

Crook County Justice Center

260 NW 2ND STREET
PRINEVILLE, OREGON 97754

BUILDING RENDER



PROJECT INFORMATION

DESCRIPTION:
NEW CIRCUIT COURTS, SHERIFF'S OFFICE & HOLDING WITH ADMIN OFFICES THROUGHOUT.

OCCUPANCY TYPE: A NON-SEPARATED
BUSINESS (B), ASSEMBLY (A-3), INSTITUTIONAL (I-3)
CONDITION 5

CONSTRUCTION TYPE:
II-B

LEGAL DESCRIPTION:
TAX LOTS 900 (LOTS 1, 2, &3), 1200 (LOTS 4, 5, W. 13'6") & 1400 (E. 67', LOT 6)

ZONING:
C1 COMMERCIAL

BUILDING AREA: 67,290 SQUARE FEET

SUBMISSION DESCRIPTION:
DESIGN PACKAGE A "DP-A" INCLUDES MAIN UNDERGROUND UTILITIES, STRUCTURAL, AND FOUNDATION PLANS

DESIGN PACKAGE B "DP-B" WILL BE SUBMITTED AS A DEFERRED SUBMITTAL WILL INCLUDE THE REST OF THE BUILDING SYSTEMS; ARCHITECTURAL, INTERIORS, MECHANICAL, ELECTRICAL, PLUMBING, TELECOM, AND FINITE STRUCTURAL DETAILS.

OTHER DEFERRED SUBMITTALS:

- GEO-PIER DESIGNS
- FIRE ALARM
- ROOF JOISTS
- FIRE SUPPRESSION
- RAISED ACCESS FLOORING
- CLADDING SYSTEM
- CURTAIN WALL SYSTEM

PROJECT TEAM

OWNER:
CROOK COUNTY ADMINISTRATION
300 NE THIRD STREET
PRINEVILLE, OREGON 97754
PHONE: (541) 447-6555
CONTACT: BRIAN BARNEY

ARCHITECT:
PINNACLE ARCHITECTURE, INC
960 SW DISK DRIVE, SUITE 101
BEND, OREGON 97702
PHONE: (541) 388-9897
CONTACT: BRIANA MANFRASS

CIVIC SPECIALIST:
KMB ARCHITECTS
906 COLUMBIA ST. SW, SUITE 400
OLYMPIA, WA 9850
PHONE: (360) 528-2762
CONTACT: BILL VALDEZ

STRUCTURAL:
TK15C
616 1ST AVENUE, SUITE 500
SEATTLE, WA 98104
PHONE: (206) 596-4400
CONTACT: JASON TORNUJIST

CIVIL & LANDSCAPE:
HHPR, INC.
250 NW FRANKLIN AVE, SUITE #404
BEND, OR 97703
PHONE: (541) 318-1161
CONTACT: NICOLAS SPEROS

MEP:
PAE ENGINEERS
1501 EAST MADISON STREET, SUITE 300
SEATTLE, WA 98122
PHONE: (503) 226-2921
CONTACT: BRANDON WATT

BUILDER (CMGC):
KIRBY NAGELHOUT CONSTRUCTION COMPANY
63049 LOWER MEADOW DRIVE
BEND, OR 97701
PHONE: 541 389 7119
CONTACT: MIKE CLUSTER

APPLICABLE CODES

GENERAL

PLANNING DEPT: CITY OF PRINEVILLE
BUILDING DEPT: CROOK COUNTY
FIRE DEPT: CITY OF PRINEVILLE

REFERENCE CODES

CURRENT OSSC OREGON STRUCTURAL SPECIALTY CODE
(WITH OREGON AMENDMENTS) 2019

CURRENT OEESC OREGON ENERGY SPECIALTY CODE
(WITH OREGON AMENDMENTS) 2021

CURRENT OPSC OREGON PLUMBING SPECIALTY CODE
(WITH OREGON AMENDMENTS) 2021

CURRENT OESC OREGON ELECTRICAL SPECIALTY CODE
(WITH OREGON AMENDMENTS) 2021

CURRENT OESC OREGON MECHANICAL SPECIALTY CODE
(WITH OREGON AMENDMENTS) 2019

CURRENT FIRE CODE
(WITH OREGON AMENDMENTS) 2019

GENERAL REFERENCES

A117.1 ICC/ANSI A1178.1-2017
ACCESSIBLE AND USEABLE BUILDINGS AND FACILITIES
AMERICAN NATIONAL STANDARD, 2017 EDITION,
INTERNATIONAL CODE COUNCIL, INC.
NFPA NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)
STANDARDS REFERENCED IN OUR STATE'S STATUTES AND REGULATION

BUILDING DATA

BUILDING OCCUPANCY DATA (NON-SEPARATED USE: PER 503.3)
OCCUPANCY CLASSIFICATION: **A-3 NON-SEPARATED GOVERNING OCCUPANCY "B", FOR LOCK UP FACILITY TO MEET REQUIREMENTS OF SECTION 304.2**

A-3
B

CONSTRUCTION TYPE (PER 602): **TYPE IIB**
CONSTRUCTION CATEGORY: **III**

BUILDING LIMITATIONS
BASE ALLOWABLE FLOOR AREA (TABLE 503.2) **38,000 SF WITH S1 (FIRE SPRINKLER)/FLOOR**
LARGEST FLOOR AREA **26,678 SF GROSS TOTAL**

HEIGHT: **75' MAXIMUM**
STORIES: **3 ALLOWED**

ACTUAL BUILDING BREAKDOWN:

OCCUPANCY GROUP	
Level	Area
LEVEL 01	26,678 SF
LEVEL 02	20,635 SF
LEVEL 03	19,546 SF
ROOF - TOP OF BEAM PERIMETER	390 SF
GRAND TOTAL	67,248 SF

ACTUAL BUILDING HEIGHT **3 STORY WITH ROOF/MECH. ACCESS (64' HEIGHT TOP OF ROOF ACCESS)**

SPRINKLERS LEGEND

Ja	Count	Manuf	DESCRIPTION	Sprinkler SIN	K-Factor	THREAD SIZE	FINISH	Response	Temp Rating	Coverage
Ø	94	Tyco	EXPOSED UPRIGHT SPRINKLER	TY3131	5.6	1/2"	BRASS	Quick	155 °F	Standard
●	561	Tyco	PENDANT BELOW CEILING SPRINKLER	TY3231	5.6	1/2"	CHROME	Quick	155 °F	Standard
IN	21	TYCO	PENDANT INSTITUTIONAL BELOW CEILING SPRINKLER	TY3281	5.6	1/2"	CHROME	Quick	155 °F	Standard
⊥	4	Tyco	HORIZONTAL SIDEWALL SPRINKLER	TY3331	5.6	1/2"	BRASS	Quick	155 °F	Standard
DP	11	Tyco	DRY TYPE PENDANT BELOW CEILING SPRINKLER	TY3338	5.6	1"	CHROME	Quick	155 °F	Standard
DP/EC	6	Tyco	DRY TYPE EC PENDANT BELOW CEILING SPRINKLER	TY5238	11.2	1"	CHROME	Quick	155 °F	Extended
Grand total: 697										

PLANS NOTE

THESE PLANS CONFORM TO THE CONTRACT DOCUMENTS WHICH INCLUDE THE OWNER/CONTRACTOR AGREEMENT, THE DRAWINGS, AND ALL ADDENDA AND MODIFICATIONS ISSUED BY THE ARCHITECT PER CONTRACT DRAWINGS DATED [REDACTED]

LLC SCOPE OF WORK

WORK SHALL BEGIN AT THE COUPLING LOCATED APPROXIMATELY 1'-0" A.F.F. AND ALL SUPERVISION, LABOR, EQUIPMENT, SUPPLIES, MATERIALS NECESSARY TO PROVIDE A COMPLETE FIRE SPRINKLER SYSTEM FOR THE PROJECT. THIS EXCLUDES THE FIRE PROTECTION BACKFLOW PREVENTER, AND THE REQUIRED FIRE DEPARTMENT CONNECTIONS.

UNDERGROUND NOTES

FLUSHING NOTE:

UNDERGROUND TO BE FLUSHED PRIOR TO CONNECTION TO OVERHEAD SYSTEM CONNECTION

FIRE SERVICE UGVNOTE:

UNDERGROUND MATERIAL AND INSTALLATION BY OTHERS.

SHOWN FOR REFERENCE AND HYDRAULIC CALCULATIONS ONLY

UNDERGROUNDVNOTES

1. SYSTEM TO BE INSTALLED, TESTED, AND FLUSHED PER NFPA 13 & 24 STANDARDS AND LOCAL REQUIREMENTS.
2. UNDERGROUND PIPING TO BE HYDROSTATICALLY TESTED AT 200 PSI FOR 2 HOURS.
3. NUTS, BOLTS, RODS, WASHERS, CLAMPS, AND OTHER RESTRAINING DEVICES ON ALL UNDERGROUND PIPING ARE TO BE COATED WITH BITUMINOUS OR OTHER APPROVED CORROSION RETARDING MATERIAL.
4. BEFORE BACKFILLING A COVER INSPECTION IS REQUIRED ON ALL UNDERGROUND PIPING AS PER LOCAL AHJ REQUIREMENTS.
5. UNDERGROUND PIPING TO HAVE A MINIMUM OF 4'-6" GROUND COVER.
6. THRUST BLOCKS TO BE INSTALLED PER NFPA 13.

FIRE SPRINKLER NOTES

1. MAX. SPRINKLER SPACING FOR STANDARD SPRAY UPRIGHT & PENDENT SPRINKLERS IS 15', 225 FT² FOR LIGHT HAZARD.
2. MAX. SPRINKLER SPACING FOR STANDARD SPRAY UPRIGHT & PENDENT SPRINKLERS IS 15', 130 FT² FOR ORDINARY HAZARD.
3. STANDARD SPRAY UPRIGHT & PENDENT SPRINKLER DEFLECTORS SHALL BE LOCATED BETWEEN 1" & 6" BELOW STRUCTURAL MEMBERS FOR OBSTRUCTED CONSTRUCTION.
4. STANDARD SPRAY UPRIGHT & PENDENT SPRINKLER DEFLECTORS SHALL BE LOCATED BETWEEN 1" & 12" BELOW FINISH CEILING FOR UNOBSTRUCTED CONSTRUCTION.
5. STANDARD SPRAY UPRIGHT, PENDENT, AND SIDEWALL SPRINKLERS SHALL BE INSTALLED IN ACCORDANCE WITH THE OBSTRUCTIONS RULES OF NFPA 13, 8.6.5 & 8.7.5.
6. SPRINKLERS SHALL BE PERMITTED TO BE OMITTED FROM CEILING POCKETS WHERE THE REQUIREMENTS OF NFPA 13, 8.6.7.2 ARE MET.

GENERAL NOTES

1. FIRE PROTECTION SYSTEM TO COMPLY WITH NFPA 13 2016, AND ALL APPLICABLE STATE AND LOCAL CODES. ALL WIRING AND MONITORING OF ALARMS AND CLEANING AND PAINTING OF PIPE IS BY OTHERS.
2. PROVIDE STOCK OF EXTRA SPRINKLERS IN ACCORDANCE WITH NFPA [REDACTED] 9.
3. ALL WIRING SHALL BE ACCOMPLISHED UNDER THE ELECTRICAL CONTRACT. COORDINATE ALL ELECTRICAL ITEMS WITH THE ELECTRICAL CONTRACTOR AND INSURE PROPER COORDINATION.
4. ALL DRILLING AND BORING OF HOLES SHALL BE DONE IN STRICT ACCORDANCE WITH THE STRUCTURAL ENGINEERS REQUIREMENTS. DO NOT UNDER ANY CIRCUMSTANCES CUT, MODIFY OF OTHERWISE MODIFY PRE-MANUFACTURED TRUSSES.
5. PIPE ROUTING SHALL BE STRICTLY ADHERED TO AND ANY ADDITIONAL OFFSETS OR FITTINGS REQUIRED FOR PROPER INSTALLATION. COORDINATION WITH OTHER TRADES, AND/OR TO MAINTAIN PROPER CLEARANCES SHALL BE PROVIDED. VERIFY EXISTING STRUCTURAL, MECHANICAL, ELECTRICAL INSTALLATIONS AND AVOID ANY/ALL OBSTRUCTIONS OR INTERFERENCES WITH FIRE PROTECTION PIPE ROUTING.
6. FIRE STOP ALL PENETRATIONS OF SMOKE/FIRE WALLS, CEILINGS, FLOORS, ROOFS, ETC. FIRE STOPPING MATERIAL SHALL BE INSTALLED PER MANUFACTURERS INSTRUCTION. ALL FIRE STOP MATERIALS SHALL LISTED AS COMPATIBLE WITH CPVC.

ACCESS PANELS TO ALL VALVES ABOVE NON-ACCESSIBLE CEILINGS AND CHASES ARE BY THE GENERAL CONTRACTOR.
7. SPRINKLER HEADS ARE TO BE COORDINATED WITH ALL EXISTING/NEW DIFFUSERS, SPEAKERS, LIGHTING FIXTURES AND CEILING SYSTEMS WHERE POSSIBLE WITHOUT ADDING ADDITIONAL SPRINKLERS.
8. VERIFY FINISH CEILING ELEVATION PRIOR TO INSTALLATION OF SPRINKLER HEADS.
9. VERIFY LOCATION AND SIZE OF ALL OBSTRUCTIONS, LIGHT FIXTURES, CABINETS, HEAT SOURCES, SOFFITS, ETC...
10. METHODS OF HANGING PIPES, HEADERS AND BRANCLINES SHALL BE IN ACCORDANCE WITH NFPA 13 AND THE HANGER CHART.
11. AUTOMATIC SPRINKLER TEMPERATURE RATINGS OF FUSIBLE ELEMENTS TO BE IN ACCORDANCE WITH NFPA 13.
12. ALL MATERIALS AND DEVICES TO BE U.L. LISTED AND/OR FM APPROVED. ALL DEVICES SHALL BE NEW AND FREE OF DEFECTS.
13. ALL SYSTEMS SHALL BE HYDROSTATICALLY TESTED AT 200 PSI FOR 2 HOURS.
14. PROVIDE A PERMANENTLY ATTACHED PLACARD / SIGNAGE STATING THE REQUIRED DESIGN CRITERIA FOR EACH HYDRAULICALLY DESIGNED SYSTEM.

15. SYSTEM PIPING TO BE OF STEEL PIPE AND IRON FITTINGS MEETING THE CRITERIA OF ASTM AND NFPA 13.
A: ALL THREADED PIPE TO BE EDDYTHREAD 40 OR APPROVED EQUAL.
B: ALL 4" AND SMALLER GROOVED PIPE TO BE EDDY FLOW OR APPROVED EQUAL.
C: ALL 6" AND LARGER GROOVED PIPE TO BE SCHEDULE 10.
D: CPVC PIPE AND FITTINGS MAY BE UTILIZED PURSUANT TO MANUFACTURERS LISTING.

16. HAZARDOUS MATERIAL SHALL BE PLACED IN A SECURE (LOCKED) AREA AT THE COMPLETION OF EACH WORK DAY.

17. ALL WORK SHALL BE INSTALLED IN A SAFE AND WORKMANLIKE MANNER. REPORT ANY UNSAFE ACTIVITY OR JOB-SITE HAZARD TO YOUR SUPERVISOR IMMEDIATELY.

18. REPORT ALL INJURIES REQUIRING MEDICAL ATTENTION THE SAME BUSINESS DAY IN WHICH THEY OCCUR.

19. SPRINKLER PIPE SIZING SHALL BE ESTABLISHED BY HYDRAULIC CALCULATIONS.

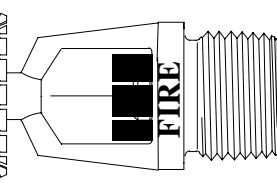
20. CONTRACTOR IS RESPONSIBLE FOR THE PROPER DESIGN AND INSTALLATION OF THE FIRE SPRINKLER SYSTEM, INCLUDING COORDINATION OF THE WORK OF OTHER TRADES.

JOB # 22-154
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CHECKED BY [REDACTED]
DATE 8:02:21 AM
REVISED

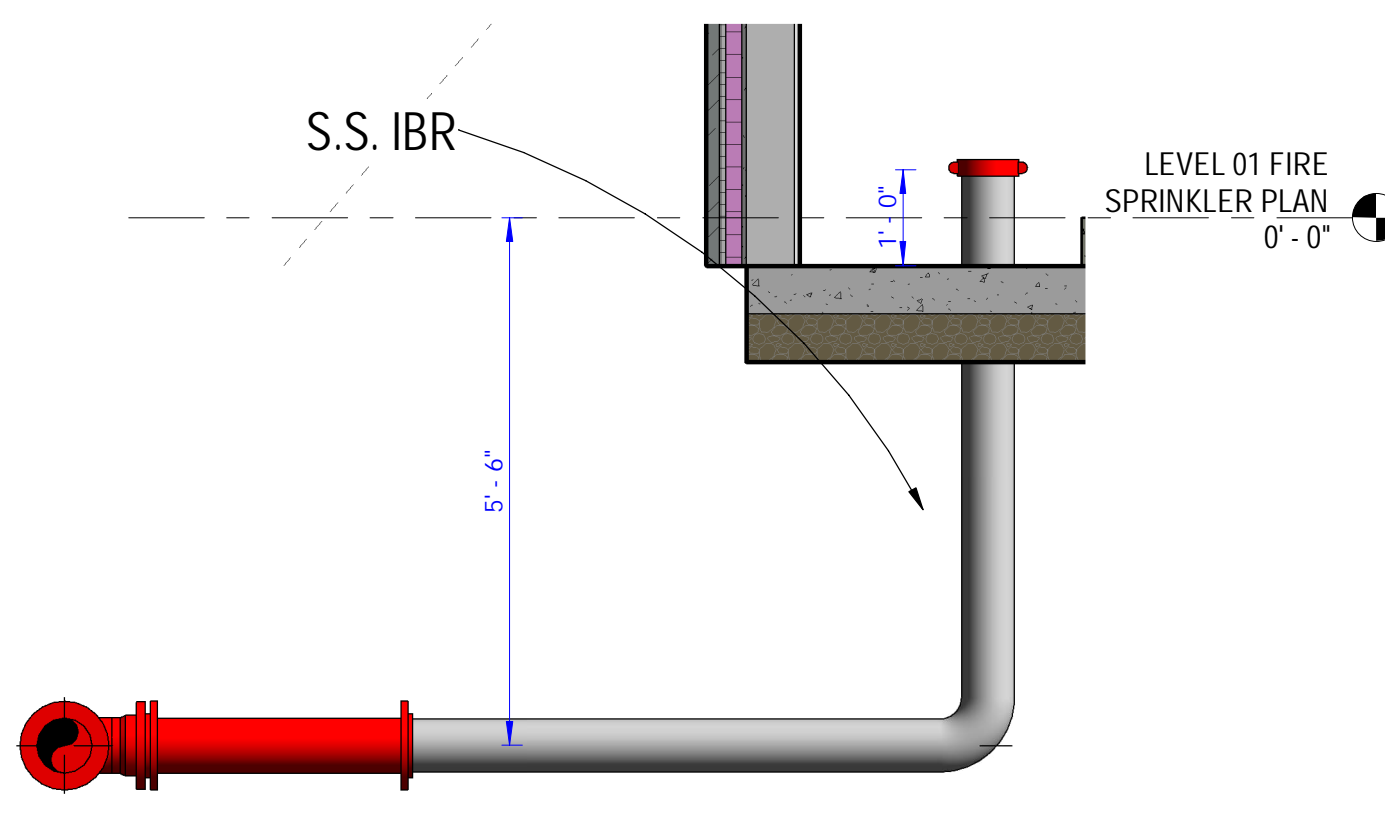
Crook County Justice Center
260 NW 2ND STREET
PRINEVILLE, OREGON 97754
COVER SHEET

C.C.B.# 179850
P.E. [REDACTED]

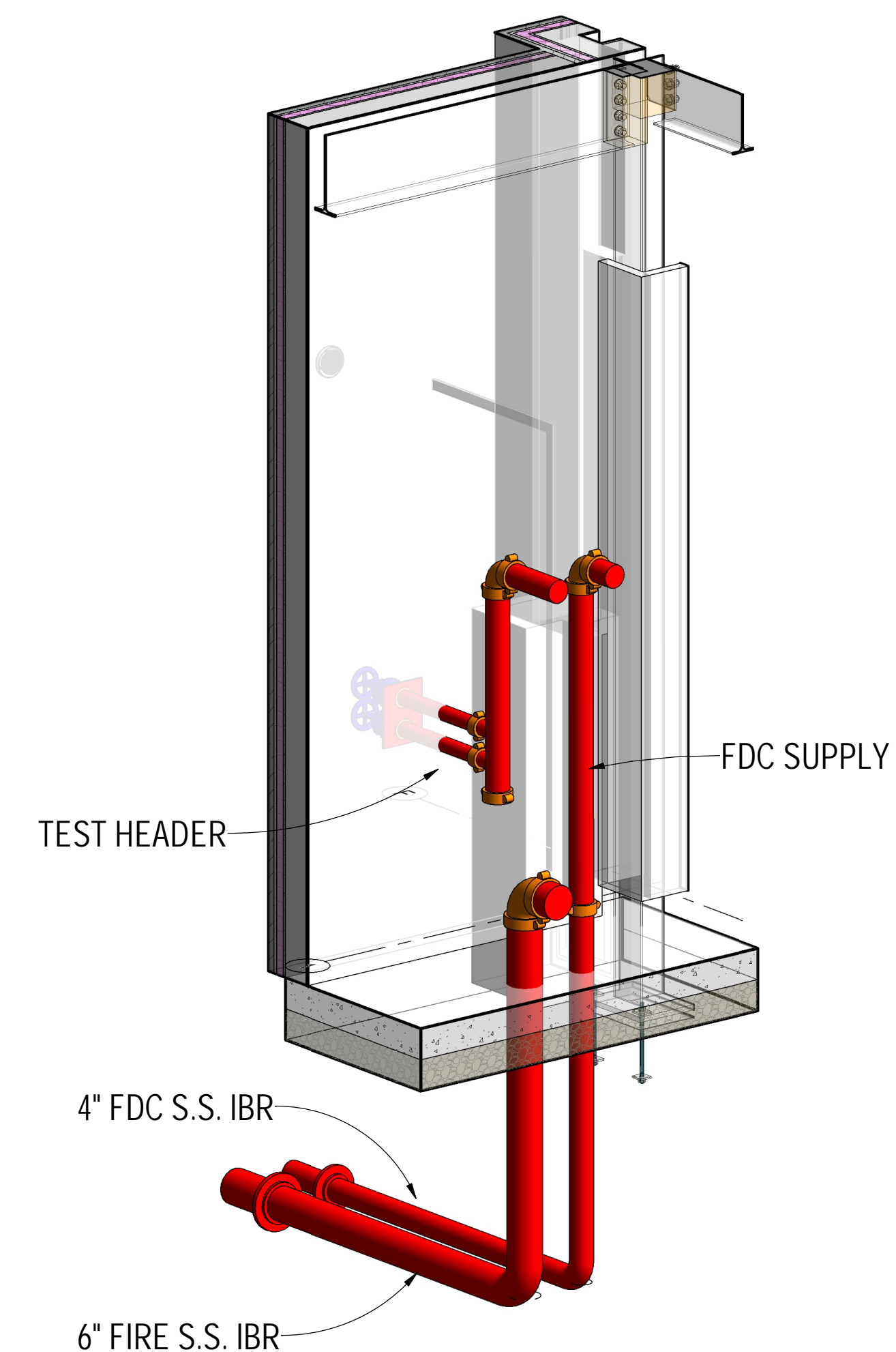
25990 ALFA MARKET RD.
BEND, OREGON 97701



