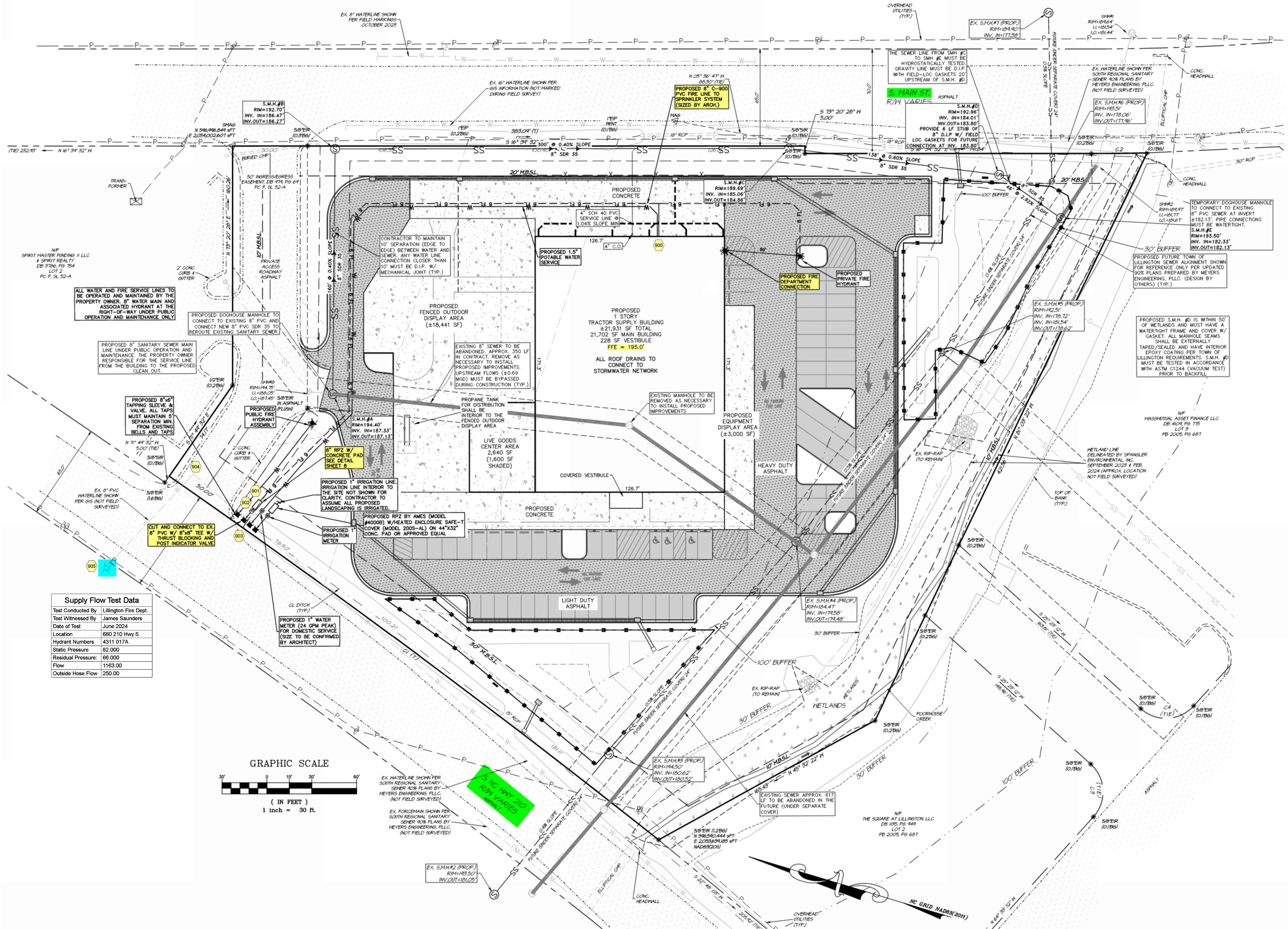
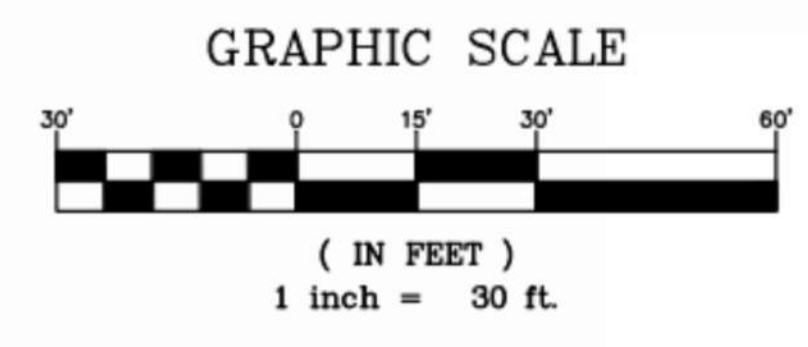




