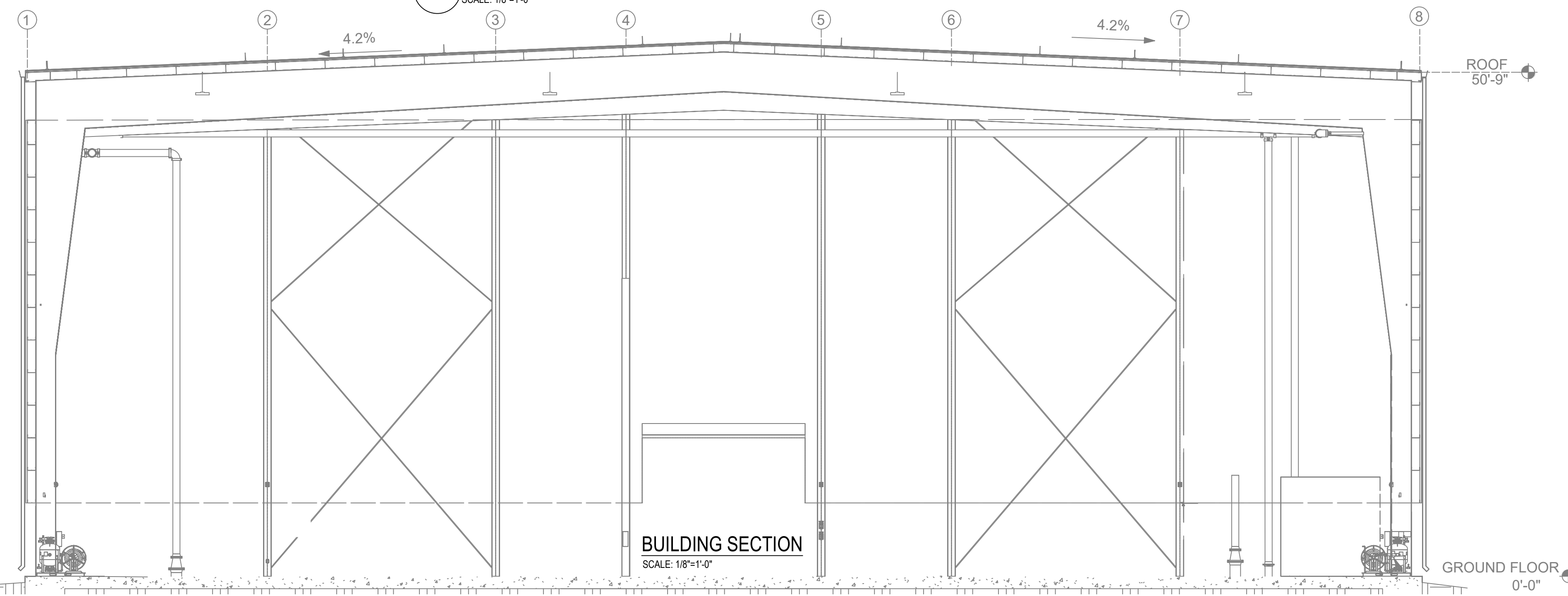


FIRE SPRINKLER PLAN
SCALE: 1/8"=1'-0"



BUILDING SECTION
SCALE: 1/8"=1'-0"

