUIPMENT HANGERS AND SUPPORTS. EQUIPMENT BASES AND SUPPORT, SLEEVES AND SEALS, FLASHING AND SEALING EQUIPMENT AND PIPE STACKS, FIRE STOPPING ACCORDING TO ALL INDUSTRY ACCEPTABLE STANDARDS AND TO ALL APPLICABLE UL TESTING AND RATING METHODS.

1.09 RECORD DRAWINGS:

A. CONTRACTOR SHALL FURNISH TO OWNER ONE NEW AND COMPLETE SET OF "RECORD" PRINTS. PRINTS. SHALL BE GENERATED FROM REVISED CAD DRAWINGS PRODUCES BY THE CONTRACTOR. THESE PRINTS SHALL INDICATE EXACT LOCATION OF ALL INSTALLED EQUIPMENT, DUCT AND PIPING AND INCORPORATE ALL CHANGES FROM ORIGINAL CONTRACT DOCUMENTS.

1.10 CLEANING UP:

A. PROPERLY PROTECT THIS WORK DURING ERECTION; SECURELY CAP OR PLUG ALL PIPE OPENINGS TO PREVENT OBSTRUCTION OR DAMAGE. REMOVE ALL DEBRIS CAUSED BY THIS WORK; CLEAN ALL EXPOSED PIPING, FIXTURES AND APPARATUS AT COMPLETION.

1.11 GUARANTEE:

A. MECHANICAL CONTRACTOR SHALL GUARANTEE ALL WORK AND MATERIALS FOR A PERIOD OF ONE YEAR AFTER SUBSTANTIAL COMPLETION AND ACCEPTANCE BY THE OWNER. DEMONSTRATE TO THE OWNER'S SATISFACTION THE PROPER OPERATION OF EACH OF THE SYSTEMS COMPRISING THIS CONTRACT BEFORE FINAL PAYMENT.

1.12 TESTS:

A. ALL TESTS FOR VARIOUS SYSTEMS SHALL BE PERFORMED AS REQUIRED AS FOR GOOD GENERAL PRACTICE AND IN COMPLIANCE WITH JURISDICTIONAL CODES AND AUTHORITIES. PROVIDE PRESSURE TESTS FOR ALL PIPING. REPLACE ALL DEFECTED MATERIAL WITH NEW MATERIAL. ADJUST ALL AIR MOVING EQUIPMENT. ADJUST ALL AUTOMATIC TEMPERATURE CONTROL AND SET TO PROPER OPERATION.

220100 PLUMBING 1.1 SERVICES:

A. EACH SERVICE (WASTE, VENT, COLD WATER AND HOT WATER) SHALL BE COMPLETE AND EXTENDED AND CONNECTED UP WITH ALL USING FIXTURES AND INSTALLED UNDER ALL DIVISIONS OF WORK ON THIS

1.2 INSPECTION AND TESTS

- A. ALL TESTS SHALL COMPLY WITH THE REQUIREMENTS OF THE GOVERNING AUTHORITY OR SERVING UTILITY AS THE CASE MAY BE. THE OWNER'S REPRESENTATIVE AND THE PLUMBING INSPECTOR SHALL BE NOTIFIED IN ADVANCE OF ALL TESTS AND SHALL BE PRESENT AT SUCH TESTS. NO WORK SHALL BE COVERED UP UNTIL IT IS INSPECTED AND APPROVED.
- B. Drainage System The New Drainage and Venting System shall be tested to conform with OHIO BUILDING CODE OR AS DIRECTED BY THE PLUMBING INSPECTOR.
- C. WATER SYSTEMS THE NEW WATER PIPING SYSTEM SHALL BE TESTED AT A HYDROSTATIC PRESSURE OF 1-1/2 TIMES THE ACTUAL WORKING PRESSURE BUT NOT LESS THAN 100 PSI GAUGE AND PROVED TIGHT AT THIS PRESSURE FOR NOT LESS THAN 30 MINUTES IN ORDER TO PERMIT INSPECTION OF ALL JOINTS. WHERE A PORTION OF THE WATER PIPING SYSTEM IS TO BE CONCEALED BEFORE COMPLETION, THIS PORTION SHALL BE TESTED SEPARATELY IN A MANNER DESCRIBED FOR THE ENTIRE

1.3 EXCAVATION AND BACKFILL:

- A. CONTRACTOR SHALL DO ALL EXCAVATING AND BACKFILLING NECESSARY FOR THE INSTALLATION OF HIS
- B. ALL TRENCHES SHALL BE DUG TO EXACT GRADE AND DEPTH WITH ONLY SUFFICIENT DIRT REMOVED TO PROVIDING WORKING SPACE. TRENCHES DUG BELOW THE REQUIRED DEPTH SHALL BE REFILLED TO PROPER DEPTH WITH AGGREGATE #57. TRENCHES SHALL BE SHORED FOR SHEET PILE, IF NECESSARY. TO PREVENT CAVING AND THE WORK OF OTHER CONTRACTORS SHALL NOT BE ENDANGERED. THIS SUBCONTRACTOR WILL BE HELD SOLELY RESPONSIBLE FOR DAMAGE CAUSED BY HIS WORK.
- C. ALL EXCAVATIONS INSIDE THE BUILDING, UNDER WALKS AND DRIVE SHALL BE BACKFILLED WITH PREMIUM BACKFILL SLAG OR LIMESTONE SCREENING THOROUGHLY TAMPED AND FLOODED.

1.4 PIPE INSTALLATION: A. ALL PIPING SHALL BE CONCEALED EXCEPT WHERE CALLED FOR OTHERWISE. PIPING SHALL BE

INSTALLED WITH PROPER PROVISION FOR EXPANSION AND CONTRACTION AND SO AS NOT TO SAG IN

1.5 PIPING MATERIAL:

- A. ALL MATERIALS SHALL BE NEW AND FOR INTENDED USE AND BE FREE FROM DEFECTS. PIPE AND FITTINGS SHALL BE OF DESIGN TO WITHSTAND 125 LBS. S.W.P.
- **B.** Sanitary and Storm Sewers (underground & interior) underground sanitary and storm SEWERS SHALL BE CARLON OR APPROVED EQUAL SCHEDULE 40 PVC SEWER PIPE AND DRAIN FITTINGS, SOLVENT WELDED JOINTS.
- C. SOIL, WASTE AND VENT PIPING (ABOVE GROUND INTERIOR, BELOW RETURN AIR PLENUM) SCHEDULE 40 PVC DRAINAGE PIPE AND FITTINGS, JOINTS TO BE SOLVENT WELDED. INSTALL EXPANSION JOINT IN VERTICAL STACK PRIOR TO STACK PENETRATING ROOF.
- **D.** WATER PIPING (INSIDE BUILDING) ALL HOT AND COLD WATER PIPING SHALL BE: TYPE "L" HARD COPPER PIPE WITH WROUGHT COPPER SWEAT SOLDER TYPE FITTINGS. SOLDERED JOINTS SHALL BE MADE USING "STAY-SAFE 40" LEAD FREE SOLDER (J.W. HARRIS CO., CINCINNATI, OHIO) OR OTHER LEAD FREE SOLDER AS APPROVED BY THE STATE OF OHIO. COPPER PRESS FITTING MAY BE USED AS AN OPTION
- E. CPVC PIPE AND FITTING. JOINTS TO BE SOLVENT WELD WITH ASTM F493 SOLVENT CEMENT.
- F. POLYBUTYLENE PIPE AND FITTINGS. FITTING TO BE PLASTIC INSERT TYPE OR COPPER. JOINTS: MECHANICAL WITH COPPER COMPRESSION RINGS.
- G. WATER HAMMER ARRESTORS THIS SUBCONTRACTOR SHALL FURNISH AND INSTALL AIR CHAMBERS AT EACH HOT AND COLD WATER FIXTURE CONNECTION. CHAMBERS SHALL BE 18" HIGH AND OF THE SAME DIAMETER AS THE FIXTURE CONNECTION, BUT NOT LESS THAN 1/2".
- H. INSULATING COUPLINGS V-LINE INSULATING COUPLING AS MANUFACTURED BY VICTAULIC OR PERFECTION CORPORATION OR APPROVED EQUAL.
- I. ESCUTCHEONS ALL PIPE PASSING THROUGH WALLS, FLOORS OR CEILINGS IN FINISHED ROOMS SHALL BE FITTED WITH STEEL OR BRASS ESCUTCHEONS WITH SET SCREW.
- J. CLEANOUTS A CLEANOUT SHALL BE INSTALLED AT THE BASE OF EACH SOIL AND WASTE STACK, DOWNSPOUT AND AT NOT MORE THAN 50 FT. INTERVALS ON HORIZONTAL RUNS AND AS REQUIRED BY CODE. CLEANOUTS SHALL BE THE SAME SIZE AS THE PIPE THEY SERVE, EXCEPT THEY NEED NOT BE LARGER THAN 4".

1.6 VALVES:

- A. FURNISH AND INSTALL AS SHOWN ON DRAWINGS VALVES AND AS REQUIRED FOR PROPER OPERATION OF VARIOUS PARTS OF WORK, VALVES SHALL BE AS MANUFACTURED BY POWELL, NIBCO, APOLLO, OR
- B. DRAIN VALVES WITH HOSE CONNECTING ENDS AND PROTECTIVE CAPS SHALL BE INSTALLED AT LOW POINTS ON ALL LINES CARRYING LIQUIDS.
- C. COMPRESSION TYPE VALVES SHALL NOT BE USED FOR DRAIN VALVES.
- D. PROVIDE SHUT-OFF VALVES AT ALL BRANCH CONNECTIONS TO MAIN, AT ALL FIXTURE GROUPINGS, EACH PIECE OF APPARATUS, AND IN MAINS TO SECTIONALIZE THE SYSTEM.

E. SCHEDULE OF VALVES:

	1	WATER VALVE S	CHEDULE		
TYPE	NIBCO NO.	SIZE	BODY	ENDS	PRESSURE
BALL VALVE	S-580-66 T-580-66 (S.S. BALL)	2" & UNDER	BRONZE	SOLDERED THREADED	150 WSP
CHECK	413	2" & UNDER	BRONZE	THREADED	125 WSP

- S.S. STEM, BRONZE DISC, EPT/CPDM SEAT) F. WATER HAMMER ARRESTER: SIOUX CHIEF, OR APPROVED EQUAL, HYDRA-RESTER, SHALL BE PRECHARGED AND PERMANENTLY SEALED AT THE FACTORY AND SHALL HAVE A MALE THREADED NIPPLE FOR CONNECTION TO THE WATER SYSTEM. WATER HAMMER ARRESTERS ARE NOTED WAHA-X. WHERE THE 'X' DESIGNATES THE P.D.I. SYMBOL DESCRIBED IN P.D.I. STANDARD MANUAL WH-201
- G. TEMPERING VALVES: INSTALL AT ALL PUBLIC HAND WASHING LAVS AND SINKS A TEMPERING VALVE THAT MEETS ASSE 1070 SIMILAR TO POWERS THERMOSTATIC MIXING VALVE LM495M

1.7 CLEANOUTS: A. FURNISH ACCESS DOORS FOR WALL OR CEILINGS CONCEALED CLEANOUTS.

- B. FLOOR CLEAN-OUT: J.R. SMITH, OR APPROVED EQUAL, WITH TAPER THREAD, BRONZE PLUG. SCORIATED COVER AND OUTLET AS REQUIRED BY THE PIPING MATERIAL FOR THE FOLLOWING APPLICATIONS:
- C. RECTANGULAR PATTERN TILE FLOORS 4040 WITH A SQUARE NICKEL BRONZE TOP. FURNISH WITH SCORIATED OR TILE RECESS AS REQUIRED BY ARCHITECT.
- D. WALL CLEAN-OUTS J.R. SMITH, OR APPROVED EQUAL, SERIES 4422-Y WITH TAPER THREAD AND BRONZE PLUG, STAINLESS STEEL COVER AND APPROPRIATE LENGTH SCREW.

1.8 INSULATION:

- A. FURNISH AND INSTALL THE FOLLOWING INSULATION IN FULL ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. ALL PIPING LISTED BELOW WITH REQUIRED INSULATION THICKNESS SHALL BE AS
- **B.** CLEAN AND DRY SURFACES PRIOR TO INSULATION.
- C. EXTEND INSULATION WITHOUT INTERRUPTION THROUGH WALLS, FLOORS, HANGERS AND SIMILAR PENETRATIONS.
- D. FIBERGLASS ASJ/SSL-11 PIPE INSULATION WITH FACTORY APPLIED JACKET OF A VINYL COATED AND EMBOSSED VAPOR BARRIER LAMINATE. ALL JACKET LAPS TO BE SEALED WITH FACTORY APPLIED SELF-SEALING LAP (SSL). ALL BUTT JOINTS TO BE SEALED WITH FACTORY PROVIDED ASJ BUTT STRIPS. INSULATE FITTINGS WITH MOLDED OR SEGMENTAL INSULATION, A LAYER OF MASTIC, A LAYER OF GLASS CLOTH FITTING TAPE, AND A FINISH LAYER OF MASTIC COMPLETELY COVERING THE FITTING TAPE. FITTING MASTIC ON HOT PIPE TO BE OCF TYPE "H", ON COLD TO BE OCT TYPE "C". ALL FITTINGS, VALVE BODIES, VALVE BONNETS AND UNIONS ON PLUMBING PIPING SHALL BE INSULATED. IN LIEU OF THE STANDARD METHOD DESCRIBED FOR INSULATING THE FITTINGS THE INSULATION CONTRACTOR HAS THE OPTION OF USING ZESTON'S ONE PIECE PREMOLDED INSULATED FITTINGS, WHEREVER POSSIBLE, PER MANUFACTURER'S RECOMMENDATION. PIPE INSULATION SHALL NOT BE STAPLED.

SERVICE	INSULATION TYPE
1. PLUMBING HOT AND COLD WATER PIPING.	1" REFER TO DESCRIPTION ABOVE.

E. ALL INSULATION SHALL BE APPLIED IN AN APPROVED MANNER, THE WORKMANSHIP SHALL BE FIRST CLASS AND ALL JOINTS SHALL BE MADE TIGHT. INSULATION SHALL BE OWENS-CORNING, ARMSTRONG, CERTAIN-TEED/SAINT GOBAIN, KNAUF OR SCHULLER.

1.9 PLUMBING FIXTURES:

A. PLUMBING FIXTURES, TRIM AND OTHER EQUIPMENT SHALL BE PROTECTED AGAINST DAMAGE OR INJURY. ALL FIXTURES AND EQUIPMENT DAMAGED BY ANY CAUSE AND ANY TRIM WITH MARRED OR SCRATCHED FINISH SHALL BE REPLACED AT NO ADDITIONAL COST TO THE OWNER. THE FIXTURE PROTECTION SHALL BE REMOVED AT THE COMPLETION OF THE WORK OR FOR FINAL INSPECTION.

B. SEE DRAWINGS FOR FIXTURE SCHEDULE

230100 HVAC

1.1 FAN COIL UNIT (HYDRONIC VERTICAL)

A. MANUFACTURERS:

1. TITUS, PRICE OR DAIKIN

1. FURNISH AND INSTALL FAN COIL UNIT WHERE INDICATED ON THE PLANS AND SPECIFICATIONS. UNITS

2. ALL UNITS SHALL BE CAPABLE OF MEETING OR EXCEEDING THE SCHEDULED CAPACITIES FOR COOLING, HEATING AND AIR DELIVERY. ALL UNIT DIMENSIONS FOR EACH MODEL AND SIZE SHALL

SHALL BE COMPLETELY FACTORY ASSEMBLED AND TESTED AND SHIPPED AS ONE PIECE EXCEPT

- 3. ALL UNITS SHALL BE OF "DRAW-THRU" DESIGN WITH COILS, FANS, MOTOR/ DRIVE AND DRAIN PAN COMPLETELY CONTAINED WITHIN THE UNIT CABINET.
- 4. UNITS SHALL BE CETL LISTED IN COMPLIANCE WITH UL/ANSI STD. 1995.
- 5. ALL UNIT COILS SHALL MEET OR EXCEED THE SCHEDULED COOLING AND HEATING CAPACITY. SELECTED AND RATED IN ACCORDANCE WITH ARI 410.

