

SYMBOLS AND ABBREVIATIONS

| SYMBOL | ABBREVIATION | DESCRIPTION |
|--------|--------------|-------------------------------|
| | EX. | EXISTING TO REMAIN |
| | NEW | NEW WORK |
| | DEM. | EXISTING TO BE REMOVED |
| | CW | COLD WATER |
| | AFF | ABOVE FINISHED FLOOR |
| | BFP | BACK FLOW PREVENTER |
| | DCV | DOUBLE CHECK VALVE |
| | DN. | ELBOW DOWN |
| | MAX. | MAXIMUM |
| | MIN. | MINIMUM |
| | PC | PLUMBING CONTRACTOR |
| | RPZ | REDUCED PRESSURE ZONE |
| | TYP | TYPICAL |
| | - | DIRECTION OF FLOW |
| | WCA | WESTCHESTER COUNTY AIRPORT |
| | WJWW | WESTCHESTER JOINT WATER WORKS |

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EQUIPMENT NOTES:

- 10" BACKFLOW PREVENTER ASSEMBLY (TYPICAL FOR 4 BACKFLOW PREVENTER DEVICES - PRIMARY & SECONDARY): SHALL BE WATTS MODEL LF909M1 REDUCED PRESSURE ZONE ASSEMBLY LEAD FREE. ASSEMBLY SHALL BE SUITABLE FOR PRESSURES UP TO 175 PSI AND TEMPERATURES UP TO 110°F. THE ASSEMBLY SHALL CONSIST OF A PRESSURE DIFFERENTIAL RELIEF VALVE LOCATED IN A ZONE BETWEEN TWO POSITIVE SEATING CHECK VALVES AND CAPTURED SPRINGS. BACKSIPHONAGE PROTECTION SHALL INCLUDE PROVISION TO ADMIT AIR DIRECTLY INTO THE REDUCED PRESSURE ZONE VIA A SEPARATE CHANNEL FROM THE WATER DISCHARGE CHANNEL. THE ASSEMBLY SHALL INCLUDE TWO TIGHTLY CLOSING SHUTOFF VALVES BEFORE AND AFTER THE VALVE AND TEST COCKS. THE ASSEMBLY SHALL INCLUDE TWO RESILIENT OS&Y SEATED SHUTOFF VALVES & FOUR BALL TYPE TEST COCKS. UL, FM APPROVED BACKFLOW PREVENTERS SHALL INCLUDE UL/FM APPROVED OSY GATE VALVES.
- 10" WATER METER SHALL BE SENSUS OMNI+FIREFILE F2
 - NSF/ANSI STANDARD 61,
 - STRAINER: UL LISTED/FM APPROVED, FIRE RATED, SENSUS V SHAPED
 - UNIT OF MEASURE SHALL BE HUNDREDS OF CUBIC FEET
 - REMOTE READING SYSTEM.
 - CONTRACTOR SHALL PROVIDE ALL ASSOCIATED COMPONENTS FOR REMOTE READING SYSTEM INCLUDING EXTERIOR WALL MOUNTED RADIO TRANSMITTER SENSUS SMARTPOINT 510M, 3-WIRE, DUAL PORT AND ALL ASSOCIATED WIRING.
 - NOTE: FINAL WATER METER SIZE, MODEL, AND DIMENSIONS SHALL BE REVIEWED AND APPROVED BY THE WESTCHESTER JOINT WATER WORKS PRIOR TO INSTALLATION. THE PLUMBING CONTRACTOR IS RESPONSIBLE FOR COORDINATION AND INSTALLATION AND ALL RELATED WATER DEPARTMENT FEES.
- LEAK DETECTION: SHALL BE SIMILAR TO LIEBERT LIQUI-TECT POINT LEAK-DETECTION SENSOR MODEL #: LT410 MOUNTED ON FLOOR OF ROOM. EXTERNAL POWER AND CONTROL WIRING ON FLOOR SHALL BE PROTECTED WITH CABLE PROTECTOR SYSTEM. PROVIDE OUTPUT TO REMOTE MONITORING SYSTEM.

PROPOSED PHASING NOTES

- EXISTING BFP BUILDING AT TOWER ROAD TO REMAIN ACTIVE AS WESTCHESTER COUNTY AIRPORT'S PRIMARY WATER SUPPLY.
 - CONSTRUCT NEW BFP BUILDING AT TOWER ROAD & AIRPORT ROAD. VALVE & CAP NEW 12" UNDERGROUND PIPING UNTIL NEW 12" UNDERGROUND WATER MAIN IS INSTALLED. CONNECTION TO NEW 12" UNDERGROUND WATER MAIN SHALL NOT BE COMPLETED UNTIL CERTIFICATE OF COMPLETION IS PROVIDED BY WC DOH.
 - PRESSURE TEST AND DISINFECT THE NEW PIPING.
 - ENERGIZE THE NEW 12" WATER SERVICE PIPING.
 - DEMOLISH EXISTING BACKFLOW PREVENTER BUILDING AT TOWER RD.
- NOTE: REFER TO CIVIL DRAWINGS FOR ADDITIONAL PHASING INFORMATION AND CONSTRUCTION SEQUENCE.

BUILDING INFORMATION

ADDRESS: 240 AIRPORT RD.
WHITE PLAINS NY, 10604

COUNTY: WESTCHESTER

GENERAL NOTES:

- ADEQUATE HEAT AND LIGHT SHALL BE PROVIDED IN LOCATIONS WHERE BACKFLOW PREVENTERS ARE TO BE INSTALLED.
- THE CONTRACTOR SHALL USE ONLY AMERICAN MADE, UL/FM APPROVED VALVES.
- NO WORK SHALL PROCEED WITHOUT WESTCHESTER JOINT WATER WORKS (WJWW) AND WESTCHESTER COUNTY DEPARTMENT OF HEALTH APPROVAL. BACKFLOW PREVENTER ARRANGEMENT SHALL NOT BE ALTERED WITHOUT PRIOR APPROVAL BY WESTCHESTER COUNTY DEPARTMENT OF HEALTH.
- BACKFLOW PREVENTION SHALL BE PROTECTED FROM THE HIGHEST FLOOD LEVEL.
- BY-PASSES AROUND BACKFLOW PREVENTER ASSEMBLY SHALL NOT BE PERMITTED.
- BACKFLOW PREVENTER DEVICE SHALL BE TESTED INITIALLY AND ANNUALLY BY A CERTIFIED AND LICENSED TESTER. AT THE TIME OF INITIAL TESTING PART A AND B OF DOH 1013 FORM MUST BE COMPLETED, TEST RESULTS (FORM DOH 1013) SHALL BE FORWARDED TO THE WJWW, WESTCHESTER COUNTY DEPARTMENT OF HEALTH, OWNER AND ENGINEER. THE BACKFLOW PREVENTER SHALL BE REBUILT EVERY FIVE YEARS.
- ALL PLUMBING WORK SHALL BE PERFORMED BY A LICENSED PLUMBER AND ACCORDING TO DEPARTMENT OF PUBLIC WORKS REGULATIONS.
- CONTRACTOR SHALL DISINFECT AND PRESSURE TEST BACKFLOW PREVENTER ASSEMBLY BEFORE PLACING IN SERVICE. DISINFECTION SHALL BE IN ACCORDANCE WITH AWWA STANDARD C651-05 WITH THE EXCEPTION OF SECTION 4.4.2.
- CONTRACTOR SHALL ADEQUATELY SUPPORT ALL PIPING AND DEVICES.
- WHERE THE DISTANCE BETWEEN THE WATER METER AND THE BACKFLOW PREVENTER ASSEMBLY IS GREATER THAN 10'-0", ALL EXPOSED PIPING SHALL BE STENCILED "FEED LINE TO BACKFLOW PREVENTER - DO NOT TAP" AT 5'-0" INTERVALS.

INSTALLATION NOTES:

- STRAINERS ARE RECOMMENDED PRIOR TO EACH BACKFLOW DEVICE ON NON-FIRE FIGHTING LINES ONLY. NO STRAINER IS TO BE USED ON A FIRE LINE WITHOUT INSURANCE UNDERWRITER APPROVAL.
- ASSEMBLIES SHOULD BE SPECIFIED AND INSTALLED WITH MANUFACTURER SUPPLIED VALVES.
- WATER LINES SHOULD BE THOROUGHLY FLUSHED BEFORE INSTALLATION OF DEVICE TO PREVENT DEBRIS FOULING THE DEVICE CHECK VALVES.
- DEVICES MUST BE MOUNTED HORIZONTALLY UNLESS APPROVED FOR VERTICAL INSTALLATION.
- ASSEMBLIES SHOULD NOT BE INSTALLED IN AREAS CONTAINING CORROSIVE OR TOXIC GASES WHICH COULD RENDER THE DEVICE INOPERABLE.

NOTE: INSTALLATION SHALL BE IN ACCORDANCE WITH WESTCHESTER COUNTY DEPARTMENT OF HEALTH REQUIREMENTS.

SITE PLAN NOTES:

- BACKFLOW PREVENTERS ARE MINIMUM 1 FOOT ABOVE THE 100 YEAR FLOOD ELEVATION.
- CATASTROPHIC DISCHARGE FLOWS TO NON-PEDESTRIAN TRAFFIC AREAS. REFER TO DRAWINGS & ENGINEER'S REPORT FOR CALCULATIONS.
- PIPING MATERIALS:

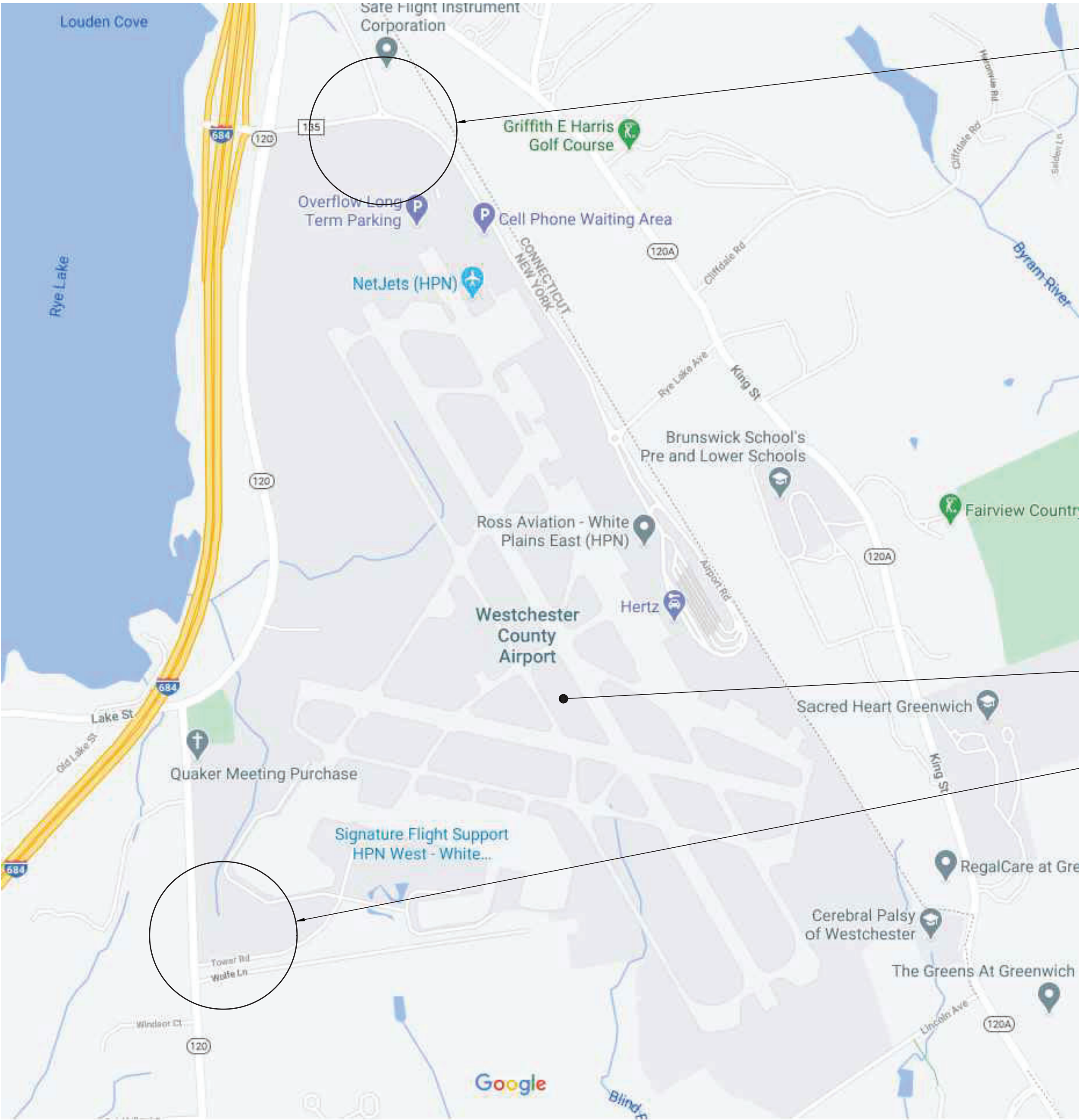
COMPLY WITH REQUIREMENTS FOR PIPING & FITTING MATERIALS AND JOINING METHODS FOR SERVICE PIPING.
POTABLE-WATER PIPING AND COMPONENTS SHALL COMPLY WITH NSF 61 ANNEX G.
COMPLY WITH NSF STANDARD 372 FOR LOW LEAD.
DUCTILE-IRON SERVICE PIPE AND FITTINGS

MECHANICAL-JOINT, DUCTILE-IRON PIPE:
AWWA C151/A21.51, WITH MECHANICAL-JOINT FLANGED ENDS.
GASKETS, AND BOLTS: AWWA C111/A21.11, RUBBER GASKETS, AND STEEL BOLTS.

