

**APPENDIX C.23**

**CASE 10-T-0139**

**SITE PLANS AND CONSTRUCTION DRAWINGS**

**PLUMBING DRAWINGS – SERVICE BUILDING**

**ASTORIA HVDC CONVERTER STATION**

**SEGMENT 22**

# ASTORIA HVDC CONVERTER STATION

## SERVICE BUILDING PLUMBING PACKAGE

### SCOPE OF WORK

THE PLUMBING SCOPE OF WORK INCLUDES FURNISHING AND INSTALLATION OF PLUMBING FIXTURES AND EQUIPMENT, POTABLE HOT AND COLD-WATER PIPING SYSTEMS, AND SANITARY WASTE AND VENT PIPING SYSTEMS FOR THE FOLLOWING AREAS AS SUBJECT TO THE REQUIREMENTS AND PERFORMANCE CRITERIA PROVIDED IN THE PRELIMINARY PERFORMANCE SPECIFICATION:

- SERVICE BUILDING

### FLOOD ZONE DESIGN CERTIFICATION:

THE EXISTING PROPERTY IS IN THE SPECIAL FLOOD HAZARD AREA (SFHA), ZONE AE PER EFFECTIVE 2015 FLOOD INSURANCE RATE MAP(FIRM). THIS IS TO CONFIRM THAT THE PROPOSED INSTALLATION IS IN COMPLIANCE WITH THE REQUIREMENTS SET FORTH IN APPENDIX Q OF THE NYC BUILDING CODE.

### NYC ENERGY CODE COMPLIANCE:

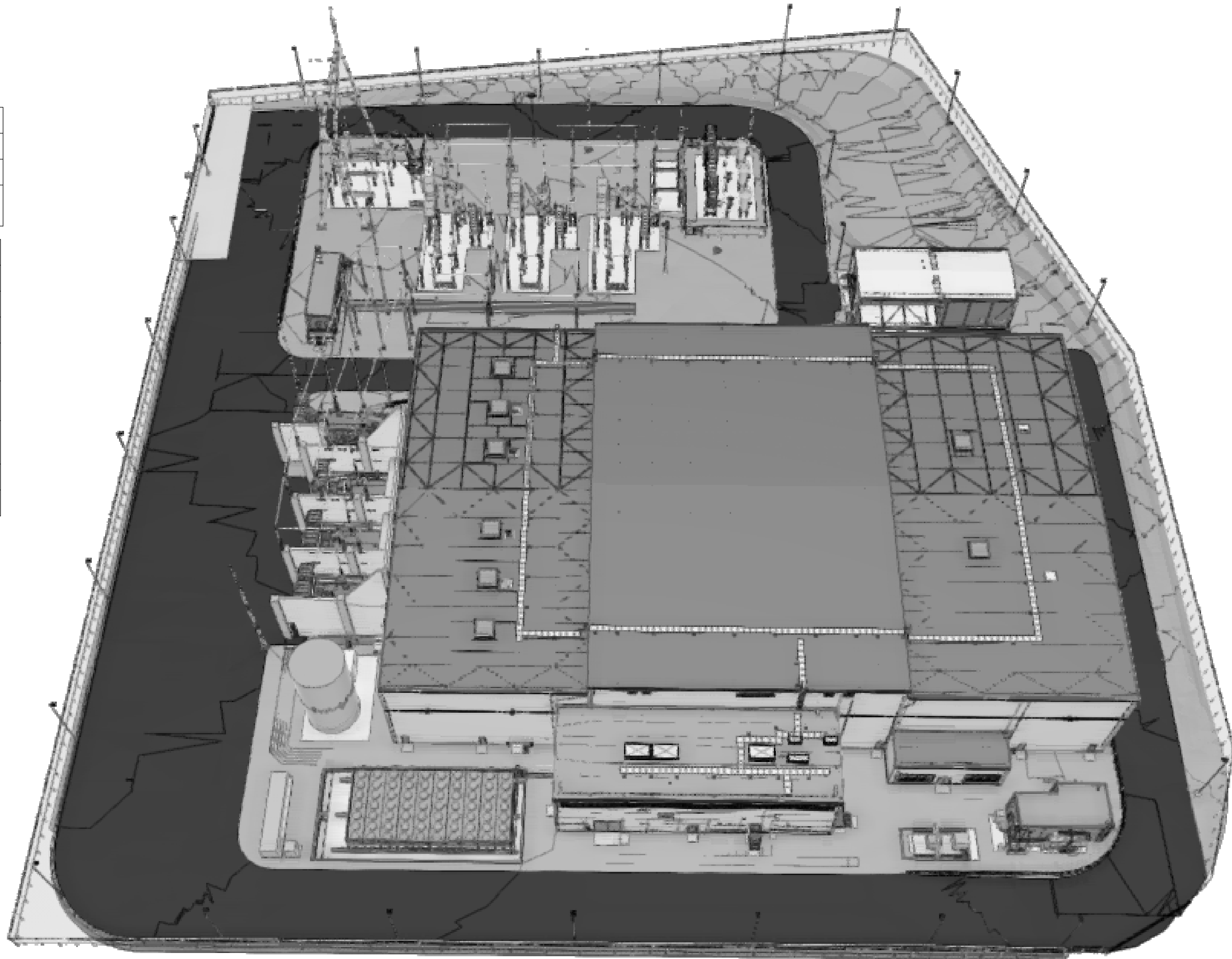
STATEMENT: TO THE BEST OF MY KNOWLEDGE, BELIEF AND PROFESSIONAL JUDGEMENT, THESE PLANS AND SPECIFICATIONS ARE IN COMPLIANCE WITH THE NEW YORK CITY ENERGY CONSERVATION CODE. PROPOSED WORK MEETS THE GUIDELINES AND INSTRUCTIONS OUTLINED IN THE 2020 NYC ECC CHAPTER 4.

### SPECIAL INSPECTION AND PROGRESS INSPECTIONS:

FOLLOWING SPECIAL AND PROGRESS INSPECTIONS SHALL BE PERFORMED PER NYC BUILDING CODE 2022. NOTIFY ARCHITECT, ENGINEER AND OWNER FOR SPECIAL INSPECTIONS AT LEAST 72 HOURS BEFORE THE SPECIAL INSPECTION WORK STARTS.

SPECIAL INSPECTIONS	
INSPECTION AND TEST	CODE / SECTION
HEATING SYSTEMS	BC 1704.25
EMERGENCY & STAND BY POWER SYSTEMS (GENERATORS)	BC 1704.31

PROGRESS INSPECTIONS	
INSPECTION AND TEST	CODE / SECTION
ENERGY CODE COMPLIANCE INSPECTIONS	BC 110.3.5
FINAL	28-116.2.4.2 BC 110.5
HVAC-R AND SERVICE WATER HEATING EQUIPMENT	IB3, IIB3
HVAC-R AND SERVICE WATER HEATING SYSTEM CONTROLS	IB4, IIB4
HVAC-R AND SERVICE WATER HEATING DESIGN AND INSULATION	IB5, IIB5
ELECTRICAL MOTORS AND ELEVATORS	IIC6
MAINTENANCE INFORMATION	ID1, IID1



ISSUED FOR PERMIT

**K** Engineering and  
Land Surveying, P.C.

370 7th Avenue  
SUITE 1604  
New York, NY 10001

**SOWINSKI  
SULLIVAN**  
ARCHITECTURE+ENGINEERING

25 Mohawk Avenue  
Sparta, NJ 07871

#### CONFIDENTIAL

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B	FINAL SUBMISSION	VSP	EK	12/12/2022
A	INTERIM SUBMISSION	VSP	EK	09/13/2022
REV	DESCRIPTION	DRW BY	CHK BY	DATE

**Kiewit**  
470 Chestnut Ridge Rd # 2,  
Woodcliff Lake, NJ 07677

**Hitachi Energy**  
901 Main Campus Drive  
Raleigh, North Carolina 27606

PROJECT

**CHPE**  
Champlain Hudson  
Power Express

**Astoria HVDC  
Converter Station**

31-45 20th Avenue, Astoria, Queens NY 11105  
Block #850 - Lot #310 - BIN #4624437

COVER SHEET



DATE 12/12/2022  
PROJECT NO 105121  
DRAWING BY V. PATEL  
CHECKED BY E. KIDANE  
DRAWING NO

**P-001.00**

CADD FILE NO  
Astoria-CHPE-081-00-M314-001.rvt

FL-1.	THE SITE IS DEFINED AS A ZONE (NON-COASTAL).
FL-2.	BASE FLOOD ELEVATION, BFE, = 13 FEET NAVD 88.
FL-3.	RECOMMENDED FREE BOARD BY THE 2022 NYCBC-APPENDIX G IS 2.0 FEET.
FL-4.	RECOMMENDED DESIGN FLOOD ELEVATION, DFE = 15 FEET NAVD 88.
FL-5.	THE STRUCTURE IS NOT SUBJECTED TO HYDRODYNAMIC LOADS.

DESIGN ELEVATION / DEPTH	FEET IN NAVD 88
DESIGN BASE FLOOD ELEVATION	13.0
FINISH FLOOR ELEVATION	15.0
SEA LEVEL RISE	NOT CONSIDERED

SHEET NUMBER	SHEET NAME
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03-PLUMBING	
P-001.00	COVER SHEET
P-002.00	SHEET INDEX
P-003.02	OVERALL PLUMBING SITE PLAN
P-004.00	PLUMBING - GENERAL NOTES, LEGENDS, SYMBOLS & ABBREVIATIONS
P-100.00	WASTE AND VENT PLUMBING PLAN - FIRST FLOOR
P-101.00	DOMESTIC WATER PLUMBING PLAN - FIRST FLOOR
P-102.00	PLUMBING PLAN - SECOND FLOOR
P-500.00	PLUMBING - RISER DIAGRAMS
P-600.00	PLUMBING DETAILS SHEET #1
P-601.00	PLUMBING DETAILS SHEET #2
P-602.00	PLUMBING DETAILS SHEET #3
P-700.00	SERVICE BUILDING PLUMBING - SCHEDULES
P-701.00	SERVICE BUILDING PLUMBING - SCHEDULES

KEY PLAN  
N.T.S.

   Z PLAN NORTH

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A	INTERIM SUBMISSION	WP	AZ	09-13-22
REV	DESCRIPTION	DRW BY	CHK BY	DATE



# Kiewit

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Woodcliff Lake, NJ 07677



## Sachi Energy

901 Main Campus Drive  
Raleigh, North Carolina 27606



## Astoria HVDC Converter Station

31-45 20<sup>th</sup> Avenue, Astoria, Queens NY 11105  
Block #850 - Lot #310 - BIN #4624437

## SHEET INDEX



DATE	12/12/2022
PROJECT NO	105121
DRAWING BY	W.PENDLETON
CHECKED BY	S.DEVADKAR
DRAWING NO	
P-002-00	
CADD FILE NO	
Autodesk Docs/CHiPE	
Astonia/CHA-KIE-081-00-M3-H-001.rvt	





PLUMBING GENERAL NOTES

1. THESE DRAWINGS ARE DIAGRAMMATIC AND INDICATE GENERAL ARRANGEMENT OF ALL MATERIALS, PIPING AND EQUIPMENT. DO NOT SCALE DRAWINGS. THE EXACT LOCATION AND/OR ROUTING OF EQUIPMENT, PLUMBING, SANITARY PIPING, ETC., SHALL BE FOLLOWED AS CLOSELY AS BUILDING CONSTRUCTION AND ALL OTHER WORK WILL PERMIT.

2. MATERIALS AND EQUIPMENT SHALL BE NEW AND INSTALLED AS INDICATED ON THE DRAWINGS AND/OR SPECIFICATIONS. THEY SHALL BE INSTALLED PLUMB, LEVEL, AND TRUE-TO-LINE WITH ADJACENT WORK. WHERE INSTALLATION METHODS ARE NOT SPECIFICALLY COVERED BY THE DRAWINGS AND/OR SPECIFICATIONS, FIRST CLASS TRADE PRACTICES AND MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS SHALL GOVERN.

3. ALL WORK SHALL COMPLY WITH THE REQUIREMENTS OF ALL AUTHORITIES HAVING JURISDICTION, BUILDING DEPARTMENTS, APPLICABLE TO THE LATEST EDITION OF THE APPLICABLE BUILDING CODE, PROVINCIAL FIRE CODE, APPLICABLE OSHA AND NFPA STANDARDS, COUNTY AND CITY BUILDING REGULATIONS AND CODES.

4. CAREFULLY EXAMINE ALL ARCHITECTURAL, STRUCTURAL, PLUMBING, HVAC, FIRE PROTECTION, AND ELECTRICAL DRAWINGS PERTAINING TO CONSTRUCTION. COOPERATE WITH OTHER TRADES IN LOCATING DUCTWORK, PIPING, EQUIPMENT, ETC., IN ORDER TO AVOID CONFLICT WITH OTHER TRADES WORK. NO CLAIM FOR COSTS WILL BE ALLOWED FOR RELOCATING EQUIPMENT, PIPING, DUCTWORK, ETC., WHICH INTERFERES WITH OTHER TRADES WORK.

5. VERIFY ALL ROUGH-IN LOCATION AND COORDINATE PIPING AND EQUIPMENT LOCATIONS WITH WORK UNDER OTHER DIVISIONS OF THE SPECIFICATIONS TO AVOID CONFLICTS. CONTRACTOR MUST COORDINATE WITH OTHER TRADES FOR ALL STRUCTURES, PIPING, CONDUIT, DUCTWORK, LIGHTING, ETC. TO PROPERLY BE INSTALLED. ANY CONFLICTS SHALL BE RESOLVED AT NO EXPENSE TO THE OWNER.

6. LABEL ALL PLUMBING PIPING WITH ADHESIVE PIPE LABELS INDICATING SERVICE AND DIRECTION OF FLOW. PIPE LABELS SHALL BE LOCATED NEAR ALL BRANCH CONNECTIONS, NEAR ALL FLOOR AND WALL PENETRATIONS, AND AT MAXIMUM INTERVALS OF 10 FEET ALONG EACH RUN.

7. PLUMBING SYSTEMS INCLUDE, BUT ARE NOT LIMITED TO:

a. PLUMBING FIXTURES AND EQUIPMENT

b. FIRE STOPPING

c. DOMESTIC WATER SYSTEM

d. SANITARY WASTE AND VENT SYSTEM

8. PROVIDE COMPLETE FIXTURES AND INCLUDE SUPPLIES, STOPS, VALVES, FAUCETS, DRAINS, TRAPS, TAILPIECES, ESCUTCHEONS, ETC. EXPOSED COPPER OR BRASS MATERIALS SHALL BE CHROME PLATED.

9. SEAL ALL EDGES OF PLUMBING FIXTURES IN CONTACT WITH FLOORS, WALLS OR COUNTERTOPS USING SANITARY-TYPE, ONE-PART, MILDEW RESISTANT SILICONE SEALANT. USE CLEAR SEALANT OR MATCH SEALANT COLOR TO FIXTURE COLOR.

10. REFER TO ARCHITECTURAL DRAWINGS FOR MOUNTING HEIGHTS OF PLUMBING FIXTURES.

11. FIRE STOP ALL PENETRATIONS, BY PIPING OR CONDUITS, OF FIRE RATED WALLS, FLOORS, AND PARTITIONS. PROVIDE DEVICE(S) OR SYSTEM(S) WHICH HAS BEEN TESTED AND LISTED AS COMPLYING WITH ASTM E-814 OR UL 1479 AND INSTALL IN ACCORDANCE WITH THE CONDITIONS OF THEIR LISTING. PROVIDE DEVICE(S) OR SYSTEM(S) WITH AN 'F' RATING EQUAL TO THE RATING OF THE ASSEMBLY BEING PENETRATED.

12. FURNISH AND INSTALL A COMPLETE SYSTEM OF DOMESTIC HOT AND COLD WATER FROM EXISTING SUPPLIES TO ALL FIXTURES AND/OR EQUIPMENT REQUIRING DOMESTIC WATER SUPPLIES. VERIFY LOCATION OF BEGINNING POINTS.

13. DOMESTIC WATER PIPING: ASTM B 88 TYPE 'L' HARD COPPER TUBE WITH WROT COPPER FITTINGS, AND SOLDERED OR PRESSURE-SEALED JOINTS.

14. STERILIZE DOMESTIC WATER PIPING IN ACCORDANCE WITH THE NYC PLUMBING CODE AND LOCAL HEALTH DEPARTMENT REGULATIONS.

15. INSULATE DOMESTIC WATER PIPING AS PER SPECIFICATION SECTION 220719 PLUMBING PIPING INSULATION.
16. DOMESTIC WATER PIPING INSULATION, JACKETS, COVERINGS, SEALERS, MASTICS, AND ADHESIVES SHALL NOT EXCEED A FLAME SPREAD RATING OF 25 AND A SMOKE DEVELOP RATING OF 50 WHEN TESTED IN ACCORDANCE WITH ASTM E 84.

17. ALL PIPE INSULATION SHALL RUN CONTINUOUSLY THROUGH WALLS AND PARTITIONS.

18. DO NOT INSTALL DOMESTIC WATER PIPING IN AREAS SUBJECT TO FREEZING TEMPERATURES. INSTALL DOMESTIC WATER PIPING IN EXTERIOR WALLS ON THE CONDITIONED SIDE OF THE WALL INSULATION.

