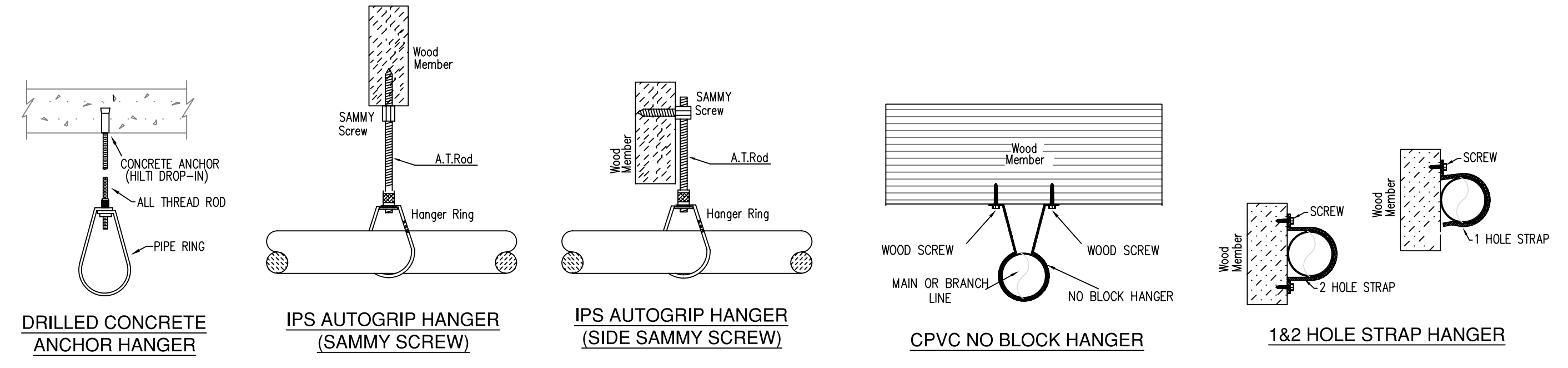


SECTION -A-
SCALE= 1/4" : 1'-0"

SPRINKLER SELECTION MODIFICATIONS 6-27-19

SYN	QTY	POSITION	FINISH	TEMP	K	NPT	SN	MFG	MODEL#	ESCUITCHER#	HEAD BOX (2 min)
193	UPR	BRASS	200	14.00	3/4"	TY6137	TYce	EC-14	N/A	N/A	2
21	UPR	BRASS	200	5.60	1/2"	TY313	TYce	TY-FRB	N/A	N/A	2
6	UPR	BRASS	286	14.00	3/4"	TY6137	TYce	EC-14	N/A	N/A	2
14	SIDE	WHITE	205	5.60	1/2"	W481	TKING	Comp	CONCEALED		2
75	PEND	WHITE	155	5.60	1/2"	TY3531	TYce	RFII	CONCEALED		2
86	PEND	WHITE	200	5.60	1/2"	TY3531	TYce	RFII	CONCEALED		2
17	PEND	WHITE	160	11.20	3/4"	TY5522	TYce	ELOC	CONCEALED		2
506	SIDE	WHITE	165	4.20	1/2"	RA4835	RELIABLE	RFS	CONCEALED		2
10	SIDE	WHITE	165	5.60	1/2"	RA5035	RELIABLE	GB	CONCEALED		2
2	SIDE	WHITE	165	8.00	1/2"	RA4762	RELIABLE	GB	CONCEALED		2
463	PEND	WHITE	160	4.90	1/2"	TY3596	TYce	LFII	CONCEALED		2
6	SIDE	BRASS	200	5.60	1/2"	TY3331	TYce	TY-FRB	N/A	N/A	2
1359 TOTAL HEADS											

