WSU ALL GENDER RESTROOMS

259 MACK AVE
DETROIT, MI 48201

ARCHITECT
STUCKY VITALE ARCHITECTS
27172 WOODWARD AVENUE
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(248) 546-6700

PROJECT INFORMATION

WSU PROJECT #: 603-350831

PROJECT DESCRIPTION
REWORK OF EXISTING WOMEN'S RESTROOM TO ACCOMIDATE (3) NEW ALL GENDER RESTROOMS.

APPLICABLE CODES
2015 MICHIGAN REHABILITATION CODE FOR EXISTING BUILDINGS (MRC)
2015 MICHIGAN MECHANICAL CODE (MMC)
2018 MICHIGAN PLUMBING CODE (MPC)
2015 MICHIGAN ENERGY CODE (MEC)
2013 ANSI/ASHRA/IES 90.1
2017 NATIONAL ELECTRICAL CODE (NEC)
2015 NFPA 101 LIFE SAFETY CODE

BARRIER FREE REQUIREMENTS:
2010 ADA STANDARDS FOR ACCESSIBLE DESIGN (DOJ)
MBC-2015, CHAPTER 11
ICC / ANSI 117.1 - 2009, EXCEPT SECTION 611 & 707

CHAPTER 3 - USE AND OCCUPANCY CLASSIFICATION
BUSINESS: B
UNIVERSITY/COLLEGE

SHEET DESIGNATION

DRAWINGS ARE NUMBERED ACCORDING TO THE FOLLOWING CONVENTIONS:

A001

- DRAWING SEQUENCE NUMBER
- DRAWING TYPE DESIGNATOR
- DISCIPLINE DESIGNATOR

DISCIPLINE DESIGNATOR		DRAWING TYPE DESIGNATOR	
G	GENERAL	0	GENERAL, LEGENDS
AD	ARCHITECTURAL DEMOLITION	1	PLANS
A	ARCHITECTURAL	2	REFLECTED CEILING PLANS
M	MECHANICAL	9	DOOR AND WINDOW SCHEDULES AND DETAILS
P	PLUMBING		
E	ELECTRICAL		
FP	FIRE PROTECTION		

SHEET INDEX - GENERAL			
DWG #	DRAWING NAME	ISSUED FOR	DATE
G001	COVER SHEET, GENERAL INFORMATION, DRAWING INDEX	BFS Submission	05.25.2023
G002	STANDARD MOUNTING HEIGHTS, WALL SCHEDULE, AND DETAILS	BFS Submission	05.25.2023
G003	OVERALL BASEMENT LOCATION PLAN	BFS Submission	05.25.2023
DRAWINGS: 3			

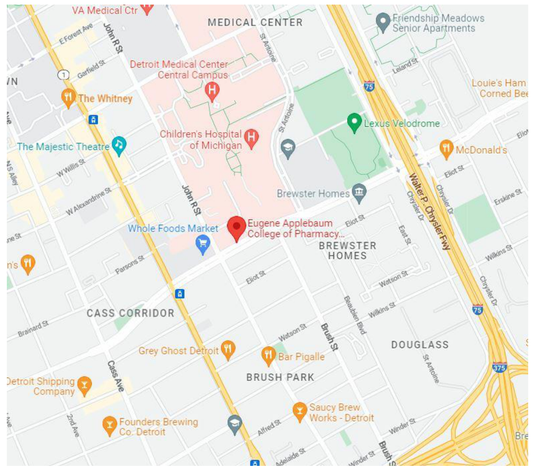
SHEET INDEX - ARCHITECTURAL DEMOLITION			
DWG #	DRAWING NAME	ISSUED FOR	DATE
AD110	BASEMENT DEMOLITION AND CONSTRUCTION PLAN	BFS Submission	05.25.2023
DRAWINGS: 1			

SHEET INDEX - ARCHITECTURAL			
DWG #	DRAWING NAME	ISSUED FOR	DATE
A110	BASEMENT FLOOR PLAN AND RCP	BFS Submission	05.25.2023
A901	DOOR SCHEDULE, TYPES, AND DETAILS	BFS Submission	05.25.2023
PS001	PROJECT SPECIFICATION	BFS Submission	05.25.2023
PS002	PROJECT SPECIFICATION	BFS Submission	05.25.2023
DRAWINGS: 4			

SHEET INDEX - MECHANICAL			
DWG #	DRAWING NAME	ISSUED FOR	DATE
M000	MECHANICAL SYMBOLS LIST, INDEX AND NOTES	BFS Submission	05.25.2023
M001	MECHANICAL SPECIFICATIONS	BFS Submission	05.25.2023
M100	BASEMENT FLOOR PLAN - MECHANICAL	BFS Submission	05.25.2023
M200	MECHANICAL DETAILS	BFS Submission	05.25.2023
M300	MECHANICAL DETAILS	BFS Submission	05.25.2023
MD100	BASEMENT DEMOLITION PLAN - MECHANICAL	BFS Submission	05.25.2023
DRAWINGS: 6			

SHEET INDEX - ELECTRICAL			
DWG #	DRAWING NAME	ISSUED FOR	DATE
E000	ELECTRICAL LEGEND, SHEET INDEX, AND SPECIFICATIONS	BFS Submission	05.25.2023
E200	OVERALL FLOOR PLAN - ELECTRICAL	BFS Submission	05.25.2023
E201	ENLARGED FLOOR PLANS - ELECTRICAL	BFS Submission	05.25.2023
ED100	ENLARGED DEMOLITION FLOOR PLAN - ELECTRICAL	BFS Submission	05.25.2023
DRAWINGS: 4			

NOTE:
THESE CONSTRUCTION DRAWINGS WERE PREPARED FOR COMPLIANCE WITH THE MICHIGAN CONSTRUCTION CODES IN EFFECT AT THE TIME OF PERMIT SUBMITTAL. ALL ENGINEERS, CONTRACTORS AND SUPPLIERS INVOLVED WITH THIS PROJECT SHALL COMPLY WITH THE SAME CODES, ISSUED AND APPROVED CODE MODIFICATIONS AND/OR CITY CODE AUTHORITY CONSTRUCTION BOARDS OF APPEALS RULINGS AND WHENEVER REQUIRED SHALL PROVIDE SHOP DRAWINGS AND SUBMITTALS CLEARLY DESCRIBING COMPLIANCE TO THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE FOR REVIEW AND APPROVAL.



1 / G001 LOCATION MAP
1" = 1'-0"

SYMBOL LEGEND

- 1 / A101 — ENLARGED CALLOUT TAG
- 1 / A101 — INTERIOR ELEVATION TAG
- 1 / A101 — EXTERIOR ELEVATION TAG
- X / Sheet — Name, SCALE: X/X" = 1'-0" — DETAIL NUMBER, VIEW TITLE, VIEW SCALE, SHEET NUMBER
- ROOM NAME / ROOM NAME / 101 — ROOM TAG
- FLOOR NAME ELEV. 100'-0" — LEVEL REFERENCE
- 0, 0 — DATUM WORKPOINT
- COLUMN GRIDS
  - 1 — NUMBERS DESIGNATE VERTICAL COLUMN LINES
  - A — LETTERS DESIGNATE HORIZONTAL COLUMN LINES
  - A — SQUARE DESIGNATE EXISTING COLUMN GRID
- DOOR TAGS
  - 101 — NEW DOOR TAG DESIGNATION
  - 101 — EXISTING DOOR TAG DESIGNATION (ONLY IF EXISTING DOOR TO BE MODIFIED)
- 2C3-Ys — PARTITION TAG
- XX — KEYNOTE TAG
- XX — EQUIPMENT TAG
- X / A-XXX — SHEET REF FOR DRAWING CONTINUATION
- ZONE B / ZONE A — MATCH LINE

ABBREVIATION LEGEND

&	AND	℄ or ℄	CENTERLINE
L	ANGLE	Ø	DIAMETER
@	AT	±	PLUS OR MIN
ACCESS.	ACCESSIBILITY	N	NORTH
ACOUS.	ACOUSTICAL	NIC	NOT IN CONTRACT
ACT	ACOUSTICAL CEILING TILE	NOM.	NOMINAL
A.D.	AREA DRAIN	NTS	NOT TO SCALE
ADJ	ADJUSTABLE	O/C	ON CENTER
A.F.F.	ABOVE FINISH FLOOR	OFC	OFFICE
AL.	ALUMINUM	OPNG	OPENING
ANOD.	ANODIZED	OPP	OPPOSITE
ARCH.	ARCHITECTURAL or ARCHITECT	OVFD	OVERFLOW DRAIN
ASPH.	ASPHALT	PL	PLATE
BD.	BOARD	PLAM	PLASTIC LAMINATE
BF	BARRIER FREE	PLAS.	PLASTER
BLDG.	BUILDING	PNT	PAINT
BLK'G.	BLOCKING	PLYWD	PLYWOOD
BOT.	BOTTOM	PREFAB	PREFABRICATED
BR	BRICK	PFN	PREFINISH or PREFINISHED
CAB.	CABINET	PROJ	PROJECTION
CEM.	CEMENT	PT	POINT
C.J.	CONTROL JOINT	R.	RISER
CLG	CEILING	RCP	REFLECTED CEILING PLAN
C.F.M.F.	COLD FORMED METAL FRAMING	R.C.	ROOF CONDUCTOR
C.O.	CLEAN OUT	RD	ROOF DRAIN
CLO.	CLOSET	REINF	REINFORCING
CLR.	CLEAR	REQ'D	REQUIRED
COL.	COLUMN	RESIL	RESILIENT
CONC.	CONCRETE	RFG	ROOFING
C.G.	CORNER GUARD	RM	ROOM
CONST.	CONSTRUCTION	R.S.	ROOF SUMP
CONT.	CONTINUOUS	SAN	SANITARY
COR.	CORRIDOR	SC	SOLID CORE
CORR.	CORRUGATED	SCHED	SCHEDULE
CPT	CARPET	SHT	SHEET
C.T.	CERAMIC TILE	SIM	SIMILAR
CTSK.	COUNTER SUNK	SPEC	SPECIFICATIONS
CW	CURTAIN WALL	SQ	SQUARE
D.F.	DRINKING FOUNTAIN	ST.STL.	STAINLESS STEEL
DET.	DETAIL	SS	SOLID SURFACE
DIA.	DIAMETER	ST	STONE
DIM.	DIMENSION	STD	STANDARD
DN.	DOWN	STL	STEEL
D.O.	DOOR OPENING	STN	STAIN
DR.	DOOR	STOR	STORAGE
D.S.	DOWN SPOUT	STRUCT	STRUCTURAL or STRUCTURE
DWG.	DRAWING	SUSP	SUSPENDED
DWR.	DRAWER	SYM	SYMMETRICAL
EA	EACH	T.	TREAD
E.J.	EXPANSION JOINT	T&B	TOP AND BOTTOM
EL	ELEVATION	TERR.	TERRAZZO
ELEC.	ELECTRICAL	T.O.C.	TOP OF CURB
ELEV.	ELEVATOR	T&G	TONGUE AND GROOVE
E.O.S./EOS	EDGE OF SLAB	THK	THICK
E.O.D./EOD	EDGE OF DECK	THRES.	THRESHOLD
EP	ELECTRICAL PANEL	T.O.P.	TOP OF PARAPET
EPX	EPOXY	TA	TOILET ACCESSORY
EQ.	EQUAL	TV	TELEVISION
EQPM	EQUIPMENT	T.O.W.	TOP OF WALL
E.W.	EACH WAY	TOS / T.O.S.	TOP OF STEEL
EXIST. / EX	EXISTING	TYP.	TYPICAL
EXP.	EXPOSED	U/C	UNDERCUT
EXT.	EXTERIOR	U.N.O.	UNLESS NOTED OTHERWISE
FA	FIRE ALARM	U.SK.	UTILITY SINK
FD	FLOOR DRAIN	V.B.	VAPOR BARRIER
FON	FOUNDATION	VCT	VINYL COMPOSITION TILE
FE	FIRE EXTINGUISHER	VERT.	VERTICAL
FEC	FIRE EXTINGUISHER CABINET	VEST	VESTIBULE
FHC	FIRE HOSE CABINET	VF	VINYL FLOORING
FIN	FINISH	V.I.F.	VERIFY IN FIELD
FL	FLOOR	W	WIDTH
F.O.	FACE OF	W/	WITH
F.O.S.	FACE OF STUD	WB	WALL BASE
FPRF	FIREPROOF	W.C.	WATER CLOSET
FR	FRAME	WC	WALLCOVERING
FRP	FIBERGLASS REINFORCED PANEL	WD	WOOD
FRT	FIRE RETARDANT TREATED	W/O	WITHOUT
F.S.	FULL SIZE	WR	WATER RESISTANT
FT.	FOOT or FEET	WSCT.	WAINSCOT
FTG.	FOOTING	WT.	WEIGHT
FUR	FURRING	W.W.F.	WELDED WIRE FABRIC
GA.	GAUGE		
GALV.	GALVANIZED		
G.B.	GRAB BAR		
GFRC.	GLASS FIBER REINFORCED CONCRETE		
GL.	GLASS		
GYP.	GYPSUM		
H.B.	HOSE BIBB		
H.C.	HOLLOW CORE		
HDWD	HARDWOOD		
HDWE	HARDWARE		
HM	HOLLOW METAL		
HORIZ.	HORIZONTAL		
HR	HOUR		
HGT	HEIGHT		
INSUL	INSULATION		
IMP	INSULATED METAL PANEL		
IMWP	INSULATED METAL WALL PANEL		
INT	INTERIOR		
J.C.	JANITOR'S CLOSET		
JT.	JOINT		
KIT.	KITCHEN		
LAV	LAVATORY		
LG	LENGTH		
L.L.V.	LONG LEG VERTICAL		
LT	LIGHT		
LVT	LUXURY VINYL TILE		
MAX	MAXIMUM		
MECH	MECHANICAL		
MTL	METAL		
MFR.	MANUFACTURER		
MIN.	MINIMUM		
MISC.	MISCELLANEOUS		
M.O.	MASONRY OPENING		

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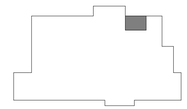
Key Plan:



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Drawn by :
JML

Checked by :
ARR

Sheet Title :
COVER SHEET, GENERAL INFORMATION, DRAWING INDEX

Project No. :
2023.053

Sheet No. :
G001

MATERIAL LEGEND

HATCH PATTERNS

- EARTH
- SAND
- GRAVEL FILL
- CONCRETE
- BRICK
- MASONRY
- GROUT
- MORTAR
- STEEL
- STAINLESS STEEL
- RIGID INSULATION
- GYPSUM BOARD
- CEMENT BOARD

TYPICAL DETAIL SYMBOLS

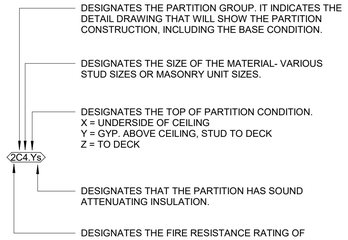
- STEEL MEMBER
- SPRAY ON FIREPROOFING
- HARDWOOD
- PLYWOOD
- CONTINUOUS BLOCKING
- SHIM
- BATT INSULATION
- SEALANT WITH BACKER ROD

PARTITION PLAN DESIGNATIONS

- SMOKE SEPARATION
- 1 HOUR FIRE SEPARATION
- 2 HOUR FIRE SEPARATION
- 3 HOUR FIRE SEPARATION
- METAL STUD PARTITION
- WOOD STUD PARTITION
- CMU PARTITION
- CONCRETE WALL

PARTITION LEGEND

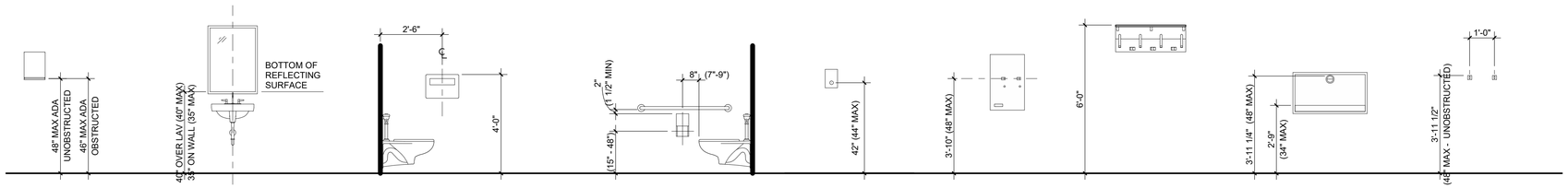
THE PARTITION TAG

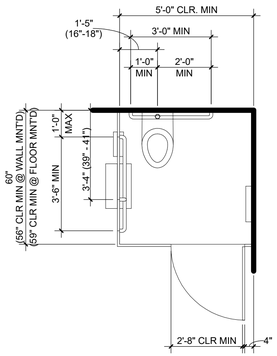


PARTITION GROUPS (REMOVE TYPE FROM NOTE WHEN NOTE USED)

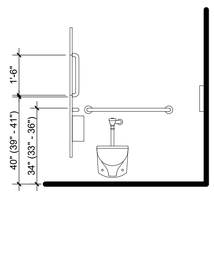
C = ONE LAYER OF GYPSUM BOARD ON BOTH SIDES OF METAL STUDS.

TYPICAL MOUNTING LEGEND

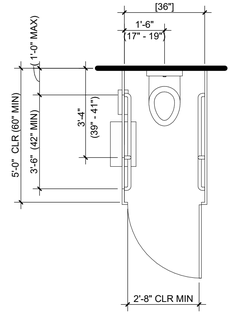




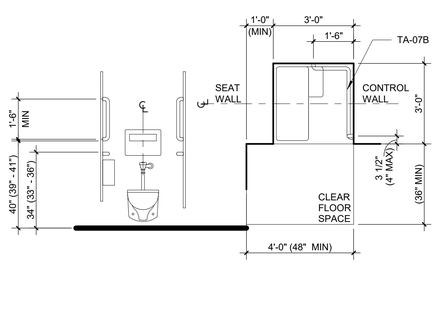
ACCESSIBLE TOILET STALL PLAN
DIMENSIONS IN (PARENTHESIS) INDICATE ADA 2010 AND ANSI 117.1/2003 REQUIREMENTS UNLESS NOTED OTHERWISE



ACCESSIBLE TOILET STALL BACK WALL
DIMENSIONS IN (PARENTHESIS) INDICATE ADA 2010 AND ANSI 117.1/2003 REQUIREMENTS UNLESS NOTED OTHERWISE

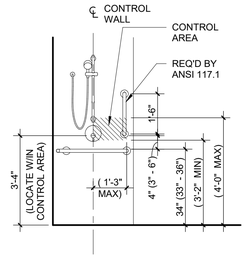


AMBULATORY TOILET STALL PLAN
DIMENSIONS IN (PARENTHESIS) INDICATE ADA 2010 AND ANSI 117.1/2003 REQUIREMENTS UNLESS NOTED OTHERWISE. DIMENSIONS IN [BRACKETS] INDICATE ANSI 117.1/2003 REQUIREMENT- MORE STRINGENT THAN ADA

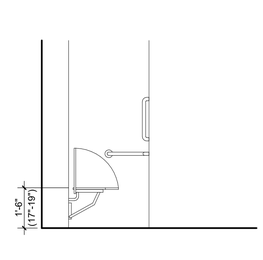


AMBULATORY TOILET STALL BACK WALL
DIMENSIONS IN (PARENTHESIS) INDICATE ADA 2010 AND ANSI 117.1/2003 REQUIREMENTS UNLESS NOTED OTHERWISE

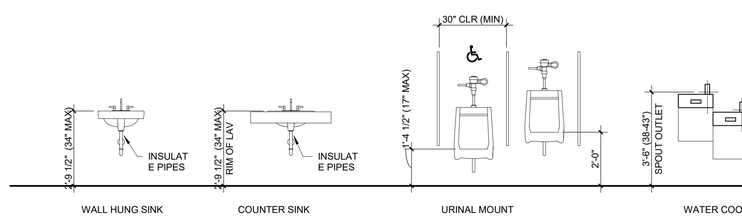
SHOWER PLAN
DIMENSIONS IN (PARENTHESIS) INDICATE ADA 2010 AND ANSI 117.1/2003 REQUIREMENTS UNLESS NOTED OTHERWISE



SHOWER CONTROL WALL
DIMENSIONS IN (PARENTHESIS) INDICATE ADA 2010 AND ANSI 117.1/2003 REQUIREMENTS UNLESS NOTED OTHERWISE

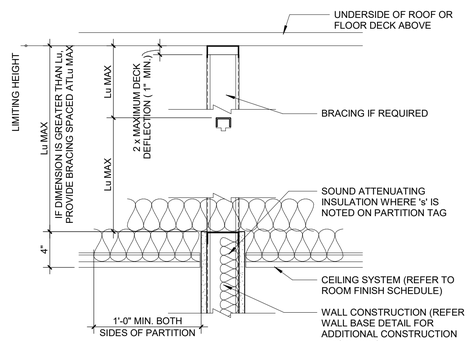


SHOWER SEAT MOUNT ELEVATION
DIMENSIONS IN (PARENTHESIS) INDICATE ADA 2010 AND ANSI 117.1/2003 REQUIREMENTS UNLESS NOTED OTHERWISE

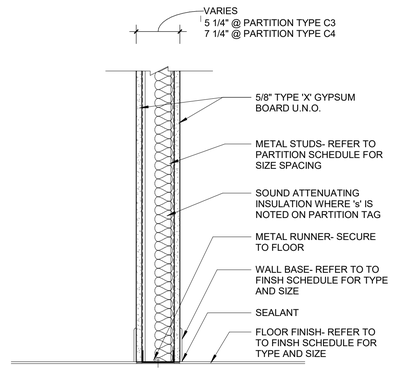


INTERIOR PARTITION SCHEDULE

	TYPE	DESCRIPTION	WIDTH NOMINAL	WIDTH ACTUAL	DET'L	STUD DEPTH	STUD THICK	STUD SPACING	UL DESIGN 1 HR	UL DESIGN 2 HR	UL DESIGN OTH'R	STC* W/O	STC* W/	REMARKS
	C3	1 GYP, BOTH SIDES ON 4" METAL STUDS	0' - 5 1/4"	5 1/4"	1/G003 2/G003	4"	30 MIL	16" O/C	U419	--	--	42	44	
	C4	1 GYP, BOTH SIDES ON 6" METAL STUDS	0' - 7 1/4"	7 1/4"	1/G003 2/G003	6"	30 MIL	16" O/C	U419	--	--	42	44	



