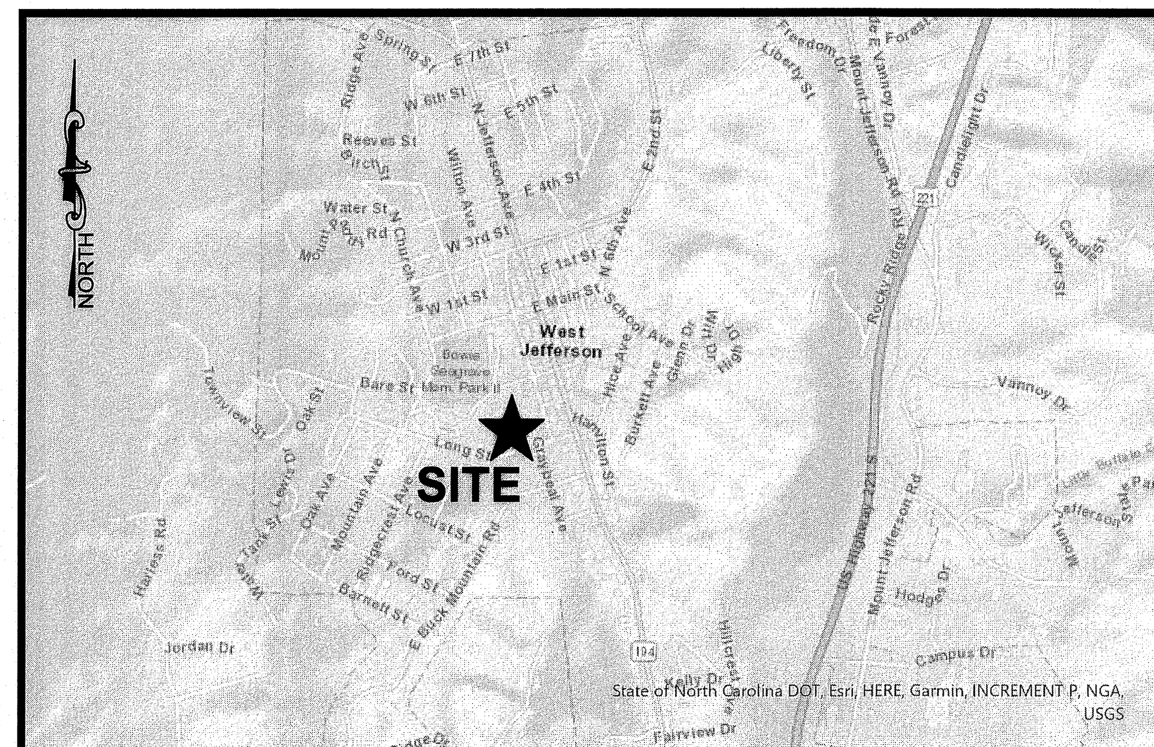

VICINITY MAP
NOT TO SCALE

INDEX OF DRAWINGS

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C-4	DETAIL SHEET	4 OF 4

CIVIL ENGINEER:
MUNICIPAL ENGINEERING INC.
820-B STATE FARM ROAD
BOONE, NC 28607
(828) 262-1767

STORMWATER IMPROVEMENTS
LONG STREET & BACKSTREET
WEST JEFFERSON, NORTH CAROLINA
PROJECT NO. B24044.3

Municipal Engineering Inc,
Boone, N.C. Garner, N.C.

NORTH CAROLINA PROFESSIONAL SEAL 18186 ENGINEER MICHAEL P. TREW

By: 11-1-25
Professional Engineer

LEGEND

- EX. POWER POLE
- EX. SS MANHOLE
- EX. SS CLEANOUT
- EX. GATE VALVE
- EX. FIRE HYDRANT
- EX. LIGHT POLE
- EX. CATCH BASIN
- EX. DROP INLET
- EX. WATER METER
- EX. GUY WIRE
- EX. TEST PIT
- EX. DRAINAGE MANHOLE
- EX. GAS MARKER
- EX. WELL
- EX. TREE
- EX. BUSH
- EX. SIGN
- EX. TELEPHONE PEDESTAL
- EX. FIBER OPTIC MARKER
- PROPOSED POWER POLE
- PROPOSED SS MANHOLE
- PROPOSED SS CLEANOUT
- PROPOSED GATE VALVE
- PROPOSED FIRE HYDRANT
- PROPOSED WATER METER
- PROPOSED LIGHT POLE
- PROPOSED STORMWATER DETENTION OUTLET CONTROL STRUCTURE
- PROPOSED STORMWATER DRAINAGE STRUCTURE
- PROPOSED STORMWATER PIPE FLARED END SECTION

