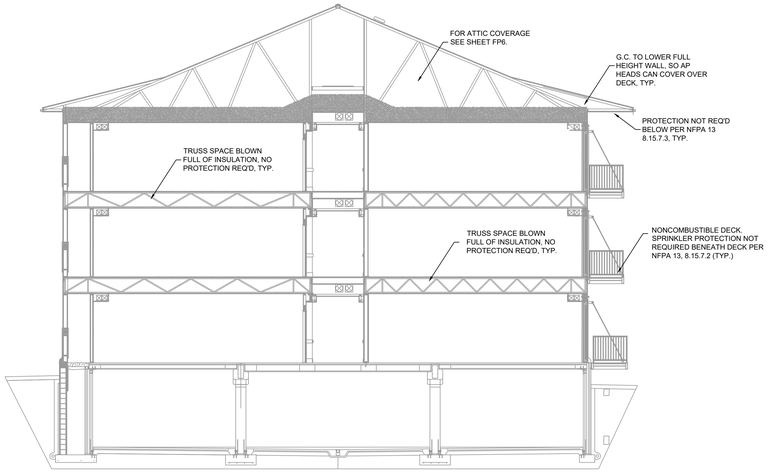
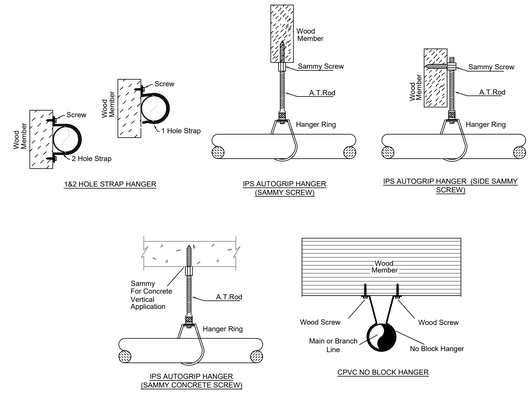
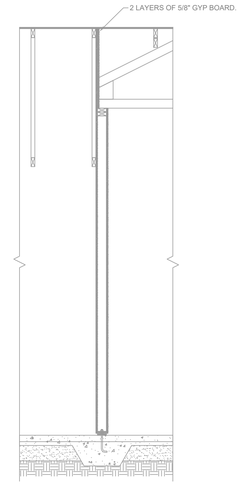


A BUILDING SECTION
SCALE= 1/8" : 1'-0"



HANGER DETAILS



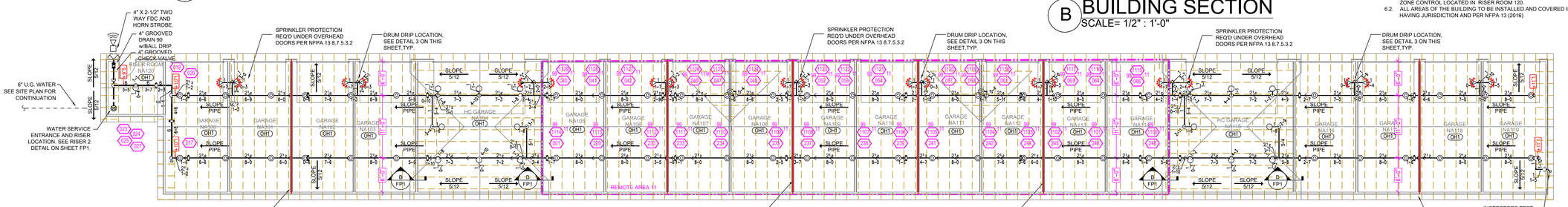
GENERAL NOTES

1. MINNESOTA STATE BUILDING CODE (2020)
   - 1.1. OCCUPANCY: R-2 & S-2
   - 1.2. TYPE OF CONSTRUCTION:V-A
   - 1.3. SPRINKLERED AREAS (APPROXIMATE - SEE ARCHITECTURAL PLANS FOR ACTUAL)

PARKING GARAGE	= 28,042 S.F. (ZONE 1)
1ST FLOOR	= 28,429 S.F. (ZONE 2)
2ND FLOOR	= 28,324 S.F. (ZONE 3)
3RD FLOOR	= 28,324 S.F. (ZONE 3)
ATTIC	= 28,324 S.F. (ZONE 4)
TOTAL	= 141,479 S.F.
DETACHED GARAGE	= 5,667 S.F. (ZONE 1)

   - 1.4. INSTALLATION STANDARDS: SPRINKLER SYSTEM DESIGNED AND INSTALLED PER NFPA-13 (2016), NFPA-14 (2016)
2. SPRINKLER PIPE TYPES:
   -WET-
   - 2.1. 1" BRANCH LINES TO BE BLAZEMASTER CPVC PIPING WITH CEMENTED FITTINGS
   - 2.2. 1½" THROUGH 2-1/2" MAIN & BRANCH LINES TO BE BLAZEMASTER CPVC PIPING WITH CEMENTED FITTINGS
   - 2.3. 1" BRANCH LINES TO BE BLK MEGA -THREAD PIPING WITH THREADED FITTINGS
   - 2.4. 1½" THROUGH 3" MAIN & BRANCH LINES TO BE BLK MEGA-FLOW PIPING WITH GROOVED SHORT RADIUS FITTINGS
   -DRY-
   - 2.5. 1" BRANCH LINES TO BE THREADED BLK SCHEDULE 40 WITH THREADED FITTINGS
   - 2.6. 1½" THROUGH 6" MAIN & BRANCH LINES TO BE GROOVED BLK SCHEDULE 10 WITH GROOVED SHORT RADIUS FITTINGS
   - 2.7. MAINS & BRANCH LINES TO BE ROLL-GROOVED BLK SCHEDULE 10
3. DESIGN CRITERIA
   - 3.1. LOBBY, UNITS, FITNESS ROOM, ATTIC AND SIMILAR AREAS ARE DESIGNED TO LIGHT HAZARD.
   - 3.2. PARKING GARAGE, DETACHED GARAGE, MECH CLOSETS AND SIMILAR AREAS ARE DESIGNED TO ORDINARY HAZARD GROUP 1 AREAS
   - 3.3. REMOTE AREA REDUCTIONS HAVE BEEN TAKEN WHERE APPLICABLE PER NFPA 13 SEC. 11.2.3.2.3
4. NOTES:
   - 4.1. ALL MATERIAL TO BE NEW AND MEET U.L. STANDARDS
   - 4.2. HANGERS TO BE INSTALLED IN ACCORDANCE WITH NFPA 13 (2016) - SEE PLAN FOR HANGING REQUIREMENTS
   - 4.3. DRY SYSTEM PIPE SLOPE INSTALLATION:
     SPRINKLER MAINS TO BE 2" PER 10 FEET
     SPRINKLER BRANCH LINES TO BE 2" PER 10 FEET
   - 4.4. DRY SYSTEM CAPACITY
     - 4.4.1. ATTIC = 545 GAL.
     - 4.4.2. DETACHED GARAGE = 201 GAL.
5. SYMBOLS USED ON DRAWINGS:
   - +9'6" PIPE ELEVATION A.F.F
   - -1'2" PIPE ELEVATION BELOW B.O.D
   - OH1 ROOM HAZARD CLASSIFICATION (ALL ROOMS ARE CONSIDERED LIGHT HAZARD UNLESS NOTED)
   - F1 HYDRAULIC CALCULATION JUNCTION POINT
   - 9'-10" CEILING HEIGHT
6. SCOPE OF WORK:
   - 6.1. TO INSTALL NEW SPRINKLER SYSTEMS FOR THE APARTMENT BUILDING AND DETACHED GARAGE AS SHOWN ON THESE DRAWINGS. THE APARTMENT BUILDING WILL HAVE 4 ZONES. 1 WET ZONE FOR THE PARKING GARAGE, 1 WET ZONE FOR LEVEL 1, 1 WET ZONE FOR LEVELS 2 & 3 (COMBINED), AND 1 DRY ZONE FOR THE ATTIC. EACH STAIRWELL WILL HAVE 1-1/2" CLEAN UP STANDPIPES. ALL ZONE CONTROLS FOR THE APARTMENT TO BE LOCATED IN MECH ROOM 121. THE DETACHED GARAGE WILL HAVE 1 DRY SYSTEM WITH THE ZONE CONTROL LOCATED IN RISER ROOM 120.
   - 6.2. ALL AREAS OF THE BUILDING TO BE INSTALLED AND COVERED IN ACCORDANCE WITH THE LOCAL AUTHORITY HAVING JURISDICTION AND PER NFPA 13 (2016)

B BUILDING SECTION
SCALE= 1/2" : 1'-0"



DETACHED GARAGE FIRE SPRINKLER PLAN
SCALE= 1/8" : 1'-0"

CALC PLACARD

Design Area #:11 HAZARD: OH1
Zone: 1 System Type: DRY
Location: DETACHED GARAGE

Flowing Outlets: 30
Density: 0.15 Remote Area: 2587
Flow 745 gpm @ 50.5psi
Calculation Safety: 5.9 psi
Includes250 gpm Hose allowance

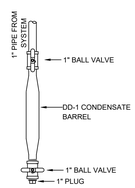
NOTE:
INCREASED REMOTE AREA 30% FOR DRY SYSTEM AND 30% FOR A SLOPED ROOF OVER 2/12. MINIMUM REMOTE AREA OF 2535 S.F. USED.

