

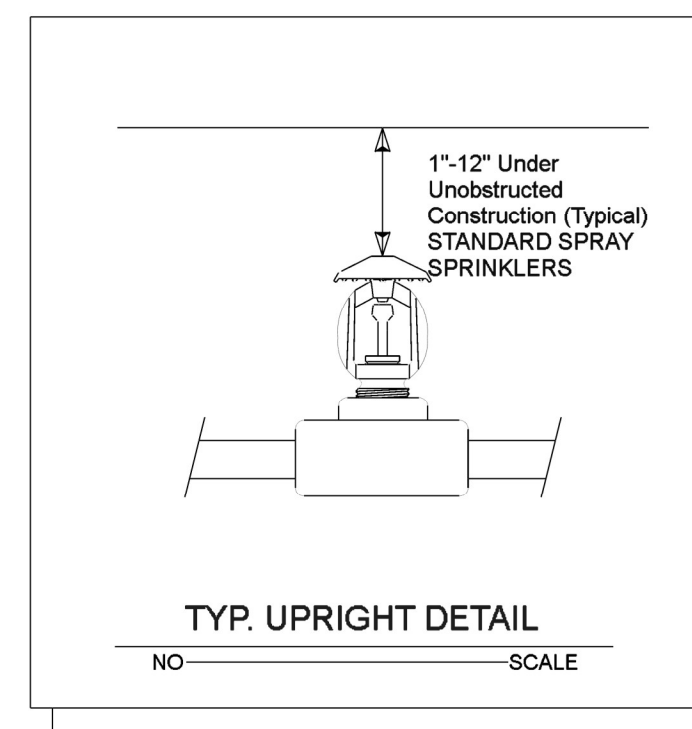
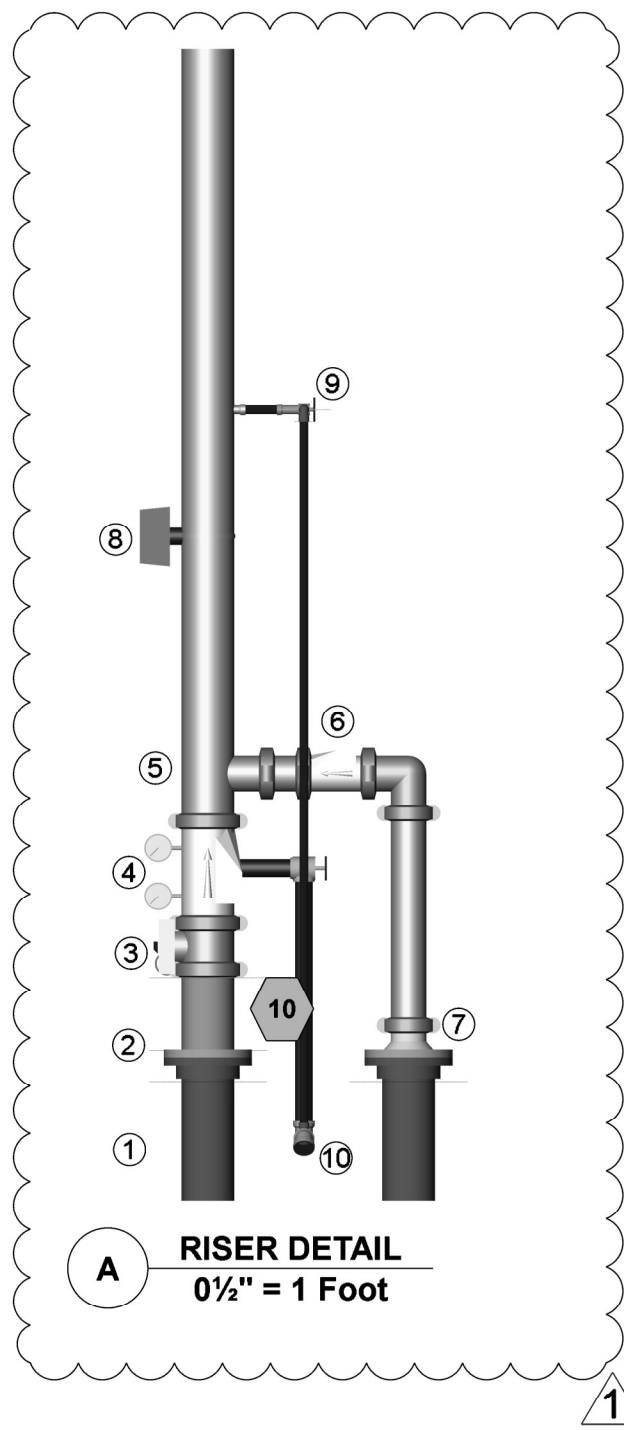
GENERAL NOTES:

- MATERIALS AND INSTALLATION SHALL COMPLY WITH APPLICABLE NFPA CODES (NFPA 13 2013 EDITION), STATE BUILDING CODE, LOCAL AUTHORITY HAVING JURISDICTION, AND INSURANCE UNDERWRITER'S REQUIREMENTS.
- ALL MATERIALS AND EQUIPMENT SHALL BE NEW, UL LISTED FOR THE INTENDED USE AND SHALL BE INSTALLED IN FULL COMPLIANCE WITH MANUFACTURER'S RECOMMENDATIONS.
- ALL NEW SPRINKLER PIPE 1" AND SMALLER IS SCHEDULE-40 BLACK STEEL WITH THREADED ENDS AND FITTINGS. ALL NEW SPRINKLER PIPE 1 1/4" AND LARGER IS SCHEDULE-10 BLACK STEEL WITH GROOVED ENDS AND FITTINGS.
- SPRINKLER HEAD SPACING IS BASED ON THE NFPA STANDARDS FOR ORDINARY HAZARD OCCUPANCIES ALLOWING A MAXIMUM HEAD SPACING OF 130 S.F. PER HEAD.
- LOCATIONS OF PIPING AS SHOWN ON THE DRAWINGS ARE APPROXIMATE AND SUBJECT TO MINOR ADJUSTMENTS IN THE FIELD.
- SCOPE OF WORK IS TO INSTALL A NEW ONE RISER SPRINKLER SYSTEM FOR NEW SHELL BUILDING.
- THE WATER TEST INFORMATION HAS BEEN PROVIDED BY J&D SPRINKLER DATED 2/6/2024 INDICATES THE FOLLOWING...

