

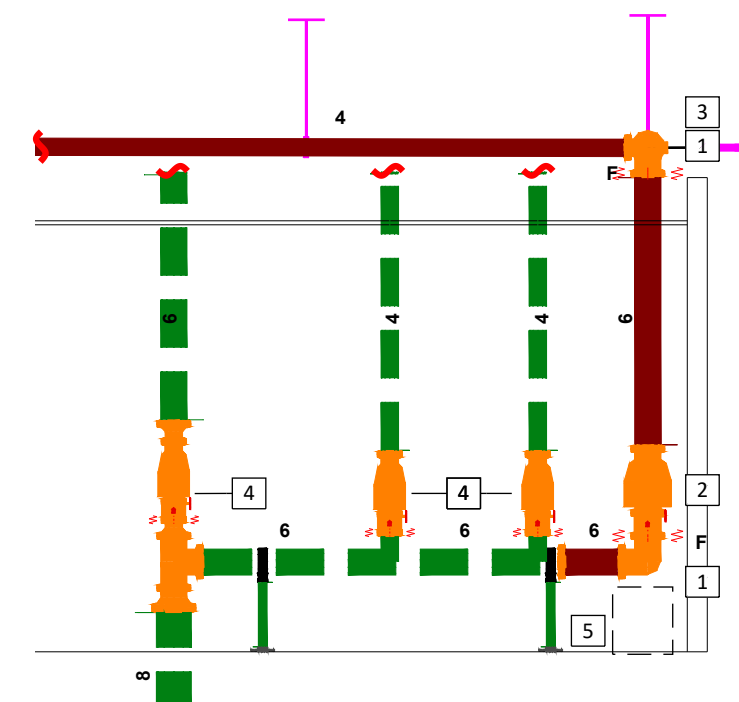
**SITE PLAN**  
SCALE: 1/64" = 1'-0"



**KEY PLAN**  
SCALE: 1:1000



**VICINITY MAP**  
SCALE: NTS



**FIRE RISER DETAIL - LOOKING WEST**  
SCALE: 1/4" = 1'-0"

#	DESC.	MAKE	MODEL
1	6" 90° ELBOW	ANVIL	SPF E-1
2	6" PRE-ACTION VALVE	RELIABLE	DDX W/ DBL. INTERLOCK-ELECTRIC/PNEUMATIC
3	6" x 4" CONC. REDUCER	ANVIL	SPF R-1
4	(E) 4" PRE-ACTION VALVE	RELIABLE	DDX W/ MOD A-2 AIR MAINT. DEVICE
5	(E) 1300 GAL. AIR COMPRESSOR	GENERAL	LT1300300

