

UNDERGROUND PIPE SHOWN FOR REFERENCE ONLY  
SEE CIVIL PLAN SET (BY OTHERS) FOR MORE INFORMATION

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

Building	Planning
Engineering	Public Works
Fire	Traffic

**City of Puyallup  
Fire  
REVIEWED FOR  
COMPLIANCE**

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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.

- SYMBOLS:**
- SWAY BRACING
  - PIPE HANGER
  - PIPE HANGER W/ BRANCH LINE RESTRAINT
  - FLEXIBLE COUPLING
  - RIGID COUPLING
  - HYDRAULIC NODE
  - GATE VALVE-N.R.S. (GV)
  - ELECTRIC BELL
  - FIRE DEPARTMENT CONNECTION (STANDARD)
  - FIRE DEPARTMENT CONNECTION (SIDEWALK)
  - EXISTING FIRE HYDRANT
  - NEW FIRE HYDRANT
  - POST INDICATOR VALVE (PIV)
  - THRUST BLOCK
  - FLANGED CONNECTION
  - EXISTING SPRINKLER PIPING (SITE PLAN)
  - NEW SPRINKLER PIPING BY OTHERS (SITE PLAN)
  - NEW SPRINKLER PIPING BY SHINN MECH. (SITE PLAN)
  - CENTERLINE OF PIPE ABOVE FINISHED FLOOR
  - FLOOR SECTION DETAIL ARROW POINTS
  - VIEW DIRECTION

**SCOPE OF WORK:**  
SHINN FIRE PROTECTION TO DESIGN AND INSTALL NEW WET AND DRY FIRE SPRINKLER SYSTEMS, WET MANUAL STANDPIPES BASED ON NFPA 14 - 2016. SCOPE OF WORK STARTS AT 12" ABOVE FINISHED FLOOR IN THE RISER ROOM

- UNDERGROUND NOTES: (BY OTHERS)**
- ALL UNDERGROUND TO BE BY OTHERS. CONTRACTOR TO BE STATE LICENSED AND CERTIFIED TO INSTALL UNDERGROUND PIPING PER WAC 212-80.
  - THE DESIGN AND INSTALLATION OF THE FIRE PROTECTION UNDERGROUND SHALL BE PERFORMED PER SECTION 212.80.18 OF THE "WASHINGTON ADMINISTRATIVE CODE" (WAC).
  - UNDERGROUND PIPING TO BE PROPERLY THRUST BLOCKED PER NFPA 24 WITH A MINIMUM OF 3'-0" BELOW FROST LINE.
  - SHINN FIRE PROTECTION'S SCOPE OF WORK STARTS AT 12" ABOVE FINISHED FLOOR IN THE RISER ROOM

**SPECIAL FIELD INSTRUCTIONS:**

- INSTALL TEMPORARY PROTECTION (RED CAP) AND OR PLASTIC BAGS ON ALL SPRINKLER HEADS AS REQUIRED TO AVOID COLLISION BY OTHER TRADES AND PAINT OVERSPRAY. ALL TEMPORARY PROTECTION MEASURES TO BE REMOVED PRIOR TO SYSTEM BEING PLACED IN SERVICE.

- GENERAL NOTES:**
- FIRE SPRINKLER SYSTEMS ARE TO BE DESIGNED, INSTALLED & TESTED IN ACCORDANCE WITH NFPA 14 & 25, 2016 EDITION, AS AMENDED BY THE STATE FIRE MARSHAL & THE CITY OF PUYALLUP FIRE DEPT.
  - ALL MATERIALS AND EQUIPMENT TO BE INSTALLED SHALL BE UL LISTED OR FM APPROVED.
  - IT IS THE OWNER'S RESPONSIBILITY TO ENSURE THAT THE STRUCTURE CAN ADEQUATELY SUPPORT ALL FIRE SPRINKLER PIPE AND SEISMIC LOADS.
  - OWNER IS RESPONSIBLE FOR MAINTAINING TEMPERATURES ABOVE 40°F TO PROTECT THE WET FIRE SPRINKLER SYSTEM FROM FREEZING. FIRE SPRINKLER SYSTEM HEATED BY BUILDING CENTRAL HEATING SYSTEM
  - ALL WIRING OF FIRE PROTECTION SYSTEM COMPONENTS TO BE DONE BY OTHERS. ALL WIRING AND MATERIAL SHALL BE LISTED IN ACCORDANCE WITH NFPA 70 (NEC) LATEST EDITION ADOPTED.
  - CENTRAL STATION MONITORING EQUIPMENT, WIRING AND SERVICES TO BE DONE BY OTHERS.
  - HANGERS TO BE PER NFPA 13 AS SHOWN ON THE DRAWINGS
  - NOTIFICATIONS: CENTRAL ALARM SYSTEM (BY OTHERS)
  - ALL NEW SYSTEMS SHALL BE HYDROSTATICALLY TESTED AT 200PSI OR 50 PSI OVER SYSTEM PRESSURE, WHICHEVER IS GREATER FOR 2 HRS.
  - ALL ORDINARY TEMPERATURE SPRINKLERS TO BE LOCATED AT LEAST 12" AWAY FROM EDGE OF DIFFUSER AND 6" AWAY FROM LIGHTS (0-250W)
  - ALL ALARM OVERS EXCEEDING 24" TO BE PROVIDED WITH A HANGER
  - NOTIFICATION IS PROVIDED BY INTERIOR/EXTERIOR HORN & STROBE. ALL SYSTEMS TO BE MONITORED 24 HRS A DAYS BY A CENTRAL STATION. (BY OTHERS)
  - EXTERIOR HORN & STROBE TO BE PROVIDED & LOCATED ON SIDE OF BUILDING CLOSEST TO REMOTE FDC (BY OTHERS)
  - ACT GRID CEILINGS - ALL SPRINKLER HEADS TO BE CENTER OF 2X2 TILES.

