

GENERAL NOTES:

- PROVIDE A CONSTRUCTION RECORD SET OF "AS-BUILT" DOCUMENTS TO THE ARCHITECT REFLECTING ANY VARIANCES OF INSTALLED PIPING LOCATIONS OR EQUIPMENT CONTRARY TO THE CONSTRUCTION DOCUMENTS. REFER TO SPECIFICATIONS.
- DRAWINGS ARE DIAGRAMMATIC ONLY AND REPRESENT THE GENERAL SCOPE OF THE WORK. PRIOR TO SUBMITTING BID, VISIT THE JOB SITE TO OBSERVE THE EXISTING CONDITIONS OF THE PROJECT. REVIEW THE GENERAL NOTES, SPECIFICATIONS AND PLANS FOR ADDITIONAL REQUIREMENTS THAT MAY NOT BE SPECIFICALLY CALLED OUT IN THIS PORTION OF THE CONSTRUCTION DOCUMENTS. NOTIFY ARCHITECT OF ANY CONFLICTS OR DISCREPANCIES PRIOR TO SUBMISSION OF BID.
- PROVIDE TO THE ARCHITECT A COPY OF INSPECTION REPORTS AND APPROVAL CERTIFICATES FROM LOCAL AND STATE INSPECTIONS. REFER TO SPECIFICATIONS.
- INSTALLATION SHALL COMPLY WITH LEGALLY CONSTITUTED CODES AND THE REQUIREMENTS OF AUTHORITIES HAVING JURISDICTION AND ALSO MEET ALL REQUIREMENTS OF THE LANDLORD. OBTAIN A COPY OF THE LANDLORD'S REQUIREMENTS AND REVIEW PRIOR TO SUBMITTING BID.
- PLANS AND SPECIFICATIONS GOVERN WHERE THEY EXCEED CODE REQUIREMENTS.
- VERIFY LOCATION AND DEPTH OF UTILITIES AT POINTS OF CONNECTION BEFORE START OF PIPING INSTALLATION.
- REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATION AND MOUNTING HEIGHTS OF PLUMBING FIXTURES.
- DO NOT SCALE FLOOR PLANS FOR EXACT HORIZONTAL LOCATION OF PIPE ROUTING.
- INSTALL CONCEALED PIPING TIGHT TO THE STRUCTURE AND AS HIGH AS POSSIBLE.
- VALVES SHALL BE LINE SIZE UNLESS OTHERWISE NOTED.
- INSTALL EXPOSED PIPING, WHERE NECESSARY, IN FINISHED AREAS TIGHT TO THE STRUCTURE, WALL OR CEILING AND AS HIGH AS POSSIBLE. INSTALL PIPING PARALLEL AND / OR PERPENDICULAR TO WALLS.
- INSTALL VALVES AND APPURTENANCES A MAXIMUM OF 24" ABOVE CEILING IN ACCESSIBLE LOCATION WITHIN 24" OF ACCESS DOORS OR ACCESSIBLE CEILING TILES. PROVIDE PIPE AND FITTINGS TO INSTALL VALVES AND APPURTENANCES AT REQUIRED HEIGHT AND WITHIN 24" OF ACCESS DOORS OR ACCESSIBLE CEILING TILES.
- INSTALL NO PLASTIC PIPE OF ANY KIND ABOVE SLAB INSIDE OR UNDER THE BUILDING. INSTALL NO PLASTIC PIPE IN THE CEILING RETURN AIR PLENUM.
- COORDINATE ALL WORK WITH OTHER TRADES AND CONTRACTORS.
- COORDINATE PIPING INSTALLATION WITH STRUCTURAL GRADE BEAMS, FOOTINGS, COLUMN PIERS, ETC. SLEEVE PIPING THROUGH GRADE BEAMS, FOOTING, ETC. WHERE REQUIRED AND AS NOTED ON PLANS. COORDINATE SLEEVE INSTALLATIONS WITH THE ARCHITECT, STRUCTURAL ENGINEER, STRUCTURAL CONTRACTOR AND GENERAL CONTRACTOR BEFORE CONCRETE IS INSTALLED.
- CLEAN FAUCET AERATORS AND PIPE STRAINERS PRIOR TO TURNING BUILDING OVER TO THE OWNER.
- PROVIDE TRAP PRIMERS WHERE REQUIRED BY LOCAL AUTHORITIES.
- COORDINATE PIPE ROUTING AWAY FROM ELECTRICAL PANELS. DO NOT INSTALL PIPING OVER ELECTRICAL PANELS.
- PAINT ALL EXPOSED GAS AND WATER PIPING USING RUST INHIBITOR PAINT. PAINT AND COLOR SHALL BE COORDINATED WITH THE ARCHITECT AND / OR OWNER.
- COORDINATE ALL ROOF PENETRATIONS WITH OTHER TRADES. MAINTAIN 10" MINIMUM CLEARANCE FROM ALL AIR INTAKES. MAINTAIN 2" CLEARANCE FROM ALL OTHER EQUIPMENT.
- INSULATE PIPING ROUTED IN EXTERIOR BUILDING WALLS WITH MINIMUM 2" BATT INSULATION TO PREVENT FREEZING.
- PROVIDE TRANSITION ADAPTER COUPLINGS FOR CONNECTION OF PVC DWV TO CAST IRON SANITARY, WASTE AND VENT PIPE AT SLAB ON GRADE. SEE DIVISION 22 SPECIFICATION SECTION "SANITARY DRAINAGE AND VENT PIPING AND SPECIALTIES" FOR MORE INFORMATION.
- FLOW CONTROL VALVES SHALL BE SIZE 1/2" AND SET AT 0.5 GPM UNLESS NOTED OTHERWISE.
- WATER HAMMER ARRESTORS SHALL BE SIZE "A" UNLESS NOTED OTHERWISE.
- PROVIDE VERTICAL LIFT SPRING LOADED CHECK VALVES IN HOT AND COLD WATER SUPPLIES FOR MOP SINK FAUCETS DOWNSTREAM OF SHUTOFF VALVES.
- VERIFY EXISTING EQUIPMENT, INCLUDING ACCESSORIES, IS NOT DAMAGED AND IS IN GOOD WORKING ORDER. REPORT ANY DEFICIENCIES TO THE ARCHITECT.
- PROVIDE SIZE AND LENGTH OF HOT WATER FIXTURE SUPPLY PIPE FROM CIRCULATED HOT WATER BRANCH OR MAIN TO TERMINATION OF HOT WATER FIXTURE SUPPLY PIPE AT EACH FIXTURE PER 2021 INTERNATIONAL ENERGY CONSERVATION CODE, TABLE C404.5.1. FOR 1/2" HOT WATER FIXTURE SUPPLY PIPE SIZE TO INDIVIDUAL LAVATORIES, PROVIDE MAXIMUM LENGTH OF TWO FEET. FOR 3/4" HOT WATER FIXTURE SUPPLY PIPE SIZE TO INDIVIDUAL SINKS, PROVIDE MAXIMUM LENGTH OF 4.5 FEET. FOR 3/4" HOT WATER FIXTURE SUPPLY PIPE SIZE TO INDIVIDUAL SINKS, PROVIDE MAXIMUM LENGTH OF 21 FEET.

KITCHEN GENERAL NOTES:

- REFERENCE KITCHEN EQUIPMENT DRAWINGS FOR ITEMS TO BE FURNISHED AND / OR INSTALLED AND PROVIDE ITEMS AND WORK AS REQUIRED TO COMPLETE THE INSTALLATION OF PLUMBING SYSTEMS FOR KITCHEN EQUIPMENT. REFERENCE THE KITCHEN EQUIPMENT DRAWINGS FOR REQUIRED ROUGH-IN AND FINAL CONNECTIONS FOR KITCHEN EQUIPMENT. REFERENCE THE KITCHEN EQUIPMENT SHOP DRAWINGS PRIOR TO THE START OF INSTALLATION FOR ADDITIONAL REQUIREMENTS.
- PROVIDE ITEMS AND WORK AS REQUIRED FOR A COMPLETE AND WORKING PLUMBING INSTALLATION FOR EACH PIECE OF KITCHEN EQUIPMENT. PROVIDE ROUGH-INS AND CONNECT TO THE KITCHEN EQUIPMENT WITH TRAPS, SUPPLIES, SHUTOFF VALVES, PIPES TO THE WALL, ESCUTCHEONS, ETC AS SHOWN, SPECIFIED AND REQUIRED.
- WHERE "FLEX" TUBING IS CALLED FOR, PROVIDE A FOUR FOOT COILED LENGTH OF TYPE "K" SOFT COPPER TUBING FROM WATER SHUT-OFF VALVE TO THE EQUIPMENT CONNECTION OF SAME SIZE AS CONNECTION TO KITCHEN EQUIPMENT WITH 1/4" BEING MINIMUM SIZE. PROVIDE CONNECTORS AND ADAPTERS AS REQUIRED.
- VERIFY GAS LOADS AND GAS ROUGH-IN OF KITCHEN EQUIPMENT WITH THE KITCHEN EQUIPMENT SHOP DRAWINGS PRIOR TO INSTALLING GAS PIPING. PROVIDE GAS COCKS, UNIONS, ETC. AS SPECIFIED AND REQUIRED. INSTALL GAS QUICK DISCONNECTS WHERE FURNISHED WITH THE KITCHEN EQUIPMENT.
- PROVIDE INDIRECT WASTE LINES OF SAME SIZE AS CONNECTION TO EQUIPMENT WITH 3/4" BEING MINIMUM SIZE. ROUTE FROM EQUIPMENT CONNECTION POINTS INDICATED TO FLOOR DRAIN OR FLOOR SINK. PROVIDE AIR GAP OF TWO PIPE DIAMETERS MINIMUM PER CODE.
- COMPLY WITH HEALTH DEPARTMENT REGULATIONS. PROVIDE CLEARANCE FOR CLEANING BEHIND AND UNDER EXPOSED PIPING AS REQUIRED BY HEALTH DEPARTMENT. CONFORM TO HEALTH DEPARTMENT REQUIREMENTS FOR LOCATIONS OF FLOOR SINKS.
- PROVIDE AIRTIGHT SEAL AROUND PIPING PENETRATIONS THROUGH WALK-IN COOLER OR FREEZER WALLS OR CEILINGS.
- DO NOT INSTALL PIPING IN COOLER OR FREEZER WALLS. INSTALL EXPOSED PIPING IN A NEAT MANNER.
- COORDINATE FLOOR DRAIN LOCATION AND FLOOR SLOPE; REQUIREMENTS WITH THE ARCHITECT.
- INSTALL RIM OF FLOOR DRAINS AND FLOOR SINKS BELOW FINISHED FLOOR LEVEL. SLOPE FLOOR TO DRAINS, REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATION.
- COORDINATE LOCATION OF VENT, WATER, AND GAS PIPING TO AVOID CONFLICT WITH OTHER TRADES.
- CLEAN INSTALLED PLUMBING FIXTURES AND EQUIPMENT.
- PROVIDE WALL BACKING OR SPECIFIED CARRIERS FOR THE PROPER SUPPORT OF INSTALLED WALL HUNG FIXTURES AND EQUIPMENT.
- PROVIDE VERTICAL LIFT SPRING LOADED CHECK VALVES IN HOT AND COLD WATER SUPPLIES FOR 3-COMPARTMENT SINKS, PRE-RINSE UNITS, AND JANITOR SINKS DOWNSTREAM OF SHUTOFF VALVES.
- SEAL AROUND INSTALLED FIXTURES AND KITCHEN EQUIPMENT WITH CAULK.
- PROVIDE APPROPRIATE BACKFLOW PREVENTION DEVICES FOR KITCHEN EQUIPMENT REQUIRING THEM PER LOCAL AUTHORITIES REQUIREMENTS. INSTALL BACKFLOW PREVENTION DEVICES FURNISHED WITH KITCHEN EQUIPMENT.

PLUMBING SYMBOLS

THIS IS A MASTER LEGEND AND NOT ALL SYMBOLS OR ABBREVIATIONS ARE USED. V2.02

STANDARD MOUNTING HEIGHTS	PIPING SYMBOLS	PIPING LINETYPES
HOSE BIBB (CENTERLINE) 36"		—CW— DOMESTIC COLD WATER (CW)
JANITOR'S SINK FAUCET FITTINGS (CENTERLINE) 42"		—SCW— SOFTENED COLD WATER (SCW)
LAVATORY OR SINK STANDARD HEIGHT (RIM) ADA ACCESSIBLE (RIM) 31" 34"		—HW— DOMESTIC HOT WATER (HW)
NON FREEZE WALL HYDRANT (AFG TO CENTERLINE) 18"		—HWR— DOMESTIC HOT WATER RECIRC. (HWR)
URNAL STANDARD HEIGHT (RIM) ADA ACCESSIBLE (RIM) 24" 17"		—T— TRAP PRIMER LINE (T)
WATER CLOSET STANDARD HEIGHT (RIM) ADA ACCESSIBLE (TOP OF SEAT) 17" TO 19"		—S— SOIL PIPING - ABOVE FLOOR (S)
		—SD— SOIL PIPING - BELOW FLOOR (S)
		—W— WASTE PIPING - ABOVE FLOOR (W)
		—W— WASTE PIPING - BELOW FLOOR (W)
		—GW— GREASE WASTE - ABOVE FLOOR (GW)
		—GW— GREASE WASTE - BELOW FLOOR (GW)
		—CGWV— COMBINATION GREASE WASTE AND VENT (CGWV)
		—CWV— COMBINATION WASTE AND VENT (CWV)
		—ST— STORM DRAIN - ABOVE FLOOR (ST)
		—ST— STORM DRAIN - BELOW FLOOR (ST)
		—OST— OVERFLOW STORM DRAIN - ABOVE FLOOR (OST)
		—VBG— VENT BELOW GRADE (VBG)
		—VBF— VENT BELOW FLOOR (VBF)
		—ID— INDIRECT DRAIN (ID)
		—CD— CONDENSATE DRAIN (CD)
		—G— NATURAL GAS (G)
		—G— NATURAL GAS ON ROOF (G)
		—MPG— MEDIUM PRESSURE NATURAL GAS (MPG)
		—MPG— MEDIUM PRESSURE NATURAL GAS ON ROOF (MPG)
		—NPW— NON-POTABLE WATER (NPW)
		—NPHW— NON-POTABLE HOT WATER (NPHW)
		—WS— WATER SERVICE (WS)
		—PD— CONDENSATE PUMP DISCHARGE (PD)
		—V— VENT PIPING (V)
		—FW1— FILTERED WATER (FW1)
		—FW2— FILTERED WATER W/ SCALE INHIBITOR (FW2)

ANNOTATION

- PLUMBING PLAN NOTE CALLOUT
- PLUMBING EQUIPMENT DESIGNATION. (CONTRACTOR FURNISHED AND INSTALLED). REFER TO PLUMBING FIXTURE OR EQUIPMENT SCHEDULES
- EQUIPMENT DESIGNATION (OWNER FURNISHED, CONTRACTOR INSTALLED)
- MECHANICAL EQUIPMENT DESIGNATION (CONTRACTOR FURNISHED AND INSTALLED UNLESS NOTED OTHERWISE)
- CONNECTION POINT OF NEW WORK TO EXISTING
- DETAIL REFERENCE UPPER NUMBER INDICATES DETAIL NUMBER LOWER NUMBER INDICATES SHEET NUMBER
- SECTION CUT DESIGNATION
- DEDICATED EQUIPMENT ACCESS TILE
- ACCESS PANEL

ABBREVIATIONS

ADA AMERICANS WITH DISABILITIES ACT	MIN MINIMUM	N/C NORMALLY CLOSED
AFF ABOVE FINISHED FLOOR	N/O NORMALLY OPEN	NIC NOT IN CONTRACT
AFG ABOVE FINISHED GRADE	ORD OVERFLOW ROOF DRAIN	PHØ PHASE
AHU AIR HANDLING UNIT	PD PLUMBING DRAINAGE INSTITUTE	PHV PRESSURE REDUCING VALVE
AP ACCESS PANEL	PVC POLYVINYL CHLORIDE	PVC POLYVINYL CHLORIDE
BAS BUILDING AUTOMATION SYSTEM	RCF REINFORCED CONCRETE	RD ROOF DRAIN
BFF BELOW FINISHED FLOOR	RPM REVOLUTIONS PER MINUTE	RTU ROOFTOP UNIT
BFG BELOW FINISHED GRADE	RTU ROOFTOP UNIT	SF SQUARE FEET
BOP BOTTOM OF PIPE	SP SUMP	SS STAINLESS STEEL
BOS BOTTOM OF STRUCTURE	SS STAINLESS STEEL	TDH TOTAL DYNAMIC HEAD
BTU BRITISH THERMAL UNIT	STF SANITARY SEWER, SOIL STACK	TFB TO FLOOR ABOVE
CP CONDENSATE PUMP	TYP TYPICAL	UL UNDERWRITERS LABORATORIES, INC.
CPVC CHLORINATED POLYVINYL CHLORIDE	UL UNDERWRITERS LABORATORIES, INC.	UNO UNLESS NOTED OTHERWISE
CU COPPER	UPS UNINTERRUPTIBLE POWER SUPPLY	VBG VENT BELOW GRADE
DI DUCTILE IRON	VFD VARIABLE FREQUENCY DRIVE	VDF VENT STACK
DN DOWN	VS VENT STACK	VTR VENT THROUGH ROOF WITH
DFU DRAINAGE FIXTURE UNIT	W/ WITH	WO WITHOUT
DS DOWNSPOUT	WC WATER COLUMN	WC WATER COLUMN
(E) EXISTING	WSFU WATER SUPPLY FIXTURE UNIT	WWS WASTE VENT STACK
EMS ENERGY MANAGEMENT SYSTEM		
ETR EXISTING TO REMAIN		
EWC ELECTRIC WATER COOLER		
FD FLOOR DRAIN		
FFA FROM FLOOR ABOVE		
FFB FROM FLOOR BELOW		
FF FINISHED FLOOR		
FL FLOW LINE		
FLA FULL LOAD AMPS		
FLR FLOOR		
GPM GALLONS PER MINUTE		
HD HEAD, HUB DRAIN		
HZ HERTZ		
IE INVERT ELEVATION		
IN WC INCHES OF WATER COLUMN		
JB JUNCTION BOX		
J-BOX JUNCTION BOX		
KW KILOWATT		
MAU MAKE-UP AIR UNIT		
MAX MAXIMUM		
MBH 1000 BTU PER HOUR		
MH MANHOLE		

LINETYPE LEGEND

THROUGHOUT THE DRAWINGS DIFFERENT LINETYPES ARE USED IN COMBINATION WITH THE SYMBOLS TO INDICATE THE STATUS OF ITEMS AS EXISTING, TO BE DEMOLISHED, TO BE INCLUDED AS PART OF NEW WORK AND/OR ITEMS WHICH ARE ANTICIPATED TO BE PROVIDED IN THE FUTURE. THE STATUS OF ITEMS USING THESE LINETYPES ARE RELATIVE TO THE VIEW IN WHICH THEY APPEAR. PHASING SHOWN IN DRAWINGS IS NOT INTENDED TO FULLY DESCRIBE ALL NECESSARY CONSTRUCTION PHASING, WHICH IS DETERMINED BY THE CONTRACTOR AS PART OF THEIR RESPONSIBILITIES. ANY SUCH PHASING DESCRIBED IN THE CONSTRUCTION DOCUMENTS ARE GENERAL AND ONLY INTENDED TO INDICATE A BROAD ORDER FOR THE SAKE OF DESCRIBING THE PROJECT. THE FOLLOWING LINETYPES MAY BE USED ON ANY DEVICE, EQUIPMENT, NOTE, LINE, SHAPE, ETC.

EXISTING	NEW
----------	-----

CALL OUTS

ENLARGED PLAN CALLOUT

NOT IN SCOPE

LABELING AT ALL PIPES WILL BE NO LESS THAN 1.0" PER LANDLORD REQUIREMENTS.
PROVIDE TEST REPORT OF BACKFLOW PREVENTERS AND REGISTER ON THE COA WIERS SYSTEM.

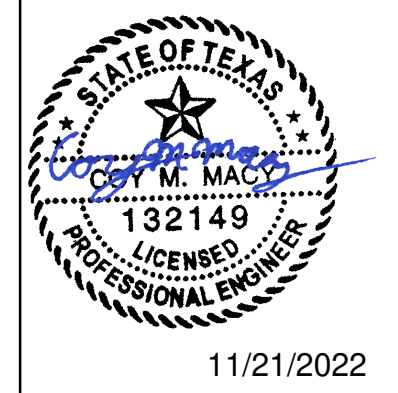
Sheet List - Plumbing

Sheet Number	Sheet Name
P-0.0	PLUMBING GENERAL NOTES AND LEGEND
P-1.0A	PLUMBING WASTE AND VENT PLAN - SEGMENT A
P-1.0B	PLUMBING WASTE AND VENT PLAN - SEGMENT B
P-1.1A	PLUMBING WATER AND GAS PLAN - SEGMENT A
P-1.1B	PLUMBING WATER AND GAS PLAN - SEGMENT B
P-1.2A	PLUMBING ROOF PLAN - SEGMENT A
P-1.2B	PLUMBING ROOF PLAN - SEGMENT B
P-2.0	PLUMBING SCHEDULES
P-3.0	PLUMBING DETAILS
P-3.1	PLUMBING WASTE & VENT RISER DIAGRAM
P-3.2	PLUMBING WATER AND GAS RISER DIAGRAMS
P-4.0	PLUMBING SPECIFICATIONS
P-4.1	PLUMBING SPECIFICATIONS

Grand total: 13

FIELD VERIFICATION
Contractor shall verify all figure dimensions and conditions at the job site and notify Avo Group Architects, Inc. of any dimensional errors, omissions or discrepancies before beginning or fabricating any work. Do not scale these drawings.
COPYRIGHT
Avo Group Architects, Inc. shall retain all common law, statutory and other reserved rights. These drawings and related documents shall not be duplicated, disclosed or otherwise used without consent of Avo Group Architects, Inc.

NO.	DATE	REMARKS
2	11/17/22	ISSUED FOR CONSTRUCTION
1	08/18/22	PERMIT RESPONSE
	06/23/22	ISSUED FOR PERMIT/BID
	06/15/22	ISSUED FOR AEGB REVIEW
	06/08/22	ISSUED FOR TAS REVIEW
	05/23/22	ISSUED FOR LANDLORD REVIEW
NO.	DATE	REMARKS
		REVISIONS



11/21/2022

Drawing Title
PLUMBING GENERAL NOTES AND LEGEND

Job No. 214735 Drawn NK

Scale 12" = 1'-0" Date Issue Date

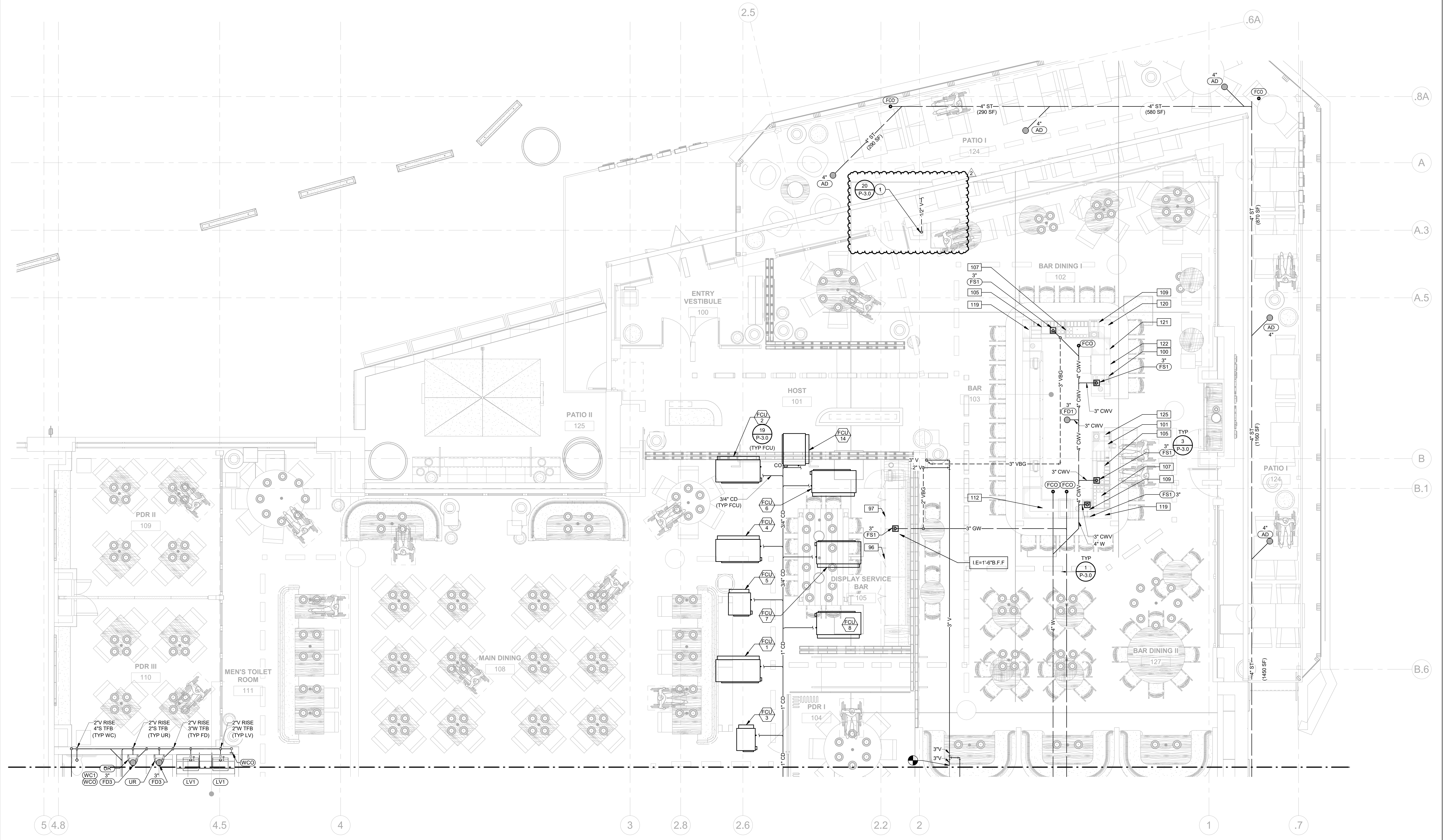
Sheet No.
P-0.0

PLUMBING PLAN NOTES:
1 1/2" COPPER VENT CONNECTED TO THE VENT PORT ON THE PIPE. TERMINATE AT THE PATIO ROOF WITH MESH INSECT SCREEN

RESTAURANT SPACE OCCUPIES 2 TENANT SPACES. CONNECT TO UTILITIES AS INDICATED ON PLANS. ADDITIONAL UTILITY CONNECTIONS NOT SHOWN ARE EXISTING TO REMAIN.

CONTRACTOR SHALL PROVIDE DRIP PANNS UNDERNEATH ALL WASTE PIPING ABOVE FOOD PREP AREAS.

MAINTAIN ACCESS TO ALL EXISTING SANITARY AND STORM WATER CLEANOUTS.



1 PLUMBING WASTE AND VENT PLAN - SEGMENT A
1/4" = 1'-0"

FUTURE RESTAURANT
2701 Perseverance Drive
Austin, TX 78731

FIELD VERIFICATION
Contractor shall verify all figured dimensions and conditions at the job site and notify Area Group Architects, Inc. of any dimensional errors, omissions or discrepancies before beginning or fabricating any work. Do not scale these drawings.
COPYRIGHT
Area Group Architects, Inc. shall retain all common law, statutory and other reserved rights. These drawings and related documents shall not be duplicated, disclosed or otherwise used without consent of Area Group Architects, Inc.