LINETYPES

- PROPOSED WATERMAIN
- 3200 PROPOSED CONTOURS
- 3200 EXISTING CONTOURS
- STREAM OR CREEK
- DITCH OR SWALE
- T/B T/B STREAM OR CREEK TOP OF BANK
- SB SB STREAM BUFFER
- TB TB TROUT BUFFER
- WTL EXISTING WETLANDS
- PROPOSED DRAINAGE PIPE
- EXISTING STORM DRAINAGE
- PROPOSED SANITARY SEWER MAIN
- CENTERLINE
- FENCES
- EXISTING WATERLINE
- R/W RIGHT-OF-WAY LINE
- EA EA EASEMENTS
- WS WS EXISTING WATERSHED
- AE EXISTING FLOOD ZONE AE LIMIT
- EXISTING SANITARY SEWER
- PD PD PD PERMANENT DIVERSION
- TD TD TD TEMPORARY BERM DITCH
- SF SF SF SF SF SILT FENCE
- EXISTING WOODS LINE
- // EXISTING OVERHEAD POWERLINE
- G G G UNDERGROUND GAS LINE
- FO FO UNDERGROUND FIBER OPTIC LINE
- P P P UNDERGROUND POWERLINE
- T T T UNDERGROUND TELEPHONE LINE
- C C C UNDERGROUND CABLE LINE

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68 SHIPWASH DRIVE, GARNER, NC 27529 - PHONE: 919-772-5393
820-B STATE FARM ROAD, BOONE, NC 28607 - PHONE: 828-262-1767
LICENSE NUMBER: F-0812 & C-586
MUNICIPAL ENGINEERS

STORMWATER IMPROVEMENTS
LONG STREET & BACKSTREET
WEST JEFFERSON, NORTH CAROLINA

DATE	BY	REV.	DESCRIPTION

COVER SHEET

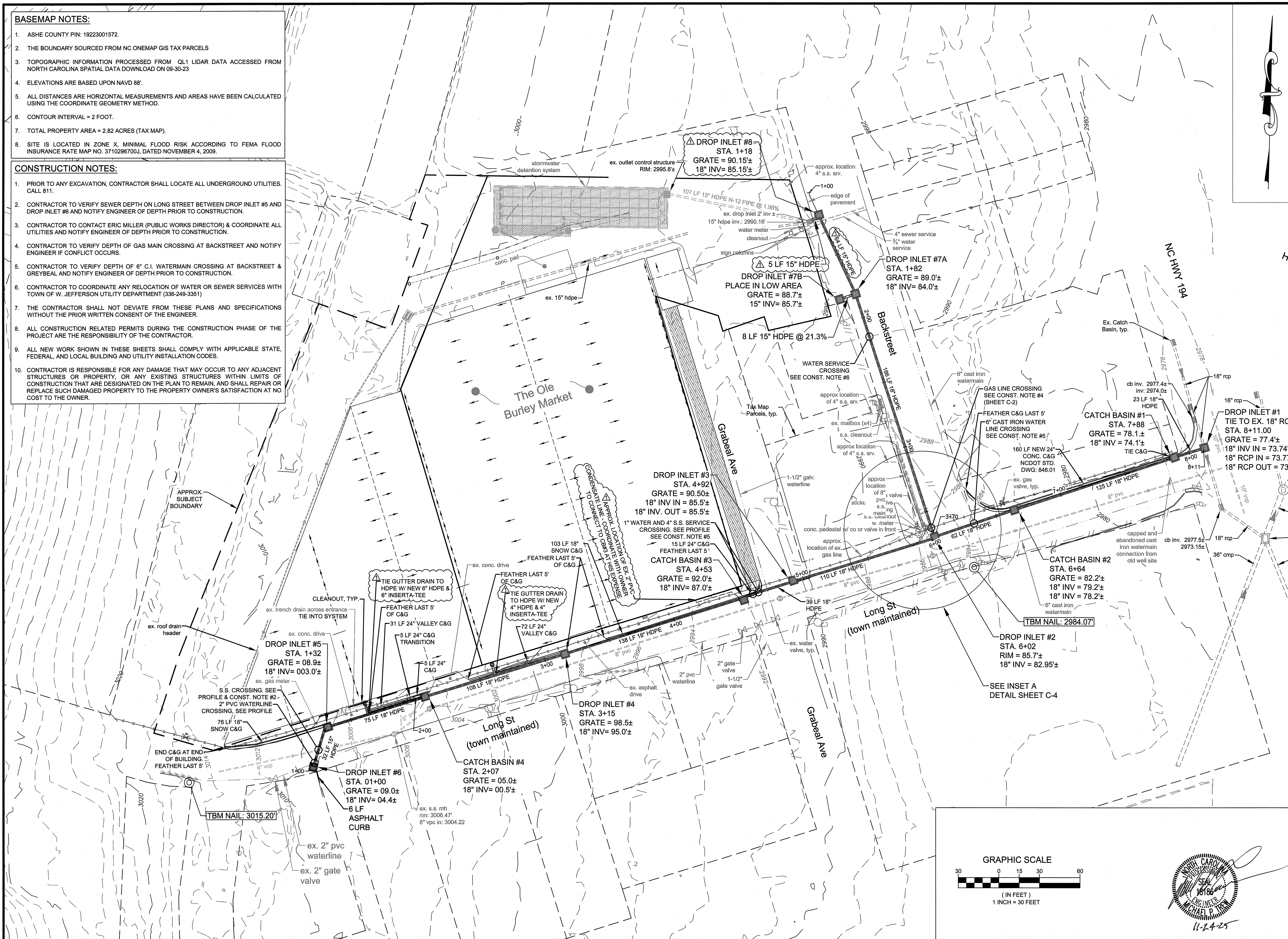
SCALE:	AS SHOWN
DATE:	11-01-25
DRWN. BY:	SGJ
CHKD. BY:	MPT
PROJECT NUMBER	B24044.3
DRAWING NO. C-1	SHEET NO. 1 OF 4