**FIRE RISER DETAIL LEGEND**

**City of Puyallup Fire REVIEWED FOR COMPLIANCE**  
DDrake  
04/11/2024  
6:57:34 AM

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

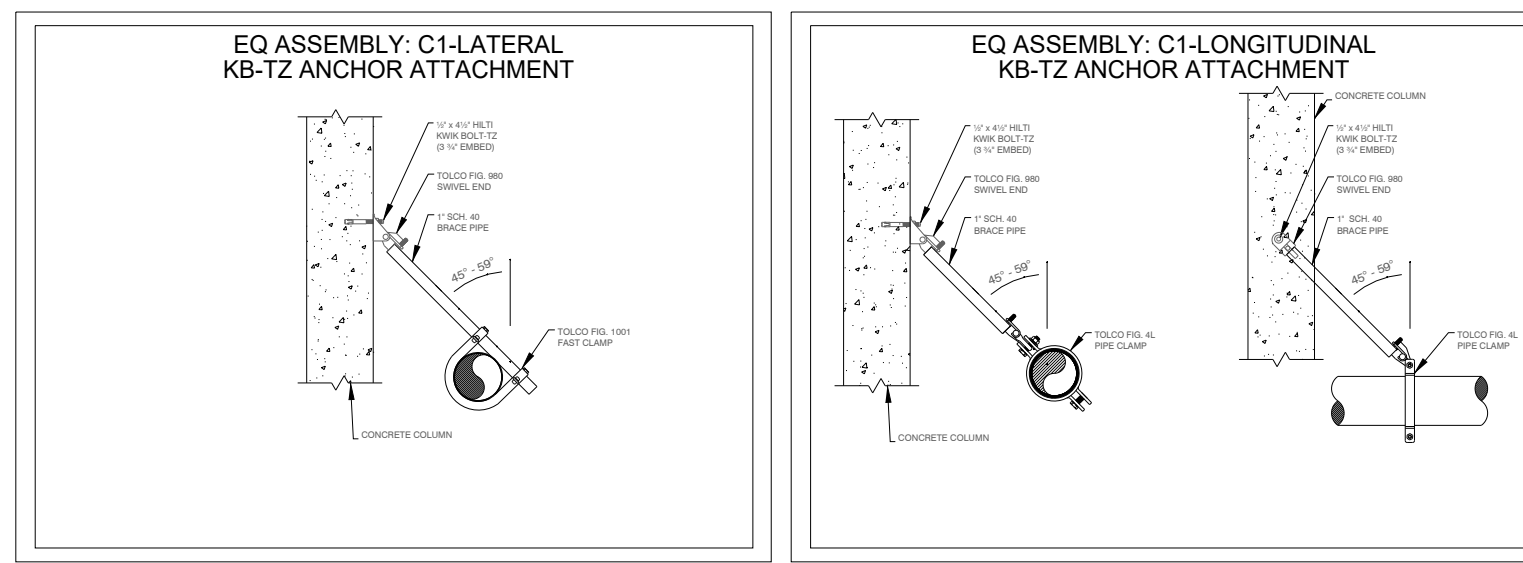
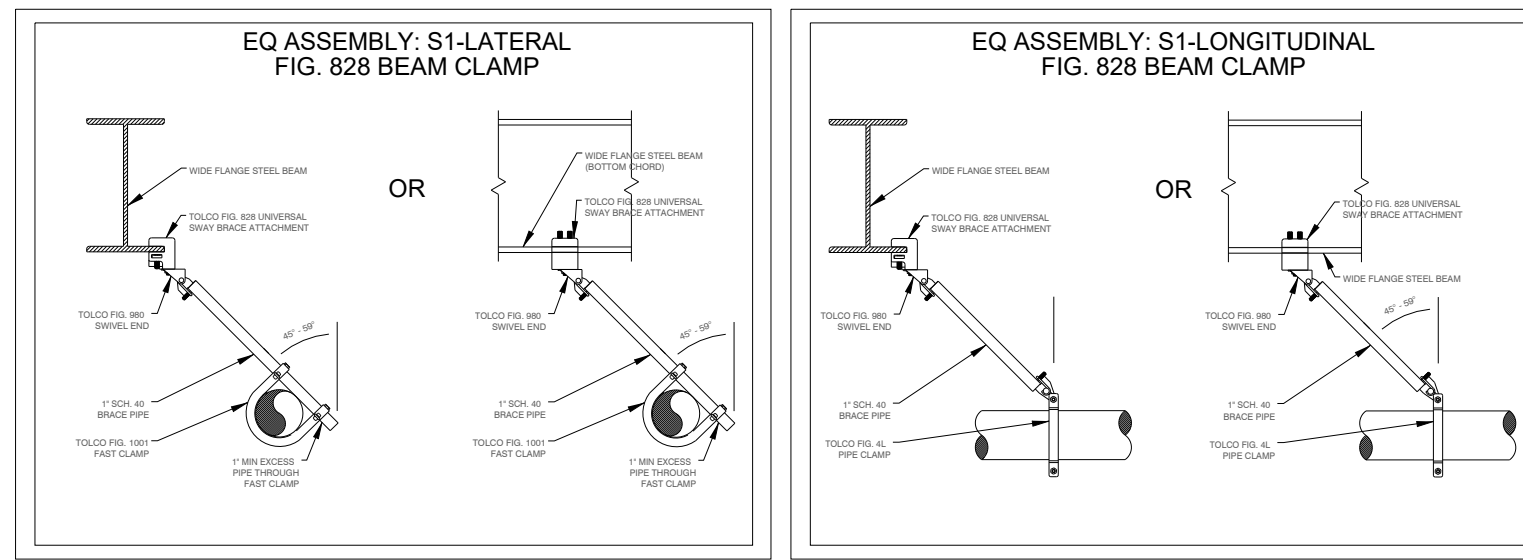
Approval of submitted plans is not an approval of omissions or oversight by this office or noncompliance with any applicable regulations of local government. The contractor is responsible for making sure that the building complies with all applicable building codes and regulations of the local government.

