

**Alomance Consulting Engineers**

961-F Burlington Ave.  
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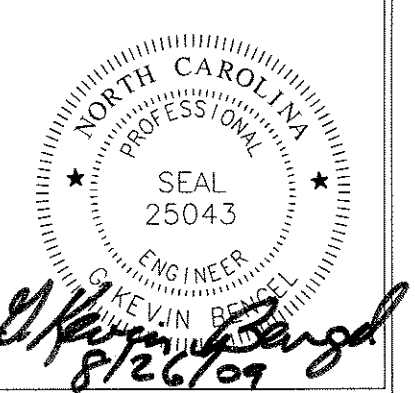
**DODSON & CHATMAN CONSTRUCTION, INC.**



3246 ANTHONY CRT. S.  
BURLINGTON, NC 27215  
PHONE: (336) 229-0539  
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**NEW BUILDING FACILITY:**  
**CENTRAL BAPTIST CHURCH**  
Oak Ridge, North Carolina

DRAWING NAME  
**FIRST FLOOR PLUMBING PLAN**



DRAWN  
JNK  
CHECKED  
6/14/09  
DATE  
8/26/09  
SCALE  
AS NOTED  
JOB NO.  
9076  
SHEET

**P-1**

**PLUMBING NOTES:**

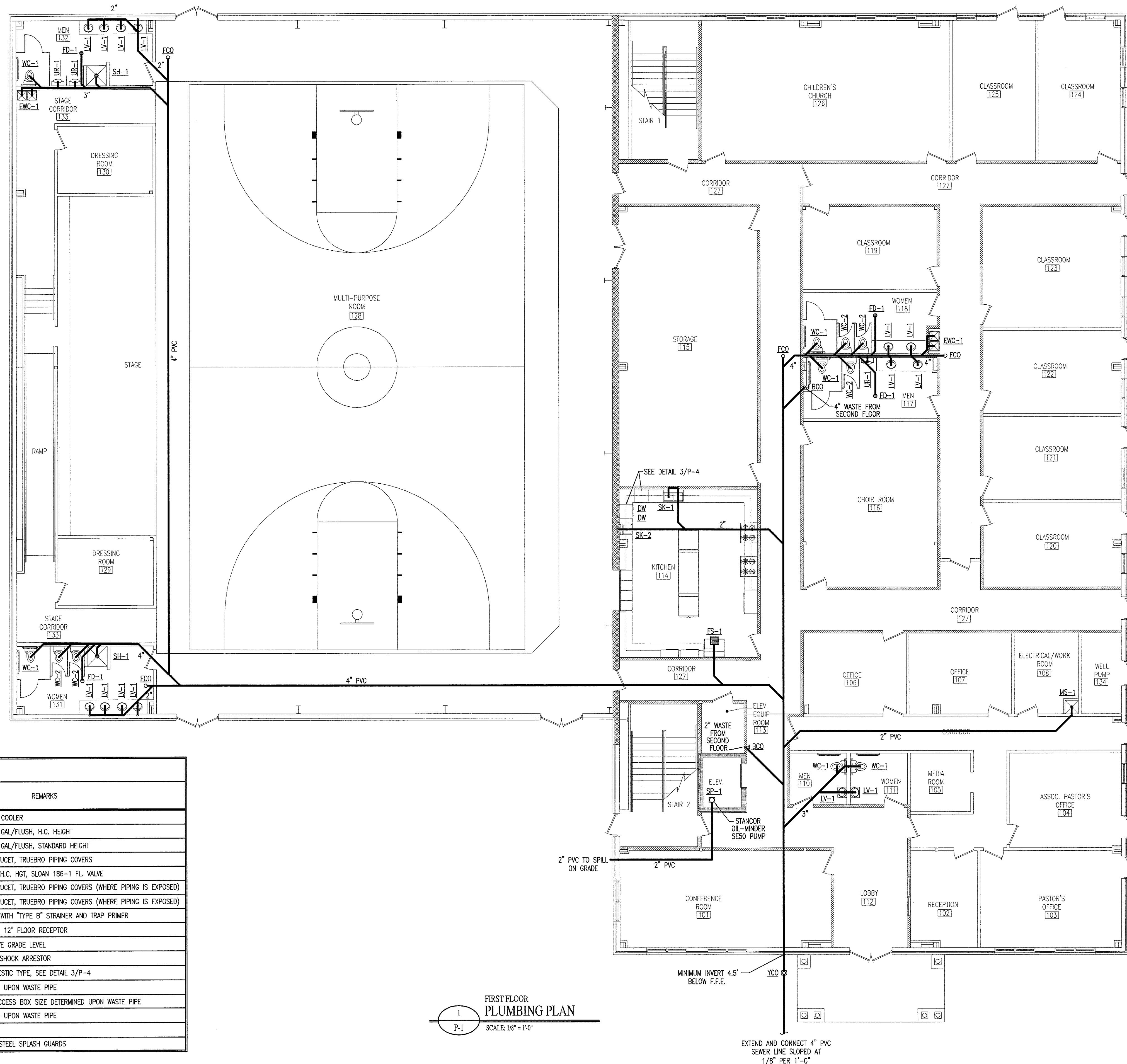
1. PLUMBING TO BE INSTALLED IN ACCORDANCE WITH ALL STATE AND LOCAL CODES.
2. PLUMBING CONTRACTOR TO COORDINATE ALL WORK WITH OTHER TRADES.
3. ALL WASTE AND VENT PIPING TO BE SCHEDULE 40 P.V.C.
4. WATER LINES TO BE COPPER TYPE K (SOFT DRAWN) BELOW SLAB, AND TYPE L HARD COPPER ABOVE SLAB.
5. ALL P.V.C. UNDER SLAB SHALL BE A MINIMUM OF 2" NPS.
6. COPPER PIPING TO BE INSULATED WHERE IT PASSES THROUGH CONCRETE.
7. INSULATE HOT & COLD WATER LINES IN ACCORDANCE WITH BUILDING CODE. INSULATE COLD WATER LINES WHERE SWEATING WOULD RESULT IN STRUCTURAL DAMAGE TO BUILDING DUE TO ROTTING OF WOOD OR STAINING OF CEILING TILES.
8. TRAP PRIMERS SHALL BE INSTALLED ON FLOOR DRAINS.
9. LAVATORIES ARE TO BE EQUIPPED WITH CLEAN-OUT TEES BELOW.
10. ALL FIXTURES ARE TO BE EQUIPPED WITH SHUT-OFF VALVES ON SUPPLY LINES.
11. ANY FIRE RATED ASSEMBLY PENETRATIONS ARE TO BE PER CODE. CONTRACTOR SHOULD REVIEW ALL FIRE RATING PENETRATIONS.
12. THE CONTRACTOR SHALL COORDINATE THE LOCATION OF ALL PIPING AND EQUIPMENT WITH ALL OTHER TRADES PRIOR TO BEGINNING INSTALLATION TO AVOID CONFLICTS AND INTERFERENCE WITH OTHER TRADES.
13. FINAL UTILITY CONNECTIONS (GAS, ELECTRIC, WATER ETC.) TO EQUIPMENT SHALL BE MADE BY THE CONTRACTOR INSTALLING THE EQUIPMENT REQUIRING THE UTILITIES.
14. PLANS AND ISOMETRICS ARE DIAGRAMMATIC. THERE IS NO INTENT TO INDICATE ALL AND FITTINGS REQUIRED. GENERALLY, PIPING SHALL BE INSTALLED PARALLEL TO AND PERPENDICULAR TO AND PLUMB WITH WALL CONSTRUCTION.
15. SOIL AND WASTE PIPING SHALL BE LAID ON MINIMUM 1/4" PER FT. SLOPE FOR PIPE SIZES LESS THAN 3", AND MINIMUM 1/8" PER FT. FOR PIPE 3" AND LARGER UNLESS OTHERWISE NOTED.
16. UNLESS OTHERWISE NOTED, PLUMBING CONTRACT SHALL TERMINATE AT A POINT FIVE (5) FEET OUTSIDE THE BUILDING. FOR WORK BY OTHER CONTRACTORS OUTSIDE THE 5 FOOT TERMINATION, REFER TO SITE UTILITY DRAWINGS.
17. VALVES AND DEVICES INSIDE CHASES OR WALLS OR ABOVE NON-ACCESSIBLE CEILINGS SHALL BE PROVIDED WITH APPROPRIATELY SIZED ACCESS PANEL COMPATIBLE WITH SURROUNDING FINISHES. SUCH ACCESS PANELS SHALL BE FURNISHED BY THE PLUMBING CONTRACTOR FOR INSTALLATION BY THE GENERAL CONTRACTOR.
18. PLUMBING VENT PIPING PENETRATING ROOF SHALL BE INSTALLED BY THE PLUMBING CONTRACTOR. CUTTING OF HOLES AND FLASHING OF PENETRATIONS SHALL BE BY THE GENERAL CONTRACTOR.
19. REFER TO BUILDING DRAWINGS FOR DIMENSIONED LOCATIONS OF WALLS AND PARTITIONS AND FOR PARTITION THICKNESS AND CONSTRUCTION MATERIALS.

