

STEP BY STEP - EARLY LEARNING CENTER



- CONSTRUCTION NOTES
1. ALL WORK PER NFPA 13 2019 STANDARDS.
 2. EMERALD FIRE TO DESIGN AND INSTALL NEW FIRE SPRINKLER SYSTEM TO PROTECT NEW STEP BY STEP EARLY LEARNING CENTER BUILDING.
 3. UPRIGHT SPRINKLERS SHALL NOT EXCEED 225 SQ. FT. SPACING IN ALL LIGHT HAZARD AREAS.
 4. UPRIGHT SPRINKLERS SHALL NOT EXCEED 130 SQ. FT. SPACING FOR ALL ORDINARY HAZARD AREAS.
 5. PENDENT SPRINKLERS SHALL NOT EXCEED 225 SQ. FT. SPACING IN ALL LIGHT HAZARD AREAS.
 6. ALL GROOVED PIPING SHALL BE SCHEDULE 10 BLACK STEEL AND ALL THREADED PIPING SHALL BE SCHEDULE 40 BLACK STEEL.
 7. UPRIGHT SPRINKLERS IN PRESCHOOL MULTIPURPOSE ROOM SHALL HAVE HEAD GUARDS AS PER CUSTOMER SPECIFICATION.
 8. DUE TO THE NATURE OF THE PROJECT, EMERALD FIRE TO HAVE ONE RISER WITH SYSTEM CONTROLS LOCATED IN RISER ROOM, AND SHALL SUPPLY SECOND BUILDING BY GOING UNDERGROUND AT EDGE OF FIRST BUILDING, ROUTING UNDERGROUND, THEN BACK UP WITHIN ENVELOPE OF SECOND BUILDING. SYSTEM TO HAVE AUXILIARY DRAINS ON PIPE GOING UNDERGROUND AND PIPE COMING UP IN SECOND BUILDING.
 9. DUE TO THE NATURE OF THE PROJECTS STRUCTURE, BRANCHLINES IN TODDLER AND INFANT CLASSROOMS RUN DOWN THE ROOF SLOPES. DUE TO THE GALLONS OF TRAPPED WATER NOT EXCEEDING 5 GALLONS, THE BRANCHLINES DO NOT REQUIRE AUXILIARY DRAINS.
 10. EMERALD FIRE TO INSTALL SIDEWALL SPRINKLERS IN SUCH A WAY AS TO SPRAY UNDERNEATH GARAGE DOORS WHEN FULLY RETRACTED.
 11. ALL TESTING AND INSPECTIONS PER NFPA 13 2019.

ABBREVIATION LEGEND:

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- B.L. - BRANCHLINE
 - B.O.R. - BASE OF RISER
 - CLNG - CEILING
 - F.F. - FINISHED FLOOR
 - G.P.M. - GALLONS PER MINUTE
 - P.S.I. - POUNDS PER SQUARE INCH
 - R.R. - RESTROOM
 - SQ.FT. - SQUARE FEET

FP PAGE LEGEND:

-
- FP1 - COVER PAGE, NOTES, SITE PLAN, ETC.
 - FP2 - SECTIONS, DETAILS, ETC.
 - FP3 - FP PLAN

DESIGN AREA SQUARE FOOTAGES:

-
- EARLY LEARNING CENTER BUILDING AREA - 12906 SQ. FT.

REMOTE AREA SQUARE FOOTAGES:

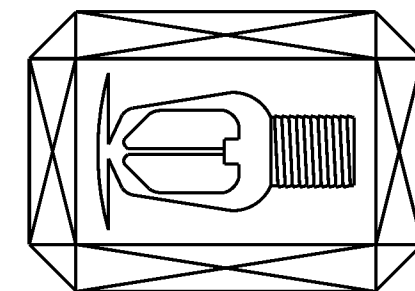
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- INFANT CLASSROOM AREA - 1083 SQ. FT.

WATER SUPPLY INFORMATION (OBTAINED BY VALLEY WATER DISTRICT):

-
- STATIC PRESSURE - 80.00 PSI
 - RESIDUAL PRESSURE - 20.00 PSI
 - WATER FLOW - 2000.00 GPM

EMERALD FIRE

FIRE SPRINKLER SPECIALISTS
11505 BURHAM DRIVE, SUITE 200
GIG HARBOR, WA 98332
(253) 857 - 2056
EMERAFLL980MR



0" 1" 2"
SHEET SIZE IS TRUE
SCALE WHEN ABOVE
LINE MEASURES AS
NOTED

REVISIONS:

1	00/00/00	XXXXXXXXXXXX
2		
3		

STEP BY STEP ELC - PUYALLUP FP PLAN

3303 8TH AVE SE,
PUYALLUP, WA 98372
BUILDING E

COVER PAGE, NOTES, SITE PLAN, ETC.

JOB NAME:

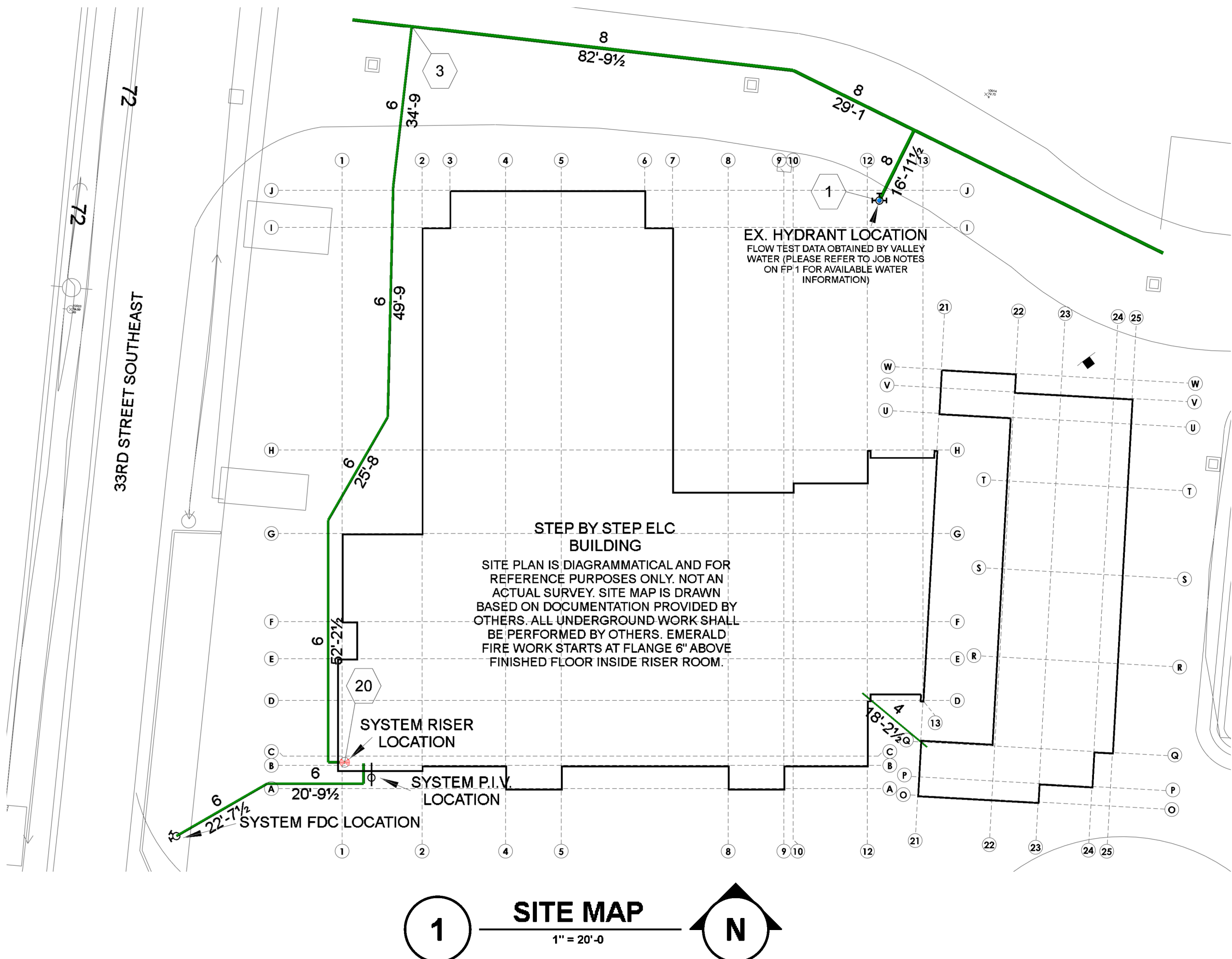
DRAWN BY: CS/MH

DATE: 04/03/25

JOB #: 225002

SHEET NO:

FP1



City of Puyallup
Fire
REVIEWED
FOR
COMPLIANCE

DDrake
05/05/2025
8:15:24 AM



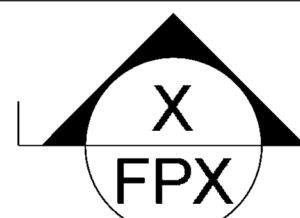
Approval of submitted plans is not an approval of omissions or oversight by this office or noncompliance with any applicable regulations of local government. The contractor is responsible for making sure that the building complies with all applicable building codes and regulations of the local government.

THE APPROVED CONSTRUCTION PLANS AND ALL ENGINEERING MUST BE POSTED ON THE JOB AT ALL INSPECTIONS IN A VISIBLE AND READILY ACCESSIBLE LOCATION.

City of Puyallup
Development & Permitting Services
ISSUED PERMIT

Building Planning
Engineering Public Works
Fire Traffic

SECTION DETAIL LEGEND



DETAIL NUMBER

FP PAGE NUMBER

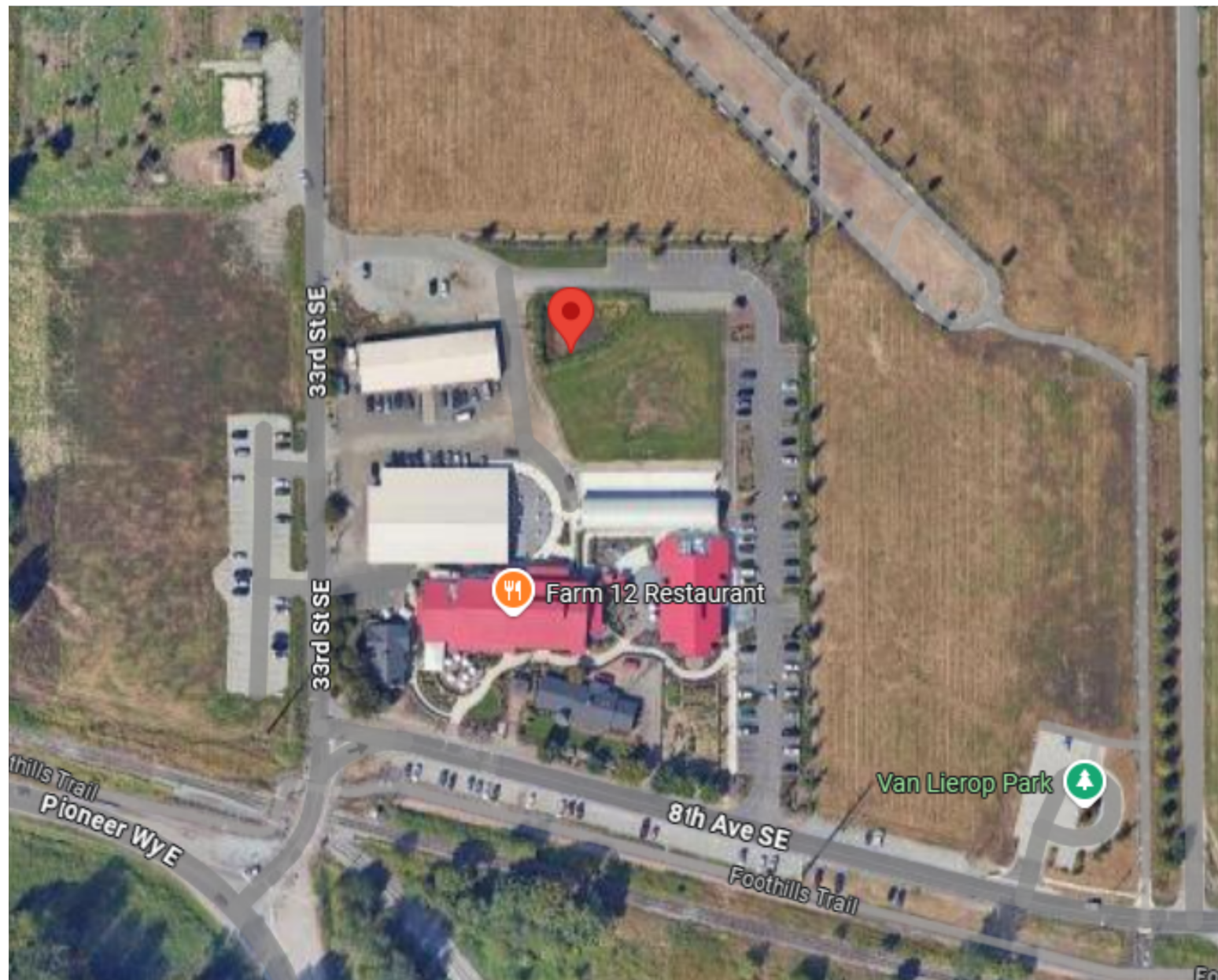
SYMBOLS LEGEND

- NEW PIPE
- PIPE HANGER
- TRAPEZE PIPE HANGER
- BRANCHLINE RESTRAINT
- LATERAL SEISMIC BRACE
- LONGITUDINAL SEISMIC BRACE
- 4-WAY SEISMIC BRACE
- FLEXIBLE DROP
- HYDRAULIC NODE TAG
- F.D.C.
- P.I.V.
- FIRE HYDRANT
- RISER LOCATION