PIPE JOINING MATERIALS
PIPE-FLANGE GASKET MATERIALS: AWWA C110, RUBBER, FLAT FACE, 1/8 INCH THICK OR ASME B16.21, NONMETALLIC AND ASBESTOS FREE, UNLESS OTHERWISE INDICATED; FULL-FACE OR RING TYPE UNLESS OTHERWISE INDICATED.
METAL, PIPE-FLANGE BOLTS AND NUTS: ASME B18.2.1, CARBON STEEL UNLESS OTHERWISE INDICATED.

IRON GATE VALVES
CLASS 150, OS&Y, IRON GATE VALVES (LEAD FREE):
STANDARD: MSS SP-70, TYPE I.
CWP RATING: 200 PSIG.
BODY MATERIAL: ASTM A 126, GRAY IRON WITH BOLTED BONNET.
ENDS: FLANGED.
TRIM: BRONZE.
DISC: SOLID WEDGE.
PACKING AND GASKET: ASBESTOS FREE.

- PIPING INSULATION FOR COLD WATER FOR NPS 1-1/2 AND LARGER SHALL BE ONE OF THE FOLLOWING FOR FLUID OPERATING TEMPERATURE 40-60 DEG F:
CELLULAR GLASS: 1 INCH THICK
FLEXIBLE ELASTOMERIC: 1 INCH THICK
MINERAL-FIBER, PREFORMED PIPE INSULATION, TYPE I: 1 INCH THICK



NEW AIRPORT RD. BFP
BUILDING LOCATION WITH (2)
10" WATTS MODEL LF 909M1
REDUCED PRESSURE ZONE
BACKFLOW PREVENTERS.

SITE LOCATION:
WESTCHESTER COUNTY
AIRPORT

NEW TOWER RD. BFP
BUILDING LOCATION WITH (2)
10" WATTS MODEL LF 909M1
REDUCED PRESSURE ZONE
BACKFLOW PREVENTERS.
REFER TO DRAWING P-002
FOR SITE PLAN.

NOTE: REFER TO DRAWING
P-002 FOR PLUMBING SITE
PLAN DETAILS.



1 SITE LOCATION MAP
SCALE: NTS



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CONTRACTOR

NAME
SIGNATURE
TITLE

PROJECT COORDINATOR

NAME
SIGNATURE
TITLE

WESTCHESTER COUNTY, NEW YORK
DEPARTMENT OF PUBLIC WORKS & TRANSPORTATION
DIVISION OF ENGINEERING

DOMESTIC WATER SYSTEM IMPROVEMENTS, WESTCHESTER COUNTY AIRPORT
TOWNS OF HARRISON, NORTH CASTLE & VILLAGE OF RYE BROOK
PLUMBING
SYMBOLS, ABBREVIATIONS, & GENERAL NOTES

CONTRACT
NUMBER

22-522

SHEET
NUMBER

P-001

SHEET NO. 42 OF 61

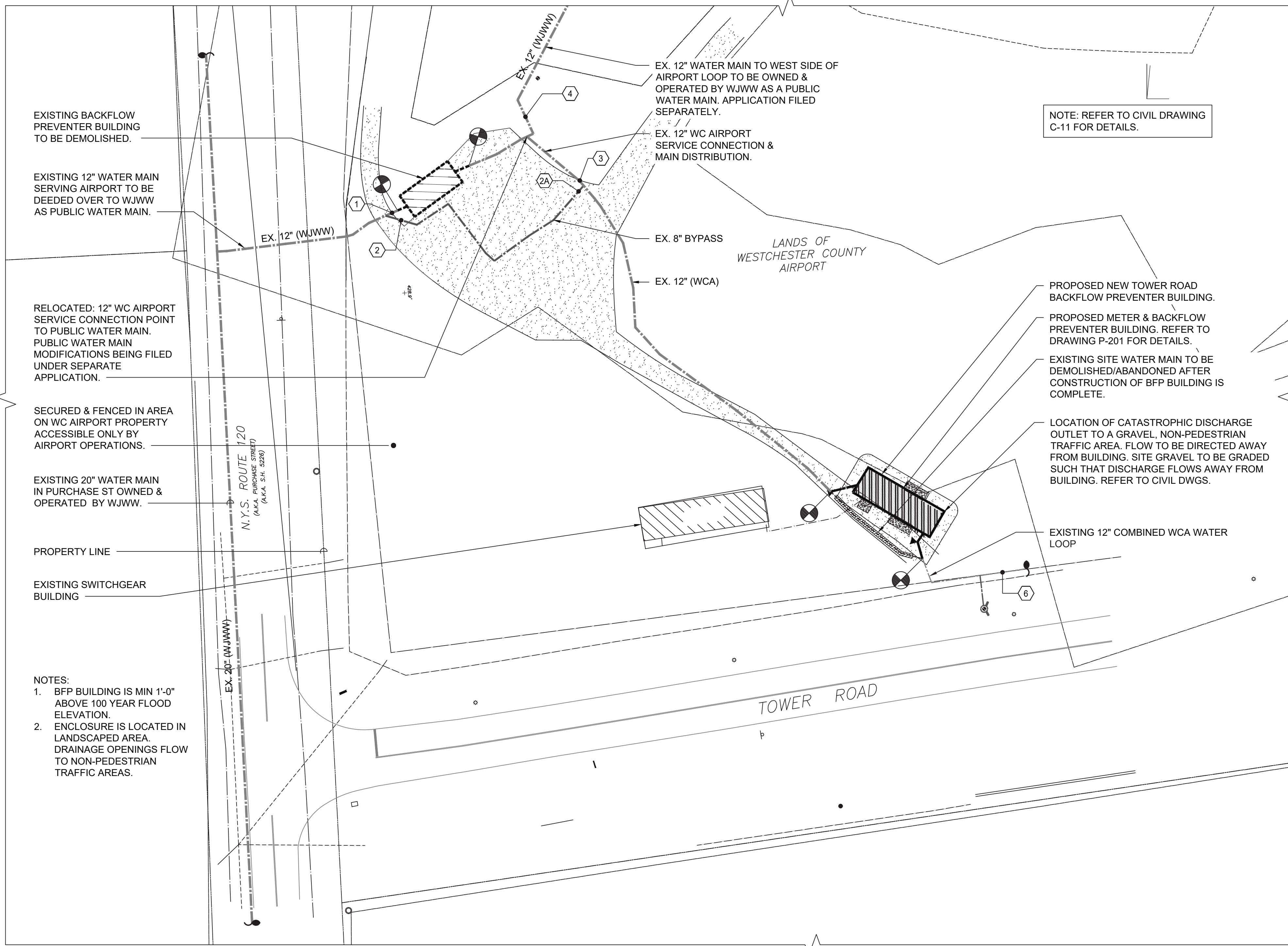
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| VALVE TAG SCHEDULE | |
|--------------------|--------------------|
| 1 | EXISTING 12" VALVE |
| 2 | EXISTING 8" VALVE |
| 2A | EXISTING 8" VALVE |
| 3 | EXISTING 12" VALVE |
| 4 | EXISTING 12" VALVE |
| 6 | EXISTING 12" VALVE |

NOTES:

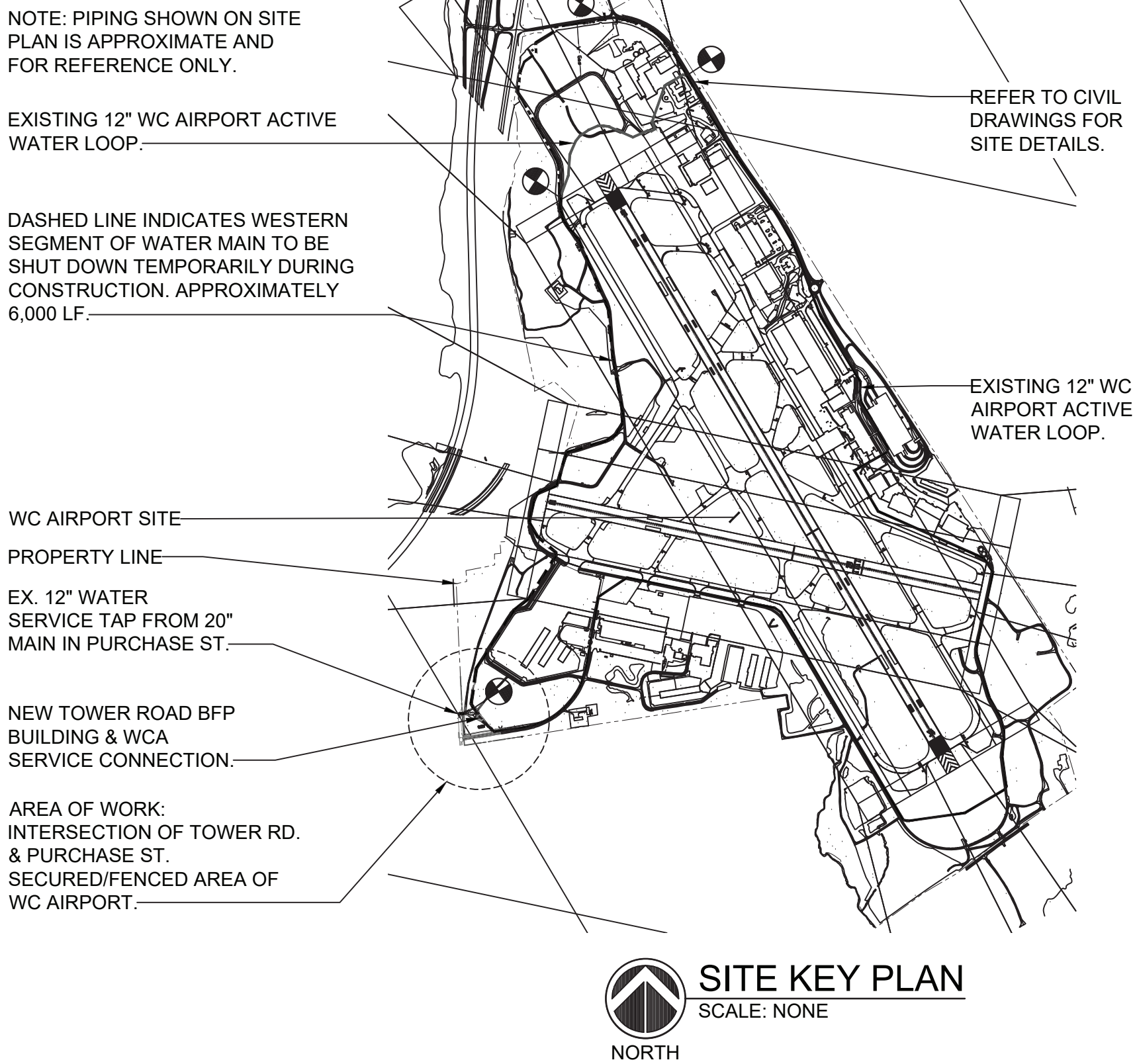
1. LOCATIONS OF EXISTING VALVES ARE APPROXIMATE AND SHALL BE VERIFIED IN FIELD.