Supply Flow Test Data	
Test Conducted By	Lillington Fire Dept.
Test Witnessed By	James Saunders
Date of Test	June 2024
Location	680 210 Hwy S
Hydrant Numbers	4311 017A
Static Pressure	82.000
Residual Pressure	66.000
Flow	1163.00
Outside Hose Flow	250.00



PROPRIETARY DOCUMENT

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MATERIAL SPECIFICATION

PIPE: ☐ DOMESTIC ☒ IMPORT

LINES: 1" SCH 40 1.14" S LARGER SCH 10

MANH: SCH 10

FITTINGS: ☐ DOMESTIC ☒ IMPORT

THD: CAST IRON

GRV: FIRELOCK

COUPLING: 1-1/2" 4" VMC #808, 6" 8" VMC #805

FLANGED: 125#

HANGERS: PER NFPA-13

BY BVS OTHERS:

☒ BACKFLOW PREVENTER

☒ FIRE CALKING

PIPE LABELS: ☐ YES ☒ NO

SLEEVES: ☐ ALL WALLS ☒ FIRE WALLS

UNDERGROUND: ☒ PAINTING

HOISTING: ☒ ALARM WIRING

ELECTRICAL WIRING: ☒ FIRE EXTINGUISHERS

N/A: FIRE PUMP

1'-0" A.F.F. BVS CONTRACT STARTS

QUADS: HEADS CENTER OF TILE

REVIEW AGENCIES: HARNETT COUNTY ARJ 910.803.7580

TRACTOR SUPPLY CO.

