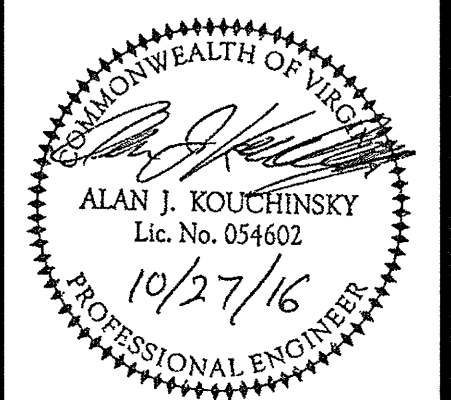




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COUNTY OF ALBEMARLE

PANTOPS
PUBLIC SAFETY
FACILITY

IFB # 2017-11223-20

CHARLOTTESVILLE,
VIRGINIA

REVISIONS

NO.	DATE	DESCRIPTION

COMMISSION NUMBER
2160310

SCALE: AS NOTED
DESIGNED: JEK
DRAWN: JEK
CHECKED: AAK
DATE: 10.27.2016

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SHEET TITLE
FIRE PROTECTION FLOOR PLANS

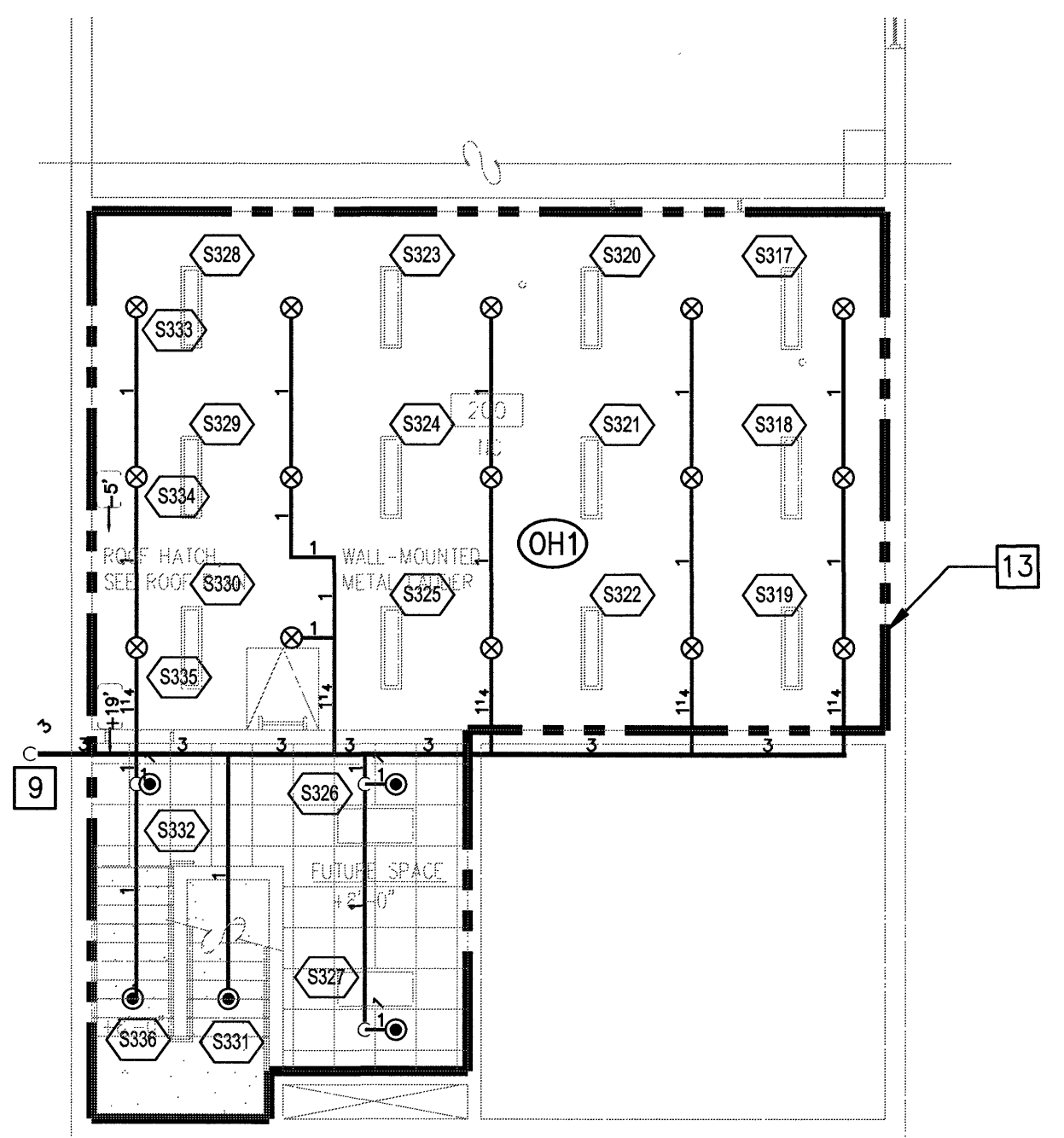
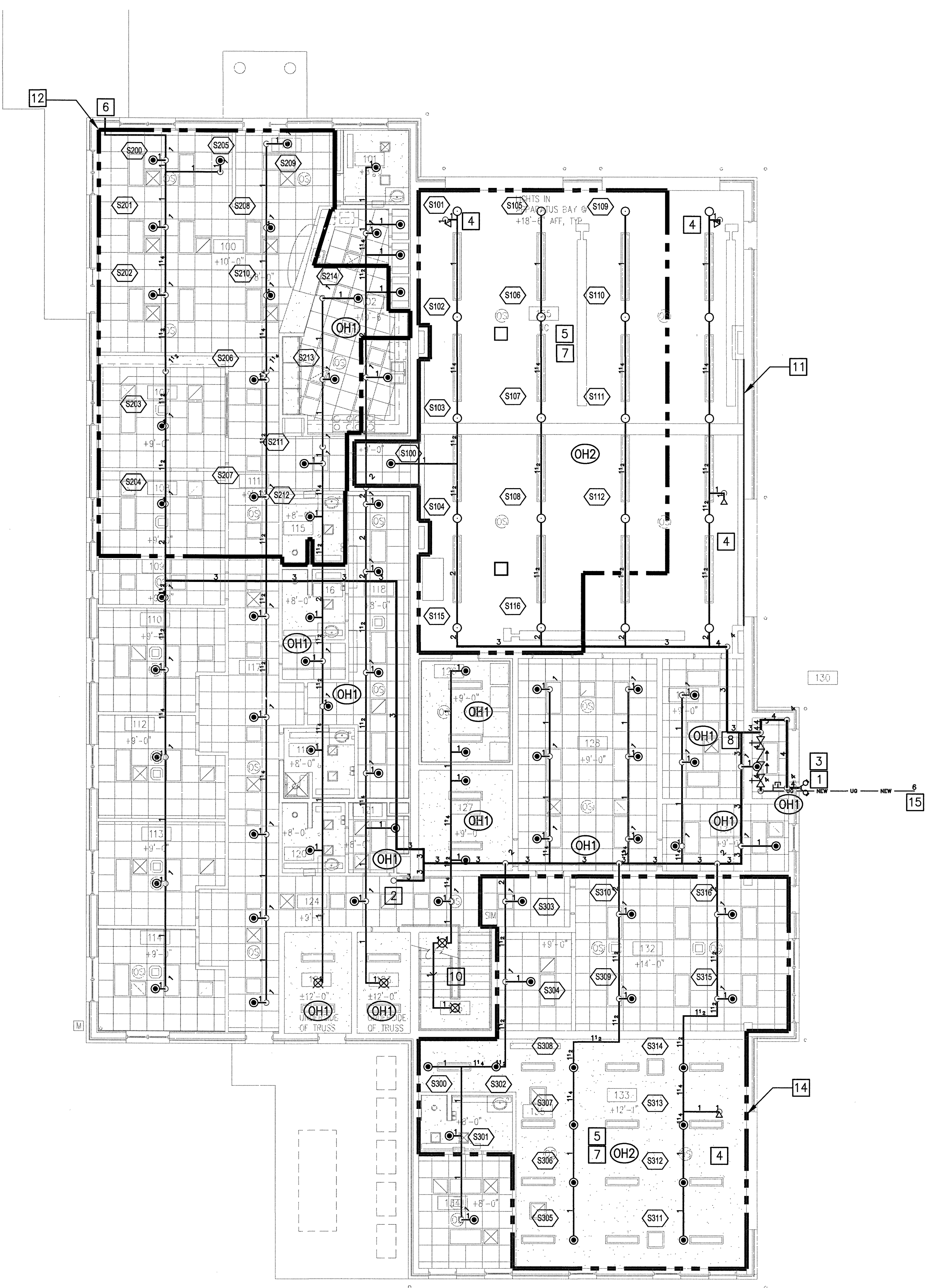
SHEET NUMBER
F-101
66 OF 68