SPRINKLER LEGEND

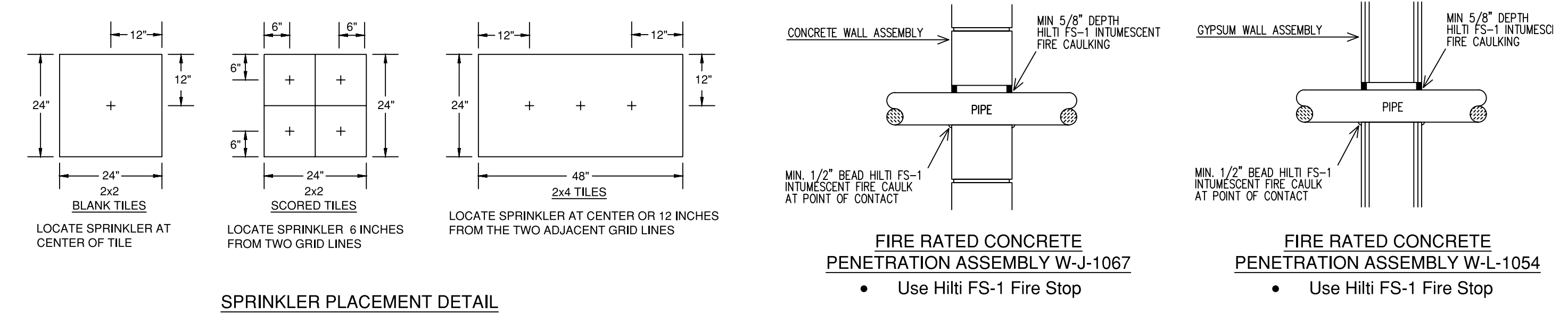


HANGER DETAILS

MAXIMUM DISTANCE BETWEEN HANGERS (FT.-IN.)

STEEL PIPE EXCEPT THREADED LIGHTWALL	NOMINAL PIPE SIZE (IN.)									
	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	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
COPPER TUBE	8-0	8-0	10-0	10-0	12-0	12-0	12-0	12-0	NA	NA
BLAZEMASTER CPVC	5-8	6-0	6-6	7-0	8-0	9-0	10-0	NA	NA	NA