BASEMAP NOTES:

1. ASHE COUNTY PIN: 19223001572.
2. THE BOUNDARY SOURCED FROM NC ONEMAP GIS TAX PARCELS
3. TOPOGRAPHIC INFORMATION PROCESSED FROM QL1 LIDAR DATA ACCESSED FROM NORTH CAROLINA SPATIAL DATA DOWNLOAD ON 09-30-23
4. ELEVATIONS ARE BASED UPON NAVD 88'.
5. ALL DISTANCES ARE HORIZONTAL MEASUREMENTS AND AREAS HAVE BEEN CALCULATED USING THE COORDINATE GEOMETRY METHOD.
6. CONTOUR INTERVAL = 2 FOOT.
7. TOTAL PROPERTY AREA = 2.82 ACRES (TAX MAP).
8. SITE IS LOCATED IN ZONE X, MINIMAL FLOOD RISK ACCORDING TO FEMA FLOOD INSURANCE RATE MAP NO. 3710296700J, DATED NOVEMBER 4, 2009.

CONSTRUCTION NOTES:

1. PRIOR TO ANY EXCAVATION, CONTRACTOR SHALL LOCATE ALL UNDERGROUND UTILITIES. CALL 811.
2. CONTRACTOR TO VERIFY SEWER DEPTH ON LONG STREET BETWEEN DROP INLET #5 AND DROP INLET #6 AND NOTIFY ENGINEER OF DEPTH PRIOR TO CONSTRUCTION.
3. CONTRACTOR TO CONTACT ERIC MILLER (PUBLIC WORKS DIRECTOR) & COORDINATE ALL UTILITIES AND NOTIFY ENGINEER OF DEPTH PRIOR TO CONSTRUCTION.
4. CONTRACTOR TO VERIFY DEPTH OF GAS MAIN CROSSING AT BACKSTREET AND NOTIFY ENGINEER IF CONFLICT OCCURS.
5. CONTRACTOR TO VERIFY DEPTH OF 6" C.I. WATERMAIN CROSSING AT BACKSTREET & GREYBEAL AND NOTIFY ENGINEER OF DEPTH PRIOR TO CONSTRUCTION.
6. CONTRACTOR TO COORDINATE ANY RELOCATION OF WATER OR SEWER SERVICES WITH TOWN OF W. JEFFERSON UTILITY DEPARTMENT (336-249-3351)
7. THE CONTRACTOR SHALL NOT DEVIATE FROM THESE PLANS AND SPECIFICATIONS WITHOUT THE PRIOR WRITTEN CONSENT OF THE ENGINEER.
8. ALL CONSTRUCTION RELATED PERMITS DURING THE CONSTRUCTION PHASE OF THE PROJECT ARE THE RESPONSIBILITY OF THE CONTRACTOR.
9. ALL NEW WORK SHOWN IN THESE SHEETS SHALL COMPLY WITH APPLICABLE STATE, FEDERAL, AND LOCAL BUILDING AND UTILITY INSTALLATION CODES.
10. CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE THAT MAY OCCUR TO ANY ADJACENT STRUCTURES OR PROPERTY, OR ANY EXISTING STRUCTURES WITHIN LIMITS OF CONSTRUCTION THAT ARE DESIGNATED ON THE PLAN TO REMAIN, AND SHALL REPAIR OR REPLACE SUCH DAMAGED PROPERTY TO THE PROPERTY OWNER'S SATISFACTION AT NO COST TO THE OWNER.