C. CONSTRUCTION

- 1. ALL UNITS SHALL BE FABRICATED OF MINIMUM 18 GAUGE GALVANIZED STEEL, ABLE TO WITHSTAND A 125 HOUR SALT SPRAY TEST PER ASTM B-117. PANELS SHALL BE DIE-FORMED "MULTIBEND" CONSTRUCTION FOR OPTIMUM STRENGTH AND RIGIDITY. ALL EXTERIOR PANELS SHALL BE SINGLE WALL INSULATED WITH 1 INCH THICK FIBERGLASS INSULATION, RATED FOR A MAXIMUM AIR VELOCITY OF 5000 F.P.M. IN ADDITION TO USING ADHESIVE COMPLYING WITH NFPA 90A, THE INSULATION SHALL INCORPORATE A SECONDARY MECHANICAL FASTENER ATTACHED TO THE UNIT CASING WALL (WELD PIN). ADHESIVE AS THE ONLY METHOD OF FASTENING THE INSULATION TO THE CASING IS NOT ACCEPTABLE. MAXIMUM THERMAL CONDUCTIVITY SHALL BE 0.24. INSULATION MUST MEET ALL REQUIREMENTS OF UL 181 AND NFPA 90A. ALL UNITS SHALL HAVE MINIMUM 1" DUCT COLLARS ON DISCHARGE AND RETURN.
- 2. ALL ACCESS PANELS SHALL BE FULLY INSULATED AND ATTACHED WITH STANDARD FASTENERS ON AT LEAST TWO OPPOSITE SIDES. NO SINGLE ACCESS PANEL SHALL BE LARGER THAN 30" X 36" FOR SAFETY AND EASE OF HANDLING. NO COIL OR DRAIN PIPING OR ELECTRICAL CONNECTIONS SHALL PASS THROUGH ANY ACCESS PANEL.
- 3. EACH UNIT SHALL BE FURNISHED WITH A ONE-PIECE HEAVY GAUGE (G90 STEEL) (IAQ STAINLESS STEEL) DRAIN PAN WITH WELDED CORNER CONSTRUCTION. ALL UNITS SHALL BE PROVIDED WITH 9/16" DIAMETER HANGER ROD HOLES IN THE TOP AND BOTTOM PANELS FOR "THROUGH-BOLT" TYPE SUSPENSION INSTALLATION.

D. FAN ASSEMBLY

1. ALL UNITS SHALL BE FURNISHED WITH STANDARD SELECTION DOUBLE INLET FORWARD CURVED CENTRIFUGAL BLOWERS STATICALLY AND DYNAMICALLY BALANCED FOR SMOOTH OPERATION. ALL BLOWER WHEELS SHALL HAVE TWO SET SCREWS AND SHALL BE MOUNTED ON SOLID STEEL SHAFTING ROTATING IN BALL BEARINGS WITH A MINIMUM DESIGN AVERAGE LIFE (L50) OF 100.000 HOURS. ALL STANDARD BLOWER ASSEMBLIES SHALL HAVE RESILIENT MOUNTED CARTRIDGE TYPE PERMANENTLY LUBRICATED BALL BEARINGS.

E. FAN MOTOR AND DRIVE ASSEMBLY

AT A MINIMUM SERVICE FACTOR OF 1.2.

1. ALL FAN MOTORS SHALL BE STANDARD NEMA DESIGN MOTORS OF THE HORSEPOWER LISTED IN THE EQUIPMENT SCHEDULE. ALL MOTORS SHALL BE 1750 RPM, 60 HERTZ (ODP) (ODP E+) SINGLE SPEED MOTORS RATED FOR CONTINUOUS DUTY. ALL MOTORS SHALL BE REVERSIBLE ROTATION TYPE.

- ALL MOTORS SHALL BE MOUNTED ON AN ADJUSTABLE BASE. ALL MOTOR WIRING IS TO BE TERMINATED IN A JUNCTION BOX, EXTERNAL TO THE UNIT CASING.
- ALL FAN DRIVE ASSEMBLIES SHALL INCLUDE AN ADJUSTABLE PITCH MOTOR PULLEY. A FIXED PITCH 4. BLOWER PULLEY AND A STANDARD CROSS SECTION "V-BELT". ALL FAN DRIVES SHALL BE SELECTED

F. COILS

1. ALL UNIT COILS SHALL BE RATED IN ACCORDANCE WITH AHRI 410.

- 2. ALL COILS SHALL BE 1/2" O.D. SEAMLESS COPPER TUBES WITH COLLARED ALUMINUM FINS. ALL TUBES SHALL BE MECHANICALLY EXPANDED TO PROVIDE AN EFFICIENT BOND BETWEEN TUBE AND FIN. ALL WATER COILS SHALL BE PROVIDED WITH A MANUAL AIR VENT FITTING TO ALLOW FOR COIL VENTING. VALVE CORE TYPE VENT FITTINGS SHALL NOT BE ACCEPTED.
- 3. ALL CHILLED WATER AND HOT WATER COILS SHALL HAVE ALUMINUM FINS AND 0.016" TUBE WALL THICKNESS.
- 4. ALL COILS SHALL BE HYDROSTATICALLY TESTED WITH AIR UNDER WATER AT 450 PSIG MINIMUM PRESSURE AND RATED FOR A MAXIMUM OF 450 PSIG WORKING PRESSURE AT 200°F.

G. FILTER RACK ASSEMBLY

1. ALL UNITS SHALL BE FURNISHED WITH A FLAT FILTER RACK WITH HINGED ACCESS ON BOTH SIDES DESIGNED TO ACCEPT A 2" NOMINAL STANDARD SIZED FILTERS. ALL UNITS SHALL BE PROVIDED WITH NOMINAL 2" THROWAWAY FILTERS FACTORY INSTALLED. ONE COMPLETE SET OF SPARE THROWAWAY FILTERS SHALL BE PROVIDED FOR EACH UNIT.

H. INLET DAMPER SECTION

1. THE UNIT MANUFACTURER SHALL FURNISH A FULLY INSULATED MIXING BOX SECTION (FACTORY ASSEMBLED AND INSTALLED INLET DAMPER SECTION) TO BE MOUNTED NEXT TO THE UNIT ON BASE RAIL (UNIT & MIXING BOX).

2. THE MIXING BOX SECTION SHALL INCLUDE HEAVY GAUGE FORMED STEEL BLADE DAMPERS IN A HEAVY GAUGE STEEL FRAME WITH EXTRUDED VINYL BLADE SEALS AND FLEXIBLE METAL JAMB SEALS. DAMPER DRIVE LINKAGE SHALL BE FACTORY FURNISHED AND INSTALLED BY THE UNIT MANUFACTURER. A FIELD FURNISHED AND INSTALLED DAMPER ACTUATOR CAN BE MOUNTED DIRECTLY TO THE DAMPER SHAFT.

I. ELECTRICAL CONTROL

- 1. THE UNIT FAN MOTOR SHALL BE COMPLETELY FACTORY WIRED TO AN EXTERNAL ELECTRICAL ENCLOSURE. EACH UNIT SHALL INCLUDE FAN CONTROL PACKAGE WITH 24 VOLT CONTROL VOLTAGE. EACH UNIT SHALL INCLUDE MOTOR CIRCUIT FUSING, CONTACTOR, CONTROL CIRCUIT TRANSFORMER AND TERMINAL STRIP FOR CONNECTION OF FIELD WIRING.
- 2. A MAIN INCOMING POWER NON-FUSED DISCONNECT SWITCH SHALL BE FACTORY FURNISHED AND WIRED BY THE UNIT MANUFACTURER FOR SINGLE POINT POWER CONNECTION.

A. HOT WATER SUPPLY AND RETURN PIPING SHALL BE TYPE 'L' HARD COPPER. FITTINGS FOR COPPER

PIPE SHALL BE WROUGHT COPPER SOLDER JOINT TYPE.. CONDENSATE: PVC 1.3 VALVES

A. VALVES IN HOT WATER PIPING SIZE 2" AND UNDER SHALL BE STOCKHAM 285 SERIES BALL VALVES WITH BRONZE BODY, STAINLESS STEEL BALLS AND SCREWED ENDS, 150 LBS. S.W.P. VALVES USED FOR SHUT-OFF AND BALANCING SHALL BE EQUIPPED WITH MEMORY STOP.

1.4 PIPE SUPPORT A. HANGERS - ALL HORIZONTAL PIPE SHALL BE SUPPORTED ON ADJUSTABLE SPLIT STEEL RING OR CLEVIS HANGERS AND THREADED RODS SPACED NOT OVER 10 FT. O.C. FOR PIPE 1-1/2" AND LARGER AND 6 FT O.C. FOR PIPE 1-1/4" AND SMALLER. CHAIN OR BAND IRON HANGERS AND TRAPEZE HANGERS WILL BE ACCEPTABLE. PIPE HANGERS FOR INSULATED PIPING SYSTEMS SHALL BE SIZED FOR THE GROSS

OUTSIDE DIMENSION OF THE PIPE AND INSULATION. SEE INSULATION SPECIFICATIONS FOR INSULATION REQUIREMENTS.

- 1.5 EXHAUST FANS: A. FANS SHALL BE GREENHECK, BROAN, NUTONE, OR COOK WITH ALL ACCESSORIES SHOWN ON DRAWINGS.
- B. PROVIDE BACKDRAFT DAMPER GRAVITY ACTUATED, ALUMINUM MULTIPLE BLADE CONSTRUCTION, FELT EDGED WITH NYLON BEARINGS.
- C. PROVIDE DISCONNECT SWITCH FACTORY WIRED, NON-FUSIBLE, IN HOUSING FOR THERMAL OVERLOAD PROTECTED MOTOR. PROVIDE TIMER SWITCH FOR FAN ON/OFF. FOR FAN/LIGHT COMBINATION PROVIDE SINGLE SWITCH.

1.6 SHEET METAL WORK:

- A. ALL DUCTWORK AND FITTINGS SHALL BE FABRICATED, ASSEMBLED AND INSTALLED IN ACCORDANCE WITH THE LATEST REVISION OF SMACNA HVAC DUCT CONSTRUCTIONS STANDARDS.
- B. ALL DUCT SIZES ON DRAWINGS INDICATE FREE INTERNAL DIMENSIONS. ACTUAL SHEET METAL SIZES SHALL INCLUDE ON ALLOWANCE FOR INTERNAL DUCT LINER.

C. DUCTWORK SHALL BE FABRICATED OF PRIME GRADE MATERIALS FREE FROM ANY IMPERFECTIONS.

GALVANIZED SHEET STEEL SHALL BE G 90 ZINC COATED AND MILL PHOSPHATIZED FOR PAINTED

APPLICATIONS ON EXPOSED DUCTWORK IN CONDITIONED SPACES. **D.** CONSTRUCTION:

- 1. GENERAL SUPPLY AIR, RETURN AIR, EXHAUST AIR, RELIEF AIR AND OUTSIDE AIR DUCTWORK WITHIN THE BUILDING SHALL BE 2" SMACNA PRESSURE CLASSIFICATION GALVANIZED STEEL UNLESS NOTED OTHERWISE ON THE DRAWINGS.
- 2. INSTALL AND SEAL ALL DUCTWORK IN ACCORDANCE WITH SMACNA HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE. SEALANT TO BE NON-HARDENING, WATER RESISTANT, FIRE RESISTIVE, COMPATIBLE WITH MATING MATERIALS, UL LISTED DUCT SEALER. SEAL CLASS "B" FOR ALL DUCTWORK UP TO 2" PRESSURE CLASS. SEAL CLASS "A" FOR ALL DUCTWORK ABOVE 2" PRESSURE CLASS. CLOTH BASED DUCT TAPE IS NOT ACCEPTABLE.
- E. ELBOWS OR TURNS IN THE DUCTWORK SHALL BE FABRICATED WITH A CENTER LINE RADIUS OF NOT LESS THAN 1.5 TIMES THE DUCT WIDTH OR WITH ELBOWS WITH INTEGRAL TURNING VANES. TRANSITIONS AND OFFSETS SHALL BE FABRICATED WITH A MAX ANGULAR TAPER OF 30 DEGREES UNLESS SPACE CONDITIONS PROHIBIT.
- F. FLEXIBLE DUCTWORK SHALL HAVE A FLAMEPROOF VINYL SHEATH WITH SPIRAL WOUND SPRING STEEL AND 1" THICK FIBERGLASS INSULATION WITH A VINYL VAPOR BARRIER EXTERIOR JACKET. FLEXIBLE DUCTWORK INSTALLATION SHALL BE A MAXIMUM OF FIVE FEET IN LENGTH AND NO MORE THAN 1-90 DEG. ELBOW. FLEXIBLE DUCT SHALL BE CONNECTED TO METAL COLLARS WITH PLASTIC LOCKABLE STRAPS. CLOTH BASED DUCT TAPE CONNECTION IS NOT ACCEPTABLE.

G. DUCTWORK BRANCHES OFF OF MAINS SHALL GENERALLY BE ARRANGED AS FOLLOWS:

- 1. RECTANGULAR BRANCHES OFF OF RECTANGULAR MAINS SHALL BE WITH 45 DEGREE SHOE ENTRY TYPE TOP IN FITTINGS.
- 2. ROUND BRANCHES OFF OF RECTANGULAR MAINS SHALL BE MADE WITH CONICAL TYPE TOP IN FITTINGS IF THE MAIN IS 4" OR GREATER IN DEPTH THAN THE BRANCH DIAMETER. OTHERWISE, A 45 DEGREE SHOE ENTRY TYPE TOP IN FITTING WITH RECTANGULAR DIMENSIONS OF EQUIVALENT CROSS SECTIONAL AREA TO THE ROUND BRANCH DIAMETER SHALL BE USED. IMMEDIATELY FOLLOWED BY A RECTANGULAR TO ROUND TRANSITION.
- 3. ROUND BRANCHES OFF OF ROUND MAINS SHALL BE MADE WITH Y-BRANCH, CONICAL TOP, 45 DEGREE SHOE ENTRY TOP, OR TEE FITTINGS AS INDICATED ON THE DRAWINGS.
- 4. PROVIDE AT EACH BRANCH AND SPLIT A VOLUME DAMPER FOR AIR BALANCING.

1.7 AIR DISTRIBUTION:

A. ALL AIR OUTLETS SHALL BE AS MANUFACTURED BY PRICE, TITUS ,LIMA OR HART & COOLEY AND SHALL BE OF SIZE SHOWN ON THE DRAWINGS. EACH OUTLET (SQUARE, RECTANGULAR OR ROUND) SHALL BE FURNISHED WITH COMBINATION EQUALIZING DAMPER AND VOLUME CONTROL DAMPER IN EXTENSION COLLAR OF OUTLET. ALL OUTLETS IN FINISHED CEILING SHALL HAVE OFF-WHITE BAKED ENAMEL FINISH. OUTLETS IN LAY-IN CEILINGS SHALL HAVE NOMINAL PANEL SIZES TO FIT CEILING GRID SYSTEM.

1.8 INSULATION:

A. FURNISH AND INSTALL THE FOLLOWING INSULATION IN FULL COMPLIANCE WITH MANUFACTURER'S

SERVICE	INSULATION TYPE
2. ALL SUPPLY DUCTS.	INSULATE WITH 1 1/2" THICK FIBERGLAS FACED DUCT WRAP TYPE ED75 WITH FLAME RETARDANT FACING (FRK). WRAP INSULATION TIGHTLY ON THE DUCT WITH ALL JOINTS BUTTED. ADHERE INSULATION WITH 4" STRIPS OF BONDING ADHESIVE AT 8" O.C. TAPE ALL JOINTS WITH 4" WIDE TAPE ADHERED WITH VAPOR BARRIER ADHESIVE.

B. ALL INSULATION SHALL BE APPLIED IN AN APPROVED MANNER, THE WORKMANSHIP SHALL BE FIRST CLASS AND ALL JOINTS SHALL BE MADE TIGHT. INSULATION SHALL BE OWENS-CORNING, ARM STRONG, CERTAIN-TEED/SAINT GOBAIN, KNAUF OR MANVILLE.