2 G002 Partition Type C Wall Head Detail (.Y)
1 1/2" = 1'-0"



1 G002 Partition Type C Wall Base Detail
1 1/2" = 1'-0"

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Key Plan:

Issued for

BFS Submission 05.25.2023

Drawn by :
JML

Checked by :
ARR

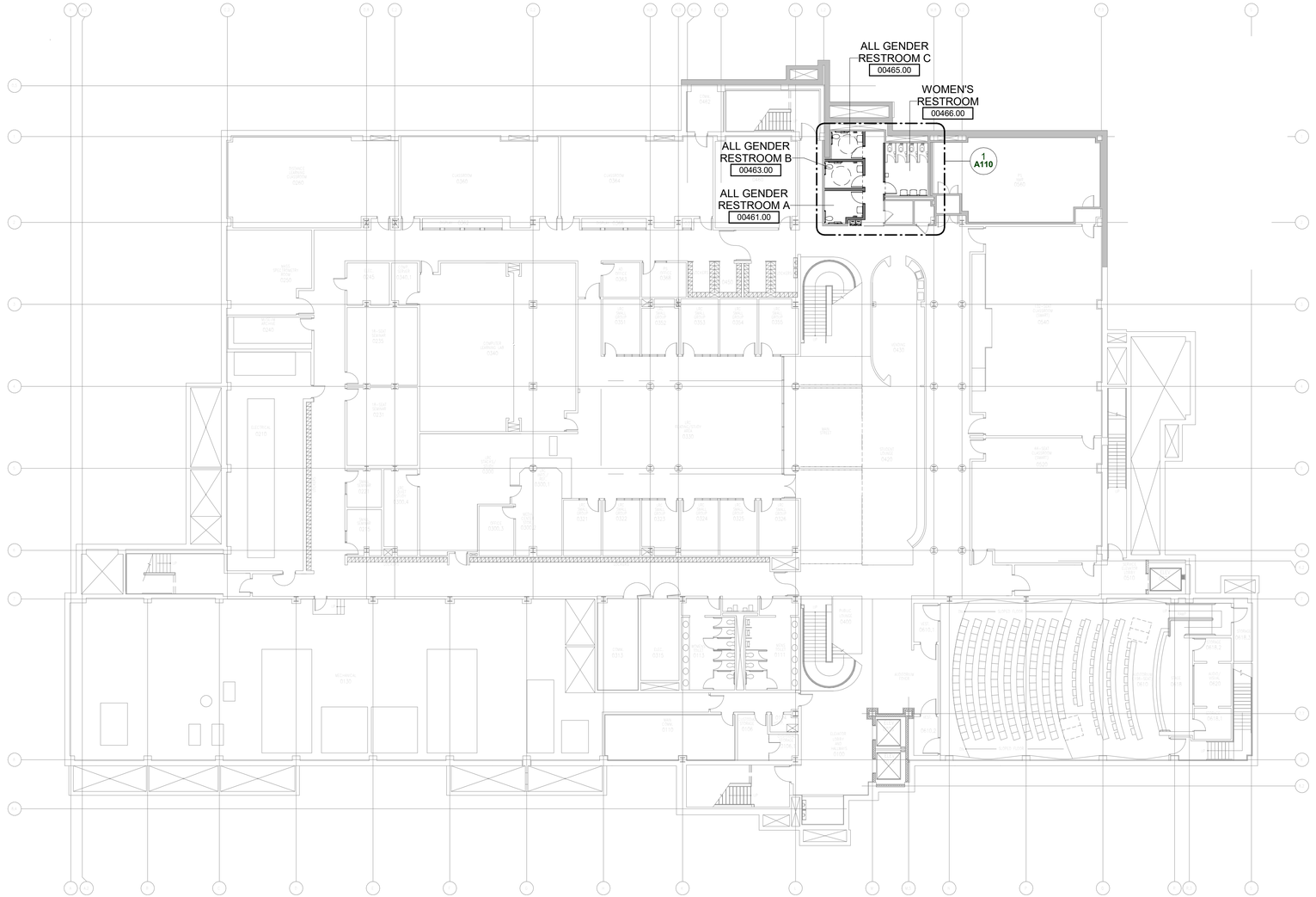
Sheet Title :
STANDARD MOUNTING HEIGHTS, WALL SCHEDULE, AND DETAILS

Project No. :
2023.053

Sheet No. :
G002

GENERAL PLAN NOTES:

1. REMOVE ALL EXISTING CEMENTOUS FIRE PROOFING ON STRUCTURAL MEMBERS IDENTIFIED AS HAVING DISSIMILAR PRODUCTS, OR WHERE FIREPROOFING HAS BEEN DAMAGED DURING DEMOLITION PHASE.
2. PREPARE ALL AREAS REQUIRED TO RECEIVE FIREPROOFING IN ACCORDANCE WITH THE APPROVED (1) ONE-HOUR/ (2) TWO- HOURS FIRE RATED FLOOR/ CEILING ASSEMBLY, AS APPLICABLE.
3. RE-APPLY (1) INTUMESCENT PAINT (OR CEMENTOUS FIRE PROOFING) TO ALL EXISTING STEEL FLOOR BEAM AND SUPPORT COLUMNS WITHIN THE TENANT SUITE (AT FIRST AND SECOND FLOOR) AS FOLLOWS: UL# N620 FOR BEAMS AND UL#X665 FOR THE COLUMNS
4. CONDUCT FIELD INSPECTIONS AFTER DEMOLITION PROCESS IS COMPLETED. WHERE (2) OR MORE DIFFERENT MATERIALS ARE IDENTIFIED AT AREAS WHERE FIRE PROTECTED STRUCTURAL ELEMENTS ARE PRESENT, OR (2) TWO DISSIMILAR FIRE PROTECTION SYSTEMS ARE NOTED ON SAME STRUCTURAL ELEMENT, REMOVE THE PRODUCTS COMPLETELY AND REAPPLY REQUIRED FIRE PROTECTION AS PER PROJECT'S SPECIFICATIONS.
5. DISSIMILAR F.R. PRODUCTS/ SYSTEMS SHALL NOT BE USED TOGETHER ON THE SAME PRIMARY STRUCTURAL ELEMENT. IF DISSIMILAR PRODUCTS ARE TO BE USED FOR APPLICATIONS AT SPECIFIC EXISTING SITE CONDITIONS, PRODUCTS MUST BE INSTALLED FOLLOWING PREVIOUS NOTE, AND THE TRANSITION BETWEEN DISSIMILAR MATERIALS MUST OCCUR AT THE ATTACHMENT AREA BETWEEN THE STRUCTURAL ELEMENTS ONLY.
6. WHERE EXISTING CONDITIONS REQUIRE FIRESTOPPING SYSTEMS AT PENETRATION GAPS IN EXCESS OF 3" AT ANY POINT AROUND THE PROTECTED ELEMENT, AUGMENT FIRESTOPPING WITH MINERAL WOOL LAYERS. COMPLY WITH LABC 714.4.1.1 & 714.4.1.2
7. INSPECT AND VERIFY THE INTEGRITY OF EXISTING (1) ONE-HOUR FIRE BARRIER WALLS AT TENANT SUITE LOCATED AT THE LOWER LEVEL AS WELL AS ALL SIMILAR WALLS WITHIN EXISTING TENANT SUITE.
8. REPAIR, INFILL AND/OR EXTEND, EXISTING FIRE BARRIER/ SMOKE BARRIER WALLS, TO THE UNDERSIDE OF METAL DECK / CONCRETE FLOOR ABOVE IN COMPLIANCE WITH THE APPROVED (1) ONE HOUR FIRE BARRIER ASSEMBLY UL#U469 AND (1) ONE-HOUR SMOKE BARRIER ASSEMBLY. NOTIFY ARCHITECT IF ANY OF THE EXISTING (2) HOUR FIRE ASSEMBLIES INTEGRITY IS FOUND COMPROMISED.
9. ALL EXISTING PENETRATIONS IN RATED ASSEMBLIES TO BE VERIFIED AND ANY NON-COMPLIANT LOCATION TO BE BROUGHT UP TO THE APPROVED STANDARDS USING FIRESTOP PRODUCTS THAT MEET THE REQUIREMENTS OF ASTM E814 OR UL1479.
10. WALLS OF ALL INCIDENTAL USES WHERE (1) HOUR SEPARATION WALL(S) ARE REQUIRED, SUCH AS: MECHANICAL SHAFTS, MECHANICAL ROOM , GENERAL STORAGE ROOM(S), SHALL BE INSPECTED AND ANY NON-COMPLIANT AREAS MUST BE REPAIRED, EXTENDED AND /OR INFILLED AS PER REQUIRED (1) HOUR FIRE BARRIER/ MECHANICAL SHAFT ASSEMBLY UL# U469
11. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING RATED WALLS AND SHALL NOTIFY ARCHITECT IMMEDIATELY OF ANY DISCREPANCIES IN THE DOCUMENTS BEFORE PROCEEDING. FAILURE TO DO SO WILL RESULT IN THE CONTRACTOR TAKING FULL RESPONSIBILITY AND LIABILITY FOR SAID DISCREPANCIES.



1 G003 OVERALL BASEMENT LOCATION PLAN
1/16" = 1'-0"

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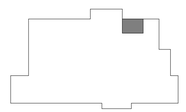
DETROIT, MI 48201

Key Plan:



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Sheet Title :
OVERALL BASEMENT LOCATION PLAN

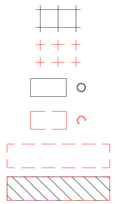
Project No. :
2023.053

Sheet No. :
G003

DEMOLITION PLAN NOTES

1. ALL DEMOLITION WORK REQUIRED IS NOT NECESSARILY LIMITED TO WHAT IS SHOWN ON THE DEMOLITION PLANS. THE INTENT IS TO REMOVE ALL MECHANICAL, ELECTRICAL, AND ARCHITECTURAL ITEMS AS REQUIRED TO FACILITATE NEW CONSTRUCTION.
2. COORDINATE SCOPE AND EXTENT OF DEMOLITION WORK WITH NEW WORK PLANS AND DETAILS.
3. ALL WALLS, DOORS, FRAMES, AND RELATED HARDWARE ASSEMBLIES DESIGNATED AS "TO BE REMOVED" (SHOWN AS DASHED LINES) SHALL BE COMPLETELY REMOVED AND DISPOSED OF AS DESIGNATED BY OWNER/TENANT. ALL EXISTING WALLS NOT DESIGNATED FOR DEMOLITION SHALL BE PROTECTED FROM DAMAGE AND REMAIN "AS-IS".
4. IN OCCUPIED BUILDINGS, ANY CONSTRUCTION BEYOND 48 HOURS MUST BE ISOLATED WITH HARD BARRIER WALL (1 HR. RATED), PER BUILDING CODE.1 HOUR FIRE RATED PLASTIC BARRIER MAY BE USED, VERIFY WITH LOCAL AHJ. PROVIDE ANY/ALL DUST CONTROL AND INFECTION CONTROL MEASURES TO ISOLATE ALL WORK TO PROJECT AREA.
5. PHASED CONSTRUCTION MAY BE REQUIRED, FINAL NUMBER OF PHASES TBD BY OWNER/ ARCHITECT/ GC PRIOR TO CONSTRUCTION. CONTRACTOR PROVIDE ANY/ALL TEMP. CONSTRUCTION MEASURES AS REQUIRED BY LOCAL AHJ (EXIT SIGNS, EMERGENCY LIGHTING, CONSTRUCTION LIGHTING, EGRESS SIGNAGE, ETC.)
6. ALL EQUIPMENT, DOORS, FRAMES, RELATED HARDWARE, AND DESIGNATED ITEMS TO BE SALVAGED SHALL BE REMOVED, PROTECTED FROM DAMAGE, AND STORED FOR REUSE.
7. CLEAN AND REPAIR ALL EXISTING FLOOR FINISHES AS NECESSARY.
8. ALL DEMOLITION WORK SHALL BE PERFORMED IN A NEAT AND WORKMANSHIP MANNER. ALL SURFACES ADJACENT TO AND ABUTTING TO THOSE DESIGNATED "TO BE REMOVED" SHALL BE LEFT WITH A SMOOTH AND FLUSH APPEARANCE.
9. THE CONTRACTOR SHALL EXERCISE ALL REQUISITE CARE NECESSARY TO ENSURE THAT ALL EQUIPMENT, MATERIALS, FINISHES AND ASSEMBLIES WHICH ARE NOT BEING REMOVED ARE PROTECTED FROM DAMAGE DURING DEMOLITION AND SUBSEQUENT CONSTRUCTION OPERATIONS.
10. REFER TO MECHANICAL AND ELECTRICAL DEMOLITION DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL DEMOLITION INFORMATION.
11. GENERAL PRECAUTIONS SHALL BE TAKEN AS NECESSARY TO HOLD ALL DISRUPTION, DUST, DIRT, NOISE, AND DEBRIS TO A MINIMUM.
12. THE CONTRACTOR SHALL COORDINATE DEMOLITION WORK WITH OWNER TO ENSURE THAT IMPACTS ON THE BALANCE OF THE BUILDING ARE HELD TO A MINIMUM.
13. PREPARE ALL SURFACES TO RECEIVE THE NEW WORK AND FINISHES OF THE CONTRACT.
14. THE CONTRACTOR SHALL DESIGN, PROVIDE, INSTALL AND MAINTAIN ANY AND ALL TEMPORARY BRACING AS REQUIRED TO ENSURE THE STABILITY OF THE BUILDING ASSEMBLY AND/OR ANY SYSTEMS AND/OR SUB-ASSEMBLIES AND/OR SYSTEMS APPURTENANT THERETO UNTIL SAID ASSEMBLY AND/OR SUB-ASSSEMBLIES ARE COMPLETE, SELF-SUPPORTING AND/OR STABLE.

DEMOLITION REFLECTED CEILING LEGEND



EXISTING CEILING GRID ASSEMBLY TO REMAIN

CEILING GRID ASSEMBLY TO BE REMOVED

EXISTING CEILING FIXTURE (LIGHT, DIFFUSER, ETC.) TO REMAIN

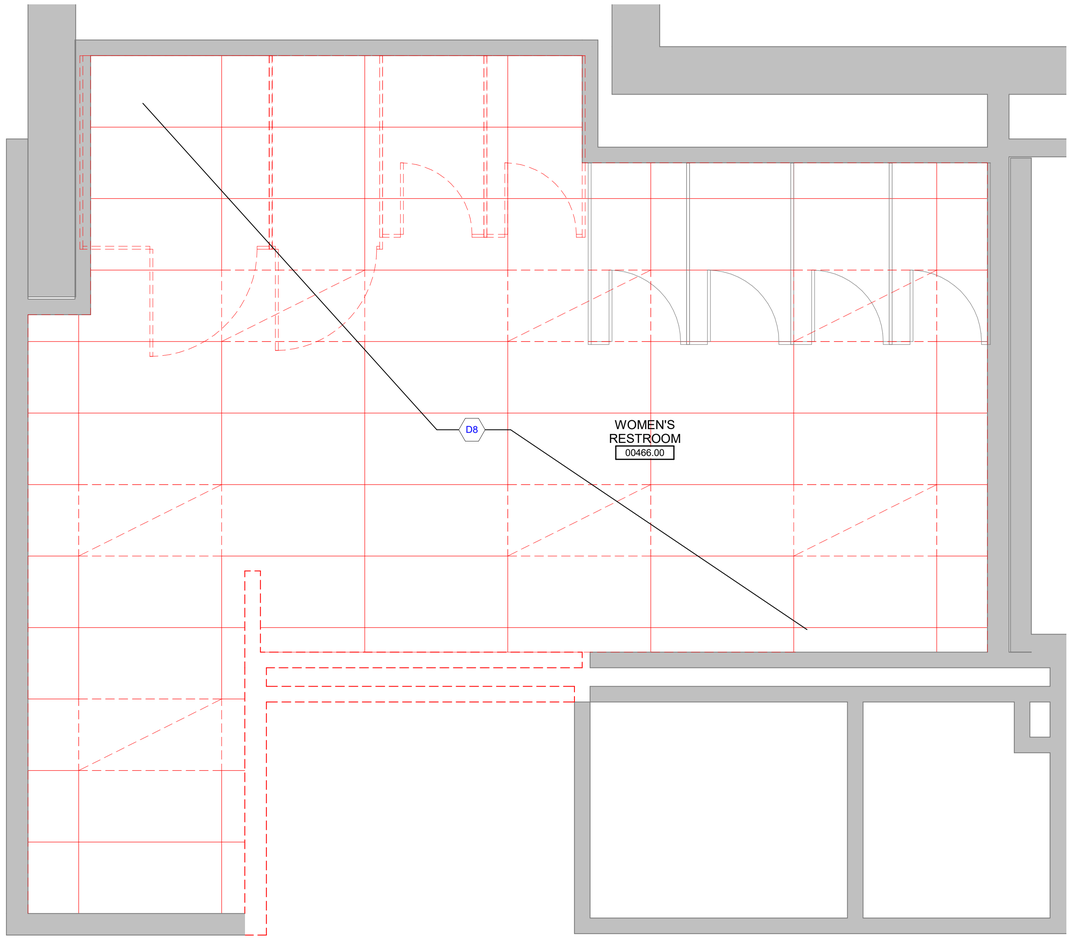
CEILING (LIGHT, DIFFUSER, ETC.) FIXTURE TO BE REMOVED UNLESS NOTED OTHERWISE

CEILING FINISH TO BE REMOVED

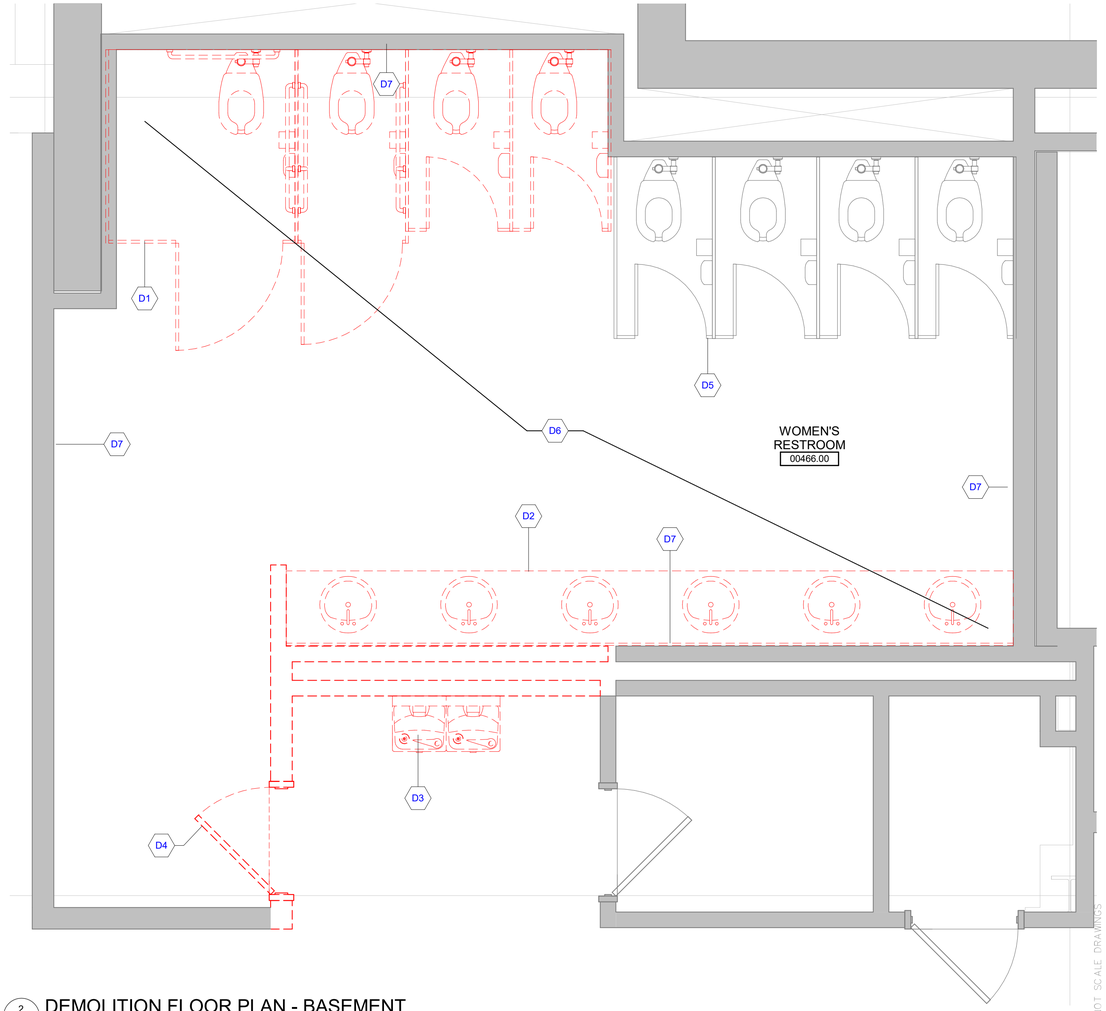
CEILING FINISH TO BE REMOVED

KEYNOTE - DEMOLITION LEGEND

KEYNOTE	KEYNOTE DESCRIPTION
D1	REMOVE EXISTING TOILET PARTITIONS AND SUPPORT SYSTEM.
D2	REMOVE EXISTING COUNTER AND SINK, REFER TO PLUMBING DEMOLITION FOR ADDITIONAL INFORMATION RELATED TO PLUMBIMG CAPPING.
D3	REMOVE EXISTING DRINKING FOUNTAIN. REFER TO PLUMBING DEMOLITINO FOR ADDITIONAL INFORMATINO RELATED TO PLUMBING CAPPING.
D4	EXISTING DOOR TO BE REMOVED. DOOR LEAF TO BE SALVAGED AND REUSED.
D5	PARTITIONS, ACCESSORIES, AND TOILETS TO REMAIN. PROTECT DURRING CONSTRUTCION.
D6	REMOVE EXISTING FLOOR - PATCH AND REPAIR SUBSURFACE AS NECESSARY.
D7	REMOVE EXISTING WALL FINISHED PATCH AND REPAIR WALLS AS NECESSARY FOR NEW FINISH.
D8	EREMOVE CEILING GRID AND SUPPORT SUSTEM, LIGHTING, MECHANICAL SUPPLY/RETURN.