PIPING LEGEND	
SYMBOL	DESCRIPTION
---	VENT PIPING
---	SEWER PIPING

WALL LEGEND	
SYMBOL	DESCRIPTION
---	1-HOUR RATED FIRE WALL
---	3-HOUR RATED FIRE WALL

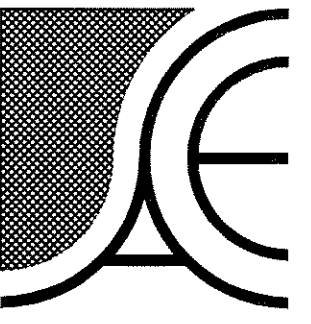
PLUMBING FIXTURE SCHEDULE								
ITEM NO.	FIXTURE DESCRIPTION	MANUFACTURER	* MODEL NO.	CONNECTION SIZES			REMARKS	
				C.W.	H.W.	WASTE		
EW-1	ELECTRIC WATER COOLER - BI-LEVEL	SUNROC	AD408BL	1/2"	--	1-1/2"	1-1/2"	BI-LEVEL WATER COOLER
WC-1	WATER CLOSET - TANK TYPE	AMER. STD.	2998.012	1/2"	--	3"	2"	FLOOR MTD. 1.6 GAL/FLUSH, H.C. HEIGHT
WC-2	WATER CLOSET - TANK TYPE	AMER. STD.	2898.012	1/2"	--	3"	2"	FLOOR MTD. 1.6 GAL/FLUSH, STANDARD HEIGHT
LV-1	COUNTER MOUNT LAVATORY	AMER. STD.	0475.020	1/2"	1/2"	1-1/2"	1-1/2"	SINGLE LEVER FAUCET, TRUEBRO PIPING COVERS
UR-1	URINAL	AMER. STD.	6541.132	3/4"	--	2"	2"	1.0 GAL/FLUSH, H.C. HGT, SLOAN 186-1 FL. VALVE
SK-1	DOUBLE COMPARTMENT SINK	STERLING	PRO33226	1/2"	1/2"	1-1/2"	1-1/2"	SINGLE LEVER FAUCET, TRUEBRO PIPING COVERS (WHERE PIPING IS EXPOSED)
SK-2	SINGLE COMPARTMENT SINK	STERLING	PRO25226	1/2"	1/2"	1-1/2"	1-1/2"	SINGLE LEVER FAUCET, TRUEBRO PIPING COVERS (WHERE PIPING IS EXPOSED)
FD-1	FLOOR DRAIN	ZURN	Z-415-B	--	--	3"	1-1/2"	BODY ASSEMBLY WITH "TYPE B" STRAINER AND TRAP PRIMER
FS-1	FLOOR SINK	ZURN	Z-1902	--	--	3"	1-1/2"	10" DEEP, 12" x 12" FLOOR RECEPTOR
EPWH-1	FROST PROOF WALL HYDRANT	WOODFORD	65	1/2"	--	--	--	MOUNT 24" ABOVE GRADE LEVEL
IB-1	ICE MAKER BOX	PPP	MM-500-MIMB	1/2"	--	--	--	MIP VALVE WITH SHOCK ARRESTOR
DW	DISHWASHER	--	--	--	1/2"	1-1/2"	--	BY OWNER, DOMESTIC TYPE, SEE DETAIL 3/P-4
FCO	FLOOR CLEAN OUT	ZURN	Z-1400	--	--	--	--	SIZE DETERMINED UPON WASTE PIPE
YCO	YARD CLEAN OUT	ZURN	Z-1470	--	--	--	--	WITH FLANGED ACCESS BOX SIZE DETERMINED UPON WASTE PIPE
BCO	BASE CLEAN OUT	ZURN	Z-1441	--	--	--	--	SIZE DETERMINED UPON WASTE PIPE
HD-1	HUB DRAIN	CHARLOTTE PLASTICS	4"x2"	--	--	2"	1-1/2"	--
MS-1	MOP SINK	STERN WILLIAMS	HL-2100-BP-3	1/2"	1/2"	2"	1-1/2"	WITH STAINLESS STEEL SPLASH GUARDS

\* FIXTURE MODEL NUMBERS LISTED ARE FOR DESCRIPTION ONLY.



FIRST FLOOR  
**PLUMBING PLAN**  
SCALE: 1/8" = 1'-0"

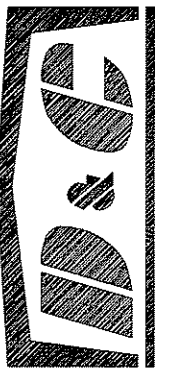
EXTEND AND CONNECT 4" PVC SEWER LINE SLOPED AT 1/8" PER 1'-0"



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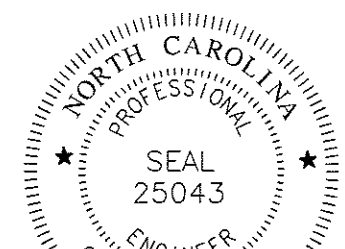
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**NEW BUILDING FACILITY:  
CENTRAL BAPTIST CHURCH**  
Oak Ridge, North Carolina