19. SHUT-OFF VALVES SHALL BE NIBCO TWO-PIECE, BRONZE, FULL PORT, BALL-TYPE. PROVIDE SHUT-OFF VALVES WHERE INDICATED ON THE SCHEDULES. INSTALL VALVES IN A LOCATION THAT PERMITS ACCESS FOR SERVICE AND OPERATION WITHOUT DAMAGE TO THE BUILDING OR FINISHED MATERIALS. PROVIDE ACCESS DOORS IF REQUIRED.

20. PROTECT COPPER PLATING AGAINST CONTACT WITH DISSIMILAR METALS. ALL HANGARS, ANCHORS, AND CLIPS SHALL BE COPPER OR COPPER-PLATED.

21. FURNISH AND INSTALL COMPLETE SYSTEMS OF SANITARY WASTE AND VENT PIPING FROM ALL PLUMBING FIXTURES AND/OR EQUIPMENT REQUIRING WASTE AND VENT CONNECTIONS. ALL WASTE AND VENT PIPING SHALL BE CONCEALED IN THE BUILDING CONSTRUCTION WHERE POSSIBLE.

22. SANITARY WASTE AND VENT PIPING ABOVE GROUND: ASTM A 888 AND CISPI 301 HUBLESS, CAST IRON SOIL PIPE AND FITTINGS; AND HEAVY DUTY SHIELDED, STAINLESS STEEL COUPLINGS. ALL PIPE AND FITTINGS SHALL BE MARKED WITH THE COLLECTIVE TRADEMARK OF THE CAST IRON SOIL PIPE INSTITUTE, AND LISTED BY NSF INTERNATIONAL.

23. INVERTS ELEVATIONS SHALL BE ESTABLISHED AND VERIFIED BEFORE SANITARY PIPING IS INSTALLED IN ORDER THAT PROPER SLOPES WILL BE MAINTAINED. SLOPE SANITARY PIPING 2-1/2 IN AND SMALLER AT 2 PERCENT (1/4 IN/1 FOOT) MINIMUM, AND SLOPE SANITARY PIPING 3 IN AND LARGER AT 1 PERCENT (1/8 IN/1 FOOT) MINIMUM.

24. SANITARY WASTE BELOW GROUND: BELOW GROUND SANITARY WASTE PIPING SHALL BE CAST IRON.

25. WHERE SANITARY PIPING IS EXPOSED IN TOILET ROOMS, PROVIDE CHROME-PLATED BRASS PIPING WITH MATCHING STOPS AND ESCUTCHEONS. PROVIDE REMOVABLE TRAPS WITH INTEGRAL CLEANOUT PLUG FOR ALL LAVATORIES.

26. INSTALL CLEANOUTS IN A LOCATION THAT PERMITS ACCESS FOR SERVICE WITHOUT DAMAGE TO THE BUILDING OR FINISHED MATERIALS. CLEANOUT PLUGS SHALL BE IN ACCORDANCE WITH PLUMBING CODE REQUIREMENTS.

27. PROVIDE WATER HAMMER ARRESTORS CONFORMING TO PDI-WH201 OR ASSE 1010, INSTALLED PER MANUFACTURER'S SPECIFICATIONS, WHERE QUICK CLOSING VALVES ARE UTILIZED. A QUICK CLOSING VALVE IS A VALVE OR FAUCET THAT CLOSSES AUTOMATICALLY WHEN RELEASED, OR THAT IS CONTROLLED BY MECHANICAL MEANS FOR FAST-ACTION CLOSING. REFER TO WATER HAMMER ARRESTOR SCHEDULE.

28. AS A MINIMUM PROVIDE ONE WATER HAMMER ARRESTOR FOR EACH BRANCH LINE TO EACH TOILET ROOM LESS THAN 20 FEET IN LENGTH, LOCATED BETWEEN THE LAST TWO FIXTURES SERVED. FOR BRANCH LINES GREATER THAN 20 FEET IN LENGTH, A SECOND WATER HAMMER ARRESTOR IS REQUIRED.

29. THE PLANS INCLUDE A COMBINATION OF INDIVIDUAL AND COMMON VENTS AND SHALL BE INSTALLED PER 2022 NYC PLUMBING CODE.

30. ALL PLUMBING WORK SHALL BE PERFORMED IN ACCORDANCE WITH 2022 NYC PLUMBING CODE.

31. ALL SUPPLY COLD AND HOT WATER PIPES ARE SIZED IN ACCORDANCE WITH 2022 NYC PLUMBING CODE. THE INSTALLATION OF HOT AND COLD WATER DISTRIBUTION SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH THE 2022 NYC PLUMBING CODE.

PLUMBING STANDARD ABBREVIATIONS

BCO	BUILDING CLEAN OUT
BFP	BACKFLOW PREVENTER
BOI	BOTTOM OF INSULATION
CI	CAST IRON
CO	CLEANOUT
CW	COLD WATER
DF	DRINKING FOUNTAIN
DN	DOWN
DRN OR D	DRAIN OR DRAIN PIPING
EWC	ELECTRIC WATER COOLER
FCO	FLOOR CLEANOUT
FD	FLOOR DRAIN
HW	HOT WATER
JS	JANITORS SINK
L	LAVATORY
NPW	NON-POTABLE WATER
OD	OVERFLOW DRAIN
OWS	OIL WATER SEPARATOR
PC	PUMPED CONDENSATE
RD	ROOF DRAIN
S	SINK
SS	SANITARY DRAIN
SAN	WASTE (SAME AS SS)
UR	URINAL
V	VENT
VTR	VENT THRU ROOF
WC	WATER CLOSET
WCO	WALL CLEANOUT
WH	WALL HYDRANT
WHA	WALL HAMMER ARRESTOR
WM	WATER METER

SHEET NOTES:

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2. REFER TO SHEETS E SERIES FOR BUILDING ELECTRICAL DRAWINGS, NOTES, DETAILS, SCHEDULES AND REQUIREMENTS. FILED UNDER SEPARATE APPLICATION.
3. REFER TO SHEETS M SERIES FOR HVAC MECHANICAL DRAWINGS, NOTES, DETAILS, SCHEDULES AND REQUIREMENTS. FILED UNDER SEPARATE APPLICATION.
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5. REFER TO SHEETS S SERIES FOR BUILDING STRUCTURAL DRAWINGS, NOTES, DETAILS, SCHEDULES AND REQUIREMENTS. FILED UNDER SEPARATE APPLICATION.
6. REFER TO GENERAL NOTES ON MEP COVER SHEET FOR ADDITIONAL REQUIREMENTS OF WORK.

PLUMBING SYMBOLS

	SANITARY DRAIN		LAVATORY (LAV)
	PLANT DRAINS		WATER CLOSET (WC)
	ROOF DRAIN		URINAL (UR)
	VENT		MOP SINK (MS)
	OVERFLOW DRAIN		
	POTABLE COLD WATER (CW)		
	POTABLE HOT WATER (HW)		
	POTABLE HOT WATER RECIRCULATION (HWR)		
	DEMINERALIZED WATER		
	DEMINERALIZED WATER TREATMENT		
	FLOOR DRAIN		
	FLOOR CLEANOUT (FCO)		
	WALL CLEANOUT (WCO) OR HORIZONTAL CLEANOUT		
	WATER HAMMER ARRESTOR		
	CAP		
	BACKFLOW PREVENTER W/ ISOLATION VALVES		
	WATER METER		
	ROOF DRAIN		
	ROOF DRAIN CLEANOUT (CO)		
	DIRECTION OF SCOPE DOWN		
	BUILDING CLEANOUT (BCO)		

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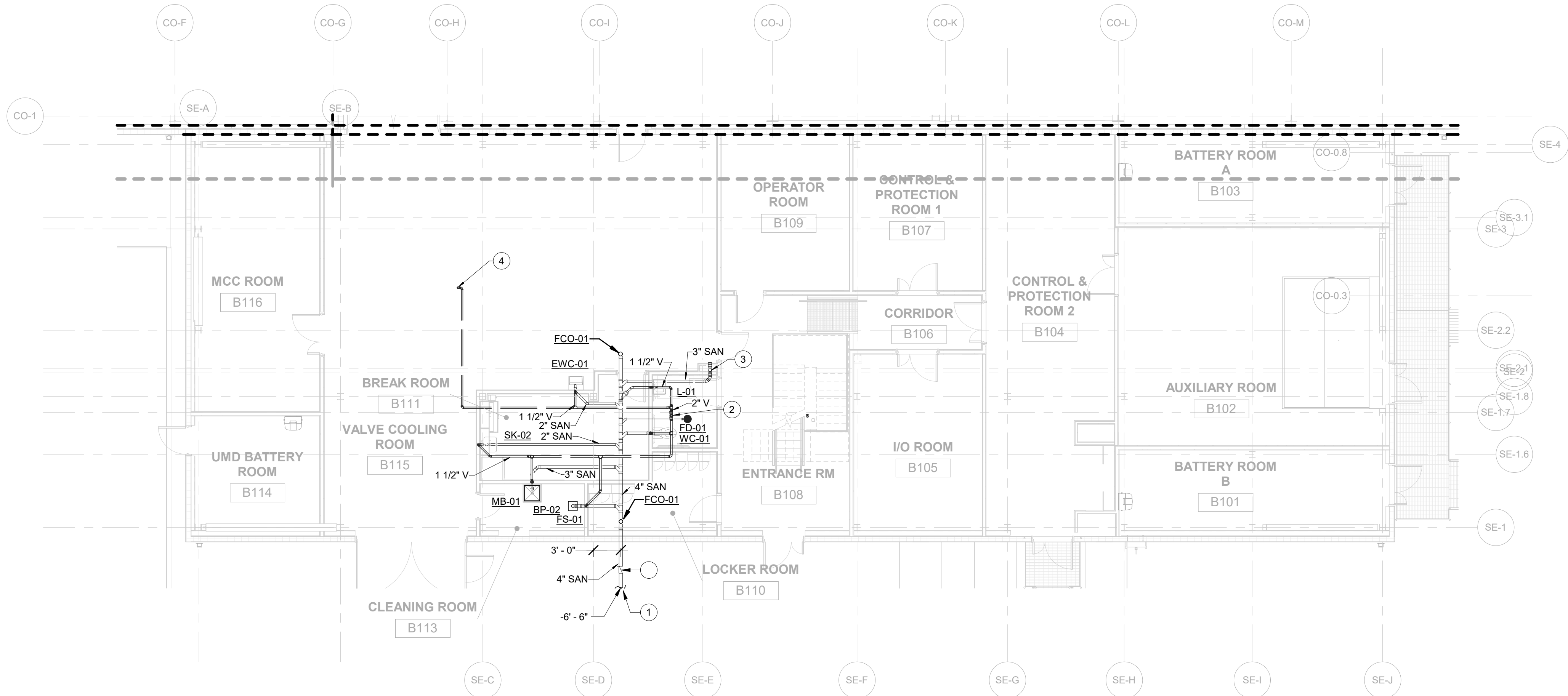
PLUMBING - GENERAL  
NOTES, LEGENDS,  
SYMBOLS &  
ABBREVIATIONS



DATE	12/12/2022
PROJECT NO	105121
DRAWING BY	W.PENDLETON
CHECKED BY	S.DEVADKAR
DRAWING NO	P-004.00
CADD FILE NO	Astoria\CHA-KIE-081-00-M34-H-001.rvt

12/21/2022 12:59:20 PM

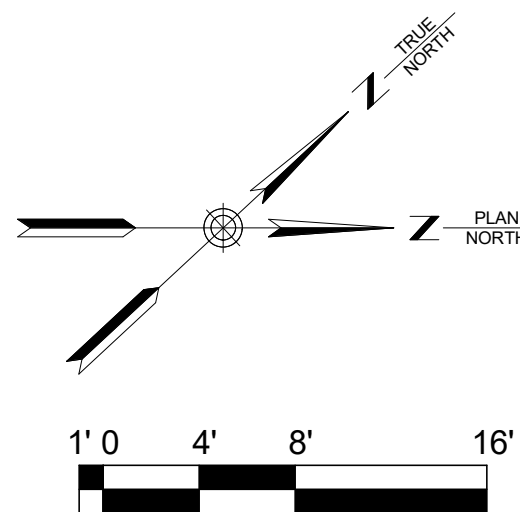
1 WASTE AND VENT PLUMBING PLAN - FIRST FLOOR  
P-100.00 1/8" = 1'-0"



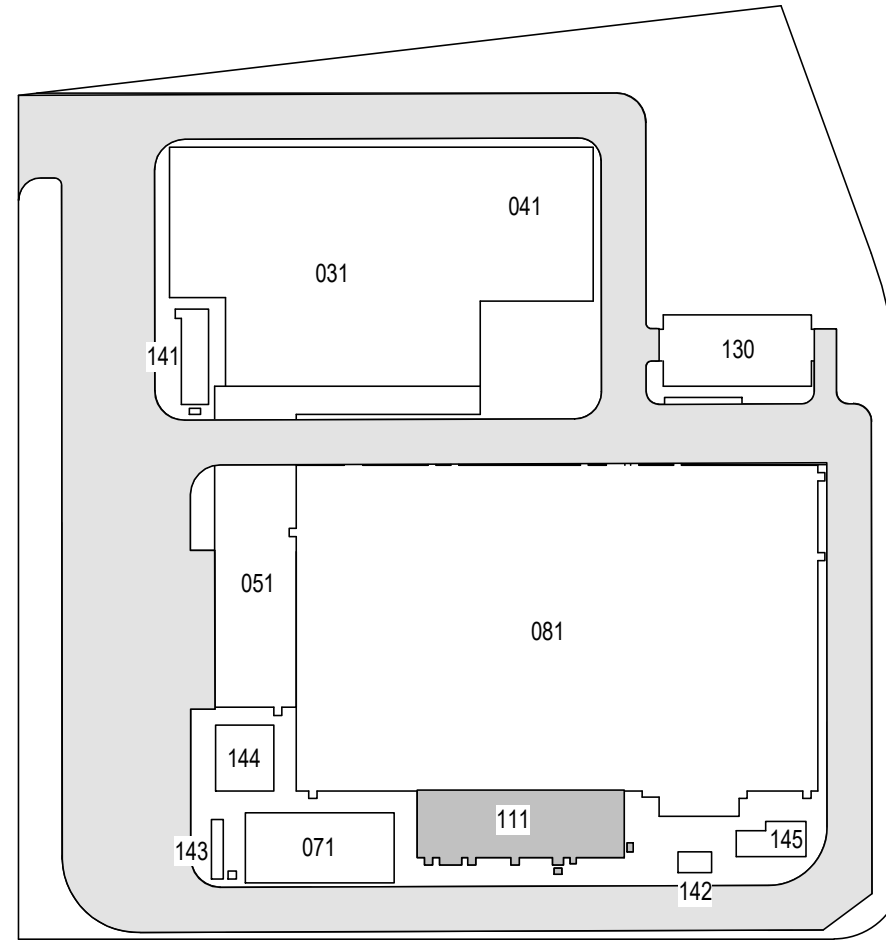
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  5. REFER TO SHEETS S SERIES FOR BUILDING STRUCTURAL DRAWINGS, NOTES, DETAILS, SCHEDULES AND REQUIREMENTS. FILED UNDER SEPARATE APPLICATION.
  6. REFER TO GENERAL NOTES ON MEP COVER SHEET FOR ADDITIONAL REQUIREMENTS OF WORK.
  7. ALL PLUMBING METALLIC COMPONENTS INSIDE CONVERTOR BUILDING SHALL BE BONDED TO THE BUILDING OR BUILDING RING CONDUCTOR. COORDINATE WITH ELECTRICAL PLANS AND CONTRACTOR FOR REQUIREMENTS.
  8. ALL PLUMBING METALLIC COMPONENTS INSTALLED OUTSIDE OF BUILDING SHALL BE BONDED TO GROUND. COORDINATE WITH ELECTRICAL PLANS AND CONTRACTOR FOR REQUIREMENTS.

- PLUMBING GENERAL NOTES:**
1. ALL FLOOR DRAINS SHALL BE READILY ACCESSIBLE AND CLEAN.
  2. THE DRAINAGE AND VENT SYSTEM SHALL BE PRESSURE TESTED WITH WATER OR AIR PER THE 2022 NYC PLUMBING CODE.
  3. SEE SHEET P-500 FOR RISER DIAGRAM.

- PLUMBING KEYNOTES**
- 1 REFER TO CIVIL DRAWINGS FOR CONTINUATION. COORDINATE EXACT LOCATION / ELEVATION WITH CIVIL PRIOR INSTALLATION. SANITARY AND DOMESTIC WATER SERVICE TO BE A MINIMUM OF 10' CLEAR FROM EACH OTHER. PIPE OUTSIDE OF THE BUILDING TO BE HEAT TRACED WITH 8 WATTS/FT OF HEAT UNTIL IT CONNECTS TO CIVIL HEAT TRACE. CONTROLLER SHALL BE INSTALLED IN JANITOR'S CLOSET. COORDINATE WITH ELECTRICAL. PROVIDE DIELECTRIC CONNECTION WHEN CONNECTING PIPES WITH DISSIMILAR METALS.
  - 2 3" VENT UP TO ROOF THROUGH SECOND FLOOR.
  - 3 3" SANITARY DOWN FROM THE FLOOR ABOVE. PROVIDE CLEANOUT ON PIPE RISER. REFER TO DETAIL.
  - 4 VENT PIPE FROM FLOOR DRAIN. REFER TO P102 FOR CONTINUATION.



