



# DOMESTIC WATER REPLACEMENT & RELATED WORK AT CANTRICK ELEMENTARY SCHOOL

1008 RIVERVIEW, MONROE, MICHIGAN 48162



**KOHLER**  
ARCHITECTURE  
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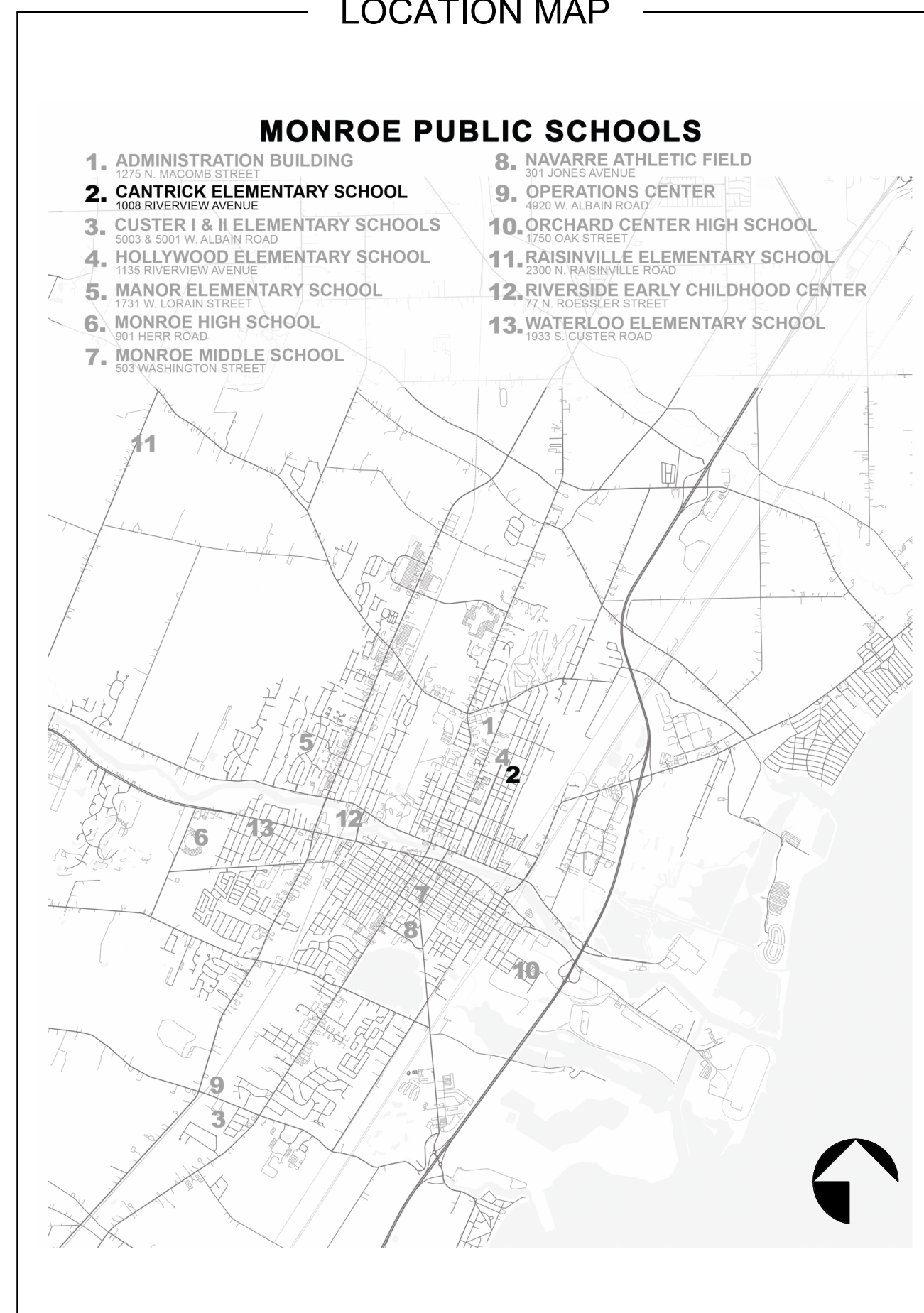
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Things Better



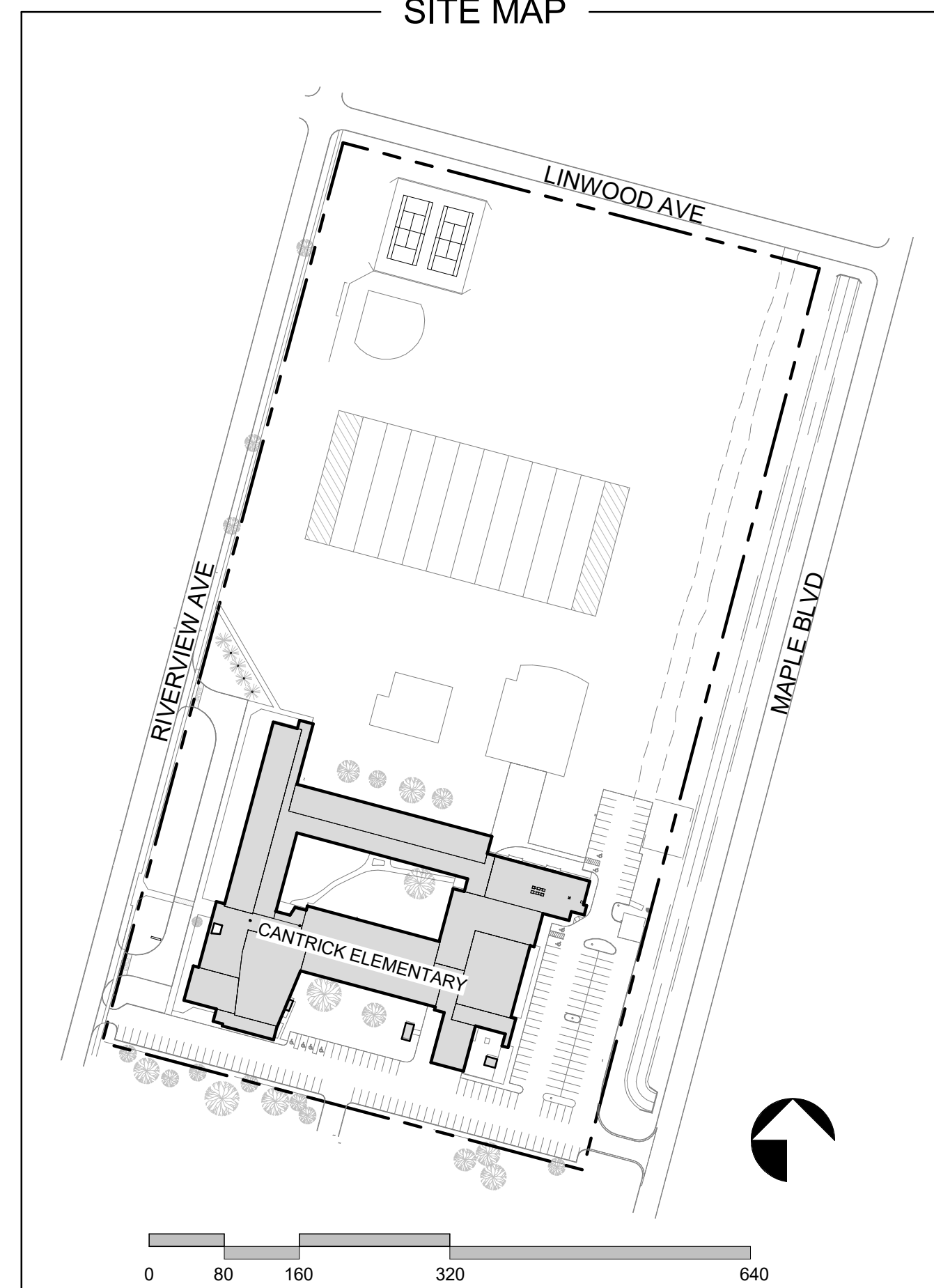
STATE OF MICHIGAN  
KEITH J. KOHLER  
ARCHITECT  
NO. 1301051757  
LICENSED PROFESSIONAL ARCHITECT  
3.16.2026

