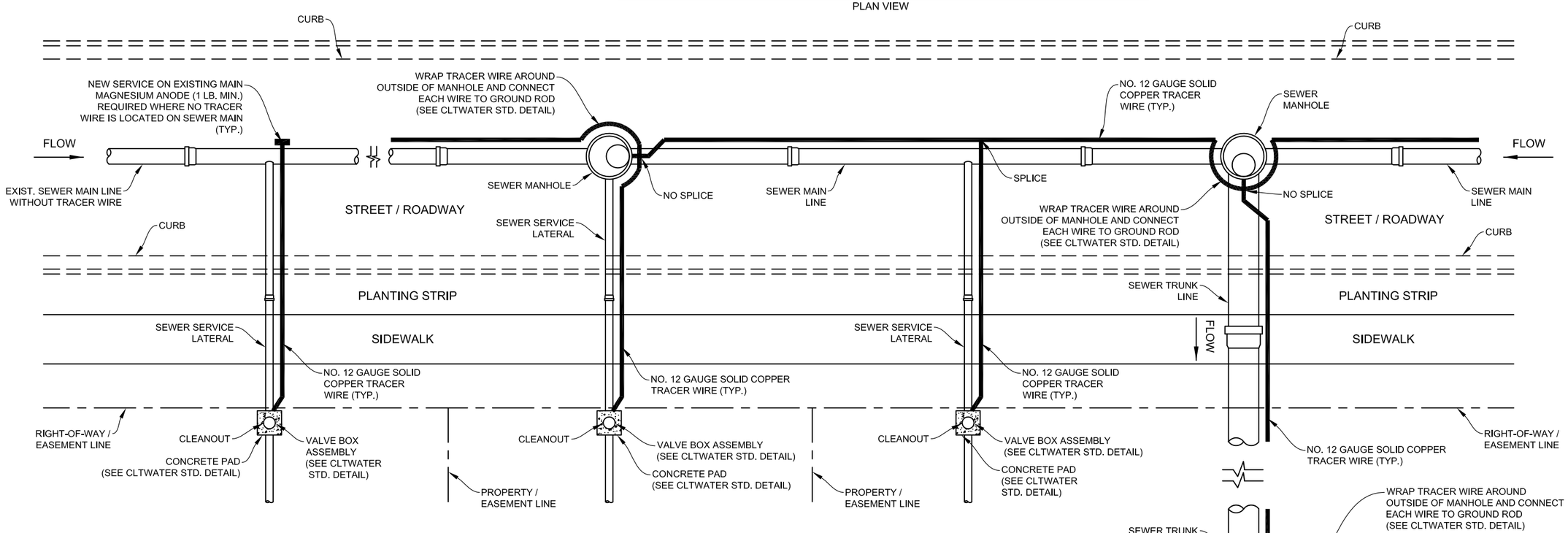
STREET VIEW - GRAVITY SEWER TRACER WIRE

PLAN VIEW

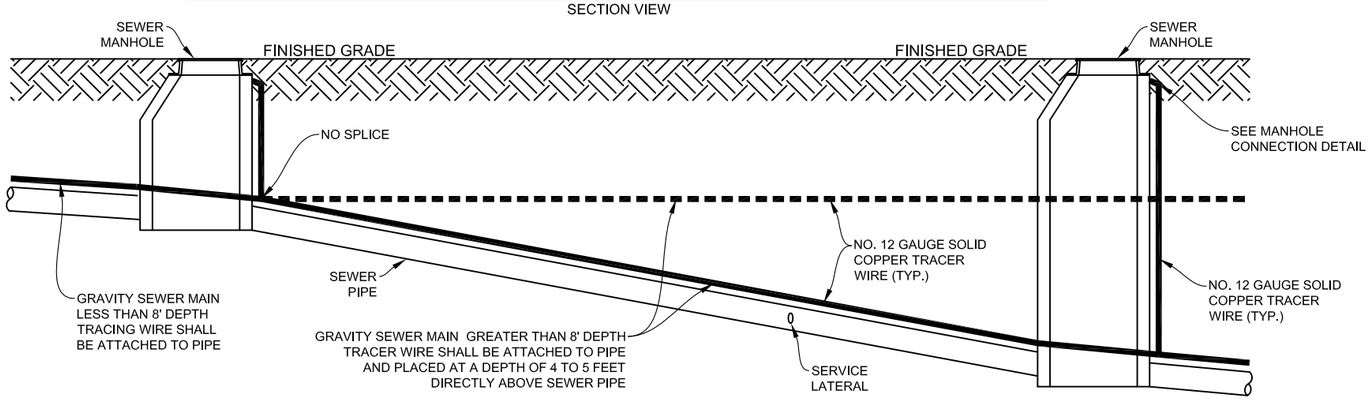


NOTES:

1. TRACER WIRE SHOWN AWAY FROM PIPE FOR CLARITY. TRACER WIRE SHALL BE INSTALLED IMMEDIATELY ADJACENT TO THE SEWER PIPE. TRACER WIRE SHALL BE FASTENED TO THE PIPE WITH ZIP TIES AT 10 FOOT INTERVALS.
2. TRACER WIRE SHALL BE SOLID COPPER NO. 12 GAUGE WITH 30 MILS GREEN HDPE INSULATION.