2. REFER TO SITE UTILITIES PLAN FOR CONTINUATION.

SYSTEM SHUTDOWN NOTE:

1. REFER TO WATER MAIN EXTENSION SUBMISSION FILED SEPARATELY: FILE ID: C21-033, C21-034 PREPARED BY D&B ENGINEERS FOR ADDITIONAL SEQUENCING AND CONSTRUCTION PHASING INFORMATION ON THE ANTICIPATED DURATION OF SHUTDOWN OF EXISTING SEGMENT OF WCA WATER LOOP APPROXIMATELY 6,000 LF.

| CONSTRUCTION SEQUENCE | |
|---|--|
| PHASE 1A (REFER TO CIVIL DRAWING G-01 FOR ADDITIONAL DETAILS): | |
| 1. CONSTRUCT NEW AIRPORT ROAD BACKFLOW PREVENTER BUILDING IN ACCORDANCE WITH WCDOH APPROVED DOCUMENTS. REFER TO DRAWING P-003. | |
| 2. CONSTRUCT NEW WATER MAIN EXTENSION TO NEW KING STREET. REFER TO CIVIL DRAWINGS FOR CONTINUATION. | |
| PHASE 1B: CONSTRUCTION AND ACTIVATION OF NEW TOWER RD BACKFLOW PREVENTER BUILDING: | |
| 1. CONSTRUCT NEW TOWER ROAD BACKFLOW PREVENTER BUILDING. BACKFLOW PREVENTION DEVICES SHALL BE INSTALLED ACCORDANCE WITH WCDOH APPROVED DOCUMENTS. PRESSURE TEST, DISINFECT, INSPECT AND SIGN OFF BFP INSTALLATION | |
| 2. SHUTDOWN THE SOUTH SERVICE CONNECTION AND CONSTRUCT 12" CONNECTIONS TO THE NEW TOWER ROAD BACKFLOW PREVENTER BUILDING TO TIE IN TO THE EXISTING WATER MAIN. THIS WORK SHALL BE COORDINATED WITH WC AIRPORT OPERATIONS AND WJWW TO MINIMIZE DOWNTIME. | |
| 3. PRESSURE TEST, DISINFECT, INSPECT AND SIGN OFF BFP INSTALLATION IN NEW TOWER ROAD BUILDING. FILE ALL FORMS AND RESULTS WITH WC DOH FOR APPROVAL. | |
| 4. ISOLATE EXISTING TOWER ROAD BACKFLOW PREVENTER BUIDLING FOR DEMOLITION & RESTORE SOUTH SERVICE CONNECTION TO OPERATION: | |
| • OPEN NORMALLY CLOSED BYPASS VALVES #2 AND #2A. VALVE #3 REMAINS CLOSED | |
| • CLOSE VALVE #1 AND #4 TO ISOLATE EXISTING WATERMAIN FOR BUILDING DEMOLITION. | |
| • OPEN VALVE #6. | |
| • RESTORE WCA SOUTH SERVICE CONNECTION. WEST SIDE OF SERVICE LOOP IS ISOLATED. | |
| PHASE 2: DEMOLISH EXISTING TOWER RD BACKFLOW PREVENTER BUILDING | |
| 1. BUILDING DEMOLITION SHALL OCCUR UPON COMPLETION OF CONSTRUCTION OF THE WORK LISTED ABOVE. DEMOLISH EXISTING STRUCTURE, EQUIPMENT AND PIPING COMPLETE. | |
| 2. CONSTRUCT THE UNDERGROUND 12" WATER MAIN BETWEEN THE INLET AND OUTLET PIPING OF THE DEMOLISHED BUILDING. TEST AND DISINFECT ALL NEW WATER MAINS IN ACCORDANCE WITH AWWA STANDARDS. FILE ALL FORMS AND RESULTS WITH WC DOH FOR APPROVAL. | |
| 3. PRESSURE TEST AND DISINFECT NEW PIPING AND FILE WITH WC DOH FOR APPROVAL. | |
| REFER TO CIVIL DRAWINGS AND SEQUENCE NOTES ON G-01 FOR INFORMATION ON SUBSEQUENT PHASES: | |
| • PHASE 3: CONSTRUCTION OF EXISTING WATER SERVICE IMPROVEMENTS | |
| • PHASE 4: ABANDON BY-PASS WATER MAIN PIPING AT TOWER ROAD | |
| • PHASE 5: TESTING OF WATER MAIN | |
| • PHASE 6: OPERATION OF ALL DOMESTIC WATER LINE IMPROVEMENTS | |
| NOTES: | |
| 1. REFER TO CIVIL DRAWING G-01 FOR CONSTRUCTION SEQUENCE COORDINATION. | |
| 2. EXISTING TOWER ROAD BACKFLOW PREVENTER BUILDING TO REMAIN ACTIVE AS WESTCHESTER COUNTY AIRPORT'S PRIMARY WATER SUPPLY UNTIL PROJECT COMPLETION INCLUDING CONSTRUCTION OF THE NEW TOWER ROAD AND AIRPORT ROAD BACKFLOW PREVENTER BUILDING AND WATER MAIN EXTENSION. REFER TO CIVIL DRAWINGS FOR WATER MAIN WORK AND WC DOH FILE ID: 13502-21-RPZ (2) AND C21-033, C21-034 | |
| 3. EXISTING BFP BUILDING AT TOWER ROAD TO REMAIN ACTIVE CONSTRUCTION SHALL NOT PROCEED WITHOUT APPROVAL FROM WESTCHESTER COUNTY DEPARTMENT OF HEALTH. | |
| 4. SHUTDOWNS OF WATER MAIN SHALL BE SCHEDULED AND FULLY COORDINATED WITH WC AIRPORT, WESTCHESTER COUNTY DPW&T AND WESTCHESTER COUNTY DEPARTMENT OF HEALTH. NOTIFICATION FOR SHUTDOWN SHALL BE PROVIDED A MINIMUM OF SEVEN DAYS IN ADVANCE. | |
| 5. INTENT OF CONSTRUCTION PHASING/SEQUENCE IS TO MINIMIZE SHUTDOWNS WC AIRPORT WATER SERVICE. | |



 1 PLUMBING SITE PART PLAN - TOWER RD
SCALE: 1" = 40'-0"

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| CONTRACTOR | | PROJECT COORDINATOR | |
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| WESTCHESTER COUNTY, NEW YORK DEPARTMENT OF PUBLIC WORKS & TRANSPORTATION DIVISION OF ENGINEERING | | CONTRACT NUMBER 22-522 | SHEET NUMBER P-002 |
| DOMESTIC WATER SYSTEM IMPROVEMENTS, WESTCHESTER COUNTY AIRPORT TOWNS OF HARRISON, NORTH CASTLE & VILLAGE OF RYE BROOK PLUMBING SITE PLAN - TOWER ROAD | | SHEET NO. 43 OF 61 | SCALE: AS SHOWN DATE: 12/09/2022 |
| | | DPW FILE NO. 48-17-P-168 | REV. 0 |

CONSTRUCTION SEQUENCE

PHASE 1A: CONSTRUCTION OF NEW FACILITIES AT NORTH END OF PROJECT.
REFER TO CIVIL DRAWING G-01 FOR ADDITIONAL INFORMATION.

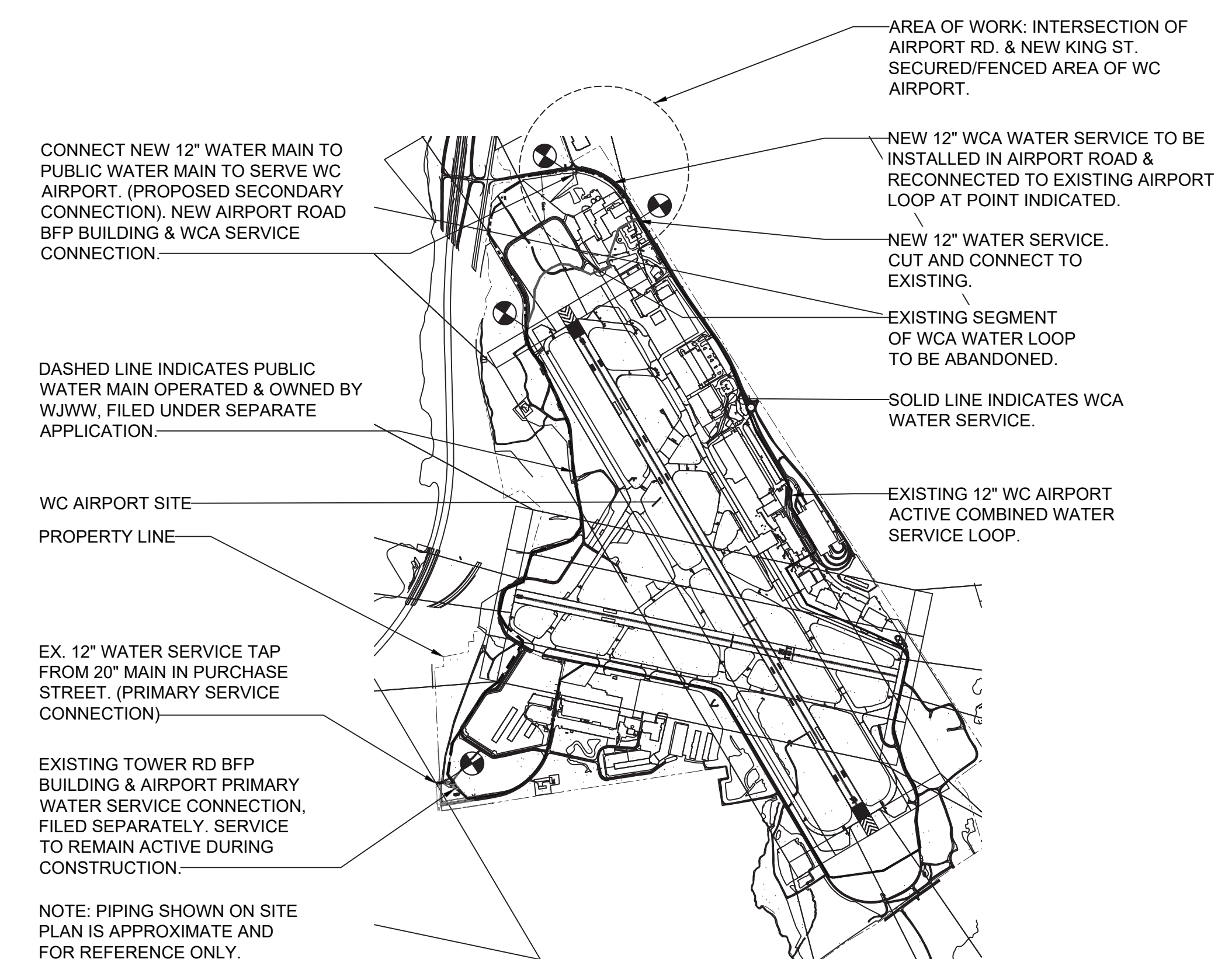
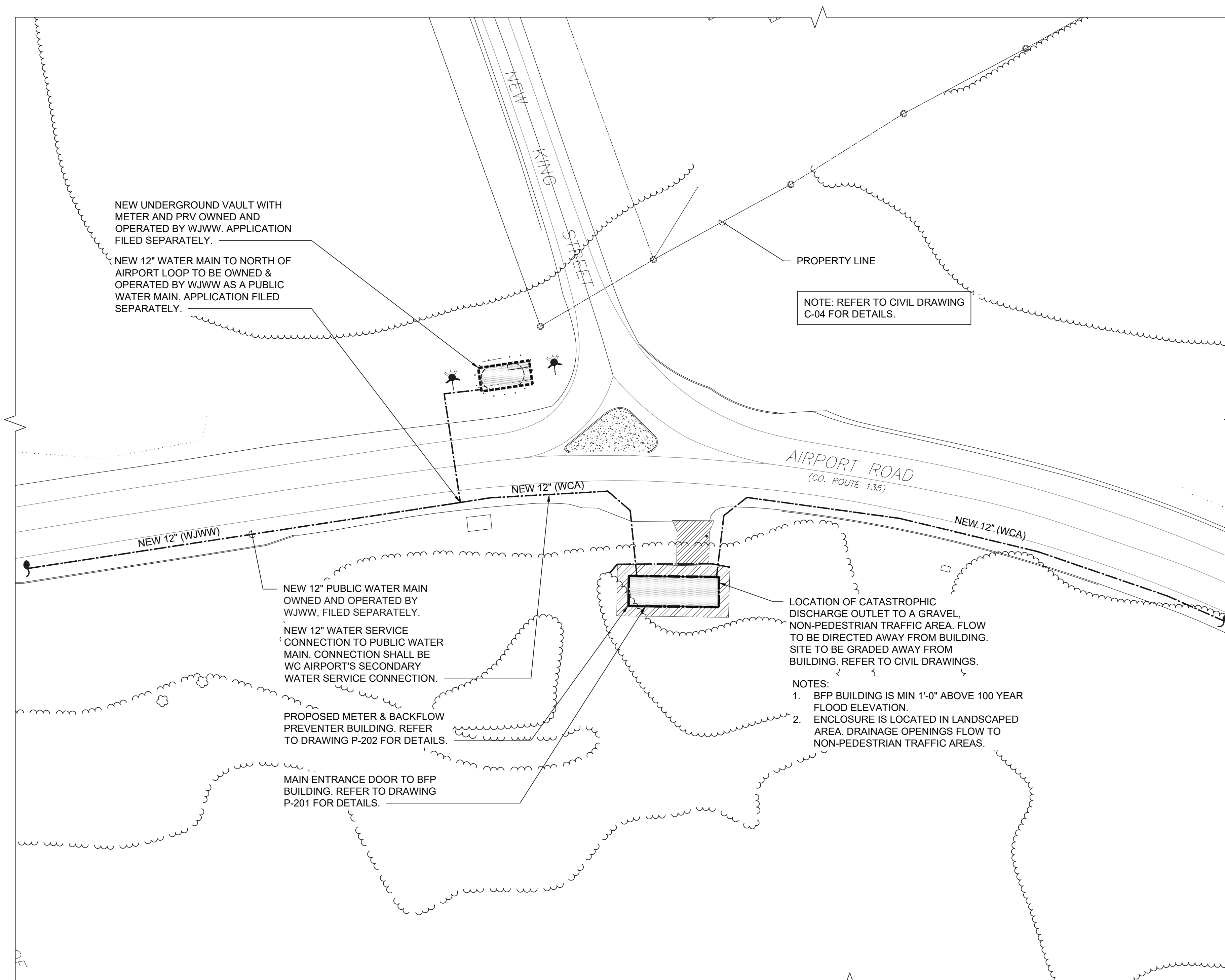
1. CONSTRUCT NEW AIRPORT ROAD BACKFLOW PREVENTER BUILDING IN ACCORDANCE WITH WCDOH APPROVED DOCUMENTS.
2. AIRPORT ROAD SERVICE CONNECTION SHALL NOT BE ENERGIZED UNTIL FINAL APPROVAL OF PUBLIC WATER MAIN. REFER TO FILE ID: C21-033, C21-034.
3. CONSTRUCT 12" CONNECTIONS TO EXISTING 12" WATER MAIN TO THE NEW AIRPORT ROAD BFP BUILDING.
4. PRESSURE TEST, DISINFECT, INSPECT AND SIGN OFF BFP INSTALLATION. FILE ALL FORMS AND RESULTS WITH WC DOH.
5. ENERGIZE THE NEW 12" WATER SERVICE PIPING TO THE NEW AIRPORT ROAD BFP BUILDING.