**DRAWING INDEX:**

- FP 0.10 SITE PLAN AND NOTES
- FP 1.00 STAND PIPE AND CROSS MAIN DETAIL
- FP 2.00 FIRE SPRINKLER PLAN - FLOOR 00 & DETAILS
- FP 2.10 FIRE SPRINKLER PLAN - FLOOR 01
- FP 2.20 FIRE SPRINKLER PLAN - FLOOR 02
- FP 2.30 FIRE SPRINKLER PLAN - FLOOR 03
- FP 2.40 FIRE SPRINKLER PLAN - ROOF PLAN

**WATER SUPPLY:**

SOURCE: PUYALLUP UTILITIES COMPUTER MODEL  
 STATIC PSI: 64 PSI  
 RESIDUAL: 20 PSI  
 FLOW: 1950 GPM  
 LOCATION: 640 RAILROAD AVE  
 DATE: 02-11-2022  
 HYDRANT LOCATION: HYDRANT #SE682

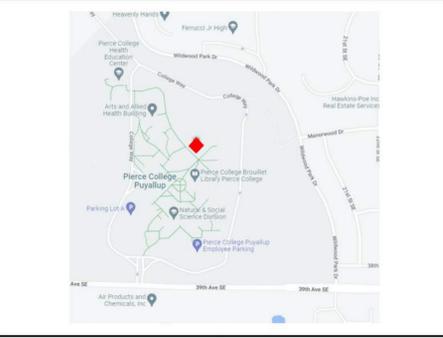
**PROJECT HEAD COUNTS: TOTAL FOR ALL PAGES**

SYM	MFG	TYPE	SIN #	K-FACTOR	THR	TEMP	FINISH	QTY	
○	RELIABLE	UPRIGHT	F1FR56	5.6	1/2"	155°F	BRONZE	319	
●	RELIABLE	PENDENT	F1FR80	8.0	3/4"	155°F	CHROME	163	
○	RELIABLE	PENDENT	F1FR56	5.6	1/2"	155°F	CHROME	197	
●	RELIABLE	PENDENT	F1FR56	5.6	1/2"	155°F	CHROME	9	
○	RELIABLE	PENDENT	F1FR28	2.8	1/2"	200°F	CHROME	4	
▷	RELIABLE	SIDEWALL	F1FR56	5.6	1/2"	155°F	BRONZE	10	
								TOTAL	702

- DESIGN NOTES:**
- BUILDING STRUCTURE IS NON-COMBUSTIBLE CONCRETE AND STEEL CONSTRUCTION.
  - SPRINKLER DEFLECTOR AND LOCATIONS SHALL BE DESIGNED IN ACCORDANCE WITH NFPA #13 - 2016.
  - ALL SEISMIC BRACING AND HANGER ASSEMBLIES TO BE INSTALLED IN ACCORDANCE TO NFPA #13 - 2016. PER NFPA 13 SECTION 9.3.6.5 BRANCHLINES WITH HANGER RODS LESS THAN 6" SHALL NOT REQUIRE BRANCH LINE END OF LINE RESTRAINT AND LATERAL BRACES.
  - THREADED PIPE TO BE SCH-40 ANSI, ASTM A53, OR A135, BLACK WET SYSTEM.
    - ROLL GROOVED PIPING: 1.5" TO 4" - SCH 10, ANSI/ASTM A795, BLACK WET SYSTEM
    - ROLL GROOVED PIPING: 6" & 8" - SCH 10, ASTM A-135, BLACK WET SYSTEM
  - THREADED PIPE TO BE SCH-40 ANSI, ASTM A53, OR A135, GALV. DRY SYSTEM.
    - ROLL GROOVED PIPING: 1.5" TO 4" - SCH 10, ANSI/ASTM A795, GALV DRY SYSTEM
    - ROLL GROOVED PIPING: 6" & 8" - SCH 10, ASTM A-135, GALV DRY SYSTEM
  - THREADED FITTINGS TO BE DUCTILE/MALLEABLE IRON, 125#
    - GROOVED FITTINGS - VICTAULIC FIRELOCK OR EQUAL
    - WELDED OUTLETS - BY MERITS OR EQUAL
  - WORKING PRESSURE:
    - ALL PIPE FITTINGS TO BE LISTED FOR PRESSURES OVER 200 PSI
    - SCH. 10 & 40 PIPE RATED FOR 300 PSI
    - FIRELOCK FITTINGS & COUPLINGS ARE RATED FOR 365 PSI
  - A REMOTE F.D.C. IS PROVIDED AND INSTALLED BY OTHERS
  - LIGHT HAZARD OCCUPANCY (0.1/1500) - CLASSROOMS, OFFICES, RESTROOMS, CORRIDORS/HALLWAYS, CONFERENCE ROOMS, LOUNGE & ATTIC SPACE.
  - OH GR I (0.15/1500) MECHANICAL ROOMS
  - OH GR II (0.2/1500) - LAB SPACES
  - A REDUCTION IN THE REMOTE AREA IS USED WHERE Q.R. SPRINKLER HEADS ARE INSTALLED.