ISSUED FOR PERMIT



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**PROJECT**

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**WASTE AND VENT  
PLUMBING PLAN - FIRST  
FLOOR**

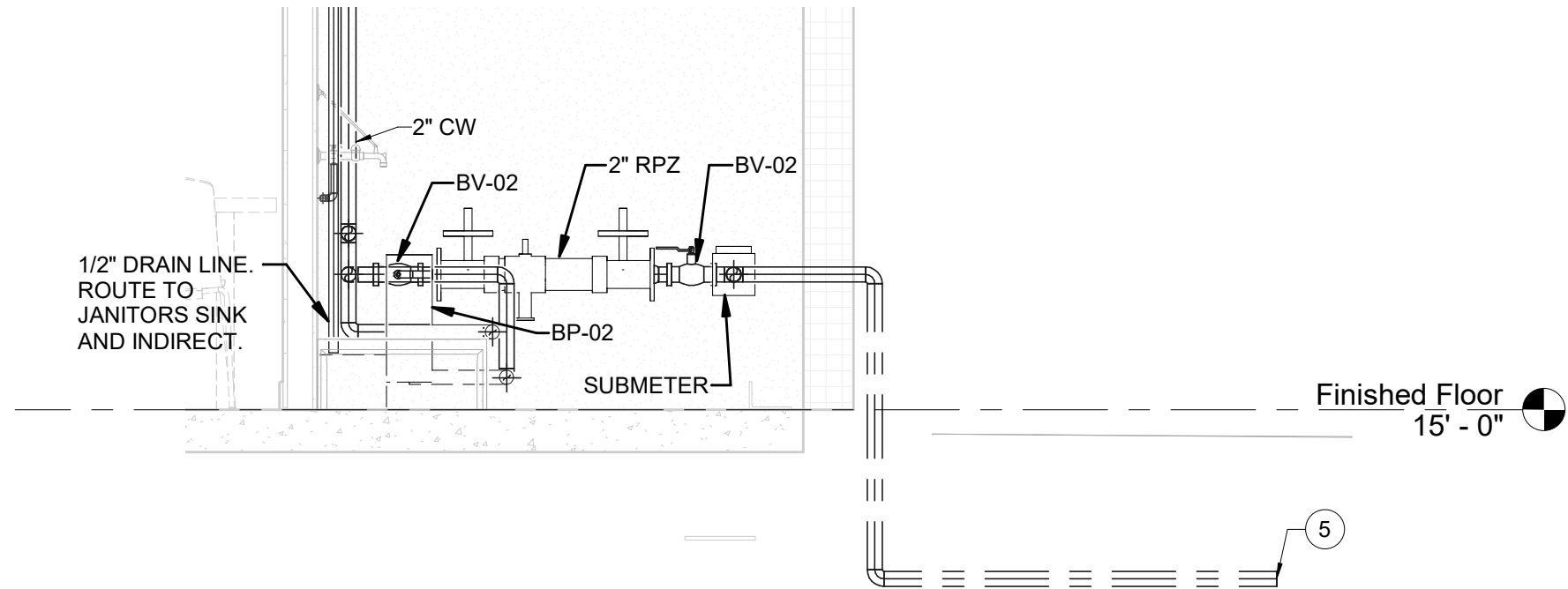


DATE 12/12/2022  
PROJECT NO 105121  
DRAWING BY W.PENDLETON  
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DRAWING NO  
**P-100.00**  
CADD FILE NO  
Astoria\CHA-KIE-081-00-M314-001.rvt

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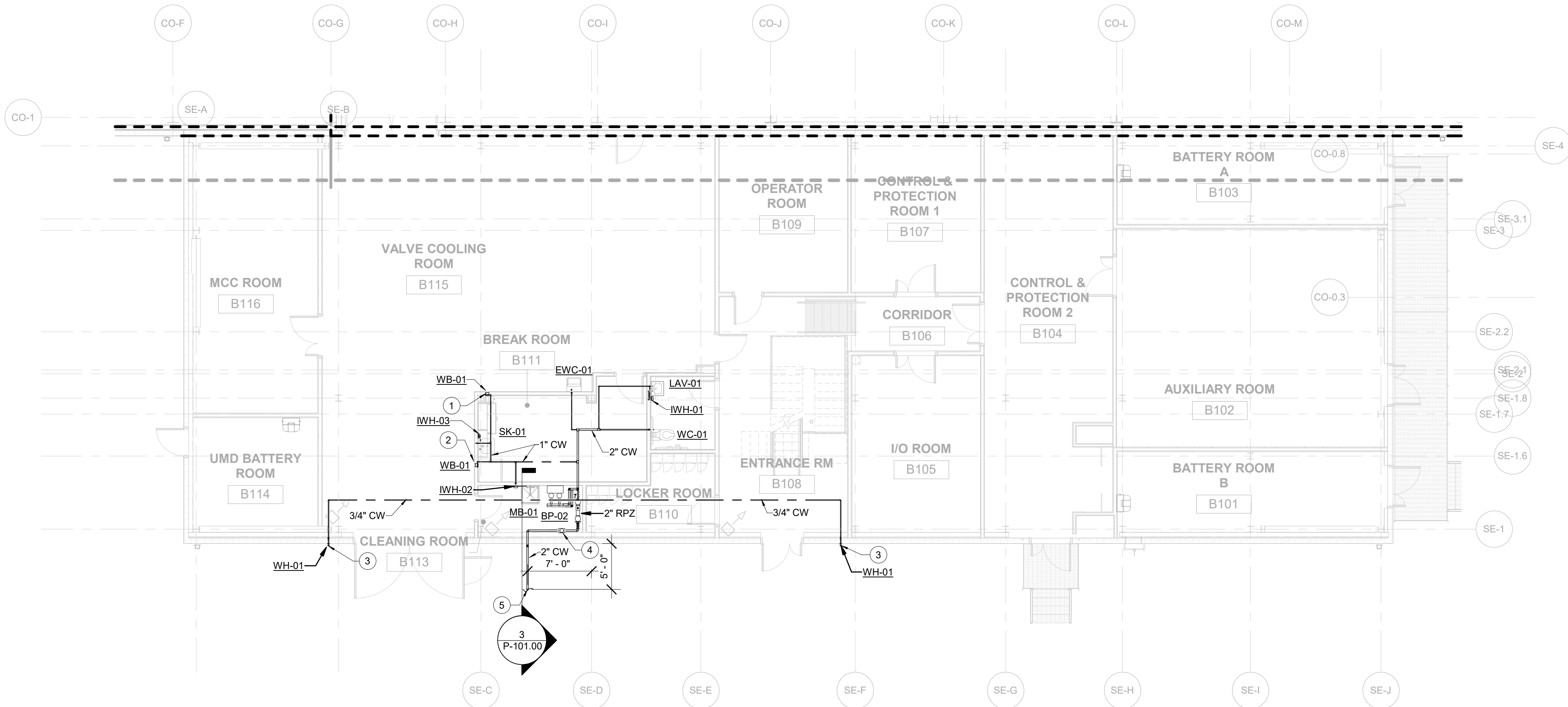
1  
P-101.00

DOMESTIC WATER PLUMBING PLAN - FIRST FLOOR  
1/8" = 1'-0"



3  
P-101.00

LEVEL 1 WATER ENTRANCE  
1/2" = 1'-0"



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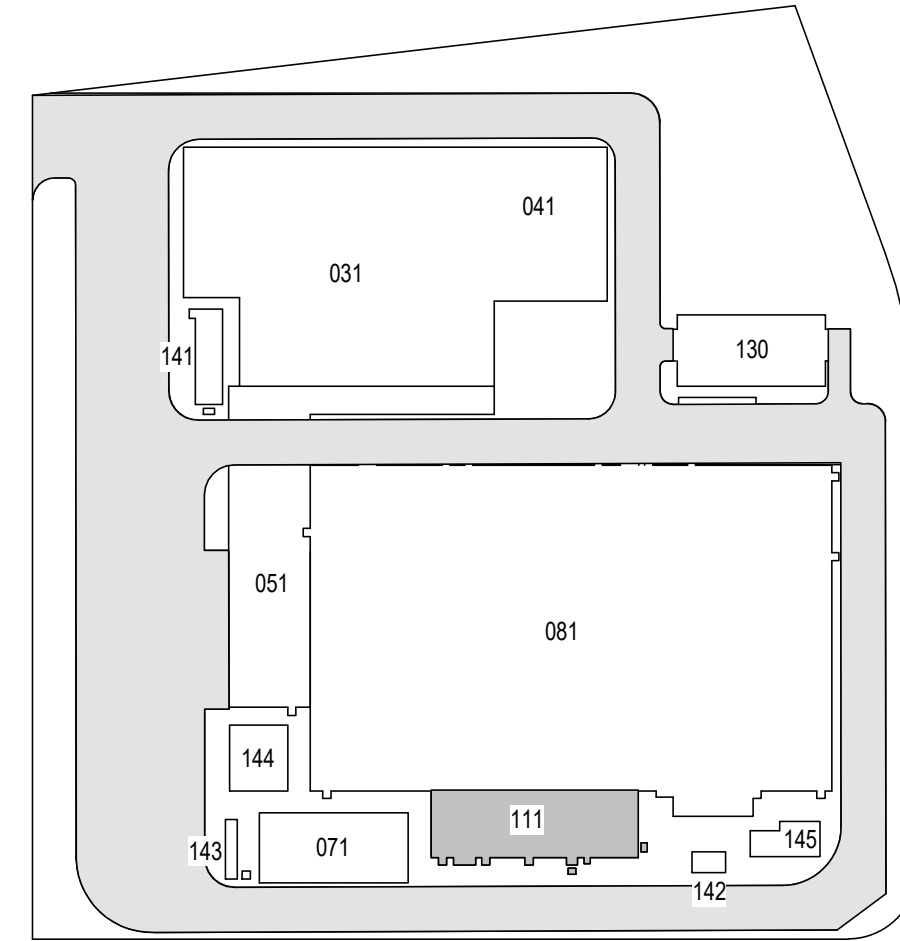
#### PLUMBING GENERAL NOTES

1. COORDINATE 2" POTABLE WATER CONNECTION WITH SITE PLAN PRIOR TO CONSTRUCTION. POTABLE WATER MUST BE MINIMUM OF 10' FROM THE SANITARY SERVICE.
2. SEE SHEET P-500 FOR RISER DIAGRAM.

#### PLUMBING KEYNOTES

1. 3/8" DOMESTIC COLD WATER DOWN IN WALL TO WB-111-01. BOTTOM OF BOX SHALL BE 12" BELOW COUNTERTOP. COORDINATE LOCATION AND ELEVATION WITH CABINETS PRIOR TO INSTALLATION. CONNECT TO OWNER PROVIDED FIXTURE.
2. 3/8" DOMESTIC COLD WATER DOWN IN WALL TO WB-111-01 BOX 48" AFF.
3. ROUTE DOMESTIC WATER PIPING DOWN TO WALL HYDRANT, WH-111-01.
4. PROVIDE DOMESTIC WATER SUBMETER INSIDE CLEANING ROOM.
5. REFER TO CIVIL DRAWINGS FOR CONTINUATION. COORDINATE EXACT LOCATION / ELEVATION WITH CIVIL PRIOR INSTALLATION. SANITARY AND DOMESTIC WATER SERVICE TO BE A MINIMUM OF 10' CLEAR FROM EACH OTHER. PIPE OUTSIDE OF THE BUILDING TO BE HEAT TRACED WITH 8 WATTS/FT OF HEAT UNTIL IT CONNECTS TO CIVIL HEAT TRACE CONTROLLER SHALL BE INSTALLED IN JANITOR'S CLOSET. COORDINATE WITH ELECTRICAL. PROVIDE DIELECTRIC CONNECTION WHEN CONNECTING PIPES WITH DISSIMILAR METALS.

ISSUED FOR PERMIT



KEY PLAN  
N.T.S.

Engineering and  
Land Surveying, P.C.

370 7th Avenue  
SUITE 1604  
New York, NY 10001

SOWINSKI  
SULLIVAN  
ARCHITECTURE+ENGINEERING

25 Mohawk Avenue  
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B	FINAL SUBMISSION	WP	SD	12-12-22
A	INTERIM SUBMISSION	WP	AZ	09-13-22

Kiewit

470 Chestnut Ridge Rd # 2,  
Woodcliff Lake, NJ 07677

Hitachi Energy

901 Main Campus Drive  
Raleigh, North Carolina 27606

#### PROJECT

**CHPE**  
Champlain Hudson  
Power Express

**Astoria HVDC  
Converter Station**

31-45 20th Avenue, Astoria, Queens NY 11105  
Block #850 - Lot #310 - BIN #4624437

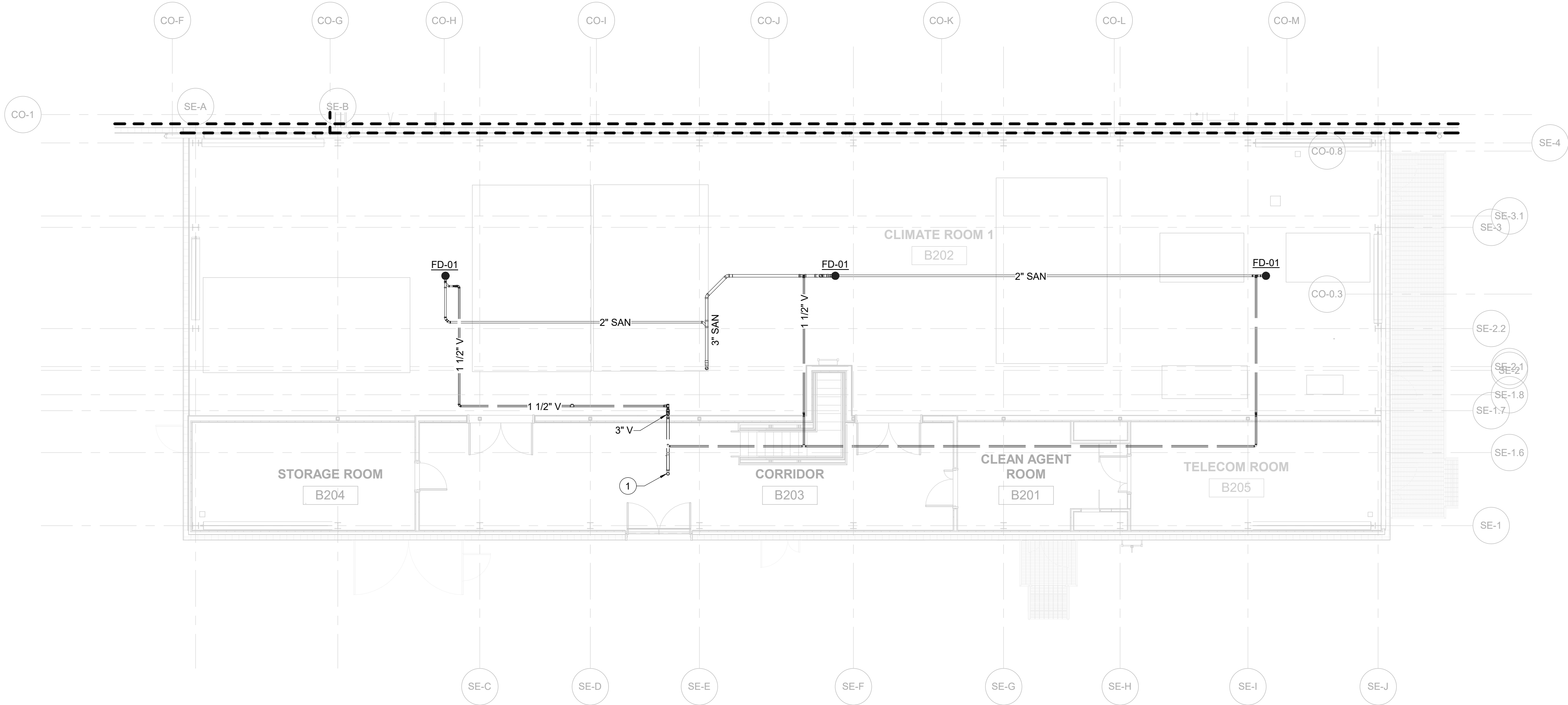
**DOMESTIC WATER  
PLUMBING PLAN - FIRST  
FLOOR**



DATE 12/12/2022  
PROJECT NO 105121  
DRAWING BY W.PENDLETON  
CHECKED BY S.DEVADKAR  
DRAWING NO  
**P-101.00**  
CADD FILE NO  
Astoria\CHPE\CHPE-081-00-MD-M4-001.rvt