NOTES:

1. EXISTING TOWER RD BFP BUILDING SHALL BE MAINTAINED ACTIVE AS WESTCHESTER COUNTY AIRPORT'S PRIMARY WATER SUPPLY UNTIL CONSTRUCTION IS COMPLETED. TOWER ROAD BUILDING DEMOLITION SHALL OCCUR UPON COMPLETION OF CONSTRUCTION OF THE AIRPORT ROAD BACKFLOW PREVENTER BUILDING AND WATER MAIN EXTENSION IS COMPLETE. REFER TO FILE ID: 13503-21-RP2 (2) & C21-033, C21-034.
2. CONSTRUCTION SHALL NOT PROCEED WITHOUT APPROVAL FROM WESTCHESTER COUNTY DEPARTMENT OF HEALTH.
3. SHUTDOWNS OF WATER MAIN SHALL BE SCHEDULED AND FULLY COORDINATED WITH WC AIRPORT, WESTCHESTER COUNTY DPW&T AND WESTCHESTER COUNTY DEPARTMENT OF HEALTH. NOTIFICATION FOR SHUTDOWN SHALL BE PROVIDED A MINIMUM OF SEVEN DAYS IN ADVANCE.
4. INTENT OF CONSTRUCTION PHASING/SEQUENCE IS TO MINIMIZE SHUTDOWNS WC AIRPORT WATER SERVICE.

SYSTEM SHUTDOWN NOTE:

1. REFER TO WATER MAIN EXTENSION SUBMISSION FILED SEPARATELY: FILE ID: C21-033, C21-034 PREPARED BY D&B ENGINEERS FOR ADDITIONAL SEQUENCING AND CONSTRUCTION PHASING INFORMATION ON THE ANTICIPATED DURATION OF SHUTDOWN OF EXISTING SEGMENT OF WCA WATER LOOP APPROXIMATELY 6,000 LF.

 SITE KEY PLAN

SCALE: NONE

NORTH



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| CONTRACTOR | PROJECT COORDINATOR |
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| WESTCHESTER COUNTY, NEW YORK DEPARTMENT OF PUBLIC WORKS & TRANSPORTATION DIVISION OF ENGINEERING | CONTRACT NUMBER 22-522 | SHEET NUMBER P-003 |
| | SHEET NO. 44 OF 61 | |

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| TOWNS OF HARRISON, NORTH CASTLE & VILLAGE OF RYE BROOK | DPW FILE NO. | R |
| PLUMBING | | |

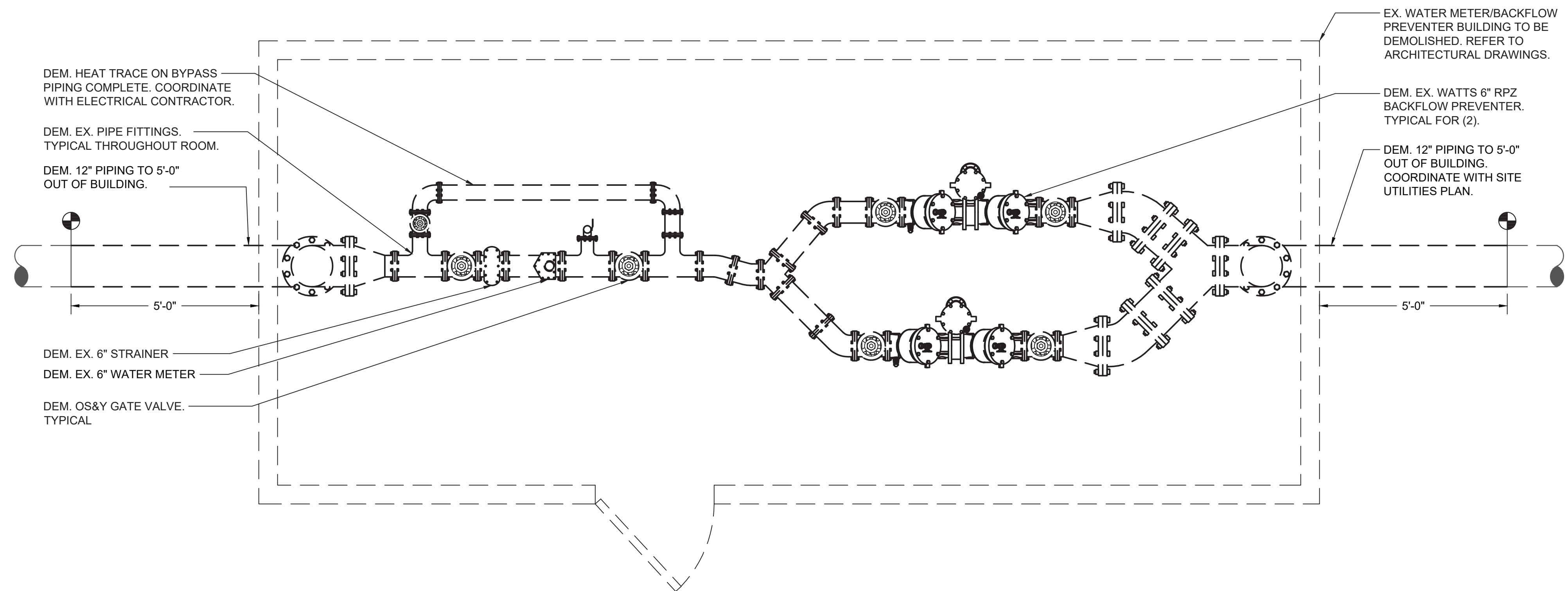
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| SITE PLAN - AIRPORT ROAD | 48-17-P-169 |
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SHEET NO. 44 OF 61

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| DPW FILE NO. | R |
| 48-17-P-169 | |



1 PLUMBING DEMOLITION PLAN - TOWER RD
SCALE: 1/2" = 1'-0"

- NOTES:**
1. DEMOLISH ALL DOMESTIC COLD WATER PIPING, PIPE FITTINGS, VALVES, PIPING SUPPORTS COMPLETE. COORDINATE SHUTDOWN OF WATER SERVICE WITH WESTCHESTER COUNTY AIRPORT AND WESTCHESTER JOINT WATER WORKS.
 2. CONTRACTOR SHALL BE RESPONSIBLE FOR WATER METER READINGS PRIOR TO REMOVAL AND SHALL COORDINATE WITH WESTCHESTER JOINT WATER WORKS AS REQUIRED.
 3. CONTRACTOR SHALL BE RESPONSIBLE TO REMOVE EXISTING WATER METER AND RETURN TO WESTCHESTER JOINT WATER WORKS AS REQUIRED.
 4. EXISTING TOWER ROAD BACKFLOW PREVENTER BUILDING TO REMAIN ACTIVE UNTIL CONSTRUCTION OF THE NEW TOWER ROAD BFP BUILDING, AIRPORT ROAD BFP BUILDING AND WATER MAIN EXTENSION IS COMPLETE.
 5. EXISTING BFP BUILDING AT TOWER ROAD TO REMAIN ACTIVE AS WESTCHESTER COUNTY AIRPORT'S PRIMARY WATER SUPPLY UNTIL PROJECT COMPLETION.
 6. SHUTDOWNS OF WATER MAIN SHALL BE SCHEDULED AND FULLY COORDINATED WITH WC AIRPORT, WESTCHESTER COUNTY DPW&T AND WESTCHESTER COUNTY DEPARTMENT OF HEALTH. NOTIFICATION FOR SHUTDOWN SHALL BE PROVIDED A MINIMUM OF SEVEN DAYS IN ADVANCE.



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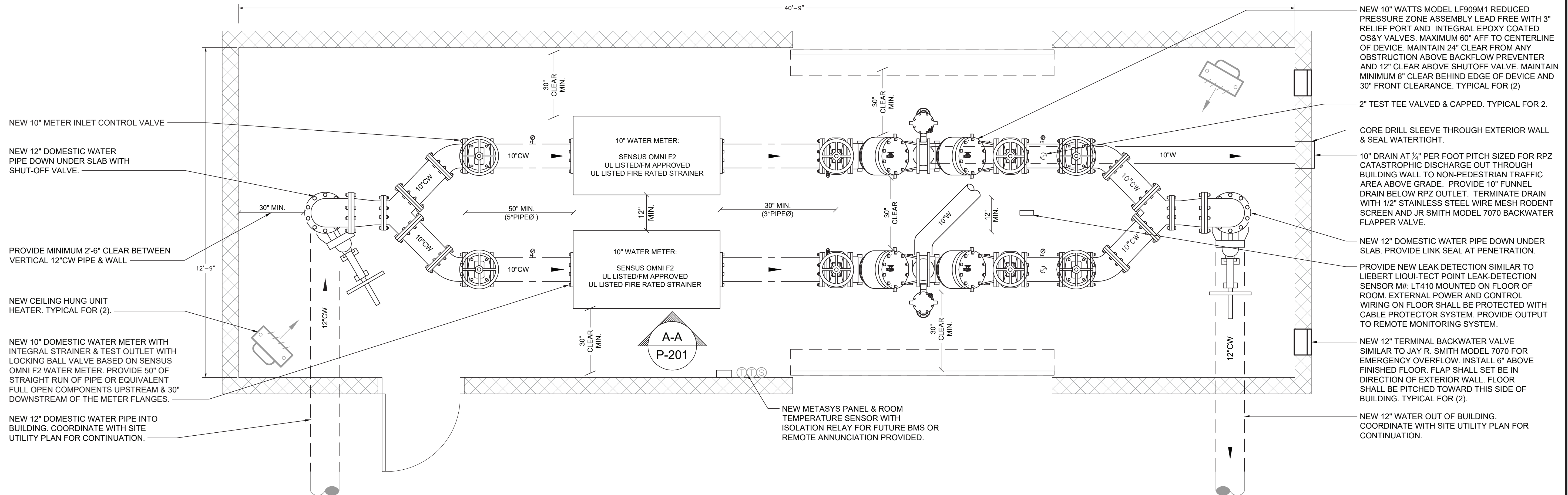
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| TITLE _____ DATE _____ | TITLE _____ DATE _____ | TITLE _____ DATE _____ | TITLE _____ DATE _____ |

WESTCHESTER COUNTY, NEW YORK
DEPARTMENT OF PUBLIC WORKS & TRANSPORTATION
DIVISION OF ENGINEERING
DOMESTIC WATER SYSTEM IMPROVEMENTS, WESTCHESTER COUNTY AIRPORT
TOWNS OF HARRISON, NORTH CASTLE & VILLAGE OF RYE BROOK
PLUMBING
DEMOLITION PLAN - TOWER RD

| | |
|-------------------------------------|--------------------------|
| CONTRACT NUMBER 22-522 | SHEET NUMBER P-101 |
| SHEET NO. 45 OF 61 | |
| SCALE: AS SHOWN DATE: 12/09/2022 | |
| DPW FILE NO. 48-17-P-170 | REV. 0 |

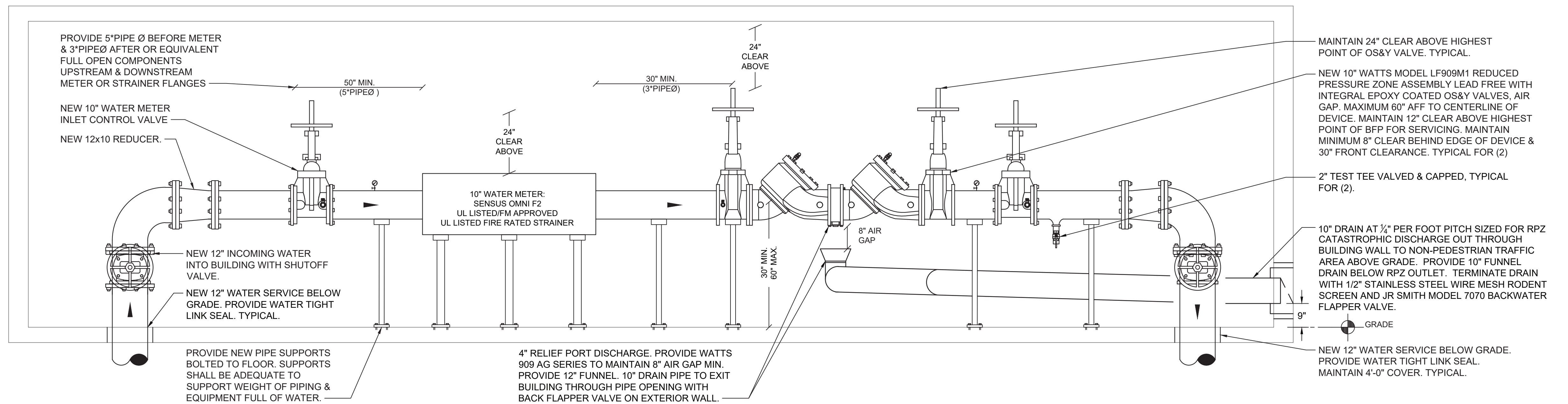
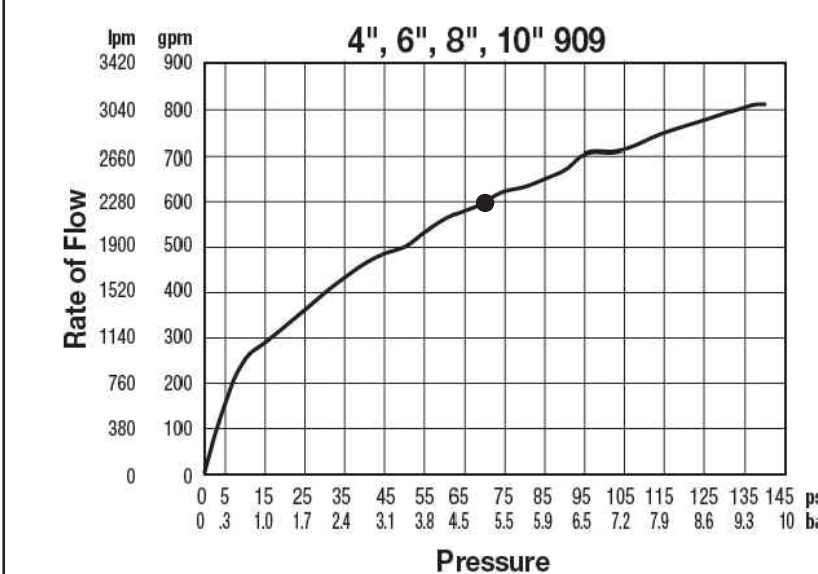


