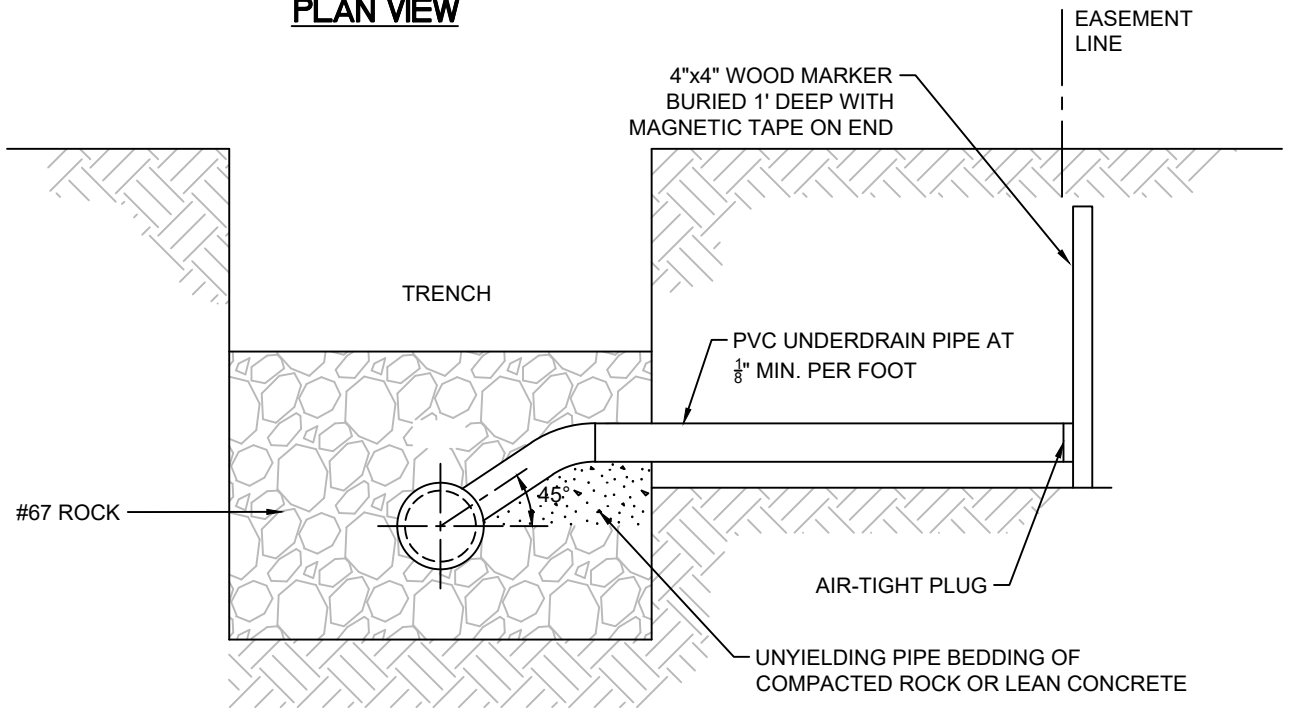


**PLAN VIEW**



**CROSS SECTION**

ADOPTED DETAIL SOURCE: LCUASS DETAIL 713.1L



# STANDARD UNDERDRAIN SERVICE CONNECTION

DETAIL NO.

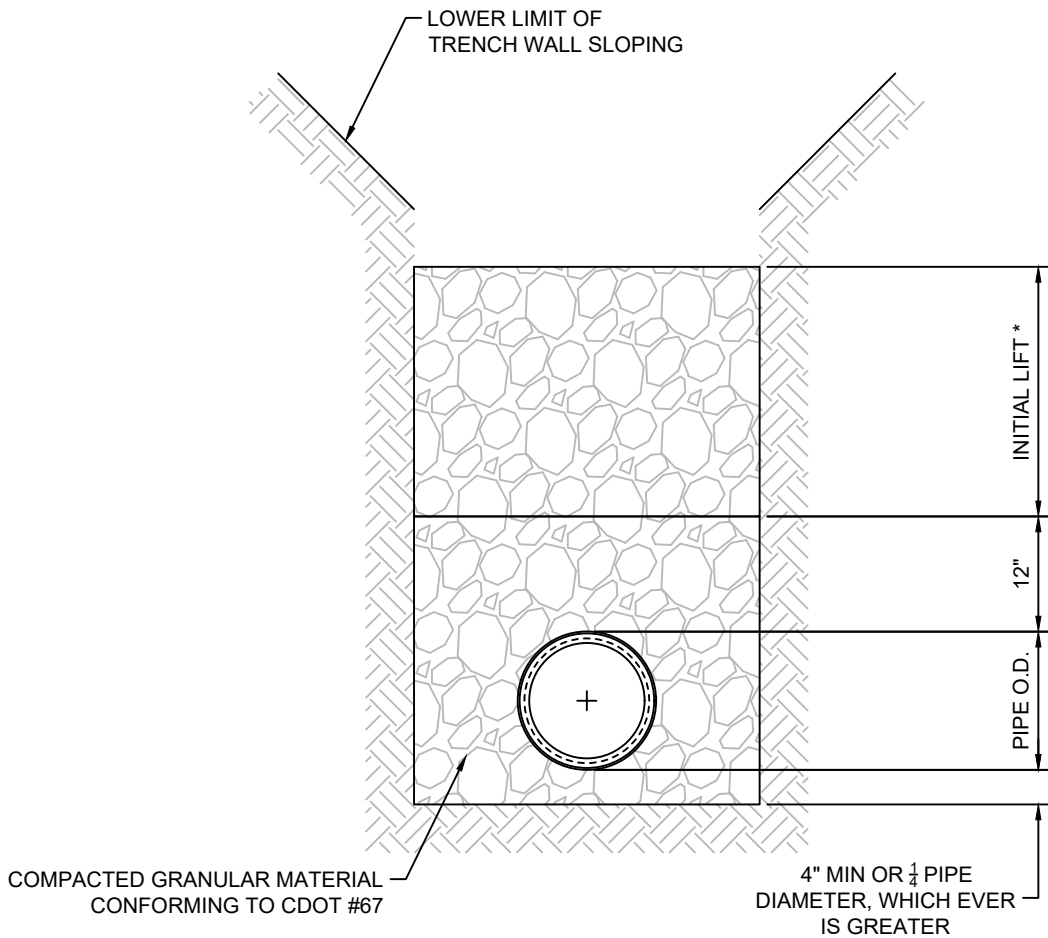
**400.01**

REVISION NO: 1

DATE: 9/20/2022

SCALE: NTS

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\* INITIAL LIFT SHALL NOT EXCEED 3 FEET IN DEPTH.

NOTE:

ALL UNDERDRAIN MAINS WILL BE PRESSURE TESTED AND VIDEO TAPED BY CONTRACTOR.

ADOPTED DETAIL SOURCE: LCUASS DETAIL 713.2L



## UNDERDRAIN MAIN BEDDING REQUIREMENTS

DETAIL NO.

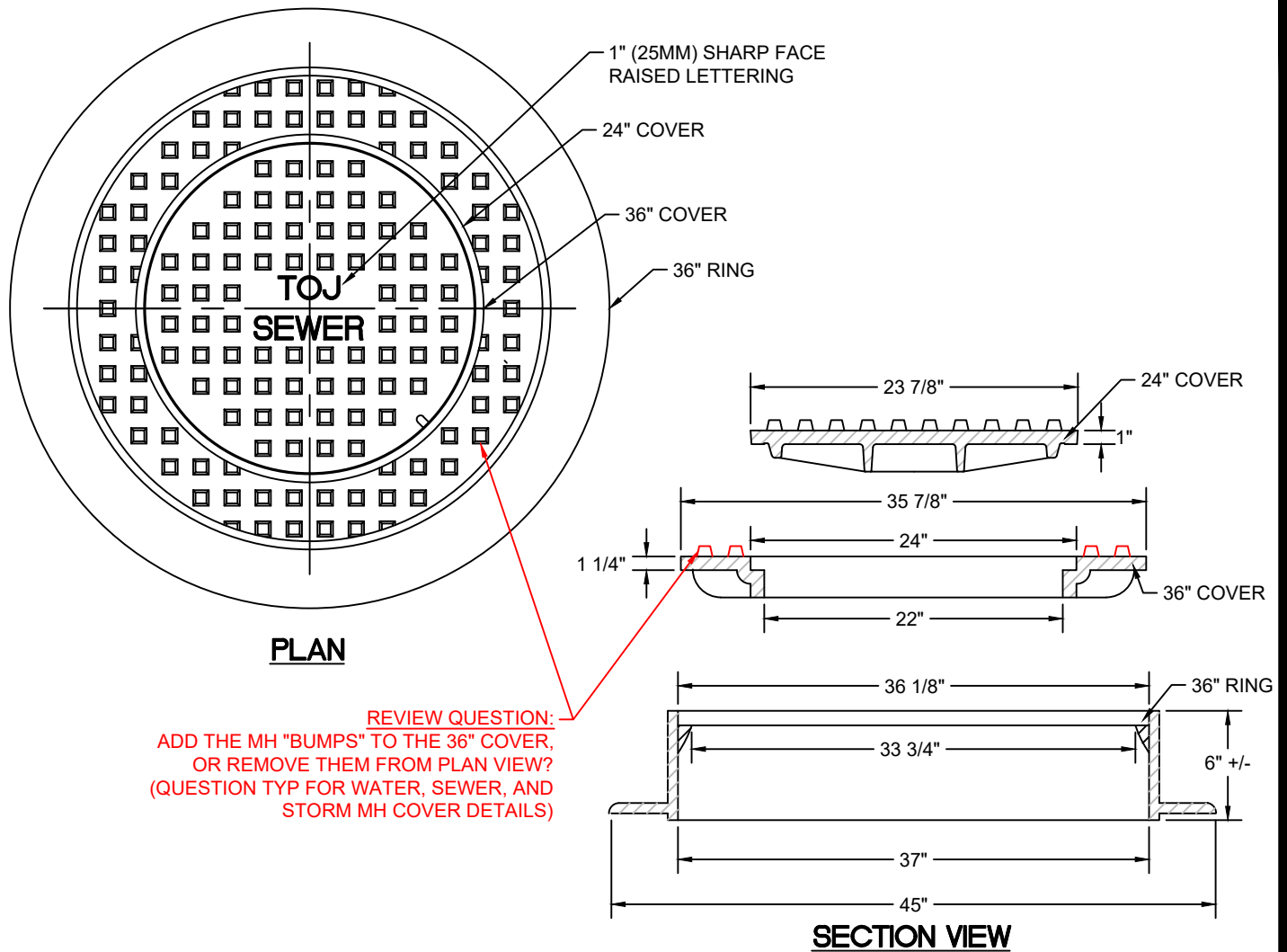
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REVISION NO: 1

DATE: 9/20/2022

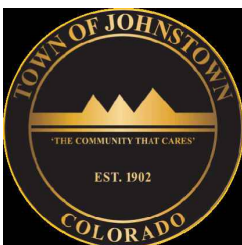
SCALE: NTS

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NOTES:

1. CASTING SPECIFICATIONS ASTM A-48 CLASS 35.
2. ALL CASTINGS TO BE FINISHED WITH BLACK BITUMINOUS PAINT.
3. TOWN MAY REQUIRE LARGER RING & COVER SIZINGS (30"+) DEPENDING ON APPLICATIONS.
4. CASTINGS AS SPECIFIED OR APPROVED EQUAL.
5. FOR USE IN ALL LOCATIONS OTHER THAN SIDEWALKS, WHERE SMOOTH LIDS ARE REQUIRED.



**SANITAR SEWER  
MANHOLE RING AND COVER**

DETAIL NO.