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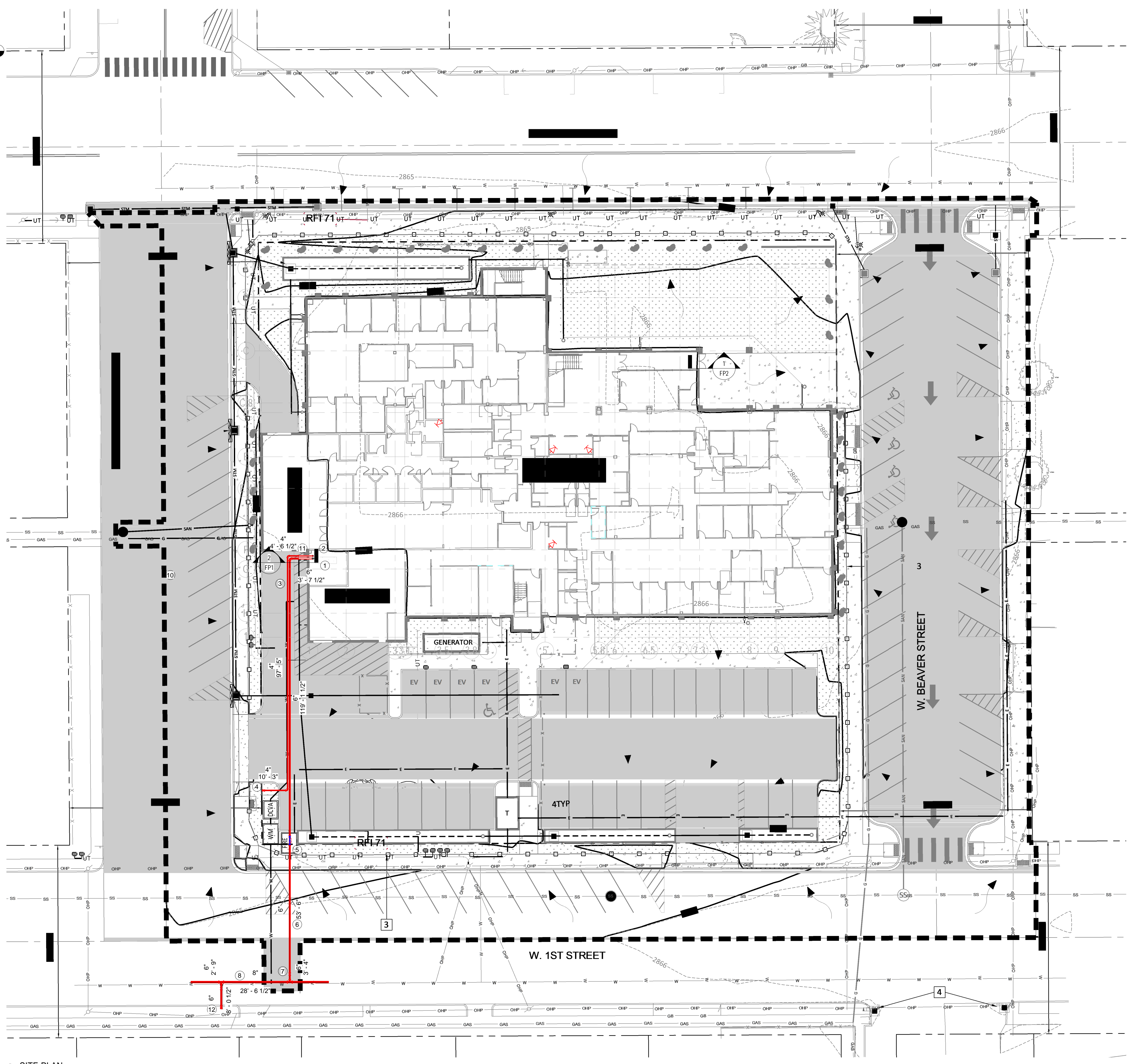


2 STUB-IN DETAIL
1/2" = 1'-0"



3 3D STUB IN DETAIL

SITE PLAN KEY	
Number	Text
1	6" FIRE RISER STUB IN
2	4" STUB-IN (REMOTE FDC)
3	4" FDC UNDERGROUND PIPING
4	REMOTE 2 WAY FDC
5	6" BACKFLOW IN VAULT
6	6" FIRELINE UNDERGROUND PIPING
7	6" GATE VALVE
8	EXISTING 8" CITY WATER MAIN
10	ELECTRIC BELL
11	S.S. IN BUILDING RISERS
12	FIRE HYDRANT



1 SITE PLAN
1" = 20'-0"

SITE PLAN PROVIDED FOR REFERENCE AND CALCULATIONS ONLY - ALL SITE UTILITIES PROVIDED AND INSTALLED BY OTHERS (REFER TO CALC ISO PLANS FOR NODE POINTS)

JOB # 22-154
DRAWN BY GERALD W. EBELING, S.E.T.
CHECKED BY [REDACTED]
DATE 8:02:27 AM
REVISED [REDACTED]

Crook County Justice Center
260 NW 2ND STREET
PRINEVILLE, OREGON 97754
SITE PLAN

C.C.B.# 179850

25990 ALFA MARKET RD.
BEND, OREGON 97701

FS SHEET

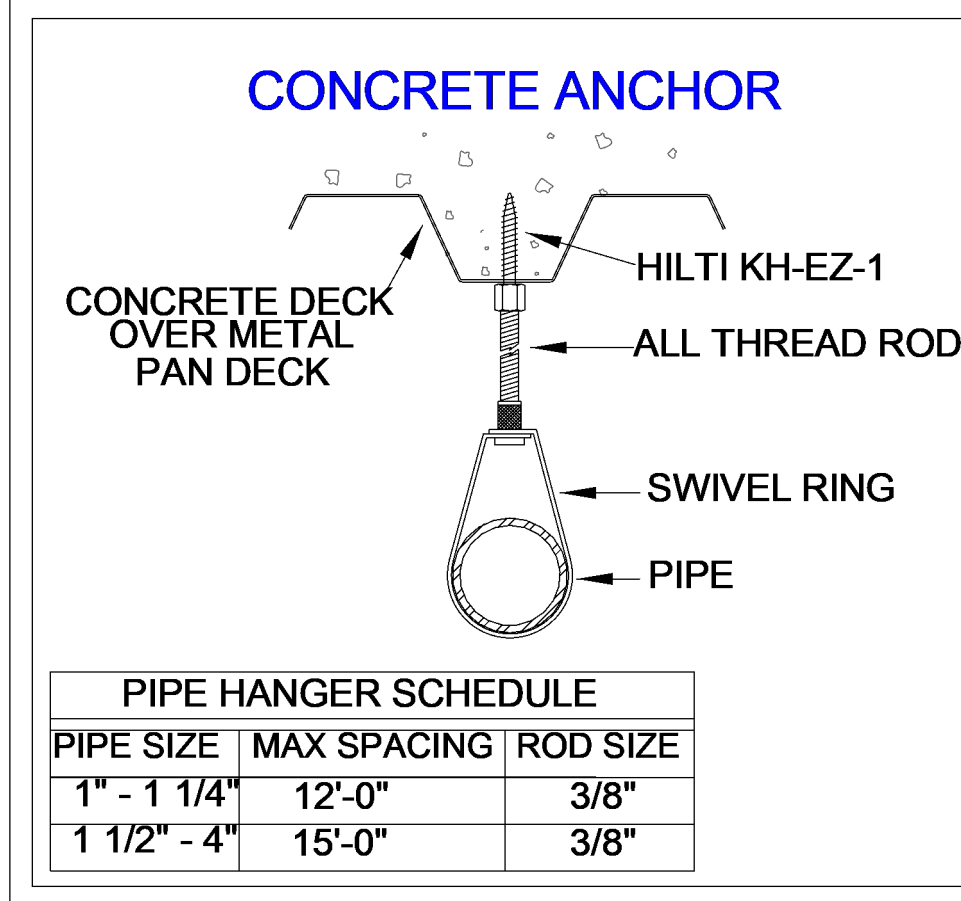
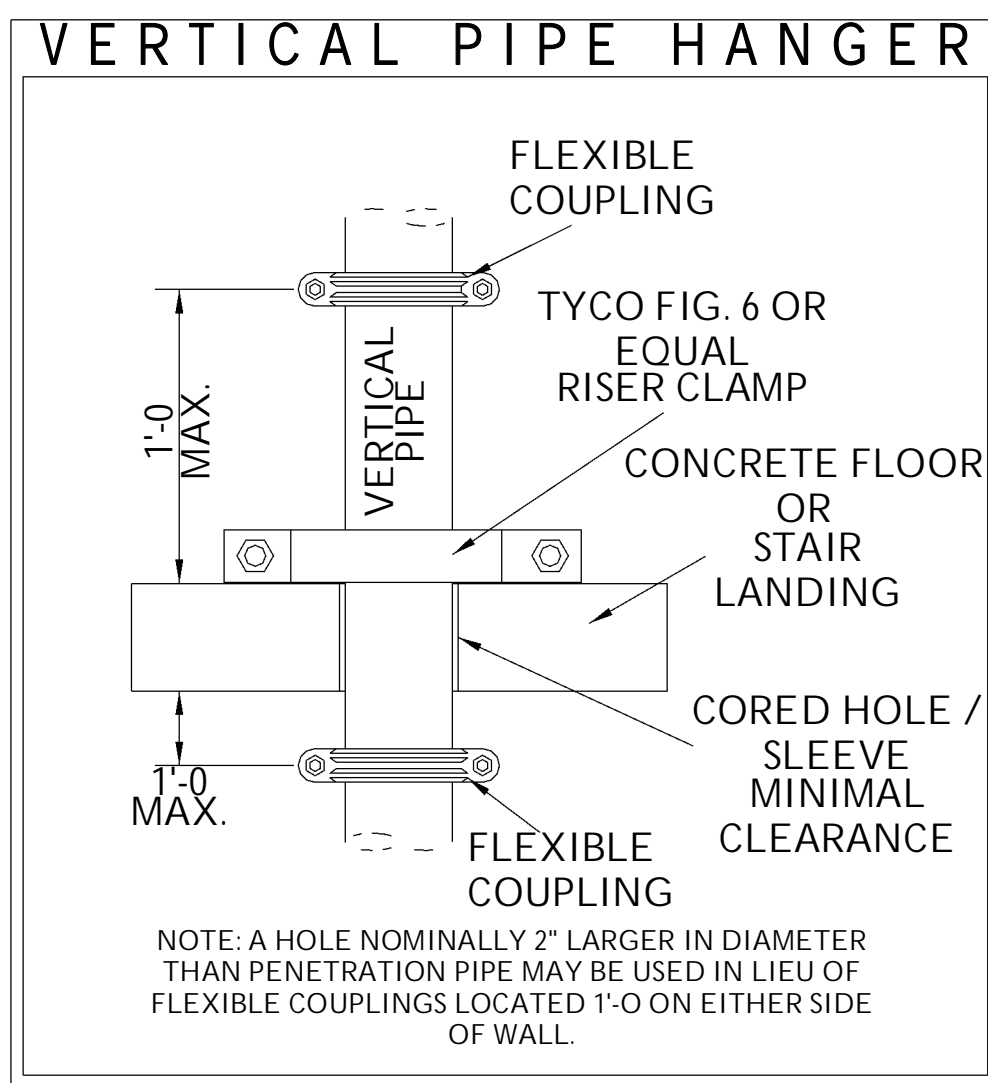
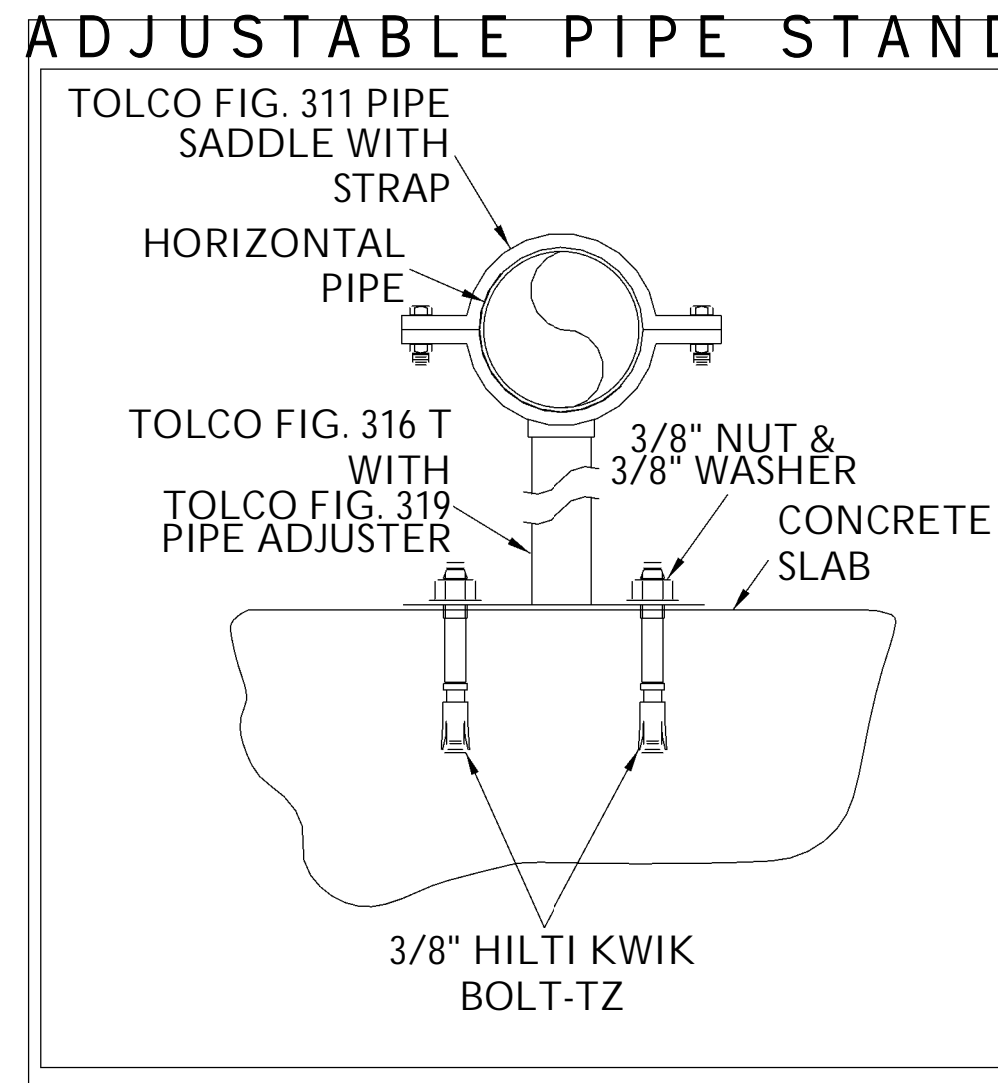
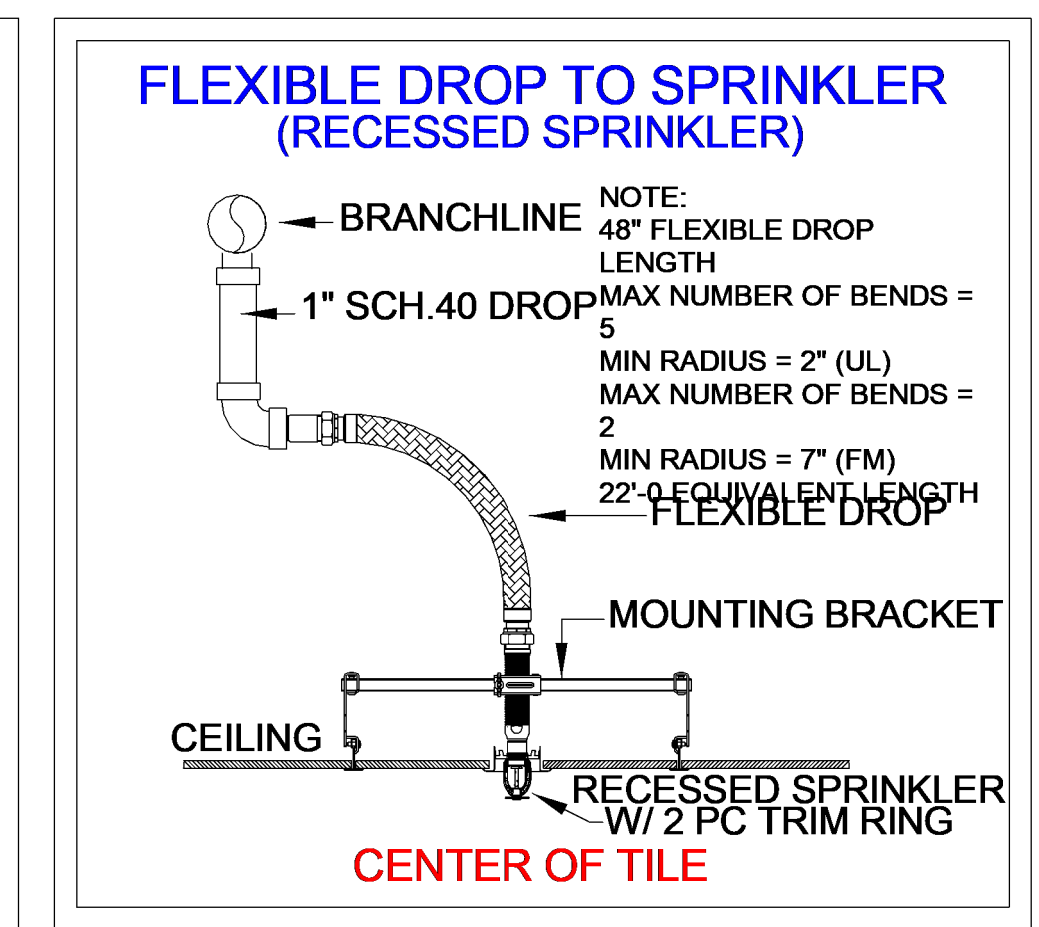
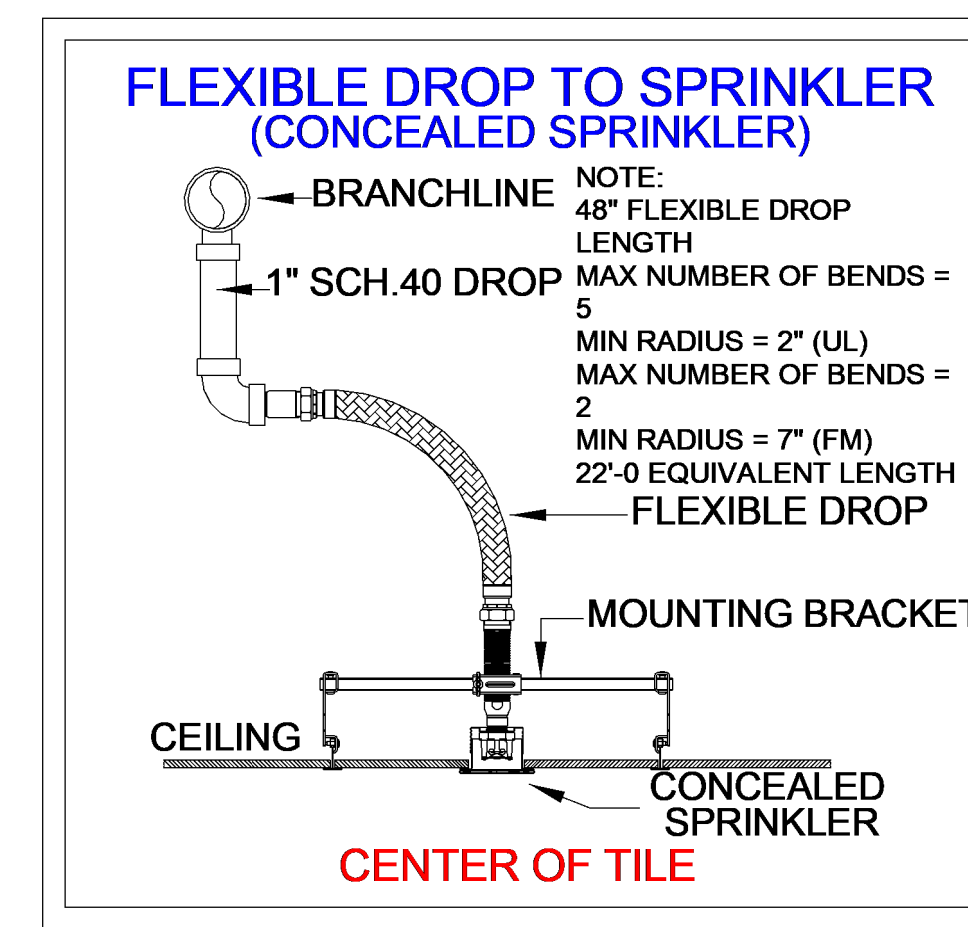
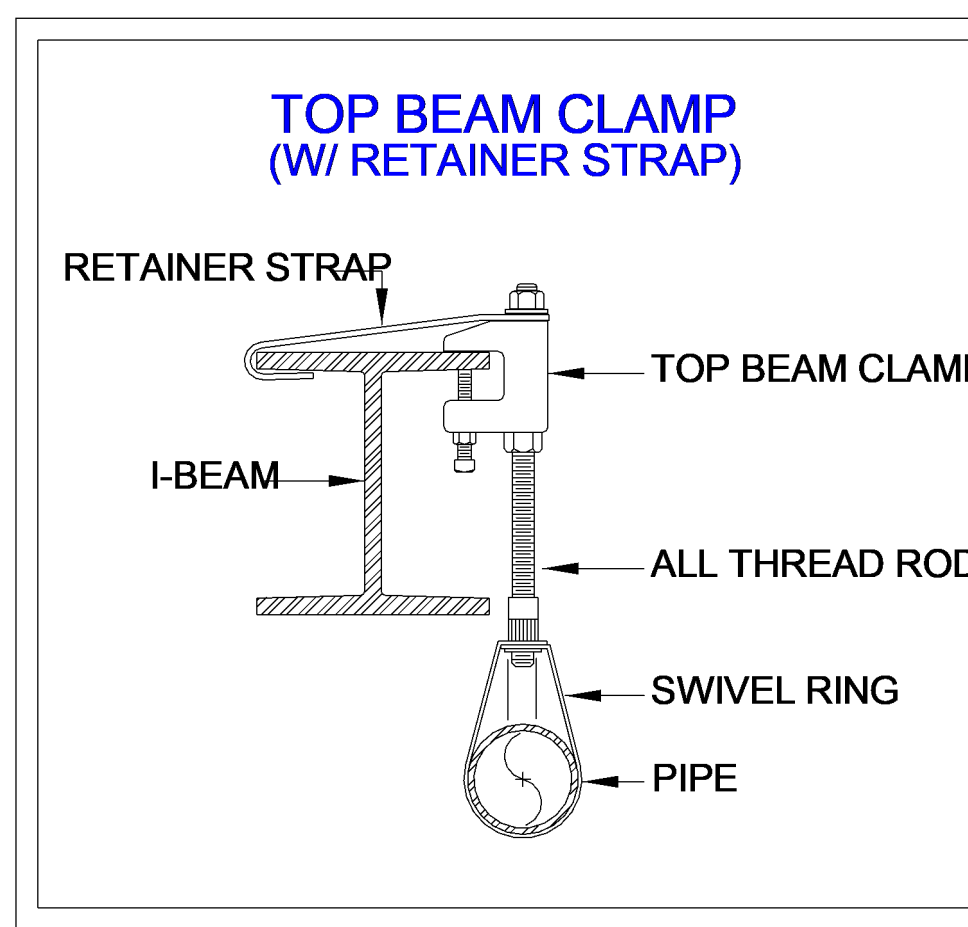
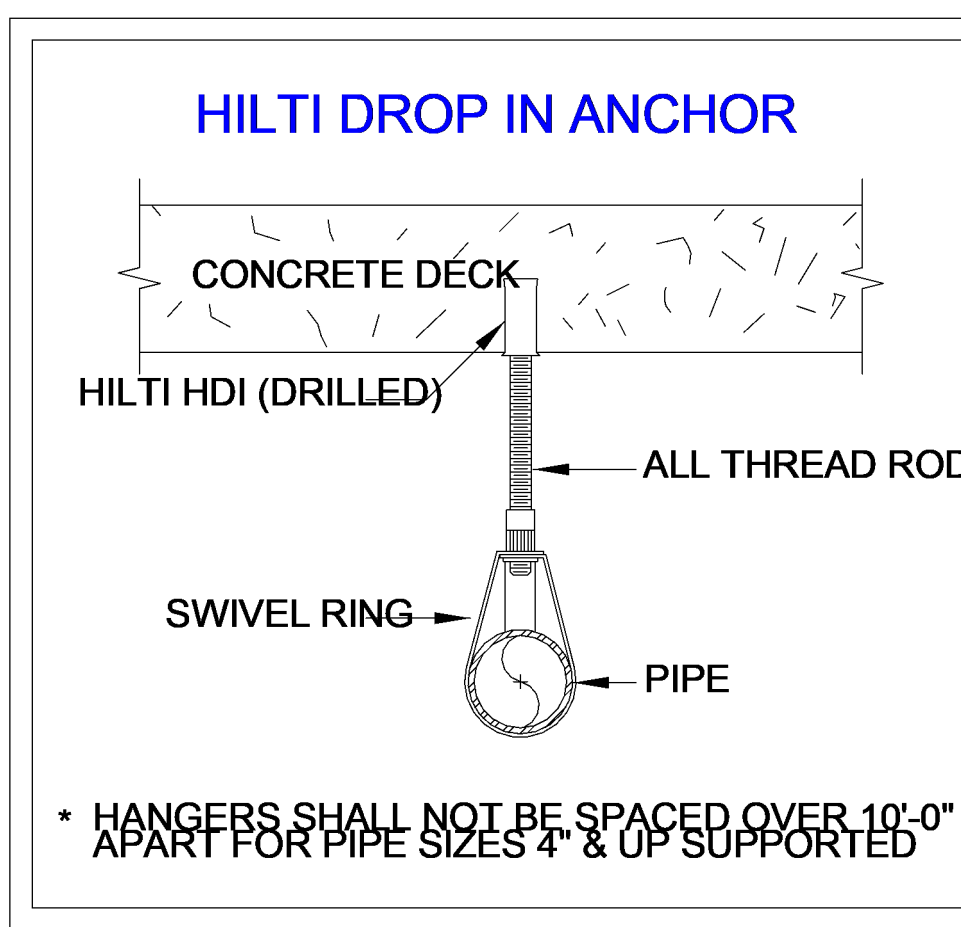
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HANGER CHART

TABLE 9.1.2.1 HANGER ROD SIZE				NFPA 13 TABLE 9.2.2.1 DISTANCE BETWEEN HANGERS									
PIPE SIZE	DIAM. OF ROD	PIPE SIZE	DIAM. OF ROD	NOMINAL PIPE SIZE (IN)	3/4	1	1-1/4	1-1/2	2	2-1/2	3	4+	
UP TO AND INCLUDING 4"	3/8"	6" AND 8"	1/2"	STEEL PIPE	N/A	12'-0"	12'-0"	12'-0"	12'-0"	12'-0"	12'-0"	15'-0"	
FIG. A9.2.3.4 DISTANCE FROM SPRINKLER TO HANGER				THREADED LIGHTWALL	N/A	12'-0"	12'-0"	12'-0"	12'-0"	12'-0"	12'-0"	N/A	
FIG. A9.2.3.4.4 DIST. FROM SPRINKLER TO HANGER >100 P.S.I.				COPPER TUBE	8'-0"	8'-0"	10'-0"	10'-0"	12'-0"	12'-0"	12'-0"	15'-0"	
SCALE: N.T.S.				CPVC	5'-6"	6'-0"	6'-6"	7'-0"	8'-0"	9'-0"	10'-0"	N/A	

