

# LAKE CO. TITLE BUREAU

## CODE REVIEW DATA

CONSTRUCTION TYPE USE GROUP	IB (EXIST.) B (EXIST.)
AREA ALLOWABLE FOR TYPE IB CONST. AND B USE GROUP	23,000 S.F. PER FLOOR AREA (EXIST.)
ACTUAL AREA	7,200 SF. (EXIST.)
OCCUPANCY	T2 (EXIST.)

## FLAME SPREAD REQUIREMENTS

ALL INTERIOR FINISHES OF CORRIDORS AND EXITS TO HAVE A FLAME SPREAD RATING OF CLASS B. FLAME SPREAD 26-75, SMOKE DEVELOPED 0-450. ALL INTERIOR FINISHES IN INTERIOR ENCLOSED SPACES TO HAVE A FLAME SPREAD OF CLASS C 76-200, SMOKE DEVELOPED 0-450, OR BETTER IN ACCORDANCE WITH O.B.C. SECTION 903.

ALL FLOOR COVERINGS IN CORRIDORS TO HAVE A MINIMUM CRITICAL RADIANT FLUX OF CLASS II 0.22 WATTS PER CM SQUARED OR GREATER IN ACCORDANCE WITH O.B.C. SECTION 904. IN ALL OTHER AREAS, THE INTERIOR FLOOR FINISH SHALL COMPLY WITH THE DOC FF-1 "FILL TEST" (CPSC 16 CFR1630)

## FIRE EXTINGUISHERS

- THE CONTRACTOR SHALL PROVIDE FIRE EXTINGUISHERS DURING CONSTRUCTION AND AT COMPLETION IN ACCORDANCE WITH O.B.C. SECTION 906 AND THE LOCAL FIRE DEPARTMENT, AT LEAST ONE NEAR EACH EXIT. FIRE EXTINGUISHER CABINET TO BE SEMI-RECESSED, AND MEET REQUIREMENTS OF THE INTERNATIONAL FIRE CODE.
- THE SELECTION, INSTALLATION AND MAINTENANCE OF PORTABLE FIRE EXTINGUISHERS SHALL BE IN ACCORDANCE WITH OFC SECTION 906 AND NFPA 10. OFC 906.1 & 906.2 RESPECTIVELY.
- PORTABLE FIRE EXTINGUISHERS SHALL BE LOCATED IN CONSPICUOUS LOCATIONS WHERE THEY WILL BE READILY ACCESSIBLE, IMMEDIATELY AVAILABLE FOR USE.
- PORTABLE FIRE EXTINGUISHERS SHALL NOT BE OBSTRUCTED OR OBSCURED FROM VIEW.
- HAND-HELD PORTABLE FIRE EXTINGUISHERS, NOT HOUSED IN CABINETS, SHALL BE INSTALLED ON THE HANGERS OR BRACKETS SUPPLIED. HANGERS OR BRACKETS SHALL BE SECURELY ANCHORED TO THE MOUNTING SURFACE IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.

## FIRE BLOCKING

- FIRE BLOCKING MUST BE INSTALLED IN ACCORDANCE WITH O.B.C. SECTION 717.
- FIRE BLOCKING SHALL BE INSTALLED IN CONCEALED SPACES OF STUD WALL AND PARTITIONS AT CEILING, FLOOR AND ROOF.
- FIRE BLOCKING SHALL BE INSTALLED AT INTERCONNECTIONS BETWEEN VERTICAL AND HORIZONTAL SPACES SUCH AS OCCUR AT SOFFITS OVER CABINETS, DROP CEILINGS, COVE CEILINGS AND SIMILAR LOCATIONS.
- FIRE BLOCKING SHALL BE INSTALLED IN CONCEALED SPACES BEHIND COMBUSTIBLE TRIM AND FINISH AND ALL OTHER HOLLOW SPACES WHERE PERMITTED IN FIRE-RESISTANCE RATED CONSTRUCTION AT 10 FEET INTERVALS. OR THE SPACE SHALL BE SOLIDLY FILLED WITH NON-COMBUSTIBLE MATERIALS.

## GENERAL NOTES

- ALL WORK SHALL BE PERFORMED IN STRICT ACCORDANCE WITH THE 2011 OHIO BUILDING CODE (O.B.C.) AND ALL LOCAL GOVERNING AUTHORITIES.
- THE CONTRACTOR SHALL REVIEW ALL DRAWINGS, VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS PRIOR TO STARTING CONSTRUCTION. ANY DISCREPANCIES SHALL BE REPORTED TO THE ARCHITECT PRIOR TO STARTING CONSTRUCTION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND INSPECTIONS AS REQUIRED.
- ALL WORK SHALL BE PERFORMED BY WORKMEN THOROUGHLY EXPERIENCED IN THEIR RESPECTIVE TRADES.
- ALL WORK & MANUFACTURED ITEMS SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND/OR WITH THE STANDARD OF THE INDUSTRY OR TRADE ASSOCIATION GOVERNING THEIR WORK.
- CLEAR EXIT ACCESS ASLEWAYS MUST BE MAINTAINED CONFORMING TO EXIT CAPACITY REQUIREMENTS AND IN NO CASE LESS THAN 44" WIDE.
- DOORS (PER O.B.C. SECTION 1008.1)
  - ALL MEANS OF EGRESS DOORS SHALL BE READILY OPENABLE FROM THE SIDE FROM WHICH EGRESS IS TO BE MADE WITHOUT THE USE OF A KEY, SPECIAL KNOWLEDGE, OR EFFORT PER O.B.C. SECTION 1008.1.4.
  - GLASS PANELS IN DOORS AND ADJACENT PANELS WITHIN 24" OF DOORS MUST BE IMPACT RESISTANT.
  - ALL EGRESS DOORS TO HAVE HARDWARE OPERABLE WITH ONE HAND AND SHALL NOT REQUIRE TIGHT GRASPING, FINCHING OR TWISTING OF THE WRIST, DOORS NOTED TO HAVE AUTOMATIC CLOSERS.
- PROVIDE EXIT SIGNS AND MEANS OF EGRESS LIGHTING PER O.B.C. SECTIONS 1006 AND 1011.
- ALL TOILET ROOMS MUST BE PROVIDED WITH NONABSORBENT FLOOR AND 6" HIGH MIN NONABSORBENT COVE BASE, AND MUST BE APPROPRIATELY IDENTIFIED ON THEIR EXTERIORS.
- TOILET ROOMS EXHAUSTS MUST HAVE A CAPACITY OF NOT LESS THAN 75 CFM PER FIXTURE.
- CONTRACTOR TO PROVIDE A KNOX BOX, AND TO COORDINATE ITS LOCATION WITH FIRE DEPARTMENT.

## ICC/A117.1 ACCESSIBLE AND USABLE BUILDINGS AND FACILITIES (2009)

### ACCESSIBLE RESTROOM NOTES

- TOILET ROOM SIGNAGE MUST HAVE RAISED BRAILLE LETTERS AND NUMBERS IN ACCORDANCE WITH THE GENERAL SIGNAGE NOTE.
- ACCESSIBLE LAVATORIES MUST HAVE A MAX HEIGHT OF 34" ABOVE FINISH FLOOR WITH KNEE CLEARANCE OF 27" MIN. REFER TO ANSI 606.3.
- HOT WATER AND DRAIN PIPES UNDER LAVATORIES SHALL BE INSULATED OR OTHERWISE CONFIGURED TO PROTECT AGAINST CONTACT. THERE SHALL BE NO SHARP OR ABRASIVE SURFACES UNDER LAVATORIES. (ANSI 606.6)
- LAVATORY MIRRORS TO BE MOUNTED WITH BOTTOM EDGE OF THE REFLECTIVE SURFACE AT A MAX OF 40" FROM FINISH FLOOR.

5. ACCESSIBLE URINALS MUST HAVE ELONGATED RIM NO HIGHER THAN 17" A.F.F. AND HAVE A MIN. 30" X 48" CLEAR ZONE IN FRONT. REFER TO ANSI 605.2.

6. CENTER LINE OF WATER CLOSET MUST BE 16-18" FROM SIDE WALL OR 17-19" FOR AMBULATORY WATER CLOSETS, AND HAVE THE FLUSH VALVE ON THE OPEN SIDE. MUST COMPLY WITH ANSI 604.2.

7. ACCESSIBLE WATER CLOSETS SEATS MUST BE 17"-19" ABOVE FINISH FLOOR. REFER TO ANSI 604.4.

8. WATER CLOSET FLUSH CONTROLS MUST BE MOUNTED ON OPEN SIDE OF TOILET AREA (ANSI 604.6).

9. TOILET PAPER DISPENSERS SHALL COMPLY WITH ANSI SECTION 909.4 AND WHERE THE DISPENSER IS LOCATED ABOVE THE GRAB BAR, THE OUTLET SHALL BE LOCATED 24-36" FROM THE REAR WALL, AND WHEN BELOW GRAB BAR 24-42" FROM THE REAR WALL. THE OUTLET OF THE DISPENSER SHALL BE 18-48" A.F.F. AND SHALL NOT BE LOCATED BEHIND THE GRAB BARS. DISPENSERS SHALL COMPLY WITH ANSI 609.3. DISPENSERS SHALL NOT BE OF A TYPE THAT CONTROL DELIVERY, OR DO NOT ALLOW CONTINUOUS PAPER FLOW. (ANSI 604.7)

10. ACCESSIBLE WATER CLOSETS SIDE GRAB BAR MUST BE 42" MIN IN LENGTH AND BEGIN NO FARTHER THAN 12" FROM BACK WALL AND EXTEND AT LEAST 54" FROM THE BACK WALL. REFER TO ANSI 604.5.1.

11. ACCESSIBLE WATER CLOSETS VERTICAL SIDE GRAB BAR MUST BE 18" MIN HIGH LOCATED BETWEEN 39-41" A.F.F. TO THE TOP OF THE BAR AND MUST BE 39-41" FROM THE REAR WALL. (ANSI 604.5.1)

12. ACCESSIBLE WATER CLOSETS REAR GRAB BAR MUST BE 36" MIN. THEY MUST EXTEND AT LEAST 12" ON THE SIDE CLOSEST TO THE WALL AND 24" MINIMUM ON THE TRANSFER SIDE. (ANSI 604.5.2)

13. GRAB BARS MUST BE MOUNTED BETWEEN 33-36" A.F.F. MEASURED TO THE TOP OF THE GRIPPING SURFACE REFER TO ANSI 609.4.1.

14. AN UNOBSTRUCTED TURNING SPACE MUST BE PROVIDED IN TOILET ROOMS IN ACCORDANCE WITH ANSI 603.2.1. A CLEAR SPACE OF 60" DIA OR A T-SHAPED SPACE MUST BE PROVIDED IN ACCORDANCE WITH ANSI SECTION 304.3.1 AND 304.3.2

### GENERAL AREA NOTES

- ALL FACILITIES NOTED AS H.C. ACCESSIBLE TO HAVE REACH REQUIREMENTS AS FOLLOWS:
  - UNOBSTRUCTED FORWARD REACH: IF THE CLEAR FLOOR SPACE ONLY ALLOWS FORWARD APPROACH TO AN OBJECT, THE MAX. HEIGHT FORWARD REACH ALLOWED SHALL BE 48". THE MIN. LOW FORWARD REACH IS 15". (ANSI 308.2.1)
  - UNOBSTRUCTED FORWARD REACH: WHERE A HIGH FORWARD REACH IS OVER AN OBSTRUCTION, THE CLEAR FLOOR SPACE SHALL EXTEND BENEATH THE ELEMENT. THE HIGH FORWARD REACH SHALL BE 48" MAXIMUM WHERE THE REACH DEPTH IS 20" MAX. WHERE REACH DEPTH EXCEEDS 20", THE MAX. FORWARD REACH SHALL BE 44" AND THE REACH DEPTH SHALL BE 25" IN COMPLIANCE WITH ANSI 308.2.2
  - UNOBSTRUCTED SIDE REACH: IF THE CLEAR FLOOR SPACE ALLOWS PARALLEL APPROACH BY A PERSON IN A WHEELCHAIR, THE MAX SIDE REACH ALLOWED SHALL BE 48" AND THE LOW SIDE REACH SHALL BE NO LESS THAN 15" A.F.F. (ANSI 308.3.1)
  - UNOBSTRUCTED SIDE REACH: WHERE A CLEAR FLOOR SPACE ALLOWS FOR PARALLEL APPROACH TO AN ELEMENT AND THE HIGH SIDE REACH IS OVER ANY OBSTRUCTION, THE HEIGHT OF THE OBSTRUCTION SHALL BE 34" MAX AND THE DEPTH OF THE OBSTRUCTION 24" MAX. THE HIGH SIDE REACH SHALL BE 48" IN CASE OF AN OBSTRUCTION NO MORE THAN 10" IN DEPTH. FOR AN OBSTRUCTION IN EXCESS OF 10" IN DEPTH BUT NO MORE THAN 24", THE MAXIMUM SIDE REACH SHALL BE 48" IN COMPLIANCE WITH ANSI 308.3.2
- ALL KITCHENETTES AND CABINETS IN PUBLIC AREAS TO HAVE COUNTER TOPS AT 34" A.F.F.
- ALL PERMANENT SIGNAGE MUST HAVE TACTILE LETTERS AND NUMERALS RAISED 1/32" MIN. AND MUST BE ACCOMPANIED WITH GRADE II BRAILLE NO HIGHER THAN 60" A.F.F. (ANSI 703.3)
- REQUIRED ACCESSIBLE ELEMENTS SHALL BE IDENTIFIED BY THE INTERNATIONAL SYMBOL OF ACCESSIBILITY.
- A TACTILE SIGN SHALL BE POSTED AT EACH ACCESSIBLE EXIT STATING "EXIT".
- DOOR THRESHOLD HEIGHTS MUST NOT EXCEED 1/2". (ANSI 404.2.4) RAISED THRESHOLDS AND LEVEL CHANGES AT DOORWAYS SHALL COMPLY WITH ANSI SECTION 303.
- SERVICE COUNTERS ACCESSIBLE BY PARALLEL APPROACH MUST HAVE AN AREA AT LEAST 36" IN LENGTH THAT IS NO MORE THAN 36" HIGH. SERVICE COUNTERS ACCESSIBLE BY FORWARD APPROACH MUST HAVE AN AREA AT LEAST 30" IN LENGTH THAT IS NO MORE THAN 36" HIGH. REFER TO ANSI 904.3
- H.C. ACCESSIBLE PARKING SPACES SHALL BE PROVIDED IN ACCORDANCE WITH ANSI 502.1 AND SHALL BE A MINIMUM 96" IN WIDTH WITH AN ACCESS ASLE AT LEAST 60" IN WIDTH. AT LEAST ONE SPACE SHALL BE VAN ACCESSIBLE WITH A 5'-0" ACCESS ASBLE. THESE SPACES MUST BE MARKED APPROPRIATELY AND HAVE ABOVE GROUND PERMANENT SIGNAGE IDENTIFYING THEM. REFER TO ANSI 502.2.
- ALL PUBLIC AREAS OF THE BUILDING TO COMPLY TO ALL ANSI 2001 REQUIREMENTS WHETHER NOTED ON THE DRAWINGS OR NOT. IT IS THE RESPONSIBILITY OF EACH SUBCONTRACTOR TO COMPLY WITH REQUIREMENTS FOR THEIR AREA OF WORK.