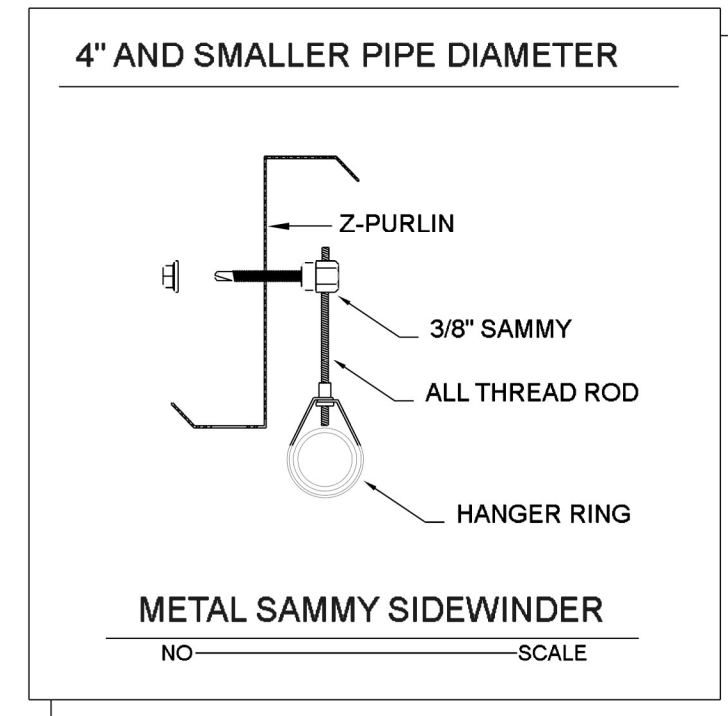
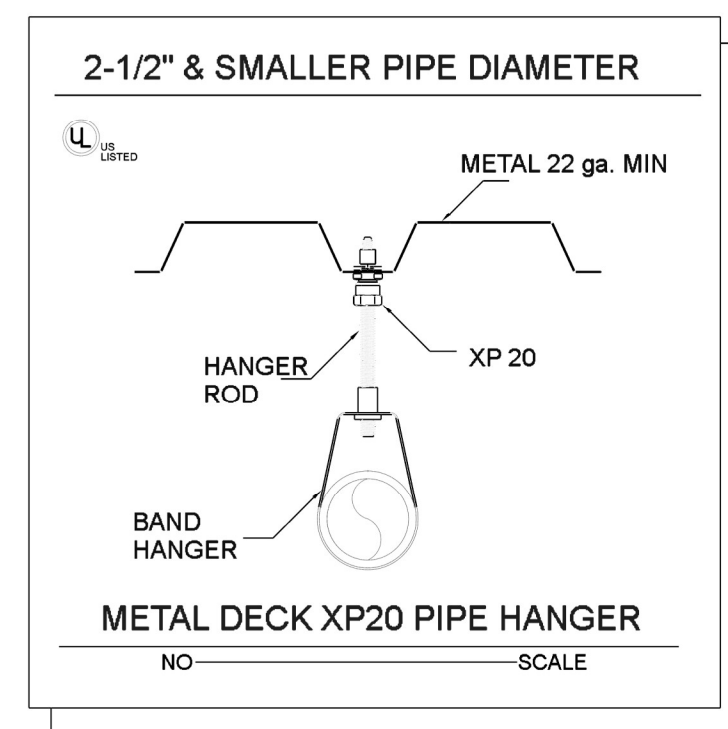
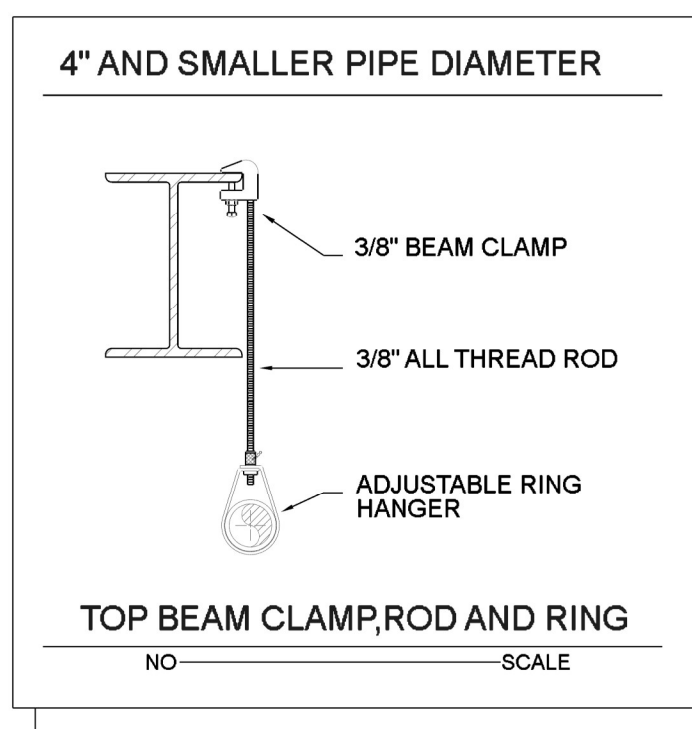
STATIC: 52 PSI
 RESIDUAL: 36 PSI
 FLOW: 840 GPM

SYMBOLS:

- DENOTES A HYDRAULIC CALCULATION POINT OF REFERENCE
- DENOTES A HYDRAULIC REMOTE AREA
- DENOTES NEW SPRINKLER PIPE
- DENOTES UNDERGROUND PIPE
- DENOTES PIPE CENTERLINE ELEVATION AFF
- DENOTES PIPE CENTERLINE BELOW TOP OF STEEL



- ### RISER LEGEND
- 6" RUN-IN BY OTHERS
 - 6" GRV-SPLIT FLANGE
 - 6" BUTTERFLY CONTROL VALVE W/TAMPER
 - 6" VIKING EZ RISER CHECK VALVE
 - 4" GRV OUTLET
 - 4" SWING CHECK VALVE
 - OUT TO YARD FDC
 - FLOW SWITCH
 - TEST & DRAIN ASSEMBLY
 - 2" MAIN DRAIN