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STORMWATER IMPROVEMENTS
LONG STREET & BACKSTREET

WEST JEFFERSON, NORTH CAROLINA

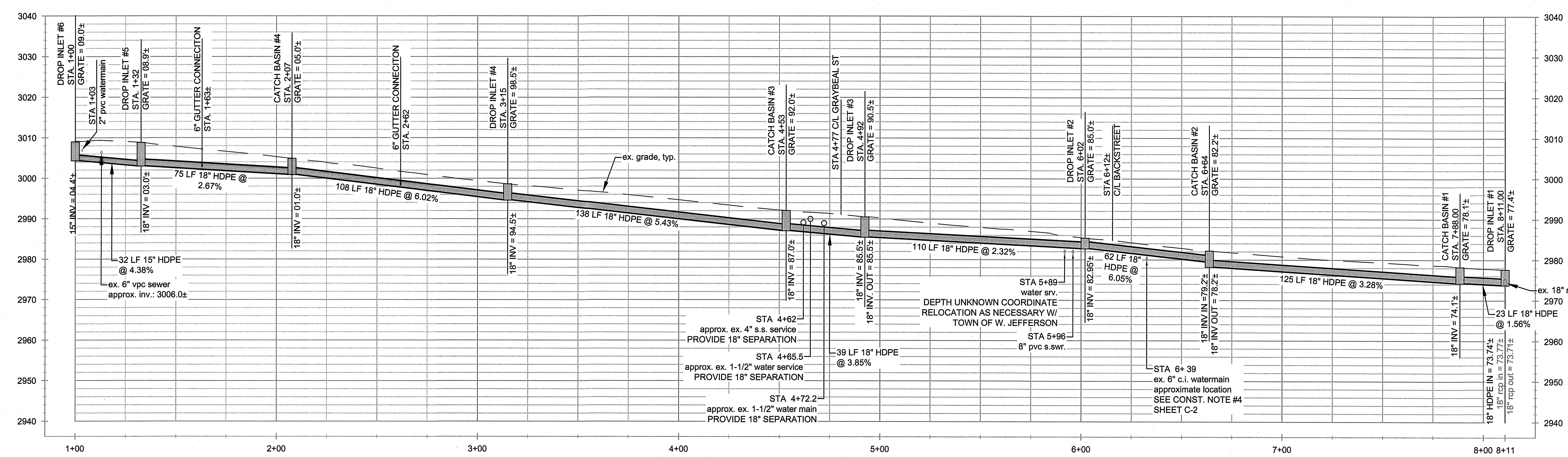
DATE	BY	REV.	DESCRIPTION
11-24-25	MPT	1	DI #8 LOCATION REV. GUTTER TIE INS W/ HDPE