## GENERAL MATERIAL NOTES

### A. FLOOR, SLABS, RAMPS, ETC...

- INFILLED AREAS OF BUILDING SLABS ON GRADE SHALL BE PATCHED WITH 4" CONCRETE IN ACCORDANCE WITH STRUCTURAL DRAWINGS WITH 10 MIL VAPOUR BARRIER OR MINIMUM 4" COMPACTED GRANULAR FILL. IF UNUSUAL CONDITIONS ARE ENCOUNTERED SEEK SOILS ENGINEER'S RECOMMENDATIONS FOR TYPES OF SUB-BASE AND BEARING CAPACITIES.
- ALL EXISTING FLOOR SLABS TO BE LEVEL; USE 'ARDEX K15' SELF LEVELING UNDER LAYMENT CONCRETE AS REQUIRED IN AREAS WHERE EXISTING SLAB IS SLOPED.
- MOVING JOINTS - HONOR ALL EXPANSION AND ISOLATION JOINTS UP THROUGH UNDER LAYMENT.
- FOLLOW MFR'S RECOMMENDATIONS FOR INSTALLATION OF ALL LEVELING MATERIALS.

### B. SEALANTS, INSULATION, MISCELLANEOUS

- ALL NEW INTERIOR STUD WALLS AROUND RESTROOMS TO HAVE SOUND ATTENUATING INSULATION. FULL HT. OF WALL, THE ONLY WALLS NOT INSULATED ARE BETWEEN RESTROOMS & JANITOR'S CLOSET.
- SOUND ATTENUATING INSULATION: BASIS OF DESIGN: USG THERMAFIBER SOUND ATTENUATION FIRE BLANKETS (SAFB) OR EQUIVALENT.

## C. INTERIOR FLOORING

### 1. INTERIOR FLOOR FINISHES

A. CARPET TILE: PROVIDE CARPET WITH 100% SOLUTION DYE, ONE DYE LOT PER COLOR SELECTION, 24 OZ. YARN WEIGHT, LIFETIME ANTIMICROBIAL, CUT & LOOP CONSTRUCTION, 159 PILE THICKNESS, 3/64" PILE DENSITY, 43-48% RECYCLED CONTENT, & CRI GREEN LABEL PLUS. ALL RESILIENT EDGE-GUARDS FOR FLOOR FINISH AT HARD SURFACE FLOORING TO BE INCLUDED. MINOR FLOOR PREP WORK - SAW JOINT/MINOR CRACK FILLING AND MINOR DEPRESSIONS TO BE INCLUDED IN THIS SCOPE OF WORK. DELIVERY, STORAGE, HANDLING, & FIELD CONDITIONS TO COMPLY WITH CRI 104. BIND OR SEAL CUT EDGES AS RECOMMENDED BY CARPET TILE MANUFACTURER.

BASIS OF DESIGN: INTERFACE CARPET TILE & TAC-TILE ADHESIVE

B. CERAMIC TILE: 12" X 12" NONSLIP CERAMIC TILE WITH ANSI DUTY RATING #3 MIN. & 5/16" THICK MIN. TILE TO MEET ALL ADA REQUIREMENTS. ALL MATERIALS & INSTALLATION TO FOLLOW MANUFACTURER'S GUIDELINES AND THE TILE COUNCIL OF AMERICA, INC. (TCA). PROVIDE ALL REQUIRED TRIM SHAPES, SUCH AS COVE BASE, BULLNOSE, ETC. FLOOR TILES TO BE CUT ON SITE IF TRIM SHAPES NOT AVAILABLE. TILE TO BE SET IN THIN-SET PORTLAND CEMENT MORTAR ACCORDING TO MANUFACTURER'S STRICT INSTRUCTIONS WITH CRACK ISOLATION MEMBRANE. 1/4" MIN. CEMENT BOARD UNDER MORTAR WHEN GOING OVER WOOD SUBSTRATE. LAYOUT TILE WORK AND CENTER TILE FIELDS IN BOTH DIRECTIONS IN EACH SPACE OR ON EACH WALL AREA. ADJUST TO MINIMIZE TILE CUTTING. PROVIDE 3/16" GROUT JOINTS. INSTALL AND SPACE EXPANSION AND CONTROL JOINTS IN ALL DIRECTIONS IN ACCORDANCE WITH THE TILE COUNCIL OF AMERICA DETAIL #EJ-171.

BASIS OF DESIGN: FLOOR TILE: DALTILE & SANDED GROUT

C. VINYL COMPOSITION TILE: VCT TO BE 1/8" X 12" X 12" WITH COLORS & TEXTURES DISPERSED UNIFORMLY THROUGHOUT ITS THICKNESS. ALL MATERIALS & INSTALLATION TO BE IN ACCORDANCE WITH TGA GUIDELINES & MANUFACTURER'S RECOMMENDATIONS. PRIMER, ADHESIVES, UNDERLAYMENT, USE THE PROPER PRODUCT RECOMMENDED BY THE MANUFACTURER OF FLOOR TILE & BASE FOR EACH INSTALLATION. PREPARE SUBSTRATES ACCORDING TO MANUFACTURER'S WRITTEN INSTRUCTIONS TO ENSURE ADHESION OF RESILIENT PRODUCTS. WAGNER RH MOISTURE TEST TO BE CONDUCTED WHEN INSTALLATION OVER CONCRETE.

BASIS OF DESIGN: FIELD: ARMSTRONG

D. WOOD GRAIN VINYL: COMMERCIAL GRADE VINYL PLANK FLOOR WITH HIGH PERFORMANCE WEAR LAYER. 6" WIDE. COLORS TO BE SELECTED BY ARCHITECT FROM STANDARD AVAILABLE.

2. INTERIOR BASE: A. RESILIENT BASE - 125" RUBBER BASE W/ INTERNAL & EXTERNAL CORNERS JOB MOLDED. 4" COVERED AT FLOOR TILE & 4" STRAIGHT AT CARPET. BASIS OF DESIGN: JOHNSONITE, 4" STANDARD TOE RUBBER WALL BASE, COLORS TO BE SELECTED BY ARCHITECT.

B. CERAMIC COVE - COVE TYPE BASE, 6" HIGH BASE IN RESTROOMS. BASIS OF DESIGN: DALTILE

3. SUBMITTALS: 12" X 12" MIN. SAMPLE OF EACH FLOORING REQUESTED. PROVIDE SELECTIONS OF EACH MATERIAL AVAILABLE WITHIN THE ALLOWANCE FOR SELECTION BY INTERIOR TEAM

## D. INTERIOR WALLS

1. INTERIOR PARTITIONS WALLS: 3/5/8" METAL STUDS @ 16" O.C. (6" WHERE NOTED) WITH 5/8" THICK GYPSUM BOARD ON BOTH SIDES, METAL STUD GAUGE TO BE AS RECOMMENDED BY STUD MFR. IN ACCORDANCE WITH HT. & LOCATION, UP TO ABOVE SUSPENDED CLG. OR TO DECK ABOVE AS NOTED. ALL INTERIOR WALLS SHALL BE BRACED TO THE STRUCTURE ABOVE. PROVIDE SOUND ATTENUATION INSULATION WHERE NOTED.

2. ALL FULL HEIGHT WALLS TO THE UNDERSIDE OF THE ROOF DECK SHALL HAVE A SLIP CHANNEL TOP RUNNER TO ALLOW FOR MOVEMENT OF THE STRUCTURE ABOVE.

3. ALL INTERIOR WALLS SHALL HAVE GYPSUM BOARD CONTROL JOINTS AT RECOMMENDED INTERVALS, OR WHERE CRACKS WOULD LIKELY OCCUR IN ACCORDANCE WITH "THE GYPSUM CONSTRUCTION HANDBOOK" BY USG.

4. CONTROL JOINT: USG CONTROL JOINT NO. 43, ZINC CONTROL JOINT, OR EQUIVALENT.

5. GYPSUM WALL BOARD: 5/8" THICK WITH TAPERED EDGES, TYPE X WHERE RATED, USE WATERPROOF INSULATING TAPE AT EXTERIOR, HOLLOW METAL DOORS AND WINDOWS.

6. WATER RESISTANT WALL BOARD: MOISTURE & MILDEW RESISTANT BOARD WITH PAPER FACING BY USG, THICKNESS AS NOTED ON DRAWINGS. TO BE USED ON SINK (NET) WALL OF RESTROOMS.

7. BOX OUT AROUND ALL MECHANICAL STACKS AND STRUCTURAL MEMBERS WITH 2" STUD SYSTEM AND 5/8" THICK GYPSUM BOARD UP ABOVE FINISHED CEILING. HOLD FRAMING SYSTEM AS TIGHT AS POSSIBLE TO MEMBERS.

8. INTERIOR WALL FINISHES
 

- A. CERAMIC TILE: COMMERCIAL GRADE CERAMIC TILE. PROVIDE ALL REQUIRED TRIM SHAPES, SUCH AS BULLNOSE, ETC. GROUT & SETTING MATERIALS - PROVIDE PRODUCTS RECOMMENDED BY TILE MANUFACTURER FOR SUBSTRATES INDICATED. FOLLOW RECOMMENDATIONS OF CURRENT HANDBOOK FOR CERAMIC TILE INSTALLATION PUBLISHED BY THE TILE COUNCIL OF AMERICA, INC. (TCA). ALIGN JOINTS WHEN ADJOINING TILES OF FLOOR, BASE, WALLS AND TRIM THAT ARE THE SAME SIZE. LAYOUT TILE WORK AND CENTER TILE FIELDS IN BOTH DIRECTIONS IN EACH SPACE OR ON EACH WALL AREA. ADJUST TO MINIMIZE TILE CUTTING. INSTALL TILES IN ACCORDANCE WITH THE MORTAR MANUFACTURER'S INSTRUCTIONS. INSTALL AND SPACE EXPANSION AND CONTROL JOINTS IN ALL DIRECTIONS IN ACCORDANCE WITH THE TILE COUNCIL OF AMERICA DETAIL #EJ-171 RECOMMENDATIONS IN THE LATEST EDITION OF THE TCA HANDBOOK.
- B. FRP PANELS: SMOOTH FIBERGLASS REINFORCED PLASTIC PANEL. PROVIDE ALL TRIM, FASTENERS AND PANEL ADHESIVE AS RECOMMENDED BY PANEL MANUFACTURER. INSTALLATION PER MANUFACTURER'S RECOMMENDATIONS. COLOR TO BE SELECTED BY ARCHITECT.
- C. CORNER GUARDS: SURFACE MOUNTED, SMOOTH CORNER GUARDS, 2.5" X 2.5" X 3/32" OR EQUIVALENT FOR 90 DEGREE CORNER OVER CONTINUOUS ALUMINUM RETAINER. PROVIDE TOP AND BOTTOM CLOSURE CAPS IN COLOR MATCHING COVER. BASIS OF DESIGN: KOFFLER A679, COLOR TO BE SELECTED BY ARCHITECT.

9. SUBMITTALS: 12" X 12" MIN. SAMPLE OF TILE, WALL COVERING, FRP COLORS AND CORNER GUARD SAMPLE WITH STANDARD COLORS FOR SELECTION.

## E. CEILINGS, SOFFITS

1. SUSPENDED ACOUSTIC TILE CEILINGS: SUSPENDED ARMSTRONG 2' X 4' X 3/4" LAY IN ACOUSTICAL TILE CEILINGS WITH EXPOSED TIE GRID PER CEILING PLANS, HEAVY DUTY MAIN TEES AT 4'-0" O.C., AND ATTACHMENT DEVICES SIZED FOR CEILING SYSTEM AND STYLE. REFER TO REFLECTED CEILING PLAN, AND ELECTRICAL DRAWINGS FOR FIXTURE LOCATIONS & MECHANICAL DRAWINGS FOR SUPPLY & RETURN AIR DIFFUSERS.

2. CEILING TILES TO BE MATCH EXISTING AND TO BE ARMSTRONG WORLD INDUSTRIES, INC. - #763 GEORGIAN, SQUARE LAY-N, 1/8", 2'x4', WASHABLE

3. SUBMITTALS: SAMPLES OF EACH CEILING TYPE

## F. INTERIOR TRIM AREAS

- ALL MISC. INTERIOR WOOD TRIM TO MATCH EXISTING.
- ALL SUPPLY SHELVES TO BE STAINED PLYWOOD WITH EDGING AND CONT. CLEATS.