1 AD110 DEMOLITION REFLECTED CEILING PLAN - BASEMENT
1/2" = 1'-0"



2 AD110 DEMOLITION FLOOR PLAN - BASEMENT
1/2" = 1'-0"

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Project :

WSU ALL GENDER RESTROOMS

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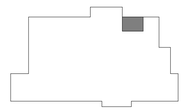
Key Plan:



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BASEMENT DEMOLITION AND CONSTRUCTION PLAN

Project No. :
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Sheet No. :
AD110

GENERAL REFLECTED CEILING PLAN NOTES

1. CONTRACTOR TO CENTER ALL CEILING MOUNTED ITEMS (i.e.. RECESSED LIGHT FIXTURES, SMOKE DETECTORS, FIRE SUPPRESSION HEADS) WITHIN THE ASSOCIATED CEILING TILE AS SHOWN. COORDINATE FINAL LOCATION WITH THE APPROPRIATE MECHANICAL, ELECTRICAL, FIRE ALARM, AND FIRE SUPPRESSION DRAWINGS AS REQUIRED.
2. CONTRACTOR SHALL VERIFY IN FIELD IF DESIGNATED CEILING HEIGHTS IN ROOMS AREA POSSIBLE. IF NOT, MAXIMIZE CEILING HEIGHTS AND NOTIFY ARCHITECT, ENGINEER OR PROJECT MANAGER OF ANY DISCREPANCY.
3. SPRINKLER HEADS SHOWN FOR REFERENCE ONLY, DESIGN-BUILD FIRE PROTECTION CONTRACTOR SHALL BE RESPONSIBLE FOR FINAL LOCATIONS, QUANTITY, TYPE AND FULL FIRE PROTECTION DESIGN. FIRE PROTECTION SYSTEM SHALL BE IN ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE AND FEDERAL CODES AND BUILDING STANDARDS INCLUDING NFPA 101 LIFE SAFETY CODE (SPECIFICALLY CHAPTER 20). SEE TITLE SHEET AND CODE SHEETS FOR ADDITIONAL INFORMATION.
4. CONTRACTOR SHALL PROVIDE ACOUSTIC SOUND BATT INSULATION ABOVE THE ENTIRE CEILING IN THE FOLLOWING ROOMS (TYPICAL UNO): TOILET ROOMS, OFFICES, RECEPTION REAS, EXAM ROOMS AND CONFERENCE ROOMS.
5. CONTRACTOR TO PROVIDE DENS ARMOR PLUS WALL BOARD (MOISTURE RESISTANT) IN ALL CEILING AREAS AND WALLS OF TOILET ROOMS AND VESTIBULES (TYPICAL UNO).
6. ACCESS PANELS TO BE INDEPENDENTLY MOUNTED, DO NOT SUPPORT ON CEILING TILE GRID ASSEMBLY, SUPPORT FROM STRUCTURE ABOVE ONLY. COORDINATE SIZE, QUANTITY AND LOCATIONS WITH ARCHITECTURAL AND MECHANICAL DRAWINGS; IF NOT SHOWN, CONTRACTOR TO PROVIDE WHERE REQUIRED AND COORDINATE FINAL LOCATIONS IN FIELD WHERE REQUIRED PER MEP EQUIPMENT AND DRAWINGS.
7. PROVIDE EXTERIOR MOUNTED EMERGENCY EGRESS LIGHT AT ALL EXTERIOR EXITS AS REQUIRED BY CODE, BATTERY BACK-UP AND MOUNTED 36" ABOVE DOOR UNO.
8. SOFFITS ABOVE UPPER CABINETS SHALL BE 16" DEEP AND SHALL BE CONSTRUCTED OF 5/8" GYPSUM BOARD ON 3 5/ 8" METAL FRAMING AT 16" OC (TYPICAL UNO).
9. REFER TO WALL TYPES FOR WALLS THAT PENETRATE CEILINGS.
10. REFER TO MECHANICAL HVAC PLANS FOR DIFFUSER / GRILLE SIZES.
11. FOR LIGHT FIXTURE TYPES SEE ELECTRICAL LIGHTING PLANS.
12. REFER TO DIMENSIONS ON REFLECTED CEILING PLAN TO LOCATE / LAYOUT CEILING GRID AND LIGHT FIXTURES.

KEYNOTE - RCP LEGEND

KEYNOTE	KEYNOTE DESCRIPTION
A	CONTINUE EXISTING CEILING GRID FROM CORRIDOR.
B	2X4 CEILING GRID.
C	2X4 LIGHT FIXTURES.
D	EXHAUST FAN.

GENERAL FLOOR PLAN NOTES

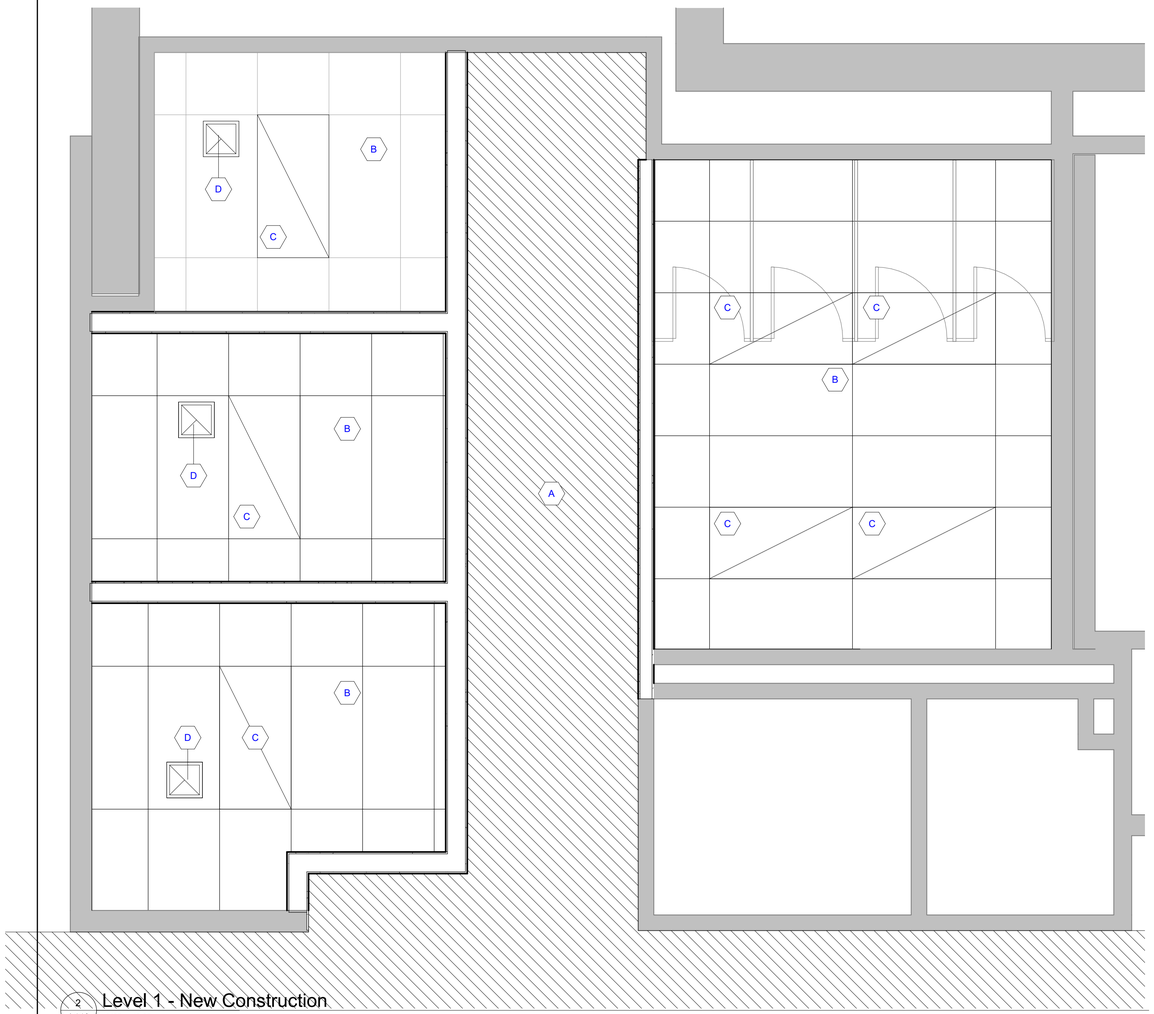
1. THIS DRAWING IS DIAGRAMMATIC AND SHOULD BE USED TO DETERMINE THE DESIGN INTENT. THE CONTRACTOR IS RESPONSIBLE FOR THE COMPLETE SET OF WORK AS INDICATED AND SHALL FIELD VERIFY ALL WORK, COORDINATE ALL DRAWINGS / NEW WORK AND SHALL NOTIFY ARCHITECT IMMEDIATELY OF ANY DISCREPANCIES IN THE DOCUMENTS BEFORE PROCEEDING. FAILURE TO DO SO WILL RESULT IN THE CONTRACTOR TAKING FULL RESPONSIBILITY AND LIABILITY FOR SAID DISCREPANCIES.
2. ALL DIMENSIONS ARE SHOWN FROM FINISH FACE TO FINISH FACE OF PARTITION UNLESS OTHERWISE NOTED.
3. WALL THICKNESS' ARE NOMINAL NOT ACTUAL DIMENSIONS. SEE WALL SCHEDULE FOR ACTUAL DIMENSIONS.
4. ALL WOOD, INCLUDING BLOCKING, USED ON THE PROJECT SHALL BE FIRE RETARDANT TREATED.
5. ALL WORK SHALL BE DONE IN ACCORDANCE WITH ALL LOCAL, STATE, COUNTY CODE REGULATIONS, O.S.H.A., AND THE AMERICAN WITH DISABILITIES ACT (ADA). REFER TO THE CODE PLAN FOR MORE INFORMATION.
6. PROVIDE POSITIVE SLOPE TO ALL FLOOR DRAINS WHILE KEEPING FLOOR LEVEL AT WALL BASE CONDITION.
7. PROVIDE TRANSITION STRIPS AT EACH CHANGE IN FLOOR FINISH MATERIALS.
8. PAINT, PATCH AND REPAIR THE FOLLOWING TO MATCH EXISTING MATERIALS: FLOOR, WALL, AND CEILING SURFACES AS REQUIRED ADJACENT TO AREAS BEING DEMOLISHED. REFER TO DEMOLITION DRAWINGS FOR MORE INFORMATION.
9. REINFORCE WALL AND PROVIDE BLOCKING AS REQUIRED TO SUPPORT WALL CABINETS AND COUNTERTOPS.
10. THE CONTRACTOR SHALL PROVIDE AND INSTALL WALL REINFORCING FOR INSTALLATION OF ACCESSORIES, COAT RACKS, CHART RACKS, CASEWORK, AND OTHER WALL MOUNTED ITEMS.
11. CLEAN AND REPAIR ALL EXISTING FLOOR FINISHES AS NECESSARY.
12. ALL EXPOSED PIPES, DUCTS, AND CONDUIT TO BE PAINTED TO MATCH EXISTING.
13. PROVIDE CONTROL JOINTS IN GYPSUM BOARD PARTITIONS AT 30'-0" O.C. MAXIMUM AND AS INDICATED IN THE CONTRACT DOCUMENTS.
14. COORDINATE WITH OWNER'S EQUIPMENT SUPPLIER FOR INSTALLATION REQUIREMENTS / LOCATIONS OF FLOOR / WALL / CEILING MOUNTED ITEMS; IE. CAMERAS, TV'S, SPEAKERS, SENSORS, SECURITY WIRING, VAULTS, ATM'S.
15. CONTRACTOR SHALL CONDUCT A ROUGH ELECTRICAL INSPECTION WITH OWNER, PRIOR TO ENCLOSING WALLS, FOR THE PURPOSE OF CONFIRMING ALL J-BOX LOCATIONS FOR POWER, DATA, VOICE, SWITCH, THERMOSTAT, ETC.
16. CONTRACTOR TO FILL ANY AND ALL EQUIPMENT PENETRATIONS OR DEPRESSIONS INTO OR THROUGH THE EXISTING SLAB THAT WILL NOT BE UTILIZED TO FEED NEW EQUIPMENT (I.E. ABANDONED FLOOR CORES, IMPRESSION FROM PREVIOUS EQUIPMENT FLOOR PLATE REMOVAL). PENETRATIONS SHALL BE FILLED WITH NON- SHRINK GROUT. THE SIDES OF ANY EXISTING OPENINGS SHALL BE MODIFIED/TAPERED SO THAT THEY ARE WIDER AT THE TOP THAN AT THE BOTTOM. FOR LARGE OPENINGS, PROVIDE ONE (1) #5 BAR 2" UP FROM BOTTOM OF HOLE.
17. A TACTILE SIGN STATING 'EXIT' AND COMPLYING WITH ICC-A117.1 SHALL BE PROVIDED ADJACENT TO EACH DOOR TO AN 'AREA OF REFUGE', AN EXTERIOR AREA FOR ASSISTED RESCUE, AN EXIT STAIRWAY, AN EXIT RAMP, AN EXIT PASSAGEWAY, AND THE EXIT DISCHARGE.
18. PROVIDE PERMANENT MIN 3-INCH HIGH CONTRASTING COLOR MARKING AND IDENTIFICATION AT ALL FIRE WALLS, FIRE BARRIERS, FIRE PARTITIONS, SMOKE BARRIERS, SMOKE PARTITIONS OR ANY OTHER WALL REQUIRED TO HAVE PROTECTED OPENINGS OR PENETRATIONS WITHIN 15 FEET AT THE END OF EACH WALL, AND NOT EXCEEDING 30 FEET MAXIMUM HORIZONTAL INTERVALS, MINIMUM 2 LOCATIONS EACH WALL. TYPICAL FOR ACCESSIBLE CONCEALED FLOOR, FLOOR-CEILING, OR ATTIC SPACES PER CODE (MBC 703.7)

KEYNOTE - NEW CONSTRUCTION LEGEND

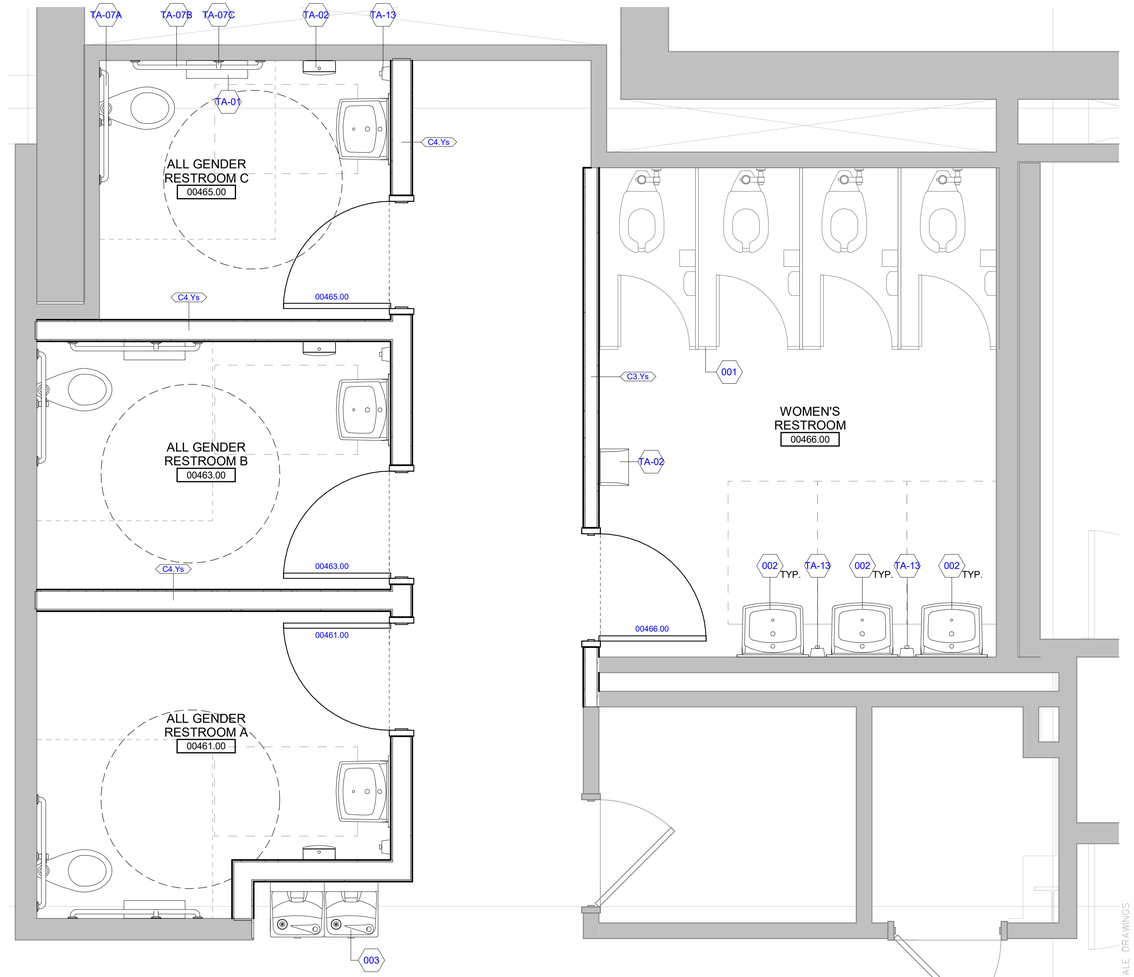
KEYNOTE	KEYNOTE DESCRIPTION
001	EXISTING TOILET STALL TO REMAIN. TYP.
002	NEW RESTROOM SINK.
003	NEW DRINKING FOUNTAIN WITH BOTTLE FILLER.

KEYNOTE - TOILET ACCESSORIES

KEYNOTE	KEYNOTE DESCRIPTION
TA-01	TOILET PAPER HOLDER - DOUBLE ROLL
TA-02	PAPER TOWEL DISPENSER - SURFACE MOUNTED
TA-07A	GRAB BARS (36" BACK BAR)
TA-07B	GRAB BARS (42" SIDE BAR)
TA-07C	GRAB BARS (18" VERTICAL BAR)
TA-13	SOAP DISPENSER - WALL MOUNTED



2 A110 Level 1 - New Construction
1/2" = 1'-0"



1 A110 Level 1 - New Construction
1/2" = 1'-0"

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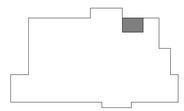
Key Plan:



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Sheet Title :
BASEMENT FLOOR PLAN AND RCP

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A110

A- DOOR & FRAME SCHEDULE

NUMBER	ROOM NAME	DOOR SIZE		HDWE SET	DOOR				THRESHOLD TYPE	FRAME				FIRE RATING	DETAILS		REMARKS
		WIDTH	HEIGHT		TYPE	MATERIAL	FINISH	GLASS		TYPE	MATERIAL	FINISH	GLASS		HEAD	JAMB	
Level 1																	
00461.00	ALL GENDER RESTROOM A	3' - 0"	6' - 8"	1	F	EXIST	EXIST	-	-	1	HM	PFN	-	-	2/A901	1/A901	
00463.00	ALL GENDER RESTROOM B	3' - 0"	6' - 8"	1	F	EXIST	EXIST	-	-	1	HM	PFN	-	-	2/A901	1/A901	
00465.00	ALL GENDER RESTROOM C	3' - 0"	6' - 8"	1	F	EXIST	EXIST	-	-	1	HM	PFN	-	-	2/A901	1/A901	
00466.00	WOMEN'S RESTROOM	3' - 0"	6' - 8"	2	F	EXIST	EXIST	-	-	1	HM	PFN	-	-	2/A901	1/A901	

DOOR HARDWARE GENERAL NOTES:

1. Contractor shall verify all existing field conditions and notify architect immediately if that which exists differs from that which is shown on drawings.
2. All work to comply with current Federal, State and Local codes, laws and ordinances.
   The requirements of ICC/ANSI A117.1 and the Americans with disabilities act (ADA) are to be fully satisfied. All work shall meet the most stringent requirements of both including, but not limited to clearances, limitations, accessories, etc.
3. These drawings are prepared in accordance with the limited services for which the architect was contracted. The architect makes no representation that the interpretation of these documents will result in complete compliance with the ADA.
4. All doors required to be labeled shall be set in labeled frames and identified with UL label and be provided with approved self-closing devices and positive latching hardware.
5. All designated exit doors shall be equipped with the required egress hardware.
6. Furnish hardware as scheduled without substitution, no alternates will be approved.
7. Provide Cylinders, Combinated IC Cores and keys; keyed to Master System. Include key conference and key system schedule. Furnish a keyed core and two cut keys for each locking device specified.
8. Furnish and provide all necessary reinforcements, brackets, fasteners, spacers and fillers to provide a complete functioning opening.
9. Provide complete shop drawings, submittals and cut sheets complying with DHI prescribed methods and vertical format double spaced hardware schedule.