MAXIMUM DISTANCE BETWEEN HANGERS (FT-IN)

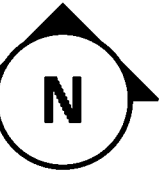
PIPE TYPE	SPACING TABLE (BY SIZE)						
	1"	1¼"	1½"	2"	2½"	3"	4"
STEEL	12'-0	12'-0	15'-0	15'-0	15'-0	15'-0	15'-0

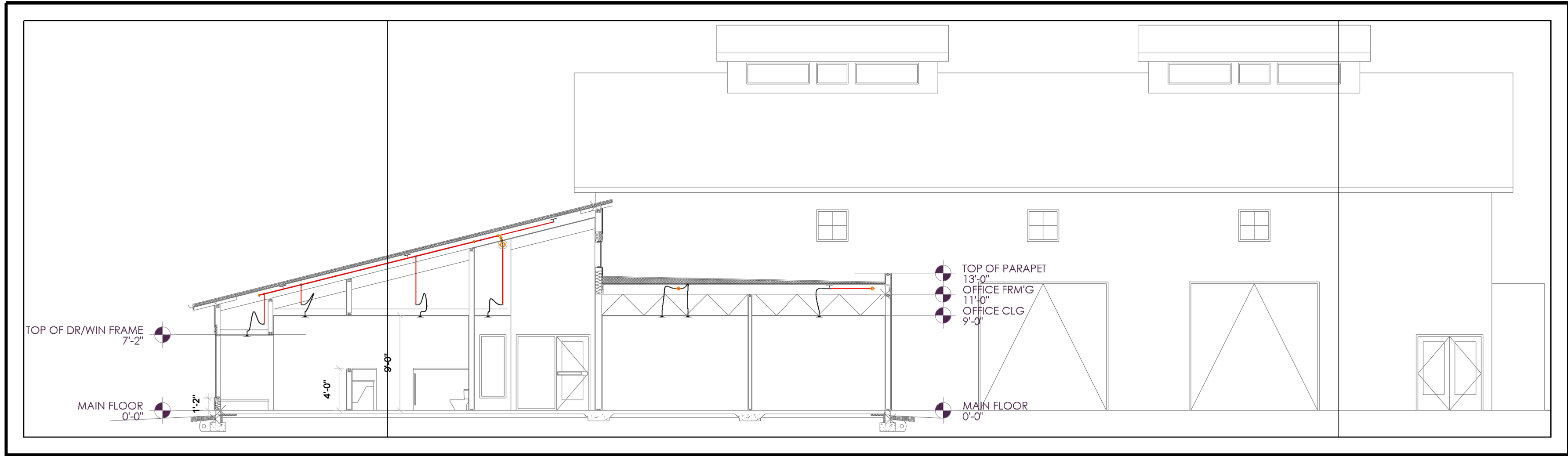
REFERENCE NFPA 13 TABLE 17.4.2.1(a)