## G. INTERIOR DOORS

1. ALL INTERIOR WOOD DOORS TO BE PRE-FINISHED, 1 3/4" SOLID WOOD, ANI GRADE, 5 PLY COMMERCIAL GRADE TO MATCH EXISTING ACCORDING TO DOOR SCHEDULE.

2. GATES: ALL GATES TO BE SOLID CORE WOOD DOUBLE-SWINGS (1/2) HALF DOORS, 3'-6" H.

3. DOOR HARDWARE: PROVIDE HARDWARE TO PERFORM FUNCTION DESCRIBED IN DOOR SCHEDULE. HARDWARE SUPPLIER TO HAVE A QUALIFIED DR ARCHITECTURAL HARDWARE CONSULTANT MEET WITH OWNER'S REPRESENTATIVE AND ARCHITECT TO REVIEW DOOR SCHEDULE AND CREATE A HARDWARE SCHEDULE AND KEYING SCHEDULE.

4. SUBMITTALS: PROVIDE PREFINISHED WOOD DOOR STAIN COLOR SAMPLES ON MAPLE VENEER, DOOR MANUFACTURERS DOOR SCHEDULE, HARDWARE SCHEDULE, AND DESCRIPTIONS.

## H. CASEWORK

1. ALL CABINETS TO BE PLASTIC LAM. FRONT STOCK UNITS WITH SOLID SURFACE COUNTER TOPS NOTED, WITH ADJUSTABLE SHELVES, & 4" BACKSPASHES. SHOP DRAWINGS OF SPECIFIC LAYOUTS SHALL BE PROVIDED BY THE CABINET PROVIDER FOR APPROVAL BY OWNER.

2. PLASTIC LAMINATE CABINETS: DOOR AND DRAWER FRONTS, 3/4" THICK, FRAMELESS, P-LAMINATED PARTICLE BOARD WITH PVC EDGE BANDING AND 3/4" THICK SOLID WOOD CENTER PANELS.

3. SOLID SURFACE COUNTER TOPS: 100% ACRYLIC PATTERNED MATERIAL, FULL 1/2" THICKNESS MIN., WITH ROUNDED EDGES, AND UNDER MOUNT SINKS.

4. SUBMITTALS: SHOP DRAWINGS OF ALL CABINETS AND CASEWORK; COLOR & PATTERN SAMPLES OF COUNTER TOP FINISHES SELECTED.

## I. PAINT SCHEDULE

PAINTING WORK SHALL BE COMPLETE AND COVER ALL ITEMS USUALLY PAINTED OR FINISHED.

- SYSTEM 3: APPLY TO EXPOSED INTERIOR CONCRETE BLOCK WALLS;
  - 1ST COAT: MASONRY PRIMER / SEALER
  - 2ND COAT: SEMI-GLOSS PRE-CATALYZED (SINGLE COMPONENT) EPOXY; OR INDUSTRIAL MODIFIED ALKYD ENAMEL GLOSS.
  - 3RD COAT: SEMI-GLOSS PRE-CATALYZED (SINGLE COMPONENT) EPOXY; OR INDUSTRIAL MODIFIED ALKYD ENAMEL GLOSS.
- SYSTEM 4: APPLY TO INTERIOR DRYWALL SURFACES.
  - 1ST COAT: DRYWALL PRIMER / SEALER
  - 2ND COAT: LATEX SATIN FINISH (SEMI-GLOSS INDUSTRIAL MODIFIED ALKYD ENAMEL IN RESTROOMS OR DAMP AREAS)
- SYSTEM 6: STAINED WOOD
  - PREPARE WOOD, SAND JOINTS, COVER NAIL HEADS STAIN WOOD PER MFR'S RECOMMENDATIONS. SPRAY CLEAR PROTECTIVE POLYURETHANE COATING.
- COMMON COATING CATEGORIES FOR OTC TYPE REGULATIONS
  - VOC LIMITS FOR THE MAIN CATEGORIES
    - FLAT COATINGS (100 g/L)
    - NON-FLAT COATINGS (150 g/L)
    - NON-FLAT HIGH GLOSS COATINGS (250 g/L)
  - PRIMERS, SEALERS AND UNDERCOATERS (200 g/L)
  - SPECIALTY PRIMERS (350 g/L)
  - INDUSTRIAL MAINTENANCE COATINGS (340 g/L)
  - RUST PREVENTIVE COATINGS (400 g/L)
  - SANDING SEALERS (350 g/L)
  - VARNISHES (350 g/L)
- SUBMITTALS: 5" X 7" MIN. PAINT SAMPLE CHIPS OF REQUESTED COLORS.

## J. SPECIALTIES

1. RESTROOM ACCESSORIES: EACH RESTROOM SHALL BE EQUIPPED WITH ADA GRAB BARS, ADA MIRROR OVER SINKS, TOILET PAPER DISPENSERS WITH A SPARE ROLL, SANITARY NAPKIN DISPENSER IN WOMEN'S ROOM, AUTOMATED PAPER TOWEL DISPENSER, SOAP DISPENSER IN COUNTER AND SHOWER CURTAIN AND ROD IN SHOWERS. PROVIDE MANUFACTURERS PRODUCT PHOTO AND DESCRIPTION OF EACH COMPONENT PROPOSED.

- BASIS OF DESIGN FIXTURES:
- GB-18: GRAB BAR, BOBRICK, B-6806x18, 18" STRAIGHT, 1 1/2" DIAM., SATIN FINISH, CONCEALED MOUNTING WITH SNAP FLANGES.
  - GB-36: GRAB BAR, BOBRICK, B-6806x36, 36" STRAIGHT, 1 1/2" DIAM., SATIN FINISH, CONCEALED MOUNTING WITH SNAP FLANGES.
  - GB-42: GRAB BAR, BOBRICK, B-6806x42, 42" STRAIGHT, 1 1/2" DIAM., SATIN FINISH, CONCEALED MOUNTING WITH SNAP FLANGES.
  - TTD-2: TOILET TISSUE DISPENSER, BOBRICK, B-7686, SURFACE MOUNTED FOR DOUBLE ROLL OR 8" PAPER.
  - FM-1: STAINLESS STEEL FRAMED MIRROR WITHOUT SHELF, BOBRICK B-290 56SERIES, SIZES AS SHOWN ON DRAWINGS.
  - RH-1: STAINLESS STEEL ROBE HOOK, BOBRICK, B-682, SATIN FINISH.
  - SD-1: SANITARY NAPKIN DISPOSAL, BOBRICK, B-210, CONTRA SERIES.
  - SD-1: SOAP DISPENSER, BOBRICK, B-40, SURFACE MOUNTED, TWO-TONED.
  - PT-1: AUTOMATED PAPER TOWEL DISPENSER, GEORGIA PACIFIC, ENMOTION #59488, TRANSLUCENT SMOKE.
  - BCS: BABY CHANGING STATION, KOALA CARE, KB108, COLOR 12, GREY GRANITE.

2. FIRE EXTINGUISHERS AND CABINETS: ALUM. CABINET, 10 LB ABC FIRE EXTINGUISHER, J.L. INDUSTRIES, INC., "ACADEMY 1027 V10" FINISHED OR EQUAL. SUBMITTAL: MANUFACTURERS PRODUCT DESCRIPTION OF TYPICAL CABINET. ALL F.E. CABINETS TO BE PROVIDED AND INSTALLED BY THE O.C. ALL BRACKET HUNG F.E.'S TO BE PROVIDED BY THE OWNER AND INSTALLED BY THE O.C.

3. MONITOR BRACKET: MONITOR BRACKET TO HOLD 32-60" FLAT PANEL TV. BRACKET WITH ADJUSTABLE WAST TO ROTATE 360 DEGREES WITH 15 DEGREE TILT DOWNWARD. UNISTRUT ADAPTER AND/OR NPT PIPE EXTENSION TO BE USED IF NECESSARY.

4. WALK OFF MAT: SCRAPER MATTING #100 (OR EQUAL) MATTING INSIDE MAIN ENTRY DOOR. COLOR (IN VESTIBULES) TO BE SELECTED BY ARCHITECT. ALIGN WITH SURROUNDING FINISHES IN ACCORDANCE WITH MFR'S RECOMMENDATIONS.

BASIS OF DESIGN: 3-M NOMAD

REVISIONS	BY
FOR PERMIT 2.20.15	
FOR BID 06.05.15	

**JOSEPH L. MYERS, ARCHITECT, INC.**  
38030 Second Street  
Willoughby, Ohio 44094  
(440) 975-1800

**LAKE CO. CLERK OF COURTS**  
TITLE CENTRAL  
8504 MENTOR AVE., MENTOR, OHIO  
TITLESHEET

DRAWN  
AMV / JLM  
DATE  
06.02.2015  
SCALE  
NTS  
JOB NO.  
15004  
SHEET  
**T**  
OF 2 SHEETS

## INDEX TO DRAWINGS

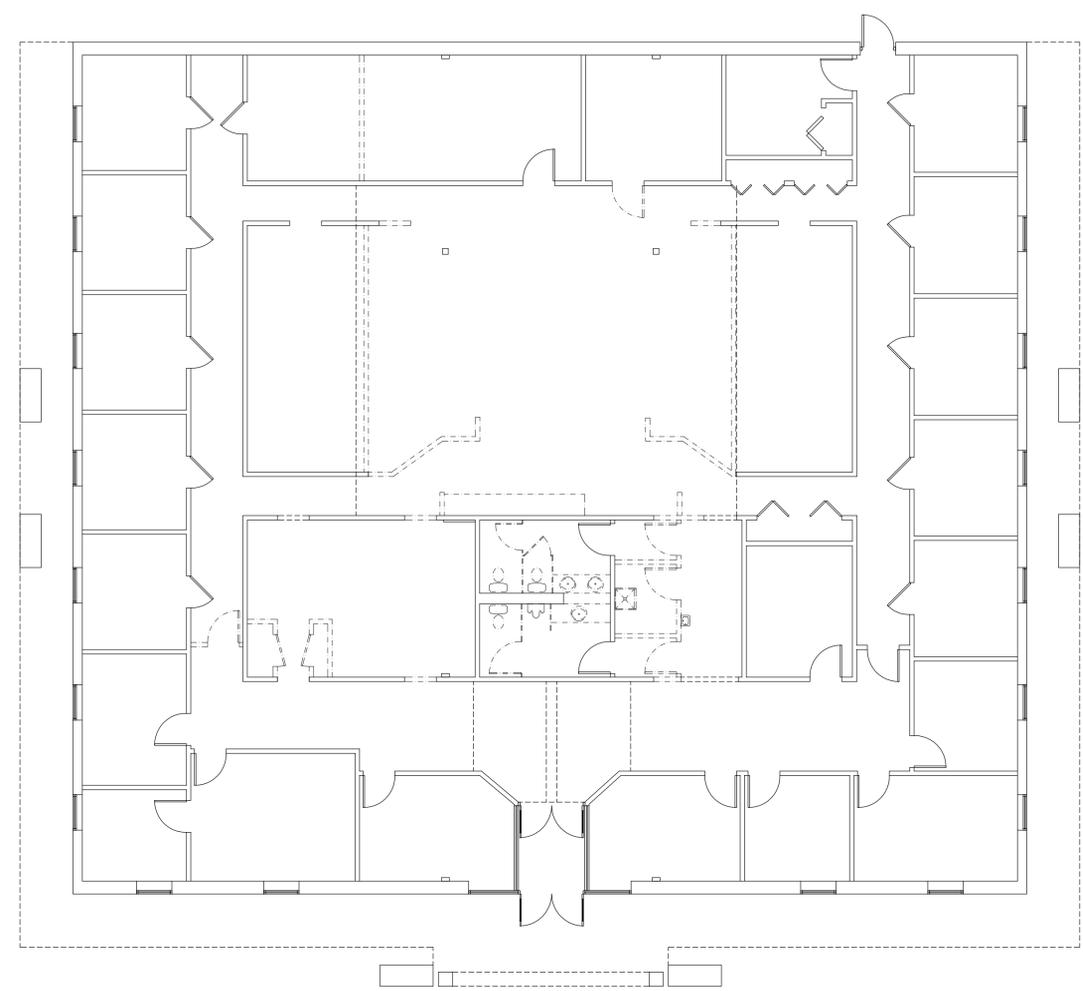
ARCHITECTURAL		MECHANICAL		ELECTRICAL	
A1	FLOOR PLANS	M1	MECHANICAL PLANS	E1	PLANS, SCHED., DIAGRAMS, & NOTES
A2	DOOR SCHEDULE & DETAILS	P1	PLUMBING PLANS		
		P2	PLUMBING SPECIFICATIONS		