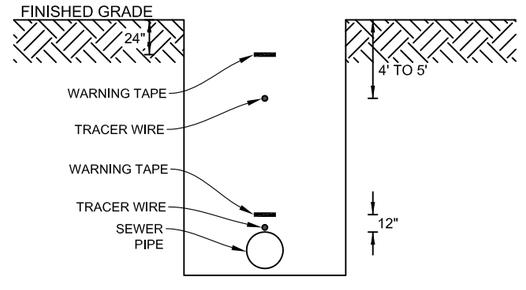
TRACER WIRE FOR GRAVITY SEWER DEEPER THAN 8 FT

SECTION VIEW



TRENCH DETAIL

PROFILE VIEW



NOT TO SCALE

STANDARD NO. TS1

VERSION NO. 1.0

VERSION DATE 7.21.2017

TRACER WIRE - GRAVITY SEWER

CHARLOTTE WATER

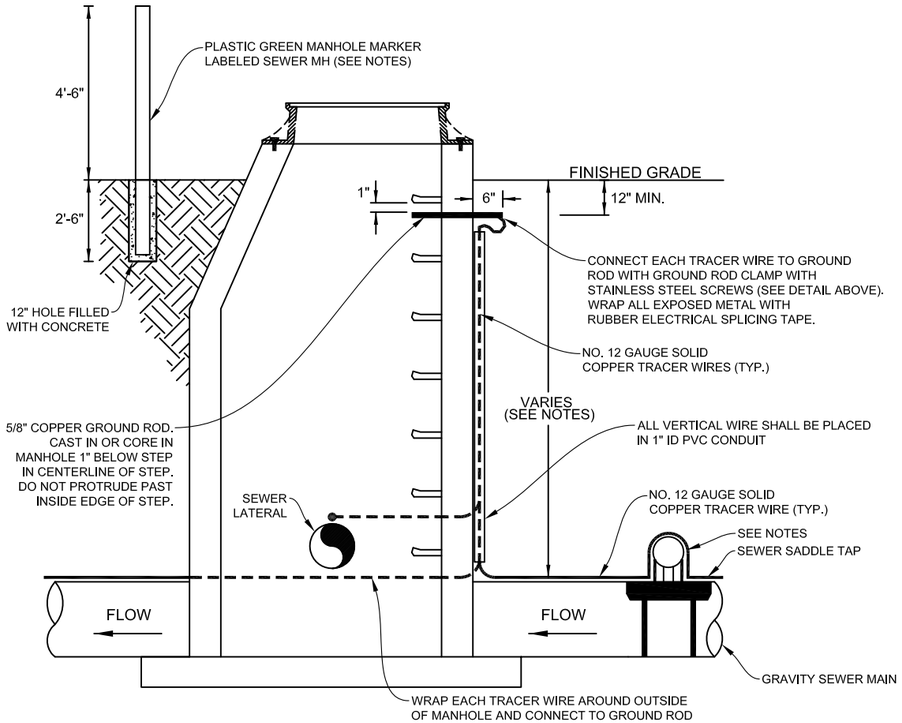
STANDARD DETAILS

SEWER

CHARLOTTE.

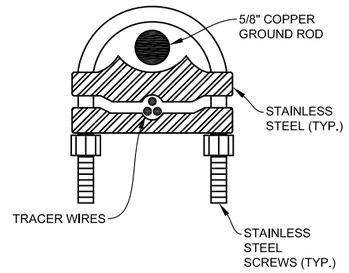
GRAVITY SEWER MAIN & MANHOLE MARKER

SECTION VIEW



GROUND ROD CLAMP

SECTION VIEW



SERVICE CONNECTION

SECTION VIEW

NOTES:

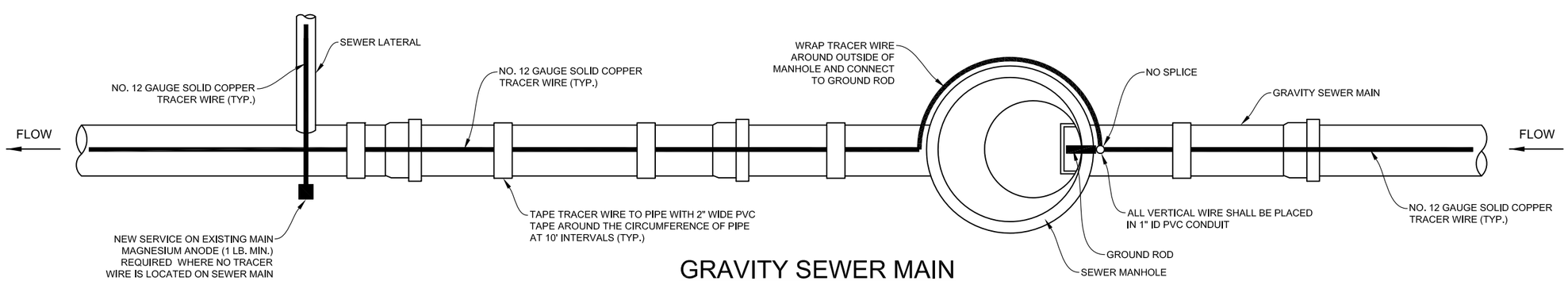
1. TRACER WIRE SHALL BE AWG NO. 12 GUAGE SOLID COPPER WITH 30 MILS GREEN HDPE INSULATION.
2. FOR GRAVITY MAIN AND OR LATERAL INSTALLATIONS LESS THAN 8 FEET, THE TRACING WIRE SHALL BE ATTACHED TO THE PIPE. TRACER WIRE SHALL BE LAID FLAT AND SECURELY AFFIXED TO THE PIPE AT 10 FOOT INTERVALS USING ZIP TIES. FOR GRAVITY MAIN AND OR LATERAL INSTALLATION DEEPER THAN 8 FEET, THE TRACING WIRE SHALL BE ATTACHED TO THE PIPE AND PLACED AT A DEPTH OF 4 TO 5 FEET DIRECTLY ABOVE THE SEWER PIPE. THE WIRE SHALL BE PROTECTED FROM DAMAGE DURING THE EXECUTION OF THE WORK. NO BREAKS OR CUTS IN THE TRACER WIRE OR INSULATION SHALL BE PERMITTED.
3. WHERE LATERAL TAPS ARE MADE BY SERVICE SADDLES, THE TRACER WIRE SHALL NOT BE ALLOWED TO TO BE PLACED BETWEEN THE SADDLE AND MAIN.
4. SPLICES IN THE PRIMARY TRACER WIRE ALONG THE SEWER MAIN SHALL INCLUDE 3 FEET OF SLACK WIRE ON EACH SIDE OF EACH SPLICE.
5. FOR INSTALLING A NEW LATERAL ON AN EXISTING MAIN WITH TRACER WIRE, ONLY SPLICE TO EXISTING WIRE WITH 3 FEET OF SLACK ON NEW LATERAL.
6. MANHOLE MARKERS SHALL BE PLACED ADJACENT TO MANHOLES AT THE DISCRETION OF ENGINEER OR ENGINEER'S REPRESENTATIVE.

NOTES:

1. THE TRACER WIRE SHALL BE CONTINUOUS TO THE GREATEST EXTENT POSSIBLE. WHERE SPLICES ARE NECESSITATED IN THE WIRE, THE SPLICES SHALL BE SECURELY BONDED TOGETHER WITH AN APPROVED INDUSTRIAL CONNECTOR TO PROVIDE ELECTRICAL CONTINUITY. CONNECTOR SHALL BE COPPER AND INSULATION SHALL BE REPAIRED TO SEAL OUT MOISTURE AND CORROSION AND SHALL BE INSTALLED IN A MANNER SO AS TO PREVENT ANY UNINSULATED WIRE EXPOSURE. (SEE CLTWATER STD. DETAIL TS1)
2. THE CLEANOUT AT THE RIGHT OF WAY AND OR EASEMENT SHALL SERVE AS THE TEST PORT.
3. SPLICED CONNECTIONS SHALL BE ALLOWED BETWEEN THE MAIN LINE TRACER WIRE AND THE LATERAL TRACER WIRE.
4. FOR NEW SEWER TAPS ON EXISTING MAINS VOID OF ANY TRACER WIRE, PROVIDE A 1 LB. MAGNESIUM ANODE FOR THE TRACING WIRE TERMINATION AT THE POINT OF THE NEW TAP ON THE EXISTING SEWER MAIN. PLACE ANODE AT BOTTOM EDGE OF TRENCH AWAY FROM MAIN & LATERAL.
5. PRIOR TO ACCEPTANCE (POST PUNCH LIST) EACH WIRE SEGMENT SHALL PASS A CONDUCTIVITY TEST, WITNESSED BY THE ENGINEER OR ENGINEER'S REPRESENTATIVE.