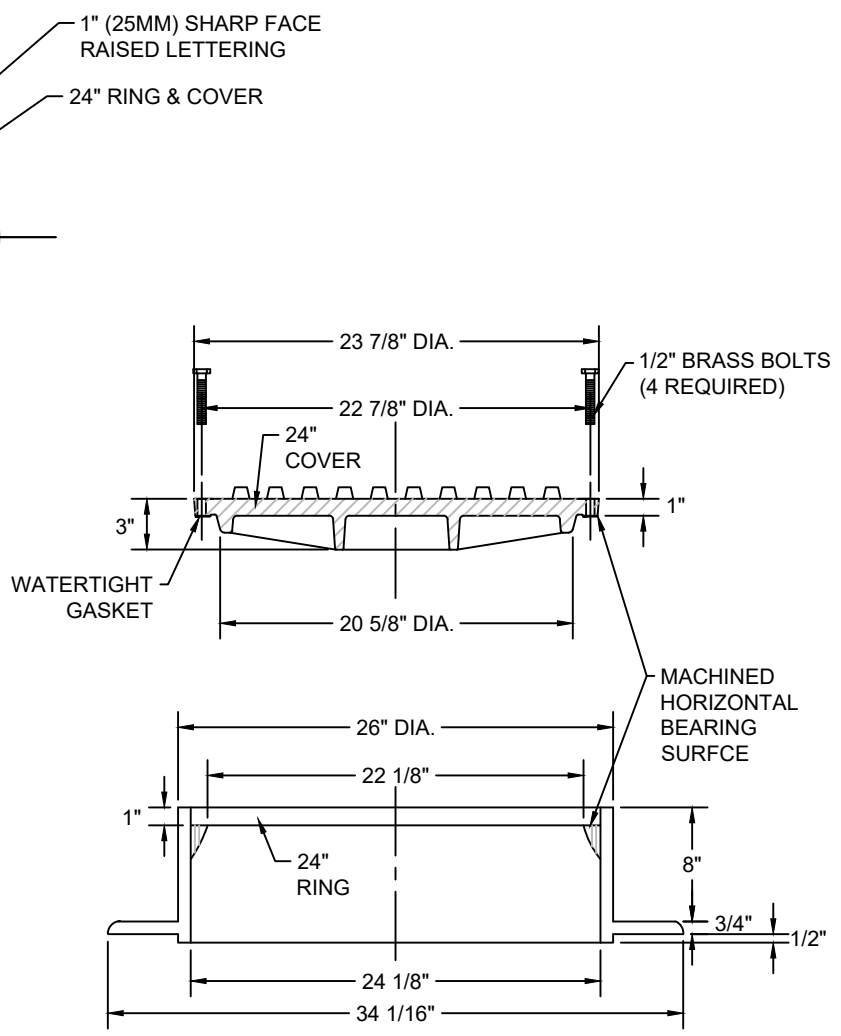
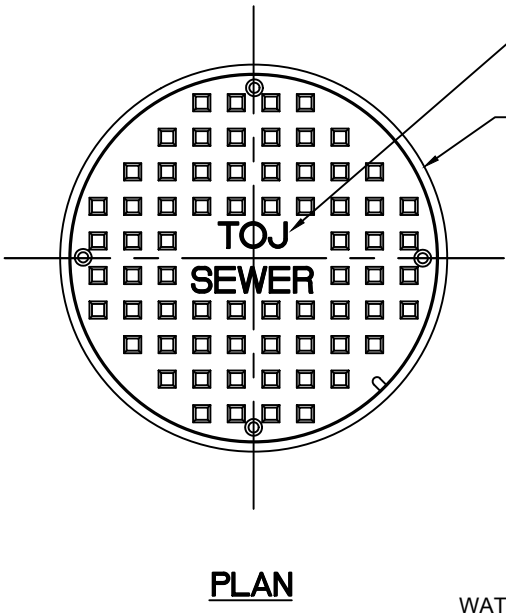
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REVISION NO: 1

DATE: JAN 2023

SCALE: NTS

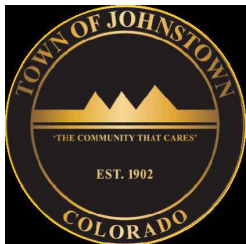
PAGE 1 OF 1



**SECTION VIEW**

**NOTES:**

1. CASTING SPECIFICATIONS ASTM A-48 CLASS 35.
2. ALL CASTINGS TO BE FINISHED WITH BLACK BITUMINOUS PAINT.
3. TOWN MAY REQUIRE LARGER RING & COVER SIZINGS (30"+) DEPENDING ON APPLICATIONS.
4. CASTINGS AS SPECIFIED OR APPROVED EQUAL.
5. FOR USE IN ALL LOCATIONS OTHER THAN SIDEWALKS, WHERE SMOOTH LIDS ARE REQUIRED.



**SANITARY SEWER MANHOLE  
RING AND BOLT DOWN COVER**

DETAIL NO.  
**402**

REVISION NO: 1

DATE: 9/20/2022

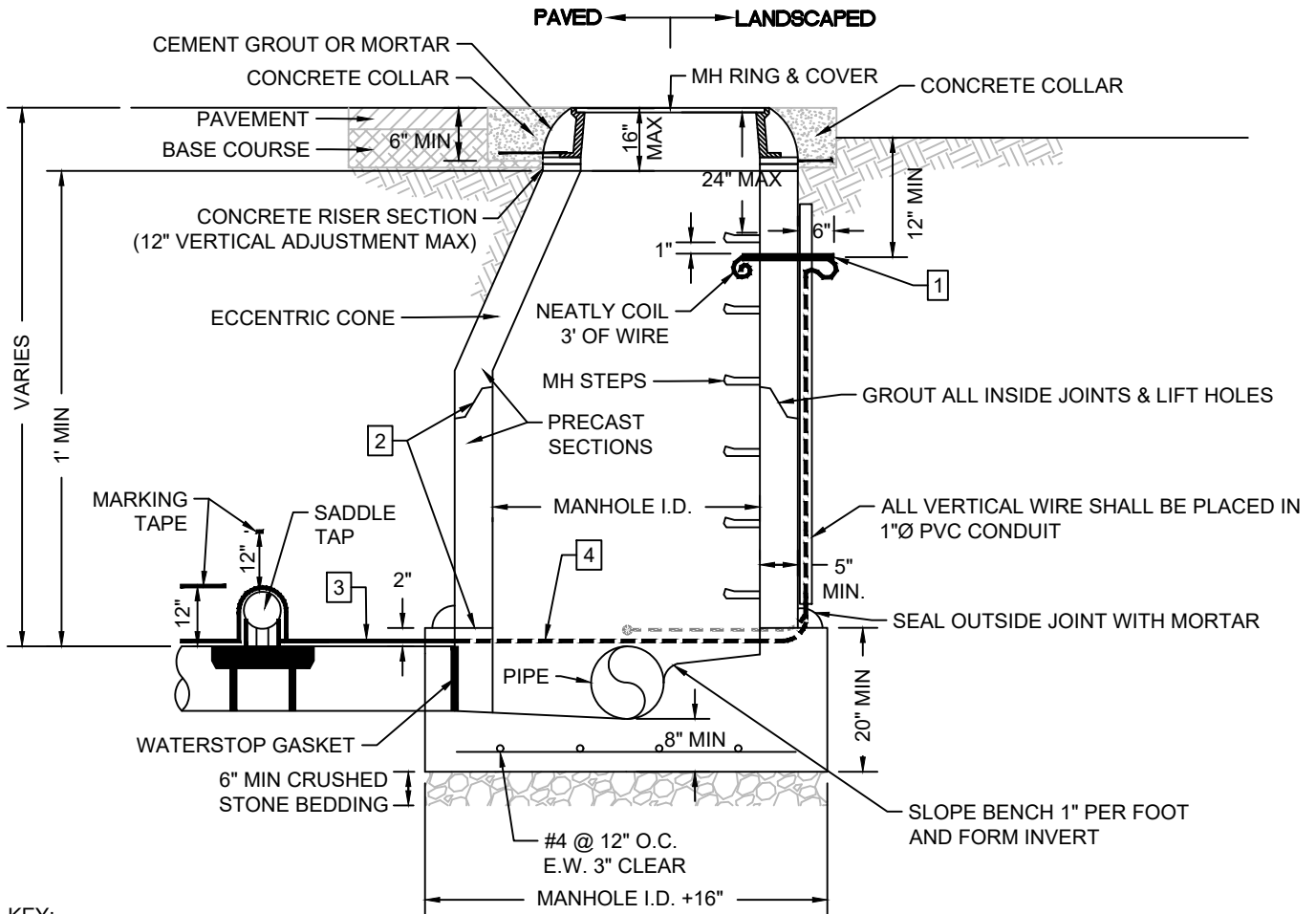
SCALE: NTS

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MINIMUM MANHOLE BARREL DIAMETER SHALL CONFORM TO THE FOLLOWING TABLE:

PIPE I.D.	MH I.D.	RING & COVER
18" & SMALLER	4'-0"	24"
21" TO 30"	*5'-0"	30"
33" TO 42"	6'-0"	30", 36" w/ 24" INNER COVER
60" & LARGER	SPECIAL DESIGN	

\* 5'-0" DIAMETER MH IS REQUIRED FOR PIPE DEPTHS 15' AND GREATER.



**KEY:**

- 1 5/8" COPPER GROUNDING ROD CAST IN OR CORE IN MH 1" BELOW STEP IN  $\epsilon$  OF STEP. GROUNDING ROD SHALL NOT PROTRUDE MORE THAN 6" INSIDE THE MH. CONNECT TRACER WIRE TO GROUND ROD CLAMP WITH STAINLESS STEEL SCREWS. WRAP ALL EXPOSED METAL w/ RUBBER ELECTRICAL SPLICING TAPE.
- 2 SET EACH RING IN FULL BED OF BITUMINOUS MASTIC OR PLASTIC SEALING COMPOUND. IN GROUND WATER AREAS, GROUT ALL OUTSIDE JOINTS.
- 3 NO. 10 GAUGE SOLID COPPER TRACER WIRE - GREEN FOR SEWER, BLACK FOR STORMWATER.
- 4 WRAP TRACER WIRE AROUND OUTSIDE OF MH & CONNECT TO GROUNDING ROD.



# PRECAST MANHOLE

DETAIL NO.

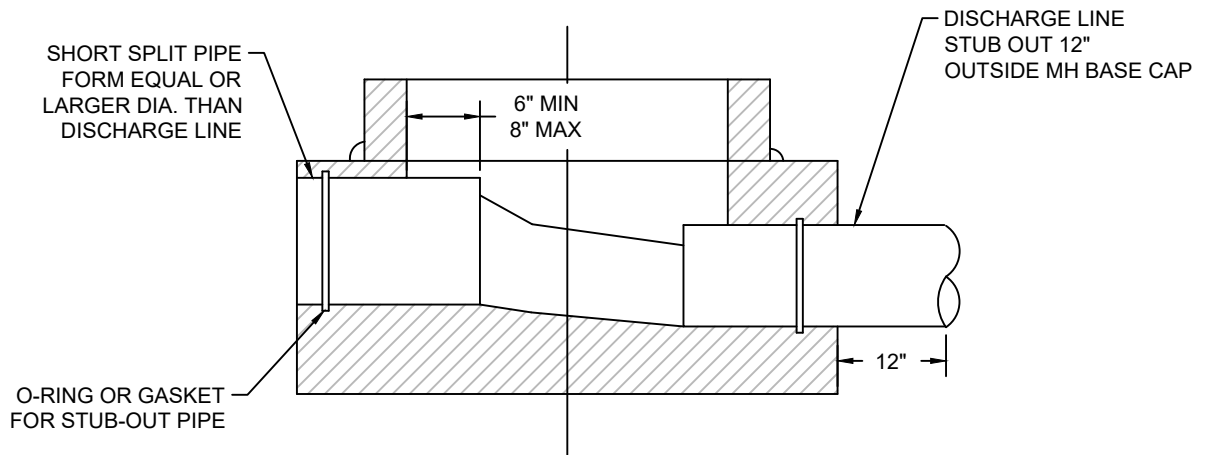
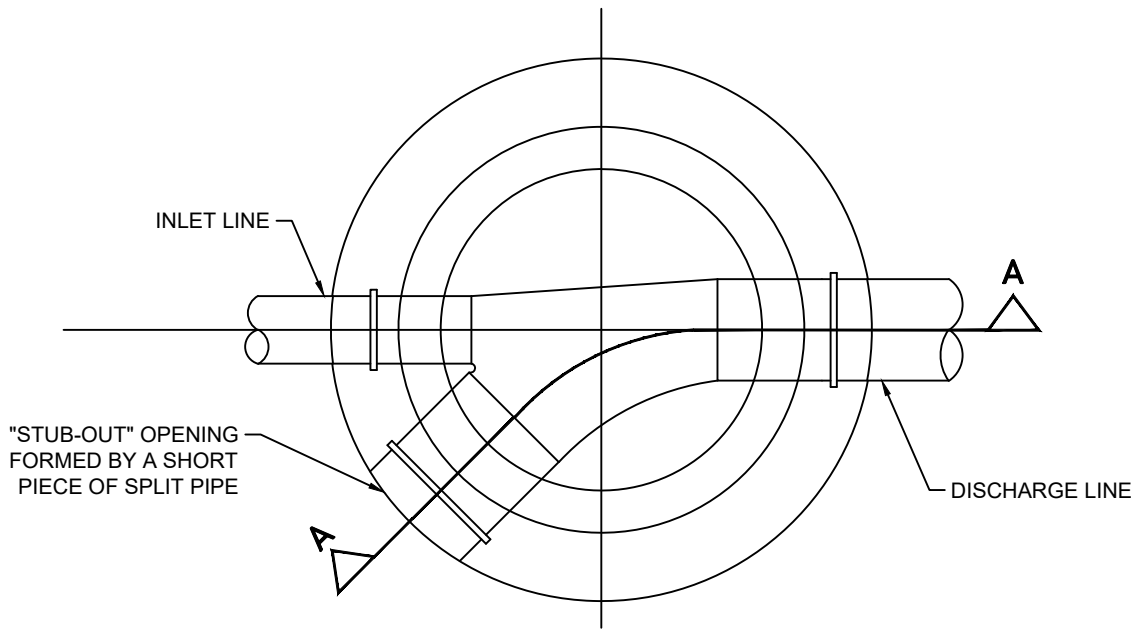
## 403

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DATE: 9/20/2022

SCALE: NTS

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**SECTION A-A**



**STUB-OUT MANHOLE**

DETAIL NO.