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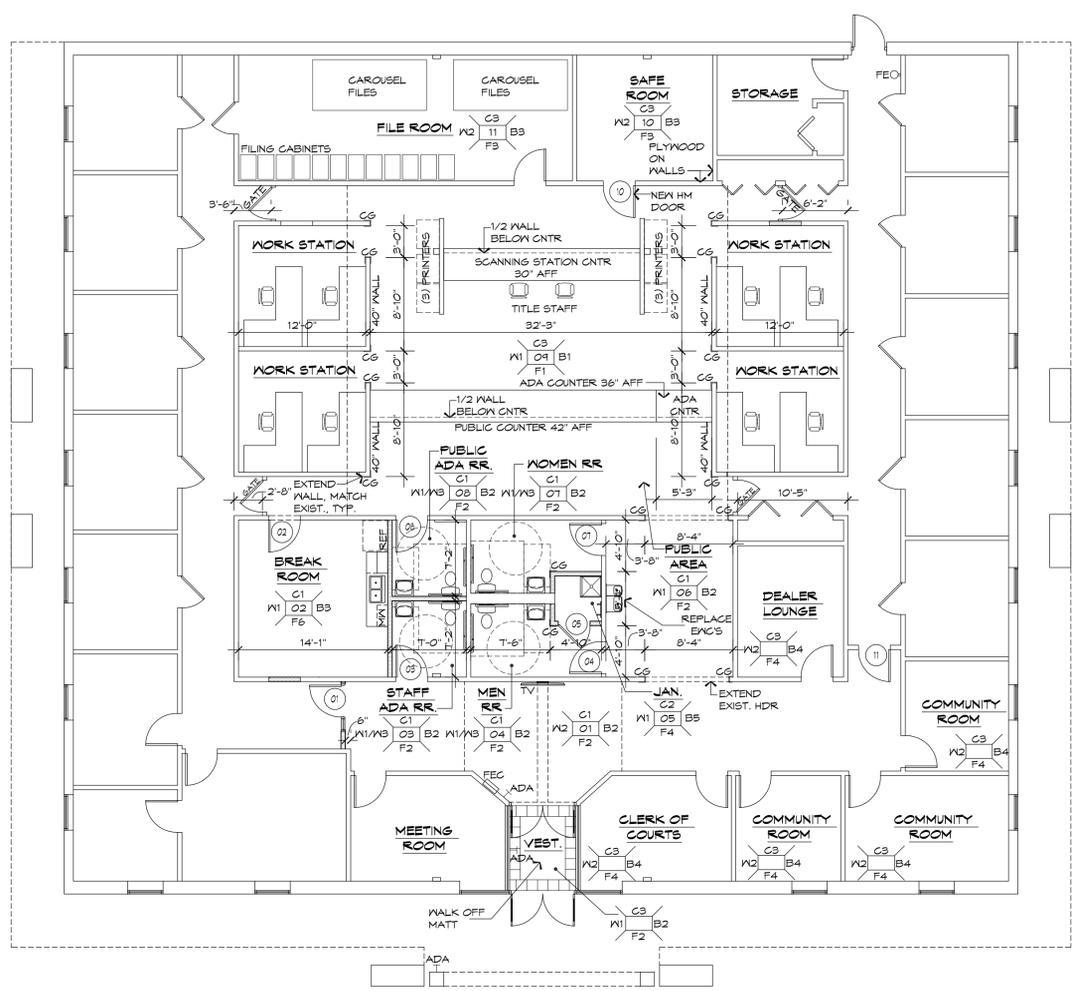
**LAKE CO. CLERK OF COURTS**  
 TITLE CENTRAL  
 8804 MENTOR AVE. MENTOR, OHIO  
 FLOOR PLAN & DEVO PLAN

DRAWN AMN / JLM  
 DATE 06.02.2015  
 SCALE 1/8" = 1'-0"  
 JOB NO. 15004  
 SHEET



**DEMOLITION PLAN** 1/8"

- DISCONNECT EXIST. ELECTRICAL SERVICE AT THE DISTRIBUTION PANEL.
- SHUT OFF HOT AND COLD DOMESTIC WATER UPON ENTERING UNIT.
- REMOVE EXISTING WALLS, CEILINGS, AND FLOORING ACCORDING TO PLAN ABOVE.
- MAINTAIN ALL DUCTWORK TRUNK LINES AND ADJUST EXISTING BRANCH DUCTWORK IF NECESSARY.
- MAINTAIN MAIN HOT AND COLD WATER LINES AND ADJUST OTHER BRANCH RUNS IF NECESSARY.
- REMOVE EXIST. ELECTRICAL FIXTURES AND WIRING IN RESTROOMS. (INVENTORY FIXTURES TO BE REUSED)
- MAINTAIN EXISTING THERMOSTATS.



**FLOOR PLAN** 1/8"

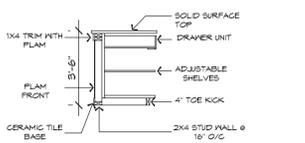
**WALL KEY**

- EXISTING WALLS TO BE REMOVED
- EXISTING WALLS TO REMAIN
- NEW WALLS
- SURFACE MOUNTED FIRE EXTINGUISHER (FE)
- SEMI RECESSED FIRE EXTINGUISHER CABINET (FEC)
- └ CORNER GUARD (CG)

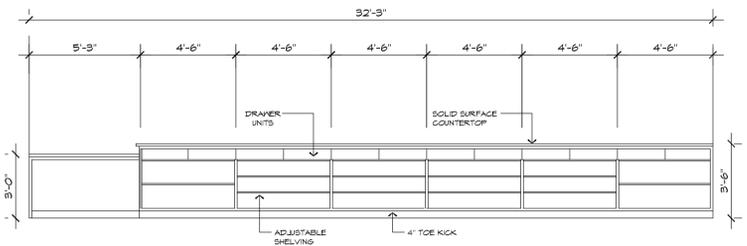
NOTE: ALL INTERIOR WALLS ARE A NOMINAL 5" DIMENSION (5/8" GYP. BOARD ON EACH SIDE OF 3 5/8" METAL STUD) UNLESS OTHERWISE NOTED.

**ROOM FINISH SCHEDULE**

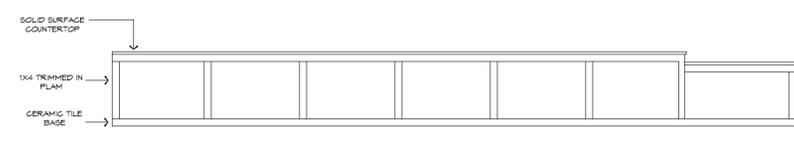
CEILING	WALLS	ROOF	FLOOR	BASE
C1 - SUSP. ACOUSTICAL TILE CEILING SYSTEM	M1 - PAINTED GYP BOARD		F1 - CARPET TILE	B1 - CARPET
C2 - EXPOSED STRUCTURE	M2 - EXISTING TO REMAIN		F2 - CERAMIC TILE	B2 - CERAMIC COVE TYPE
C3 - EXISTING TO REMAIN	M3 - CERAMIC TILE MAINSCOT		F3 - VINYL COMPOSITION TILE	B3 - RESILIENT COVE TYPE
			F4 - EXISTING TO REMAIN	B4 - EXISTING TO REMAIN
			F5 - WALK OFF MAT	B5 - NONE
			F6 - WOOD GRAIN VINYL	



**COUNTER SECTION** 1/4"



**PUBLIC COUNTER REAR ELEVATION** 1/4"



**PUBLIC COUNTER FRONT ELEVATION** 1/4"

**DOOR SCHEDULE**

ALUM. = ALUMINUM, H.M. = HOLLOW METAL, MD = SOLID CORE WOOD

DOOR #	SIZE	MAT'L.	DOOR TYPE	FRAME MAT'L.	RATED	HWYR. SET #	REMARKS
01	3'-0" x T'-0" x 1 3/4"	MD	A	MD		1	CLOSER
02	3'-0" x T'-0" x 1 3/4"	MD	B	MD		2	
03	3'-0" x T'-0" x 1 3/4"	MD	B	MD		3	
04	EXISTING					3	CLEAN & REPAIR EXISTING DOOR TO LIKE NEW CONDITION & REPLACE HARDWARE
05	3'-0" x T'-0" x 1 3/4"	MD	B	MD		4	
07	EXISTING					3	CLEAN & REPAIR EXISTING DOOR TO LIKE NEW CONDITION & REPLACE HARDWARE
08	3'-0" x T'-0" x 1 3/4"	MD	B	MD		3	
10	3'-0" x T'-0" x 1 3/4"	HM	B	HM		4	
11	EXISTING					1	CLEAN & REPAIR EXISTING DOOR TO LIKE NEW CONDITION & REPLACE HARDWARE

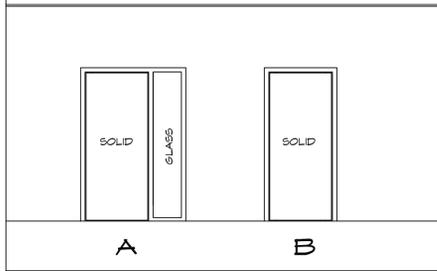
**NOTES:**

- ALL DOORS TO HAVE HARDWARE OPERABLE WITH ONE HAND AND SHALL NOT REQUIRE TIGHT GRASPING, PINCHING OR TWISTING OF THE WRIST. (LEVER TYPE)
- ALL MEANS OF EGRESS DOORS SHALL BE READILY OPERABLE FROM THE SIDE FROM WHICH EGRESS IS TO BE MADE WITHOUT THE USE OF A KEY OR SPECIAL KNOWLEDGE OR EFFORT.
- ALL INTERIOR DOORS TO BE PRE-HUNG 1 3/4" SOLID CORE WOOD OR HOLLOW METAL WITH HOLLOW METAL FRAME.
- ALL DOORS TO HAVE DOOR STOP & WALL OR FLOOR MOUNTED BUMPER AND SILENCERS.

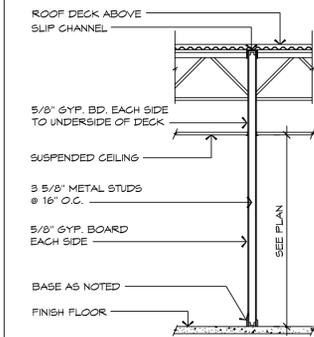
**HARDWARE SCHEDULE:**

SET #	DESCRIPTION
1.	CLASSROOM TYPE LOCK
2.	PASSAGE SET
3.	PRIVACY LOCK AND APPROPRIATE SIGNAGE
4.	STOREROOM TYPE LOCK

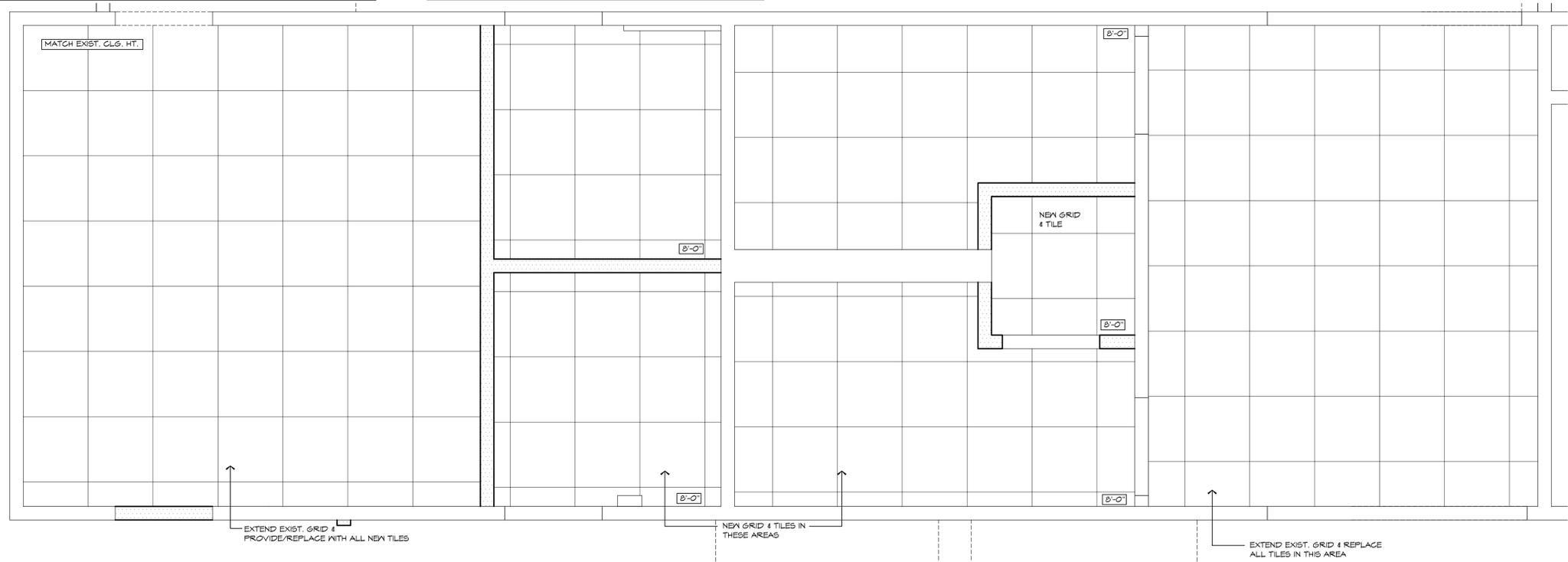
**DOOR TYPES** ALL GLASS IN DOORS TO BE TEMPERED SAFETY GLASS 1/4"



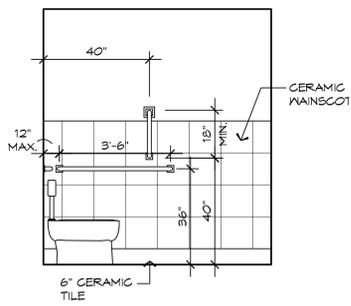
**WALL TYPES** 1/4"