695 N. CAROLINA HWY. 210 S. LILLINGTON, NC 27546

BVS SYSTEMS

18525-D7 STATESVILLE RD. P.O. BOX 1520 CORNELIUS, NC 28031 P: 704.896.9989 F: 704.896.1935

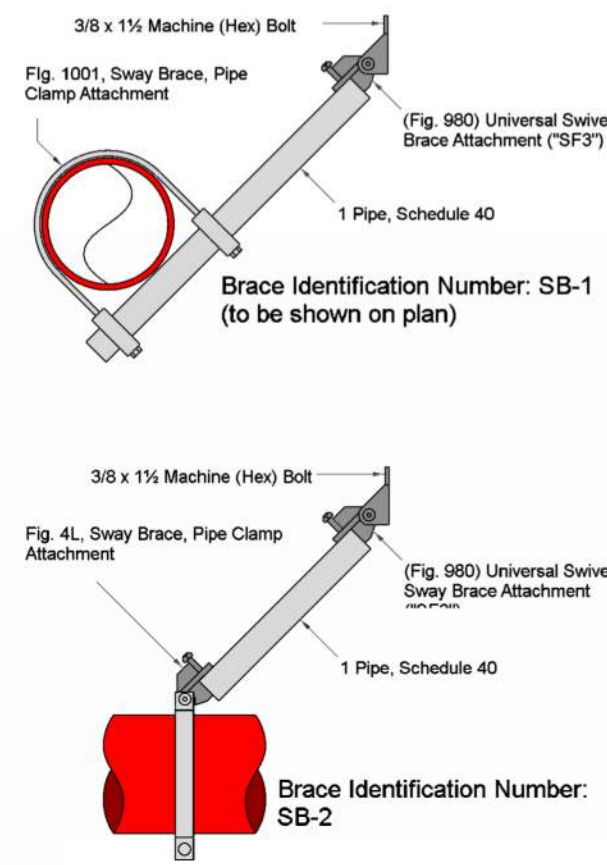
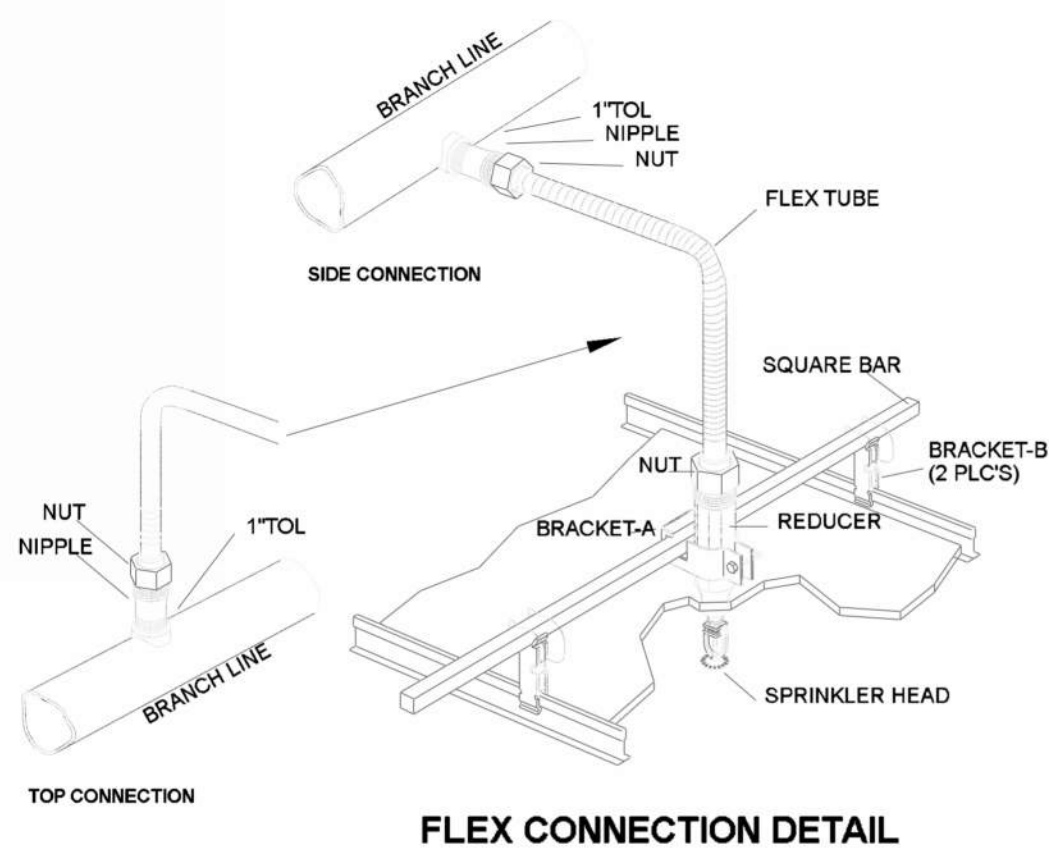
CIVIL UTILITY PLAN

NCERT CERT. NO. 128470
LEVEL: III
SUB-FIELD: WATER BASED
EXPIRATION DATE: 3/1/2028
NAME: Brian S. Harris
SIGNATURE: [Signature]