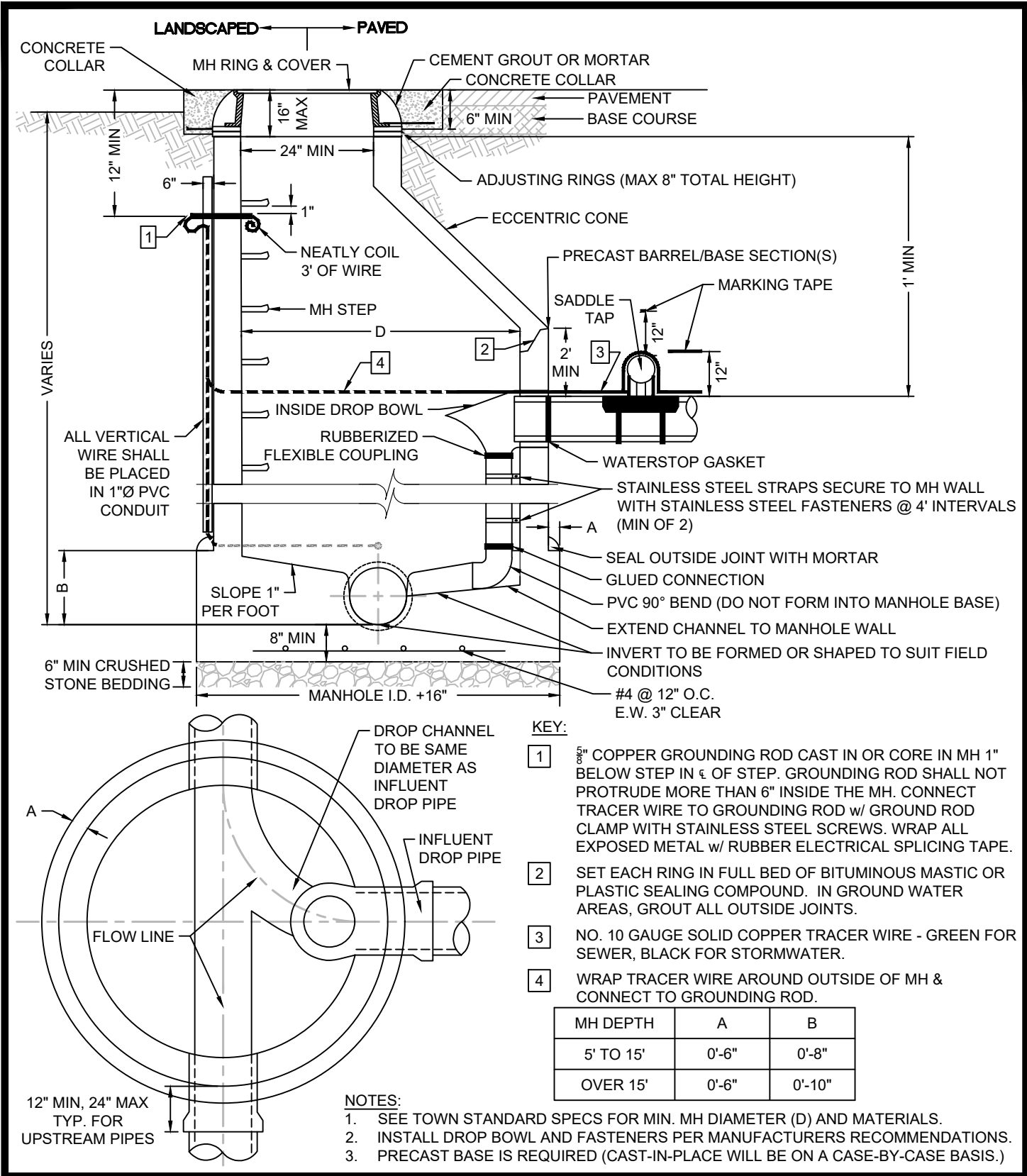
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REVISION NO: 1

DATE: 9/20/2022

SCALE: NTS

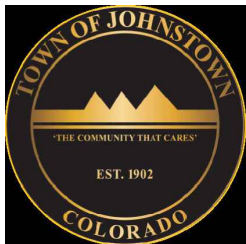
PAGE 1 OF 1



- KEY:**
- 1. 5/8" COPPER GROUNDING ROD CAST IN OR CORE IN MH 1" BELOW STEP IN 1/4 OF STEP. GROUNDING ROD SHALL NOT PROTRUDE MORE THAN 6" INSIDE THE MH. CONNECT TRACER WIRE TO GROUNDING ROD w/ GROUND ROD CLAMP WITH STAINLESS STEEL SCREWS. WRAP ALL EXPOSED METAL w/ RUBBER ELECTRICAL SPLICING TAPE.
  - 2. SET EACH RING IN FULL BED OF BITUMINOUS MASTIC OR PLASTIC SEALING COMPOUND. IN GROUND WATER AREAS, GROUT ALL OUTSIDE JOINTS.
  - 3. NO. 10 GAUGE SOLID COPPER TRACER WIRE - GREEN FOR SEWER, BLACK FOR STORMWATER.
  - 4. WRAP TRACER WIRE AROUND OUTSIDE OF MH & CONNECT TO GROUNDING ROD.

MH DEPTH	A	B
5' TO 15'	0'-6"	0'-8"
OVER 15'	0'-6"	0'-10"

- NOTES:**
1. SEE TOWN STANDARD SPECS FOR MIN. MH DIAMETER (D) AND MATERIALS.
  2. INSTALL DROP BOWL AND FASTENERS PER MANUFACTURERS RECOMMENDATIONS.
  3. PRECAST BASE IS REQUIRED (CAST-IN-PLACE WILL BE ON A CASE-BY-CASE BASIS.)



# INSIDE DROP MANHOLE

DETAIL NO.

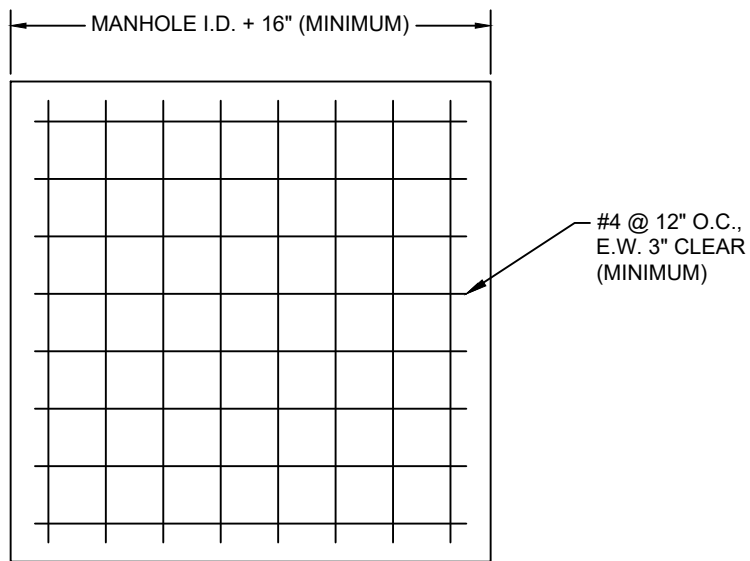
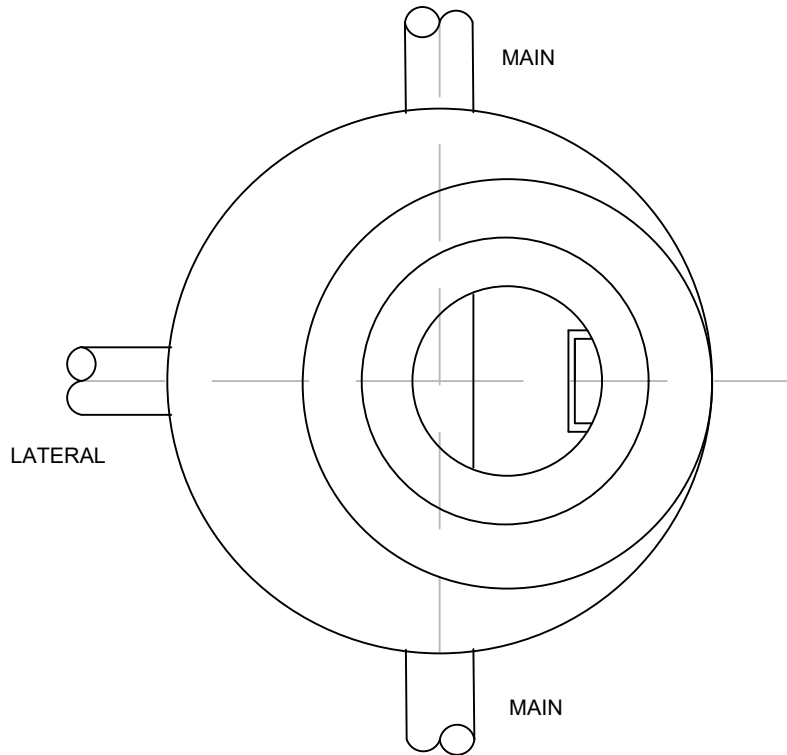
**405**

REVISION NO: 1

DATE: 9/20/2022

SCALE: NTS

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**PRECAST MANHOLE BASE**  
**PLAN VIEW**

**NOTES:**

1. RING & COVER ELEVATION SHALL BE IN ACCORDANCE WITH THE JOHNSTOWN REQUIREMENTS.
2. SET ACCESS INTO MANHOLE ON BENCH SIDE OF MAIN AS SHOWN.
3. ROTATE ECCENTRIC CONE AND STEPS AS NEEDED TO AVOID THE WHEEL PATH.
4. FOR INSTALLATIONS DEEPER THAN 15' PLANS MUST BE CONFIRMED BY A DESIGN PROFESSIONAL.



**POURED IN PLACE MANHOLE BASE**

DETAIL NO.

**406**

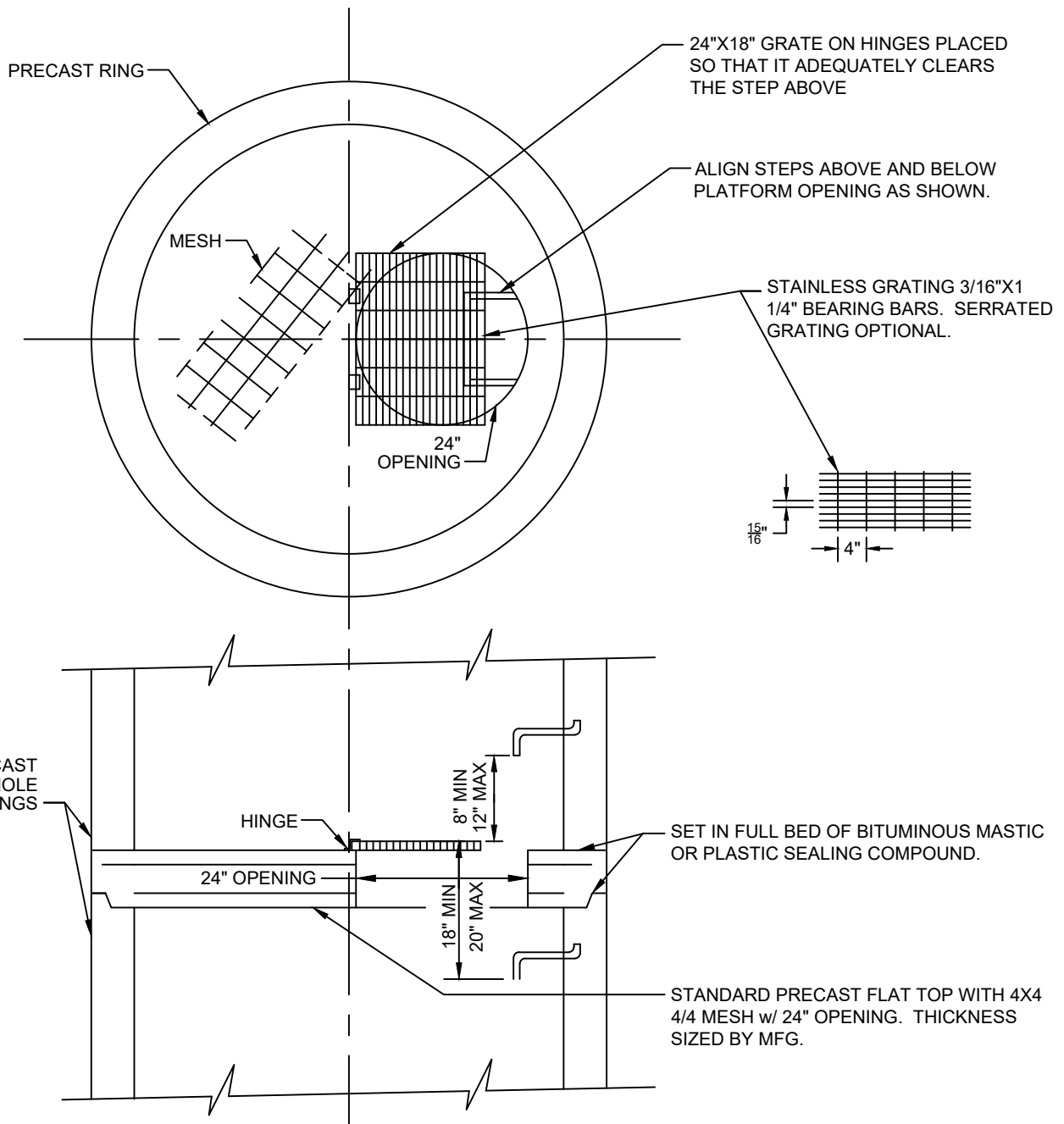
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DATE: 9/20/2022