12/21/2022 12:59:30 PM

1 PLUMBING PLAN -SECOND FLOOR  
P-102.00 1/8" = 1'-0"



- SHEET NOTES:**
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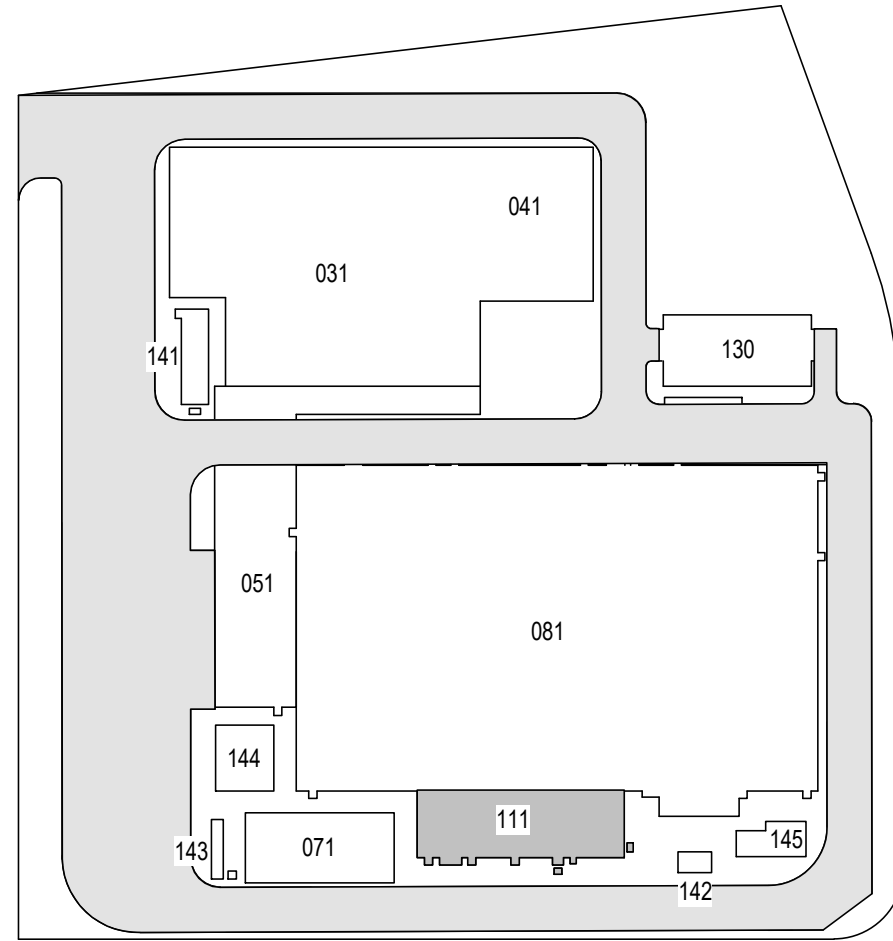
**PLUMBING GENERAL NOTES**

1. SEE SHEET P-500 FOR RISER DIAGRAM.

**1 PLUMBING KEYNOTES**

- 1 VENT THROUGH ROOF.

ISSUED FOR PERMIT



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New York, NY 10001

**SOWINSKI  
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**Kiewit**  
470 Chestnut Ridge Rd # 2,  
Woodcliff Lake, NJ 07677

**Hitachi Energy**  
901 Main Campus Drive  
Raleigh, North Carolina 27606

**PROJECT**

**CHPE**  
Champlain Hudson  
Power Express

**Astoria HVDC  
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31-45 20th Avenue, Astoria, Queens NY 11105  
Block #850 - Lot #310 - BIN #4624437

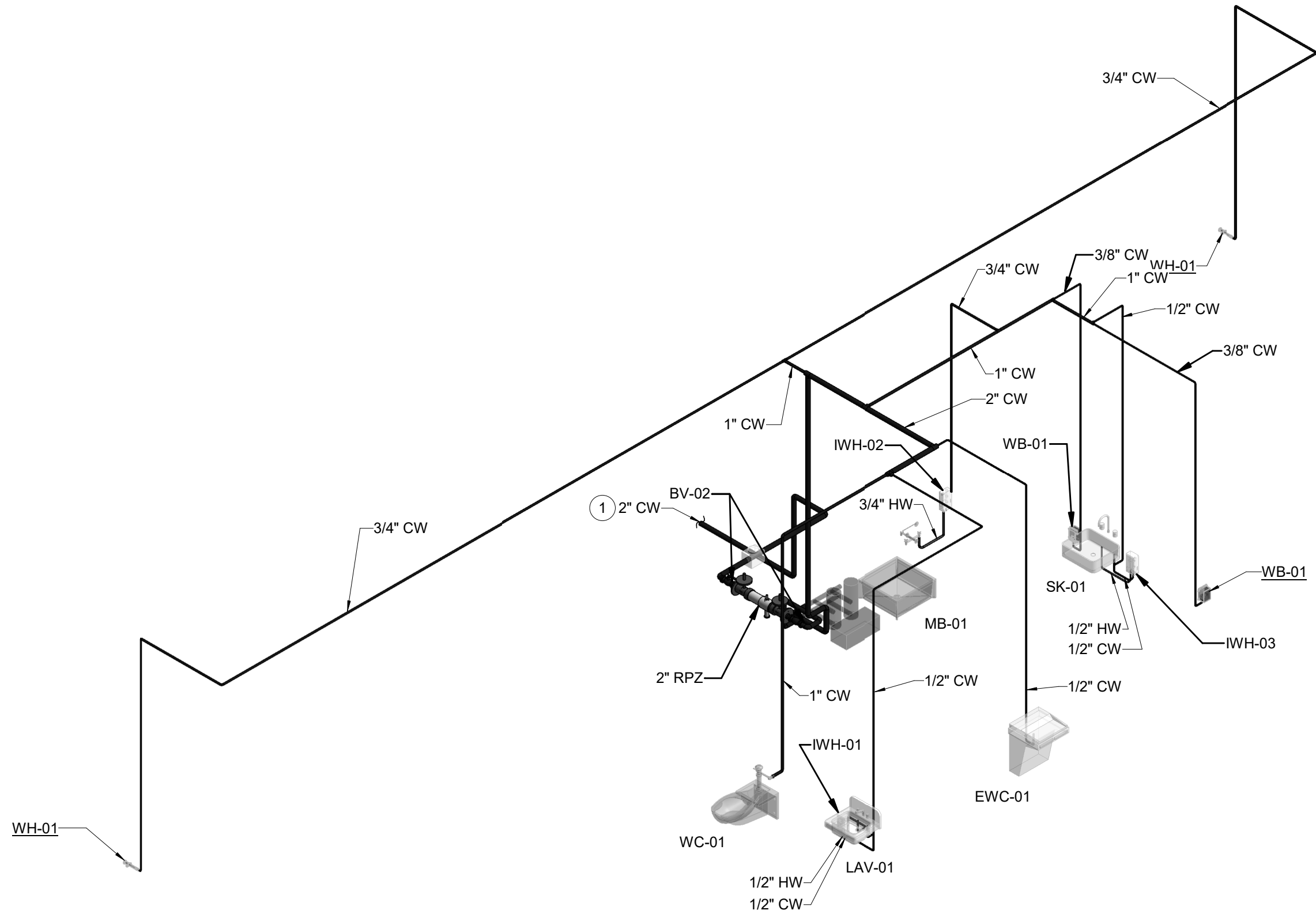
**PLUMBING PLAN -  
SECOND FLOOR**



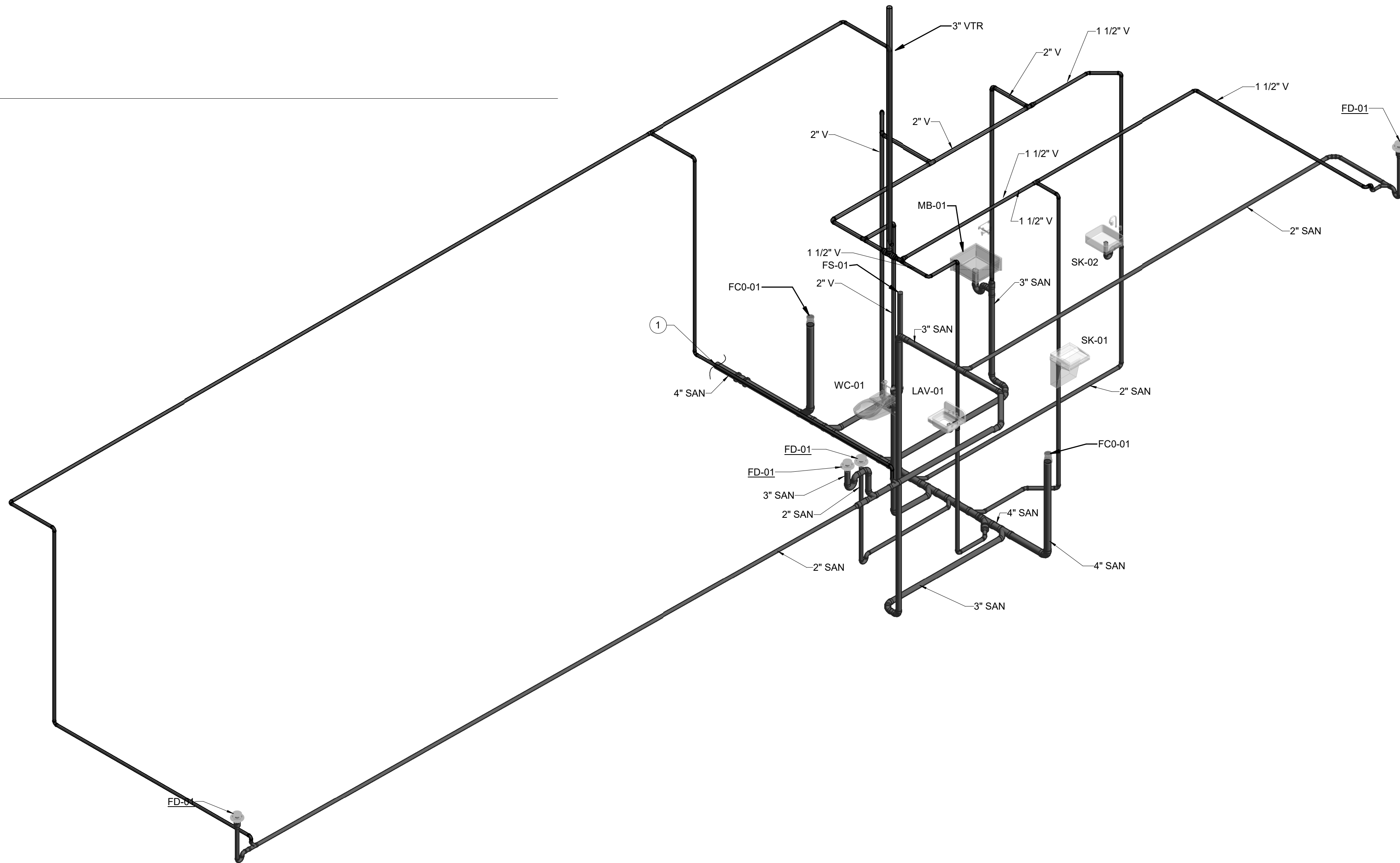
DATE 12/12/2022  
PROJECT NO 105121  
DRAWING BY W.PENDLETON  
CHECKED BY S.DEVADKAR  
DRAWING NO  
**P-102.00**  
CADD FILE NO  
Astoria\CHA-KIE-081-00-M314-001.rvt



12/21/2022 1:00:15 PM



2 Domestic Water - Level 1 Plumbing Riser  
P-500.00  
NTS



3 Sanitary and Vent - Level 1&2 Plumbing Riser  
P-500.00  
NTS

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**PROJECT**

**CHPE**  
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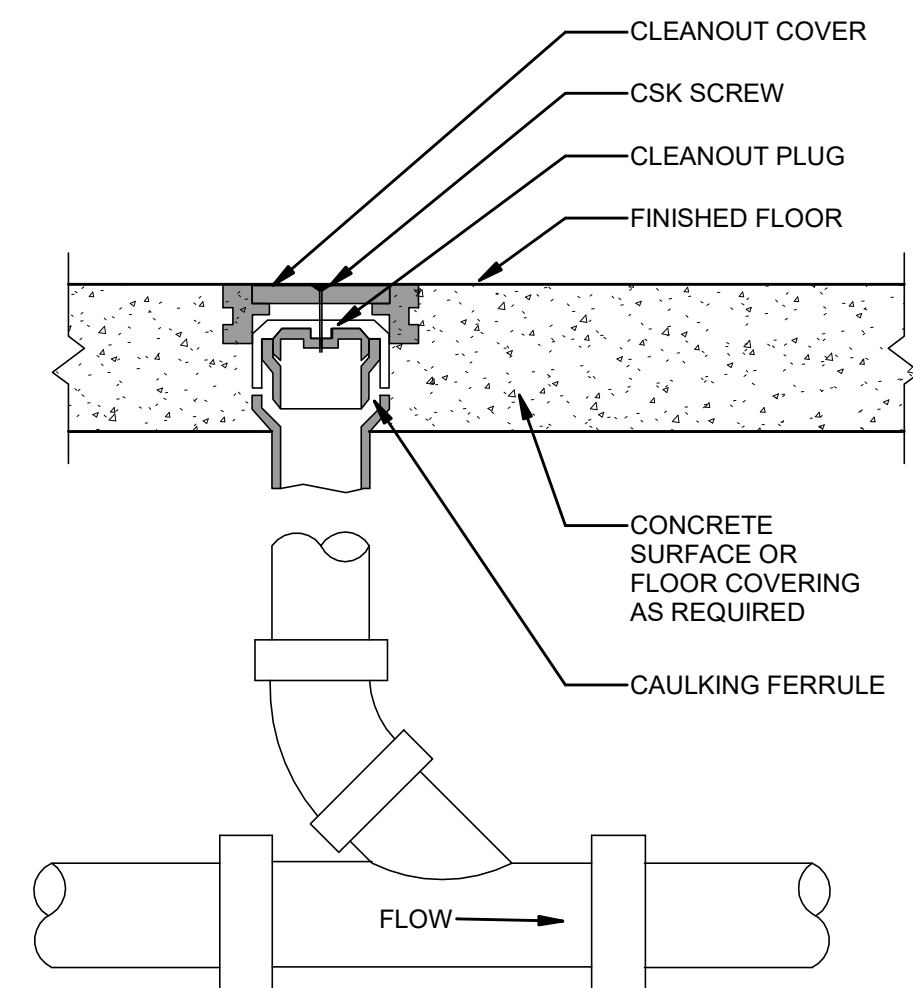
**Astoria HVDC  
Converter Station**

31-45 20th Avenue, Astoria, Queens NY 11105  
Block #850 - Lot #310 - BIN #4624437

**PLUMBING - RISER  
DIAGRAMS**

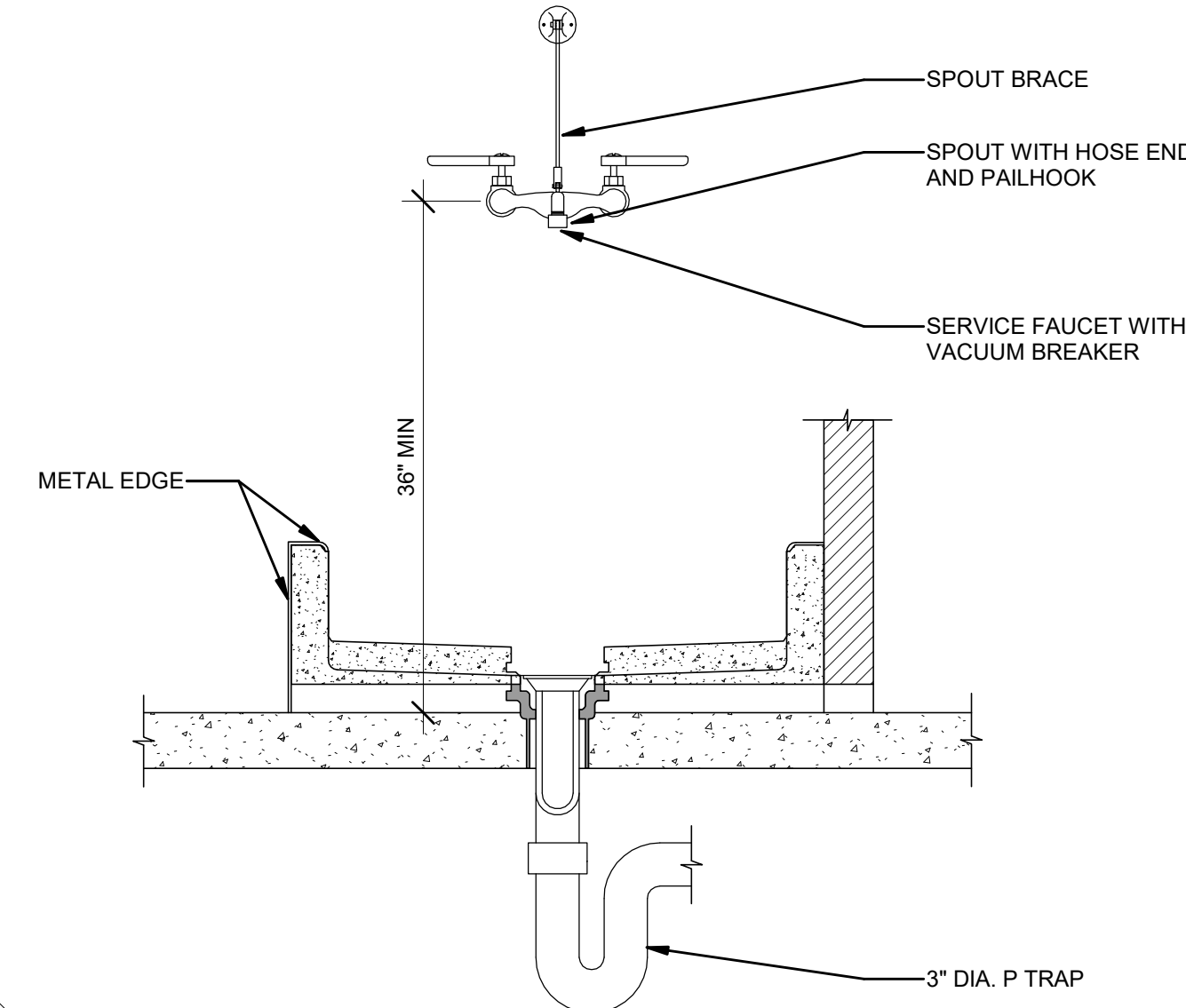


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CADD FILE NO  
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FLASHING PER ROOF MFG. REQUIREMENTS