Reviewed for Fire Code Compliance
 Leslie Jackson
 10/02/2024 1:16:10 PM

Sprinkler Design Data

Project Name: HARBOR FREIGHT TOOLS	System: WET
Project Street Address: 46 SHRIJI LN, ERWIN NC	Sys. Sq. Ft.: 15,632
Suite: -	Floor#: -
Designed By: J&D SPRINKLER CO	Phone: 919-553-2356
Occupancy: MERCHANTILE	Hazard: ORDINARY GRP II
	Ceiling Height: VARIES
	Total Bldg. Hgt.: 22'-0

Design Summary

Design Method	CALCULATED	-	-	-	-
Design Area #	1	-	-	-	-
Location	-	-	-	-	-
Type of System	WET	-	-	-	-
Hazard Class	ORDINARY GRP II	-	-	-	-
Criteria From	NFPA13 2013 ED	-	-	-	-
Design Area	1500 S.F.	-	-	-	-
Sprinkler Spacing	130 S.F. MAX	-	-	-	-
Density	.20	-	-	-	-
K-factor	5.6	-	-	-	-
Hose Allowance	250 GPM	-	-	-	-
# Design Sprinklers	13	-	-	-	-
Special Application Spk.	-	-	-	-	-
Requirement @ BASE					
G.P.M. Req'd	329.07	-	-	-	-
P.S.I. Req'd	30.834	-	-	-	-
Requirement @ TEST					
GPM Required	579.07	-	-	-	-
PSI Required	41.685	-	-	-	-
Safety factor @ Test	2.275	-	-	-	-
Dry Sys. Volume (gal)	-	-	-	-	-

Water Supply Information

Tested by	J&D SPRINKLER CO	Date/Time	2/6/2024 @ 1:45PM	Pressure Hydrant	-
Hydrant Elevation	-	Flow Hydrant # 1	-	Flow Hydrant #2	-
Static (PSI)	52	Residual (PSI)	36	Flow (gpm)	840

Copy of Water Test Data Included with Calculation is required

HANGER INSTALLATION REQUIREMENTS

NOMINAL PIPE SIZE	MAXIMUM DISTANCE BETWEEN HANGERS									
	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"	3"	4"	6"	
BLAZEMASTER CPVC	5' 6"	6' 0"	6' 6"	7' 0"	8' 0"	9' 0"	10' 0"	N/A	N/A	
THREADABLE LIGHTWALL	N/A	12' 0"	12' 0"	12' 0"	12' 0"	12' 0"	12' 0"	N/A	N/A	
STEEL PIPE (10' 40')	N/A	12' 0"	12' 0"	15' 0"	15' 0"	15' 0"	15' 0"	15' 0"	15' 0"	