SCALE: NTS

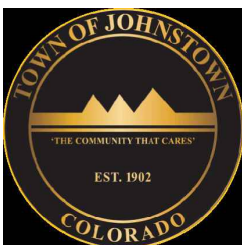
PAGE 1 OF 1





**NOTE:**

REQUIRED IN MANHOLES WHERE DEPTH MEASURED FROM RING TO INVERT EXCEEDS 15 FEET. CENTER PLATFORM BETWEEN THE RING AND INVERT. MINIMUM 5-FOOT DIAMETER MANHOLE.



# INTERMEDIATE MANHOLE PLATFORM

DETAIL NO.

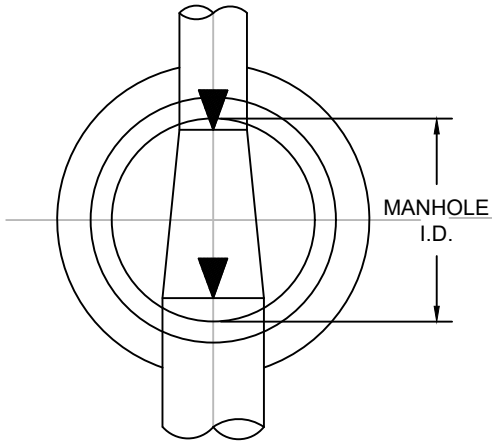
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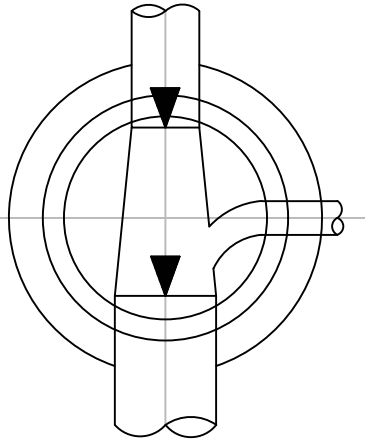
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SCALE: NTS

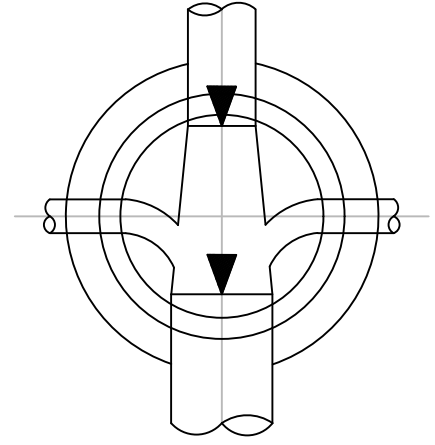
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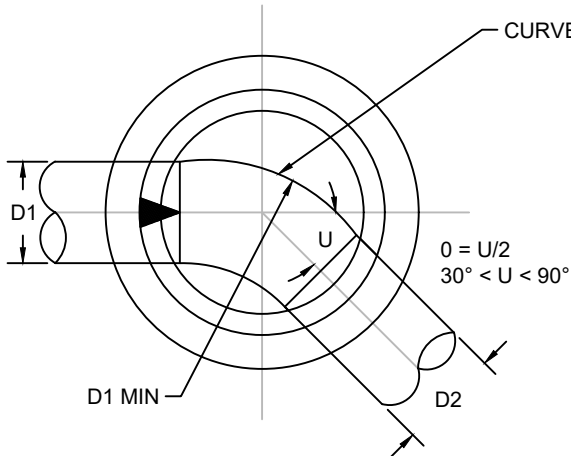
**THROUGH PIPE**



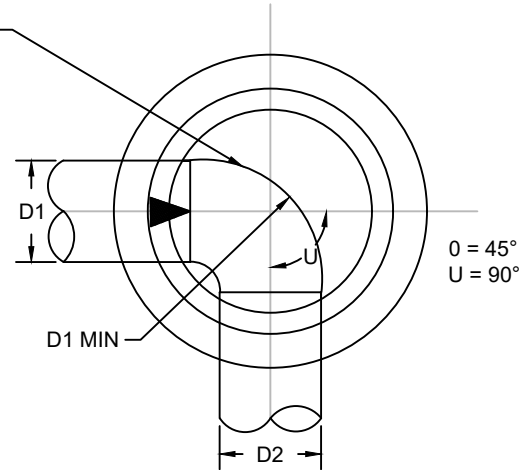
**THROUGH PIPE  
ONE COLLECTION LINE**



**THROUGH PIPE  
TWO COLLECTION LINES**



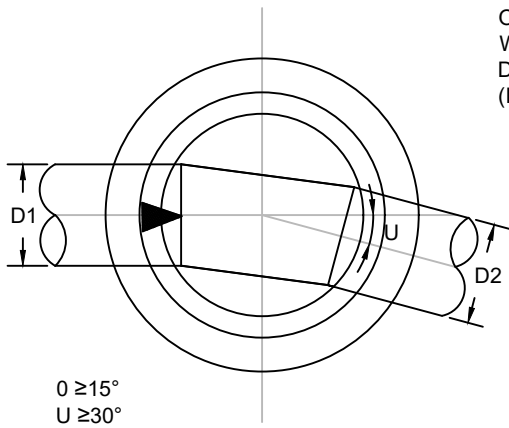
**INTERMEDIATE ANGLE**



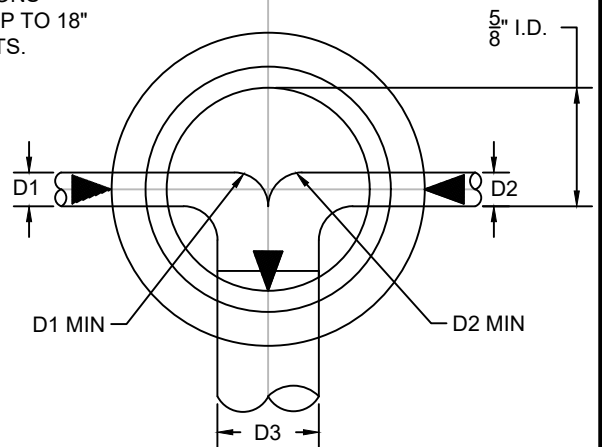
**SHARP ANGLE**

**NOTE:**

DETAILS SHOWN ARE TYPICAL ONLY FOR INSTALLATIONS WITH A MAXIMUM OF UP TO 18" DIFFERENCE IN INVERTS. (INSIDE DROP)



**INTERMEDIATE ANGLE**



**OPPOSED LATERALS**



**MANHOLE BASE DEFLECTOR**

DETAIL NO.

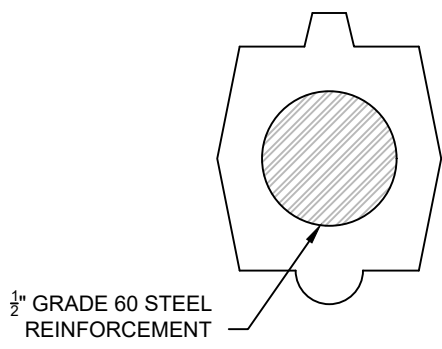
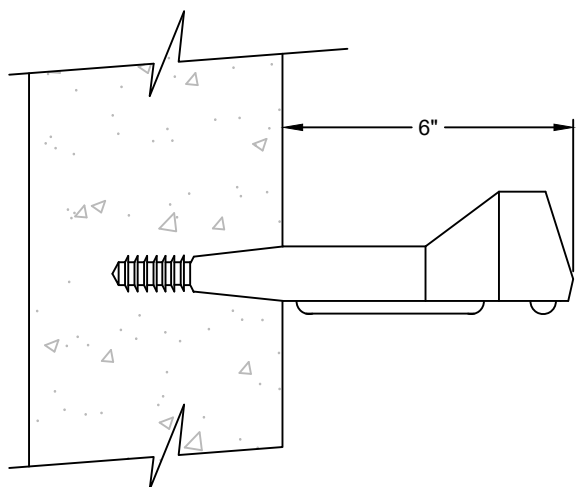
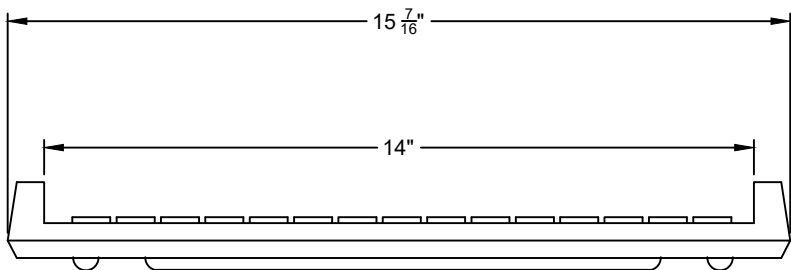
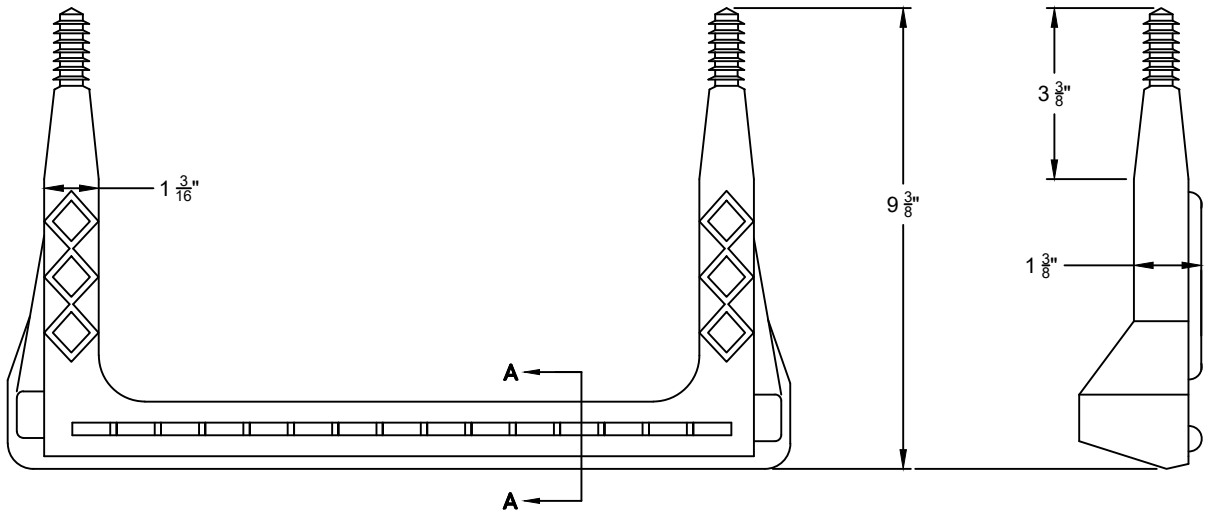
**408**

REVISION NO: 1

DATE: 9/20/2022

SCALE: NTS

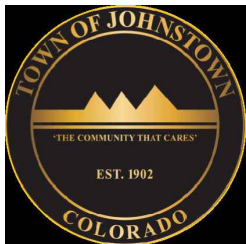
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**SECTION A-A**

**NOTE:**

STEPS SHALL BE SPACED 12" TO 16" ON CENTER AND ALIGNED AWAY FROM THE INVERT OVER LARGEST BENCH.



**PLASTIC MANHOLE STEP**

DETAIL NO.