DATE	DESCRIPTION
03.16.2026	BIDDING & STATE REVIEW

## LOCATION MAP



## SITE MAP



## PROJECT DIRECTORY

<p><b>OWNER:</b> MONROE PUBLIC SCHOOLS 1275 N. MACOMB STREET MONROE, MICHIGAN 48162</p> <p><b>CONTACT:</b> DAVID PAYNE, DIRECTOR OF TECHNOLOGY E: PAYNE@MONROE.K12.MI.US T: 734.265.3158</p>	<p><b>ARCHITECT OF RECORD:</b> KOHLER ARCHITECT, INC. 1110 WEST FRONT STREET MONROE, MICHIGAN 48161</p> <p><b>CONTACT:</b> VICTORIA CAPRANICA, NCARB E: VCAPRANICA@KOHLERARCHITECT.NET T: 734.242.6880</p>	<p><b>MECHANICAL ENGINEER OF RECORD:</b> KLEINFELDER 415 CONANT STREET MAUMEE, OHIO 43537</p> <p><b>CONTACT:</b> RYAN D. GRAMLING E: RGRAMLING@KLEINFELDER.COM T: 419.891.0022</p>
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## DRAWING INDEX

T0.00	TITLE SHEET
P1.01	PLUMBING SPECIFICATIONS AND DETAILS
P2.01	TUNNEL AND BOILER ROOM PLUMBING PLANS
P2.02	FIRST FLOOR PLAN (FOR REFERENCE)

## PROJECT DESCRIPTION

**PROJECT NARRATIVE:**

WORK INCLUDES BUT IS NOT LIMITED TO THE REMOVAL OF EXISTING CAST IRON DOMESTIC COLD WATER LINES AND INSTALLING NEW COPPER WATER LINES. MOST OF THE WORK DESCRIBED IS LOCATED WITHIN THE EXISTING TUNNELS OF THE BUILDING.

THERE IS NO ARCHITECTURAL SCOPE PRESENT ON THE DOCUMENTS.

DOMESTIC WATER REPLACEMENT & RELATED WORK

**CANTRICK ELEMENTARY SCHOOL**  
1008 RIVERVIEW, MONROE, MICHIGAN 48162  
**MONROE PUBLIC SCHOOLS**  
1275 N. MACOMB STREET, MONROE, MICHIGAN 48162

JOB # 26109

TITLE SHEET

T0.00

# PLUMBING SPECIFICATIONS

## PART 1 GENERAL

### 1.01 PURPOSE

THESE OUTLINE SPECIFICATIONS ARE NOT INTENDED TO COVER ALL NECESSARY ITEMS, BUT TO SERVE AS A GUIDE TO FURNISH AND INSTALL A COMPLETE PLUMBING SYSTEM AS DESCRIBED HEREIN.

### 1.02 SCOPE OF WORK

FURNISH AND INSTALL THE PLUMBING SYSTEMS AS SHOWN ON THE DRAWINGS AND SPECIFIED HEREIN. THIS SHALL INCLUDE BUT NOT BE LIMITED TO THE FOLLOWING:

- CUTTING AND PATCHING REQUIRED FOR THE INSTALLATION OF THE PLUMBING SYSTEMS.
- REMOVALS AS REQUIRED FOR AS INDICATED.
- DOMESTIC WATER SYSTEM INCLUDING PIPING TO ALL FIXTURES OR EQUIPMENT, VALVES, REVISED WATER METER SETTING, BACKFLOW PREVENTER, ETC.
- MODIFICATIONS TO EXISTING ELECTRIC DOMESTIC HOT WATER HEATER SERVING THE KITCHEN.
- INSULATION FOR PIPING.
- ALL VALVES, FITTINGS, HANGERS, SLEEVES, ESCUTCHEON PLATES, ANCHORS, GUIDES, ETC., REQUIRED FOR THE PLUMBING SYSTEM INSTALLATION.
- CHLORINATION, TESTING, ADJUSTMENT AND CLEANING OF SYSTEMS AND EQUIPMENT AS NOTED.
- INSTRUCTION OF OWNERS' PERSONNEL AND OPERATING MANUALS FOR ALL EQUIPMENT.
- PERMITS, APPLICATIONS, TESTS AND ANY OTHER FEES RELATED TO THIS WORK.
- HOUSEKEEPING PADS.

### 1.03 CONTRACT DRAWINGS

IN GENERAL, DRAWINGS ARE SCHEMATIC IN NATURE AND ARE INTENDED AS A GUIDE TO THE CONTRACTOR, BUT DO NOT NECESSARILY SHOW ALL DETAILS, OFFSETS, ETC. ALL DRAWINGS ARE TO BE THOROUGHLY INSPECTED. THE CONTRACTOR SHALL CONFORM TO THE ADDITIONAL DETAIL OR FIELD INSTALLATION DRAWINGS NECESSARY AT HIS OWN EXPENSE. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS INDICATED ON THE ENGINEER'S LAYOUT DRAWINGS AND DETERMINE IF ANY CHANGES ARE REQUIRED IN PIPING RUNS, DRAINS, ETC., TO AVOID INTERFERENCE. MAJOR CHANGES SHALL NOT BE MADE WITHOUT THE APPROVAL OF THE ENGINEER. WHILE THE DRAWINGS ARE TO BE ADHERED TO AS CLOSELY AS POSSIBLE, THE CONTRACTOR HAS THE RIGHT TO VARY THE RUN OF CONDUITS, PIPING AND/OR DUCTS DURING PROGRESS OF THE WORK AS MAY BE FOUND NECESSARY OR DESIRABLE TO AVOID INTERFERENCES. MAJOR REVISIONS SHALL BE VERIFIED WITH THE ENGINEER.

### 1.04 VERIFICATION

BEFORE RUNNING ANY PIPING, ETC., WITHIN THE BUILDING, THIS CONTRACTOR SHALL ASSURE HIMSELF THAT THEY CAN BE INSTALLED AS CONTEMPLATED WITHOUT TRAPPING OR INTERFERING WITH COLUMNS, BEAMS, PIPING, FIXTURES, ETC. ANY NECESSARY PIPING, FIXTURES, ETC. SHALL BE REFERRED TO THE ENGINEER FOR ADJUSTMENT BEFORE LINES ARE RUN, AT NO INCREASE IN CONTRACT PRICE. OF NECESSITY, OPENINGS, SUPPORTING STEEL, FIELD-BUILT CURBS, SPACE REQUIREMENTS, ETC., WERE DESIGNED AROUND SPECIFIC PARAMETERS. WHEN THE CONTRACTOR DETERMINES THE MAKE OF EQUIPMENT TO BE PROVIDED FOR THE JOB, IT SHALL BE HIS RESPONSIBILITY TO VERIFY AND COORDINATE UNIT DIMENSIONS WITH THE GENERAL CONTRACTOR AND ALL OTHER INTERESTED CONTRACTORS ON THE JOB. IT SHALL ALSO BECOME THE CONTRACTOR'S RESPONSIBILITY TO CHANGE AS NECESSARY, THROUGH THE ENGINEER, ALL REQUIRED DIMENSIONS THAT OPENINGS, SUPPORTING STEEL, CURBS, ELECTRICAL DATA, ETC., WILL FIT THE EQUIPMENT SUPPLIED. ANY ADDITIONAL COST WILL BE THE SOLE RESPONSIBILITY OF THIS CONTRACTOR. IN ADDITION, ELECTRICAL POWER, INTERLOCK AND CONTROL DIAGRAMS AND PIPING ARRANGEMENTS WERE DESIGNED AROUND ONE SPECIFIC MANUFACTURER. IF ADDITIONAL WIRING, PIPING CONTROLS, ETC. IS REQUIRED FOR OTHER EQUIPMENT, THIS CONTRACTOR SHALL INCLUDE THE COST OF THE SAME IN HIS PRICE. DIMENSIONS, ELEVATIONS AND RELATIVE LOCATIONS OF EXISTING EQUIPMENT, SEWERS, PIPES, DUCTS, CONDUITS, ETC., IN PLACE AS SHOWN ON THE DRAWINGS, ARE TAKEN FROM AS-BUILT AND RECORD DRAWINGS AND ARE DEEMED RELIABLE ONLY INsofar AS GENERAL LAYOUT IS CONCERNED. SUCH DIMENSIONS SHALL NOT BE USED FOR LAYOUT DRAWINGS OR DETAILING OF COMPONENTS. THE RESPONSIBILITY FOR CHECKING IN PLACE ITEMS WILL BE THE CONTRACTORS. ALL MEASUREMENTS, THE EXACT DETERMINATION OF RELATIVE ELEVATIONS OR LOCATIONS, THE ASCERTAINING OF ACCURACY OF ALL GIVEN ELEVATIONS AND DIMENSIONS AND THE OBTAINING OF ALL NECESSARY ADDITIONAL INFORMATION TO INSURE THE PROPER FIT AND COORDINATION OF ALL CONDUIT EQUIPMENT, DUCTS, AND PIPING SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