DRAWING NAME  
**SECOND FLOOR PLUMBING PLAN**



DRAWN  
JNK

CHECKED  
GKB

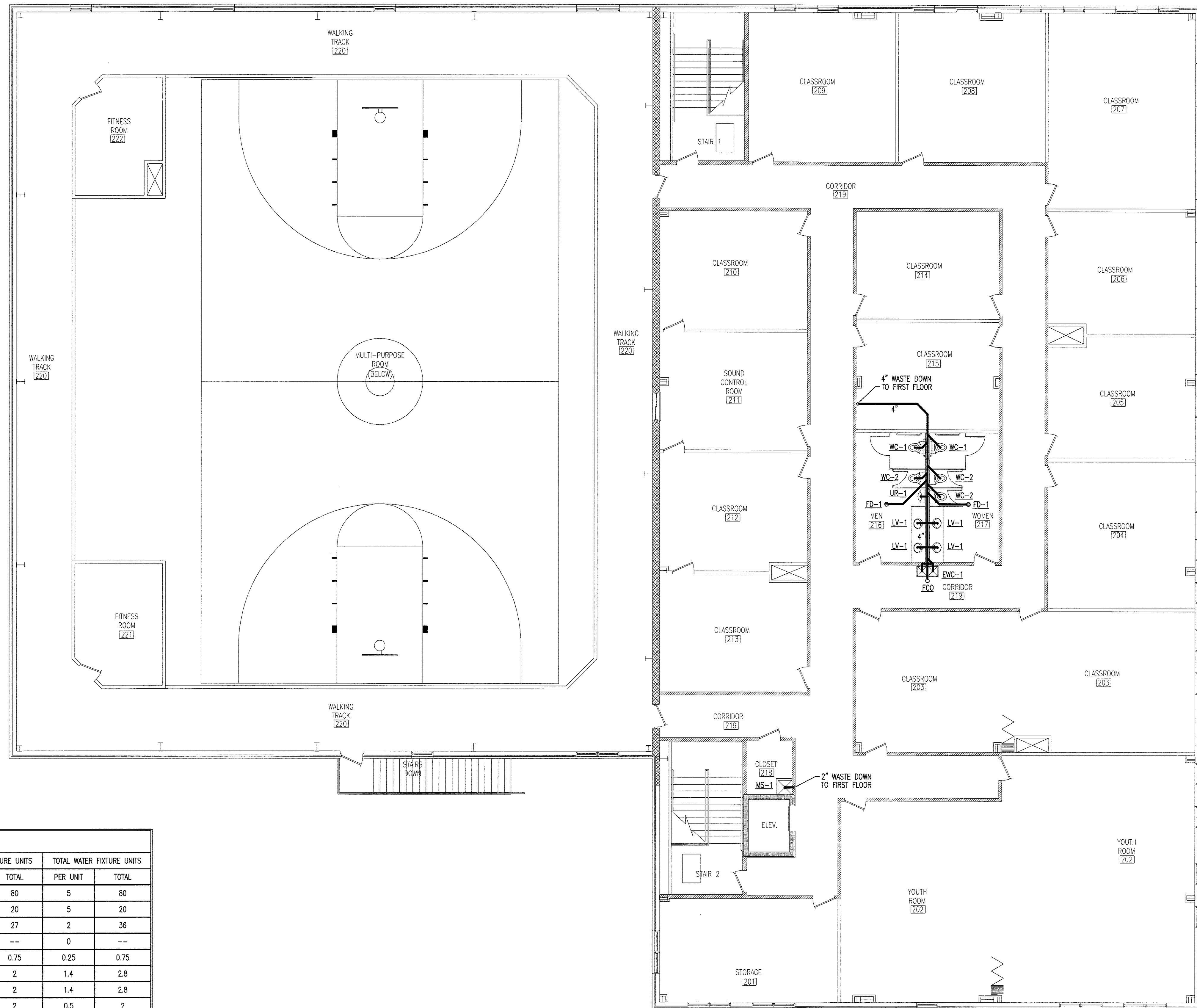
DATE  
8/26/09

SCALE  
AS NOTED

JOB NO.  
9076

SHEET

**P-2**



PIPING LEGEND	
SYMBOL	DESCRIPTION
---	VENT PIPING
---	SEWER PIPING

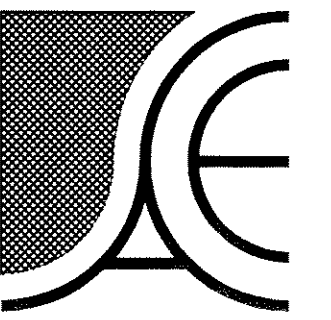
WALL LEGEND	
SYMBOL	DESCRIPTION
---	1-HOUR RATED FIRE WALL
---	3-HOUR RATED FIRE WALL

WASTE AND WATER CALCULATIONS									
FIXTURE TYPE	QUANTITY	WASTE FIXTURE UNITS		HOT WATER FIXTURE UNITS		COLD WATER FIXTURE UNITS		TOTAL WATER FIXTURE UNITS	
		PER UNIT	TOTAL	PER UNIT	TOTAL	PER UNIT	TOTAL	PER UNIT	TOTAL
WATER CLOSET - TANK	16	4	64	0	--	5	80	5	80
URINAL	4	4	16	0	--	5	20	5	20
LAVATORY	18	1	18	1.5	27	1.5	27	2	36
FLOOR DRAIN	6	2	12	0	--	0	--	0	--
DRINKING FOUNTAIN	3	0.5	1.5	0	--	0.25	0.75	0.25	0.75
SINK	2	2	4	1	2	1	2	1.4	2.8
TUB/SHOWER	2	2	4	1	2	1	2	1.4	2.8
HOSE BIBB	4	0	--	0	--	0.5	2	0.5	2
DISHWASHER	2	2	4	1.4	2.8	0	--	1.4	2.8
FLOOR SINK	1	2	2	0	--	0	--	0	--
ICE MAKER BOX	1	0	--	0	--	0.25	0.25	0.25	0.25
MOP SINK	2	2	4	2.25	4.5	2.25	4.5	3	6
<b>TOTAL</b>			<b>129.5</b>		<b>38.3</b>		<b>138.5</b>		<b>153.4</b>

1. 4" WASTE LINE SLOPED AT 1/8" PER 1'-0" IS ADEQUATE FOR 180 FIXTURE UNITS  
2. 2" WATER LINE IS ADEQUATE FOR 120 GPM.

GPM = 57

1  
P-2  
SECOND FLOOR PLUMBING PLAN  
SCALE: 1/8" = 1'-0"



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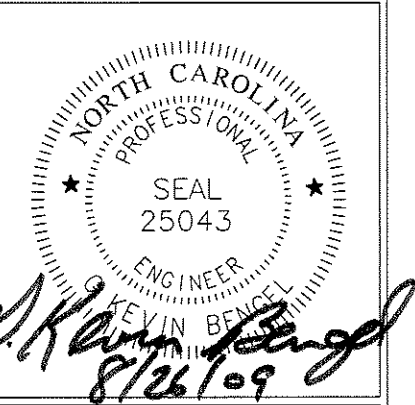
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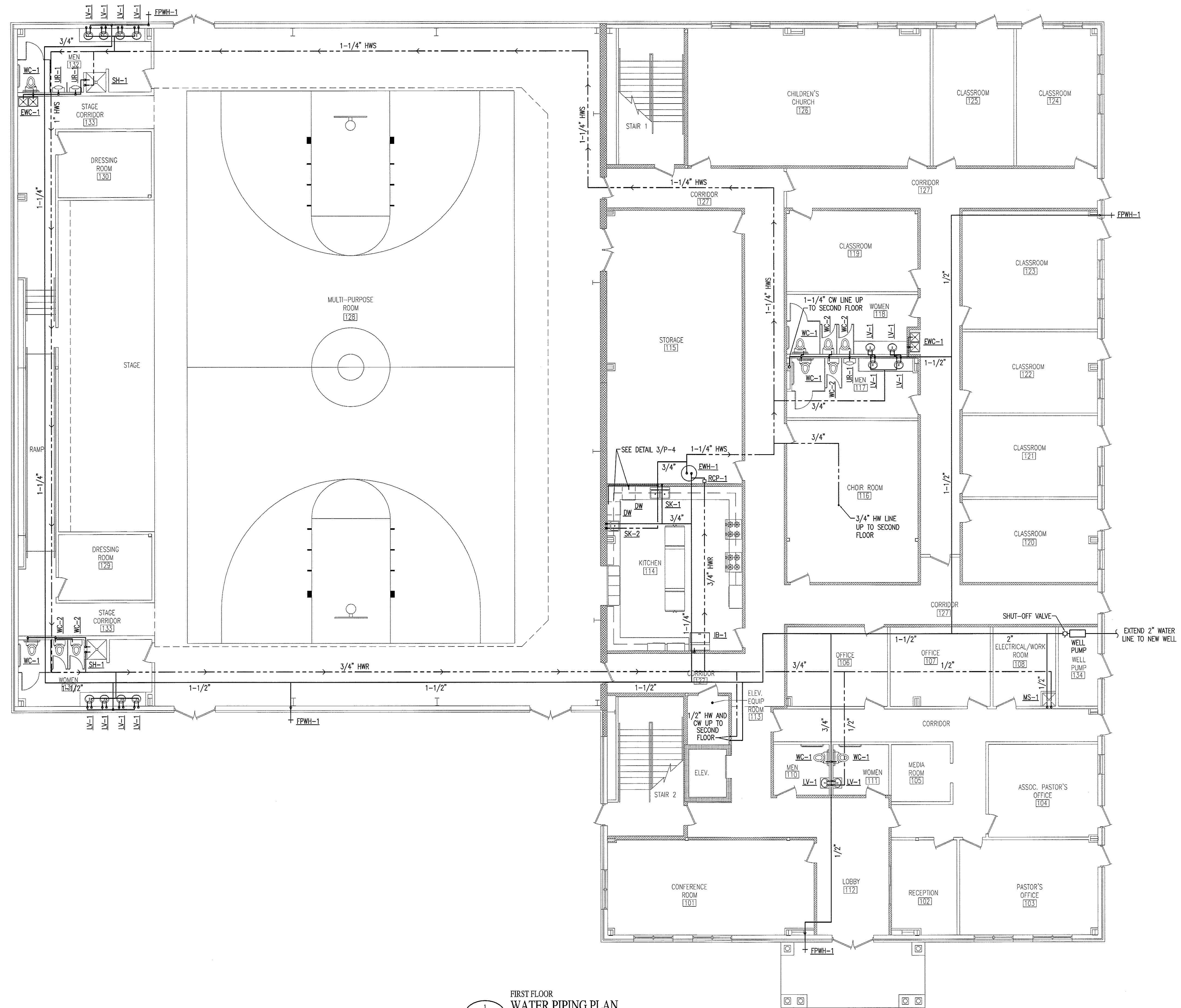
**NEW BUILDING FACILITY:  
CENTRAL BAPTIST CHURCH**  
Oak Ridge, North Carolina

DRAWING NAME  
**FIRST FLOOR WATER PIPING PLAN**



DRAWN  
JNK  
CHECKED  
GAB  
DATE  
8/26/09  
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JOB NO.  
9076  
SHEET