1 PLUMBING NEW WORK PLAN - TOWER RD.

SCALE: 1/2" = 1'-0"

CATASTROPHIC FAILURE CALCULATIONS:

- CATASTROPHIC FAILURE FLOW RATE = 600 GPM @ 68 PSI PER BACKFLOW PREVENTER AS PER WATTS PUBLISHED DATA.
NOTE: STATIC PRESSURE BASED ON HYDRANT FLOW TEST CONDUCTED BY WJWW ON 12-29-2020.
- RPZ CATASTROPHIC FAILURE WATER DISCHARGE TO EXIT BUILDING THROUGH 10" PIPE OPENING WITH BACK FLAPPER VALVE ON EXTERIOR WALL.
- EMERGENCY OVERFLOW 12" Ø - MAX FLOW THROUGH (1) 12" Ø OPENING = 1,220 GPM



2

PLUMBING ELEVATION A-A

SCALE: 1/2" = 1'-0"

0 2' 4'



OLA Consulting Engineers
50 Broadway,
Hawthorne, NY 10532
914.747.2800
8 West 38th Street,
Suite 501
New York, NY 10018
646.849.4110
olace.com NWC00027.00



D&B ENGINEERS
AND
ARCHITECTS, P.C.
4 WEST RED OAK LANE
WHITE PLAINS, NY,
10604
(914)467-5300

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RECORD DRAWING CERTIFICATION

- ☐ AS BUILT - CHANGES AS NOTED
☐ AS BUILT - NO CHANGES

CONTRACTOR

NAME
SIGNATURE
TITLE DATE

PROJECT COORDINATOR

NAME
SIGNATURE
TITLE DATE

WESTCHESTER COUNTY, NEW YORK
DEPARTMENT OF PUBLIC WORKS & TRANSPORTATION
DIVISION OF ENGINEERING

DOMESTIC WATER SYSTEM IMPROVEMENTS, WESTCHESTER COUNTY AIRPORT
TOWNS OF HARRISON, NORTH CASTLE & VILLAGE OF RYE BROOK

PLUMBING
NEW WORK PLAN - TOWER RD.

CONTRACT
NUMBER
22-522

SHEET
NUMBER
P-201

SHEET NO. 46 OF 61

SCALE: AS SHOWN
DATE: 12/09/2022

DPW FILE NO. REV.

48-17-P-171 0

NEW 12" DOMESTIC WATER PIPE INTO BUILDING. COORDINATE WITH SITE UTILITY PLAN FOR CONTINUATION.

NEW 10" METER INLET CONTROL VALVE

NEW 12" DOMESTIC WATER PIPE DOWN UNDER SLAB WITH SHUT-OFF VALVE.

PROVIDE MINIMUM 2'-6" CLEAR BETWEEN VERTICAL 12"CW PIPE & WALL

NEW CEILING HUNG UNIT HEATER. TYPICAL FOR (2).

NEW 10" DOMESTIC WATER METER WITH INTEGRAL STRAINER & TEST OUTLET WITH LOCKING BALL VALVE BASED ON SENSUS OMNI F2 WATER METER. PROVIDE 50" OF STRAIGHT RUN OF PIPE OR EQUIVALENT FULL OPEN COMPONENTS UPSTREAM & 30" DOWNSTREAM OF THE METER FLANGES.

NEW 12" WATER OUT OF BUILDING. COORDINATE WITH SITE UTILITY PLAN FOR CONTINUATION.

NEW 10" WATTS MODEL LF909M1 REDUCED PRESSURE ZONE ASSEMBLY LEAD FREE WITH 3" RELIEF PORT AND INTEGRAL EPOXY COATED OS&Y VALVES. MAXIMUM 60" AFF TO CENTERLINE OF DEVICE. MAINTAIN 24" CLEAR FROM ANY OBSTRUCTION ABOVE BACKFLOW PREVENTER AND 12" CLEAR ABOVE SHUTOFF VALVE. MAINTAIN MINIMUM 8" CLEAR BEHIND EDGE OF DEVICE AND 30" FRONT CLEARANCE. TYPICAL FOR (2)

2" TEST TEE VALVED & CAPPED. TYPICAL FOR 2.

PROVIDE NEW LEAK DETECTION SIMILAR TO LIEBERT LIQUITECT POINT LEAK-DETECTION SENSOR M# LT410 MOUNTED ON FLOOR OF ROOM. EXTERNAL POWER AND CONTROL WIRING ON FLOOR SHALL BE PROTECTED WITH CABLE PROTECTOR SYSTEM. PROVIDE OUTPUT TO REMOTE MONITORING SYSTEM.

CORE DRILL SLEEVE THROUGH EXTERIOR WALL & SEAL WATERTIGHT.

10" DRAIN AT 1/4" PER FOOT PITCH SIZED FOR RPZ CATASTROPHIC DISCHARGE OUT THROUGH BUILDING WALL TO NON-PEDESTRIAN TRAFFIC AREA ABOVE GRADE. PROVIDE 10" FUNNEL DRAIN BELOW RPZ OUTLET. TERMINATE DRAIN WITH 1/2" STAINLESS STEEL WIRE MESH RODENT SCREEN AND JR SMITH MODEL 7070 BACKWATER FLAPPER VALVE.

NEW 12" DOMESTIC WATER PIPE DOWN UNDER SLAB. PROVIDE LINK SEAL AT PENETRATION.

NEW METASYS PANEL & ROOM TEMPERATURE SENSOR WITH ISOLATION RELAY FOR FUTURE BMS OR REMOTE ANNUNCIATION PROVIDED.

NEW 12" TERMINAL BACKWATER VALVE SIMILAR TO JAY R. SMITH MODEL 7070 FOR EMERGENCY OVERFLOW. INSTALL 6" ABOVE FINISHED FLOOR. FLAP SHALL SET BE IN DIRECTION OF EXTERIOR WALL. FLOOR SHALL BE PITCHED TOWARD THIS SIDE OF BUILDING. TYPICAL FOR (2).

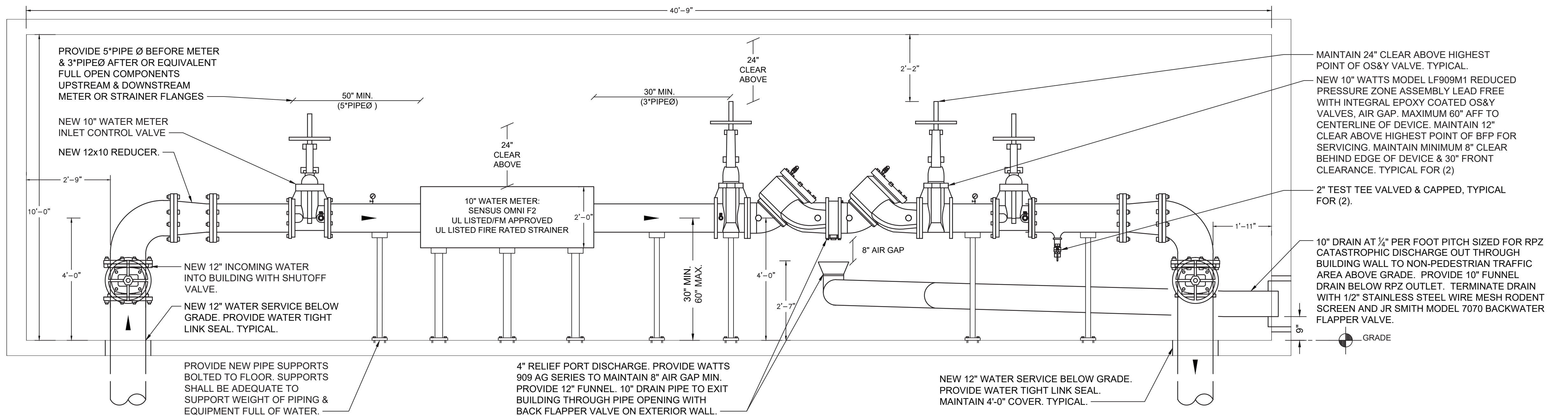
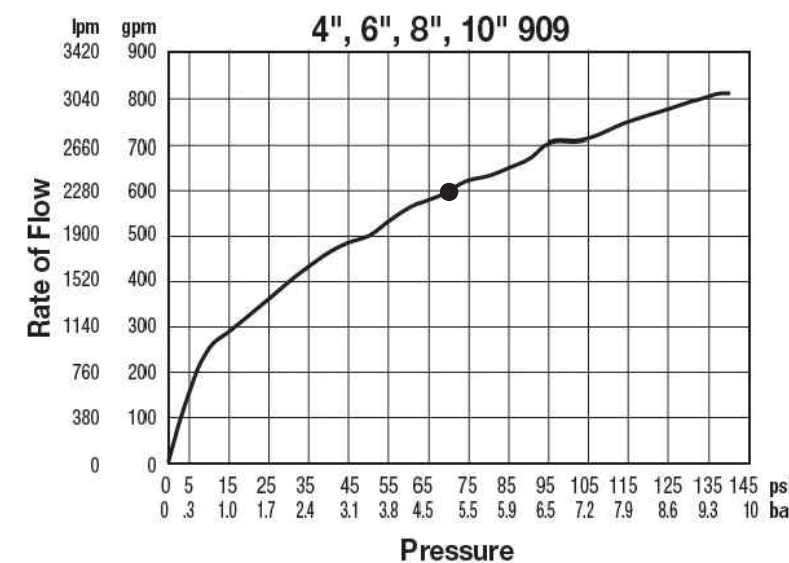


1 PLUMBING NEW WORK PLAN - AIRPORT RD.

SCALE: 1/2" = 1'-0"

CATASTROPHIC FAILURE CALCULATIONS:

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- RPZ CATASTROPHIC FAILURE WATER DISCHARGE TO EXIT BUILDING THROUGH 10" PIPE OPENING WITH BACK FLAPPER VALVE ON EXTERIOR WALL.
- EMERGENCY OVERFLOW 12"Ø - MAX FLOW THROUGH (1) 12"Ø OPENING = 1,220 GPM



2 PLUMBING ELEVATION A-A

SCALE: 1/2" = 1'-0"

0 2' 4'



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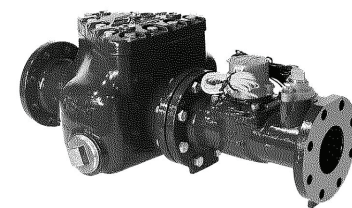
IN CHARGE OF JW
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| REVISION NUMBER | DATE | MADE BY | APP'D BY | REVISION |
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| RECORD DRAWING CERTIFICATION | | | |
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| <input type="checkbox"/> AS BUILT - CHANGES AS NOTED <input type="checkbox"/> AS BUILT - NO CHANGES | | | |
| CONTRACTOR | | PROJECT COORDINATOR | |
| NAME | | NAME | |
| SIGNATURE | | SIGNATURE | |
| TITLE | | TITLE | |
| DATE | | DATE | |

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|---|--|
| WESTCHESTER COUNTY, NEW YORK DEPARTMENT OF PUBLIC WORKS & TRANSPORTATION DIVISION OF ENGINEERING | |
| DOMESTIC WATER SYSTEM IMPROVEMENTS, WESTCHESTER COUNTY AIRPORT TOWNS OF HARRISON, NORTH CASTLE & VILLAGE OF RYE BROOK PLUMBING NEW WORK PLAN - AIRPORT RD. | |

| | |
|-------------------------------------|--------------------------|
| CONTRACT NUMBER 22-522 | SHEET NUMBER P-202 |
| SHEET NO. 47 OF 61 | |
| SCALE: AS SHOWN DATE: 12/09/2022 | REV. 0 |
| DPW FILE NO. 48-17-P-172 | |



OMNI+ Fireline (F2) Water Meter

4", 6", 8" and 10"

The OMNI+ F2 meter operation is based on advanced Floating Ball Technology (FBT).