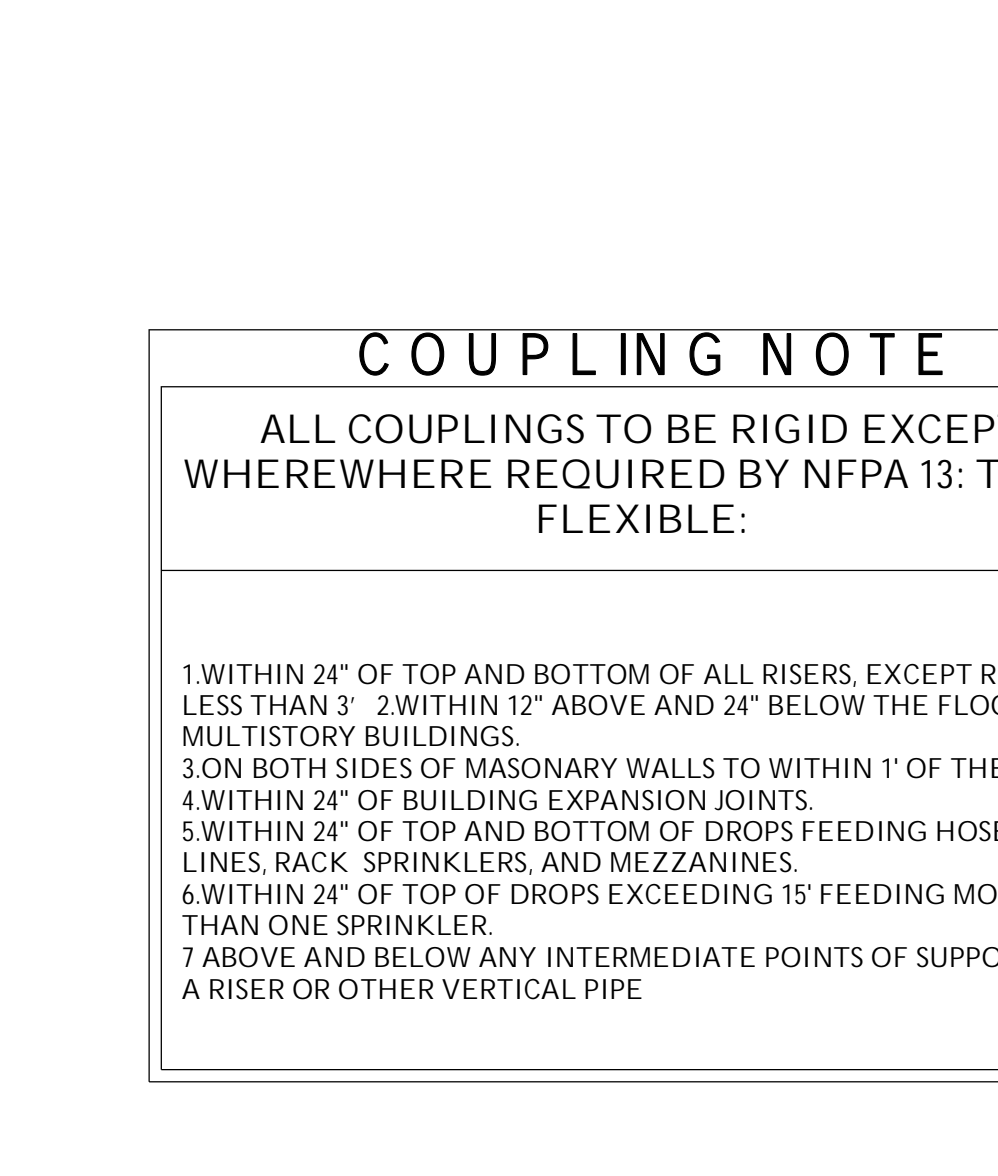
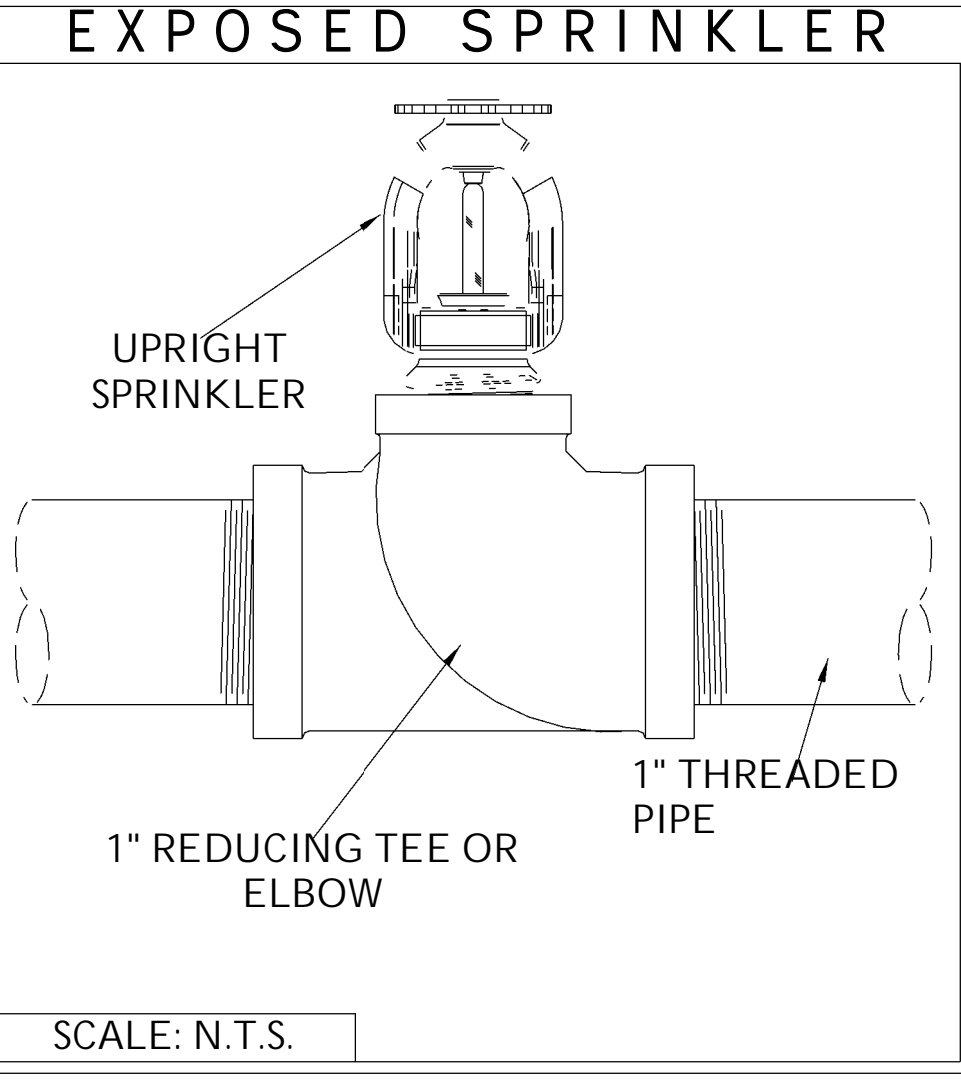
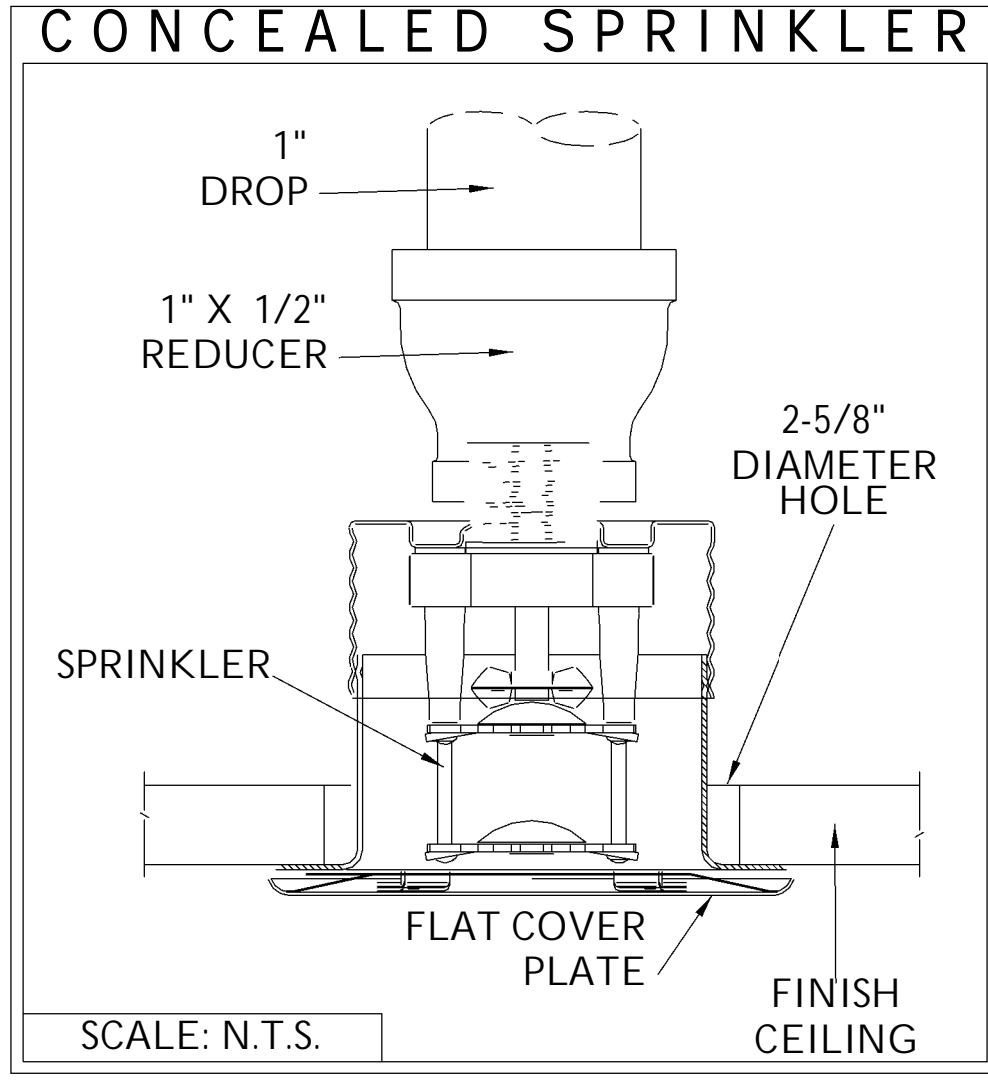
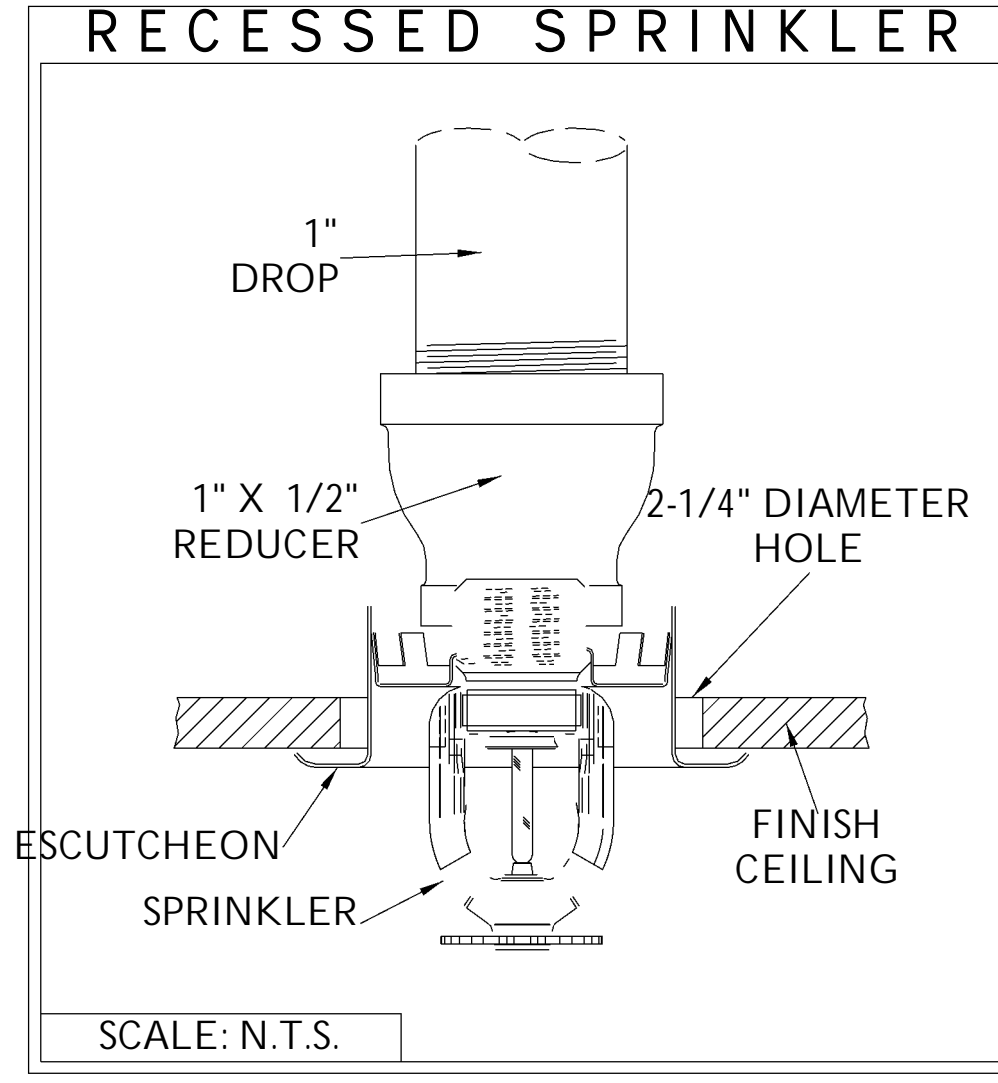
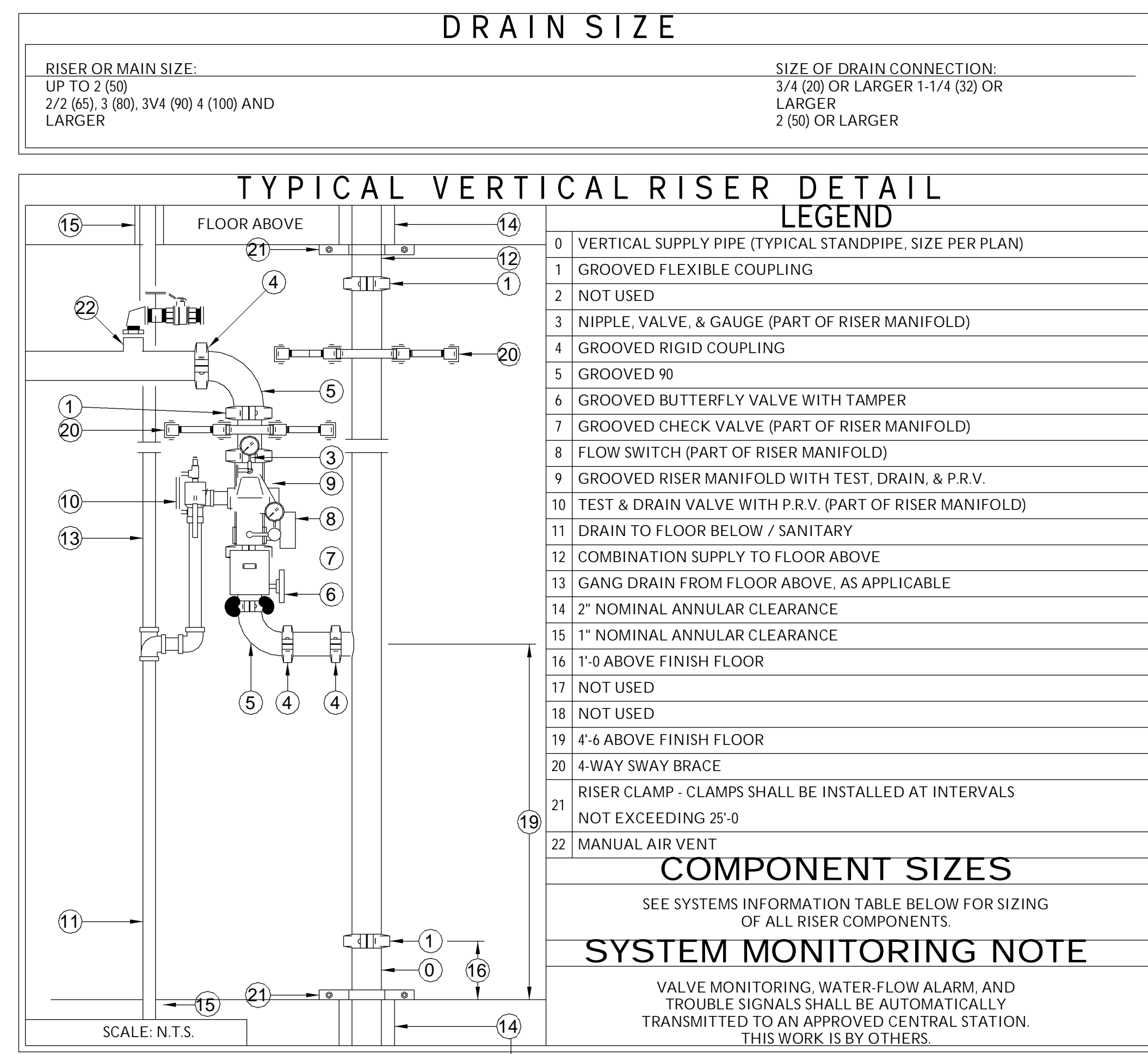
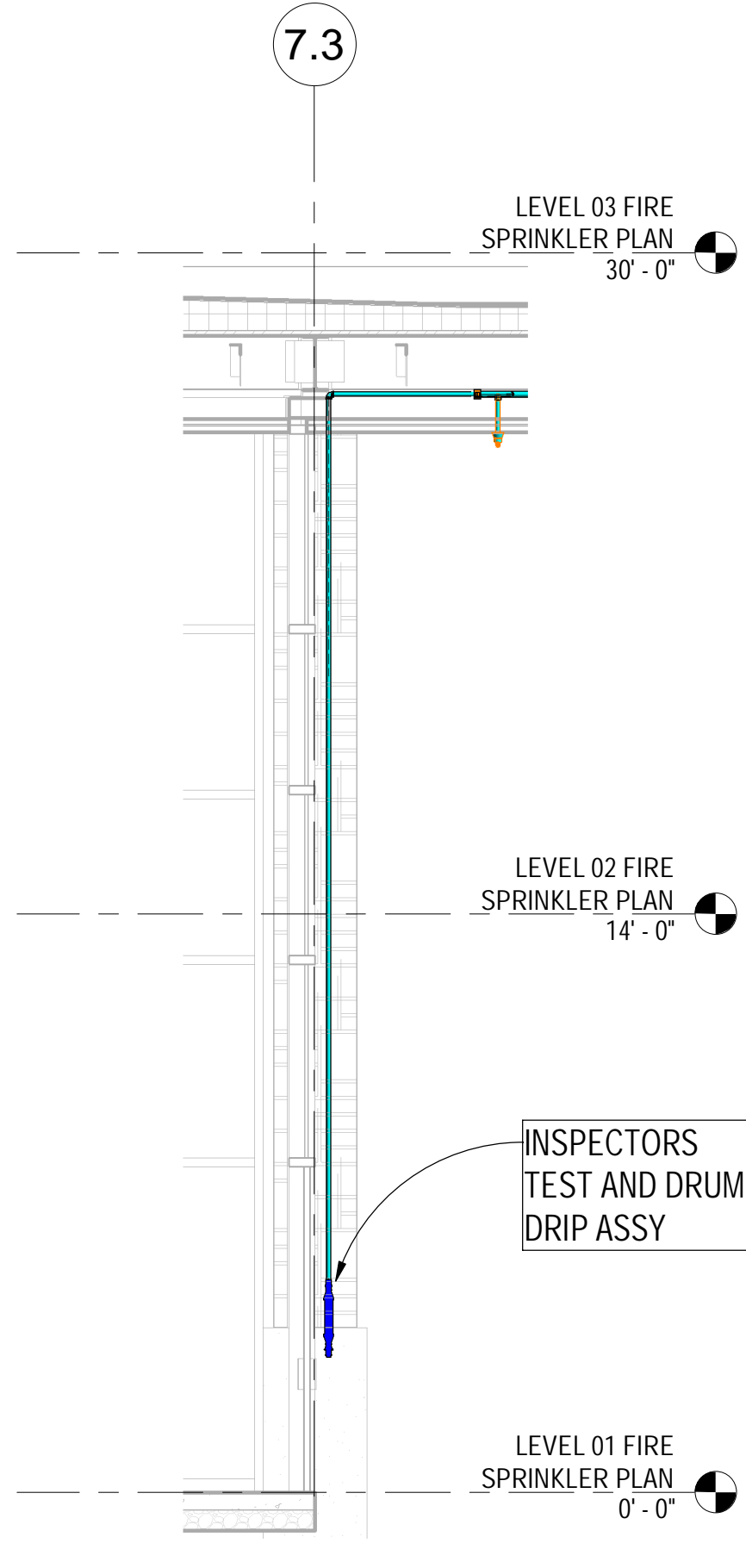


DRY SYSTEM VOLUME

Size	Inside Diameter	Schedule/Type	Length	Volume	System Classification
1"	1.049	Carbon Steel, Schedule 40	45' - 2"	2.0 gal	Fire Protection Dry
1 1/4"	1.442	Carbon Steel, Schedule 10	52' - 4 1/2"	4.4 gal	Fire Protection Dry
2"	2.157	Carbon Steel, Schedule 10	152' - 9"	29.0 gal	Fire Protection Dry
2 1/2"	2.635	Carbon Steel, Schedule 10	50' - 1"	14.2 gal	Fire Protection Dry
3"	3.260	Carbon Steel, Schedule 10	160' - 3"	69.5 gal	Fire Protection Dry
4"	4.260	Carbon Steel, Schedule 10	5' - 3 1/2"	3.9 gal	Fire Protection Dry
Grand total: 40			465' - 11"	123.1 gal	

PREACTION SYSTEM VOLUME

Size	Inside Diameter	Schedule/Type	Length	Volume	System Classification
1"	1.049	Carbon Steel, Schedule 40	30' - 2 1/2"	1.4 gal	Fire Protection Pre-Action
1 1/4"	1.442	Carbon Steel, Schedule 10	154' - 1 1/2"	13.1 gal	Fire Protection Pre-Action
1 1/2"	1.682	Carbon Steel, Schedule 10	7' - 7"	0.9 gal	Fire Protection Pre-Action
Grand total: 27			191' - 11"	15.3 gal	