BUILDING SECTION

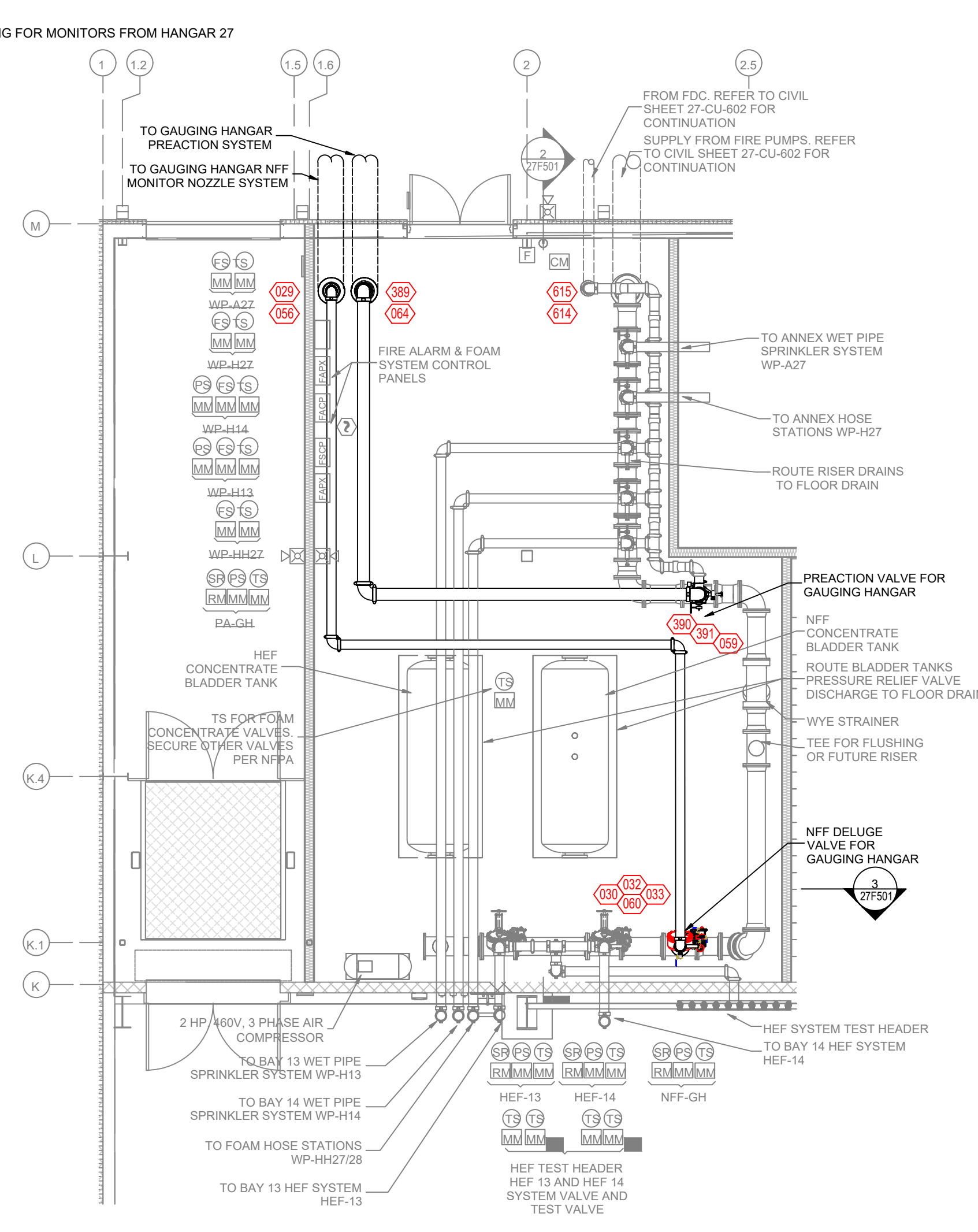
Design Area #1 (Overhead + Columns + Monitors)
Occupancy: Aircraft Hangar per NFPA 409
System Type = Preaction
Flowing Orifice: 1/2"
Density: 0.17 gpm/sq. ft.
Area: 15,000 sq. ft.
Hose Stream Allowance: 500 gpm
Sq. Ft. per Sprinkler: 120
System Total Area: 22,460 sq. ft.
Sprinkler K-Factor: 5.6, 2.8
Required at Hangar 30 Riser: 4026 gpm @ 84.5 psi
Required at Hangar 27 Riser: 5702.9 gpm @ 107.7 psi
Required at Pump Discharge: 6202.9 gpm @ 137.3 psi
Required at Source: 6202.9 gpm @ -8.8 psi
Safety Margin: 9.0 psi