SITE DRAINAGE PLAN

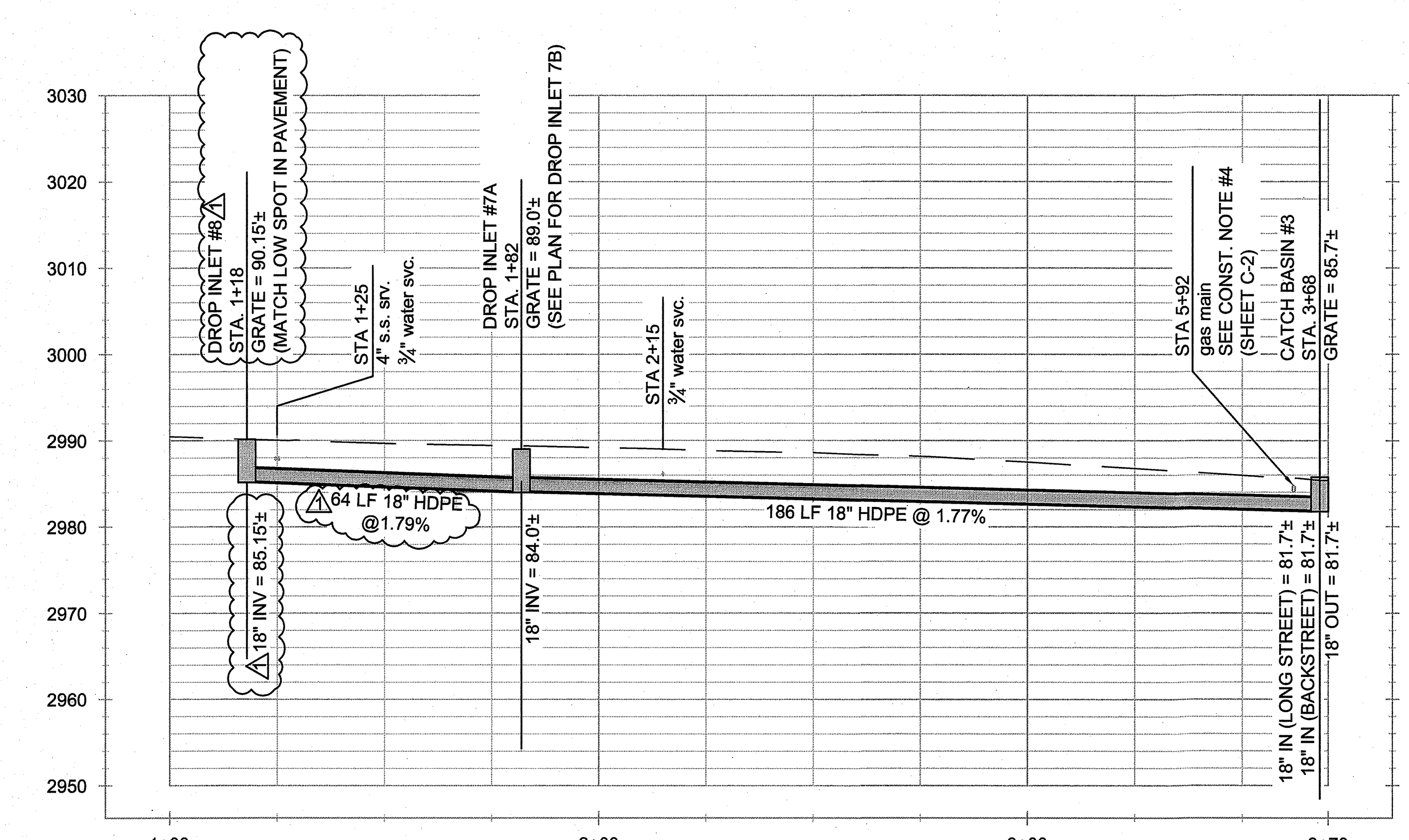
NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 18186 MICHAEL P. THEW

11-24-25

SCALE:	AS SHOWN
DATE:	11-01-25
DRWN. BY:	SGJ
CHKD. BY:	MPT
PROJECT NUMBER	B24044.3
DRAWING NO. C-2	SHEET NO. 2 OF 4



LONG ST DRAINAGE PROFILE
HORIZONTAL SCALE: 1" = 30'
VERTICAL SCALE: 1" = 15'



BACKSTREET DRAINAGE PROFILE
HORIZONTAL SCALE: 1" = 30'
VERTICAL SCALE: 1" = 15'