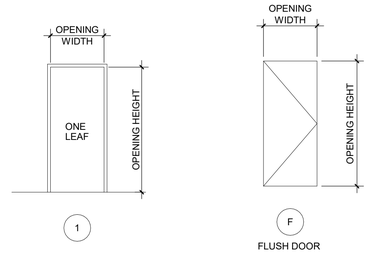
HARDWARE SETS:

Hardware Set 1 – Privacy Set w/ Indicator [Lock / Unlock] + Closer

3	ea.	Butt Hinge CB81 4 ½" x 4 ½" NRP	26D	PBB
1	ea.	Privacy Set MR 236 BJSJ SFL	32D	PDQ
1	ea.	SFIC Final Core – By WSU	26D	WSU
1	ea.	Closer 7101BC RA Regular Arm (pull side mount)	689	PDQ
1	ea.	Kickplate 90 10 x 2" LDW B4E	32D	Don Jo
1	ea.	Wall Stop 1407	26D	Don Jo

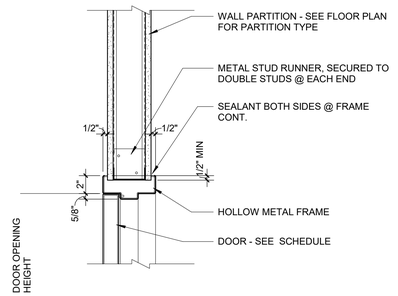
Hardware Set 2 – Push / Pull Set [Always Unlocked] + Closer

3	ea.	Butt Hinge CB81 4 ½" x 4 ½" NRP	26D	PBB
1	ea.	Pull Plate 7137 (mount prior to push plate)	32D	PDQ
1	ea.	Push Plate 71 (mount over pull fasteners)	32D	PDQ
1	ea.	Closer 7101 BC RA Regular Arm (pull side mount)	689	PDQ
1	ea.	Kickplate 90 10 x 2" LDW B4E	32D	Don Jo
1	ea.	Wall Stop 1407	26D	Don Jo

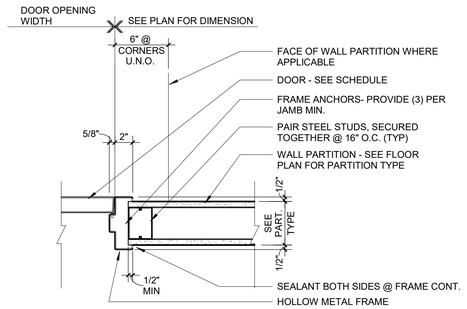


4 A901 DOOR FRAME TYPES
1/4" = 1'-0"

3 A901 DOOR TYPES
1/4" = 1'-0"



2 A901 HEAD AT TYP STUD PARTITION (LESS THAN 5'-0")
1 1/2" = 1'-0"



1 A901 JAMB AT TYPICAL STUD PARTITION
1 1/2" = 1'-0"

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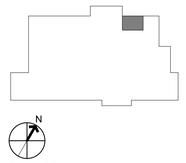

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Sheet Title :
DOOR SCHEDULE, TYPES, AND DETAILS

Project No. :
2023.053

Sheet No. :
A901

SECTION 010000
DEFINITIONS AND STANDARDS

1. The following is a general list of definitions as used in the specifications.

Architect	Refers to Stucky Vitale Architects
Contractor	Refers to the General Contractor
Subcontractor	Refers to trades people having subcontractual agreements with the Contractor.
Owner	Refers to the person, organization or authorized representative identified in the contract documents.
Contract Documents	Consist of the documents enumerated in the agreement and generally includes the contract proposal, drawings and specifications.
Drawings	Are diagrammatic interpretations of the physical work to be performed on the project.
Work	Refers to labor, materials, equipment and services related to the project.
Project	Refers to total of the work to be performed including drawings, engineering and construction.
Change Order	Is an order from the Owner or an agreement between the Owner and Contractor to make a change in the project.
N.I.C.	Is an abbreviation for "Not Included In Contract" and indicates that a particular item is not to be included in the work to be done by the Contractor.

2. The following is a general list of technical societies referenced in the Specifications.

AIA	American Institute of Architects
ACI	American Concrete Institute
AIEE	American Institute of Electrical Engineers
AISC	American Institute of Steel Construction
AITC	American Institute of Timber Construction
ASHRAE	American Society of Heating, Refrigerating and Air Conditioning Engineers
ASME	American Society of Mechanical Engineers
ASTM	American Society for Testing and Materials
AWS	American Welding Society
NAFM	National Association of Fan Manufacturers
NEC	National Electrical Code
NEMA	National Electrical Manufacturer's Assoc.
RCSC	Research Council on Structural Connections
UL	Underwriters Laboratories

SECTION 010030
SPECIAL SUPPLEMENTARY CONDITIONS

1. PERMITS, TAPS AND FEES AND BONDS
The Contractor shall obtain building permits, test borings, surveys, licenses, certificates, inspections and other permits as required. The Contractor shall be fully reimbursed for the above items by the Owner upon proper transfer of all receipts. Utility taps and fees and bonds shall be reimbursed by the Owner.
Plumbing, HVAC, Electrical and Signage subcontractors shall be responsible to obtain and pay for their own permits.

2. ELECTRICAL SERVICE
Temporary service shall be installed by the Electrical subcontractor.
Temporary electrical consumption shall be paid by the General Contractor.

3. TEMPORARY SANITARY FACILITY
The Contractor shall provide self-contained chemical sanitary facilities on the site for workers and Subcontractor's workers for the duration of the construction period.

4. TEMPORARY HEAT AND PROTECTION
If temporary heat is required for the protection of the work, the Contractor shall provide approved salamanders, stoves with smoke pipes to the outside, or other approved apparatus. All apparatus shall be properly vented to the outside. The Contractor shall also provide temporary apparatus for the drying out of work as necessary.
No work shall be damaged by the apparatus.
When the permanent heating apparatus is available for use and the building is enclosed, the Owner shall furnish heat and air circulation for that portion of the building that is permanent.
If the HVAC units are used during the construction period, the filters shall be changed as needed but at least per month. New filters shall be installed at substantial completion at which time Subcontractor warranty shall commence.

5. CUTTING AND PATCHING
EACH SUBCONTRACTOR shall be required to perform all cutting, patching and excavating necessary for his particular work unless specifically stated otherwise. The Contractor shall be responsible for COORDINATING the cutting and patching. The Contractor shall only perform cutting and patching or fitting necessary for his own work and as necessary to assure that all parts and work of other Subcontractors comes together properly.

6. WORK BY OTHERS
The Owner agrees to provide any work and/or materials not an obligation of the Contractor at such time and in such a manner so as not to delay the progress of the work of the Contractor.

7. RELOCATION OF UTILITIES
The Owner will pay for the relocation of all public utilities that conflict with construction.

8. OCCUPANCY BY OWNER
The Owner may occupy any part or parts of the work and use any equipment which is a reasonable degree of completion (provided the building department will allow such) as will in his opinion make such areas or parts reasonable safe, fit, and convenient for his use, under the conditions established for such occupancy.

9. RELOCATING OWNER'S EQUIPMENT
The Owner shall be responsible for and pay for the relocation and installation of any of his equipment.

10. CONSTRUCTION TELEPHONE
The Contractor shall maintain a telephone located in the field office at the jobsite. A cellular phone held by the on-site Superintendent meets this requirement.

SECTION 013323
SUBMITTAL PROCEDURES

1. Submit shop drawings prepared specifically for this project. Indicate fabrication details and adjacent construction.
2. Submit data and drawings in pdf format with scaled drawings via email.
3. Shop drawings, fabrication details, product literature and certificates shall be submitted bearing the contractor's review stamp for the following structural systems. Failure of the contractor to review and stamp submittals prior to forwarding them to the design professional(s) for review shall constitute grounds for rejection. Use of these drawings, plans or details used as erection plans or shop drawings by the contractor is expressly prohibited. Submittals bearing images electronically copied from these drawings will be rejected.
4. Architect will review submittals for the limited purpose of checking for conformance with information given and the design concept expressed in the contract documents.
5. Finish material samples will be reviewed only for aesthetic, color, or finish selection.
6. Required Submittals but not limited to the following:
- Cold-formed Metal Framing
- Millwork
- Doors and Door Frames
- Door Hardware
- Sliding Door Glazing System
- As specified in individual spec sections

7. Examination, Preparation, and Execution
- Before proceeding to lay out the work, verify layout information shown on drawings.
- Verify all dimensions and conditions assumed as existing at the site prior to construction and fabrication. If discrepancies are found, notify the architect in writing prior to proceeding, describe discrepancies in RFI.
- Comply with manufacturer's written instructions and recommendations for installing products in applications indicated. Notes and details on drawings shall take precedence over general notes. Details and notes are typical. Similar details and notes apply in similar conditions.

SECTION 014500
QUALITY CONTROL SERVICES

1. Independent Professional Testing Agencies shall be retained by the Contractor (reimbursed by the Owner) to inspect and test the materials and methods of construction as hereinafter specified for compliance with the requirements of the Contract Documents and to perform specialized technical services as may be required.

The Laboratory, inspection service, and soils engineer shall be acceptable to the Architect/Engineer.

SECTION 024100
SELECTIVE DEMOLITION

1. Subcontractor shall provide all labor, materials, equipment, and incidentals necessary and required for the completion of this Work.

2. Scope of Work shall include but not be limited to the following:
- Selective demolition of building elements for alteration purposes.
- Removal of existing utilities and utility structures.

3. REFERENCE STANDARDS
- 29 CFR 1926 - U.S. Occupational Safety and Health Standards; current edition.
- NFPA 241 - Standard for Safeguarding Construction, Alteration, and Demolition Operations

4. SUBMITTALS
- Demolition Plan: Submit demolition plan as specified by OSHA and local authorities. Indicate extent of demolition, removal sequence, bracing and shoring, and location and construction of barricades and fences. Identify demolition firm and submit qualifications. Include a summary of safety procedures.
- Project Record Documents: Accurately record actual locations of capped and active utilities and subsurface construction.

5. GENERAL PROCEDURES AND PROJECT CONDITIONS
- Comply with applicable codes and regulations for demolition operations and safety of adjacent structures and the public.
- Obtain required permits.
- Use of explosives is not permitted.
- Take precautions to prevent catastrophic or uncontrolled collapse of structures to be removed; do not allow worker or public access within range of potential collapse of unstable structures.
- Provide, erect, and maintain temporary barriers and security devices. Use physical barriers to prevent access to areas that could be hazardous to workers or the public.
- Conduct operations to minimize effects on and interference with adjacent structures and occupants. Do not close or obstruct roadways or sidewalks without permit.
- Conduct operations to minimize obstruction of public and private entrances and exits; do not obstruct required exits at any time; protect persons using entrances and exits from removal operations.
- Do not begin removal until receipt of notification to proceed from Owner.
- Do not begin removal until built elements to be salvaged or relocated have been removed.
- Protect existing structures and other elements that are not to be removed. Provide bracing and shoring. Prevent movement or settlement of adjacent structures. Stop work immediately if adjacent structures appear to be in danger.
- Minimize production of dust due to demolition operations; do not use water if that will result in ice, flooding, sedimentation of public waterways or storm sewers, or other pollution.
- If hazardous materials are discovered during removal operations, stop work and notify Architect and Owner; hazardous materials include regulated asbestos containing materials, lead, PCB's, and mercury.
- Partial Removal of Paving: Neatly saw cut at right angle to surface.

6. SELECTIVE DEMOLITION FOR ALTERATIONS
- Drawings showing existing construction and utilities are based on casual field observation and existing record documents only. Verify that construction and utility arrangements are as shown. Report discrepancies to Architect before disturbing existing installation. Beginning of demolition work constitutes acceptance of existing conditions that would be apparent upon examination prior to starting demolition.
- Separate areas in which demolition is being conducted from other areas that are still occupied. Provide, erect, and maintain temporary dustproof partitions of construction indicated on drawings. Provide sound retardant partitions of construction indicated on drawings in locations indicated on drawings.
- Maintain weatherproof exterior building enclosure except for interruptions required for replacement or modifications; take care to prevent water and humidity damage.
- Remove existing work as indicated and as required to accomplish new work. Remove rotted wood, corroded metals, and deteriorated masonry and concrete; replace with new construction specified.
- Services (Including but not limited to HVAC, Plumbing, Electrical, and Telecommunications): Remove existing systems and equipment as indicated.
--Maintain existing active systems that are to remain in operation; maintain access to equipment and operational components.
--Where existing active systems serve occupied facilities but are to be replaced with new services, maintain existing systems in service until new systems are complete and ready for service.
--Verify that abandoned services serve only abandoned facilities before removal. Remove abandoned pipe, ducts, conduits, and equipment, including those above accessible ceilings; remove back to source of supply where possible, otherwise cap stub and tag with identification.
- Protect existing work to remain.
--Prevent movement of structure; provide shoring and bracing if necessary.
--Perform cutting to accomplish removals neatly and as specified for cutting new work.
--Repair adjacent construction and finishes damaged during removal work.
--Patch as specified for patching new work.

7. DEBRIS AND WASTE REMOVAL
- Remove debris, junk, and trash from site. Leave site in clean condition, ready for subsequent work. Clean up spillage and wind-blown debris from public and private lands.

SECTION 054000
COLD-FORMED METAL FRAMING

1. Subcontractor shall provide all labor, material, equipment and incidentals necessary and required for the completion of this work.

2. Scope of work shall include but not be limited to the following:
- Provide Interior load-bearing wall framing.
- Provide Interior ceiling framing.
- Provide Interior joist and/or lintel framing.
- Provide shop drawings and submittals.

3. COLD-FORMED METAL FRAMING for this project is delegated design and shall be in accordance with the latest edition of the American Iron and Steel Institute (AISI) "COLD-FORMED STEEL DESIGN MANUAL"

4. COLD-FORMED METAL FRAMING shop drawings are to be signed and sealed by a professional engineer registered in the state of Michigan. Shop drawings to include structural analysis data for system and connections.

5. Structural design to accommodate forces from sliding glass door, and dead loads for new mechanical and electrical equipment.

6. Shop drawings to include layout, spacings, sizes, thickness, and types of COLD-FORMED FRAMING. They also shall include fabrication, fastening and anchorage details, including mechanical fasteners.

7. All studs, tracks and bridging shown shall be manufactured per ASTM C-955

8. COLD-FORMED METAL FRAMING members shall be formed of corrosion-resistant steel conforming to ASTM A 653 and ASTM C 955 with a minimum yield strength of 33 KSI for 43 and thinner MIL members and 50 KSI for all thicker MIL members.

9. All cold formed headers and joists shall be constructed of unpunched sections and have web stiffeners at each end.

10. Perforations will only be allowed in the web of vertical wall studs at a min end distance of 1'-0" and a min spacing of 2'-0" on-center.

11. Splicing of vertical wall studs is not allowed.

12. Provide horizontal bridging lines at 4'-0" on-center at all bearing walls.

13. Screw penetration through joined material shall have at least three exposed threads.

14. Metal studs that extend beyond the ceiling by more than 4" shall have metal blocking at the ceiling line to prevent waves in the gypsum board and provide anchorage for the wall angles of the suspended ceiling system.

15. All runner tracks and shoes for interior partitions shall be not less than 22 gauge galvanized cold rolled steel.

16. Suspended and furred ceilings: Provide componets complying with ASTM C 754

17. Provide one year written guarantee warranting against defects in material and workmanship.

18. The Subcontractor shall keep the premises and surrounding area free from the accumulation of waste materials or rubbish caused by operations under contract. The Subcontractor shall be responsible for the complete removal and disposal of his trade's debris.

SECTION 07213

BOARD AND BATT INSULATION

Refer to Division 1 - General Requirements.

1. Subcontractor shall provide all labor, materials, equipment and incidentals necessary and required for the completion of this work.

SECTION 07213 (Continued)

BOARD AND BATT INSULATION

2. Scope of Work shall include but not be limited to the following:
- Board insulation at cavity wall construction, perimeter foundation wall, underside of floor slabs, and exterior wall behind wall finish.
- Batt insulation and vapor retarder in exterior wall construction.
- Batt insulation for filling crevices in exterior wall and roof.
- Supply and install sound blanket insulation.

3. Related Work by Others specified elsewhere:
- See Section 05400 - Cold Formed Metal Framing: Supporting construction for batt insulation.
- See Section 06100 - Rough Carpentry: Supporting construction for batt insulation.
- See Section 07260 - Weather Barriers: Separate air barrier and vapor retarder materials.
- See Section 07510 - Built-Up Bituminous Roofing: Insulation specified as part of roofing system.
- See Section 07550 - Modified Bituminous Membrane Roofing: Insulation specified as part of roofing system.
- See Section 07530 - Elastomeric Membrane Roofing: Insulation specified as part of roofing system.
- See Section 07840 - Firestopping.
- See Section 09260 - Gypsum Board Assemblies: Acoustic insulation.

4. Do not install insulation adhesives when temperature or weather conditions are detrimental to successful installation.

5. APPLICATIONS
- Insulation under Concrete Slabs: Extruded polystyrene board.
- Insulation at Perimeter of Foundation: Extruded polystyrene board.
- Insulation inside Masonry Cavity Walls: Extruded polystyrene board.
- Insulation in Metal Framed Walls: Batt insulation with integral
- Insulation Above Lay-In Acoustical Ceilings: Batt insulation with no vapor retarder.

6. FOAM BOARD INSULATION MATERIALS: Extruded Polystyrene Board Insulation: ASTM C 578, Type X; Extruded polystyrene board with either natural skin or cut cell surfaces; complying with ASTM E 84 Class A.
- Board Thickness: 1-1/2 inches.
- Board Edges: Square.
- Manufacturers: Dow Chemical Co. or Owens Corning Corp.

7. BATT INSULATION MATERIALS: Glass Fiber Batt Insulation: Flexible preformed batt or blanket, complying with ASTM C 665, ASTM E 84 Class A and ASTM E 136; friction fit, formaldehyde free.
- Facing: Unfaced.
- Facing: Aluminum foil, flame spread 25 rated; one side.
- Manufacturers: CertainTeed Corp., Johns Manville Corp., or Owens Corning Corp.

8. ACCESSORIES
- Tape: Bright aluminum self-adhering type, mesh reinforced, 2 inch wide.
- Staples: Steel wire; electroplated, or galvanized; type and size to suit application for installation in wood framing only.

9. EXAMINATION: Verify that substrate, adjacent materials, and insulation materials are dry and that substrates are ready to receive insulation. Verify substrate surfaces are flat, free of honeycomb, fins, or irregularities.

10. BOARD INSTALLATION AT FOUNDATION PERIMETER: Install boards horizontally on foundation perimeter. Extend boards over expansion joints, unbonded to foundation on one side of joint. Cut and fit insulation tightly to protrusions or interruptions to the insulation plane.

11. BOARD INSTALLATION AT EXTERIOR WALLS: Apply adhesive to back of boards per manufacturer's instructions with full bed 1/8 inch thick. Install boards horizontally on walls. Install in running bond pattern. Butt edges and ends tightly to adjacent boards and to protrusions. Extend boards over expansion joints, unbonded to wall on one side of joint. Cut and fit insulation tightly to protrusions or interruptions to the insulation plane.

12. BOARD INSTALLATION AT CAVITY WALLS: Apply adhesive to back of boards per manufacturer's instructions with full bed 1/8 inch thick. Install boards to fit snugly between wall ties. Place membrane surface facing out, and tape seal board joints. Install boards horizontally on walls in running bond pattern. Cut and fit insulation tightly to protrusions or interruptions to the insulation plane.

13. BOARD INSTALLATION UNDER CONCRETE SLABS: Place insulation under slabs on grade after base for slab has been compacted. Insulation shall not reduce the thickness of the slab. Cut and fit insulation tightly to protrusions or interruptions to the insulation plane. Prevent insulation from being displaced or damaged while placing vapor retarder and placing slab.

14. BATT INSTALLATION: Install insulation and vapor retarder in accordance with manufacturer's instructions. Install in exterior wall spaces without gaps or voids. Do not compress insulation. Trim insulation neatly to fit spaces. Insulate miscellaneous gaps and voids. Fit insulation tightly in cavities and tightly to exterior side of mechanical and electrical services within the plane of the insulation. Install with factory applied vapor retarder membrane facing warm side of building spaces. Lap ends and side flanges of membrane over framing members. Tape insulation batts in place. Tape seal butt ends, lapped flanges, and tears or cuts in membrane. Tape seal tears or cuts in vapor retarder. Extend vapor retarder tightly to full perimeter of adjacent window and door frames and other items interrupting the plane of the membrane. Tape seal in place. Coordinate work of this section with construction of air barrier seal.
- At wood framing, place vapor retarder on warm side of insulation by stapling at 6 inches on center. Lap and seal sheet retarder joints over member face.
- At metal framing, place vapor retarder on warm side of insulation; lap and seal sheet retarder joints over member face.
- Exterior wall blanket insulation: (R=19 min) foil faced fiberglass insulation.

15. PROTECTION: Do not permit installed insulation to be damaged prior to its concealment.

16. The Subcontractor shall keep the premises and surrounding area free from the accumulation of waste materials or rubbish caused by operations under contract. The Subcontractor shall be responsible for the complete removal and disposal of his trade's debris.

SECTION 08100

HOLLOW METAL DOORS AND FRAMES

1. Refer to Division 1 - General Requirements

2. Work shall include but not be limited to the following:
- Furnish and install non-rated and fire rated rolled steel doors and frames.
- Furnish and install louvers where scheduled.
- Coordinate installation of hardware.

3. Related Work by Others specified elsewhere:
- Section 04100 - Mortar: Masonry mortar fill of metal frames.
- Section 08210 - Wood Doors.
- Section 08712 - Hardware.
- Section 09900 - Painting: Field painting of doors and frames.
- Section 07213 - Batt and Blanket Insulation: Sound insulation in door frames.

4. REFERENCES
- DHI - Door Hardware Institute: The Installation of Commercial Steel Doors and Steel Frames, Insulated Steel Doors in Wood Frames and Builder's Hardware.
- NFPA 80 - Standard for Fire Doors and Other Opening Protectives.
- NFPA 252 - Fire Tests for Door Assemblies.
- SDI-100 - Standard Steel Doors and Frames.
- SDI-105 - Recommended Erection Instructions for Steel Frames.

5. QUALITY ASSURANCE
- All work shall be executed in strict accordance with referenced standards and these Specification.
- Conform to requirements of SDI-100.
- Fire rated door and frame construction to conform to NFPA 252.
- Installed frame and door assembly to conform to NFPA 80 for fire rated class indicated on Drawings.
- Wherever provisions of pertinent codes, referenced standards, and/or these Specifications conflict, the more stringent shall govern.

6. REGULATORY REQUIREMENTS
- Conform to applicable code for fire rated / accessible frames and doors.

7. SUBMITTALS
- Submit shop drawings and product data under provisions of Section 01300.
- Indicate frame configuration, anchor types and spacings, location of cutouts for hardware, reinforcement, and finish.
- Indicate door elevations, internal reinforcement, closure method, and cut outs for glazing and/or louvers.

8. DELIVERY, STORAGE AND PROTECTION
- Deliver products to the site, store, handle, and protect under provisions of Section 01600.
- Protect doors and frames with resilient packaging sealed with heat shrunk plastic.
- Break seal on-site to permit ventilation.

9. ACCEPTABLE MANUFACTURERS
- Assa Abloy Ceco or Curries
- Steelcraft
- Windsor Republic Doors
- Substitutions: Under provisions of Section 01600.