Design Area #2 (Monitor Nozzles Supply Calc)
Occupancy: Aircraft Hangar per NFPA 409
System Type = Dry System w/NFF foam upon activation
Flowing Orifice: 6"
Density: 0.1 gpm/sq. ft.
Area: Engine Hangar
Hose Stream Allowance: 0 gpm
GPM per nozzle: 463
Nozzle K-factor: 50
Required at Hangar 27 Riser: 2815.9 gpm @ 143.7 psi
Required at Pump Discharge: 2815.9 gpm @ 159.7 psi
Required at Source: 2815.9 gpm @ 0.6 psi
Safety Margin: 0.2 psi
With 3% foam solution and a 10 minute duration:
Total Foam Concentrate Required = 845 gallons

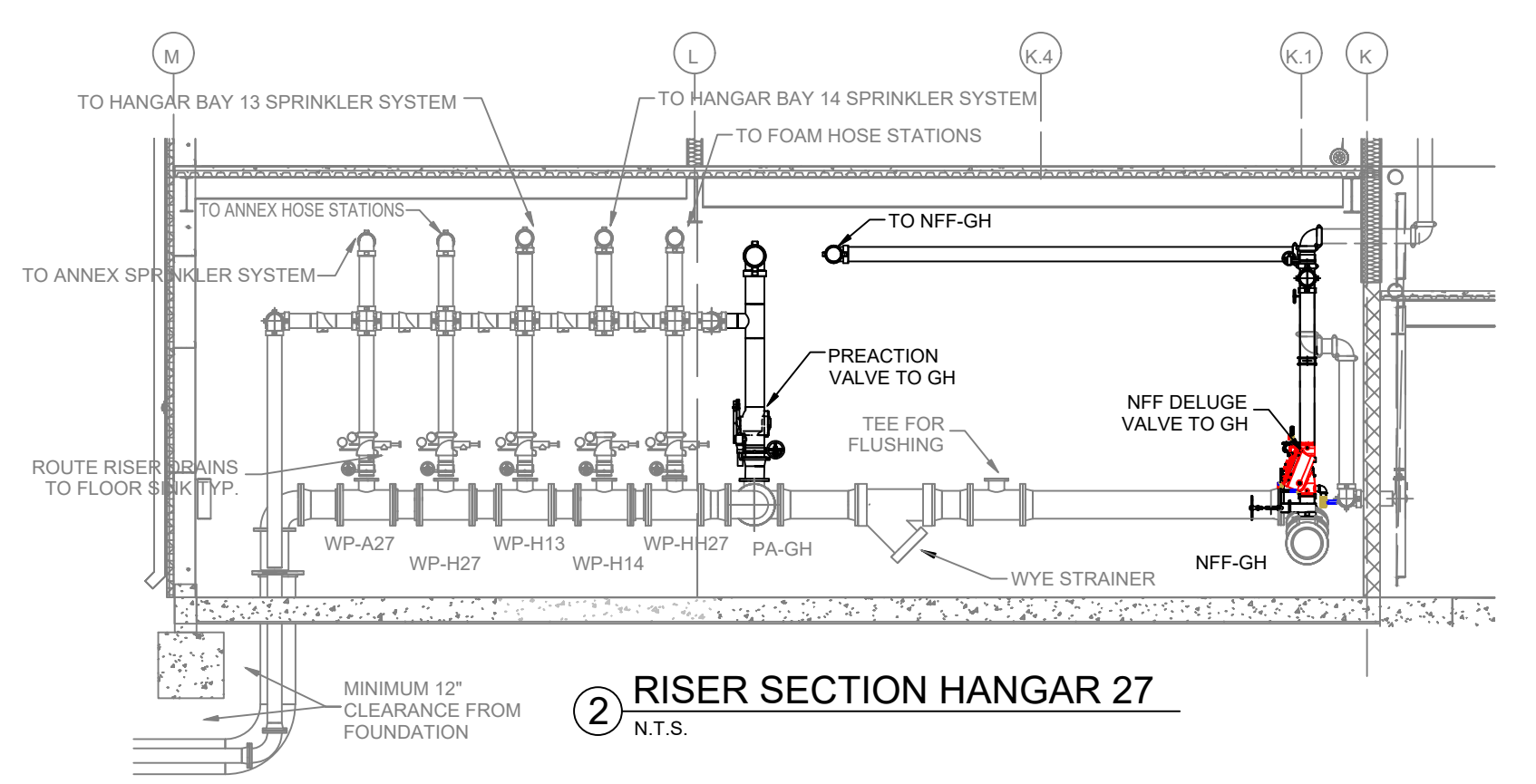
- FIRE PROTECTION GENERAL NOTES**
- MATERIAL & WORKMANSHIP FOR FIRE PROTECTION SYSTEM SHALL BE DESIGNED, INSTALLED, & TESTED IN ACCORDANCE WITH N.F.P.A. #13 2019 EDITION AND LOCAL FIRE MARSHAL'S REQUIREMENTS.
 - ALL FITTINGS & DEVICES SHALL BE UL LISTED.
 - 1" PIPE SHALL BE GRADE "A" GALVANIZED STEEL, SCH 40 PIPE PER ASTM A53. FITTINGS SHALL BE CLASS # 150 MALLEABLE IRON PATTERN ANSI B 16.4.
 - PIPE 1 1/2" & 2" SHALL BE GRADE "A" GALVANIZED STEEL SCH. 10 WITH ROLL-GROOVED ENDS. FITTINGS SHALL BE GALVANIZED INSTALLATION READY TYPE.