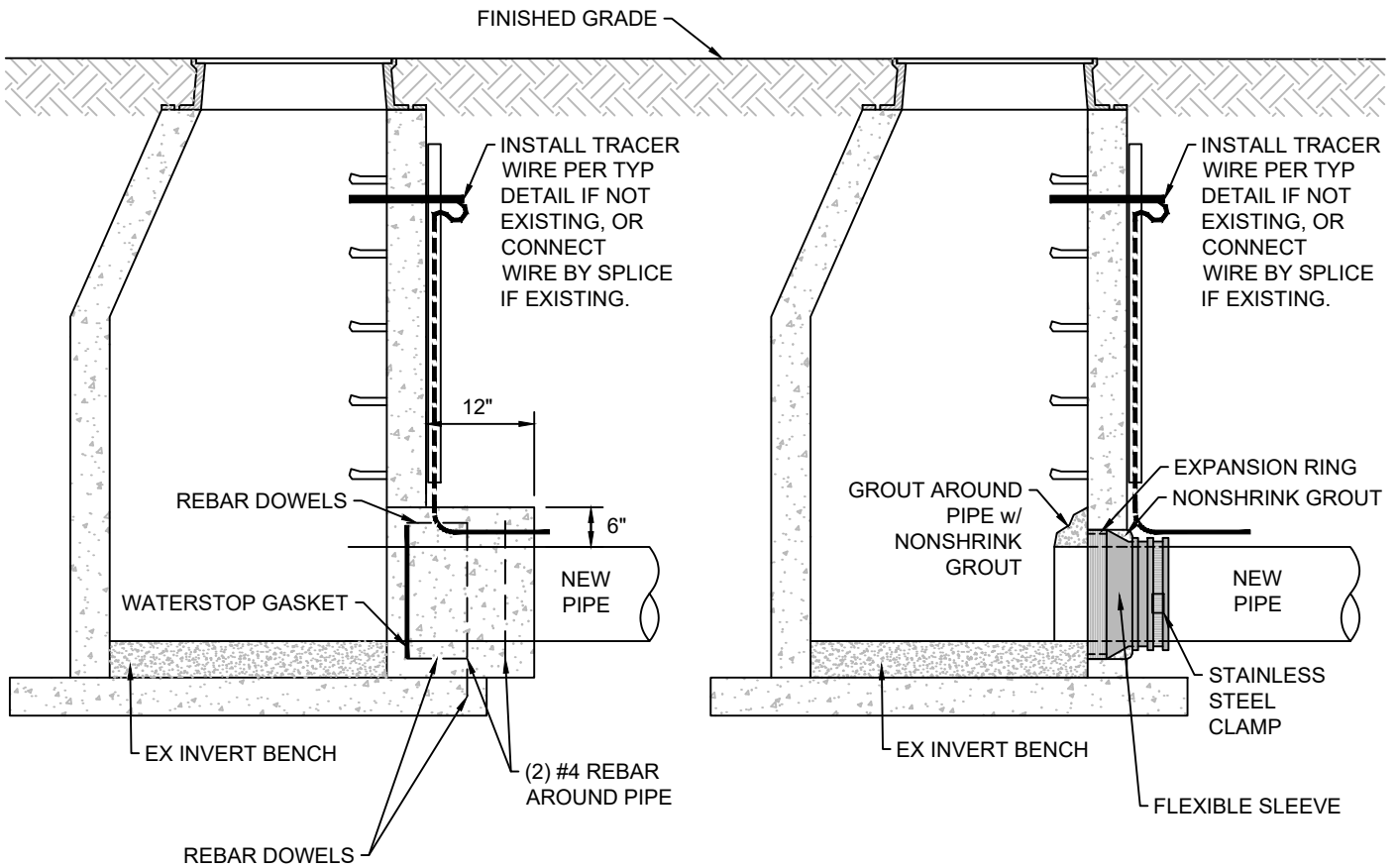
**409**

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DATE: 9/20/2022

SCALE: NTS

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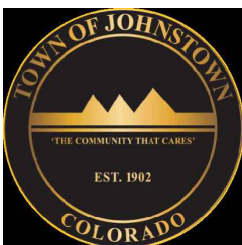


**CONCRETE CONNECTION**

**CORE AND SEAL BOOT CONNECTION**

**NOTES:**

1. USE CONCRETE BONDING AGENT BETWEEN NEW CONCRETE AND EXISTING PRECAST CONCRETE.
2. CORE DRILL DIAMETER IN EXISTING MANHOLE TO ONE STANDARD PIPE SIZE (DIAMETER) LARGER THAN THE PROPOSED TIE-IN PIPE.
3. RESHAPE INVERTS AND BENCHES IN GENERAL ACCORDANCE WITH TYPICAL NEW CONSTRUCTION DETAILS AS POSSIBLE TO ACHIEVE PROPER FLOW THROUGH THE MANHOLE.



**CONNECTION TO EXISTING MANHOLE**

DETAIL NO.

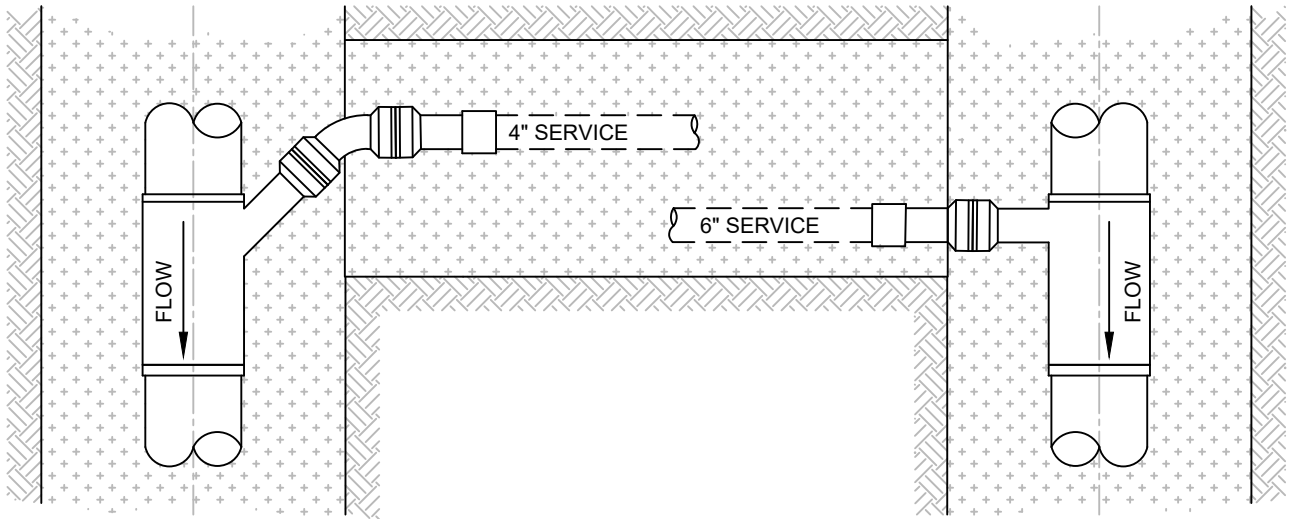
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REVISION NO: 1

DATE: 9/20/2022

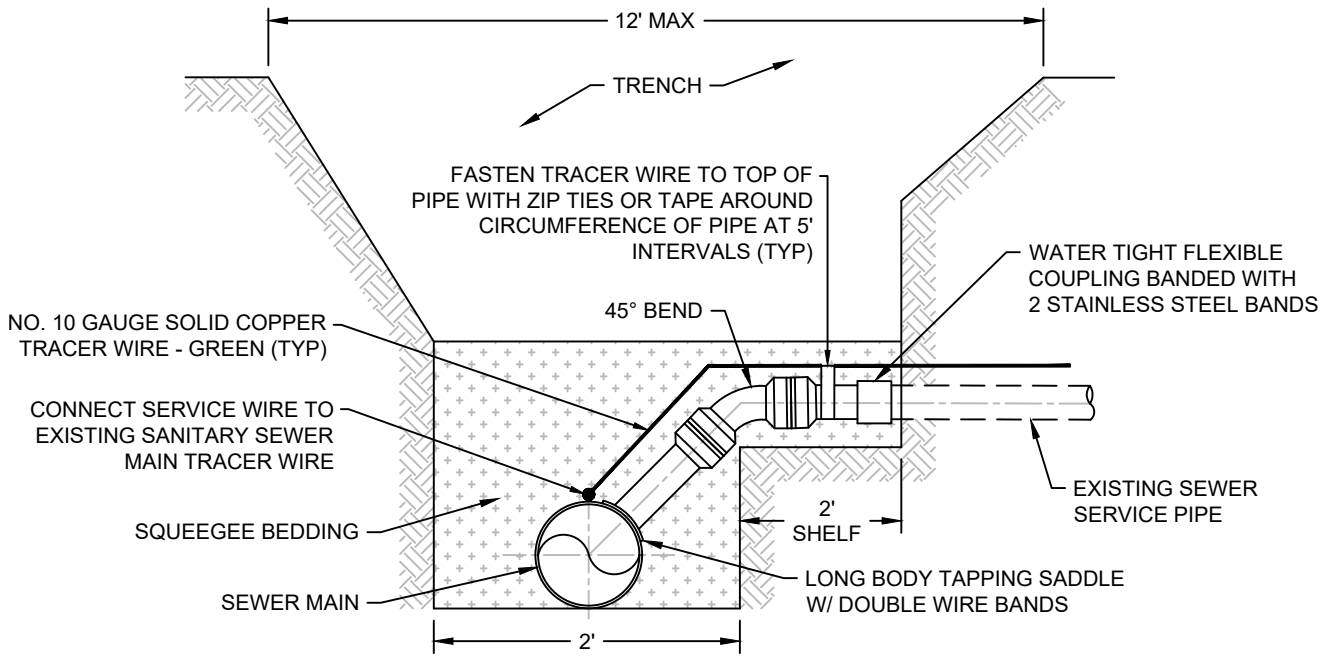
SCALE: NTS

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**PLAN**  
**(4" SERVICE WITH WYE)**

**PLAN**  
**(6" SERVICE WITH TEE)**



**ELEVATION**

**NOTES:**

1. MAXIMUM TRENCH WIDTH AT SERVICE CONNECTIONS IS 12 FEET.
2. INSTALL TRACER WIRE IN GENERAL ACCORDANCE WITH STANDARD DETAILS.



**CONNECTION TO EXISTING  
SANITARY SEWER SERVICE**

DETAIL NO.

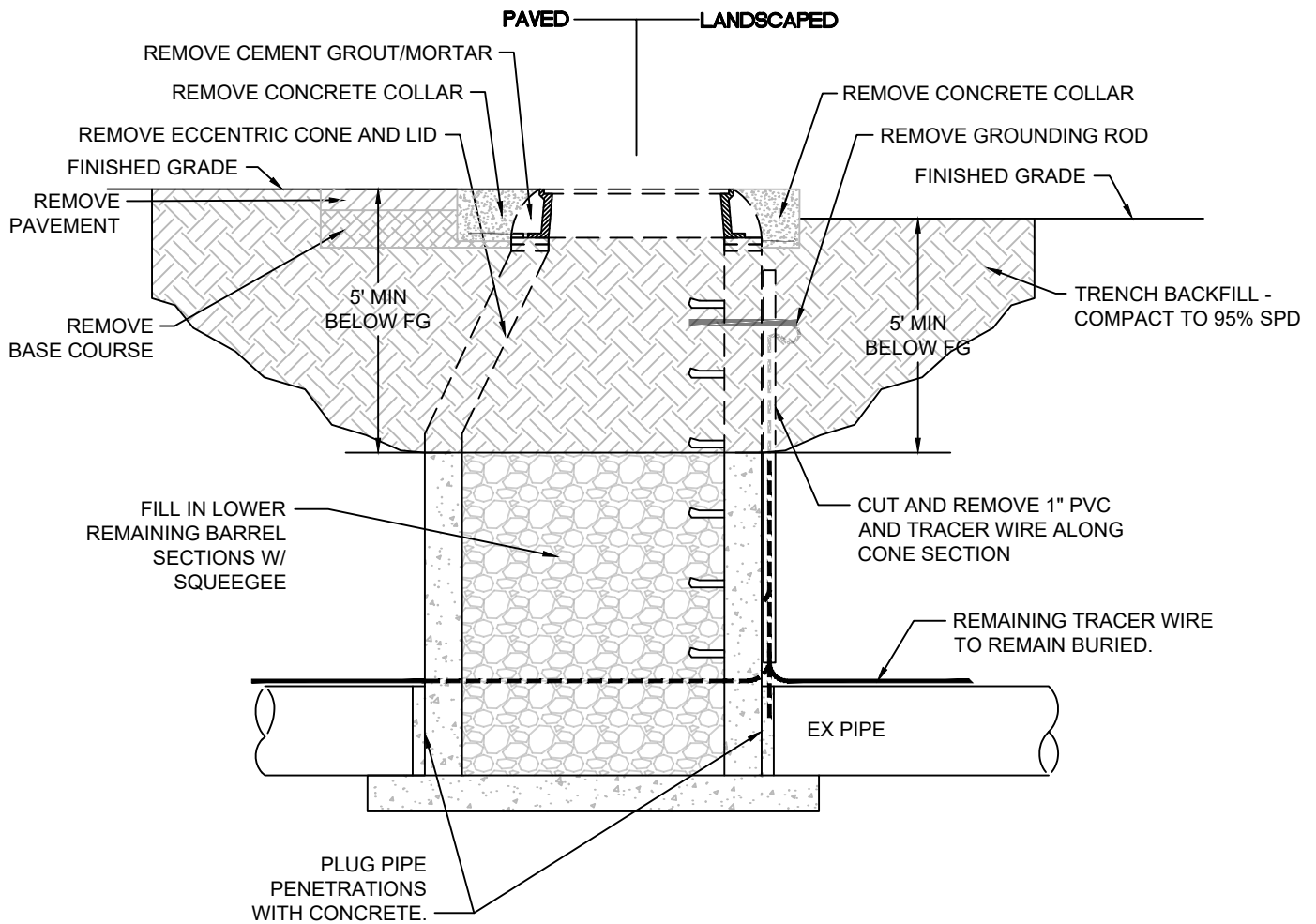
**412**

REVISION NO: 1

DATE: 9/20/2022

SCALE: NTS

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**NOTE:**

1. FOR MANHOLES ABANDONED IN STREET SECTIONS, DRIVES, OR PARKING AREAS, REMAINING BARREL SECTIONS SHALL BE FILLED IN WITH FLOW FILL.