VENT PIPING REF. PLANS FOR SIZE. (MIN. SIZE = 3")

ROOFING

INSULATION

PIPE SUPPORT AS REQUIRED (TYP)

INCREASER AS REQUIRED

VENT PIPE (INSULATED IN CEILING SPACE WHERE SPECIFIED OR REQUIRED)

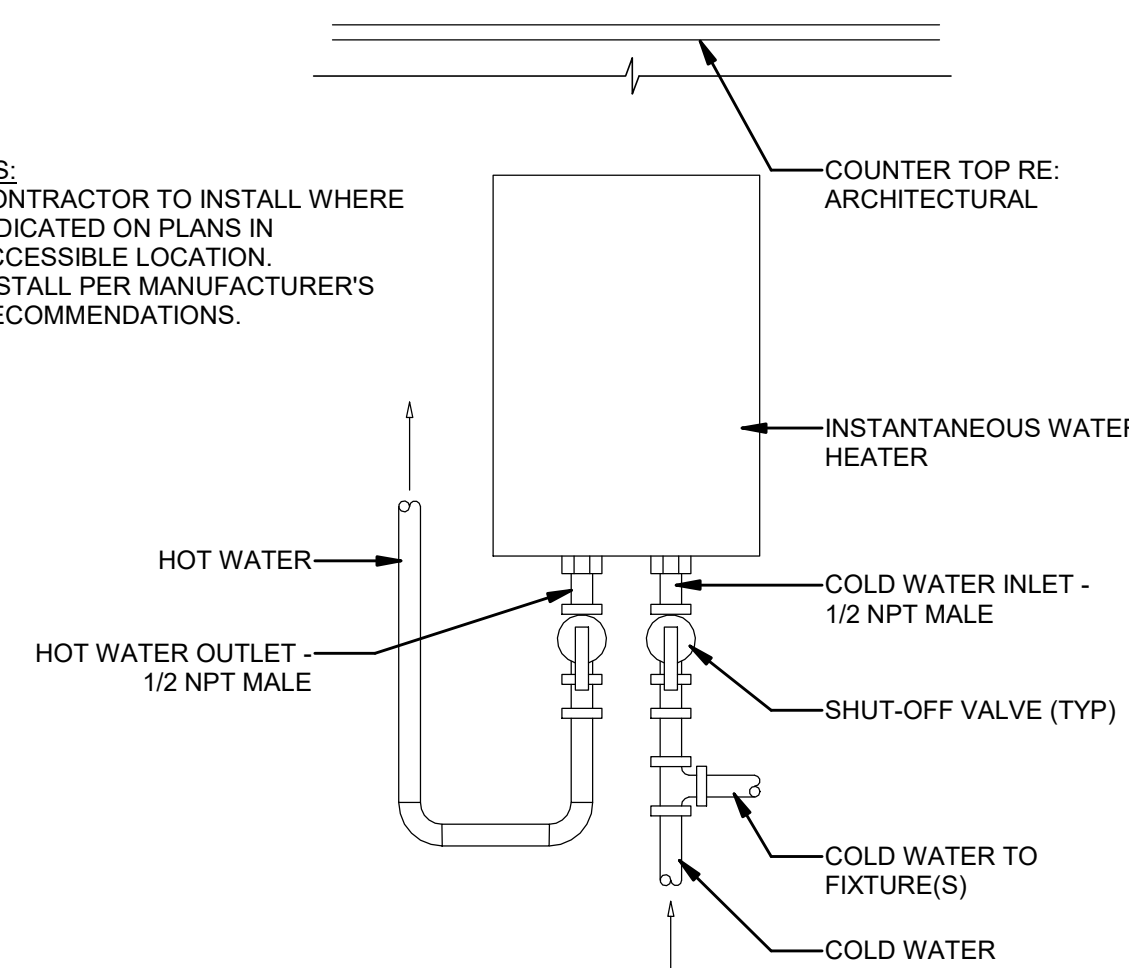
NOTE: LOCATE VTR A MINIMUM OF 10' FROM ANY BUILDING OPENING MECHANICAL UNIT INTAKES, RELIEF OR INTAKE HOODS

2"

12" MIN.

**NOTES:**

1. CONTRACTOR TO INSTALL WHERE INDICATED ON PLANS IN ACCESSIBLE LOCATION.
2. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.

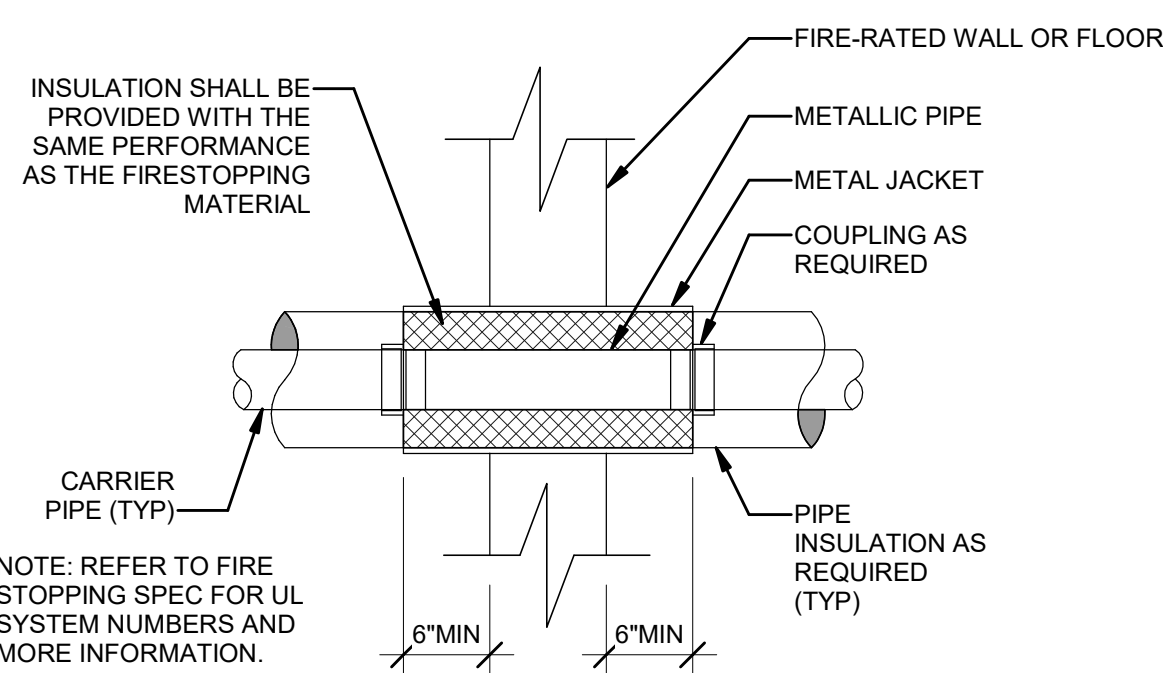


A cross-sectional diagram of a Clevis Hanger assembly. At the top, a vertical rod is labeled "HANGER ROD". It passes through a horizontal bar labeled "HANGER". Below the hanger is a circular component labeled "PIPE INSULATION". Inside this insulation is a "METAL SADDLE" which contains a "HIGH DENSITY INSERT" at its base. The entire assembly is mounted on a larger structure, with a bolt visible on the left side.

Diagram illustrating the application of a premolded rigid insulation seal to a pipe elbow. The components labeled are:

- PVC OR ZESTON PREMOLDED COVER
- PIPE
- PREMOLDED RIGID INSULATION, SEAL ALL JOINTS AND MAKE WATER VAPOR BARRIER
- PIPE INSULATION

ELBOWS



INSULATION METHOD IS TYPICAL FOR ALL OTHER VALVES

EXTENSION STEM UNIT FOR PIPE INSULATION

SEAL EXPOSED INSULATION END

PIPE INSULATION WITH METAL JACKET

PIPE

SEAL JOINT TIGHT

FILL VOID SPACE WITH FLEX. FIBERGLASS BLANKET

REMOVABLE SECTION OF INSULATION

BALL VALVE

REMOVABLE SECTION OF INSULATION

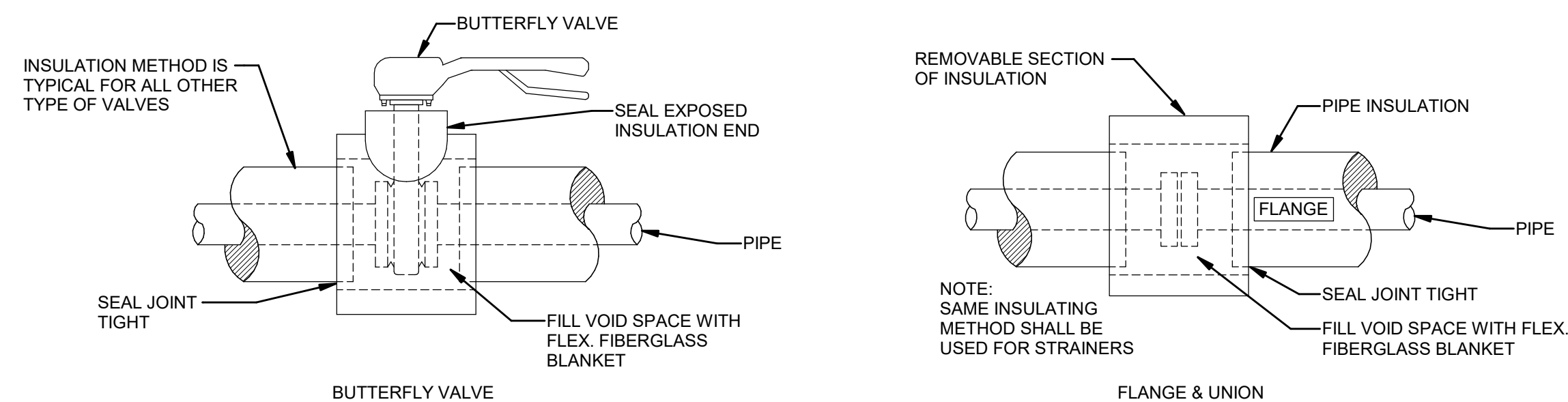
SEAL JOINT TIGHT

FILL VOID SPACE WITH FLEX. FIBERGLASS BLANKET

UNION

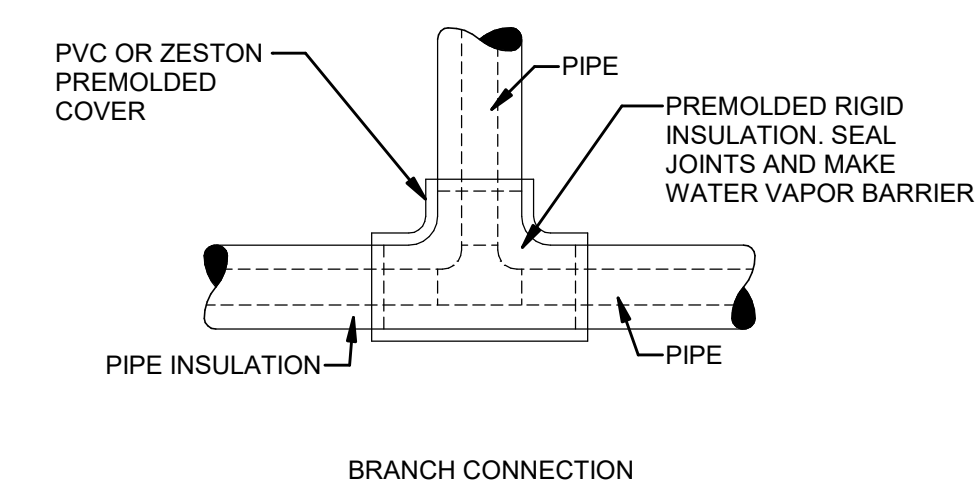
UNION

PIPE INSULATION



USED FOR STRAINERS                  FIBERGLASS BLANKET

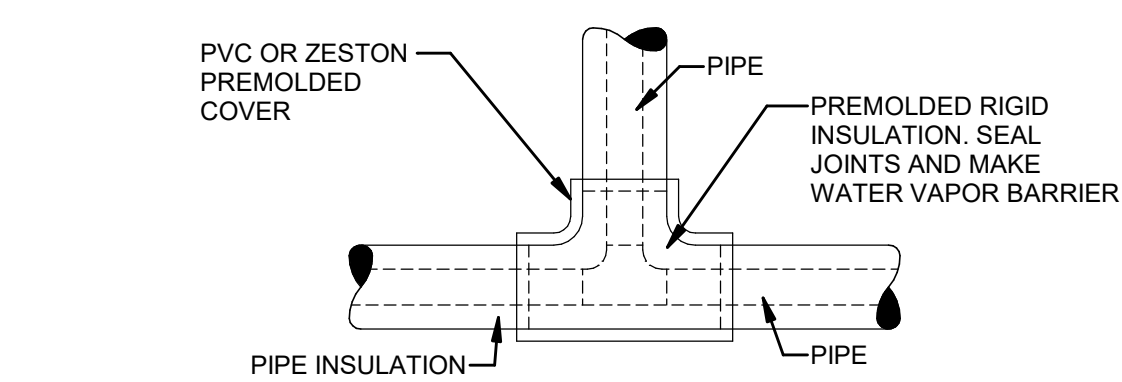
FLANGE & UNION



BRANCH CONNECTION

## ELBOWS

SLIP RING HANGERS



BRANCH CONNECTION

6	PIPE INSULATION DETAIL
P-600.00	NTS

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B	FINAL SUBMISSION	WP	SD	12-12-22
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REV	DESCRIPTION	DRW BY	CHK BY	DATE



PROJECT



## Astoria HVDC Converter Station

31-45 20<sup>th</sup> Avenue, Astoria, Queens NY 11105  
Block #850 - Lot #310 - BIN #4624437

# PLUMBING DETAILS

## SHEET #1

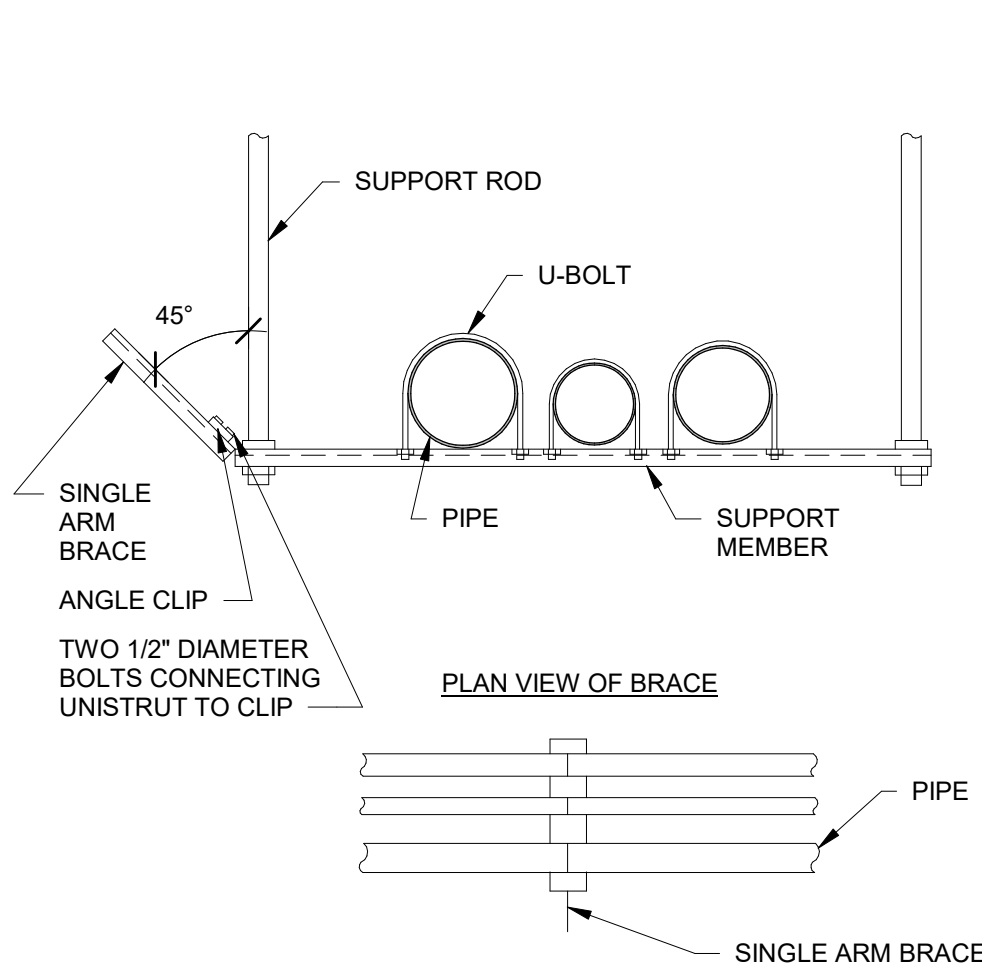


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DRAWING BY	W.PENDLETON
CHECKED BY	S.DEVADKAR
DRAWING NO	
P-600.00	
CADD FILE NO	
Autodesk Docs://CHPE	
Autodesk Docs://CHPE	