NO.	DATE	REVISIONS
2	11/17/22	ISSUED FOR CONSTRUCTION
1	08/18/22	PERMIT RESPONSE
	06/23/22	ISSUED FOR PERMIT/BID
	06/15/22	ISSUED FOR AEGG REVIEW
	06/08/22	ISSUED FOR TAS REVIEW
	05/23/22	ISSUED FOR LAND/CDD REVIEW



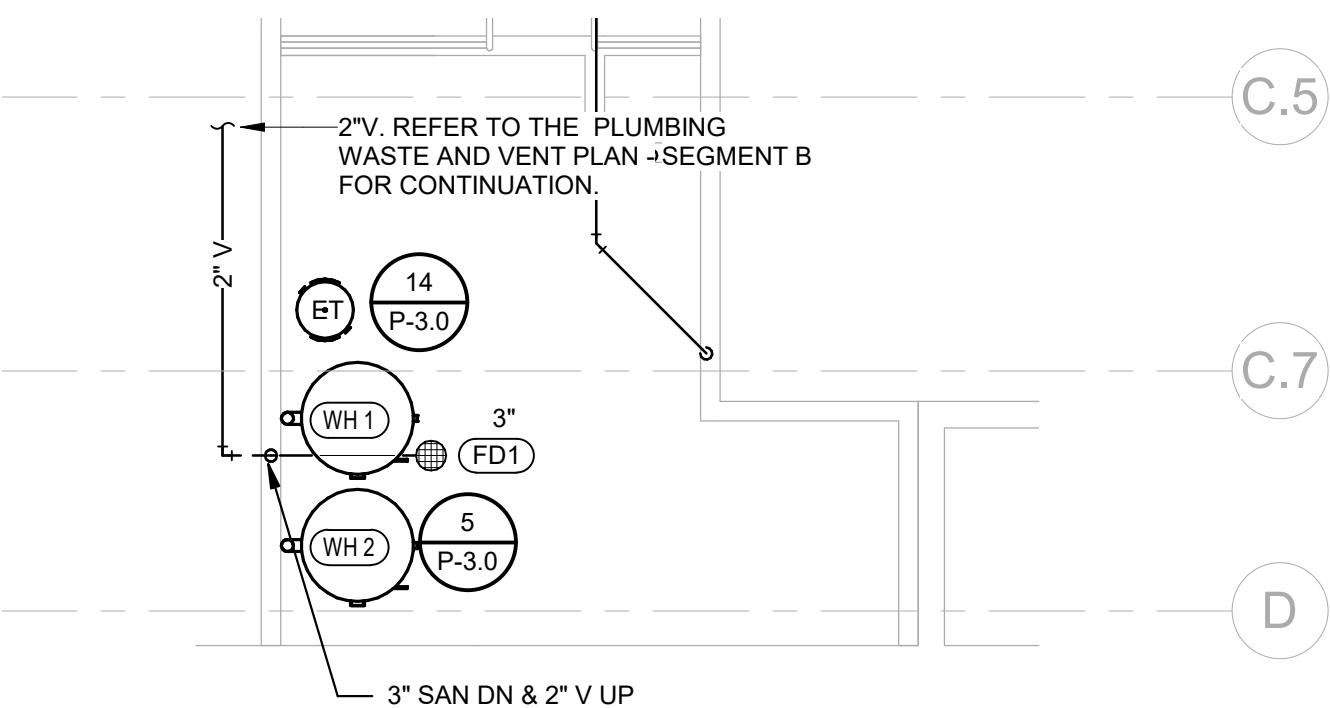
Drawing Title
PLUMBING WASTE AND VENT PLAN - SEGMENT A

Job No. 214735
Drawn NK

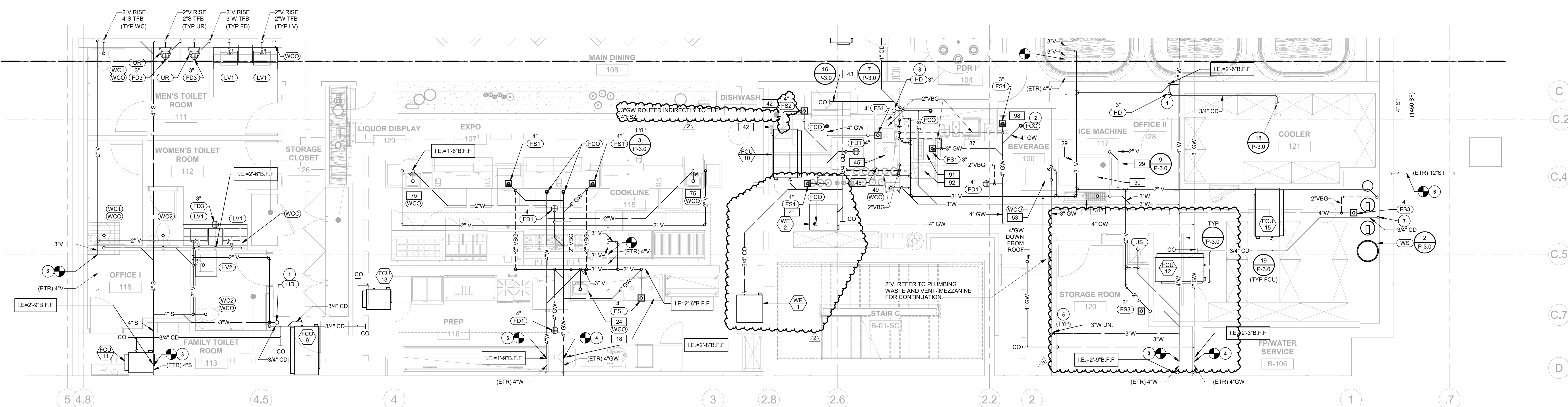
Scale 1/4" = 1'-0"
Date Issue Date

Sheet No.
P-1.0A

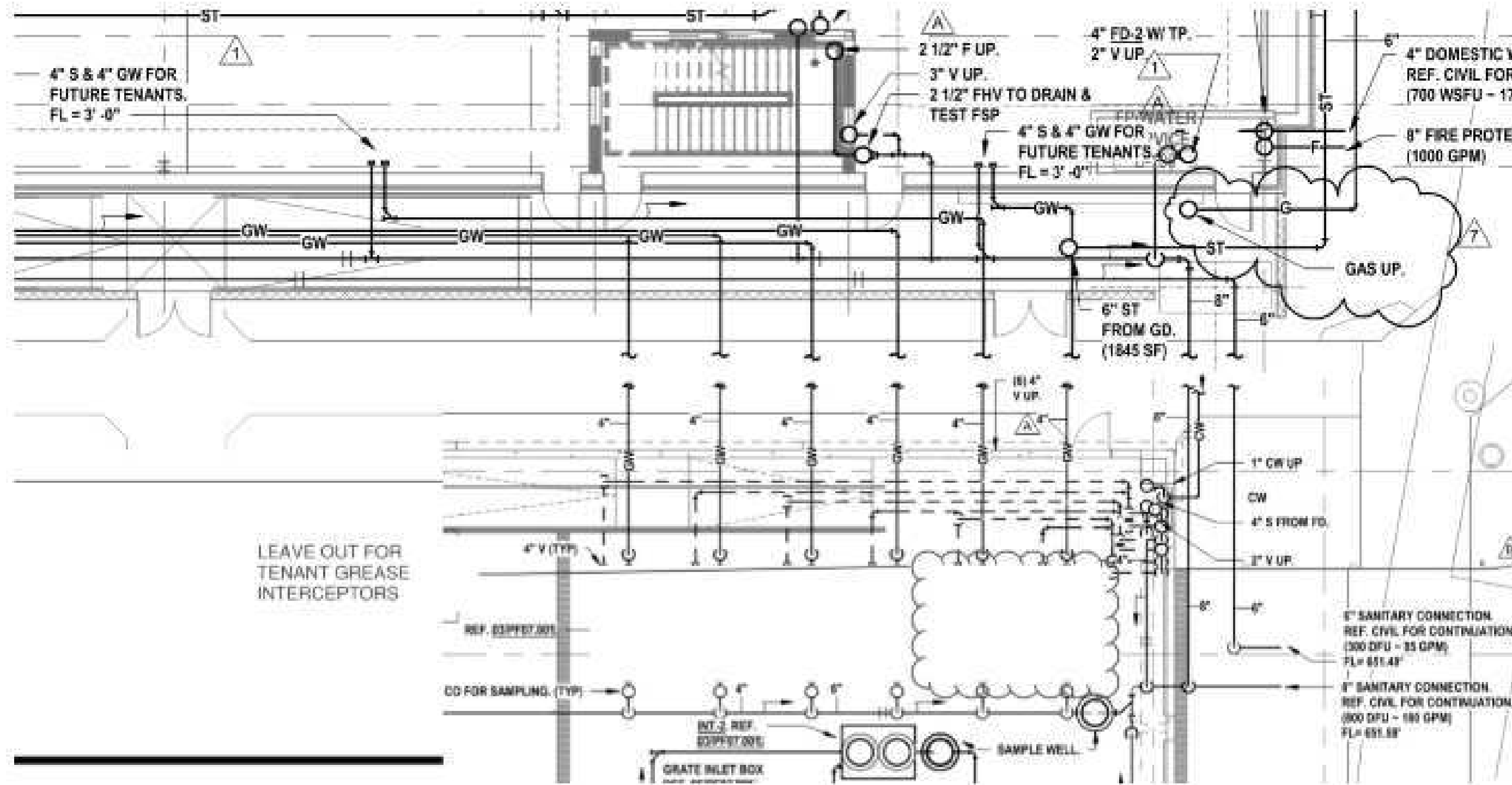
Cory M. Mack 11/21/2022 2:28:09 PM BIM 360/0214735-PERRY'S - VERDAD/215004838 Verdad Austin, TX MEP_V21_CoryMack.rvt



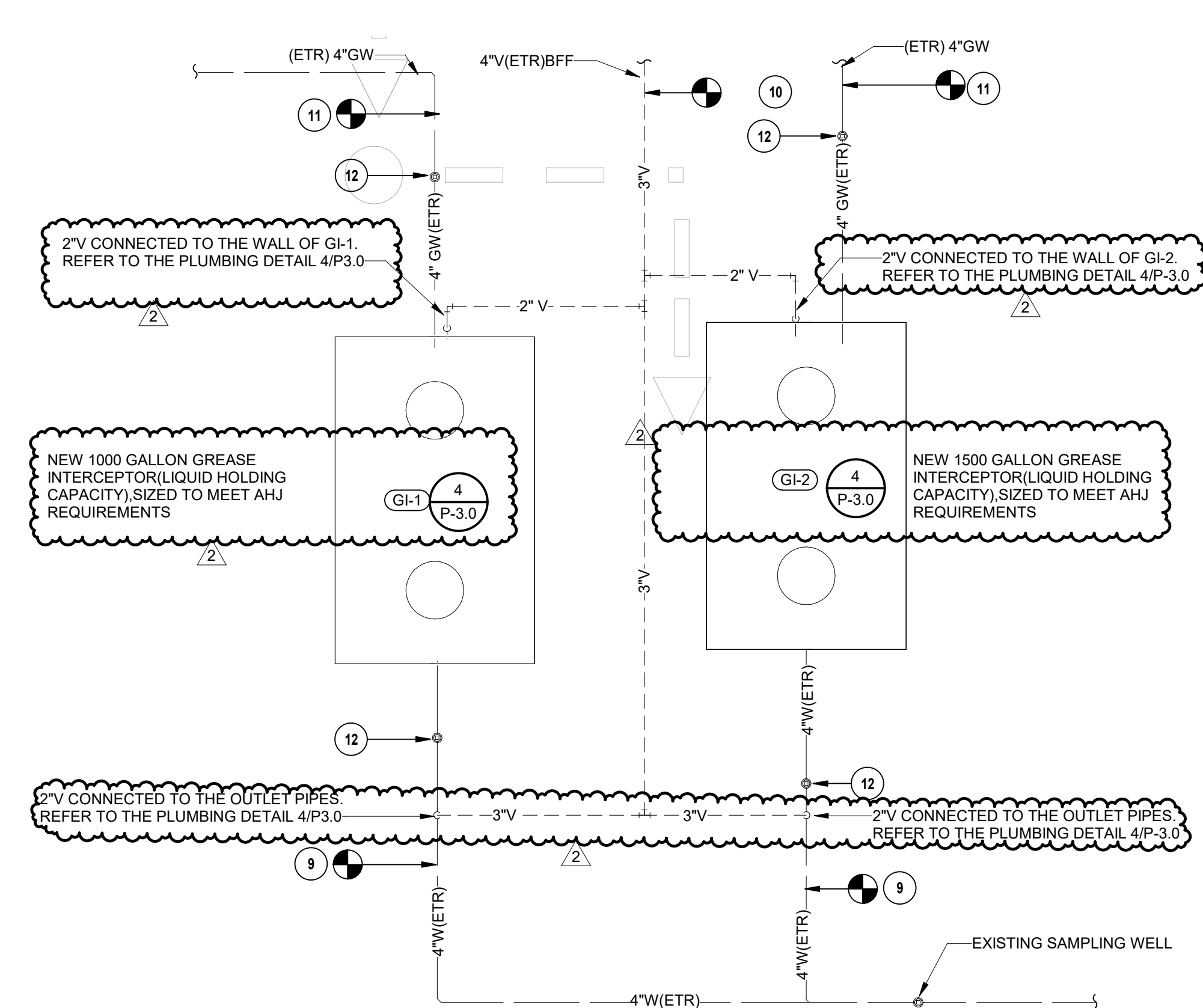
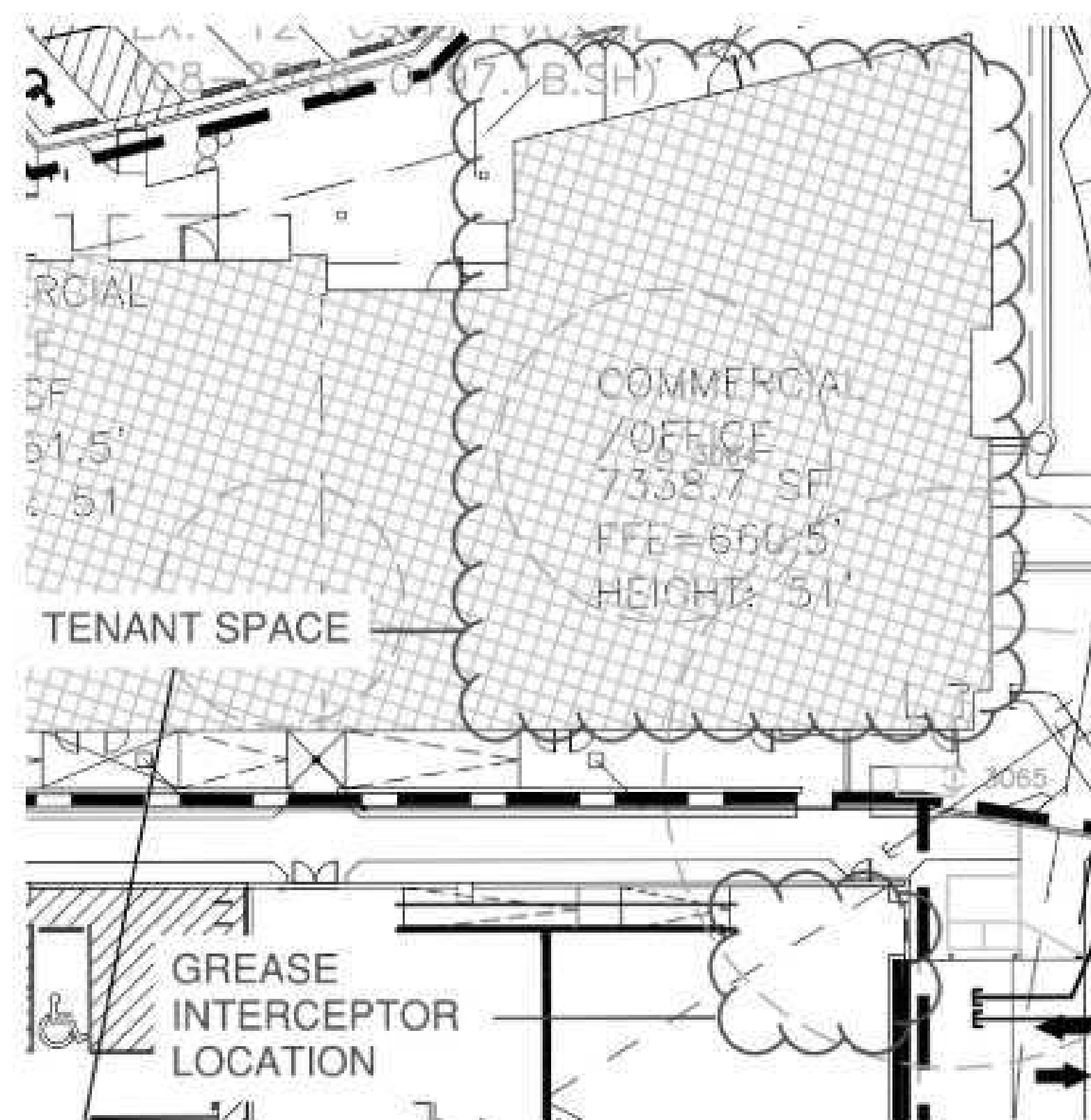
2 PLUMBING WASTE AND VENT PLAN - MEZZANINE
1/4" = 1'-0"



1 PLUMBING WASTE AND VENT PLAN - SEGMENT B
1/4" = 1'-0"



3 EXISTING LANDLORD PIPING FOR TENANT GREASE INTERCEPTOR LOCATION
NTS



4 PLUMBING WASTE AND VENT PLAN - GREASE INTERCEPTOR
1/4" = 1'-0"

RESTAURANT SPACE OCCUPIES 2 TENANT SPACES. CONNECT TO UTILITIES AS INDICATED ON PLANS. ADDITIONAL UTILITY CONNECTIONS NOT SHOWN ARE EXISTING TO REMAIN.

MAINTAIN ACCESS TO ALL EXISTING SANITARY AND STORM WATER CLEANOUTS.

- PLUMBING PLAN NOTES:**
- 1 ROUTE CONDENSATE TO WASTE RECEPTOR AND INDIRECT WASTE WITH AIR GAP.
 - 2 CONNECT NEW 3" V TO LANDLORD PROVIDED 4" VENT STUB. VERIFY EXACT LOCATION IN FIELD.
 - 3 CONNECT NEW 4" S TO LANDLORD PROVIDED 4" SANITARY STUB. VERIFY EXACT LOCATION IN FIELD.
 - 4 CONNECT NEW 4" GW TO LANDLORD PROVIDED 4" GREASE WASTE STUB. VERIFY EXACT LOCATION IN FIELD.
 - 5 COORDINATE PIPE ROUTING AWAY FROM ELECTRICAL PANELS. MAINTAIN CLEARANCES PER NEC.
 - 6 CONNECT NEW 4" ST TO EXISTING 12" STORM MAIN. REFER TO CIVIL FOR CONTINUATION.
 - 7 ROUTE CD DOWN WALL AND DISCHARGE TO FLOOR SINK WITH AIR GAP.
 - 8 ROUTE DRAIN LINE FROM POI CONTROL PANEL DOWN TIGHT TO WALL AND DISCHARGE OVER HUB DRAIN WITH AIR GAP.
 - 9 CONNECT 4" S TO LANDLORD PROVIDED STUB. MINIMUM SANITARY INVERT REQUIRED IS 551.29'.
 - 10 CONNECT TO EXISTING 4" VENT STUB PROVIDED BY LANDLORD. FIELD VERIFY SIZE AND LOCATION.
 - 11 CONNECT 4" GW TO LANDLORD PROVIDED STUB. MINIMUM GREASE WASTE INVERT REQUIRED IS 632.80'.
 - 12 SAMPLING PORT INSTALLED PER CITY OF AUSTIN REQUIREMENTS.

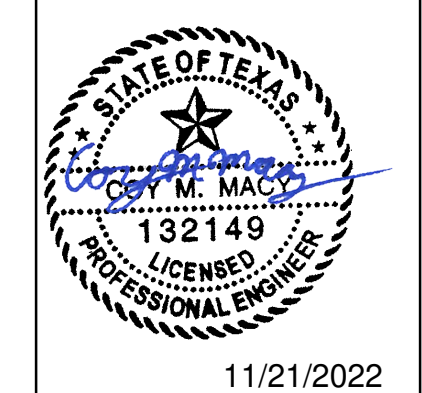
HENDERSON ENGINEERS
8345 LENEXA DRIVE, SUITE 300
LENEXA, KS 66214
TEL 913.742.5000 FAX 913.742.5011
WWW.HENDERSONENGINEERS.COM
215004838
TX. CORPORATE NO. F-001236
EXPIRES 9/30/2023

FUTURE RESTAURANT
2701 Perseverance Drive
Austin, TX 78731

FIELD VERIFICATION
Contractor shall verify all field dimensions and conditions at the job site and notify Area Group Architects, Inc. of any dimensional errors, omissions or discrepancies before beginning or fabricating any work. Do not scale these drawings.

COPYRIGHT
Area Group Architects, Inc. shall retain all common law, statutory and other reserved rights. These drawings and related documents shall not be duplicated, disclosed or otherwise used without the consent of Area Group Architects, Inc.

NO.	DATE	REMARKS
2	11/17/22	ISSUED FOR CONSTRUCTION
1	08/18/22	PERMIT RESPONSE
	06/23/22	ISSUED FOR PERMIT/BID
	06/15/22	ISSUED FOR AEBG REVIEW
	06/08/22	ISSUED FOR TAS REVIEW
	05/23/22	ISSUED FOR LANDLORD REVIEW
NO. DATE REMARKS REVISIONS		



Drawing Title
PLUMBING WASTE AND VENT PLAN - SEGMENT B

Job No. 214735 Drawn NK

Scale As Indicated Date Issue Date

Sheet No.
P-1.0B

RESTAURANT SPACE OCCUPIES 2 TENANT SPACES. CONNECT TO UTILITIES AS INDICATED ON PLANS. ADDITIONAL UTILITY CONNECTIONS NOT SHOWN ARE EXISTING TO REMAIN.

PLUMBING CONTRACTOR SHALL PROVIDE BEVERAGE CONDUIT. REFER TO KITCHEN FOOD SERVICE DRAWINGS FOR BEVERAGE CONDUIT SIZE, ROUTING, AND DETAILS. REFER TO PLUMBING SPECIFICATION FOR BEVERAGE CONDUIT MATERIALS.

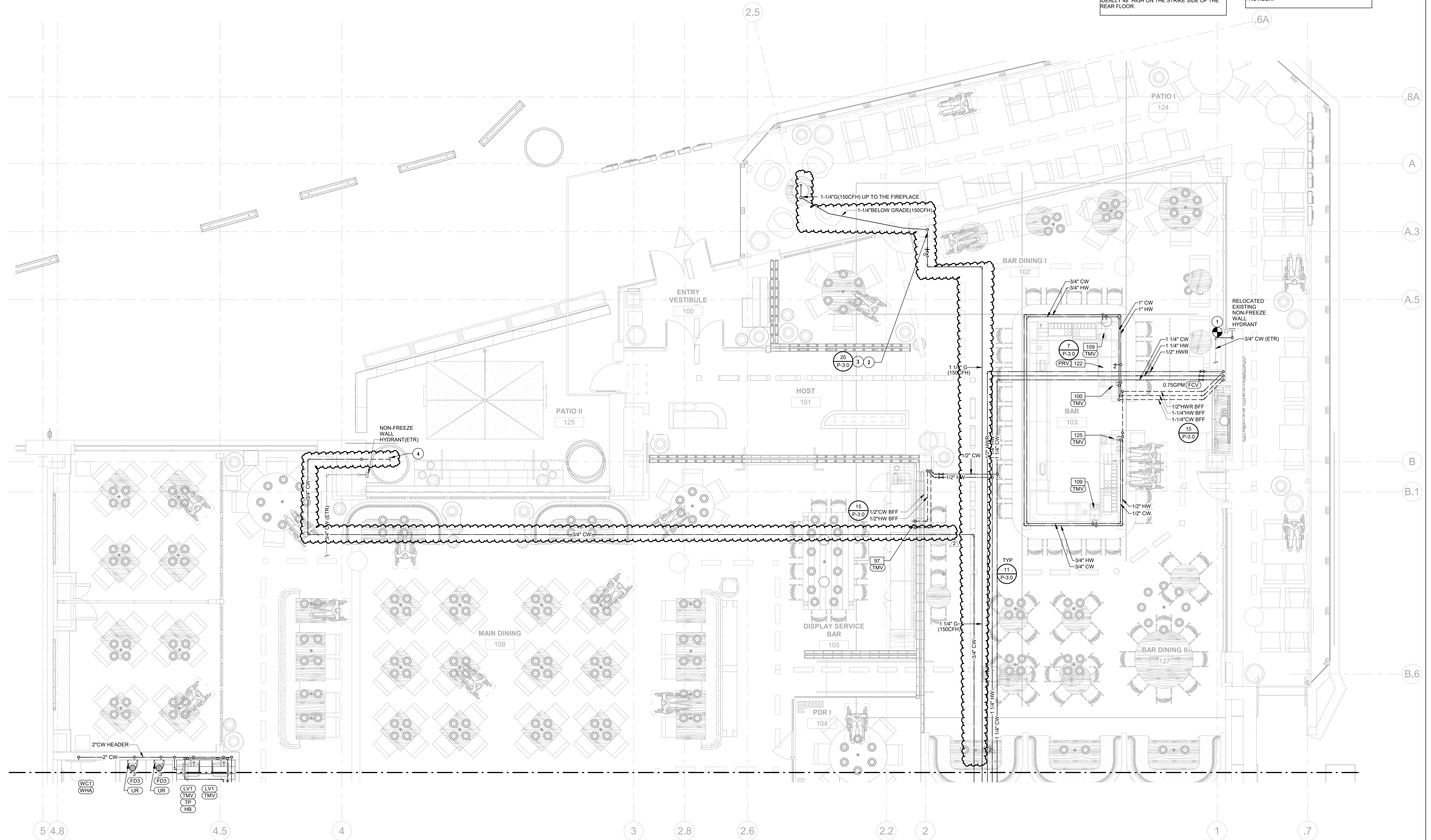
UNLESS NOTED OTHERWISE, THERE SHALL BE NO PIPING, DUCTWORK, CONDUITS, ETC. ROUTED EXPOSED ON THE EXTERIOR OF THE BUILDING. WHERE EXTERIOR ROUTING IS SPECIFICALLY REQUIRED BY THE AHJ OR LANDLORD, CONTACT ENGINEER FOR EXACT ROUTING LOCATIONS PRIOR TO ROUGH-IN.

WATER SUB-METER SPECIFICATION TO BE APPROVED BY LANDLORD WITH REMOTE READER LOCATED IN A MUTUALLY AGREEABLE LOCATION INSTALLED AT TENANT'S SOLE COST. IDEALLY 48" HIGH ON THE STRIKE SIDE OF THE REAR FLOOR.