**City of Puyallup Development & Permitting Services ISSUED PERMIT**

Building	Planning
Engineering	Public Works
Fire	Traffic

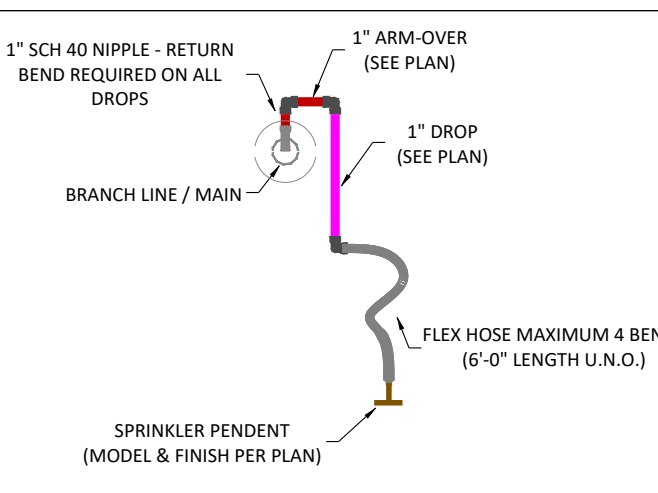
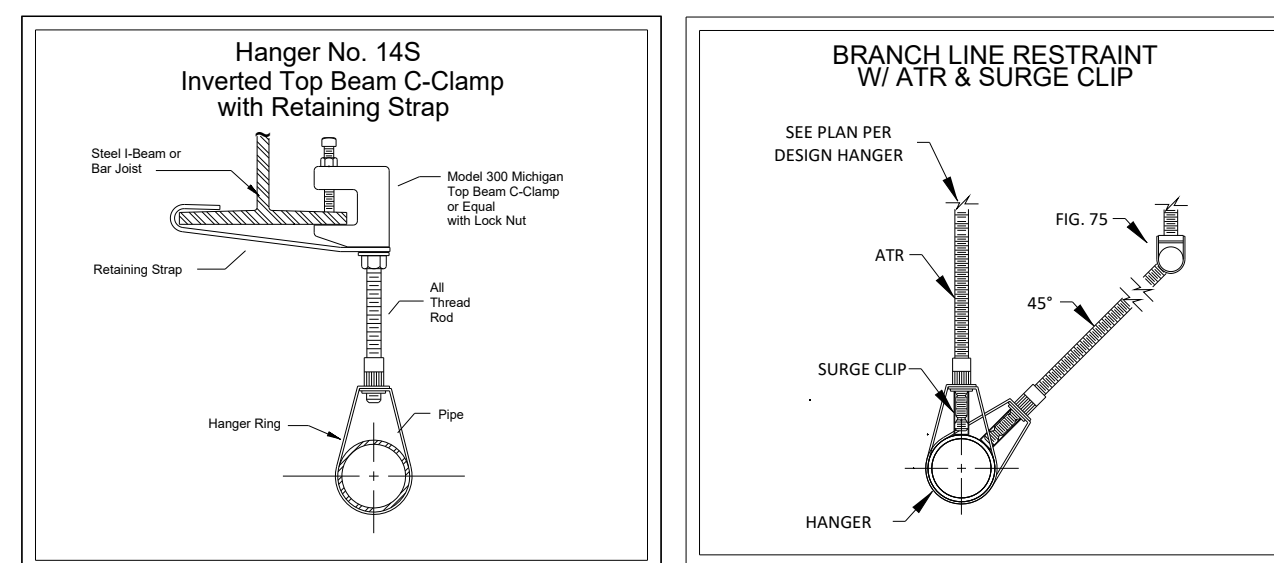
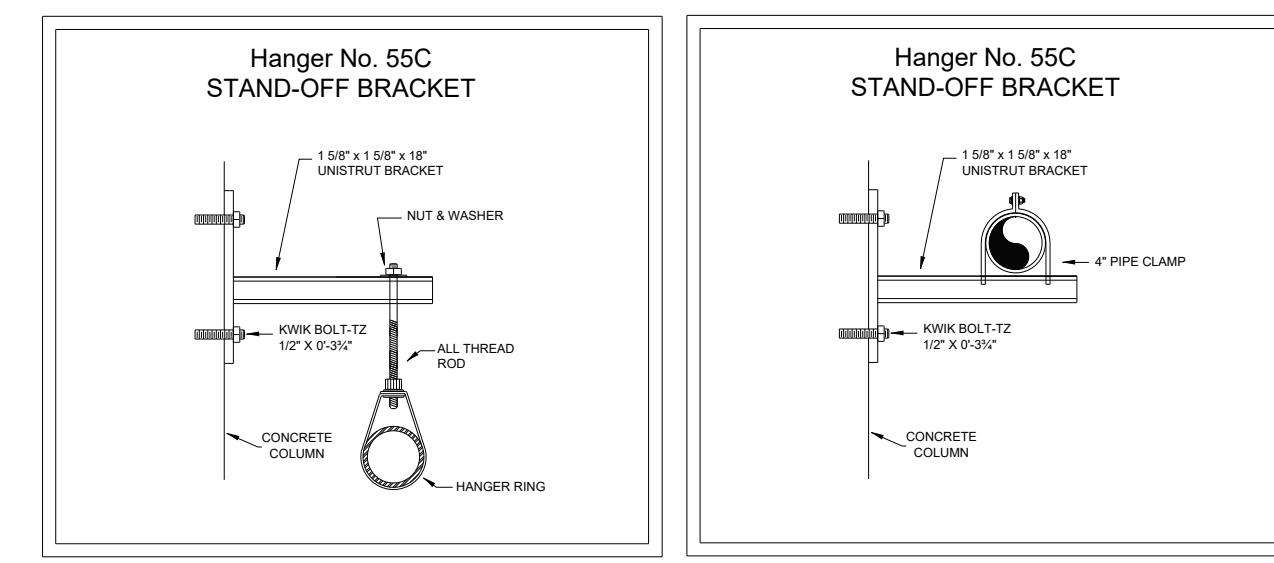
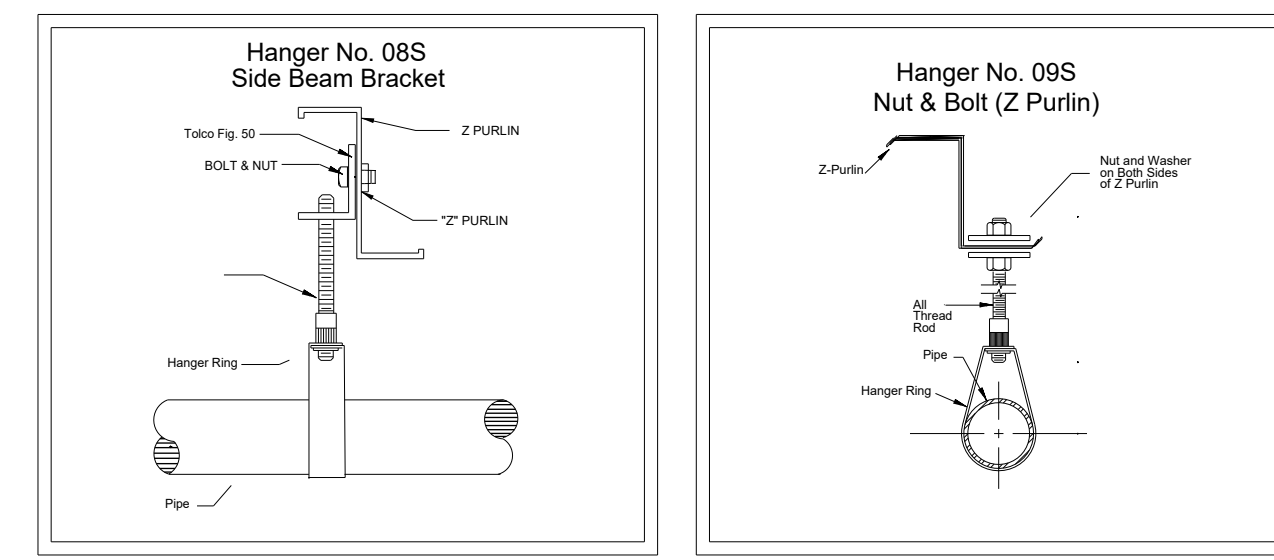
**EQ BRACING DETAILS**