 - PIPE 2 1/2" & LARGER SHALL BE GRADE "A" GALVANIZED STEEL SCH. 10 WITH ROLL-GROOVED ENDS. FITTINGS TO BE GALVANIZED VICTAULIC FIRELOCK.
- ✓ DENOTES APPROXIMATE LOCATION OF PIPE HANGERS. PIPE TO BE HUNG USING 3/8" TOP BEAM CLAMPS, ANGLE CLIPS, WASHERS & WASHERS WITH CLEVIS RING HANGERS & ALL THREAD ROD. HANGERS DESIGNED, SPACED AND INSTALLED IN ACCORDANCE WITH N.F.P.A. #13.
- APPROPRIATE SIGNS SHALL BE INSTALLED ON ALL VALVES, DRAINS, INSPECTOR'S TEST, ETC., INCLUDING HYDRAULIC PLAQUE ON RISER.
- HYDRAULIC DESIGN CRITERIA SHALL BE 0.17/15,000 ft²
- NOTE:
DRY PIPE SYSTEMS, BRANCH LINES SHALL BE PITCHED AT LEAST 1/2" PER 10 FT. MAINS SHALL BE PITCHED AT LEAST 1/4" PER 10 FT.
- NOTE:
SYSTEMS ARE DESIGNED TO EXTRA HAZARD GROUP 1, WHICH WOULD NORMALLY BE A DENSITY AREA OF 0.30 GPM/SQ. FT. OVER THE MOST DEMANDING 2500 SQ. FT. NFPA 13 2016.4, FIGURE 11.2.3.1.1. ALLOWS ANY POINT ON THE RH1 CURVE TO BE USED. IN THIS CASE 0.249 GPM/SQ. FT. OVER 3000 SQ. FT. THIS AREA OF OPERATION CAN THEN BE REDUCED BY 20% WHEN USING HIGH TEMP HEADS PER 11.2.3.2.6. THEN THE REMOTE AREA IS INCREASED BY 30% DUE TO THE DRY SYSTEM. FINAL DENSITY AREA IS 0.249/3705.