10. DOORS AND FRAMES
- Accessibility: Comply with ANSI/ICC A117.1.
- Exterior Doors: SDI-100 Grade III Model 3.
- Interior Doors: SDI-100 Grade II Model 3.
- Combined Requirements: If a particular door and frame unit is indicated to comply with more than one type of requirement, comply with all the specified requirements for each type. Where two requirements conflict, comply with the most stringent.
- Exterior Frames: 16 gage thick material, core thickness.
- Interior Frames: 16 gage Thick material, core thickness.
- Top Closures for Outswinging Doors: Flush with top of faces and edges.

11. DOOR CORE
- Cardboard Honeycomb Core.
- Polyurethane Core.
- Polystyrene Foam Core: Polystyrene insulation with steel channel grid. Space vertical reinforcing 6 inches oc and extend full door height. Spot weld reinforcing to both face sheets at 5 inches oc maximum.
- Mineral Fiberboard Core.
- Steel Channel Grid.
- Vertical Steel Stiffeners.

12. ACCESSORIES
- Louvers: Roll formed steel material, inverted `V' blade, sightproof design.
- Silencers: Resilient rubber, fitted into drilled hole; 3 strike side of single door, 3 center mullion of pairs, and 2 head of pairs without center mullions.
- Glazing: As specified in Section 08800.

13. FABRICATION
- Fabricate frames as welded unit.
- Fabricate frames and doors with hardware reinforcement plates welded in place. Provide mortar guard boxes.
- Reinforce frames wider than 48 inches with roll formed steel channels fitted tightly into frame head, flush with top.
- Terminate door stops 6 inches above finished floor. Cut stop at 90 degree angle and close.
- Prepare frame for silencers. Provide three single rubber silencers for single doors and mullions of double doors on strike side, and two single silencers on frame head at double doors without mullions.
- Attach fire rated label to each frame and door unit. LABEL SHALL NOT BE COVERED OR PAINTED, ETC.
- Close top edge of exterior door flush with inverted steel channel closure. Seal joints watertight.
- Configure exterior frames with special profile to receive snap-in weatherstripping.
- Fabricate frames for masonry wall coursing with 4 inch head member.

14. FINISH
- Bituminous Coating: Asphalt emulsion or other high-build, water-resistant, resilient coating
- Primer: Zinc chromate type Rust-inhibiting, complying with ANSI A250.10.
- Factory Finish: Complying with ANSI A 250.3
- Manufacturer's standard coating.
- Baked enamel.
- Thermosetting epoxy.
- Color as Scheduled / Selected by Architect.
- Interior Units: 0.60 oz/sq ft galvanized.- Exterior Units: 2.0 oz/ sq ft galvanized.
- Primer: Baked on.
- Coat inside of frame profile with bituminous coating to a thickness of 1/16 inch . Coating may be shop or field applied.
- Coatings shall be continuous at top and bottom of doors, typical.

SECTION 092000
GYPSUM BOARD

1. Subcontractor shall provide all labor, materials, equipment and incidentals necessary and required for the completion of this work.

2. Scope of work shall include but not be limited to the following:
- Boarding and finishing of interior partitions.
- Boarding and finishing of interior ceilings.
- Boarding and finishing ceiling drops.
- Supply and install sound blanket insulation.

3. Gypsum Board work:
A. Provide and install gypsum wall panels such as USG Sheetrock brand SW or equal with tapered edges.
Include the following types as required:
- In general, board shall be 5/8" thick.
- Board for walls shall be 5/8" thick unless indicated otherwise.
- Board for ceilings shall be 5/8" thick unless indicated otherwise.
- Water resistant board shall be used in all toilet rooms, janitor closets and mechanical rooms. Coordinate with finishes to determine if water resistant gypsum board is to be used.
- ASTM C 1396, provide Level 4 for gypsum board surface except as noted on drawings.

All gypsum board shall be installed horizontally across the partition and wall framing except as otherwise approved.

All gypsum board shall be glued and screwed to metal studs. Screws shall be of the self tapping variety and shall be spaced at 12" o.c.

B. Provide and install corner beads, casing beads, expansion joints and trims as necessary, (wherever gypsum board abuts another material).
All trim beads and accessories shall be metal unless otherwise indicated.
Plastic trims shall be used only where the gypsum board terminates against a dissimilar metal or incompatible material.
ASTM C 1047.

All outside corner beads must be glued in addition to screwing or stapling to assure continuous securement.

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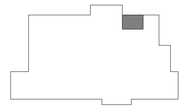
Consultants

Seal:

Project :
WSU ALL GENDER RESTROOMS

259 MACK AVE
DETROIT, MI 48201

Key Plan:



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ARR

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All trim beads and accessories shall be metal unless otherwise indicated.
Plastic trims shall be used only where the gypsum board terminates against a dissimilar metal or incompatible material.
ASTM C 1047.

All outside corner beads must be glued in addition to screwing or stapling to assure continuous securement.

C. All joints and interior corners shall be reinforced with USG Perf a Tape reinforcing tape prior to finishing with jointing compound.

D. All concealed portions of gypsum board shall be fire taped but need not be finished. All exposed portions of walls and drops located below the ceiling line shall be finished accordingly to receive paint or wall coverings as indicated.

E. Joint Treatment: Setting-type joint compound and drying -type joint compound.
- Embedding and First Coat: Setting-type joint compound. FIII (Second) Coat. Setting-type joint compound Finish (Third) Coat. Drying-type, all-purpose or topping compound.

F. Finishing Gypsum Board Assemblies
- Where Level 5 gypsum board finish is indicated, embed type in Joint compound and apply first, fill (second), and finish (thlrd) coats of joint compound over joints, angles, fastener heads, and accessorles± and apply a thin, uniform skim coat of joint compound over entire surface. For skim coat, use Joint compound specified for third coat, or a product specially formulated for this purpose and acceptable to gypsum board manufacturer. Touch up and sand between coats and after last coat as needed to produce a surface free of visual defects, tool marls, and ridges and ready for decoration.

- For Level 4 gypsum board finish, embed tape in joint compound and apply first, fill (second), and finish (third) coats of joint compound over joints, angles, fastner heads, and accessories. Touch up and sand between coats and after last coat as needed to produce a surface free of visual defects and ready for decoration.

4. Sound insulation shall consist of 3 1/2" minimum thickness unfaced fiberglass sound attenuating blanket insulation x appropriate widths for wall stud spacing. Sound insulation in partition walls shall extend to just above the ceiling line in all locations.

5. Supply and install acoustical sealant for all partition walls. Sealant shall be USG Acoustical Sealant or equal and shall be used at all partition perimeters. Apply two beads of acoustical sealant to all metal runners at floor and roof and any perimeter studs. The sealant shall be held back from the face of board.

6. Do all work in strict accordance with the manufacturer's printed instructions.

7. Provide one year written guarantee warranting against defects in material and workmanship.

8. The Subcontractor shall keep the premises and surrounding area free from the accumulation of waste materials or rubbish caused by operations under contract. The Subcontractor shall be responsible for the complete removal and disposal of his trade's debris.

SECTION 09300

CLAY TILE WORK

Refer to Division 1 - General Requirements.

1. Subcontractor shall provide all labor, materials, equipment, and incidentals necessary and required for the completion of this work.

2. Scope of work shall include the following:
- Protect adjoining finished areas from dirt and mess.
- Supply and install clay tile floors and base.
- Supply and install marble thresholds.

3. Related work by others specified elsewhere:
- Flat steel troweled and fine broomed slabs, see Section 03010.
- Backer boarded partitions for wall tile, see Section 09250.

4. Subcontractor shall SUBMIT LETTER OF INTENT stating that each item to be used shall be exactly as specified in the Color and Material Schedule. Subcontractor shall place order as soon as possible to assure availability on the job when needed.

5. Subcontractor shall examine the substrate conditions and work of other trades which affects the work under this section. Subcontractor shall report to the Contractor and Architect in writing all defects found therein. Contractor shall see that appropriate subcontractors make corrections.
Commencement of work signifies acceptance of the substrate conditions.

Subcontractor shall inspect and prepare all surfaces to receive tile, to assure proper conditions for tile installation. The existing concrete shall be thoroughly cleaned and prepared. Patch and top floors as necessary. The patching and topping materials shall be compatible with the dry set mortar. Floors shall be acid etched as required.

6. Marble threshold shall be 3/4" x 4" bevelled in color to complement the floor tile. Submit color sample to Architect for approval prior to installation.

7. Clay tile floors and wall base shall be: See Finish Schedule for manufacturer, size and color.

8. Supply and install all necessary trim pieces (coves, bullnoses, inside and outside corners) for a complete and proper installation.

9. The floor tile shall be installed in accordance with the recommendations of the Tile Council of America, Inc., Handbook for Ceramic Tile Installation (latest edition) unless otherwise noted.
over interior concrete slab on grade: TCA Design # F113

10. SETTING MATERIALS:
MORTAR for floors shall be a LATEX-PORTLAND CEMENT MORTAR conforming with ANSI 118.4 prepared under Tile Council Formula for thin-set floor tile installation and shall be mixed with clean potable water. The bond coat shall be a minimum 3/32" thick.

11. GROUTING MATERIALS:
GROUT floor tile joints with a LATEX-PORTLAND CEMENT GROUT conforming with ANSI A118.6. Floor type is generally gray. (See Color and Material Schedule)

12. Follow manufacturer's printed instructions.

13. Use single-source suppliers for mixing components; especially when additives are involved.

14. Protect finish floor until occupancy with heavy rosin paper.

15. Clean tile upon completion. All tile shall be thoroughly scrubbed with Hillyard Chemical Company, "Super Shine-All". The floors shall be buffed to luster after becoming completely dry.

16. Provide one year written warranty against defects in materials and workmanship.

17. The Subcontractor shall keep the premises and surrounding area free from the accumulation of waste materials or rubbish caused by operations under contract. The Subcontractor shall be responsible for the complete removal and disposal of his trade's debris.
Subcontractor shall protect adjoining finish surfaces from damage and shall repair any resultant damage.

SECTION 09900
PAINTING AND WALLCOVERINGS

1. Subcontractor shall provide all labor, materials, equipment and incidentals necessary and required for the completion of this work.

2. Scope of work shall include but not be limited to the following:
- Submit Letter of Intent or drawdown samples.
- Provide specified finish on exposed surfaces including, but not limited to the following;
- Prime coated interior duct surfaces visible behind grilles, exposed ductwork, louvers and grilles.
- Electrical panel box covers and surface raceways (over factory finish), conduits and boxes.
- Hollow metal frames, prime painted fire extinguisher cabinets, access panels, prime painted hardware, metal supports for counters and exposed miscellaneous metals,
- Spot-spackling, caulking and sealing required for finishing.
- Do all caulking, sealing and spot spackling as required for finishing.
- Finish wood doors and frames and casings.
- Finish wood borrow lite frames and casings.
- Finish mouldings and trims.
- Paint gypsum walls and ceilings where indicated.
- Seal gypsum wall board to receive wall covering.
- Paint electrical panels.
- Supply and install wall covering (If specified) with prime painting preparation work under wall covering.

3. Products:
- Primer - Sherwin Williams ProMar 200 Zero VOC Interior Latex Primer.
- Paint - Sherwin Williams ProMar 200 Zero VOC Interior Latex Paint.

4. All surfaces scheduled to receive paint or wallcoverings shall be cleaned and properly prepared in accordance with manufacturer's instructions.
Fill nail holes with non-shrink putty colored to match stain.
Caulk excessive open joints between trims and wall surfaces.

5. Subcontractor shall examine the substrate conditions and work of other trades which affects the work under this section. Subcontractor shall report to the Contractor and Architect in writing all defects found therein. Contractor shall see that appropriate subcontractors make corrections.
- Apply paint products only when temperature and humidity are within range recommended by paint product manufacturers.
- Comply with paint manufacturer's recommendations for surface preparation.
- Prep wall according to requirements for MPI system INT 9.2A Latex, per primer manufacturer's written instructions.
- Ensure that joint compound is fully cured.
- Sand Joint compound smooth and remove dust.

6. Commencement of work under this section shall be considered as an acceptance of such work of other trades.

7. Painting shall be of the very best workmanship as follows:
- Interior ferrous metals- 1 ct primer, 1 ct enamel undercoat and 1 ct enamel Eggshell.(Eggshell)
- Stain millwork-: 1 ct stain, 1 ct sealer, 1 ct spirit reduced gloss varnish, 1 ct satin varnish, (sand between sealer and varnish coats).
- Stained wood cabinetry- (two-tone stain where indicated) 1 ct stain, 1 ct sealer, 1 ct spirit reduced gloss varnish, 2 cts
satin varnish, (sand between sealer and varnish coats).
- Paint millwork- 1 ct enamel undercoat, 2 cts interior alkyd eggshell enamel. (Eggshell)
- Paint gyp board- 2 ct latex primer, 2 cts alkyd eggshell enamel. (Eggshell)
- Paint gyp board ceilings- 2 ct latex primer, 2 cts alkyd eggshell enamel. (FLAT)

- Institutional Low Odor/VOC: MPI INT 9.2M
a. Prime Coats: Inst. Low Odor/VOC Primer, MPI #149
b. Intermediate Coat and Top Coat (one coat each) as follows:
1) Where Flat finish is indicated: Institutional Low Odor/VOC (G-1), MPI #143.
2) Where Eggshell finish is indicated: Institutional Low Odor/VOC (G-3), MPI #145.

The number of coats indicated above shall be considered as minimum. Apply additional coats where required for adequate coverage or to correct defects. Dry film thickness as recommended by manufacturer.

8. For the purpose describing "Finish appearance" the following general values shall be used:

Description Light Reflectance Value Remarks

Flat 0-5 No sheen. Hides flaws but lacks washability and durability because pigment is at the surface.
- Ceilings intermediate and top Coats.

Eggshell 6-15 No sheen. Cannot tell difference from Flat but product has improved washability and durability.
- Walls intermediate and top Coats.

Roll or spray. Do not brush.

9. All paint coats shall be tinted to approximate shade of the final coat. Each successive coat shall be slightly darker than the preceding coat. All coats shall be thoroughly dry before applying succeeding coat.

10. Colors shall be as selected by Architect and paint manufacturers may be Sherwin-Williams or as approved by Owner.

11. Subcontractor shall submit Letter of Intent stating that of each item to be used shall be exactly as specified in the Color and Material Schedule. If a manufacturer other than the one specified in the Color and Material Schedule is intended to be used, the Subcontractor shall submit paint drawdown samples for each color selection for Architects approval.

12. Protect work of other trades from damage of painting and staining and correct any damage by cleaning, repairing, or replacing as acceptable to the Architect. Before painting, remove hardware, accessories and light fixtures, etc., and replace upon completion. Finish top, bottom and edges of doors same as balance of door after fitting. Remove doors, if necessary, to finish bottom edge.

13. Store all materials in a single location and keep neat and clean. Remove oily rags every night to avoid fire.

14. All vinyl wallcovering shall be a minimum Type 1 Light Duty material and shall meet the standards of ASTM E 84-87 with a flame spread rating of 25 or less. Refer to Color and Material Schedule for manufacturers, pattern and color.

15. Subcontractor shall submit samples of each item specified for Architect's approval prior to ordering.

16. Provide one year written guarantee warranting against defects in materials and workmanship.

17. The Subcontractor shall keep the premises and surrounding area free from the accumulation of waste materials or rubbish caused by operations under contract. The Subcontractor shall be responsible for the complete removal and disposal of his trade's debris.

SECTION 096500

CONTRACT FLOORCOVERINGS

Refer to Division 1 - General Requirements.

1. Subcontractor shall provide all labor, materials, equipment and incidentals necessary and required for the completion of this work.

2. Scope of work shall include but not be limited to the following:
- Submit samples and manufacturer's installation and maintenance manuals.
- Supply and install resilient flooring.
- Supply and install reducers and transition strips.
- Supply and install wall base.
- Supply and install Broadloom Carpet.
- Supply and install vinyl base in rooms to be carpeted.

3. Related work by others specified elsewhere:
- Flat steel troweled and fine broomed slabs, see Section 03010.

4. Subcontractor shall submit samples of each item specified in this division for approval prior to ordering. Submit four copies of the manufacturer's printed installation and maintenance manuals.

5. Subcontractor shall examine the substrate conditions and work of other trades which affects the work under this section. Subcontractor shall report to the Contractor and Architect in writing all defects found therein. Contractor shall see that appropriate subcontractors make corrections.

6. Commencement of work under this section shall be considered as an acceptance of such work of other trades.

7. Subcontractor shall prepare all surfaces to receive resilient flooring, to assure proper conditions for its installation. New concrete shall be thoroughly cured and sufficiently dry to achieve a bond with adhesive in accordance with the flooring manufacturer's installation instructions. The existing concrete shall be thoroughly cleaned and prepared. Patch, seal, prime and level all floors as necessary. All materials shall be supplied from a single source and be compatible with the resilient floorings. Patching and leveling compounds shall be latex based. Concrete and other floor primers shall be a non-staining type. Adhesives shall be waterproof, stabilized type to suit material and substrate conditions.

SECTION 096500

CONTRACT FLOORCOVERINGS

8. Supply and install wall base as indicated.
Wall base shall be: (Refer to Color and Materials Schedule for manufacturer, size, and color.)

9. Supply and install reducers and transition strips as indicated.
Reducers and Transition strips shall be:
(Refer to Color and Materials Schedule for manufacturer, style and color).

10. Resilient Flooring:
A. Refer to Color and Material Schedule for manufacturer, size and color.

B. Assure proper temperatures and broom clean, vacuum, and brush clean all foreign materials from the subfloor prior to commencing installation.

C. Install resilient tile and base in accordance with the standards of the Resilient Floor Covering Institute (RFCI) and the manufacturer's printed installation instructions. Center floor covering transitions where indicated on Drawings or centered under doors.

D. Follow the manufacturer's printed instructions and perform the initial maintenance after installation and preparation for Commercial use.

11. Broadloom Carpeting:
A. See Color and Material Schedule for manufacturer, size and color.

B. All bidding shall be based upon seam layout as determined by the Architect. (See Room Finishes Floor Plan.)

C. Subcontractor shall state in his proposal the carpet yardage included. Adequate yardage shall be included to provide a complete installation with a minimum number of end seams.

D. Carpet without cushion pad over concrete floors shall be as installed as a direct-glue application.
Sections of carpet shall be fit into each space prior to application of adhesive. Trim edges and butt cuts with seaming cement.
Apply adhesive uniformly to the substrate in accordance with the manufacturer's instructions. Butt carpet edges tightly together to form seams without gaps. Roll entire carpet lightly to eliminate air pockets and ensure uniform bond. Remove any adhesive promptly from face of carpet by method which will not damage carpet face.

12. Comply with manufacturer's recommendations for seam locations and direction of carpet; maintain uniformity of carpet direction and lay of pile. Follow seaming diagrams as indicated. At doors, center seams under doors; do not place seams in traffic direction at doorway.

13. If the carpet nap is laying in the wrong direction at any carpet seams and it is determined to be in the factory roll and not because the carpet was laid in an improper direction, the carpet subcontractor shall be responsible for steam cleaning the carpet to release the nap so it lays in the proper direction.

14. Provide one year written guarantee warranting against defects in material and workmanship.

15. The Subcontractor shall keep the premises and surrounding area free from the accumulation of waste materials or rubbish caused by operations under contract. The Subcontractor shall be responsible for the complete removal and disposal of his trade's debris.

SECTION 10800

TOILET ROOM ACCESSORIES

1. Subcontractor shall provide all labor, materials, equipment and incidentals necessary and required for the completion of this work.

2. Scope of work shall include but not be limited to the following:
- Supply all toilet accessories.

3. Related work by others specified elsewhere:
- Mirrors by others, see Section 08712
- Installation by others, see Section 06100.

4. Exchange information with trades installing adjacent work so that work will be perfectly coordinated.

5. Subcontractor shall submit four sets of shop drawings to the Architect for approval prior to ordering.

6. Subcontractor shall provide one year written guarantee warranting against defects in material and workmanship.

7. Provide and install surface mounted toilet room accessories as follows; Bobrick, Bradley or equal to:

In Men:
a. (1) Bobrick B-3900 recessed towel dispenser/disposal.
b. (1) Bobrick B-6806 x 36" grab bar.
c. (1) Bobrick B-6806 x 48" grab bar.
d. (2) Bobrick B-685 toilet paper holder.
e. (1) Mirror size: width of counter x 33".

In Women:
a. (1) Bobrick B-3900 recessed towel dispenser/disposal.
b. (1) Bobrick B-6806 x 36" grab bar.
c. (1) Bobrick B-6806 x 48" grab bar.
d. (2) Bobrick B-685 toilet paper holder.
e. (1) Mirror size: width of counter x 33".

8. Additional items to be provided where indicated on Drawings are as follows:
a. Wall mounted sanitary napkin unit.
b. Wall mounted sanitary napkin disposal.
c. Hand dryer unit.
d. Clothes hook.
e. Shelf unit.
f. Soap dispenser.