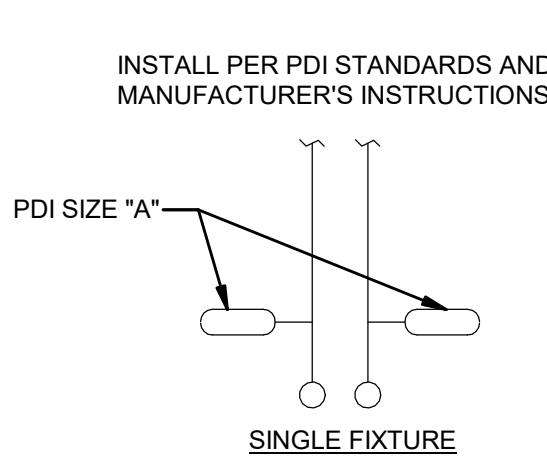
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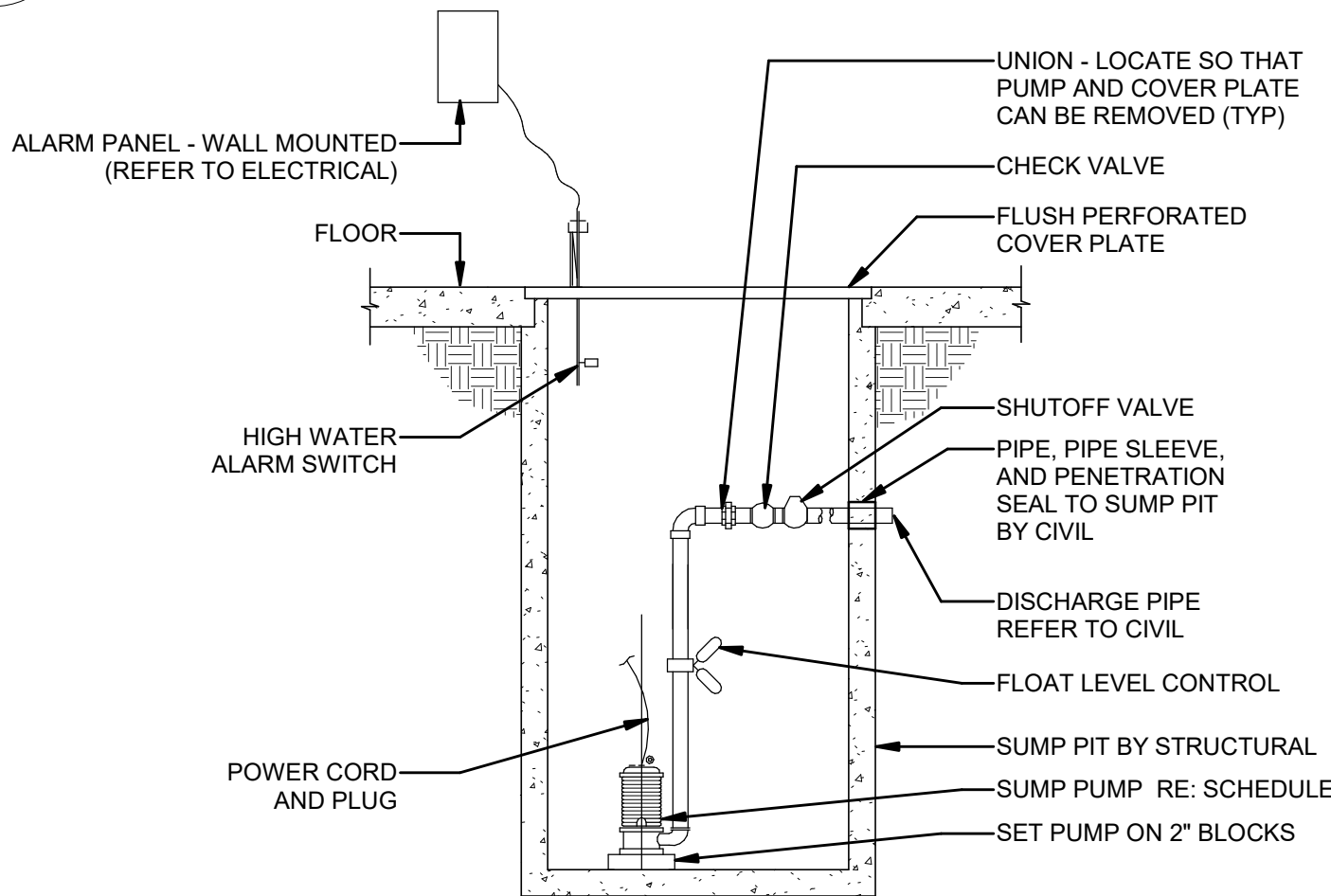


PDI SIZE	PIPE SIZE	FIXTURE UNIT LOAD
AA	1/2"	1-3
A	1/2"	1-11
B	3/4"	12-32
C	1"	33-60
D	1 1/4"	61-113
E	1 1/2"	114-154
F	2"	155-330

FIXTURE	TYPE OF SUPPLY CONTROL	WEIGHT IN FIXTURE - UNITS					
		TOTAL	C.W.	H.W.	TOTAL	C.W.	H.W.
WATER CLOSET 1.66 GPF	FLUSH VALVE	8	8	-	5	5	-
LAVATORY	FAUCET	2	1.5	1.5	1	1	1
SERVICE SINK	FAUCET	3	3	3	-	-	-
ICE MAKER	EQUIPMENT CONNECTION	1	1	-	1	1	-

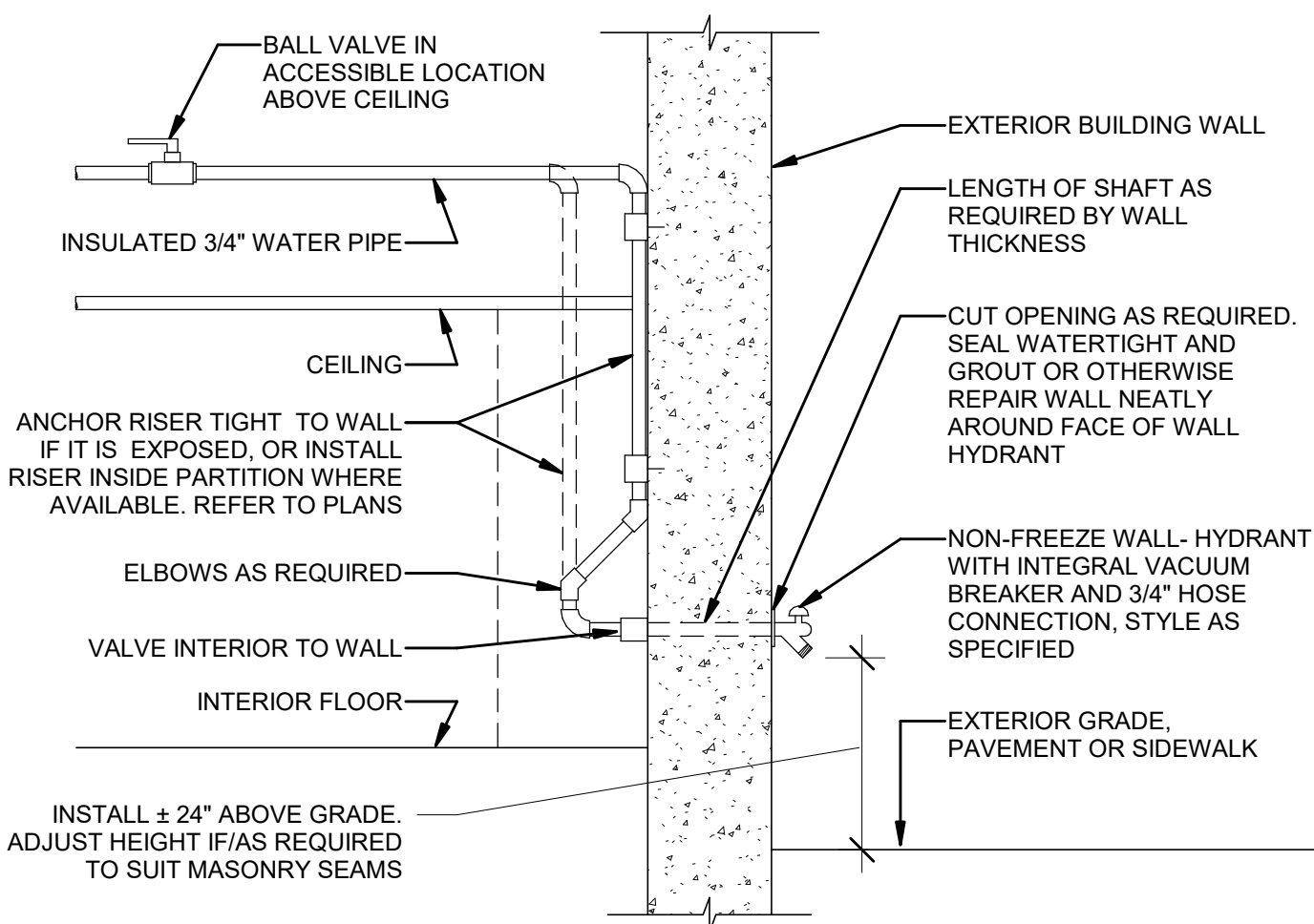
DO NOT PROVIDE AIR CHAMBERS. PROVIDE WATER HAMMER ARRESTERS BY SIOUX CHIEF, PRECISION PLUMBING PRODUCTS, WATTS OR APPROVED EQUIVALENT WITH PISTON AND O-RING CONSTRUCTION, HAVING PDI #WH-201, ASSE # 1010, AND ANSI # A112.26.1M CERTIFICATION. INSTALL IN HORIZONTAL OR VERTICAL POSITION, BUT NEVER UPSIDE DOWN. INSTALL IN LINE WITH WATER FLOW DIRECTION IF POSSIBLE. SIZE THE UNITS PER THE TABLES SHOWN ABOVE, BUT NOT LESS THAN WATER CONNECTION SIZE.

6 SINGLE ARM BRACE FOR TRAPEZE HUNG PLUMBING PIPING  
P-601.00 NTS



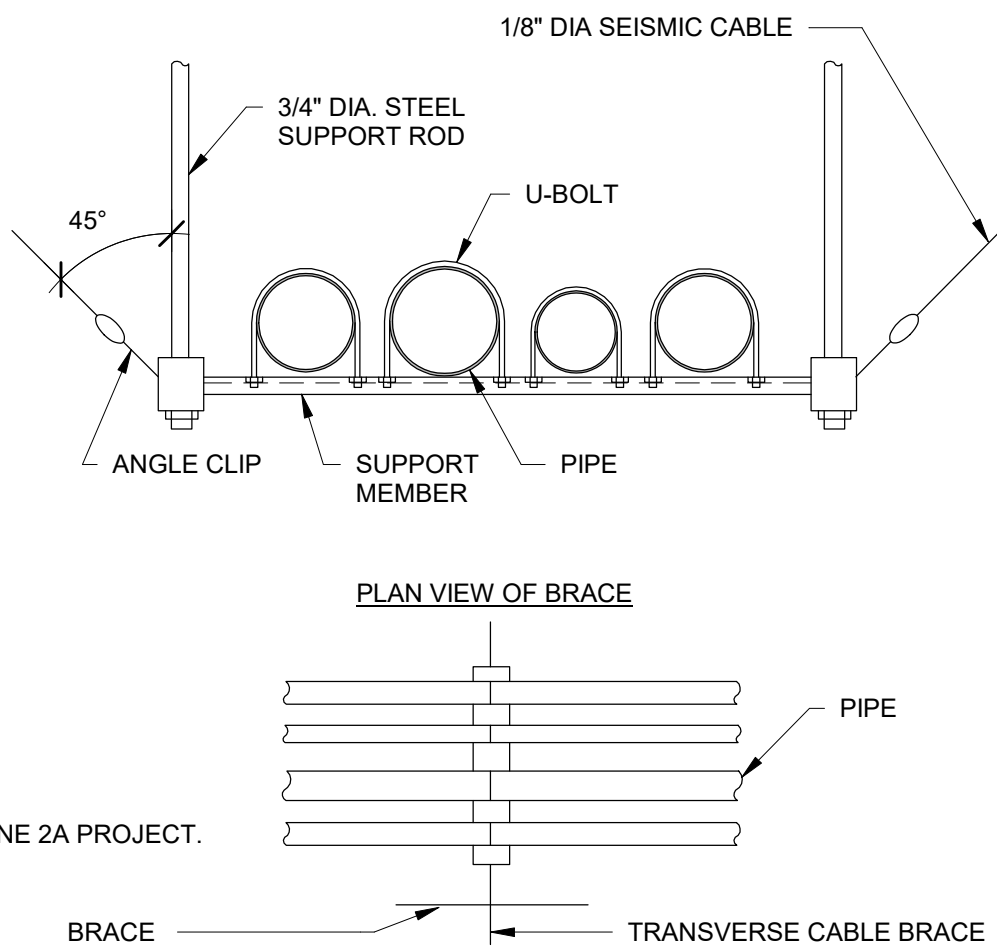
- NOTES:
- LEVEL CONTROL IS TYPICALLY A FLOAT.
  - DISCHARGE TO STORM FOR TRANSFORMER SUMP PUMP.
  - PROVIDE OIL SENSOR FOR TRANSFORMER SUMP PUMP.
  - VENT NORMALLY OMITTED WHEN CONNECTING TO STORM.

7 SUBMERSIBLE TRANSFORMER SUMP PUMP DETAIL  
P-601.00 NTS



1 NON-FREEZE WALL HYDRANT DETAIL  
P-601.00 NTS

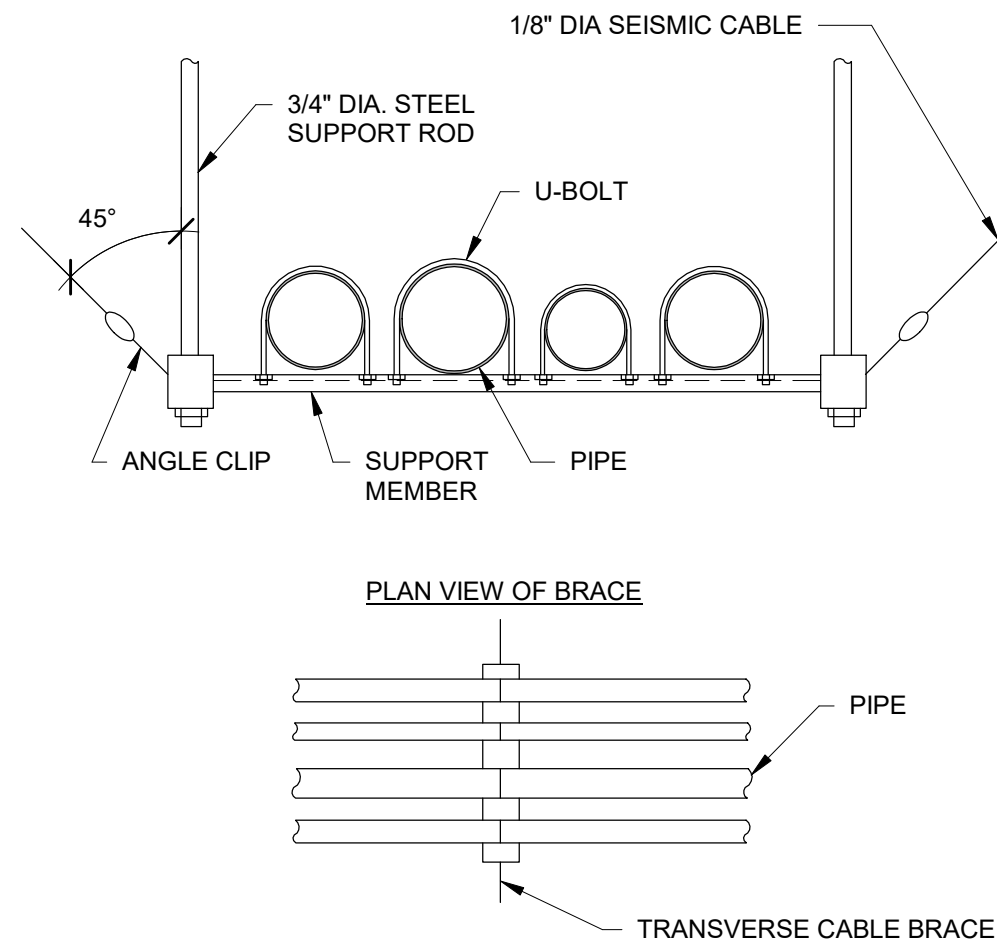
3 WATER HAMMER ARRESTER DETAIL  
P-601.00 NTS



NOTE:  
THIS IS A SEISMIC ZONE 2A PROJECT.