- PLUMBING PLAN NOTES:**
- 1 RELOCATED EXISTING NON-FREEZE WALL HYDRANT TO THIS LOCATION AND CONNECT NEW 3/4" CW TO EXISTING SHELL
 - 2 PROVIDE 1-1/4" DN PROVIDE NECESSARY SUPPORT AND MINIMAL AMOUNT OF JOINTS.
 - 3 PROVIDE STRIKE PLATES PER NFPA 54 AND LOCAL CODE REQUIREMENTS.
 - 4 EXTEND TO THE EXISTING IRRIGATION SYSTEM AROUND THE TENANT SPACE. CONNECTION SHALL BE TERMINATED FROM THE LANDLORDS SUPPLY AND SUPPLIED BY THIS NEW TENANT IRRIGATION LINE. COORDINATE EXACT REQUIREMENTS WITH THE LANDLORD AND ARCHITECT.

MAINTAIN ACCESS TO ALL EXISTING HOSE CONNECTIONS VIA ACCESSIBLE PANEL. PANEL TO BE APPROVED BY ARCHITECT.

ALL ELECTRIC, WATER AND GAS SERVICING THE SPACE MUST BE SUB-METER, SUB-METER TO RESIDE IN THE A MUTUALLY AGREEABLE LOCATION TO LANDLORD AND TENANT. INDIVIDUAL GAS METER TO BE COORDINATED AND INSTALLED DIRECTLY WITH THE UTILITY GAS PROVIDER.



1 PLUMBING WATER AND GAS PLAN - SEGMENT A
 1/4" = 1'-0"

FUTURE RESTAURANT
 2701 Perseverance Drive
 Austin, TX 78731

FIELD VERIFICATION
 Contractor shall verify all figured dimensions and conditions at the job site and notify Area Group Architects, Inc. of any dimensional errors, omissions or discrepancies before beginning or fabricating any work. Do not scale these drawings.

COPYRIGHT
 Area Group Architects, Inc. shall retain all common law, statutory and other reserved rights. These drawings and related documents shall not be duplicated, disclosed or otherwise used without consent of Area Group Architects, Inc.

NO.	DATE	REMARKS
2	11/17/22	ISSUED FOR CONSTRUCTION
1	08/18/22	PERMIT RESPONSE
	06/23/22	ISSUED FOR PERMIT/BID
	06/15/22	ISSUED FOR AEBG REVIEW
	06/08/22	ISSUED FOR TAS REVIEW
	05/23/22	ISSUED FOR LANDLORD REVIEW
		NO. DATE REMARKS REVISIONS



Drawing Title
PLUMBING WATER AND GAS PLAN - SEGMENT A

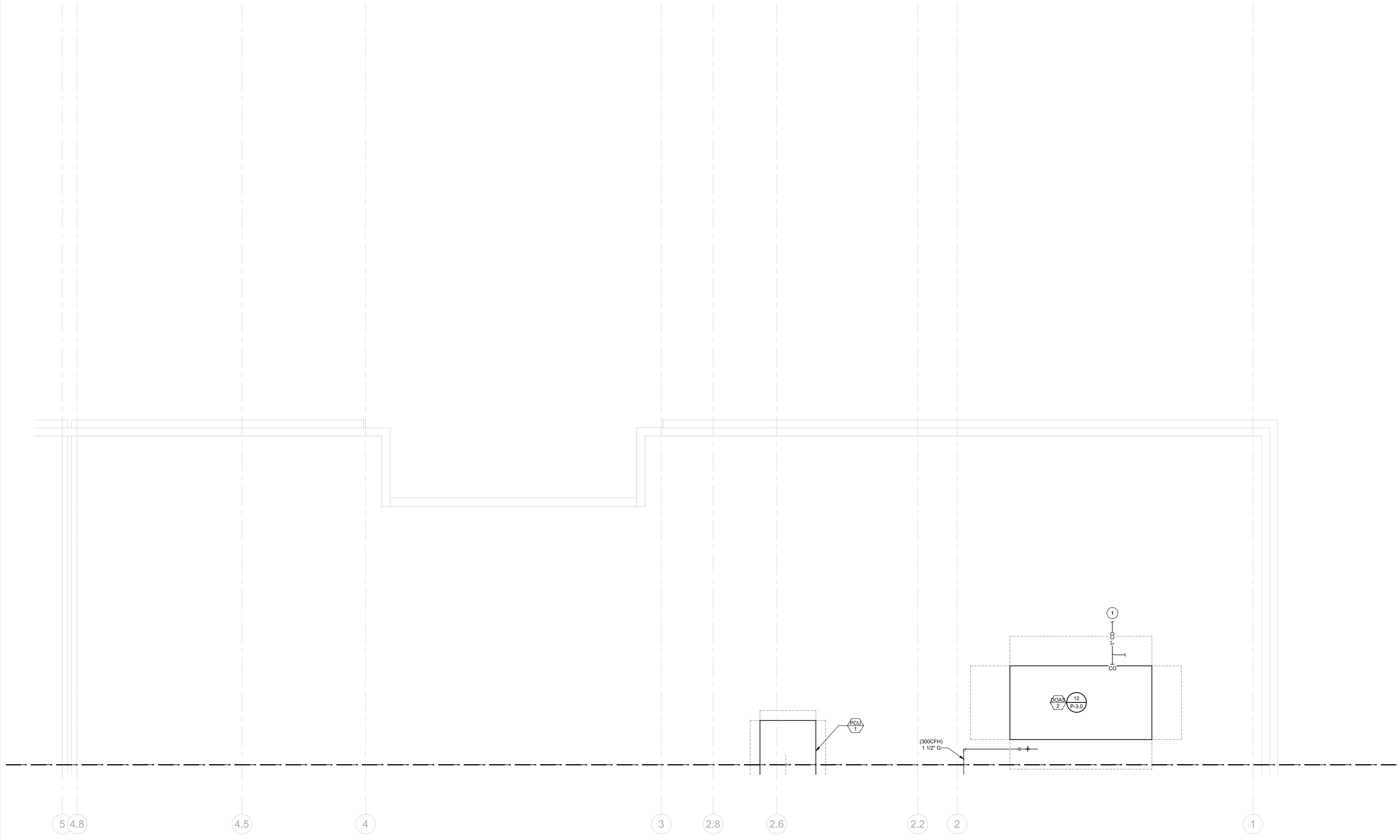
Job No. 214735 Drawn NK

Scale 1/4" = 1'-0" Date Issue Date

Sheet No.
P-1.1A

PLUMBING PLAN NOTES:
 1 ROUTE CONDENSATE PIPING TO NEAREST ROOF DRAIN AND DISCHARGE WITH AIR GAP PER CODE.

HENDERSON ENGINEERS
 8345 LENEXA DRIVE, SUITE 300
 LENEXA, KS 66214
 TEL 913.742.5000 FAX 913.742.5001
 WWW.HENDERSONENGINEERS.COM
 215004838
 TX CORPORATE NO. F-001236
 EXPIRES 9/30/2023

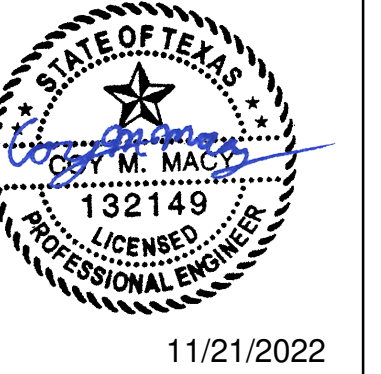


① PLUMBING ROOF PLAN - SEGMENT A
 1/4" = 1'-0"

FUTURE RESTAURANT
 2701 Perseverance Drive
 Austin, TX 78731

FIELD VERIFICATION
 Contractor shall verify all figured dimensions and conditions at the job site and notify Aia Group Architects, Inc. of any dimensional errors, omissions or discrepancies before beginning or fabricating any work. Do not scale these drawings.
COPYRIGHT
 Aia Group Architects, Inc. shall retain all copyright law, statutory and other reserved rights. These drawings and related documents shall not be duplicated, disclosed or otherwise used without consent of Aia Group Architects, Inc.

NO.	DATE	REMARKS
2	11/17/22	ISSUED FOR CONSTRUCTION
1	08/18/22	PERMIT RESPONSE
	06/23/22	ISSUED FOR PERMIT/BID
	06/15/22	ISSUED FOR AEGG REVIEW
	06/08/22	ISSUED FOR TAS REVIEW
	05/23/22	ISSUED FOR LANDLORD REVIEW



Drawing Title
PLUMBING ROOF PLAN - SEGMENT A

Job No. 214735
 Drawn NK

Scale 1/4" = 1'-0"
 Date Issue Date

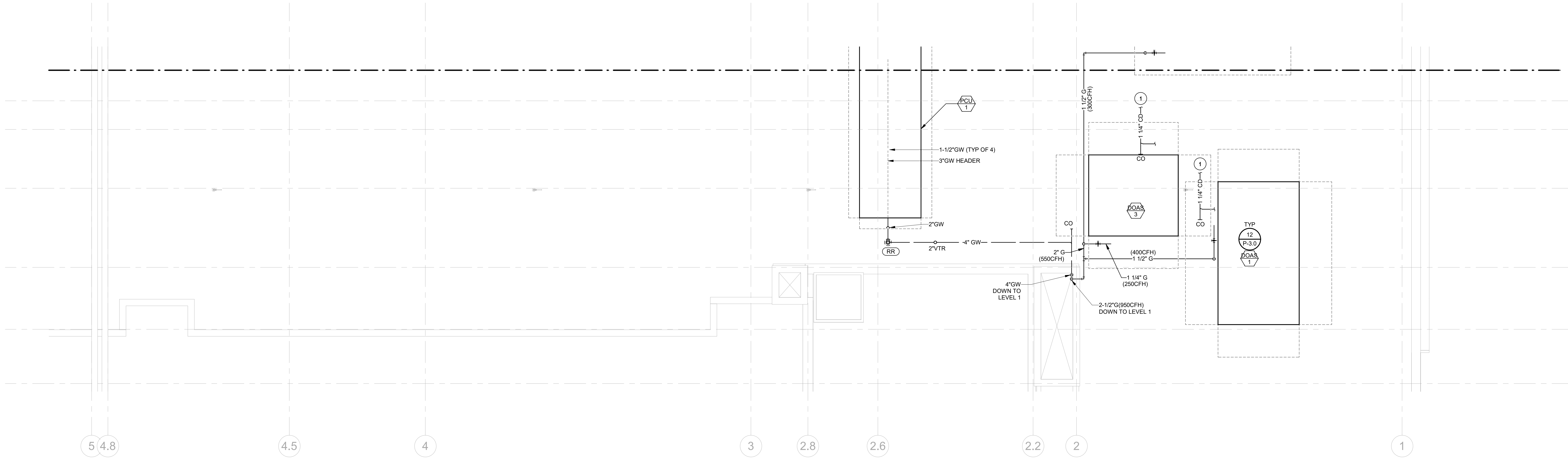
Sheet No.
P-1.2A

COY M MACY 11/21/2022 2:40:18 PM BIM 360/214735-PERRYS - VERDAD/215004838 Verdad_Austin_TX MEP_v21_CoyMacy.rvt

PLUMBING PLAN NOTES:
 1 ROUTE CONDENSATE PIPING TO NEAREST ROOF DRAIN AND DISCHARGE WITH AIR GAP PER CODE.

HENDERSON ENGINEERS
 8345 LENEXA DRIVE, SUITE 300
 LENEXA, KS 66214
 TEL 913.742.5000 FAX 913.742.5001
 WWW.HENDERSONENGINEERS.COM
 215004838
 TX CORPORATE NO. F-001236
 EXPIRES 9/30/2023

FUTURE RESTAURANT
 2701 Perseverance Drive
 Austin, TX 78731

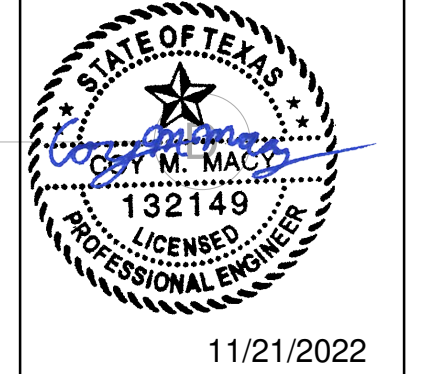


1 PLUMBING ROOF PLAN - SEGMENT B
 1/4" = 1'-0"

FIELD VERIFICATION
 Contractor shall verify all field dimensions and conditions at the job site and notify the Architect if any discrepancies are noted before beginning or fabricating any work. Do not scale these drawings.

COPYRIGHT
 All rights reserved. No part of this drawing may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, or by any information storage and retrieval system, without the prior written consent of the Architect.

NO.	DATE	REVISIONS
2	11/17/22	ISSUED FOR CONSTRUCTION
1	08/18/22	PERMIT RESPONSE
	06/23/22	ISSUED FOR PERMIT/BID
	06/15/22	ISSUED FOR AEGB REVIEW
	06/08/22	ISSUED FOR TAS REVIEW
	05/23/22	ISSUED FOR LAND USE REVIEW



Drawing Title
PLUMBING ROOF PLAN - SEGMENT B

Job No. 214735
 Drawn NK

Scale 1/4" = 1'-0"
 Date Issue Date

Sheet No.
P-1.2B

COY M. MACY
 11/21/2022 2:40:24 PM
 BIM 360/27 14735-PEPERRY - VERB/D/215004838 Verdad Austin, TX MEP_V21_Coy/Macy.rvt

PLUMBING FIXTURE CONNECTION SCHEDULE

FIXTURE	COLD WATER	HOT WATER	WASTE	VENT
WATER CLOSET (FV)	1-1/4" (NOTE 1)	--	4"	2"
URINAL	3/4" (NOTE 2)	--	2"	2"
LAVATORY/HAND SINK	1/2"	1/2"	2"	1-1/2"
JANITOR'S SINK	1/2"	1/2"	3"	2"
FLOOR DRAIN	--	--	2"	2"
SINK	1/2"	1/2"	2"	1-1/2"

NOTES:
 PIPE SIZES SHOWN ARE MINIMUM. AND ARE FOR INDIVIDUAL SERVICE PIPE SIZES
 (NOTE 1) PROVIDE 1-1/4" CW TO FLUSH VALVE, REDUCE TO 1" PRIOR TO CONNECTING TO FLUSH VALVE INLET AT INSIDE OF WALL
 (NOTE 2) PROVIDE 1" CW TO FLUSH VALV..

EXPANSION TANK SCHEDULE

MARK	MANUFACTURER / MODEL #	TANK SIZE (GALLONS)	MIN. ACCEPTANCE VOLUME (GALLONS)	SERVICE	WEIGHT (LBS)	NOTES
ET	AMTROL ST-25V	10.3	4.64	WH-1 & WH-2	110	A

NOTES:
 A. CHARGE TANK WITH AIR TO IDENTICAL PRESSURE AS STATIC DOMESTIC WATER PRESSURE.

RECIRCULATION PUMP SCHEDULE

MARK	MANUFACTURER / MODEL#	LOCATION	GPM	HEAD (FT.)	CONNECTION SIZE	IMPELLER SIZE (IN.)	ELECTRICAL DATA			NOTES
RP	BELL & GOSSETT # NBF-2S(SPEED 3)	MECH/ELEC	3.39	15.5	3/4"	N/A	VOLTS	PHASE	FLA	A-D
							120	1	1.1	

NOTES:
 A. ALL LEAD FREE CAST BRONZE BOOSTER.
 B. PROVIDE WITH STRAINER UPSTREAM OF PUMP
 C. PROVIDE ADJUSTABLE, SURFACE MOUNTED ADJUSTAT - HONEYWELL L8096C
 D. SET ADJUSTAT TO SHUT OFF RECIRCULATION PUMP AT WATER HEATER SET POINT AND ON AT 10' BELOW SET POINT

PLUMBING PIPE MATERIAL SCHEDULE

PIPING SYSTEM	ABBREVIATION	PIPING MATERIAL
SANITARY DRAINAGE & VENT (ABOVE GRADE)	S, W OR V	HUBLESS CAST IRON
SANITARY DRAINAGE & VENT (BELOW GRADE)	S, W OR V	SERVICE WEIGHT CAST IRON (PVC DWV OPTIONAL)
POTABLE WATER (ABOVE GRADE)	CW, HW OR HWR	TYPE L HARD DRAWN COPPER
POTABLE WATER - 2" & SMALLER (BELOW GRADE)	CW, HW OR HWR	TYPE K SOFT ANNEALED COPPER
NATURAL GAS (ABOVE GRADE & ON ROOF)	G	SCHEDULE 40 BLACK STEEL
CONDENSATE DRAIN - 1" & SMALLER	CD	TYPE M HARD DRAWN COPPER
CONDENSATE DRAIN - 1-1/4" & LARGER	CD	TYPE DWV HARD DRAWN COPPER
INDIRECT DRAIN - 1/8" SMALLER	ID	TYPE M HARD DRAWN COPPER
INDIRECT DRAIN - 1-1/4" & LARGER	ID	TYPE DWV HARD DRAWN COPPER

REFER TO SPECIFICATIONS FOR FITTINGS, INSTALLATION REQUIREMENTS AND FURTHER INFORMATION

WATER SOFTENER SCHEDULE

MARK	MANUFACTURER/ MODEL#	CONTINUOUS FLOW RATE (GPM) NOTE A	MAXIMUM FLOW RATE (GPM) NOTE B	EXCHANGE CAPACITY (MIN) GRAINS	SALT DOSAGE (MIN) POUNDS	EXCHANGE CAPACITY (MAX) GRAINS	SALT DOSAGE (MAX) POUNDS	(MIN) RESIN TANK CAPACITY (CU. FT.)	NOTES
WS	CULLIGAN # HET-60	25.1	31.5	50,000	20	60,000	30	2	CDE

NOTES:
 A. AT A MAXIMUM PRESSURE LOSS OF 15 PSI
 B. AT A MAXIMUM PRESSURE LOSS OF 25 PSI, INTERMITTENT FLOW
 C. PROVIDE FACTORY MOUNTED TURBINE METER WITH TIMER TO CONTROL BACKWASH CYCLE.
 D. DUPLEX SYSTEM WITH ONE BRINE TANK AND TWO SOFTENERS CONFIGURED FOR PROGRESSIVE FLOW OPERATION. SOFTENER CAPACITIES SCHEDULED ARE FOR ONE SOFTENER.
 E. CONTACT MIKE DEGROOT (P. (303) 419-6757, E. MDEGROOT@HALLSWATER.COM) FOR WATER SOFTENER PURCHASING.

GAS STORAGE WATER HEATER SCHEDULE

MARK	MANUFACTURER/ MODEL#	TANK SIZE (GALLONS)	INPUT MBH	ELECTRICAL DATA			RECOVERY (GPH)	WEIGHT (LBS)	NOTES
				VOLTS	PHASE	FLA			
WH1	A.O. SMITH # BTH 199	100	199	120	1	5	300	1,363	A, B, C
WH2	A.O. SMITH # BTH-199	100	199	120	1	5	300	1,363	A, B, C

NOTES:
 A. 78° TEMPERATURE RISE WITH 140°F OPERATING TEMPERATURE
 B. ULTRA LOW NOX TYPE - RESIDUAL NOX IS LESS THAN 14 mg / joule. COMPLIES WITH SCAGM0 RULE 1148.2
 C. FURNISH WITH CONDENSATE NEUTRALIZATION KIT TO MATCH HEATER INPUT, AO SMITH # CNS SERIES

WATER FILTER SCHEDULE

MARK	MANUFACTURER	MODEL	FILTER TYPE	MEDIA VOLUME (CU. FT.)	DESIGN FLOW RATE (GPM) NOTE A	PRESSURE LOSS AT DESIGN RATE (PSI)	BACKWASH FLOW RATE (GPM)	INLET/OUTLET CONNECTIONS	OPERATING WEIGHT (LBS)	TANK DIAMETER AND HEIGHT (NOTE D)	NOTES
CF	CULLIGAN	HE CF-16	CARBON FILTER	3	8	1	15	1.5	470	16" DIAMETER 60" TALL	BE

NOTES:
 A. FOR PRODUCING HIGH WATER QUALITY. REFER TO SPECIFICATIONS FOR MORE INFORMATION.
 B. PROVIDE WITH TIMER AND DIFFERENTIAL PRESSURE SENSOR TO CONTROL BACKWASH CYCLE.
 C. CONFIGURED FOR SIMPLEX OPERATION.
 D. DIMENSIONS AND OPERATING WEIGHT ARE FOR EACH TANK. REFER TO SPECIFICATIONS FOR TANK TYPE.
 E. CONTACT MIKE DEGROOT (P. (303) 419-6757, E. MDEGROOT@HALLSWATER.COM) FOR WATER FILTRATION PURCHASING.

TOTAL CONNECTED NATURAL GAS LOAD

DESIGNATION	QUANTITY	DESCRIPTION	CFH (EACH)	TOTAL CFH
KITCHEN EQUIPMENT				
11	1	GRIDDLE	81	81
15	2	STOCK POT RANGE	110	220
17	1	CONVECTION OVEN	100	100
62	3	FRYER	100	300
63	1	CONVECTION OVEN	100	100
64	1	RANGE OPEN BURNER	430	430
65	1	GRIDDLE	162	162
67	1	CHARBROILER	187	187
		TOTAL =		1580
MECHANICAL EQUIPMENT				
DOAS-1	1	DEDICATED OUTSIDE AIR UNIT	400	400
DOAS-2	1	DEDICATED OUTSIDE AIR UNIT	300	300
DOAS-3	1	DEDICATED OUTSIDE AIR UNIT	250	250
WH1	1	WATER HEATER	199	199
WH2	1	WATER HEATER	199	199
WH3	1	WATER HEATER	150	150
FIRE PLACE	1	FIRE PLACE	150	150
		TOTAL =		1498

NATURAL GAS SYSTEM OPERATING PRESSURE:
 NATURAL GAS SYSTEM SIZED WITH TOTAL DEVELOPED LENGTH FROM GAS METER TO MOST REMOTE PIECE OF EQUIPMENT.
 SYSTEM DESIGN PRESSURE DROP:
 7" WC
 180 FEET
 0.5" WC

TOTAL CONNECTED LOAD = 3078

LOW PRESSURE GAS PIPE SIZING CHART

PIPE SIZE	LOAD (CFH)
1/2"	36
3/4"	76
1"	143
1-1/4"	294
1-1/2"	441
2"	849
2-1/2"	1,353
3"	2,392
4"	4,878
5"	8,625
6"	14,290
8"	29,361
10"	53,327
12"	84,424

FOR SCHEDULE 40 STEEL PIPE
 OPERATING PRESSURE OF 7" WC WITH A PRESSURE DROP OF 0.5" WC
 TOTAL DEVELOPED LENGTH (FEET) = 180
 BASED ON NFPA 54 EQUATION 4-1

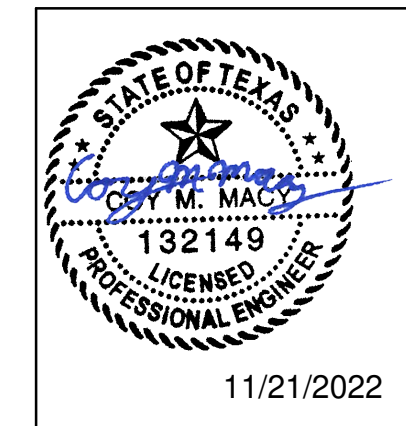
PLUMBING FIXTURE SCHEDULE

FIXTURES IN THIS SCHEDULE OR THEIR APPROVED EQUIVALENT ARE PROVIDED BY THE PLUMBING CONTRACTOR. SUBMIT SHOP DRAWINGS ON EACH OF THESE ITEMS. REFER TO SPECIFICATIONS FOR FURTHER INFORMATION AND INSTALLATION REQUIREMENTS. VERIFY ROUGH-IN REQUIREMENTS WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS AND INSTALL PER MANUFACTURER'S RECOMMENDATIONS. REFER TO THE ARCHITECTURAL DRAWINGS FOR THE PLUMBING FIXTURE MOUNTING HEIGHTS.