SCALE: NTS



**HANGER DETAILS**

SCALE: NTS



**TYP. FLEX DROP/RETURN BEND DETAIL**  
SCALE: NTS

**SCOPE OF WORK:**

1) DESIGN & INSTALL A NEW PRE-ACTION SYSTEM FOR THE NEW UPS AND BATTERY ROOMS.

**GENERAL NOTES:**

- 1) MATERIALS INSTALLATION AND DESIGN PER NFPA 13 STANDARDS
- 2) ALL AREAS PROTECTED BY A WET PIPE SYSTEM MUST BE MAINTAINED AT 40°F TO PREVENT WATER IN PIPES FROM FREEZING BY OTHERS
- 3) STRUCTURAL ADEQUACY OF THE BUILDING TO SUPPORT THE SPRINKLER PIPING BY OTHERS.
- 4) ALL FIRE ALARMS, WIRING, MONITORING ARE BY OTHERS.

**EXCLUSIONS:**

- 1) FIRE WATCH OR TEMPORARY SPRINKLER PROTECTION DURING CONSTRUCTION.
- 2) ACOUSTICAL CAULKING
- 3) HEAT TRACE OR INSULATION
- 4) PAINTING SPRINKLER PIPE
- 5) REPAIRS OR MODIFICATIONS TO THE EXISTING SYSTEM BEYOND THE SCOPE OF WORK
- 6) MODIFICATION OF EXISTING MAINS AND BRANCH LINES
- 7) STRUCTURAL ANALYSIS, SEISMIC INVESTIGATION
- 8) FPE AND PE REVIEW
- 9) UNDERGROUND WORK

**DESIGN CRITERIA:**

PER NFPA 13 - 2019, NFPA 855 - 2020 AND CITY OF PUYALLUP OCCUPANCY - DATA CENTER:  
1) EXTRA HAZARD 1: BATTERY STORAGE RM. - 100FT<sup>2</sup> PER HEAD | 0.3 GPM/FT<sup>2</sup> BASED OVER THE AREA OF THE ROOM. PER NFPA 855-2020: SEC. 4.11.2.1  
2) ORDINARY HAZARD 2: UPS RM. - 130FT<sup>2</sup> PER HEAD

**DRY SYSTEM PITCH:**

MAIN - 1/4" FOR EVERY 10'  
BRANCH LINE - 1/2" FOR EVERY 10'

**CONSTRUCTION TYPE:**

CONCRETE & STEEL, UNOBSTRUCTED UNO ON PLAN UNOBSTRUCTED CONSTRUCTION SPRINKLER DEFLECTOR - 12" MAX. BELOW DECK / CEILING

**EQ BRACING:**

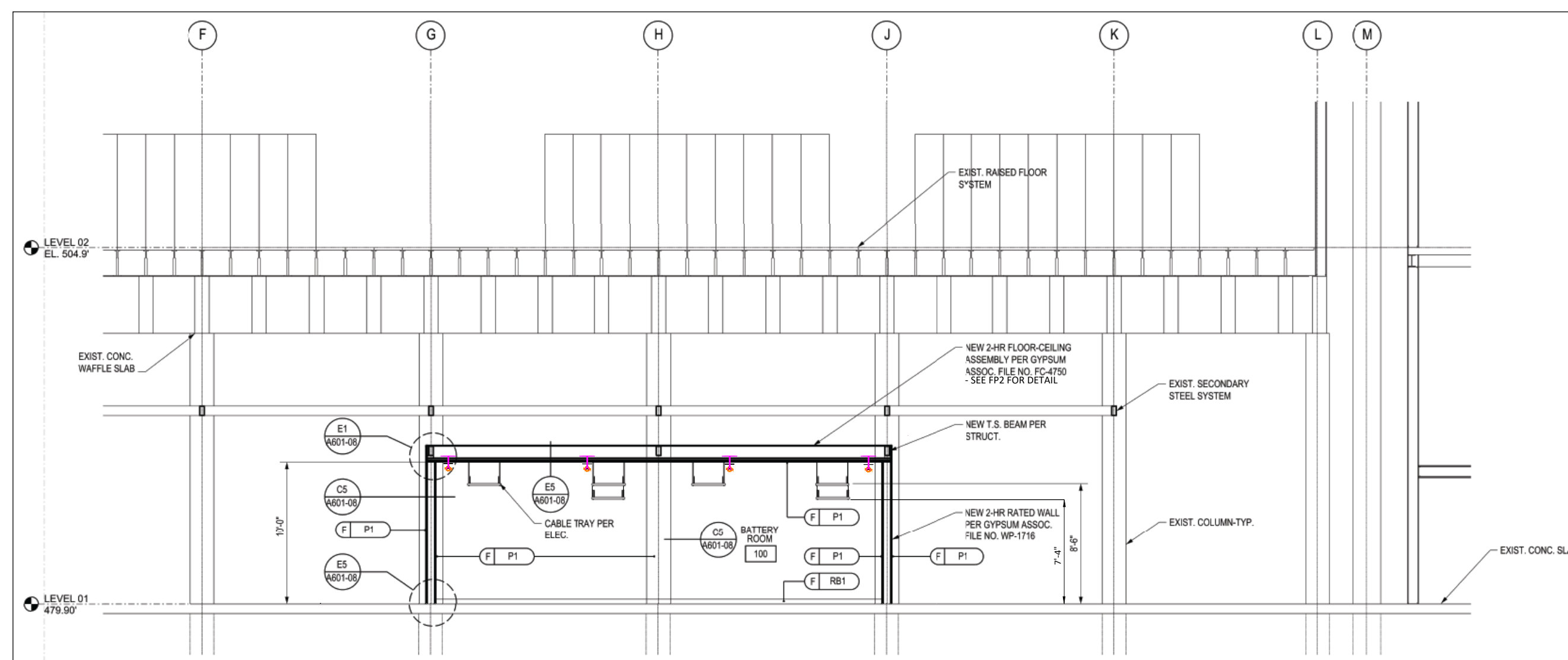
- LATERAL BRACES:
- 1) MAX. SPAN PER SEISMIC CALCULATION, NOT TO EXCEED 40'
  - 2) 6' MAX. FROM END OF THE PIPE
  - 3) 12' MAX. FROM START OF THE PIPE
  - 4) LATERAL BRACES SHALL BE ALLOWED TO ACT AS LONGITUDINAL BRACES IF THEY ARE WITHIN 24" OF THE CENTERLINE OF THE PIPING BRACED LONGITUDINALLY.