# MANHOLE ABANDONMENT

DETAIL NO.

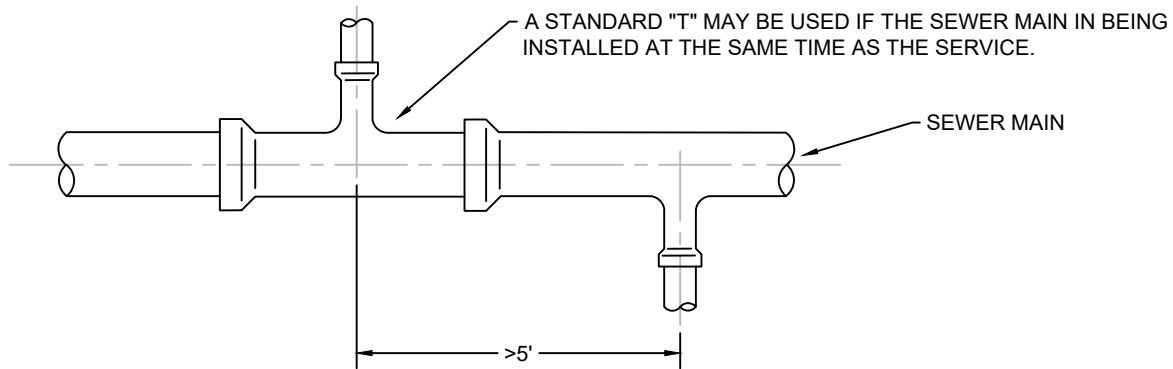
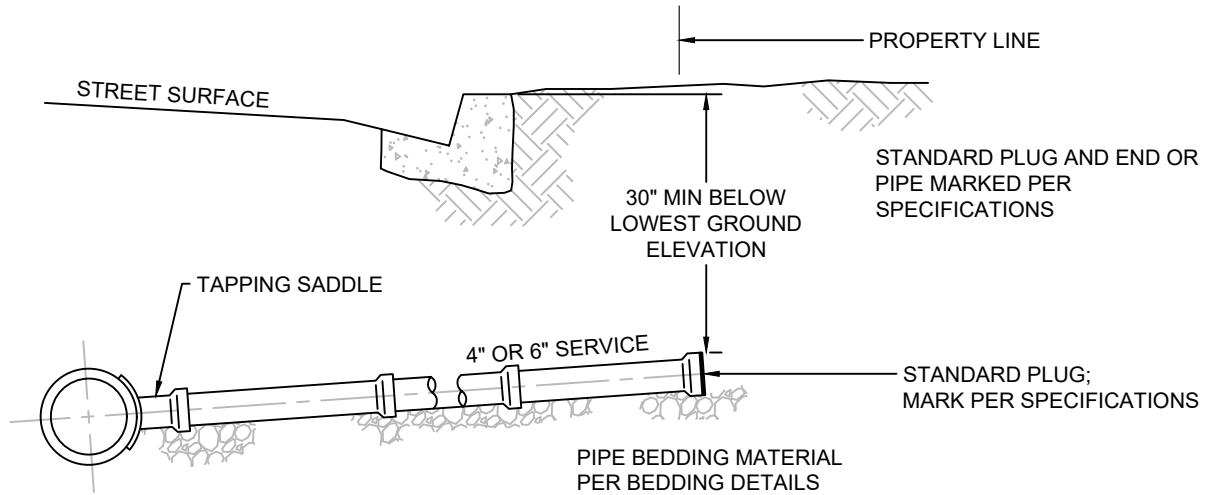
**411**

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**NOTES:**

1. IN NO CASE SHALL THE SEWER SERVICE PROTRUDE INTO THE SEWER MAIN.
2. 4" SEWER SERVICES SHALL HAVE A MIN SLOPE OF 2% AND A MAX SLOPE OF 8%.
3. 6" SEWER SERVICES SHALL HAVE A MINIMUM SLOPE OF 1% AND A MAX SLOPE OF 8%.
4. SERVICES SHALL NOT BE MADE CLOSER THAN 5 FT FROM EACH OTHER ON THE MAIN.
5. SERVICES LARGER THAN 6" SHALL BE MADE AT A MANHOLE.
6. SERVICES SHALL EXTEND TO PROPERTY LINE UNLESS OTHERWISE SHOWN ON TOWN ACCEPTED PLANS.
7. TAPS SHALL BE MADE AT THE 10 OR 2 POSITIONS ON THE PIPE.



# ALTERNATE SANITARY SEWER SERVICE

DETAIL NO.

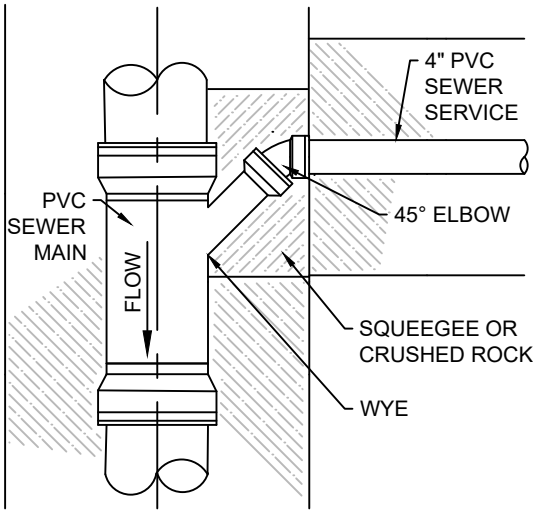
**414**

REVISION NO: 1

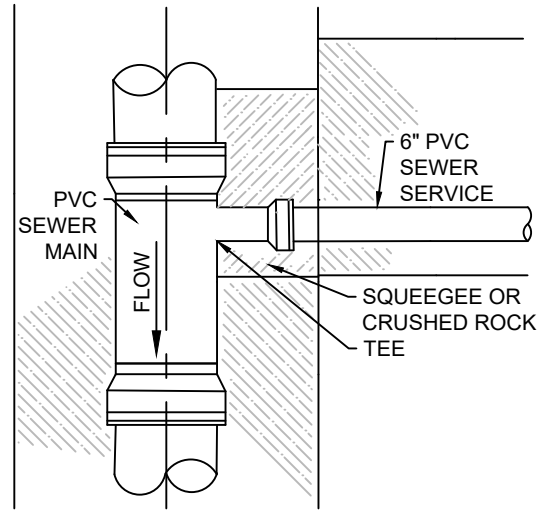
DATE: 9/20/2022

SCALE: NTS

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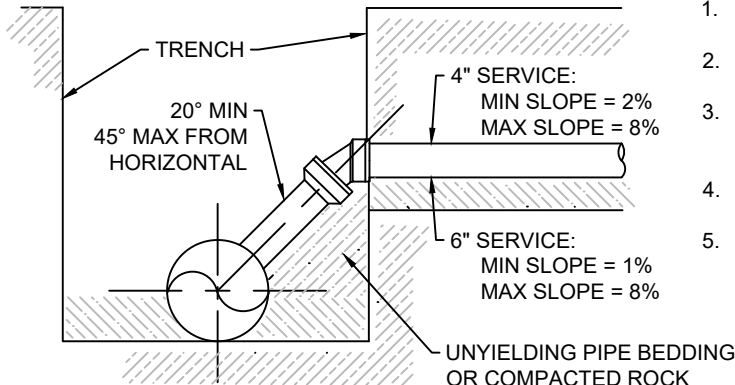
**PLAN**  
**(4" SERVICE WITH WYE)**



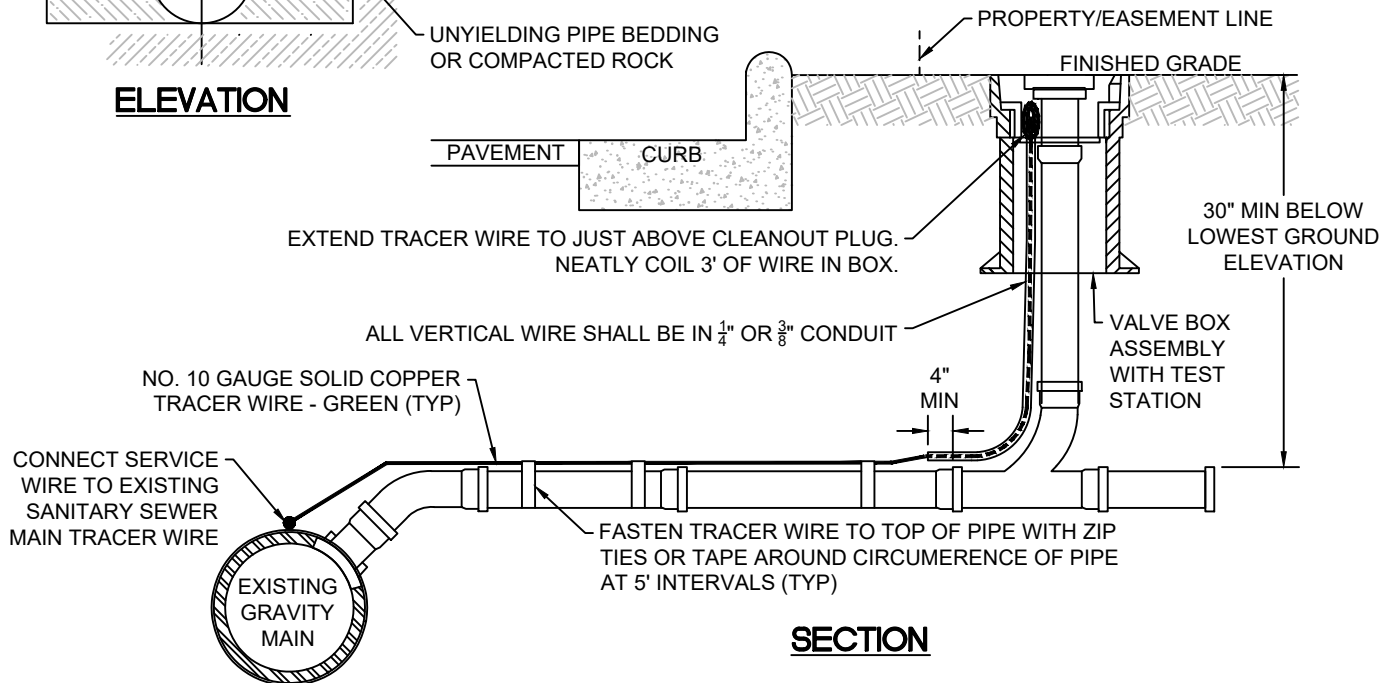
**PLAN**  
**(6" SERVICE WITH TEE)**

**NOTES:**

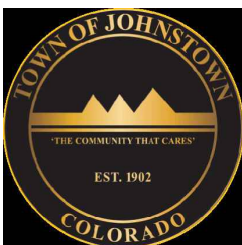
1. THE MINIMUM DISTANCE FROM THE BELL OR SPIGOT END OF A PIPE SHALL BE 3'.
2. THE MINIMUM DISTANCE BETWEEN SERVICES SHALL BE 3'.
3. WHEN TAPPING INTO AN EXISTING MAIN, A SADDLE CONNECTION AND APPROVED CORING METHOD SHALL BE USED.
4. MAINTAIN 10' MIN SEPARATION FROM WATER SERVICE LINES, INSTALL DOWNHILL FROM WATER SERVICE.
5. TAPPING SLEEVE IS AN ACCEPTABLE ALTERNATIVE CONNECTION METHOD FOR 4" SERVICES. REFERENCE ALTERNATIVE SANITARY SEWER SERVICE DETAIL.