INSTALLATION NOTES:
ALL DRY PIPE TO SLOPE BACK TO DRY VALVE OR DRUM DRIP.
SLOPE MAINS: 1/4"=10'
SLOPE BRANCHLINES: 1/4"=10'

ALL DIMENSION MEASURED ON THE FLAT.

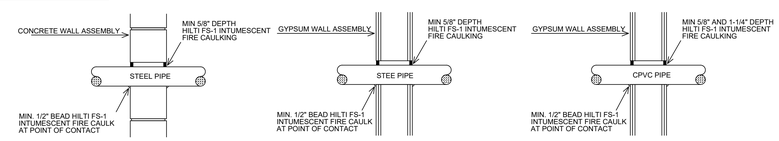
SYM	CNT	POSITION	FINISH	TEMP	K	NPT	SIN	MFG.	MODEL#	ESCUTCHEON	MAX SPACING
	368	PENDENT	WHITE	155	4.90	1/2"	TY2236	TYCO	LFII	SEMI-RECESSED	18 X 18 U.N.O.
	44	PENDENT	WHITE	155	8.00	3/4"	TY4282	TYCO	EC-8C	SEMI-RECESSED	28 X 10
	6	SIDEWALL	WHITE	155	8.00	3/4"	TY4332	TYCO	TY-FRB	SEMI-RECESSED	16 X 20
	146	PENDENT	WHITE	200	5.60	1/2"	TY323	TYCO	TY-FRB	SEMI-RECESSED	LH = 15 X 15, OH1 = 130 S.F.
	216	SIDEWALL	WHITE	155	4.40	1/2"	TY2334	TYCO	LFII	SEMI-RECESSED	16 X 16
	56	SIDEWALL	WHITE	200	5.60	1/2"	TY3331	TYCO	TY-FRB	SEMI-RECESSED	LH = 14X14, OH1 = 100 S.F.
	8	PENDENT	WHITE	155	11.20	3/4"	TY5237	TYCO	EC-11	SEMI-RECESSED	18 X 18
	52	UPRIGHT	BRASS	286	11.20	3/4"	TY5137	TYCO	EC-11	N/A	18 X 18
	17	UPRIGHT	BRASS	200	5.60	1/2"	TY3151	TYCO	TY-B	N/A	130 S.F.
	15	SIDEWALL	WHITE	155	4.00	1/2"	VK486	VIKING	VK486	SEMI-RECESSED	16 X 18 U.N.O.
	8	UPRIGHT	BRASS	212	5.60	1/2"	RA5626	RELIABLE	AH56	N/A	10X15
	79	SPRG'D UPR	BRASS	212	8.00	3/4"	RA5622	RELIABLE	DD80-6	N/A	6 X 63
	16	SPRG'D UPR	BRASS	212	5.60	1/2"	RA5694	RELIABLE	DD56-27	N/A	6 X 40
	112	UPRIGHT	BRASS	286	5.60	1/2"	TY3151	TYCO	TY-B	N/A	130 S.F.
	3	SPRG'D UPR	BRASS	200	8.00	3/4"	TY4182	TYCO	BB3	N/A	6 X 60
	58	UPRIGHT	BRASS	200	5.60	1/2"	TY313	TYCO	TY-FRB	N/A	ATTIC = 120 S.F., LH = 15X15
	56	SPRG'D UPR	BRASS	200	5.60	1/2"	TY3151	TYCO	TY-B	N/A	130 S.F.
	20	SIDEWALL	BRASS	200	5.60	1/2"	TY3331	TYCO	TY-FRB	N/A	14X14
	2	SIDEWALL	BRASS	200	11.20	3/4"	TY5332	TYCO	ELOSW20	N/A	16 X 16
	HEAD CAGE HSW										
	1282 TOTAL SPRINKLERS										

SPRINKLER HEAD LEGEND



3 DRUM DRIP ASSEMBLY
SCALE= 1/8" : 1'-0"

PIPE LEGEND
- BLACK STEEL SPRINKLER PIPING
- CPVC BLAZEMASTER SPRINKLER PIPING



FIRE RATED CONCRETE PENETRATION ASSEMBLY W-J-1067
- Use Hilti FS-1 MAX Fire Stop

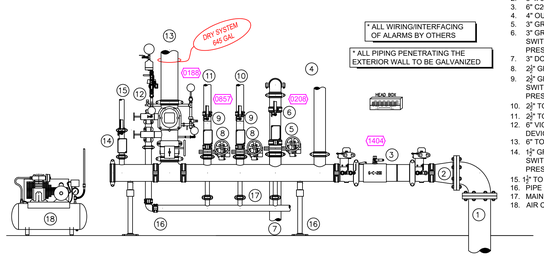
FIRE RATED GYPSUM PENETRATION ASSEMBLY W-L-1054
- Use Hilti FS-1 MAX Fire Stop

FIRE RATED GYPSUM WALL PENETRATION ASSEMBLY W-L-2377
- Use Hilti FS-1 MAX Fire Stop

FIRE STOPPING DETAIL

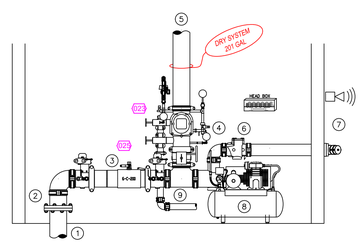
MAXIMUM DISTANCE BETWEEN HANGERS (FT.–IN.)										
	NOMINAL PIPE SIZE (IN.)									
	¾"	1"	1 ¼"	1 ½"	2"	2 ½"	3"	4"	6"	8"
STEEL PIPE EXCEPT THREADED LIGHTWALL	NA	12–0	12–0	15–0	15–0	15–0	15–0	15–0	15–0	15–0
THREADED LIGHTWALL STEEL PIPE	NA	12–0	12–0	12–0	12–0	NA	NA	NA	NA	NA
BLAZEMASTER CPVC	5–6	6–0	6–6	7–0	8–0	9–0	10–0	NA	NA	NA

NFPA 13 HANGER SPACING



RISER LEGEND
1. 8" UNDERGROUND WATER SERVICE (BY OTHERS) (FLUSHING & TESTING OF THE UNDERGROUND SHALL BE COMPLETED PRIOR TO THE SPRINKLER SYSTEM HOOKUP. UNDERGROUND PAPERS ARE TO BE SUPPLIED TO THE "FP" CONTRACTOR BY THE G.C.)
2. 8" x 6" REDUCER
3. 6" C200 BACKFLOW GXG w/ TAMPER SWITCHES
4. 4" OUT TO FDC
5. 3" GROOVED BUTTERFLY VALVE w/ TAMPER SWITCH
6. 3" GROOVED COMMERCIAL RISER MANIFOLD w/ FLOW SWITCH, PRESSURE GAUGE, TEST & DRAIN AND PRESSURE RELIEF VALVE.
7. 3" DOWN TO SUPPLY PARKING GARAGE (ZONE 1)
8. 2½" GROOVED BUTTERFLY VALVE w/ TAMPER SWITCH
9. 2½" GROOVED COMMERCIAL RISER MANIFOLD w/ FLOW SWITCH, PRESSURE GAUGE, TEST & DRAIN AND PRESSURE RELIEF VALVE.
10. 2½" TO SUPPLY 1ST FLOOR (ZONE 2)
11. 2½" TO SUPPLY 2ND-3RD FLOOR (ZONE 3)
12. 6" VICTUALIC DRY VALVE (768N) w/QUICK OPENING DEVICE AND AMD.
13. 6" TO ATTIC (ZONE 4)
14. 1½" GROOVED COMMERCIAL RISER MANIFOLD w/ FLOW SWITCH, PRESSURE GAUGE, TEST & DRAIN AND PRESSURE RELIEF VALVE.
15. 1½" TO CLEAN UP STANDPIPES
16. PIPE STAND
17. MAIN DRAIN PIPED TO EXTERIOR.
18. AIR COMPRESSOR