Performance

The patented measurement principles of the OMNI+ F2 meter ensure greater accuracy, expanded accuracy range and longer service life than any other comparable class meter. The OMNI+ F2 meter has no restrictions on sustained flow rates within its continuous range. The floating ball measurement technology allows installation in any orientation and flows up to maximum rated capacity without undue wear or accuracy degradation.

Construction

The OMNI+ F2 meter consists of two basic assemblies: the maincase and the measuring chamber. The measuring chamber assembly includes the "floating ball" impeller with a coated titanium shaft, hybrid axial bearings, integral flow straightener and an all electronic programmable register with protective bonnet. The maincase is made from industry proven Ductile Iron with an approved NSF epoxy coating. Maincase features are, easily removable measuring chamber, unique chamber seal to the maincase using a high pressure o-ring, testing port and a convenient integral strainer with optional drain/debris-flushing ports.

OMNI+ Electronic Register

The OMNI+ electronic register is hermetically sealed with an electronic pickup containing no mechanical gearing. The OMNI+ register features a programmable totalizer registration, an optional digital pulse signal, AMI/AMR reading digits, and a resettable test totalizer. The large, easy-to-read LCD also displays both forward and reverse flow directions. The OMNI+ tamper-proof security cover can be positioned in any of 270 degrees of rotation, with indexing points at each of the 90-degree customary register viewing positions.

Magnetic Drive

Meter registration is achieved by utilizing a fully magnetic pickup system. This is accomplished by the magnetic actions of the embedded rotor magnets and the ultra sensitive register pickup probe. The only moving component in water is the "floating ball" impeller.

Measuring Element

The hydro-dynamically balanced impeller floats between the bearings. The Floating Ball Technology (FBT) allows the measuring element to operate virtually without friction or wear, thus creating the extended upper and lower flow ranges capable on only the OMNI+ F2 meter.

OMNI+ Fireline (F2) Water Meter

4", 6", 8" and 10"

Strainer

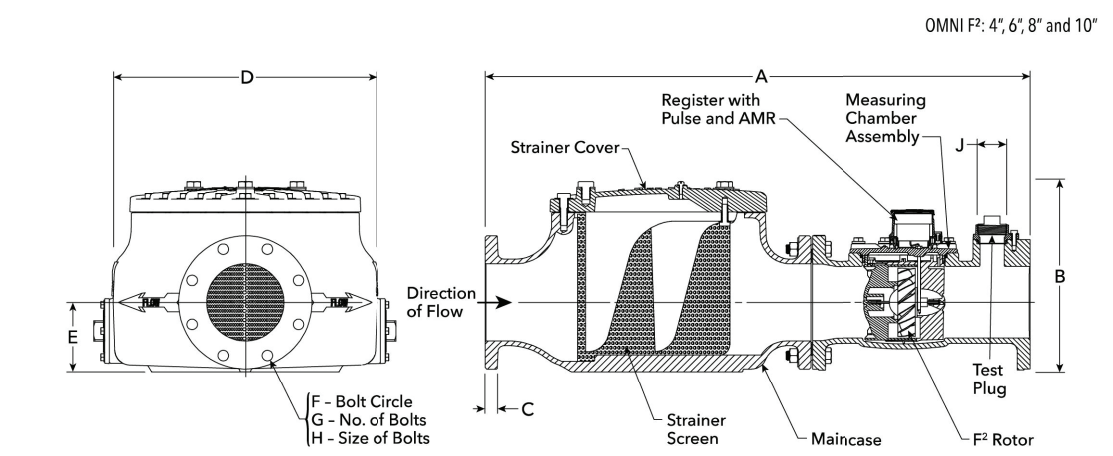
The OMNI+ F2 meter includes the Sensus designed "V" shaped UL Listed/FM approved strainer which utilizes a stainless steel screen along with Floating Ball Technology (FBT) to create a design that provides greatly improved accuracy even in difficult settings. A removable strainer cover permits easy access to the screen for routine maintenance. Strainer drain ports allow for easy discharging of debris without the need to remove the cover.

AMR/AMI Systems

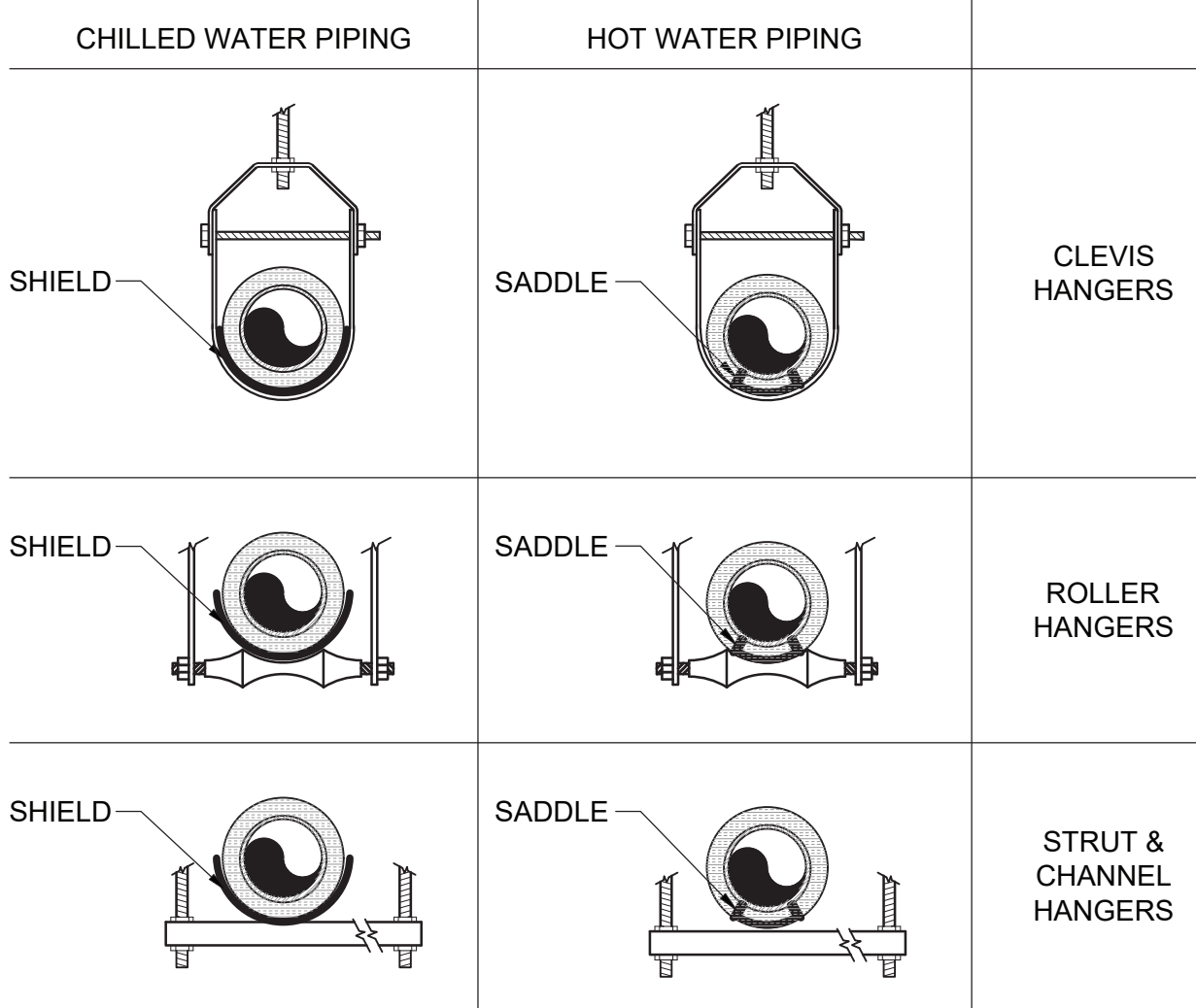
Meters and Electronic Registers are compatible with current Sensus AMR/AMI systems and other AMI communication systems that use the Sensus U1203 protocol.

Maintenance

The OMNI+ F2 meter is designed for easy maintenance. Should any maintenance be required, the measuring chamber and/or strainer cover can be removed independently. Replacement parts or complete measuring chambers are available for repairs.

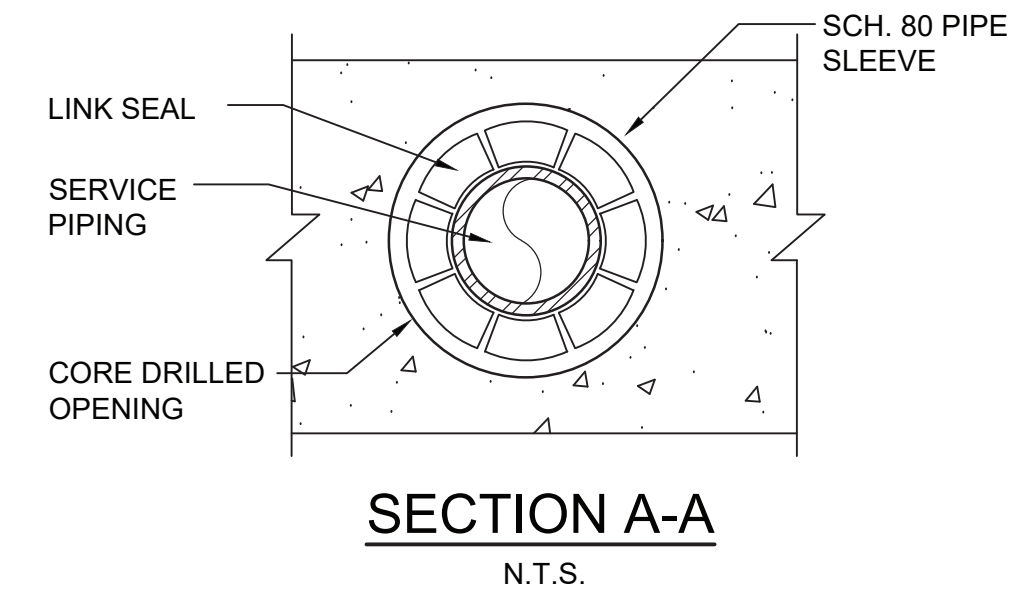
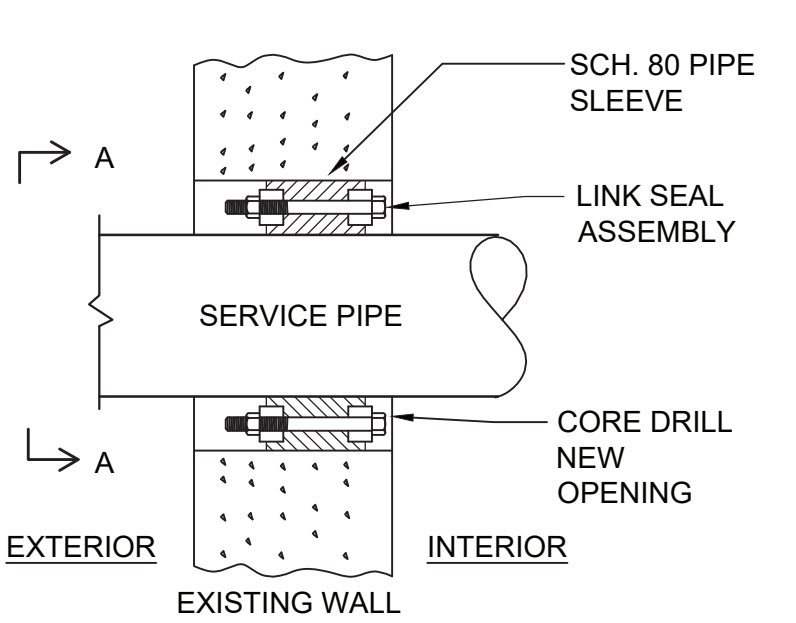