**LONGITUDINAL BRACES PLACEMENT**

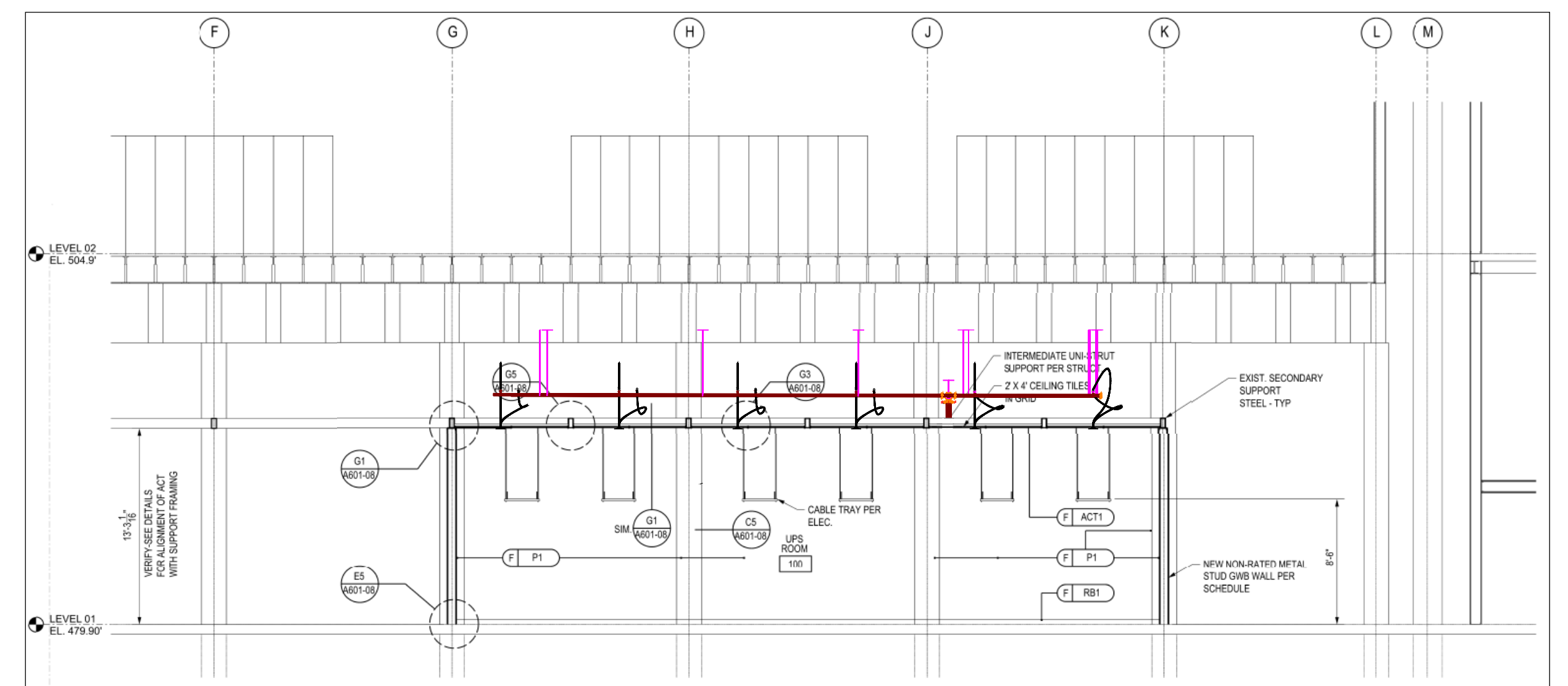
- 1) MAX. SPAN PER SEISMIC CALCULATION, NOT TO EXCEED 80'
- 2) 40' MAX. FROM BOTH END AND STARTER OF THE PIPE.
- 3) LONGITUDINAL BRACES SHALL BE ALLOWED TO ACT AS LATERAL BRACES IF THEY ARE WITHIN 24" OF THE CENTERLINE OF THE PIPING BRACED LATERALLY.