PIPE TYPES INFORMATION

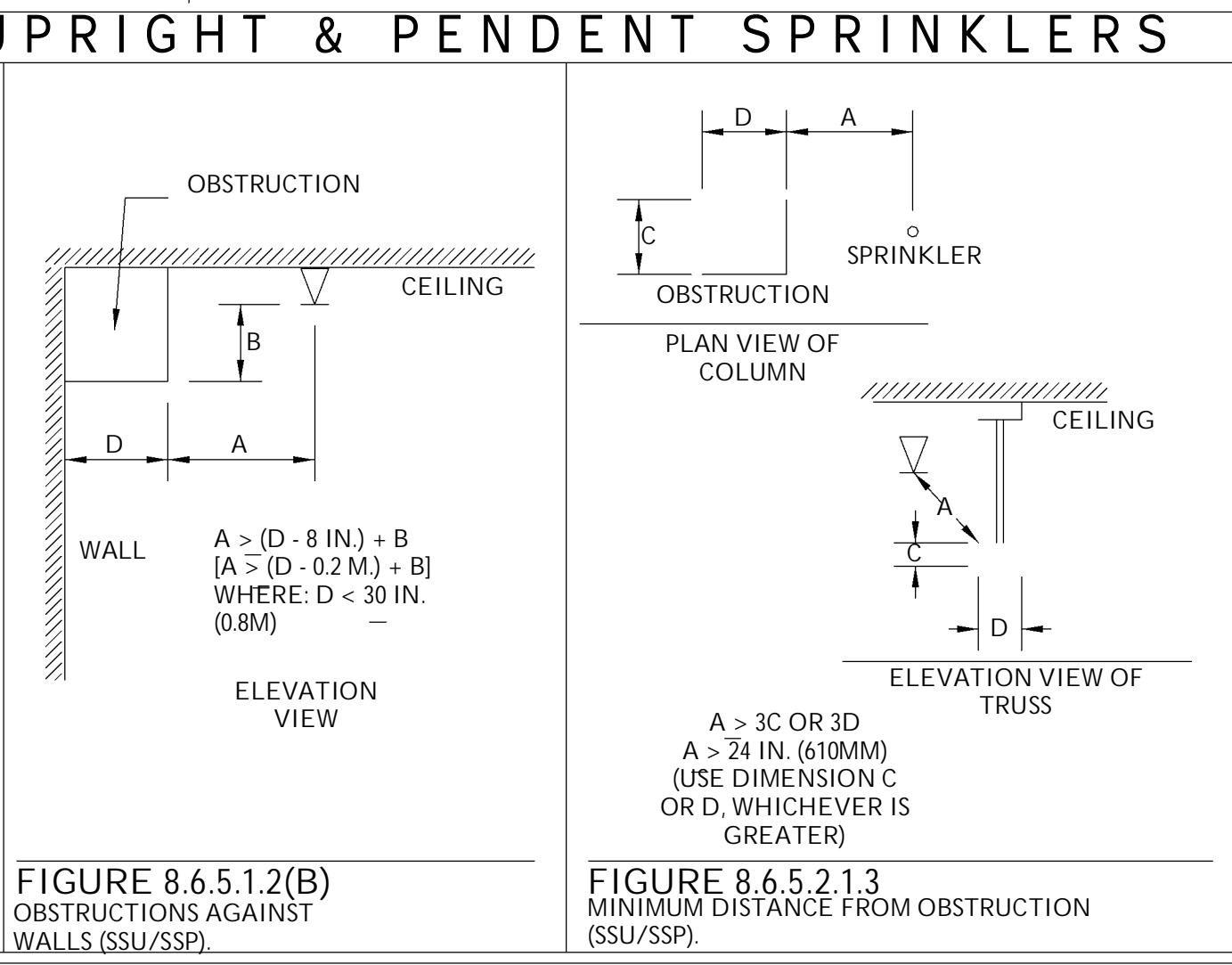
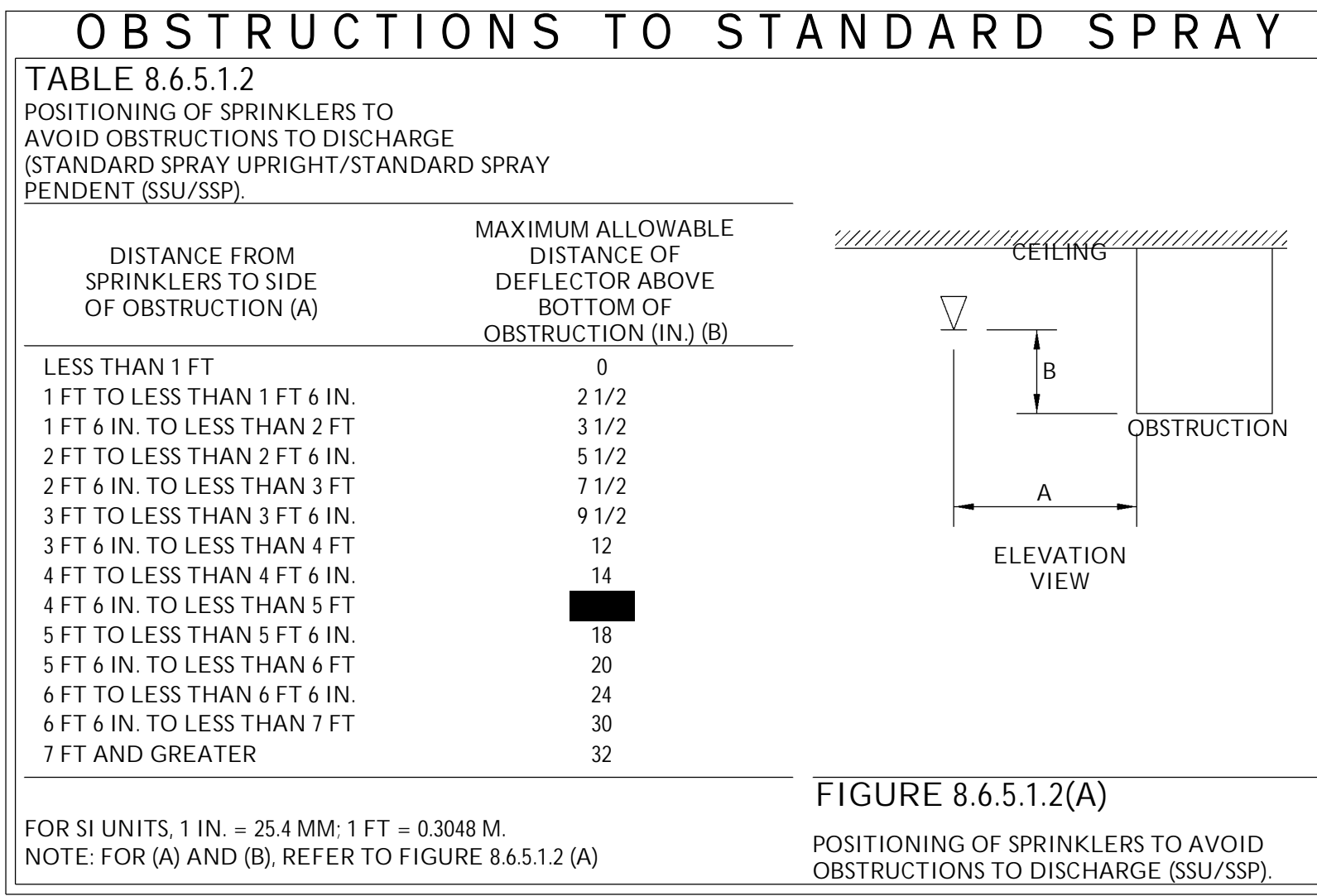
PIPETYPE SCHEDULE	NPS	NOMINAL INSIDE DIA. (IN)
EDDYFLOW	8"	8.249
	6"	6.357
	4"	4.310
	3"	3.334
EDDYTHREAD 40	2 1/2"	2.705
	2"	2.203
	1 1/2"	1.728
	1 1/4"	1.530
	2"	2.123
	1 1/2"	1.654
CPVC	1 1/4"	1.418
	1"	1.083
	2"	2.003
	1 1/2"	1.598
SCALE: N.T.S.	1 1/4"	1.394
	1"	1.101

OBSTRUCTIONS TO STANDARD SPRAY UPRIGHT & PENDENT SPRINKLERS

TABLE 8.6.5.1.2 POSITIONING OF SPRINKLERS TO AVOID OBSTRUCTIONS TO DISCHARGE (STANDARD SPRAY UPRIGHT/STANDARD SPRAY PENDENT (SSU/SSP))

DISTANCE FROM SPRINKLERS TO SIDE OF OBSTRUCTION (A)	MAXIMUM ALLOWABLE DISTANCE OF DEFLECTOR ABOVE BOTTOM OF OBSTRUCTION (IN.) (B)
LESS THAN 1 FT	0
1 FT TO LESS THAN 1 FT 6 IN.	2 1/2
1 FT 6 IN. TO LESS THAN 2 FT	3 1/2
2 FT TO LESS THAN 2 FT 6 IN.	5 1/2
2 FT 6 IN. TO LESS THAN 3 FT	7 1/2
3 FT TO LESS THAN 3 FT 6 IN.	9 1/2
3 FT 6 IN. TO LESS THAN 4 FT	12
4 FT TO LESS THAN 4 FT 6 IN.	14
4 FT 6 IN. TO LESS THAN 5 FT	18
5 FT TO LESS THAN 5 FT 6 IN.	20
5 FT 6 IN. TO LESS THAN 6 FT	24
6 FT TO LESS THAN 6 FT 6 IN.	24
6 FT 6 IN. TO LESS THAN 7 FT	30
7 FT AND GREATER	32

FOR SI UNITS, 1 IN. = 25.4 MM; 1 FT = 0.3048 M.
NOTE: FOR (A) AND (B), REFER TO FIGURE 8.6.5.1.2 (A)



FIRE PUMP PACKAGE
SUBMITTAL DATA SHEET ELECTRIC DRIVE

Quote # 092922-K7 REV 1

CROOK COUNTY JUSTICE CENTER

DATE: 12-21-2022
 CONTRACTOR: J & R FIRE LLC
 PUMP LISTED CONDITIONS: 500 GPM @ 60 PSI BOOST
 PUMP MODEL: AURORA 4-383-7B VERTICAL INLINE
 ELECTRIC MOTOR: 25HP, 460V, 3PH, 60HZ
 FLANGES: 125# / 125#
 MAIN CONTROLLER: TORNATECH GPA+ GPU 25HP, 460V, 3PH ACROSS THE LINE W/ TRANSFER SWITCH NEMA 2 ENCLOSURE
 HOSE VALVE HEADER: 4 X 2 W/ CAPS, VALVES & CHAINS
 JOCKEY PUMP: AURORA PVM1-8 1HP, 460V, 3PH
 JOCKEY CONTROLLER: TORNATECH JP 1HP, 460V, 3PH
 METER DATA: N/A
 DISCONNECT SWITCH: TORNATECH OPD 25HP, 460V, 3PH

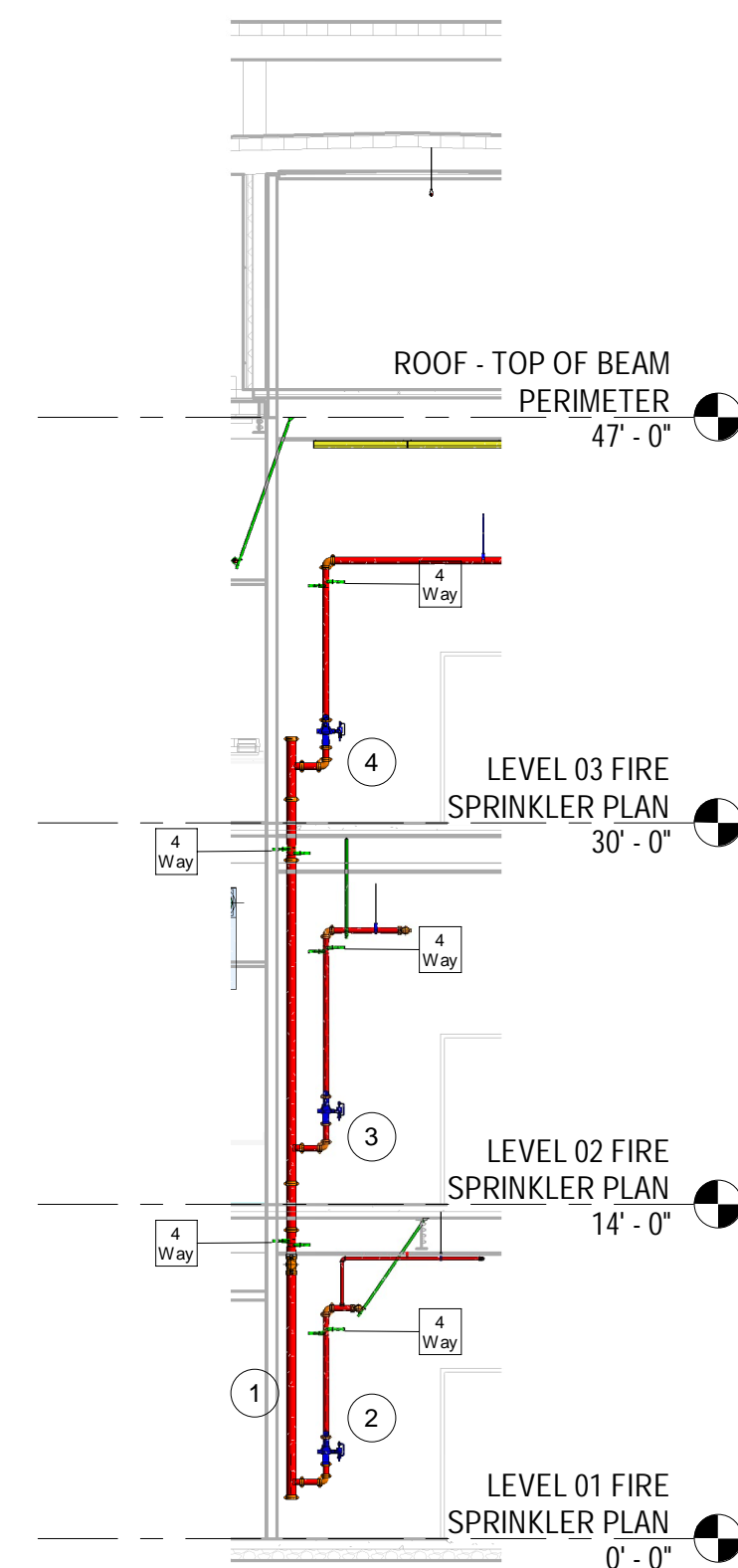
Voltage To be Confirmed

Voltage & Phase to be confirmed

"OPTION"

Not installed on skid. To be installed by others

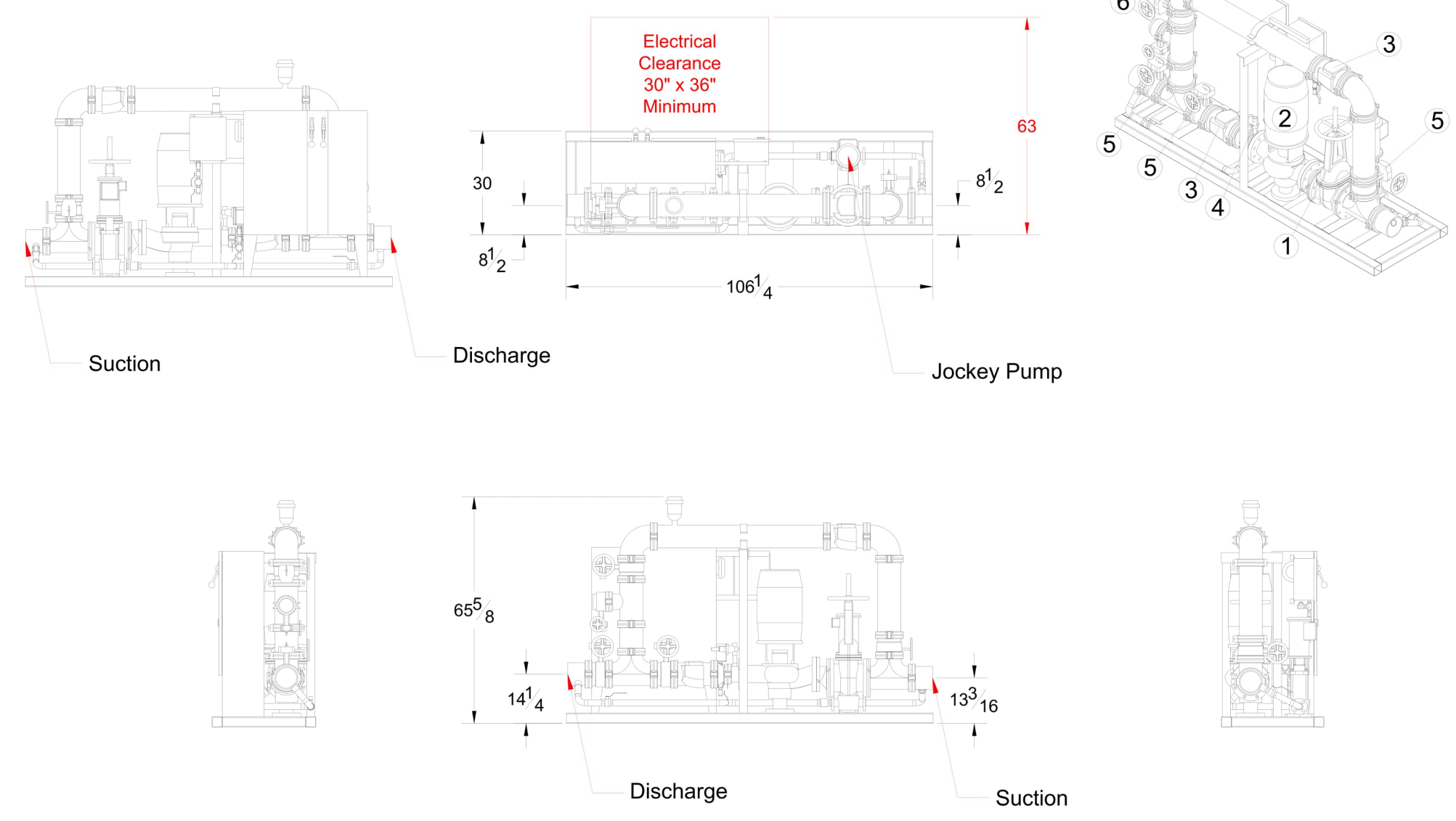
RISER DETAIL NOTES	
NUMBER	TEXT
1	4" SPRINKLER RISER SUPPLY
2	L1 2-1/2" FLOOR CONTROL ASSY - GLOBE UMC
3	L2 2-1/2" FLOOR CONTROL ASSY - GLOBE UMC
4	L3 3" FLOOR CONTROL ASSY - GLOBE UMC



3 RISER DETAIL
1/8" = 1'-0"

ULR-500
4-383-7B
Listed Fire Pump & Controller
NFPA-20 Compliant Packaged System

LEFT HAND



500GPM
Test Port, City Bypass

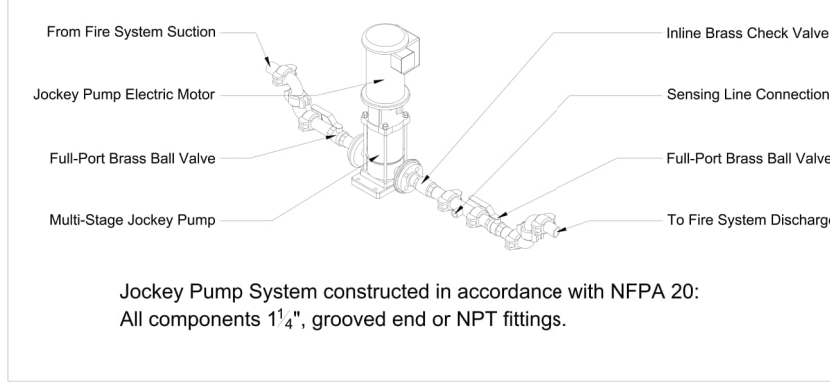
- System Components
- OS&Y Gate Valve
 - Inline Pump & Motor
 - Check Valve
 - Case Relief Valve
 - Monitored Butterfly
 - 4" Test Connection
 - Air Release

Design Conditions
500 GPM @ 60 PSI
25 HP460V 3 Phase

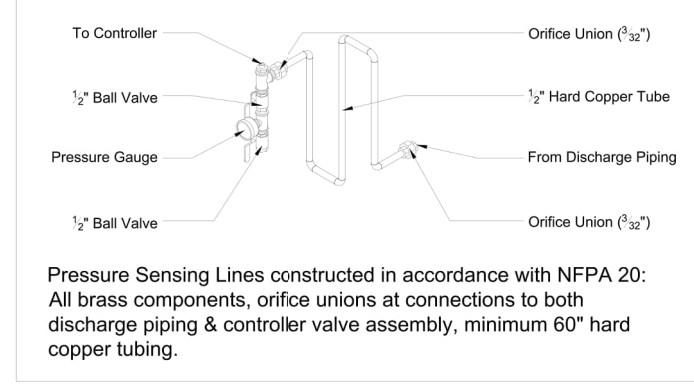
Project: Crook Co. Justice Center
 Contractor: J&R Fire LLC
 Date: 12/21/2022 P.O.: Submittal

Controller: Tornatech GPA+GPU, 25HP, 460/3/60
 Jockey Pump: Aurora PVM1-8 stage, 1HP, 460/3/60
 Jockey Controller: Tornatech JP2, 1HP, 460/3/60
 Suction x Discharge: 6" GRV x 6" GRV

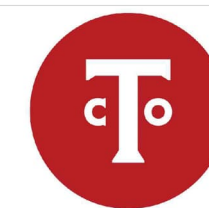
Jockey System Detail



Sensing Line Detail

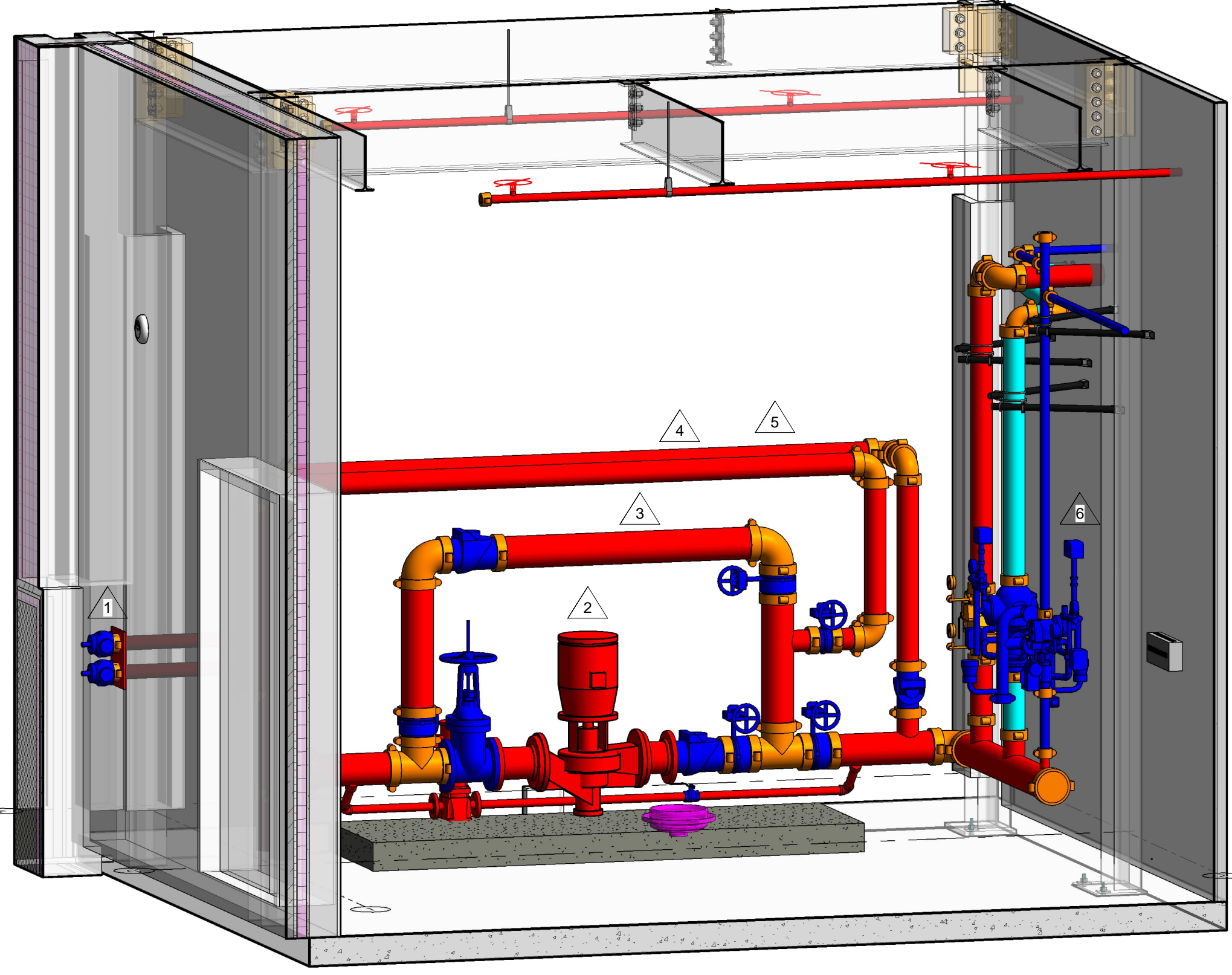


TALCO FIRE SYSTEMS

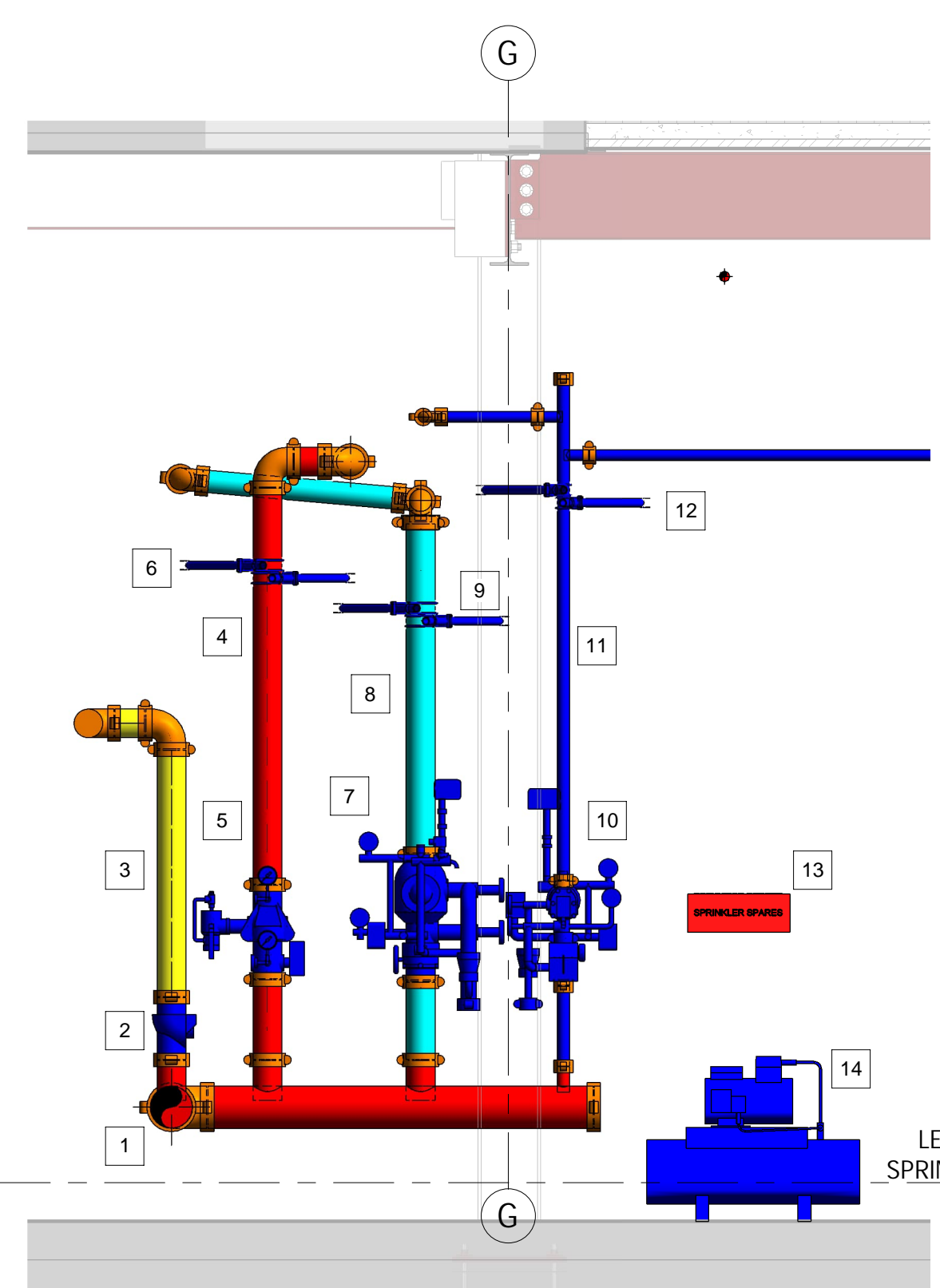


RESIDENTIAL & COMMERCIAL FIRE PUMP SPECIALISTS
6040 NE 112TH AVE. PORTLAND, OREGON 97220
PHONE: 800-878-8055 WWW.TALCOFIRE.COM