**ELEVATION**



**SECTION**



**SANITARY SEWER SERVICE**

DETAIL NO.

**413**

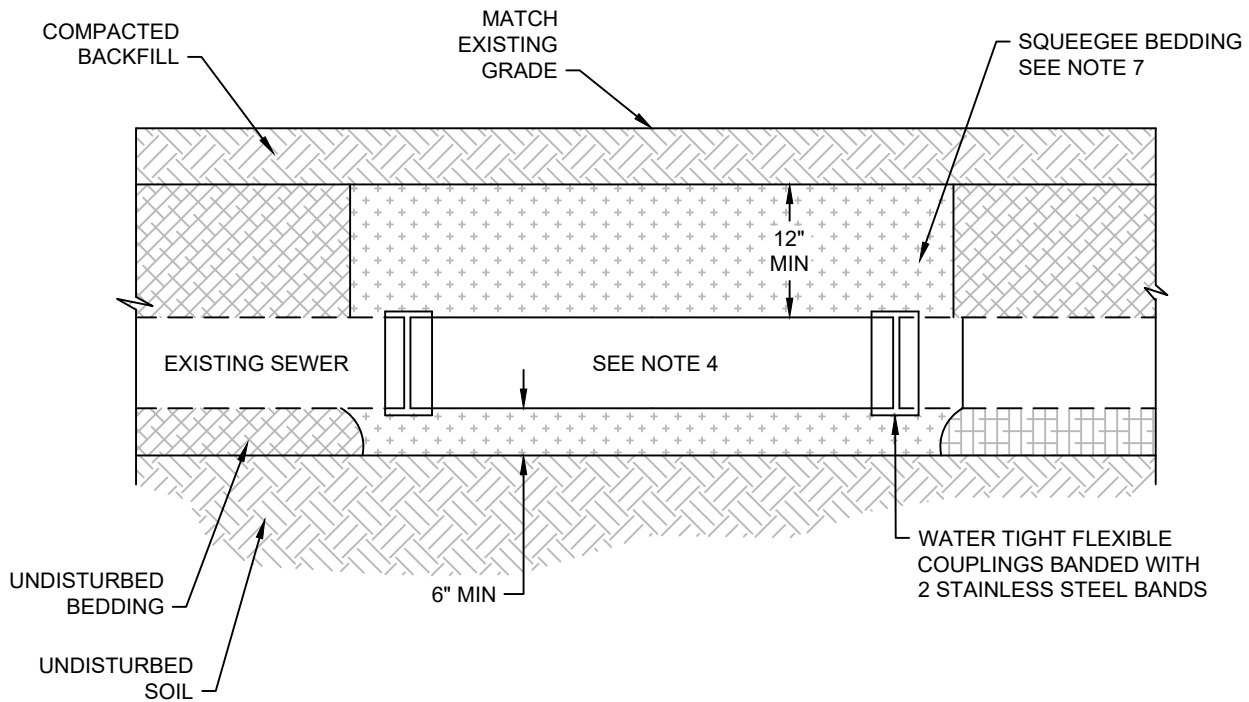
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SCALE: NTS

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**NOTES:**

1. WHEN SANITARY SEWER LINES ARE DAMAGED, THE TOWN SHALL BE NOTIFIED IMMEDIATELY BY THE CONTRACTOR.
2. CONTRACTOR SHALL PROVIDE BYPASS PUMPING UNTIL THE REPAIR IS CONSTRUCTED, REVIEWED, INSPECTED, AND APPROVED BY THE TOWN.
3. SEE THE STANDARD SPECIFICATIONS FOR ALLOWABLE PIPE MATERIAL. THE TOWN MAY REQUIRE OTHER MATERIALS AND REPAIR TECHNIQUES OR METHODS ON A CASE BY CASE BASIS. THE NEW PIPE SHALL BE CONNECTED TO THE EXISTING MAIN USING WATER TIGHT FLEXIBLE COUPLINGS MEETING ASTM C-425 BANDED AS NOTED.
4. SANITARY SEWER LINE REPAIR SHALL NOT BE BACKFILLED UNTIL THEY ARE INSPECTED AND APPROVED BY THE TOWN.
5. ANY EXISTING SUB-DRAIN UNDER THE SEWER SHALL BE REPLACED IN LIKE MANNER SUCH THAT NO FLOW SHALL ENTER THE TRENCH.
6. THIS STANDARD APPLIES ONLY FOR NON-PRESSURIZED SANITARY SEWERS.
7. THE TOWN MAY REQUIRE FLOW FILL OR FULL CONCRETE ENCASEMENT TO BE PLACED AROUND THE PIPE FOR SUPPORT & PROTECTION PARTICULARLY IN AREAS SUBJECT TO TRAFFIC.



## SANITARY SEWER PIPE REPAIR

DETAIL NO.

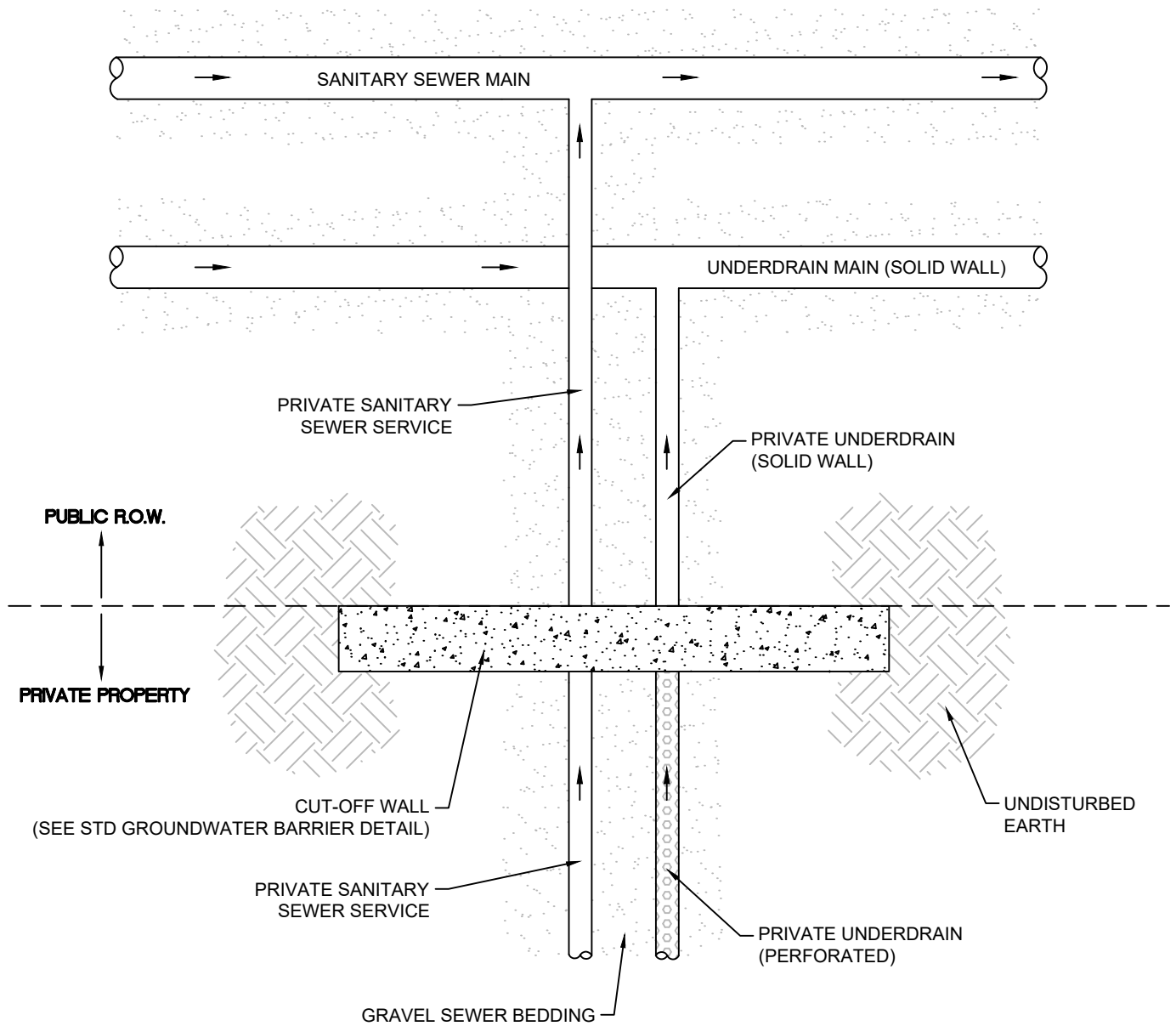
# 415

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**NOTE:**

CUT-OFF WALLS ARE REQUIRED AT ALL INTERFACED BETWEEN PUBLIC AND PRIVATE PROPERTY.



## UNDERDRAIN CUT-OFF WALL PLACEMENT

DETAIL NO.

# 416

REVISION NO: 1

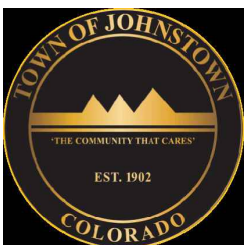
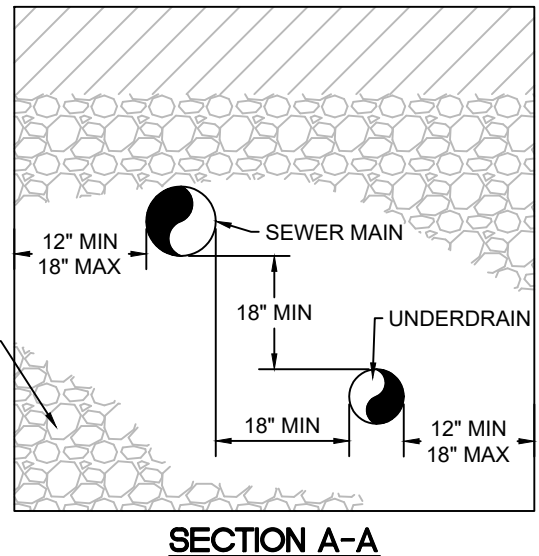
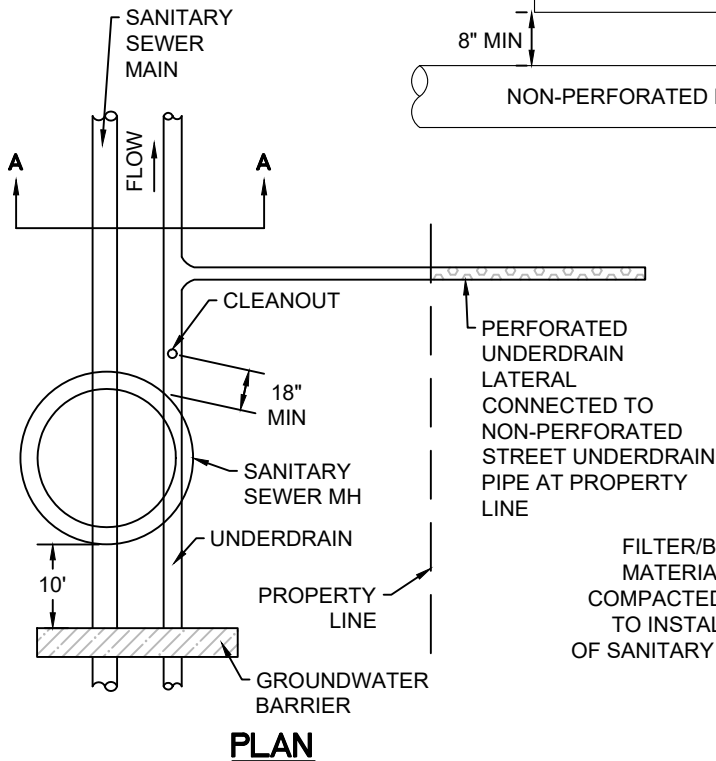
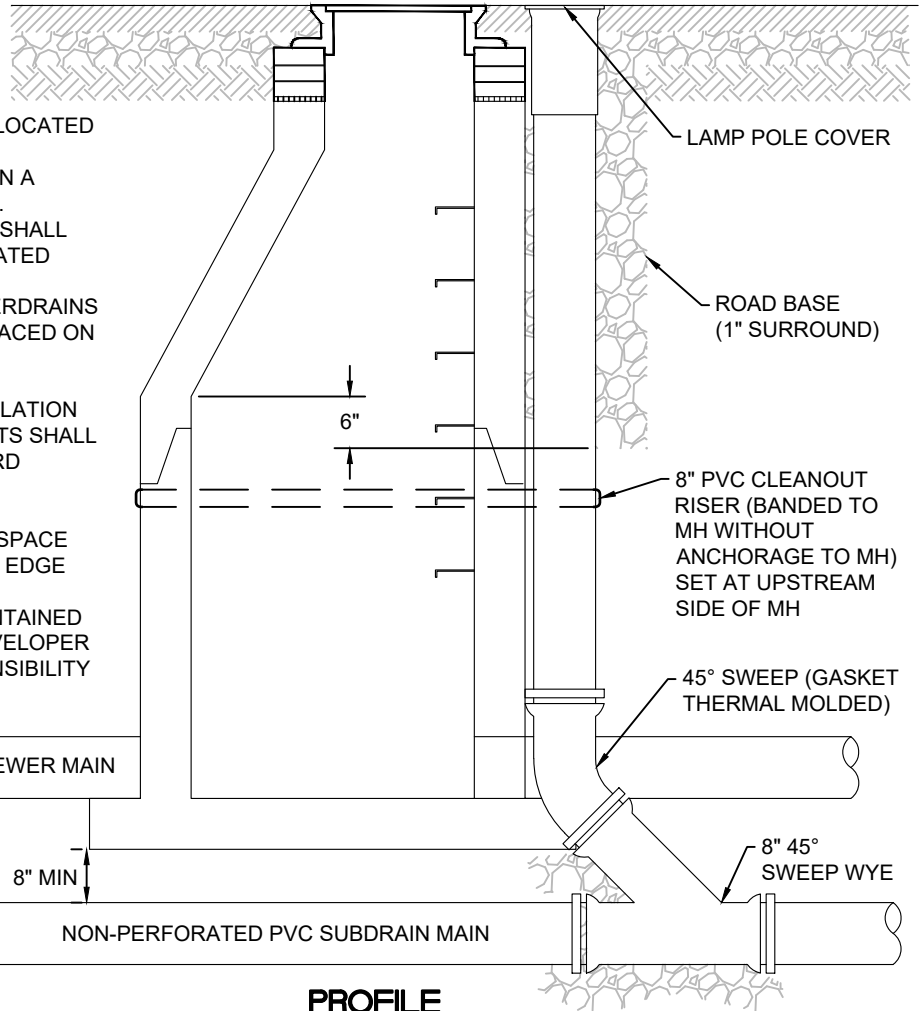
DATE: 9/20/2022