**FLEXIBLE COUPLING LOCATION:**

- 1) VERTICAL PIPE IN LENGTH 3' TO 7' - (1) FLEXIBLE COUPLING AT TOP
- 2) VERTICAL PIPE IN LENGTH 7' OR LONGER - (1) FLEXIBLE COUPLING AT TOP AND (1) FLEXIBLE COUPLING AT BOTTOM
- 3) STRUCTURAL WALL PENETRATION W/O SEISMIC CLEARANCE - (1) FLEXIBLE COUPLING AT BOTH SIDE WITHIN 12"
- 4) FLOOR PENETRATION - (1) FLEXIBLE COUPLING AT TOP WITHIN 12" AND (1) FLEXIBLE COUPLING AT BOTTOM WITHIN 24"



**A/FP1 SECTION VIEW**  
SCALE: 1/8" = 1'-0"

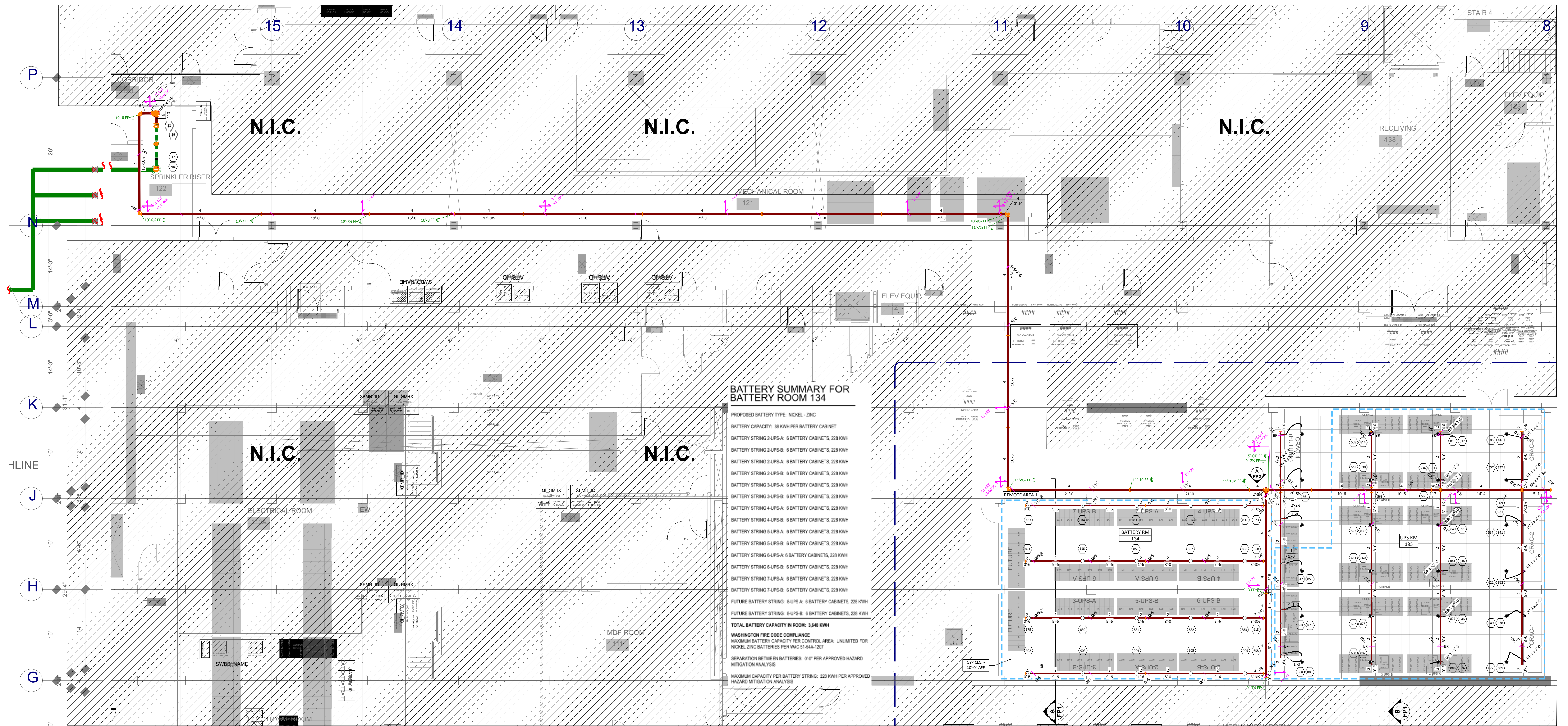


**B/FP1 - SECTION VIEW**  
SCALE: 1/8" = 1'-0"

**DRAWING INDEX:**

FP 1 - COVERSHEET  
FP 2 - 1ST FLOOR - UPS & BATTERY RMS.