- BFP1 REDUCED PRESSURE ZONE BACKFLOW PREVENTER: WATTS # LF090Q1-S, MEETING ASSE 1015, LEAD FREE CAST BRONZE BODY, QUARTER TURN TEST COCKS, QUARTER TURN BALL VALVES, BRONZE STRAINER, AND # 909AG AIR GAP FITTING.
- BFP2 DOUBLE CHECK VALVE BACKFLOW PREVENTER: WATTS # LF719QT-S, MEETING ASSE 1015, LEAD FREE CAST BRONZE BODY, QUARTER TURN TEST COCKS, QUARTER TURN BALL VALVES, AND STRAINER.
- BFP3 REDUCED PRESSURE ZONE BACKFLOW PREVENTER: WATTS # S8090Q1-S, MEETING ASSE 1013, 316 STAINLESS STEEL BODY, QUARTER TURN TEST COCKS, QUARTER TURN, FULL PORT BALL VALVES, STAINLESS STEEL STRAINER AND # 909AG AIR GAP FITTING.
- BFP4 DUAL CHECK VALVE WITH ATMOSPHERIC PORT: WATTS # SD-3, MEETING ASSE 1022 AND NSF 18, 316 STAINLESS STEEL BODY, 3/8" INLET AND OUTLET, ATMOSPHERIC PORT, AND WYE PATTERN STRAINER.
- FCO FLOOR CLEANOUT: JAY R. SMITH, CAST IRON BODY, FLASHING FLANGE WITH CLAMPING COLLAR, ABS PLUG, AND ADJUSTABLE, ROUND, SECURED, NICKEL BRONZE, TOP. # 4031L (F-C), SCORRIATED TOP FOR EXPOSED, FLUSH WITH FINISHED FLOOR, APPLICATION(S), # 4031L (F-C-Y), STAINLESS STEEL MARKER FOR INSTALLATION IN CARPETED FLOOR AREA(S), # 4151 (F-C), 1/8" RECESS FOR INSTALLATION IN TILED FLOOR AREA(S), # 4191 (F-C), 1/2" RECESS FOR INSTALLATION IN TERRAZZO AND SIMILAR POURED FLOOR AREAS). REFER TO SPECIFICATIONS FOR INSTALLATION.
- FCV FLOW CONTROL VALVE: FLOW/DESIGN # ICSS "AUTOFLOW", SERIES 300 STAINLESS UNION BODY WITH NICKEL PLATED UNION NUT, STAINLESS STEEL PRESSURE COMPENSATING CARTRIDGE, MEETING NSF 61 ANNEX G, NAMEPLATE AND 1/2" VALVE BODY SIZE UNLESS SHOWN OTHERWISE ON PLANS. PROVIDE 0.33 GPM FLOW RATE CARTRIDGE UNLESS SHOWN OTHERWISE ON PLANS.
- FD1 FLOOR DRAIN: JAY R. SMITH # 2005L (A), CAST IRON BODY AND CLAMPING COLLAR, ADJUSTABLE 6" ROUND NICKEL BRONZE STRAINER. PROVIDE TRAP PRIMER PORT IF TRAP PRIMER IS PROVIDED ON THE DRAWINGS. USE PUSH-ON JOINT OF OUTLET SIZE AS SHOWN ON PLANS.
- FD2 EQUIPMENT FLOOR DRAIN: JAY R. SMITH # 2131L (B), 5" DEEP CAST IRON BODY, 12" ROUND, LOOSE, MEDIUM DUTY, CAST IRON GRATE, SEDIMENT BUCKET, BOTTOM OUTLET, SEEPAGE PAN, AND MEMBRANE FLASHING CLAMP. PROVIDE TRAP PRIMER PORT IF TRAP PRIMER IS PROVIDED ON THE DRAWINGS. USE PUSH-ON JOINT OF OUTLET SIZE AS SHOWN ON PLANS.
- FD3 FLOOR DRAIN: JAY R. SMITH # 2005L (A), CAST IRON BODY AND CLAMPING COLLAR, ADJUSTABLE 6" SQUARE NICKEL BRONZE STRAINER. PROVIDE TRAP PRIMER PORT IF TRAP PRIMER IS PROVIDED ON THE DRAWINGS. USE PUSH-ON JOINT OF OUTLET SIZE AS SHOWN ON PLANS.
- FS1 FLOOR SINK: JAY R. SMITH # 3101L (-12), 6" DEEP CAST IRON BODY WITH ACID RESISTING ENAMELED INTERIOR, ANCHOR FLANGE WITH SEEPAGE HOLES, CLAMP COLLAR, WHITE ABS SEDIMENT BUCKET, AND 8-1/2" SQUARE NICKEL BRONZE RIM AND HALF GRATE. USE PUSH-ON JOINT OF OUTLET SIZE AS SHOWN ON PLANS.
- FS2 FLOOR SINK: JAY R. SMITH # 3161L (-12), 10" DEEP CAST IRON BODY WITH ACID RESISTING ENAMELED INTERIOR, ANCHOR FLANGE WITH SEEPAGE HOLES, CLAMP COLLAR, WHITE ABS SEDIMENT BUCKET, AND 12-1/2" SQUARE NICKEL BRONZE RIM AND HALF GRATE. USE PUSH-ON JOINT OF OUTLET SIZE AS SHOWN ON PLANS.
- FS3 PVC FLOOR SINK: SIOUX CHIEF # 860-WXP-N-C-2 SERIES WITH 5" DEEP ROUND PVC BODY WITH PVC SOCKET OUTLET, ANCHOR FLANGE, CLAMP COLLAR, WHITE ABS SEDIMENT BUCKET, 9" ROUND CAST NICKEL RIM AND HALF GRATE. CLEAN AND POLISH AFTER INSTALLATION. PROVIDE A P-TRAP, SIZE OF TRAP AND WASTE ARM AS SHOWN ON PLANS.
- HB HOSE BIBB: ZURN # Z1350-VB, NARROW WALL HYDRANT BRONZE BODY AND INTERIOR PARTS WITH 3/4" FEMALE TOP INLET, 3/4" T-THREADED HOSE CONNECTION, LOOSE KEY HANDLE, VACUUM BREAKER AND STAINLESS STEEL BOX WITH HINGED COVER.
- HD HUB DRAIN: PROVIDE A P-TRAP BELOW FINISHED FLOOR AND STUB THE BELL END OF A CAST IRON PIPE 4" ABOVE FINISHED FLOOR. SIZE AS SHOWN ON FLOOR PLAN(S).
- LV1 UNDER MOUNTED LAVATORY (ADA ACCESSIBLE): REFER TO ARCHITECTURAL SCHEDULE FOR BASIN AND FAUCET. PROVIDE FAUCET WITH 0.5 GPM AERATOR OPTION TO ACHIEVE 0.25 GPC
 TRIM: MCGUIRE # 155A GRID DRAIN WITH TAILPIECE, MCGUIRE # LF2165CCLK LEAD FREE BRASS LOOSE KEY COMPRESSION ANGLE STOP VALVES WITH RISERS AND ESCUTCHEONS, MCGUIRE # B8872CF 1-1/4" 17 GAUGE CAST CHROME PLATED BRASS ADJUSTABLE P-TRAP AND WASTE ARM WITH CLEANOUT PLUG AND ESCUTCHEON, CONCEALED ARM CARRIER WITH STANCHIONS TO FLOOR.
- LV2 WALL-MOUNTED LAVATORY (ADA ACCESSIBLE): REFER TO ARCHITECTURAL SCHEDULE FOR BASIN AND FAUCET. PROVIDE FAUCET WITH 0.5 GPM AERATOR OPTION TO ACHIEVE 0.25 GPC
 TRIM: MCGUIRE # 155A GRID DRAIN WITH TAILPIECE, MCGUIRE # LF2165CCLK LEAD FREE BRASS LOOSE KEY COMPRESSION ANGLE STOP VALVES WITH RISERS AND ESCUTCHEONS, MCGUIRE # B8872CF 1-1/4" 17 GAUGE CAST CHROME PLATED BRASS ADJUSTABLE P-TRAP AND WASTE ARM WITH CLEANOUT PLUG AND ESCUTCHEON, CONCEALED ARM CARRIER WITH STANCHIONS TO FLOOR, AND PLUMBEREX "PRO-EXTREME" # X-4222 INSULATION KIT FOR WATER AND WASTE PIPES.
- PRV PRESSURE REDUCING VALVE: WATTS # LFJ58-LP-GG-Z3, LEAD FREE BRONZE BODY WITH INTEGRAL STRAINER WITH STAINLESS STEEL SCREEN, STAINLESS STEEL SEAT, SEALED SPRING CAGE, INTEGRAL THERMAL BYPASS, 160# MAXIMUM OPERATING TEMPERATURE, 160 LB. PRESSURE GAUGE AND TAPPING, 3/4" INLET AND OUTLET, 10 - 35 PSI REDUCED PRESSURE RANGE. SET OUTLET PRESSURE TO 35 PSI.
- RR ROOF RECEPTOR: JAY R. SMITH # 3980-Y-E-C-R, WITH 12-1/2" ROUND CAST IRON BODY, COMBINATION 2-1/2" HIGH WATER DAM AND FLASHING CLAMP, GRAVEL STOP, UNDERDECK CLAMP, SUMP RECEIVER, NO-HUB OUTLET, FIXED EXTENSION - HEIGHT AS REQUIRED BY INSTALLED INSULATION THICKNESS AND DOME BOTTOM STRAINER. PROVIDE OUTLET SIZE AS SHOWN ON PLANS. LOCATE DRAIN WHERE INDICATED ON ARCHITECTURAL PLANS IN STRUCTURAL HIGH POINT INSTALL WITH TOP OF DAM 2-1/2" ABOVE ROOF AND WITH ADDITIONAL 2" INSULATION AROUND DRAIN BODY SLOPING AWAY FROM THE DRAIN AT 1/2" FOOT - COORDINATE WITH THE ROOFING CONTRACTOR.
- ST STRAINER: WATTS #S777-SI WITH LINE SIZE CLASS 150 BRONZE BODY WITH SOLDER CONNECTIONS, THREADED SCREEN RETAINER WITH SCREWED BLOWOFF CONNECTION AND #100 MESH STAINLESS STEEL SELF SEATING SCREEN. PROVIDE 1/2" BALL VALVE AND BLOW OFF LINE ROUTED TO NEAREST FLOOR SINK.
- TMV THERMOSTATIC MIXING VALVE: POWERS # LFA480, SOLID LEAD FREE BRASS BODY, THERMOSTATIC WAX ELEMENT, CORROSION RESISTANT INTERNAL PARTS, AND INTEGRAL CHECKS, ASSE 1070 COMPLIANT, CAPABLE OF 2.2 GPM WITH A 20 PSI DIFFERENTIAL AND A MINIMUM FLOW RATE OF 0.25 GPM. SET TEMPERATURE TO 110F FOR DUEL TEMPERATURE LAVATORIES AND HAND SINKS, 120F FOR SINGLE TEMPERATURE LAVATORIES AND HAND SINKS AND 120F FOR SINKS. MOUNT BELOW THE PLUMBING FIXTURE WHERE INDICATED ON PLAN(S).
- TP TRAP PRIMER: PRECISION PLUMBING PRODUCTS # PR-500 "PRIME RITE", CORROSION RESISTANT BRASS BODY, "O" RING SEALS, 1/2" INLET AND OUTLET, AND INTEGRAL VACUUM BREAKER. INSTALL THE VALVE AT A MINIMUM OF 12" ABOVE FINISHED FLOOR.
- TS TIME SWITCH INTERMATIC #ET1705CSPST, 7 DAY, ONE CIRCUIT-SINGLE POLE SINGLE THROW, ELECTRONIC TIME SWITCH OR EQUAL BY TORK. TIME SWITCH SHALL BE MOTOR RATED (1 H.P. @ 120 VOLT, SINGLE PHASE), MINIMUM OF 20 SET POINTS (14 ON/OFF CYCLES) AND BATTERY BACK UP. COORDINATE WITH DIVISION 16 FOR INSTALLATION AND INTERLOCK OF TIME SWITCH IN SERIES WITH THE ADJUSTAT AND RECIRCULATION PUMP.
- UR URINAL (ADA ACCESSIBLE): REFER TO ARCHITECTURAL DRAWINGS FOR SCHEDULED URINAL.
 FLUSH VALVE: REFER TO ARCHITECTURAL DRAWINGS FOR SCHEDULED 0.125 GPF FLUSH VALVE.
 TRIM: SUITABLE CARRIER WITH STANCHIONS TO FLOOR.
- WC1 FLOOR-MOUNTED WATER CLOSET (ADA ACCESSIBLE): REFER TO ARCHITECTURAL DRAWINGS FOR WATER CLOSETS AND 1.28GPF FLUSH VALVE.
 TRIM: REFER TO ARCHITECTURAL SCHEDULES FOR SEAT LESS COVER.
- WC2 FLOOR-MOUNTED WATER CLOSET: REFER TO ARCHITECTURAL DRAWINGS FOR WATER CLOSETS AND 1.28GPF FLUSH VALVE.
 TRIM: REFER TO ARCHITECTURAL SCHEDULES FOR SEAT LESS COVER.
- WCO WALL CLEANOUT: JAY R. SMITH # 4530S, CAST IRON CLEANOUT TEE, COUNTER SUNK PLUG, STAINLESS STEEL ROUND COVER AND SCREW, AND IRON PLUG WITH GASKET SEAL. REFER TO SPECIFICATIONS FOR INSTALLATION.
- WHA WATER HAMMER ARRESTER: PRECISION PLUMBING PRODUCTS, HARD DRAWN COPPER BODY WITH WROUGHT COPPER FITTINGS, PISTON TYPE WITH LUBRICATED EPDM "O" RING SEALS, MEETING ASSE 1010 OR PDI WH-201. PROVIDE PDI SIZES "A" THROUGH "F" AS SHOWN ON PLANS. PROVIDE SIZE "A" UNLESS SHOWN OTHERWISE ON THE PLANS.
- WM WATER METER: BADGER METER # M170 2", LEAD FREE BRONZE MAINCASE AND MEASURING CHAMBER, BOTTOM PLATE, STAINLESS STEEL TRIM AND BOLTS, THERMOPLASTIC STRAINER, OSCILLATING PISTON MEASURING ELEMENT, STRAIGHT READING HERMETICALLY SEALED REGISTER, REGISTRATION IN US GALLONS, MAGNETIC DRIVE, AND COMPLIANCE WITH ANSI/AWWA C700. PROVIDE WITH REMOTE READING SYSTEM
- G1-1 1000 GALLON LIQUID HOLDING CAPACITY CONCRETE GREASE INTERCEPTOR. THE FOLLOWING IS A LIST OF ACCEPTABLE MANUFACTURER FOR THE PRODUCT. PARKS USA, CAPITAL CONCRETE PRODUCTS, COMAL CONCRETE PRODUCTS, WALLIS CONCRETE, SCHIER PRODUCTS, SHAWCOR, ZURN GREEN TURTLE, MIFAB.
- G1-2 1500 GALLON LIQUID HOLDING CAPACITY CONCRETE GREASE INTERCEPTOR. THE FOLLOWING IS A LIST OF ACCEPTABLE MANUFACTURER FOR THE PRODUCT. PARKS USA, CAPITAL CONCRETE PRODUCTS, COMAL CONCRETE PRODUCTS, WALLIS CONCRETE, SCHIER PRODUCTS, SHAWCOR, ZURN GREEN TURTLE, MIFAB.
- JS JANITOR'S SINK: STERN-WILLIAMS # MTB-2424, 24" X 24" X 10" HIGH TERRAZZO BASIN WITH INTEGRAL STAINLESS STEEL DRAIN BODY FAUCET: CHICAGO FAUCET # 897-CP FAUCET WITH WALL BRACE, INTEGRAL VACUUM BREAKER, PAIL HHOK, AND 3/4" MALE HOSE THREADED OUTLET. SECURE FAUCET IN THE WALL WITH BACK GROUND. TRIM: # T-35 THREE FOOT LONG REINFORCED HOSE 3/4" CHORMIE COUPLING AND WALL HOOK, AND # T-40 24" STAINLESS STEEL MOP HANGER.

FIELD VERIFICATION
 Contractor shall verify all field dimensions and conditions at the job site and notify Avo Group Architects, Inc. of any dimensional errors, omissions or discrepancies before beginning or fabricating any work. Do not scale these drawings.
COPYRIGHT
 Avo Group Architects, Inc. shall retain all common law, statutory and other reserved rights. These drawings and related documents shall not be duplicated, disclosed or otherwise used without consent of Avo Group Architects, Inc.

NO.	DATE	REMARKS
2	11/17/22	ISSUED FOR CONSTRUCTION
1	08/18/22	PERMIT RESPONSE
	06/23/22	ISSUED FOR PERMIT/BID
	06/15/22	ISSUED FOR AEGB REVIEW
	06/08/22	ISSUED FOR T&B REVIEW
	05/23/22	ISSUED FOR LANDSCAPE REVIEW
NO. DATE REMARKS		
REVISIONS		