SPRINKLER HEAD LEGEND

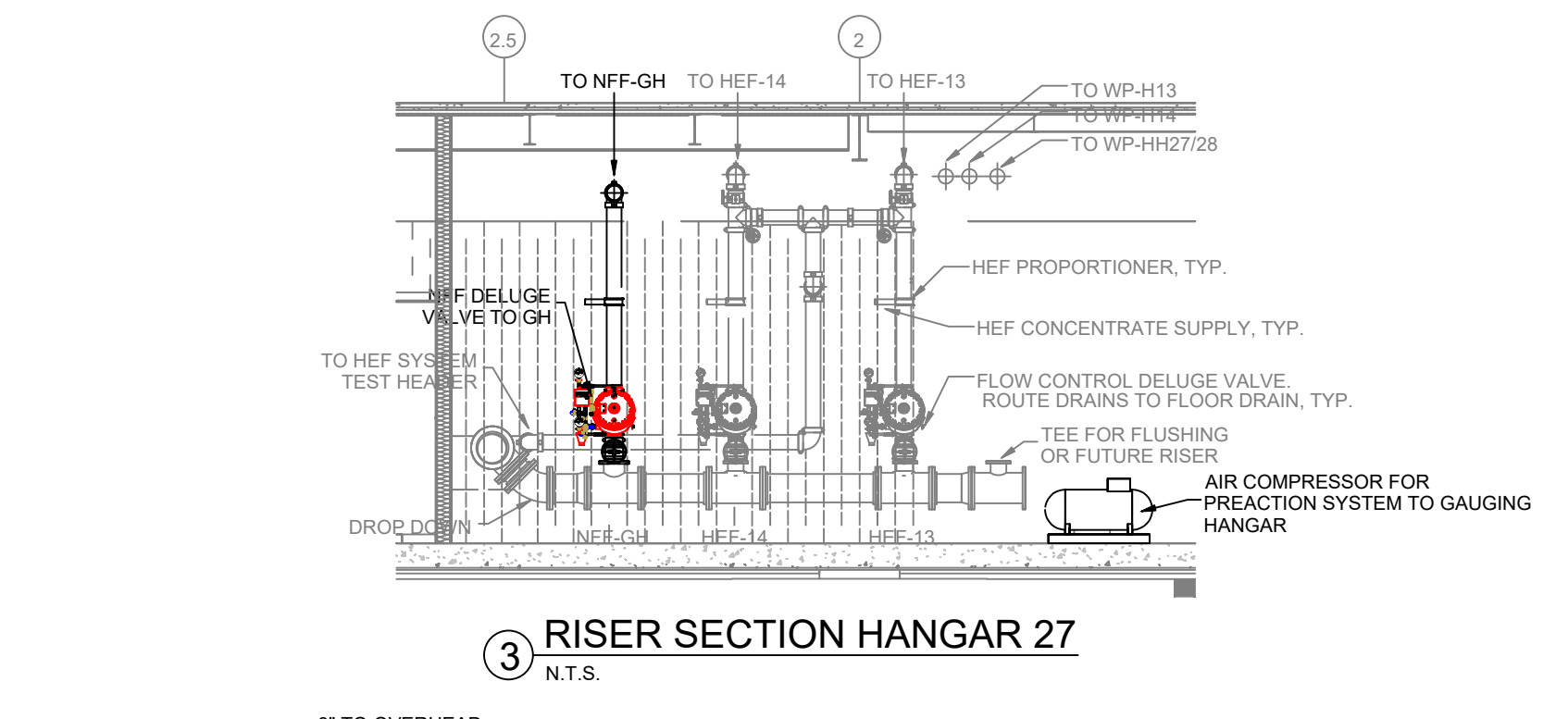
SYM	CONT	POSITION	FINISH	TEMP	K	NPT	SIN	NFG	MODEL #
○ 186	LPR		BRASS	200	5.60	1/2"	TY313	TYCO	TY-FRB
◁ 110	PCND		BRASS	200	2.80	1/2"	V2801	VICTAULIC	FL-GR