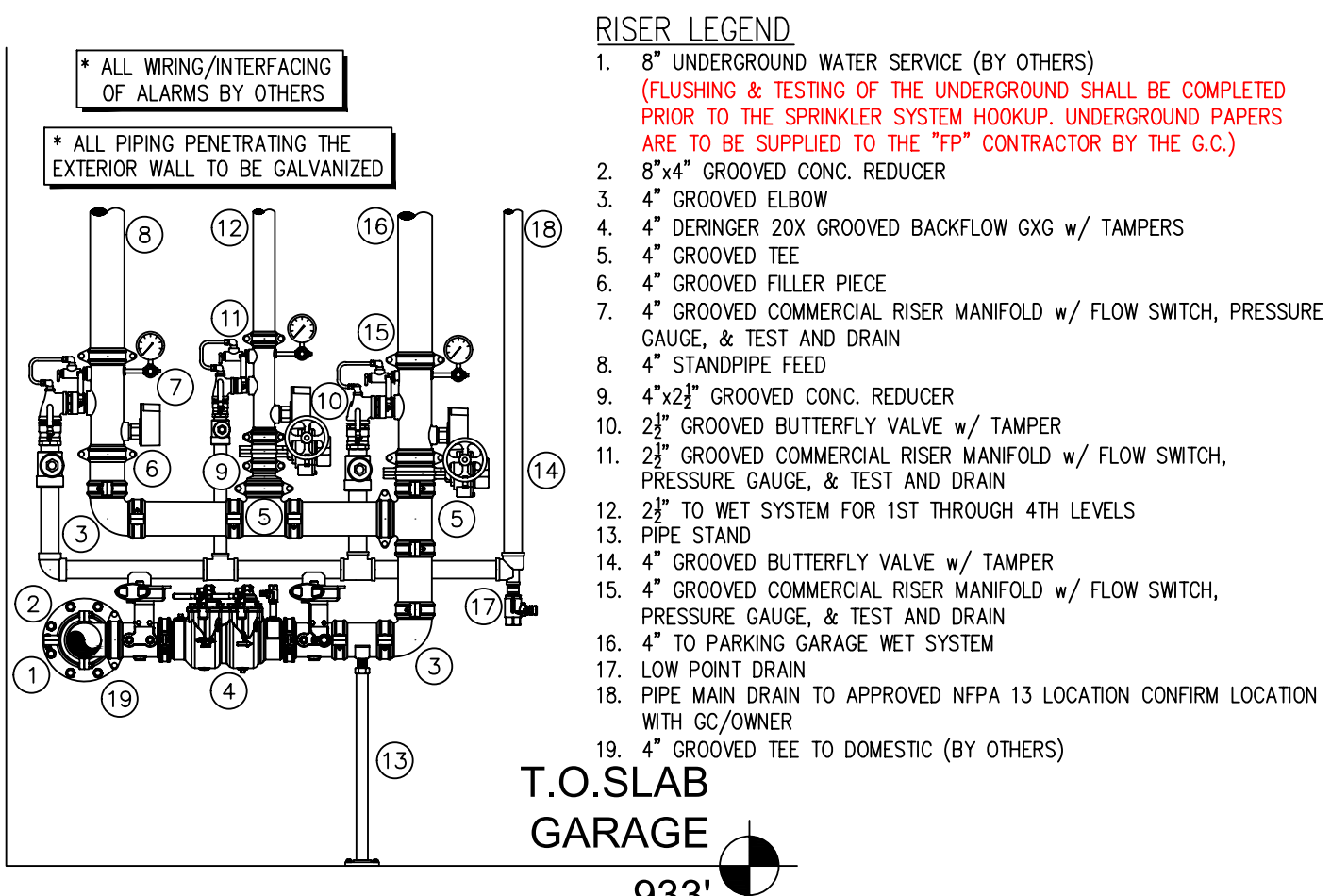
NFPA 13 HANGER SPACING



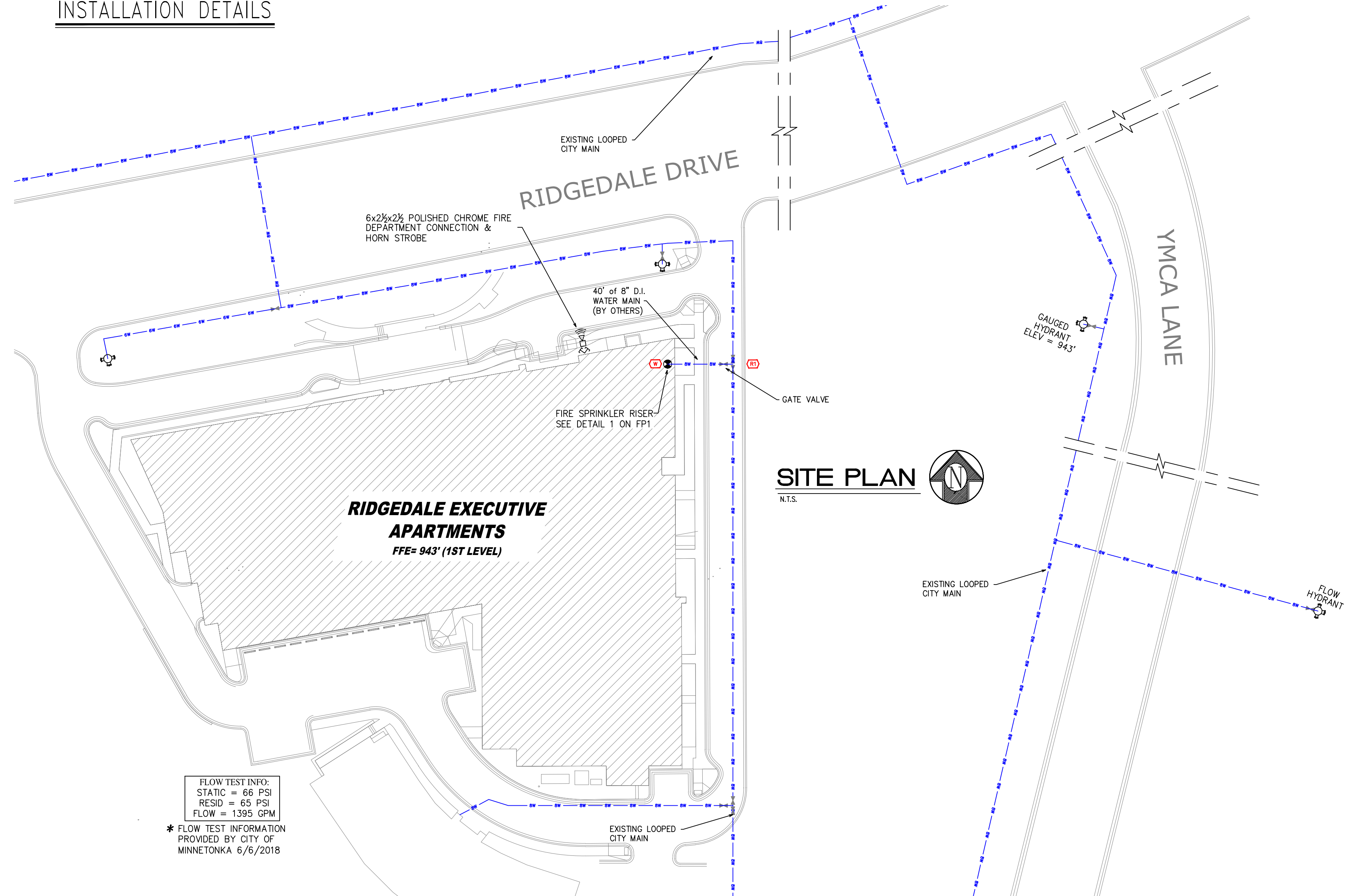
INSTALLATION DETAILS

MANUAL WET STANDPIPE
LOCATION: 4TH FLOOR SOUTH AND WEST STAIR
REQUIRED FLOW: 750GPM
OUTLET PSI: 100
REQUIRED INLET PSI: 148.5

NOTE:
PIPE SCHEDULE ~
1" = SCH. 30
1 1/4" & LARGER = SCH. 7
1" THROUGH 3" = BLAZEMASTER CPVC
AREA OF COVERAGE ~
TOTAL AREA PROTECTED - 170,000 SQ. FT.
ZONE 1 - LOWER LEVEL - 42,000 SQ. FT.
ZONE 2 - LEVEL 1 - 32,000 SQ. FT.
LEVEL 2 - 32,000 SQ. FT.
LEVEL 3 - 32,000 SQ. FT.
LEVEL 4 - 32,000 SQ. FT.
DESIGN CRITERIA ~
LIGHT HAZARD AREAS - DESIGNED TO DELIVER 0.10 GPM/S.F. OVER THE MOST DEMANDING 1500 S.F.
ORDINARY HAZARD GROUP 1 AREAS - DESIGNED TO DELIVER 0.15 GPM/S.F. OVER THE MOST DEMANDING 1500 S.F.
REMOTE AREA REDUCTIONS HAVE BEEN TAKEN WHERE APPLICABLE PER NFPA 13 SEC. 11.2.3.2.3
FIRE CAULKING ~
ALL FIRE RATED WALLS TO BE CAULKED w/ HILTI FS-ONE FIRE CAULKING AS PER U.L. LISTING FOR WALL TYPE & RATING
AUX. DRAINS ~
SHALL BE PROVIDED WHERE A CHANGE IN PIPING DIRECTION PREVENTS DRAINAGE OF SYSTEM PIPING THROUGH THE MAIN DRAIN VALVE.