- DESIGN CRITERIA:**  
PER NFPA 13 (2016), AND CITY OF PUYALLUP FIRE MARSHAL.
- LEVEL 0 - BOILER ROOM  
ORDINARY GROUP I HAZARD  
DESIGN DENSITY: 0.15 GPM / 1500 SF  
WET SYSTEM, QR HEADS  
DESIGN AREA REDUCTION PER NFPA 13 (2016) SECTION 11.2.3.2.3.1  
-3" 10/2 + 55 = 40% REDUCTION, 1500 SF \* 40% = 600 SF  
1500 SF - 600 SF = 900 SF
  - LEVEL 1 - FAB LAB  
ORDINARY GROUP II HAZARD  
DESIGN DENSITY: 0.20 GPM / 1500 SF  
WET SYSTEM, QR HEADS  
DESIGN AREA REDUCTION PER NFPA 13 (2016) SECTION 11.2.3.2.3.1  
-3" 15/2 + 55 = 33% REDUCTION, 1500 SF \* 33% = 495 SF  
1500 SF - 495 SF = 1005 SF
  - LEVEL 1 - CLOSELY SPACED HEADS  
LIGHT HAZARD  
DESIGN DENSITY: 0.10 GPM / 7 HEADS  
WET SYSTEM
  - LEVEL 1 - CLASSROOM 101 / 102  
LIGHT HAZARD  
DESIGN DENSITY: 0.10 GPM / 1555 SF  
WET SYSTEM, QR HEADS  
DESIGN AREA REDUCTION PER NFPA 13 (2016) SECTION 11.2.3.2.3.1  
-3" 15/2 + 55 = 33% REDUCTION, 1500 SF \* 33% = 495 SF  
1500 SF - 495 SF = 1005 SF
  - LEVEL 2 - EAST ENTRY - HIGH BAY AREA  
LIGHT HAZARD  
DESIGN DENSITY: 0.10 GPM / 1335 SF  
WET SYSTEM
  - LEVEL 2 - GENERAL BIOLOGY LAB  
ORDINARY GROUP II HAZARD  
DESIGN DENSITY: 0.20 GPM / 1005 SF  
WET SYSTEM, QR HEADS  
DESIGN AREA REDUCTION PER NFPA 13 (2016) SECTION 11.2.3.2.3.1  
-3" 10/2 + 55 = 40% REDUCTION, 1500 SF \* 40% = 600 SF  
1500 SF - 600 SF = 900 SF
  - LEVEL 2 - CLASSROOM 201 / 202  
LIGHT HAZARD  
DESIGN DENSITY: 0.10 GPM / 1555 SF  
WET SYSTEM, QR HEADS  
DESIGN AREA REDUCTION PER NFPA 13 (2016) SECTION 11.2.3.2.3.1  
-3" 15/2 + 55 = 33% REDUCTION, 1500 SF \* 33% = 495 SF  
1500 SF - 495 SF = 1005 SF
  - LEVEL 2 - EAST DOOR OVER HANG  
LIGHT HAZARD  
DESIGN DENSITY: 0.10 GPM / FULL SYSTEM  
WET SYSTEM
  - LEVEL 3 - ORGANIC CHEMISTRY LAB  
ORDINARY GROUP II HAZARD  
DESIGN DENSITY: 0.20 GPM / 976 SF  
WET SYSTEM, QR HEADS  
DESIGN AREA REDUCTION PER NFPA 13 (2016) SECTION 11.2.3.2.3.1  
-3" 10/2 + 55 = 40% REDUCTION, 1500 SF \* 40% = 600 SF  
1500 SF - 600 SF = 900 SF
  - LEVEL 3 - EARTH SCIENCE LAB B  
ORDINARY GROUP II HAZARD  
DESIGN DENSITY: 0.20 GPM / 976 SF  
WET SYSTEM, QR HEADS  
DESIGN AREA REDUCTION PER NFPA 13 (2016) SECTION 11.2.3.2.3.1  
-3" 10/2 + 55 = 40% REDUCTION, 1500 SF \* 40% = 600 SF  
1500 SF - 600 SF = 900 SF
  - LEVEL 4 - MECHANICAL PENTHOUSE  
ORDINARY GROUP I HAZARD  
DESIGN DENSITY: 0.15 GPM / 418 SF  
WET SYSTEM

**VICINITY MAP:**



**1) FIRE SPRINKLER SECTION VIEW**  
SCALE 1/8"=1'-0"

**2) FIRE SPRINKLER SECTION VIEW**  
SCALE 1/8"=1'-0"

**SHINN**  
FIRE PROTECTION

18802 80th Avenue S  
Kent, WA 98032

Phone: (425) 203-9800  
Fax: (425) 203-9801

WA CL# SHINNMI060QP  
www.shinnmechanical.com

**PROJECT:**  
PIERCE COLLEGE  
PUYALLUP NEW  
STEM BUILDING

1601 39th AVE SE  
Puyallup, WA 98374

**CONTRACTOR:**  
Absher  
Construction

P.O. Box 280  
Puyallup, WA 98371  
PRECON DIRECTOR Blaine Wolfe  
Phone: (253) 845-9544

**KEY PLAN:**

**REVISIONS:**  
7-11-23 FM Review-Notes added

**AHJ:**  
CITY OF PUYALLUP

**NICET STAMP:**

FPET NICET #106245 LEVEL IV ASME  
WASHINGTON STATE  
CERTIFICATE OF COMPETENCY  
FIRE PROTECTION SPRINKLER SYSTEMS

Hussain A. A. Huballa  
8321-1119-C Level 3  
Shinn Mechanical, Inc.  
SHINNMI060QP

Signature:

05/16/2023

**DATE:** 05/15/2023  
**JOB NUMBER:** 22-3688  
**DESIGNER:** Ben Bernard  
**PM:**

**SITE PLAN AND NOTES**

**FP-0.0**

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Hussein A. A. Huballa  
8321-1119-C Level 3  
Shinn Mechanical, Inc.  
SHINNM060QP  
05/16/2023  
Signature: *[Signature]*