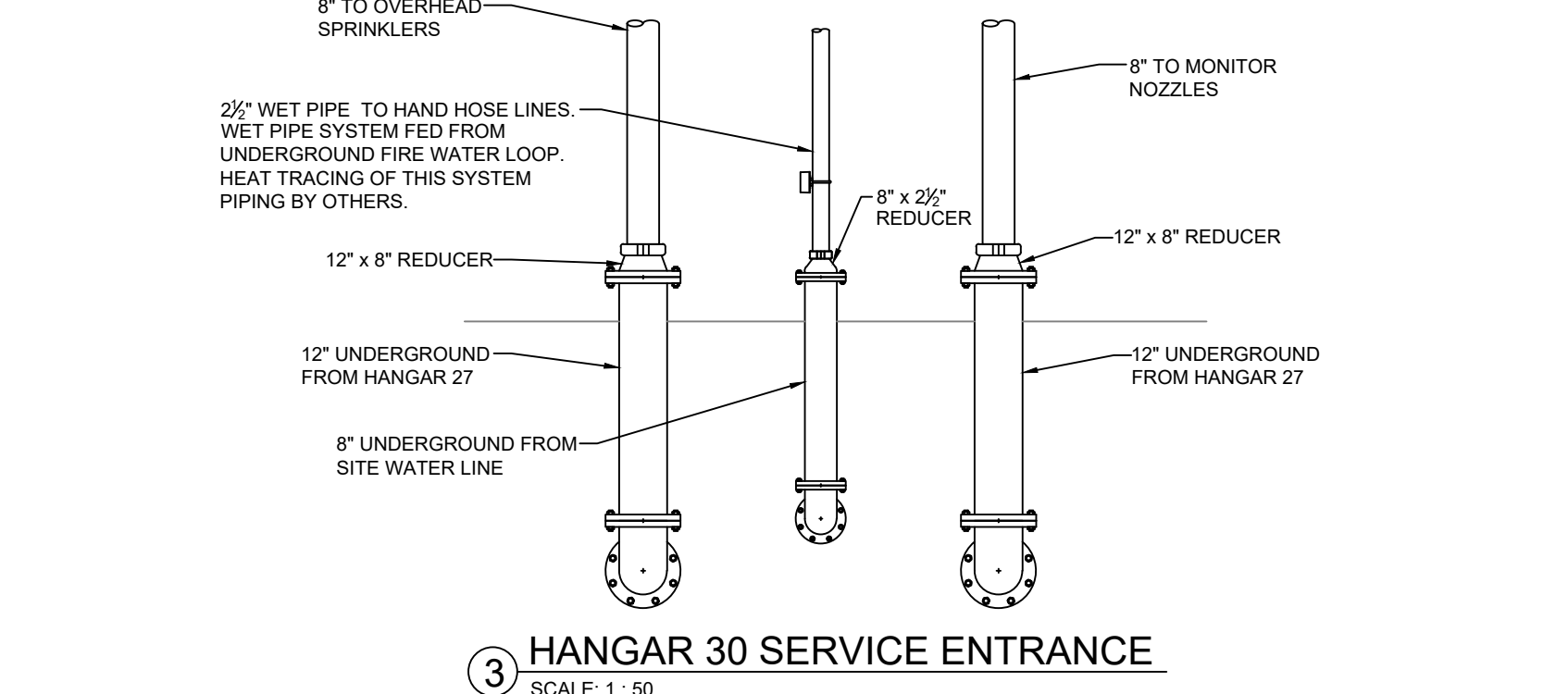
1 ENLARGED FIRE PROTECTION ROOM HANGAR 27
N.T.S.



