

1. MODIFY EXISTING SPRINKLER SYSTEM TO ACCOMMODATE NEW BATTERY ROOM ADDITIONS.
  - A. A NEW SEPARATE ROOM IS TO BE CREATED (BY OTHERS) FOR ROOM 110D AND SPRINKLER COVERAGE IS TO BE PROVIDED IN NEW 2 HR RATED CEILING. SPRINKLERS OUTSIDE OF ROOM TO BE RELOCATED PER PLAN TO ACCOMMODATE NEW WALLS.
  - B. BATTERY ROOM 173 IS TO BE EXPANDED (BY OTHERS) AND AN ADDITIONAL EXPOSED LINE OF SPRINKLER PROTECTION IS TO BE ADDED.
2. EXISTING SYSTEMS TO REMAIN OUTSIDE OF AREAS OF WORK.
3. ALL ALARM AND DETECTION IS TO BE BY OTHERS.

1. ALL MATERIAL AND EQUIPMENT IS TO BE NEW UL AND / OR FM APPROVED.
2. PIPING DIMENSIONS ARE CENTER TO CENTER EXCEPT RISERS AND DIMENSIONS SHOWN THUSLY (X-X) WHICH ARE END OF PIPE TO END OF PIPE.
3. EARTHQUAKE BRACING SHALL BE PROVIDED IN ACCORDANCE WITH NFPA NO. 13 2019 EDITION. SEE DETAILS ON CORRESPONDING SHEETS.
4. PIPE HANGERS AND METHODS OF HANGING IS TO BE IN ACCORDANCE WITH NFPA NO. 13, 2019 EDITION.
5. PIPING SHALL BE IN ACCORDANCE WITH NFPA NO. 13, 2019 EDITION. ALL GROOVED/ WELDED PIPING IS TO BE SCHEDULE 10 BLACK PIPE. ALL THREADED PIPING IS TO BE SCHEDULE 40 BLACK PIPE.
6. JOINING OF PIPE & FITTINGS, THREADED, WELDED, AND GROOVED, SHALL BE IN ACCORDANCE WITH NFPA NO. 13 2019 EDITION.
7. OWNER IS TO PROVIDE ADEQUATE HEAT IN AREAS PROTECTED BY A WET PIPE SPRINKLER SYSTEM TO PREVENT WATER IN PIPES FROM FREEZING.
8. PAINTING OF PIPE & EQUIPMENT (IF REQUIRED) IS TO BE BY OTHERS.
9. FURRING OF PIPE & EQUIPMENT (IF REQUIRED) IS TO BE BY OTHERS.
10. SPRINKLER SYSTEM SHALL OPERATE INSIDE BUILDING ALARM SYSTEM THROUGHOUT PREMISES. COORDINATED WITH FIRE ALARM CONTRACTOR.

SPRINKLER SYSTEM REMOTE AREAS HAVE BEEN HYDRAULICALLY CALCULATED TO PROTECT THE FOLLOWING:

DESIGN CRITERIA PER NFPA 13 (2019), NFPA 855 §4.11.2.1, & WASHINGTON STATE FIRE CODE §1207.5.5

DRY SYSTEM EXTRA HAZARD GROUP 1; BATTERY ROOMS - .30 GPM / 3250 SQ. FT. OR ENTIRE AREA WHICHEVER IS SMALLER

VALVE REGULATED LEAD ACID (VRLA)	
BATTERY CAPACITIES	
BATTERY ROOM NO. 110C	
BATTERY SYSTEM	CAPACITY (KWH)
BATTERY CAPACITY PER CABINET	51.9
BATTERY STRING A-U-P-E	309.6
BATTERY STRING B-U-P-E	309.6
BATTERY STRING C-U-P-E	309.6
<b>TOTAL BATTERY CAPACITY IN ROOM (KWH)</b>	<b>928.8</b>
EACH BATTERY ROOM SEPARATED FROM OTHER OCCUPANCIES WITH 2-HOUR FIRE RATED ASSEMBLIES.	
BATTERY CAPACITY CALCULATION	
BATTERY CELL VOLTAGE (V)	12
NOMINAL CAPACITY (AH)	129
TOTAL CAPACITY (VAH)	1548
NOMINAL CAPACITY (KWH)	1.548
NUMBER OF BATTERIES PER CABINET	40
TOTAL CAPACITY PER BATTERY CABINET (KWH)	61.92
NUMBER OF BATTERY CABINETS PER STRING	5
TOTAL CAPACITY PER STRING	309.6