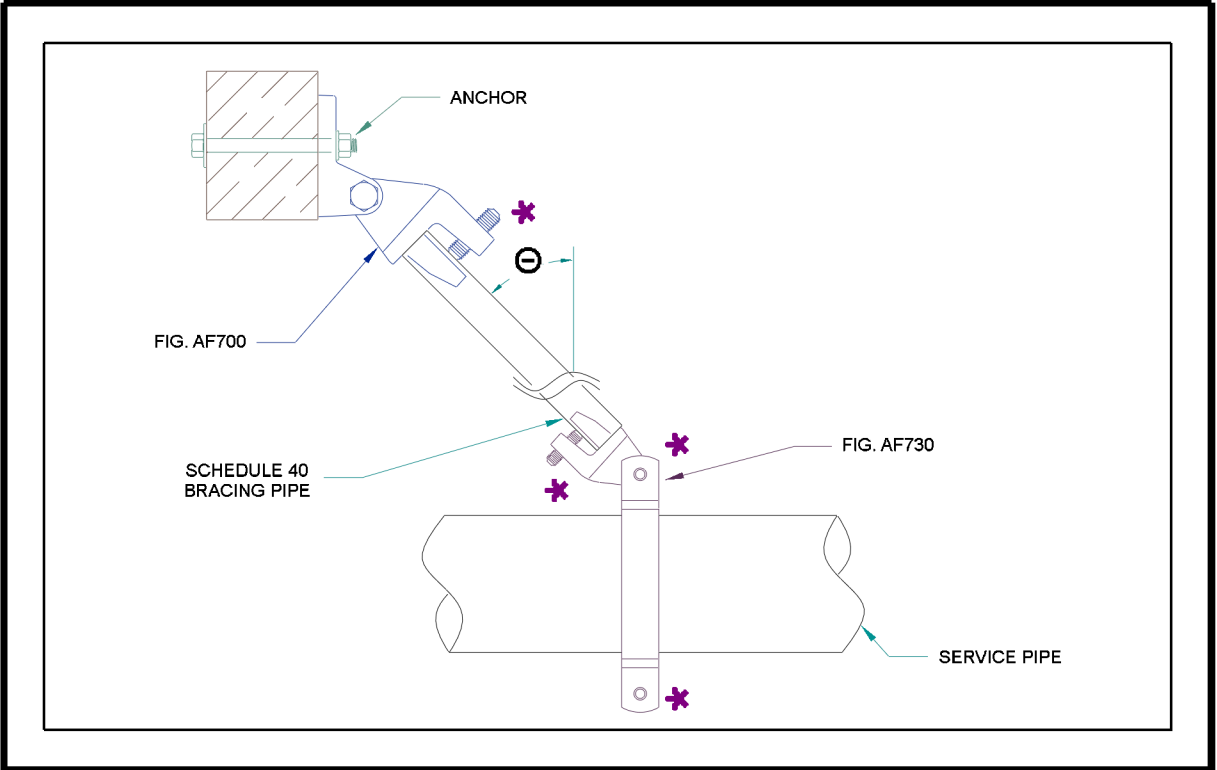
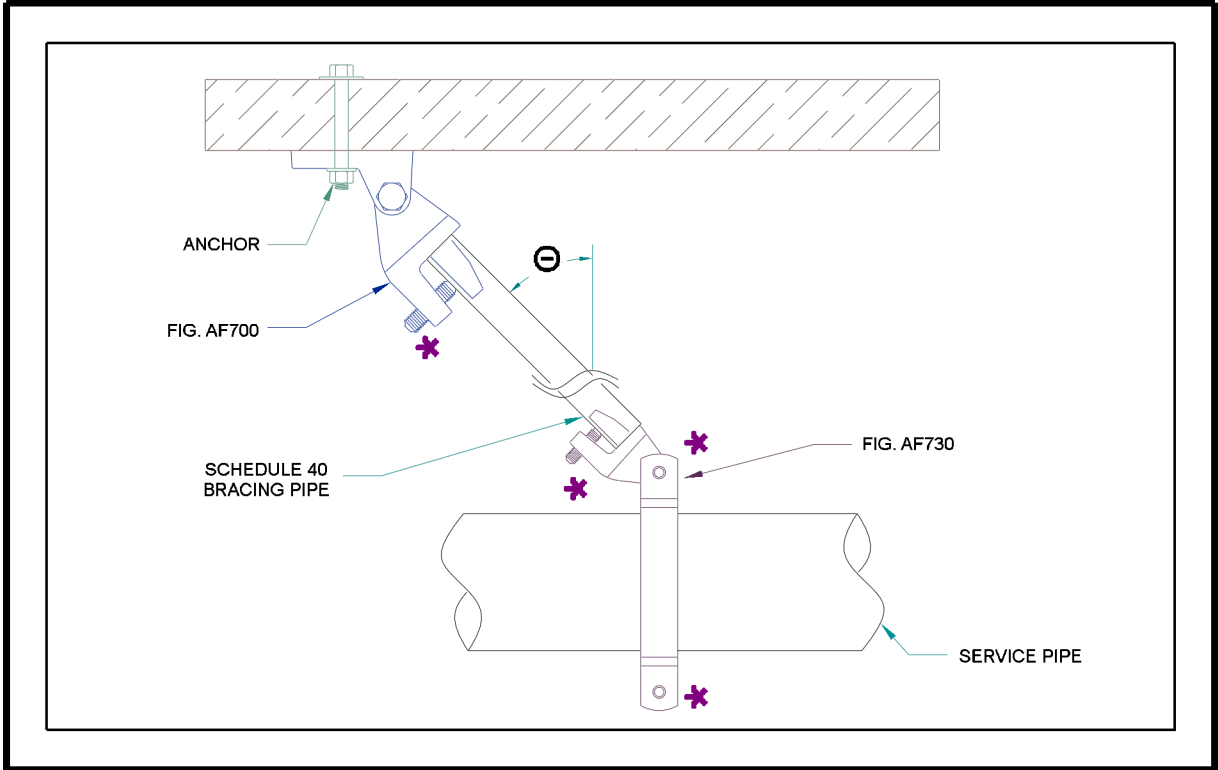
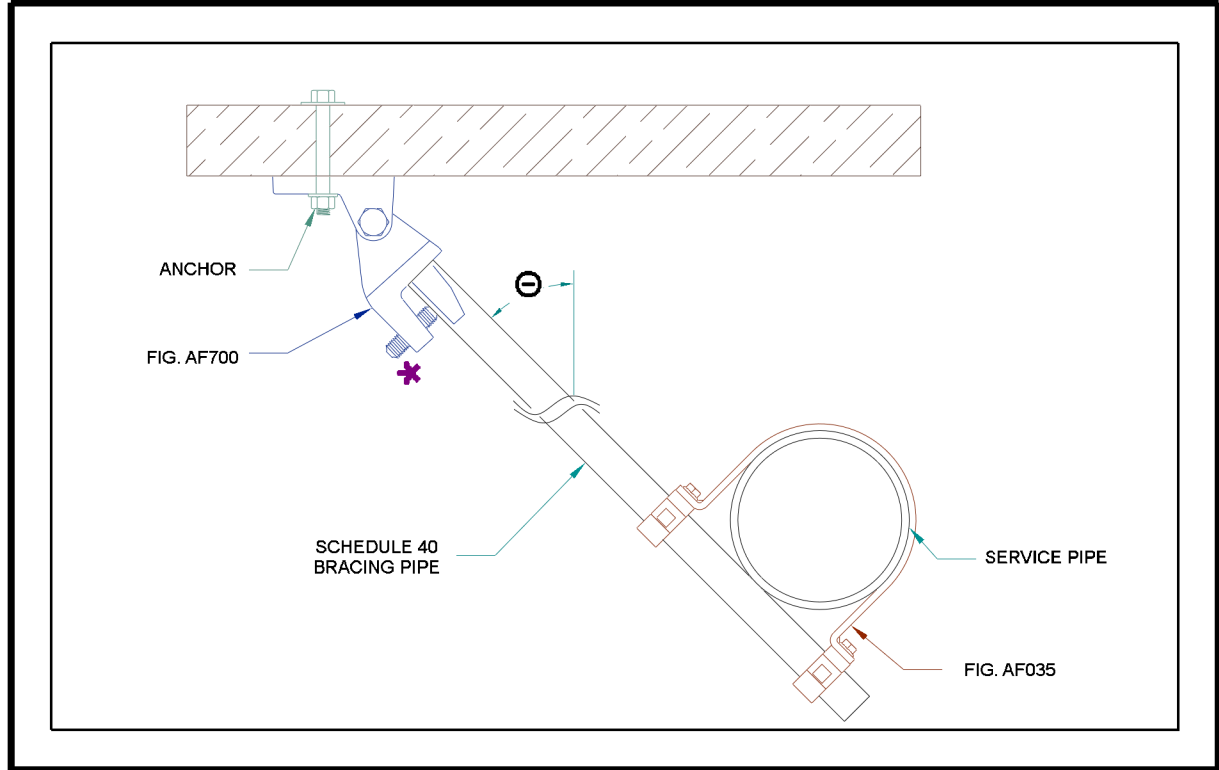
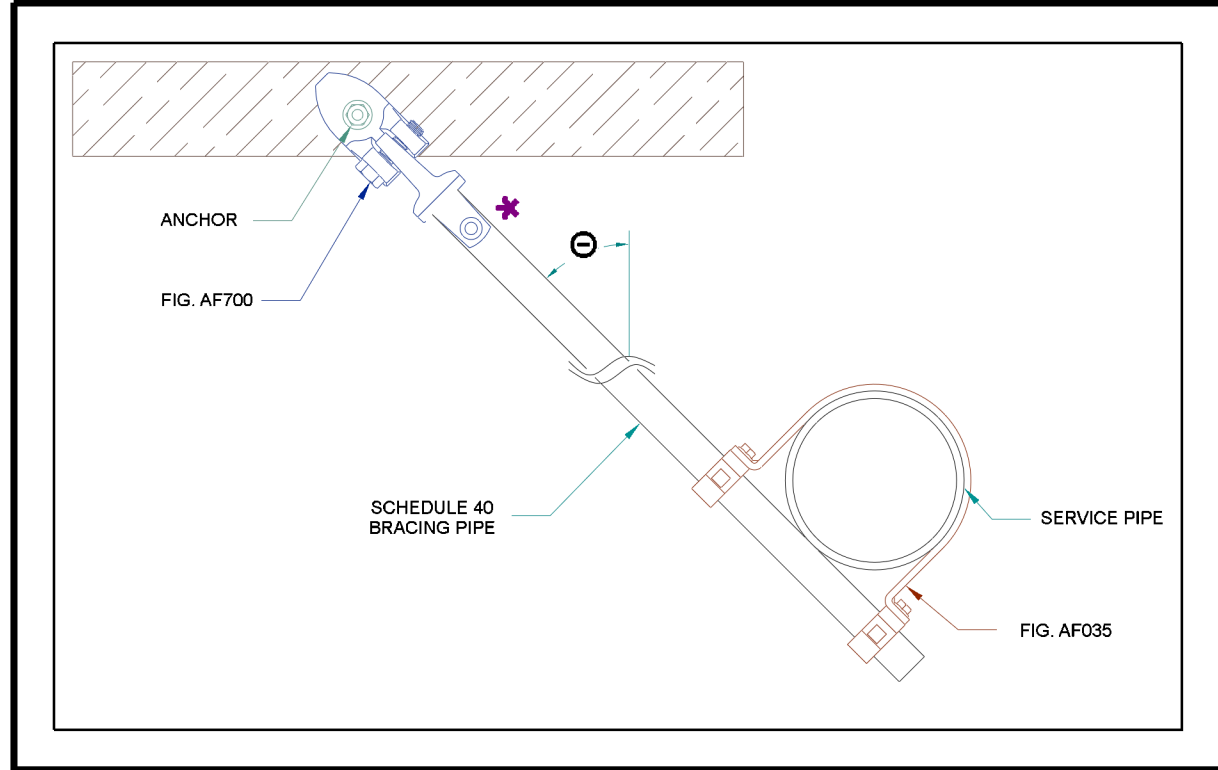
VICINITY MAP