### 1.05 SITE VISIT

ALL CONTRACTORS BIDDING THE WORK INDICATED THROUGHOUT THESE CONTRACT DOCUMENTS ARE REQUIRED TO VISIT AND THOROUGHLY EXAMINE THE PROJECT SITE AND ITS ASSOCIATED CONDITIONS. THE CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH ALL EXISTING CONDITIONS UNDER WHICH THIS WORK MUST BE PERFORMED. ALL CONTRACTORS SHALL REPORT ANY DISCREPANCIES TO THE ARCHITECT PRIOR TO SUBMITTING A BID PROPOSAL. FAILURE TO DO SO SHALL BE DEEMED AS ACCEPTANCE OF EXISTING CONDITIONS. NO ADDITIONAL COMPENSATION WILL BE CONSIDERED FOR ANY DEVIATIONS OR DISCREPANCIES TO THESE PLANS AFTER A CONTRACTOR HAS BEEN SELECTED.

### 1.06 GUARANTEE

THE CONTRACTOR GUARANTEES BY HIS ACCEPTANCE OF THE CONTRACT THAT ALL WORK WILL BE FREE FROM DEFECTS IN WORKMANSHIP AND/OR MATERIALS AND THAT ALL APPARATUS WILL DEVELOP CAPACITIES AND CHARACTERISTICS SPECIFIED. SHOULD ANY DEFECTS IN WORKMANSHIP, AND/OR MATERIALS REQUIRE REDESIGN OF ANY PART OF THE ELECTRICAL, MECHANICAL, PLUMBING, OR ARCHITECTURAL LAYOUT, ALL SUCH REDESIGN AND ALL NEW DRAWINGS AND DETAILING REQUIRED HEREOF SHALL, WITH THE APPROVAL OF THE ARCHITECT, BE PREPARED BY THE CONTRACTOR AT HIS OWN EXPENSE. WHERE SUCH APPROVED DEVIATION REQUIRES A DIFFERENT QUALITY AND ARRANGEMENT OF DUCTWORK, PIPING, WIRING, CONDUIT AND/OR EQUIPMENT FROM THAT SPECIFIED OF DETAILED ON THE DRAWINGS WITH THAT APPROVAL OF THE ARCHITECT, THE CONTRACTOR SHALL FURNISH AND INSTALL ALL SUCH MATERIAL AND/OR EQUIPMENT REQUIRED BY THE SYSTEM AT NO ADDITIONAL COST TO THE OWNER.

### 1.07 SUBMITTALS

AFTER RECEIVING APPROVAL OF EQUIPMENT MANUFACTURERS AND PRIOR TO DELIVERY OF ANY MATERIAL TO JOB SITE AND SUFFICIENTLY IN ADVANCE OF THE REQUIREMENTS TO ALLOW ARCHITECT AMPLE TIME FOR CHECKING, SUBMIT FOR REVIEW DETAILED DIMENSIONED DRAWINGS AND/OR EQUIPMENT CUT SHEETS SHOWING CONSTRUCTION SIZE, ARRANGEMENT, OPERATING CLEARANCES, PERFORMANCE CHARACTERISTICS AND CAPACITY OF MATERIAL AND EQUIPMENT. SHOP DRAWINGS SHALL SHOW THE RATINGS OF ITEMS AND SYSTEMS AND HOW THE COMPONENTS OF AN ITEM AND SYSTEM ARE ASSEMBLED, FUNCTION TOGETHER AND HOW THEY WILL BE INSTALLED ON THE PROJECT. DATA AND SHOP DRAWINGS FOR COMPONENT PARTS OF AN ITEM OR SYSTEM SHALL BE COORDINATED AND SUBMITTED AS A UNIT. IT IS THE INTENT OF THESE CONTRACT DRAWINGS TO HAVE THE MECHANICAL CONTRACTOR PREPARE "AS-BUILT" RECORD DRAWINGS IN ACCORDANCE WITH THESE CONTRACT DOCUMENTS.

## 1.08 CUTTING, PATCHING & FINISHING

PROVIDE CUTTING AND PATCHING OF ALL MATERIALS NECESSARY FOR THE INSTALLATION AS INDICATED OR SPECIFIED. NEATLY REMOVE AND LEGALLY DISPOSE OF PLUMBING COMPONENTS AND ITEMS NO LONGER IN USE. PROTECT THE STRUCTURE, FURNISHINGS, FINISHES AND MATERIALS ADJACENT TO THE AREA OF CUTTING AND PATCHING. PATCH EXISTING FINISHED SURFACES AND EQUIPMENT USING NEW MATERIALS AND METHODS, TO MATCH ADJACENT WORK, UTILIZING EXPERIENCED INSTALLERS. PATCHING OF FIRE RATED PARTITIONS, CEILINGS AND OTHER ASSEMBLIES, SHALL MATCH THE RATING OF THE RATED BARRIER WITH MATERIALS LISTED AND IDENTIFIED FOR SUCH USE, AND SHALL COMPLY WITH APPLICABLE REQUIREMENTS OF THE GENERAL TRADES SPECIFICATIONS. IN AREAS WHERE NEW FINISH WORK BY THE LISTED CONTRACTOR IS NOT INCLUDED IN THE PROJECT, THIS CONTRACTOR SHALL REPAIR AND/OR RESTORE FINISHES TO MATCH ADJACENT FINISHES. OPENINGS AROUND PIPING OR IN SLEEVES FOR PIPING PENETRATING FIRE-RATED FLOOR SLABS, WALLS, PARTITIONS, CEILINGS, OR SMOKE PARTITIONS, SHALL BE SEALED AT BOTH SIDES OF THE PENETRATION. INSULATION SHALL NOT EXTEND THROUGH SLEEVES. PACK OPENINGS WITH CALCIUM SILICATE BLOCK, DOW CORNING 3-6548 RTV SILICON FOAM, 3M CP25 CAULK, OR 303 PUTTY FIRE BARRIER SYSTEM OR MATERIAL HAVING THE SAME FIRE RATINGS AS THE FLOOR OR WALL PENETRATED. FIBERGLASS IS NOT ACCEPTABLE.