PROPOSED BATTERY TYPE: NICKEL - ZINC

BATTERY CAPACITY: 38 KW/H PER BATTERY CABINET

BATTERY STRING 2-UPS-A: 6 BATTERY CABINETS, 228 KWH

BATTERY STRING 2-UPS-B: 6 BATTERY CABINETS, 228 KWH

BATTERY STRING 3-UPS-A: 6 BATTERY CABINETS, 228 KWH

BATTERY STRING 3-UPS-B: 6 BATTERY CABINETS, 228 KWH

BATTERY STRING 4-UPS-A: 6 BATTERY CABINETS, 228 KWH

BATTERY STRING 4-UPS-B: 6 BATTERY CABINETS, 228 KWH

BATTERY STRING 5-UPS-A: 6 BATTERY CABINETS, 228 KWH

BATTERY STRING 5-UPS-B: 6 BATTERY CABINETS, 228 KWH

BATTERY STRING 6-UPS-A: 6 BATTERY CABINETS, 228 KWH

BATTERY STRING 6-UPS-B: 6 BATTERY CABINETS, 228 KWH

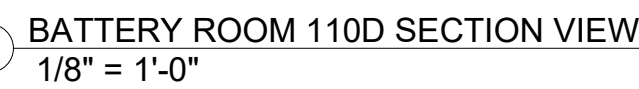
BATTERY STRING 7-UPS-A: 6 BATTERY CABINETS, 228 KWH

BATTERY STRING 7-UPS-B: 6 BATTERY CABINETS, 228 KWH