FIRE PUMP NOTES	
NUMBER	TEXT
1	FIRE PUMP TEST HEADER
2	FIRE PUMP / SKID - SEE TALCO DETAILS
3	BYPASS - SEE TALCO DETAILS
4	4" TEST HEADER SUPPLY
5	4" REMOTE FDC SUPPLY
6	MANIFOLD RISERS - SEE MANIFOLD DETAIL



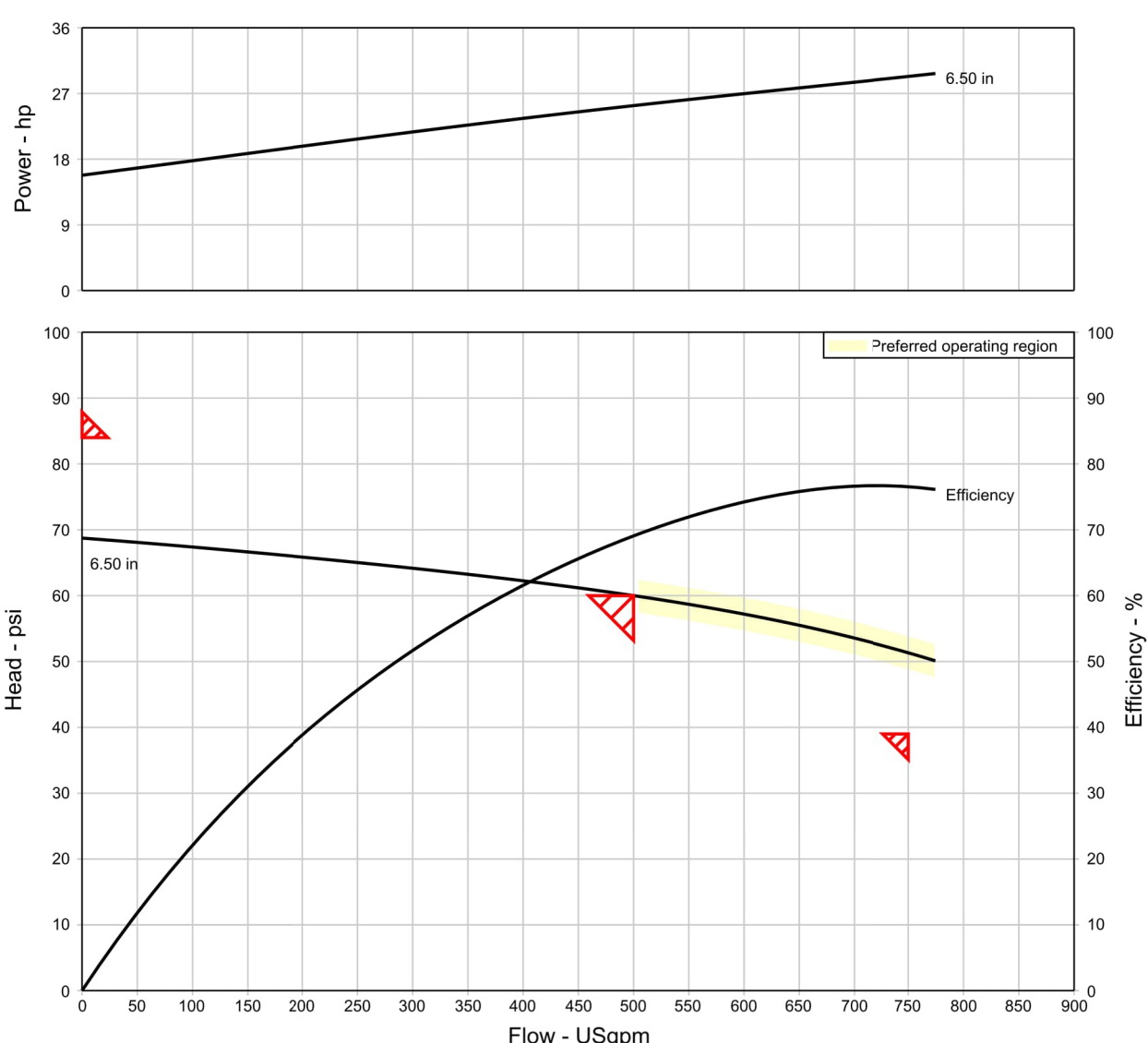
1 3D FIRE PUMP



MANIFOLD KEY	
Number	Text
1	6" MANIFOLD
2	4" FDC CHECK VALVE4
3	4" FDC SUPPLY LINE TO REMOTE FDC
5	4" GLOBE UMC RISER - SEE DETAIL SHEET
6	4" 4 WAY EQ BRACE
4	4" WET RISER SUPPLY LINE TO STAIR S3
7	4" VICTAULIC DRY VALVE WITH TRIM
8	4" DRY SYSTEM RISER
10	1-1/2" VICTAULIC PREACTION ASSEMBLY WITH TRIM
11	1-1/2" PREACTION RISER
12	1-1/2" 4 WAY EQ BRACE
9	4" 4 WAY EQ BRACE
13	SPARE HEAD CABINET
14	TANK MOUNTED AIR COMPRESSOR

2 MANIFOLD DETAIL
1/2" = 1'-0"

PENTAIR Customer: TALCO INDUSTRIES, INC. Project name: CCJC



Item number	: 001	Size	: 4-383-7B
Service	:	Stages	: 1
Quantity	: 1	Driver type	: Motor
Quote number	: 092922-K7	Frequency	: 60 Hz
Date last saved	: 29 Sep 2022 4:21 PM	Speed, rated	: 3500 rpm
Flow, rated	: 500.0 USgpm	Based on curve number	: 383-4X4X7B-3500
Differential head / pressure, rated	: 60.00 psi	Efficiency	: 69.07 %
Flange rating (suction / discharge)	: 125/125	Max working pressure, allowable	: 175.0 psi.g
Secondary Point (150% of rated flow)	: 750.0 USgpm	Shutoffhead, Typical	: 68.74 psi.g
Secondary Point (65% of rated head)	: 39.00 psi	Max suction pressure, allowable	: 106.3 psi.g
Max Shutoff per NFPA	: 84.00 psi	Suction pressure, max (user specified)	: 50.00 psi.g
		Pump shutoff w/ suction pressure	: 118.7 psi.g
		Power driver, minimum	: 25.00 hp

Curve performance is typical. Contact factory for guaranteed performance curve.

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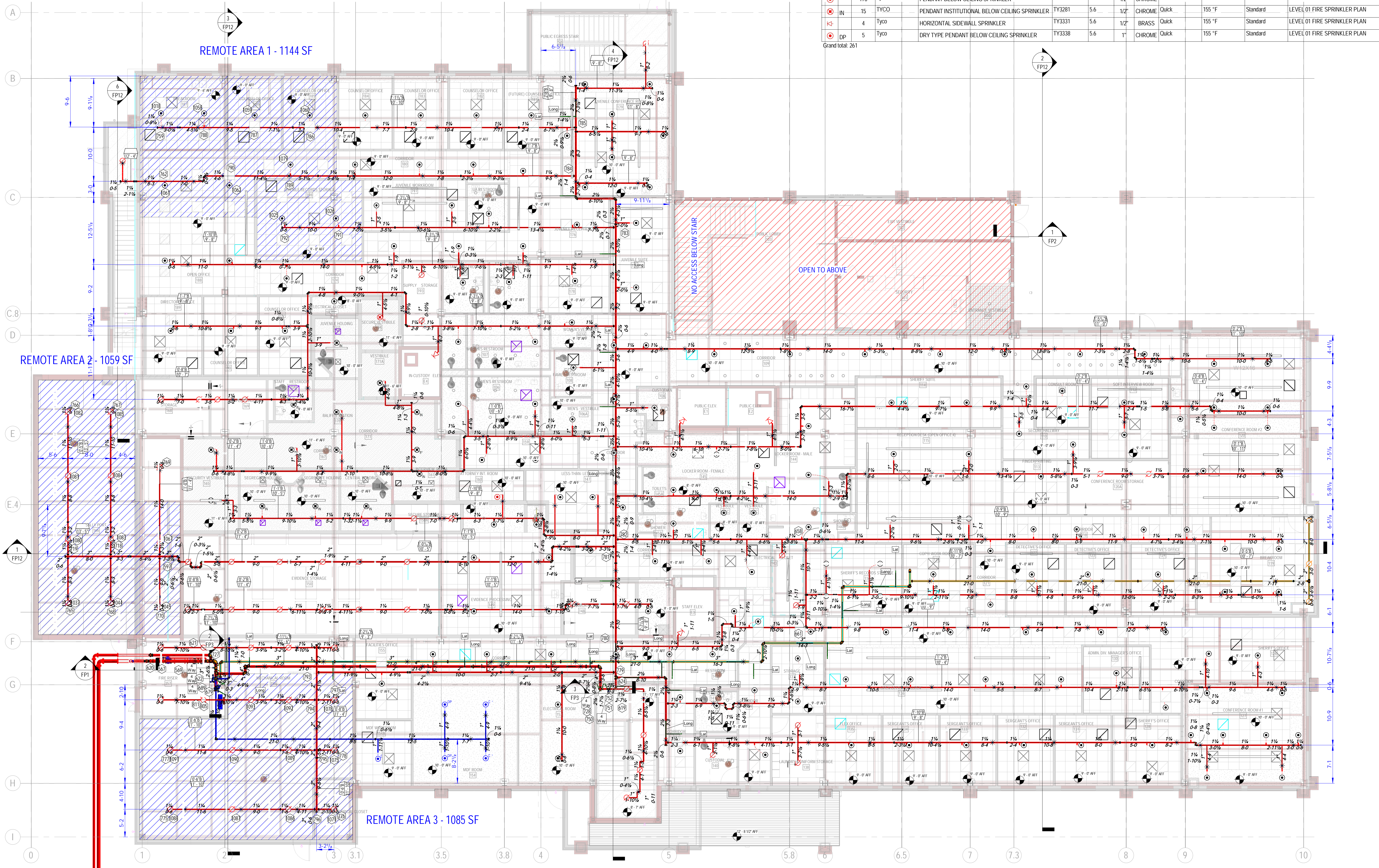
C.C.B.# 179850

FIRE
25990 ALFA MARKET RD.
BEND, OREGON 97701

FS SHEET
FP3

JOB #	22-154
DRAWN BY	GERALD W. EBELING, S.E.T.
CHECKED BY	[REDACTED]
DATE	8:02:36 AM
REVISED	[REDACTED]

Crook County Justice Center
260 NW 2ND STREET
PRINEVILLE, OREGON 97754
FIRE PUMP PLAN



SY	S.E.	COUNT	Manufacturer	DESCRIPTION	Sprinkler SIN	K-Factor	THREA D SIZE	FINISH	Response	Temperature Rating	Coverage	Level
EX		67	Tyco	EXPOSED UPRIGHT SPRINKLER	TY3131	5.6	1/2"	BRASS	Quick	155 °F	Standard	LEVEL 01 FIRE SPRINKLER PLAN
PD		170	Tyco	PENDANT BELOW CEILING SPRINKLER	TY3231	5.6	1/2"	CHROME	Quick	155 °F	Standard	LEVEL 01 FIRE SPRINKLER PLAN
IN		15	TYCO	PENDANT INSTITUTIONAL BELOW CEILING SPRINKLER	TY3281	5.6	1/2"	CHROME	Quick	155 °F	Standard	LEVEL 01 FIRE SPRINKLER PLAN
HS		4	Tyco	HORIZONTAL SIDEWALL SPRINKLER	TY3331	5.6	1/2"	BRASS	Quick	155 °F	Standard	LEVEL 01 FIRE SPRINKLER PLAN
DP		5	Tyco	DRY TYPE PENDANT BELOW CEILING SPRINKLER	TY3338	5.6	1"	CHROME	Quick	155 °F	Standard	LEVEL 01 FIRE SPRINKLER PLAN
Grand total: 261												

2 LEVEL 01 FIRE SPRINKLER PLAN
1/8" = 1'-0"

REFER TO SHEET FP8 FOR HYDRAULIC INFORMATION

PROJECT NORTH

FS SHEET

DATE: 8:03:04 AM

FIRE

25990 ALFA MARKET RD.
BEND, OREGON 97701

FP4

DATE: 8:03:04 AM

C.C.B.# 179850

260 NW 2ND STREET
PRINEVILLE, OREGON 97754

8:03:04 AM

Crook County Justice Center

L1 FIRE SPRINKLER PLAN

22-154

DRAWN BY: GERALD W. EBELING, S.E.T.

CHECKED BY: [REDACTED]

DATE: 8:03:04 AM

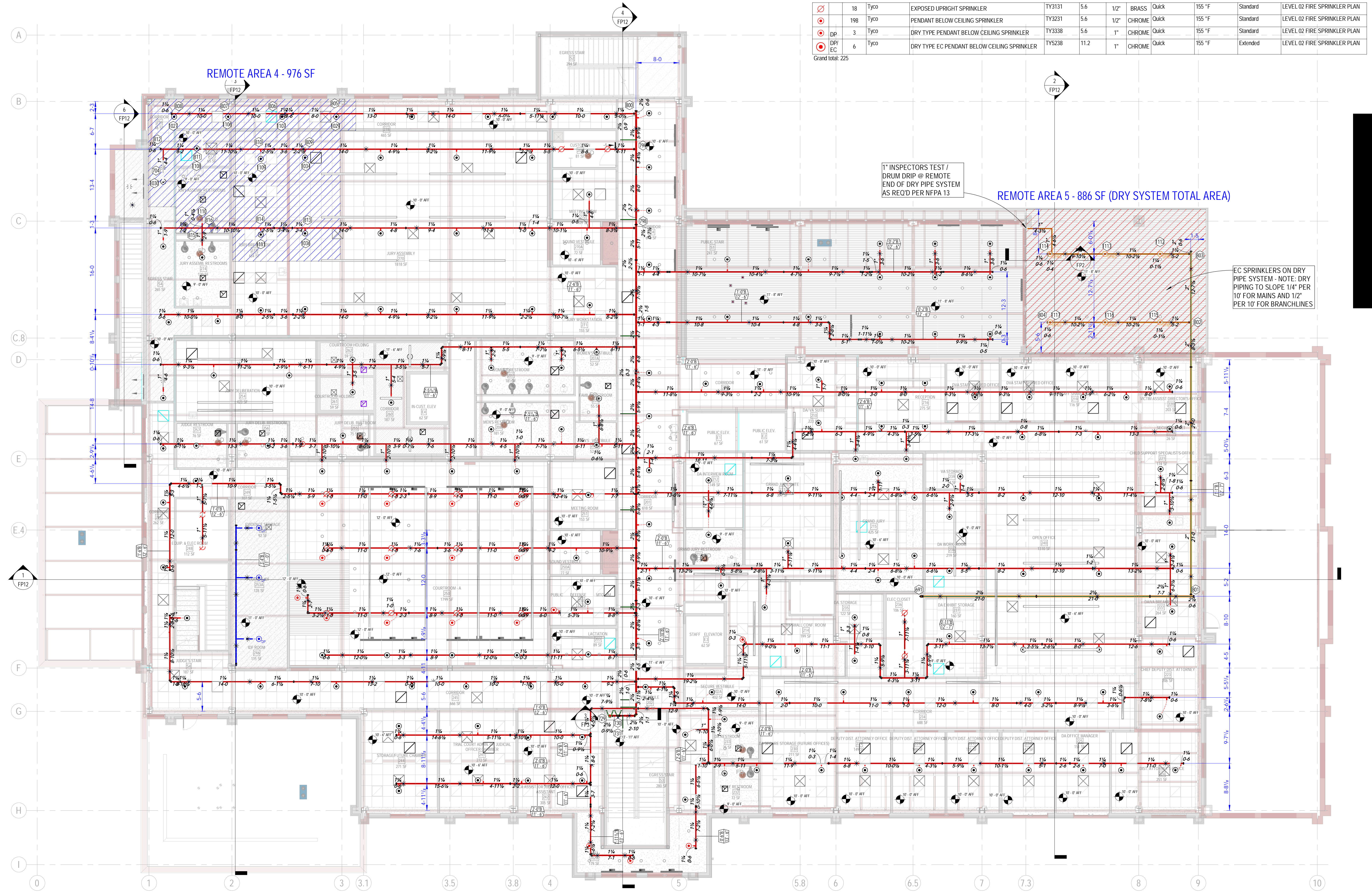
REVISED

FILE LOCATION: C:\Users\Admin\Dropbox\3D FIRE PROJECTS\FIRE L1\CURRENT PROJECTS\22-154 Crook County Justice Center\Fire\Fire

SOFTWARE: REVIT 2022 / MICROBIM

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SY	S	E	COUNT	Manufacturer	DESCRIPTION	Sprinkler SIN	K-Factor	THREA D SIZE	FINISH	Response	Temperature Rating	Coverage	Level
⊗			18	Tyco	EXPOSED UPRIGHT SPRINKLER	TY3131	5.6	1/2"	BRASS	Quick	155 °F	Standard	LEVEL 02 FIRE SPRINKLER PLAN
⊙			198	Tyco	PENDANT BELOW CEILING SPRINKLER	TY3231	5.6	1/2"	CHROME	Quick	155 °F	Standard	LEVEL 02 FIRE SPRINKLER PLAN
⊙	DP		3	Tyco	DRY TYPE PENDANT BELOW CEILING SPRINKLER	TY3338	5.6	1"	CHROME	Quick	155 °F	Standard	LEVEL 02 FIRE SPRINKLER PLAN
⊙	DP/EC		6	Tyco	DRY TYPE EC PENDANT BELOW CEILING SPRINKLER	TY5238	11.2	1"	CHROME	Quick	155 °F	Extended	LEVEL 02 FIRE SPRINKLER PLAN
Grand total: 225													



1" INSPECTORS TEST / DRUM DRIP @ REMOTE END OF DRY PIPE SYSTEM AS REQ'D PER NFPA 13

REMOTE AREA 5 - 886 SF (DRY SYSTEM TOTAL AREA)

EC SPRINKLERS ON DRY PIPE SYSTEM - NOTE: DRY PIPING TO SLOPE 1/4" PER 10' FOR MAINS AND 1/2" PER 10' FOR BRANCHLINES

1 LEVEL 02 FIRE SPRINKLER PLAN
1/8" = 1'-0"

REFER TO SHEET FP9 FOR HYDRAULIC INFORMATION

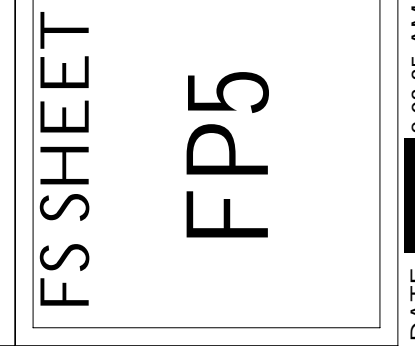
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ISSION. ENGINEER.	JOB #	22-154
DRAWN BY D.W. EBELING, S.E.T.	CHECKED BY	DATE
8:03:35 AM	REVISED	

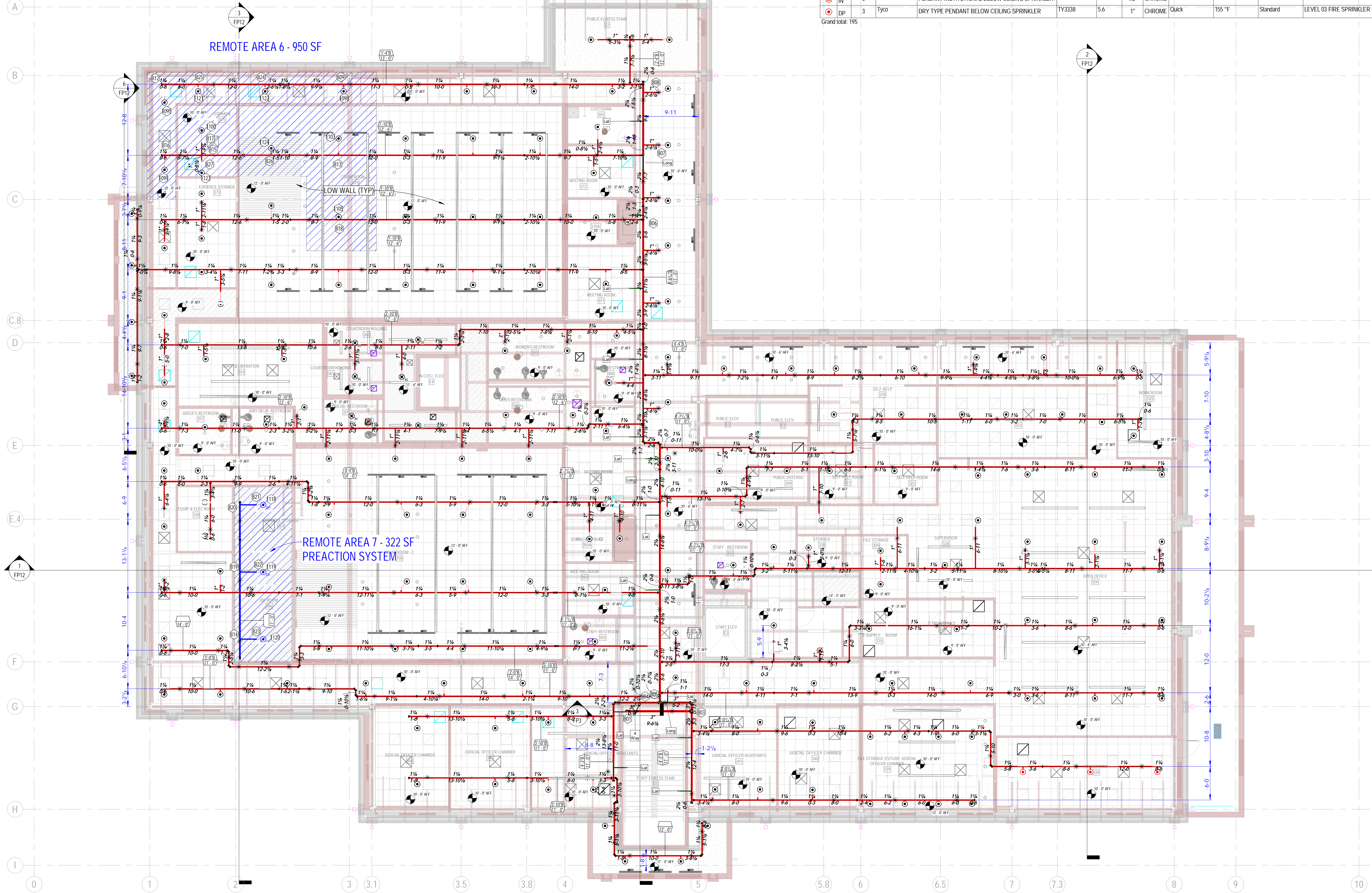
Crook
 PRIN
 L2 FIR

C.C.B.# 179850
 FIRE
 25990 ALFA MARKET RD.
 BEND, OREGON 97701

FS SHEET
 PROJECT NORTH
 DATE: 8:03:35 AM



SOFTWARE: REVIT 2022 / MICROBIM
 FILE LOCATION: C:\Users\Admin\Dropbox\3D FIRE PROJECTS\FIRE L2 CURRENT PROJECTS\Fire L2-FS\COC\FI