**DATE:** 05/16/2023  
**JOB NUMBER:** 22-3688  
**DESIGNER:** Ben Bernard  
**PM:**

3/4 VIEW STAND PIPE  
PLAN AND DETAILS

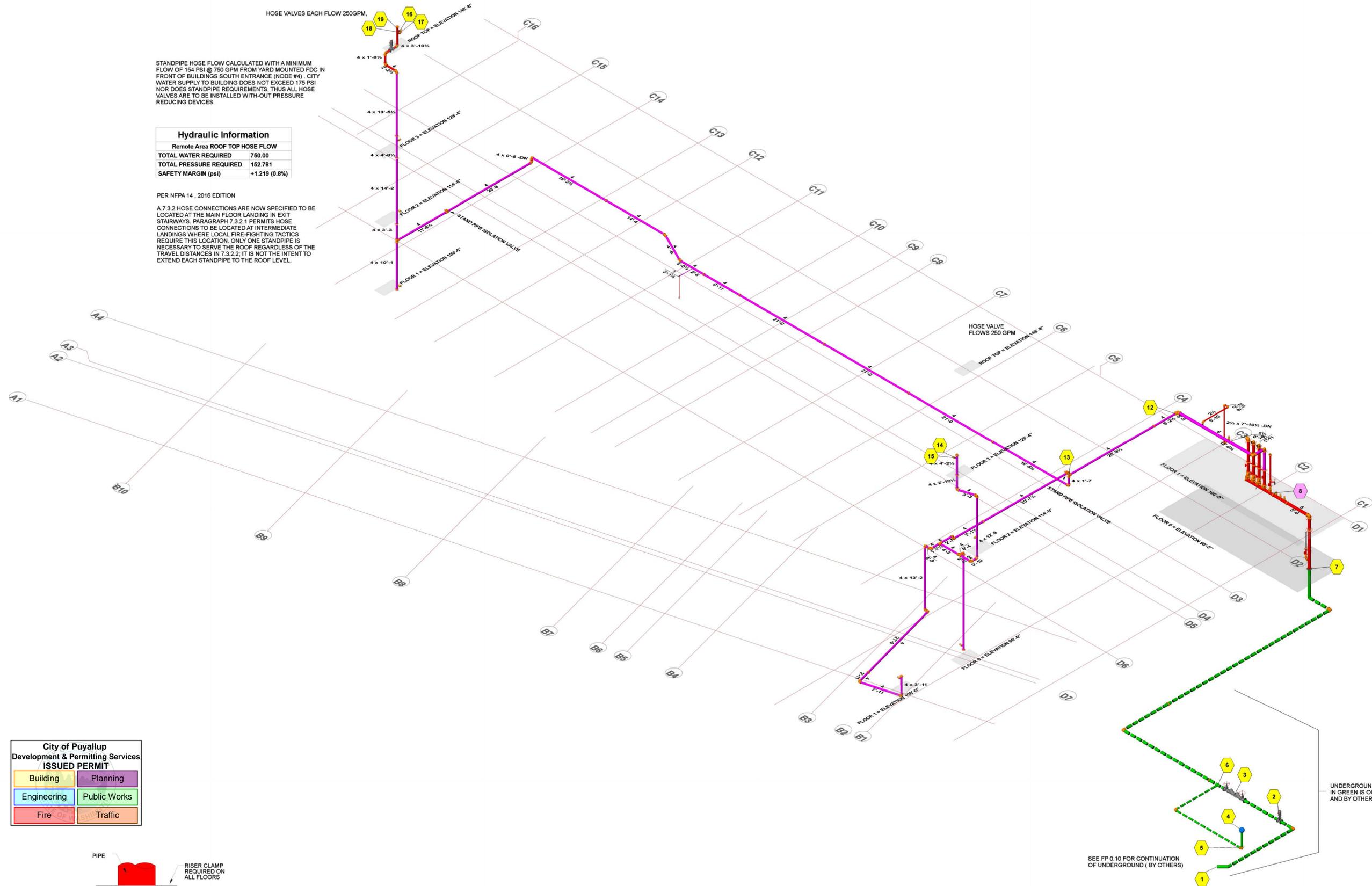
**FP-1.0**

STANDPIPE HOSE FLOW CALCULATED WITH A MINIMUM FLOW OF 154 PSI @ 750 GPM FROM YARD MOUNTED FDC IN FRONT OF BUILDINGS SOUTH ENTRANCE (NODE #4). CITY WATER SUPPLY TO BUILDING DOES NOT EXCEED 175 PSI NOR DOES STANDPIPE REQUIREMENTS, THUS ALL HOSE VALVES ARE TO BE INSTALLED WITH-OUT PRESSURE REDUCING DEVICES.

Hydraulic Information	
Remote Area ROOF TOP HOSE FLOW	
TOTAL WATER REQUIRED	750.00
TOTAL PRESSURE REQUIRED	152.781
SAFETY MARGIN (psi)	+1.219 (0.8%)

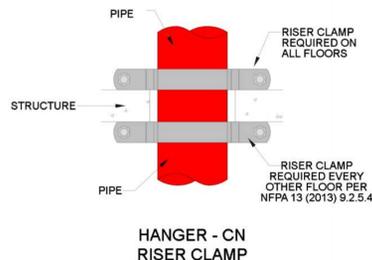
PER NFPA 14, 2016 EDITION

A 7.3.2 HOSE CONNECTIONS ARE NOW SPECIFIED TO BE LOCATED AT THE MAIN FLOOR LANDING IN EXIT STAIRWAYS. PARAGRAPH 7.3.2.1 PERMITS HOSE CONNECTIONS TO BE LOCATED AT INTERMEDIATE LANDINGS WHERE LOCAL FIRE-FIGHTING TACTICS REQUIRE THIS LOCATION. ONLY ONE STANDPIPE IS NECESSARY TO SERVE THE ROOF REGARDLESS OF THE TRAVEL DISTANCES IN 7.3.2.2. IT IS NOT THE INTENT TO EXTEND EACH STANDPIPE TO THE ROOF LEVEL.



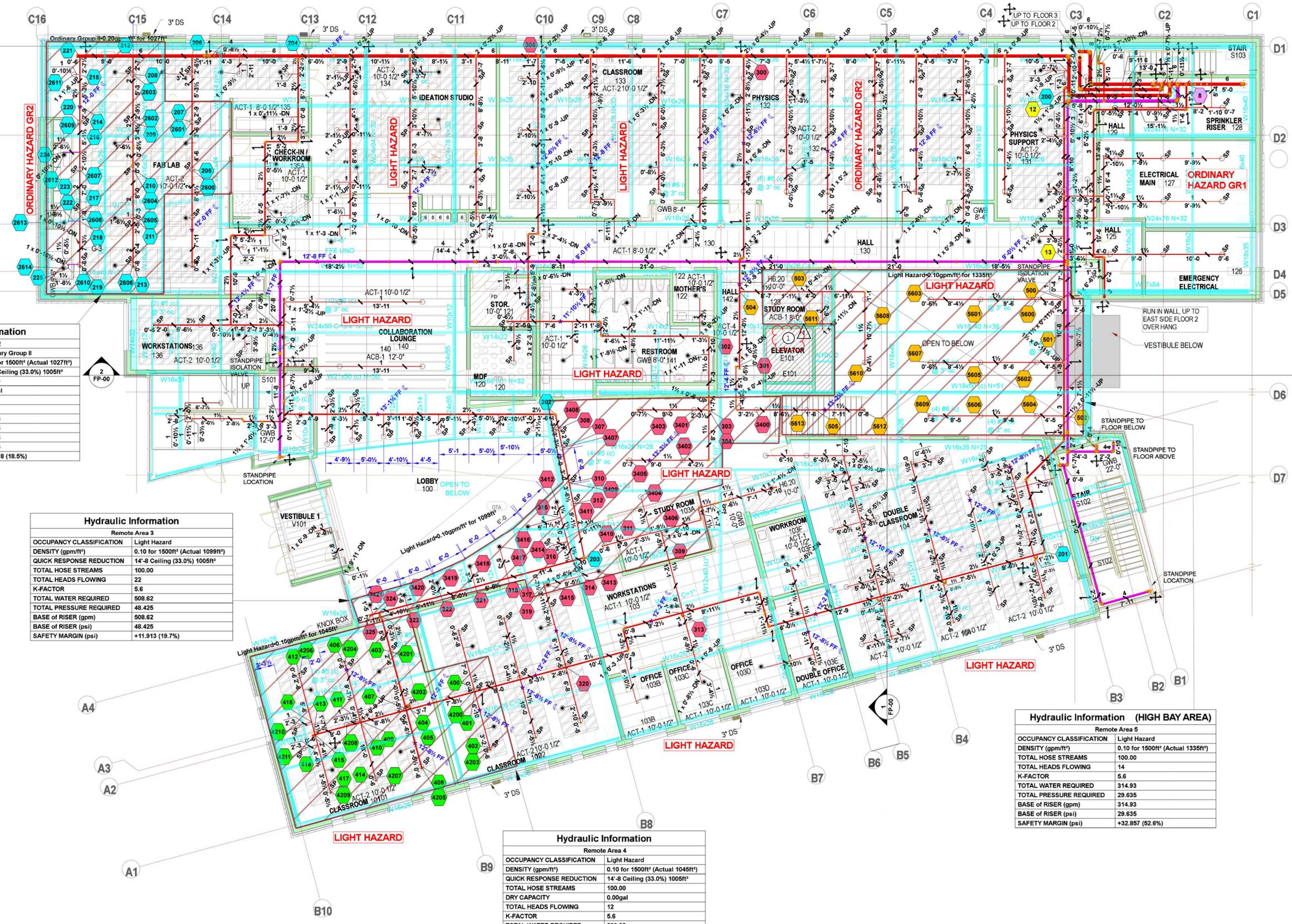
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**FIRE SPRINKLER WET MANUAL STANDPIPE AND RISER LOCATIONS**  
SCALE 1/8"=1'-0"