GRAVITY SEWER MAIN

PLAN VIEW



NOT TO SCALE

STANDARD NO. TS2

VERSION NO. 1.0

VERSION DATE 7.21.2017

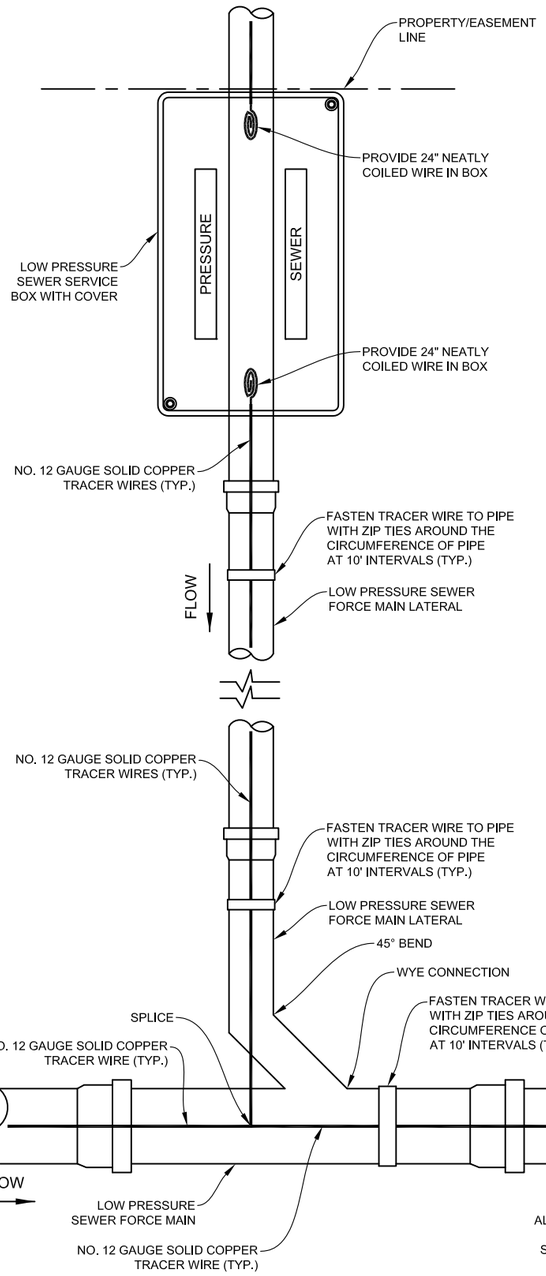
TRACER WIRE - GRAVITY SEWER DETAILS

CHARLOTTE WATER

STANDARD DETAILS

SEWER

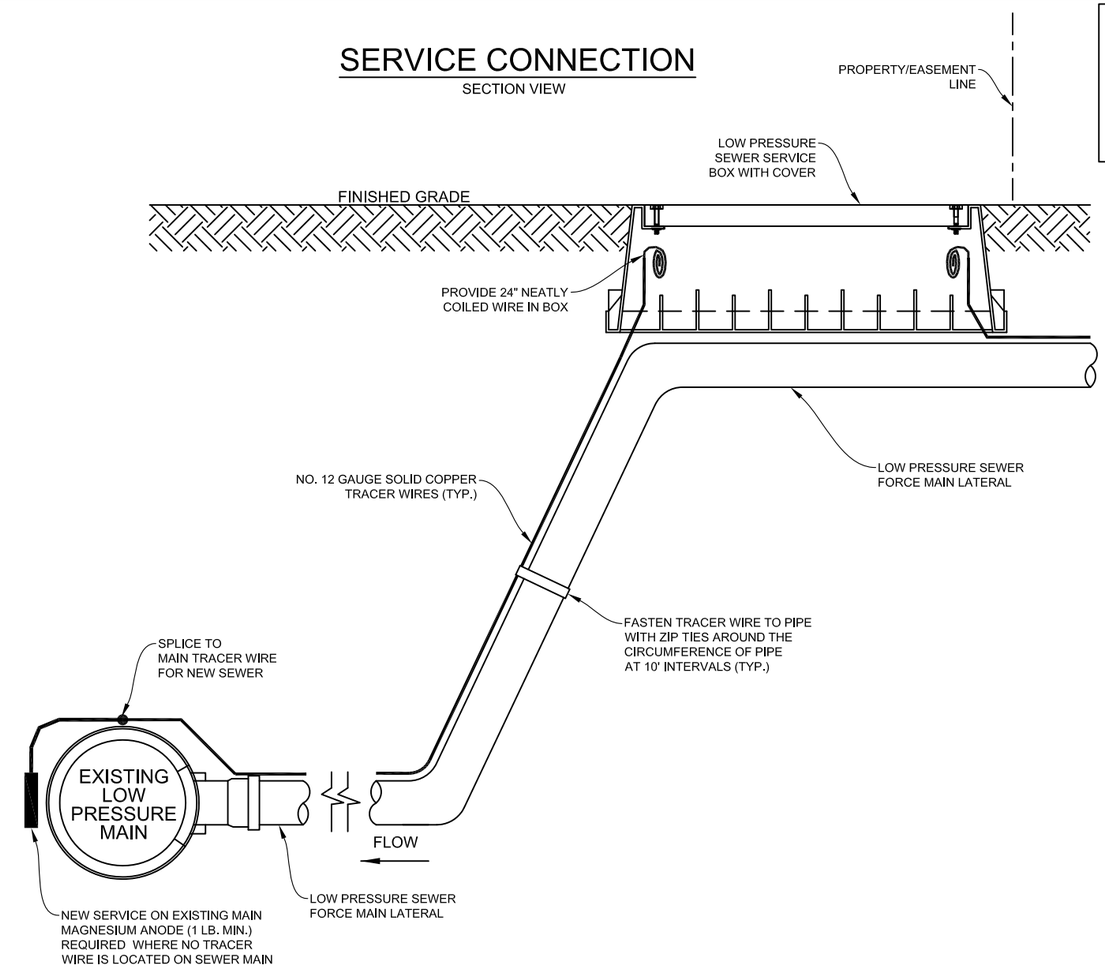
SERVICE CONNECTION
PLAN VIEW



LOCATOR TERMINAL POST

1. SHALL BE A GREEN TRIANGULAR TRACER WIRE TERMINAL POST, 54 INCHES TALL, WITH CLT WATER APPROVED DECAL.
2. POST SHALL BE "RHINO ULTIMATE LOCATE POST" AS MANUFACTURED BY RHINO MARKING AND PROTECTION SYSTEMS OR APPROVED EQUAL.
3. TRACER WIRES FROM MAIN TO LOCATOR POST SHALL BE INSTALLED IN 1" PVC CONDUITS.
4. PROVIDE LOCATOR POST EVERY 750 FT WHERE NO VALVE OR SERVICE CONNECTION OCCURS.