OBSTRUCTIONS ~
ALL SPRINKLER LOCATIONS TO BE SPACED IN ACCORDANCE w/ OBSTRUCTIONS TO MAINTAIN CLEARANCES ~ PER NFPA-13 (EXIT SIGNS & SECURITY EQUIPMENT SHALL NOT BE OBTURED BY FIRE PROTECTION SYSTEM)
ELEC. EQUIP ~
PROVIDE SHIELDS OR Baffles WHERE WATER DAMAGE MAY RESULT FROM HEADS TO CLOSE TO ELEC. PANELS
SYMBOLS USED ON DRAWING
- (699) PIPE ELEVATION A.F.F.
- (127) PIPE ELEVATION BELOW B.O.D.
(RH) ROOM HAZARD CLASSIFICATION (ALL ROOMS ARE CONSIDERED LIGHT HAZARD UNLESS NOTED)
(H) HYDRAULIC CALCULATION JUNCTION POINT
8'-0" CEILING HEIGHT



SCOPE OF WORK:
TO INSTALL 2 NEW WET SPRINKLER SYSTEMS IN THE NEW LUX APARTMENT BUILDING AS SHOWN ON SHOP DRAWINGS. ONE ZONE WILL COVER THE BASEMENT PARKING, ONE ZONE WILL COVER THE RESIDENTIAL 1ST THRU 4TH FLOORS. ALL PIPING IN PARKING GARAGE TO BE STEEL AND ALL PIPING IN OCCUPIED SPACES TO BE CONCEALED BLAZEMASTER CPVC PIPING WITH SEMI-RECESSED WHITE SPRINKLER HEADS. FDC WILL BE LOCATED ON THE NORTH WALL ADJACENT TO THE MAIN ENTRANCE. A MANUAL WET STANDPIPE SYSTEM WILL ALSO BE INSTALLED IN THE 2 STAIR TOWERS