11/21/2022

Drawing Title

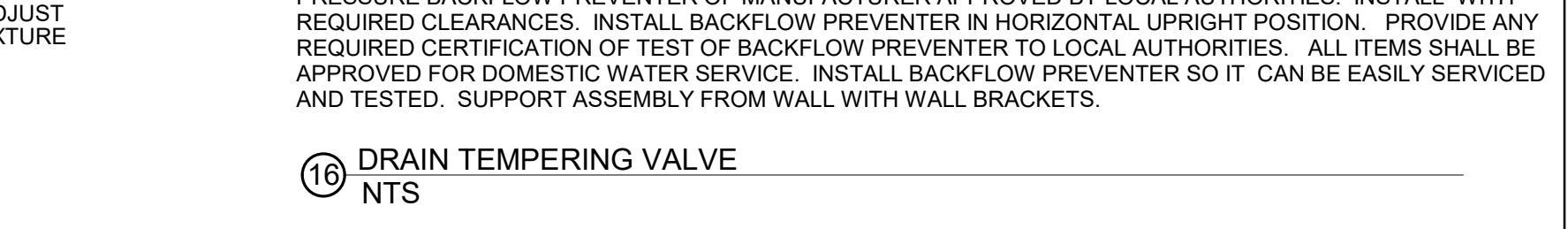
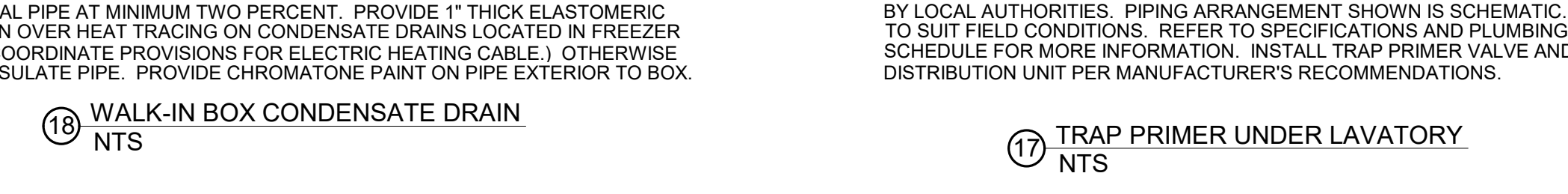
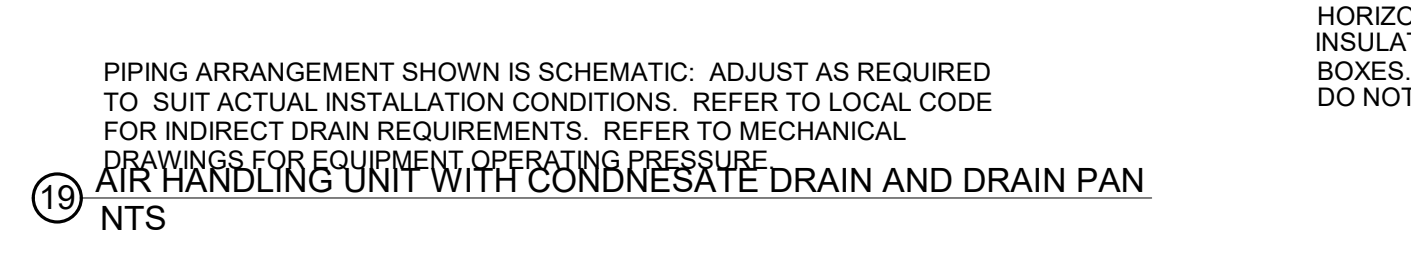
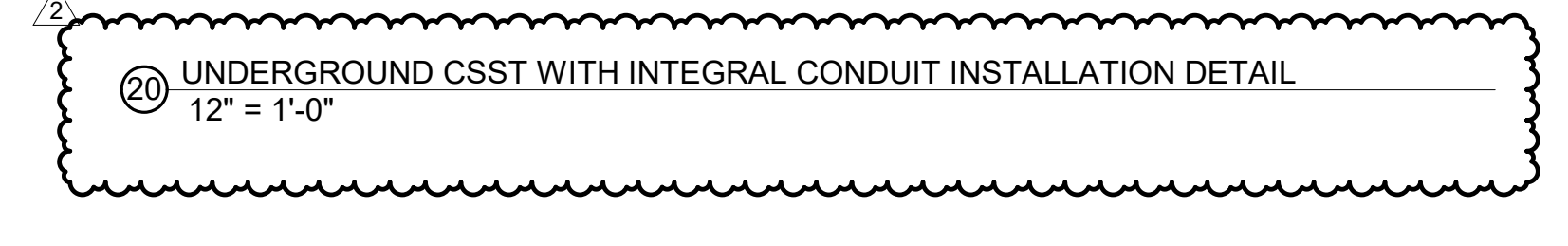
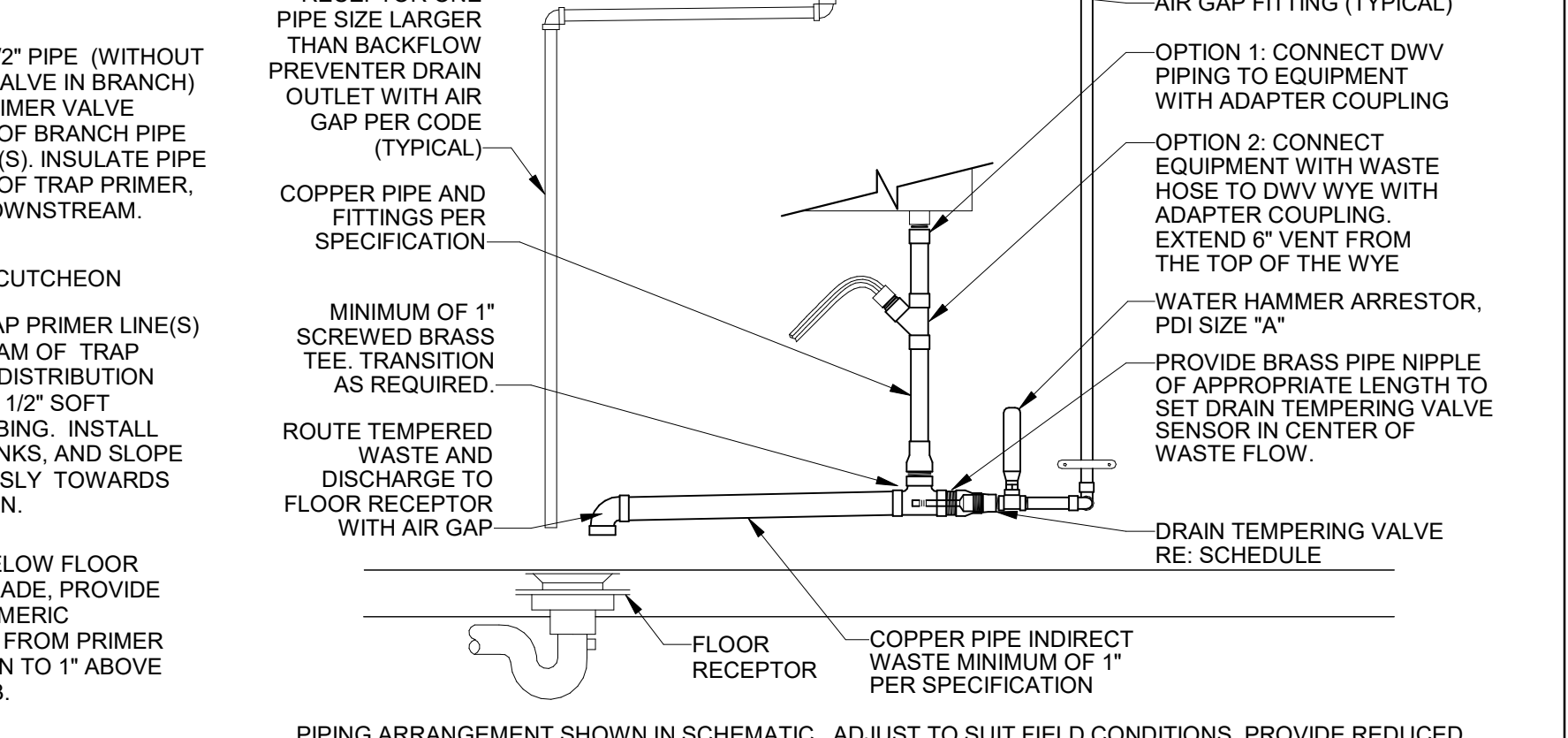
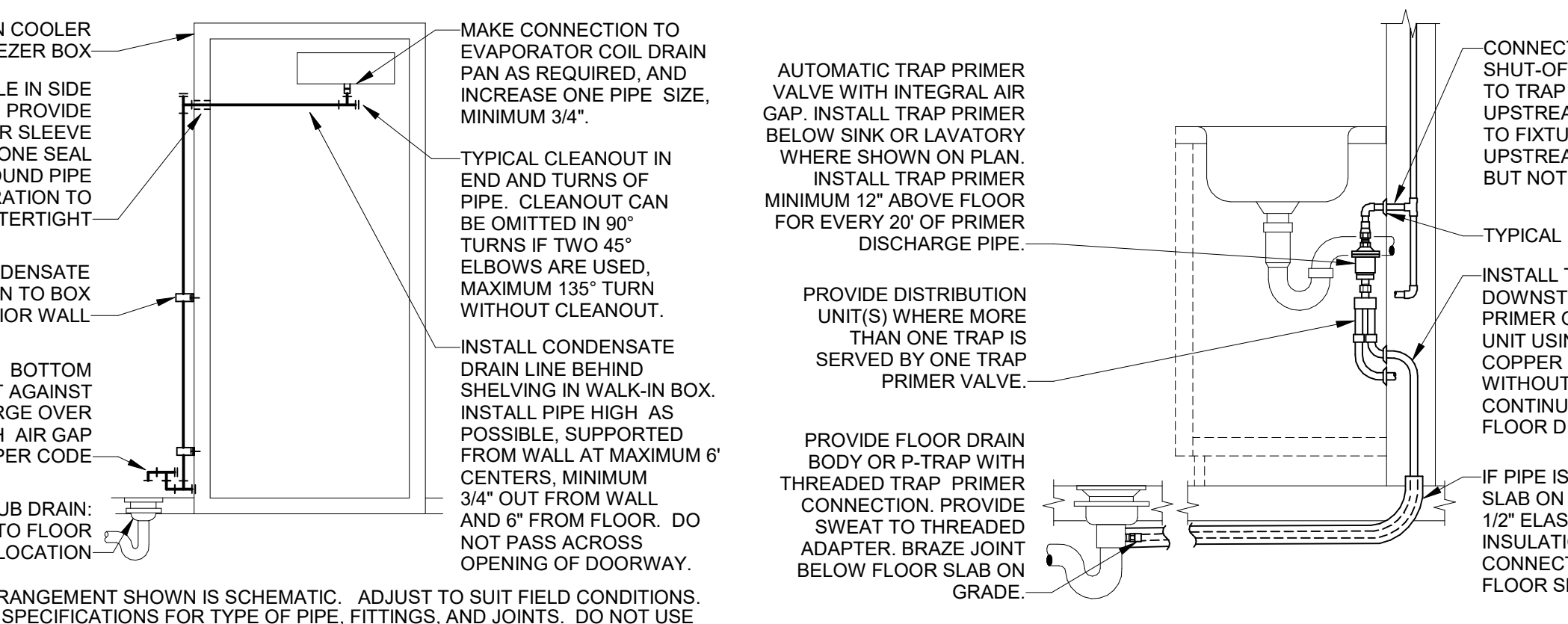
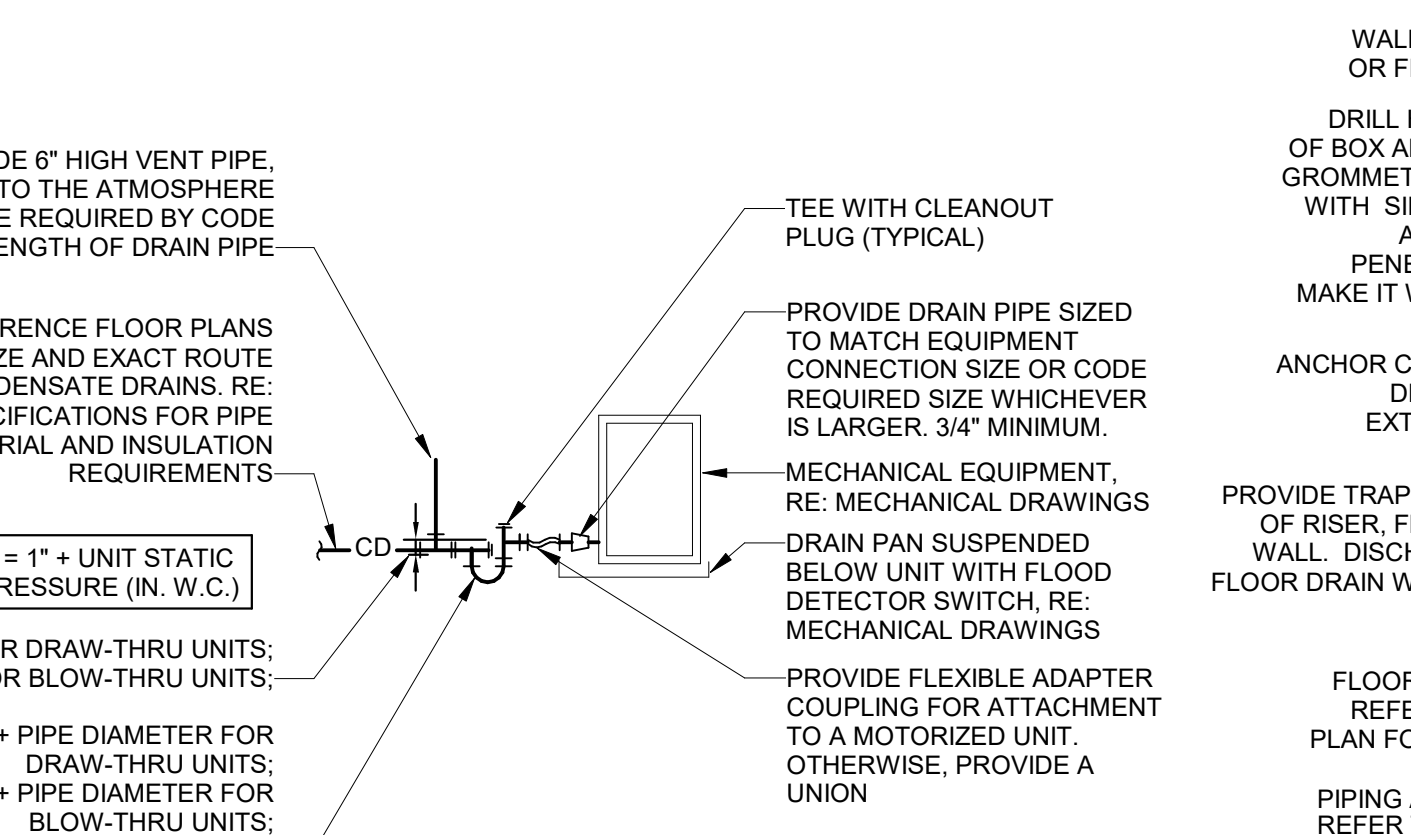
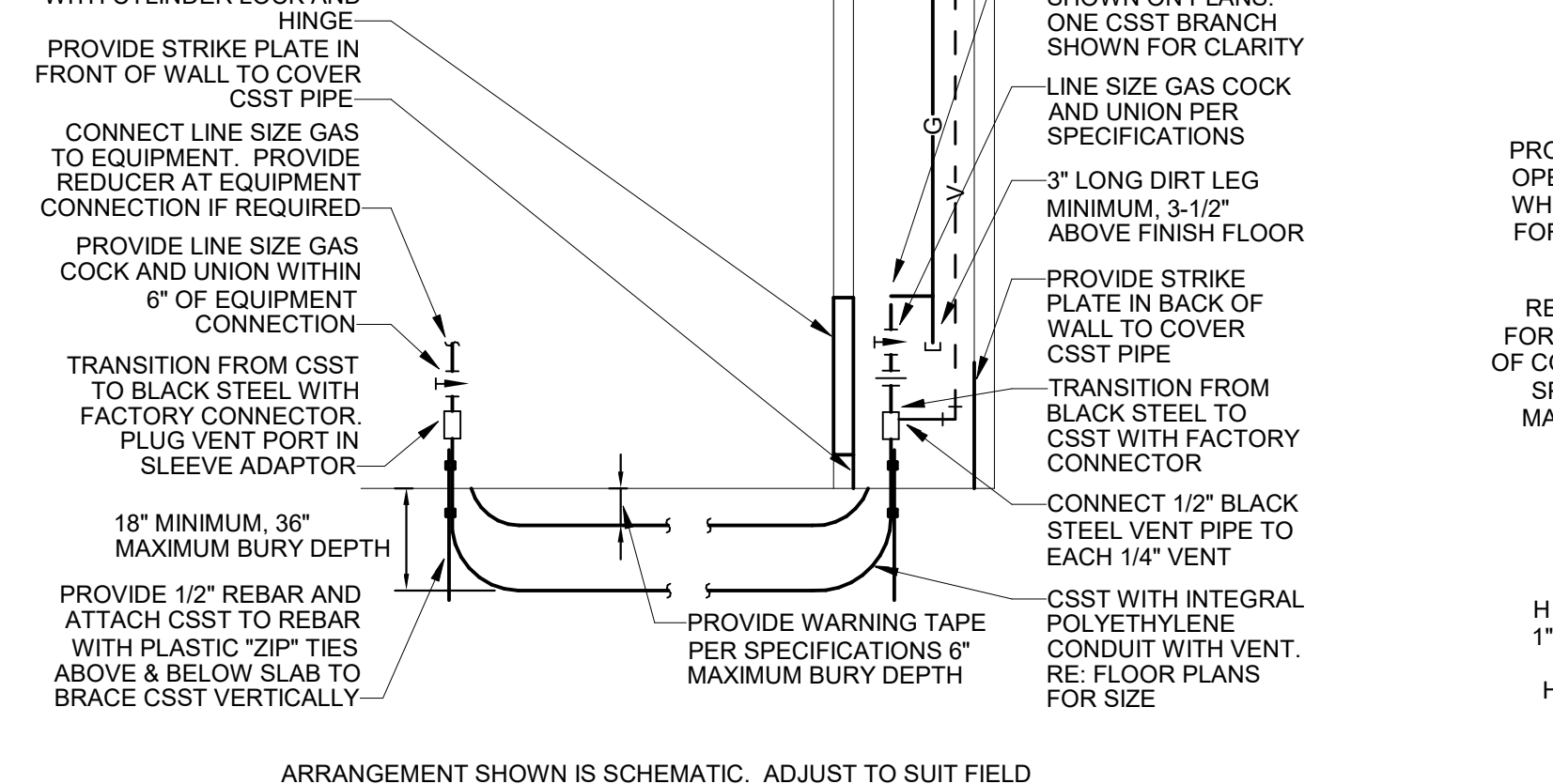
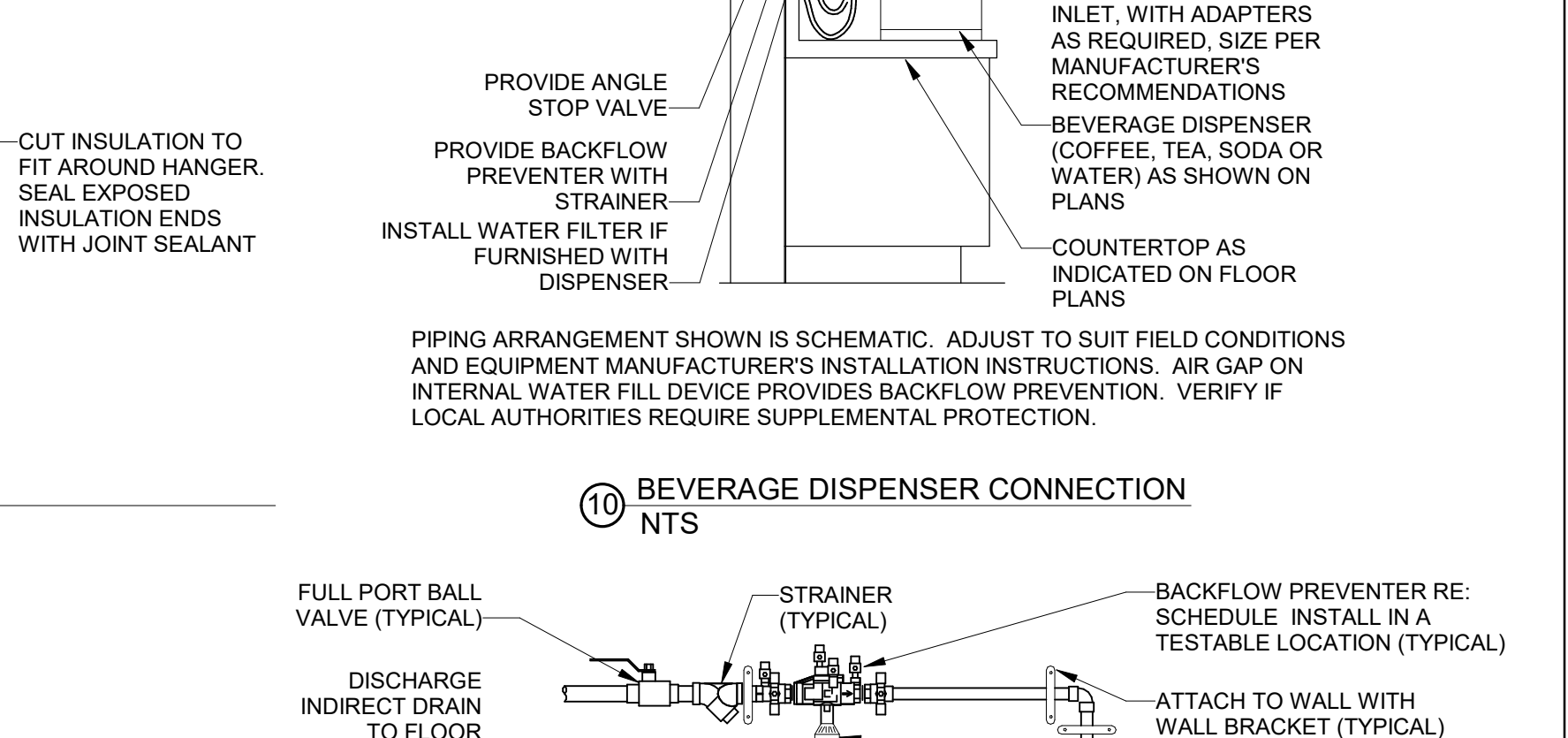
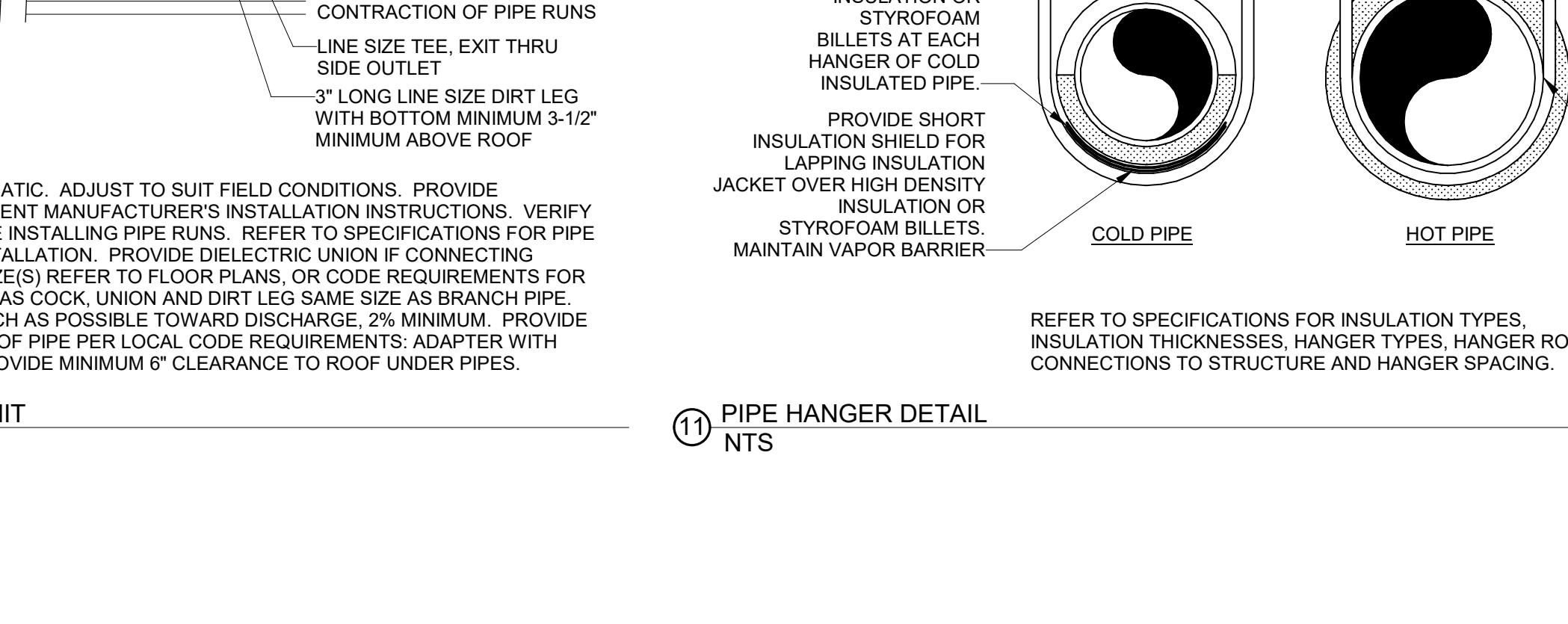
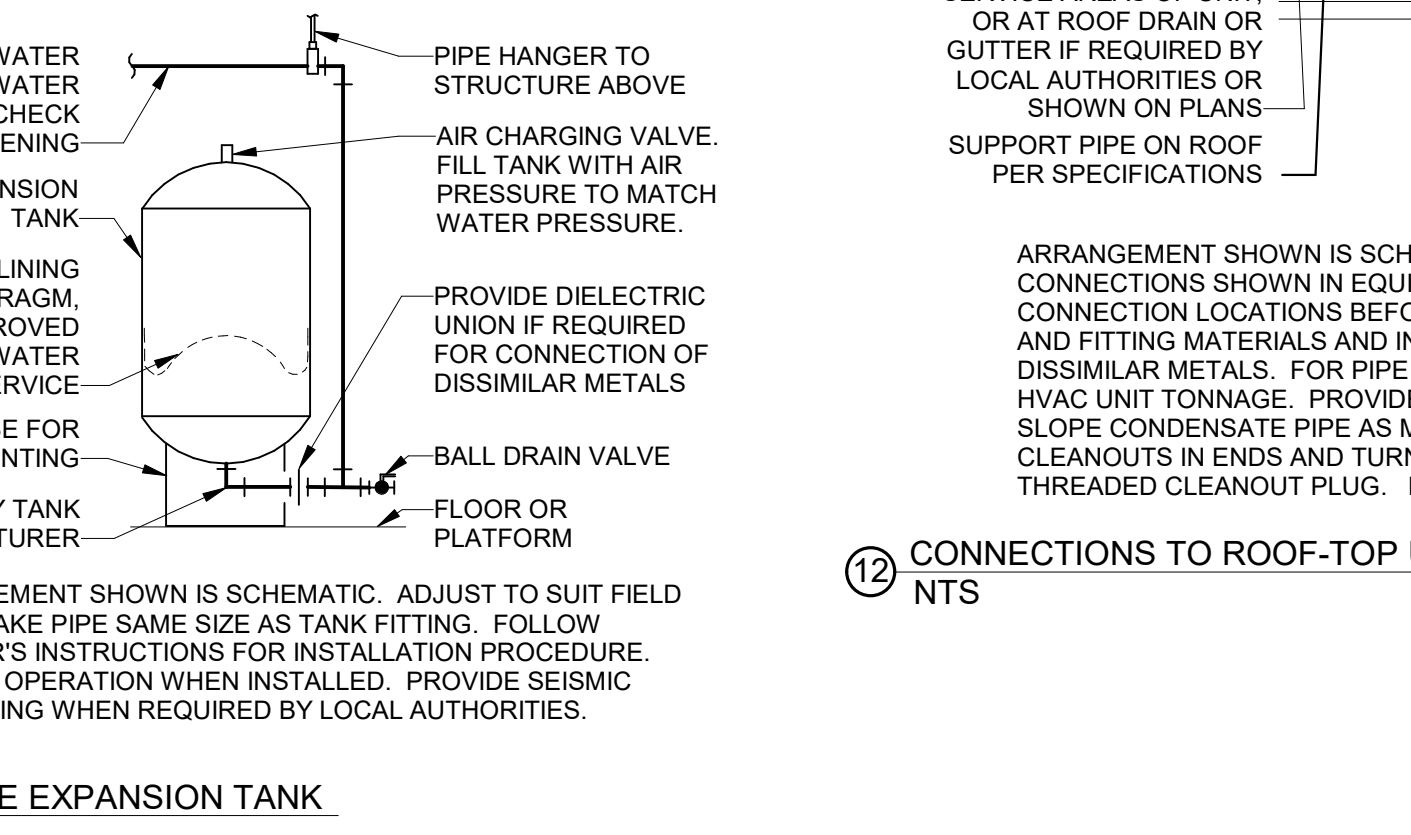
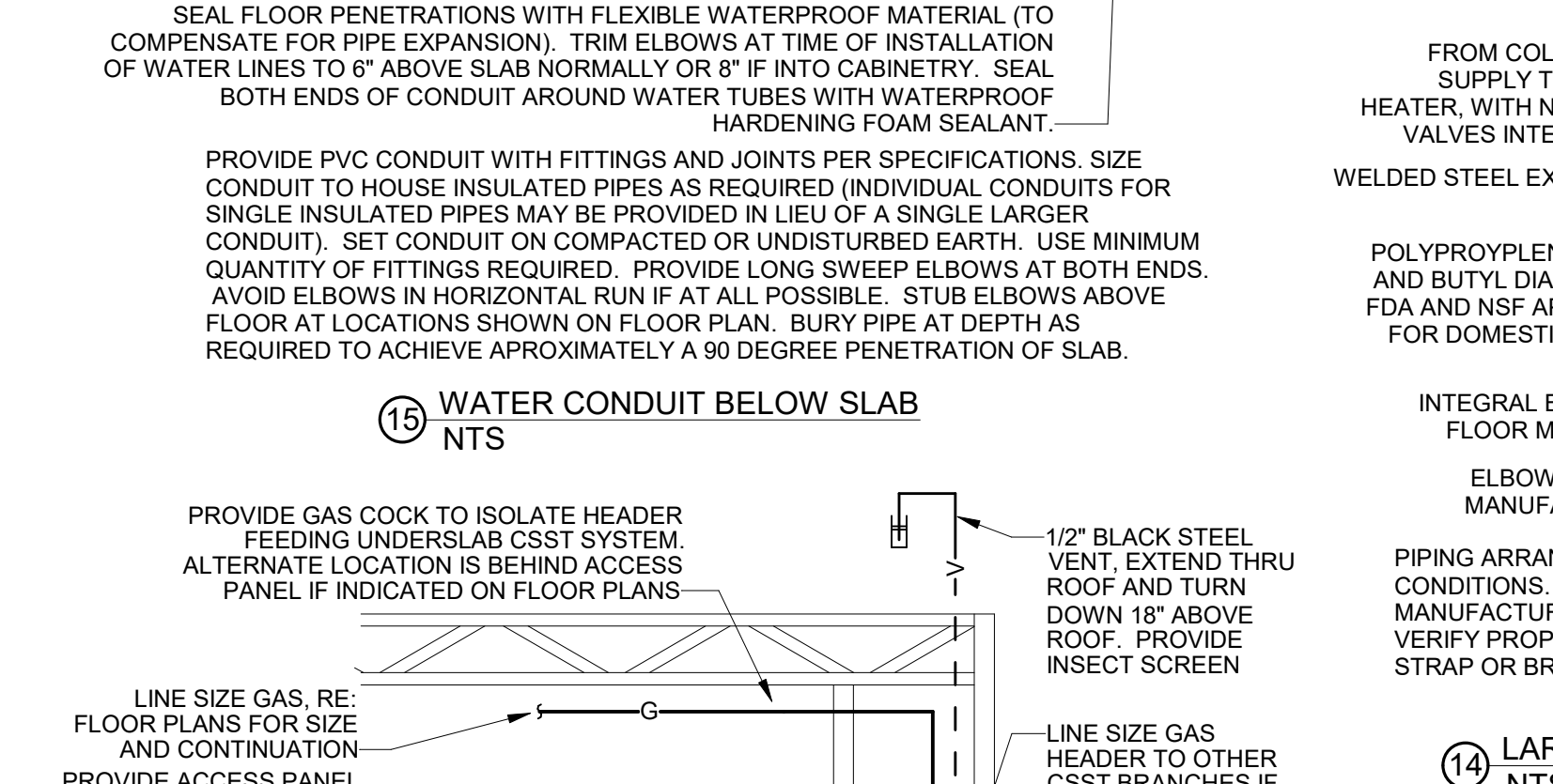