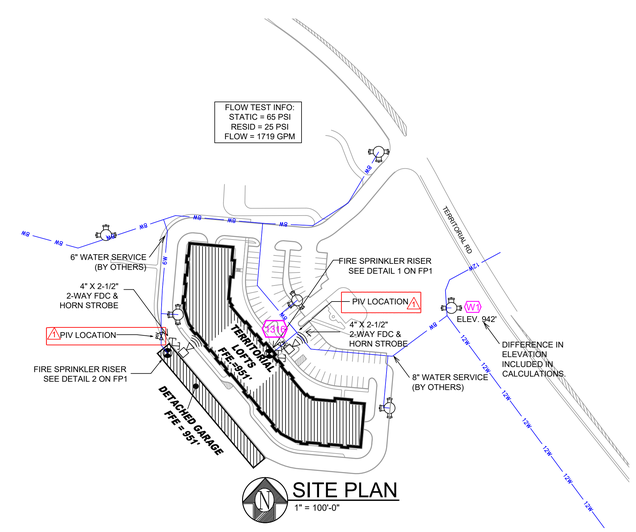
1 RISER DETAIL
SCALE= 1/2" : 1'-0"



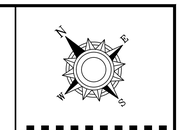
RISER LEGEND
1. 6" UNDERGROUND WATER SERVICE (BY OTHERS) (FLUSHING & TESTING OF THE UNDERGROUND SHALL BE COMPLETED PRIOR TO THE SPRINKLER SYSTEM HOOKUP. UNDERGROUND PAPERS ARE TO BE SUPPLIED TO THE "FP" CONTRACTOR BY THE G.C.)
2. 6" FLANGE ADAPTER NIPPLE
3. 6" C200 BACKFLOW GXG w/ TAMPER SWITCHES
4. 6" VICTUALIC DRY VALVE (768N) w/AMD.
5. 6" OUT TO DRY SYSTEM (ZONE 1)
6. 4" GROOVED CHECK VALVE
7. 4" x 2-1/2" 2-WAY FDC AND HORN STROBE
8. AIR COMPRESSOR
9. MAIN DRAIN PIPE TO EXTERIOR

* ALL WIRING/INTERFACING OF ALARMS BY OTHERS
* ALL PIPING PENETRATING THE EXTERIOR WALL TO BE GALVANIZED

2 RISER DETAIL
SCALE= 1/2" : 1'-0"



SITE PLAN
1" = 100'-0"



NO	REVISIONS	DATE
1	PLAN REVIEW	8-5-2022

APPROVAL STAMPS

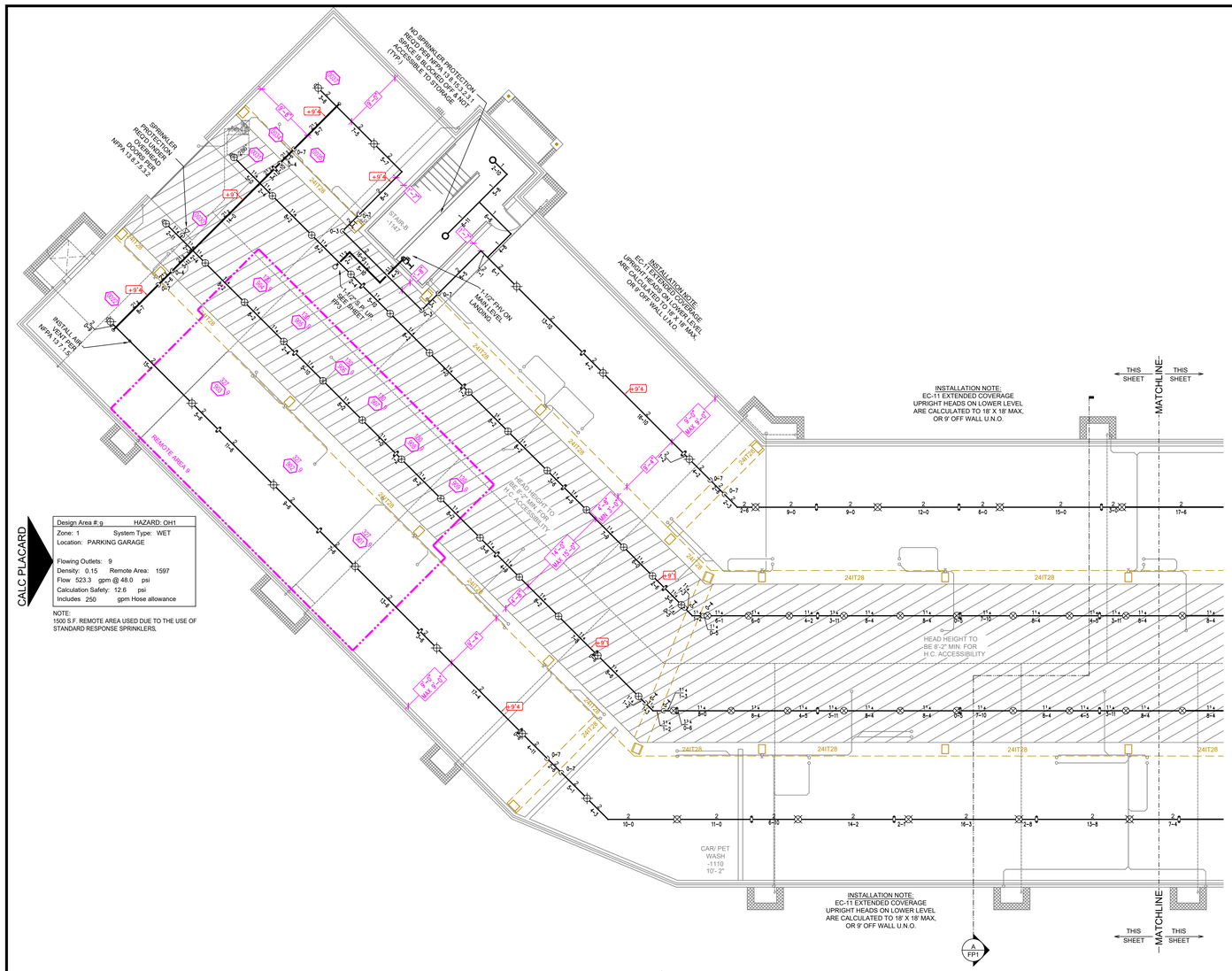
GENERAL NOTES
1. SYSTEM INSTALLED PER NFPA-13 (2016 EDITION) AND STATE FIRE MARSHAL.
2. ALL EQUIPMENT FOR THIS SYSTEM SHALL BE U.L. LISTED
3. ALL PIPE SHALL BE ASTM A-53 GRADE B.
4. ALL SCH-10 & LIGHTWALL PIPING HAS WELDED OUTLETS & GROOVED ALL WELDING PER NFPA 13(3.3.4.2)
5. NO WORK SHALL BE PERFORMED PRIOR TO BEGIN WITHOUT APPROVED SHOP DRAWINGS.
6. PROTECTION OF FABRICATION TO BE FOLLOWED PRIOR TO FABRICATION AND INSTALLATION BY SPRINKLER CONTRACTORS.
7. ALL DIMENSIONS SHOWN ARE CENTER TO CENTER.
8. PROVIDE ONE SPARE HEAD CABINET.
9. ELECTRICAL WIRING, ALARM, DETECTION AND SUPERVISORY BY OWNER
10. PROVIDE ONE SPARE HEAD OF EACH TYPE AND TEMPERATURE RATING WHERE REQUIRED
11. ELECTRICAL WIRING, ALARM, DETECTION AND SUPERVISORY BY OWNER
12. ALL EQUIPMENT SHALL BE U.L. LISTED AND F.M. APPROVED
13. WET SYSTEM PIPING TO BE PROVIDED WITH ADEQUATE HEATING TO PREVENT FROM FREEZING.