ABBREVIATIONS	DRAWING SYMBOLS	DRAWING SYMBOLS	FLEX DROP LEGEND	SPRINKLER PIPE LEGEND	CERTIFICATION OF COMPETENCY	REVISIONS	CUSTOMER INFORMATION								
<p>SP SPRING UP</p> <p>RN RISER NIPPLE</p> <p>DR DROP</p> <p>FF FINISH FLOOR</p> <p>TS TOP OF STRUCTURE</p> <p>BOS BOTTOM OF STRUCTURE</p> <p>BODS BOTTOM OF DECK</p> <p>BOM BOTTOM OF MAIN</p> <p>BOL BOTTOM OF BRANCH LINE</p> <p>OTS OPEN TO STRUCTURE</p> <p>FO FIELD ORDER</p> <p>COI CUT ON JOB</p> <p>IFOW INSIDE FACE OF WALL</p> <p>OFOW OUTSIDE FACE OF WALL</p> <p>NAS NO AUTO. SPRINKLER REQUIRED</p> <p>UNO UNLESS NOTED OTHERWISE</p> <p>NTC NOT IN CONTRACT</p>	<p>2-WAY EQ BRACING</p> <p>4-WAY EQ BRACING</p> <p>HANGER LOCATION</p> <p>BRANCH LINE RESTRAINT LOCATION</p> <p>CENTER LINE</p> <p>BOTTOM OF DECK ELEVATION</p> <p>CUT ON JOB</p> <p>HYDRAULIC CALCULATION NODE</p> <p>SPRINKLER MAIN FAB</p> <p>SPRINKLER BRANCH LINE FAB</p>	<p>NEW MECHANICAL TEE (U-BOLT)</p> <p>NEW MECHANICAL TEE</p> <p>RELOCATE EXISTING SPRINKLER</p> <p>(E) EXISTING SYSTEM COMPONENT</p> <p>FLEXIBLE COUPLING</p>	<p>4" 4'-0 FLEX DROP, ELBOW STYLE</p> <p>6" 6'-0 FLEX DROP</p> <p>6" EL 6' EL FLEX DROP, ELBOW STYLE</p> <p>4" 4'-0 FLEX DROP BRACKET</p>	<p>NEW SPRINKLER PIPE</p> <p>EXISTING SPRINKLER PIPE</p> <p>RELOCATED EXISTING PIPE</p> <p>NEW FLEX DROP</p> <p>EXISTING FLEX DROP</p>	<p><b>Matthew William Kunkle</b> 4960-0322-C LEVEL 3 Columbia Fire, LLC COLUMBIA FIRE 04/08/2024</p>	<table border="1"> <tr> <th>NO.</th> <th>DATE</th> <th>REVISIONS</th> </tr> <tr> <td>1</td> <td></td> <td></td> </tr> </table>	NO.	DATE	REVISIONS	1			<p><b>COLUMBIA FIRE</b> SPRINKLER SYSTEM SERVICES &amp; REPAIR WA CFC COLUMBIA FIRE 4960-0322-C 111 South Findlay Street Seattle, WA 98108 (206) 232-8569</p>	<p><b>CUSTOMER INFORMATION</b></p> <p>PROJECT MANAGER: BAXTER HAGAN CELL PHONE: (206) 379-2423 EMAIL: HAGANB@HSWC.COM</p> <p>SUPERINTENDENT: JASON JAINGA CELL PHONE: (206) 305-3621 EMAIL: JAINGA@HSWC.COM</p>	<p><b>CENTERIS VOLTAGE PARK: UPS &amp; BATTERY ROOM BUILD-OUT</b></p> <p>1023 39TH AVE SE PUYALLUP, WA 98374</p> <p>AHJ: CITY OF PUYALLUP</p> <p>HOWARD S. WRIGHT</p>
NO.	DATE	REVISIONS													
1															
<p>JOB NO. 231213R1L01</p> <p>DATE 03/27/2024</p> <p>DESIGNER Luke Thompson</p> <p>PM Ryan Labrie</p> <p>SCALE 1/8"=1'-0"</p> <p>FP 1 OF 2</p>															



**FIELD NOTE:**

**SPRINKLER PIPING:**

- 1) ALL NEW 1" PIPE TO BE SCH 40 BLACK FINISH
- 2) ALL NEW ARM-OVER, AND DROPS TO BE ON SCH 40 BLACK FINISH 1" x 2 1/2" NIPPLES
- 3) ALL GROOVED END MAINS AND BRANCH LINES TO BE SCH 10 BLACK FINISH
- 4) ALL THREADED END BRANCH LINE TO BE SCH 40 BLACK FINISH

**SPRINKLER PLACEMENT:**

- 1) ALL NEW SPRINKLER PENDENT TO BE IN CENTER OF 2' DIRECTION AND QUARTER POINT OF 4' DIRECTION FOR 2' X 4' TILES

**SPRINKLER SPACING:**

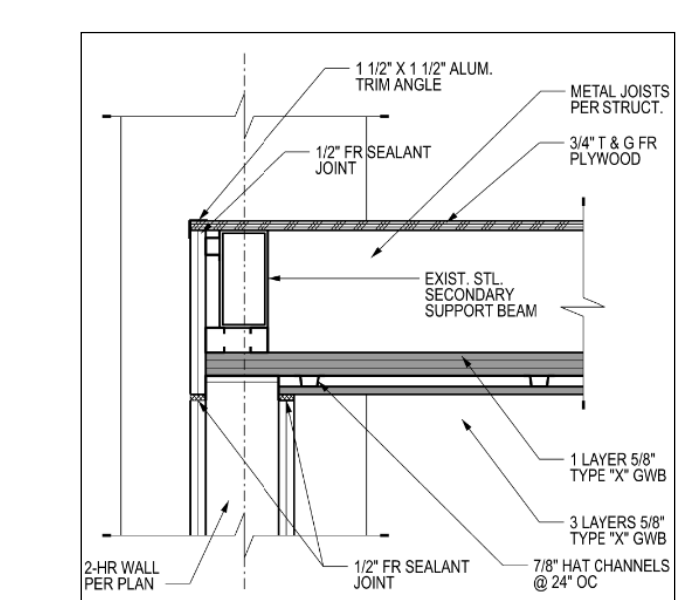
- 1) EXTRA HAZARD GROUP 1 - 100 FT<sup>2</sup> MAX. PER SPRINKLER HEAD.
- 2) ORDINARY HAZARD GROUP 2 - 130FT<sup>2</sup> MAX. PER SPRINKLER HEAD.