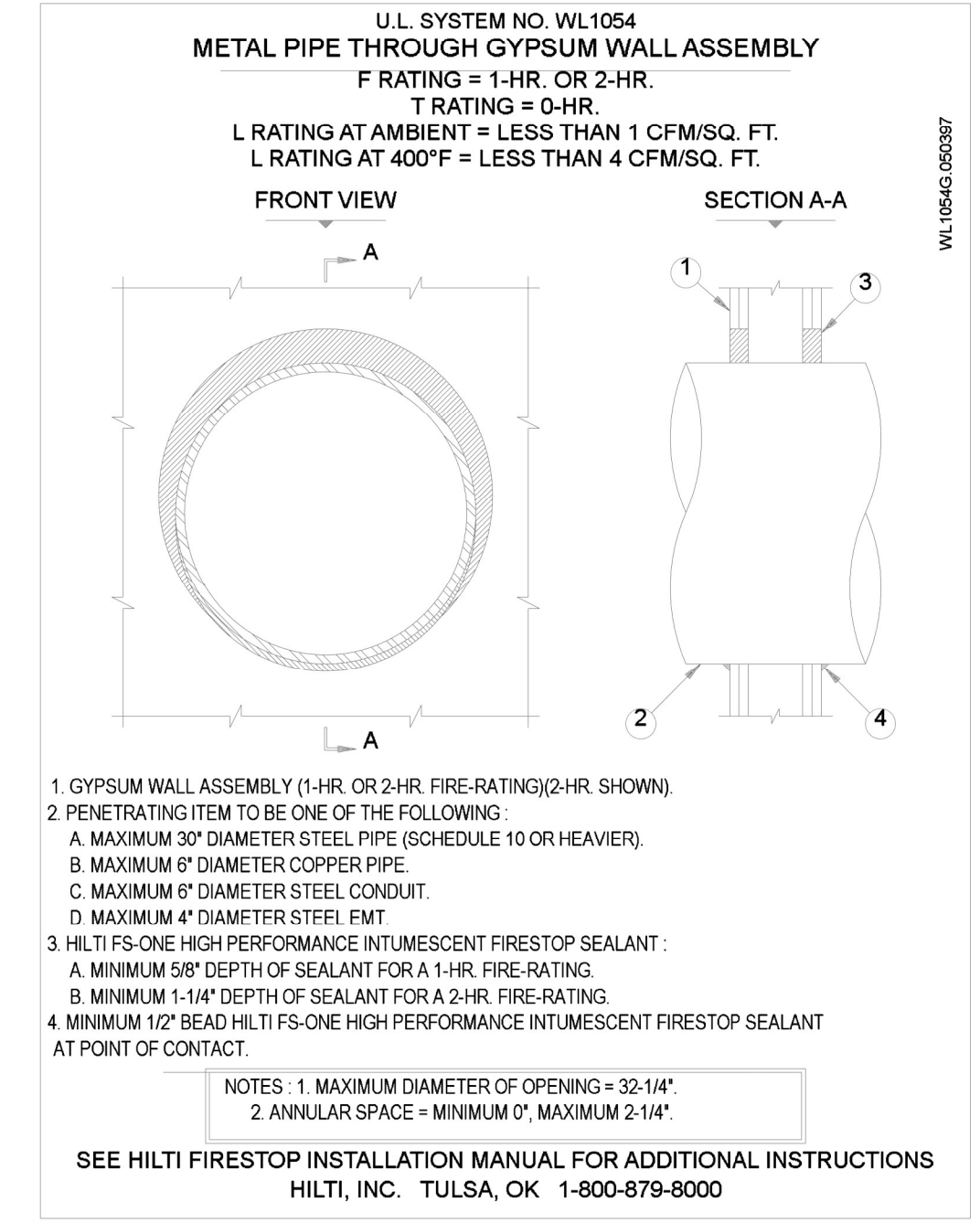
100 PSI STATIC PRESSURE ON SYSTEM REQUIRES UP-LIFT RESTRAINT WITHIN 12 INCHES HORIZONTALLY OF HEAD FOR ARM-OVERS AND END OF BRANCH LINE

THE UNSUPPORTED LENGTH BETWEEN THE END SPRINKLER AND THE LAST HANGER ON THE LINE SHALL NOT EXCEED 30' FOR 1" PIPE, 40' FOR 1 1/4" PIPE AND 60' FOR 1 1/2" PIPE OR LARGER

THE CUMULATIVE HORIZONTAL LENGTH OF AN UNSUPPORTED ARM OVER TO A SPRINKLER, SPRINKLER DROP, OR SPRIG-UP SHALL NOT EXCEED 24'

TRAPEZE INSTALLATION REQUIREMENTS

SPAN OF TRAPEZE (Schedule 10)	NOMINAL PIPE SIZE SUPPORTED							
	1"	1-1/4"	1-1/2"	2"	2-1/2"	3"	4"	6"
1 FT. 6 IN.	1"	1"	1"	1"	1"	1"	1-1/4"	1-1/4"
2 FT. 0 IN.	1"	1"	1"	1-1/4"	1-1/4"	1-1/4"	1-1/4"	2"
3 FT. 0 IN.	1-1/4"	1-1/4"	1-1/4"	1-1/4"	1-1/2"	1-1/2"	1-1/2"	2"
4 FT. 0 IN.	1-1/2"	1-1/2"	1-1/2"	1-1/2"	2"	2"	2"	2-1/2"
5 FT. 0 IN.	2"	2"	2"	2"	2"	2"	2-1/2"	2-1/2"
6 FT. 0 IN.	2"	2"	2"	2"	2"	2-1/2"	2-1/2"	3"
7 FT. 0 IN.	2"	2"	2"	2-1/2"	2-1/2"	2-1/2"	2-1/2"	3"
8 FT. 0 IN.	2-1/2"	2-1/2"	2-1/2"	2-1/2"	2-1/2"	2-1/2"	2-1/2"	3"
9 FT. 0 IN.	2-1/2"	2-1/2"	2-1/2"	2-1/2"	2-1/2"	2-1/2"	3"	4"
10 FT. 0 IN.	2-1/2"	2-1/2"	2-1/2"	2-1/2"	2-1/2"	3"	3"	4"