## 1.09 CONNECTIONS TO EXISTING WORK

PLAN THE INSTALLATION OF NEW WORK AND CONNECTIONS TO EXISTING WORK TO ENSURE MINIMUM INTERFERENCE WITH THE REGULAR OPERATION OF THE EXISTING FACILITIES. SUBMIT TO THE ARCHITECT, FOR HIS APPROVAL, A PROGRESS SCHEDULE INDICATING ALL NECESSARY TEMPORARY SHUTDOWNS OF EXISTING SERVICES. ALL SHUTDOWNS SHALL BE MADE AT SUCH TIMES AS WILL NOT INTERFERE WITH REGULAR OPERATION OF THE EXISTING FACILITIES AND ONLY AFTER WRITTEN APPROVAL FROM THE ARCHITECT.

## 1.10 NEW WORK

UNLESS OTHERWISE NOTED, ALL WORK INDICATED THROUGHOUT THESE DRAWINGS SHALL BE CONSIDERED TO BE NEW WORK AND SHALL BE INCLUDED AS AN INTEGRAL PART OF THIS CONTRACT.

## 1.11 CLOSE-OUT

CONTRACTOR SHALL PROVIDE FIELD-TESTING, CHECKOUT AND SYSTEM DEMONSTRATIONS TO OWNER TO ASSURE PROPER PERFORMANCE AND ADJUSTMENT OF ITEMS PROVIDED UNDER THE CONTRACT. REMOVE ALL DEBRIS CREATED BY THE CONSTRUCTION WORK AND CLEAN ALL EQUIPMENT, AIR DEVICES, ETC., INSIDE AND OUTSIDE. PROVIDE HARDBOUND BINDER WHICH INCLUDES: COPIES OF EACH SHOP DRAWING, PREVENTATIVE MAINTENANCE PROCEDURES, OPERATION AND INSTRUCTION MANUALS, LITERATURE SUPPLIED WITH PLUMBING EQUIPMENT, AND A LIST OF ALL CONTRACTOR'S PURCHASE ORDERS WITH SUPPLIERS, NAMES, ADDRESSES AND PHONE NUMBERS, FOR ALL MATERIALS. PROVIDE AT LEAST 2 HOURS OF INSTRUCTION TO PERSONNEL SELECTED BY THE OWNER, TO FAMILIARIZE THEM WITH THE LOCATION OF SIGNIFICANT EQUIPMENT, TRAIN THEM ON EQUIPMENT FUNCTIONS, REVIEW MAINTENANCE PROCEDURES AND COORDINATE INFORMATION AVAILABLE IN THE CLOSE-OUT BINDER.

## 1.12 REFERENCED STANDARDS

- 2021 MICHIGAN PLUMBING CODE
- 2021 MICHIGAN BUILDING CODE
- 2021 MICHIGAN ENERGY CODE
- NFPA-NATIONAL FIRE PROTECTION ASSOCIATION

## PART 2 PRODUCTS

### 2.01 GENERAL

THE MANUFACTURERS REFERENCED THROUGHOUT THIS OUTLINE SPECIFICATION ARE INCLUDED AS A BASIS OF DESIGN. SUBMISSION OF ALTERNATE MANUFACTURERS OF SIMILAR EQUIPMENT IS SUBJECT TO ENGINEER APPROVAL. UNITS OF EQUIPMENT, OTHER THAN THOSE LISTED AS THE BASIS OF DESIGN, MUST BE PROVEN TO BE PHYSICALLY ACCEPTABLE, IN ADDITION TO MEETING ALL PERFORMANCE AND EQUIPMENT SPECIFICATIONS. LIABILITY OF NON-COMFORMANCE SHALL LIE WITH THE CONTRACTOR/SUBMITTER.

### 2.02 PIPING

A. DOMESTIC WATER - INSIDE BUILDING ABOVEGROUND

- 4" AND SMALLER: TYPE "L" HARD TEMPER COPPER.
  - WITH LEAD-FREE SOLDERED JOINTS AND WROUGHT STANDARD WEIGHT PRESSURE RATED FITTINGS. PRESS FITTINGS ARE NOT ACCEPTABLE.

### 2.03 VALVES

A. DOMESTIC WATER PIPING

- BALL: 125 PSI, LEAD-FREE BRONZE BODY, TEFLON TRIM, 2-PIECE, FULL PORT, APOLLO #770LF-A WITH EXTENDED HANDLE SLEEVE FOR INSULATION.
- CHECK: 125 PSI, LEAD-FREE BRONZE BODY AND TRIM, APOLLO #611-LF.
- BUTTERFLY: 150 PSI, CAST IRON BODY WITH TAPPED LUGS, EDPM TRIM, GRINNELL SERIES 8000.

B. APPROVED MANUFACTURERS

- WATTS, APOLLO, CRANE, GRINNELL, NORDSTROM, NIBCO, STOCKHAM, SMITH, MILWAUKEE.

### 2.04 PLUMBING SPECIALTIES

A. WATER HAMMER ARRESTER (WHA)

- WATER HAMMER ARRESTER SHALL BE OF LEAD-FREE CONSTRUCTION AND SHALL BE EQUIVALENT TO WATTS #F15M2 SIZE TO CORRESPOND WITH PLUMBING AND DRAINAGE INSTITUTE STANDARD PDI - WH201 AND ASSE #1010 STANDARD.
- APPROVED MANUFACTURERS: PRECISION PLUMBING PRODUCTS, ZURN, WATTS, WADE.

B. REDUCED PRESSURE BACKFLOW PREVENTION DEVICE

- BACKFLOW PREVENTION DEVICE SHALL BE OF LEAD-FREE CONSTRUCTION AND SHALL BE TESTED AND CERTIFIED UNDER ASSE STANDARD #1013 USGFCM MANUAL, AWWA STANDARD C511 AND BE APPROVED BY EPA, LOCAL AND STATE CODES.
- WATTS #PVS-7000 FLOOD PROTECTION VALVE STATION, CONSISTING OF WATTS #FF113FP AUTOMATIC SHUTDOWN CONTROL VALVE AND RELAY BOX, WATTS SENTRYPLUS ALERT SENSOR AND WATTS #F309-OSY-S-FDA-FS, 4" RPZ BACKFLOW PREVENTER WITH STRAINER AND AIR GAP FITTING DRAIN ROUTED TO EXISTING FLOOR DRAIN. REDUCED PRESSURE ZONE PRINCIPLE BACKFLOW PREVENTION DEVICE SHALL INCLUDE SHUTOFF VALVES, STRAINER, TEST COCKS, AND FULL SIZE DRAIN WITH AIR GAP CONNECTION DEVICE.