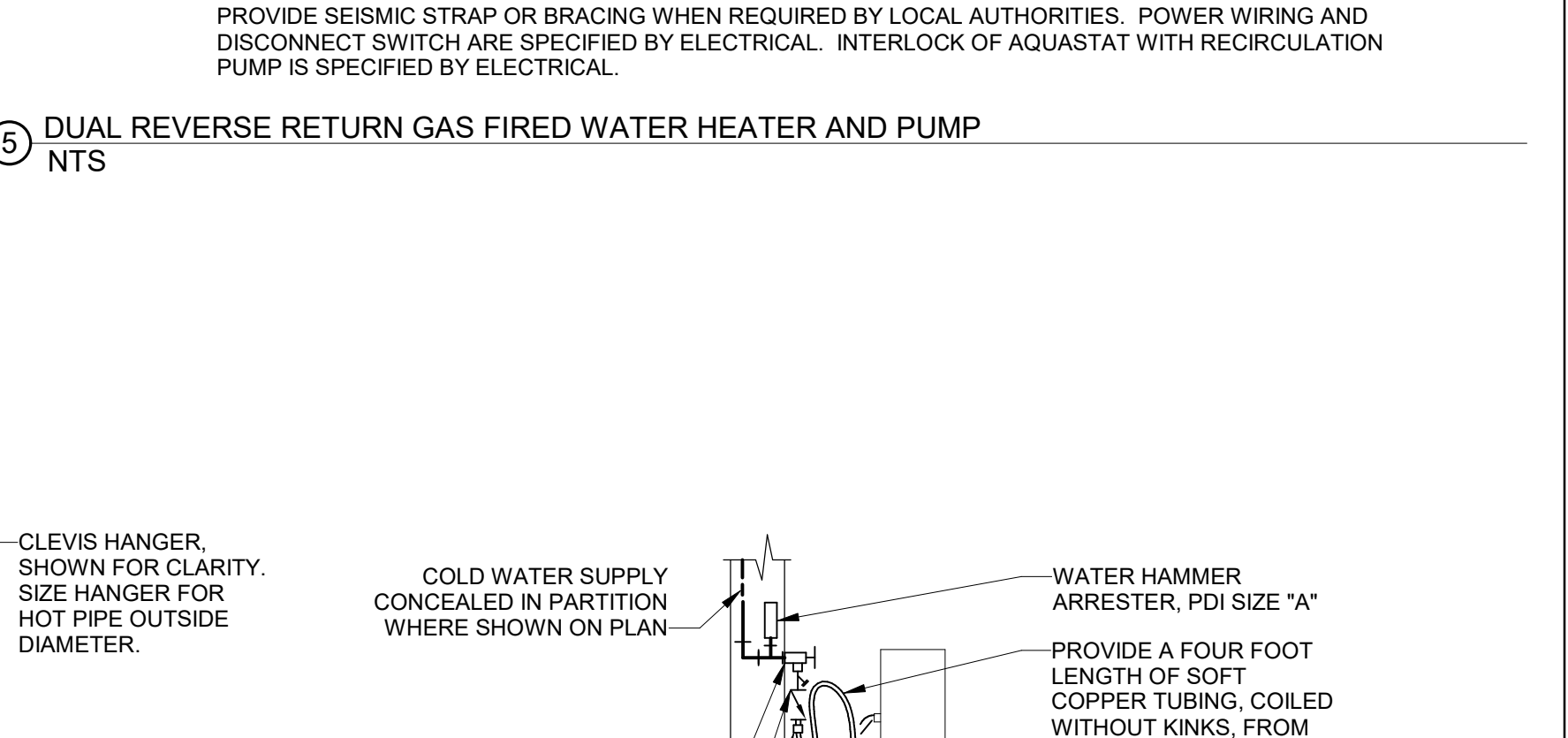
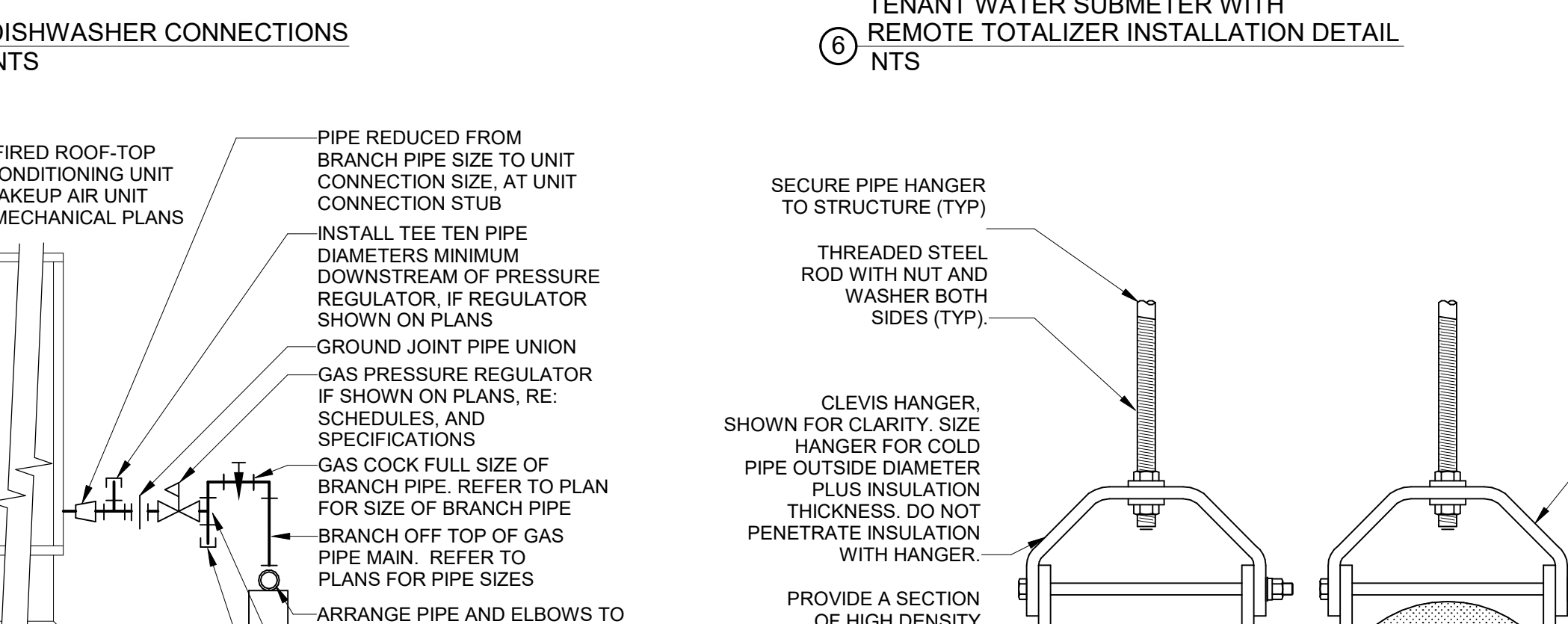
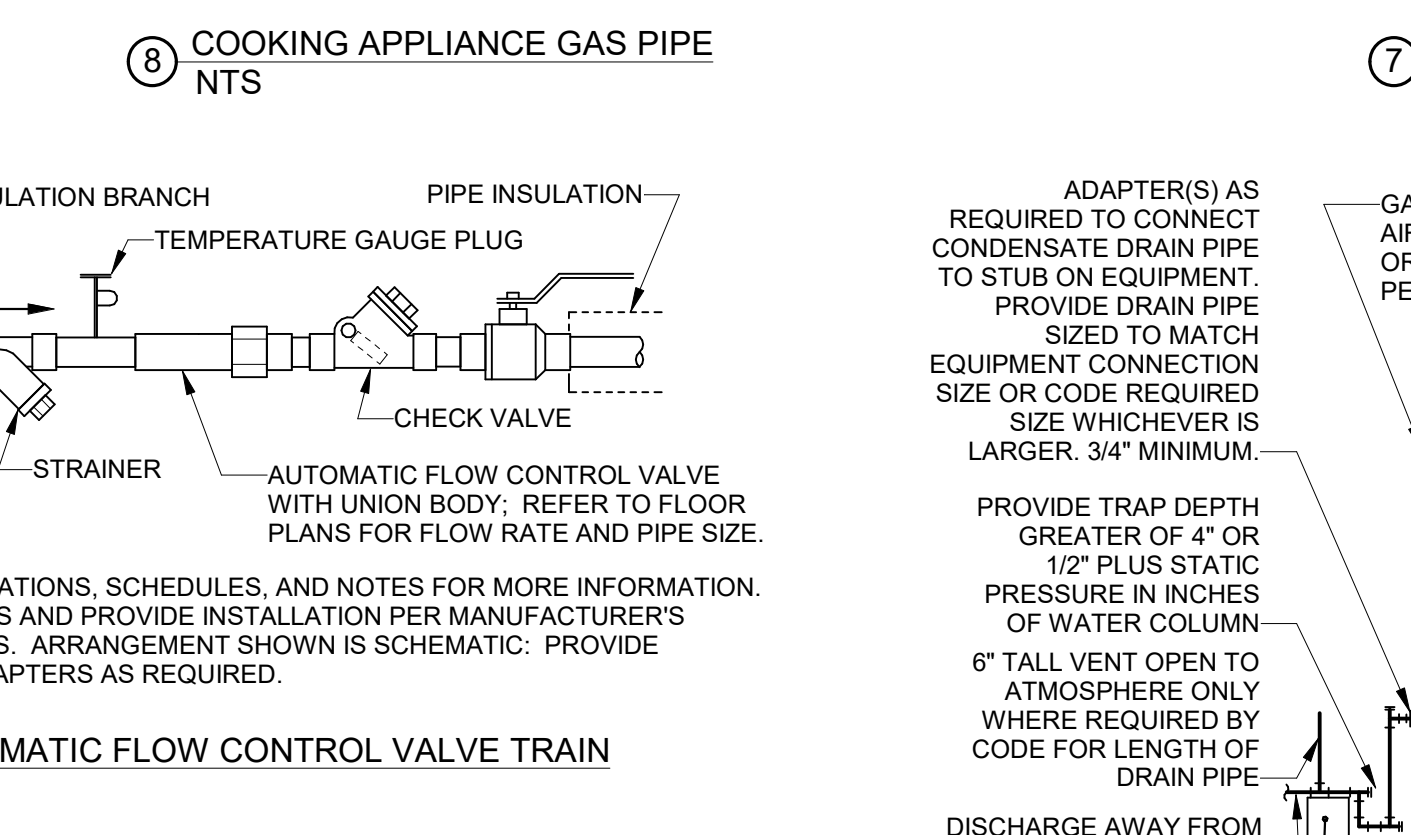
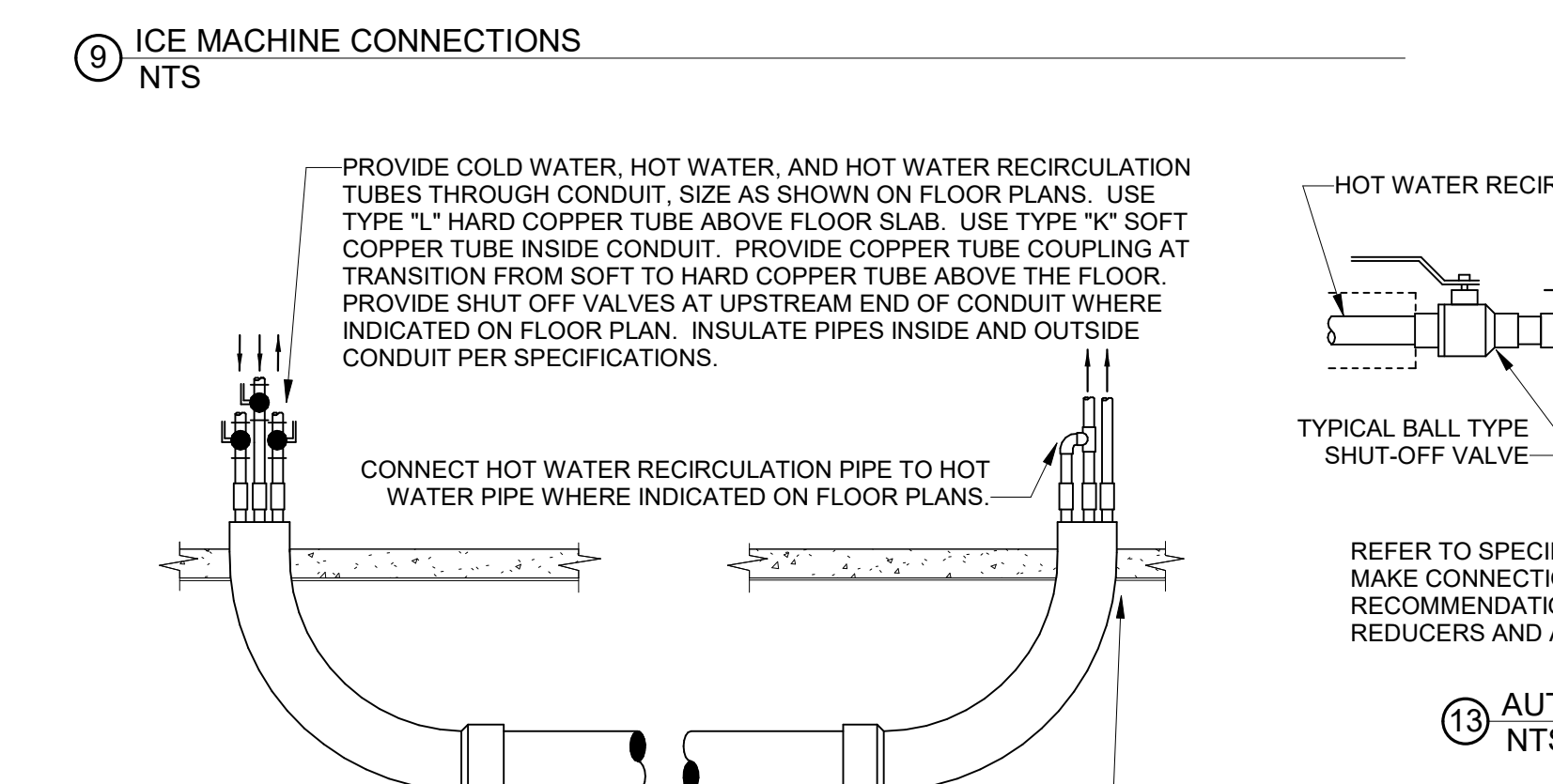
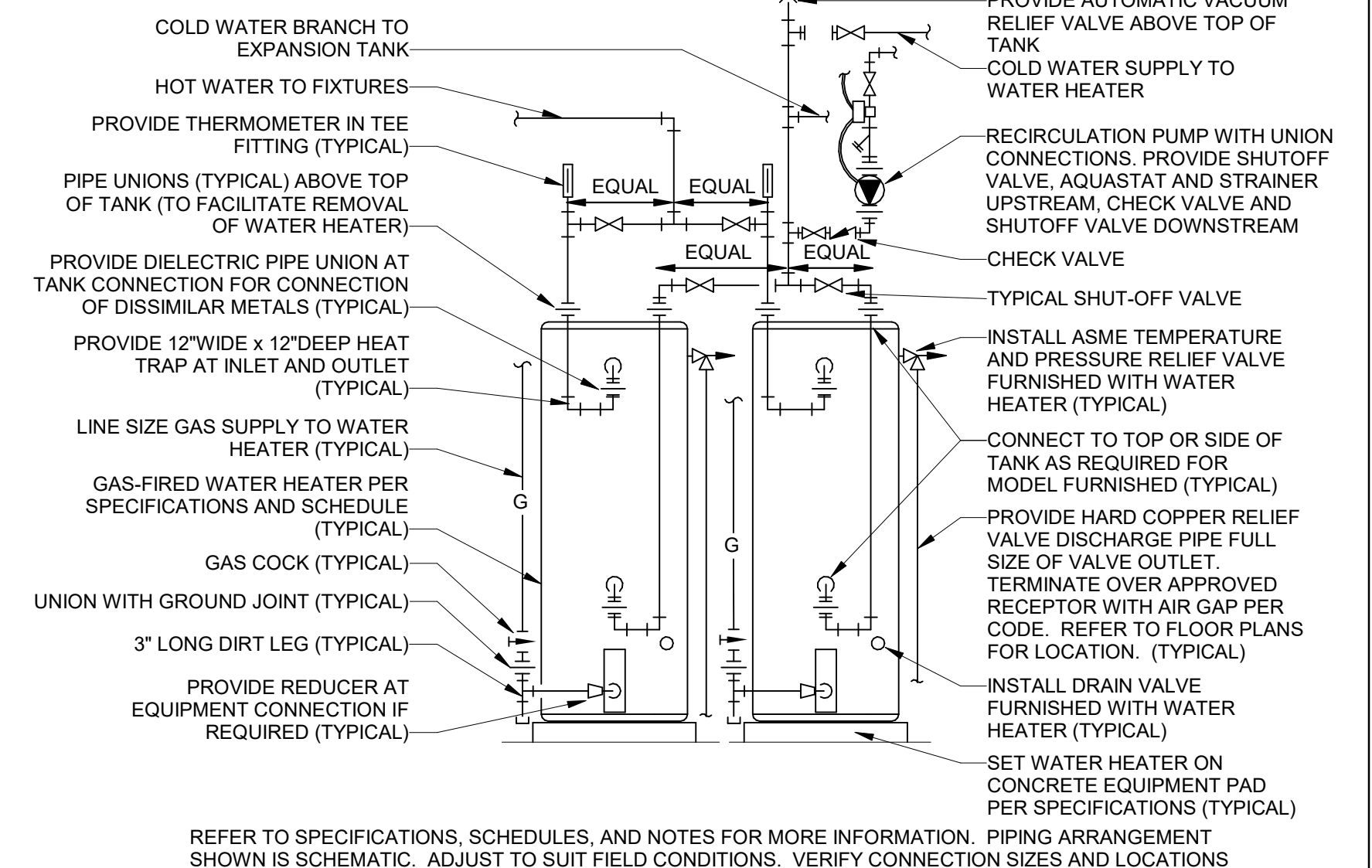
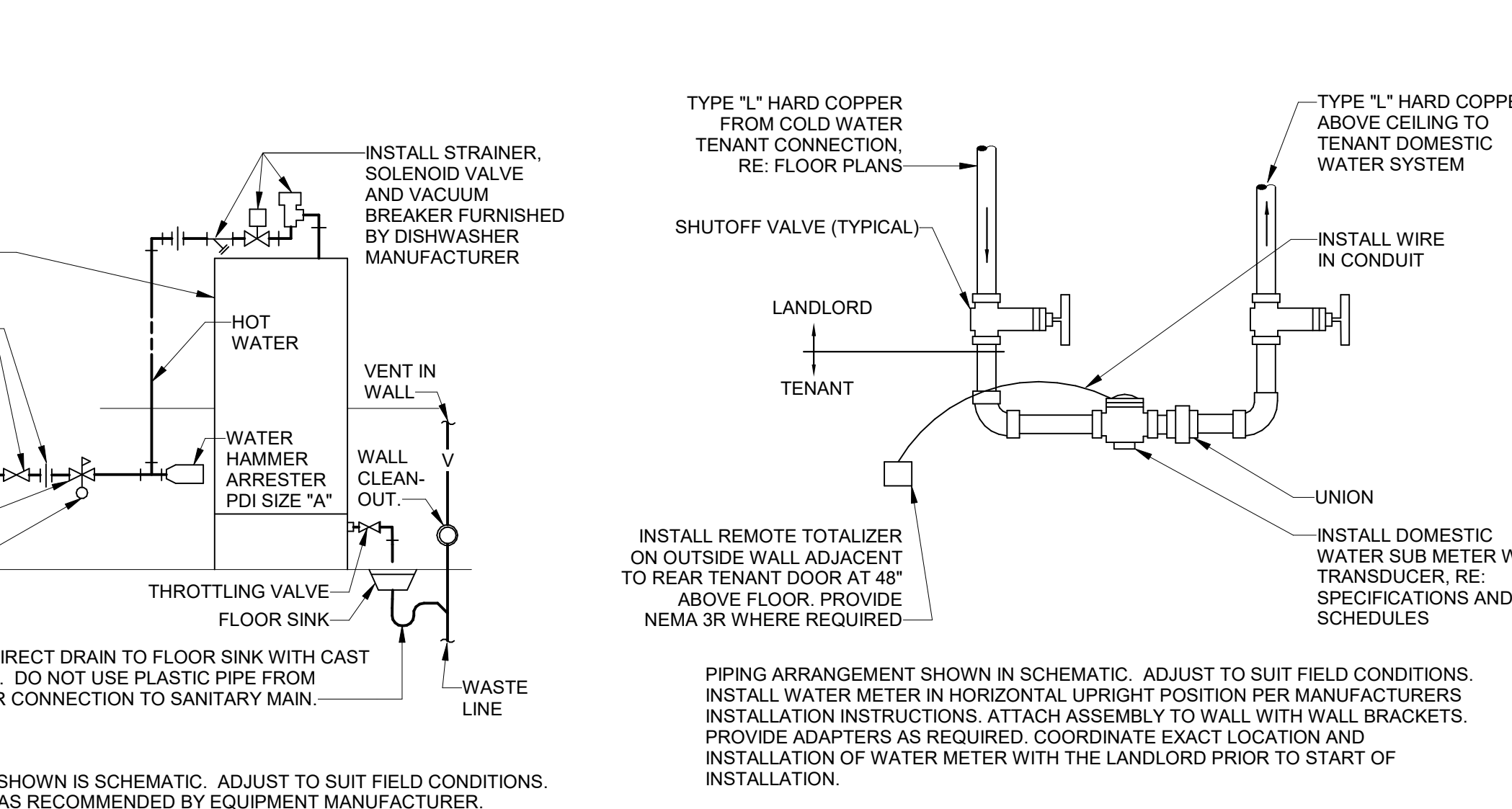
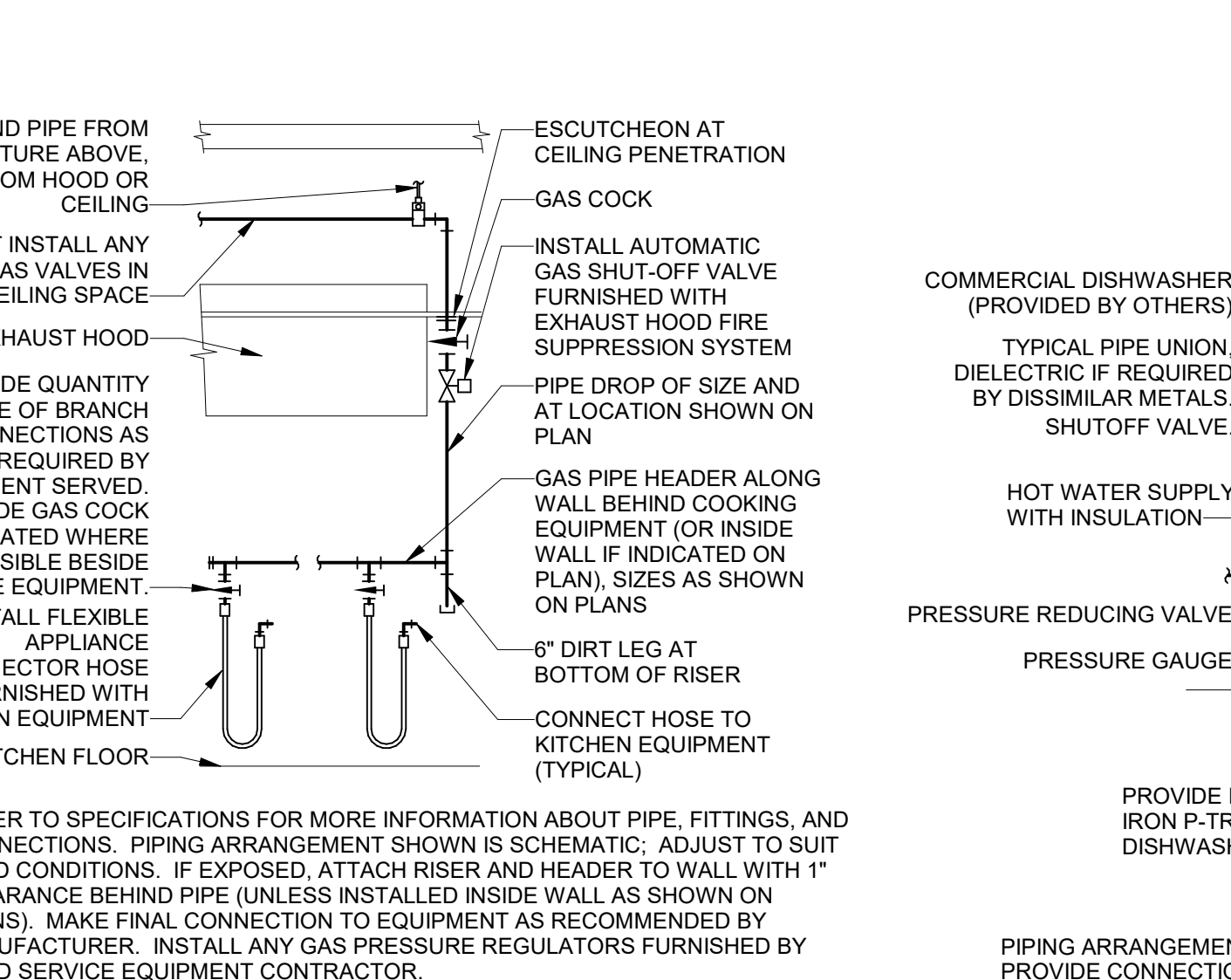
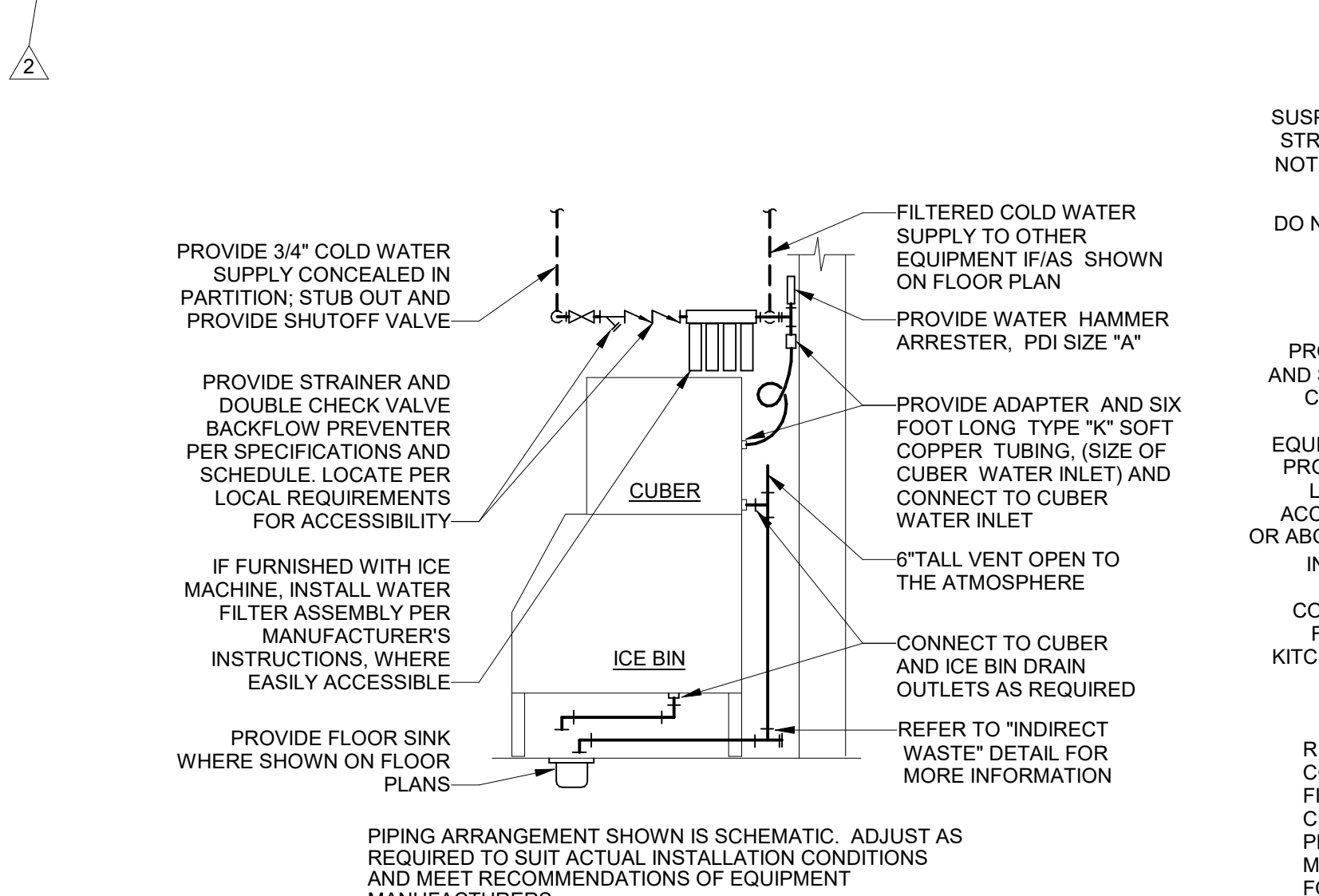
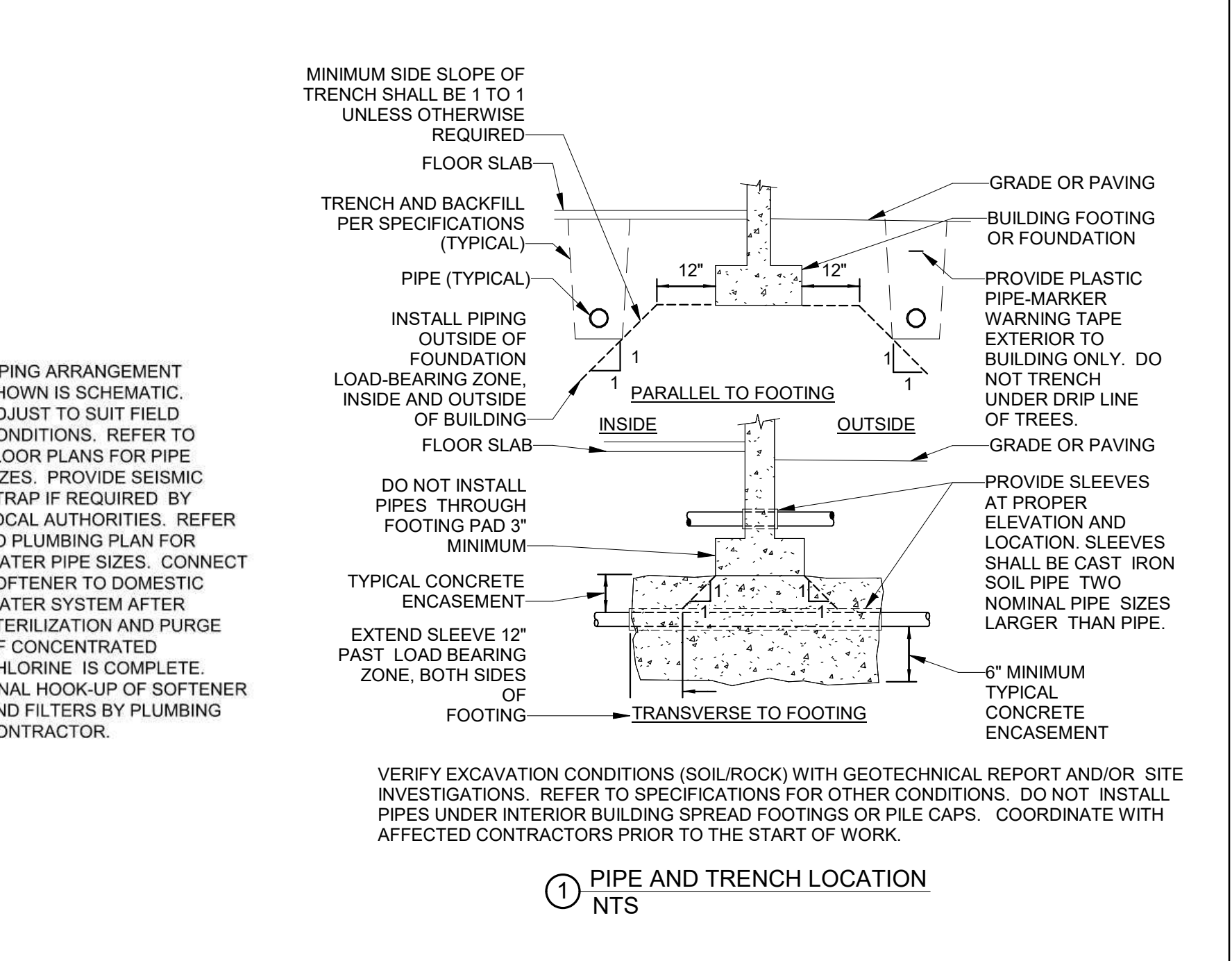
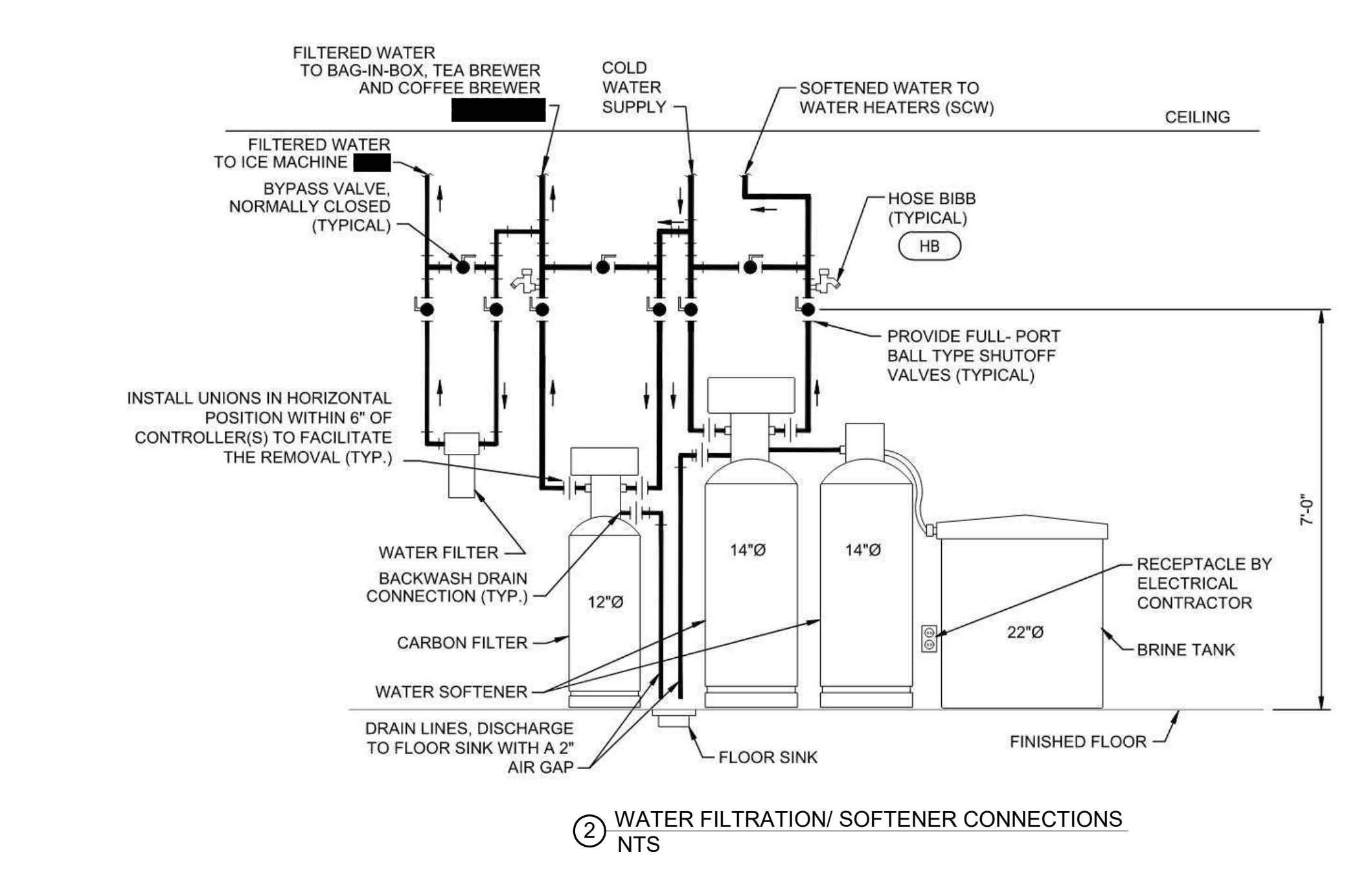
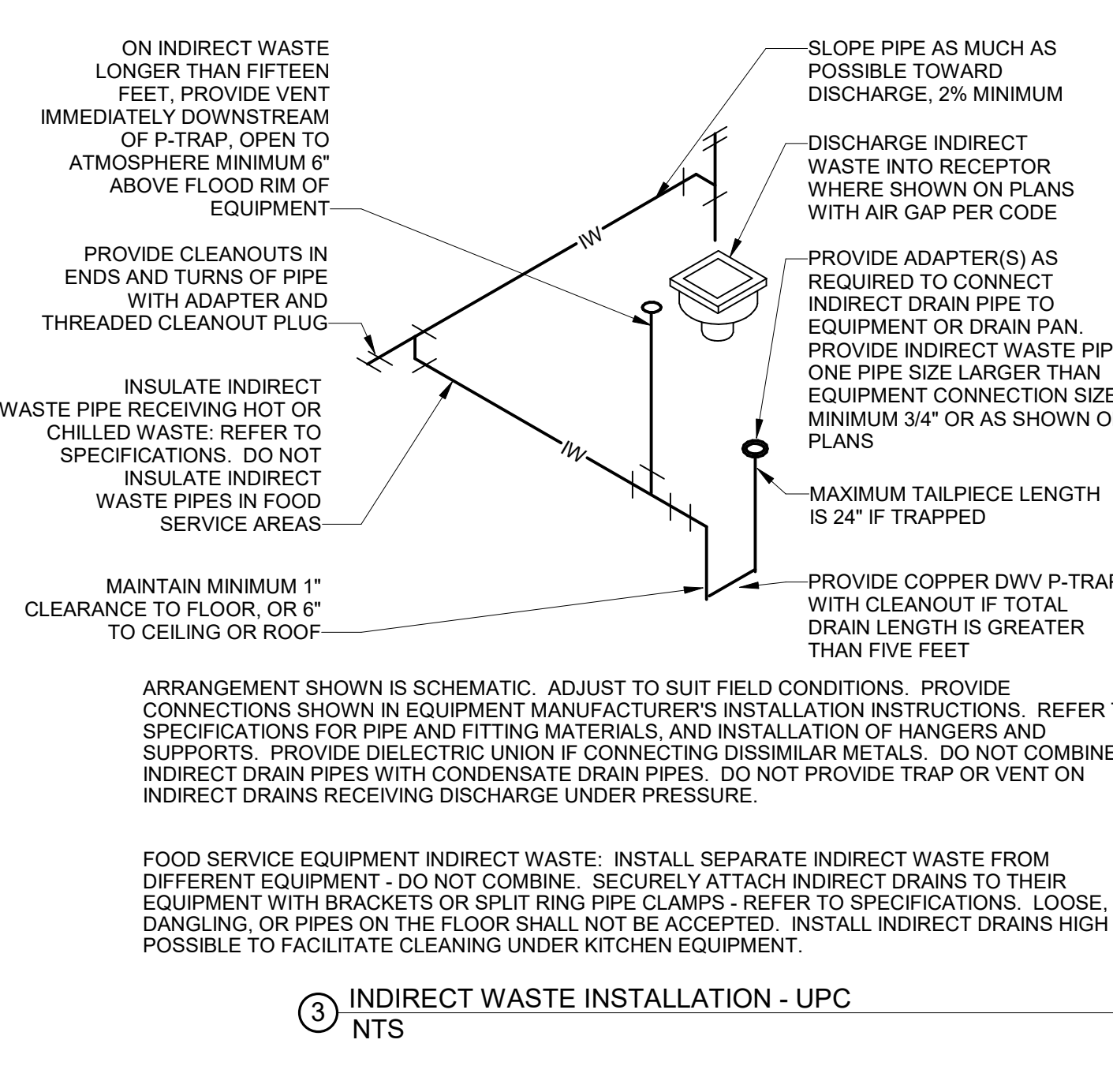
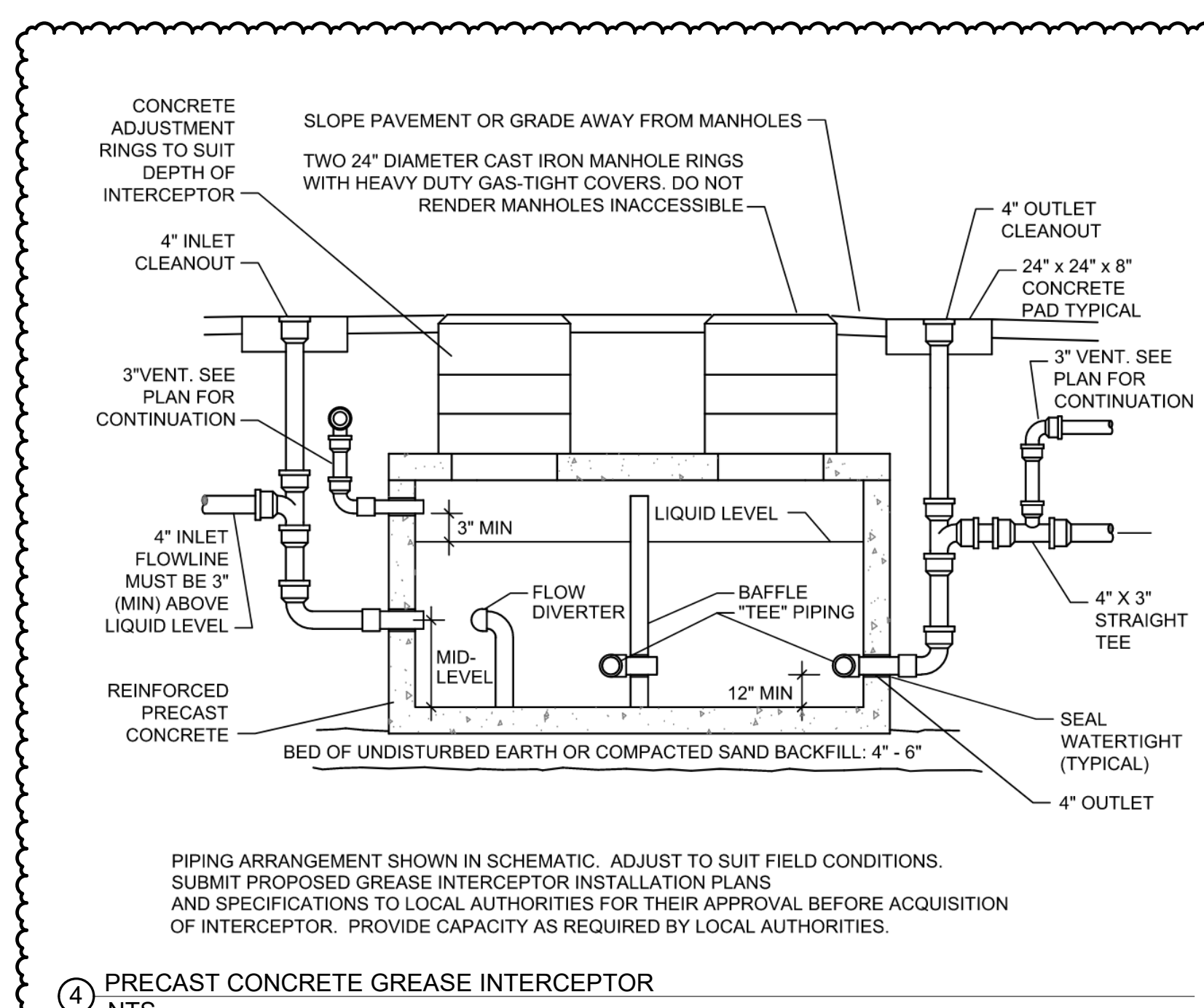
PLUMBING SCHEDULES