NTS

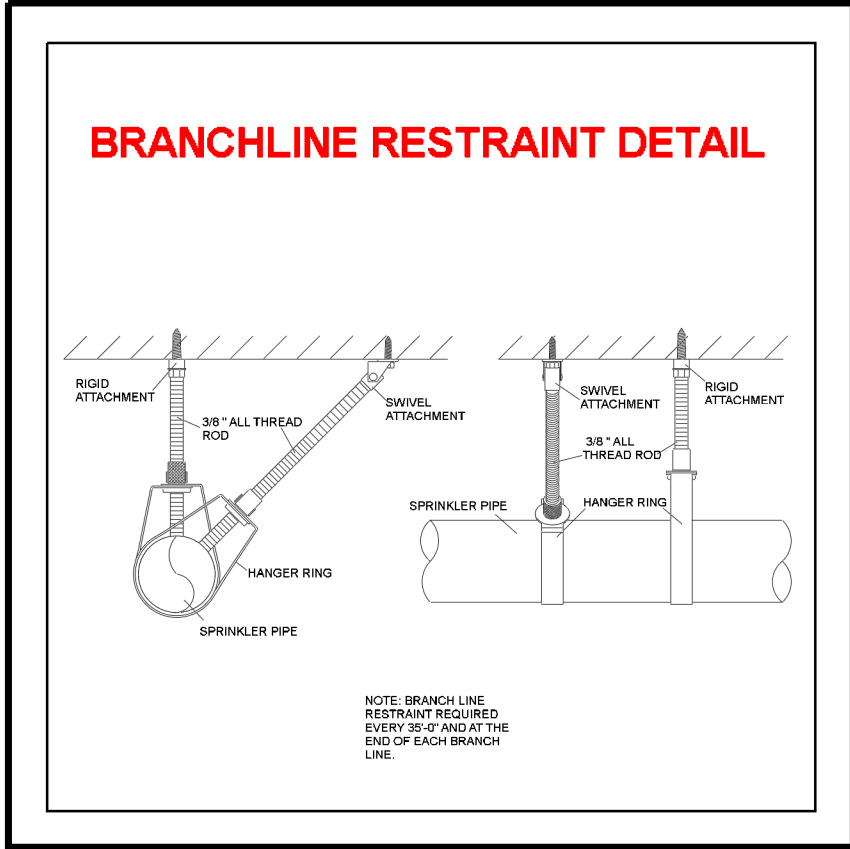




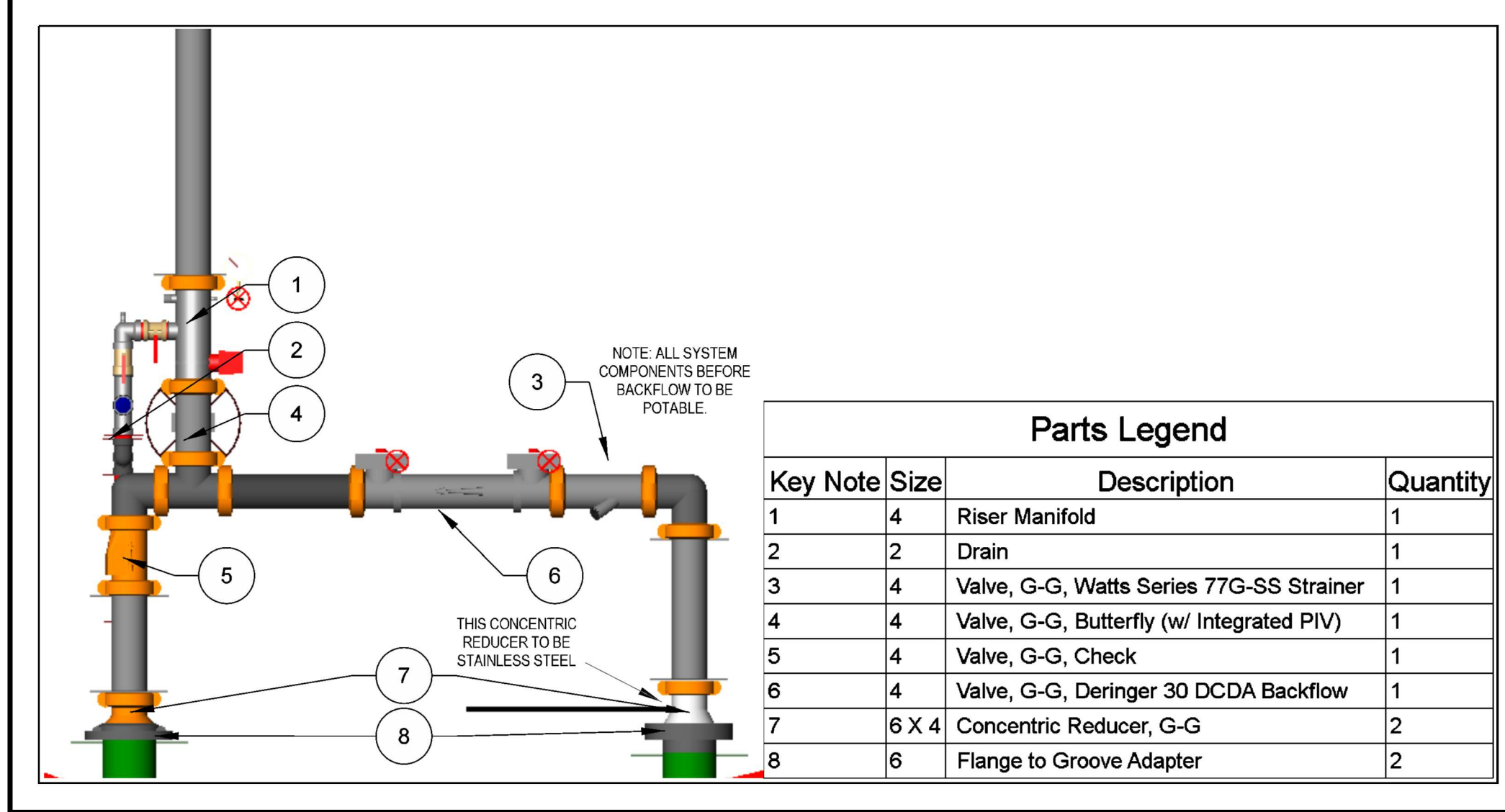
1 SECTION VIEW
SCALE: 1/8" = 1'-0"