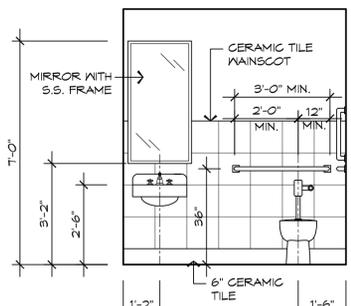
1 ENTRY LEVEL FULL HT. PARTITIONS



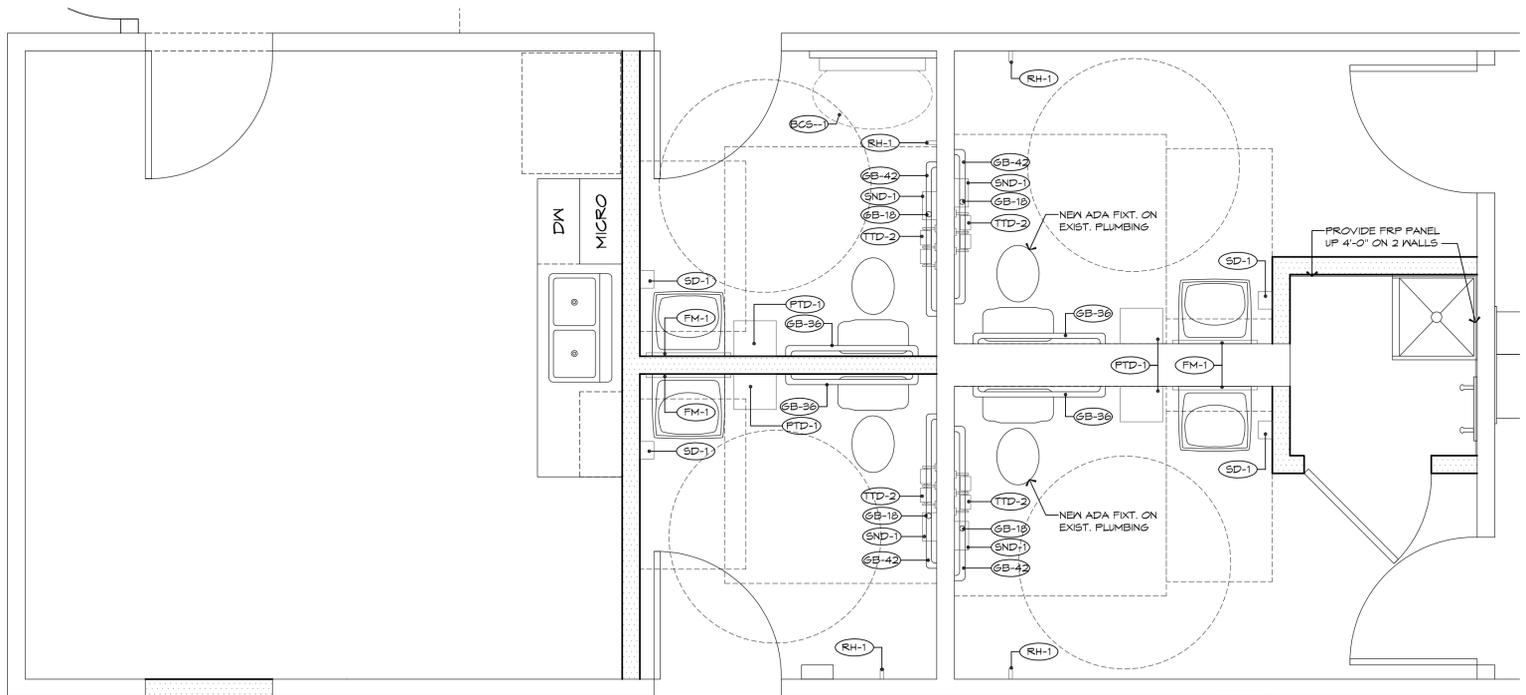
ENLARGED REFLECTED CLG PLAN 1/2"



UNISEX RR 2.A2 TYP.



UNISEX RR 1.A2 TYP.



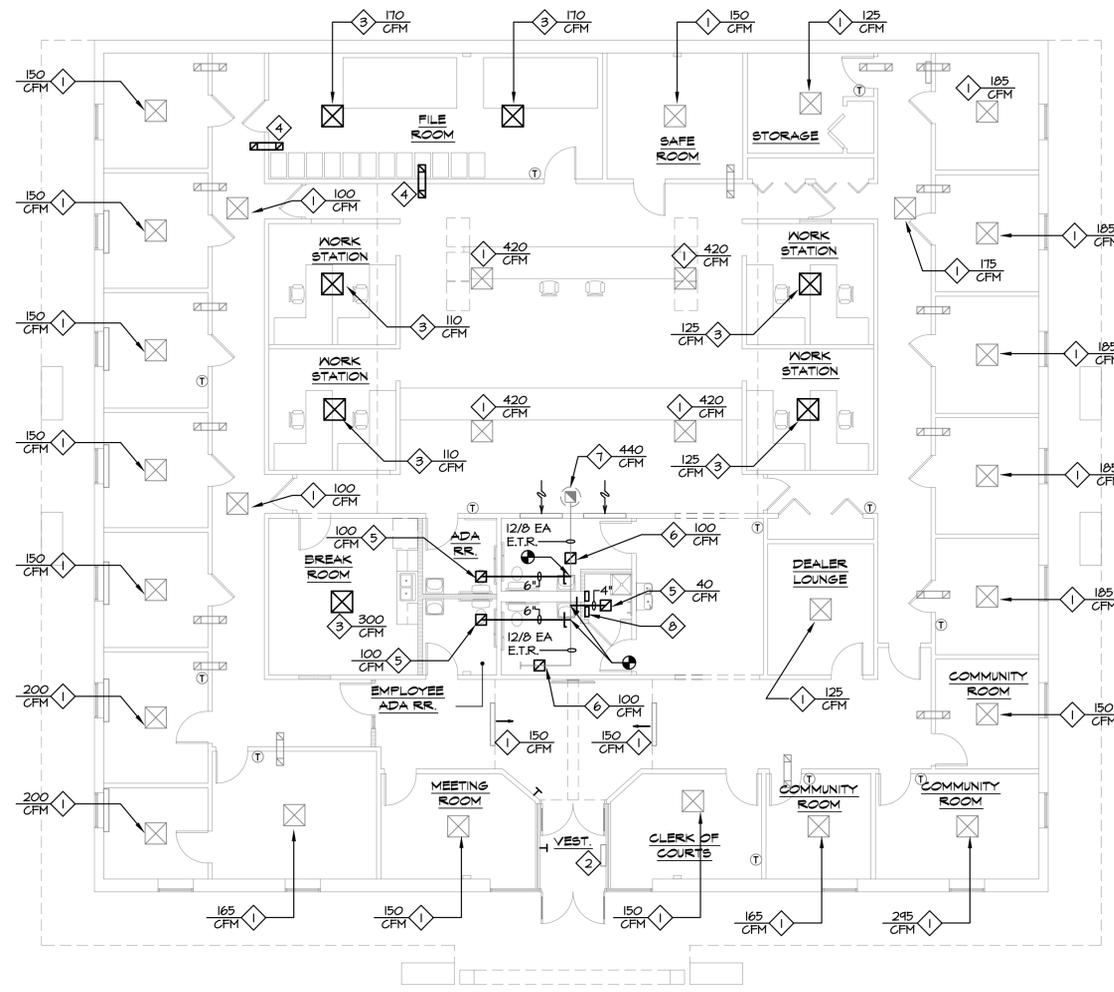
ENLARGED RR FLOOR PLAN 1/2"

REVISIONS	BY
FOR PERMIT 2.20.15	
FOR BID 06.05.15	

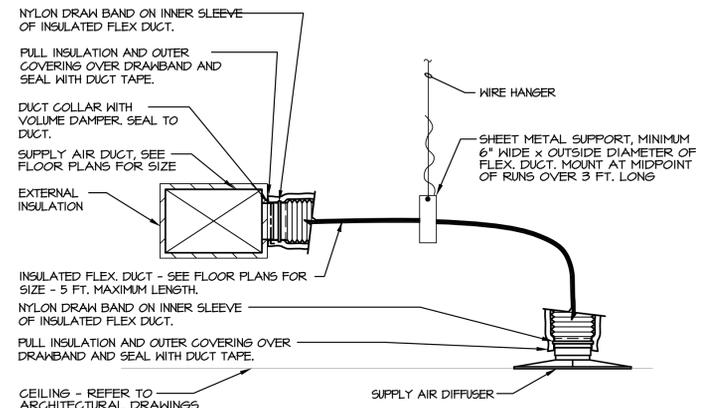
**JOSEPH L. MYERS, ARCHITECT, INC.**  
 38030 Second Street Willoughby, Ohio 44094  
 (440) 975-1800

**LAKE CO. CLERK OF COURTS**  
 TITLE CENTRAL  
 8804 MENTOR AVE. MENTOR, OHIO  
 DOOR SCHEDULE & DETAILS

DRAWN AMN / JLM
DATE 06.02.2015
SCALE AS NOTED
JOB NO. 15004
SHEET
<b>A2</b>
OF 2 SHEETS



**MECHANICAL PLAN**  
SCALE: 1/8" = 1'-0"



**FLEXIBLE DUCT WITH DIFFUSER - DETAIL**  
NOTE:  
USE DRAW BAND INSTALLATION TOOL TO TIGHTEN BAND TO DUCTWORK. HAND INSTALLED DRAWBAND IS NOT ACCEPTABLE.

**GENERAL NOTES**

- A. CONDUCT FIELD SURVEY OF EXISTING CONDITIONS PRIOR TO SUBMISSION OF BID AND START OF WORK. NO ADDITIONAL PAYMENTS WILL BE MADE ON CLAIMS THAT ARISE FROM LACK OF KNOWLEDGE OF EXISTING CONDITIONS.
- B. COORDINATE SCHEDULE OF WORK REQUIRED IN OCCUPIED AND OPERATING AREAS WITH OWNER PRIOR TO STARTING SUCH WORK.
- C. SCHEDULE UTILITY SERVICE SHUTDOWNS REQUIRED FOR NEW CONSTRUCTION WITH OWNER AND GENERAL TRADES PRIOR TO SHUTTING DOWN SYSTEMS. GIVE ONE WEEK ADVANCE NOTICE.
- D. REMOVE AND REPLACE EXISTING CEILING TO ACCOMMODATE NEW WORK. REPLACE DAMAGED CEILING TILES WITH NEW.
- E. CUT FLOOR, WALL, AND CEILING CONSTRUCTION FOR PENETRATIONS TO ACCOMMODATE NEW WORK. COORDINATE WITH GENERAL TRADES. PATCH CONSTRUCTION TO MATCH, OR TO SATISFACTION OF ARCHITECT AND OWNER.
- F. COORDINATE ROUTING OF NEW DUCTWORK WITH EXISTING BUILDING CONDITIONS AND WITH WORK OF OTHER TRADES. PROVIDE CHANGES IN LOCATION, DIRECTION, OFFSETS, AS MAY BE REQUIRED, WHETHER SPECIFICALLY INDICATED OR NOT, AND AT NO ADDITIONAL COST TO THE OWNER.
- G. UNLESS OTHERWISE NOTED, FLEXIBLE DUCTWORK IS SAME SIZE AS ROUND DUCTWORK TO WHICH IT IS CONNECTED.
- H. THE DUCTWORK SIZES INDICATED ARE INSIDE CLEAR DIMENSIONS.
- I. FOR DUCTWORK INSULATION, REFER TO SPECIFICATIONS.

**PLAN NOTES**

- 1. CONTRACTOR SHALL REBALANCE EXISTING DIFFUSER TO AIR VOLUME INDICATED.
- 2. EXISTING ELECTRIC HEATER TO REMAIN.
- 3. RELOCATE EXISTING 24/24 INCH SUPPLY AIR DIFFUSER INTO NEW CEILING. EXTEND 8 INCH FLEXIBLE DUCTWORK TO NEW LOCATION AS REQUIRED.
- 4. RELOCATE EXISTING 10/10 INCH SURFACE MOUNTED TRANSFER AIR GRILLE INTO NEW CEILING. MODIFY EXISTING 12/8 INCH TRANSFER AIR DUCT AS REQUIRED FOR NEW CONDITIONS.
- 5. PROVIDE TITUS 350R SURFACE MOUNTED EXHAUST AIR GRILLE, NECK 10/10, COLOR SHALL BE WHITE. BALANCE TO EXHAUST AIR VOLUME INDICATED.
- 6. RELOCATE EXISTING 10/10 INCH SURFACE MOUNTED EXHAUST AIR GRILLE INTO NEW TOILET ROOM CEILING. MODIFY EXISTING EXHAUST AIR DUCT DROP REQUIRED FOR NEW CONDITIONS. BALANCE TO EXHAUST AIR VOLUME AS INDICATED.
- 7. EXISTING ROOF MOUNTED EXHAUST FAN TO REMAIN AND BE REUSED. EXHAUST FAN IS FENIX MODEL XR94, 0.375 INCH STATG. PRESSURE, 1/10 HORSE POWER, 120V-1PH. CONTRACTOR SHALL BALANCE THE EXHAUST TO AIR VOLUME INDICATED.
- 8. EXISTING TEMPERATURE CONTROL PANELS SHALL BE RELOCATED FROM EXISTING JANITOR CLOSET TO LOCATION INDICATED. CONTRACTOR SHALL PROVIDE ALL CONTROL WIRING FOR RELOCATION. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO MAKE EXISTING TEMPERATURE CONTROL SYSTEM, ZONE T-STATS, AND DAMPERS FULLY OPERATIONAL.