DRIVEN FIRE CONSULTANTS
910 N. SYCAMORE AVENUE, SIOUX FALLS, SD 57110 PHONE: (605) 444-9260

Drawing Title: FIRE PROTECTION PLAN

TERRITORIAL LOFTS
19615 TERRITORIAL RD.
ROGERS, MN 55311

Contract No.	C21-148
Drawing Date:	05/12/22
Scale:	1/8" = 1'-0"
Drawn By:	BCJ
Approval By:	STATE FIRE MARSHAL DIV.
SHEET NO.	FP 1 of 6



CALC PLACARD

Design Area #:g	HAZARD: OH1
Zone: 1	System Type: WET
Location: PARKING GARAGE	
Flowing Outlets: 9	
Density: 0.15	Remote Area: 1597
Flow 523.3 gpm @ 48.0 psi	
Calculation Safety: 12.6 psi	
Includes 250 gpm Hose allowance	

NOTE:
1500 S.F. REMOTE AREA USED DUE TO THE USE OF STANDARD RESPONSE SPRINKLERS.

PIPE LEGEND

BLACK STEEL SPRINKLER PIPING
CPVC BLAZEMASTER SPRINKLER PIPING

SYM	CNT	POSITION	FINISH	TEMP	K	NPT	SIN	MFG.	MODEL#	ESCUTCHEON	MAX SPACING
	368	PENDENT	WHITE	155	4.90	1/2"	TY2236	TYCO	LFII	SEMI-RECESSED	18 X 18 U.N.O.
	44	PENDENT	WHITE	155	8.00	3/4"	TY4282	TYCO	EC-8C	SEMI-RECESSED	28 X 10
	6	SIDEWALL	WHITE	155	8.00	3/4"	TY4332	TYCO	TY-FRB	SEMI-RECESSED	16 X 20
	146	PENDENT	WHITE	200	5.60	1/2"	TY323	TYCO	TY-FRB	SEMI-RECESSED	LH = 15 X 15, OH1 = 130 S.F.
	216	SIDEWALL	WHITE	155	4.40	1/2"	TY2334	TYCO	LFII	SEMI-RECESSED	16 X 16
	56	SIDEWALL	WHITE	200	5.60	1/2"	TY3331	TYCO	TY-FRB	SEMI-RECESSED	LH = 14X14, OH1 = 100 S.F.
	8	PENDENT	WHITE	155	11.20	3/4"	TY5237	TYCO	EC-11	SEMI-RECESSED	18 X 18
	52	UPRIGHT	BRASS	286	11.20	3/4"	TY5137	TYCO	EC-11	N/A	18 X 18
	17	UPRIGHT	BRASS	200	5.60	1/2"	TY3151	TYCO	TY-B	N/A	130 S.F.
	15	SIDEWALL	WHITE	155	4.00	1/2"	VK486	VIKING	VK486	SEMI-RECESSED	16 X 18 U.N.O.
	8	UPRIGHT	BRASS	212	5.60	1/2"	RA5626	RELIABLE	AH56	N/A	10X15
	79	SPRG'D UPR	BRASS	212	8.00	3/4"	RA5622	RELIABLE	DD80-6	N/A	6 X 63
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		HEAD CAGE HSW									
1282 TOTAL SPRINKLERS											

SPRINKLER HEAD LEGEND

PARKING GARAGE FIRE SPRINKLER PLAN

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

GENERAL NOTES

1. SYSTEM INSTALLED PER NFPA-13 (2016 EDITION) AND STATE FIRE MARSHAL.
2. ALL EQUIPMENT FOR THIS SYSTEM SHALL BE U.L. LISTED
3. ALL PIPE SHALL BE ASTM A-53 SCHEDULE 40.
4. ALL SCH-10 & LIGHTWALL PIPING HAS WELDED OUTLETS & GROOVED ENDS. NO THREADED FITTINGS.
5. ALL WELDING PER NFPA 13(3.4.2)
6. NO PIPE SHALL BE CUT OR FABRICATED PRIOR TO BEGIN WITHOUT APPROVED SHOP DRAWINGS.
7. ALL FABRICATION AND INSTALLATION TO BE PERFORMED BY QUALIFIED CONTRACTORS.
8. ALL DIMENSIONS SHOWN ARE CENTER TO CENTER.
9. PROVIDE ONE SPARE HEAD CABINET.
10. PROVIDE ALL SEISMIC BRACING AS REQUIRED WHERE REQUIRED
11. ELECTRICAL WIRING, ALARM, DETECTION AND SUPERVISORY BY OWNER
12. WET SYSTEM PIPING TO BE PROTECTED FROM FREEZING. ADEQUATE HEATING TO PREVENT WET SYSTEM PIPING FROM FREEZING.

NO	REVISIONS	DATE
1	PLAN REVIEW	8-5-2022

APPROVAL STAMPS

DRIVEN FIRE CONSULTANTS
910 N. SYCAMORE AVENUE, SIOUX FALLS, SD 57110 PHONE: (605) 444-3250

Drawing Title: FIRE PROTECTION PLAN

TERRITORIAL LOFTS
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Contract No.	C21-148
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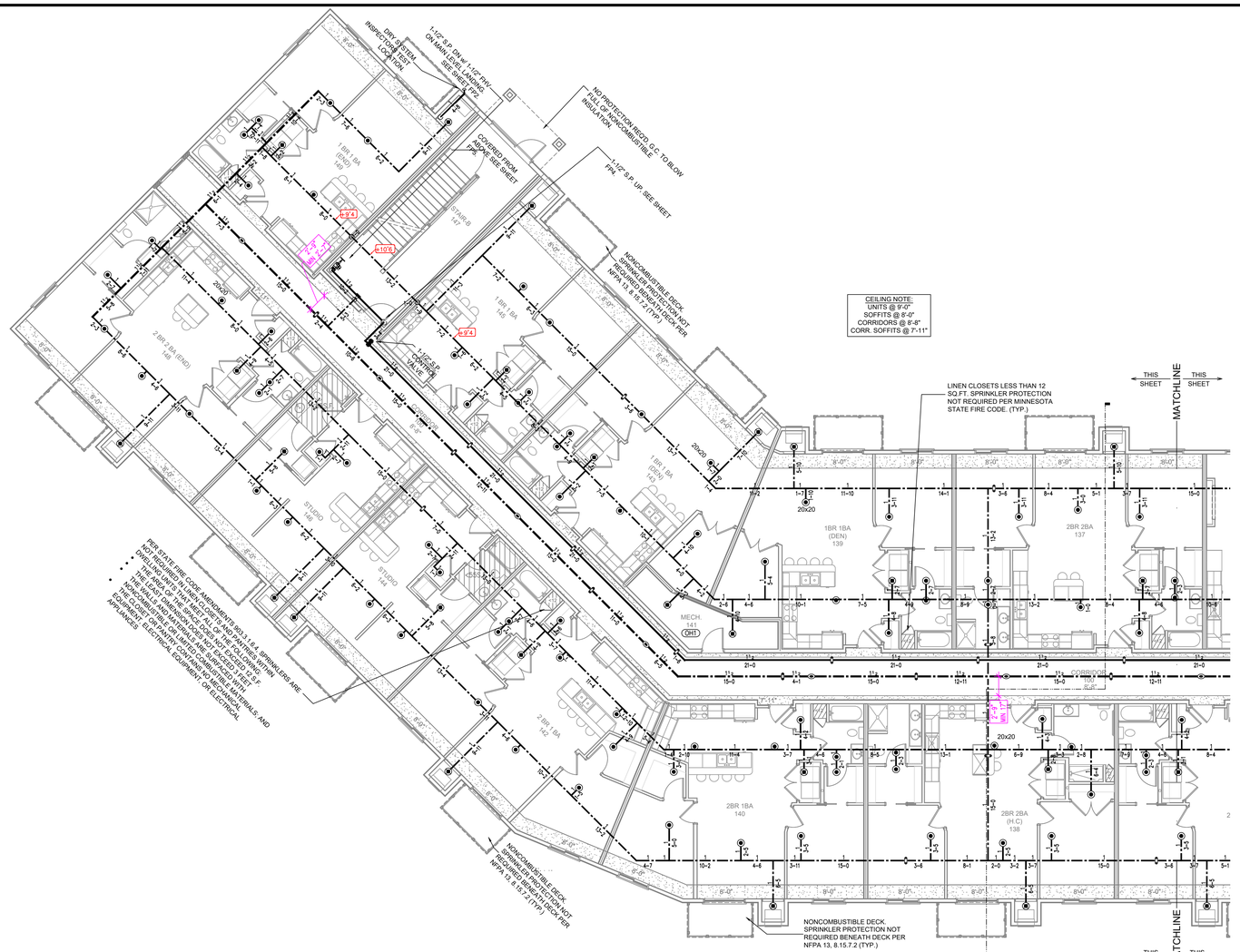