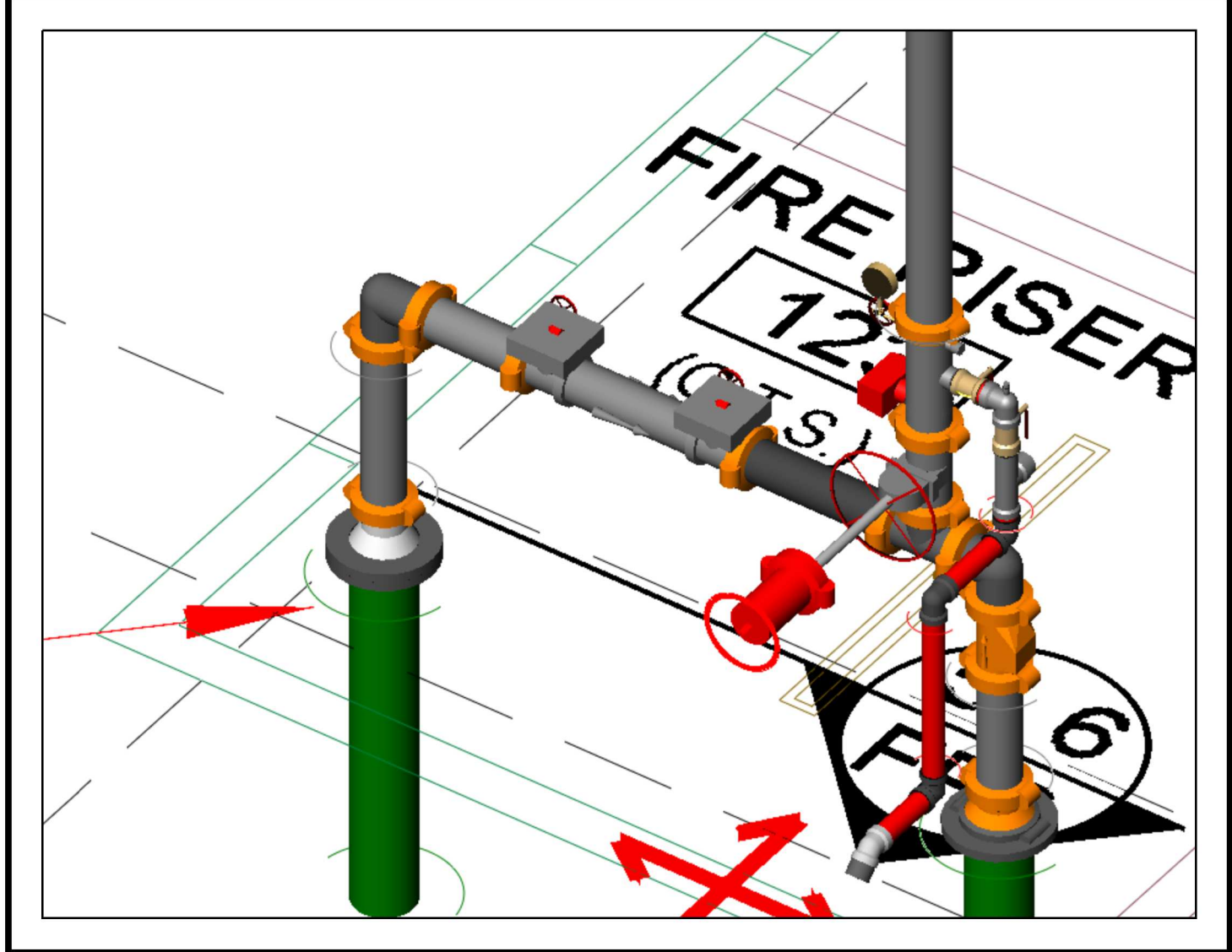
3 SEISMIC BRACING DETAIL



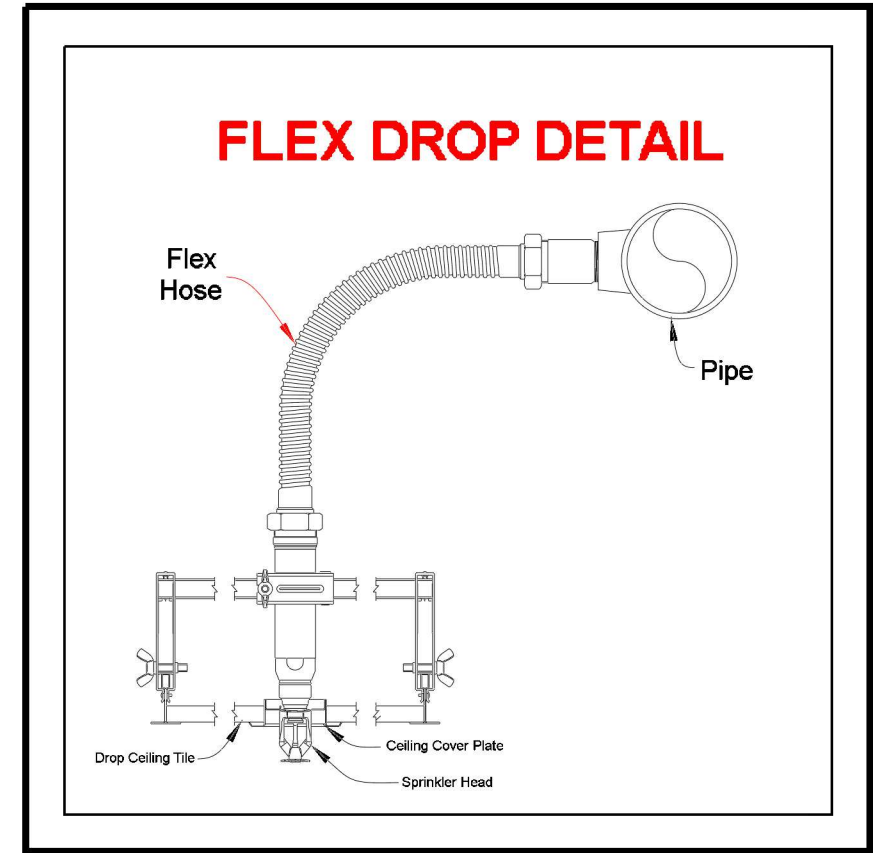
4 BRANCHLINE RESTRAINT DETAIL