1.9 TESTS AND ADJUSTMENTS:

ASHRAE RECOMMENDATIONS.

- A. PERFORM TESTS AND ADJUSTMENTS UNDER CONTRACTOR'S SUPERVISION AND REPORT TO ARCHITECT. DURING TESTING PERIOD, MAINTAIN ON JOB A COMPETENT ENGINEER THOROUGHLY FAMILIAR WITH ALL PHASES FOR AS LONG A PERIOD AS REQUIRED TO THOROUGHLY ADJUST ALL SYSTEMS AND DEMONSTRATE TO ARCHITECT THAT THEY ARE FUNCTIONING PROPERLY.
- B. FOR AIR HANDLING AND AIR DISTRIBUTION SYSTEMS, PROCURE SERVICES OF AN INDEPENDENT AGENCY THAT SPECIALIZES IN TESTING AND BALANCING OF SUCH SYSTEMS. ALL WORK BY THIS AGENCY TO BE DONE UNDER DIRECT SUPERVISION OF A QUALIFIED HEATING AND VENTILATING ENGINEER. INDEPENDENT AGENCY SHALL BE A MEMBER OF AABC OR NEBB.
- C. TESTING ADJUSTING AND BALANCING WORK SHALL BE DONE IN ACCORDANCE WITH AABC, NEBB OR
- D. THE TEST AND BALANCE AGENCY SHALL PERFORM TESTS AND MAKE ALL ADJUSTMENTS AS REQUIRED TO BALANCE THE HVAC SYSTEMS TO THE FOLLOWING CRITERIA: 1. ALL FANS SHALL PERFORM "EQUAL TO" OR "10% IN EXCESS OF" THE DESIGN VOLUME.
- 2. MINIMUM OUTDOOR AIR REQUIREMENTS SHALL BE WITHIN 5% ABOVE OR BELOW THE DESIGN

3. SUPPLY DIFFUSERS AND REGISTERS SHALL BE WITHIN 10% ABOVE OR 5% BELOW THE DESIGN

1.10 FIRESTOPPING A. PROVIDE FIRESTOPPING AT PENETRATIONS REQUIRED FOR THE PASSAGE OF A DUCT, CABLE, CABLE TRAY

,CONDUIT, PIPING, ELECTRICAL BUSWAYS AND RACEWAYS THROUGH FIRE—RATED VERTICAL

4. RETURN AND EXHAUST GRILLES SHALL BE WITHIN 5% ABOVE OR 10% BELOW THE DESIGN VOLUME.

BARRIERS(WALLS AND PARTITIONS), HORIZONTAL BARRIERS(FLOOR/CEILING ASSEMBLIES), AND VERTICAL

B. QUALITY ASSURANCE

SERVICE SHAFT WALLS AND PARTITIONS.

- 1. A MANUFACTURER'S DIRECT REPRESENTATIVE (NOT DISTRIBUTOR OR AGENT) TO BE ON-SITE DURING INITIAL INSTALLATION OF FIRESTOP SYSTEM TO TRAIN APPROPRIATE CONTRACTOR PERSONNEL IN PROPER SELECTION AND INSTALLATION PROCEDURES. THIS WILL BE DONE PER MANUFACTURERS WRITTEN RECOMMENDATIONS PUBLISHED IN THEIR LITERATURE AND DRAWING DETAILS.
- 2. FIRESTOP SYSTEM INSTALLATION MUST MEET REQUIREMENTS OF ASTM E-814 OR UL1479 TESTED ASSEMBLIES THAT PROVIDE A FIRE RATING EQUAL TO THAT OF THE CONSTRUCTION BEING
- 3. PROPOSED FIRESTOP MATERIALS AND METHODS SHALL CONFORM TO APPLICABLE GOVERNING CODES HAVING LOCAL JURISDICTION.

PARTITIONS/ASSEMBLIES, OR SUPPORT LIVE LOADS AND TRAFFIC. INSTALLER SHALL CONSULT

4. FIRESTOP SYSTEM DOES NOT RE-ESTABLISH THE STRUCTURAL INTEGRITY OF LOAD BEARING

- STRUCTURAL ENGINEER PRIOR TO PENETRATING ANY LOAD BEARING ASSEMBLY. 5. FOR THOSE FIRESTOP APPLICATIONS THAT EXIST FOR WHICH NO UL SYSTEM IS AVAILABLE THROUGH ANY MANUFACTURER, A MANUFACTURER'S ENGINEERING JUDGMENT DERIVED FROM SIMILAR UL SYSTEM DESIGNS OR OTHER TESTS WILL BE SUBMITTED TO LOCAL AUTHORITIES HAVING JURISDICTION FOR THEIR REVIEW AND APPROVAL PRIOR TO INSTALLATION. ENGINEER JUDGMENT DRAWINGS MUST FOLLOW REQUIREMENTS SET FORTH BY THE INTERNATIONAL FIRESTOP COUNCIL
- (SEPTEMBER 7, 1994). 6. ENGAGE AN EXPERIENCED INSTALLER WHO IS CERTIFIED, LICENSED, OR OTHERWISE QUALIFIED BY THE FIRESTOPPING MANUFACTURER AS HAVING THE NECESSARY EXPERIENCE, STAFF AND TRAINING TO INSTALL MANUFACTURER'S PRODUCTS PER SPECIFIED REQUIREMENTS. A MANUFACTURER'S WILLINGNESS TO SELL ITS FIRESTOPPING PRODUCTS TO THE CONTRACTOR OR TO THE INSTALLER

ENGAGED BY THE CONTRACTOR DOES NOT IN ITSELF CONFER QUALIFICATIONS ON THE BUYER.

c. PRODUCTS 1. USE ONLY FIRESTOP PRODUCTS THAT HAVE BEEN ASTM E-814 OR UL 1479 TESTED AND APPROVED FOR SPECIFIC FIRE-RATED CONSTRUCTION ASSEMBLY TYPE, PENETRATING ITEM TYPE,

- ANNULAR SPACE REQUIREMENTS AND FIRE—RATING INVOLVED FOR EACH SEPARATE INSTANCE. 2. ACCEPTABLE MANUFACTURERS: HILTI, 3M, METACAULK, NELSON
- 1.11 TEMPERATURE CONTROL: A. CONTRACTOR SHALL PROVIDE ALL THERMOSTATS, RELAYS, CONTROL WIRING AND ALL ACCESSORIES
- REQUIRED TO COMPLETE ALL TEMPERATURE CONTROL WORK. B. ALL WIRING SHALL BE DONE PER NEC, STATE AND LOCAL CODE.

C. FURNISH OWNER WITH THREE (3) SETS OF OPERATING INSTRUCTIONS.

D. CONTROLS:

1. EXHAUST FANS #1 THE ELECTRICAL CONTRACTOR SHALL PROVIDE A 7 DAY TIME CLOCK TO CONTROL EXHAUST FAN. EXHAUST FAN SHALL BE MADE TO OPERATE DURING OCCUPIED SCHEDULE OF HOURS AS SET BY OWNER. FAN SHALL CONTINUOUSLY DURING OCCUPIED TIME AND OFF DURING UNOCCUPIED HOURS.

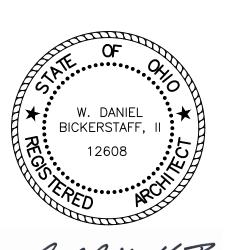


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GLENVILLE HIGH SCHOOL

WDB, II 08.26.2022

Interior Alteration

PERMIT ISSUANCE

New MetroHealth ODH

650 East 113th Street

Cleveland, OH 44108



Health Care Expansion Program

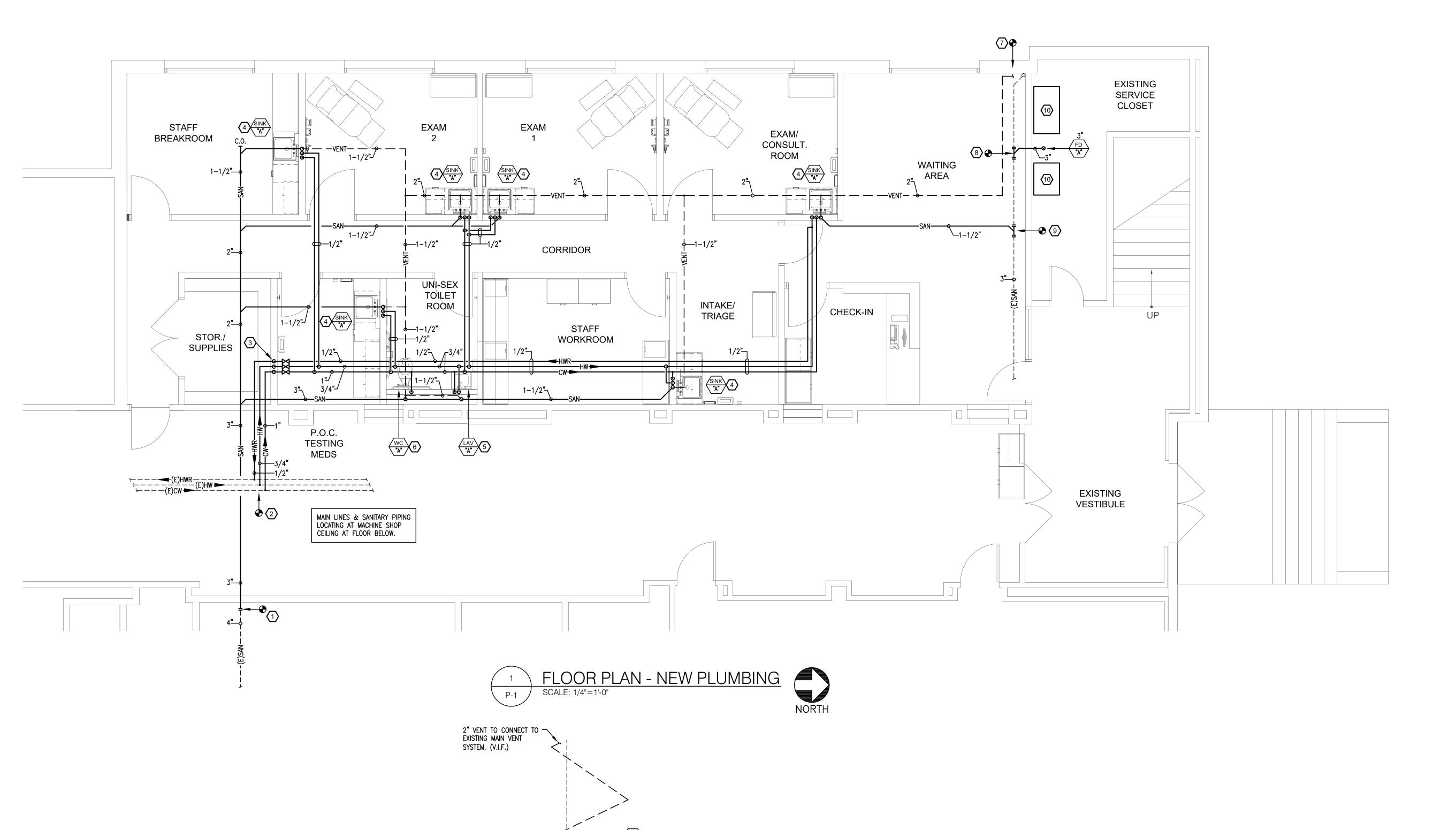
MEDICAL CENTER 2500 METROHEALTH DR. CLEVELAND. OH 44109

Hollie Dellisanti EDUCATOR, Exec. Di WDB. II MECHANICAL

SPECIFICATIONS

07.13.2022

MP-1



COFFEE SINK (AS PER PLAN)—

COLD WATER SUPPLY

- THREE-WAY

STOP VALVE

THERMOSTATIC

MIXING VALVE

(TMV-2)

TYPICAL POINT SOURCE MIXING VALVE

CONNECTION DETAIL

MIXED WATER-

HOT WATER SUPPLY-

SUPPLY

SINK An

1-1/2**"**——ф

C.T.E.—

STACK DIAGRAM

N.T.S.



- 1. THE CONTRACTOR SHALL FIELD VERIFY CONDITIONS PRIOR TO
- 2. CONTRACTOR SHALL VERIFY & CONFIRM SANITARY MAIN
- "BURIED" SHALL BE 2" SIZE AND SHALL BE INSTALLED WITH 2% SLOPE ON DRAIN LINE.
- 5. PLUMBING SYSTEM PIPING SHALL BE TESTED AND INSPECTED
- 7. WATER HAMMER ARRESTORS SHALL BE FURNISHED AND INSTALLED AS DIRECTED BY STATE AT ALL FLUSH VALVE
- 8. ANY PIPING PASSING THRU RATED WALLS OR FLOORS SHALL
- NEW 3" SAN TO CONNECT TO EXISTING 4" SAN AT MACHINE SHOP CEILING AT FLOOR BELOW. COORDINATE ACTUAL CONNECTION POINT IN FIELD.
- 2 NEW 1" CW, 3/4" HW & 1/2" HWR LINES TO CONNECT TO EXISTING MAIN LINES AT MACHINE SHOP CEILING AT FLOOR
- FROM FLOOR BELOW. REFER TO NOTE 2.
- 6 NEW WC A: 1" CW, 3" SAN & 1-1/2" VENT.
- SYSTEM OR VTR. CONNECTION POINT TO BE DETERMINED IN
- 9 NEW 1-1/2" SAN TO CONNECT TO EXISTING 3" SAN AT MACHINE SHOP CEILING AT FLOOR BELOW.

FAN COIL UNIT, REFER TO H.V.A.C. PLAN.

EQUIPMENT & FIXTURE CONNECTION SCHEDULE SINK "A" DRAWING FIXTURE VENT C.W. H.W. DESIGNATION 1/2" 1 1/2" SINK 1 1/2" 1/2" WATER CLOSET ---1 1/2" 1/2" 1 1/2" LAVATORY LAV

NOTES:

- 1. "EQ" = INDICATES EQUIPMENT FURNISHED BY OWNER.
- 2. WATER DISPENSER & ICE MAKER SHALL HAVE AN AIR GAP OF 2" PER CODE &
- 3. ADA FIXTURES WITH EXPOSED TRAP AND/OR SUPPLIES ARE REQUIRED TO HAVE INSULATION KIT INCLUDED AND INSTALLED. UNLESS ARCHITECT IS PROVIDING A REMOVABLE PANEL BELOW FIXTURE.

GENERAL PLUMBING NOTES:

- CONSTRUCTION.
- LOCATION, ROUTING & SIZE IN FIELD.
- 3. SANITARY SEWERS 2 1/2" & SMALLER SHALL BE PITCHED @ 2% SLOPE. 3" & LARGER SHALL BE PITCHED @ 1% SLOPE.
- 4. MINIMUM SANITARY SEWER SIZE LOCATED BELOW FLOOR
- FOR COMPLIANCE WITH STATE CODE.
- 6. POTABLE WATER SYSTEM SHALL BE PURGED & DISINFECTED PRIOR TO OWNER & OR TENANT USE. METHOD TO COMPLY W/ STATE CODE.
- ACTUATED FIXTURE GROUPINGS AND AT ALL QUICK CLOSING
- BE FIRESTOPPED IN METHOD COMPLIANT WITH STATE CODE.
- 9. ALL PUBLIC LAVATORIES SHALL INCLUDE COST & INSTALLATION OF A THERMOSTATIC MIXING VALVE.

PLAN CODED NOTES:

- BELOW. ROUTE & RISE UP IN WALL OF SUPPLY CLOSET AS
- 3-NEW WATER PIPING RISING UP IN WALL TO ABOVE CEILING
- 4—NEW SINK A: 1/2" CW/HW & 1-1/2" SAN/VENT. SINK TO BE PROVIDED W/ THERMOSTATIC MIXING VALVE, REFER TO
- 5 NEW LAV A: 1/2" CW/HW & 1-1/2" SAN/VENT. SINK TO BE PROVIDED W/ THERMOSTATIC MIXING VALVE, REFER TO DETAIL.
- 7)—NEW 2" VENT LINE TO CONNECT TO EXISTING MAIN VENT
- 8 NEW 3" SAN TO CONNECT TO EXISTING 3" SAN AT MACHINE SHOP CEILING AT FLOOR BELOW.