KEYED NOTES:

- 1 PROVIDE FIRE DEPARTMENT CONNECTION WITH CHECK VALVE AND AUTOMATIC BALL DRIP.
- 2 RISE UP TO SECOND FLOOR FOR WET PIPE SYSTEM. PIPING SHALL BE LOCATED WITHIN HEATED BUILDING ENVELOPE.
- 3 PROVIDE BACKFLOW PREVENTOR TEST CONNECTION.
- 4 PROVIDE SPRINKLER PROTECTION UNDER BAY DOORS IN OPEN POSITION.
- 5 PROVIDE INTERMEDIATE OR HIGH TEMPERATURE SPRINKLER IN ACCORDANCE WITH NFPA 13 REQUIREMENTS FOR SPRINKLERS WITHIN CLOSE PROXIMITY TO HEAT GENERATING DEVICES. (APPLIES THROUGHOUT)
- 6 PROVIDE REMOTE INSPECTOR'S TEST CONNECTION PIPED TO EXTERIOR OF BUILDING WITH 45° ELBOW AND SMOOTH BORE OUTLET ANGLED DOWN. SPLASHBLOCK TO BE PROVIDED AT DISCHARGE.
- 7 OWNER INDICATED SPACE WILL BE MAINTAINED ABOVE 40°F.
- 8 WET PIPE VALVE FOR FIRST AND SECOND FLOOR SYSTEM.
- 9 RISE UP FROM FIRST FLOOR WET PIPE SYSTEM.
- 10 PROVIDE SPRINKLERS BENEATH STAIRS.
- 11 DESIGN AREA "OH2 E".
- 12 DESIGN AREA "LH 1".
- 13 DESIGN AREA "OH1 M".
- 14 DESIGN AREA "OH2 R".
- 15 NEW 6 INCH INCOMING. SEE SITE UTILITY PLAN FOR ADDITIONAL INFORMATION.

GENERAL NOTES:

1. ALL WET SYSTEM PIPING SHALL BE MAINTAINED ABOVE 40°F AT ALL TIMES.



Calculation results for Design Area OH2 E - Engine Bay

This system as shown on _____ company print no. _____ dated 10/24/2016 for Pantops Public Safety Station at _____ contract no. _____ is designed to discharge at a rate of 0.2 gpm/ft² (L/min/m²) of floor area over a maximum area of 1950 ft² when supplied with water at a rate of 737.8 gpm at 65.7 psi at the base of the riser. Hose stream allowance of _____ is included in the above.