**HVAC SYMBOLS**

- SUPPLY AIR DIRECTION ARROW
- ↔ RETURN/EXHAUST INTAKE DIRECTION ARROW
- ⊕ CONNECT TO EXISTING
- ⊙ RTU-1 THERMOSTAT AND ASSOCIATED EQUIPMENT

REVISIONS	BY
FOR BID 06.05.15	TEC

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**LAKE CO. CLERK OF COURTS**  
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MECHANICAL PLANS



DRAWN PMT / DHH
DATE 06.02.2015
SCALE 1/8" = 1'-0"
JOB NO. 15004
SHEET

PLUMBING FIXTURE SCHEDULE

MARK	FIXTURE	WASTE	VENT	HW	CW	MANUFACTURER, MODEL NUMBER, AND DESCRIPTION
WC-1	WATER CLOSET ADA	3"	2"	-	1/2"	FIXTURE: FLOOR MOUNTED TANK TYPE, WHITE VITREOUS CHINA, ELONGATED BOWL, 3 INCH FLUSH VALVE, SIPHON JET ACTION, 1.28 GALLONS PER FLUSH, 16-1/2 INCH BOWL HEIGHT. AMERICAN STANDARD CHAMPION 211AA104 SEAL: WHITE, HEAVY DUTY COMMERCIAL GRADE, OPEN FRONT, SELF-SUSTAINING CHECK HINGES WITH STAINLESS STEEL POSTS BY CHURCH MODEL 4500C OR APPROVED EQUAL. ROUGH-IN DIMENSION: 12 INCH SUPPLIES: PROVIDE CHROME PLATED RIGID SUPPLY WITH LOOSE KEY STOP, REDUCERS AND ESCUTCHEONS.
L-1	LAVATORY COUNTERTOP	1-1/4"	1-1/4"	1/2"	1/2"	FIXTURE: 20 INCH x 18 INCH WALL HUNG LAVATORY, 4 INCH CENTERS, AMERICAN STANDARD 0355.012 "LUCERNE" OR APPROVED EQUAL. FAUCET: SINGLE CONTROL LAVATORY FAUCET ON 4 INCH CENTERS, WASHER-LESS CERAMIC DISC VALVE CARTRIDGE, METAL LEVER HANDLE, 0.5 GPM VANDAL PROOF, NON-AERATING SPRAY, AMERICAN STANDARD MODEL T395.050 @ 0.5 GPM OR APPROVED EQUAL. CARRIER: ADJUSTABLE CARRIER WITH STEEL UPRIGHTS, ARMS FOR CONCEALED MOUNTING, BLOCK FEET FOR SECURING TO FLOOR AND FRAMING, MADE W-520 OR ZURN. SUPPLIES: FURNISH CHROME PLATED RIGID OR FLEXIBLE SUPPLIES WITH LOOSE KEY STOPS, REDUCERS, AND ESCUTCHEONS. INSULATED FOR ADA COMPLIANCE. DRAIN: STAINLESS STEEL NON-REMOVABLE STRAINER WITH 1-1/4 INCH TAILPIECE. CHICAGO FAUCET NO. 327. TRAP: CHROME PLATED CAST BRASS ADJUSTABLE "P" TRAP WITH CLEANOUT AND IT GAUGE WASTE TO WALL WITH ESCUTCHEON. INSULATED AND OFFSET TO MEET ADA COMPLIANCE. PROVIDE PLUMBEX MODEL X4114 TRAP COVER AND MODEL X4333 PRO EXTREME TRAP WRAP.
S-1	SINK	1-1/2"	1-1/2"	1/2"	1/2"	FIXTURE: 30 INCH BY 18 INCH OVERALL DIMENSIONS 13-1/2 INCH BY 16 INCH BY 7-1/8 INCH DEEP INSIDE DIMENSIONS EACH BOWL, 1/8 GAUGE, TYPE 304 STAINLESS STEEL, UNDER-MOUNT, DOUBLE COMPARTMENT, THREE FAUCET HOLE. ELKAY LUSTERTONE MODEL, ELU8110 OR APPROVED EQUAL. FAUCET: DECK MOUNTED CHROME PLATED BRASS FAUCET, 8 INCH CENTER, L8 - 8 INCH TYPE SWING SPOUT, 2.2 GPM FLOW AERATOR, 1000-FR 2 INCH CANOPY SINGLE WING HANDLE. CHICAGO FAUCET NO. 1000-CP OR APPROVED EQUAL. DRAIN: STAINLESS STEEL BASKET STRAINER WITH CHROME PLATED BRASS 1-1/2 INCH DIAMETER TAILPIECE, JUST J-35. TRAP: FURNISH CHROME PLATED BRASS ADJUSTABLE "P" TRAP WITH CLEANOUT AND IT GAUGE WASTE TO WALL WITH ESCUTCHEON. SUPPLIES: PROVIDE CHROME PLATED RIGID OR FLEXIBLE SUPPLIES WITH LOOSE KEY STOPS, REDUCERS AND ESCUTCHEONS.  FOOD WASTE DISPOSER: IN-SINK ERATOR BADGER 3, PLASTIC GRIND CHAMBER, GALVANIZED STEEL GRINDING ELEMENTS, STAINLESS STEEL SINK FLANGE, INTERNAL OVERLOAD PROTECTION, PERMANENTLY LUBRICATED BEARINGS, 1/2 HORSEPOWER 120 VOLT, SINGLE PHASE MOTOR.  PROVIDE WASTE PIPING BETWEEN DRAIN AND GARBAGE DISPOSER AND GARBAGE DISPOSER AND WALL.
EW-1	ELECTRIC WATER COOLER	1-1/2"	1-1/2"	-	1/2"	FIXTURE: BI-LEVEL WALL MOUNTED, ELECTRIC WATER COOLER HAVING MINIMUM CAPACITY OF 8.8 GPH OF 50 DEGREE F WATER AT 80 DEGREE F INLET WATER AND 90 DEGREE F ROOM TEMPERATURE. FRONT PUSH PAD, STAINLESS STEEL TOP AND FLEXIBLE BUBBLER GUARD. PROVIDE BRACKET FOR WALL MOUNTING AND FLEXIBLE POWER CABLE WITH THREE PRONGED GROUNDED PLUG. FINISH: STAINLESS STEEL TOP. CABINET FINISH AS SELECTED BY ARCHITECT. MANUFACTURER: ELKAY EWTLC OR APPROVED EQUAL. ROUGH-IN: PROVIDE STOP VALVE, CAST BRASS P-TRAP, AND IT GAUGE TAILPIECE. MOUNTING HEIGHT: TO ACCOMMODATE WHEELCHAIR USERS.
MR-1	MOP RECEPTOR	2"	1-1/2"	1/2"	1/2"	FIXTURE: 24 X 24 X 10 INCH HIGH MOLDED STONE, FLOOR MOUNTED, STAINLESS STEEL STRAINER, ZURN Z1946-24 OR APPROVED EQUAL. FAUCET: CHROME PLATED SERVICE FAUCET, THREADED SPOUT WITH BUCKET HOOK, VACUUM BREAKER, HOSE OUTLET SPOUT END, WALL BRACE, FOUR-ARM HOT AND COLD HANDLES, AND STOPS IN SHANKS. ZURN Z1946-SF OR APPROVED EQUAL. ACCESSORIES: 48 INCH LONG HEAVY DUTY, 5/8 INCH DIAMETER HOSE AND HOSE CLIP, STAINLESS STEEL HOSE BRACKET, AND STAINLESS STEEL MOP HANGER WITH 3 GRIPS.

NOTES:  
1 - PLUMBING FIXTURES ARE TO BE PROVIDED BY PLUMBING CONTRACTOR, UNLESS OTHERWISE NOTED.

PLUMBING EQUIPMENT SCHEDULE

MARK	EQUIPMENT	WASTE	VENT	HW	CW	MANUFACTURER, MODEL NUMBER, AND DESCRIPTION
FD-1	FLOOR DRAIN	3"	-	-	-	FLOOR DRAIN: CAST IRON BODY, NICKEL BRASS TOP, INSIDE CAULK OR NO-HUB BOTTOM OUTLET, FLASHING RING WITH WEEPHOLES, ADJUSTABLE ROUND STRAINER WITH VANDAL PROOF SCREWS, SMITH FIGURE 2005 OR SIMILAR BY MIFAB OR ZURN.
TP-1	TRAP SEALER	-	-	-	-	SURE SEAL MODEL S83000V & S64004V PRE-ASSEMBLED INLINE FLOOR DRAIN TRAP SEALER. 2 PIECES: 1 COMMERCIAL GRADE ABS PLASTIC HOUSING AND PROPRIETARY DIAPHRAGM WITH 1 SOFT RUBBER SEALING GASKET BY THE GREEN SOLUTION ASSE - 1072 AF-6M.
FCO	FLOOR CLEANOUT	-	-	-	-	FLOOR CLEANOUT: DUGO CAST IRON CLEANOUT WITH ROUND ADJUSTABLE SCORiated SECURE NICKEL BRONZE TOP. NON-SKID GASKETED WATER TIGHT COVER SECURED INDEPENDANTLY OF PLUGS WITH VANDAL PROOF SCREWS, SMITH FIGURE 4020 OR SIMILAR BY MIFAB OR ZURN.
	POINT OF USE THERMOSTATIC MIXING VALVE	-	-	-	3/8"	WATER TEMPERATURE REGULATING VALVE, LEAD FREE BRONZE BODY, THREADED CONNECTIONS. LOW TEMPERATURE, DUAL ACTION, INTERCHANGEABLE THERMOSTAT, INTEGRAL FILTER WASHERS AND CHECK VALVES, ASSE 1070 LISTED. ADJUSTABLE FROM 80 DEGREES F TO 120 DEGREES F WITH LOCKING FEATURE. SET OUTLET TEMPERATURE AT 110 DEGREES F. MAXIMUM PRESSURE 150 PSI. WATTS SERIES LUV65-B OR AS APPROVED.
	WATER HAMMER ARRESTORS	REFER TO PLUMB. PLAN FOR SIZING				PERMANENTLY SEALED BELLOWS OR EXPANDING CHAMBER TYPE DEVICE FOR CONTROL OF WATER HAMMER, P.D.I APPROVED. SMITH HYDROTROL OR SIMILAR BY JOSAM, MIFAB, WADE, OR ZURN.

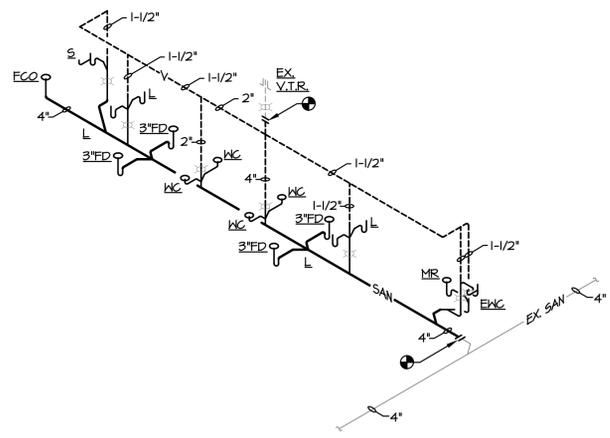
NOTES:  
1 - PLUMBING FIXTURES AND EQUIPMENT ARE TO BE PROVIDED BY PLUMBING CONTRACTOR, UNLESS OTHERWISE NOTED.

GENERAL NOTES

- CONDUCT FIELD SURVEY OF EXISTING CONDITIONS PRIOR TO SUBMISSION OF BID AND START OF WORK. NO ADDITIONAL PAYMENTS WILL BE MADE ON CLAIMS THAT ARISE FROM LACK OF KNOWLEDGE OF EXISTING CONDITIONS.
- COORDINATE SCHEDULE OF WORK REQUIRED IN OCCUPIED AND OPERATING AREAS WITH OWNER PRIOR TO STARTING SUCH WORK.
- SCHEDULE UTILITY SERVICE SHUTDOWNS REQUIRED FOR NEW CONSTRUCTION WITH OWNER AND GENERAL TRADES PRIOR TO SHUTTING DOWN SYSTEMS. GIVE ONE WEEK ADVANCE NOTICE.
- REMOVE AND REPLACE EXISTING CEILING TO ACCOMMODATE NEW WORK. REPLACE DAMAGED CEILING TILES WITH NEW.
- CUT FLOOR, WALL, AND CEILING CONSTRUCTION FOR PENETRATIONS TO ACCOMMODATE NEW WORK. COORDINATE WITH GENERAL TRADES. PATCH CONSTRUCTION TO MATCH, OR TO SATISFACTION OF ARCHITECT AND OWNER.
- COORDINATE ROUTING OF NEW PIPING WITH EXISTING BUILDING CONDITIONS AND WITH WORK OF OTHER TRADES. PROVIDE CHANGES IN LOCATION, DIRECTION, OFFSETS, AS MAY BE REQUIRED, WHETHER SPECIFICALLY INDICATED OR NOT, AND AT NO ADDITIONAL COST TO THE OWNER.
- ALL WORK TO BE COMPLETED IN ACCORDANCE WITH THE LOCAL BUILDING CODE AND AUTHORITY HAVING JURISDICTION.
- ALL FIXTURES SHALL BE PROVIDED WITH SHUT-OFF BALL VALVES ON SUPPLY LINES.
- PLUMBING WORK SHALL BE COMPLETED BY AN INDIVIDUAL OR BUSINESS THAT IS LICENSED BY THE STATE CONSTRUCTION INDUSTRY LICENSING BOARD.
- REFER TO SHEET P-1 FOR PLUMBING FIXTURE CONNECTION SCHEDULE FOR ALL FIXTURE CONNECTION SIZES.
- REFER TO SHEET P-1 FOR SANITARY STACK DIAGRAM FOR ALL SANITARY AND VENT SIZES.

PLAN NOTES

- EXISTING ELECTRIC WATER HEATER RELOCATED ABOVE MOP RECEPTOR. PREPARE HOT WATER AND COLD WATER PIPE CONNECTIONS FOR NEW CONNECTION.
- PROVIDE 1/2" COLD WATER BRANCH TO SERVE REFRIGERATOR.