		ND		
PLUMBII	PLUMBING LEGEND			
REMOVED	SAN	······································		
E DRAIN —	V			
eturn ————— Ve ——————————————————————————————	HW	—×—	SV CV	
TE		'	— C.O. — F.D. — I.W. — V.T.R.	
ED FLOOR ———			— N.T.S. — A.F.F.	
MINUTE —			− G.P.M.	

PLUMBING FIXTURE SCHEDULE WATER CLOSET: AMERICAN STANDARD MODEL 2294.011EC WALL—MOUNTED ELONGATED WATER CLOSET WITH 1-1/2" TOP INLET SPUD. PROVIDE WITH SLOAN MODEL #3250400 BATTERY OPERATED SENSOR 1.6 GPF FLUSH VALVE WITH 1" I.P.S. INLET. PROVIDE WITH AMERICAN STANDARD MODEL 5901.1100SS ELONGATED TOILET SEAT WITH SELF-SUSTAINING AMERICAN STANDARD & SLOAN LAVATORY: AMERICAN STANDARD MODEL LUCERNE 0356.421 VITREOUS CHINA WALL HUNG LAVATORY, ADA COMPLIANT, 20"x18" WITH SINGLE HOLE FAUCET. FAUCET:SLOAN MODEL EAF-150-BAT-CP-0.35GPM-MLM-IR-IQ-FTC, PROVIDE ASSE 1070 COMPLIANT MIXING VALVE, ZURN MODEL Z1231-79 WALL CARRIER, FLAT GRID STRAINER, 1-1/4" OFFSET TAILPIECE AND SUPPLY WRAP PER CODE. ADA SINK: ELKAY MODEL LRAD221955 LUSTERTONE STAINLESS STEEL SINGLE BOWL DROP-IN ADA SINK, DIMENSIONS 22"x19" AND 5-1/2" DEEP. FAUCET: CHICAGO MODEL 786-E29-XKCP FAUCET WITH 4" WRISTBLADE HANDLES WITH 8"

CENTERS, AND GOOSENECK SPOUT WITH 2.2 GPM LAMINAR FLOW OUTLET
PROVIDE ASSE 1070 COMPLIANT MIXING VALVE, WALL SUPPLIES WITH STOP, FLAT GRID STRAINER, P TRAP, AND SUPPLY WRAP PER CODE.

J.R. SMITH #2010-A, WITH 6" ROUND STRAINER AND NICKLE BRONZE TOP. PROVIDE WITH "SURE-SEAL" INLINE FLOOR DRAIN TRAP SEAL.

1. EACH INDIVIDUAL PLUMBING FIXTURE SHALL BE INSTALLED WITH ITS OWN SHUT-OFF VALVE ON RESPECTIVE COLD WATER SUPPLY & / OR HOT WATER SUPPLY LINES. ALL FLUSH VALVE OPERATED FIXTURES AND SHOWER VALVES SHALL BE FURNISHED WITH SCREWDRIVER BAK-CHEK ANGLE STOPS.

- 2. INSTALL EACH FIXTURE WITH TRAP, EASILY REMOVABLE FOR SERVICING AND CLEANING.
- 3. PROVIDE CHROME PLATED RIGID OR FLEXIBLE SUPPLIES TO FIXTURES W/ HANDLE OR LOOSE KEY STOPS, REDUCERS AND ESCUTCHEONS.
- 4. INSTALL AND SECURE FIXTURES IN PLACE WITH WALL SUPPORTS, FLOOR SUPPORTS, WALL CARRIERS AND BOLTS.

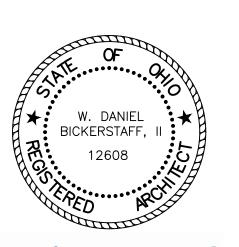


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GLENVILLE HIGH SCHOOL

Interior Alteration

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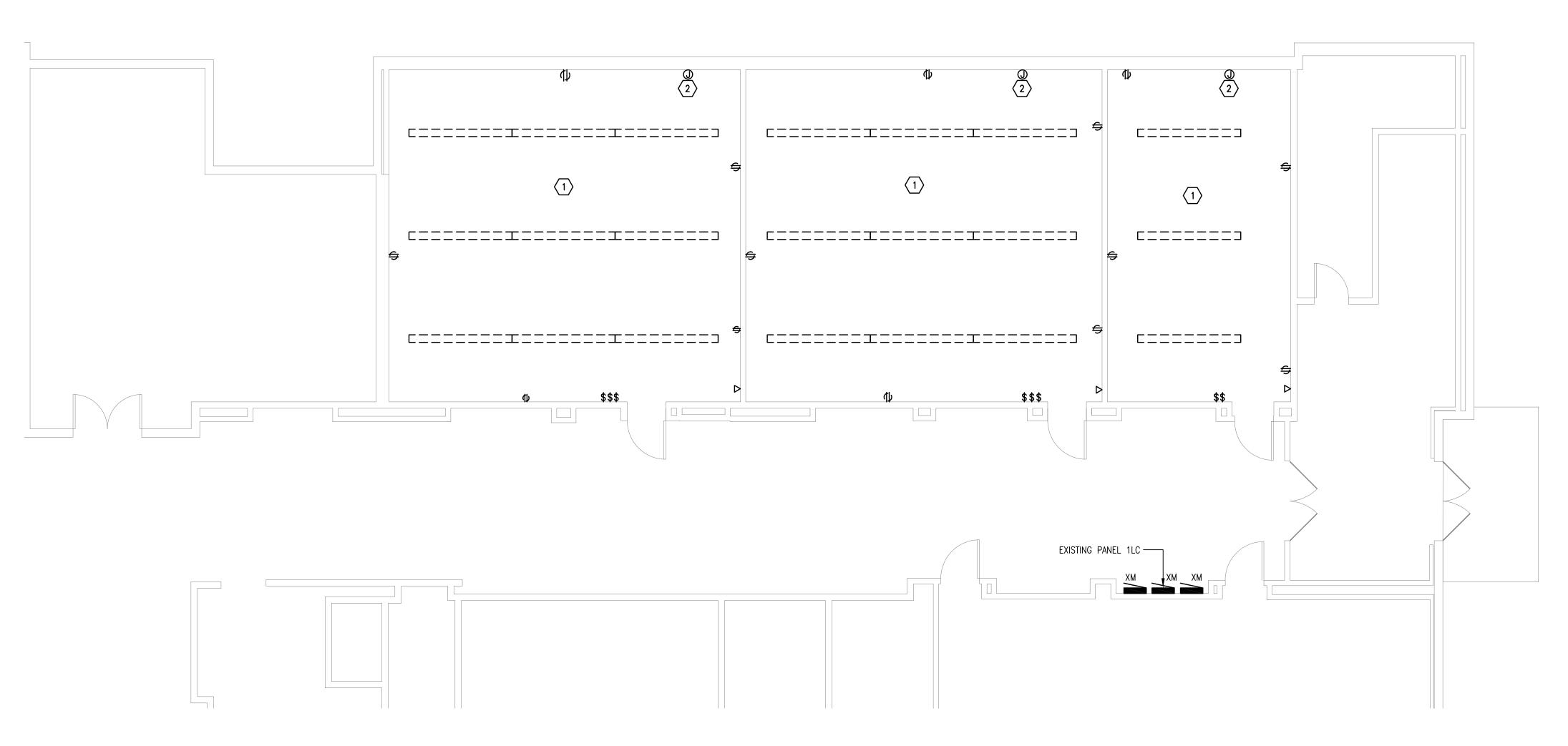
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Architectural Projects, Capital Projects Checked by: WDB, II

PLUMBING FLOOR PLANS, SCHEDULES & DETAILS

07.13.2022

P-1



1 FIRST FLOOR PARTIAL LIGHTING PLAN E1.1 SCALE: 3/16" = 1'-0"

DEMOLITION NOTES:

- 1. PERFORM ALL DEMOLITION OF EXISTING ELECTRICAL SYSTEMS AS INDICATED ON ELECTRICAL AND ARCHITECTURAL PLANS OR NECESSARY FOR THE PROJECT. REMOVE FROM SITE AND PROPERLY DISPOSE OF ALL MATERIAL AND DEBRIS FROM THIS WORK.
- 2. DEMOLITION DRAWINGS ARE GENERAL IN NATURE SHOWING THE SCOPE OF DEMOLITION WORK. CONTRACTOR SHALL VISIT THE SITE AND BECOME FAMILIAR WITH THE QUANTITY OF LUMINAIRES, OUTLETS, ETC. REMOVE ALL EQUIPMENT AND DEVICES NO LONGER REQUIRED FOR FINISHED CONSTRUCTION. REMOVE CONDUITS BEYOND NEW SURFACES. REMOVE ALL EXISTING WIRE FROM CONDUIT BACK TO POINT OF COMMON USE OR TO PANELS.
- 3. FOR ALL DEVICES AND LUMINAIRES BEING REMOVED, REMOVE RELATED CONDUIT AND WIRING TO SOURCE. RE-LABEL EXISTING CIRCUIT BREAKERS AS "SPARE" WHEN LOAD IS COMPLETELY REMOVED OR REVISE LABEL ON PANEL DIRECTORY APPROPRIATELY AND SET BREAKER TO THE
- 4. PATCH ALL SURFACES TO MATCH SURROUNDING FOR DEVICES BEING REMOVED FROM EXISTING WALLS TO BE MAINTAINED. ALL CIRCUITS WHICH ARE REQUIRED TO REMAIN ACTIVE SHALL BE MAINTAINED OR REWORKED AS REQUIRED. ANY EXISTING CIRCUITS OR CABLING SYSTEMS SERVING AREAS NOT AFFECTED BY DEMOLITION SHALL BE MAINTAINED.
- 5. ALL CIRCUITS SHALL BE VERIFIED WITH EXISTING DRAWINGS AND ACTUAL FIELD CONDITIONS PRIOR TO BEGINNING DEMOLITION.
- 6. THE OWNER RESERVES THE RIGHT OF SALVAGE FOR ALL EXISTING ELECTRICAL EQUIPMENT PRIOR TO DEMOLITION. THE CONTRACTOR SHALL REVIEW ALL MATERIALS AND DELIVER TO THE OWNER THOSE REQUIRED IN THEIR EXISTING CONDITION. ALL OTHER MATERIAL SHALL BE REMOVED BY THIS
- 7. DISCONNECT AND REMOVE ALL EXISTING DATA, SPEAKER PHONE AND CLOCK WIRING FROM SPACE. REMOVE AND DISPOSE OF ALL DEVICES ASSOCIATED WITH THESE SYSTEMS UNLESS NOTED
- 8. ALL WORK SHOWN LIGHT IS EXISTING TO REMAIN UNLESS NOTED OTHERWISE.
- 9. ALL WORK SHOWN DARK OR DARK/DASHED SHALL BE DISCONNECTED AND REMOVED IN ITS ENTIRETY UNLESS NOTED OTHERWISE.

X KEYED NOTE SCHEDULE

- 1. DISCONNECT EXISTING LIGHTING FIXTURES AND POWER DEVICES MAINTAIN BRANCH CIRCUIT WIRING FOR FUTURE CONNECTION OF NEW EQUIPMENT. LIGHTING AND POWER ARE FED FROM PANEL '1LC'. (TOTAL OF 9 CIRCUITS)
- 2. DISCONNECT AND REMOVE EXISTING MECHANICAL EQUIPMENT BRANCH CIRCUIT WIRING FOR REMOVAL BY OTHERS. MAINTAIN CIRCUITS FOR FUTURE CONNECTION.

DEMOLITION ANNOTATION LEGEND

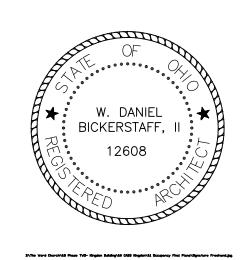
"XM" DENOTES EXISTING TO BE MAINTAINED



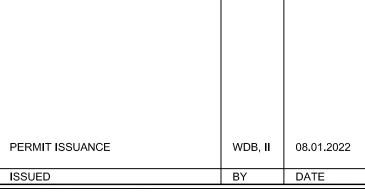
Project Team:



3443 LEE ROAD SHAKER HEIGHTS, OHIO 44120 P 216.752.4444 F 216.752.5011 ARCATEK@UDLTD.COM



W. Daniel Bickerstaff, II License No. 12608 Expiration Date: December 31, 2023



GLENVILLE HIGH SCHOOL

Interior Alteration

New MetroHealth ODH Health Care Expansion Program

650 East 113th Street

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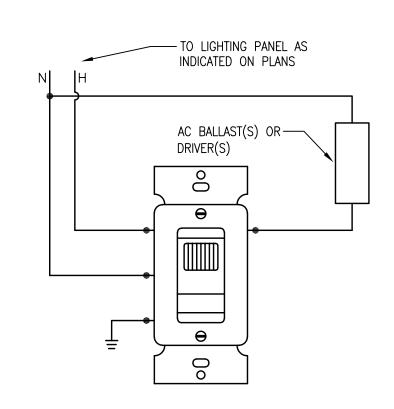


MEDICAL CENTER 2500 METROHEALTH DR. CLEVELAND, OH 44109

Hollie Dellisanti EDUCATOR, Exec. Dir. Architectural Projects, Capital Projects Checked by: WDB, II **LIGHTING AND**

POWER DEMOLITION **PLAN**

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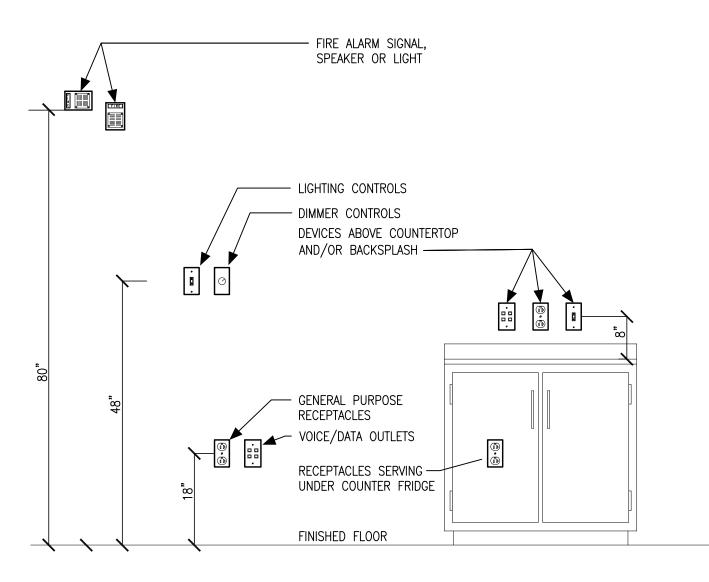
VACANCY SENSOR SWITCH 'VS' **WIRING DIAGRAM**

SCALE: NOT TO SCALE

- 1. ALL LOW VOLTAGE WIRING AND TERMINATIONS TO BE BY ELECTRICAL CONTRACTOR.
- 2. VACANCY SENSOR SHALL BE "SENSOR SWITCH" WSX-PDT-SA OR APPROVED EQUAL. 3. CONTRACTOR TO VERIFY AND MATCH LOAD TYPE AND WATTAGE.