DRAWN BY: B. Harris SCALE: NOTED DATE: 3/20/25
GC: W. Newman SHEET NO: JOB 103
PHONE: 910.815.1914 FPI: 4386-S

REVISIONS

NO.	DESCRIPTION
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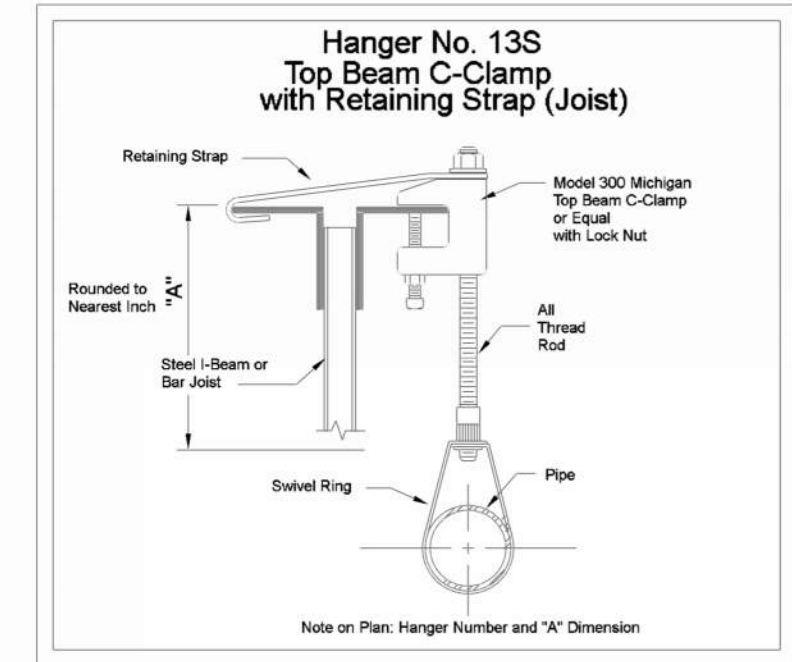


LINE RESTRAINT SPACING IN FEET

WALL	SP-10	SP-15	SP-20	SP-25
1-1/2"	48	36	24	18
1-1/4"	48	36	24	18
1-1/2"	48	36	24	18
2"	48	36	24	18

SEISMIC BRACING LEGEND

- SB-1** LATERAL BRACE (40'-0" MAX SPACING / 6'-0" MAX. FROM END)
 - SB-2** LONGITUDINAL BRACE (80'-0" MAX SPACING / 40'-0" MAX. FROM END)
 - +** 4-WAY BRACE (TOP OF ALL RISERS)
- ALL BRACES SHALL BE 1" DIA. SCH 40 PIPE UN O.
INSTALL RETAINER STRAPS ON ALL PIPING BEAM CLAMPS.
INSTALL LINE RESTRAINTS SPACED PER ATTACHED TABLE.
INSTALL FLEX COUPLINGS AT TOP & BOTTOM OF ALL RISERS & DROPS OVER 15' AND WITHIN 12' ON EITHER SIDE OF MASONRY WALLS. (MAINS ONLY)



GENERAL NOTES

- THE DESIGN AND INSTALLATION OF THIS SPRINKLER SYSTEM SHALL BE IN STRICT ACCORDANCE TO NFPA 13, 2019 EDITION.
- ALL ABOVE GROUND PIPE SHALL BE FLUSHED PER NFPA-13, 2019 EDITION.
- ALL NEW PIPING SHALL BE HYDROSTATICALLY TESTED @ 200 PSI FOR A MINIMUM OF 2 HOURS.
- FLUSHING CONNECTIONS - GROOVED CROSS MAIN CAPS.
- SPARE HEAD BOX TO BE PROVIDED WITH NEW SPRINKLER HEADS OF TYPE INSTALLED W/ WRENCH.
- ALL HANGERS SHALL BE INSTALLED AS REQUIRED BY NFPA 13, 2019 EDITION.
- TRAPEZE HANGERS (IF APPLICABLE) TO BE PLACED AT BAR JOIST PANEL POINT.
- ALL MAIN OUTLETS ARE TO BE SHOP WELDED WITH GROOVED FITTINGS.
- THE BUILDING OWNER SHALL MAINTAIN A MINIMUM 40°F IN ALL AREAS OF THE WET SPRINKLER SYSTEM PIPING TO PREVENT FREEZING.
- ALL UNDERGROUND PIPING, ELECTRICAL WIRING, MONITORING, AND FIRE ALARM PANEL REQUIREMENTS ARE DONE BY OTHERS.
- AUXILIARY DRAINS SHALL BE IN ACCORDANCE WITH NFPA 13, 2019 EDITION.