## 2.05 PIPE INSULATION

A. GENERAL

- ALL INSULATION, UNLESS OTHERWISE NOTED, SHALL HAVE A COMPOSITE RATING INCLUDE THE FOLLOWING: ADHESIVES, JACKET, ETC., AS FOLLOWS: THE COMPOSITE ASSEMBLY SHALL HAVE A FLAME SPREAD RATING NOT OVER 25 AND A SMOKE DEVELOPED RATING NOT HIGHER THAN 50.
- INSULATION SHALL BE MANUFACTURED BY OWENS-CORNING, KNAUF OR ARMSTRONG AND THERMALLY EQUIVALENT TO THE OWENS-CORNING MATERIALS SPECIFIED.
- THE PIPING INSTALLATION MATERIAL SHALL BE AN UL-RATED, NON-COMBUSTIBLE PIPE INSULATION RECOMMENDED FOR BOTH HOT AND COLD PIPING. INSULATION SHALL BE HEAVY DENSITY SECTIONAL PIPE INSULATION JACKETED WITH AN EMBOSSED VAPOR BARRIER LAMINATED ALL-SERVICE JACKET WITH SELF-SEALING LAP ADHESIVE. LAP AND SEAL ALL JOINTS TO INSURE VAPOR BARRIER. THERMAL CONDUCTIVITY (K) SHALL NOT EXCEED 0.24 BTU/H SQUARE FOOT 1/INCH. INSULATION SHALL EQUAL OWENS-CORNING FIBERGLASS 25 ASJ/SSL, THICKNESS AS PER TABLES IN OTHER SECTIONS OF THESE SPECIFICATIONS. IF STAPLES ARE USED ON COLD WATER LINES, APPLY WHITE VAPOR BARRIER MASTIC OVER STAPLES. AT HANGERS, PROVIDE GALVANIZED SHIELD EXTENDING 12" ON EACH SIDE OF HANGER.
- WHERE FIBERGLASS INSULATION ON PIPING IS USED, PIPE FITTINGS SHALL BE COVERED WITH INSULATING CEMENT OF A THICKNESS EQUAL TO ADJACENT PIPE INSULATION AND WRAPPED WITH GLASS CLOTH.
- IN LIEU OF BUILDING UP A FITTING WITH INSULATING CEMENT, A PREFORMED INSULATING FITTING COVER SUCH AS ZESTON 25/50 RATED PVC INSULATED FITTING COVER WITH FIBERGLASS INSERT MAY BE USED. ONLY INSULATING MATERIALS MEETING THE 25/50 FLAME SPREAD AND SMOKE DEVELOPED RATINGS ARE ALLOWABLE IN AIR DUCTS, AIR CHASES OR AIR PLENUMS.

B. PIPING INSULATION THICKNESS

- DOMESTIC COLD WATER:
  - 1-1/4" AND BELOW - 1/2" THICK.
  - 1-1/2" AND ABOVE - 1" THICK.
- DOMESTIC HOT WATER AND RECIRCULATION:
  - 1-1/4" AND BELOW - 1" THICK.
  - 1-1/2" AND ABOVE - 1-1/2" THICK.

## 2.06 IDENTIFICATION:

A. PIPING:

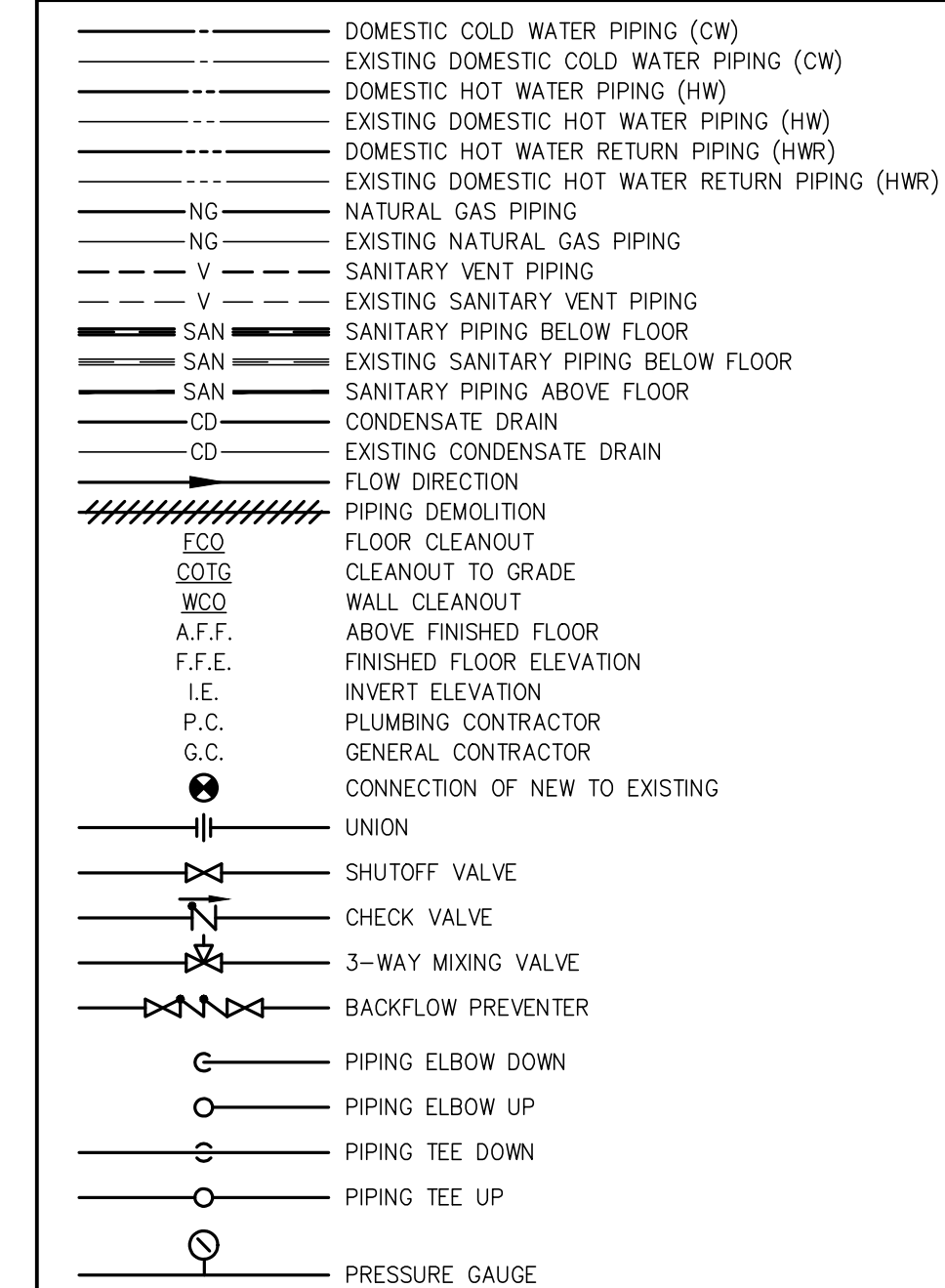
- INTERIOR INSTALLED PIPING: STENOLED MARKERS, SHOWING SERVICE AND DIRECTION OF FLOW ON ALL PIPE MAINS.
- LETTER SIZE: 1" HIGH LETTERS.
- COLOR CODES: COMPLY WITH ASME A13.1, UNLESS OTHERWISE INDICATED.
- LOCATIONS: LOCATE MARKERS AND COLOR BANDS WHERE PIPING IS EXPOSED IN FINISHED SPACES; MACHINE ROOMS; ACCESSIBLE MAINTENANCE SPACES SUCH AS SHAFTS, TUNNELS, AND PLENUMS; AND OWNER-APPROVED NON CONCEALED LOCATIONS. LOCATE MARKERS WHERE PIPES ENTER INTO CONCEALED SPACES AND AT A MAXIMUM INTERVALS OF 50 FEET IN EACH SPACE WHERE PIPES ARE EXPOSED OR CONCEALED BY REMOVABLE CEILING SYSTEM.