SERVICE CONNECTION
SECTION VIEW



NOT TO SCALE

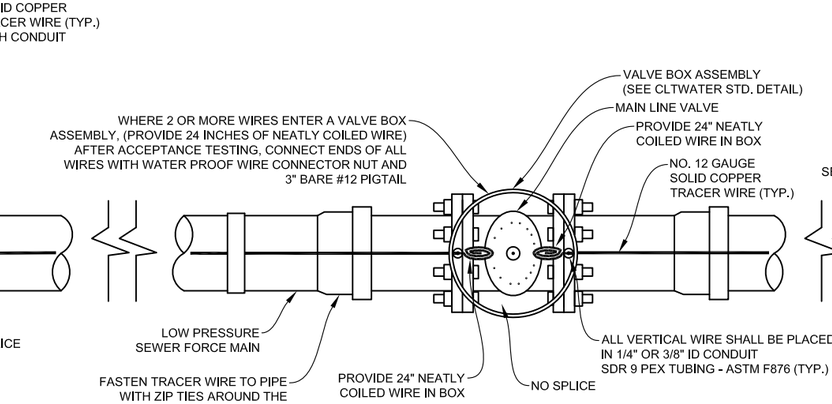
STANDARD NO. TS3

VERSION NO. 1.0

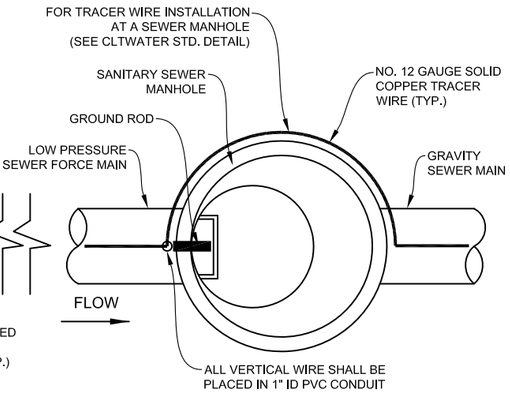
VERSION DATE 7.21.2017

TRACER WIRE - LOW PRESSURE SEWER

LOCATOR POST
PLAN VIEW



MAIN LINE VALVE
PLAN VIEW



TERMINATION AT MANHOLE
PLAN VIEW

CHARLOTTE WATER

STANDARD DETAILS