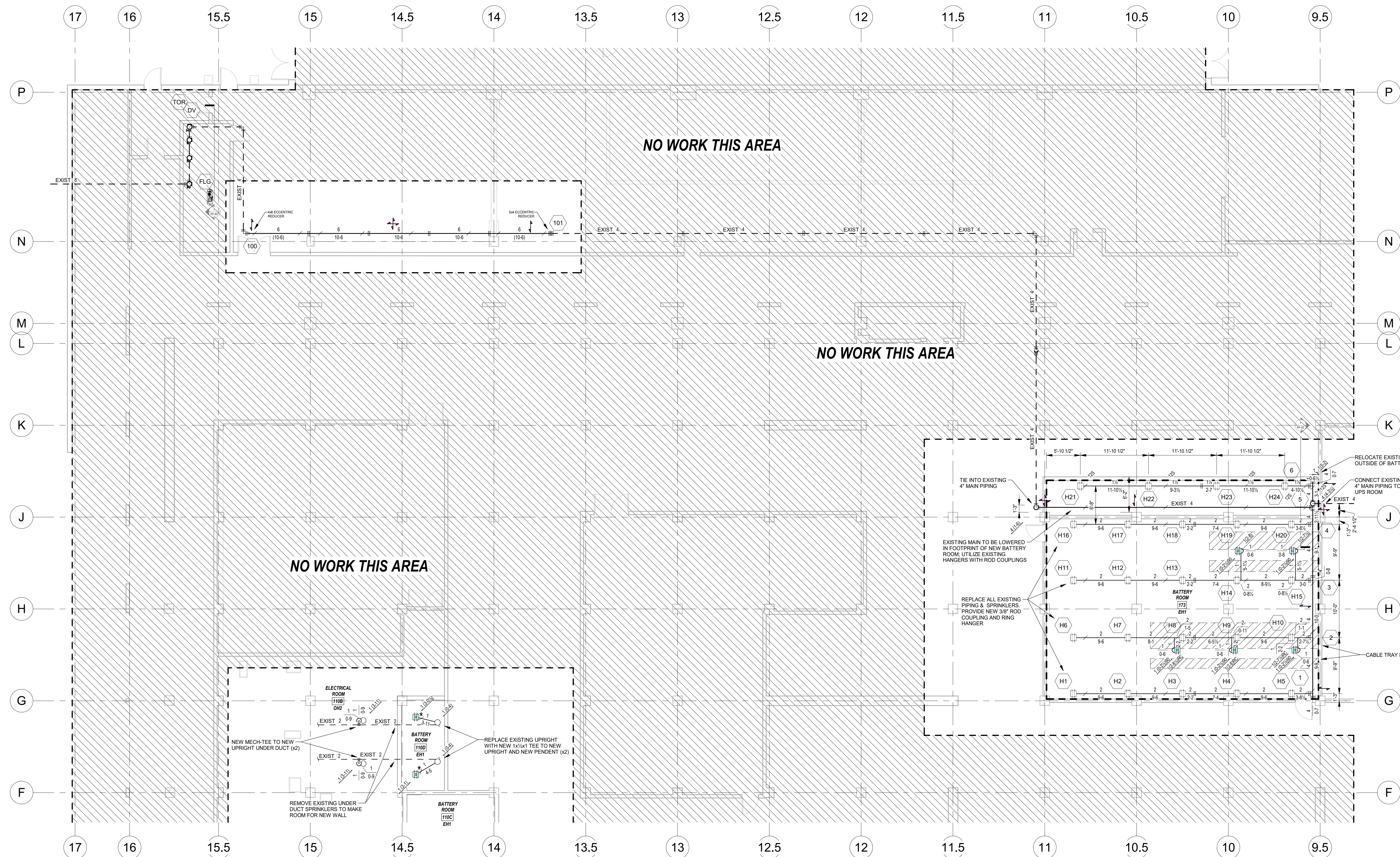
BATTERY STRING 8-UPS-A: 6 BATTERY CABINETS, 228 KWH

BATTERY STRING 8-UPS-B: 6 BATTERY CABINETS, 228 KWH

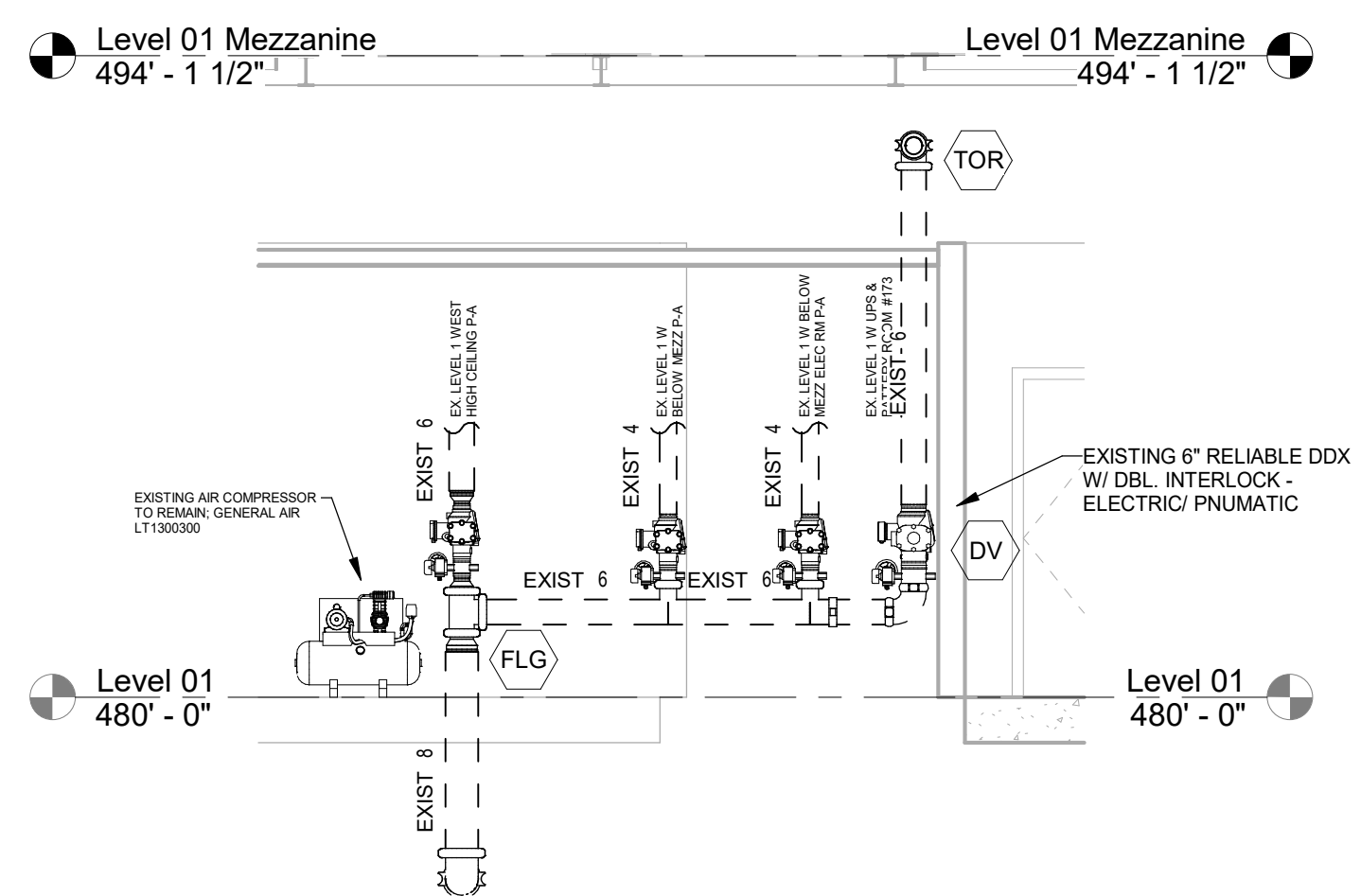
**TOTAL BATTERY CAPACITY IN ROOM: 3,192 KWH**



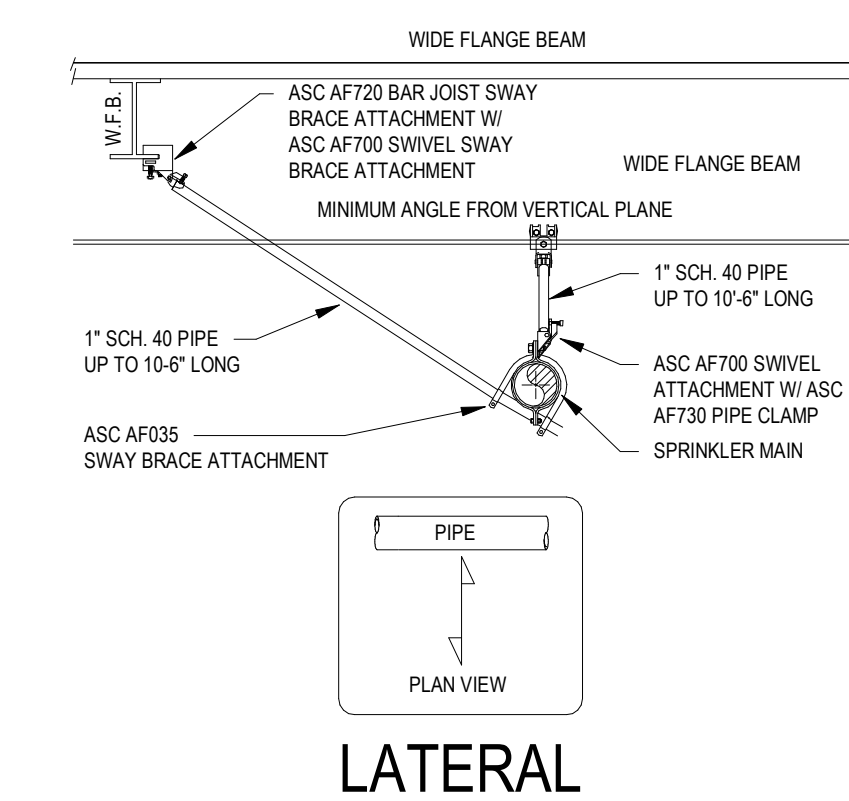
DESIGNER	DJS	SHEET	<b>FP-01</b>
DATE	10/17/25	<b>1 OF 2</b>	
JOB NO.	18-0181B		
SITE CONTACT	RYAN CHEEVER		