## PART 3 EXECUTION

- ALL EQUIPMENT INSTALLATION PROCEDURES SHALL BE BASED ON FUNDAMENTAL ENGINEERING AND CONSTRUCTION PRINCIPLES IN CONFORMANCE WITH ALL APPLICABLE CODES, STANDARDS AND ORDINANCES.
- THE PLUMBING CONTRACTOR SHALL INSTALL ALL PLUMBING EQUIPMENT IN CONFORMANCE WITH MANUFACTURER ISSUED INSTRUCTIONS AND RECOMMENDATIONS.
- THE PLUMBING CONTRACTOR SHALL NOT KNOWINGLY INSTALL WORK THAT IS IN ERROR.
- PROVIDE TWO (2) YEAR WARRANTY ON ALL LABOR AND MATERIALS UNLESS NOTED OTHERWISE.
- THE PLUMBING CONTRACTOR IS RESPONSIBLE FOR ALL PERMITS AND FEES REQUIRED FOR HIS WORK.
- THE PLUMBING CONTRACTOR SHALL PROVIDE AS-BUILT DRAWINGS OF HIS COMPLETED WORK.
- THE SYSTEMS REPRESENTED IN THESE CONTRACT DOCUMENTS HAVE THE INTENT OF PROVIDING ENERGY-EFFICIENT, SAFETY AND COMFORT FOR THE PROPOSED FACILITY.
- THE PLUMBING CONTRACTOR SHALL COORDINATE HIS WORK WITH ALL OTHER TRADES ON THE PROJECT.
- ALL MATERIALS AND EQUIPMENT INSTALLED SHALL FULLY COMPLY WITH THE SAFE DRINKING WATER ACT OF 1974, INCLUDING PUBLIC LAW 111-350, COMMONLY REFERRED TO AS THE "NO LEAD LAW".
- PROCEDURES FOR FLUSHING AND DISINFECTION
  - PROCEDURES SHALL MEET THE REQUIREMENTS OF AWWA C651 AND C652 AS WELL AS ALL APPLICABLE LOCAL REGULATIONS.
  - DISINFECTION AND FLUSHING SHALL BE COMPLETED WITHIN THREE WEEKS PRIOR TO WHOLE OR PARTIAL BENEFICIAL OCCUPANCY. IF BENEFICIAL OCCUPANCY OF ANY PART OF THE BUILDING IS DELAYED MORE THAN TWO WEEKS BUT LESS THAN FOUR WEEKS AFTER DISINFECTION, FLUSHING OF ALL FIXTURES SHALL AGAIN BE COMPLETED. IF BENEFICIAL OCCUPANCY OF ANY PART OF THE BUILDING IS DELAYED FOUR WEEKS OR MORE AFTER DISINFECTION, THE NEED FOR DISINFECTION AND FLUSHING SHALL BE DETERMINED BY A RISK ASSESSMENT CONDUCTED BY THE WATER PROGRAM TEAM / OWNER.
  - CONFIRMATION THAT THE BUILDING WATER SYSTEM PERFORMANCE MEETS DESIGN PERFORMANCE PARAMETERS INDICATED IN THE CONTRACT DOCUMENTS.
- COORDINATE ALL PIPING TO AVOID REQUIRED OVERHEAD CLEARANCES PERTAINING TO ELECTRICAL PANELS AND EQUIPMENT.
- PIPING SHALL BE SUPPORTED AT THE FOLLOWING MAXIMUM INTERVAL SPACING:

MATERIAL	HORIZONTAL (FT.)	VERTICAL (FT.)
COPPER PIPE	12	10

# PLUMBING LEGEND

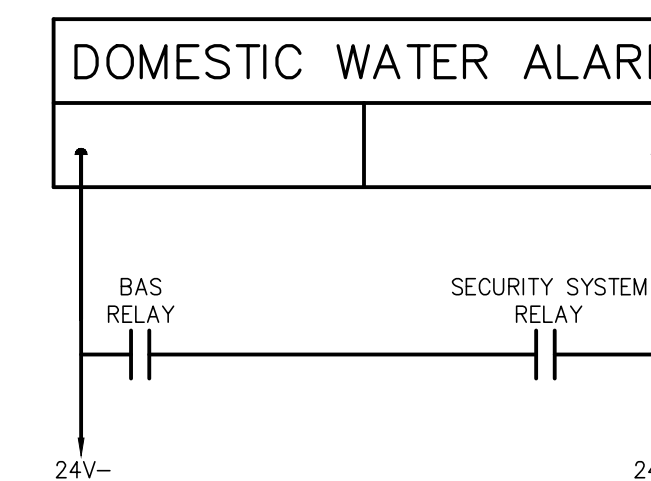


# T.C.C. SCOPE OF WORK

ALL TEMPERATURE CONTROL WORK TO BE PERFORMED BY AUTOMATED LOGIC GREAT LAKES. CONTACT SHANE SPRING AT 419-887-1611.

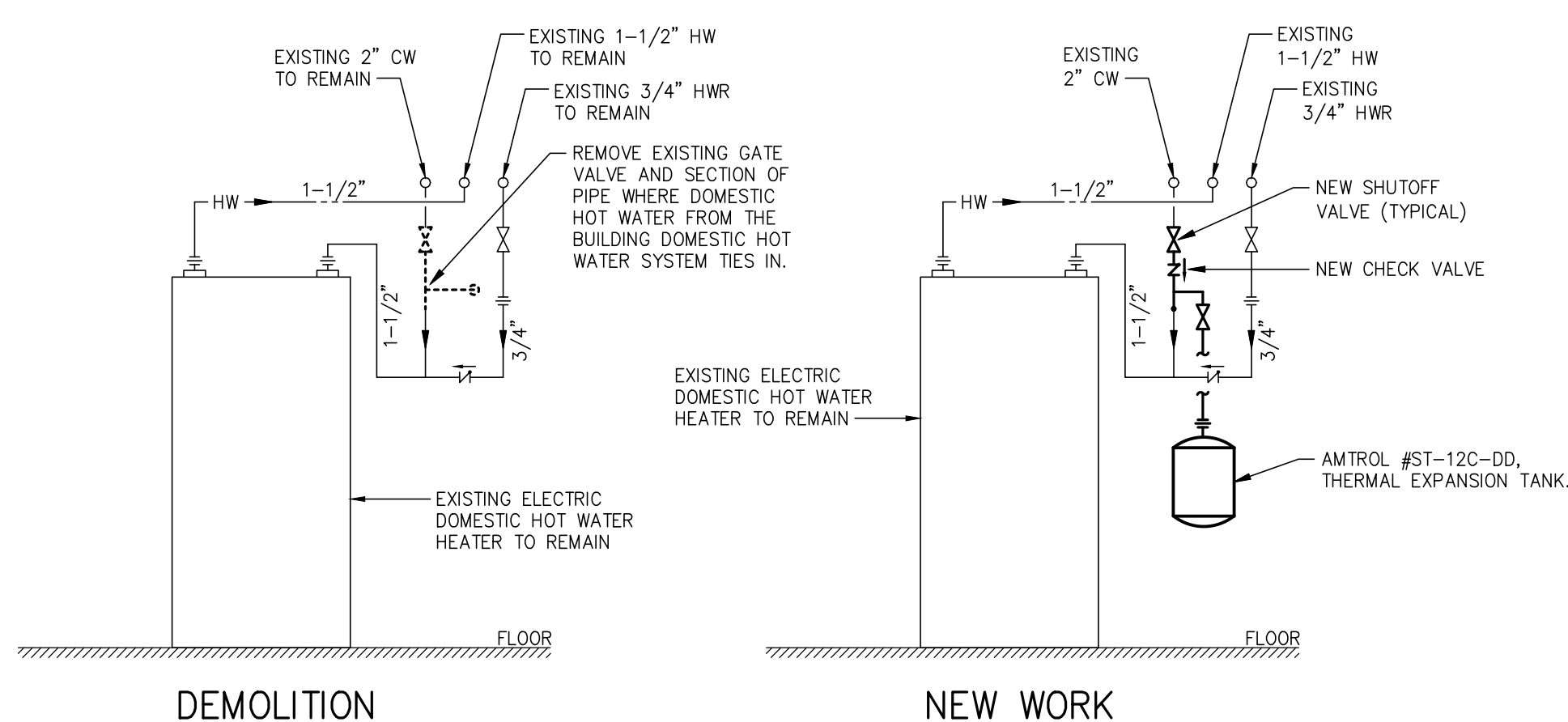
ALL SECURITY WORK SHALL BE PERFORMED BY HABITEC. CONTACT NICK WERT AT 419-205-1147

- THE TEMPERATURE CONTROL SCOPE SHALL INCLUDE BUT NOT BE LIMITED TO MODIFICATION TO EXISTING BUILDING TEMPERATURE CONTROL SYSTEM TO ADD TIE IN ALARM FOR NEW AUTOMATIC SHUTDOWN CONTROL VALVE FOR BUILDING WATER SERVICE.
- SET UP RELAYS FOR SECURITY SYSTEM TO ALSO RECEIVE ALARM POINT.
- COORDINATE ALL SYSTEM ALARMS WITH APPROPRIATE MONROE PUBLIC SCHOOLS PERSONAL FOR PROPER TEXT AND EMAIL CONTACTS.
- THE TEMPERATURE CONTROLS CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TEMPERATURE CONTROL AND INTERLOCK WIRING REQUIRED FOR THE PROJECT. ALL EXPOSED TO VIEW 24V AND ALL 120V TEMPERATURE CONTROL WIRING SHALL BE ROUTED IN ITS OWN SEPARATE CONDUIT FOR ENTIRE ROUTING, REFER TO THE ELECTRICAL SPECIFICATIONS FOR CONDUIT MATERIAL AND INSTALLATION REQUIREMENTS.