PIPE LEGEND

BLACK STEEL SPRINKLER PIPING

CPVC BLAZEMASTER SPRINKLER PIPING

SYM	CNT	POSITION	FINISH	TEMP	K	NPT	SIN	MFG.	MODEL#	ESCUTCHEON	MAX SPACING
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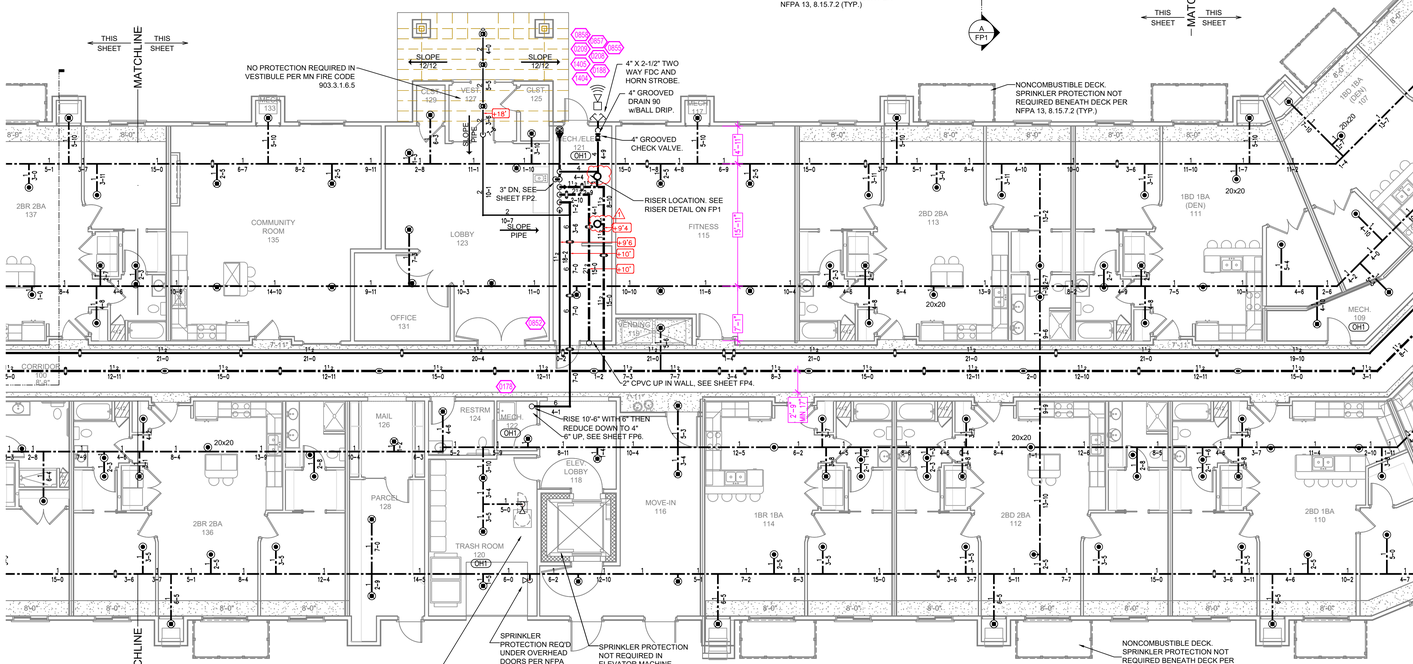
	17	UPRIGHT	BRASS	200	5.60	1/2"	TY3151	TYCO	TY-B	N/A	130 S.F.
	15	SIDEWALL	WHITE	155	4.00	1/2"	VK486	VIKING	VK486	SEMI-RECESSED	16 X 18 U.N.O.
	* 8	UPRIGHT	BRASS	212	5.60	1/2"	RA5626	RELIABLE	AH56	N/A	10X15
	79	SPRG'D UPR	BRASS	212	8.00	3/4"	RA5622	RELIABLE	DD80-6	N/A	6 X 63
	16	SPRG'D UPR	BRASS	212	5.60	1/2"	RA5694	RELIABLE	DD56-27	N/A	6 X 40
	112	UPRIGHT	BRASS	286	5.60	1/2"	TY3151	TYCO	TY-B	N/A	130 S.F.
	3	SPRG'D UPR	BRASS	200	8.00	3/4"	TY4182	TYCO	BB3	N/A	6 X 60
	58	UPRIGHT	BRASS	200	5.60	1/2"	TY313	TYCO	TY-FRB	N/A	ATTIC = 120 S.F., LH = 15X15
	56	SPRG'D UPR	BRASS	200	5.60	1/2"	TY3151	TYCO	TY-B	N/A	130 S.F.
	20	SIDEWALL	BRASS	200	5.60	1/2"	TY3331	TYCO	TY-FRB	N/A	14X14
	2	SIDEWALL	BRASS	200	11.20	3/4"	TY5332	TYCO	ELOSW20	N/A	16 X 16
		HEAD CAGE HSW									
1282 TOTAL SPRINKLERS											

SPRINKLER HEAD LEGEND



LEVEL 1 FIRE SPRINKLER PLAN

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

GENERAL NOTES

1. SYSTEM INSTALLED PER NFPA-13 (2016 EDITION) AND STATE FIRE MARSHAL.
2. ALL EQUIPMENT FOR THIS SYSTEM SHALL BE U.L. LISTED
3. ALL PIPE SHALL BE ASTM A-53 SCH-40 BLACK STEEL.
4. ALL SCH-10 & LIGHTWALL PIPING HAS WELDED OUTLETS & GROOVED ALL WELDING PER NFPA 13(3.4.2)
5. ALL PIPE MUST BE PRE-APPROVED FABRICATION TO BEGIN WITHOUT APPROVED SHOP DRAWINGS.
6. ALL PIPE MUST BE PRE-APPROVED PRIOR TO FABRICATION AND INSTALLATION BY SPRINKLER CONTRACTOR.
7. ALL DIMENSIONS SHOWN ARE CENTER TO CENTER
8. PROVIDE ONE SPARE HEAD CABINET
9. ALL SHOP DRAWINGS MUST BE STAMPED BY A PE.
10. ELECTRICAL WIRING, ALARM, DETECTION AND SUPERVISORY BY OWNER
11. PROVIDE ADEQUATE BRACING AND SUPPORT TO PREVENT DAMAGE DURING SHIPPING AND INSTALLATION
12. ADEQUATE HEATING TO PREVENT WET SYSTEM PIPING FROM FREEZING.