**Hydraulic Information**

Remote Area 2

OCCUPANCY CLASSIFICATION	Ordinary Group II
DENSITY (gpm/ft <sup>2</sup> )	0.20 for 1500ft <sup>2</sup> (Actual 1027ft <sup>2</sup> )
QUICK RESPONSE REDUCTION	14'-8 Ceiling (33.0%) 1005ft <sup>2</sup>
TOTAL HOSE STREAMS	250.00
DRY CAPACITY	0.00gal
TOTAL HEADS FLOWING	15
K-FACTOR	5.6
TOTAL WATER REQUIRED	637.25
TOTAL PRESSURE REQUIRED	47.625
BASE OF RISER (gpm)	637.25
BASE OF RISER (psi)	47.625
SAFETY MARGIN (psi)	+10.818 (18.5%)

**Hydraulic Information**

Remote Area 3

OCCUPANCY CLASSIFICATION	Light Hazard
DENSITY (gpm/ft <sup>2</sup> )	0.10 for 1500ft <sup>2</sup> (Actual 1099ft <sup>2</sup> )
QUICK RESPONSE REDUCTION	14'-8 Ceiling (33.0%) 1005ft <sup>2</sup>
TOTAL HOSE STREAMS	100.00
TOTAL HEADS FLOWING	22
K-FACTOR	5.6
TOTAL WATER REQUIRED	508.62
TOTAL PRESSURE REQUIRED	48.425
BASE OF RISER (gpm)	508.62
BASE OF RISER (psi)	48.425
SAFETY MARGIN (psi)	+11.913 (19.7%)

**Hydraulic Information**

Remote Area 4

OCCUPANCY CLASSIFICATION	Light Hazard
DENSITY (gpm/ft <sup>2</sup> )	0.10 for 1500ft <sup>2</sup> (Actual 1045ft <sup>2</sup> )
QUICK RESPONSE REDUCTION	14'-8 Ceiling (33.0%) 1005ft <sup>2</sup>
TOTAL HOSE STREAMS	100.00
DRY CAPACITY	0.00gal
TOTAL HEADS FLOWING	12
K-FACTOR	5.6
TOTAL WATER REQUIRED	290.92
TOTAL PRESSURE REQUIRED	37.798
BASE OF RISER (gpm)	290.92
BASE OF RISER (psi)	37.798
SAFETY MARGIN (psi)	+24.899 (39.7%)

**Hydraulic Information (HIGH BAY AREA)**

Remote Area 5

OCCUPANCY CLASSIFICATION	Light Hazard
DENSITY (gpm/ft <sup>2</sup> )	0.10 for 1500ft <sup>2</sup> (Actual 1335ft <sup>2</sup> )
TOTAL HOSE STREAMS	100.00
TOTAL HEADS FLOWING	14
K-FACTOR	5.6
TOTAL WATER REQUIRED	314.93
TOTAL PRESSURE REQUIRED	29.635
BASE OF RISER (gpm)	314.93
BASE OF RISER (psi)	29.635
SAFETY MARGIN (psi)	+32.857 (52.6%)

City of Puyallup  
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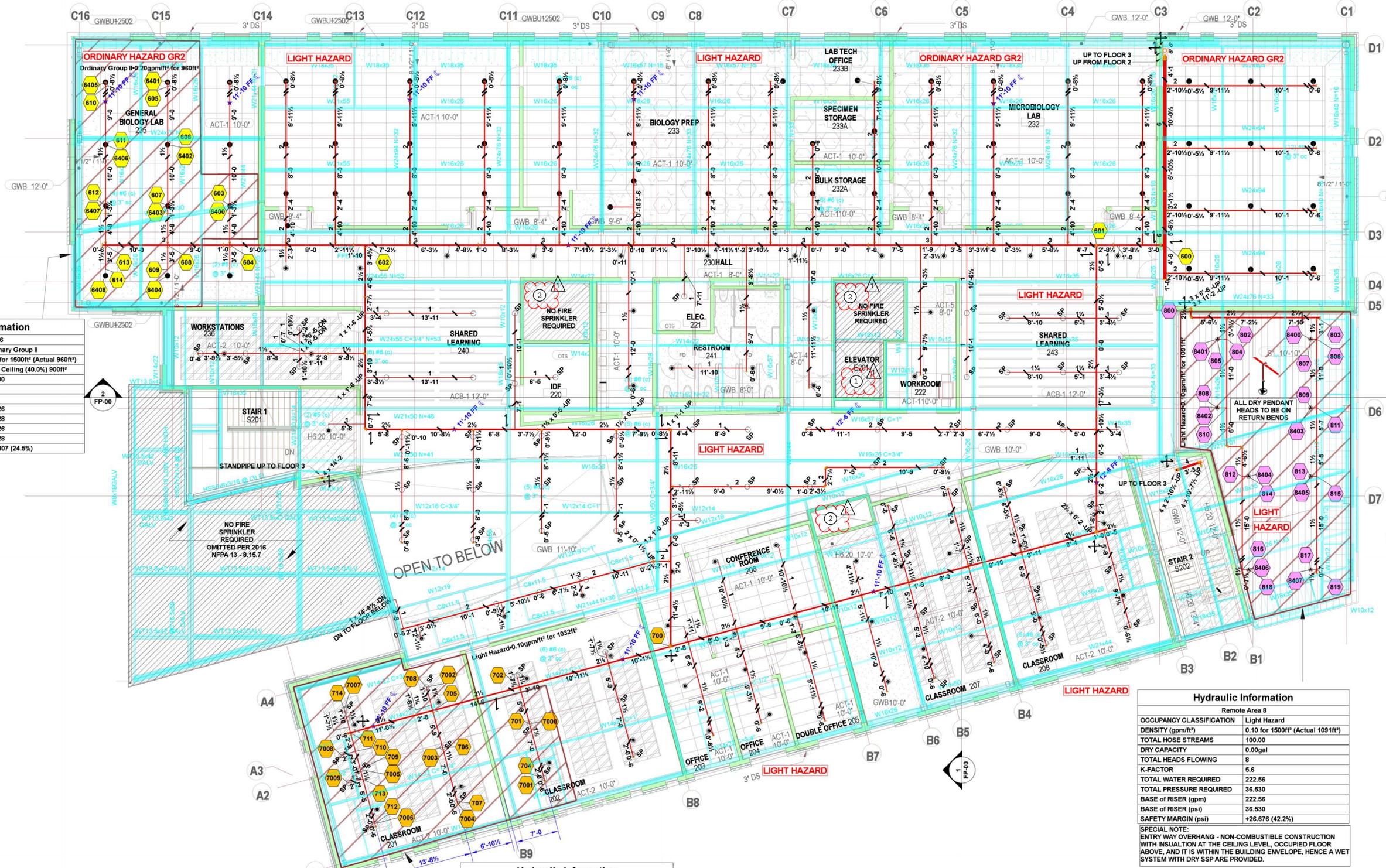
FIRE SPRINKLER PLAN - FIRST FLOOR