**P-3**



**PIPING LEGEND**

SYMBOL	DESCRIPTION
HWS	HOT WATER SUPPLY
HWR	HOT WATER RETURN
CW	COLD WATER

**WALL LEGEND**

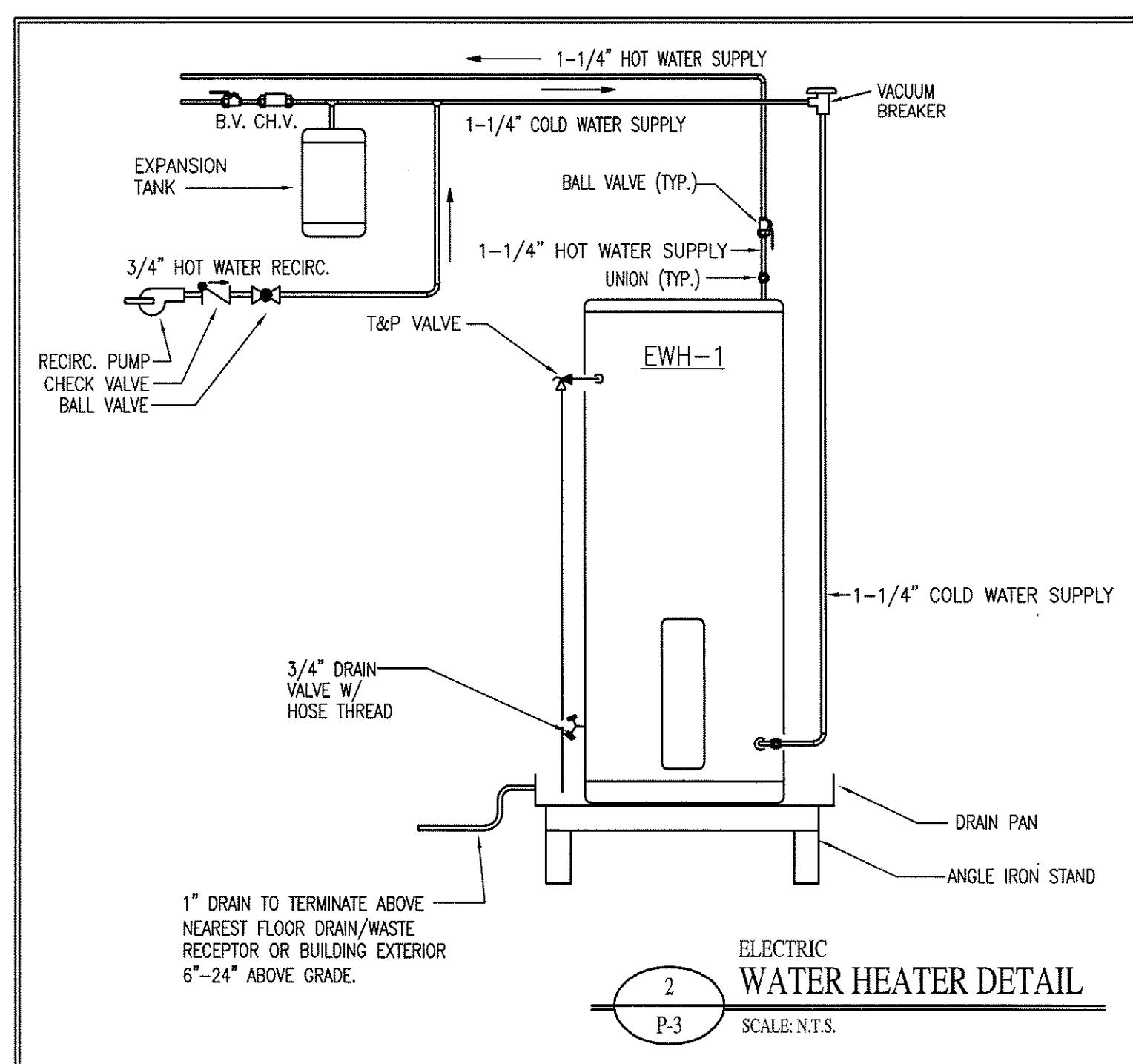
SYMBOL	DESCRIPTION
[Hatched Pattern]	1-HOUR RATED FIRE WALL
[Cross-hatched Pattern]	3-HOUR RATED FIRE WALL

**PUMP SCHEDULE**

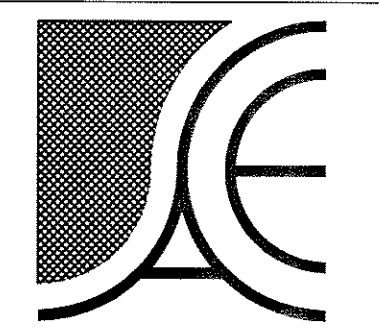
MARK	MANUFACTURER	MODEL NO.	GPM	HEAD (FT.)	HP	VOLTAGE
RCP-1	B & G	PL-30	4	17	1/12	115V/1Ø

**WATER HEATER SCHEDULE**

MARK	TANK VOLUME	RECOVERY	TEMPERATURE	ELEMENT SIZE	POWER	MANUFACTURER	MODEL
EWH-1	81 GAL.	93 GPH	80°	18 KW	208V/3Ø	RHEEM/RUUD	EBSA-81-GS



**FIRST FLOOR WATER PIPING PLAN**  
SCALE: 1/8" = 1'-0"



**Alamance Consulting Engineers**

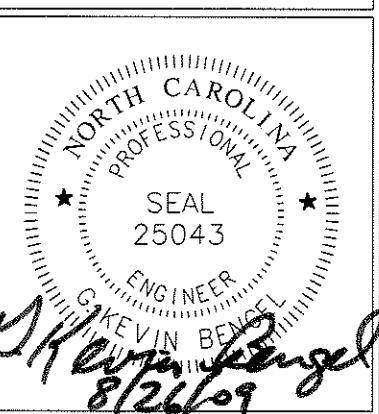
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CENTRAL BAPTIST CHURCH**  
Oak Ridge, North Carolina