SPRINKLERS LEGEND													
JA	SY	SE	COUNT	Manufacturer	DESCRIPTION	Sprinkler SIN	K-Factor	THREA D SIZE	FINISH	Response	Temperature Rating	Coverage	Level
⊗			1	Tyco	EXPOSED UPRIGHT SPRINKLER	TY3131	5.6	1/2"	BRASS	Quick	155 °F	Standard	LEVEL 03 FIRE SPRINKLER PLAN
⊙			185	Tyco	PENDANT BELOW CEILING SPRINKLER	TY3231	5.6	1/2"	CHROME	Quick	155 °F	Standard	LEVEL 03 FIRE SPRINKLER PLAN
⊙	IN		6	TYCO	PENDANT INSTITUTIONAL BELOW CEILING SPRINKLER	TY3281	5.6	1/2"	CHROME	Quick	155 °F	Standard	LEVEL 03 FIRE SPRINKLER PLAN
⊙	DP		3	Tyco	DRY TYPE PENDANT BELOW CEILING SPRINKLER	TY3338	5.6	1"	CHROME	Quick	155 °F	Standard	LEVEL 03 FIRE SPRINKLER PLAN
Grand total: 195													

1 LEVEL 03 FIRE SPRINKLER PLAN
1/8" = 1'-0"

REFER TO SHEET FP10 & FP11 FOR HYDRAULIC INFORMATION

PROJECT NORTH

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FS SHEET

FP6

FIRE
25990 ALFA MARKET RD.
BEND, OREGON 97701

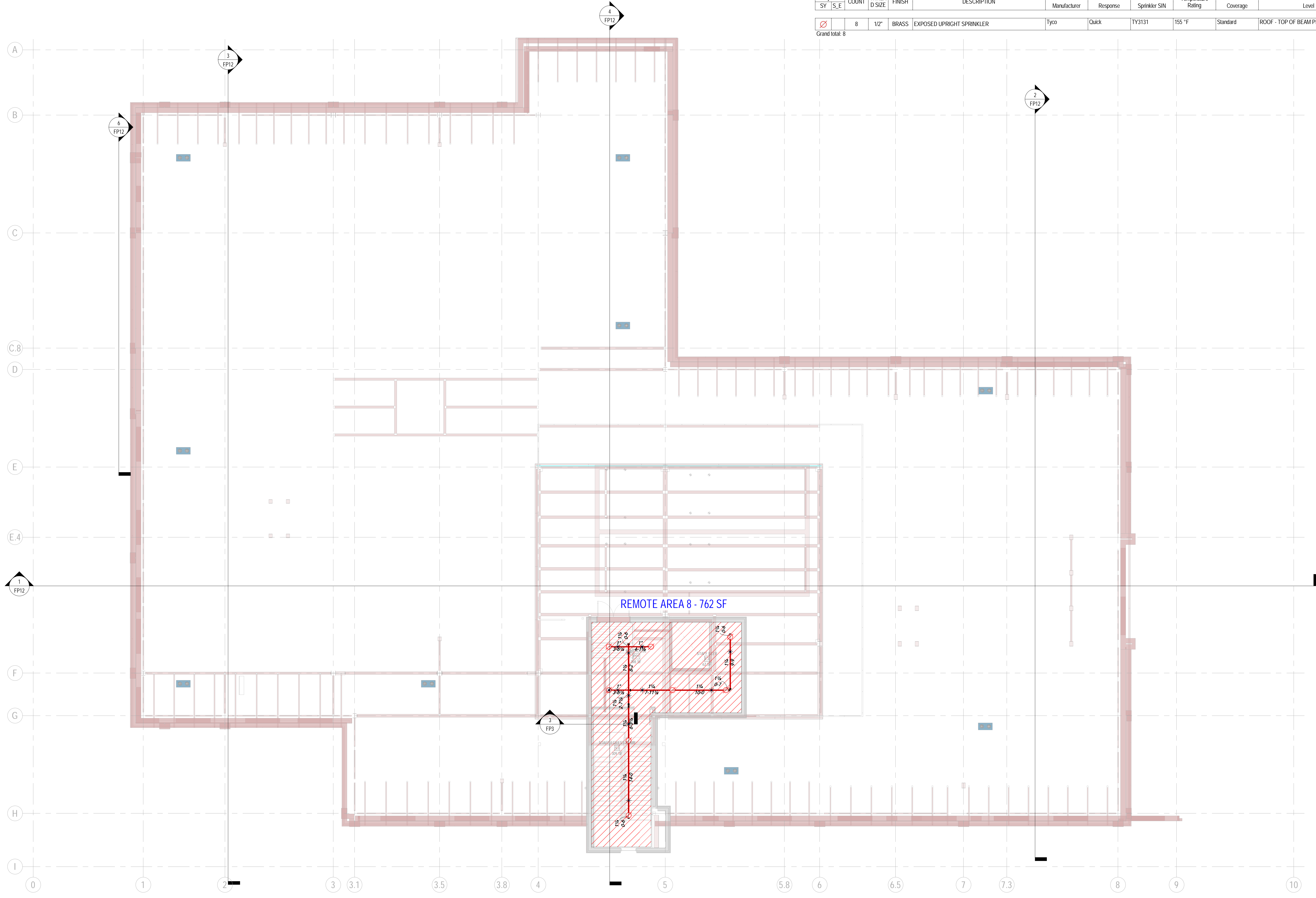
C.C.B.# 179850

Crook County Justice Center
260 NW 2ND STREET
PRINEVILLE, OREGON 97754
L3 FIRE SPRINKLER PLAN

JOB # 22-154
DRAWN BY GERALD W. EBELING, S.E.T.
CHECKED BY [REDACTED]
DATE 8:03:56 AM
REVISED

SOFTWARE: REVIT 2022 / MICROBIM FILE LOCATION: C:\Users\Admin\Dropbox\3D FIRE PROJECTS\FIRE L3\CURRENT PROJECTS\22-154\Crook County Justice Center\22-154-COJC Fire.rvt

DATE: 8:03:56 AM



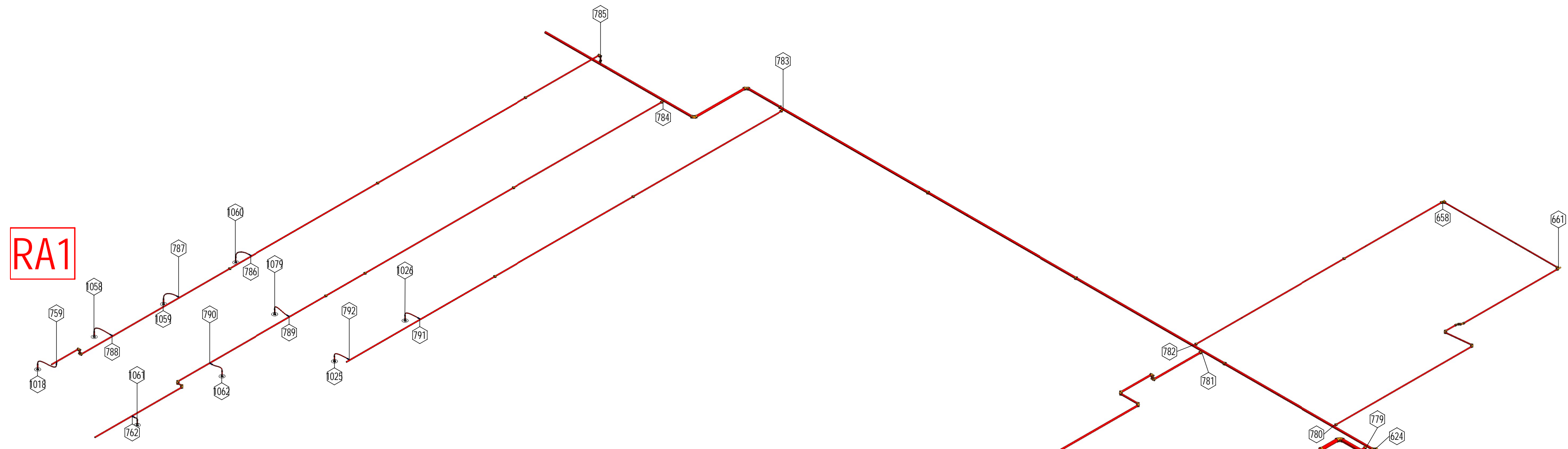
SPRINKLERS LEGEND											
SY	S.E	COUNT	THREA D SIZE	FINISH	DESCRIPTION	Manufacturer	Response	Sprinkler SIN	Temperature Rating	Coverage	Level
Ø		8	1/2"	BRASS	EXPOSED UPRIGHT SPRINKLER	Tyco	Quick	TY3131	155 °F	Standard	ROOF - TOP OF BEAM PERIMETER
Grand total: 8											

REFER TO SHEET FP10 FOR HYDRAULIC INFORMATION

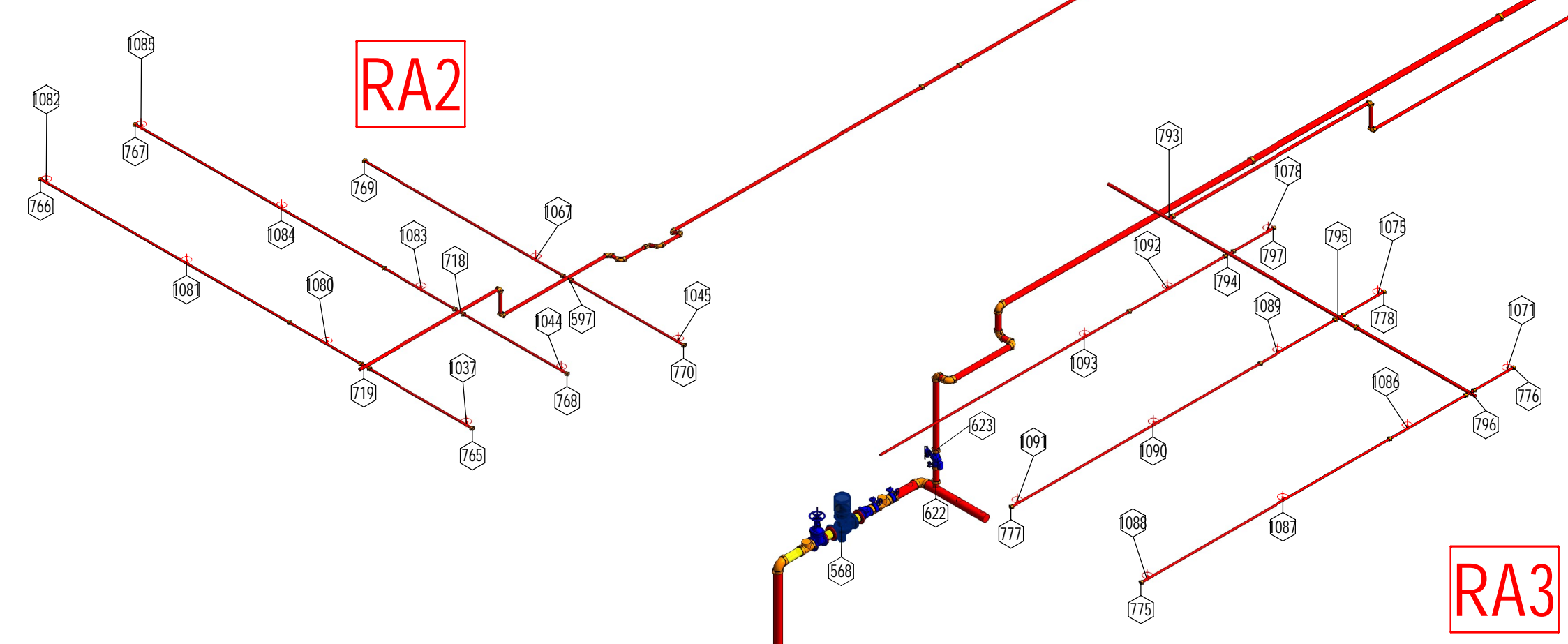
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<p>FS SHEET</p> <p>FP7</p>	<p>FIRE</p> <p>25990 ALFA MARKET RD. BEND, OREGON 97701</p>	<p>C.C.B.# 179850</p>	<p>PROJECT NORTH</p>
<p>DATE: █ 8:04:04 AM</p>			
<p>SOFTWARE: REVIT 2022 / MICROBIM</p>			
<p>FILE LOCATION: C:\Users\Admin\Dropbox\3D FIRE PROJECTS\FIRE LLC\CURRENT PROJECTS\2-1st Crook County Justice Center\22-154\C01C Fire.rvt</p>			
<p>Crook County Justice Center 260 NW 2ND STREET PRINEVILLE, OREGON 97754</p>		<p>ROOF FIRE SPRINKLER PLAN</p>	
<p>DRAWN BY GERALD W. EBELING, S.E.T.</p>		<p>CHECKED BY DATE 8:04:04 AM REVISED</p>	
<p>JOB # 22-154</p>			

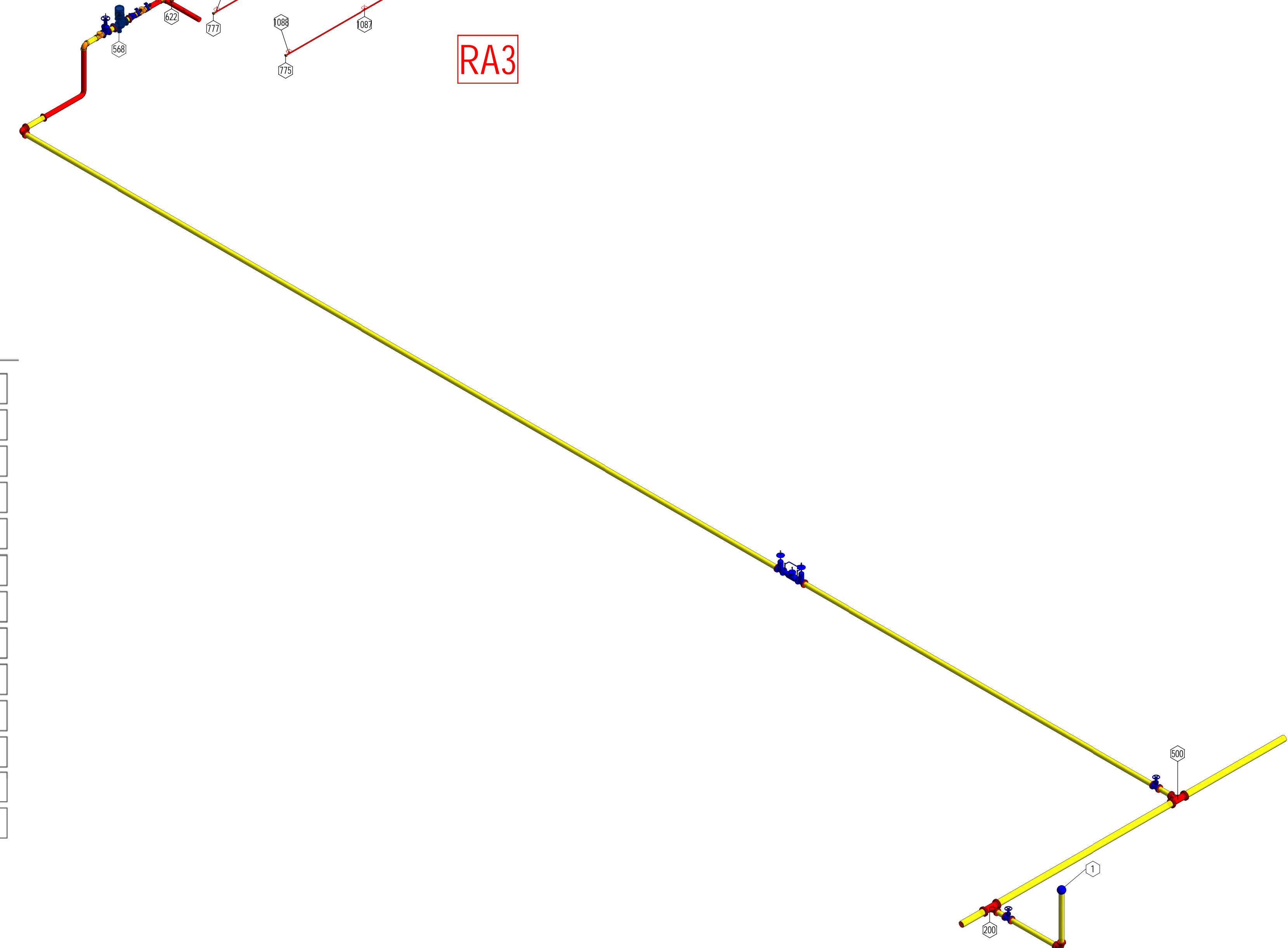
RA1



RA2



RA3



RA1

Calculation Summary	
Demand Flow	341.796 (gpm)
Demand Pressure	25.96 (psi)
Source Flow	341.796 (gpm)
Source Pressure	50.762 (psi)
BOR Flow	241.796 (gpm)
BOR Pressure	89.244 (psi)
Safety Margin	24.801 (psi)
Heads Flowing	9
Total Head Flow	241.796 (gpm)
Min Head Flow	22.5 (gpm)
Max Head Flow	32.853 (gpm)
Avg Head Flow	26.866 (gpm)
Max Velocity	18.44 (ft/s)

RA2

Calculation Summary	
Demand Flow	465.842 (gpm)
Demand Pressure	33.417 (psi)
Source Flow	465.842 (gpm)
Source Pressure	50.577 (psi)
BOR Flow	215.842 (gpm)
BOR Pressure	96.631 (psi)
Safety Margin	17.16 (psi)
Heads Flowing	10
Total Head Flow	215.842 (gpm)
Min Head Flow	19.5 (gpm)
Max Head Flow	25.693 (gpm)
Avg Head Flow	21.584 (gpm)
Max Velocity	18.951 (ft/s)

RA3

Calculation Summary	
Demand Flow	485.073 (gpm)
Demand Pressure	7.437 (psi)
Source Flow	485.073 (gpm)
Source Pressure	50.544 (psi)
BOR Flow	235.073 (gpm)
BOR Pressure	70.707 (psi)
Safety Margin	43.107 (psi)
Heads Flowing	11
Total Head Flow	235.073 (gpm)
Min Head Flow	19.5 (gpm)
Max Head Flow	23.8 (gpm)
Avg Head Flow	21.37 (gpm)
Max Velocity	20.639 (ft/s)

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FIRE
25990 ALFA MARKET RD.
BEND, OREGON 97701

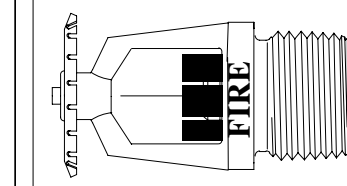
C.C.B.# 179850

P: [REDACTED]
E: [REDACTED]

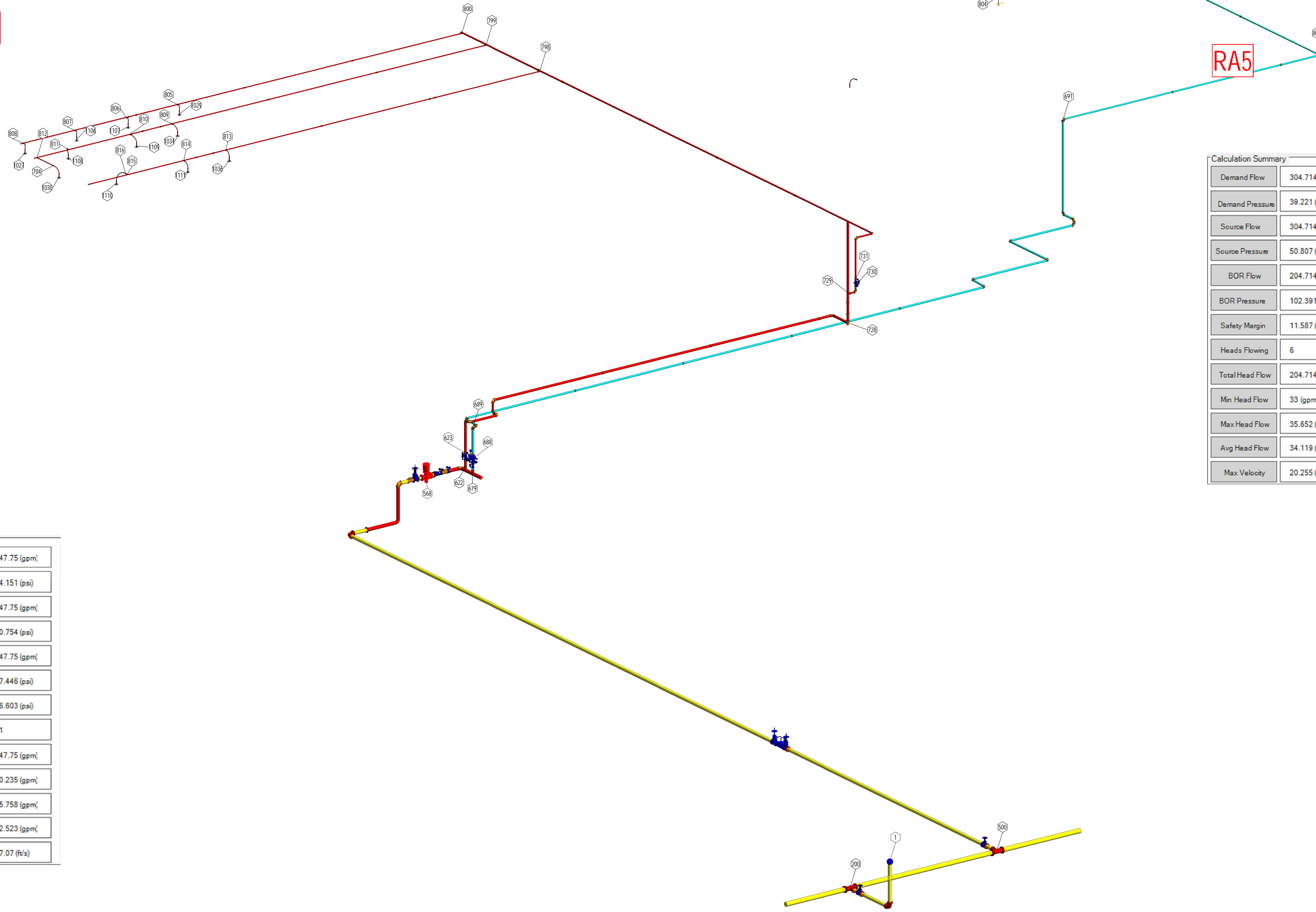
Crook County Justice Center
260 NW 2ND STREET
PRINEVILLE, OREGON 97754
L1 CALC PLAN

JOB # 22-154

DRAWN BY GERALD W. EBELING, S.E.T.
CHECKED BY [REDACTED]
DATE 8/04/06 AM
REVISED [REDACTED]



RA4



RA4

Calculation Summary	
Demand Flow	347.75 (gpm)
Demand Pressure	24.151 (psi)
Source Flow	347.75 (gpm)
Source Pressure	50.754 (psi)
BOR Flow	247.75 (gpm)
BOR Pressure	87.446 (psi)
Safety Margin	26.603 (psi)
Heads Flowing	11
Total Head Flow	247.75 (gpm)
Min Head Flow	20.235 (gpm)
Max Head Flow	25.758 (gpm)
Avg Head Flow	22.523 (gpm)
Max Velocity	17.07 (ft/s)

Calculation Summary	
Demand Flow	304.714 (gpm)
Demand Pressure	39.221 (psi)
Source Flow	304.714 (gpm)
Source Pressure	50.807 (psi)
BOR Flow	204.714 (gpm)
BOR Pressure	102.391 (psi)
Safety Margin	11.587 (psi)
Heads Flowing	6
Total Head Flow	204.714 (gpm)
Min Head Flow	33 (gpm)
Max Head Flow	35.652 (gpm)
Avg Head Flow	34.119 (gpm)
Max Velocity	20.255 (ft/s)



FS SHEET
 PROJECT NORTH
 FP9

FIRE
 25990 ALFA MARKET RD.
 BEND, OREGON 97701

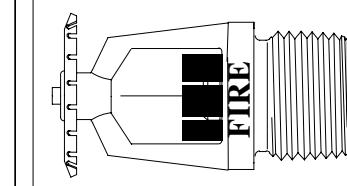
C.C.B.# 179850

Crook County Justice Center
 260 NW 2ND STREET
 PRINEVILLE, OREGON 97754
 L2 CALC PLAN

DRAWN BY
 GERALD W. EBELING, S.E.T.
 CHECKED BY
 DATE
 8:04:08 AM
 REVISED

JOB # 22-154

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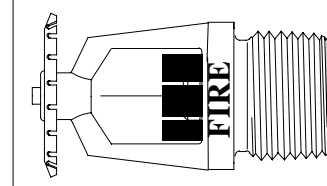


DATE: 8:04:08 AM

SOFTWARE: REVIT 2022 / MICROBIM

FILE LOCATION: C:\Users\Admin\Dropbox\3D FIRE PROJECTS\FIRE L2\CURRENT PROJECTS\22-154 Crook County Justice Center\22-154\COCIC Fire.rvt

P: [REDACTED]
 E: [REDACTED]



FIRE
25990 ALFA MARKET RD.
BEND, OREGON 97701

C.C.B.# 179850

P: [REDACTED]
E: [REDACTED]

Crook County Justice Center
260 NW 2ND STREET
PRINEVILLE, OREGON 97754
L3 & ROOF CALC PLAN