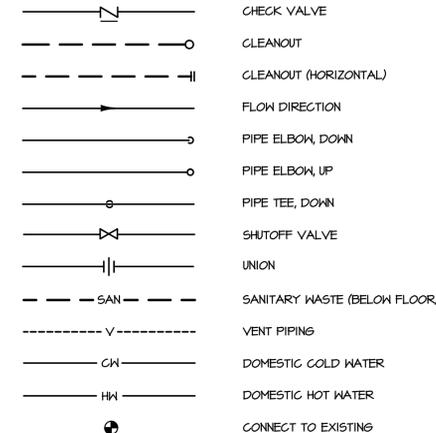


SANITARY STACK DIAGRAM  
SCALE: NONE

PLUMBING ABBREVIATIONS

AFF	ABOVE FINISHED FLOOR
ARCH	ARCHITECT
BFF	BELOW FINISHED FLOOR
CBV	CALIBRATED BALANCING VALVE
CW	DOMESTIC COLD WATER
deg. F	DEGREES FAHRENHEIT
EW	ELECTRIC WATER COOLER
FD	FLOOR DRAIN
G.C.	GENERAL CONTRACTOR
HN	DOMESTIC HOT WATER
L	LAVATORY
M.C.	MECHANICAL CONTRACTOR
MIN	MINIMUM
MR	MOP RECEPTOR
MV	MIXING VALVE
OPC	OHIO PLUMBING CODE
P.C.	PLUMBING CONTRACTOR
PVC	POLYVINYL CHLORIDE PLASTIC
QTY	QUANTITY
S	SINK
TYP.	TYPICAL
VTR	VENT THROUGH ROOF
WC	WATER CLOSET

PLUMBING SYMBOLS

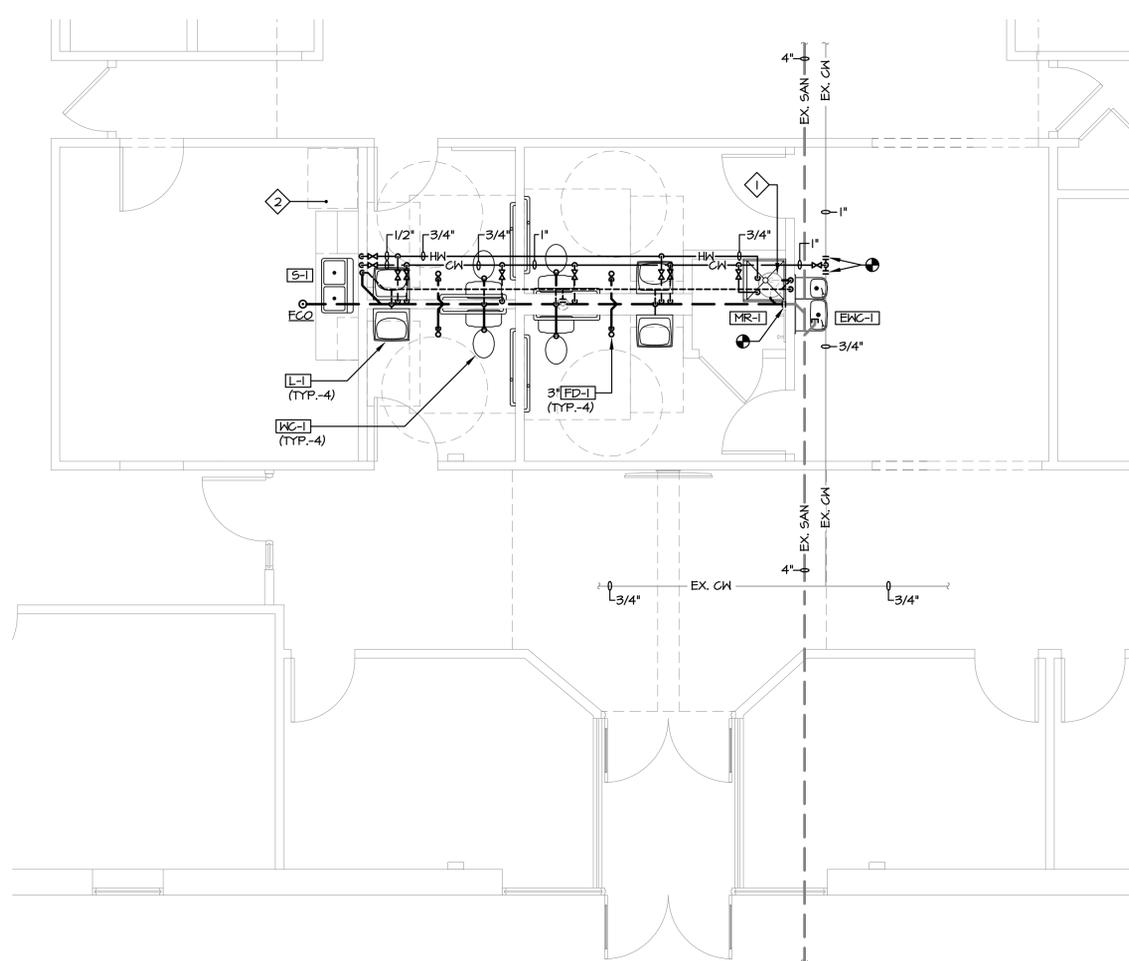


DEMOLITION NOTES

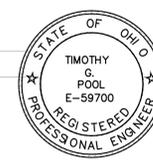
- REFER TO ARCHITECTURAL DRAWING A-1 FOR REMOVAL OF PLUMBING FIXTURES. CONTRACTOR SHALL REMOVE AND DISCARD ALL WATER PIPING AND SANITARY WASTE AND VENT PIPING AT MAIN TO POINTS INDICATED ON PLAN AND CAP FOR ALL FIXTURES BEING REMOVED.
- REFER TO PLUMBING PLAN ON THIS DRAWING FOR NEW WORK.

FIRE PROTECTION PLAN NOTE

THE FOLLOWING IS A PERFORMANCE BASED SPECIFICATION. CONTRACTOR TO REWORK SPRINKLER SYSTEM FOR AREA'S REQUIRED IN THIS PROJECT. COORDINATE FINAL LOCATION OF SPRINKLER HEADS WITH ARCHITECTURAL REFLECTED CEILING PLANS. SUBMIT SPRINKLER PERMIT DRAWINGS AND CALCULATIONS TO BUILDING DEPARTMENT. TENANT MUST USE AN APPROVED SPRINKLER CONTRACTOR LICENSED IN THE STATE OF OHIO.



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



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TITLE CENTRAL  
8804 MENTOR AVE. MENTOR, OHIO  
PLUMBING PLANS

DRAWN	JKJ
DATE	06.02.2015
SCALE	1/4" = 1'-0"
JOB NO.	15004
SHEET	

**P-1**  
OF 2 SHEETS

**SECTION 22 00 00 PLUMBING SPECIFICATIONS**

**PART 1 GENERAL**

- 1.1 PROVIDE ALL LABOR AND MATERIAL FOR ALL SYSTEMS AS INDICATED ON THE DRAWINGS AND SPECIFIED HEREIN, OR REASONABLY IMPLIED, TESTED AND READY FOR USE BY THE OWNER.
- 1.2 REFER TO THE EXISTING AND NEW ARCHITECTURAL, STRUCTURAL, MECHANICAL, ELECTRICAL AND OTHER CONTRACT DOCUMENTS FOR THE PROJECT. PLUMBING WORK AND/OR COORDINATION ITEMS INDICATED ON THESE DOCUMENTS ARE A PART OF THE PLUMBING SCOPE OF WORK.
- 1.3 DISCREPANCIES BETWEEN EACH DIVISION'S DOCUMENTS OR BETWEEN THE DOCUMENTS AND THE BUILDING OR SITE CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE BEFORE SUBMITTING A BID.
- 1.4 THE PLUMBING SCOPE OF WORK INCLUDES, BUT IS NOT LIMITED TO THE FOLLOWING EQUIPMENT OR SYSTEMS:
  - A. SANITARY AND DOMESTIC WATER PIPING
  - B. PIPE HANGERS
  - C. PIPING IDENTIFICATION
  - D. PLUMBING INSULATION
  - E. PLUMBING DRAIN SPECIALTIES
  - F. PLUMBING SUPPLY SPECIALTIES
  - G. PLUMBING EQUIPMENT AND FIXTURES.
- 1.5 SUBMITTALS, OR SHOP DRAWINGS ARE REQUIRED FOR THE FOLLOWING EQUIPMENT OR SYSTEMS:
  - A. SANITARY AND DOMESTIC WATER PIPING
  - B. PIPE HANGERS
  - C. PIPING IDENTIFICATION
  - D. PLUMBING INSULATION
  - E. PLUMBING DRAIN SPECIALTIES
  - F. PLUMBING SUPPLY SPECIALTIES
  - G. PLUMBING EQUIPMENT AND FIXTURES.
  - H. SUBMITTALS SHALL BE REVIEWED ONLY FOR GENERAL COMPLIANCE AND NOT FOR DIMENSIONS, QUANTITIES, ETC. THE SUBMITTALS THAT ARE RETURNED SHALL BE USED FOR PROCUREMENT. THE RESPONSIBILITY OF CORRECT PROCUREMENT REMAINS SOLELY WITH THE CONTRACTOR. THE SUBMITTAL REVIEW SHALL NOT RELIEVE THE CONTRACTOR OF RESPONSIBILITY FOR ERRORS OR OMISSIONS AND DEVIATIONS FROM THE CONTRACT REQUIREMENTS. REFER TO ARCHITECTURAL SPECIFICATIONS FOR EXACT QUANTITIES AND OTHER SUBMITTAL REQUIREMENTS.
- 1.6 SECURE AND PAY FOR PERMITS AND INSPECTIONS REQUIRED. MAKE PAYMENTS TO PUBLIC UTILITIES FOR WORK PERFORMED BY THEM IN PROVIDING SERVICE CONNECTIONS.
- 1.7 SUBMISSION OF A BID ASSUMES KNOWLEDGE OF ALL DOCUMENTS AVAILABLE RELATED TO THE WORK, AS WELL AS EXISTING CONDITIONS MADE AVAILABLE FOR REVIEW AND INSPECTION DURING THE BIDDING PERIOD. THIS CONTRACTOR SHALL INFORM THE OWNER'S REPRESENTATIVE OF ANY UNKNOWN AND/OR CONCEALED CONDITIONS AFFECTING THE NEW WORK, AS THEY ARE DISCOVERED.
- 1.8 WHEREVER THE WORD "PROVIDE" IS USED, IT SHALL MEAN: FURNISHED AND INSTALLED BY THE PLUMBING CONTRACTOR.
- 1.9 THE NEW MATERIAL AND LABOR SHALL BE GUARANTEED FOR A PERIOD OF ONE YEAR FROM THE ACCEPTANCE BY THE OWNERS REPRESENTATIVE. GUARANTEES ON PRODUCTS WILL COMMENCE ON THE DATE OF SUBSTANTIAL COMPLETION, NOT FROM DATE PRODUCTS OR EQUIPMENT ARE PUT INTO OPERATION.
- 1.10 ALL MATERIAL, EQUIPMENT INSTALLATION AND LABOR SHALL BE IN ACCORDANCE WITH THE LATEST APPLICABLE NATIONAL, STATE AND LOCAL CODES AND SHALL COMPLY WITH THE LATEST ADOPTED EDITION OF THE FOLLOWING STANDARDS:
  - A. ADA AMERICANS WITH DISABILITIES ACT
  - B. ANSI AMERICAN NATIONAL STANDARDS INSTITUTE
  - C. ASHRAE AMERICAN SOCIETY OF HEATING, REFRIGERATING AND AIR-CONDITIONING
  - D. ASME AMERICAN SOCIETY OF MECHANICAL ENGINEERS
  - E. ASTM AMERICAN SOCIETY OF TESTING AND MATERIALS
  - F. IBC INTERNATIONAL BUILDING CODE
  - G. IECC INTERNATIONAL ENERGY CONSERVATION CODE
  - H. IFC INTERNATIONAL FIRE CODE
  - I. IMC INTERNATIONAL MECHANICAL CODE
  - J. NEC NATIONAL ELECTRIC CODE
  - K. NFPA NATIONAL FIRE PREVENTION ASSOCIATION
  - L. OBC OHIO BUILDING CODE
  - M. OPC OHIO PLUMBING CODE
  - N. OSHA OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
  - O. SMACNA SHEET METAL AND AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION, INC.
  - P. UL UNDERWRITERS LABORATORIES

**PART 2 PRODUCTS**

- 2.1 PIPING:
  - A. SANITARY SEWER PIPING BELOW GRADE:
    - 1. PVC PIPE: ASTM D2665 OR ASTM D3034 FITTINGS: PVC JOINTS: ASTM D2855, SOLVENT WELD WITH ASTM D2564 SOLVENT CEMENT.
    - 2. PVC PIPE: ASTM D2665, ASTM D3034, OR ASTM F679 FITTINGS: PVC JOINTS: ASTM F477, ELASTOMERIC GASKETS.
  - B. SANITARY SEWER AND VENT PIPING ABOVE GRADE:
    - 1. PVC PIPE: ASTM D2729 FITTINGS: PVC JOINTS: ASTM D2855, SOLVENT WELD WITH ASTM D2564 SOLVENT CEMENT.
    - 2. PVC PIPE: ASTM D2665 FITTINGS: PVC JOINTS: ASTM D2855, SOLVENT WELD WITH ASTM D2564 SOLVENT CEMENT.