DRAWING NAME  
**SECOND FLOOR WATER PIPING PLAN**



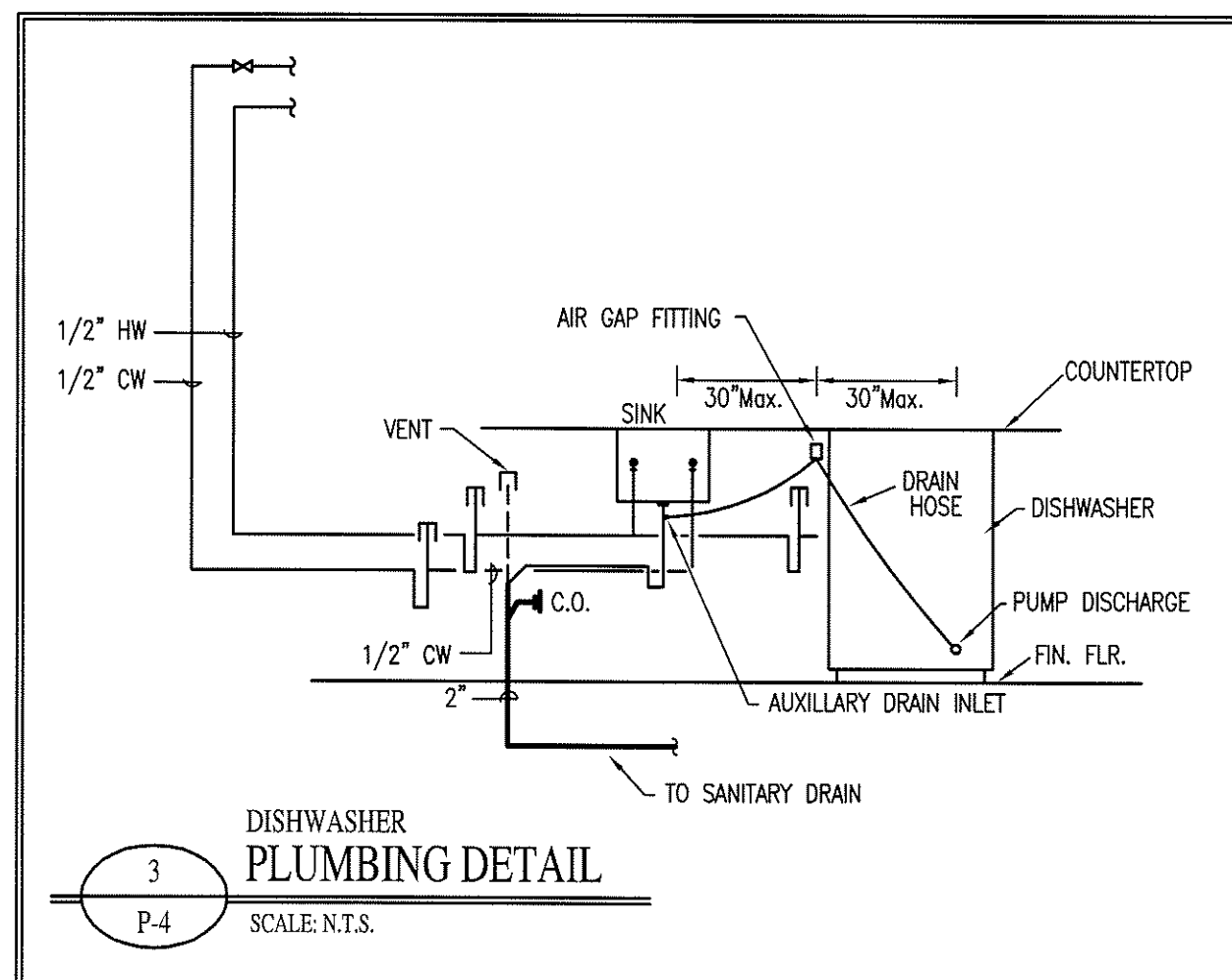
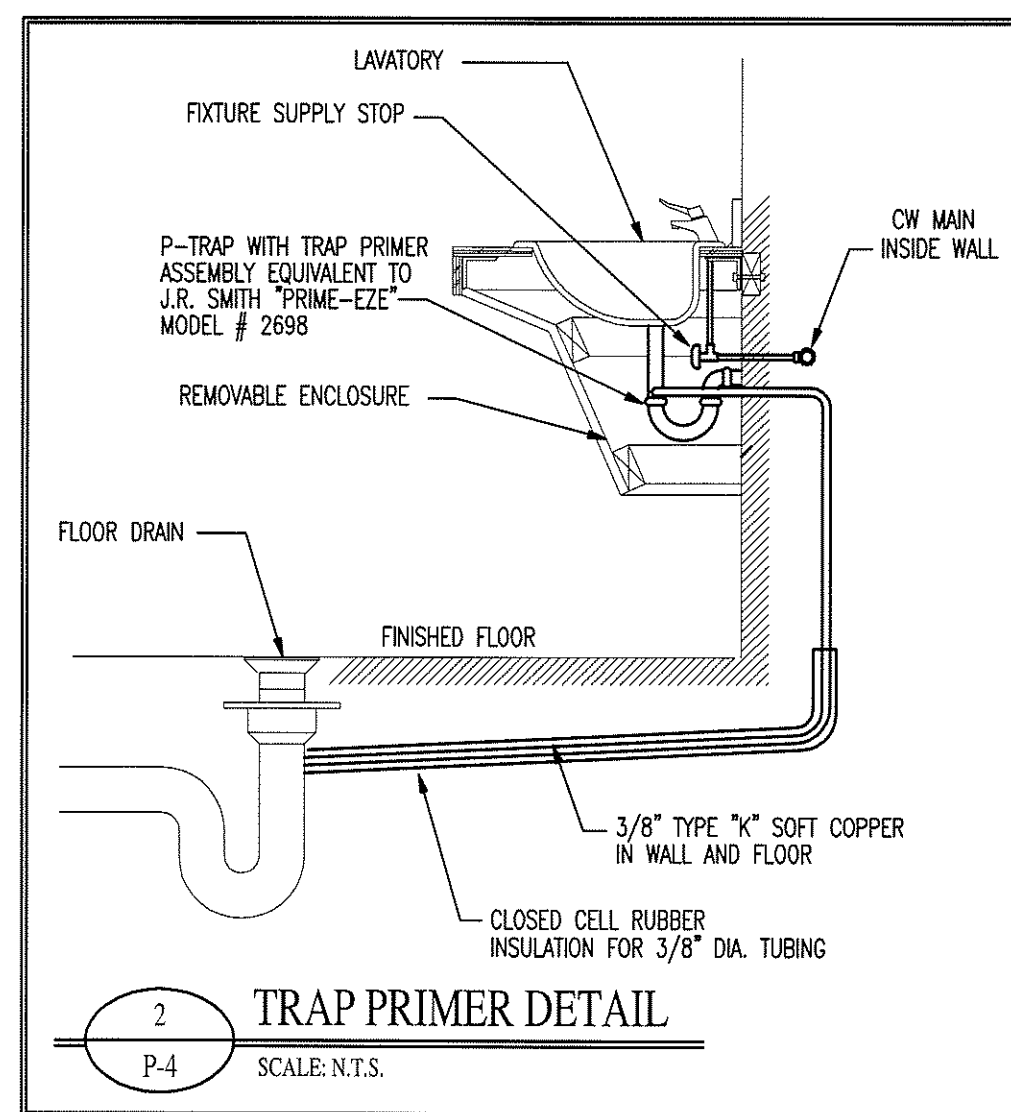
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CHECKED: **6/14/8**  
DATE: 8/26/09  
SCALE: AS NOTED  
JOB NO.: 9076  
SHEET

**P-4**

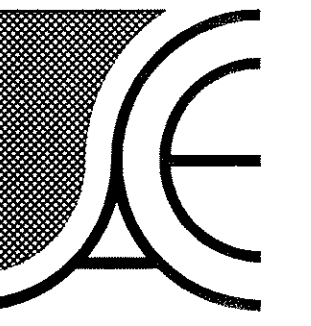


PIPING LEGEND	
SYMBOL	DESCRIPTION
HWS	HOT WATER SUPPLY
HWR	HOT WATER RETURN
CW	COLD WATER

WALL LEGEND	
SYMBOL	DESCRIPTION
[Hatched Pattern]	1-HOUR RATED FIRE WALL
[Cross-hatched Pattern]	3-HOUR RATED FIRE WALL



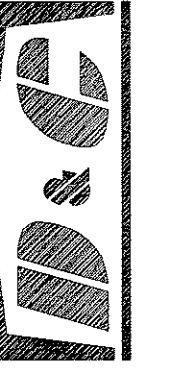
1  
SECOND FLOOR  
**WATER PIPING PLAN**  
SCALE: 1/8" = 1'-0"