1 Level 01  
1/8" = 1'-0"

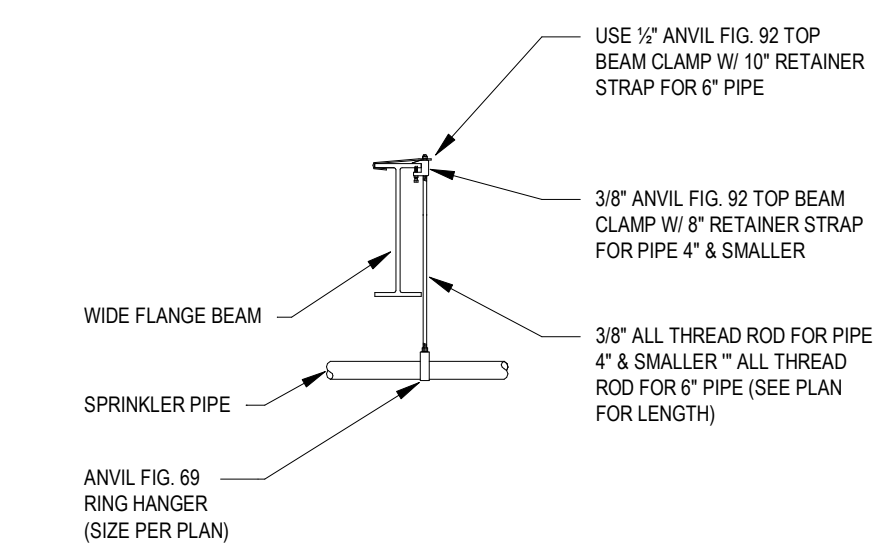


2 RISER SECTION - FOR REFERENCE  
1/4" = 1'-0"

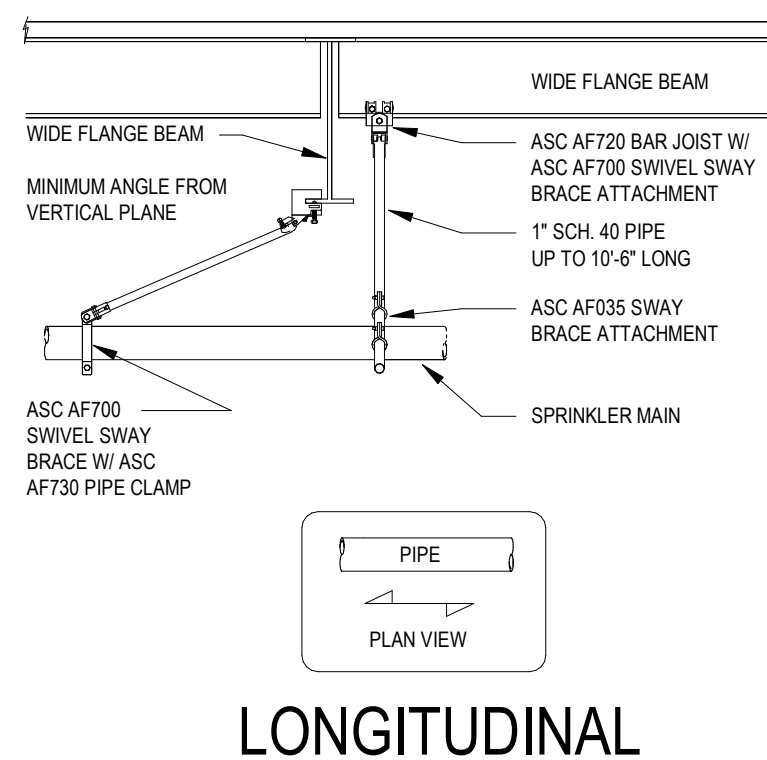


LATERAL

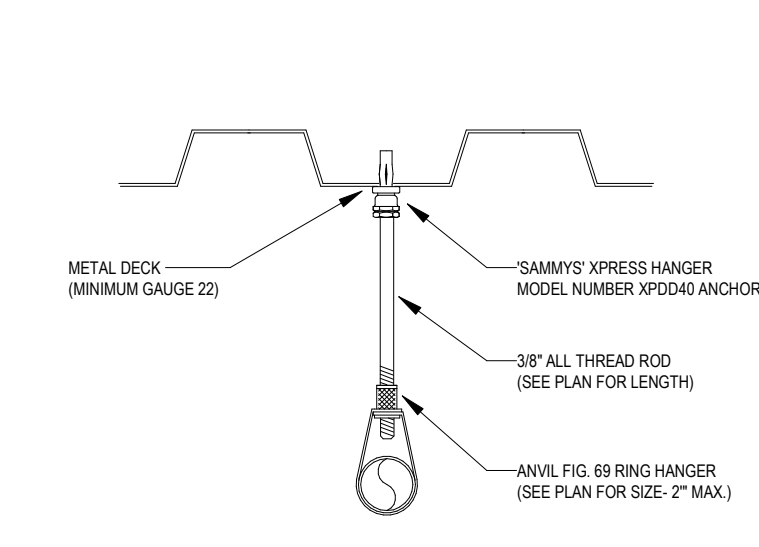
SEISMIC BRACING  
1/2" = 1'-0"



HANGER TYPE 'D' DETAIL  
1/2" = 1'-0"



LONGITUDINAL



HANGER TYPE 'S' DETAIL  
3/4" = 1'-0"

## SYMBOLS LEGEND

- 15'-10" AFF  
5  
BOD ELEVATION FROM FINISHED FLOOR IN FEET, AND DISTANCE DOWN FROM STRUCTURE IN INCHES TO TYPE OF STRUCTURE EX. BOD = (BOTTOM OF DECK)
- 10'-0" AFF - 6 DISTANCE FROM CENTERLINE OF PIPE TO FINISHED FLOOR
- 4-WAY EARTHQUAKE BRACE SEE DETAIL ON CORRESPONDING SHEETS
- 2-WAY EARTHQUAKE BRACE SEE DETAIL ON CORRESPONDING SHEETS
- HANGER SUPPORT SYMBOL - NO. - LENGTH OF HANGER ROD LETTER = HANGER TYPE DESIGNATION
- PIPE OFFSET DOWN, LEFT TO RIGHT
- PIPE TEE OFFSET DOWN, HORIZ. ON TOP VERTICAL BELOW
- PIPE OUTLET UP TO ABOVE
- HYDRAULIC CALCULATION NODE IDENTIFIER
- DENOTES NEW FIRE SPRINKLER PIPE
- - - - DENOTES EXISTING FIRE SPRINKLER PIPE