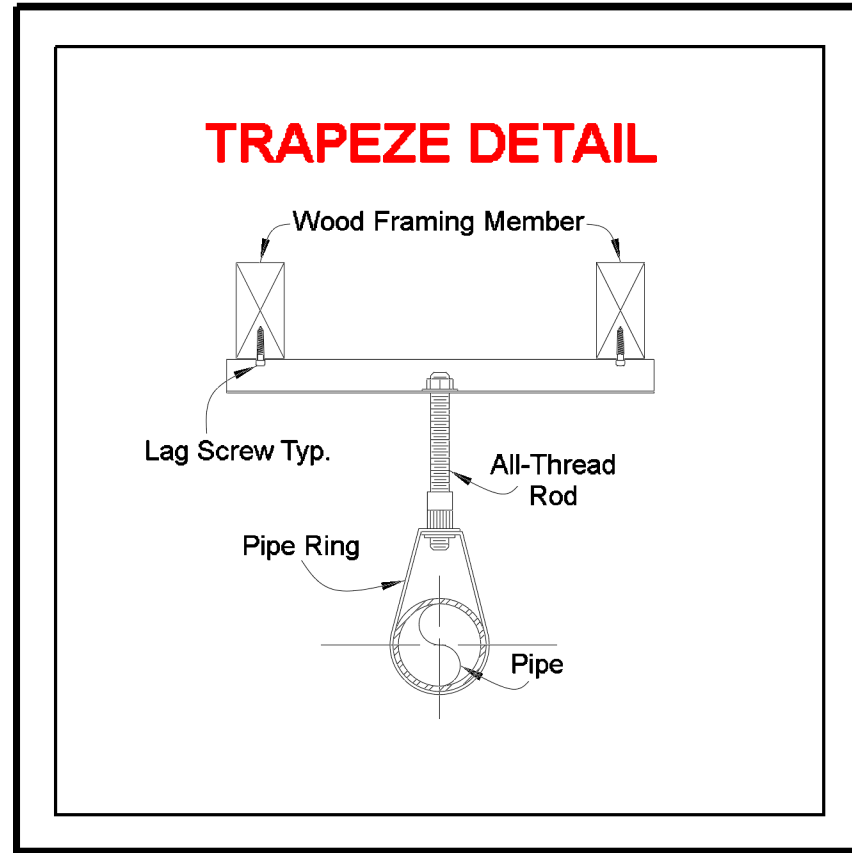
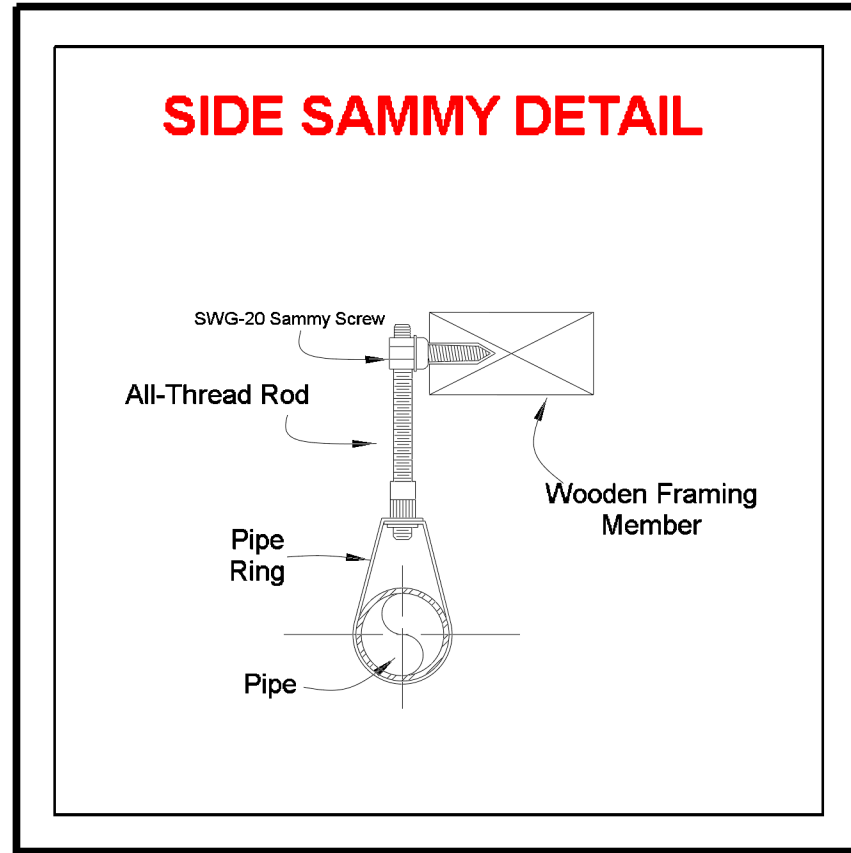
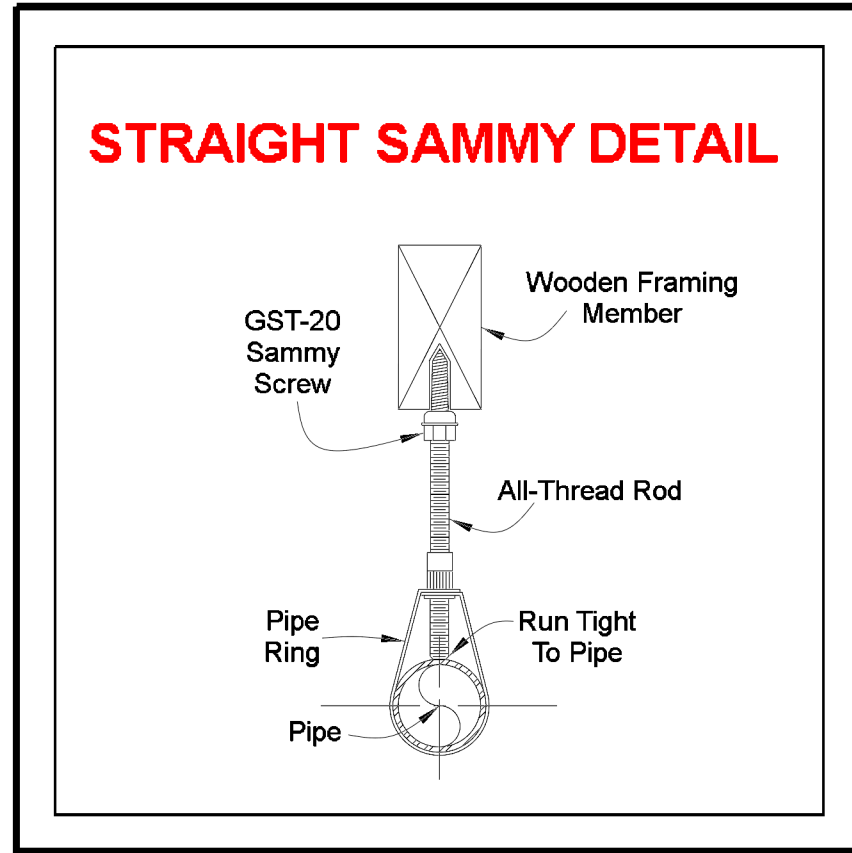
5 RISER DETAIL