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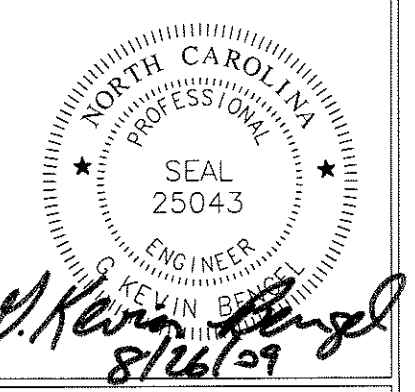
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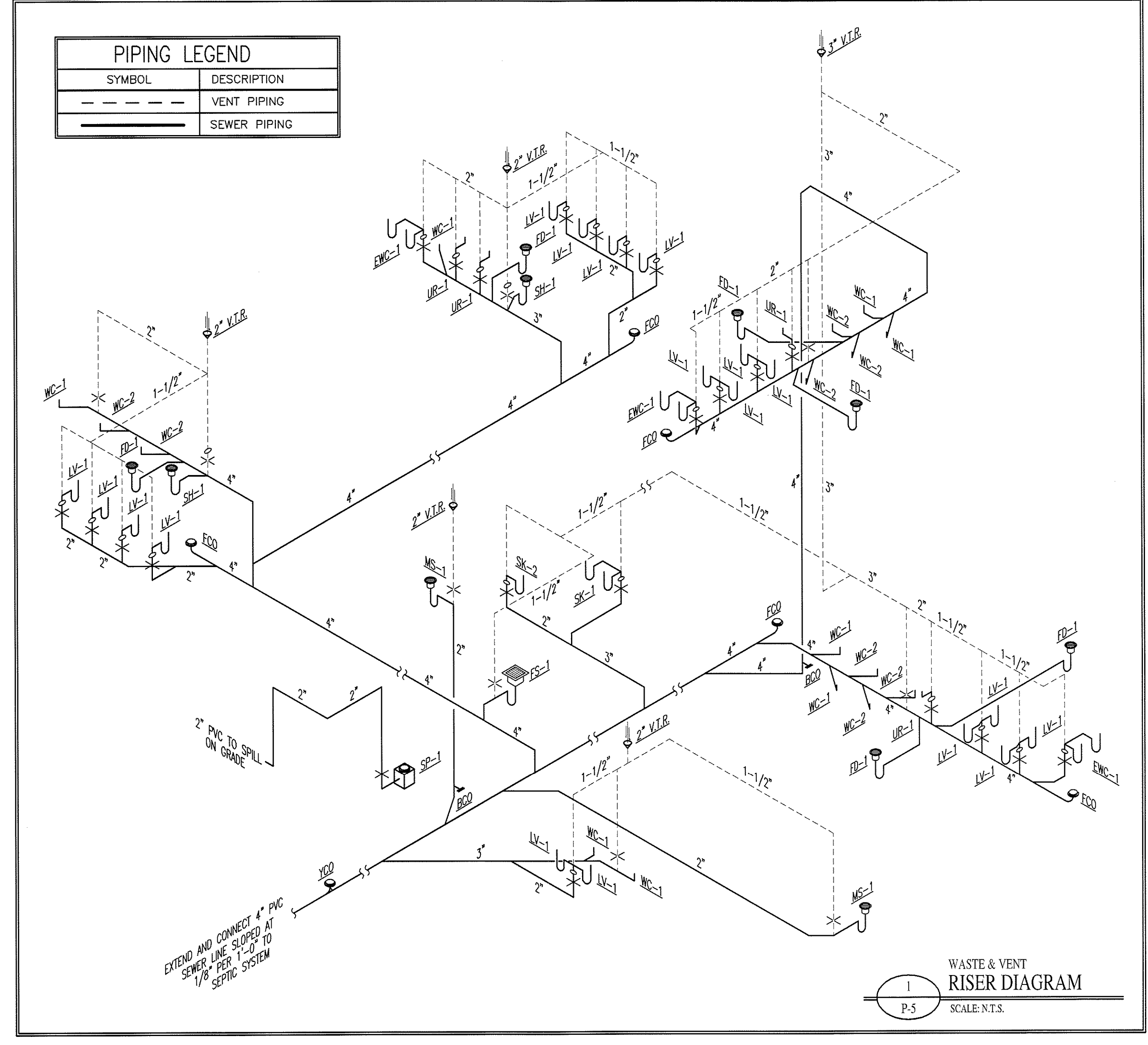
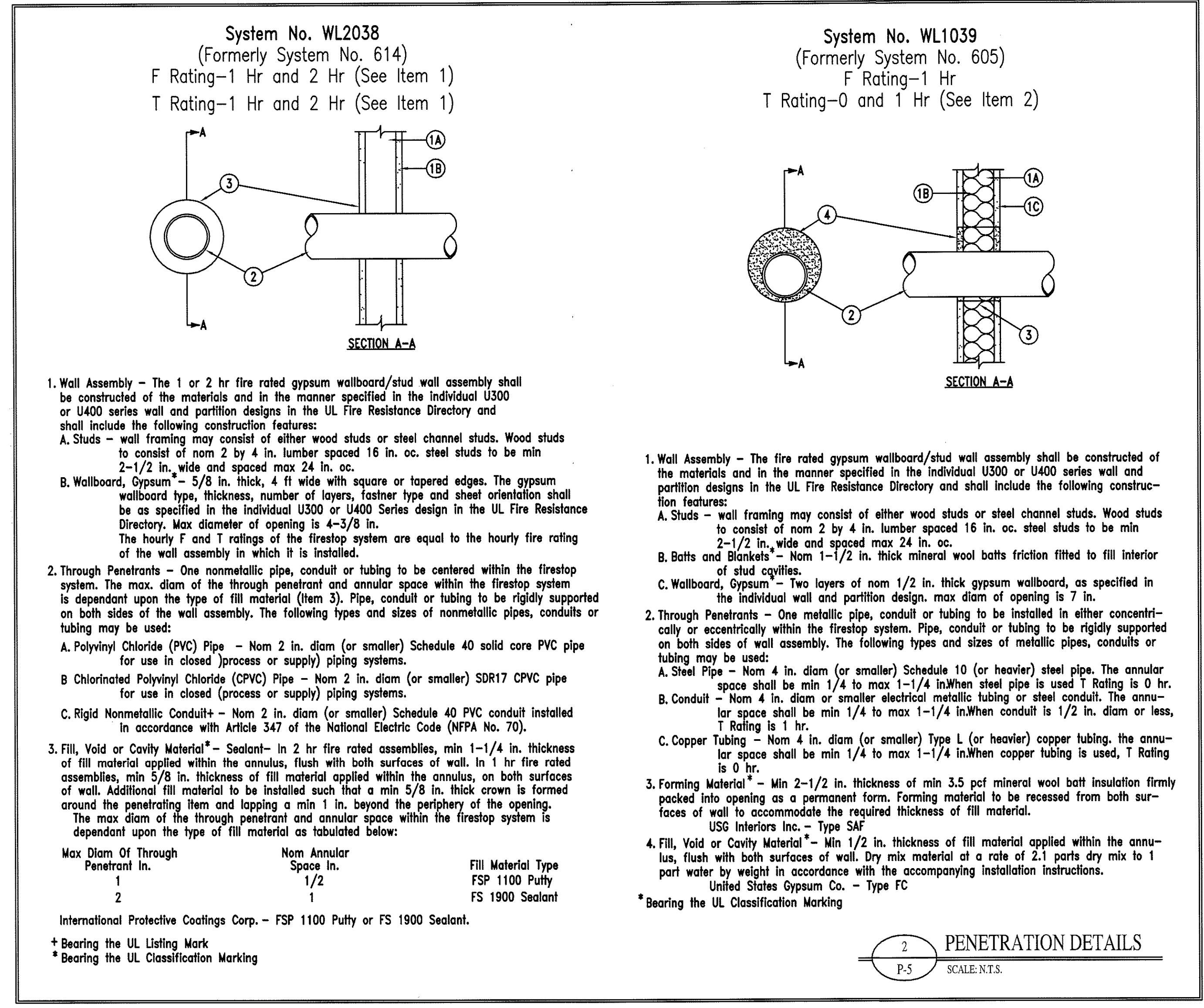
**NEW BUILDING FACILITY:  
CENTRAL BAPTIST CHURCH**  
Oak Ridge, North Carolina

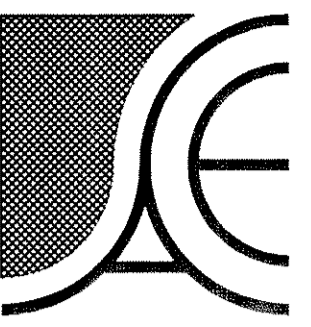
DRAWING NAME  
**PLUMBING DETAILS**



DRAWN  
JNK  
CHECKED  
GKB  
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8/26/09  
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**P-5**

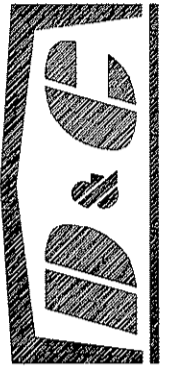




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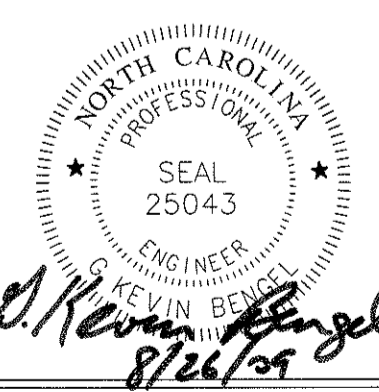
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**NEW BUILDING FACILITY:  
CENTRAL BAPTIST CHURCH**  
Oak Ridge, North Carolina

DRAWING NAME  
**WATER PIPING RISER DIAGRAM**



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JNK  
CHECKED  
GIBBS  
DATE  
8/26/09  
SCALE  
AS NOTED  
JOB NO.  
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SHEET