## HYDRAULIC NOTES

SPRINKLER SYSTEM REMOTE AREAS HAVE BEEN HYDRAULICALLY CALCULATED TO PROVIDE THE FOLLOWING:

DESIGN CRITERIA PER NFPA 13 (2019), NFPA 855 §4.11.2.1, & WASHINGTON STATE FIRE CODE §1207.5.5

DRY SYSTEM EXTRA HAZARD GROUP 1: BATTERY ROOMS - 30 GPM / 3250 SQ. FT. OR ENTIRE AREA WHICHEVER IS SMALLER

## DRY SYSTEM NOTES

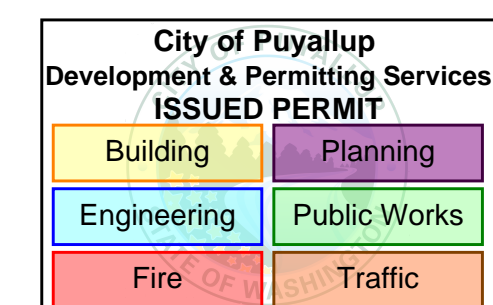
- ALL GROOVED PIPE TO BE SCH. 10 BLACK.
- ALL THREADED PIPE TO BE SCH. 40 BLACK.
- ALL DRY SYSTEM BRANCHLINE PIPING TO SLOPE MIN 1/2" IN 10'-0".
- ALL DRY SYSTEM MAIN PIPING TO SLOPE MIN 1/4" IN 10'-0".

## MATERIAL GENERAL NOTES

- ALL GROOVED FITTINGS 1 1/2" AND LARGER TO BE VICTAULIC FIRELOCK FITTINGS U.N.O.
- ALL GROOVED COUPLINGS TO BE VICTAULIC FIRELOCK EZ RIGID COUPLINGS NO. 009V U.N.O.
- ALL FLEXIBLE GROOVED COUPLINGS TO BE VICTAULIC INSTALLATION READY NO. 004 U.N.O.

### Fire Protection System Demand:

Remote area number: BATTERY 134  
Occupancy classification: EXTRA HAZARD GROUP 1  
Density: 0.30 Gpm/SqFt  
Area of application: 1,789 SqFt  
No. of sprinklers calculated: 24  
Total Hose Streams: 500 GPM  
Total Additional Flow: 0 GPM  
Total water required (including hose streams): 1202.65 GPM  
@ a required system pressure of: 65.41 Psi  
Safety Margin: 9.05 Psi



HANGER LEGEND	
A	"U" HOOK
B	COACH SCREW ROD
D	BM. CLAMP W/ STRAP
E	EYELET
F	FLUSH SHELL
G	CEILING FLANGE
H	SIDE BEAM BRACKET
K	SHORT CLIP
M	ALL THREAD ROD
N	TOGGLE NUT
P	POWDER DRIVEN STUD
R	EXPANSION BOLT
S	SAMMY X-PRESS
T	
U	
V	
W	
X	
Y	
Z	

APPROVAL REQUIRED	
DESIGNER	DATE
CHECKER	DATE
APPROVER	DATE

FITTING LEGEND	
P	PIPE-O-LET
SN	GROOVED SHAPED NIPPLE
TM	THREADED SHAPED NIPPLE
ADN	ADJUSTABLE DROP NIPPLE
FLG	FLANGE
RC	REDUCING COUPLING
STRUCTURE TO CENTER LINE OF PIPE IN INCHES	
2 - WAY EARTHQUAKE BRACE	
4 - WAY EARTHQUAKE BRACE	

SPRINKLER LEGEND	
SPRINKLER	SPRINKLER
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AND TYPE	AND TYPE
1/2"	1/2"
3/4"	3/4"
1"	1"
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2"	2"
2 1/2"	2 1/2"
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