SCALE: NTS

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**NOTES:**

1. UNDERDRAIN CLEANOUTS SHALL BE LOCATED ADJACENT TO EVERY MANHOLES.
2. UNDERDRAIN CLEANOUTS SHALL BE IN A STREET VALVE BOX WITH A PLAIN LID.
3. A POLYESTER KNITTED FILTER SOCK SHALL BE INSTALLED AROUND THE PERFORATED UNDERDRAIN PIPE.
4. SEWER MAINS INSTALLED WITH UNDERDRAINS SHALL HAVE ALL MANHOLE BASES PLACED ON STABILIZATION MATERIAL PER TOWN CONSTRUCTIONS SPECIFICATIONS.
5. MANHOLES AND UNDERDRAIN INSTALLATION AND TRENCH/BEDDING REQUIREMENTS SHALL BE PER WATER AND SEWER STANDARD DRAWINGS AND CONSTRUCTION SPECIFICATIONS.
6. FLOW FILL AS NECESSARY THE VOID SPACE BETWEEN THE CLEANOUT RISER AND EDGE OF MANHOLE.
7. UNDERDRAIN SYSTEM SHALL BE MAINTAINED BY HOMEOWNERS ASSOCIATION. DEVELOPER SHALL ACCEPT ALL LIABILITY/RESPONSIBILITY FOR UNDERDRAIN INSTALLATION.



**UNDERDRAIN SECTION**

DETAIL NO.

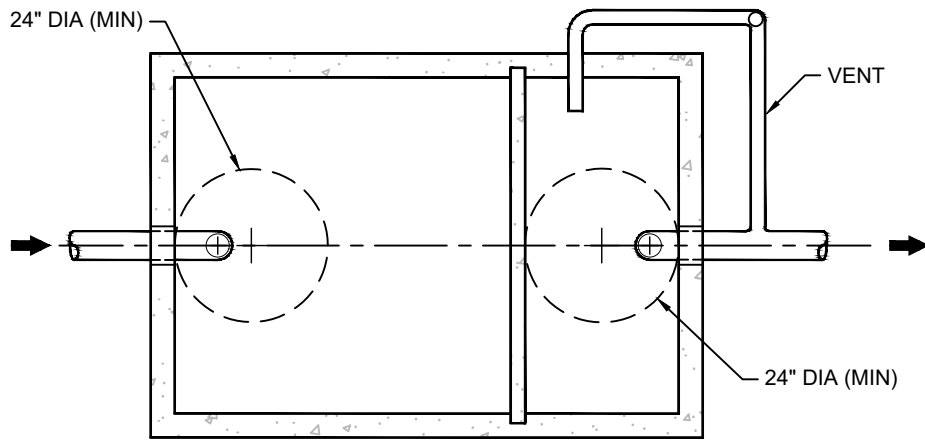
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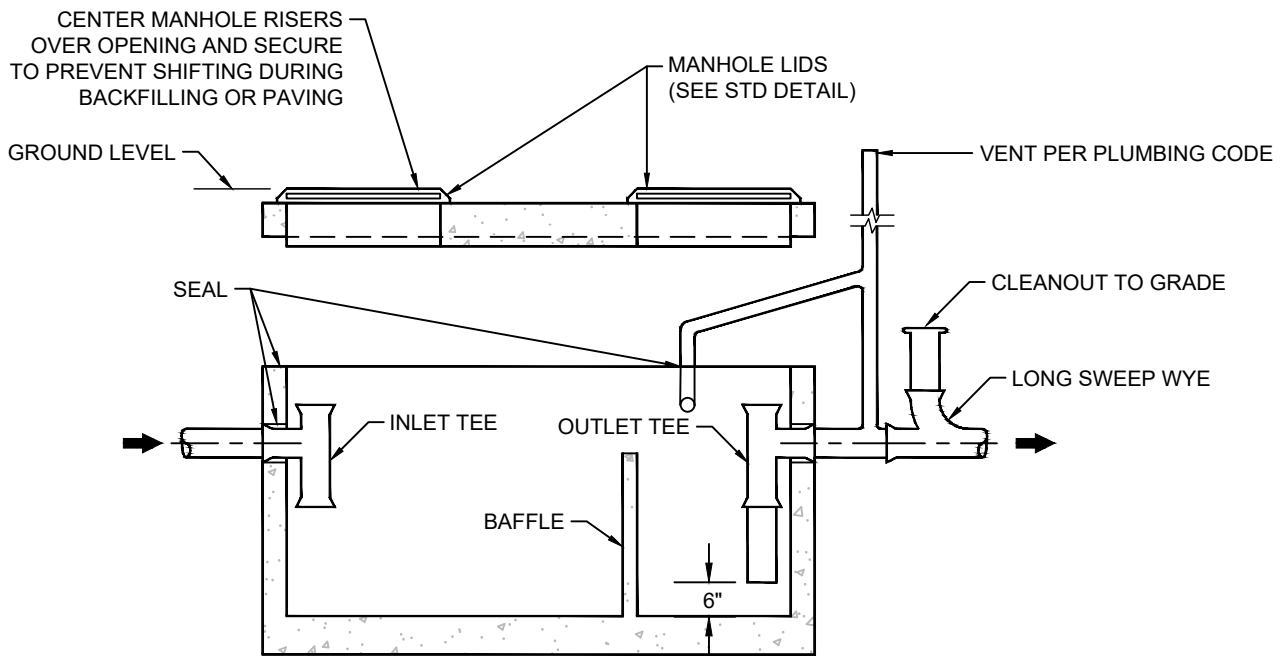
DATE: 9/20/2022

SCALE: NTS

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**PLAN VIEW**



**SECTION VIEW**

**NOTES:**

1. REFER TO THE WATER AND SANITARY SEWER DEVELOPMENT STANDARDS.
2. TRAFFIC RATED INTERCEPTOR IS REQUIRED IN TRAFFIC AREAS.
3. ACTUAL CONFIGURATION OF INTERCEPTOR MAY VARY BETWEEN MANUFACTURERS.
4. DESIGNER SHOULD CHECK WITH SUPPLIER FOR EXACT DIMENSIONS.
5. DESIGN PROFESSIONAL IS RESPONSIBLE FOR SIZING AND PLACEMENT OF ALL SAND AND OIL INTERCEPTORS.



**SAND AND OIL INTERCEPTOR**

DETAIL NO.

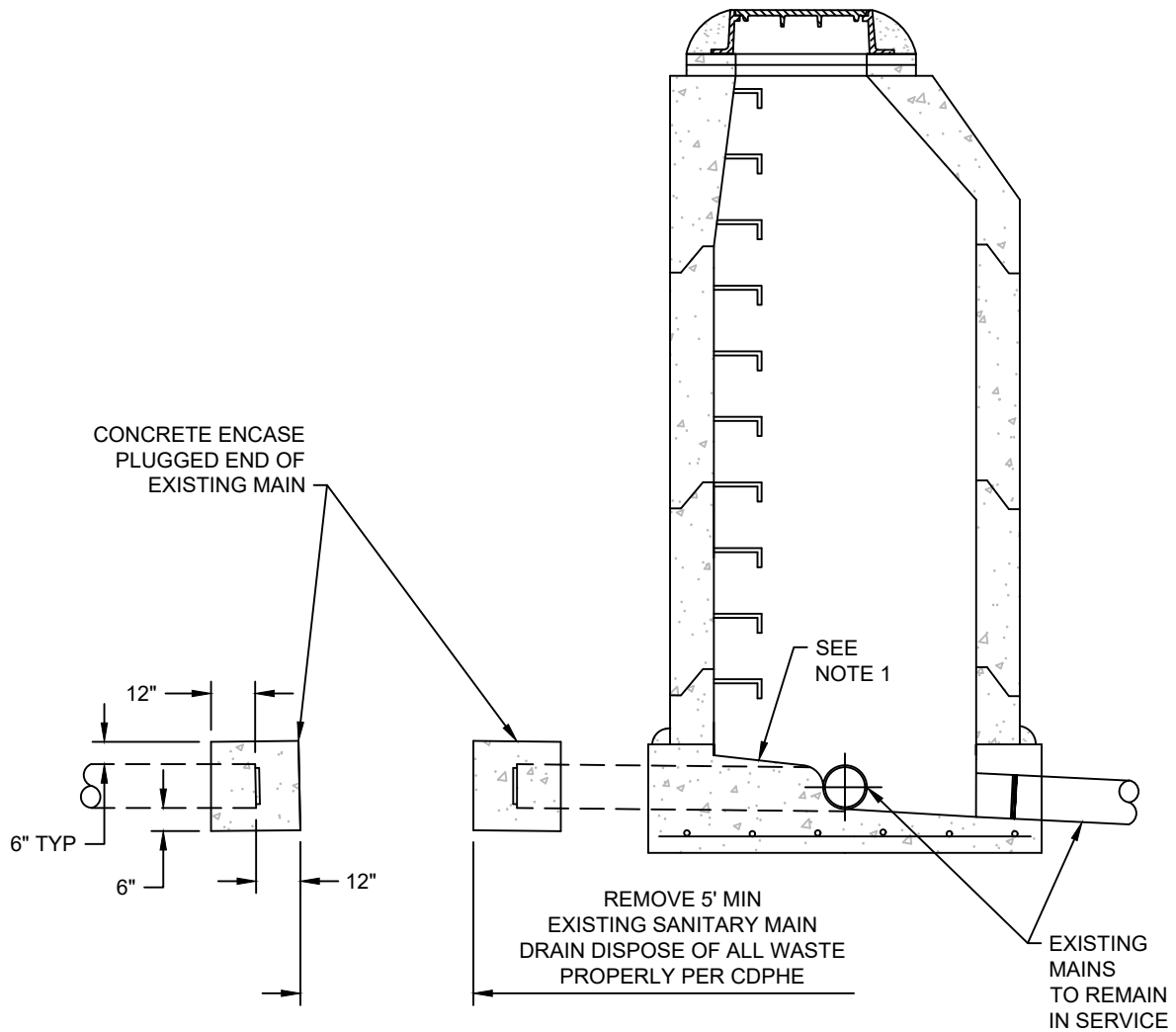
**418**

REVISION NO: 1

DATE: 9/20/2022

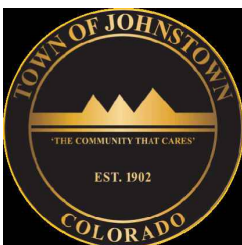
SCALE: NTS

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NOTE:

1. RESHAPE BENCH & INVERT USING CONCRETE. PLUG INVERT TO BE ABANDONED WITH CONCRETE.



## SANITARY SEWER PIPE ABANDONMENT

DETAIL NO.

**419**

REVISION NO: 1

DATE: JAN 2023

SCALE: NTS

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