Job No. 214735	Drawn NK
-------------------	-------------

Scale	Date Issue Date
-------	--------------------

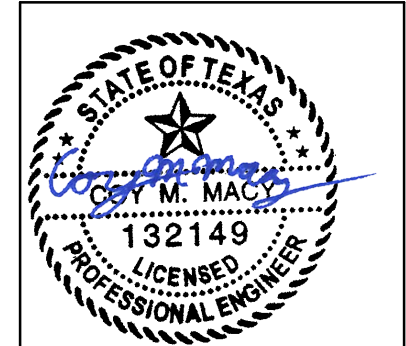
Sheet No.

P-2.0



FIELD VERIFICATION
 Contractor shall verify all figure dimensions and conditions at the job site and notify Ams Group Architects, Inc. of any dimensional errors, omissions or discrepancies before beginning or laboring any work. Do not scale these drawings.
 COPYRIGHT
 Ams Group Architects, Inc. shall retain all copyright, liability and other reserved rights. These drawings and related documents shall not be duplicated, disclosed or otherwise used without consent of Ams Group Architects, Inc.

NO.	DATE	REVISIONS
2	11/17/22	ISSUED FOR CONSTRUCTION
1	08/18/22	PERMIT RESPONSE
	06/23/22	ISSUED FOR PERMIT/BID
	06/15/22	ISSUED FOR AEG REVIEW
	06/08/22	ISSUED FOR RAS REVIEW
	05/23/22	ISSUED FOR LANDLORD REVIEW



11/21/2022

Drawing Title

PLUMBING DETAILS

Job No. 214735 Drawn NK

Scale Date Issue Date

Sheet No.

P-3.0

Division 22: PLUMBING

1. GENERAL REQUIREMENTS

A. GENERAL REQUIREMENTS

All requirements under Division 01 and the general and supplementary conditions of these specifications apply to this section and division. Where the requirements of this section and division exceed those of Division 01, this section and division take precedence. Become thoroughly familiar with all its contents as to requirements that affect this division, section, or both. Work required under this division includes all material, equipment, appliances, transportation, services and labor required to complete the entire system as required by the drawings and specifications, or reasonably inferred to be necessary to facilitate the function of each system as implied by the drawings and the equipment specified.

The specifications and drawings for the Project are complementary, and any portion of work described in one shall be provided as if described in both. In the event of discrepancies, notify the Engineer and request clarification prior to proceeding with the work involved.

Drawings are graphic representations of the work upon which the contract is based. They show the materials and their relationship to one another, including sizes, shapes, locations, and connections. They convey the scope of work, indicating the intended general arrangement of the systems without showing all of the exact details as to fittings, offsets, and other installation requirements. Use the drawings as a guide when laying out the work and to verify that materials and equipment will fit into the designated spaces, which when installed per manufacturers' requirements, will ensure a complete, coordinated, satisfactory, and properly operating system.

B. DEFINITIONS

Division: References contained in this specification follow the numbering system defined in the Construction Specifications Institute (CSI) MasterFormat 2004 Edition. Specification Divisions 01 through 13 provided with this project may reference the CSI MasterFormat 1995 Edition. The corresponding division references between the 2004 Edition and 1995 Edition are as follows:

2004 Edition	1995 Edition
1. Division 21 - Fire Suppression	Division 15
2. Division 22 - HVAC	Division 15
3. Division 23 - HVAC	Division 15
4. Division 26 - Electrical	Division 16
5. Division 27 - Communications	Division 16
6. Division 28 - Electronic Safety and Security	Division 16

Furnish: "to supply and deliver to the project site, ready for unloading, unpacking, assembly, installation and similar operations."

Install: "to perform all operations at the project site including, but not limited to, the actual unloading, unpacking, assembling, erecting, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning, testing, commissioning, starting up and similar operations, complete, and ready for the intended use."

Provide: "to furnish and install, complete and ready for the intended use."

Furnished by Owner (or Owner-Furnished) or Furnished by Others: "an item furnished by the Owner or other divisions or contracts, and installed under the requirements of this division, complete, and ready for the intended use, including all items and materials required for proper installation and operation. Include the installation under the warranty required by this division."

Engineer: Where referenced in this division, "Engineer" is the Engineer of Record and the Design Professional for the work under this division, and is a consultant to, and an authorized representative of the Architect, as defined in the General and/or Supplementary Conditions. When used in this division, Engineer means increased involvement by and obligations to the Engineer, in addition to involvement by and obligations to the Architect.

AHJ: The local code and/or inspection agency (Authority Having Jurisdiction over the work).

NRTL: Nationally recognized testing laboratory, as defined and listed by OSHA in 29 CFR 1910.7 (e.g., UL, ETL, CSA), and acceptable to the AHJ over this project. Nationally recognized testing laboratories and standards listed are used only to represent the characteristics required and are not intended to restrict the use of other NRTLs that are acceptable to the AHJ and standards that meet the specified criteria.

Substitution: Changes in products, materials, equipment, and methods of construction from those required by the Contract Documents and proposed by Contractor. Substitutions include Value Engineering proposals.

A Substitutions for Cause: Changes proposed by Contractor that are required due to changed Project conditions, such as unavailability of product, regulatory changes, or unavailability of required warranty terms.

B Substitutions for Convenience: Changes proposed by Contractor or Owner that are not required in order to meet other Project requirements but may offer advantage to Contractor or Owner.

The terms "approved equal," "equivalent," or "equal" are used synonymously and shall mean "accepted by or acceptable to the Engineer as equivalent to the item or manufacturer specified." The term "approved" shall mean labeled, listed, or both, by an NRTL, and acceptable to the AHJ over this project.

The term lead-free refers to the wetted surface of pipe, fittings and fixtures in potable water systems that have a weighted average lead content of less than or equal to 0.25% per safe drinking water act as amended January 4, 2011 Section 1417.

C. PREBID SITE VISIT

Prior to submitting bid, visit the site of the proposed work and become fully informed as to the conditions under which the work is to be done. Failure to comply with this requirement shall not be considered sufficient justification to request or obtain extra compensation over and above the contract price.

D. MATERIAL AND WORKMANSHIP

Provide new material, equipment, and apparatus under this contract unless otherwise stated herein, of best quality normally used for the purpose in good commercial practice, and free from defects. Install material and equipment in accordance with the manufacturer's installation instructions. Model numbers listed in specifications or shown on the drawings are not necessarily intended to designate the required trim, written descriptions of the trim govern model numbers.

Work performed under this contract shall appear a neat and "workmanlike" appearance when completed, to the satisfaction of the Architect and Engineer. Workmanship shall be the first possible by experienced mechanics. Installations shall comply with applicable codes and laws.

The complete installation shall function as designed and intended with respect to efficiency, capacity, noise level, etc. Abnormal noise caused by rattling equipment, piping and squeaks in rotating components shall not be acceptable. Materials and workmanship shall be of commercial grade and of quality. Light duty and residential grade equipment shall not be accepted unless otherwise indicated.

Remove from the premises waste material present as a result of his work, including cartons, crating, paper, stickers, and/or excavation material not used in backfilling, etc. Clean equipment installed under this contract to present a neat and clean installation at the termination of the work.

Repair or replace public and private property damaged as a result of work performed under this contract to the satisfaction of authorities and regulations having jurisdiction. Provide all safety lights, guards, and warning signs required for the performance of the work and for the safety of the public.

E. MANUFACTURERS

In other articles where lists of manufacturers are introduced, subject to compliance with requirements, provide products by any of the manufacturers specified.

Where a list is provided, manufacturers are listed alphabetically and not in accordance with any ranking or preference.

Where manufacturers are not listed, provide products subject to compliance with requirements from manufacturers that have been actively involved in manufacturing the specified product for no less than 5 years.

F. COORDINATION

Coordinate work with that of other trades so that the various components of the systems are installed at the proper time, will fit the available space, and will allow proper service access to those items requiring maintenance. Components which are installed without regard to the above shall be relocated at no additional cost to the Owner.

Unless otherwise indicated, General Contractor shall provide chases and openings in building construction required for installation of the systems specified herein. Contractor shall furnish the General Contractor with information which chases and openings are to be worked out by the contractor for the necessary release agreement form and in the construction of the project and shall execute his work in such a manner as not to interfere with or delay the work of other trades.

Figured dimensions shall be taken in preference to scaled dimensions. Contractor shall take his own measurements at the building, as variations may occur. Contractor shall be held responsible for errors which could have been avoided by proper checking and verification.

G. ORDINANCES AND CODES

Work performed under this contract shall, at a minimum, be in conformance with applicable national, state and local codes having jurisdiction. Equipment furnished and associated installation work performed under this contract shall be in strict compliance with current applicable codes adopted by the local AHJ, including any amendments and standards as set forth by the following:

- 1. National Fire Protection Association (NFPA)
- 2. Underwriters Laboratories (UL)
- 3. Occupational Safety and Health Administration (OSHA)
- 4. American Society of Mechanical Engineers (ASME)
- 5. American Society of Heating, Refrigeration, and Air Conditioning Engineers (ASHRAE)
- 6. American National Standards Institute (ANSI)
- 7. American Society of Testing Materials (ASTM)
- 8. Other national standards and codes not specifically applicable.

Where the contract documents exceed the requirements of the referenced codes, standards, etc., the contract documents shall take precedence. Where conflicts between various codes, ordinances, rules, and regulations exist, comply with the most stringent.

Promptly bring all conflicts observed between codes, ordinances, rules, regulations, referenced standards, and these documents to the attention of the Architect and Engineer for final resolution. Contractor will be held responsible for any violation of the law.

Procure and pay for permits and licenses required for the accomplishment of the work herein described. Where required, obtain, pay for, and furnish certificates of inspection to Owner.

H. PROTECTION OF EQUIPMENT AND MATERIAL

Store and protect from damage equipment and material after delivery to job site. For materials and equipment susceptible to changing weather conditions, dampness, or temperature variations, store inside in conditioned spaces. For materials and equipment not susceptible to these conditions, cover with waterproof, tear-resistant heavy tarp or polyethylene plastic as required to protect from plaster, dirt, paint, water, or physical damage. Equipment and material damaged by construction activities shall be rejected and Contractor shall furnish new equipment and material of a like kind at his own expense.

Keep premises broad clean of foreign material created during work performed under this contract. Piping, equipment, etc. shall have a neat and clean appearance at the termination of the work.

Plug or cap open ends of piping systems while stored and installed during construction when not in use to prevent the entrance of debris into the systems.

Keep the manufacturer-provided protective coverings on floor drains, floor sinks and trench drains during construction. Remove coverings at the termination of the work and polish exposed surfaces.

I. SUBSTITUTIONS

Materials, products, equipment, and systems described in the Bidding Documents establish a standard of required function, dimension, appearance, and performance to be met by the proposed substitution. The issue bid shall include only the products from manufacturers specifically named in the drawings and specifications. To submit a substitution, request the Substitution Request Form from the Architect or Engineer. Complete and send the Substitution Request Form to each material, product, or system that is proposed to be substituted. The burden of proof of the merit of the proposed substitution is upon the proposer.

Unless stated otherwise in writing to the Engineer by the Contractor, Contractor warrants to the Engineer, Architect, and Owner the following:

- 1. Proposed substitution has been fully investigated and determined to meet or exceed the specified Work in all respects unless stated otherwise in a substitution request.
- 2. Proposed substitution is consistent with the Contract Documents and will produce indicated results, including functional clearances, maintenance service, and sourcing of replacement parts.
- 3. Proposed substitution is not required necessary approval of authority having jurisdiction.
- 4. Same warranty will be furnished for proposed substitution as for specified Work.
- 5. If approved substitution fails to perform as required, Contractor shall replace substitute material or system with that originally specified and bear costs of replacement.
- 6. Coordination, installation and changes in the Work as necessary for accepted substitution will be complete in all respects.

No substitutions will be considered unless the Substitution Request Form is completed and attached with the appropriate substitution documentation. No substitution will be considered prior to receipt of bids unless written request for approval to bid has been received by the Engineer at least ten (10) calendar days prior to the date for receipt of bids.

If the proposed substitution is approved prior to receipt of bids, such approval will be stated in an addendum. Bidders shall not rely upon approvals made in any other way. Verbal approval will not be given. No substitutions will be considered after the contract is awarded unless specifically provided in the contract documents.

J. SUBMITTALS

Assemble and submit for review shop drawings, material lists, manufacturer product literature for equipment to be furnished, and items requiring coordination between contractors under this contract. Provide submittals in sufficient detail so as to demonstrate compliance with these Contract Documents and the design concept. This coordination shall be submitted to the Engineer. The equipment submitted is mutually compatible and suitable for the intended use, will fit the available space, and maintain manufacturer recommended service clearances. If the size of equipment furnished makes necessary any change in location or configuration, submit a shop drawing showing the proposed layout.

Transmit submittals as early as required to support the project schedule. Allow for two weeks Engineer review time plus time for mailing time via the Architect, plus a duplication of this time for resubmittal, if required. Only resubmit those sections required for resubmittal.

Submittals shall contain the project name, applicable specification section, submittal date, equipment identification accuracy as used on the drawings, and the Contractor's stamp. The stamp shall certify that the submittal has been checked by the Contractor against the drawings and specifications, and is coordinated with other trades. Manufacturer product literature shall include shop drawings, product data, performance sheets, samples and other submittals required by this division. Highlight, mark, list, or indicate the materials, performance criteria, and accessories that are to be provided. General product catalog data not specifically noted to be part of the specified product will be rejected and returned without review.

Submittals and shop drawings shall not contain the firm name, logo, seal, or signature of the Engineer. They shall not be copies of the work product of the Engineer. If the Contractor desires to use elements of such product, refer to paragraph "Electronic Drawing Files" for procedures to be used.

Separate submittals according to individual specification sections. Illegible submittals will be rejected and returned without review. Catalog data shall be properly bound, identified, indexed and tabbed in a 3-ring binder. Each item must be clearly identified with the drawings and specifications, and is coordinated with other trades. Identification accuracy or number as used on the drawings and include performance factors, capacities, sizes, weights, materials, finishes, wiring diagrams, electrical requirements and deviations from specified equipment or materials. For equipment with motor starters or VFDs, include short circuit current ratings. Mark out inapplicable items. Shop drawings will be returned without review if the above mentioned requirements are not met.

Provide the quantity of submittals required by Division 01. If not indicated and hard-copy sets are provided, submit a minimum of six (6) copies. Refer to Division 01 for acceptance of electronic submittals for this project. For electronic submittals, Contractor shall submit the documents in accordance with the procedures specified in Division 01. Contractor shall not submit the documents in accordance with the procedures specified in Division 01. Contractor shall not submit the documents in accordance with the procedures specified in Division 01. Contractor shall not submit the documents in accordance with the procedures specified in Division 01.

The checking and subsequent acceptance of submittals by the Engineer and/or Architect shall not relieve the Contractor from responsibility for deviations from the drawings and specifications, errors in dimensions, details, size of members, or quantities, omissions, and/or omissions. The Contractor shall be responsible for coordinating items with adjacent building conditions and adjacent work. Proceed with the procurement and installation of equipment only after receiving approved shop drawings relative to each item.

Provide the quantity of submittals required by Division 01. If not indicated and hard-copy sets are provided, submit a minimum of six (6) copies. Refer to Division 01 for acceptance of electronic submittals for this project. For electronic submittals, Contractor shall submit the documents in accordance with the procedures specified in Division 01. Contractor shall not submit the documents in accordance with the procedures specified in Division 01. Contractor shall not submit the documents in accordance with the procedures specified in Division 01.

The checking and subsequent acceptance of submittals by the Engineer and/or Architect shall not relieve the Contractor from responsibility for deviations from the drawings and specifications, errors in dimensions, details, size of members, or quantities, omissions, and/or omissions. The Contractor shall be responsible for coordinating items with adjacent building conditions and adjacent work. Proceed with the procurement and installation of equipment only after receiving approved shop drawings relative to each item.

Provide the quantity of submittals required by Division 01. If not indicated and hard-copy sets are provided, submit a minimum of six (6) copies. Refer to Division 01 for acceptance of electronic submittals for this project. For electronic submittals, Contractor shall submit the documents in accordance with the procedures specified in Division 01. Contractor shall not submit the documents in accordance with the procedures specified in Division 01. Contractor shall not submit the documents in accordance with the procedures specified in Division 01.

The checking and subsequent acceptance of submittals by the Engineer and/or Architect shall not relieve the Contractor from responsibility for deviations from the drawings and specifications, errors in dimensions, details, size of members, or quantities, omissions, and/or omissions. The Contractor shall be responsible for coordinating items with adjacent building conditions and adjacent work. Proceed with the procurement and installation of equipment only after receiving approved shop drawings relative to each item.

Provide the quantity of submittals required by Division 01. If not indicated and hard-copy sets are provided, submit a minimum of six (6) copies. Refer to Division 01 for acceptance of electronic submittals for this project. For electronic submittals, Contractor shall submit the documents in accordance with the procedures specified in Division 01. Contractor shall not submit the documents in accordance with the procedures specified in Division 01. Contractor shall not submit the documents in accordance with the procedures specified in Division 01.

The checking and subsequent acceptance of submittals by the Engineer and/or Architect shall not relieve the Contractor from responsibility for deviations from the drawings and specifications, errors in dimensions, details, size of members, or quantities, omissions, and/or omissions. The Contractor shall be responsible for coordinating items with adjacent building conditions and adjacent work. Proceed with the procurement and installation of equipment only after receiving approved shop drawings relative to each item.

Provide the quantity of submittals required by Division 01. If not indicated and hard-copy sets are provided, submit a minimum of six (6) copies. Refer to Division 01 for acceptance of electronic submittals for this project. For electronic submittals, Contractor shall submit the documents in accordance with the procedures specified in Division 01. Contractor shall not submit the documents in accordance with the procedures specified in Division 01. Contractor shall not submit the documents in accordance with the procedures specified in Division 01.

The checking and subsequent acceptance of submittals by the Engineer and/or Architect shall not relieve the Contractor from responsibility for deviations from the drawings and specifications, errors in dimensions, details, size of members, or quantities, omissions, and/or omissions. The Contractor shall be responsible for coordinating items with adjacent building conditions and adjacent work. Proceed with the procurement and installation of equipment only after receiving approved shop drawings relative to each item.

Provide the quantity of submittals required by Division 01. If not indicated and hard-copy sets are provided, submit a minimum of six (6) copies. Refer to Division 01 for acceptance of electronic submittals for this project. For electronic submittals, Contractor shall submit the documents in accordance with the procedures specified in Division 01. Contractor shall not submit the documents in accordance with the procedures specified in Division 01. Contractor shall not submit the documents in accordance with the procedures specified in Division 01.

The checking and subsequent acceptance of submittals by the Engineer and/or Architect shall not relieve the Contractor from responsibility for deviations from the drawings and specifications, errors in dimensions, details, size of members, or quantities, omissions, and/or omissions. The Contractor shall be responsible for coordinating items with adjacent building conditions and adjacent work. Proceed with the procurement and installation of equipment only after receiving approved shop drawings relative to each item.