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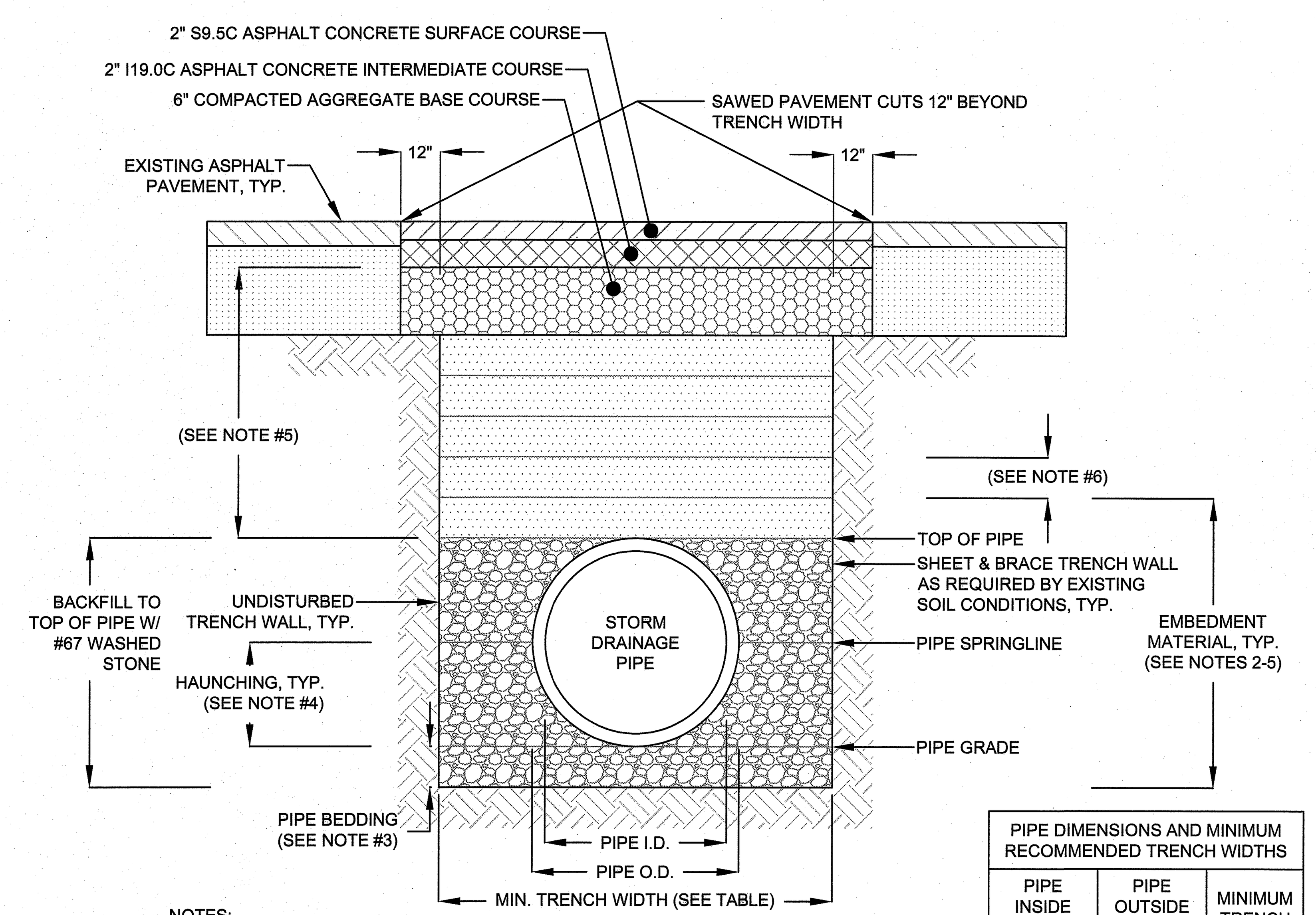
STORMWATER IMPROVEMENTS
LONG STREET & BACKSTREET
WEST JEFFERSON, NORTH CAROLINA

DATE	BY	REV.	DESCRIPTION
11-24-25	MPT	1	DROP INLET #8 LOCATION REVISED

STORMWATER PROFILE SHEET

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 18186 MICHAEL P. TREW
11-24-25

SCALE:	AS SHOWN
DATE:	11-01-25
DRWN. BY:	SGJ
CHKD. BY:	MPT
PROJECT NUMBER	B24044.3
DRAWING NO. C-3	SHEET NO. 3 OF 4



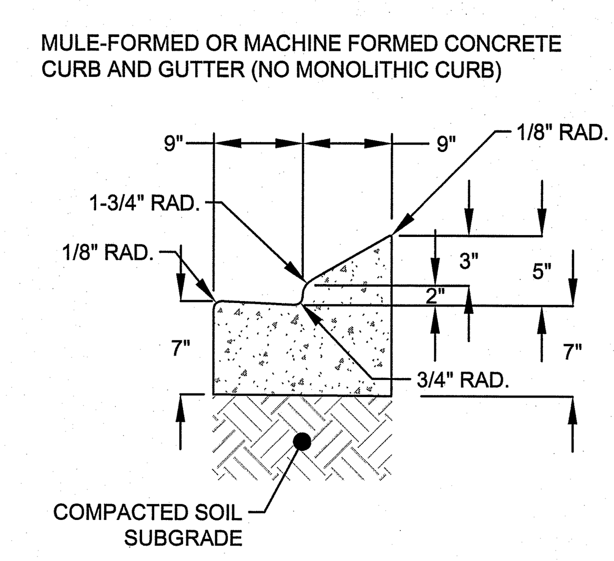
PIPE DIMENSIONS AND MINIMUM RECOMMENDED TRENCH WIDTHS		
PIPE INSIDE DIAMETER (I.D.)	PIPE OUTSIDE DIAMETER (O.D.)	MINIMUM TRENCH WIDTH
4"	4.8"	21"
6"	6.9"	23"
8"	9.1"	26"
10"	11.4"	28"
12"	14.5"	30"
15"	18"	34"
18"	22"	39"
24"	28"	47"
30"	36"	56"
36"	42"	63"
42"	48"	72"
48"	54"	80"
60"	67"	96"