**P-6**

**SYSTEM No. C-AJ-1001**  
F Rating - 3 hr  
T Ratings - 0 hr

**SECTION A-A**

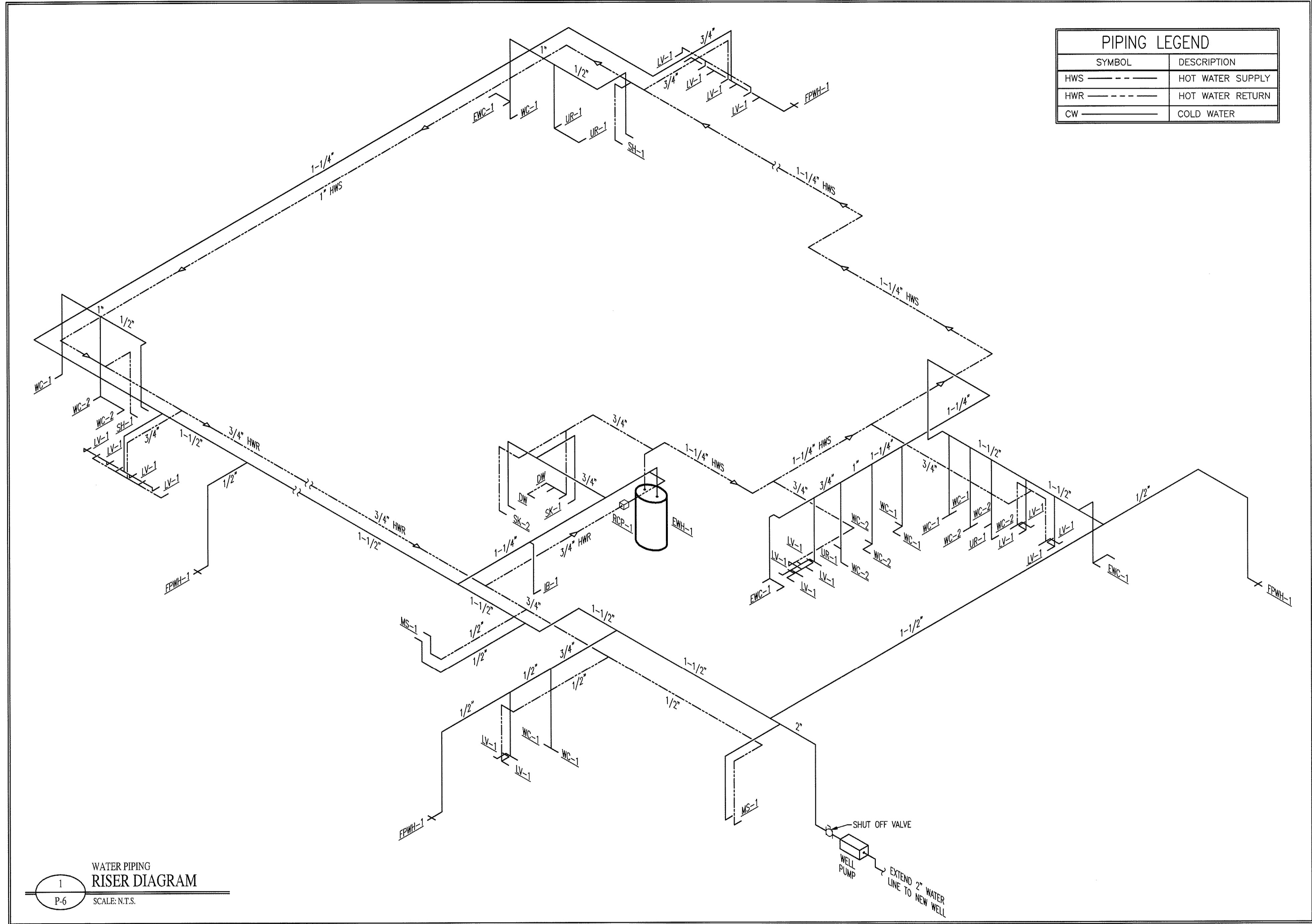
- Floor or Wall Assembly - Min 4-1/2 in. thick lightweight or normal weight (100-150pcf) concrete. Wall may also be constructed of any UL Classified Concrete Blocks\*. Max diam of circular through opening is 22-1/2 in.  
See Concrete Blocks (CAZT) category in the Fire Resistance Directory for names of manufacturers.
- Steel Sleeve - (Optional, not shown) - Nom. 12 in. diam (or smaller) Schedule 40 (or heavier) steel pipe sleeve cast into concrete floor or wall. Sleeve to be flush with or project max 2 in. from top surface of floor or from both surfaces of wall.
- Pipe or Conduit - Nom 20 in. diam. (or smaller) Schedule 10 (or heavier) steel pipe, nom. 6 in. diam. (or smaller) rigid steel conduit or Type L (or heavier) copper tube, nom. 4 in. diam. (or smaller) cast iron pipe or steel EMT. Max one pipe or conduit per through opening. Max annular space between pipe or conduit and edge of through opening not to exceed 2-1/2 in. Min. annular space between pipe or conduit and edge of through opening is zero in. (point contact). Pipe or conduit to be rigidly supported on both sides of floor or wall assembly.
- Packing material - Polyethylene backer rod or nom. 1 in. thickness of tightly-packed ceramic (alumina silica) fiber blanket, mineral wool batt or glass fiber insulation material used as a permanent form. Packing material to be recessed from top surface of floor or from both surfaces of solid concrete or concrete block wall as required to accommodate the required thickness of caulk fill material (item 4). As an alternate when max pipe size is 10 in. diam. and when max annular space is 1 in., a min. 1 in. thickness of tightly-packed ceramic fiber blanket or mineral wool batt packing material may be recessed min. 1/2 in. from bottom surface of floor or from either side of solid concrete wall.
- Fill, Void, or Cavity Materials\* - Caulk - Applied to fill the annular space to the min thickness shown in the following table:

Max Pipe Diam In	Max Annular Space In	Packing Material Type (a)	Min Caulk Thkns In
10	1	BR, CF, GF, or MW	1/2 (b)
10	1	CF or MW	1/2 (c)
20	2-1/2	BR, CF, GF, or MW	1 (b)

(a) BR=Polyethylene backer rod, GF=Glass fiber insulation, CF=Ceramic fiber blanket, MW=Mineral-wool batt.  
(b) Caulk installed flush with top surface of floor or both surfaces of wall.  
(c) Caulk installed flush with bottom surface of floor or one surface of solid (non-concrete block) wall.

Minnesota Mining & Mfg. Co. - CP 25N/S  
\* Bearing the UL Classification Marking