HARBOR FREIGHT TOOLS
 46 SHRIJI LN
 ERWIN, NC

J & D SPRINKLER CO. INC.
 315 W. MAIN ST., CLAYTON, NC 27520
 PHONE: (919)553-2356 FAX: (919) 359-0622

SHEET TITLE:
 NOTES/DETAILS

This fire sprinkler planning and design drawing has been prepared by J & D Sprinkler Co. as a licensed fire sprinkler contractor under Article 2 of Chapter 87 of the General Statutes for a & Sprinkler's scope of work must perform any and all installation work and other work performed in reliance on this drawing pursuant to G.S. § 55B-15(a)(2). Installation work or any other work performed by any other person or entity in reliance on this drawing or any copy thereof is strictly prohibited.

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DANA GRAHAM
 NC # 16269FS CERT # 71075
 NICET LEVEL III
 JASON GRAHAM
 NC # 16269FS CERT # 121842
 NICET LEVEL III

REVISION:
 NO. DATE
 1 10/2/2024

Date: 4/24/2024

Scale: 1/8" = 1'-0"
 0 10'

Job Number: F24084

Drawn By: MWL

Sheet Number: FP-1

Supply Flow Test Data	
Test Conducted By	J&D SPRINKLER CO
Test Witnessed By	FARRIN DUNN/TRAVIS CURRY
Date of Test	2/6/2024
Time of Test	1:45PM
Location	46 SHRIJI LN
Static Pressure	52.000
Residual Pressure	36.000
Flow	840.00