NOTES:

1. FOR TRENCHES REQUIRING SHORING AND BRACING, TRENCH WIDTH DIMENSIONS SHALL BE TAKEN FROM THE INSIDE FACE OF THE SHORING AND BRACING.
2. EMBEDMENT MATERIAL SHALL BE #67 WASHED STONE. EXCAVATE BEDDING UNDER EACH PIPE BELL SUFFICIENTLY TO PREVENT ANY LOAD ON BELL.
3. DEPTH OF PIPE BEDDING SHALL BE 4" MINIMUM FOR 4" TO 24" PIPE.
4. UNIFORM HAUNCHING OF THE EMBEDMENT STONE ON EACH SIDE OF THE TRENCH FROM TOP OF BEDDING TO TOP OF PIPE IS REQUIRED FOR ALL PIPE INSTALLATIONS.
5. COVER FROM TOP OF PIPE TO BOTTOM OF ASPHALT CONCRETE FLEXIBLE PAVEMENT, TOP OF RIGID OR GRAVEL PAVEMENT AND TOP OF GROUND SURFACE IN NON-PAVEMENT AREAS SHALL BE 12" MINIMUM FOR 4" TO 48" DIAMETER PIPE.
6. BACKFILL OF TRENCHES SHALL BE ACCOMPLISHED IMMEDIATELY AFTER THE PIPE IS INSTALLED. EACH LAYER OF BACKFILL SHALL BE PLACED LOOSE IN 6" MAXIMUM LIFTS AND THOROUGHLY COMPACTED TO AT LEAST 95% OF STANDARD PROCTOR DENSITY (AASHTO TEST METHOD T-99), TYP. COMPACTION REQUIREMENTS SHALL BE ATTAINED BY THE USE OF MECHANICAL TAMPS ONLY.
7. ALL BACKFILL MATERIAL SHALL BE SUITABLE NATIVE MATERIAL.
8. UNDER NO CIRCUMSTANCES SHALL WATER BE PERMITTED TO RISE IN UNBACKFILLED TRENCHES AFTER THE PIPE HAS BEEN PLACED.

⚠ DUAL WALL HDPE TRENCH & PAVEMENT DETAIL

NOT TO SCALE



NOTES: (DETAIL COPIED FROM NCDOT STD. 846.01)

PLACE CONTRACTION JOINTS AT 10' INTERVALS, EXCEPT THAT A 15' SPACING MAY BE USED WHEN A MACHINE IS USED OR WHEN SATISFACTORY SUPPORT FOR THE FACE FORM CAN BE OBTAINED WITHOUT THE USE OF TEMPLATES AT 10' INTERVALS.

JOINT SPACING MAY BE ALTERED IF REQUIRED BY THE ENGINEER.

CONTRACTION JOINTS MAY BE INSTALLED WITH THE USE OF TEMPLATES OR FORMED BY OTHER APPROVED METHODS.

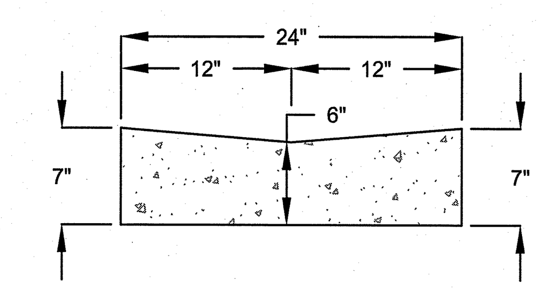
CONSTRUCT NON-TEMPLATE FORMED JOINTS A MIN. OF 1 1/2 " DEEP.

FILL ALL CONSTRUCTION JOINTS, EXCEPT IN 8" X 6" MEDIAN CURB WITH JOINT FILLER AND SEALER.

SPACE EXPANSION JOINTS AT 90' INTERVALS AND ADJACENT TO ALL RIGID OBJECTS.