NO	REVISIONS	DATE	APPROVAL STAMPS
1	PLAN REVIEW	8-5-2022	

DRIVEN FIRE CONSULTANTS

910 N. SYCAMORE AVENUE; SIOUX FALLS, SD 57110 PHONE: (605)-444-5250

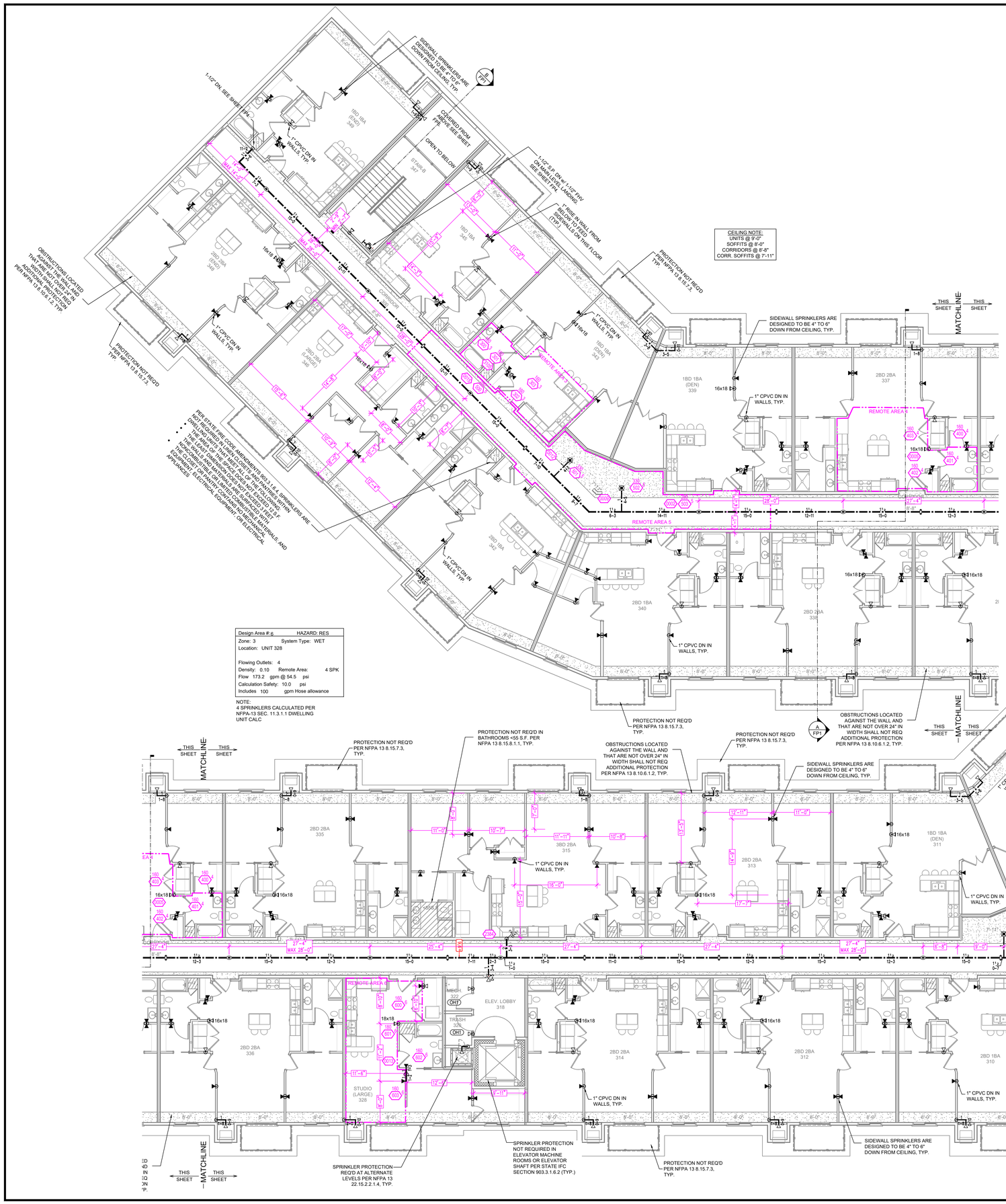
Drawing Title: FIRE PROTECTION PLAN

TERRITORIAL LOFTS

19615 TERRITORIAL RD.
ROGERS, MN 55311

Contract No. C21-148

Drawing Date:	05/12/22
Scale:	1/8" = 1'-0"
Drawn By:	BCJ
Approval By:	STATE FIRE MARSHAL DIV.
SHEET NO.	FP 3 of 6



Design Area #:3 HAZARD: RES
Zone: 3 System Type: WET
Location: UNIT 343

Flowing Outlets: 4
Density: 0.10 Remote Area: 4 SPK
Flow 168.3 gpm @ 57.7 psi
Calculation Safety: 6.7 psi
Includes 100 gpm Hose allowance

NOTE:
4 SPRINKLERS CALCULATED PER NFPA-13 SEC. 11.3.1.1 DWELLING UNIT CALC

Design Area #:4 HAZARD: RES
Zone: 3 System Type: WET
Location: UNIT 337

Flowing Outlets: 4
Density: 0.10 Remote Area: 4 SPK
Flow 166.6 gpm @ 55.1 psi
Calculation Safety: 9.3 psi
Includes 100 gpm Hose allowance

NOTE:
4 SPRINKLERS CALCULATED PER NFPA-13 SEC. 11.3.1.1 DWELLING UNIT CALC

CALC PLACARD

Design Area #:5 HAZARD: RES
Zone: 3 System Type: WET
Location: CORRIDOR 300

Flowing Outlets: 4
Density: 0.10 Remote Area: 75 LF
Flow 226 gpm @ 55.0 psi
Calculation Safety: 9.1 psi
Includes 100 gpm Hose allowance

NOTE:
CALCULATED PER ROOM DESIGN METHOD NFPA 13 SEC. 11.2.3.3.6. ALL EC SPRINKLERS WITHIN 75 LINEAR FEET OF THE CORRIDOR.

Design Area #:6 HAZARD: RES
Zone: 3 System Type: WET
Location: UNIT 328

Flowing Outlets: 4
Density: 0.10 Remote Area: 4 SPK
Flow 173.2 gpm @ 54.5 psi
Calculation Safety: 10.0 psi
Includes 100 gpm Hose allowance

NOTE:
4 SPRINKLERS CALCULATED PER NFPA-13 SEC. 11.3.1.1 DWELLING UNIT CALC

PIPE LEGEND

BLACK STEEL SPRINKLER PIPING
CPVC BLAZEMASTER SPRINKLER PIPING

SYM	CNT	POSITION	FINISH	TEMP	K	NPT	SIN	MFG.	MODEL#	ESCUTCHEON	MAX SPACING
	368	PENDENT	WHITE	155	4.90	1/2"	TY2236	TYCO	LFII	SEMI-RECESSED	18 X 18 U.N.O.
	44	PENDENT	WHITE	155	8.00	3/4"	TY4282	TYCO	EC-8C	SEMI-RECESSED	28 X 10
	6	SIDEWALL	WHITE	155	8.00	3/4"	TY4332	TYCO	TY-FRB	SEMI-RECESSED	16 X 20
	146	PENDENT	WHITE	200	5.60	1/2"	TY323	TYCO	TY-FRB	SEMI-RECESSED	LH = 15 X 15, OH1 = 130 S.F.
	216	SIDEWALL	WHITE	155	4.40	1/2"	TY2334	TYCO	LFII	SEMI-RECESSED	16 X 16
	56	SIDEWALL	WHITE	200	5.60	1/2"	TY3331	TYCO	TY-FRB	SEMI-RECESSED	LH = 14X14, OH1 = 100 S.F.
	8	PENDENT	WHITE	155	11.20	3/4"	TY5237	TYCO	EC-11	SEMI-RECESSED	18 X 18
	52	UPRIGHT	BRASS	286	11.20	3/4"	TY5137	TYCO	EC-11	N/A	18 X 18
	17	UPRIGHT	BRASS	200	5.60	1/2"	TY3151	TYCO	TY-B	N/A	130 S.F.
	15	SIDEWALL	WHITE	155	4.00	1/2"	VK486	VIKING	VK486	SEMI-RECESSED	16 X 18 U.N.O.
	8	UPRIGHT	BRASS	212	5.60	1/2"	RA5626	RELIABLE	AH56	N/A	10X15
	79	SPRG'D UPR	BRASS	212	8.00	3/4"	RA5622	RELIABLE	DD80-6	N/A	6 X 63
	16	SPRG'D UPR	BRASS	212	5.60	1/2"	RA5694	RELIABLE	DD56-27	N/A	6 X 40
	112	UPRIGHT	BRASS	286	5.60	1/2"	TY3151	TYCO	TY-B	N/A	130 S.F.
	3	SPRG'D UPR	BRASS	200	8.00	3/4"	TY4182	TYCO	BB3	N/A	6 X 60
	58	UPRIGHT	BRASS	200	5.60	1/2"	TY313	TYCO	TY-FRB	N/A	ATTIC = 120 S.F., LH = 15X15
	56	SPRG'D UPR	BRASS	200	5.60	1/2"	TY3151	TYCO	TY-B	N/A	130 S.F.
	20	SIDEWALL	BRASS	200	5.60	1/2"	TY3331	TYCO	TY-FRB	N/A	14X14
	2	SIDEWALL	BRASS	200	11.20	3/4"	TY5332	TYCO	ELOSW20	N/A	16 X 16
		HEAD CAGE HSW									
	1282 TOTAL SPRINKLERS										

SPRINKLER HEAD LEGEND

Design Area #:1 HAZARD: RES
Zone: 3 System Type: WET
Location: UNIT 308

Flowing Outlets: 4
Density: 0.10 Remote Area: 4 SPK
Flow 166.7 gpm @ 59.2 psi
Calculation Safety: 5.3 psi
Includes 100 gpm Hose allowance