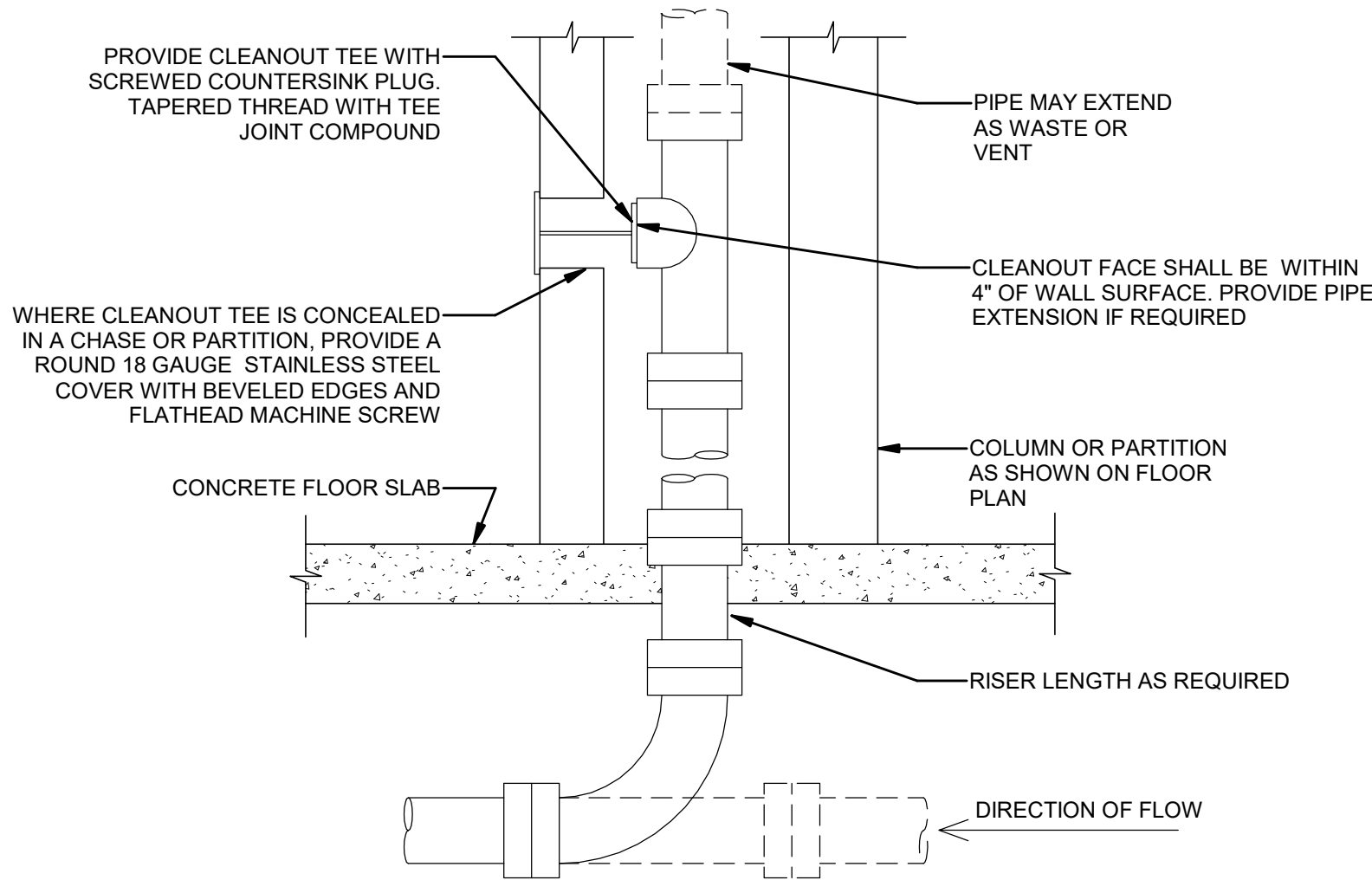
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4 TRANSVERSE AND LONGITUDINAL CABLE BRACE FOR TRAPEZE HUNG PLUMBING PIPING  
P-601.00 NTS



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5 TRANSVERSE CABLE BRACE FOR TRAPEZE HUNG PLUMBING PIPING  
P-601.00 NTS

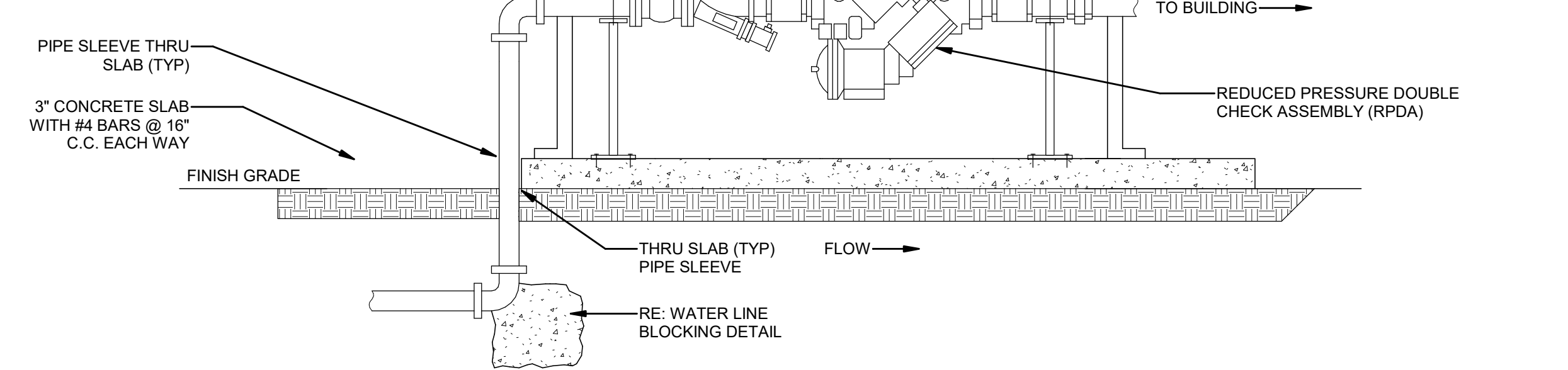


NOTE:  
PROVIDE WCO WHERE SHOWN ON PLAN AND ON SANITARY WASTE BRANCHES NOT SERVED WITH A FLOOR CLEANOUT. LOCATE ABOVE FIXTURE FLOOD RIM WITHIN FOUR FEET OF FLOOR. CONFORM TO LOCAL CODES FOR OTHER WCO REQUIREMENTS.

2 WALL CLEANOUT DETAIL  
P-601.00 NTS

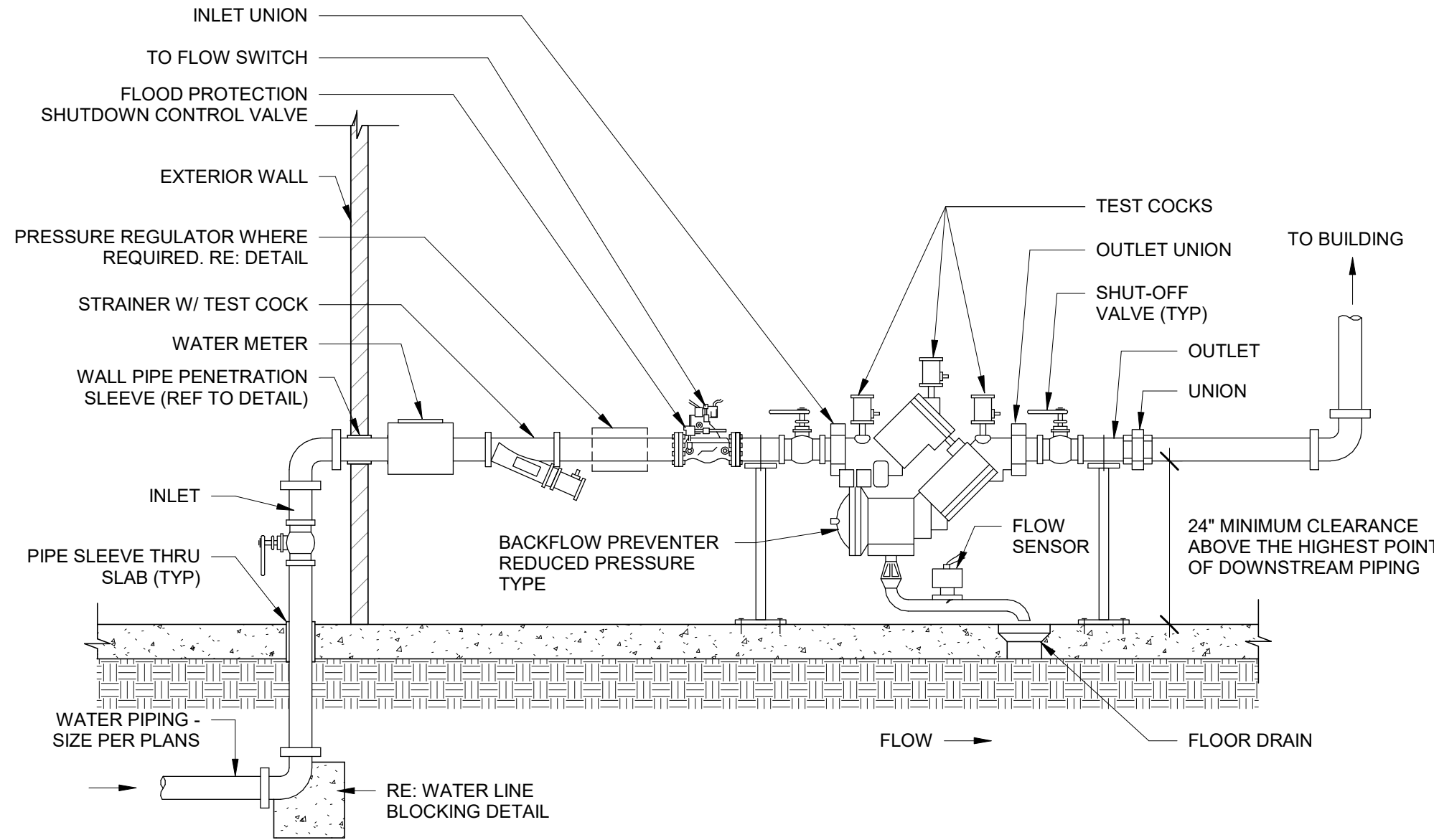


NOTES:  
1. ARRANGEMENT SHOWN IS SCHEMATIC. MODIFY TO SUIT CONDITIONS. INSTALL SO BFP CAN BE SERVICED AND TESTED IN ACCORDANCE W/ ALL RULES & REGULATIONS OF LOCAL AUTHORITIES.  
2. SUPPORT AS REQUIRED FROM SLAB.  
3. EXTERIOR PIPE TO BE HEAT TRACED.

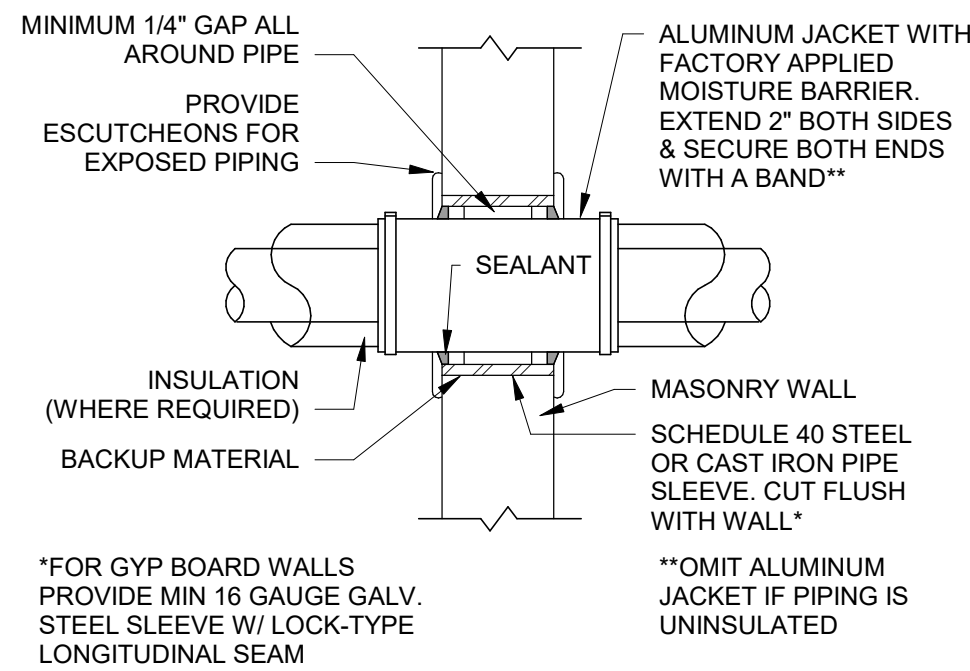


1 REDUCED PRESSURE DOUBLE CHECK ASSEMBLY  
P-602.00 NTS

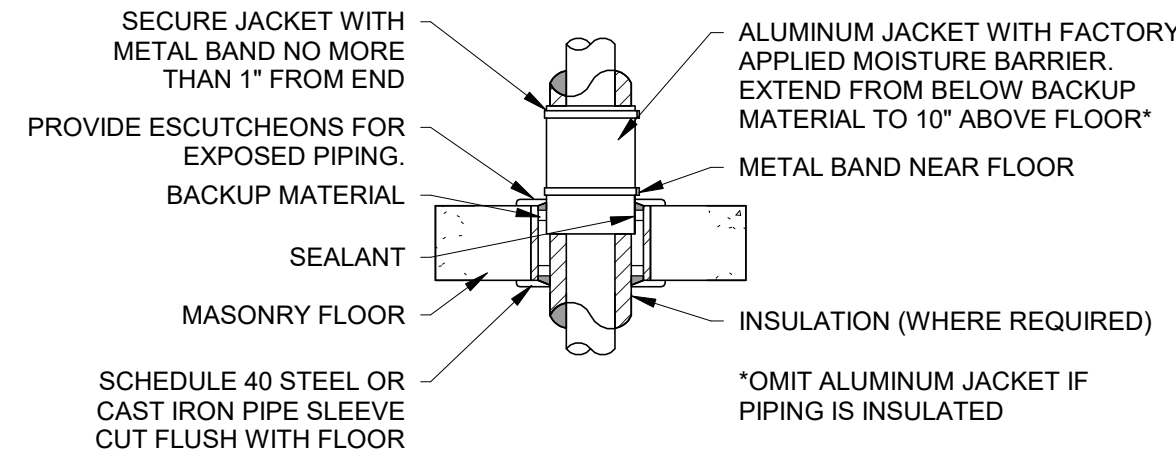
NOTES:  
1. PROVIDE PRESSURE REGULATOR, SET TO 75 PSI WHERE SOURCE PRESSURE EXCEEDS 80 PSI. INSTALL BACKFLOW PREVENTER OUTLET, RE: DETAIL.  
2. ARRANGEMENT SHOWN IS SCHEMATIC. MODIFY TO SUIT CONDITIONS. INSTALL SO BFP CAN BE SERVICED AND TESTED IN ACCORDANCE W/ ALL RULES & REGULATIONS OF LOCAL AUTHORITIES.  
3. ROUTE DRAIN AS INDICATED ON PLANS.  
4. SUPPORT AS REQUIRED FROM SLAB.  
5. EXTERIOR PIPE TO BE HEAT TRACED.