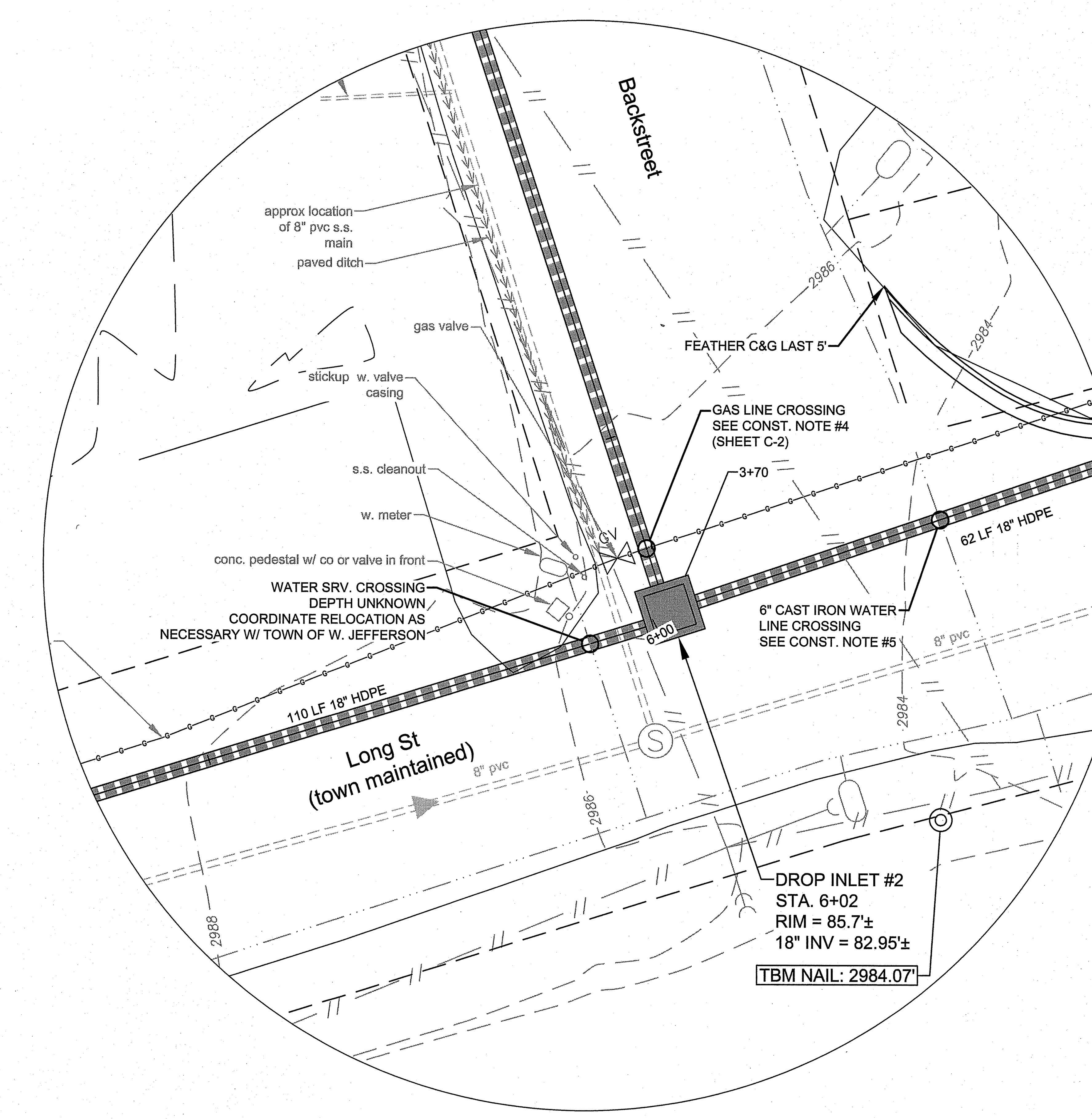
NC DOT 18" MOUNTABLE (AKA SNOW CURB) CURB AND GUTTER

NOT TO SCALE



24" VALLEY GUTTER CROSS-SECTION

NOT TO SCALE



INSET A

1" = 10'

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STORMWATER IMPROVEMENTS
LONG STREET & BACKSTREET
WEST JEFFERSON, NORTH CAROLINA

DATE	BY	REV.	DESCRIPTION
11-24-25	MPT	⚠1	DETAIL REVISED, SEE ⚠1

DETAIL SHEET

SCALE:	AS SHOWN
DATE:	11-01-25
DRWN. BY:	SGJ
CHKD. BY:	MPT
PROJECT NUMBER	B24044.3
DRAWING NO. C-4	SHEET NO. 4 OF 4

NORTH CAROLINA PROFESSIONAL SEAL 18186 ENGINEER MICHAEL P. TRIPP

11-24-25