NOTE:
4 SPRINKLERS CALCULATED PER NFPA-13 SEC. 11.3.1.1 DWELLING UNIT CALC

Design Area #:2 HAZARD: RES
Zone: 3 System Type: WET
Location: UNIT 302

Flowing Outlets: 4
Density: 0.10 Remote Area: 4 SPK
Flow 165.4 gpm @ 53.4 psi
Calculation Safety: 11.0 psi
Includes 100 gpm Hose allowance

NOTE:
4 SPRINKLERS CALCULATED PER NFPA-13 SEC. 11.3.1.1 DWELLING UNIT CALC

CEILING NOTE:
UNITS @ 9'-0"
SOFFITS @ 8'-0"
CORRIDORS @ 8'-8"
CORR. SOFFITS @ 7'-11"

LEVEL 3 FIRE SPRINKLER PLAN

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

GENERAL NOTES

1. SYSTEM INSTALLED PER NFPA-13 (2016 EDITION) AND STATE FIRE MARSHAL.
2. ALL EQUIPMENT FOR THIS SYSTEM SHALL BE U.L. LISTED
3. ALL PIPE SHALL BE ASTM A-53 SCHEDULE 40 STEEL.
4. ALL SCH-10 & LIGHTWALL PIPING HAS WELDED OUTLETS & GROOVED ANGLE FITTING CONNECTIONS.
5. ALL WELDING PER NFPA 13(3.4.2)
6. ALL PIPE BENDING, WELDING OR FABRICATION TO BEGIN WITHOUT APPROVED SHOP DRAWINGS.
7. ALL PIPE BENDING, WELDING OR FABRICATION TO BE COMPLETED PRIOR TO FABRICATION AND INSTALLATION BY SPRINKLER CONTRACTOR.
8. ALL DIMENSIONS SHOWN ARE CENTER TO CENTER.
9. PROVIDE ONE SPARE HEAD CABINET.
10. ELECTRICAL WIRING, ALARM, DETECTION AND SUPERVISORY BY OWNER
11. ELECTRICAL WIRING, ALARM, DETECTION AND SUPERVISORY BY OWNER
12. ADEQUATE HEATING TO PREVENT WET SYSTEM PIPING FROM FREEZING.

NO	REVISIONS	DATE
1	PLAN REVIEW	8-5-2022

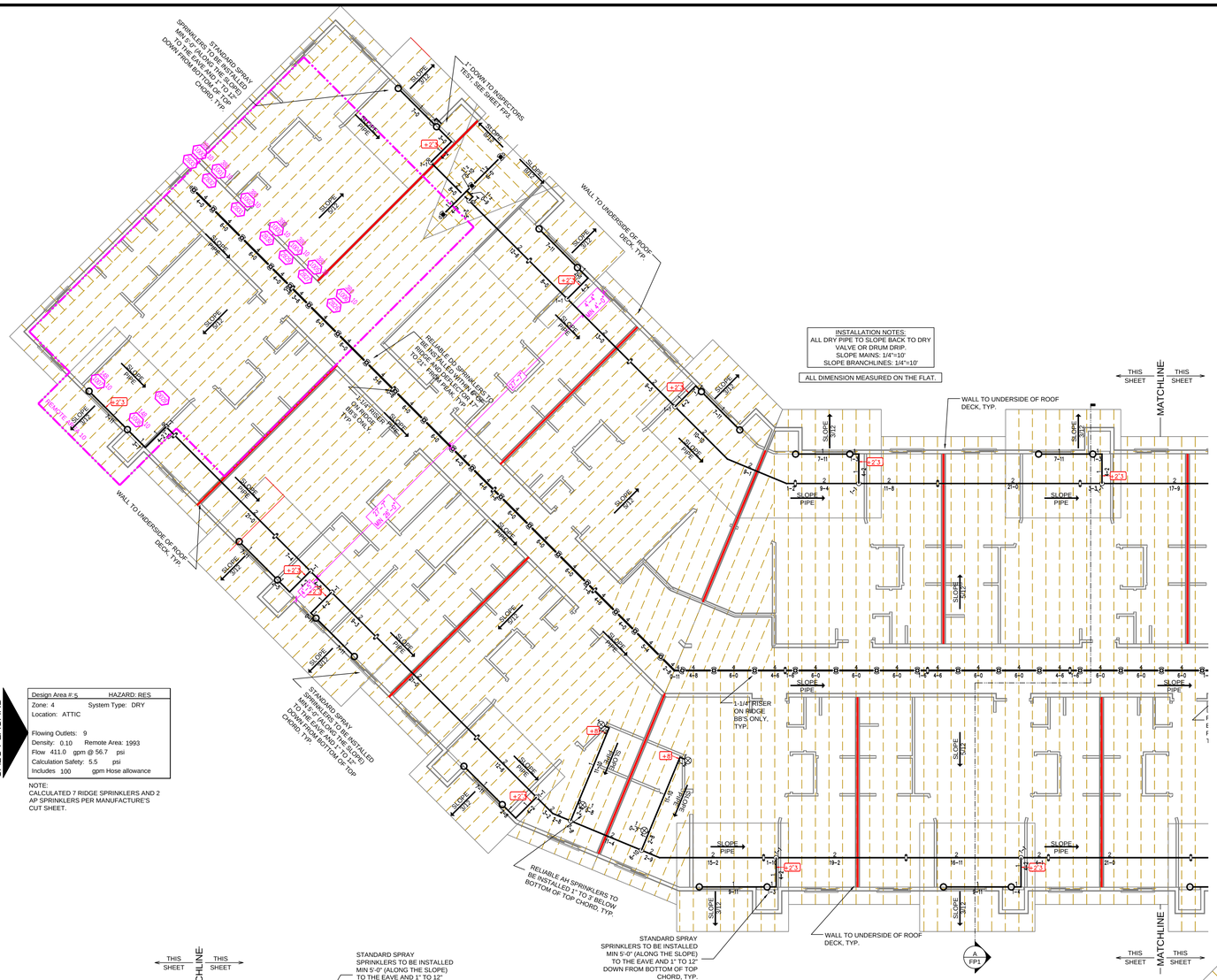
APPROVAL STAMPS

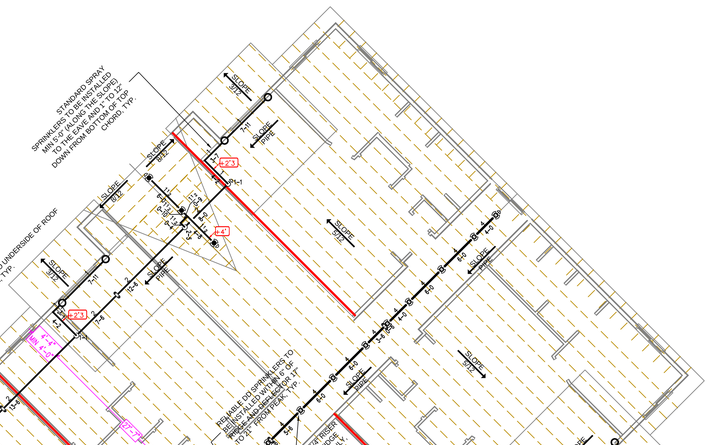
DRIVEN FIRE CONSULTANTS
910 N. SYCAMORE AVENUE; SIOUX FALLS, SD 57110 PHONE: (605) 444-9250