6 RISER ISOMETRIC

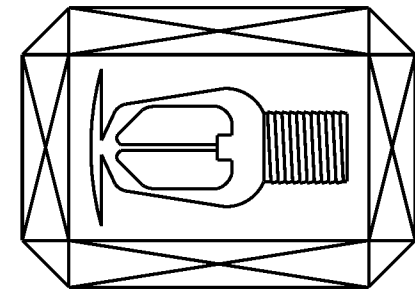


7 FLEX DROP DETAIL



2 HANGER DETAILS

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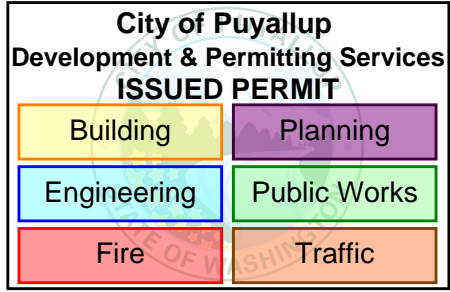
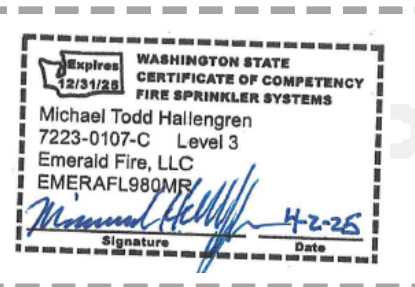
0" 1" 2"
SHEET SIZE IS TRUE
SCALE WHEN ABOVE
LINE MEASURES AS
NOTED

REVISIONS:	
1	XX/XX/XX XXXXXXXXXXXX
2	
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STEP BY STEP ELC - PUYALLUP FP PLAN
3303 8TH AVE SE,
PUYALLUP, WA 98372
BUILDING E

SECTIONS, DETAILS, ETC.

JOB NAME:	
DRAWN BY:	CS/MH
DATE:	04/03/25
JOB #:	225002
SHEET NO:	FP2









1

FIRE SPRINKLER PLAN
STEP BY STEP ELC

1/8" = 1'-0"
0 1 2 4

N

Sprinkler Legend											
Symbol	Manufacturer	SIN	Model	Quantity	K-Factor	Type	Size	Response	Finish	Temperature	Note
	Viking	VK300	MICROFAST	88	5.6	Upright	½	Quick	Brass	200°F	
	Viking	VK3021		46	5.6	Pendent	½	Quick	Chrome	200°F	
	Viking	VK300	MICROFAST	43	5.6	Upright	½	Quick	Brass	200°F	***
	Viking	VK305	Microfast	10	5.6	Sidewall	½	Quick	Brass	200°F	
				Total = 188							
NOTE: ALL PENDENT SPRINKLERS SHALL BE INSTALLED WITH CHROME, SEMI-RECESSED ESCUTCHEONS AS PER PROJECT SPECS.											
*** NOTE: UPRIGHT SPRINKLERS WITH THIS SYMBOL TO BE INSTALLED WITH HEAD GUARD CAGE.											

Hydraulic Information	
Remote Area 2	
OCCUPANCY CLASSIFICATION	Light Hazard
DENSITY (gpm/ft²)	0.10 for 1500ft² (Actual 2018ft²)
TOTAL HOSE STREAMS	100.00
TOTAL HEADS FLOWING	22
K-FACTOR	5.6
TOTAL WATER REQUIRED	600.43
TOTAL PRESSURE REQUIRED	58.702
BASE OF RISER (gpm)	600.43
BASE OF RISER (psi)	58.798
SAFETY MARGIN (psi)	+14.820 (20.2%)

Hydraulic Information	
Remote Area 1	
OCCUPANCY CLASSIFICATION	Light Hazard
DENSITY (gpm/ft²)	0.10 for 1500ft² (Actual 1083ft²)
QUICK RESPONSE REDUCTION	16'-3" Ceiling (29.8%) 1053ft²
TOTAL HOSE STREAMS	100.00
TOTAL HEADS FLOWING	9
K-FACTOR	5.6
TOTAL WATER REQUIRED	321.82
TOTAL PRESSURE REQUIRED	52.764
BASE OF RISER (gpm)	221.82
BASE OF RISER (psi)	52.341
SAFETY MARGIN (psi)	+25.193 (32.3%)

City of Puyallup
Development & Permitting Services
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Building

Planning

Engineering

Public Works

Fire

Traffic

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STEP BY STEP ELC - PUYALLUP FP PLAN
3303 8TH AVE SE,
PUYALLUP, WA 98372
BUILDING E

FIRE PROTECTION PLANS

JOB NAME:
DRAWN BY: CS/MH
DATE: 04/03/25
JOB #: 225002
SHEET NO: FP3

WASHINGTON STATE
CERTIFICATE OF COMPETENCY
FIRE SPRINKLER SYSTEMS
Michael Todd Hallgren
7223-0107-C Level 3
Emerald Fire, LLC
EMERAF980MR
4-2-25