# BAS AND SECURITY INTERFACE DIAGRAM

- TEMPERATURE CONTROLS CONTRACTOR SHALL PROVIDE ALL NECESSARY ITEMS TO ALLOW OWNERS SECURITY SYSTEM TO TIE INTO BOILER ALARM.
- TEMPERATURE CONTROL CONTRACTOR SHALL HIRE DIRECT OWNERS SECURITY CONTRACTOR TO PROVIDE FINAL INTERLOCK FROM RELAY TO THEIR CONTROL SYSTEM PANEL.
- SECURITY CONTRACTOR CONTACT IS: NICK WERT AT HABITECH 419-205-1147



**ELECTRIC WATER HEATER (KITCHEN) MODIFICATION DETAIL**  
NO SCALE

# TEMPERATURE CONTROL SYSTEM POINT LIST

SYSTEM POINT DESCRIPTION	HARDWARE POINTS				SOFTWARE POINTS				SHOW ON GRAPHIC		
	AI	AO	BI	BO	AV	BV	LOOP	SCHED		TREND	ALARM
DOMESTIC WATER CONTROL VALVE ALARM										X	X

# PLUMBING DRAWING LIST

DWG NO.	TITLE	FILE NO.
P1.01	PLUMBING SPECIFICATIONS AND DETAILS	26109P1.01.dwg
P2.01	TUNNEL AND BOILER ROOM PLUMBING PLANS	26109P2.01.dwg
P2.02	FIRST FLOOR PLAN (FOR REFERENCE)	26109P2.02.dwg

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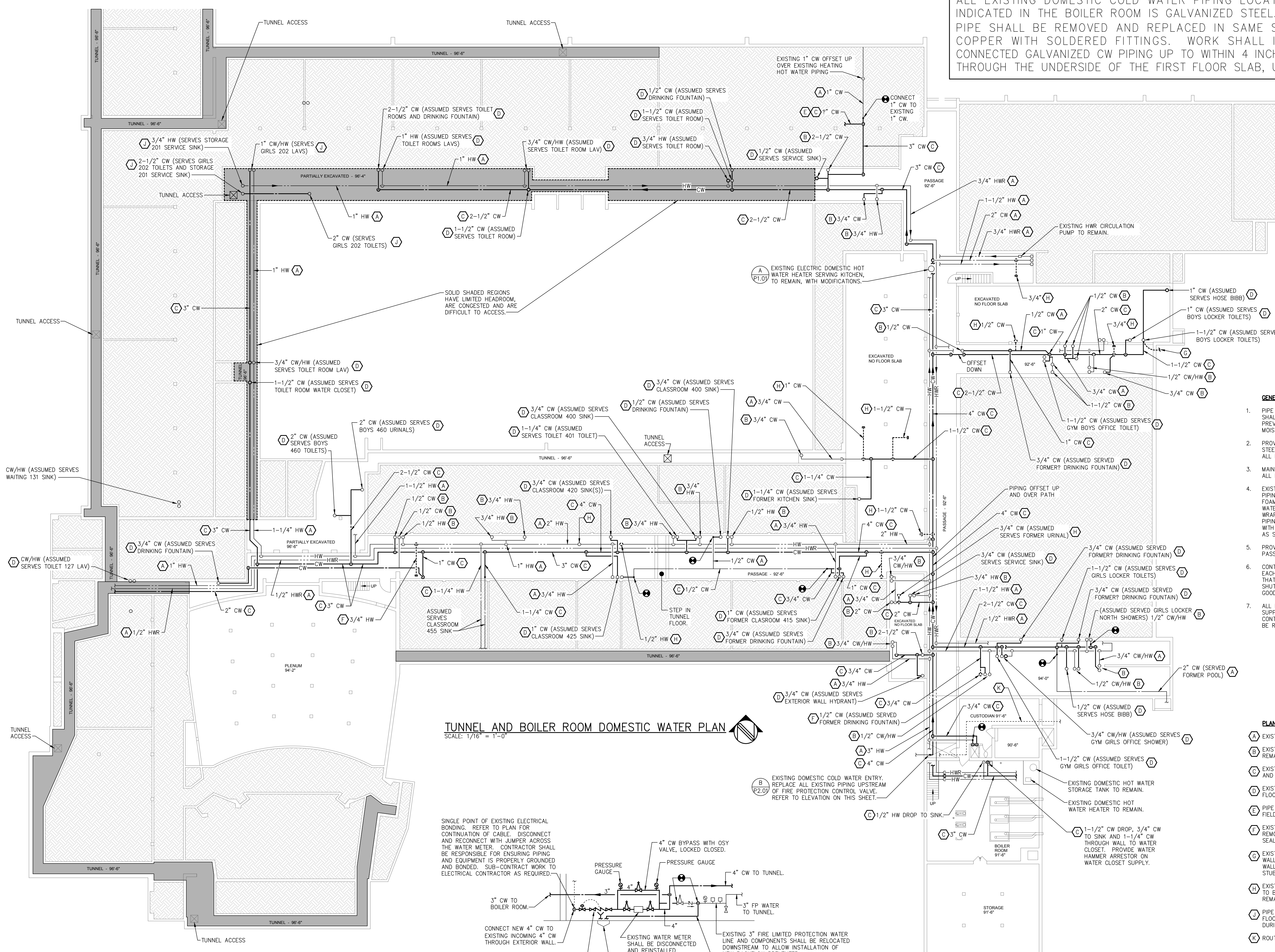
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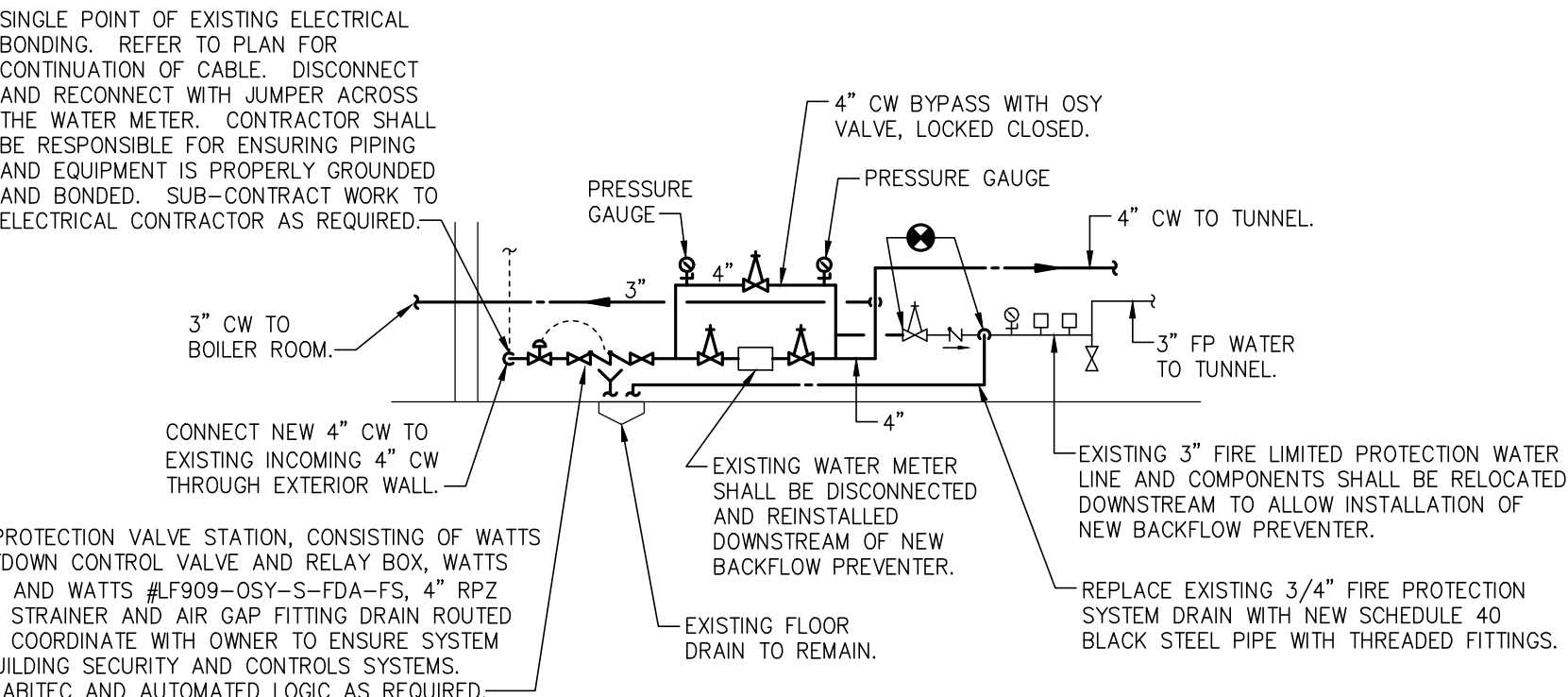
PLUMBING SPECIFICATIONS AND DETAILS