SYMBOL	DESCRIPTION	MTG. HGT. (U.N.O.)	ABBREVIATION	DESCRIPTION
Φ / Φ / Φ ^c	SINGLE / DUPLEX / DOUBLE DUPLEX RECEPTACLE / G-GROUND FAULT	18"		ADDOME FINIOUSE FLOOR
Ф •	COMBINATION 120VAC, USB 5 VDC, 3.1A CHARGER PORT & RECEPTACLE		AFF AHJ	ABOVE FINISHED FLOOR AUTHORITY HAVING JURISDICTION
⇔ ^{AC}	GROUND FAULT DUPLEX RECEPTACLE, AC-MOUNTED ABOVE COUNTER		ECH	ELECTRIC CABINET HEATER
\$.	LIGHT SWITCH, SINGLE POLE, 20 AMP, 120/277 VOLT. LOWER CASE LETTER INDICATES LUMINAIRE CONTROLLED.		EX	EXISTING
\$ _{vs}	WALLBOX VACANCY SENSOR, SEE DETAIL THIS DRAWING		EUH	EXISTING UNIT HEATER
<u>(</u> (s)	CEILING MOUNTED OCC SENSOR WITH POWER PACK, SEE DETAIL THIS DRAWING		ERTU EF	EXISTING ROOF TOP UNIT EXHAUST FAN
0	JUNCTION BOX		NIC	NOT IN CONTRACT
A	IT DEVICE, PROVIDE BOX WITH 3/4" CONDUIT TO CEILING SPACE, SEE IT DRAWINGS	18"	SER	SERVICE ENTRANCE RATED
(1)	PLAN CODED NOTE		SW	SWITCH
	TENT COSES TOTAL		TYP	TYPICAL
ㅁ	DISCONNECT SWITCH GENERAL PURPOSE, 240V, 2-P NON-FUSED, OR AS NEEDED		UC	UNDER COUNTER
Ø	DISCONNECT SWITCH GENERAL PURPOSE, 240V, 2-P FUSED, OR AS NEEDED		UNO	UNLESS NOTED OTHERWISE
	PANELBOARD 208/120 VOLT		XFMR	TRANSFORMER
FΙ	WALL MOUNTED FIRE ALARM HORN STROBE DEVICE.	80"		
V	WALL MOUNTED FIRE ALARM VISUAL DEVICE			

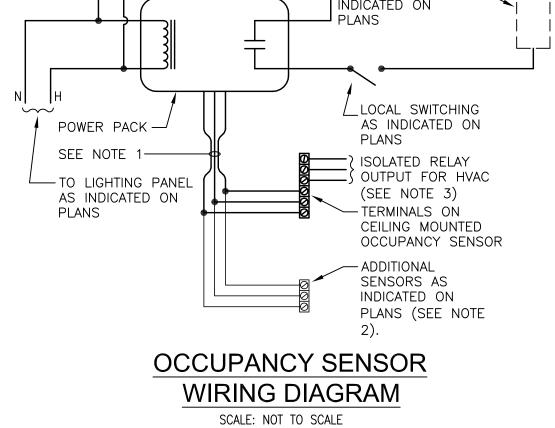
SYMBOL	<u>TYPE</u>	SOURCE	<u>VOLTS</u>	TOTAL WATTS	DESCRIPTION	CATALOG NO.
	A1	LED	UNV	26	2X2 RECESSED MOUNTED FLAT PANEL LED LUMINAIRE.	COLUMBIA LIGHTING CFP22-3335-HE
						OR APPROVED EQUAL
	A2	LED	UNV	25	2X2 RECESSED MOUNTED FLAT PANEL LED LUMINAIRE.	COLUMBIA LIGHTING CFP22-2835
						OR APPROVED EQUAL
	В	LED	UNV	26	4' LED RECESSED LUMINAIRE.	NEO-RAY LIGHTING S124DR-S-1020D835-FTG4F0-1 -DD-F
						OR APPROVED EQUAL
<u> 2</u> \$¤	X1	LED	120V		UNIVERSAL MOUNTED COMBINATION EXIT SIGN/ EMERGENCY LIGHT WITH THERMOPLASTIC HOUSING, RED LETTERING AND BATTERY BACK UP.	LITHONIA LHQM-LED-R
⊗	X1	LED	120V		UNIVERSAL MOUNTED EXIT SIGN WITH THERMOPLASTIC HOUSING, RED LETTERING AND BATTERY BACK UP.	LITHONIA LHQM-LED-R-HO
₩	EM	LED	120V		EMERGENCY BATTERY PACK WITH THERMOPLASTIC CONSTRUCTION AND BATTERY PACK.	LITHONIA ELM2L—UVOLT



TYPICAL DEVICE MOUNTING DETAIL

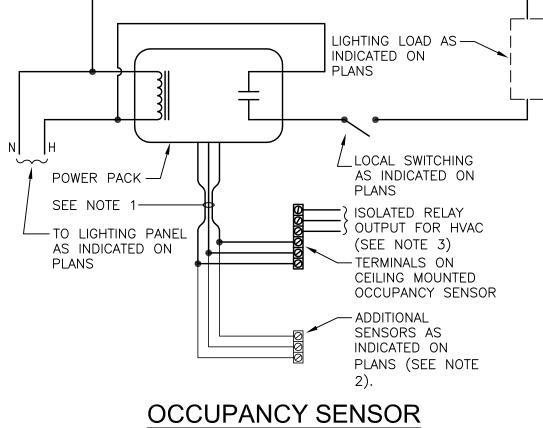
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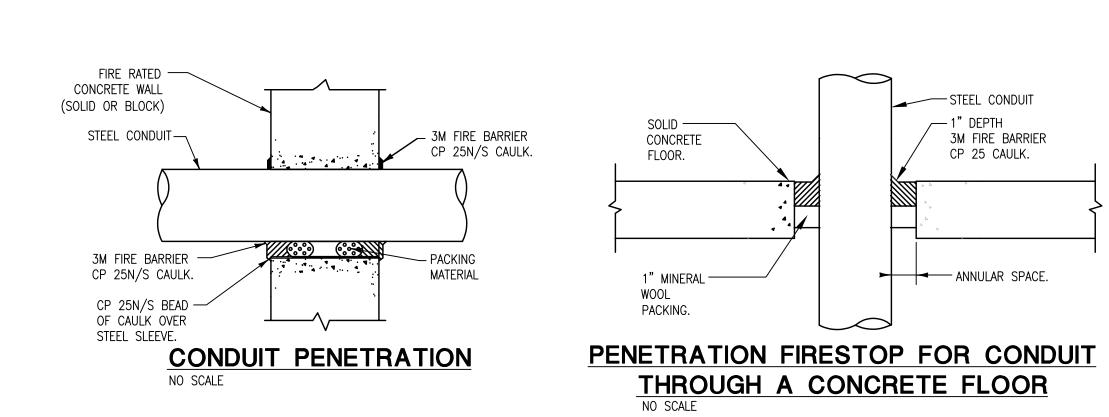
- 1. ALL MOUNTING HEIGHTS SHALL BE MEASURED FROM FINISHED FLOOR TO THE CENTERLINE OF DEVICE.
- 2. NO WIRING DEVICES OR OUTLET BOXES SHALL BE MOUNTED BACK TO BACK.
- 3. ALL MOUNTING DEVICES SHALL BE INSTALLED AT MOUNTING HEIGHTS AS INDICATED ON THIS DETAIL UNLESS OTHERWISE
- 4. FOR ALL ELEVATIONS (WHERE APPLICABLE), CASEWORK DETAILS, FIRE WALLS, SMOKE WALLS, LOCATION OF COUNTERTOP RECEPTACLES, LUMINAÎRE SWITCHES, TELÉPHONE OUTLETS, EQUIPMENT ROUGH-INS, HEADWALLS, ETC., SEE ARCH DRAWINGS. WHERE NO ARCHITECTURAL ELEVATIONS OR DETAILS OCCUR, THE ELECTRICAL CONTRACTOR SHALL USE MEANS AND METHODS AS WELL AS THEIR FIELD KNOWLEDGE TO SPOT DEVICES IN THE BEST LOCATIONS FOR THE PROJECT.



NOTES:

- 1. ALL LOW VOLTAGE WIRING AND TERMINATIONS TO BE BY ELECTRICAL CONTRACTOR.
- 2. MAXIMUM NUMBER OF SENSORS PER POWER PACK IS DEPENDANT ON MANUFACTURER. COORDINATE QUANTITY OF POWER PACKS WITH
- 3. AUXILIARY RELAY IS ENERGIZED DURING 'UNOCCUPIED' STATE.
- 4. OCCUPANCY SENSOR SHALL BE DUAL TECHNOLOGY "SENSOR SWITCH" CM-PDT-10 OR APPROVED EQUAL. ALL EXPOSED CONTROL WIRING SHALL BE IN CONDUIT.
- 5. UNITS DENOTED WITH AN 'H' SHALL BE HALLWAY COVERAGE TYPE CM-PDT-11 OR APPROVED EQUAL.
- 6. CONTRACTOR TO VERIFY AND MATCH LOAD TYPE AND WATTAGE.



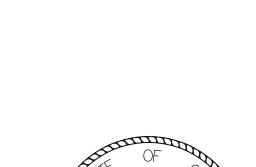




Project Team:

Architect

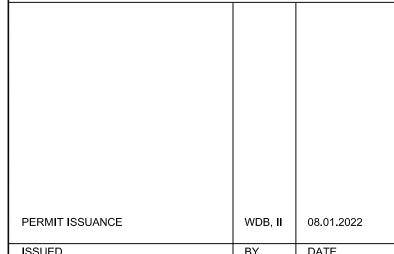




W. DANIEL BICKERSTAFF,

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Expiration Date: December 31, 2023



GLENVILLE HIGH SCHOOL

Interior Alteration

New MetroHealth ODH SBHC Health Care Expansion Program

650 East 113th Street Cleveland, OH 44108

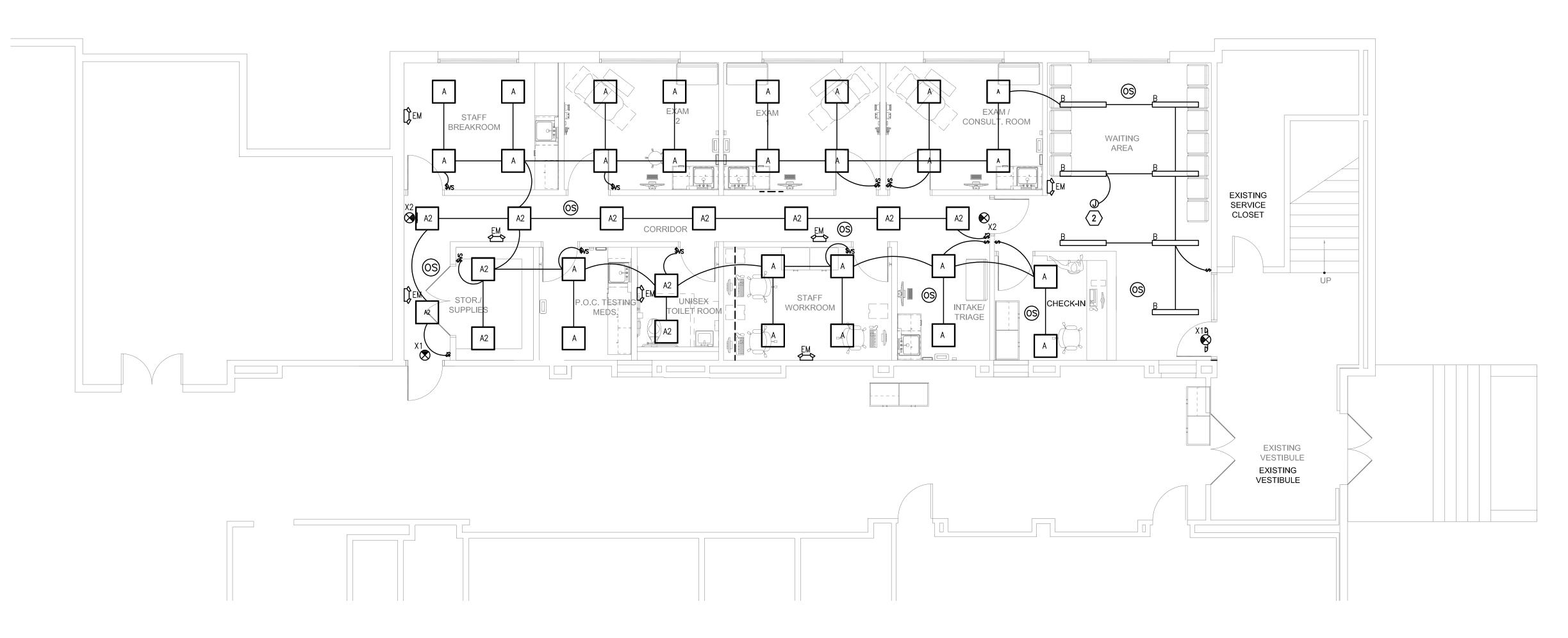


MEDICAL CENTER 2500 METROHEALTH DR. CLEVELAND, OH 44109

Hollie Dellisanti EDUCATOR, Exec. Dir. Architectural Projects, Capital Projects Checked by: WDB, II SYMBOL LEGEND AND LUMINAIRE SCHEDULE

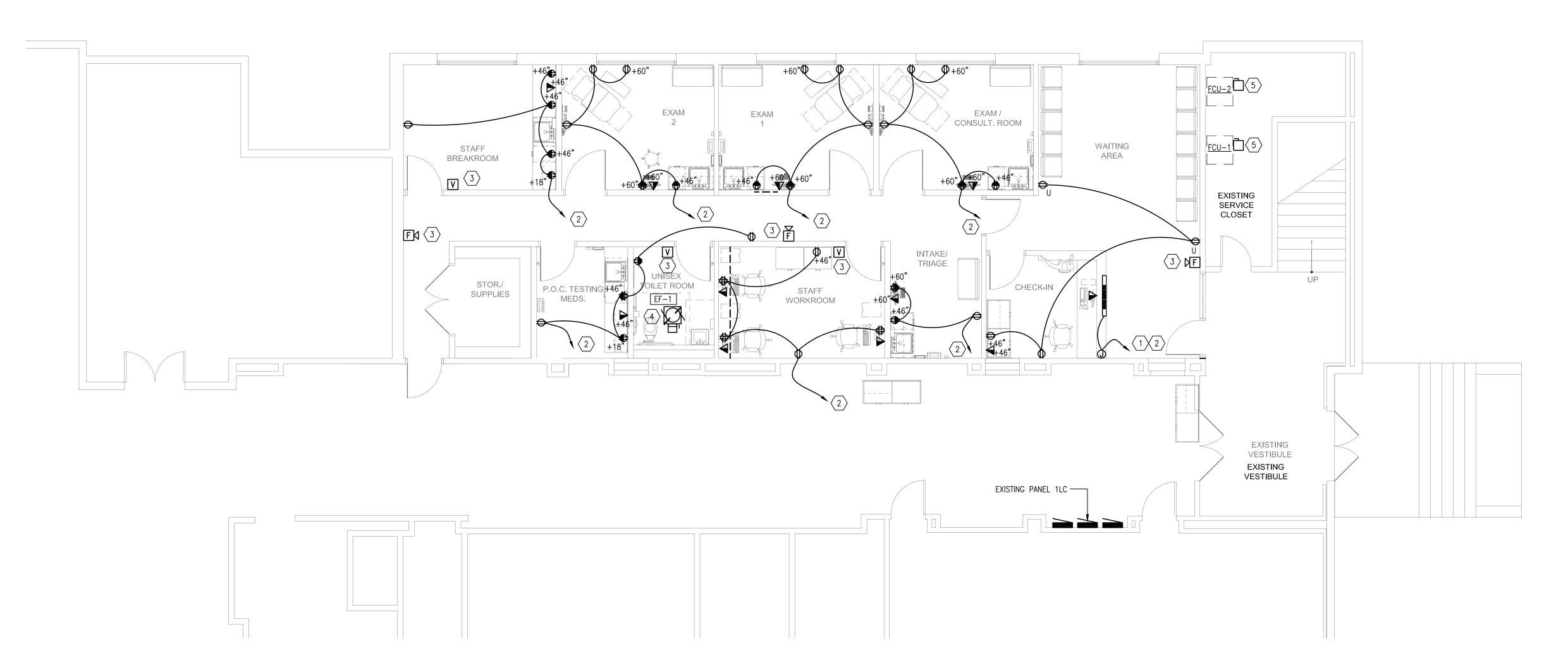
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E0.1



1 FIRST FLOOR PARTIAL LIGHTING PLAN

E1.1 SCALE: 3/16" = 1'-0"



1 FIRST FLOOR PARTIAL LIGHTING PLAN

E1.1 SCALE: 3/16" = 1'-0"

GENERAL NOTES:

1. ALL DEVICES, EQUIPMENT, LUMINAIRES, ETC., MUST BE GROUNDED BY USE OF A PROPERLY SIZED GROUNDING CONDUCTOR. MECHANICAL/ELECTRICAL BONDS OF THE METALLIC RACEWAY SYSTEM SHALL ALSO BE MAINTAINED.