Maximum Distance Between Hangers

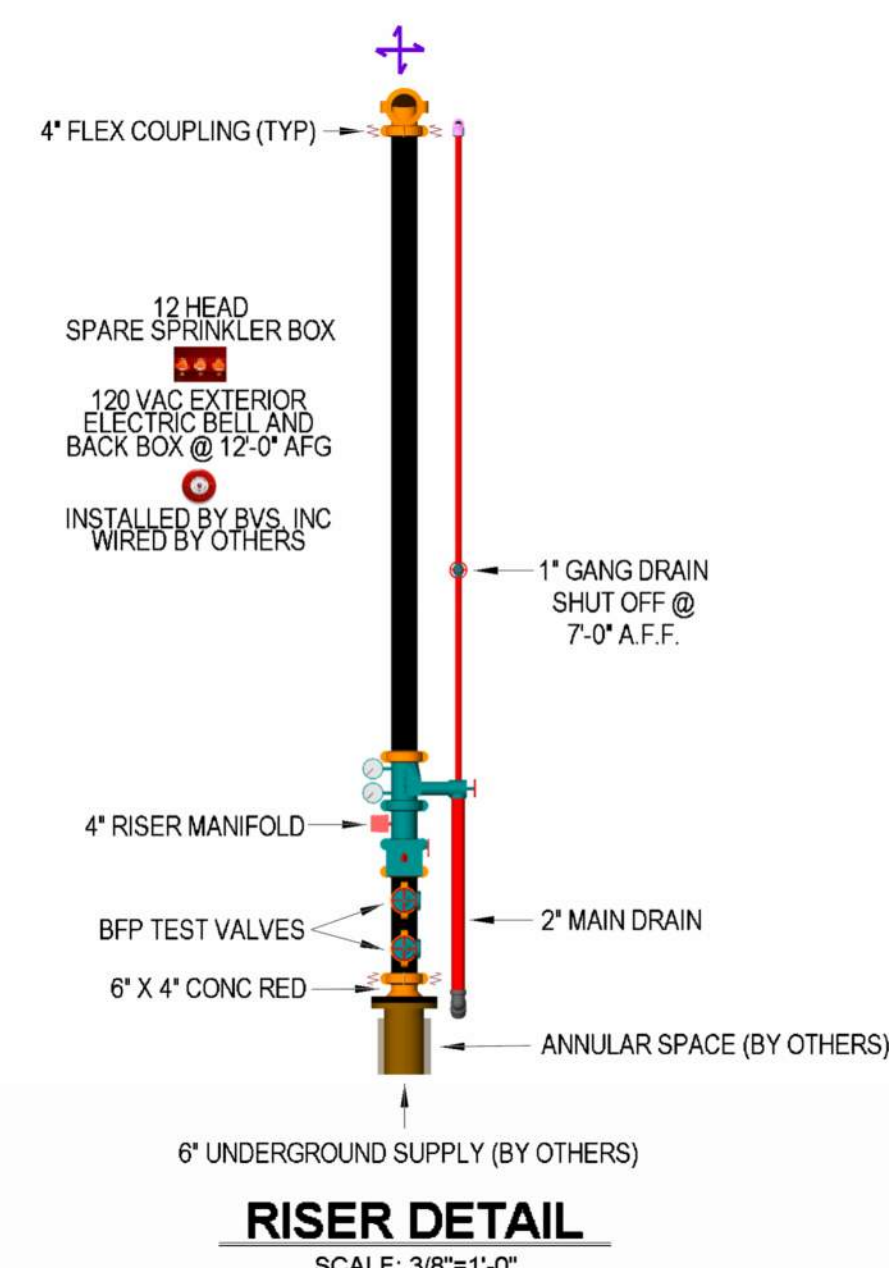
NOMINAL PIPE SIZE (IN.)	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"	3"	3-1/2"	4"	6"	8"
STEEL PIPE (EXCEPT LIGHTWALL)	N/A	12'-0"	12'-0"	15'-0"	15'-0"	15'-0"	15'-0"	15'-0"	15'-0"	15'-0"	15'-0"