9. All selections to be approved by Owner.

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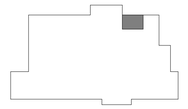
Key Plan:



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PROJECT SPECIFICATION

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ABBREVIATIONS

ACCU	AIR CONDITIONING CONDENSING UNIT
AD	ACCESS DOOR
AFF	ABOVE FINISHED FLOOR
AHU	AIR HANDLING UNIT
AP	ACCESS PANEL
ASR	AUTOMATIC SPRINKLER RISER
BTU	BRITISH THERMAL UNIT
CC	COOLING COIL
CF	CENTRIFUGAL FAN
CFM	CUBIC FEET PER MINUTE
CI	CAST IRON
CO	CLEAN OUT
COND	CONDENSATE
CONT	CONTINUATION
CUH	CABINET UNIT HEATER
CW	COLD WATER
CWS	CHILLED WATER SUPPLY
CWR	CHILLED WATER RETURN
Db	DRY BULB TEMPERATURE, °F
dB	DECIBELS
DDC	DIRECT DIGITAL CONTROL
DET	DETAIL
DIA	DIAMETER
DN.	DOWN
DS	DOWNSPOUT
DWG.	DRAWING
EA	EXHAUST AIR
ECUH	ELECTRIC CABINET UNIT HEATER
EF	EXHAUST FAN
ELEV.	ELEVATION
ESP	EXTERNAL STATIC PRESSURE
EUH	ELECTRIC UNIT HEATER
EX.	EXISTING
EXH	EXHAUST
EXIST	EXISTING

F	FAHRENHEIT
FD	FLOOR DRAIN
FLR	FLOOR
FPM	FEET PER MINUTE
FSW	FLOW SWITCH
FS	FLOOR SINK
FT.	FEET
GPM	GALLONS PER MINUTE
HB	HOSE BIBB
HO	HUB OUTLET
HP	HORSEPOWER
HW	HOT WATER (POTABLE)
HWR	HOT WATER RETURN (POTABLE)
IN	INCHES
INL	INLET
INV	INVERT
LAT	LEAVING AIR TEMPERATURE
LAV	LAVATORY
LBS/HR	POUNDS PER HOUR
LWT	LEAVING WATER TEMPERATURE
MAX.	MAXIMUM
MBH	1000 BTU/HR
MECH	MECHANICAL
MIN.	MINIMUM
MISC	MISCELLANEOUS
NC	NORMALLY CLOSED
NIC	NOT IN CONTRACT
NO	NORMALLY OPEN
NOM.	NOMINAL
NFWH	NON FREEZE WALL HYDRANT
OA	OUTSIDE AIR
OF	OVERFLOW
OFD	OVERFLOW DRAIN

P	PUMP
PD	PRESSURE DROP (FEET OF WATER)
PSI	POUNDS PER SQUARE INCH
PRV	PRESSURE REDUCING VALVE
RA	RETURN AIR
RD/SP	ROOF DRAIN/STAND PIPE
BAL.	BALANCE
RET	RETURN
RF	RETURN FAN
RH	REHEAT COIL
Rh	RELATIVE HUMIDITY
RPM	REVOLUTIONS PER MINUTE
RS	ROOF SUMP
RC	RAIN CONDUCTOR
REL	RELOCATED
REB	REBALANCE
SA	SUPPLY AIR
SAN	SANITARY WASTE
SD	SMOKE DETECTOR
SF	SUPPLY FAN
SG	SPECIFIC GRAVITY
SP	STATIC PRESSURE (INCHES OF WATER)
SP	STAND PIPE
SPR	SPRINKLER
SPR/STP	SPRINKLER STANDPIPE
SPS	STATIC PRESSURE SENSOR
STK	STACK
TP	TOTAL PRESSURE
TYP	TYPICAL
UH	UNIT HEATER
UON	UNLESS OTHERWISE NOTED
V	VALVE
VTR	VENT THRU ROOF
W	WASTE
WG	WATER GAUGE
WH	WALL HYDRANT

PLUMBING, PIPING & FIRE PROTECTION

- ITEM TO BE REMOVED
- EXISTING WORK
- NEW WORK
- ISOLATION VALVE
- CHECK VALVE
- WATER FLOW SWITCH
- VALVE IN RISER
- STRAINER
- PIPE ANCHOR
- EXPANSION JOINT – SLIDING
- ALIGNMENT GUIDE
- UNION
- SPRINKLER HEAD (PENDANT)
- SPRINKLER HEAD (UPRIGHT)
- CO CLEANOUT
- FCO CLEANOUT FLOOR
- WCO CLEANOUT WALL
- GCO CLEANOUT GRADE
- FLOOR DRAIN (FD)
- REDUCER – CONCENTRIC
- PRESSURE GAUGE WITH COCK
- THERMOMETER
- CAP OR PLUG
- ELBOW – TURNED DOWN
- ELBOW – TURNED UP
- TEE OUTLET – DOWN
- TEE OUTLET – UP
- DIRECTION OF FLOW
- BALANCING VALVE
- TWO-WAY MODULATING CONTROL VALVE
- THREE-WAY MODULATING CONTROL VALVE

- MANUAL AIR VENT
- TEST PLUG (PRESSURE/TEMPERATURE)
- NEW CONNECTION
- COLD WATER PIPING
- HOT WATER PIPING
- HOT WATER RETURN PIPING
- VENT PIPING
- SAN SANITARY LINE (UNDERGROUND)
- SAN SANITARY LINE (AVOVE GROUND)
- ST STORM LINE
- STM STEAM
- CR CONDESATE RETURN
- OXY OXYGEN
- VAC VACUUM
- MA MEDICAL AIR
- N2 NITROGEN
- N2O NITROUS OXIDE
- G NATURAL GAS
- F FIRE SPRINKLER PIPE (FS)
- HHWS HEATING HOT WATER SUPPLY
- HHWR HEATING HOT WATER RETURN
- CHWS CHILLED WATER SUPPLY
- CHWR CHILLED HOT WATER RETURN

MECHANICAL SHEET INDEX

GENERAL HVAC NOTES:

THE FOLLOWING NOTES APPLY TO ALL HVAC DRAWINGS, EXCEPT WHERE OTHERWISE INDICATED.

1. WHEREVER VOLUME DAMPERS OCCUR ABOVE CEILINGS WITHOUT REMOVABLE TILE AND AN ACCESS PANEL IS NOT FURNISHED, PROVIDE AN EXPOSED DAMPER REGULATOR TO ALLOW DAMPER ADJUSTMENT FROM BELOW CEILING. UNIT TO BE EQUAL TO VENTLOCK No. 666 IN 1/2"x3/8" SIZE.
2. ALL DIMMENSION SHOWN FOR DUCTWORK ARE NET INSIDE DIMENSIONS.
3. DIFFUSER AND REGISTER LOCATIONS SHALL BE COORDINATED WITH ARCHITECTURAL REFLECTED CEILING PLAN.
4. THOUGH SOME OFFSETS & TRANSITIONS ARE SHOWN IN PIPING AND SHEET METAL TO HELP INDICATE THE PHYSICAL RELATIONSHIP BETWEEN THEM. IT IS NOT THE INTENT OF THE DRAWINGS TO SHOW ALL PIPING AND SHEET METAL OFFSET & TRANSITIONS REQUIRED. THE CONTRACTOR SHALL FULLY COORDINATE THE MECHANICAL WORK WITHIN ITSELF AND WITH THE WORK OF ALL TRADES TO PROVIDE COMPLETE AND OPERABLE SYSTEMS WITHOUT INTERFERENCES.
5. DUCT PRESSURE CONSTRUCTION CLASSIFICATION SHALL BE AS SPECIFIED.
6. ALL ROUND RUNOUTS AND DROPS TO DIFFUSERS SHALL BE SAME NOMINAL SIZE AS INDICATED ON THE DRAWINGS.
7. ALL PIPING AND DUCTS IN FINISHED ROOMS OR SPACES SHALL BE CONCEALED IN FURRED CHASE OR SUSPENDED CEILING.
8. ACCESS PANELS AND DOORS ARE REQUIRED THROUGH BUILDING CONSTRUCTION ASSEMBLIES SUCH AS WALLS, CEILING, PARTITONS AND FLOORS TO SERVICE AND MAINTAIN DAMPERS, CONTROL MOTORS, REGULATORS, VALVES, FLEXIBLE DUCT CONNECTIONS AND OTHER ITEMS OR DEVICES INCORPORATED IN MECHANICAL WORK. SUCH PANELS AND DOORS SHALL BE PROVIDED AND INSTALLED UNDER THE ARCHITECTURAL SPECIFICATIONS. MECHANICAL CONTRACTOR SHALL COORDINATE LOCATION OF ACESS DOORS AND PANELS AND VERIFY THE EXACT QUANTITY, SIZE, FIRE-RATING AND LOCATION AFTER THE SYSTEMS AND EQUIPMENT REQUIRING ACCESS HAVE BEEN INSTALLED AND PRIOR TO THE CLOSURE OF THE AFFECTED CEILING AND BUILDING ASSEMBLIES. MINIMUM ACCESS PANEL AND DOOR SIZE SHALL BE 24 INCHES BY 18 INCHES UNLESS OTHERWISE NOTED.
9. ALL DUCTWORK PENETRATIONS THROUGH FIRE-RATED WALLS AND FLOORS SHALL BE PROVIDED WITH FIRE DAMPERS AND ACCESS DOOR.
10. A 24/7 CRAC UNIT MUST BE PROVIDED FOR THE LAN/SERVER ROOM #410 & TR1/RWC #320, BUT MUST NOT BE ABOVE THE SPACE. IT MAY BE INSTALLED OVER ANOTHER ROOM OR IN A HALLWAY (NOT THE HSDN ROOM #409). THIS IS ALSO TO AVOID LEAKS AND DAMAGE TO IT & SECURITY EQUIPMENT. IF APPLICABLE, THERE MUST ALSO NOT BE ANY ROOF PENETRATIONS DIRECTLY ABOVE THE LAN/SERVER ROOM & TR1/RWC OR NEAR THE PERIMETER TO AVOID WATER LEAKS AS WELL. SEE OIT COMPUTER & TELEPHONE ROOM STANDARD AND RELATED DOCUMENTS.

PLUMBING GENERAL NOTES:

1. FOR PIPE SIZES TO INDIVIDUAL PLUMBING FIXTURES AND VARIOUS PIECES OF EQUIPMENT REFER TO SPECIFICATIONS.
2. IN ALL WASTE DRAINAGE PIPING THE CONTRACTOR SHALL FURNISH AND INSTALL CLEANOUTS (IN ADDITION TO THE CLEANOUTS INDICATED ON DRAWINGS AS REQUIRED BY THE GOVERNING PLUMBING CODE).
3. REFER TO HVAC GENERAL NOTE-4
4. FOR ADDITION NOTES COMMON TO PLUMBING REFER TO HVAC NOTES.

FIRE PROTECTION GENERAL NOTES:

1. AREA UNDER RENOVATION IS TO BE FULLY SPRINKLERED. SPRINKLER SYSTEM DESIGN AND LAYOUT TO BE IN COMPLIANCE WITH NFPA 13. REFER TO SPECIFICATION FOR ADDITIONAL INFORMATION. ALL UNFINISHED/UNOCCUPIED AREAS SHALL BE TREATED AS STORAGE AREAS.
2. REMOVE ALL AUTOMATIC SPRINKLER HEADS PRESENTLY INSTALLED IN THE AREA OF RENOVATION AND TURN OVER TO THE OWNER. FIELD VERIFY LOCATION OF EXISTING HEADS AND SPRINKLER PIPING LOCATION PRIOR TO DESIGN & INSTALLATION. CONNECT NEW SPRINKLER HEADS TO EXISITNG MAINS IF FEASABLE, PROVIDE NEW MAIN VALVES, FLOW SWITCHES AS REQUIRED. WORK SHALL BE PHASED SO THAT FIRE PROTECTION SERVICE WILL NOT BE INTERRUPTED FOR THE ADJACENT SPACES DURING ALTERATIONS.
3. DO NOT SCALE THE PLUMBING AND FIRE PROTECTION DRAWINGS FOR LOCATION OF CEILING MOUNTED SPRINKLER HEADS. ALL CEILING MOUNTED HEADS SHALL BE COORDINATED WITH AND LOCATED AS SHOWN ON REFLECTED ARCHITECTURAL CEILING PLANS, UNLESS OTHERWISE NOTED.
4. ALL SPRINKLERS LOCATED IN LAY-IN CEILINGS SHALL BE CENTERED IN THE MIDDLE OF THE CEILING TILES UNLESS OTHERWISE INDICATED ON THE ARCHITECTURAL SERIES DRAWINGS.
5. THOUGH SOME FIRE PROTECTION MAINS ARE SHOWN ON THE DRAWINGS, ADDITIONAL PIPING ARE EXISTING AND REQUIRED TO BE REMOVED & TRASHED. FIELD VERIFY LOCATION PRIOR TO START OF DEMOLITION.

HVAC LEGEND & SYMBOLS

- 18x6 — INDICATES RECTANGULAR DUCT WITH DUCT SIZE 18 INCHES WIDE (IN PLANE OF DRAWING) AND 6 INCHES DEEP. SIZE PERTAINS TO THE ENTIRE RUN OF DUCT UNLESS OTHERWISE NOTED.
- 22x14ø — INDICATES FLAT OVAL DUCT WITH DUCT SIZE 22 INCHES WIDE (IN PLANE OF DRAWING) AND 14 INCHES DEEP. SIZE PERTAINS TO THE ENTIRE RUN OF DUCT UNLESS OTHERWISE NOTED.
- 6"ø — INDICATES ROUND DUCT WITH DUCT SIZE OF 6 INCHES IN DIAMETER. SIZE PERTAINS TO THE ENTIRE RUN OF DUCT (FROM DUCT ORIGIN AT TAP TO END OF DUCT) UNLESS OTHERWISE NOTED.
- VANE TURN ELBOW & AIR SPLIT TYPE DUCT TAKE-OFF
- RISE — INCLINED RISE IN RESPECT TO AIR FLOW
- DN. — INCLINED DROP IN RESPECT TO AIR FLOW
- VANED ELBOW (PROVIDE ALL SQUARE OR RECTANGULAR ELBOWS WITH VANES)
- VANED ELBOW (SHORT RADIUS)
- INDICATES FLEXIBLE DUCT (RUNOUT) OF SIZE AS SCHEDULED OR SHOWN. LENGTH SHALL NOT EXCEED 5 FT.
- DUCT TURNING UP
- DUCT TURNING DOWN
- VERTICAL FIRE DAMPER
- HORIZONTAL FIRE DAMPER
- POINT OF NEW CONNECTION
- SD DUCT SMOKE DETECTOR
- ITEM TO BE REMOVED
- SUPPLY AIR DIFFUSER
- RETURN AIR GRILLE
- LINEAR SUPPLY AIR DIFFUSER
- SUPPLY AIR GRILLE

- MD VOLUME CONTROL DAMPER (MANUAL)
- FLEXIBLE CONNECTION OR FLEXIBLE DUCT CONNECTOR
- M MOTORIZED DAMPER
- C COMBINATION FIRE AND SMOKE DAMPER
- RF RF SHEILDING DAMPER
- T THERMOSTAT
- S TEMPERATURE SENSOR

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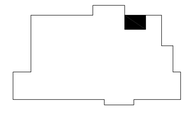
Key Plan:



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MECHANICAL SYMBOLS LIST, INDEX AND NOTES

Project No. :
2022.053

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M000

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MECHANICAL SPECIFICATION

MECHANICAL MATERIALS, METHODS AND EXECUTION WORK INCLUDED:

WORK INCLUDED:

A. FURNISH ALL LABOR AND MATERIAL, APPLIANCES, EQUIPMENT AND SUPERVISION TO PUT IN PLACE A COMPLETE AND FUNCTIONING MECHANICAL INSTALLATION READY FOR OPERATION, AS SPECIFIED HEREIN AND AS INDICATED ON THE DRAWINGS. SYSTEMS SHALL INCLUDE BUT NOT NECESSARILY LIMITED TO THE FOLLOWING MAJOR EQUIPMENT OR OPERATIONS:
1. PLUMBING.
2. HEATING, VENTILATING AND AIR CONDITIONING.
3. INSULATION.
4. FIRE PROTECTION.
5. TEMPERATURE CONTROLS.

DEFINITIONS:
A. "PROVIDE": TO FURNISH AND COMPLETELY INSTALL SPECIFIED PRODUCTS AND INCIDENTALS, WHETHER SPECIFICALLY INDICATED OR NOT, NECESSARY FOR A COMPLETE, FUNCTIONAL INSTALLATION. INCLUDES ALL GENERAL AND SPECIALIZED LABOR, EQUIPMENT AND TOOLS NECESSARY TO COMPLETE THE INSTALLATION.
B. "PIPING": A COMPLETE SYSTEM, INCLUDING PIPE, TUBING, FITTINGS, HANGERS, SUPPORTS, VALVES, AND ALL SPECIALTIES THAT COMPRISE A FULLY FUNCTIONAL PIPING SYSTEM, WHETHER SPECIFICALLY INDICATED OR NOT.

CODES, ORDINANCES, AND STANDARDS:
A. ALL WORK SHALL CONFORM IN ALL RESPECTS TO THE REQUIREMENTS OF THE LATEST ADOPTED FEDERAL, STATE AND LOCAL CODES, ORDINANCES, AND STANDARDS HAVING JURISDICTION OVER THE WORK.
B. WHERE CONTRACT DOCUMENT REQUIREMENTS EXCEED THE REQUIREMENTS OF THE REFERENCED CODES, ORDINANCES, AND STANDARDS, THE CONTRACT DOCUMENT REQUIREMENTS SHALL BE TAKEN AS MINIMUM.
C. ALL EQUIPMENT CONTAINING ELECTRICAL WIRING AND/OR ELECTRICAL COMPONENTS SHALL HAVE A UNDERWRITERS LABORATORIES (UL) "PACKAGE" LABEL.
D. ALL GAS FIRED EQUIPMENT SHALL HAVE THE AMERICAN GAS ASSOCIATION (AGA) LABEL.

PERMITS, FEES AND INSPECTIONS:
A. SECURE ALL NECESSARY PERMITS, CONNECTION FEES, TAD FEES, LICENSES AND APPROVALS AND ARRANGE FOR ALL INSPECTIONS, INCLUDE ALL RELATED COSTS.
B. FURNISH CERTIFICATES OF FINAL INSPECTION AND APPROVAL UPON COMPLETION OF PROJECT.

EXAMINATION OF SITE:
A. VISIT PROJECT SITE AND BECOME FULLY COGNIZANT OF ALL EXISTING ARCHITECTURAL, MECHANICAL, ELECTRICAL, STRUCTURAL AND SITE CONDITIONS, OR EXISTING CODE VIOLATIONS WHICH MAY AFFECT THE WORK.
B. NOTIFY ARCHITECT PRIOR TO SUBMITTING BID IF REVISIONS TO CONTRACT DOCUMENTS ARE NECESSARY TO RECTIFY ANY OF THE AFOREMENTIONED EXISTING CONDITIONS.
C. NO "EXTRAS" TO CONTRACT PRICE WILL BE ALLOWED AFTER RECEIVING BID IN ORDER TO RECTIFY EXISTING CONDITIONS IN ORDER TO MEET THE DESIGN INTENT OF THE CONTRACT DOCUMENTS OR SATISFY CODE REQUIREMENTS.

COORDINATION WITH OTHER TRADES:
A. COORDINATE ALL WORK BEFORE AND DURING CONSTRUCTION WITH ALL OTHER AFFECTED TRADES.
B. WHERE INTERFERENCES DEVELOP, NOTIFY ARCHITECT FOR RESOLUTION OF CONFLICT.
C. RELOCATION OF CONFLICTING INSTALLED WORK, DUE TO LACK OF COORDINATION, OR POOR COORDINATION WILL NOT BE CONSIDERED EXTRA WORK.

APPROVED MANUFACTURERS:
A. USE ONLY MATERIALS SPECIFICALLY INDICATED IN CONTRACT DOCUMENTS, OR COMPARABLE MATERIALS BY OTHER LISTED ACCEPTABLE MANUFACTURERS. NOTE THAT "ACCEPTABLE MANUFACTURER" DOES NOT CONSTRUE AUTOMATIC APPROVAL OF SPECIFIC MATERIALS BY ONE OR ALL OF THE LISTED ACCEPTABLE MANUFACTURERS. ARCHITECT AND/OR ENGINEER OF RECORD RESERVES THE RIGHT OF FINAL DETERMINATION OF ACCEPTABILITY OF EACH ITEM.

SHOP DRAWINGS:
A. SUBMIT COMPLETE SHOP DRAWINGS FOR ALL MATERIALS AND EQUIPMENT INTENDED FOR USE ON THIS PROJECT.
B. SHOP DRAWINGS SHALL CLEARLY INDICATE ALL PHYSICAL, PERFORMANCE AND ELECTRICAL CHARACTERISTICS FOR ALL MATERIALS AND EQUIPMENT.
C. SUBMIT ELECTRONIC COPY OF ALL SHOP DRAWINGS FOR REVIEW.
D. NO WORK IS TO BE INSTALLED PRIOR TO RETURN OF ARCHITECT REVIEWED SHOP DRAWINGS.

OPERATION AND MAINTENANCE MANUALS:
A. UPON COMPLETION OF PROJECT, SUBMIT TWO (2) COMPLETE BOUND SETS OF OPERATING AND MAINTENANCE MANUALS FOR ALL EQUIPMENT AND SYSTEMS INSTALLED IN THIS PROJECT.
B. MANUALS SHALL INCLUDE GUARANTEE(S), COMPLETE OPERATING INSTRUCTIONS, REPAIR PARTS LIST, PREVENTATIVE MAINTENANCE SCHEDULE, BELT AND FILTER SCHEDULE, AND LIST OF ALL SUBCONTRACTORS ASSOCIATED WITH THE WORK, INCLUDING TELEPHONE NUMBER AND CONTACT PERSON.

OPERATING AND MAINTENANCE INSTRUCTIONS:
A. PRIOR TO FINAL ACCEPTANCE BY OWNER, PROVIDE ALL PERSONNEL, EQUIPMENT, AND LABOR AS NECESSARY TO INSTRUCT OWNER'S PERSONNEL IN PROPER OPERATION AND MAINTENANCE OF THE SYSTEMS AND EQUIPMENT INSTALLED IN THIS PROJECT. PROVIDE INSTRUCTIONAL SESSION DURING TIME PERIOD AGREED TO WITH OWNER.

CUTTING AND PATCHING:
A. ALL CUTTING AND PATCHING SHALL BE PROVIDED BY THE GENERAL TRADES UNDER THE DIRECTION OF THE MECHANICAL TRADES. COST WILL BE PAID BY THE MECHANICAL TRADE REQUESTING THE WORK.
B. RESTORED SURFACES SHALL BE OF SAME MATERIALS AND QUALITY AS ADJACENT SURFACES, AND SHALL MATCH SURROUNDING SURFACES, AND/OR BE RESTORED TO PRE-CONSTRUCTION CONDITION.

PROTECTION OF EXISTING SERVICES:
A. PROTECT FROM ALL DAMAGE, EXISTING SERVICES (I.E., GAS, WATER, ELECTRICAL, ETC.), ENCOUNTERED IN THE WORK, NOT SPECIFICALLY INDICATED TO BE DEMOLISHED. INCLUDE ALL RELATED COSTS.
B. REPAIR AND/OR REPLACE EXISTING ACTIVE SERVICES INTENDED TO REMAIN IN SERVICE, BUT DAMAGED DURING THE COURSE OF CONSTRUCTION. ABSORB ALL RELATED COSTS. NO "EXTRAS" WILL BE PAID TO RESTORE EXISTING ACTIVE SERVICES DAMAGED DURING CONSTRUCTION.
C. ARCHITECT WILL DETERMINE COURSE OF ACTION WHEN EXISTING INACTIVE SERVICES ARE DAMAGED DURING COURSE OF CONSTRUCTION. ABSORB ALL COSTS RELATIVE TO ADDITIONAL DEMOLITION, TERMINATION, RELOCATION AND/OR RESTORATION OF EXISTING, DAMAGED INACTIVE SERVICES AS DIRECTED BY ARCHITECT.