JOB # 22-154

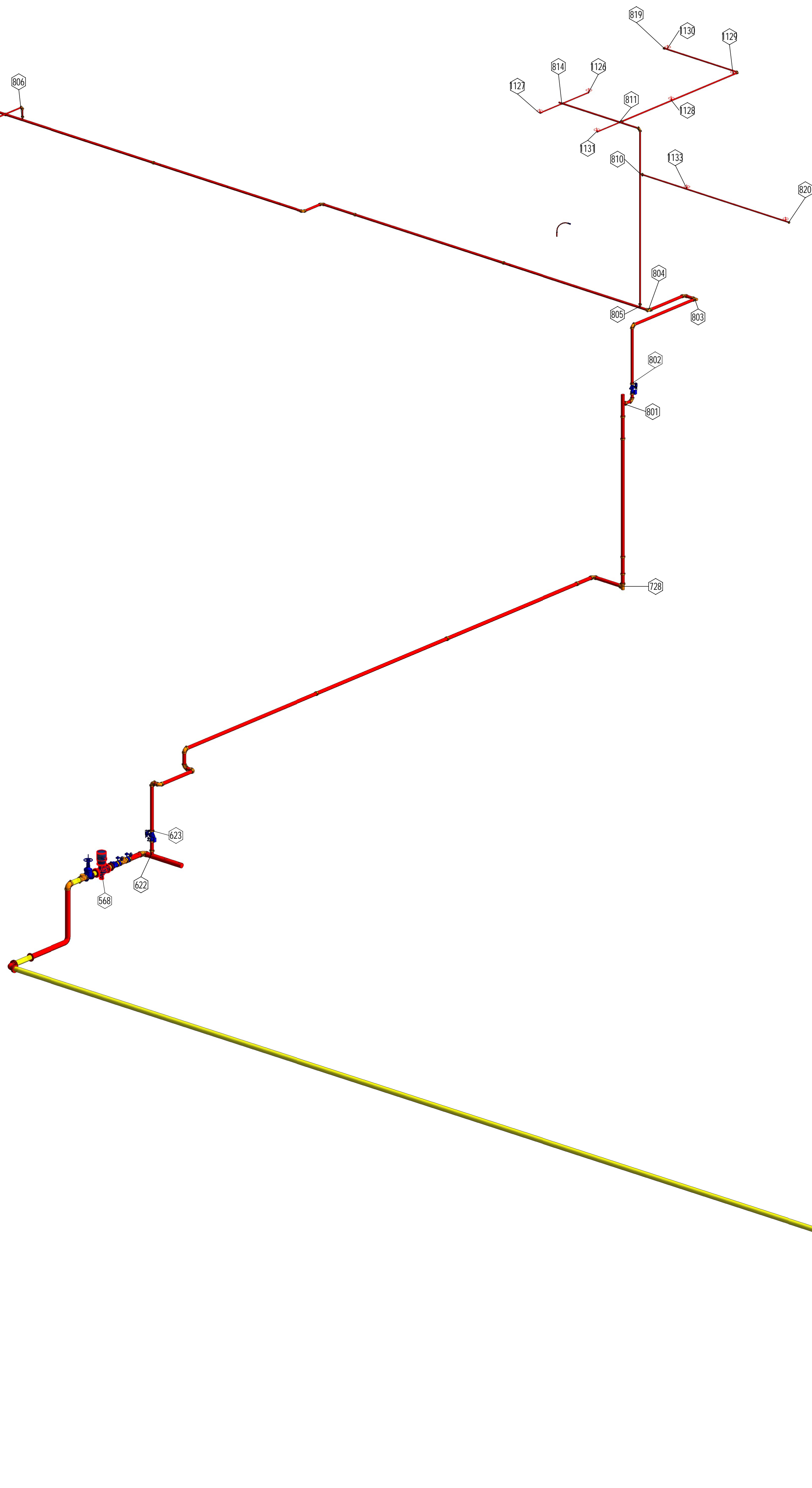
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DATE 8/04/09 AM
REVISED [REDACTED]

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RA8

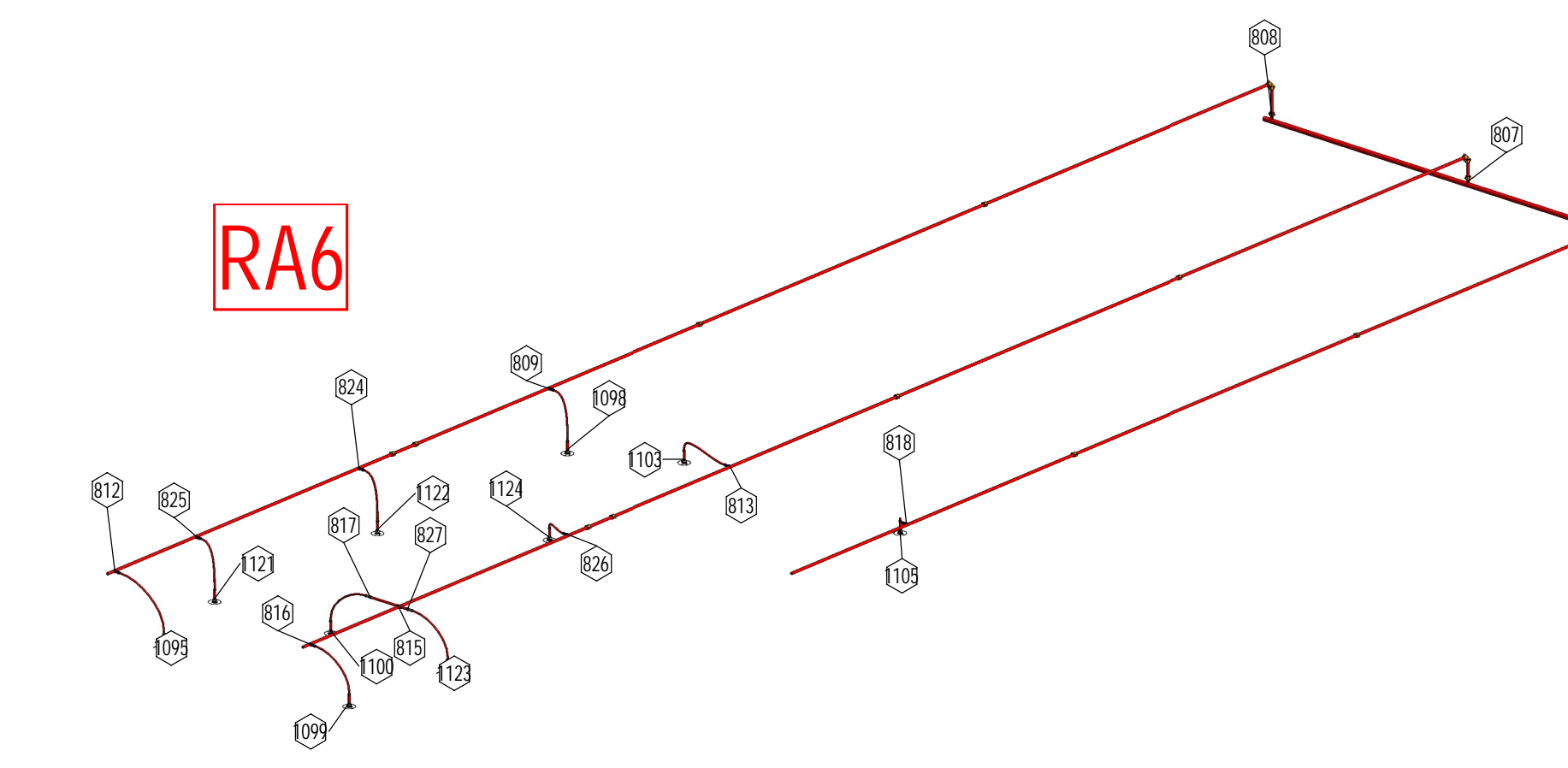
Calculation Summary	
Demand Flow	427.168 (gpm)
Demand Pressure	10.51 (psi)
Source Flow	427.168 (gpm)
Source Pressure	50.64 (psi)
BOR Flow	177.168 (gpm)
BOR Pressure	73.554 (psi)
Safety Margin	40.129 (psi)
Heads Flowing	8
Total Head Flow	177.168 (gpm)
Min Head Flow	19.5 (gpm)
Max Head Flow	26.192 (gpm)
Avg Head Flow	22.146 (gpm)
Max Velocity	25.581 (ft/s)

RA8



RA6

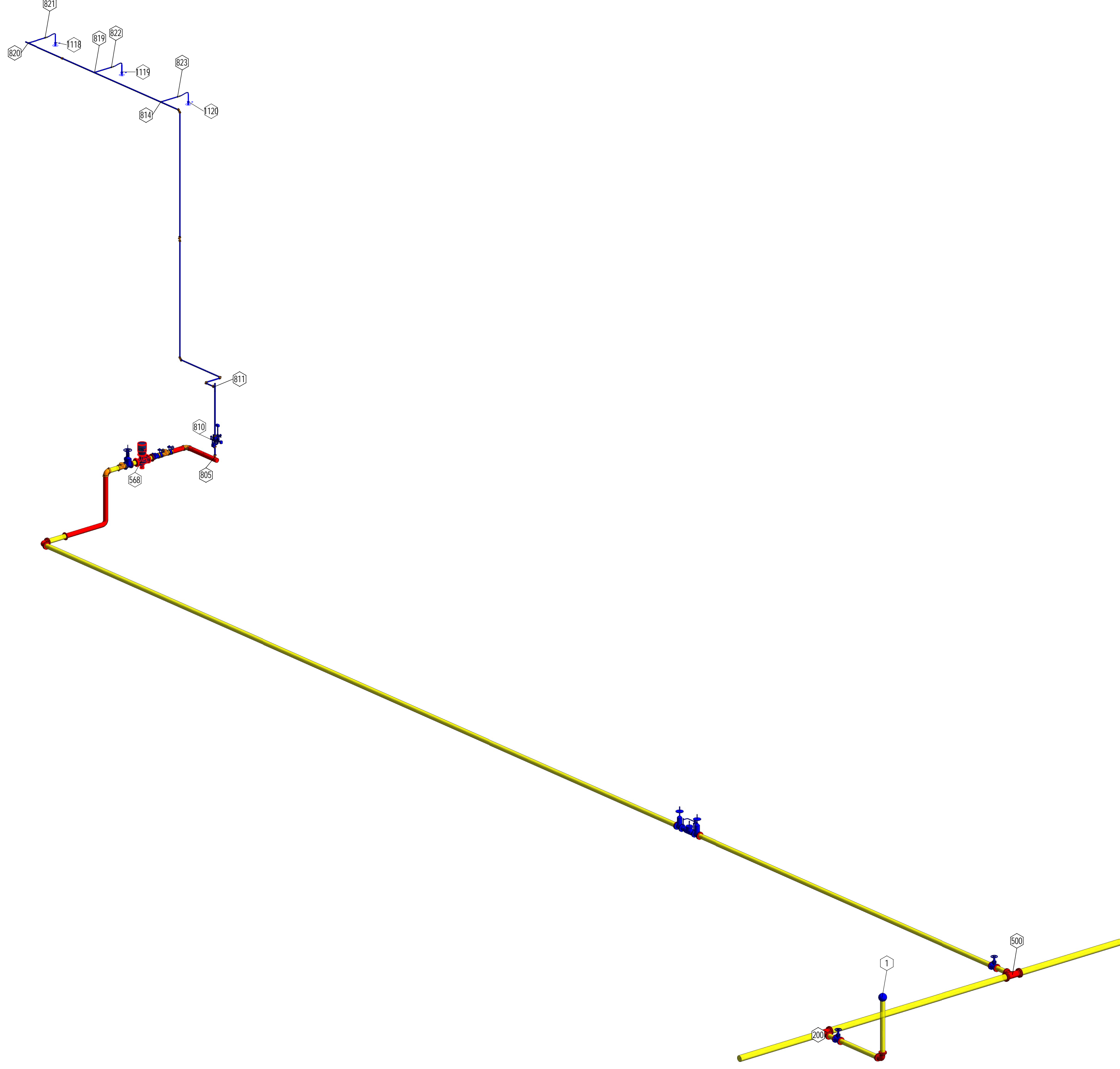
Calculation Summary	
Demand Flow	335.106 (gpm)
Demand Pressure	40.687 (psi)
Source Flow	335.106 (gpm)
Source Pressure	50.77 (psi)
BOR Flow	235.106 (gpm)
BOR Pressure	103.956 (psi)
Safety Margin	10.084 (psi)
Heads Flowing	10
Total Head Flow	235.106 (gpm)
Min Head Flow	19.5 (gpm)
Max Head Flow	37.083 (gpm)
Avg Head Flow	23.511 (gpm)
Max Velocity	20.125 (ft/s)



RA6

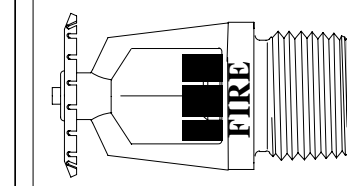
RA7 PREACTION

Calculation Summary	
Demand Flow	309.946 (gpm)
Demand Pressure	-7.511 (psi)
Source Flow	309.946 (gpm)
Source Pressure	50.801 (psi)
BOR Flow	59.946 (gpm)
BOR Pressure	56.009 (psi)
Safety Margin	58.312 (psi)
Heads Flowing	3
Total Head Flow	59.946 (gpm)
Min Head Flow	19.5 (gpm)
Max Head Flow	20.685 (gpm)
Avg Head Flow	19.982 (gpm)
Max Velocity	11.777 (ft/s)



① LEVEL 3 PREACTION CALC PLAN

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FIRE
 25990 ALFA MARKET RD.
 BEND, OREGON 97701

C.C.B.# 179850
 P: [REDACTED]
 F: [REDACTED]

Crook County Justice Center
 260 NW 2ND STREET
 PRINEVILLE, OREGON 97754
 L3 PREACTION CALC PLAN

DRAWN BY
 GERALD W. EBELING, S.E.T.
 CHECKED BY
 DATE
 8/04/11 AM
 REVISED

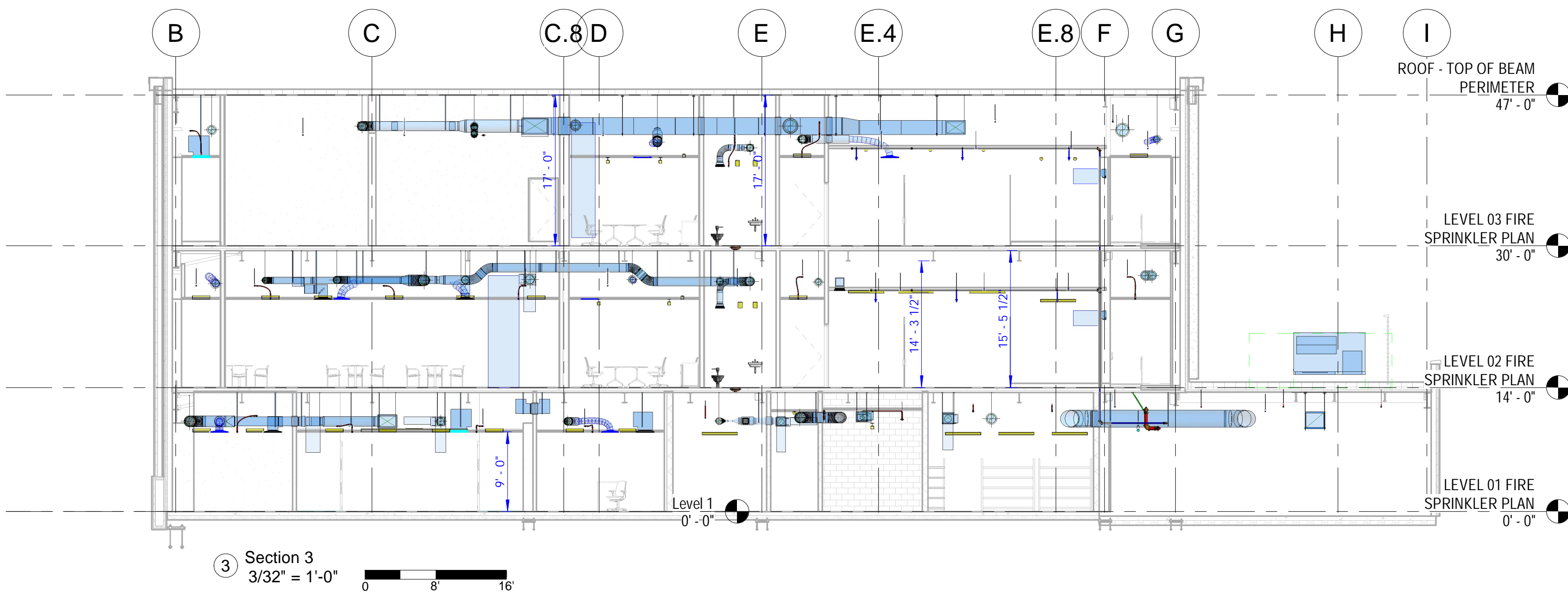
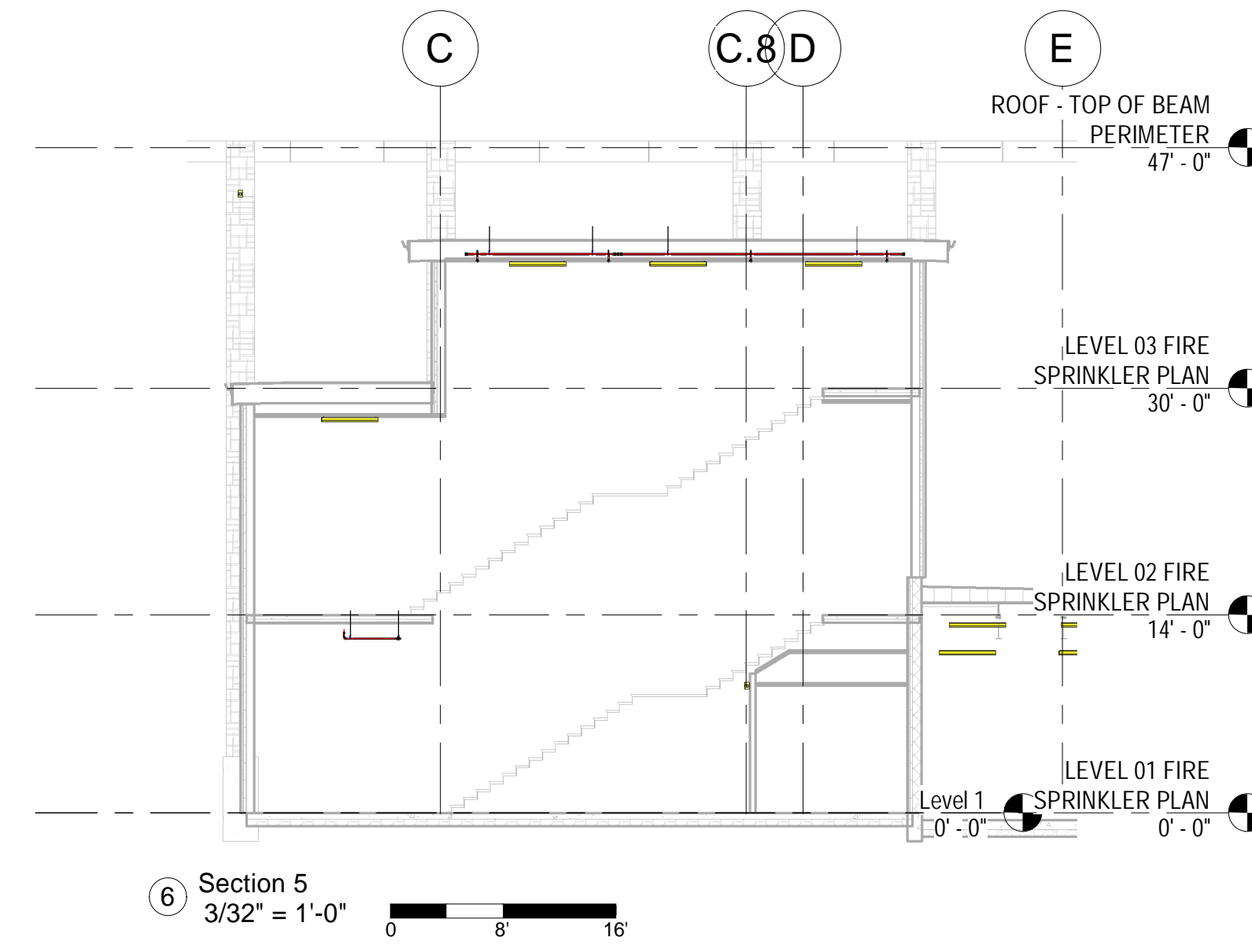
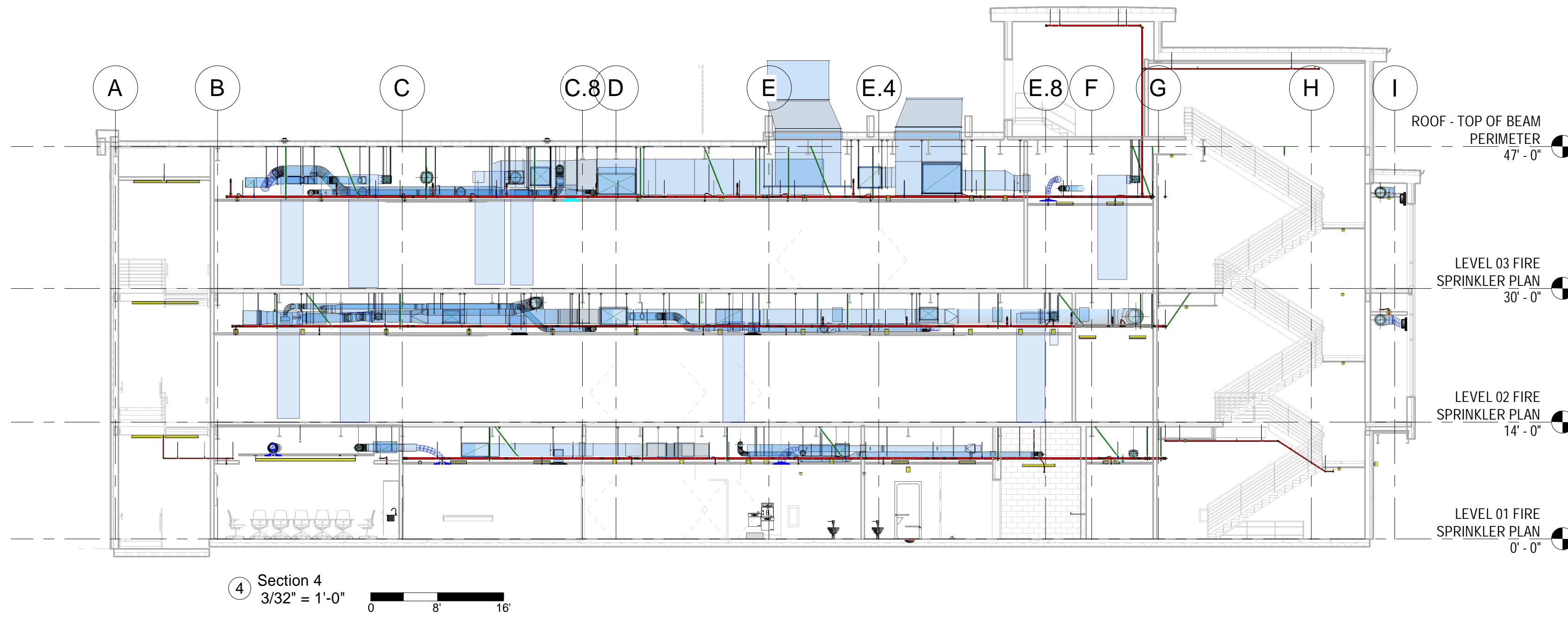
JOB # 22-154

PROJECT
 NORTH

FS SHEET
 FP11

DATE: 8/04/11 AM

SOFTWARE: REVIT 2022 / MICROBIM FILE LOCATION: C:\Users\Admin\Dropbox\3D FIRE PROJECTS\FIRE LLC\CURRENT PROJECTS\2-1st Crook County Justice Center\22-154\CCJC Fire.rvt



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<p>FS SHEET</p> <p>FP12</p> <p>PROJECT NORTH</p>	<p>FIRE</p> <p>25990 ALFA MARKET RD. BEND, OREGON 97701</p> <p>C.C.B.# 179850</p> <p>P: [REDACTED] E: [REDACTED]</p>
<p>DATE: 8/04/37 AM</p>	<p>SOFTWARE: REVIT 2022 / MICROBIM</p> <p>FILE LOCATION: C:\Users\Admin\Dropbox\3D FIRE PROJECTS\FIRE LLC\CURRENT PROJECTS\22-151 Crook County Justice Center\22-151 Crook County Justice Center\Fire.rvt</p>
<p>Crook County Justice Center 260 NW 2ND STREET PRINEVILLE, OREGON 97754</p>	<p>SECTIONS</p>
<p>DRAWN BY: GERALD W. EBELING, S.E.T. CHECKED BY: [REDACTED]</p>	<p>JOB #: 22-154</p> <p>DATE: 8/04/37 AM REVISED: [REDACTED]</p>

TOLBrace™ Seismic Bracing Calculations v8.8.123

Project Address: CCJC Contractor: 3D FIRE DESIGN, LLC
 Address: 16012 VALLEY VIEW
 260 NW 2ND STREET FORNEY, TX 75126
 PRINEVILLE, OR 97754 Phone: 9722133210
 Licence: NICET 105930