Sprinkler Legend

Symbol	SIN	Quantity	K-Factor	Type	Size	Response	Finish	Temp
	V2708	12	5.6	Pendent	½	Quick	Chrome	155 °F
	V2710	2	5.6	Sidewall	½	Quick	Chrome	155 °F
	V2704	168	5.6	Upright	½	Quick	Brass	155 °F
		Total = 182						

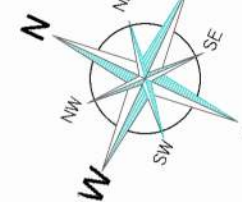
Hydraulic Information

OCCUPANCY CLASSIFICATION	Ordinary Group II
DENSITY (gpm/ft²)	0.20 for 1500 ft² (Actual 1610 ft²)
TOTAL HOSE STREAMS	250.00
TOTAL HEADS FLOWING	13
K-FACTOR	5.6
TOTAL WATER REQUIRED	576.71
TOTAL PRESSURE REQUIRED	51.682
SAFETY MARGIN (psi)	+25.937 (33.4%)



PROPRIETARY DOCUMENT

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MATERIAL SPECIFICATION

PIPE:	☐ DOMESTIC ☒ IMPORT
LINES:	1" = SCH 40 1-1/4" & LARGER = SCH 10
MAINS:	SCH 10
FITTINGS:	☐ DOMESTIC ☒ IMPORT
THD:	CAST IRON
GRV:	FIRELOCK
COUPLING:	1-1/2" - 4" VIC #808, 6"-8" VIC #805
FLANGED:	125#
HANGERS:	PER NFPA-13
BY BVS OTHERS:	
☒	BACKFLOW PREVENTER
☒	FIRE CAULKING
☒	PIPE LABELS ☐ YES ☒ NO
☒	SLEEVES ☐ ALL WALLS ☒ FIRE WALLS
☒	UNDERGROUND
☒	PAINTING
☒	HOISTING
☒	ALARM WIRING
☒	ELECTRICAL WIRING
☒	FIRE EXTINGUISHERS
N/A	FIRE PUMP
1'-0" A.F.F.	BVS CONTRACT STARTS
QUADS:	HEADS CENTER OF TILE
REVIEW AGENCIES:	
HARRNETT COUNTY APU	910.883.7580

TSC TRACTOR SUPPLY CO.

695 N. CAROLINA HWY. 210 S.
LILLINGTON, NC 27546

REVISIONS

NO.	DATE	DESCRIPTION
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BVS SYSTEMS

18525-D7 STATESVILLE RD.
P.O. BOX 1520
CORNELIUS, NC 28031
P: 704.896.9989
F: 704.896.1935

FIRE SPRINKLER PLAN

NICET CERT. NO.	128475
LEVEL	LEVEL III
SUB-FIELD	WATER BASED
EXPIRATION DATE	3/1/2028
NAME	Brian S. Harris
SIGNATURE	

DRAWN BY: B. Harris SCALE: NOTED DATE: 3/20/25
GC: GW NEWMAN SHEET NO: J06103
PHONE: 815.815.1914 FP2 4368-S