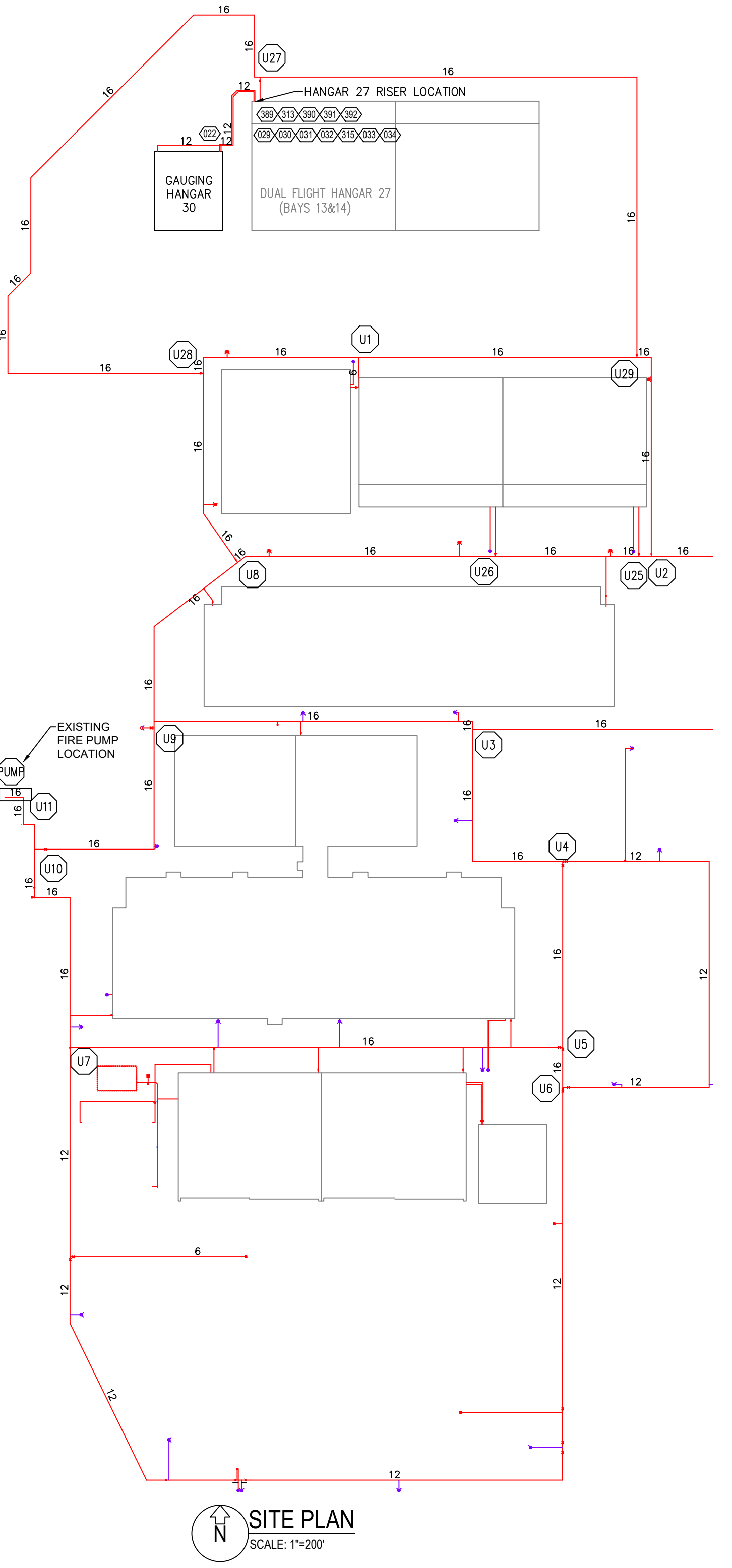
2 RISER SECTION HANGAR 27
N.T.S.



3 RISER SECTION HANGAR 27
N.T.S.



3 HANGAR 30 SERVICE ENTRANCE
SCALE: 1:50



SITE PLAN
SCALE: 1"=20'

#	DATE	BY	REVISION	DESCRIPTION
1	7-2-2024	DS	DS	Review Comments

30 - GAUGING HANGAR #2
AIRBUS FAL USA
MOBILE, AL