- 2. BRANCH CIRCUIT WIRE SIZES (AND CONDUITS) SHALL BE INCREASED FROM THESE INDICATED ON THE PLANS TO PREVENT EXCESSIVE VOLTAGE DROP. BRANCH CIRCUITS SHALL BE INSTALLED WITH WIRES OF SUFFICIENT SIZE SO THAT VOLTAGE DROP BETWEEN THE PANEL AND THE LOADS DOES NOT EXCEED A LIMIT OF 3%.
- 3. CIRCUITS MAY BE COMBINED IN CONDUIT PROVIDED WIRE IS PROPERLY DE-RATED AND CONDUIT SIZED PER CODE. UNDER NO CIRCUMSTANCES SHALL MORE THAN NINE (9) CURRENT CARRYING CONDUCTORS BE RUN IN A SINGLE CONDUIT.
- 4. ALL CONDUITS SHALL CONTAIN A GROUND WIRE SIZED PER NEC TABLE #250-122. WHERE CIRCUIT CONDUCTORS ARE INCREASED IN SIZE FOR VOLTAGE DROP, THE GROUND WIRE SIZE SHALL BE INCREASED PROPORTIONATELY (ACCORDING TO CIRCULAR MIL AREA) FROM THE SIZE REQUIRED BY NEC TABLE #250-122.
- 5. EXPOSED CONDUITS, WHERE PERMITTED, SHALL BE RUN PARALLEL TO OR AT RIGHT ANGLES TO BUILDING STRUCTURAL MEMBERS.
- 6. ALL DEVICES SHALL BE WHITE WITH MATCHING COVERPLATES, UNLESS NOTED OTHERWISE.
- 7. ALL EXIT SIGNS, EMERGENCY LIGHTING BATTERY PACKS, EMERGENCY LUMINAIRES (ON GENERATOR OR EMERGENCY LIGHTING BATTERY PACKS INTEGRAL TO LUMINAIRE), AND NIGHT LIGHTS (DENOTED 'NL') SHALL BE CONNECTED TO THE LOCAL LIGHTING CIRCUIT AHEAD OF ANY CONTROLS SUCH AS: SWITCHES (DEVICE), OCCUPANCY SENSORS AND/OR RELAY CONTROLS.

X KEYED NOTE SCHEDULE

- 1. ROUTE CIRCUIT IN FLEXIBLE CONDUIT FROM WALL TO PRE—INSTALLED PLUGMOLD ON DESK. CPPRDINATE CONNECTION POINT WITH MANUFACTURER SPECIFICATIONS AND MAKE CONNECTION TO ALL PRE—INSTALLED
- 2. CONNECT TO SPARE CIRCUIT MADE AVAILABLE PER DEMOLITION. E.C. SHALL CONFIRM ALL CIRCUITS IN FIELD AND ADJUST AS REQUIRED.
- 3. PROVIDE NEW FIRE ALARM DEVICE AND CONNECT TO FIRE ALARM SYSTEM SERVING SPACE. COORDINATE ALL WORK WITH BUILDING FIRE ALARM MAINTENANCE CONTRACTOR.
- 4. PROVIDE TIME CLOCK PER HVAC REQUIREMENTS AND CONNECT TO EXHAUST FAN. SPLIT EXISTING LIGHTING CIRCUIT IN AREA.
- 5. CONNECT FCU UNIT TO MAINTAINED BRANCH CIRCUIT MADE AVAILABLE FROM DEMO UNIT VENTILATOR.

CONTRACTOR SHALL PROVIDE CERTIFIED FIRE ALARM DRAWINGS AS STATED IN THE SPECIFICATIONS, STAMPED BY A STATE CERTIFIED NICET DESIGNER DENOTING SCOPE OF WORK SHOWN AND ANY MODIFICATIONS REQUIRED TO MEET CODE REQUIREMENTS. REFER TO SPECIFICATION SECTION 1.12 PARAGRAPH A.17 FOR FURTHER INFORMATION. A COMPLETE, CODE COMPLIANT SYSTEM SHALL BE PROVIDED BASED ON THE NICET CERTIFIED DESIGNER DOCUMENTS AND AHJ REQUIREMENTS.



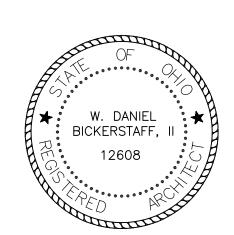
Project Team:

Architect



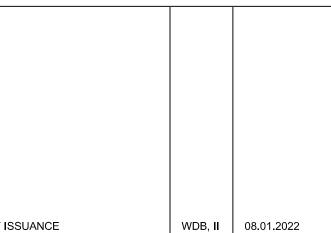
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W. Daniel Bickerstaff, II License No. 12608 Expiration Date: December 31, 2023

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PERMIT ISSUANCE

GLENVILLE HIGH SCHOOL

Interior Alteration

New MetroHealth ODH SBHC

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MEDICAL CENTER 2500 METROHEALTH DR. CLEVELAND, OH 44109

Health Care Expansion Program

Hollie Dellisanti EDUCATOR, Exec. Dir.
Architectural Projects, Capital Projects

Date

Consultant Project # Drawn by:
DB Checked by:
WDB, II

LIGHTING AND
POWER

PLANS

Date: **E** 1

ELECTRICAL SPECIFICATIONS

SECTION 260010 - GENERAL REQUIREMENTS

- 1.1 GENERAL A. THE ARCHITECTURAL AND MECHANICAL EQUIPMENT AND ANY EQUIPMENT AND SPECIFICATIONS ARE HEREBY INCORPORATED INTO AND BECOME A PART OF THE ELECTRICAL CONTRACT DOCUMENTS. THIS CONTRACTOR SHALL EXAMINE ALL SUCH DRAWINGS AND SPECIFICATIONS AND BECOME FAMILIAR WITH PROVISIONS CONTAINED THEREIN.
- B. IT IS THE PURPOSE OF THE ELECTRICAL DRAWINGS TO INDICATE THE APPROXIMATE LOCATIONS OF ALL EQUIPMENT, OUTLETS, FIXTURES, ETC. ASCERTAIN EXACT LOCATIONS AND ARRANGE WORK ACCORDINGLY. THE FINAL LOCATIONS ARE SUBJECT TO REASONABLE CHANGE BY THE ARCHITECT OR OWNER PRIOR TO ROUGH-IN AT NO ADDITIONAL COST. DIMENSIONS GIVEN ON THE PLANS SHALL BE VERIFIED IN THE FIELD. DRAWINGS SHALL NOT BE SCALED TO OBTAIN EXACT DIMENSIONS. C. THE DRAWINGS SHOW DIAGRAMMATICALLY THE LOCATIONS OF THE VARIOUS ELECTRICAL DEVICES, EQUIPMENT, FIXTURES, AND THE METHOD OF CONNECTING AND CONTROLLING THEM; THEY ARE NOT INTENDED TO SHOW EVERY CONNECTION IN DETAIL, NOR ALL FITTINGS REQUIRED FOR A COMPLETE

SYSTEM. MATERIAL OR LABOR WHICH IS NOT SHOWN ON THE DRAWINGS OR INCLUDED IN THE

- SPECIFICATIONS BUT IS NECESSARY TO COMPLETE THE WORK, SHALL BE PROVIDED. D. THE DRAWINGS, AS PREPARED, ARE DIAGRAMMATIC, BUT SHALL BE FOLLOWED AS CLOSELY AS ACTUAL OPERATION OF BUILDING AND WORK OF OTHER TRADES WILL PERMIT. ALL CHANGES FROM THESE DRAWINGS. NECESSARY TO MAKE THE WORK CONFORM TO THE BUILDING AS CONSTRUCTED. AND TO FIT THE WORK OF OTHER TRADES OR TO CONFORM TO THE RULES AND REGULATIONS OF THE STATE. MUNICIPAL AND LOCAL BODIES HAVING JURISDICTION, SHALL BE MADE BY THIS CONTRACTOR, AT HIS
- E. ALL BIDDERS ARE REQUIRED TO VISIT THE SITE OF WORK AND BECOME FAMILIAR WITH THE CONDITIONS AFFECTING INSTALLATION. SUBMISSION OF A PROPOSAL SHALL PRESUPPOSE KNOWLEDGE OF SUCH CONDITIONS AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED WHERE EXTRA LABOR OR
- MATERIALS ARE REQUIRED BECAUSE OF IGNORANCE OF THESE CONDITIONS. F. IT IS THE INTENT OF THESE SPECIFICATIONS THAT EQUIPMENT SPECIFIED AS AN EXTENSION TO OR AN INTERFACE WITH AN EXISTING SYSTEM BE COMPLETELY COMPATIBLE WITH THE EXISTING SYSTEM. THE CONTRACTOR SHALL DETERMINE CHARACTERISTICS OF THE EXISTING SYSTEMS AND COORDINATE WITH SUPPLIERS OF NEW EQUIPMENT TO PROVIDE COMPLETE AND PROPERLY OPERATING SYSTEMS.
- A. ALL LABOR, MATERIALS AND EQUIPMENT REQUIRED FOR A COMPLETE AND OPERATING ELECTRICAL
- B. ALL PERMITS AND INSPECTIONS REQUIRED FOR ELECTRICAL WORK. TEMPORARY ELECTRICAL SERVICE, GFI PROTECTED, LIGHTING AND WIRING FOR CONSTRUCTION. CONCRETE WHERE REQUIRED FOR ELECTRICAL WORK.
- CUTTING, PATCHING AND FIREPROOFING WHERE REQUIRED FOR ELECTRICAL WORK. FEEDER AND BRANCH CIRCUIT WIRING.
- G. GROUNDING SYSTEM H. LIGHTING FIXTURES AND LAMPS. I. ALL LIGHTING FIXTURES, HANGERS, SUPPORTS, LAMPS AND CONTROL DEVICES INSTALLED AND CONNECTED IN COMPLETE WORKING ORDER.
- EMERGENCY LIGHTING SYSTEM AND EXIT SIGNS RECEPTACLE OUTLETS, DISCONNECT SWITCHES AND EQUIPMENT CONNECTIONS. L. OUTLET BOXES, CABLING AND PLYWOOD BACKBOARDS IF REQUIRED FOR MOUNTING TELEPHONE AND
- M. PANELBOARDS. N. PROVIDE CONSTRUCTION POWER AND LIGHTING, INCLUDING GFI PROTECTION FOR ALL TRADES. ASSIST OTHER TRADES.
- 1.3 MATERIALS NOT PROVIDED BY THIS CONTRACTOR, BUT SUBJECT TO HIS WIRING A. MOTORS AND MOTOR CONTROLS PROVIDED BY OTHER CONTRACTORS UNDER OTHER SECTIONS OF UNLESS OTHERWISE INDICATED ON THE DRAWING, THE MECHANICAL CONTRACTOR PROVIDES
- TEMPERATURE CONTROL COMPONENTS AND ALL RELATED CONDUIT AND WIRING. C. SECURITY SYSTEM AND WIRING BY OWNER. 1.4 REQUIREMENTS OF REGULATORY AGENCIES
- A. ALL WORK SHALL BE FURNISHED AND INSTALLED IN ACCORDANCE WITH THE PROVISIONS OF ALL APPLICABLE FEDERAL, STATE, LOCAL AND REGIONAL CODES, RULES, REGULATIONS, AND STANDARDS, INCLUDING THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE AS INTERPRETED BY THE LOCAL INSPECTION DEPARTMENT.
- B. SECURE AND PAY FOR ALL PERMITS AND INSPECTIONS REQUIRED FOR ELECTRICAL WORK AND GIVE THE PROPER AUTHORITIES NOTICES AS REQUIRED BY LAW. COMPLY WITH REGULATIONS REGARDING TEMPORARY ENCLOSURES, OBSTRUCTIONS, EXCAVATIONS, AND PAY FOR ALL LEGAL FEES INVOLVED. C. COPIES OF ALL INSPECTION REPORTS SHALL BE MADE AVAILABLE TO THE ARCHITECT ON REQUEST. THE ELECTRICAL CONTRACTOR SHALL FURNISH TO THE ARCHITECT THREE (3) COPIES OF THE APPROVED FINAL INSPECTION REPORT BEFORE REQUEST FOR FINAL PAYMENT.
- D. ALL CONDITIONS AND REQUIREMENTS OF THE OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA) SHALL BE FOLLOWED THROUGHOUT THE CONSTRUCTION OF THIS PROJECT. THIS PROJECT, WHEN COMPLETE SHALL MEET OR EXCEED THE CONDITIONS AND REQUIREMENTS FOR SAFETY AS ESTABLISHED BY THE OCCUPATIONAL SAFETY AND HEALTH ACT.
- SUBMIT DRAWINGS, CATALOG SHEETS AND/OR WIRING DIAGRAMS FOR THE FOLLOWING EQUIPMENT AND SYSTEMS AS SPECIFIED IN DIVISION 1 WIRING DEVICES AND COVER PLATES. SUBMIT COLOR SAMPLES.
- 3. LIGHTING FIXTURES & EMERGENCY LIGHTING. B. THE SUBMITTALS WILL BE REVIEWED BY THE ENGINEER FOR GENERAL COMPLIANCE WITH CONTRACT DOCUMENTS ONLY, AND NOT FOR DIMENSIONS, QUANTITIES, ETC.

PANELBOARDS, DISCONNECT SWITCHES, FUSED & NON-FUSED. STARTERS.

- C. THE SUBMITTALS RETURNED MARKED "REVIEWED" OR "FURNISH AS CORRECTED" SHALL BE USED FOR PROCUREMENT; HOWEVER, THE RESPONSIBILITY FOR CORRECT PROCUREMENT REMAINS SOLELY WITH THE CONTRACTOR. ANY SUBMITTALS RETURNED MARKED "REVISE AND RESUBMIT" OR "REJECTED" SHOULD BE RESUBMITTED AS NOTED. D. DISPOSITION OF SUBMITTALS SHALL NOT RELIEVE THE CONTRACTOR FROM THE RESPONSIBILITY FOR
- DEVIATIONS FROM DRAWINGS OR SPECIFICATIONS, UNLESS HE HAS SUBMITTED IN WRITING A LETTER ITEMIZING OR CALLING ATTENTION TO SUCH DEVIATIONS AT TIME OF SUBMISSION AND SECURED WRITTEN APPROVAL FROM THE ARCHITECT, NOR SHALL SUCH DISPOSITION OF SUBMITTALS RELIEVE THE CONTRACTOR FROM RESPONSIBILITY FOR ERRORS IN SUBMITTALS.
- A. THESE SPECIFICATIONS SHALL ESTABLISH THE QUALITY AND STANDARD FOR MATERIALS AND EQUIPMENT TO BE FURNISHED. ITEMS SPECIFIED BY MANUFACTURER, TRADE NAME, OR CATALOG NUMBER SHALL BE FURNISHED AS SPECIFIED.
- B. WHERE MORE THAN ONE MANUFACTURER IS SPECIFIED FOR AN ITEM OR SYSTEM, THE CONTRACTOR MAY FURNISH ANY ITEM OR SYSTEM SPECIFIED. WHERE THE EQUIPMENT OF ONE MANUFACTURE IS SPECIFIED AND OTHER MANUFACTURERS ARE LISTED AS "ALTERNATE MANUFACTURERS". THE CONTRACTOR MAY FURNISH THE EQUIPMENT OF THE SPECIFIED MANUFACTURE OR OF ANY OF THE LISTED ALTERNATE MANUFACTURES. HOWEVER, THE DRAWINGS ARE BASED ON THE EQUIPMENT OF THE SPECIFIED MANUFACTURER ONLY. IF THE CONTRACTOR ELECTS TO FURNISH FOUIPMENT OF AN ALTERNATE MANUFACTURE. ANY CHANGES TO THE WORK SHOWN ON THE DRAWINGS REQUIRED ACCOMMODATING VARIATIONS OF THE ALTERNATE EQUIPMENT IN DIMENSIONS, CHARACTERISTIC, ACCESS, ETC. FROM THE SPECIFIED EQUIPMENT INCLUDING WORK OF OTHER CONTRACTORS SHALL BE INCLUDED IN THIS CONTRACTOR'S BID.
- 1.7 AS-BUILT DRAWINGS A. PROVIDE AS-BUILT DRAWINGS ON MEDIA REQUIRED BY ARCHITECT. AS WORK PROGRESSES, RECORD ANY DEVIATION FROM CONTRACT DRAWINGS. NOTATIONS SHALL BE NEAT AND LEGIBLE WITH ANY ADDITIONAL EXPLANATORY DRAWINGS OR SKETCHES NECESSARY. KEEP ON SITE A CURRENT SET AND SUBMIT AT COMPLETION OF PROJECT.
- 1.8 TEMPORARY LIGHTING AND WIRING A. PROVIDE TEMPORARY ELECTRICAL SERVICE, CONVENIENCE OUTLETS GFI PROTECTED, LIGHTING AND POWER AS REQUIRED FOR USE OF ALL TRADES DURING CONSTRUCTION.
- A. GUARANTEE ALL WORKMANSHIP AND MATERIALS FURNISHED UNDER THE CONTRACT FOR ONE YEAR AFTER ACCEPTANCE BY OWNER.REPAIR OR REPLACE ANY DEFECT DURING THE GUARANTEE PERIOD, WITHOUT COST TO OWNER.
- 1.10 MATERIALS AND EQUIPMENT A. ALL EQUIPMENT AND MATERIAL SHALL BE NEW, OF CURRENT MANUFACTURE AND MEET OR EXCEED STANDARDS SPECIFIED BY UL. NEMA, ANSI, AND IEEE WHEREVER SUCH STANDARDS HAVE BEEN ESTABLISHED AND SHALL BEAR THE UNDERWRITER'S LABORATORIES LABEL. ALL MATERIALS SUPPLIED OF ONE TYPE OR OF ONE SYSTEM SHALL BE BY THE SAME MANUFACTURER.
- B. EQUIPMENT AND MATERIAL SHALL BE PROTECTED BY AND BE THE RESPONSIBILITY OF CONTRACTOR UNTIL FORMALLY ACCEPTED BY THE OWNER.