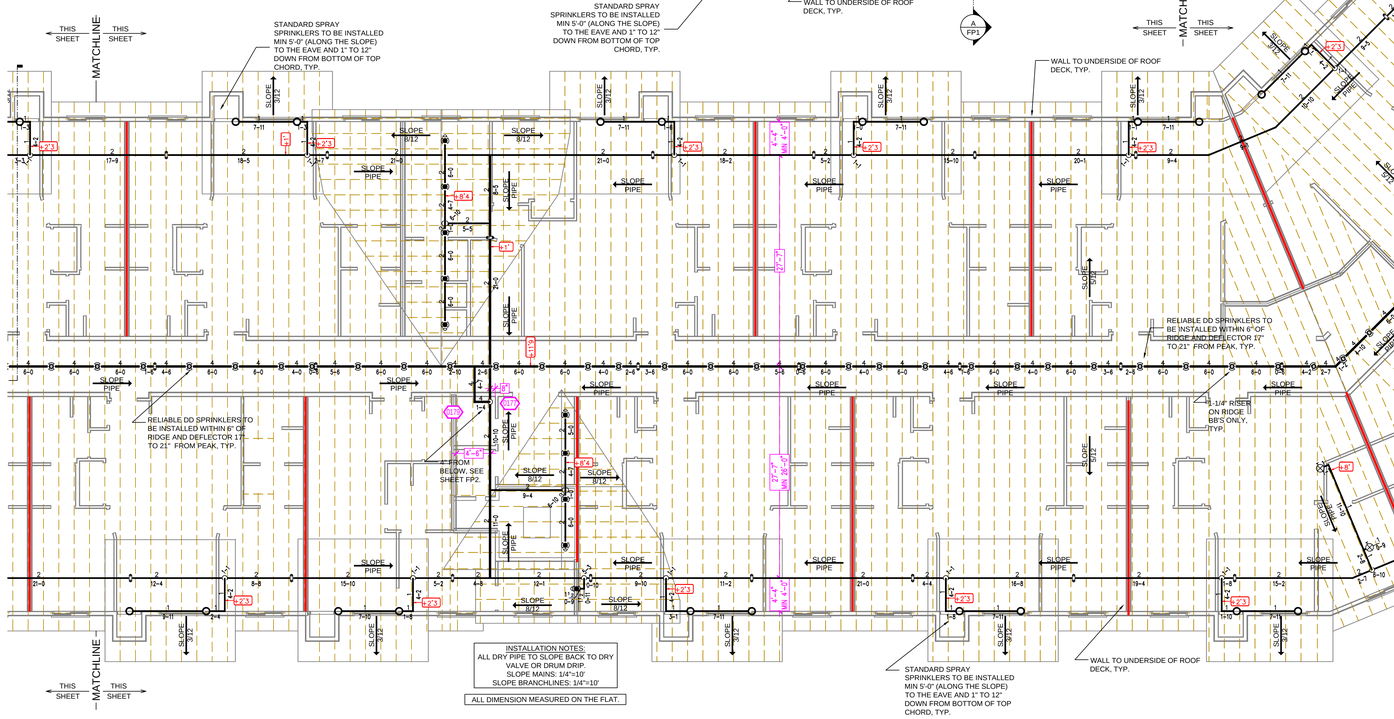
Drawing Title: FIRE PROTECTION PLAN

TERRITORIAL LOFTS
19615 TERRITORIAL RD.
ROGERS, MN 55311

Contract No. C21-148
Drawing Date: 05/12/22
Scale: 1/8" = 1'-0"
Drawn By: BCJ
Approval By: STATE FIRE MARSHAL DIV.
SHEET NO. FP 5 of 6







CALC PLACARD

Design Area #:5	HAZARD: RES
Zone: 4	System Type: DRY
Location: ATTIC	
Flowing Outlets: 9	
Density: 0.10	Remote Area: 1993
Flow 411.0 gpm @ 56.7 psi	
Calculation Safety: 5.5 psi	
Includes 100 gpm Hose allowance	

NOTE:
CALCULATED 7 RIDGE SPRINKLERS AND 2 AP SPRINKLERS PER MANUFACTURE'S CUT SHEET.

PIPE LEGEND

- BLACK STEEL SPRINKLER PIPING
- CPVC BLAZEMASTER SPRINKLER PIPING

SYM	CNT	POSITION	FINISH	TEMP	K	NPT	SIN	MFG.	MODEL#	ESCUTCHEON	MAX SPACING
	368	PENDENT	WHITE	155	4.90	1/2"	TY2236	TYCO	LFII	SEMI-RECESSED	18 X 18 U.N.O.
	44	PENDENT	WHITE	155	8.00	3/4"	TY4282	TYCO	EC-8C	SEMI-RECESSED	28 X 10
	6	SIDEWALL	WHITE	155	8.00	3/4"	TY4332	TYCO	TY-FRB	SEMI-RECESSED	16 X 20
	146	PENDENT	WHITE	200	5.60	1/2"	TY323	TYCO	TY-FRB	SEMI-RECESSED	LH = 15 X 15, OH1 = 130 S.F.
	216	SIDEWALL	WHITE	155	4.40	1/2"	TY2334	TYCO	LFII	SEMI-RECESSED	16 X 16
	56	SIDEWALL	WHITE	200	5.60	1/2"	TY3331	TYCO	TY-FRB	SEMI-RECESSED	LH = 14X14, OH1 = 100 S.F.
	8	PENDENT	WHITE	155	11.20	3/4"	TY5237	TYCO	EC-11	SEMI-RECESSED	18 X 18
	52	UPRIGHT	BRASS	286	11.20	3/4"	TY5137	TYCO	EC-11	N/A	18 X 18
	17	UPRIGHT	BRASS	200	5.60	1/2"	TY3151	TYCO	TY-B	N/A	130 S.F.
	15	SIDEWALL	WHITE	155	4.00	1/2"	VK486	VIKING	VK486	SEMI-RECESSED	16 X 18 U.N.O.
	8	UPRIGHT	BRASS	212	5.60	1/2"	RA5626	RELIABLE	AH56	N/A	10X15
	79	SPRG'D UPR	BRASS	212	8.00	3/4"	RA5622	RELIABLE	DD80-6	N/A	6 X 63
	16	SPRG'D UPR	BRASS	212	5.60	1/2"	RA5694	RELIABLE	DD56-27	N/A	6 X 40
	112	UPRIGHT	BRASS	286	5.60	1/2"	TY3151	TYCO	TY-B	N/A	130 S.F.
	3	SPRG'D UPR	BRASS	200	8.00	3/4"	TY4182	TYCO	BB3	N/A	6 X 60
	58	UPRIGHT	BRASS	200	5.60	1/2"	TY313	TYCO	TY-FRB	N/A	ATTIC = 120 S.F., LH = 15X15
	56	SPRG'D UPR	BRASS	200	5.60	1/2"	TY3151	TYCO	TY-B	N/A	130 S.F.
	20	SIDEWALL	BRASS	200	5.60	1/2"	TY3331	TYCO	TY-FRB	N/A	14X14
	2	SIDEWALL	BRASS	200	11.20	3/4"	TY5332	TYCO	ELOSW20	N/A	16 X 16
	HEAD CAGE HSW										
	1282 TOTAL SPRINKLERS										

SPRINKLER HEAD LEGEND

GENERAL NOTES

1. SYSTEM INSTALLED PER NFPA 13 (2016 EDITION) AND STATE FIRE MARSHAL.
2. ALL EQUIPMENT FOR THIS SYSTEM SHALL BE U.L. LISTED
3. ALL PIPE SHALL BE ASTM A-53 SCHEDULE 40 STEEL
4. ALL SCH 10 & LIGHTWALL PIPING HAS WELDED OUTLETS & GROOVED ANGLE WELDED TO PIPE.
5. ALL WELDING PER NFPA 13(3.9.4.2)
6. ALL WELDING SHALL BE PERFORMED BY A WELDER WITHOUT APPROVED SHOP DRAWINGS.
7. ALL SHOP DRAWINGS SHALL BE SUBMITTED PRIOR TO FABRICATION AND INSTALLATION BY SPRINKLER CONTRACTOR.
8. ALL DIMENSIONS SHOWN ARE CENTER TO CENTER
9. PROVIDE ONE SPARE HEAD CABINET
10. ALL SHOP DRAWINGS SHALL BE STAMPED BY A P.E. APPROVED
11. ELECTRICAL WIRING, ALARM, DETECTION AND SUPERVISORY BY OWNER
12. ALL PIPE SHALL BE SUPPORTED PER NFPA 13 (2016 EDITION) AND ADEQUATE BRACING TO PREVENT
13. WET SYSTEM PIPING FROM FREEZING.

ATTIC FIRE SPRINKLER PLAN

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

DRIVEN FIRE CONSULTANTS
910 N. SYCAMORE AVENUE, SIOUX FALLS, SD 57110 PHONE: (605)-444-9289

NO	REVISIONS	DATE
1	PLAN REVIEW	8-5-2022

APPROVAL STAMPS

Drawing Title: FIRE PROTECTION PLAN

TERRITORIAL LOFTS
19615 TERRITORIAL RD.
ROGERS, MN 55311

Contract No.	C21-148
Drawing Date:	05/12/22
Scale:	1/8" = 1'-0"
Drawn By:	BCJ
Approval By:	STATE FIRE MARSHAL DIV.
SHEET NO.	FP 6 of 6