**P1.01**

ALL EXISTING DOMESTIC COLD WATER PIPING LOCATED IN TUNNELS AND AS INDICATED IN THE BOILER ROOM IS GALVANIZED STEEL. ALL GALVANIZED STEEL PIPE SHALL BE REMOVED AND REPLACED IN SAME SIZE WITH TYPE 'L' HARD COPPER WITH SOLDERED FITTINGS. WORK SHALL INCLUDE REPLACING ALL CONNECTED GALVANIZED CW PIPING UP TO WITHIN 4 INCHES OF EACH PENETRATION THROUGH THE UNDERSIDE OF THE FIRST FLOOR SLAB, UNLESS NOTED OTHERWISE.



**TUNNEL AND BOILER ROOM DOMESTIC WATER PLAN**  
SCALE: 1/16" = 1'-0"

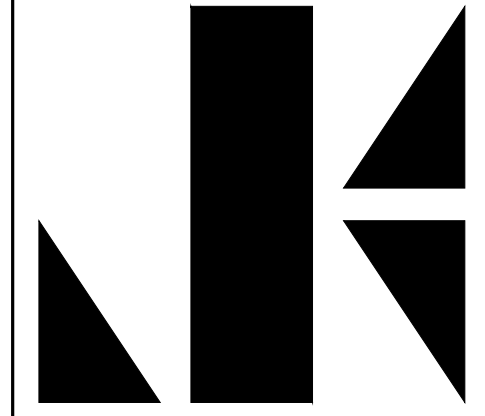


**B DOMESTIC COLD WATER ENTRY ELEVATION**  
P2.01 NO SCALE

- GENERAL NOTES:**
- PIPE PENETRATIONS THRU ALL FIRE RATED WALLS SHALL BE SEALED BY THE PLUMBING CONTRACTOR, TO PREVENT SPREAD OF FIRE AND SMOKE AND INGRESS OF MOISTURE.
  - PROVIDE ALL HANGERS, SUPPORTS AND MISCELLANEOUS STEEL REQUIRED FOR THE PROPER INSTALLATION OF ALL PIPING AND EQUIPMENT.
  - MAINTAIN REQUIRED MANUFACTURERS' CLEARANCES ON ALL EQUIPMENT.
  - EXISTING DOMESTIC HOT WATER SUPPLY AND RETURN PIPING IN TUNNELS IS INSULATED WITH ARMAFLEX STYLE FOAM PIPE WRAP. SOME EXISTING DOMESTIC COLD WATER PIPING IS INSULATED WITH FIBERGLASS PIPE WRAP. ALL EXISTING DOMESTIC CW, HW AND HWR PIPING INSULATION SHALL BE REMOVED AND REPLACED WITH NEW FIBERGLASS WRAP AND PVC FITTING COVERS, AS SPECIFIED ON SHEET P1-01.
  - PROVIDE A NEW SHUTOFF BALL VALVE FOR EACH PIPE PASSING THROUGH THE TUNNEL TO THE FLOOR ABOVE.
  - CONTRACTOR SHALL PROVIDE A PER-UNIT PRICE FOR EACH NEW SHUTOFF BALL VALVE FOR EACH PIPE SIZE, THAT CAN BE APPLIED IN THE EVENT THAT EXISTING SHUTOFF BALL VALVES ARE FOUND TO BE NEWER, IN GOOD WORKING ORDER AND DO NOT NEED REPLACED.
  - ALL EXISTING DOMESTIC WATER PIPE HANGERS AND SUPPORTS ARE INTENDED TO BE REPLACED. CONTRACTOR SHALL REVIEW PIPE SUPPORTS THAT CAN BE REUSED WITH ARCHITECT AND ENGINEER.

- PLAN NOTES:**
- (A) EXISTING COPPER PIPE TO REMAIN.
  - (B) EXISTING COPPER PIPE, UP THROUGH FLOOR, TO REMAIN.
  - (C) EXISTING GALVANIZED STEEL PIPE TO BE REMOVED AND REPLACED WITH COPPER.
  - (D) EXISTING GALVANIZED STEEL PIPE, UP THROUGH FLOOR, TO REMAIN.
  - (E) PIPE COULD NOT BE ACCESSED. CONTRACTOR TO FIELD VERIFY SIZE AND PURPOSE OF PIPE.
  - (F) EXISTING COPPER PIPE NO LONGER IN USE TO BE REMOVED AND REMAINING PIPE STUB CAPPED AND SEALED.
  - (G) EXISTING DISCONNECTED 1/2" SOFT COPPER THROUGH WALL. REMOVE REMAINING DISCONNECTED PIPE UP TO WALL FACE AND CAP AND SEAL REMAINING PIPE STUB.
  - (H) EXISTING GALVANIZED STEEL PIPE NO LONGER IN USE TO BE REMOVED AND NOT REPLACED. CAP AND SEAL REMAINING UNUSED PIPE STUB AS APPLICABLE.
  - (I) PIPE IS ASSUMED TO BE COPPER BASED ON FIRST FLOOR CONSTRUCTION OBSERVATION PHOTOS TAKEN DURING PREVIOUS RENOVATIONS.
  - (K) ROUTE OF EXISTING BONDING CABLE.

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03/13/2026  
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REGISTERED PROFESSIONAL ENGINEER  
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DATE	DESCRIPTION
03.16.2026	BIDDING & STATE REVIEW

**DOMESTIC WATER REPLACEMENT & RELATED WORK**  
AT  
**CANTRICK ELEMENTARY SCHOOL**  
1008 RIVERVIEW AVENUE, MONROE, MICHIGAN 48162  
FOR  
**MONROE PUBLIC SCHOOLS**  
1275 N. MACOMB STREET, MONROE, MICHIGAN 48162

JOB # **26109**

TUNNEL AND BOILER ROOM DOMESTIC WATER PLAN  
**P2.01**