- C. DOMESTIC HOT AND COLD WATER, ABOVE GRADE WITHIN BUILDING:
  - 1. PIPE: ASTM B88, TYPE L, HARD DRAWN COPPER TUBING.
  - 2. FITTINGS:
    - A. ASME B16.18, CAST BRASS, OR ASME B16.22, SOLDER WROUGHT COPPER.
    - B. PROGRESS FITTING EQUALLY ACCEPTABLE.
  - 3. JOINTS:
    - A. SOLDER, LEAD FREE, 95-5 TIN-ANTIMONY, OR TIN AND SILVER, WITH MELTING RANGE 430 TO 535 DEGREES F.
    - B. PROGRESS FITTINGS SHALL BE MADE WITH APPROPRIATE TOOL, MANUFACTURED FOR SUCH USE.
- D. WATER PIPING, BURIED BEYOND 5 FEET OF BUILDING:
  - 1. DUCTILE IRON PIPE: AWWA C151, FITTINGS: AWWA C110, DUCTILE OR GRAY IRON, STANDARD THICKNESS. JOINTS: AWWA C111, RUBBER GASKET WITH 3/4 INCH DIAMETER RODS.
- 2.2 VALVES:
  - A. BALL VALVES:
    - 1. DOMESTIC WATER (2 INCHES AND SMALLER) TWO PIECE, BRONZE BODY, STAINLESS STEEL BALL.
  - B. CHECK VALVES, 2 INCHES AND SMALLER: BRONZE BODY, IN-LINE STAINLESS STEEL SPRING, SILENT CLOSING, SOLDER ENDS.
- 2.3 PIPE HANGERS AND SUPPORTS
  - A. CONFORM TO:
    - 1. ASME B31.9 (AMERICAN SOCIETY OF MECHANICAL ENGINEERS) - BUILDING SERVICES PIPING.
    - 2. MSS SP98 (MANUFACTURERS STANDARDIZATION SOCIETY OF VALVE AND FITTINGS INDUSTRY) - PIPE HANGERS AND SUPPORTS - MATERIALS, DESIGN AND MANUFACTURE.
    - 3. MSS SP89 (MANUFACTURERS STANDARDIZATION SOCIETY OF VALVE AND FITTINGS INDUSTRY) - PIPE HANGERS AND SUPPORTS - FABRICATION AND INSTALLATION PRACTICES.
  - B. USE ONLY ONE TYPE BY ONE MANUFACTURER FOR EACH PIPING SERVICE.
  - C. HANGER SIZING: SELECT SIZE OF HANGERS AND SUPPORTS TO EXACTLY FIT PIPE SIZE FOR BARE PIPING, AND TO EXACTLY FIT AROUND EXTERIOR OF PIPING INSULATION WITH SHIELD FOR INSULATED PIPING.
  - D. HANGER MATERIALS: FURNISH COPPER PLATED HANGERS AND SUPPORTS FOR COPPER-PIPING SYSTEMS. FURNISH HANGERS AND SUPPORTS WITH GALVANIZED FINISH FOR OTHER PIPING SYSTEMS.
  - E. HANGERS FOR PIPE SIZES 1/2 TO 1-1/2 INCH: MALLEABLE IRON, ADJUSTABLE SWIVEL, SPLIT RING.
  - F. HANGER RODS: MILD STEEL THREADED BOTH ENDS, THREADED ONE END, OR CONTINUOUS THREADED.
  - G. INSERTS: MALLEABLE IRON CASE OF GALVANIZED STEEL SHELL AND EXPANDER PLUG FOR THREADED CONNECTION WITH LATERAL ADJUSTMENT, TOP SLOT FOR REINFORCING RODS, LUGS FOR ATTACHING TO FORMS; SIZE INSERTS TO SUIT THREADED HANGER RODS.
- 2.4 PIPE, VALVE, AND EQUIPMENT IDENTIFICATION
  - A. SHUTOFF VALVES:
    - 1. MARK BY MEANS OF BRASS OR PLASTIC DISC ONE INCH IN DIAMETER FASTENED TO VALVE WHEEL OR STEM BY BRASS WIRE.
    - 2. FURNISH EACH DISC WITH LEGIBLY MARKED IDENTIFICATION NUMBER, INDICATE FUNCTION AND NORMALLY OPEN OR CLOSED POSITION.
  - B. PIPING:
    - 1. CONFORM TO ANSI A13.1. USE ANSI STANDARD BACKGROUND COLORS AND STYLE 2 FOR PIPING 3 INCHES AND LARGER AND STYLE 6 FOR PIPING SMALLER THAN 3 INCH DIAMETER. ATTACH MARKERS TO PIPE BY PREFORMED "SNAP" TYPE ACTION FOR PIPE 6 INCHES AND SMALLER OUTSIDE DIAMETER (INCLUDING INSULATION); FOR PIPE 6 INCHES OUTSIDE DIAMETER AND LARGER (INCLUDING INSULATION), FURNISH PREFORMED MARKERS AND FASTEN WITH STRAPS. PROVIDE IDENTIFYING MARKINGS AT INTERVALS NOT EXCEEDING 100 FEET FOR STRAIGHT RUNS OF PIPE; AT EVERY SECTIONALIZING OR MAIN SHUT-OFF VALVE; AND/OR ON EACH RISER AT POINT 5 FEET ABOVE FLOOR OR PLATFORM, WHEN PASSING THROUGH WALL OR PARTITION, MARK PIPE ON BOTH SIDES OF STRUCTURE.
    - 2. MANUFACTURER: W. H. BRADY COMPANY OR SIMILAR BY SETON NAMEPLATE CORP. OR EMEC COMPANY, INC.
- 2.5 PIPE INSULATION:
  - A. CELLULAR FOAM: ASTM C534, FLEXIBLE, CLOSED CELL ELASTOMERIC INSULATION, TUBULAR, "K" VALUE OF 0.27 AT 75 DEGREES F. TEMPERATURE USAGE RANGE: MINUS 58 DEGREES F TO 180 DEGREES F. SIMILAR TO ARMAFLEX.
- 2.6 PLUMBING DRAINAGE SPECIALTIES
  - A. ALL PLUMBING DRAINAGE SPECIALTIES SHALL BE AS INDICATED ON DRAWINGS COMPLETE WITH PROPER EQUIPMENT SUPPORTS AND ACCESSORIES AS RECOMMENDED BY THE MANUFACTURER.
- 2.7 PLUMBING SUPPLY SPECIALTIES
  - A. ALL PLUMBING SUPPLY SPECIALTIES SHALL BE AS INDICATED ON DRAWINGS COMPLETE WITH PROPER EQUIPMENT SUPPORTS AND ACCESSORIES AS RECOMMENDED BY THE MANUFACTURER.
- 2.8 PLUMBING EQUIPMENT AND FIXTURES
  - A. ALL PLUMBING EQUIPMENT AND FIXTURES SHALL BE AS INDICATED ON DRAWINGS COMPLETE WITH PROPER EQUIPMENT SUPPORTS AND ACCESSORIES AS RECOMMENDED BY THE MANUFACTURER.

**PART 3 EXECUTION**

- 3.1 GENERAL
  - A. COORDINATE THE PLUMBING WORK WITH ALL OTHER TRADES ON SITE, INCLUDING CORE DRILL LOCATIONS AND PIPE ROUTINGS. PROVIDE LAYOUT DRAWINGS FOR PIPING AND PLUMBING EQUIPMENT IN MECHANICAL ROOMS AND SUBMIT COPIES TO THE OWNER'S REPRESENTATIVE FOR REVIEW AND APPROVAL BEFORE ROUGH-IN PIPING AND EQUIPMENT.
  - B. CUTTING AND PATCHING OF WALLS, FLOORS AND CEILINGS SHALL BE PROVIDED BY SKILLED MECHANICS IN THE TRADE. FINAL FINISHING AND PAINTING IS BY THE GENERAL TRADES CONTRACTOR.
  - C. IT IS THE PURPOSE OF THE CONTRACT DOCUMENTS TO INDICATE THE APPROXIMATE LOCATIONS OF ALL PIPING, EQUIPMENT, ETC. THE EXACT LOCATION OF EQUIPMENT AND OUTLETS MAY BE ADJUSTED FROM TIME TO TIME AS THE WORK PROGRESSES. THIS CONTRACTOR SHALL CONFIRM THE EXACT LOCATIONS AND ARRANGE THE WORK ACCORDINGLY. THE OWNER'S REPRESENTATIVE RESERVES THE RIGHT TO EFFECT REASONABLE CHANGES IN THE LOCATION OF PIPING AND EQUIPMENT UP TO THE TIME OF ROUGH-IN WITHOUT ADDITIONAL COST.
  - D. SERVE AND CONNECT ALL PLUMBING EQUIPMENT FURNISHED BY OTHER DIVISIONS OR OWNER. COORDINATE ALL PIPING AND EQUIPMENT LOCATIONS AND CONNECTION REQUIREMENTS WITH THE CONTRACTOR FURNISHING THE EQUIPMENT, BEFORE CONNECTING ANY PIECE OF EQUIPMENT VERIFY PLUMBING CONNECTIONS WITH MANUFACTURER'S RECOMMENDATIONS.
- 3.2 PIPING INSTALLATION
  - A. PROVIDE DIELECTRIC CONNECTIONS WHEREVER JOINTING DISSIMILAR METALS.
  - B. INSTALL BALL VALVES FOR SHUT OFF APPLICATIONS (2 INCH AND SMALLER) IN DOMESTIC WATER SYSTEMS.
  - C. PROVIDE 3/4-INCH BALL DRAIN VALVES AT MAIN SHUT-OFF VALVES, LOW POINTS OF PIPING, BASES OF VERTICAL RISERS.

- D. INSTALL PIPE HANGER SPACING FOR DOMESTIC WATER SYSTEMS AND SANITARY AND VENT SYSTEMS IN ACCORDANCE WITH OPC.
- E. ALL PIPING, CLAMPS, SUPPORTS, ETC. SHALL BE FASTENED TO AND NOT DRILLED THROUGH JOISTS OR BEAMS. DO NOT ATTACH ANYTHING DIRECTLY TO THE DECK, CEILING SUPPORT SYSTEM OR DUCTWORK ABOVE. FURNISH SUPPORTS IN COMPLIANCE WITH APPLICABLE CODES.
- 3.3 PIPING INSULATION INSTALLATION
  - A. PIPING INSULATION:
    - 1. INSULATE COMPLETE SYSTEM.
- 3.4 PIPING INSULATION SCHEDULES:
 

	PIPE SIZE	MINIMUM THICKNESS
A. PIPING INSULATION		
1. DOMESTIC HOT WATER SUPPLY	UP TO 1.0	1.0
	1.25 TO 2.0	1.0
	OVER 2.0	1.5
2. DOMESTIC COLD WATER	ALL SIZES	0.5
3. CONDENSATE PIPING	ALL SIZES	0.5
- 3.5 PLUMBING DRAIN SPECIALTIES, SUPPLY SPECIALTIES, EQUIPMENT INSTALLATION.
  - A. INSTALL WATER HAMMER ARRESTORS COMPLETE WITH ACCESSIBLE ISOLATION VALVE ON ALL FLUSH-VALVE BRANCH WATER PIPING BEFORE LAST FIXTURE TAKE-OFF AND AS RECOMMENDED BY MANUFACTURER.
  - B. INSTALL UNIONS DOWNSTREAM OF VALVES AND AT EQUIPMENT OR APPARATUS CONNECTIONS.
  - C. FLOOR DRAINS AND FLOOR SINKS ARE TO BE PROVIDED WITH 1/2 INCH TRAP PRIMER CONNECTIONS. CONTRACTOR IS TO INSTALL TRAP PRIMER BELOW SINK ARE RECOMMENDED BY MANUFACTURER AND IS TO PROVIDE 3/8 FLEXIBLE COPPER PIPING FROM TRAP PRIMER TO FLOOR DRAIN OR FLOOR SINK.
  - D. CLEAN AND TEST DOMESTIC WATER PIPING SYSTEM IN ACCORDANCE WITH THE OPC.
  - E. TEST SANITARY AND VENT PIPING IN ACCORDANCE WITH THE OPC.
- 3.6 PLUMBING FIXTURE INSTALLATION
  - A. INSTALL PLUMBING FIXTURES AND COMPONENTS LEVEL AND PLUMB, IN ACCORDANCE WITH FIXTURE MANUFACTURER'S WRITTEN INSTRUCTIONS, ROUGH-IN DRAWINGS, AND PERTINENT CODES AND REGULATIONS.
  - B. COMPLY WITH INSTALLATION REQUIREMENTS OF ANSI A117.1 AND PUBLIC LAW 90-480 WITH RESPECT TO PLUMBING FIXTURES FOR ADA USE.
  - C. INSTALL AND SECURE FIXTURES IN PLACE WITH WALL CARRIERS AND BOLTS. WALL CARRIERS ARE TO BE PROVIDED BY THE PLUMBING CONTRACTOR.
  - D. FASTEN PLUMBING FIXTURES SECURELY TO SUPPORTS OR BUILDING STRUCTURE. SECURE SUPPLIES BEHIND OR WITHIN WALL CONSTRUCTION TO PROVIDE RIGID INSTALLATION.
  - E. ROUGH-IN FIXTURE PIPING CONNECTIONS IN ACCORDANCE WITH MINIMUM SIZES INDICATED IN FIXTURE SCHEDULE FOR PARTICULAR FIXTURES.
  - F. INSTALL STOP VALVE IN ACCESSIBLE LOCATION IN WATER CONNECTION TO EACH FIXTURE.
  - G. INSTALL EACH FIXTURE WITH TRAP, EASILY REMOVABLE FOR SERVICING AND CLEANING.
  - H. INSTALL ESCUTCHEONS AT EACH WALL, FLOOR, AND CEILING PENETRATION IN EXPOSED FINISHED LOCATIONS AND WITHIN CABINETS AND MILLWORK.
  - I. SEAL FIXTURES TO WALLS AND FLOORS USING SILICONE SEALANT AS SPECIFIED IN DIVISION 07. MATCH SEALANT COLOR TO FIXTURE COLOR.
  - J. TEST FIXTURES TO DEMONSTRATE PROPER OPERATION UPON COMPLETION OF INSTALLATION AND AFTER UNITS ARE WATER PRESSURIZED. REPLACE MALFUNCTIONING UNITS, THEN RETEST.
  - K. CLEAN FIXTURES, TRIM, AND STRAINERS USING MANUFACTURER'S RECOMMENDED CLEANING METHODS AND MATERIALS.

**3.7 EXISTING ELECTRIC WATER HEATER INSTALLATION**

- A. MAINTAIN MANUFACTURER'S RECOMMENDED CLEARANCES AROUND AND OVER WATER HEATERS.
- B. INSTALL WATER HEATER ON WALL MOUNTED BRACKET SYSTEM.
- C. CONNECT DOMESTIC HOT WATER, DOMESTIC COLD WATER PIPING TO SUPPLY AND RETURN WATER HEATER CONNECTIONS.
- D. INSTALL DISCHARGE PIPING FROM RELIEF VALVES AND DRAIN VALVES TO NEAREST FLOOR DRAIN.
- E. INSTALL WATER HEATER TRIM AND ACCESSORIES FURNISHED LOOSE FOR FIELD MOUNTING.
- F. INSTALL ELECTRICAL DEVICES FURNISHED LOOSE FOR FIELD MOUNTING.
- G. INSTALL CONTROL WIRING BETWEEN WATER HEATER CONTROL PANEL AND FIELD MOUNTED CONTROL DEVICES.

REVISIONS	BY
FOR PERMIT 02.20.2015	TEC

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