**2 FIRE PENETRATION DETAIL**  
P-6 SCALE: N.T.S.

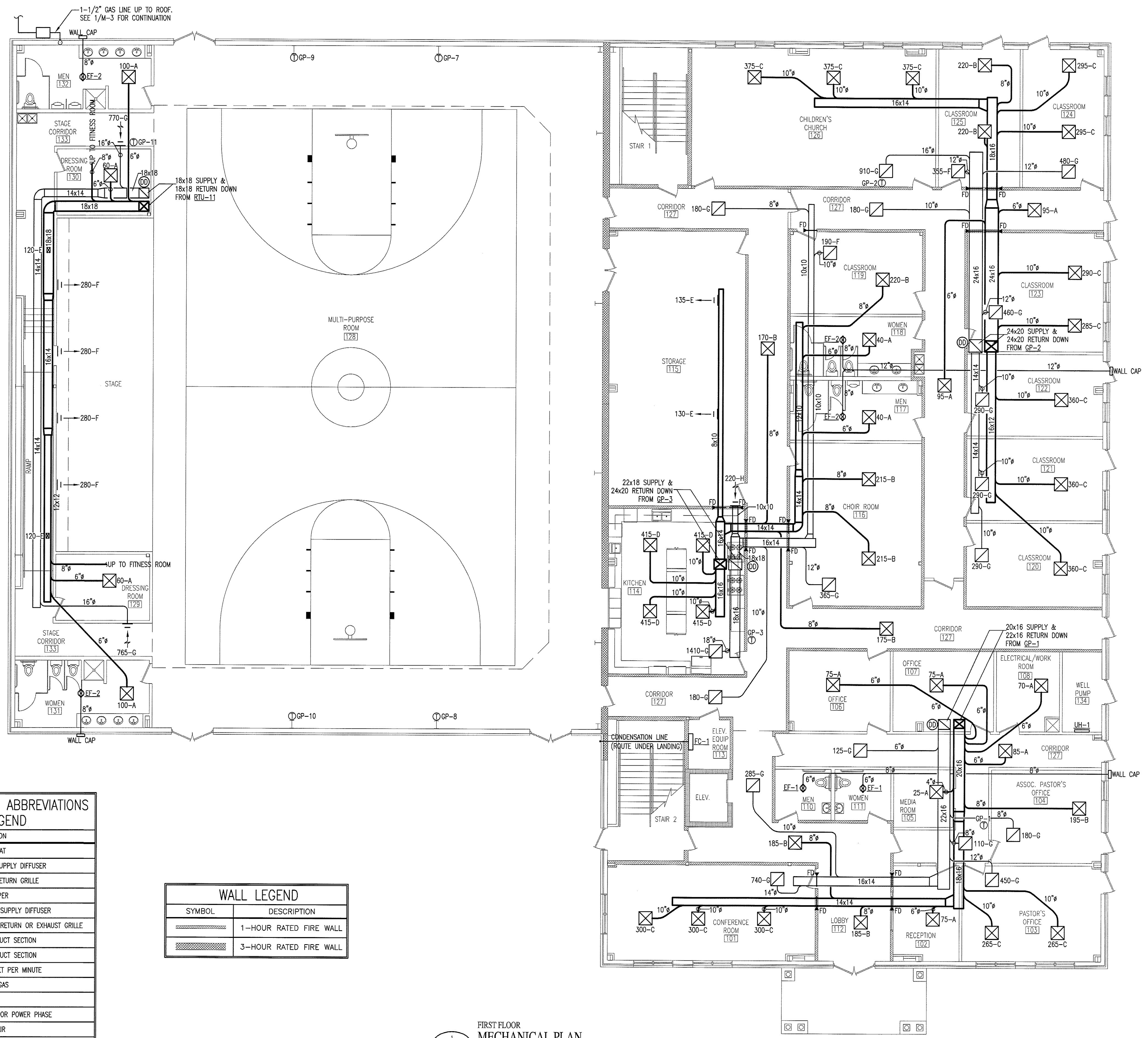


**PIPING LEGEND**

SYMBOL	DESCRIPTION
HWS	HOT WATER SUPPLY
HWR	HOT WATER RETURN
CW	COLD WATER

**MECHANICAL NOTES:**

- ALL HVAC EQUIPMENT AND DUCTWORK TO BE INSTALLED IN ACCORDANCE WITH STATE AND LOCAL CODES.
- THE CONTRACTOR SHALL COORDINATE THE LOCATION OF ALL DUCTWORK, PIPING, AND ELECTRICAL REQUIREMENTS WITH ALL OTHER TRADES PRIOR TO BEGINNING INSTALLATION TO AVOID CONFLICTS AND INTERFERENCE WITH OTHER TRADES.
- ALL EQUIPMENT TO BE INSTALLED AS SUGGESTED BY MANUFACTURER.
- INSULATE SUPPLY AND RETURN DUCTWORK LOCATED IN UNCONDITIONED SPACES BY WRAPPING WITH INSULATION WITH A MINIMUM INSTALLED R-VALUE OF 5.0. DIMENSIONS SHOWN ARE INSIDE CLEAR AREA DIMENSIONS.
- FIRST 10' FROM THE HVAC UNIT OF EXPOSED INTERIOR DUCTWORK MUST BE INSULATED WITH 1" DUCT LINER.
- INSTALL WASHABLE SCREEN FILTER ON OUTSIDE AIR INTAKE OF ROOF TOP UNITS.
- MECHANICAL SYSTEM TO BE BALANCED AND TESTED AFTER INSTALLATION TO ASSURE PROPER OPERATION.
- COORDINATE EXACT LOCATION OF THERMOSTATS WITH OWNER.
- ANY FIRE RATED ASSEMBLY PENETRATIONS ARE TO BE PER CODE. CONTRACTOR SHOULD REVIEW ALL FIRE RATING PENETRATIONS.
- BATHROOM EXHAUST FANS ARE TO BE FURNISHED, INSTALLED AND DUCTED TO OUTDOORS BY THE MECHANICAL CONTRACTOR. EXHAUST FAN TO BE WIRED BY THE ELECTRICAL CONTRACTOR.
- SMOKE DETECTORS ARE TO BE PROVIDED IN RETURN AIR DUCT OF EACH UNIT AHEAD OF MAKE-UP AIR CONNECTIONS TO SHUT DOWN THE UNIT IN CASE OF FIRE.
- DUCT SMOKE DETECTORS ARE TO BE CONNECTED TO FIRE ALARM.
- EXHAUST FAN DISCHARGE TO BE AT LEAST TEN FEET AWAY FROM HVAC FRESH AIR IN-TAKE.
- GAS PIPING BASED ON 2 PSI GAS PRESSURE. VERIFY ALL GAS LINES SIZES WITH GAS COMPANY.
- ALL GAS PIPING TO BE BLACK STEEL PIPING WITH PROTECTIVE PAINT.
- GAS FURNACES ARE TO BE PROVIDED WITH COMBUSTION AIR IN ACCORDANCE WITH MECHANICAL CODE.
- SEALED COMBUSTION GAS FURNACES AND/OR WATER HEATERS ARE TO BE EQUIPPED WITH A CONCENTRIC PVC VENT. VENT TO BE SIZED PER MANUFACTURERS SPECIFICATIONS.
- GAS REGULATORS FOR HVAC EQUIPMENT TO BE PROVIDED AND INSTALLED BY MECHANICAL CONTRACTOR.
- FINAL UTILITY CONNECTIONS (GAS, ELECTRIC, ETC.) TO EQUIPMENT SHALL BE MADE BY THE CONTRACTOR INSTALLING THE EQUIPMENT REQUIRING THE UTILITIES.
- DUCT DRAWINGS ARE DIAGRAMMATIC AND ARE INTENDED TO SHOW THE INTENT OF THE ENGINEER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ANY ADDITIONAL TRANSITIONS, OFFSETS, OR TURNS, IN THE DUCTWORK AND/OR PIPING, NOT SHOWN BUT REQUIRED FOR A COMPLETE AND OPERATING SYSTEM.
- ALL DUCTWORK SHALL BE INSTALLED TIGHT AGAINST THE STRUCTURE UNLESS OTHERWISE NOTED OR SHOWN.
- AIR DISTRIBUTION LOCATIONS SHOWN ON MECHANICAL PLANS ARE APPROXIMATE. SEE ARCHITECTURAL REFLECTED CEILING PLANS FOR ACTUAL LOCATIONS.
- REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONED LOCATIONS OF WALLS AND PARTITIONS AND FOR PARTITION THICKNESS AND CONSTRUCTION MATERIALS.
- PRESSURE REGULATORS FOR GAS KITCHEN EQUIPMENT TO BE PROVIDED BY AND INSTALLED BY CONTRACTOR INSTALLING THE GAS PIPING.
- ELECTRICAL POWER REQUIREMENTS ARE BASED ON MANUFACTURER'S PUBLISHED DATA. IF ACTUAL UNIT IS A DIFFERENT MANUFACTURER OR THE ACTUAL PURCHASED UNIT(S) OTHERWISE HAVE DIFFERENT ELECTRICAL LOAD (MCA) OR CIRCUIT BREAKER (MCB) REQUIREMENTS THAN WHAT IS PUBLISHED ON THE DRAWING SCHEDULE, THE MECHANICAL CONTRACTOR MUST SUBMIT THE CORRECT DATA IN WRITING TO THE GENERAL CONTRACTOR AND ELECTRICAL CONTRACTOR (IF KNOWN). IT IS THE MECHANICAL CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT THE GC AND ELECTRICAL CONTRACTOR ARE NOTIFIED OF CHANGES IN THE MECHANICAL EQUIPMENT, WHICH WILL CHANGE THE ELECTRICAL WIRING, BREAKER SIZES OR QUANTITY OF CIRCUITS.



**MECHANICAL SYSTEMS, SERVICE SYSTEMS AND EQUIPMENT METHOD OF COMPLIANCE**

PREScriptive	ENERGY COST BUDGET
THERMAL ZONE 4	
EXTERIOR DESIGN CONDITIONS	
WINTER DRY BULB	15 °F
SUMMER DRY BULB	90 °F
INTERIOR DESIGN CONDITIONS	
WINTER DRY BULB	68 °F
SUMMER DRY BULB	78 °F
RELATIVE HUMIDITY	50 %
BUILDING HEATING LOAD	1,453,538 BTU/HR
BUILDING COOLING LOAD	101.45 TONS
MECHANICAL SPACING CONDITIONING SYSTEM	
UNITARY	
DESCRIPTION OF UNIT	ROOF TOP GAS PACKS
HEATING EFFICIENCY	
COOLING EFFICIENCY	
HEATING OUTPUT OF UNIT	1,686,200 BTU/HR
COOLING OUTPUT OF UNIT	106 TONS
LIST EQUIPMENT EFFICIENCIES	
EQUIPMENT SCHEDULES WITH MOTORS (MECHANICAL SYSTEM)	
MOTOR HORSEPOWER	HP
NUMBER OF PHASES	Ø
MINIMUM EFFICIENCY	%
MOTOR TYPE	
# OF POLES	
DESIGNER STATEMENT:	
TO THE BEST OF MY KNOWLEDGE AND BELIEF, THE DESIGN OF THIS BUILDING COMPLIES WITH THE MECHANICAL SYSTEMS, SERVICE SYSTEMS AND EQUIPMENT REQUIREMENTS OF NORTH CAROLINA STATE BUILDING CODES.	

**SYMBOLS & ABBREVIATIONS LEGEND**

SYMBOL	DESCRIPTION
⊕	THERMOSTAT
⊗	CEILING SUPPLY DIFFUSER
⊘	CEILING RETURN GRILLE
FD	FIRE DAMPER
	SIDEWALL SUPPLY DIFFUSER
	SIDEWALL RETURN OR EXHAUST GRILLE
⊞	SUPPLY DUCT SECTION
⊞	RETURN DUCT SECTION
CFM	CUBIC FEET PER MINUTE
— · —	NATURAL GAS
	UNION
Ø	DIAMETER OR POWER PHASE
O.A.	OUTSIDE AIR
R.A.	RETURN AIR
S.A.	SUPPLY AIR
A.F.F.	ABOVE FINISHED FLOOR
⊕	EXHAUST FAN
⊕	DUCT MOUNTED SMOKE DETECTOR

**WALL LEGEND**

SYMBOL	DESCRIPTION
▨	1-HOUR RATED FIRE WALL
▩	3-HOUR RATED FIRE WALL

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

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NEW BUILDING FACILITY:  
**CENTRAL BAPTIST CHURCH**  
Oak Ridge, North Carolina

DRAWING NAME:  
FIRST FLOOR MECHANICAL PLAN

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 25043  
ALAMANCE CONSULTING ENGINEERS, P.A.  
DRAWN BY: MJW  
DATE: 8/26/09

SCALE: AS NOTED  
JOB NO: 9076  
SHEET

**M-1**