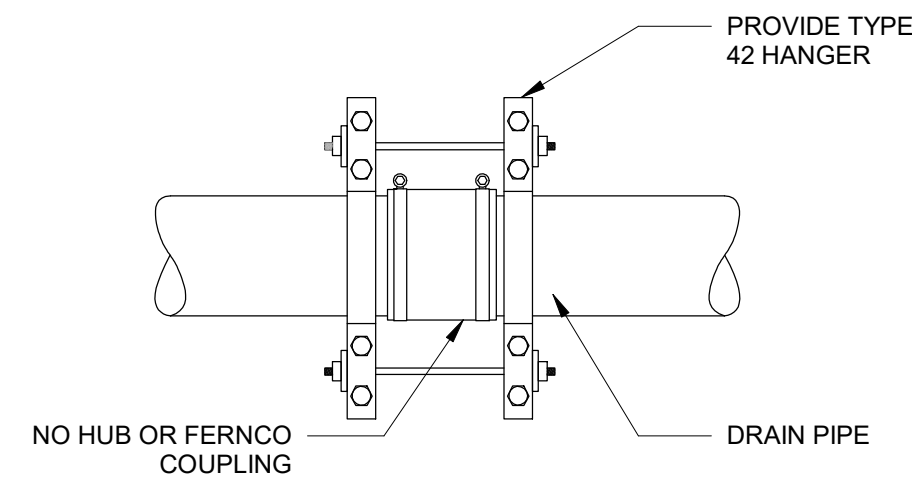
2 INTERIOR BACKFLOW PREVENTER WITH FLOOD CONTROL VALVE DETAIL  
P-602.00 6" = 1'-0"



3 WALL PIPE PENETRATION DETAIL  
P-602.00 3/4" = 1'-0"



4 FLOOR PIPE PENETRATION DETAIL  
P-602.00 1/2" = 1'-0"

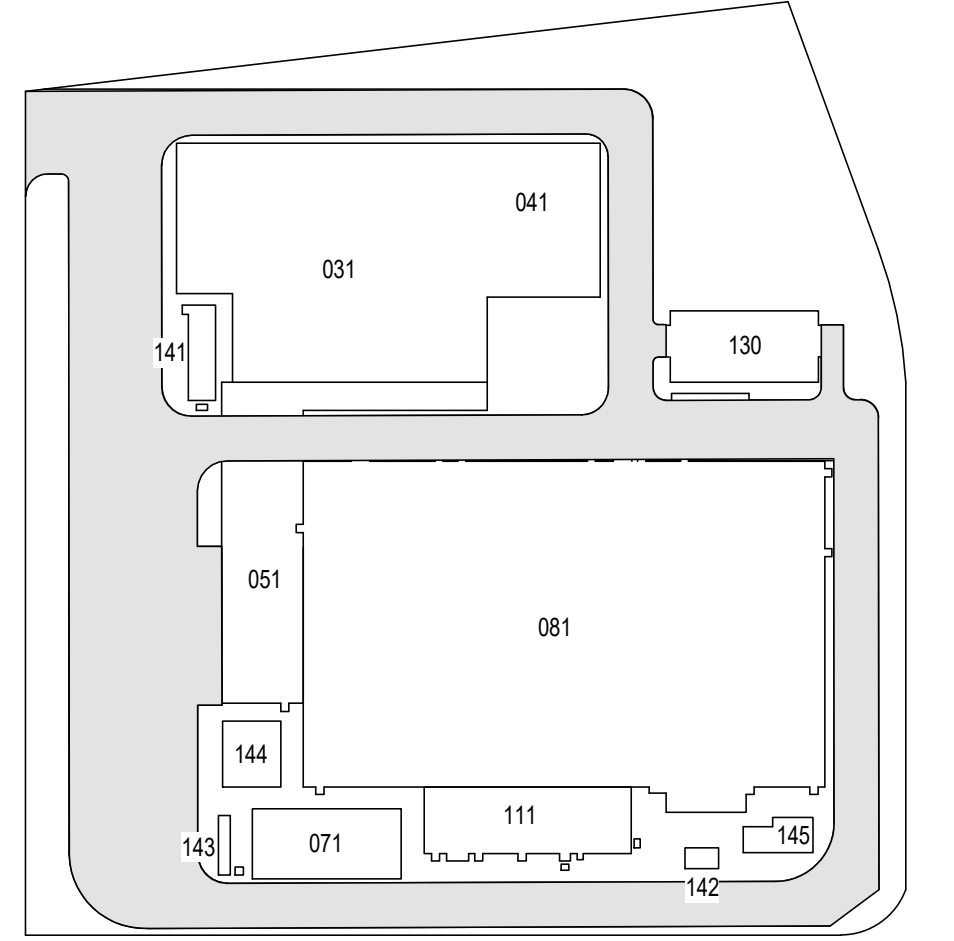


5 PIPE RESTRAINT  
P-602.00 3/4" = 1'-0"

SHEET NOTES:

1. REFER TO SHEETS A SERIES FOR ARCHITECTURAL DRAWINGS, NOTES, DETAILS, SCHEDULES AND REQUIREMENTS. FILED UNDER SEPARATE APPLICATION.
2. REFER TO SHEETS E SERIES FOR BUILDING ELECTRICAL DRAWINGS, NOTES, DETAILS, SCHEDULES AND REQUIREMENTS. FILED UNDER SEPARATE APPLICATION.
3. REFER TO SHEETS M SERIES FOR HVAC MECHANICAL DRAWINGS, NOTES, DETAILS, SCHEDULES AND REQUIREMENTS. FILED UNDER SEPARATE APPLICATION.
4. REFER TO SHEETS P SERIES FOR PLUMBING DRAWINGS, NOTES, DETAILS, SCHEDULES AND REQUIREMENTS. FILED UNDER SEPARATE APPLICATION.
5. REFER TO SHEETS S SERIES FOR BUILDING STRUCTURAL DRAWINGS, NOTES, DETAILS, SCHEDULES AND REQUIREMENTS. FILED UNDER SEPARATE APPLICATION.
6. REFER TO GENERAL NOTES ON MEP COVER SHEET FOR ADDITIONAL REQUIREMENTS OF WORK.
7. ALL PLUMBING METALLIC COMPONENTS INSIDE CONVERTOR BUILDING SHALL BE BONDED TO THE BUILDING OR BUILDING RING CONDUCTOR. COORDINATE WITH ELECTRICAL PLANS AND CONTRACTOR FOR REQUIREMENTS.
8. ALL PLUMBING METALLIC COMPONENTS INSTALLED OUTSIDE OF BUILDING SHALL BE BONDED TO GROUND. COORDINATE WITH ELECTRICAL PLANS AND CONTRACTOR FOR REQUIREMENTS.

ISSUED FOR PERMIT



KEY PLAN  
N.T.S.

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REV	DESCRIPTION	DRW BY	CHK BY	DATE
B	FINAL SUBMISSION	WP	SD	12-12-22
A	INTERIM SUBMISSION	WP	AZ	09-13-22

Kiewit

470 Chestnut Ridge Rd # 2,  
Woodcliff Lake, NJ 07677

Hitachi Energy

901 Main Campus Drive  
Raleigh, North Carolina 27606

PROJECT

CHPE  
Champlain Hudson  
Power Express

Astoria HVDC  
Converter Station

31-45 20th Avenue, Astoria, Queens NY 11105  
Block #850 - Lot #310 - BIN #4624437

PLUMBING DETAILS  
SHEET #3



DATE 12/12/2022  
PROJECT NO 105121  
DRAWING BY W. PENDLETON  
CHECKED BY S. DEVADKAR  
DRAWING NO  
P-602.00  
CADD FILE NO  
Astoria\CHPE\CHPE-081-00-M314-001.rvt

12/21/2022 1:00:22 PM

INSTANTANEOUS WATER HEATER SCHEDULE (IWH)			
TAG	IWH-111-01	IWH-111-02	IWH-111-03
TYPE	INSTANTANEOUS	INSTANTANEOUS	INSTANTANEOUS
LOCATION	LAV-111-01	MB-111-01	SK-111-01
MANUFACTURER	RHEEM	RHEEM	RHEEM
MODEL	RTEX-11	RTEX-24	RTEX-11
HEATING SOURCE	ELECTRIC	ELECTRIC	ELECTRIC
POWER INPUT - KW	11	24	11
ELECTRICAL DATA (V / PH / HZ)	240/1/60	208/1/60	240/1/60
AMPERAGE (A)	46	100	46
MINIMUM REQUIRED BREAKER SIZE	50	(3) 40	50
MAXIMUM TEMP. RISE	50 @ 1.5 GPM	66 @ 2.5 GPM	50 @ 1.5 GPM
WATER CONNECTION SIZE (.in)	1/2"	3/4"	1/2"
MAXIMUM WORKING PRESSURE (PSI)	150	150	150
ENERGY EFFICIENCY (%)	99.8	99.8	99.8
APPROXIMATE FULL WEIGHT (lbm)	8.5	18	8.5
REMARKS	1,2	1,2	1,2
GENERAL NOTES: 1. PROVIDE ASME TEMPERATURES AND PRESSURE RELIEF VALVE FOR WATER HEATER. 2. PROVIDE VACCUM RELIEF VALVE FOR WATER HEATER.			

FLOOR CLEANOUT SCHEDULE				
SYMBOL	DESCRIPTION	MINIMUM CONNECTION SIZE		NOTES
		WASTE (in)	VENT (in)	
FCO-01	FLOOR CLEANOUT	4"	NA	WATTS CO-200-R, EPOXY COATED CAST IRON FLOOR CLEANOUT WITH 5" ROUND ADJUSTABLE GASKETED NICKEL BRONZE TOP AND NO-HUB CONNECTION
NOTES: 1. PROVIDE MINIMUM CONNECTION SIZE SCHEDULED UNLESS INDICATED OTHERWISE.				

WATER HAMMER ARRESTOR SCHEDULE		
PDI SIZE	REMARKS	WATER SUPPLY FIXTURE UNITS (NOTE 3)
A	STAINLESS STEEL	1-11
C	STAINLESS STEEL	33-60
NOTES: 1. PDI ABBREVIATION: PLUMBING AND DRAINAGE INSTITUTE. 2. WATER HAMMER ARRESTOR SIZE DESIGNATOR IS IN REFERENCE TO THE PLUMBING AND DRAINAGE INSTITUTE PUBLICATION PDI-WH-201. 3. PROVIDE THE MAXIMUM NUMBER OF WATER SUPPLY FIXTURE UNIT FIXTURE A WATER HAMMER ARRESTOR SHALL SERVE. 4. SEE TABLE E103.3(2) OF THE 2009 INTERNATIONAL PLUMBING CODE FOR WATER SUPPLY FIXTURE UNITS VALVES ASSIGNED TO FIXTURES. 5. JR SMITH 5005-5050		

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REV	DESCRIPTION	DRW BY	CHK BY	DATE

**Kiewit**  
470 Chestnut Ridge Rd # 2,  
Woodcliff Lake, NJ 07677


**Hitachi Energy**  
901 Main Campus Drive  
Raleigh, North Carolina 27606

PROJECT

**CHPE**  
Champlain Hudson Power Express

**Astoria HVDC Converter Station**  
31-45 20th Avenue, Astoria, Queens NY 11105  
Block #850 - Lot #310 - BIN #4624437

SERVICE BUILDING  
PLUMBING - SCHEDULES

  
DATE 12/12/2022  
PROJECT NO 105121  
DRAWING BY W.PENDLETON  
CHECKED BY S.DEVADKAR  
DRAWING NO  
**P-700.00**  
CADD FILE NO  
Astoria\CHA-KIE-081-00-M3-H-001.rvt



PIPING MATERIAL APPLICATION								
DIVISION	SERVICE	LOCATION	SIZE RANGE	MATERIAL	STANDARD INSULATION MATERIAL	OTHER INSULATION MATERIAL OPTIONS	JACKETING	REMARKS
22 - PLUMBING	SOIL , WASTE	UNDERGROUND	UP TO 10 INCH	PIPE: SOLID-WALL PVC PIPE, PVC SOCKET FITTINGS, AND SOLVENT-CEMENTED JOINTS: ASTM D 2665, DRAIN, WASTE, AND VENT, SCHEDULE 40. FITTINGS: PVC SOCKET FITTINGS, ASTM D 2665, SOCKET TYPE, MADE TO ASTM D 3311 DRAIN, WASTE, AND VENT PATTERNS.	-		-	-
		ABOVE GROUND	UP TO 10 INCH	PIPE: HUBLESS CAST-IRON PIPE AND FITTINGS OR DWV COPPER PIPING WITH HUBLESS FITTINGS OR DWV COPPER PIPE WITH WROUGHT-COPPER DRAINAGE FITTINGS AND SOLDER JOINTS. FITTINGS: ALL HUBLESS CAST-IRON FITTINGS SHALL MEET THE REQUIREMENTS OF ASTM A-888 OR CISPI 301 AS APPLICABLE. COUPLINGS, BOTH AT HORIZONTAL AND VERTICAL JOINTS, SHALL BE CLAMPED AND RESTRAINED WHERE REQUIRED AND IN ACCORDANCE WITH CISPI 301. COPPER DWV TUBE SHALL MEET THE REQUIREMENTS OF ASTM B306.	-		-	-
22 - PLUMBING	VENT	UNDERGROUND	UP TO 4 INCH	PIPE: SOLID-WALL PVC PIPE, PVC SOCKET FITTINGS, AND SOLVENT-CEMENTED JOINTS: ASTM D 2665, DRAIN, WASTE, AND VENT, SCHEDULE 40. FITTINGS: PVC SOCKET FITTINGS, ASTM D 2665, SOCKET TYPE, MADE TO ASTM D 3311 DRAIN, WASTE, AND VENT PATTERNS.	-		-	-
		ABOVE GROUND	UP TO 4 INCH	GALVANIZED STEEL PIPE WITH MALLEABLE IRON FITTINGS OR SERVICE WEIGHT CAST-IRON SOIL PIPE WITH HUBLESS FITTINGS (ASTM A-888 OR CISPI 301), OR DWV COPPER PIPE WITH WROUGHT-COPPER DRAINAGE FITTINGS AN SOLDER JOINTS. COPPER PIPE SHALL MEET ASTM B306 REQUIREMENTS.	1.5" CELLULAR GLASS	GLASS-FIBER, TYPE I MINERAL WOOL, TYPE II	ASJ	1
22 - PLUMBING	CONDENSATE DRAIN	ABOVE GROUND	UP TO 4 INCH	PIPE: SOLID-WALL PVC PIPE, PVC SOCKET FITTINGS, AND SOLVENT-CEMENTED JOINTS: ASTM D 2665, DRAIN, WASTE, AND VENT, SCHEDULE 40. FITTINGS: PVC SOCKET FITTINGS, ASTM D 2665, SOCKET TYPE, MADE TO ASTM D 3311 DRAIN, WASTE, AND VENT PATTERNS.  PIPE: SOFT COPPER TUBE, ASTM B 88, TYPE K (ASTM B 88M, TYPE A) FITTINGS: ASME 16.22 & ASTM B75/B75M, WROUGHT-COPPER, SOLDER-JOINT FITTINGS; AND BRAZED JOINTS.	1.5" CELLULAR GLASS	GLASS-FIBER, TYPE I MINERAL WOOL, TYPE II	ASJ	5
22 - PLUMBING	DOMESTIC WATER INDOOR	UNDERGROUND	UP TO 4 INCH	PIPE: SOFT COPPER TUBE, ASTM B 88, TYPE K (ASTM B 88M, TYPE A) FITTINGS: ASME 16.22 & ASTM B75/B75M, WROUGHT-COPPER, SOLDER-JOINT FITTINGS; AND BRAZED JOINTS.	-		-	-
22 - PLUMBING	FIRE / DOMESTIC WATER SERVICE	UNDERGROUND	2-6 INCH	PIPE: AWWA C151, DUCTILE IRON FITTINGS: AWWA C111, MECH JOINTS	-		-	-
22 - PLUMBING	DOMESTIC WATER INDOOR	ABOVE GROUND	UP TO 6 INCH	PIPE: ASTM B88, TYPE L DRAWN TEMPER SEAMLESS COPPER TUBE. FITTINGS: ASME B16.22 WROUGHT COPPER OR ASME B16.18 CAST-COPPER ALLOY. FLANGES: ASME B16.24, CLASS 150 CAST BRONZE FLANGES WITH SOLDER JOINT ENDS. UNIONS: ASME B16.18 CAST-COPPER ALLOY, HEXAGONAL STOCK BODY WITH BALL-AND-SOCKET JOINT, METAL-TO-METAL SEATING SURFACES, AND SOLDER JOINT AND/OR THREADED ENDS.	1.5 INDOORS CELLULAR GLASS CELLULAR GLASS 2" OUTDOORS	FLEXIBLE ELASTOMETRIC GLASS-FIBER, TYPE I MINERAL WOOL, TYPE II PHENOLIC POLYOLEFIN	ASJ	3
REMARKS: 1. INSULATE PLUMBING VENTS WITHIN 6 FEET OF ROOF OUTLET. 2. INSULATE ALL DOMESTION HOT WATER, TEMPERED WATER, AND COLD WATER PIPING. 3. INSULATE CONDENSATE DRAINAGE PIPING. 4. INSULATE HYDRONIC PIPING - CHILLED WATER / HOT WATER.  JACKET MATERIALS: ASJ WHITE, KRAFT-PAPER, FIBERGLASS-REINFORCED SCRIM WITH ALUMINUM-FOIL BACKING; COMPLYING WITH ASTM C 1136, TYPE I. ALUM ASTM B209, TEMPER H14, MINIMUM THICKNESS OF 0.016 INCH, WITH FACTORY-APPLIED POLYETHYLENE AND KRAFT PAPER MOISTURE BARRIER ON THE INSIDE SURFACE GLASS PLAIN-WEAVE GLASS CLOTH CONFORMING TO ASTM D579/, STYLE 141, WEIGHING NOT LESS THAN 7.23 OUNCES PER SQUARE YARD BEFORE SIZING. FACTORY APPLY CLOTH WHEREVER POSSIBLE. PVC PROVIDE 0.010 INCH THICK, FACTORY-PREMOLDED POLYVINYLCHLORIDE, PIPE-BARREL SHEETING VAPOR-BARRIER JACKETING THAT IS SELF-EXTINGUISHING, WITH HIGH-IMPACT STRENGTH AND MODERATE CHEMICAL RESISTANCE.								

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SERVICE BUILDING  
PLUMBING - SCHEDULES



DATE12/12/2022

PROJECT NO105121

DRAWING BYW.PENDLETON

CHECKED BYS.DEVADKAR

DRAWING NO

P-701.00

CADD FILE NO  
Astoria-HVDC-CHPE  
Astoria-CHA-KIE-081-00-M314-001.rvt