| DIMENSIONS AND NET WEIGHTS | | Connections | | | | | | | | | | | | | | | |
|----------------------------|------------------------|-------------|---------|----------|--------|---------|---------|--------|------|-------|------------|-----------------|-----------------|----|-----------|------------|----------|
| Meter and Pipe Size | Normal Operating Range | A | B | C | D | E | F | G | H | J | Net Weight | Shipping Weight | Standard Weight | | | | |
| 4" DN 1.5 gpm 1200 gpm | 33" | 13 1/16" | 15 1/8" | 17 1/2" | 4 3/4" | 7 1/2" | 8 3/8mm | 348mm | 24mm | 445mm | 121mm | 191mm | 8 5/8" | 2" | 212 lbs. | 252 lbs. | 51.78" |
| 6" DN 3 gpm 2000 gpm | 45" | 15 3/4" | 15 1/8" | 22 3/8" | 5 3/4" | 9 1/2" | 114mm | 348mm | 24mm | 548mm | 146mm | 241mm | 8 5/8" | 2" | 294 lbs. | 449 lbs. | 67.58" |
| 8" DN 5 gpm 3500 gpm | 68" | 22 1/4" | 17 1/8" | 37 1/2" | 8 1/2" | 14 1/4" | 143mm | 400mm | 24mm | 548mm | 146mm | 241mm | 8 5/8" | 2" | 488 lbs. | 795 lbs. | 105.66" |
| 10" DN 8 gpm 5500 gpm | 91" | 25 1/4" | 17 1/8" | 41 1/2" | 8 1/2" | 14 1/4" | 172mm | 440mm | 24mm | 548mm | 146mm | 241mm | 8 5/8" | 2" | 658 lbs. | 1056 lbs. | 136.66" |
| 12" DN 11 gpm 7700 gpm | 114" | 28 1/4" | 17 1/8" | 45 1/2" | 8 1/2" | 14 1/4" | 203mm | 480mm | 24mm | 548mm | 146mm | 241mm | 8 5/8" | 2" | 828 lbs. | 1312 lbs. | 167.66" |
| 14" DN 15 gpm 10500 gpm | 137" | 31 1/4" | 17 1/8" | 49 1/2" | 8 1/2" | 14 1/4" | 229mm | 520mm | 24mm | 548mm | 146mm | 241mm | 8 5/8" | 2" | 1008 lbs. | 1592 lbs. | 198.66" |
| 16" DN 20 gpm 14000 gpm | 160" | 34 1/4" | 17 1/8" | 53 1/2" | 8 1/2" | 14 1/4" | 255mm | 560mm | 24mm | 548mm | 146mm | 241mm | 8 5/8" | 2" | 1178 lbs. | 1812 lbs. | 223.66" |
| 18" DN 25 gpm 17500 gpm | 183" | 37 1/4" | 17 1/8" | 57 1/2" | 8 1/2" | 14 1/4" | 281mm | 600mm | 24mm | 548mm | 146mm | 241mm | 8 5/8" | 2" | 1348 lbs. | 2052 lbs. | 253.66" |
| 20" DN 30 gpm 21000 gpm | 206" | 40 1/4" | 17 1/8" | 61 1/2" | 8 1/2" | 14 1/4" | 307mm | 640mm | 24mm | 548mm | 146mm | 241mm | 8 5/8" | 2" | 1518 lbs. | 2292 lbs. | 283.66" |
| 22" DN 35 gpm 24500 gpm | 229" | 43 1/4" | 17 1/8" | 65 1/2" | 8 1/2" | 14 1/4" | 333mm | 680mm | 24mm | 548mm | 146mm | 241mm | 8 5/8" | 2" | 1688 lbs. | 2532 lbs. | 313.66" |
| 24" DN 40 gpm 28000 gpm | 252" | 46 1/4" | 17 1/8" | 69 1/2" | 8 1/2" | 14 1/4" | 359mm | 720mm | 24mm | 548mm | 146mm | 241mm | 8 5/8" | 2" | 1858 lbs. | 2772 lbs. | 343.66" |
| 26" DN 45 gpm 31500 gpm | 275" | 49 1/4" | 17 1/8" | 73 1/2" | 8 1/2" | 14 1/4" | 385mm | 760mm | 24mm | 548mm | 146mm | 241mm | 8 5/8" | 2" | 2028 lbs. | 3012 lbs. | 373.66" |
| 28" DN 50 gpm 35000 gpm | 298" | 52 1/4" | 17 1/8" | 77 1/2" | 8 1/2" | 14 1/4" | 411mm | 800mm | 24mm | 548mm | 146mm | 241mm | 8 5/8" | 2" | 2198 lbs. | 3252 lbs. | 403.66" |
| 30" DN 55 gpm 38500 gpm | 321" | 55 1/4" | 17 1/8" | 81 1/2" | 8 1/2" | 14 1/4" | 437mm | 840mm | 24mm | 548mm | 146mm | 241mm | 8 5/8" | 2" | 2368 lbs. | 3492 lbs. | 433.66" |
| 32" DN 60 gpm 42000 gpm | 344" | 58 1/4" | 17 1/8" | 85 1/2" | 8 1/2" | 14 1/4" | 463mm | 880mm | 24mm | 548mm | 146mm | 241mm | 8 5/8" | 2" | 2538 lbs. | 3732 lbs. | 463.66" |
| 34" DN 65 gpm 45500 gpm | 367" | 61 1/4" | 17 1/8" | 89 1/2" | 8 1/2" | 14 1/4" | 489mm | 920mm | 24mm | 548mm | 146mm | 241mm | 8 5/8" | 2" | 2708 lbs. | 3972 lbs. | 493.66" |
| 36" DN 70 gpm 49000 gpm | 390" | 64 1/4" | 17 1/8" | 93 1/2" | 8 1/2" | 14 1/4" | 515mm | 960mm | 24mm | 548mm | 146mm | 241mm | 8 5/8" | 2" | 2878 lbs. | 4212 lbs. | 523.66" |
| 38" DN 75 gpm 52500 gpm | 413" | 67 1/4" | 17 1/8" | 97 1/2" | 8 1/2" | 14 1/4" | 541mm | 1000mm | 24mm | 548mm | 146mm | 241mm | 8 5/8" | 2" | 3048 lbs. | 4452 lbs. | 553.66" |
| 40" DN 80 gpm 56000 gpm | 436" | 70 1/4" | 17 1/8" | 101 1/2" | 8 1/2" | 14 1/4" | 567mm | 1040mm | 24mm | 548mm | 146mm | 241mm | 8 5/8" | 2" | 3218 lbs. | 4692 lbs. | 583.66" |
| 42" DN 85 gpm 59500 gpm | 459" | 73 1/4" | 17 1/8" | 105 1/2" | 8 1/2" | 14 1/4" | 593mm | 1080mm | 24mm | 548mm | 146mm | 241mm | 8 5/8" | 2" | 3388 lbs. | 4932 lbs. | 613.66" |
| 44" DN 90 gpm 63000 gpm | 482" | 76 1/4" | 17 1/8" | 109 1/2" | 8 1/2" | 14 1/4" | 619mm | 1120mm | 24mm | 548mm | 146mm | 241mm | 8 5/8" | 2" | 3558 lbs. | 5172 lbs. | 643.66" |
| 46" DN 95 gpm 66500 gpm | 505" | 79 1/4" | 17 1/8" | 113 1/2" | 8 1/2" | 14 1/4" | 645mm | 1160mm | 24mm | 548mm | 146mm | 241mm | 8 5/8" | 2" | 3728 lbs. | 5412 lbs. | 673.66" |
| 48" DN 100 gpm 70000 gpm | 528" | 82 1/4" | 17 1/8" | 117 1/2" | 8 1/2" | 14 1/4" | 671mm | 1200mm | 24mm | 548mm | 146mm | 241mm | 8 5/8" | 2" | 3898 lbs. | 5652 lbs. | 703.66" |
| 50" DN 105 gpm 73500 gpm | 551" | 85 1/4" | 17 1/8" | 121 1/2" | 8 1/2" | 14 1/4" | 697mm | 1240mm | 24mm | 548mm | 146mm | 241mm | 8 5/8" | 2" | 4068 lbs. | 5892 lbs. | 733.66" |
| 52" DN 110 gpm 77000 gpm | 574" | 88 1/4" | 17 1/8" | 125 1/2" | 8 1/2" | 14 1/4" | 723mm | 1280mm | 24mm | 548mm | 146mm | 241mm | 8 5/8" | 2" | 4238 lbs. | 6132 lbs. | 763.66" |
| 54" DN 115 gpm 80500 gpm | 597" | 91 1/4" | 17 1/8" | 129 1/2" | 8 1/2" | 14 1/4" | 749mm | 1320mm | 24mm | 548mm | 146mm | 241mm | 8 5/8" | 2" | 4408 lbs. | 6372 lbs. | 793.66" |
| 56" DN 120 gpm 84000 gpm | 620" | 94 1/4" | 17 1/8" | 133 1/2" | 8 1/2" | 14 1/4" | 775mm | 1360mm | 24mm | 548mm | 146mm | 241mm | 8 5/8" | 2" | 4578 lbs. | 6612 lbs. | 823.66" |
| 58" DN 125 gpm 87500 gpm | 643" | 97 1/4" | 17 1/8" | 137 1/2" | 8 1/2" | 14 1/4" | 801mm | 1400mm | 24mm | 548mm | 146mm | 241mm | 8 5/8" | 2" | 4748 lbs. | 6852 lbs. | 853.66" |
| 60" DN 130 gpm 91000 gpm | 666" | 100 1/4" | 17 1/8" | 141 1/2" | 8 1/2" | 14 1/4" | 827mm | 1440mm | 24mm | 548mm | 146mm | 241mm | 8 5/8" | 2" | 4918 lbs. | 7092 lbs. | 883.66" |
| 62" DN 135 gpm 94500 gpm | 689" | 103 1/4" | 17 1/8" | 145 1/2" | 8 1/2" | 14 1/4" | 853mm | 1480mm | 24mm | 548mm | 146mm | 241mm | 8 5/8" | 2" | 5088 lbs. | 7332 lbs. | 913.66" |
| 64" DN 140 gpm 98000 gpm | 712" | 106 1/4" | 17 1/8" | 149 1/2" | 8 1/2" | 14 1/4" | 879mm | 1520mm | 24mm | 548mm | 146mm | 241mm | 8 5/8" | 2" | 5258 lbs. | 7572 lbs. | 943.66" |
| 66" DN 145 gpm 101500 gpm | 735" | 109 1/4" | 17 1/8" | 153 1/2" | 8 1/2" | 14 1/4" | 905mm | 1560mm | 24mm | 548mm | 146mm | 241mm | 8 5/8" | 2" | 5428 lbs. | 7812 lbs. | 973.66" |
| 68" DN 150 gpm 105000 gpm | 758" | 112 1/4" | 17 1/8" | 157 1/2" | 8 1/2" | 14 1/4" | 931mm | 1600mm | 24mm | 548mm | 146mm | 241mm | 8 5/8" | 2" | 5598 lbs. | 8052 lbs. | 1003.66" |
| 70" DN 155 gpm 108500 gpm | 781" | 115 1/4" | 17 1/8" | 161 1/2" | 8 1/2" | 14 1/4" | 957mm | 1640mm | 24mm | 548mm | 146mm | 241mm | 8 5/8" | 2" | 5768 lbs. | 8292 lbs. | 1033.66" |
| 72" DN 160 gpm 112000 gpm | 804" | 118 1/4" | 17 1/8" | 165 1/2" | 8 1/2" | 14 1/4" | 983mm | 1680mm | 24mm | 548mm | 146mm | 241mm | 8 5/8" | 2" | 5938 lbs. | 8532 lbs. | 1063.66" |
| 74" DN 165 gpm 115500 gpm | 827" | 121 1/4" | 17 1/8" | 169 1/2" | 8 1/2" | 14 1/4" | 1009mm | 1720mm | 24mm | 548mm | 146mm | 241mm | 8 5/8" | 2" | 6108 lbs. | 8772 lbs. | 1093.66" |
| 76" DN 170 gpm 119000 gpm | 850" | 124 1/4" | 17 1/8" | 173 1/2" | 8 1/2" | 14 1/4" | 1035mm | 1760mm | 24mm | 548mm | 146mm | 241mm | 8 5/8" | 2" | 6278 lbs. | 9012 lbs. | 1123.66" |
| 78" DN 175 gpm 122500 gpm | 873" | 127 1/4" | 17 1/8" | 177 1/2" | 8 1/2" | 14 1/4" | 1061mm | 1800mm | 24mm | 548mm | 146mm | 241mm | 8 5/8" | 2" | 6448 lbs. | 9252 lbs. | 1153.66" |
| 80" DN 180 gpm 126000 gpm | 896" | 130 1/4" | 17 1/8" | 181 1/2" | 8 1/2" | 14 1/4" | 1087mm | 1840mm | 24mm | 548mm | 146mm | 241mm | 8 5/8" | 2" | 6618 lbs. | 9492 lbs. | 1183.66" |
| 82" DN 185 gpm 129500 gpm | 919" | 133 1/4" | 17 1/8" | 185 1/2" | 8 1/2" | 14 1/4" | 1113mm | 1880mm | 24mm | 548mm | 146mm | 241mm | 8 5/8" | 2" | 6788 lbs. | 9732 lbs. | 1213.66" |
| 84" DN 190 gpm 133000 gpm | 942" | 136 1/4" | 17 1/8" | 189 1/2" | 8 1/2" | 14 1/4" | 1139mm | 1920mm | 24mm | 548mm | 146mm | 241mm | 8 5/8" | 2" | 6958 lbs. | 9972 lbs. | 1243.66" |
| 86" DN 195 gpm 136500 gpm | 965" | 139 1/4" | 17 1/8" | 193 1/2" | 8 1/2" | 14 1/4" | 1165mm | 1960mm | 24mm | 548mm | 146mm | 241mm | 8 5/8" | 2" | 7128 lbs. | 10212 lbs. | 1273.66" |
| 88" DN 200 gpm 140000 gpm | 988" | 142 1/4" | 17 1/8" | 197 1/2" | 8 1/2" | 14 1/4" | 1191mm | 2000mm | 24mm | 548mm | 146mm | 241mm | 8 5/8" | 2" | 7298 lbs. | 10452 lbs. | 1303.66" |
| 90" DN 205 gpm 143500 gpm | 1011" | 145 1/4" | 17 1/8" | 201 1/2" | 8 1/2" | 14 1/4" | 1217mm | 2040mm | 24mm | 548mm | 146mm | 241mm | 8 5/8" | 2" | 7468 lbs. | 10692 lbs. | 1333.66" |
| 92" DN 210 gpm 147000 gpm | 1034" | 148 1/4" | 17 1/8" | 205 1/2" | 8 1/2" | 14 1/4" | 1243mm | 2080mm | 24mm | 548mm | 146mm | 241mm | 8 5/8" | 2" | 7638 lbs. | 10932 lbs. | 1363.66" |
| 94" DN 215 gpm 150500 gpm | 1057" | 151 1/4" | 17 1/8" | 209 1/2" | 8 1/2" | 14 1/4" | 1269mm | 2120mm | 24mm | 548mm | 146mm | 241mm | 8 5/8" | 2" | 7808 lbs. | 11172 lbs. | 1393.66" |
| 96" DN 220 gpm 154000 gpm | 1080" | 154 1/4" | 17 1/8" | 213 1/2" | 8 1/2" | 14 1/4" | 1295mm | 2160mm | 24mm | 548mm | 146mm | 241mm | 8 5/8" | 2" | 7978 lbs. | 11412 lbs. | 1423.66" |
| 98" DN 225 gpm 157500 gpm | 1103" | 157 1/4" | 17 1/8" | 217 1/2" | 8 1/2" | 14 1/4" | 1321mm | 2200mm | 24mm | 548mm | 146mm | 241mm | 8 5/8" | 2" | 8148 lbs. | 11652 lbs. | 1453.66" |
| 100" DN 230 gpm 161000 gpm | 1126" | 160 1/4" | 17 1/8" | 221 1/2" | 8 1/2" | 14 1/4" | 1347mm | 2240mm | 24mm | 548mm | 146mm | 241mm | 8 5/8" | 2" | 8318 lbs. | 11892 lbs. | 1483.66" |
| 102" DN 235 gpm 164500 gpm | 1149" | 163 1/4" | 17 1/8" | 225 1/2" | 8 1/2" | 14 1/4" | 1373mm | 2280mm | 24mm | 548mm | 146mm | 241mm | 8 5/8" | 2" | 8488 lbs. | 12132 lbs. | 1513.66" |
| 104" DN 240 gpm 168000 gpm | 1172" | 166 1/4" | 17 1/8" | 229 1/2" | 8 1/2" | 14 1/4" | 1399mm | 2320mm | 24mm | 548mm | 146mm | 241mm | 8 5/8" | 2" | 8658 lbs. | 12372 lbs. | 1543.66" |
| 106" DN 245 gpm 171500 gpm | 1195" | 169 1/4" | 17 1/8" | 233 1/2" | 8 1/2" | 14 1/4" | 1425mm | 2360mm | 24mm | 548mm | 146mm | 241mm | 8 5/8" | 2" | 8828 lbs. | 12612 lbs. | 1573.66" |
| 108" DN 250 gpm 175000 gpm | 1218" | 172 1/4" | 17 1/8" | 237 1/2" | 8 1/2" | 14 1/4" | 1451mm | 2400mm | 24mm | 548mm | 146mm | 241mm | 8 5/8" | 2" | 8998 lbs. | 12852 lbs. | 1603.66" |
| 110" DN 255 gpm 178500 gpm | 1241" | 175 1/4" | 17 1/8" | 241 1/2" | 8 1/2" | 14 1/4" | 1477mm | 2440mm | 24mm | 548mm | 146mm | 241mm | 8 5/8" | 2" | 9168 lbs. | 13092 lbs. | 1633.66" |
| 112" DN 260 gpm 182000 gpm | 1264" | 178 1/4" | 17 1/8" | 245 1/2" | 8 1/2" | 14 1/4" | 1503mm | 2480mm | 24mm | 548mm | 146mm | 241mm | 8 5/8" | 2" | 9338 lbs. | 13332 lbs. | 1663.66" |