SEWER

NOT TO SCALE

STANDARD NO. TS4

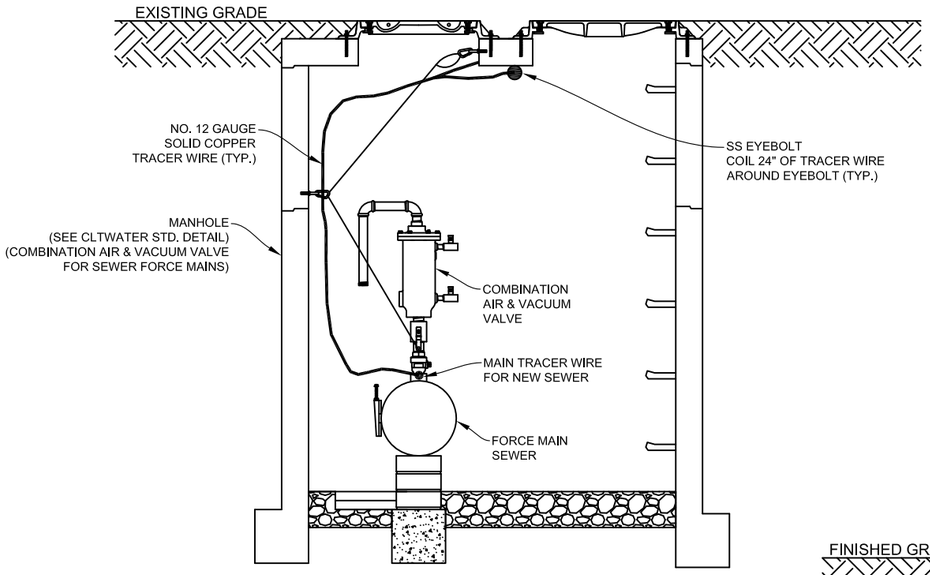
VERSION NO. 1.0

VERSION DATE 7.21.2017

TRACER WIRE - FORCE MAIN SEWER

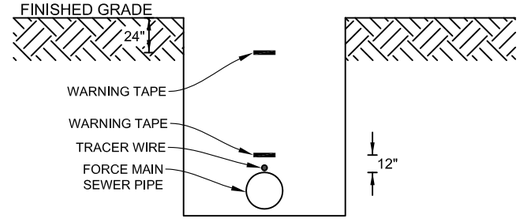
AIR RELEASE VALVE IN MANHOLE

PROFILE VIEW



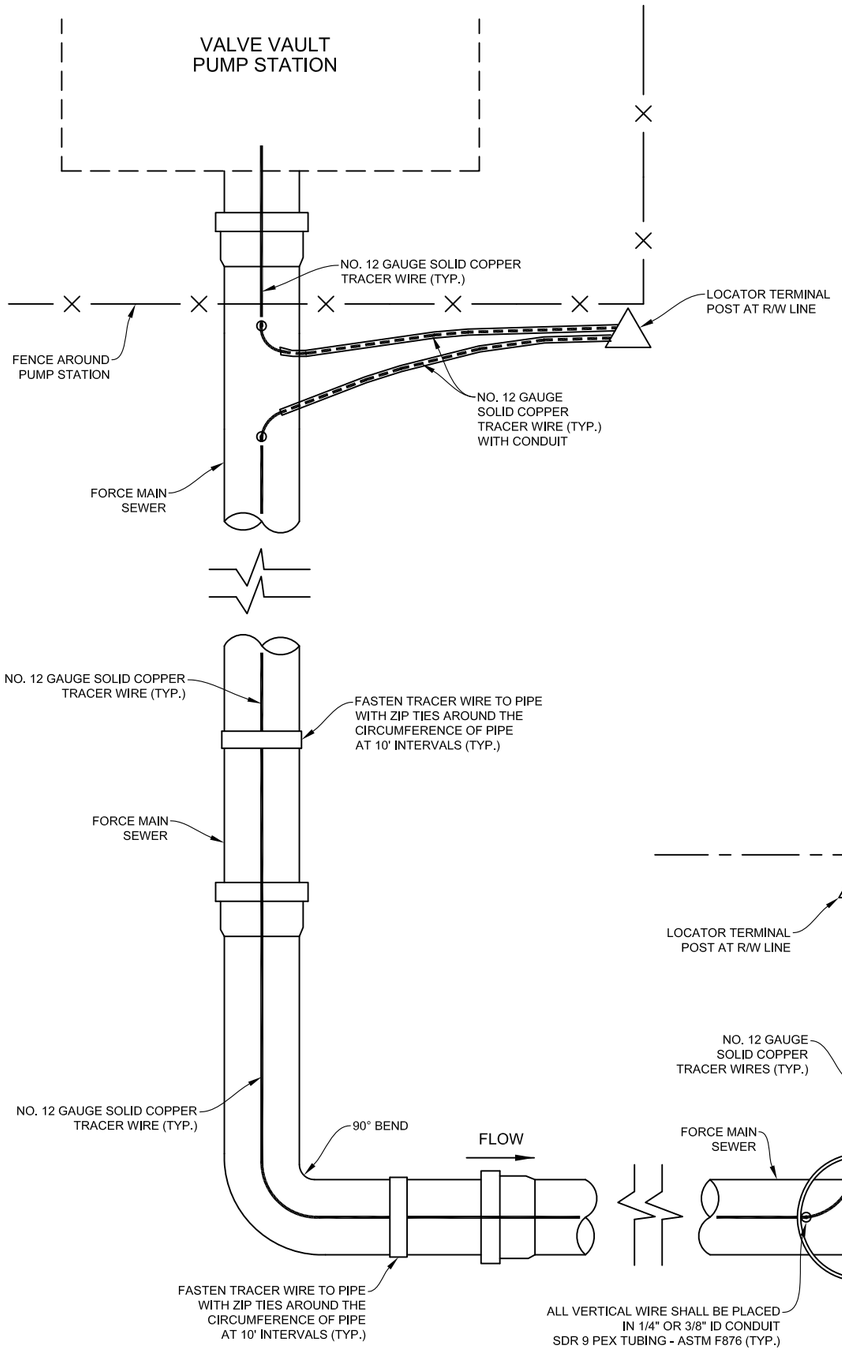
TRENCH DETAIL

PROFILE VIEW



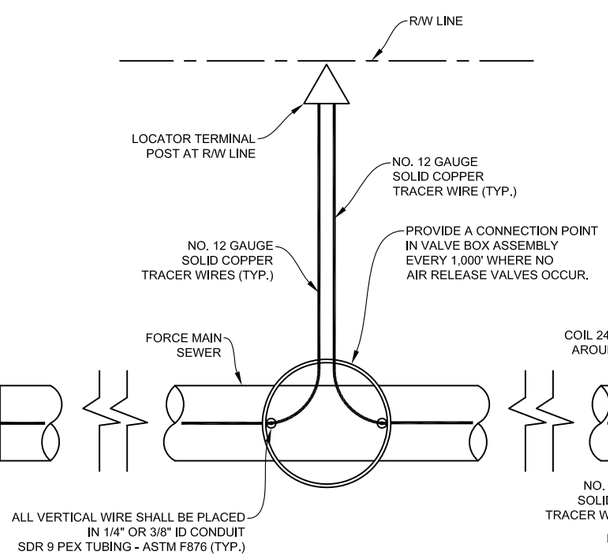