Occupancy classification: OH2 Number of heads flowing: 15
Commodity classification: _____ System Type: Wet
Maximum storage height: _____ Maximum velocity: 19.99 ft/s
Storage arrangement: _____

Flow from In-Rack sprinklers:	0 gpm	Pressure Required at Source:	65.7 psi
Flow from Overhead sprinklers:	487.8 gpm	Pressure Available at Source:	87.4 psi
Flow from Inside Hoses:	0 gpm	Surplus Pressure at Source:	21.7 psi
Flow from Outside Hoses:	250 gpm		
Other fixed flows:	0 gpm		
Total flow in system piping:	737.8 gpm		
Additional flow at/beyond source:	33 gpm		
Total of all flows:	770.8 gpm		

Calculation results for Design Area LH 1 - 1st Floor

This system as shown on _____ company print no. _____ dated 10/24/2016 for Pantops Public Safety Station at _____ contract no. _____ is designed to discharge at a rate of 0.1 gpm/ft² (L/min/m²) of floor area over a maximum area of 1500 ft² when supplied with water at a rate of 424.8 gpm at 60.2 psi at the base of the riser. Hose stream allowance of _____ is included in the above.

Occupancy classification: LH Number of heads flowing: 15
Commodity classification: _____ System Type: Wet
Maximum storage height: _____ Maximum velocity: 16.39 ft/s
Storage arrangement: _____

Flow from In-Rack sprinklers:	0 gpm	Pressure Required at Source:	60.2 psi
Flow from Overhead sprinklers:	324.8 gpm	Pressure Available at Source:	88.4 psi
Flow from Inside Hoses:	0 gpm	Surplus Pressure at Source:	28.2 psi
Flow from Outside Hoses:	100 gpm		
Other fixed flows:	0 gpm		
Total flow in system piping:	424.8 gpm		
Additional flow at/beyond source:	33 gpm		
Total of all flows:	457.8 gpm		

Calculation results for Design Area OH1 M - 2nd Floor Mech Room

This system as shown on _____ company print no. _____ dated 10/24/2016 for Pantops Public Safety Station at _____ contract no. _____ is designed to discharge at a rate of 0.15 gpm/ft² (L/min/m²) of floor area over a maximum area of 1500 ft² when supplied with water at a rate of 595.3 gpm at 51.4 psi at the base of the riser. Hose stream allowance of _____ is included in the above.

Occupancy classification: _____ Number of heads flowing: 20
Commodity classification: _____ System Type: Wet
Maximum storage height: _____ Maximum velocity: 13.49 ft/s
Storage arrangement: _____

Flow from In-Rack sprinklers:	0 gpm	Pressure Required at Source:	51.4 psi
Flow from Overhead sprinklers:	345.3 gpm	Pressure Available at Source:	87.9 psi
Flow from Inside Hoses:	0 gpm	Surplus Pressure at Source:	36.5 psi
Flow from Outside Hoses:	250 gpm		
Other fixed flows:	0 gpm		
Total flow in system piping:	595.3 gpm		
Additional flow at/beyond source:	33 gpm		
Total of all flows:	628.3 gpm		

Calculation results for Design Area OH2 R - Repair Bay

This system as shown on _____ company print no. _____ dated 10/24/2016 for Pantops Public Safety Station at _____ contract no. _____ is designed to discharge at a rate of 0.2 gpm/ft² (L/min/m²) of floor area over a maximum area of 1500 ft² when supplied with water at a rate of 666.4 gpm at 63.4 psi at the base of the riser. Hose stream allowance of _____ is included in the above.

Occupancy classification: _____ Number of heads flowing: 17
Commodity classification: _____ System Type: Wet
Maximum storage height: _____ Maximum velocity: 18.12 ft/s
Storage arrangement: _____

Flow from In-Rack sprinklers:	0 gpm	Pressure Required at Source:	63.4 psi
Flow from Overhead sprinklers:	416.4 gpm	Pressure Available at Source:	87.7 psi
Flow from Inside Hoses:	0 gpm	Surplus Pressure at Source:	24.3 psi
Flow from Outside Hoses:	250 gpm		
Other fixed flows:	0 gpm		
Total flow in system piping:	666.4 gpm		
Additional flow at/beyond source:	33 gpm		
Total of all flows:	699.4 gpm		



**MECHANICAL PLATFORM
FIRE PROTECTION PLAN**
SCALE: 1/8" = 1'-0"



FIRST FLOOR FIRE PROTECTION PLANS
SCALE: 1/8" = 1'-0"