ELECTRICAL WORK:
A. PROVIDE ALL ELECTRICAL WORK ASSOCIATED WITH, AND NECESSARY TO COMPLETE THIS PROJECT, WHICH IS NOT INCLUDED AS ELECTRICAL TRADES WORK.
B. PROVIDE ALL ELECTRICAL WORK, AS APPLICABLE, IN ACCORDANCE WITH DIVISION 16 REQUIREMENTS.
C. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION (WITH ELECTRICAL TRADES) OF CORRECT VOLTAGES FOR ALL MECHANICAL EQUIPMENT. IN CASE OF DISCREPANCY, NOTIFY ENGINEER IMMEDIATELY AND PRIOR TO SHOP DRAWING SUBMITTALS. FAILURE TO COMPLY WITH THIS REQUIREMENT HOLDS THE CONTRACTOR FULLY RESPONSIBLE FOR ANY SUBSEQUENT PROBLEMS

CLEANING AND FINISHING:
A. PRIOR TO FINAL ACCEPTANCE BY OWNER, THOROUGHLY CLEAN ALL WORK INSIDE AND OUT AS APPLICABLE, AND LEAVE ALL SYSTEMS AND EQUIPMENT IN PERFECT WORKING ORDER. THOROUGHLY CLEAN ALL PLUMBING FIXTURES, EXPOSED PIPING, FLOOR DRAIN GRATES, AND CLEANOUT COVERS AS APPLICABLE.

GUARANTEE:
A. REFER TO ARCHITECTURAL SPECIFICATIONS FOR GUARANTEES, IF NONE EXIST THE FOLLOWING MINIMUM GUARANTEES SHALL BE PROVIDED.
1. PROVIDE A ONE (1) YEAR GUARANTEE COVERING ALL LABOR AND MATERIAL PROVIDED IN THIS PROJECT. GUARANTEE SHALL INCLUDE ALL SHIPPING AND TRANSPORTATION CHARGES NECESSARY TO RETURN DEFECTIVE MATERIALS TO MANUFACTURER, AS WELL AS LABOR CHARGES NECESSARY TO REMOVE AND REPLACE DEFECTIVE MATERIALS.
2. PROVIDE 5 YEAR GUARANTEE FOR ALL COMPRESSORS.
3. DEFECTIVE MATERIALS AND/OR EQUIPMENT MAY BE REPAIRED IN LIEU OF REPLACED WITH PRIOR APPROVAL OF ARCHITECT AND/OR OWNER.

PIPING:

SANITARY WASTE AND VENT PIPE AND FITTINGS:

PIPE AND FITTINGS: CAST IRON HUBLESS SOIL PIPE AND FITTINGS CONFORMING TO THE REQUIREMENTS OF CISPI STANDARD 310 AND LOCAL CODE REQUIREMENTS. HUBLESS COUPLING GASKETS SHALL CONFORM TO ASTM STANDARD C-564.

DOMESTIC WATER AND HEATING HOT WATER PIPING:

ABOVEGROUND DOMESTIC HOT AND COLD WATER 2" AND SMALLER:

ASTM B88, TYPE L, SEAMLESS HARD DRAWN RIGID COPPER WATER TUBE. FITTINGS: ANSI B16.22, WROUGHT COPPER, ASTM B32-95TA SOLDER JOINT OR PRESS.

DOMESTIC HOT AND COLD WATER VALVES:
BALL VALVES:
BALL VALVES 1/4" TO 1" PIPE SIZE: APOLLO 77C-140-01 FULL PORT, TWO PIECE WITH SCREWED ENDS, BRONZE BODY AND END PIECE, STAINLESS STEEL BALL, TEFLON SEAT RINGS, STAINLESS STEEL STEM, REINFORCED PTFE TEFLON PACKING WITH BRASS PACKING GLAND, ZINC PLATED STEEL HANDLE WITH PLASTIC GRIP SECURED BY ZINC PLATED STEEL HANDLE NUT, 150 PSI STEAM, 600 PSI WOG WORKING PRESSURE.
BALL VALVES 1-1/4" TO 2" PIPE SIZE: APOLLO 82-140-01, 3 PIECE, FULL SIZE PORT WITH SCREWED ENDS, BRONZE BODY, STAINLESS STEEL BALL, TEFLON DOUBLE SEAL SEATS AND THRUST WASHER, BRASS PACKING GLAND, REINFORCED TAFLON PACKING, STAINLESS STEEL STEM, PLASTIC COATED ZINC PLATED STEEL HANDLE AND ZINC PLATED STEEL HANDLE NUT, 150 PSI SATURATES STEAM, 600 PSI WOG.

CHECK VALVES:
INDUSTRIAL SERVICE, 150 LB., SWP 300 LB., WOG COMPOSITION DISC, THREADED ENDS. MILWAUKEE NO. 510.

CLEANOUT:

PROVIDE CLEANOUTS AS REQUIRED BY LOCAL CODES. THE FINISH OF COVER PLATES, TOP AND TOP FRAME ACCESS COVERS SHALL BE NICKEL BRONZE, UNLESS OTHERWISE SCHEDULED.

PIPING INSTALLATION:

INSTALL ALL PIPING PARALLEL OR PERPENDICULAR TO BUILDING WALL AND COLUMNS IN LOCATIONS TO AVOID INTERFERENCE WITH DUCTWORK, STRUCTURE, OTHER PIPING, LIGHTING AND ELECTRICAL EQUIPMENT OR OTHER EQUIPMENT.

DO NOT LOCATE PIPING ABOVE OR WITHIN 3 FEET HORIZONTALLY OF ELECTRICAL PANELS OR EQUIPMENT.

FOR PIPING PASSING THROUGH WALLS, PACK VOID BETWEEN PIPE AND STRUCTURE WITH APPROVED, NON-COMBUSTIBLE MATERIAL.

DO NOT ALLOW CONTACT BETWEEN PIPING AND MASONRY OF CONCRETE SURFACES.

PROVIDE ALL THE NECESSARY HANGERS, RODS, SUPPORTS, CHANNELS, ANGLES, STRUCTURAL MEMBERS AND CONCRETE INSERTS TO PROPERLY SECURE PIPING AND RELATED EQUIPMENT. ALL SUPPORTS AND PARTS SHALL CONFORM TO THE LATEST REQUIREMENTS OF ANSI CODE FOR PRESSURE PIPING B31.1, AND MSS STANDARD PRACTICE SP-58.

PROTECT ALL INSULATED PIPE LINES AGAINST INSULATION DAMAGE AT ALL HANGERS BY THE USE OF 1 FOOT LONG, 12 GAUGE STEEL SEMI-CIRCULAR SHIELDS FOR PIPE SIZES WITH 12" OD AND LESS (INCLUDING INSULATION) AND 2 FOOT LONG, 1/2" STEEL SEMI-CIRCULAR SHIELDS FOR PIPE SIZES OVER 12" OD (INCLUDING INSULATION). SECURELY CEMENT ALL SHIELDS TO THE INSULATION. PROVIDE RIGID PIPE INSULATION AT EACH HANGER.

PIPING INSULATION:

ALL ADHESIVES, SEALERS AND COATINGS SHALL BE INCOMBUSTIBLE. INSULATION SHALL BE APPLIED BY EXPERIENCED PIPE COVERERS AS PER BEST TRADE PRACTICE. WHERE EXISTING INSULATED PIPING AND SURFACES ARE EXPOSED DUE TO RENOVATIONS, RE-INSULATE EXPOSED SURFACES TO MATCH THE EXISTING INSTALLATION. APPLY INSULATION TO PIPE LINES AND EQUIPMENT ONLY AFTER TESTING AND INSPECTION, AND ALL SURFACES HAVE BEEN THOROUGHLY CLEANED.

DOMESTIC HOT, COLD, AND DOMESTIC HOT WATER RETURN PIPING SHALL BE INSULATED WITH 1" THICK FIBERGLASS INSULATION. PIPING INSULATION AND COVERING SHALL HAVE FLAME SPREAD RATING OF 25 AND SMOKE DEVELOPED RATING OF 50 AND SHALL BE SIMILAR TO OWENS-CORNING NO. 25ASJ/55L-11.

ALTERNATE FOR TRAP PRIMER:
SURE SEAL MODEL SS4009 PRE-ASSEMBLED INLINE FLOOR DRAIN TRAP SEALER. 2 PIECES: 1 COMMERCIAL GRADE ABS PLASTIC HOUSING & PROPRIETARY NEOPRENE RUBBER DIAPHRAGM WITH 1 SOFT RUBBER SEALING GASKETS. FLOOR RATING ASSE - 1072 AF-GW.
FUNCTION: INLINE FLOOR DRAIN TRAP SEALER, CREATES A PHYSICAL BARRIER TO BLOCK SEWER GASES AND THEIR ODORS FROM ESCAPING. CAN BE USED IN EITHER THE STRAINER OR IN THE FLOOR DRAIN OUTLET.
NEW CONSTRUCTION: USED IN FLOOR DRAINS TO PROVIDE ADDED PROTECTION AGAINST ESCAPING SEWER GASES. CAN BE USED IN EITHER THE STRAINER OR IN THE FLOOR DRAIN OUTLET. ELIMINATES THE NEED TO REPAIR/REPLACE TRAP PRIMERS WHEN THEY FAIL.
RETROFIT: USED IN SITUATIONS WHERE TRAP PRIMERS HAVE FAILED OR WHERE TRAP PRIMERS WERE NEVER INSTALLED.

FIXTURE CONNECTIONS SHALL BE IN ACCORDANCE WITH THE FOLLOWING TABLE:

FIXTURE	SOIL OR WASTE	VENT	TRAP	HOT WATER	COLD WATER
WATER CLOSETS (FLUSH)	4"	2"			1-1/2"
LAVATORY	1-1/2"	1-1/2"	1-1/4"	1/2"	1/2"

OTHERS AS INDICATED IN THE CONTRACT DOCUMENTS.
FIXTURES SHALL BE ZURN, AMERICAN STANDARD, KOHLER, MANSFIELD OR AS SPECIFY BELOW.
FIXTURE SUPPORTS SHALL BE ZURN, J.R. SMITH, JOSAM OR WADE.
FLUSH VALVE SHALL BE SLOAN, ZURN OR DELTA
FAUCETS SHALL BE ZURN, CHICAGO, DELTA OR SPEAKMAN.

PIPING INSTALLATION:

PROVIDE ALL THE NECESSARY HANGERS, RODS, SUPPORTS, CHANNELS, ANGLES, STRUCTURAL MEMBERS AND CONCRETE INSERTS TO PROPERLY SECURE PIPING AND RELATED EQUIPMENT. ALL SUPPORTS AND PARTS SHALL CONFORM TO THE LATEST REQUIREMENTS OF ANSI CODE FOR PRESSURE PIPING B31.1, AND MSS STANDARD PRACTICE SP-58.

SHEET METAL NOTES:

INSTALL TRANSFER GRILLES IN ALL FULL HEIGHT PARTITIONS TO ALLOW RETURN AIR FLOW. SIZE PER MECHANICAL ENGINEER REQUIREMENTS. THESE SHALL BE FIRE DAMPERS IN RATED WALLS.

BLANK-OFF RETURN DUCTWORK IN AREAS OF WORK THAT CREATES DUST TO PREVENT DEBRIS FROM ENTERING MECHANICAL SYSTEM.

MEDIUM PRESSURE DUCTWORK:
DUCTWORK ON INLET OF V.A.V. BOXES SHALL BE CONSTRUCTED AND SEALED IN ACCORDANCE WITH THE REQUIREMENTS OF THE LATEST SMACNA'S ISSUE OF "HIGH PRESSURE DUCT CONSTRUCTION STANDARDS".

LOW PRESSURE DUCTWORK:
ALL DUCTWORK SHALL BE CONSTRUCTED AND SUPPORTED IN ACCORDANCE WITH THE REQUIREMENTS OF THE LATEST SMACNA'S ISSUE OF "DUCT CONSTRUCTION STANDARDS".

IN ADDITION, ALL JOINTS AND SEAMS SHALL BE SEALED WITH DUCT SEALANT EQUAL TO FOSTER #32-14.
APPROVED SEALANT MANUFACTURERS: 3M COMPANY, BENJAMIN FOSTER COMPANY, UNITED SHEET METAL, FLINTKOTE.

ALL ROUND TAKE-OFFS DOWNSTREAM OF TERMINAL UNITS SHALL BE MADE WITH CONICAL TAKE-OFF SPIN-IN FITTINGS TYPE SW-2DG, WITH FACTORY INSTALLED ADJUSTABLE DAMPER AS MANUFACTURED BY GENERAL ENVIRONMENT CORPORATION, GLENDALE, CALIFORNIA OR EQUAL.

FLEXIBLE CONNECTIONS:
AT EACH POINT OF CONNECTION OF DUCTWORK TO FANS, PROVIDE A FLEXIBLE CONNECTION, VENTFABRICS, INC., "VENTGLAS L.A." NOT LESS THAN 12" IN LENGTH AND MADE OF HEAVY GRADE GLASS FABRIC DOUBLE COATED WITH NEOPRENE AND PROVIDED WITH A SUITABLE FRAME AT EACH END ARRANGED FOR BOLTING TO INLET AND OUTLET OF FAN AND DUCTWORK, RESPECTIVELY.

VANES AND DEFLECTORS:
ALL ELBOWS AND TURNS SHALL BE MADE WITH A RADIUS NOT LESS THE 1-1/2" TIMES THE DUCT DIAMETER OR WIDTH. WHERE BUILDING CONSTRUCTION DOES NOT PERMIT A LONG RADIUS ELBOW OR TURN OR IF SHOWN ON THE CONTRACT DOCUMENTS, ACOUSTICAL TURNING VANES AND DEFLECTORS SHALL BE PROVIDED.

FLEXIBLE DUCTWORK:

ALL LOW PRESSURE AND HIGH PRESSURE FLEXIBLE DUCT SHALL BE FLEXMASTER USA, INC., TYPE #8M INSULATED FLEXIBLE DUCT CONSISTING OF A FACTORY FABRICATED ASSEMBLY OF A TRILAMINATE ALUMINUM FOIL, FIBERGLASS AND POLYESTER. THE FLEXIBLE DUCT SHALL BE UL LISTED 181 CLASS 1 AIR DUCT AND COMPLY WITH NFPA 90A AND 90B AND HAVE A FLAME SPREAD OF NOT OVER 25 AND A SMOKE DEVELOPED OF NOT OVER 50. THE FLEXIBLE DUCT SHALL HAVE A MINIMUM PRESSURE RATING OF 12" WC THROUGH TEMPERATURE RANGE OF -20 DEGREES F. TO + 250 DEGREES F.

DUCT INSULATION:

ALL DUCTWORK SHALL BE THERMALLY INSULATED OR ACOUSTICALLY LINES:
-OUTSIDE AIR INTAKE AND RELIEF PLENUMS AND DUCTS.
-RELIEF AIR DUCT DOWNSTREAM OF RELIEF AIR DAMPER.
ALL DUCT INSULATION SHALL HAVE A FLAME SPREAD CLASSIFICATION OF 25 OR LESS, A FUEL CONTRIBUTED RATING OF 35 OR LESS AND SMOKE DEVELOPED RATING OF 50 OR LESS, AS RATED BY UNDERWRITERS' LABORATORIES
BLANKET TYPE (UP TO 1-1/2 LB./CU. FT. INSULATION):
INSULATION WITH ATTACHED FACING SHALL BE SECURED TO THE DUCTS WITH ADHESIVE APPLIED IN 6" BRUSH WIDTHS EVERY 12". THE ADHESIVE SHALL BE RIDGED SLIGHTLY BY USING A SERRATED TROWEL. INSULATION WITHOUT ATTACHED FACING (PLAIN) SHALL BE SECURED TOT HE DUCTS THE SAME AS ABOVE THEN BIND WITH TYING CORD, SPIRAL WRAPPED OR HALF HITCHED.
DUCT FITTINGS SHALL BE INSULATED BY WRAPPING WITH A GLASS FIBER BLANKET. BLANKETS SHALL BE SECURED TOT HE DUCT FITTINGS BY INSULATION STAPLES OR JUTE TWINE. THE BLANKET SHALL BE COVERED WITH AN OPEN MESH CLOTH OR GLASS FIBER HEAVILY COATED WITH VAPOR BARRIER ADHESIVE. THE INSULATION THICKNESS SHALL BE EQUAL TO THE THICKNESS OF THE INSULATION ON THE ADJOINING DUCTWORK.
ACOUSTICAL LINING:
ACOUSTIC INSULATION SHALL BE JOHNS-MANVILLE OR EQUAL "LINACOUSTIC" WITH A .70 NRC, 1-1/2"/CU.FT. MINIMUM DENSITY, 1" THICK UNLESS OTHERWISE NOTED. INSULATION SHALL BE SUITABLE FOR VELOCITIES OF 5,000 FPM. ABSOLUTE ROUGHNESS FACTOR SHALL NOT EXCEED .0008 FEET. SCOPE: DUCTWORK AND EQUIPMENT LISTED BELOW AND/OR NOTED ON THE CONTRACT DOCUMENTS SHALL BE ACOUSTICALLY LINED.
RECTANGULAR SUPPLY DUCTWORK FROM ALL TERMINAL BOXES TO GRILLES, REGISTERS AND DIFFUSERS. ROUND DUCTWORK ON DISCHARGE ON TERMINAL BOXES SHALL BE INSULATED EXTERNALLY UNLESS OTHERWISE NOTED.

TESTING AND BALANCING:

TEST AND ADJUST ALL NEW PIPING SYSTEMS INSTALLED IN THIS PROJECT. PROVIDE ALL TESTING INSTRUMENTS, GAUGES, PUMPS AND OTHER EQUIPMENT REQUIRED OR NECESSARY FOR TEST. REPAIR ALL DEFECTS DISCLOSED BY TESTS WITHOUT ADDITIONAL COST TO THE OWNER. REPEAT TESTS AFTER ANY DEFECTS DISCLOSED ARE REPAIRED OR REPLACED, UNLESS WAIVED BY ARCHITECT. ARRANGE AND PAY THE COST OF ALL UTILITIES USED ON TESTS. COMPLETE ALL TESTS BEFORE COVERING IS APPLIED. ISOLATE ALL PIPING SYSTEM COMPONENTS NOT CONSTRUCTED TO WITHSTAND TEST PRESSURES.

WATER SYSTEMS TEST:
TEST AT 150 PSIG FOR EIGHT (8) HOURS WITH ZERO LOSS IN PRESSURE. CHECK JOINTS AND FITTINGS FOR LEAKS WITH LIQUID SOAP SOLUTION.

DRAINAGE SYSTEM:
THE DRAINAGE SYSTEM SHALL BE TESTED IN ACCORDANCE WITH ALL LOCAL CODES AND REGULATIONS AND IN THE PRESENCE OF THE PROPER INSPECTOR. AIR TEST SHALL BE 5 PSIG AND SHALL REMAIN IN OPERATION FOR A PERIOD OF 15 MINUTES.

AIR BALANCING:
BALANCE ALL OUTLETS AND TERMINAL BOXES TO WITHIN 10% OF RATED C.F.M IN ACCORDANCE WITH AABC AND NEBB, SUBMIT BALANCING REPORT.

FIRE PROTECTION:

FIRE PROTECTION CONTRACTOR SHALL SUBMIT NECESSARY DRAWINGS AND DOCUMENTS TO LOCAL AND STATE AGENCIES AND OBTAIN APPROVALS OF SAME.
FIRE PROTECTION CONTRACTOR SHALL DESIGN AND PROVIDE ALL MODIFICATIONS TO THE SPRINKLER SYSTEM INCLUDING RELOCATION OF HEADS TO ACCOMMODATE NEW CEILING AND WALL CONFIGURATIONS AS SHOWN OR REQUIRED COMPLYING WITH N.F.P.A. 13, U.L. AND ALL STATE AND LOCAL CODES.
SPRINKLER HEADS ARE TO MATCH EXISTING CONCEALED TYPE WITH WHITE COVER.
ALL SPRINKLER HEADS AND INCANDESCENT LIGHT FIXTURES SHALL BE CENTERED WITHIN THE GRID U.N.O. THE FIRE PROTECTION CONTRACTOR SHALL COORDINATE HEAD AND BRANCH LINE LOCATIONS TO ALLOW INSTALLATION OF LIGHTING, GRILLES AND DUCTWORK AS SHOWN.
THE FIRE PROTECTION CONTRACTOR SHALL RELOCATE EXISTING HEADS AND BRANCH LINES AS REQUIRED TO ACCOMMODATE NEW MECHANICAL WORK LIGHT FIXTURE LAYOUT AND ALL APPLICABLE CODES.

DEMOLITION:

DEMOLITION DRAWINGS ARE DIAGRAMMATIC, INTENDED TO CONVEY THE SCOPE OF THE WORK AND INDICATE GENERAL ARRANGEMENT OF EQUIPMENT, PLUMBING FIXTURES, DUCTS, PIPING AND APPROXIMATE SIZES AND APPROXIMATE LOCATIONS. DO NOT SCALE DRAWINGS FOR EXACT MEASUREMENTS.

ALL MECHANICAL WORK SHOWN ON THE DEMOLITION DRAWINGS HAS BEEN TAKEN FROM THE OWNER'S RECORD DRAWINGS AND/OR CERTAIN FIELD OBSERVATIONS. EXACT SIZES, LOCATIONS, ARRANGEMENT AND ELEVATIONS OF ALL EXISTING MECHANICAL EQUIPMENT, EXISTING PLUMBING FIXTURES, EXISTING DUCTWORK, EXISTING PIPING AND EXISTING MECHANICAL DEVICES SHALL BE VERIFIED IN THE FIELD.