TERMINATION AT PUMP STATION

PLAN VIEW



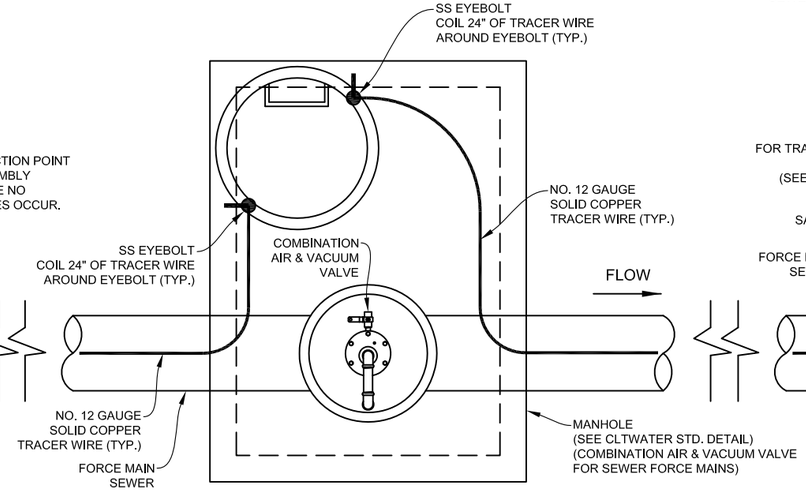
LOCATOR POST

PLAN VIEW



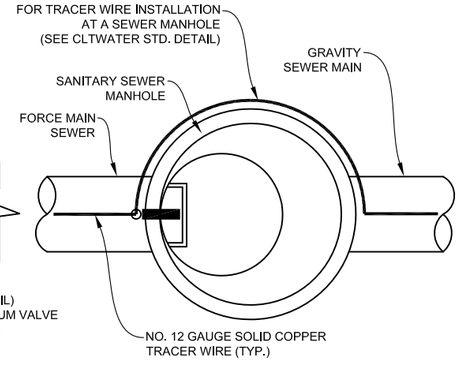
AIR RELEASE VALVE IN MANHOLE

PLAN VIEW



TERMINATION AT MANHOLE

PLAN VIEW



CHARLOTTE WATER

STANDARD DETAILS

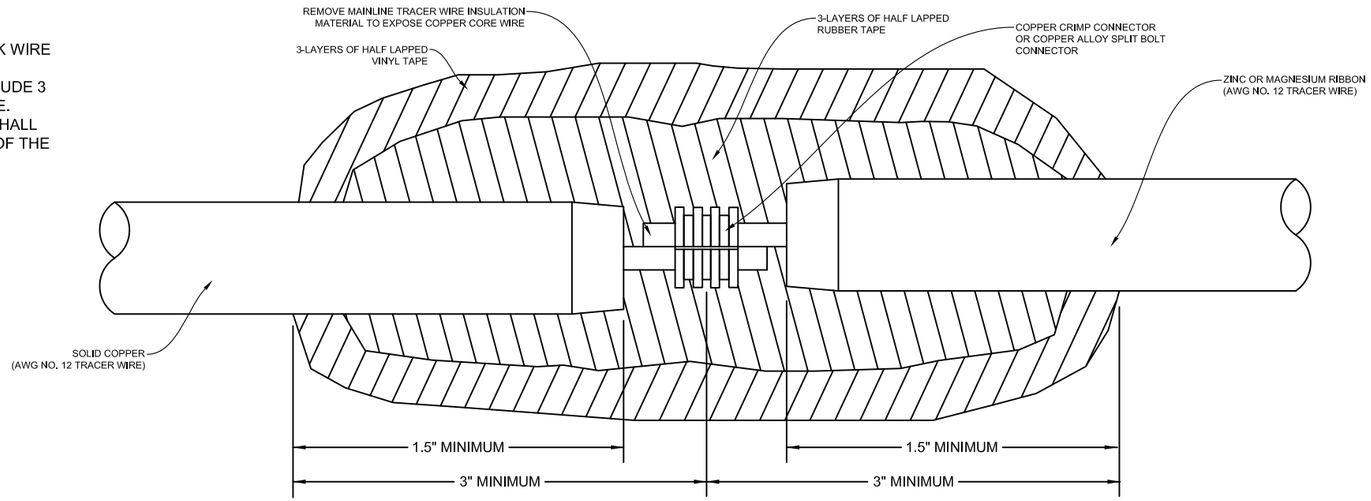
SEWER

CHARLOTTE.