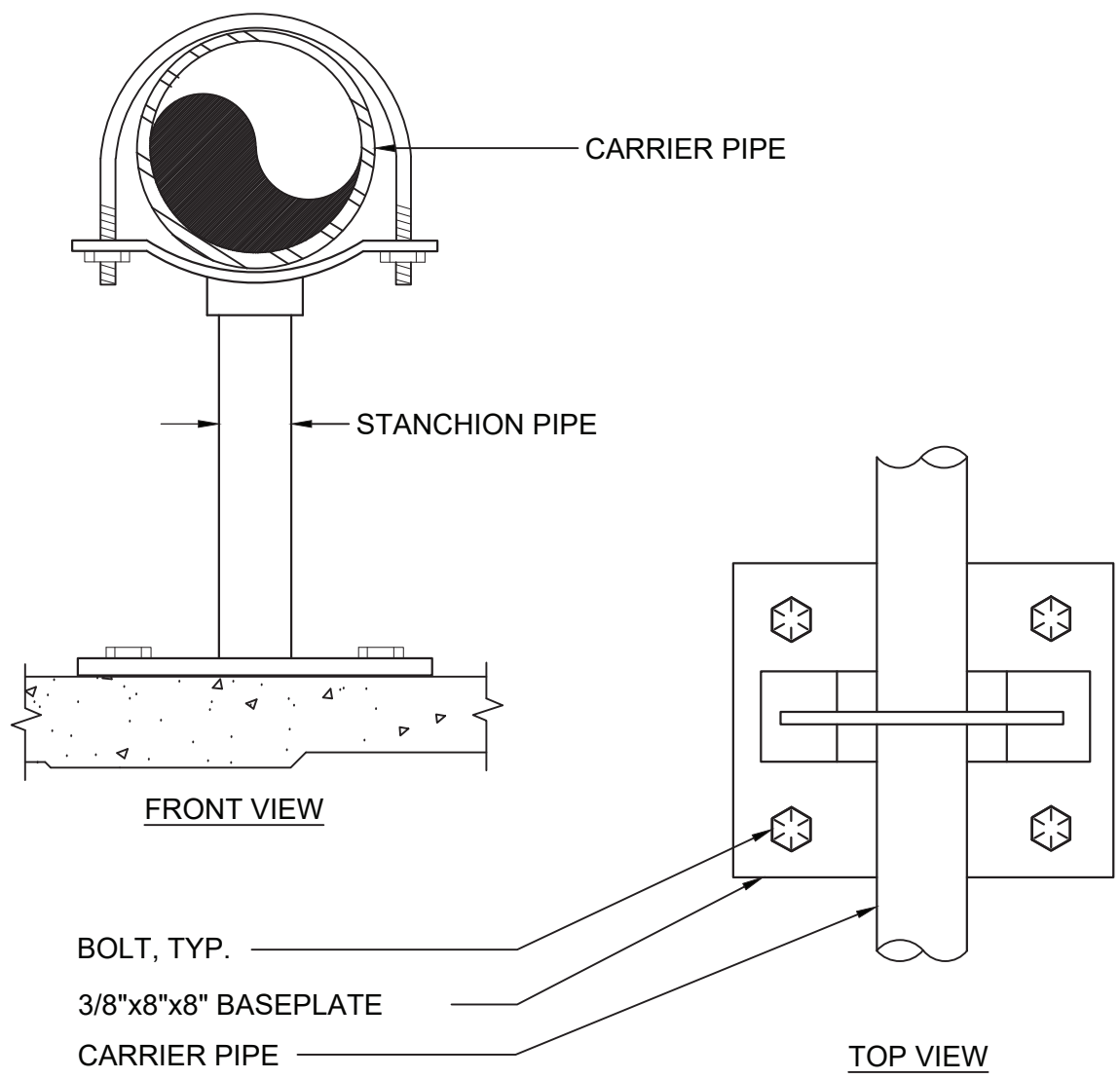
- NOTES:
- INSULATION ON ALL COLD SURFACES SHALL BE APPLIED WITH A CONTINUOUS, UNBROKEN VAPOR SEAL. HANGERS, SUPPORTS, ANCHORS, ETC., THAT ARE SECURED DIRECTLY TO COLD SURFACES SHALL BE ADEQUATELY INSULATED AND VAPOR SEALED TO PREVENT CONDENSATION.
 - GALVANIZED METAL SHIELDS SHALL BE APPLIED BETWEEN HANGERS OR SUPPORTS AND THE PIPE INSULATION AS SHOWN ABOVE. SHIELDS SHALL BE FORMED TO FIT THE INSULATION AND SHALL EXTEND UP TO THE CENTERLINE OF THE PIPE.
 - RIGID INSULATION INSERTS SHALL BE INSTALLED ON PIPE SIZES 1½" (38 MM) OR LARGER AS SHOWN ABOVE. INSERTS SHALL BE OF EQUAL THICKNESS TO THE ADJOINING INSULATION AND SHALL BE PROVIDED WITH VAPOR RETARDER SEALS.

4 PIPE INSULATION SADDLE/SHIELD SCHEDULE
SCALE: NONE



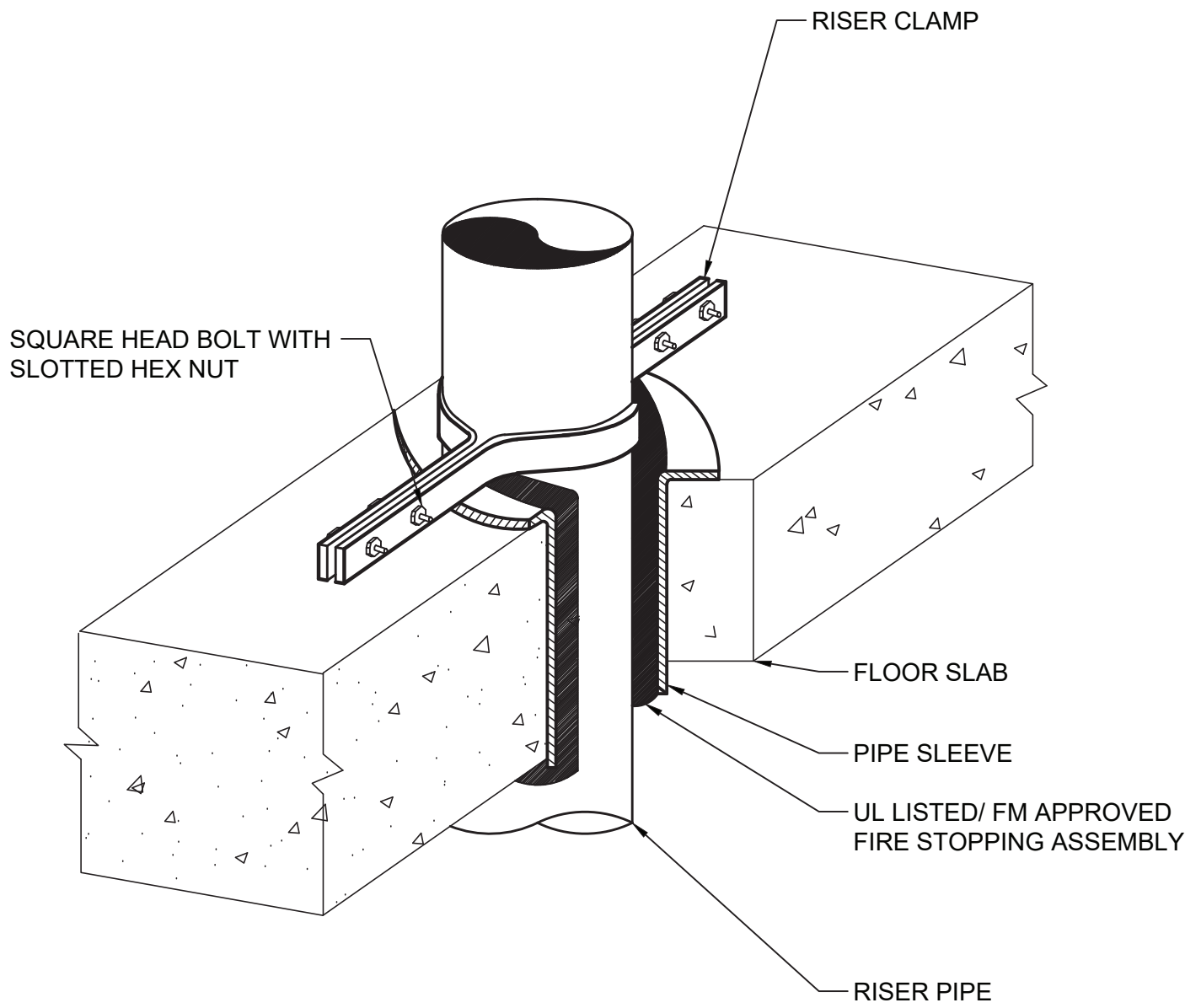
- NOTES:
- SEAL ASSEMBLY BASED ON THUNDERLINE MODEL "C" LINK-SEAL MODULAR SEAL, WITH EPDM SEAL ELEMENT, COMPOSITE PRESSURE PLATES, STEEL WITH 2-PART ZINC DICHROMATE & ORGANIC COATING NUTS AND BOLTS AND WITH A OPERATING TEMPERATURE RANGE OF -40°F TO +250°F.

2 LINK SEAL DETAIL
SCALE: NONE



- NOTES:
- ALL PIPE SUPPORTS SHALL BE GALVANIZED STEEL OR FACTORY PAINTED BLACK WITH ENAMEL.
 - FOR NON FERROUS PIPING WITHOUT INSULATION, ALL SUPPORTS SHALL BE COPPER PLATED OR FURNISHED WITH A DI-ELECTRIC SPACER BETWEEN PIPE AND SUPPORT.

3 FLOOR MOUNTED PIPE SUPPORT DETAIL
SCALE: NONE



1 VERTICAL PIPE SUPPORT DETAIL
SCALE: NONE