6" BACKFLOW IN HOTBOX BY OTHERS

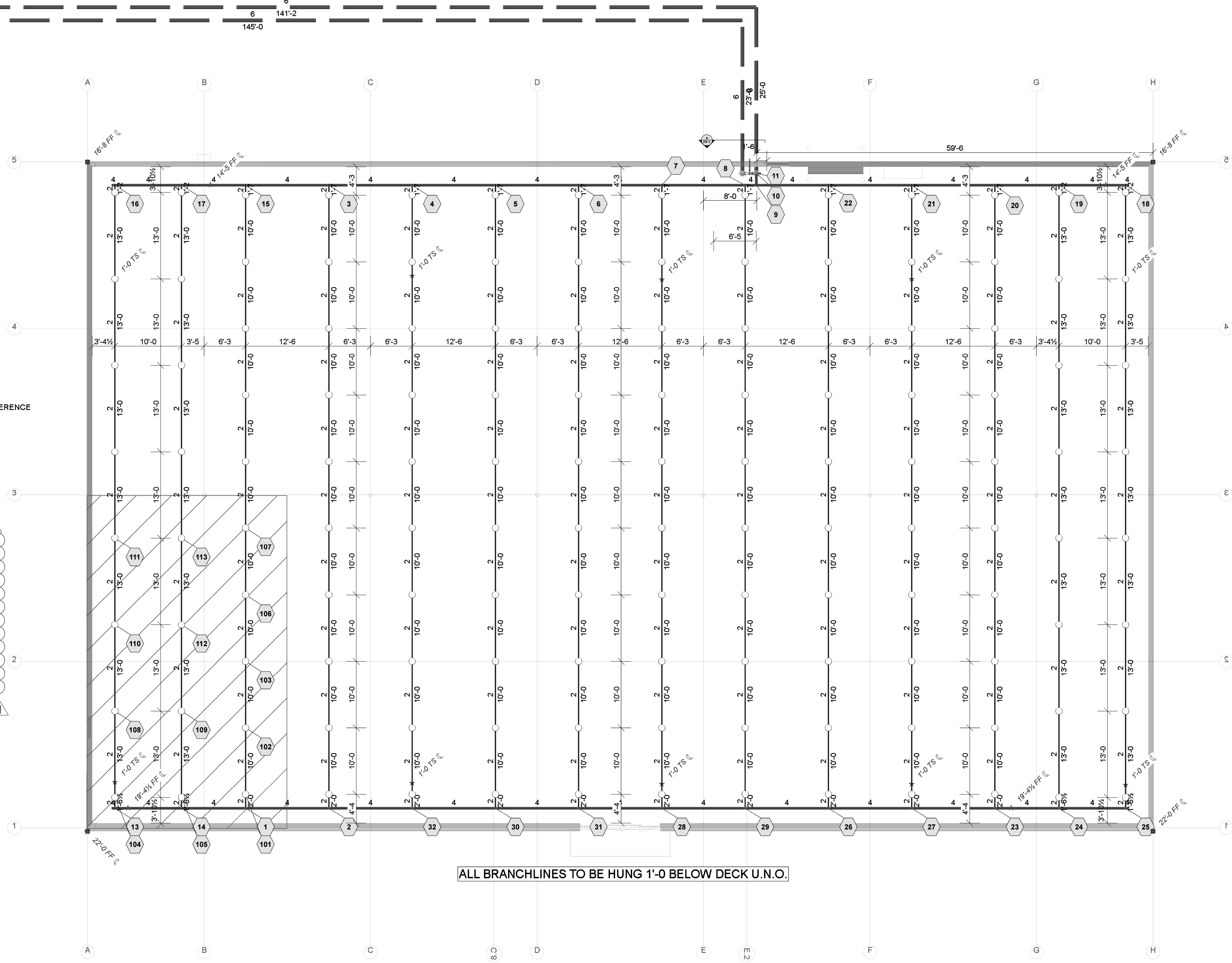
NEW SUPPLY TAP
FDC (BY OTHERS)

REVIEWER NOTE:
PREVIOUS SUBMITTAL HAD THE BACKFLOW SHOWN INSIDE THE BUILDING.
CONTRACTOR HAS SINCE MOVED IT OUTSIDE. NEW CALCULATIONS PERFORMED.

SYMBOLS:

- XX DENOTES A HYDRAULIC CALCULATION POINT OF REFERENCE
- DENOTES A HYDRAULIC REMOTE AREA
- DENOTES NEW SPRINKLER PIPE
- - - DENOTES UNDERGROUND PIPE
- *0'-0" FF \perp DENOTES PIPE CENTERLINE ELEVATION AFF
- *0'-0" TS \perp DENOTES PIPE CENTERLINE BELOW TOP OF STEEL

Hydraulic Information	
Remote Area 1	
OCCUPANCY CLASSIFICATION	Ordinary Group II
DENSITY (gpm/ft ²)	0.20 for 1500ft ² (Actual 1502ft ²)
TOTAL HOSE STREAMS	250.00
TOTAL HEADS FLOWING	13
K-FACTOR	5.6
TOTAL WATER REQUIRED	579.07
TOTAL PRESSURE REQUIRED	41.685
BASE OF RISER (gpm)	329.07
BASE OF RISER (psi)	30.834
SAFETY MARGIN (psi)	+2.275 (5.2%)
Ordinary Group II-0.20gpm/ft ² for 1502ft ²	



Sprinkler Legend											
Symbol	Manufacturer	SIN	Model	Quantity	K-Factor	Type	Size	Response	Finish	Temperature	Note
○	Victaulic	V2704	FL-QR	132	5.6	Upright	1/2"	Quick	Brass	200°F	
				Total = 132							

Plan North
PIPING PLAN
1/8"=1'-0"

HARBOR FREIGHT TOOLS

46 SHRIJI LN
ERWIN, NC

J & D SPRINKLER CO. INC.
315 W. MAIN ST., CLAYTON, NC 27520
PHONE: (919)553-2356 FAX: (919) 359-0622

SHEET TITLE:
PIPING PLAN

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