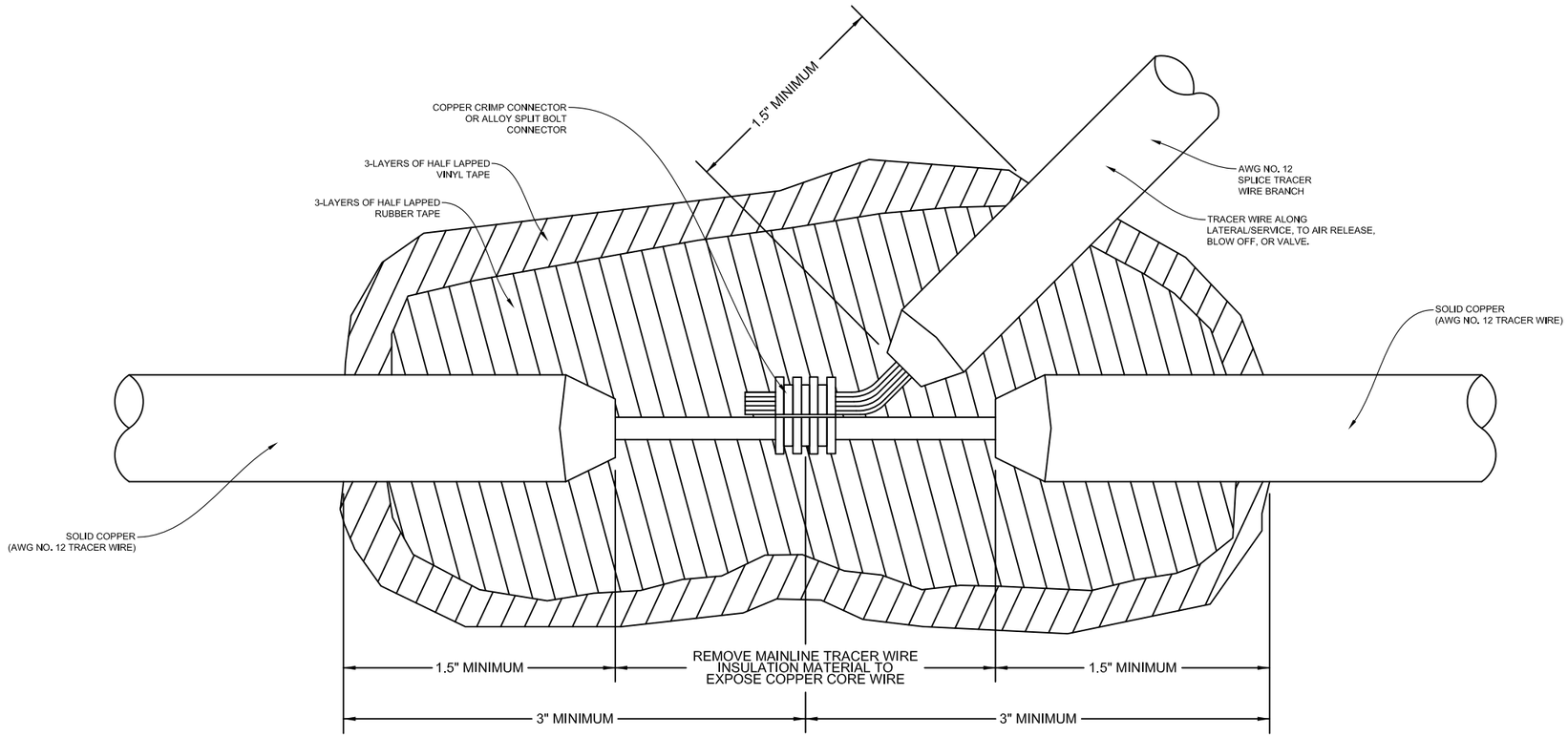
NOTES:

1. IN LINE SPLICES SHALL BE LIMITED TO THE GREATEST EXTENT POSSIBLE. TRACER WIRE SHALL BE AS CONTINUOUS AS POSSIBLE WITHOUT SPLICES.
2. INLINE SPLICES SHALL INCLUDE 3 FEET OF SLACK WIRE ON EACH SIDE OF EACH SPLICE.
3. BRANCH SPLICES ON EXISTING WIRE SHALL INCLUDE 3 FEET OF SLACK WIRE ON THE NEW BRANCH WIRE.
4. BRANCH SPLICES ON NEW MAIN INSTALLATION SHALL INCLUDE 3 FEET OF SLACK WIRE ON EACH SIDE OF THE SPLICE IN EACH DIRECTION.

IN-LINE OR REPAIR SPLICE



BRANCH IN-LINE SPLICE FOR SERVICE/LATERAL, TEE, CROSS, AIR RELEASE, BLOW OFF, OR VALVE



NOT TO SCALE

STANDARD NO. TS5

VERSION NO. 1.0

VERSION DATE 7.21.2017

TRACER WIRE - SEWER MAIN - SPLICE

CHARLOTTE WATER

STANDARD DETAILS

SEWER

CHARLOTTE.