Provide the quantity of submittals required by Division 01. If not indicated and hard-copy sets are provided, submit a minimum of six (6) copies. Refer to Division 01 for acceptance of electronic submittals for this project. For electronic submittals, Contractor shall submit the documents in accordance with the procedures specified in Division 01. Contractor shall not submit the documents in accordance with the procedures specified in Division 01. Contractor shall not submit the documents in accordance with the procedures specified in Division 01.

The checking and subsequent acceptance of submittals by the Engineer and/or Architect shall not relieve the Contractor from responsibility for deviations from the drawings and specifications, errors in dimensions, details, size of members, or quantities, omissions, and/or omissions. The Contractor shall be responsible for coordinating items with adjacent building conditions and adjacent work. Proceed with the procurement and installation of equipment only after receiving approved shop drawings relative to each item.

Provide the quantity of submittals required by Division 01. If not indicated and hard-copy sets are provided, submit a minimum of six (6) copies. Refer to Division 01 for acceptance of electronic submittals for this project. For electronic submittals, Contractor shall submit the documents in accordance with the procedures specified in Division 01. Contractor shall not submit the documents in accordance with the procedures specified in Division 01. Contractor shall not submit the documents in accordance with the procedures specified in Division 01.

The checking and subsequent acceptance of submittals by the Engineer and/or Architect shall not relieve the Contractor from responsibility for deviations from the drawings and specifications, errors in dimensions, details, size of members, or quantities, omissions, and/or omissions. The Contractor shall be responsible for coordinating items with adjacent building conditions and adjacent work. Proceed with the procurement and installation of equipment only after receiving approved shop drawings relative to each item.

Provide the quantity of submittals required by Division 01. If not indicated and hard-copy sets are provided, submit a minimum of six (6) copies. Refer to Division 01 for acceptance of electronic submittals for this project. For electronic submittals, Contractor shall submit the documents in accordance with the procedures specified in Division 01. Contractor shall not submit the documents in accordance with the procedures specified in Division 01. Contractor shall not submit the documents in accordance with the procedures specified in Division 01.

The checking and subsequent acceptance of submittals by the Engineer and/or Architect shall not relieve the Contractor from responsibility for deviations from the drawings and specifications, errors in dimensions, details, size of members, or quantities, omissions, and/or omissions. The Contractor shall be responsible for coordinating items with adjacent building conditions and adjacent work. Proceed with the procurement and installation of equipment only after receiving approved shop drawings relative to each item.

Provide the quantity of submittals required by Division 01. If not indicated and hard-copy sets are provided, submit a minimum of six (6) copies. Refer to Division 01 for acceptance of electronic submittals for this project. For electronic submittals, Contractor shall submit the documents in accordance with the procedures specified in Division 01. Contractor shall not submit the documents in accordance with the procedures specified in Division 01. Contractor shall not submit the documents in accordance with the procedures specified in Division 01.

The checking and subsequent acceptance of submittals by the Engineer and/or Architect shall not relieve the Contractor from responsibility for deviations from the drawings and specifications, errors in dimensions, details, size of members, or quantities, omissions, and/or omissions. The Contractor shall be responsible for coordinating items with adjacent building conditions and adjacent work. Proceed with the procurement and installation of equipment only after receiving approved shop drawings relative to each item.

Provide the quantity of submittals required by Division 01. If not indicated and hard-copy sets are provided, submit a minimum of six (6) copies. Refer to Division 01 for acceptance of electronic submittals for this project. For electronic submittals, Contractor shall submit the documents in accordance with the procedures specified in Division 01. Contractor shall not submit the documents in accordance with the procedures specified in Division 01. Contractor shall not submit the documents in accordance with the procedures specified in Division 01.

The checking and subsequent acceptance of submittals by the Engineer and/or Architect shall not relieve the Contractor from responsibility for deviations from the drawings and specifications, errors in dimensions, details, size of members, or quantities, omissions, and/or omissions. The Contractor shall be responsible for coordinating items with adjacent building conditions and adjacent work. Proceed with the procurement and installation of equipment only after receiving approved shop drawings relative to each item.

Provide the quantity of submittals required by Division 01. If not indicated and hard-copy sets are provided, submit a minimum of six (6) copies. Refer to Division 01 for acceptance of electronic submittals for this project. For electronic submittals, Contractor shall submit the documents in accordance with the procedures specified in Division 01. Contractor shall not submit the documents in accordance with the procedures specified in Division 01. Contractor shall not submit the documents in accordance with the procedures specified in Division 01.

The checking and subsequent acceptance of submittals by the Engineer and/or Architect shall not relieve the Contractor from responsibility for deviations from the drawings and specifications, errors in dimensions, details, size of members, or quantities, omissions, and/or omissions. The Contractor shall be responsible for coordinating items with adjacent building conditions and adjacent work. Proceed with the procurement and installation of equipment only after receiving approved shop drawings relative to each item.

Provide the quantity of submittals required by Division 01. If not indicated and hard-copy sets are provided, submit a minimum of six (6) copies. Refer to Division 01 for acceptance of electronic submittals for this project. For electronic submittals, Contractor shall submit the documents in accordance with the procedures specified in Division 01. Contractor shall not submit the documents in accordance with the procedures specified in Division 01. Contractor shall not submit the documents in accordance with the procedures specified in Division 01.

The checking and subsequent acceptance of submittals by the Engineer and/or Architect shall not relieve the Contractor from responsibility for deviations from the drawings and specifications, errors in dimensions, details, size of members, or quantities, omissions, and/or omissions. The Contractor shall be responsible for coordinating items with adjacent building conditions and adjacent work. Proceed with the procurement and installation of equipment only after receiving approved shop drawings relative to each item.

Provide the quantity of submittals required by Division 01. If not indicated and hard-copy sets are provided, submit a minimum of six (6) copies. Refer to Division 01 for acceptance of electronic submittals for this project. For electronic submittals, Contractor shall submit the documents in accordance with the procedures specified in Division 01. Contractor shall not submit the documents in accordance with the procedures specified in Division 01. Contractor shall not submit the documents in accordance with the procedures specified in Division 01.

The checking and subsequent acceptance of submittals by the Engineer and/or Architect shall not relieve the Contractor from responsibility for deviations from the drawings and specifications, errors in dimensions, details, size of members, or quantities, omissions, and/or omissions. The Contractor shall be responsible for coordinating items with adjacent building conditions and adjacent work. Proceed with the procurement and installation of equipment only after receiving approved shop drawings relative to each item.

Provide the quantity of submittals required by Division 01. If not indicated and hard-copy sets are provided, submit a minimum of six (6) copies. Refer to Division 01 for acceptance of electronic submittals for this project. For electronic submittals, Contractor shall submit the documents in accordance with the procedures specified in Division 01. Contractor shall not submit the documents in accordance with the procedures specified in Division 01. Contractor shall not submit the documents in accordance with the procedures specified in Division 01.

The checking and subsequent acceptance of submittals by the Engineer and/or Architect shall not relieve the Contractor from responsibility for deviations from the drawings and specifications, errors in dimensions, details, size of members, or quantities, omissions, and/or omissions. The Contractor shall be responsible for coordinating items with adjacent building conditions and adjacent work. Proceed with the procurement and installation of equipment only after receiving approved shop drawings relative to each item.

Provide the quantity of submittals required by Division 01. If not indicated and hard-copy sets are provided, submit a minimum of six (6) copies. Refer to Division 01 for acceptance of electronic submittals for this project. For electronic submittals, Contractor shall submit the documents in accordance with the procedures specified in Division 01. Contractor shall not submit the documents in accordance with the procedures specified in Division 01. Contractor shall not submit the documents in accordance with the procedures specified in Division 01.

The checking and subsequent acceptance of submittals by the Engineer and/or Architect shall not relieve the Contractor from responsibility for deviations from the drawings and specifications, errors in dimensions, details, size of members, or quantities, omissions, and/or omissions. The Contractor shall be responsible for coordinating items with adjacent building conditions and adjacent work. Proceed with the procurement and installation of equipment only after receiving approved shop drawings relative to each item.

Provide the quantity of submittals required by Division 01. If not indicated and hard-copy sets are provided, submit a minimum of six (6) copies. Refer to Division 01 for acceptance of electronic submittals for this project. For electronic submittals, Contractor shall submit the documents in accordance with the procedures specified in Division 01. Contractor shall not submit the documents in accordance with the procedures specified in Division 01. Contractor shall not submit the documents in accordance with the procedures specified in Division 01.

The checking and subsequent acceptance of submittals by the Engineer and/or Architect shall not relieve the Contractor from responsibility for deviations from the drawings and specifications, errors in dimensions, details, size of members, or quantities, omissions, and/or omissions. The Contractor shall be responsible for coordinating items with adjacent building conditions and adjacent work. Proceed with the procurement and installation of equipment only after receiving approved shop drawings relative to each item.

Provide the quantity of submittals required by Division 01. If not indicated and hard-copy sets are provided, submit a minimum of six (6) copies. Refer to Division 01 for acceptance of electronic submittals for this project. For electronic submittals, Contractor shall submit the documents in accordance with the procedures specified in Division 01. Contractor shall not submit the documents in accordance with the procedures specified in Division 01. Contractor shall not submit the documents in accordance with the procedures specified in Division 01.

The checking and subsequent acceptance of submittals by the Engineer and/or Architect shall not relieve the Contractor from responsibility for deviations from the drawings and specifications, errors in dimensions, details, size of members, or quantities, omissions, and/or omissions. The Contractor shall be responsible for coordinating items with adjacent building conditions and adjacent work. Proceed with the procurement and installation of equipment only after receiving approved shop drawings relative to each item.

Provide the quantity of submittals required by Division 01. If not indicated and hard-copy sets are provided, submit a minimum of six (6) copies. Refer to Division 01 for acceptance of electronic submittals for this project. For electronic submittals, Contractor shall submit the documents in accordance with the procedures specified in Division 01. Contractor shall not submit the documents in accordance with the procedures specified in Division 01. Contractor shall not submit the documents in accordance with the procedures specified in Division 01.

The checking and subsequent acceptance of submittals by the Engineer and/or Architect shall not relieve the Contractor from responsibility for deviations from the drawings and specifications, errors in dimensions, details, size of members, or quantities, omissions, and/or omissions. The Contractor shall be responsible for coordinating items with adjacent building conditions and adjacent work. Proceed with the procurement and installation of equipment only after receiving approved shop drawings relative to each item.

C. EXCAVATION AND BACKFILLING

Perform excavation and backfill required for installation of underground work under this contract. Trenches shall be of sufficient width, crib and brace trenches to prevent cave-in or settlement. Do not excavate trenches close to columns and walls of new building without prior consultation with the architect. Use pumping equipment if required to keep trenches free of water. Backfill trenches in maximum 6 inch layers of well-tamped dry earth in a manner to prevent future settlement.

Excavation as specified herein shall be classified as common excavation. Common excavation shall comprise the satisfactory removal and disposition of material of whatever substances and of every description encountered, including, but not limited to, any within the work as specified and shown on the drawings. Excavation shall be performed to the lines and grades indicated on the drawings. Dispose of excavated materials that are considered unsuitable for backfill and surplus of excavated material which is not required for backfill to the satisfaction of the Architect.

D. UTILITY CONNECTIONS

Provide utility connections required and indicated on the drawings. Install interior and exterior connections to "mains" and existing service lines complete and functioning, in compliance with the requirements of the codes having jurisdiction and the serving utility involved. Verify the exact location of utility mains, service lines, and connection points requiring connection in the field prior to installation. Work in conjunction with the utility involved in the installation of services. Verify that installation will tie into the existing utility mains, service lines, and connection points as indicated on the drawings and prior to installation. If the installation will not tie into the indicated invert elevation point while maintaining proper fall, notify the Architect and the Engineer so that an alternative may be determined.

Provide service piping and accessories required to complete utility connections that are not furnished by the serving utility. Coordinate with the serving utility company regarding items furnished, work performed, and permits and inspections required. Pay associated fees or charges.

E. COINCIDENTAL DAMAGE

Repair streets, sidewalks, drives, paving, walls, finishes, and other facilities damaged in the course of the work. Repair materials shall match existing construction. Repair work shall meet all requirements of the Owner, local jurisdiction, and the satisfaction of the Architect. Conform to requirements of Division 02 of this specification.

F. CUTTING AND PATCHING

Conform to the requirements in Division 01. Cut walls, floors, ceilings, and other portions of the facility as required to install work under this division. Obtain permission from the Architect prior to cutting. Do not disturb structural members without prior approval from the Architect. Cut holes as small as possible. Patch walls, floors, and other portions of the facility as required by work under this division. Patching shall match original material and construction including fire ratings, if applicable. Repair and refinish areas disturbed by work to the condition of adjoining surfaces in a manner satisfactory to the Architect.

G. ROUGH-IN

Coordinate without delay all rough-in's with other divisions. Conceal piping, conduit, and rough-in except in unfinished areas and where otherwise shown.

H. CONCRETE BASES

Provide concrete bases (e.g., housekeeping pads) for equipment where indicated on the drawings and as specified herein. Concrete bases shall have chamfered edges. Size of base shall be a minimum of 4 inches greater than the footprint of the equipment they are supporting and shall have a minimum height as described below.

Construct equipment bases of a minimum 28 day, 4000 psi concrete conforming to American Concrete Institute Standard Building Code for Reinforced Concrete (ACI 318-99) and the latest applicable recommendations of the ACI standard practice manual. Concrete shall be composed of cement conforming to ASTM C150 Type 1 aggregate conforming to ASTM C33, and potable water. Exposed exterior concrete shall contain 5 to 7 percent air.

I. SUPPORT SYSTEMS

Structural steel used for pipe supports, equipment supports, etc., shall be new and clean, and shall conform to ASTM designation A-36.

J. ACCESS DOORS

Provide access doors for all concealed equipment where indicated or as required, except where above-in-ceilings. Access doors shall be adequately sized for the devices served with a minimum size of 18 inches x 18 inches. Access doors must be of the proper construction for type of construction in which it is installed. Obtain Architect approval of type, size, location, and color before ordering. Provide factory-fabricated and assembled units, complete with attachment devices and fasteners ready for installation, concealed hinges, flush screwdriver-operated cam lock, and anchor straps. Provide access doors manufactured by Milcor, Titus, Zurn, or equal.

K. PENETRATIONS

Sleeve sleeves for pipes passing through above grade concrete or masonry walls, concrete floor or roof slabs. Sleeves are not required for core drilled holes in existing masonry walls, concrete floors or roofs. Provide 10 gauge galvanized steel sleeves for sleeves 6 inches and smaller. Provide galvanized sheet metal sleeves for larger than 6 inches. Schedule 40 PVC sleeves are acceptable for installation in areas without air plenums.

L. FIRESTOPPING

Seal around penetrations of fire rated assemblies. Coordinate fire ratings and locations with the Architectural Department. Refer to architectural specifications for fire stoppings. Provide modular mechanical sleeve seals, wall or floor rating and installation drawing for each penetration fire stop system.

M. ELECTRICAL WIRING

Line voltage wiring shall be provided by Division 26. Line voltage control and interlock wiring for plumbing systems shall also be provided by Division 26. Low voltage control wiring shall be provided by Division 23. Furnish wiring required by Division 26 as required for proper equipment hookup. Coordinate with Division 26 the actual wire sizing and amps for plumbing equipment (from the equipment nameplate) to ensure proper installation.

N. EQUIPMENT FURNISHED BY OTHERS

</

COY M. MACY
11/21/2022 2:41:10 PM BIM 360/2714735-PERRY'S - VERDAD/2150004838 Verdad Austin, TX MEP_V21_Coy/Macy.rvt

C. VALVES, STRAINERS, HOSE BIBBS, AND UNIONS

Plumbing system valves shall be designed for 125 psi steam working pressure and 200 psi cold water pressure. Install valves on the hot and cold water lines at the water heater connections and other items of equipment, at branches from mains serving groups of fixtures, and at other places indicated or required by the installation to allow ease of future maintenance. Submit certification that valves, fittings and specialties comply with NSF 61 Annex G and / or NSF 372. Except for the following: Hose bibbs, hydrants, backflow preventers including irrigation or mechanical make-up systems, emergency mixing valves and trap primers.

Gate Valves 2 inch and Smaller: Class 125, rising stem, soldered lead free cast bronze body and parts, sweat ends, with wedge disc. By Apollo # 1025-LF, Hammond # UP-668, Milwaukee # UP868 or Nibco # S-113-LF

Ball Valves 2 inch and Smaller (may be used in lieu of gate valves up to 2 inch): Class 150, two piece lead free cast bronze body, with sweat ends, chrome plated bronze ball with conventional port, 600 psi, blow-out proof stem by Apollo # 70-LF-200, Hammond # UP801, Milwaukee # UP8A-150.

Swing Check Valves 2 inch and Smaller: Class 125, lead free cast bronze body and with sweat ends by Apollo # 1633-LF, Milwaukee #UP-1509, or Nibco # S-413-Y-LF. Install in horizontal pipe runs.

Lift Check Valves 2 inch and Smaller: Class 125, lead free cast bronze body, stainless steel spring and with sweat ends by Hammond # LP-947 or Nibco # S-413-Y-LF. Install in vertical pipe or in horizontal runs where required.

Gas Cocks, Ball Type 1/2" to 2": Rated to 600psi WOG, full port brass body with chrome-plated brass ball, TFE seats, threaded ends and UL listed for natural gas service by Apollo #77F-XX-01, Hammond Valve # 8901, Milwaukee Valve # BA-475B, or Nibco # T-FP 600A.

Gas Cocks, Ball Type 2-1/2" to 4": Rated to 400psi WOG, full port brass body with chrome-plated brass ball, TFE seats, threaded ends and UL listed for natural gas service by Apollo #77F-XX-01, Hammond Valve # 8901, Milwaukee Valve # BA-475B, or Nibco # T-FP 600A.

Point of Use Thermostatic Mixing Valves: Thermostatic mixing valves shall be Powers as scheduled on the drawings by Powers or equal by Acorn Engineering Co., Cash ACME or Leonard meeting ASSE 1070 with lead free brass body, non-conductive internal parts, lampier resistant temperature adjustment, union inlets and check stops with strainers, install valve at public lavatories and handwashing sink locations in accessible location. Set temperature as scheduled on the drawings.

Pressure Balancing Mixing Valves: Pressure Balancing Mixing Valves shall be Symmons as scheduled on the drawings by Symmons or equal by Acorn, Bradley, Lawler, Leonard Valve, Powers, or Speakman meeting ASSE 1016P. Set temperature as scheduled on the drawings.

Gas Line Pressure Regulators: Gas line pressure regulators shall be CSA listed by Karl Dungs, Maxtrol or Pietro-Fiorerini with capacities as scheduled on the drawings. Regulators shall be single stage, steel jacketed, corrosion-resistant type with interstitial relief valve with atmospheric vent, vent limiter for indoor installation, elevation compensator, with threaded ends, for inlet and outlet. Install with regulator dome vertically upright and level with listed vent factory vent limiter. Install gas pressure regulators located outside the building with the relief port facing down to prevent the entry of rainwater with the relief port a minimum of 18" above the roof or finish grade. Remove vent limiter and provide with line size (same size as gas vent relief port) insect screen or gas relief vent and 1" long schedule 40 black steel nipple. Where manufacturer does not allow the gas pressure regulator to be installed upside down, install gas pressure regulator with regulator dome horizontal or vertically upright with factory breather plug.

Strainers: Strainers 2 inch and smaller shall be Watts #LFS777SI with lead free cast bronze body and soldered ends, brass cap and Morel 40 mesh screen. Strainers 2-1/2 inch and larger shall be Watts #77F-Di-FDA-125 with flanged iron body with fused FDA epoxy coating, bolted iron cap and stainless steel screen with 1/16 inch perforations. Strainers size 2-1/2 inch and larger shall have a 1 inch blow-off line with a 1 inch gate valve connected to the blow-off connection and shall be extended to the nearest floor drain.

Drain Valves and Interior Hose Bibbs: As specified on the drawings by Prier or equal by Woodford or Watts.

Unions: Ferrous unions shall be Crane or equal, combination iron and brass, ground joint with screwed ends. Copper unions shall be streamline or equal, cast bronze sweat type with ground joint. Ferrous to copper unions shall be universal controls or equal, dielectric type with threaded nylon insert.

Automatic Flow Control Valves: For installation in hot water recirculation lines, shall be Flow Design, Inc #ICSS or equal by Victaulic with stainless steel body and flow cartridge and sweat connections. Provide ball valve, strainer and check valve upstream and union and ball valve downstream of each automatic flow control valve. Provide flow control valve cartridges of the flows as indicated on the drawings.

Pressure Reducing Valves: Self contained type shall be of the type as scheduled and indicated on the drawings by Watts or equal by Cash-ACME or Wilkins.

Backflow Preventers: Shall be of the type as scheduled and indicated on the drawings by Watts, Contraco, Fabcro or Wilkins.

D. SYSTEM ACCESSORIES

Thermometers shall be American 3 inch bi-metal dial type with separable socket, and shall be installed where indicated or required.

Pressure gauges shall be Ashcroft 3 inch dial type with shut-off cock, and shall be installed where indicated or required.

Trap primers shall be as specified on the drawings, Precision Plumbing Products "Prime Rita" or equal by Mifab or Sioux Chief with brass body and integral vacuum breaker. Provide distribution box where more than one trap is indicated to be primed on the drawings. Provide access panel where required.

5. PLUMBING FIXTURES AND EQUIPMENT

A. PLUMBING FIXTURES

Furnish and install commercial grade plumbing fixtures, see the drawings for quantities and descriptions. Provide china fixtures as scheduled by Sloan or Kohler. Provide stainless steel sinks as scheduled by Elkay or equal by Franke or Just. Provide electric water coolers as scheduled by Elkay or approved equal by Acorn / Aqua, Halsey Taylor or Haws. Provide mop sinks as scheduled by Stern-Williams or equal by Acorn Engineering Co., Fiat or Florestone. Provide emergency equipment as scheduled by Bradley or equal by Chicago, Eicon, Guardian, Haws or Speakman. Provide fixtures of same manufacturer where possible, unless noted otherwise.

Fixtures shown on the drawings or specified herein shall be furnished and installed, set firm and true, connected to required piping services, thoroughly cleaned, left clean and ready for use. Exposed fittings and piping at the fixtures shall be chrome-plated, and water supply piping shall be valved at each fixture.

Vitreous china fixtures shall be of the best grade vitreous ware, without pit holes or blemishes, and the outlines shall be generally true. The engineer reserves the right to reject any pieces which, in his opinion, are faulty. Fixtures set against walls shall have ground backs and shall be caulked with silicone sealant of a matching color.

B. PLUMBING FIXTURE TRIM

Submit certification that faucets and trim comply with NSF 61 Annex G and / or NSF 372. Except for the following: Faucets not used for drinking water or cooking, shower valves and heads or flush valves.

Fixture trim shall have the manufacturer's name stamped clearly and visibly on each item.

Provide faucets as scheduled on drawings.

Provide electronic faucets as scheduled on the drawings.

Fixture P-traps shall be 17 gauge brass body with cleanout, 17 gauge seamless tubular wall bend with cast brass slip nut, shallow steel flange, all chrome plated by McGuire, Brass Craft, Dearborn Brass, EBC, Proflo, Watts Brass and Tubular or Zum.

Lavatory, sink, and water closet supplies shall be solid brass angle or straight type with full turn brass stem, wheel handle, or loose key types as noted on drawings, shallow steel flange, 3/8 inch copper riser flange, all chrome plated, final connection as required by McGuire, Brass Craft, EBC, Proflo or Zum.

Lavatory drains shall be grid type chrome plated 17 gauge brass open grid with 1-1/4 inch x 6 inch long seamless brass lattice and brass locknut with heavy rubber basin washer and fiber friction washer, by McGuire, Brass Craft, Dearborn Brass, EBC, Franke, Proflo, Watts Brass and Tubular or Zum.

Provide handicap insulation kits for lavatories and sinks on exposed water and waste pipes and fittings, including offset drain and continuous waste covers where required by Brocar, McGuire, Plumbex "Pro-2000", Proflo, Trap-Wrap or Tru-Bro.

Provide Smith, Josam, Wade, Watts, or Zum chair carriers for mounting wall mounted urinals and lavatories as described on the drawings. Securely fasten carriers to floor and test per manufacturer's recommendations prior to installation of partitions. Secure lavatory chair carriers to floor with 1/2 inch anchor bolts.

C. WATER HEATER

Water heater shall be by A.O. Smith, Bock, Bradford-White, Hubbel, Lochinvar, State, HTP, Rheem or Ruud with capacity as scheduled on the drawings. Unit shall be electric glass-lined tank type complete with steel jacket, fiberglass insulation, magnesium anode, integral thermostats and controls, and temperature & pressure relief valve. Water heater shall be UL listed and meet ASHRAE 90.1B standards for thermal efficiency and standby heat loss.

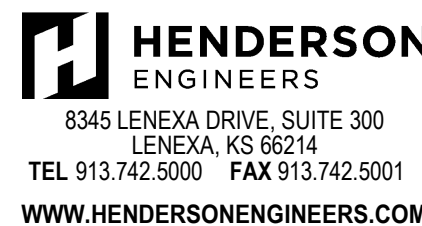
Temperature and Pressure Relief Valve: Lead free brass body meeting ANSI Z21.22. The temperature shall be normally set to relieve at 210 F and the pressure relief shall be equal to the tank pressure rating. Install line size relief valve discharge line to discharge to an approved receptor with air gap.

Vacuum Relief Valve: Lead free brass body meeting ANSI Z21.22 with silicon disc. Valve shall open at 0.5 inches HG vacuum and be rated for 200 psig working pressure and 250 F operating temperature by Apollo #37, Cash ACME #VR01, Watts #R36 or Wilkins #VR-10. Install in cold water supply to each water heater downstream of the shutoff and check valves.

Recirculation Pump: By B&G as scheduled on the drawings, or equal by Armstrong, Grundfos or Taco, of all bronze construction with Aquastat and/or timer.

Expansion Tank: Expansion tank shall be Amtrol "Therm-X-Trol" as scheduled on the drawings or equal by Armstrong, Bell & Gossett, Proflo, Taco, or Watts. Unit shall be constructed of welded carbon steel listed for 150 psig working pressure, with a FDA approved butyl rubber diaphragm, taps for pressure gage, air charging fitting, and drain fitting. Support as detailed on the drawings. Charge tank with air pressure equal to the static water pressure.

END OF SECTION 22



3545 LENEXA DRIVE, SUITE 300
LENEXA, KS 66214
TEL 913.742.5000 FAX 913.742.5001
WWW.HENDERSONENGINEERS.COM

215004838
TX CORPORATE NO. F-001236
EXPIRES 9/30/2023

FUTURE RESTAURANT
2701 Perseverance Drive
Austin, TX 78731

FIELD VERIFICATION
Contractor shall verify all figured dimensions and conditions at the job site and notify Aia Group Architects, Inc. of any dimensional errors, omissions or discrepancies before beginning or fabricating any work. Do not scale these drawings.
COPYRIGHT
Aia Group Architects, Inc. shall retain all common law, statutory and/or reserved rights. These drawings and related documents shall not be duplicated, disclosed or otherwise used without consent of Aia Group Architects, Inc.

NO.	DATE	REMARKS
2	11/17/22	ISSUED FOR CONSTRUCTION
06/23/22		ISSUED FOR PERMIT/BID
06/15/22		ISSUED FOR AEBG REVIEW
06/08/22		ISSUED FOR TAS REVIEW
05/23/22		ISSUED FOR LANDLORD REVIEW
REVISIONS		



11/21/2022

Drawing Title
PLUMBING SPECIFICATIONS

Job No. 214735	Drawn NK
Scale	Date Issue Date

Sheet No.
P-4.1