**HANGERS:**

- 1) NORTH OF GRID LINE M SUPPORT MAIN FROM STEEL BEAMS USING BEAM CLAMPS.
- 2) SOUTH OF GRID LINE M SUPPORT MAIN FROM COLUMNS USING STAND OFF UNISTRUT BRACKETS 16'-0" ON CENTER U.N.O.
- 3) ATTACH BL HANGERS TO Z PURLINS USING NUT & BOLT FASTENERS IN BATTERY ROOM.

**DRY SYSTEM PITCH:**

- 1) MAIN - 1/4" FOR EVERY 10'
- 2) BRANCH LINE - 1/2" FOR EVERY 10'



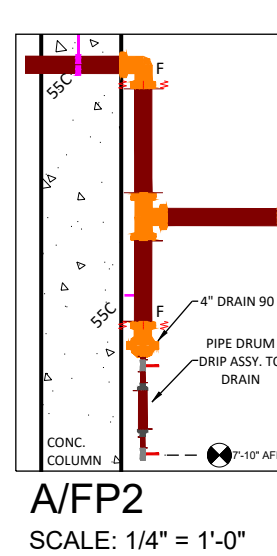
BATTERY RM: FIRE RATED CLG. DETAIL  
SCALE: 3/4" = 1'-0"

**City of Puyallup**  
Development & Permitting Services  
**ISSUED PERMIT**

Building	Planning
Engineering	Public Works
Fire	Traffic

**LEVEL 1 - FIRE PROTECTION**  
SCALE: 1/8" = 1'-0"

Hydraulic Information		Hydraulic Information	
Remote Area 1		Remote Area 2	
OCCUPANCY CLASSIFICATION	Extra Hazard Group I	OCCUPANCY CLASSIFICATION	Ordinary Group II
DENSITY (gpm/ft <sup>2</sup> )	0.30 for 2500ft <sup>2</sup> (Actual 1488ft <sup>2</sup> )	DENSITY (gpm/ft <sup>2</sup> )	0.20 for 1500ft <sup>2</sup> (Actual 2003ft <sup>2</sup> )
TOTAL HOSE STREAMS	500.00	TOTAL HOSE STREAMS	250.00
DRY CAPACITY	317.64gal	DRY CAPACITY	338.51gal
TOTAL HEADS FLOWING	20	TOTAL HEADS FLOWING	21
K-FACTOR	8	K-FACTOR	8
TOTAL WATER REQUIRED	1094.22	TOTAL WATER REQUIRED	771.58
TOTAL PRESSURE REQUIRED	51.788	TOTAL PRESSURE REQUIRED	47.749
SAFETY MARGIN (psi)	+20.933 (28.8%)	SAFETY MARGIN (psi)	+25.580 (34.9%)



Symbol	Manufacturer	SIN	Model	Quantity	K-Factor	Type	Size	Response	Finish	Temperature	Note
○	Reliable	RA6322	F1FR80	20	8	Upright	3/4"	Quick	Brass	286°F	ON LINE UPRIGHTS
●	Reliable	RA6312	F1FR80	24	8	Pendent	3/4"	Quick	Chrome	286°F	REC. PEN.
				<b>Total = 44</b>							

ABBREVIATIONS	DRAWING SYMBOLS	DRAWING SYMBOLS	FLEX DROP LEGEND	SPRINKLER PIPE LEGEND	CERTIFICATION OF COMPETENCY	REVISIONS	CUSTOMER INFORMATION
SP RN DR FF TS BOS BOM BOL OTS FO COW GROW NAS UNC NIC	2-WAY EQ BRACING 4-WAY EQ BRACING HANGER LOCATION BRANCH LINE RESTRAINT LOCATION CENTER LINE BOTTOM OF DECK ELEVATION HYDRAULIC CALCULATION NODE SPRINKLER MAIN FAB SPRINKLER BRANCH LINE FAB	NEW MECHANICAL TEE (U-BOLT) NEW MECHANICAL TEE RELOCATE EXISTING SPRINKLER EXISTING SYSTEM COMPONENT FLEXIBLE COUPLING	4'-0" FLEX DROP 4'-0" FLEX DROP, ELBOW STYLE 6'-0" FLEX DROP 6'-0" FLEX DROP, ELBOW STYLE 4'-0" FLEX DROP BRACKET	NEW SPRINKLER PIPE EXISTING SPRINKLER PIPE RELOCATED EXISTING PIPE NEW FLEX DROP EXISTING FLEX DROP	Matthew William Kunkle 4960-0322-C LEVEL 3 Columbia Fire, LLC COLUMBIA FIRE 04/08/2024	NO. DATE	PROJECT MANAGER: BAXTER HAGAN CELL PHONE: (206) 379-2423 EMAIL: HAGANB@HSWC.COM  SUPERINTENDENT: JASON JAINGA CELL PHONE: (206) 305-3621 EMAIL: JAINGA@HSWC.COM
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							HOWARD S. WRIGHT FP 2 OF 2