1.11 SUPPORTING DEVICES

- A. PROVIDE ALL HARDWARE, SUPPORTS, HANGERS, ANGLE IRON, CHANNELS, RODS, CLAMPS, ETC., FOR INSTALLATION OF ELECTRICAL EQUIPMENT AND LIGHT FIXTURES AS REQUIRED TO SUIT CONDITIONS AND APPLICATION. ALL SUPPORTING DEVICES SHALL BE GALVANIZED OR CADMIUM PLATED STEEL OR OTHER SUITABLY CORROSION-RESISTANT MATERIAL.
- B. SUPPORTING DEVICES SHALL INCLUDE: INDIVIDUAL STEEL RING OR CLEVIS TYPE HANGERS.
- 2. MALLEABLE IRON C-CLAMP AND RETAINING CLIPS FOR ATTACHMENT TO STEEL BEAMS.
- 3. RING AND TURNBUCKLE ATTACHMENT FOR STEEL PIPE. 4. TRAPEZE HANGERS WITH CLAMPS AND HANGER. 5. CONCRETE INSERTS RATED PER LOAD FOR ATTACHMENT TO CONCRETE.

- 1.12 WORKMANSHIP A. JOURNEYMAN ELECTRICIANS UNDER THE DIRECT SUPERVISION OF A COMPETENT FOREMAN SHALL INSTALL ELECTRICAL WORK. WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE BEST PRACTICES OF
- 1.13 EQUIPMENT CONNECTIONS A. SERVE AND CONNECT ELECTRICAL EQUIPMENT FURNISHED BY OTHERS AS SCHEDULED ON DRAWINGS. COORDINATE ALL OUTLET LOCATIONS AND CONNECTION REQUIREMENTS WITH THE CONTRACTOR FURNISHING THE EQUIPMENT. BEFORE CONNECTING ANY PIECE OF EQUIPMENT, CHECK THE NAMEPLATE RATING AGAINST THE INFORMATION SHOWN ON THE DRAWINGS AND CALL ANY DISCREPANCIES TO THE ATTENTION OF THE ARCHITECT. CAREFULLY STUDY ALL EQUIPMENT MANUFACTURER'S WIRING DIAGRAMS AND MAKE CONNECTIONS ACCORDINGLY.
- 1.14 CUTTING AND PATCHING A. AVOID CUTTING AND PATCHING OF NEW CONSTRUCTION BY USING SLEEVES, INSERTS, AND CHASES AS REQUIRED. OPENINGS FOR THE PASSAGE OF DUCTS AND CONDUITS THROUGH WALLS AND FLOORS, CHASES, FTC., IN NEW CONSTRUCTION WILL BE PROVIDED BY THE GENERAL CONTRACTOR. THIS CONTRACTOR SHALL GIVE THE GENERAL CONTRACTOR COMPLETE INFORMATION AS TO THE EXACT SIZE
- B. PROVIDE ALL CUTTING AND PATCHING REQUIRED FOR INSTALLATION OF ELECTRICAL WORK IN EXISTING CONSTRUCTION. STRUCTURAL MEMBERS SHALL NOT BE CUT UNLESS APPROVED BY ARCHITECT.
- 1.15 TESTS AND INSPECTIONS A. TEST ALL CIRCUITS EQUIPMENT AND SYSTEMS SPECIFIED FOR GROUNDS, SHORTS AND PROPER PHASING BEFORE ENERGIZING. TEST ALL DEVICES, EQUIPMENT AND LIGHT FIXTURES FOR PROPER

AND LOCATION OF SUCH OPENINGS AT THE PROPER TIME.

AND MAINTENANCE DATA TO THE ARCHITECT/ENGINEER.

- FUNCTIONING. CHECK LOAD BALANCE ON PANELS AND SERVICE. . CONDUCT ANY TESTS REQUIRED BY CODE, LISTING AGENCY, MANUFACTURER, INSPECTOR, BUILDING
- DEPARTMENT, FIRE DEPARTMENT OR ANY OTHER AUTHORITY HAVING JURISDICTION. C. THE CONTRACTOR SHALL CONDUCT TESTS OF THE SYSTEM IN THE PRESENCE OF THE ARCHITECT/ENGINEER OR HIS AGENT. THE CONTRACTOR SHALL TURN OVER SYSTEM WIRING DIAGRAMS
- 1.16 FIELD QUALITY CONTROL AND COORDINATION A. CONSULT PLANS, FIELD LAYOUTS AND SHOP DRAWINGS COVERING WORK OF THE VARIOUS OTHER
- TRADES AND PLAN LAYOUT OF ELECTRICAL WORK ACCORDINGLY. B. KEEP FULLY INFORMED OF THE PROGRESS OF THE GENERAL CONSTRUCTION. AND INSTALL WORK THAT
- IS TO BE CONCEALED WITHIN THE BUILDING CONSTRUCTION IN SUFFICIENT TIME TO SECURE PROPER LOCATION WITHOUT DELAY TO WORK OF OTHER TRADES. C. ALL CONDUIT AND OUTLET BOXES CONCEALED IN MASONRY CONSTRUCTION SHALL BE INSTALLED DURING WALL CONSTRUCTION. OUTLET BOXES SHALL LINE UP WITH EITHER TOP OR BOTTOM OF
- MASONRY COURSES. ATTEND THE ELECTRICAL WORK DURING PROGRESS OF BUILDING-IN TO PREVENT MISALIGNMENT. D. EXAMINE WORK OF OTHER TRADES WHERE THEIR WORK COMES IN CONTACT WITH OR IS COVERED BY ELECTRICAL WORK. DO NOT ATTACH TO, COVER UP, OR FINISH AGAINST ANY DEFECTIVE WORK OR INSTALL ELECTRICAL WORK IN A MANNER, WHICH WILL PREVENT PROPER INSTALLATION OF THE WORK
- E. TAKE ALL FIELD MEASUREMENTS NECESSARY AND ASSUME RESPONSIBILITY FOR THEIR ACCURACY. F. BEFORE INSTALLING ANY WORK, SEE THAT IT DOES NOT INTERFERE WITH ARCHITECTURAL, STRUCTURAL AND MECHANICAL WORK. REPORT ANY INTERFERENCE BETWEEN THIS WORK AND THAT OF ANY OTHER
- CONTRACTOR TO THE ARCHITECT AS SOON AS THEY ARE DISCOVERED. 1.17 EQUIPMENT INSTALLATION AND SUPPORT A. ALL EQUIPMENT AND MATERIALS SHALL BE INSTALLED IN STRICT ACCORDANCE WITH MANUFACTURER'S
- AND U.L. LABELING INSTRUCTIONS. B. ALL ELECTRICAL WORK SHALL BE INSTALLED SO AS TO BE READILY ACCESSIBLE FOR OPERATING, SERVICING, MAINTAINING AND REPAIRING.
- C. ELECTRICAL WORK SHALL BE SUPPORTED FROM BUILDING STRUCTURAL ELEMENTS ONLY, AND NOT FROM BUILDING SUB-SYSTEMS SUCH AS MECHANICAL DUCTS OR PIPES OR ROOF DECK.

SECTION 261000 - BASIC METHODS AND MATERIALS

A. CONDUITS SHALL BE:

- 1. RIGID OR INTERMEDIATE GRADE GALVANIZED STEEL CONDUIT IN WET LOCATIONS, CONCRETE, EXTERIOR MASONRY WALLS AND EXPOSED LOCATIONS SUBJECT TO DAMAGE.
- GALVANIZED STEEL ELECTRICAL METALLIC TUBING IN DRY LOCATIONS, INTERIOR PARTITIONS, AND CEILING SPACE. 3. FLEXIBLE METAL CONDUIT FOR FINAL CONNECTIONS TO TRANSFORMERS, MOTORS AND EQUIPMENT. LIQUIDTIGHT FLEXIBLE METAL CONDUIT IN WET AND DAMP LOCATIONS. 4. FLEXIBLE METALLIC TUBING FROM OUTLET BOX TO RECESSED LIGHT.
- 5. FIXTURES IN SUSPENDED CEILINGS SIX FOOT MAXIMUM LENGTH. B. RACEWAYS SHALL BE SIZED IN ACCORDANCE WITH N.E.C. TABLES OR AS NOTED ON DRAWINGS WHICHEVER IS LARGER. MINIMUM CONDUIT SIZE SHALL BE ONE HALF INCH. CONDUIT FITTINGS FOR RIGID CONDUIT SHALL BE THREADED CAST FERROUS ALLOY WITH GASKETS AND COVERS WHERE REQUIRED. CONDUIT FITTINGS FOR EMT SHALL BE SET SCREW OR COMPRESSION TYPE.
- LOCKNUTS SHALL BE OF THE BONDING TYPE THAT BITES INTO THE METAL OF THE BOX. BUSHINGS SHALL BE OF THE INSULATING TYPE. D. METAL CONDUITS SHALL BE COUPLED AND SECURED TO ALL BOXES IN A MANNER THAT PROVIDES AN ELECTRICALLY CONTINUOUS GROUND PATH FROM POINT OF SERVICE TO ALL OUTLETS.
- E. RIGID CONDUITS SHALL BE TERMINATED IN SHEET STEEL WITH DOUBLE LOCKNUTS AND AN INSULATING BUSHING. EMPTY CONDUITS STUBBED SHALL BE THREADED AND CAPPED.
- F. NYLON PULL LINE SHALL BE INSTALLED IN ALL EMPTY CONDUITS. G. CONDUIT ROUTING INDICATED ON THE DRAWINGS IS DIAGRAMMATIC ONLY AND IS NOT NECESSARILY THE INTENDED ACTUAL CONDUIT RUN. CONTRACTOR SHALL CHECK AND BE RESPONSIBLE FOR THE ACTUAL INSTALLATION WITH REGARD TO AVAILABLE SPACE AND SHALL COOPERATE WITH OTHER TRADES.
- H. ALL CONDUITS SHALL BE SIZED AND INSTALLED SO THAT THE REQUIRED NUMBER OF CONDUCTORS MAY BE PULLED IN WITHOUT INJURY OR STRAIN. CONDUIT RUNS SHALL BE LOCATED TO AVOID EQUIPMENT AND ACCESS TO EQUIPMENT OF OTHER
- J. CONDUITS IN FINISHED AREAS SHALL BE RUN CONCEALED IN WALLS AND ABOVE FINISHED CEILINGS. CONDUITS MAY BE RUN EXPOSED ONLY IN MECHANICAL ROOM. K. EXPOSED CONDUITS, WHERE PERMITTED SHALL BE RUN WITH ALL RUNS PARALLEL TO OR AT RIGHT
- ANGLES TO BUILDING STRUCTURAL MEMBERS. CONDUIT SUPPORTS SHALL BE ATTACHED TO BUILDING STRUCTURAL MEMBERS ONLY, AND NOT TO ANY BUILDING SUB-SYSTEMS SUCH AS SUSPENDED CEILINGS, MECHANICAL DUCTS OR PIPES. M. ENDS OF EACH CONDUIT SHALL BE CAPPED WITH AN APPROVED CAP OR DISC TO PREVENT THE
- ENTRANCE OF FOREIGN MATERIALS DURING CONSTRUCTION. N. CONDUITS THAT PASS THROUGH FIRE OR SMOKE RATED WALLS, CEILINGS, OR DECKS SHALL BE INSTALLED SO AS TO MAINTAIN THE FIRE OR SMOKE RATING.
- O. EXPANSION FITTINGS SHALL BE INSTALLED AT ALL POINTS WHERE CONDUITS CROSS BUILDING EXPANSION JOINTS.
- P. CONDUIT ENTRIES INTO BUILDING SHALL BE MADE WATERTIGHT. ALL UNDERGROUND JOINTS SHALL BE
- 1.2 600 VOLT FEEDER AND BRANCH CIRCUIT CONDUCTORS
- A. FEEDER AND BRANCH CIRCUIT CONDUCTORS SHALL BE U.L. LABELED, 98% CONDUCTIVITY COPPER STAMPED AT 2 FT. INTERVALS WITH CONDUCTOR SIZE AND INSULATION TYPE. FEEDER CIRCUIT CONDUCTORS SHALL BE TYPE 'THWN' OR 'XHHW', 600 VOLT, STRANDED COPPER.
- C. BRANCH CIRCUIT CONDUCTORS SHALL BE TYPE 'THHN/THWN', 600 VOLT, COPPER. WIRE SIZES #8 AWG AND LARGER SHALL BE STRANDED. MINIMUM WIRE SIZE SHALL BE #12 AWG OR LARGER AS REQUIRED TO LIMIT VOLTAGE DROP AT FURTHEST OUTLET TO 3%.
- D. COLOR CODE BRANCH CIRCUIT AND FEEDER CONDUCTORS AS FOLLOWS