0 2 4 8 16  
SCALE 1/8"=1'-0"

(1) Elevator shaft and elevator mechanical room omitted by complying with NFPA 13 #8.15.5. Fire Sprinklers located in sump of elevator only

**Sprinkler Legend**

Symbol	Manufacturer	Model	K-Factor	Type	Size	Response	Finish	Temperature	Quantity
○	RELIABLE	FIFR56	5.6	Upright	1/2	Quick	Brass	155°F	174
◐	RELIABLE	FIFR56	5.6	Sidewall	1/2	Quick	Chrome	155°F	3
●	RELIABLE	FIFR56	5.6	Pendent	1/2	Quick	Chrome	155°F	100
Total = 277									



**Hydraulic Information**  
Remote Area 6

OCCUPANCY CLASSIFICATION	Ordinary Group II
DENSITY (gpm/ft <sup>2</sup> )	0.20 for 1500ft <sup>2</sup> (Actual 960ft <sup>2</sup> )
QUICK RESPONSE REDUCTION	10'-0" Ceiling (40.0%) 900ft <sup>2</sup>
TOTAL HOSE STREAMS	250.00
TOTAL HEADS FLOWING	9
K-FACTOR	8
TOTAL WATER REQUIRED	501.26
TOTAL PRESSURE REQUIRED	45.628
BASE OF RISER (gpm)	501.26
BASE OF RISER (psi)	45.628
SAFETY MARGIN (psi)	+14.807 (24.5%)

**Hydraulic Information**  
Remote Area 7

OCCUPANCY CLASSIFICATION	Light Hazard
DENSITY (gpm/ft <sup>2</sup> )	0.10 for 1500ft <sup>2</sup> (Actual 1032ft <sup>2</sup> )
QUICK RESPONSE REDUCTION	14'-8" Ceiling (33.0%) 1005ft <sup>2</sup>
TOTAL HOSE STREAMS	100.00
DRY CAPACITY	0.00gal
TOTAL HEADS FLOWING	10
K-FACTOR	5.6
TOTAL WATER REQUIRED	310.62
TOTAL PRESSURE REQUIRED	51.897
BASE OF RISER (gpm)	310.62
BASE OF RISER (psi)	51.897
SAFETY MARGIN (psi)	+10.632 (17.0%)

**Hydraulic Information**  
Remote Area 8

OCCUPANCY CLASSIFICATION	Light Hazard
DENSITY (gpm/ft <sup>2</sup> )	0.10 for 1500ft <sup>2</sup> (Actual 1091ft <sup>2</sup> )
TOTAL HOSE STREAMS	100.00
DRY CAPACITY	0.00gal
TOTAL HEADS FLOWING	8
K-FACTOR	5.6
TOTAL WATER REQUIRED	222.56
TOTAL PRESSURE REQUIRED	36.530
BASE OF RISER (gpm)	222.56
BASE OF RISER (psi)	36.530
SAFETY MARGIN (psi)	+26.676 (42.2%)

SPECIAL NOTE:  
ENTRY WAY OVERHANG - NON-COMBUSTIBLE CONSTRUCTION WITH INSULATION AT THE CEILING LEVEL, OCCUPIED FLOOR ABOVE, AND IT IS WITHIN THE BUILDING ENVELOPE, HENCE A WET SYSTEM WITH DRY SSP ARE PROVIDED.

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FIRE SPRINKLER PLAN - SECOND FLOOR  
0 2 4 8 16  
SCALE 1/8"=1'-0"

(1) Elevator shaft and elevator mechanical room omitted by complying with NFPA 13 #8.15.5, Fire Sprinklers located in sump of elevator only.  
(2) Fire Sprinklers omitted from Vertical, concealed, non-combustible shaft areas that comply with NFPA 13 #8.15.1.2

**Sprinkler Legend**

Symbol	Manufacturer	Model	K-Factor	Type	Size	Response	Finish	Temperature	Quantity
○	RELIABLE	FIFR56	5.6	Upright	1/2"	Quick	Brass	200°F	81
●	RELIABLE	F3QR56	5.6	Dry Pendent	1"	Quick	Chrome	155°F	9
●	RELIABLE	FIFR80	8	Pendent	3/4"	Quick	Chrome	155°F	67
●	RELIABLE	FIFR56	5.6	Pendent	1/2"	Quick	Chrome	155°F	57
									Total = 214