THE CONTRACTOR SHALL INCLUDE, IN HIS QUOTE, ALLOWANCES FOR REASONABLE DEVIATIONS BETWEEN WHAT IS SHOWN AND ACTUAL JOB CONDITIONS IN ORDER TO COMPLETE THE WORK IN THE SCOPE INDICATED.
REMOVE, RECONNECT, CAP, PLUG AND REPLACE EXISTING PIPING AND DUCTWORK ONLY WHERE INDICATED IN THE CONTRACT DOCUMENTS. REMOVE AND/OR REPLACE EXISTING EQUIPMENT, VALVES, CONTROLS, ETC., ONLY WHERE INDICATED IN THE CONTRACT DOCUMENTS.

INTERRUPTION OF EXISTING ACTIVE PIPING: WHERE THE WORK MAKES TEMPORARY SHUT-DOWNS OF SERVICE UNAVOIDABLE , SHUT-DOWN AT TIME AS APPROVED BY THE OWNER, WHICH WILL CAUSE LEAST INTERFERENCES WITH ESTABLISHED OPERATING ROUTINE. ARRANGE TO WORK CONTINUOUSLY, INCLUDING OVERTIME, IF REQUIRED TO MAKE NECESSARY CONNECTION TO EXISTING WORK.

UNLESS SPECIFICALLY NOTED TO THE CONTRARY, REMOVED MATERIALS SHALL NOT BE REUSED IN THE WORK. SALVAGE MATERIALS THAT ARE TO BE REUSED SHALL BE STORED SAFE AGAINST DAMAGE AND TURNED OVER TO THE APPROPRIATE TRADE FOR REUSE. SALVAGED MATERIALS OF VALUE THAT ARE NOT TO BE REUSED SHALL REMAIN THE PROPERTY OF THE OWNER UNLESS POSSESSION RIGHTS ARE WAIVED. THE MATERIALS ARE TO BE REMOVED FROM THE SYSTEMS BY THIS CONTRACTOR AND TURNED OVER TO THE OWNER IN THEIR ORIGINAL CONDITIONS. THE OWNER SHALL MOVE AND STORE THE MATERIALS. WHERE THE OWNER WAIVES POSSESSION RIGHTS, THESE MATERIALS SHALL BECOME THE PROPERTY OF THIS CONTRACTOR, WHO SHALL REMOVE AND LEGALLY DISPOSE OF THE SAME, AWAY FROM THE PREMISES.

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Project :
WSU ALL GENDER RESTROOMS

259 MACK AVE
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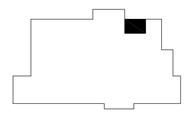
Key Plan:



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Drawn by :
UF

Checked by :
SS

Sheet Title :
MECHANICAL SPECIFICATIONS

Project No. :
2022.053

Sheet No. :
M001

H:\ACADFILES\83183551-WSU All Gender Restrooms\CAD\MECH\83551-M000-COVER SHEET & SPECS.dwg Wed, 24 May 2023 - 2:49pm

H:\ACAD\FILES\83\83551-WSU All Gender Restrooms\CADIMECH\83551-MD110-DEMO PLAN.dwg Wed, 24 May 2023 - 2:50pm

GENERAL DEMOLITION NOTES:

A. COORDINATE ALL DEMOLITION WORK WITH ARCHITECTURAL AND ELECTRICAL DEMOLITION PLANS, WITH OWNER'S PROJECT REPRESENTATIVE, OWNER'S FACILITY MANAGER, AND WITH SALVAGED ITEMS AND COMPONENTS TO BE USED ON NEW WORK AS INDICATED ON DRAWINGS AND WITHIN SPECIFICATIONS.

B. THESE DEMOLITION NOTES AND PLAN DO NOT FULLY REPRESENT ALL DEMOLITION WORK REQUIRED TO INSTALL NEW WORK IN ACCORDANCE WITH CONTRACT DOCUMENTS, BUT ARE INTENDED TO SERVE AS GENERAL DEMOLITION GUIDELINES. REFER TO ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS FOR LOCATIONS OF INCIDENTAL DEMOLITION WORK NOT INDICATED ON THIS PLAN.

C. ALL WORK INDICATED WITH SOLID LINES IS EXISTING TO REMAIN, UNLESS OTHERWISE NOTED (U.O.N.).

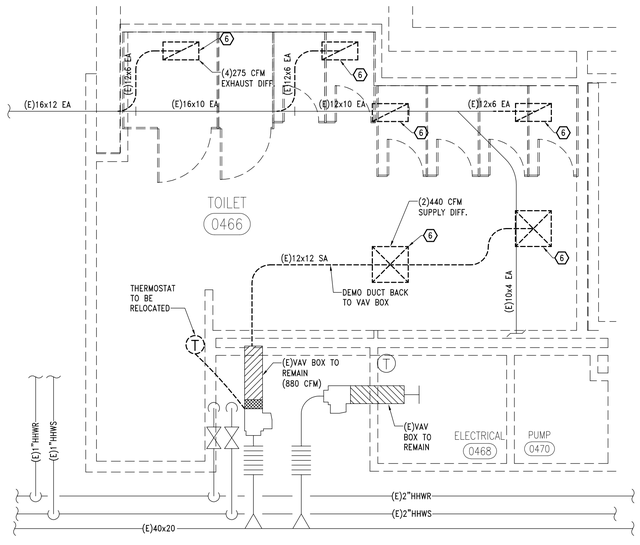
D. COORDINATE ANY SERVICE SHUTDOWNS WITH OWNER. USE WSU FACILITIES STANDARD PROCEDURE FOR SHUTDOWNS.

E. REMOVE ALL DUCTWORK, PIPING AND EQUIPMENT COMPLETE INCLUDING ALL HANGERS AND ACCESSORIES.

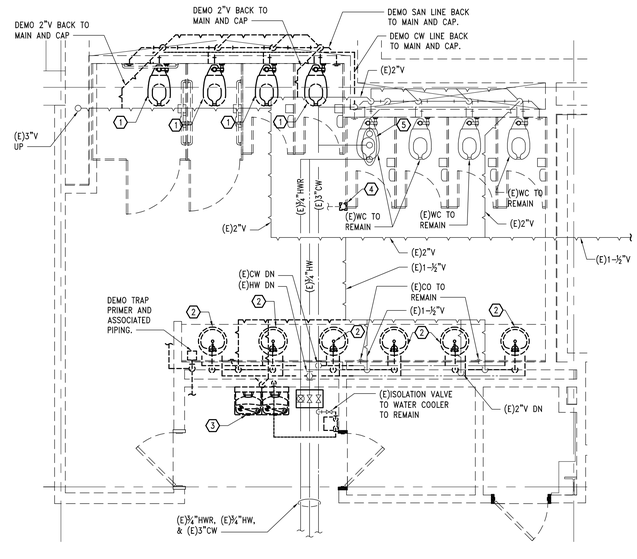
F. CAP PIPING AND DUCT AT MAINS. DISPOSE OF ALL MATERIALS IN A LEGAL MANNER.

DEMOLITION KEY NOTES:

1. DEMO EXISTING WATER CLOSET AND ASSOCIATED CW AND SAN BACK TO MAIN, AND CAP.
2. DEMO EXISTING LAV AND ASSOCIATED CW, HW, AND SAN BACK TO MAIN AND CAP.
3. DEMO EXISTING WATER CHILLER AND ASSOCIATED CONDENSER IN CEILING. DEMO ASSOCIATED SAN BACK TO MAIN AND CAP. DEMO ASSOCIATED CW LINE BACK TO EXISTING ISOLATION VALVE IN CEILING AND CAP.
4. DEMO EXISTING FLOOR DRAIN AND ASSOCIATED CW LINE FROM TRAP PRIMER.
5. (E)SAN, (E)CW, & (E)HW UP TO REMAIN.
6. DEMO EXISTING DIFFUSER AND ASSOCIATED DUCT BRANCH.



1 MD110 Level 1 - HVAC Demolition
1/4" = 1'-0"



2 MD110 Level 1 - Plumbing Demolition
1/2" = 1'-0"

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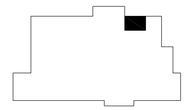

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Drawn by : UF
Checked by : SS
Sheet Title : BASEMENT DEMOLITION PLAN - MECHANICAL

Project No. : 2022.053

Sheet No. : MD100

NEW WORK KEY NOTES:

1. (E)SAN, (E)CW, & (E)HW UP
2. OFFSET CW AND HW LINE TO MAINTAIN PIPING WITHIN PLUMBING CHASE TO ACCOMMODATE NEW WALL LOCATION
3. ½"HW, ½"CW, & 1-½"V DN TO LAV-1. 1-½" SAN UP TO LAV-1.
4. 1-¼"CW & 2"V DN TO WC-1. 4"SAN UP TO WC-1.
5. ½"HW, ½"CW, & 1-½"SAN TO LAV-1.
6. FOR THE AREA INDICATED, MODIFY THE EXISTING FIRE PROTECTION SYSTEM AND PROVIDE A HYDRAULICALLY DESIGNED WET FIRE PROTECTION SYSTEM PER NFPA-13, THE MICHIGAN BUILDING CODE, THE OWNER'S INSURANCE AGENT AND THE AUTHORITY HAVING JURISDICTION. PROVIDE ALL NEW SPRINKLER HEADS.
7. CONTRACTOR TO FIELD CONFIRM INVERT ELEVATION, LOCATION, AND SIZE OF EXISTING SANITARY LINE IS SUITABLE FOR PROPOSED DESIGN, PRIOR TO START OF ANY NEW CONSTRUCTION.

GENERAL NOTES:

A. COORDINATE ALL WORK WITH OTHER TRADES.

B. IN AREAS TO BE FULLY SPRINKLERED, SPRINKLER SYSTEM DESIGN AND LAYOUT TO BE IN COMPLIANCE WITH NFPA 13. REFER TO SPECIFICATION FOR ADDITIONAL INFORMATION.

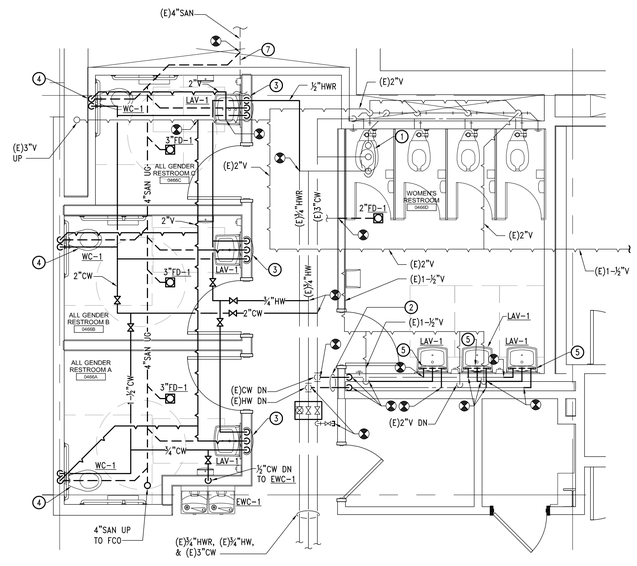
C. DO NOT SCALE THE PLUMBING AND FIRE PROTECTION DRAWINGS FOR LOCATION OF CEILING MOUNTED SPRINKLER HEADS. ALL CEILING MOUNTED HEADS SHALL BE COORDINATED WITH ARCHITECTURAL CEILING PLANS, UNLESS OTHERWISE NOTED.

D. ALL SPRINKLERS LOCATED IN LAY-IN CEILINGS SHALL BE CENTERED IN THE MIDDLE OF THE CEILING TILES UNLESS OTHERWISE INDICATED ON THE ARCHITECTURAL SERIES DRAWINGS.

E. SPRINKLER HEADS TO BE SIMILAR TO TYCO ROYAL FLUSH II UNLESS OTHERWISE INDICATED ON THE DRAWINGS.

F. PRIOR TO START OF ANY CONSTRUCTION, SUBMIT DRAWINGS TO OWNER'S INSURANCE COMPANY AND LOCAL AUTHORITY HAVING JURISDICTION FOR APPROVAL.

1 M110 Level 1 - HVAC New Work
1/4" = 1'-0"



2 M110 Level 1 - Plumbing New Work
1/2" = 1'-0"

3 M110 Level 1 - Fire Protection New Work
1/2" = 1'-0"

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Key Plan:

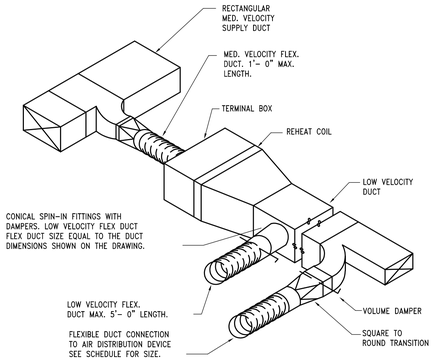
Issued for
BFS Submission 05.25.2023

Drawn by : UF
Checked by : SS
Sheet Title : BASEMENT FLOOR PLAN - MECHANICAL

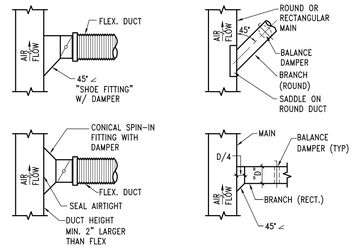
Project No. : 2022.053

Sheet No. : M100

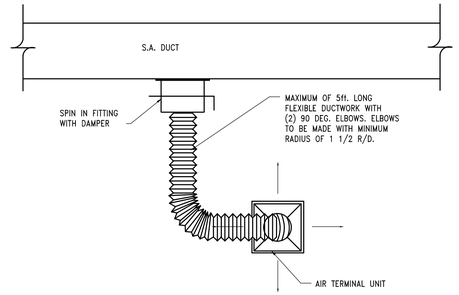
H:\ACAD\FILES\83\83551-WSU All Gender Restrooms\CAD\MECH\83551-M110-NEW WORK PLAN.dwg Wed, 24 May 2023 - 2:50pm



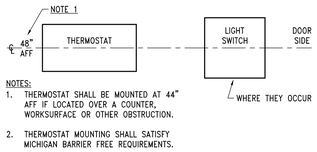
TYPICAL TERMINAL BOX DETAIL
SCALE: NONE



TYPICAL DUCT TAP DETAILS
SCALE: NONE

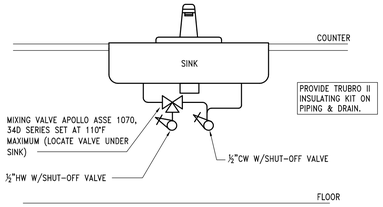


FLEXIBLE DUCT CONNECTION DETAIL
SCALE: NONE

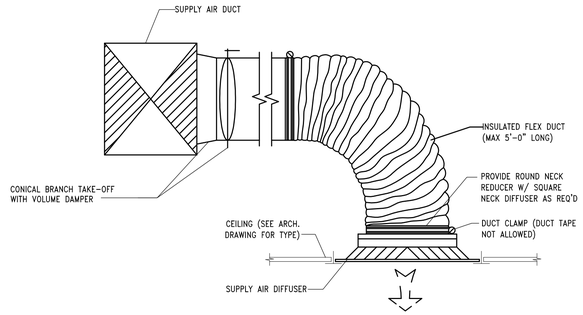


NOTES:
1. THERMOSTAT SHALL BE MOUNTED AT 44" AFF IF LOCATED OVER A COUNTER, WORKSURFACE OR OTHER OBSTRUCTION.
2. THERMOSTAT MOUNTING SHALL SATISFY MICHIGAN BARRIER FREE REQUIREMENTS.

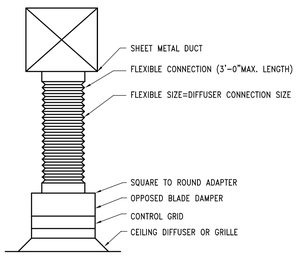
THERMOSTAT MOUNTING DETAIL
NO SCALE

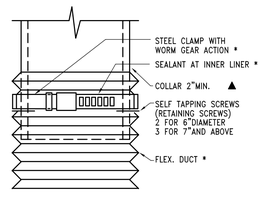


MIXING VALVE PIPING DETAIL
SCALE: NONE



SUPPLY AIR DIFFUSER W/ FLEX DUCT DETAIL
SCALE: NONE

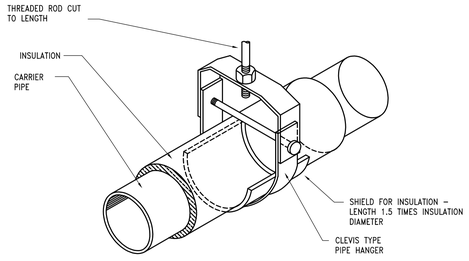




TYPICAL FLEXIBLE CONNECTION DETAIL

▲ STANDARD PRODUCT COLLAR DIMENSIONS ARE ACCEPTABLE.
* REFER TO THE SPECIFICATIONS FOR INFORMATION.

FLEXIBLE DUCT CONNECTION TO DIFFUSERS & GRILLES DETAIL
SCALE: NONE



DETAIL OF CLEVIS TYPE HANGER
SCALE: NONE

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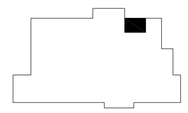
Key Plan:



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UF

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SS

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MECHANICAL DETAILS

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M200

PLUMBING FIXTURE SCHEDULE

ITEM #	FIXTURE	MANUFACTURER	MODEL	MATERIAL	TRIM	FIXTURE CONNECTION				NOTES/ACCESSORIES
						COLD WATER	HOT WATER	WASTE	VENT	
WC-1	WALL MOUNTED WATER CLOSET BARRIER-FREE	SLOAN	ST-2459	WHITE VITREOUS CHINA	FLUSH VALVE: SOLIS 8111 FLUSHOMETER EXPOSED 1.28 GPF FLUSH VALVE	1-1/2"	–	4"	2"	SEAT: BEMIS 1655 SSCT WITH STATITE COMMERCIAL FASTENING SYSTEM, WHITE MOLDED OPEN FRONT. MOUNT TO CONFORM TO A.D.A STANDARDS.
LAV-1	WALL HUNG LAVATORY	AMERICAN STANDARD	DECORUM 9024.001EC	WHITE	SLOAN SF-2450-4-BAT-TEE-CP-0.35GPM WITH CHROME FINISH	1/2"	1/2"	1-1/2"	1-1/2"	MOUNT TO CONFORM TO A.D.A. STANDARDS 20" x 18-1/4" SIZE WITH P-TRAP, ANGLE STOPS AND STRIANER
CO	CLEANOUT	MIFAB	C1230	LACQUERED CAST IRON	LINE OR FLOOR CLEANOUT WITH 1/2" THICK GASKETED COMBINED DUCTILE IRON COVER AND PLUG	–	–	SEE PLAN	–	FURNISH WITH VANDAL RESISTANT STAINLESS STEEL SCREWS. ALSO INSTALL COTG INSIDE PARKING GARAGE AREA
FCO	CLEANOUT TO GRADE	MIFAB	C1300-MF	LACQUERED CAST IRON	HEAVY DUTY ACCESS HOUSING WITH ANCHOR FLANGES. FURNISH WITH MODEL C1230 FLOOR CLEANOUT	–	–	SEE PLAN	–	FURNISH WITH VANDAL RESISTANT STAINLESS STEEL SCREWS. ALSO INSTALL COTG INSIDE PARKING GARAGE AREA
FD-1	FLOOR DRAIN	MIFAB	F1000	LACQUERED CAST IRON	5" DIAMETER LIGHT DUTY DRAIN WITH ROUND TOP, TRAP PRIMER CONNECTION AND MEMBRANE FLASHING CLAMP	1/2"	–	SEE PLAN	–	STAINLESS STEEL STRAINER
EWC-1	ELECTRIC WATER COOLER/BOTTLE FILL STATION, WALL MOUNTED BARRIER-FREE	ELKAY	LVRCGRNTLBWSK	STAINLESS STEEL	BOTTLE FILLING STATION & BI-LEVEL ADA COOLER, FILTERED, LAMINAR FLOW, REAL DRAIN, VISUAL FILTER MONITOR. FURNISHED WITH FLEXI-GUARD SAFETY BUBBLER. ELECTRONIC BOTTLE FILLER SENSOR WITH ELECTRONIC FRIC FRONT AND SIDE BUBBLER PUSHBAR ACTIVATION.	1/2"		1-1/2"	1-1/2"	MOUNT TO CONFORM TO ADA STANDARDS REFRIGERATED WITH CHILLING CAPACITY OF 8.0 GPH OF 50°F DRINKING WATER, BASED ON 80°F INLET WATER AND 90°F AMBIENT. AUTOMATIC FILTER STATUS RESET. 115V/60Hz, FLA 6A.
TMV	THERMOSTATIC MIXING VALVE	WATTS	MMV-M1	BRONZE	ASSE 1070 LISTED FOR POINT OF USE APPLICATION WITH ADJUSTABLE THERMOSTAT AND SOLDERED CONNECTIONS	1/2"	1/2"	–	–	INSTALL AT EACH HAND SINK AND LAVATORY TO LIMIT HW TO 110°F

GRILLE, REGISTER AND DIFFUSER SCHEDULE

TAG	MANUFACTURER & MODEL NO.	SERVICE	MOUNTING	OVERALL SIZE	NECK SIZE	CONSTRUCTION	NOTES/ACCESSORIES
S-1	TITUS PAS-AA	SAD	CEILING LAY-IN	12x24	6"	ALUMINUM	A
S-1	TITUS PAS-AA	SAD	CEILING	16x16	10"	ALUMINUM	A C
E-1	TITUS 50F	EAG	CEILING	12x24	SEE PLAN	ALUMINUM	A
T-1	TITUS CT-700L	TAG	WALL	8x8	SEE PLAN	ALUMINUM	A D

KEY:

SAD – CEILING OR WALL SUPPLY DIFFUSER
SAG – CEILING OR WALL SUPPLY GRILLE
TAG – WALL TRANSFER GRILLE
RAR – CEILING OR WALL RETURN REGISTER
RAG – CEILING OR WALL RETURN GRILLE
EAG – CEILING OR WALL EXHAUST GRILLE

NOTES AND ACCESSORIES DESIGNATION

A	WHITE	C	PROVIDE GYPSUM CEILING BORDER
B	PROVIDE RETURN AIR BOOT UNLESS DUCTED	D	SIGHT PROOF BLADES WITH AUXILIARY FRAME

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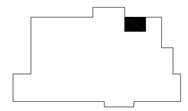

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