Calculations based on 2019 NFPA Pamphlet #13

Brace Information		TOLCO™ Brace Components	
Maximum Brace Length	7' 0" (2.134 m)	TOLCO™ Component	Listed Load Adjusted Load
Diameter of Brace	1"	Fig. 1001 Clamp	2015 lbs (914 kg) 1425 lbs (646 kg)
Type of Brace	Sch.40	Fig.980 - 3/8" Universal Swive	1600 lbs (726 kg) 1131 lbs (513 kg)
Angle of Brace	45° Min.	*Calculation Based on CONCENTRIC Loading *Please Note: These calculations are for TOLCO™ components only. Use of any other components voids these calculations and the listing of the assembly.	
Least Rad. of Gyration	0.42" (11 mm)		
L/R Value	200		
Max Horizontal Load	1310 lbs (594 kg)		
Fastener Information		Brace Identification on Plans SB1 Brace Type Lateral [] Longitudinal [] 4-Way [X]	
Orientation to Connecting Surface NFPA Type B			
Fastener Type	Wedge Anchor 3/8in. x 2 3/8in.		
Diameter	3/8in.		
Length	2 3/8in.		
Maximum Load	221 lbs (100 kg)		
Prying Factor	1.29		

Sprinkler System Load Calculation (Fpw = CpWp)					
Diameter	Type	Length	Total Length	Weight Per Unit Length	Total Weight
4" (100 mm)	Sch. 10	10 ft (3 m)	10 ft (3 m)	11.78 lb/ft (17.53 kg/m)	118 lbs (54 kg)
				Subtotal Weight	118 lbs (54 kg)
				Wp (incl. 15%)	136 lbs (62 kg)
				Total (Fpw)	48 lbs (22 kg)
				Maximum Fpw per 18.5.5.2 (if applicable) N/A	

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TOLBrace™ Seismic Bracing Calculations v8.8.123

Project Address: CCJC Contractor: 3D FIRE DESIGN, LLC
 Address: 16012 VALLEY VIEW
 260 NW 2ND STREET FORNEY, TX 75126
 PRINEVILLE, OR 97754 Phone: 9722133210
 Licence: NICET 105930

Calculations based on 2019 NFPA Pamphlet #13

Brace Information		TOLCO™ Brace Components	
Maximum Brace Length	7' 0" (2.134 m)	TOLCO™ Component	Listed Load Adjusted Load
Diameter of Brace	1"	Fig. 1001 Clamp	2015 lbs (914 kg) 1425 lbs (646 kg)
Type of Brace	Sch.40	Fig.980 - 3/8" Universal Swive	1600 lbs (726 kg) 1131 lbs (513 kg)
Angle of Brace	45° Min.	*Calculation Based on CONCENTRIC Loading *Please Note: These calculations are for TOLCO™ components only. Use of any other components voids these calculations and the listing of the assembly.	
Least Rad. of Gyration	0.42" (11 mm)		
L/R Value	200		
Max Horizontal Load	1310 lbs (594 kg)		
Fastener Information		Brace Identification on Plans SB1 Brace Type Lateral [X] Longitudinal [] 4-Way []	
Orientation to Connecting Surface NFPA Type B			
Fastener Type	Wedge Anchor 3/8in. x 2 3/8in.		
Diameter	3/8in.		
Length	2 3/8in.		
Maximum Load	203 lbs (92 kg)		
Prying Factor	1.29		

Sprinkler System Load Calculation (Fpw = CpWp)					
Diameter	Type	Length	Total Length	Weight Per Unit Length	Total Weight
4" (100 mm)	Sch. 10	40 ft (12.2 m)	40 ft (12.2 m)	11.78 lb/ft (17.53 kg/m)	471 lbs (214 kg)
				Subtotal Weight	471 lbs (214 kg)
				Wp (incl. 15%)	542 lbs (246 kg)
				Total (Fpw)	191 lbs (87 kg)
				Maximum Fpw per 18.5.5.2 (if applicable) 769 lb (348 kg)	

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TOLBrace™ Seismic Bracing Calculations v8.8.123

Project Address: CCJC Contractor: 3D FIRE DESIGN, LLC
 Address: 16012 VALLEY VIEW
 260 NW 2ND STREET FORNEY, TX 75126
 PRINEVILLE, OR 97754 Phone: 9722133210
 Licence: NICET 105930

Calculations based on 2019 NFPA Pamphlet #13

Brace Information		TOLCO™ Brace Components	
Maximum Brace Length	7' 0" (2.134 m)	TOLCO™ Component	Listed Load Adjusted Load
Diameter of Brace	1"	Fig. 4L Clamp	2000 lbs (907 kg) 1414 lbs (641 kg)
Type of Brace	Sch.40	Fig.980 - 3/8" Universal Swive	1600 lbs (726 kg) 1131 lbs (513 kg)
Angle of Brace	45° Min.	*Calculation Based on CONCENTRIC Loading *Please Note: These calculations are for TOLCO™ components only. Use of any other components voids these calculations and the listing of the assembly.	
Least Rad. of Gyration	0.42" (11 mm)		
L/R Value	200		
Max Horizontal Load	1310 lbs (594 kg)		
Fastener Information		Brace Identification on Plans SB2 Brace Type Lateral [] Longitudinal [X] 4-Way []	
Orientation to Connecting Surface NFPA Type B			
Fastener Type	Wedge Anchor 3/8in. x 2 3/8in.		
Diameter	3/8in.		
Length	2 3/8in.		
Maximum Load	203 lbs (92 kg)		
Prying Factor	1.29		

Sprinkler System Load Calculation (Fpw = CpWp)					
Diameter	Type	Length	Total Length	Weight Per Unit Length	Total Weight
4" (100 mm)	Sch. 10	40 ft (12.2 m)	40 ft (12.2 m)	11.78 lb/ft (17.53 kg/m)	471 lbs (214 kg)
				Subtotal Weight	471 lbs (214 kg)
				Wp (incl. 15%)	542 lbs (246 kg)
				Total (Fpw)	191 lbs (87 kg)
				Maximum Fpw per 18.5.5.2 (if applicable) N/A	

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TOLBrace™ Seismic Bracing Calculations v8.8.123

Project Address: CCJC Contractor: 3D FIRE DESIGN, LLC
 Address: 16012 VALLEY VIEW
 260 NW 2ND STREET FORNEY, TX 75126
 PRINEVILLE, OR 97754 Phone: 9722133210
 Licence: NICET 105930

Calculations based on 2019 NFPA Pamphlet #13

Brace Information		TOLCO™ Brace Components	
Maximum Brace Length	7' 0" (2.134 m)	TOLCO™ Component	Listed Load Adjusted Load
Diameter of Brace	1"	Fig. 4L Clamp	2015 lbs (914 kg) 1425 lbs (646 kg)
Type of Brace	Sch.40	Fig.980 - 3/8" Universal Swive	1600 lbs (726 kg) 1131 lbs (513 kg)
Angle of Brace	45° Min.	*Calculation Based on CONCENTRIC Loading *Please Note: These calculations are for TOLCO™ components only. Use of any other components voids these calculations and the listing of the assembly.	
Least Rad. of Gyration	0.42" (11 mm)		
L/R Value	200		
Max Horizontal Load	1310 lbs (594 kg)		
Fastener Information		Brace Identification on Plans SB2-1 Brace Type Lateral [] Longitudinal [X] 4-Way []	
Orientation to Connecting Surface NFPA Type B			
Fastener Type	Wedge Anchor 3/8in. x 2 3/8in.		
Diameter	3/8in.		
Length	2 3/8in.		
Maximum Load	203 lbs (92 kg)		
Prying Factor	1.29		

Sprinkler System Load Calculation (Fpw = CpWp)					
Diameter	Type	Length	Total Length	Weight Per Unit Length	Total Weight
4" (100 mm)	Sch. 10	40 ft (12.2 m)	40 ft (12.2 m)	11.78 lb/ft (17.53 kg/m)	471 lbs (214 kg)
				Subtotal Weight	471 lbs (214 kg)
				Wp (incl. 15%)	542 lbs (246 kg)
				Total (Fpw)	191 lbs (87 kg)
				Maximum Fpw per 18.5.5.2 (if applicable) N/A	

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TOLBrace™ Seismic Bracing Calculations v8.8.123

Project Address: CCJC Contractor: 3D FIRE DESIGN, LLC
 Address: 16012 VALLEY VIEW
 260 NW 2ND STREET FORNEY, TX 75126
 PRINEVILLE, OR 97754 Phone: 9722133210
 Licence: NICET 105930

Calculations based on 2019 NFPA Pamphlet #13

Brace Information		TOLCO™ Brace Components	
Maximum Brace Length	7' 0" (2.134 m)	TOLCO™ Component	Listed Load Adjusted Load
Diameter of Brace	1"	Fig. 1001 Clamp	2015 lbs (914 kg) 1425 lbs (646 kg)
Type of Brace	Sch.40	Fig.980 - 3/8" Universal Swive	1600 lbs (726 kg) 1131 lbs (513 kg)
Angle of Brace	45° Min.	*Calculation Based on CONCENTRIC Loading *Please Note: These calculations are for TOLCO™ components only. Use of any other components voids these calculations and the listing of the assembly.	
Least Rad. of Gyration	0.42" (11 mm)		
L/R Value	200		
Max Horizontal Load	1310 lbs (594 kg)		
Fastener Information		Brace Identification on Plans SB3 Brace Type Lateral [X] Longitudinal [] 4-Way []	
Orientation to Connecting Surface NFPA Type B			
Fastener Type	Fig.800 - Along 4" - 12" Wide		
Diameter	N/A		
Length	N/A		
Maximum Load	1400 lbs (635 kg)		
Prying Factor	N/A		

Sprinkler System Load Calculation (Fpw = CpWp)					
Diameter	Type	Length	Total Length	Weight Per Unit Length	Total Weight
4" (100 mm)	Sch. 10	40 ft (12.2 m)	40 ft (12.2 m)	11.78 lb/ft (17.53 kg/m)	471 lbs (214 kg)
				Subtotal Weight	471 lbs (214 kg)
				Wp (incl. 15%)	542 lbs (246 kg)
				Total (Fpw)	191 lbs (87 kg)
				Maximum Fpw per 18.5.5.2 (if applicable) 769 lb (348 kg)	

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TOLBrace™ Seismic Bracing Calculations v8.8.123

Project Address: CCJC Contractor: 3D FIRE DESIGN, LLC
 Address: 16012 VALLEY VIEW
 260 NW 2ND STREET FORNEY, TX 75126
 PRINEVILLE, OR 97754 Phone: 9722133210
 Licence: NICET 105930

Calculations based on 2019 NFPA Pamphlet #13

Brace Information		TOLCO™ Brace Components	
Maximum Brace Length	7' 0" (2.134 m)	TOLCO™ Component	Listed Load Adjusted Load
Diameter of Brace	1"	Fig. 4L Clamp	2015 lbs (914 kg) 1425 lbs (646 kg)
Type of Brace	Sch.40	Fig.980 - 3/8" Universal Swive	1600 lbs (726 kg) 1131 lbs (513 kg)
Angle of Brace	45° Min.	*Calculation Based on CONCENTRIC Loading *Please Note: These calculations are for TOLCO™ components only. Use of any other components voids these calculations and the listing of the assembly.	
Least Rad. of Gyration	0.42" (11 mm)		
L/R Value	200		
Max Horizontal Load	1310 lbs (594 kg)		
Fastener Information		Brace Identification on Plans SB4 Brace Type Lateral [] Longitudinal [X] 4-Way []	
Orientation to Connecting Surface NFPA Type B			
Fastener Type	Fig.800 - Along 4" - 12" Wide		
Diameter	N/A		
Length	N/A		
Maximum Load	1400 lbs (635 kg)		
Prying Factor	N/A		

Sprinkler System Load Calculation (Fpw = CpWp)					
Diameter	Type	Length	Total Length	Weight Per Unit Length	Total Weight
4" (100 mm)	Sch. 10	40 ft (12.2 m)	40 ft (12.2 m)	11.78 lb/ft (17.53 kg/m)	471 lbs (214 kg)
				Subtotal Weight	471 lbs (214 kg)
				Wp (incl. 15%)	542 lbs (246 kg)
				Total (Fpw)	191 lbs (87 kg)
				Maximum Fpw per 18.5.5.2 (if applicable) N/A	

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C.C.B.# 179850
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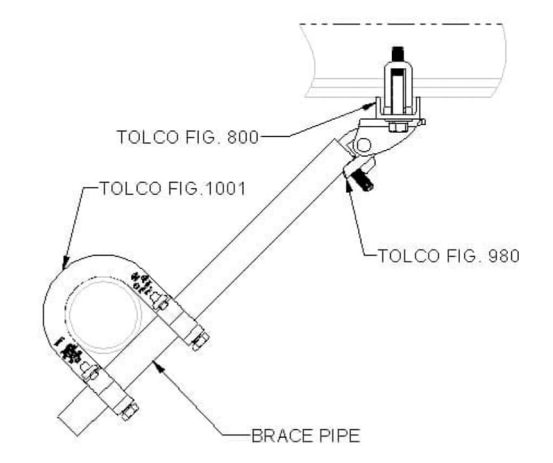
Crook County Justice Center
 260 NW 2ND STREET
 PRINEVILLE, OREGON 97754

PROJECT NORTH
FS SHEET
FP13

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TOLBrace™ Seismic Bracing Calculations V8.8.123

Project Address: CCJC Contractor: 3D FIRE DESIGN, LLC
 Address: 16012 VALLEY VIEW FORNEY, TX 75126
 260 NW 2ND STREET Phone: 9722133210
 PRINEVILLE, OR 97754 Licence: NICET 105930
 Job # Calculations based on 2019 NFPA Pamphlet #13

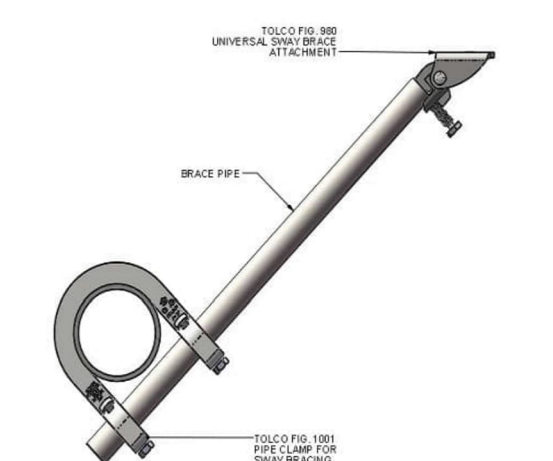
Brace Information		TOLCO™ Brace Components		
Maximum Brace Length	7' 0" (2.134 m)	TOLCO™ Component	Listed Load	Adjusted Load
Diameter of Brace	1"	Fig. 1001 Clamp	2015 lbs (914 kg)	1425 lbs (646 kg)
Type of Brace	Sch.40	Fig.980 - 3/8" Universal Swive	1600 lbs (726 kg)	1131 lbs (513 kg)
Angle of Brace	45° Min.	Fig.800 - Along 4" - 12" Wide	1400 lbs (635 kg)	
Least Rad. of Gyration	0.42" (11 mm)	*Calculation Based on CONCENTRIC Loading *Please Note: These calculations are for TOLCO™ components only. Use of any other components voids these calculations and the listing of the assembly.		
L/R Value	200	Seismic Brace Assembly Detail		
Max Horizontal Load	1310 lbs (594 kg)			
Fastener Information				
Orientation to Connecting Surface NFPA Type B				
Fastener				
Type	Fig.800 - Along 4" - 12" Wide	Brace Identification on Plans SB5		
Diameter	N/A	Brace Type Lateral [X] Longitudinal [] 4-Way []		
Length	N/A			
Maximum Load	1400 lbs (635 kg)			
Prying Factor	N/A			

Sprinkler System Load Calculation (Fpw = CpWp)					
Diameter	Type	Length	Total Length	Weight Per Unit Length	Total Weight
2.5" (65 mm)	Sch. 10	20 ft (6.1 m)	20 ft (6.1 m)	5.89 lb/ft (8.77 kg/m)	118 lbs (54 kg)
1.25" (32 mm)	Sch. 10	402 ft (122.5 m)	402 ft (122.5 m)	2.52 lb/ft (3.75 kg/m)	1013 lbs (460 kg)
1" (25 mm)	Sch. 40	63 ft (19.2 m)	63 ft (19.2 m)	2.05 lb/ft (3.05 kg/m)	129 lbs (59 kg)
Subtotal Weight					1260 lbs (572 kg)
Wp (incl. 15%)					1449 lbs (657 kg)
Main Size	Type/Sch.	Spacing (ft)	Total (Fpw)		
2.5"	Sch. 10	20	510 lbs (231 kg)		
			Maximum Fpw per 18.5.5.2 (if applicable) 641 lb (290 kg)		

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TOLBrace™ Seismic Bracing Calculations V8.8.123

Project Address: CCJC Contractor: 3D FIRE DESIGN, LLC
 Address: 16012 VALLEY VIEW FORNEY, TX 75126
 260 NW 2ND STREET Phone: 9722133210
 PRINEVILLE, OR 97754 Licence: NICET 105930
 Job # Calculations based on 2019 NFPA Pamphlet #13

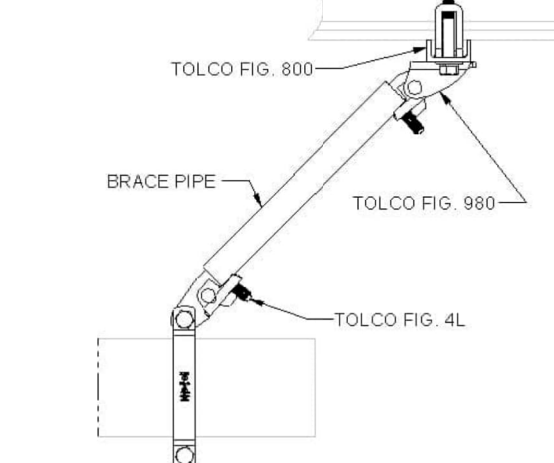
Brace Information		TOLCO™ Brace Components		
Maximum Brace Length	7' 0" (2.134 m)	TOLCO™ Component	Listed Load	Adjusted Load
Diameter of Brace	1"	Fig. 1001 Clamp	2000 lbs (907 kg)	1414 lbs (641 kg)
Type of Brace	Sch.40	Fig.980 - 3/8" Universal Swive	1600 lbs (726 kg)	1131 lbs (513 kg)
Angle of Brace	45° Min.	See Fastener Information		
Least Rad. of Gyration	0.42" (11 mm)	*Calculation Based on CONCENTRIC Loading *Please Note: These calculations are for TOLCO™ components only. Use of any other components voids these calculations and the listing of the assembly.		
L/R Value	200	Seismic Brace Assembly Detail		
Max Horizontal Load	1310 lbs (594 kg)			
Fastener Information				
Orientation to Connecting Surface NFPA Type B				
Fastener				
Type	Wedge Anchor 3/8in. x 2 3/8in.	Brace Identification on Plans SB7		
Diameter	3/8in.	Brace Type Lateral [X] Longitudinal [] 4-Way []		
Length	2 3/8in.			
Maximum Load	203 lbs (92 kg)			
Prying Factor	1.29			

Sprinkler System Load Calculation (Fpw = CpWp)					
Diameter	Type	Length	Total Length	Weight Per Unit Length	Total Weight
3" (80 mm)	Sch. 10	40 ft (12.2 m)	40 ft (12.2 m)	7.94 lb/ft (11.82 kg/m)	318 lbs (144 kg)
Subtotal Weight					318 lbs (144 kg)
Wp (incl. 15%)					366 lbs (166 kg)
Main Size	Type/Sch.	Spacing (ft)	Total (Fpw)		
3"	Sch. 10	40	129 lbs (59 kg)		
			Maximum Fpw per 18.5.5.2 (if applicable) 454 lb (205 kg)		

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TOLBrace™ Seismic Bracing Calculations V8.8.123

Project Address: CCJC Contractor: 3D FIRE DESIGN, LLC
 Address: 16012 VALLEY VIEW FORNEY, TX 75126
 260 NW 2ND STREET Phone: 9722133210
 PRINEVILLE, OR 97754 Licence: NICET 105930
 Job # Calculations based on 2019 NFPA Pamphlet #13

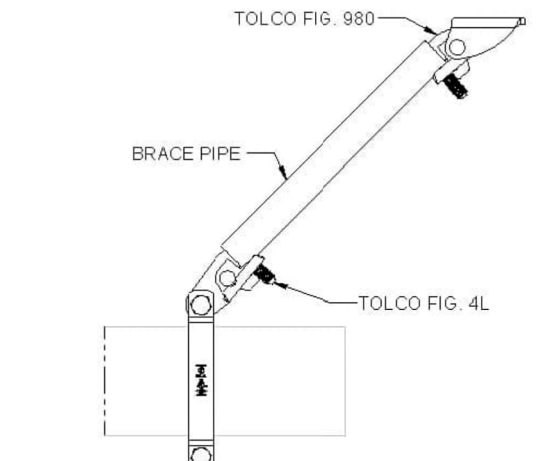
Brace Information		TOLCO™ Brace Components		
Maximum Brace Length	7' 0" (2.134 m)	TOLCO™ Component	Listed Load	Adjusted Load
Diameter of Brace	1"	Fig. 4L Clamp	2015 lbs (914 kg)	1425 lbs (646 kg)
Type of Brace	Sch.40	Fig.980 - 3/8" Universal Swive	1600 lbs (726 kg)	1131 lbs (513 kg)
Angle of Brace	45° Min.	Fig.800 - Along 4" - 12" Wide	1400 lbs (635 kg)	
Least Rad. of Gyration	0.42" (11 mm)	*Calculation Based on CONCENTRIC Loading *Please Note: These calculations are for TOLCO™ components only. Use of any other components voids these calculations and the listing of the assembly.		
L/R Value	200	Seismic Brace Assembly Detail		
Max Horizontal Load	1310 lbs (594 kg)			
Fastener Information				
Orientation to Connecting Surface NFPA Type B				
Fastener				
Type	Fig.800 - Along 4" - 12" Wide	Brace Identification on Plans SB6		
Diameter	N/A	Brace Type Lateral [] Longitudinal [X] 4-Way []		
Length	N/A			
Maximum Load	1400 lbs (635 kg)			
Prying Factor	N/A			

Sprinkler System Load Calculation (Fpw = CpWp)					
Diameter	Type	Length	Total Length	Weight Per Unit Length	Total Weight
2.5" (65 mm)	Sch. 10	80 ft (24.4 m)	80 ft (24.4 m)	5.89 lb/ft (8.77 kg/m)	471 lbs (214 kg)
Subtotal Weight					471 lbs (214 kg)
Wp (incl. 15%)					542 lbs (246 kg)
Main Size	Type/Sch.	Spacing (ft)	Total (Fpw)		
2.5"	Sch. 10	80	191 lbs (87 kg)		
			Maximum Fpw per 18.5.5.2 (if applicable) N/A		

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TOLBrace™ Seismic Bracing Calculations V8.8.123

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 260 NW 2ND STREET Phone: 9722133210
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 Job # Calculations based on 2019 NFPA Pamphlet #13

Brace Information		TOLCO™ Brace Components		
Maximum Brace Length	7' 0" (2.134 m)	TOLCO™ Component	Listed Load	Adjusted Load
Diameter of Brace	1"	Fig. 4L Clamp	2000 lbs (907 kg)	1414 lbs (641 kg)
Type of Brace	Sch.40	Fig.980 - 3/8" Universal Swive	1600 lbs (726 kg)	1131 lbs (513 kg)
Angle of Brace	45° Min.	See Fastener Information		
Least Rad. of Gyration	0.42" (11 mm)	*Calculation Based on CONCENTRIC Loading *Please Note: These calculations are for TOLCO™ components only. Use of any other components voids these calculations and the listing of the assembly.		
L/R Value	200	Seismic Brace Assembly Detail		
Max Horizontal Load	1310 lbs (594 kg)			
Fastener Information				
Orientation to Connecting Surface NFPA Type B				
Fastener				
Type	Wedge Anchor 3/8in. x 2 3/8in.	Brace Identification on Plans SB8		
Diameter	3/8in.	Brace Type Lateral [] Longitudinal [X] 4-Way []		
Length	2 3/8in.			
Maximum Load	203 lbs (92 kg)			
Prying Factor	1.29			

Sprinkler System Load Calculation (Fpw = CpWp)					
Diameter	Type	Length	Total Length	Weight Per Unit Length	Total Weight
3" (80 mm)	Sch. 10	40 ft (12.2 m)	40 ft (12.2 m)	7.94 lb/ft (11.82 kg/m)	318 lbs (144 kg)
Subtotal Weight					318 lbs (144 kg)
Wp (incl. 15%)					366 lbs (166 kg)
Main Size	Type/Sch.	Spacing (ft)	Total (Fpw)		
3"	Sch. 10	40	129 lbs (59 kg)		
			Maximum Fpw per 18.5.5.2 (if applicable) N/A		

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FS SHEET

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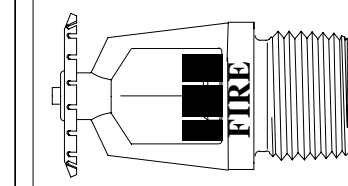
PROJECT NORTH

FP14

C.C.B.# 179850

25990 ALFA MARKET RD.
BEND, OREGON 97701

SEISMIC CALCS 2



FIRE ENGINEERING, INC.

DRAWN BY: GERALD W. EBELING, S.E.T.

CHECKED BY: [REDACTED]

DATE: 8:04:41 AM

REVISED: [REDACTED]

Job # 22-154

Crook County Justice Center

260 NW 2ND STREET
PRINEVILLE, OREGON 97754

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