- E. COLOR CODING SHALL BE CONTINUOUS ON INSULATION FOR #8 AWG OR SMALLER CONDUCTORS AND CONTINUOUS OR MARKED WITH COLORED TAPE AT ALL CONNECTIONS FOR CONDUCTORS LARGER THAN
- WIRE AND CABLE SHALL BE PULLED INTO CONDUIT USING IDEAL INDUSTRIES "YELLOW 77" OR EQUAL. MECHANICAL MEANS MAY BE USED TO PULL #4 AWG AND LARGER CONDUCTORS. SIX INCHES OF FREE WIRE SHALL BE PROVIDED AT ALL OUTLETS FOR WIRING DEVICE CONNECTION. G. ALL MECHANICAL WIRE AND CABLE TERMINATIONS SHALL BE TIGHTENED WITH TORQUE WRENCH OR
- SCREWDRIVER TO MANUFACTURER'S RECOMMENDED TORQUE VALUES. H. JOINTS IN #10 AWG AND SMALLER WIRE SHALL BE MADE WITH 3M "SCOTCH LOCKS OR EQUIVALENT
- INSULATED CONNECTORS. JOINTS IN #8 AWG AND LARGER WIRE SHALL BE MADE WITH PRESSURE TYPE MECHANICAL CONNECTOR'S AND INSULATED WITH ELECTRICAL TAPE OR HEAT SHRINK INSULATION TO 150% OF THE
- INSULATING VALUE OF THE CONDUCTOR INSULATION. J. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE TO CONNECT ALL SINGLE-PHASE, (120 AND 208) VOLT LOADS TO THE 3-PHASE BUS SYSTEM IN ORDER TO BALANCE THE LOADING ON THE PHASE
- K. PROVIDE DEDICATED NEUTRAL PER CODE FOR 120 CIRCUITS.
- 1.3 METAL CLAD CABLE (MC) SHALL BE CONSTRUCTED IN STRICT ACCORDANCE WITH UNDERWRITERS LABORATORIES, INC. STANDARD FOR METAL CLAD CABLES. THE CABLE SHALL BEAR THE U.L. LABEL AND THE MANUFACTURER'S "E" NUMBER. IN ADDITION, METAL CLAD CABLE MUST MEET THE
- REQUIREMENTS OF THE LATEST NEC, NFPA 70, ARTICLE 334, METAL CLAD CABLE. A. DESCRIPTION: CLAD CABLE, CONTINUOUS SHEATH (INTERLOCKED STYLE IS NOT ACCEPTABLE BECAUSE
- THE OUTER ARMOR IS NOT AN APPROVED GROUNDING PATH). B. FEEDER CIRCUIT CONDUCTORS SHALL BE TYPE 'THWN' OR 'XHHW', 600 VOLT, STRANDED COPPER.
- INSULATION VOLTAGE RATING: 600 VOLTS. INSULATION TEMPERATURE RATING: 90 DEGREES C (DRY).
- INSULATION MATERIAL: THERMOPLASTIC (THHN) OR EQUIVALENT. ARMOR MATERIAL: GALVANIZED STEEL OR ALUMINUM OF THE CLASS A TYPE, CONTINUOUS SHEATH.
- GROUNDING: A FULL-SIZE INSULATED GREEN CONDUCTOR MUST BE PROVIDED. 4. USE ON U.L. "MC" CONNECTORS LISTED FOR SMOOTH OR CORRUGATED CONTINUOUS SHEATH (ROMEX AND BX CONNECTORS ARE NOT ACCEPTABLE).
- 5. PROTECT EXPOSED CABLE FROM DAMAGE. 6. MC CABLE MAY BE USED IN LIEU OF CONDUIT AND WIRE SYSTEM FOR 20 AMP. 120 VOLT OR 277 VOLT CIRCUITING WHERE CONCEALED IN FINISHED AREAS, ABOVE CEILINGS OR UNFINISHED UTILITY SPACES EXCEPT FOR EXAM ROOMS & INJECTION ROOM.
- A. OUTLET BOXES SHALL BE GALVANIZED STEEL CONSTRUCTION OF PROPER SIZE MEETING NEC
- REQUIREMENTS AND SUITABLE FOR THE LOCATION. B. PULL AND JUNCTION BOXES SHALL BE INSTALLED AT ALL POINTS REQUIRED WHETHER INDICATED ON DRAWINGS OR NOT. MINIMUM DIMENSIONS SHALL NOT BE LESS THAN NEC REQUIREMENTS. PULL AND JUNCTION BOXES SHALL BE CONSTRUCTED OF CODE GAUGE GALVANIZED STEEL AND SHALL BE
- PROVIDED WITH FLAT PLAIN COVERS C. ALL CONDUIT BOXES SHALL BE RIGIDLY MOUNTED TO THE BUILDING STRUCTURE INDEPENDENT OF
- D. DOOR SWING DIRECTIONS SHALL BE VERIFIED BEFORE INSTALLING BOXES FOR LIGHT SWITCHES. E. BOXES SHALL NOT BE INSTALLED BACK-TO-BACK IN WALLS. OPEN KNOCKOUTS OR HOLES IN BOXES SHALL BE PLUGGED WITH SUITABLE BLANKING DEVICES.
- A. WIRING DEVICES SHALL BE AS SPECIFIED IN THE SYMBOL LEGEND ON THE DRAWINGS. ALL WIRING
- DEVICES SHALL BE THE PRODUCT OF A SINGLE MANUFACTURER EXCEPT WHERE SPECIFICALLY STATED OTHERWISE. COLORS SHALL BE AS SELECTED BY ARCHITECT. SWITCHES AND RECEPTACLES SHALL BE MANUFACTURED BY HUBBELL, PASS & SEYMOUR OR LEVITON
- COVER PLATES SHALL BE HIGH IMPACT SMOOTH THERMOPLASTIC. COLOR OF COVER PLATE SHALL MATCH DEVICE, AND STAINLESS OR GALVANIZED STEEL IN UNFINISHED SPACES. FINAL COLOR BY ARCHITECT.
- D. EACH RECEPTACLE SHALL BE TESTED FOR PROPER CONNECTION, POLARITY AND GROUNDING, WITH PLUG-IN CIRCUIT TESTER. E. THE INSIDE COVER OF ALL RECEPTACLE AND LIGHT SWITCH PLATES SHALL BE PERMANENTLY MARKED
- TO INDICATE THE PANEL AND CIRCUIT NUMBER OF THE OUTLET OR LIGHT CIRCUIT. SECTION 264000 - SERVICE AND DISTRIBUTION

1.1 ELECTRIC AND TELEPHONE SERVICES

- A. THE ELECTRICAL SERVICE IS NEW, E.C. SHALL PROVIDE & INSTALL NEW EQUIPMENT AS NOTED. COORDINATE WITH FOR INCOMING SERVICES WITH LOCAL PROVIDER.
- B. EXTEND NEW TELEPHONE/CATV SERVICE AS REQUIRED. COORDINATE WITH OWNER & LOCAL SERVICE
- 1.2 BRANCH CIRCUIT PANELBOARDS
- A. BRANCH CIRCUIT PANELBOARDS ARE DEAD FRONT CIRCUIT BREAKER TYPE, WITH VOLTAGE, AMPERAGE, MAIN CIRCUIT BREAKER OR MAIN LUGS ONLY. AS NOTED ON DRAWINGS. ALL PANELBOARDS SHALL BE PROVIDED WITH SOLID NEUTRALS AN A GROOUNDING BUS WITH LUGS.

B. CIRCUIT BREAKERS SHALL BE THERMAL MAGNETIC, MOLDED CASE, BOLT-ON TYPE WITH QUANTITY,

- AMPERAGE, AND POLES AS NOTED ON THE PANEL SCHEDULES. SHORT CIRCUIT INTERRUPTING CAPACITY SHALL BE 25,000 AMPERES SYMMETRICAL MINIMUM. TWO AND THREE POLE BREAKERS SHALL BE COMMON TRIP. AUTOMATIC TRIPPING SHALL BE INDICATED BY THE OPERATING HANDLE ASSUMING A MID-POSITION BETWEEN ON AND OFF.
- C . PANELBOARDS ENCLOSURES SHALL BE GENERAL PURPOSE, SURFACE OF FLUSH MOUNTED AS NOTED ON PLANS WITH GALVANIZED BACKBOX AND PAINTED FRONT WITH LOCKABLE DOOR. A GLAZED DIRECTORY FRAME SHALL BE PROVIDED INSIDE DOOR AND SHALL BE OF SUFFICIENT SIZE TO GIVE DESCRIPTION OF EACH CIRCUIT, ALL SECTIONS OF MILTI-SECTION PANELS SHALL BE SAME SIZE.
- D. TWO KEYS SHALL BE PROVIDED WITH EACH PANEL AND ALL PANELS SHALL SCREW FASTENED
- E. HANDLE LOCK-ON DEVICES SHALL BE PROVIDED ON BRANCH CIRCUIT BREAKERS FOR EMERGENCY, EXIT, SECURITY AND NIGHT LIGHTS.
- F. BRANCH CIRCUIT PANELBOARDS SHALL BE SQUARE D, SEIMENS OR CUTLER HAMMER. 1.3 DISCONNECT SWITCHES
- A. ALL MOTOR DRIVEN EQUIPMENT SHALL BE PROVIDED WITH THE PROPERLY SIZED AND RATED DISCONNECT SWITCHES TO COMPLY WITH NEC REQUIREMENTS WHETHER INDICATED ON DRAWINGS OR
- B. DISCONNECT SWITCHES FOR ALL THREE PHASE MOTORS AND SINGLE PHASE MOTORS OVER 1/2 HORSEPOWER SHALL BE GENERAL DUTY, SINGLE THROW SAFETY SWITCHES. SWITCHES SHALL BE FUSIBLE OR NON-FUSIBLE, AS INDICATED ON DRAWINGS WITH AMPERAGE, POLES AND NEUTRAL, AS SHOWN ON DRAWINGS SWITCHES SHALL BE PROVIDED WITH QUICK-MAKE, QUICK-BREAK OPERATING MECHANISM, FULL COVER INTERLOCK AND INDICATOR HANDLE, PROVISIONS FOR PADLOCKING OFF, UL CLASS R REJECTION TYPE FUSE CLIPS, NEMA 1 ENCLOSURE FOR DRY LOCATIONS AND NEMA 3R
- C . DISCONNECT SWITCHES SHALL BE SQUARE D, SEIMENS OR CUTLER HAMMER.

1.4 DRYTYPE TRAMSFORMER

- A. TRANSFORMERS SHALL BE GENERAL PURPOSE, VENTILATED, DRY TYPE, WITH 480 VOLT, 3 PHASE, 3 WIRE DELTA PRIMARY, 120/208 VOLT, 3 PHASE, 4 WIRE, WYE SECONDARY, AND KVA AS NOTED ON THE DRAWINGS. TRANSFORMERS SHALL BE DESIGNED AND MANUFACTURED IN ACCORDANCE WITH ANSI C89.2 FOR KVA RATINGS OF 500 KVA AND BELOW.
- B. INSULATION SYSTEM SHALL BE CLASS F (115 DEGRESS C. TEMPERATURE RISE) FOR 15 KVA AND BELOW, AND CLASS H (150 DEGRESS C. TEMPERATURE RISE) FOR 30 KVA AND ABOVE. COILS SHALL BE WOUND WITH COPPER OR ALUMINUM. THE ENCLOSURE TEMPERATURE SHALL NOT EXCEEED 35 DEGREES C. ABOVE AMBIENT.
- C. SOUND LEVELS SHALL NOT EXCEED NEMA STANDARDS.

E. TRANFORMERS SHALL BE SQUARE D, SIEMENS OR CUTLER HAMMER.

BELOW, AND SIX 2.5% FULL CAPACITY TAPS, 2 ABOVE AND 4 BELOW NOMINAL VOLTAGE, SHALL BE PROVIDED FOR 30 KVA AND ABOVE.

D. TWO 5% FULL CAPACITY TAPS BELOW NOMINAL VOLTAGE SHALL BE PROVIDED FOR 15 KVA AND

1.5 EQUIPMENT IDENTIFICATION

GROUNDING CONNECTORS.

- A. PROVIDE NEW NAMEPLATES WITH BLACK FACE AND WHITE LETTERS (MINIMUM HEIGHT 1/8" HIGH) ON ALL ELECTRICAL DISTRIBUTION AND CONTROL EQUIPMENT. LETTERING SHALL BE AS FOLLOWS: LINE 1 - NAME OF EQUIPMENT AND IDENTIFICATION NUMBER USED ON DRAWINGS; LINE 2 - AMPERAGE AND VOLTAGE RATING; LINE 3 - IDENTIFICATION OF UPSTREAM OVERCURRENT PROTECTION DEVICE.
- A. THIS CONTRACTOR SHALL VERIFY THAT THERE IS A COMPLETE SYSTEM OF GROUNDING FOR ALL EQUIPMENT. A GOOD MECHANICAL AND ELECTRICAL CONNECTION SHALL BE MADE WITH APPROVED
- B. ELECTRICAL SYSTEM AND EQUIPMENT GROUNDS SHALL COMPLY WITH ALL LOCAL, STATE AND N.E.C. CODES AND REGULATIONS. BONDING JUMPERS SHALL BE INSTALLED AT ALL LOCATIONS REQUIRED BY
- C. PROVIDE GROUNDING AS REQUIRED FOR ALL COMMUNICATION SYSTEM EQUIPMENT.

SECTION 265000 - LIGHTING

1.1 LIGHT FIXTURES A. ALL LIGHT FIXTURES SHALL BE SECURELY SUPPORTED FROM BUILDING STRUCTURAL MEMBERS WITH APPROVED HANGERS AS REQUIRED. RECESSED GRID TROFFERS SHALL BE FASTENED TO CEILING T-BARS WITH APPROVED CLIPS AND T-BARS SHALL BE PROVIDED WITH WIRE HANGERS AT FOUR

CORNERS OF FIXTURES. COORDINATE THIS REQUIREMENT WITH CEILING CONTRACTOR.

B. COORDINATE LIGHTING FIXTURE AIA REQUIREMENTS TYPES WITH ARCHITECT BEFORE ORDERING

A. LED, 3500K, 86 CRI, WITH DRIVER & WATTAGES AS NOTED ON PLAN.

- 1.3 INSTALLATION A. FURNISH AND INSTALL ALL NECESSARY HANGERS, SUPPORTS, FRAMING, FITTINGS, ETC., TO SUPPORT FIXTURES AND FIXTURE OUTLETS. ALL FIXTURE SUPPORTS SHALL BE SECURELY ANCHORED TO THE CEILING AND/OR BUILDING CONSTRUCTION AND SHALL BE CAPABLE OF SUPPORTING THE FIXTURE IN
- QUESTION PLUS 100% ADDITIONAL WEIGHT. B. WHERE INSTALLING CHAIN MOUNTED FIXTURES, THE CONTRACTOR SHALL PROVIDE ADDITIONAL
- SUPPORTING CHANNELS AS REQUIRED. C. PROVIDE THERMAL PROTECTION ON RECESSED INCANDESCENT FIXTURES WHERE REQUIRED.
- A. EGRESS EMERGENCY LIGHTING 90 MINUTES BATTERY BACK-UP UNIT.

SECTION 267000 - COMMUNICATION SYSTEMS 1.1 TELEPHONE, DATA & CATV CABLING SYSTEMS

A. PROVIDE ALL CONDUIT, BOXES, AS REQUIRED FOR THE INSTALLATION OF TELEPHONE/DATA CABLING SYSTEMS BY THIS CONTRACTOR. CABLING, JACKS, WALL PLATES, etc. BY THIS CONTRACTOR. E.C. SHALL COORDINATE WITH OWNER & SYSTEM PROVIDER.

FIRE ALARM SYSTEM

FURNISH AND INSTALL NEW FIRE ALARM DEVICES AS NOTED AND CONNECT TO SYSTEM. PROVIDE ALL COMPONENTS AS REQUIRED FOR A COMPLETE WORKING SYSTEM.

- PROVIDE ALL HARDWARE, SOFTWARE, RACEWAYS AND INTERCONNECTING WIRING REQUIRED FOR EXTENSION OF EXISTING SYSTEM.
- INCLUDE ALL HARDWARE, SOFTWARE, RACEWAYS AND INTERCONNECTING WIRING REQUIRED.
- SMOKE SENSORS SHALL REPORT DIRTY TROUBLE CONDITIONS AUTOMATICALLY

5) HORN/STROBE AND VISUAL DEVICES.

4) EACH DEVICE ADDRESS SHALL BE SET ELECTRONICALLY.

CLEVELAND

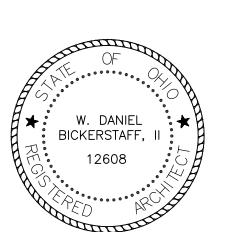
Project Team:

Architect

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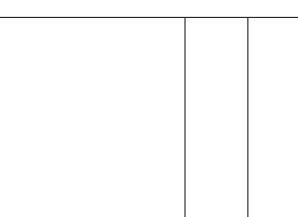


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WDB, II 08.01.2022

GLENVILLE HIGH SCHOOL

PERMIT ISSUANCE

Interior Alteration

New MetroHealth

650 East 113th Street Cleveland, OH 44108



MEDICAL CENTER

Health Care Expansion Program

2500 METROHEALTH DR. CLEVELAND, OH 44109

Hollie Dellisanti EDUCATOR, Exec. Dir.

Checked by: WDB, II **ELECTRICAL SPECIFICATIONS**

08.19.2022