**Hydraulic Information**

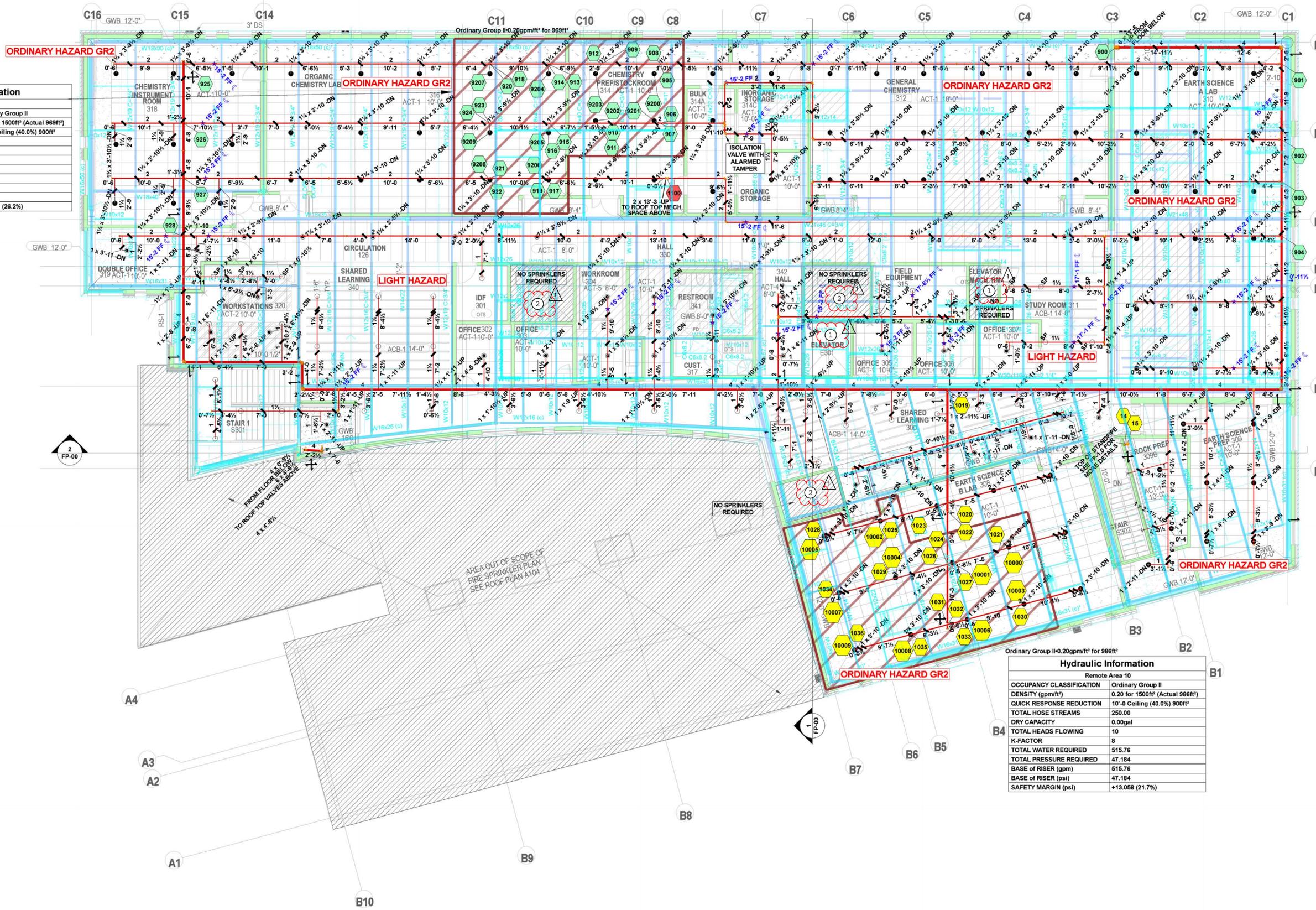
Remote Area 9	
OCCUPANCY CLASSIFICATION	Ordinary Group II
DENSITY (gpm/ft <sup>2</sup> )	0.20 for 1500ft <sup>2</sup> (Actual 969ft <sup>2</sup> )
QUICK RESPONSE REDUCTION	10'-0 Ceiling (40.0%) 900ft <sup>2</sup>
TOTAL HOSE STREAMS	250.00
TOTAL HEADS FLOWING	10
K-FACTOR	8
TOTAL WATER REQUIRED	515.36
TOTAL PRESSURE REQUIRED	44.470
BASE OF RISER (gpm)	515.36
BASE OF RISER (psi)	44.470
SAFETY MARGIN (psi)	+15.778 (26.2%)

**Hydraulic Information**

Remote Area 10	
OCCUPANCY CLASSIFICATION	Ordinary Group II
DENSITY (gpm/ft <sup>2</sup> )	0.20 for 1500ft <sup>2</sup> (Actual 986ft <sup>2</sup> )
QUICK RESPONSE REDUCTION	10'-0 Ceiling (40.0%) 900ft <sup>2</sup>
TOTAL HOSE STREAMS	250.00
DRY CAPACITY	0.00gal
TOTAL HEADS FLOWING	10
K-FACTOR	8
TOTAL WATER REQUIRED	515.76
TOTAL PRESSURE REQUIRED	47.184
BASE OF RISER (gpm)	515.76
BASE OF RISER (psi)	47.184
SAFETY MARGIN (psi)	+13.058 (21.7%)

**Sprinkler Legend**

Symbol	Manufacturer	Model	K-Factor	Type	Size	Response	Finish	Temperature	Quantity
▶	RELIABLE	F1FR56	5.6	Sidewall	1/2	Quick	Chrome	155°F	6
●	RELIABLE	F1FR56	5.6	Pendent	1/2	Quick	Chrome	155°F	35
○	RELIABLE	F1FR56	5.6	Upright	1/2	Quick	BRASS	155°F	45
●	RELIABLE	F1FR80	8	Pendent	3/4	Quick	Chrome	155°F	96
									Total = 182



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

City of Puyallup  
Development & Permitting Services  
ISSUED PERMIT

Building	Planning
Engineering	Public Works
Fire	Traffic

(1) Elevator shaft and elevator mechanical room omitted by complying with NFPA 13 #8.15.5, Fire Sprinklers located in sump of elevator only.  
(2) Fire Sprinklers omitted from Vertical, concealed, non-combustible shaft areas that comply with NFPA 13 #8.15.1.2



18802 80th Avenue S  
Kent, WA 98032  
Phone: (425) 203-9800  
Fax: (425) 203-9801  
WA CL# SHINMMI060QP  
www.shinnmechanical.com

PROJECT:  
**PIERCE COLLEGE  
PUYALLUP NEW  
STEM BUILDING**

1601 39th AVE SE  
Puyallup, WA 98374

CONTRACTOR:  
**Absher  
Construction**  
P.O. Box 280  
Puyallup, WA 98371  
PRECON DIRECTOR Blaine Wolfe  
Phone: (253) 845-9544

KEY PLAN:

REVISIONS:  
▲ 7-11-23 FM Review-Notes added

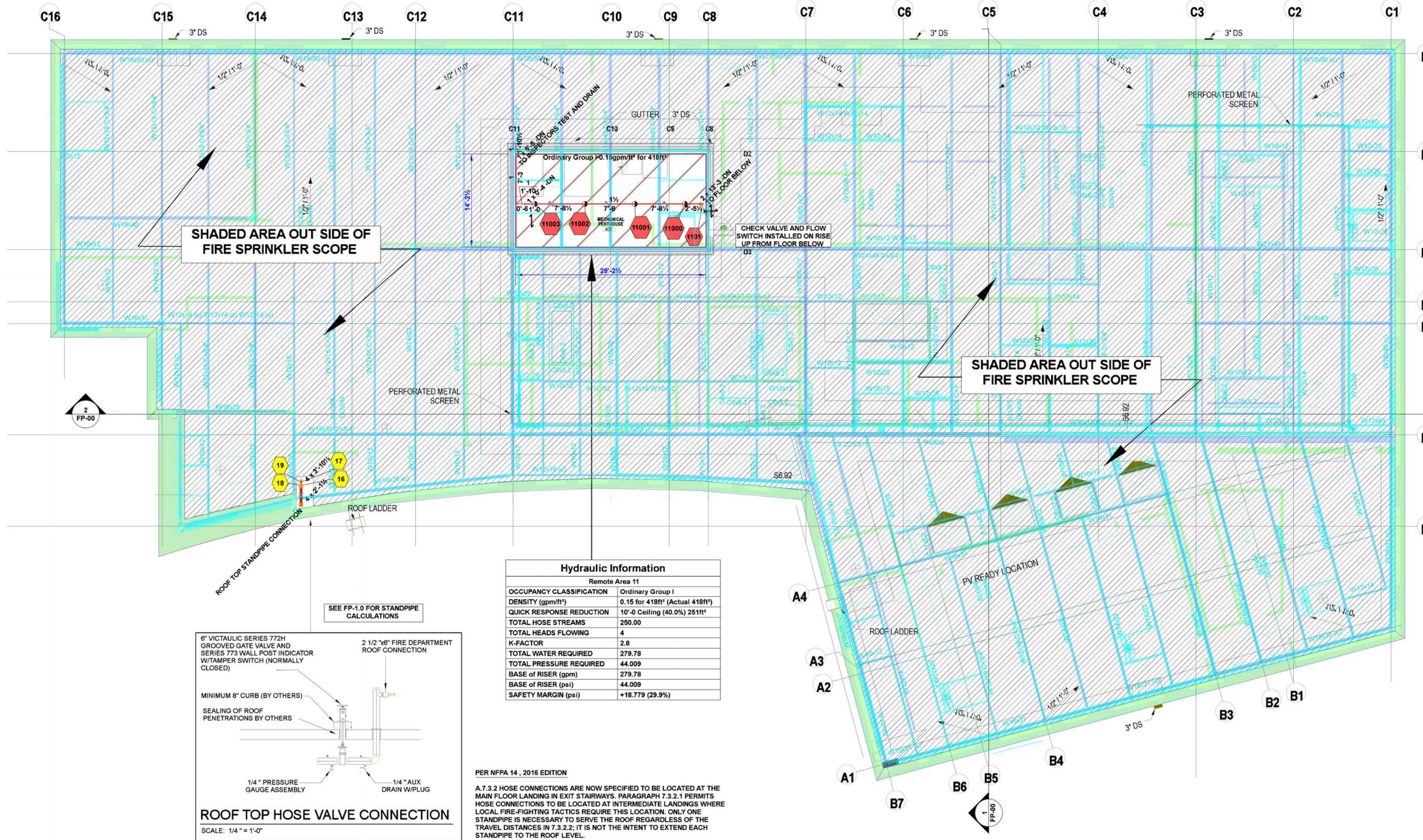
AHJ:  
CITY OF PUYALLUP



DATE: 05/16/2023  
JOB NUMBER: 22-3688  
DESIGNER: Ben Bernard  
PM:

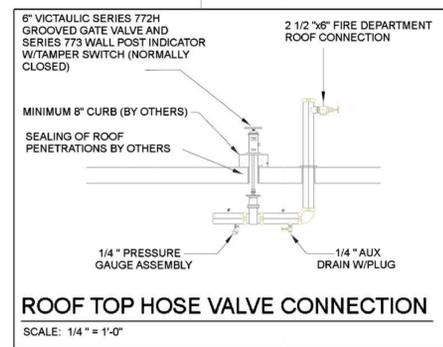
3rd FLOOR FIRE  
SPRINKLER PLANS

FP-2.3



Hydraulic Information	
Remote Area 11	
OCCUPANCY CLASSIFICATION	Ordinary Group I
DENSITY (gpm/ft <sup>2</sup> )	0.15 for 418ft <sup>2</sup> (Actual 418ft <sup>2</sup> )
QUICK RESPONSE REDUCTION	10'-0" Ceiling (40.0%) 251ft <sup>2</sup>
TOTAL HOSE STREAMS	250.00
TOTAL HEADS FLOWING	4
K-FACTOR	2.8
TOTAL WATER REQUIRED	279.78
TOTAL PRESSURE REQUIRED	44.009
BASE OF RISER (gpm)	279.78
BASE OF RISER (psi)	44.009
SAFETY MARGIN (psi)	+18.779 (29.9%)

PER NFPA 14, 2016 EDITION  
A.7.3.2 HOSE CONNECTIONS ARE NOW SPECIFIED TO BE LOCATED AT THE MAIN FLOOR LANDINGS IN EXIT STAIRWAYS. PARAGRAPH 7.3.2.1 PERMITS HOSE CONNECTIONS TO BE LOCATED AT INTERMEDIATE LANDINGS WHERE LOCAL FIRE-FIGHTING TACTICS REQUIRE THIS LOCATION. ONLY ONE STANDPIPE IS NECESSARY TO SERVE THE ROOF REGARDLESS OF THE TRAVEL DISTANCES IN 7.3.2.2; IT IS NOT THE INTENT TO EXTEND EACH STANDPIPE TO THE ROOF LEVEL.



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

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Fire	Traffic

Sprinkler Legend									
Symbol	Manufacturer	Model	K-Factor	Type	Size	Response	Finish	Temperature	Quantity
	RELIABLE	F1FR28	2.8	Pendent	1/2	Quick	Chrome	155°F	4
									Total = 4