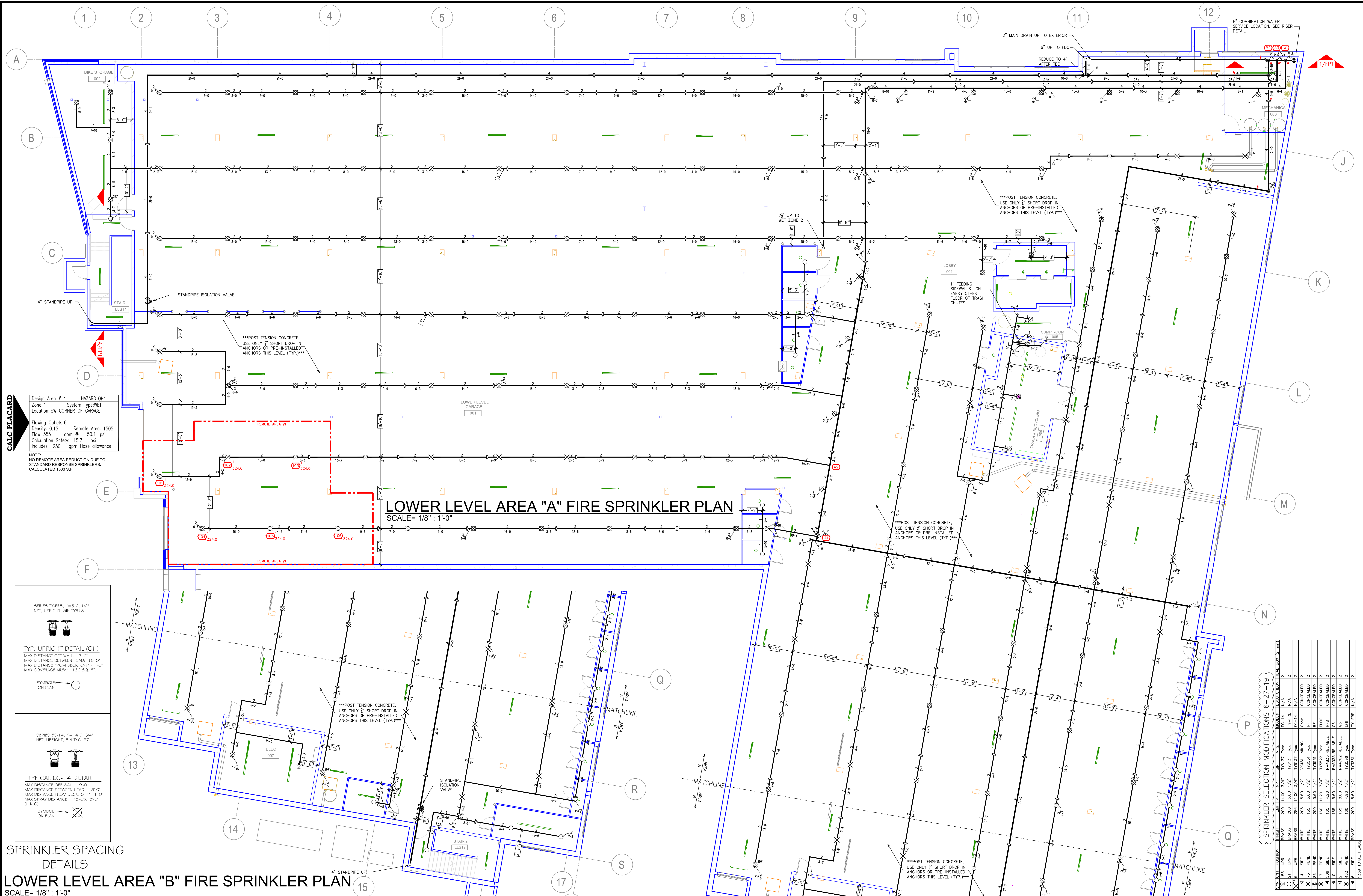
General Notes
1. System installed per NFPA-13 (2010) And State Fire Marshal.
2. All equipment for this system shall be U.L. listed.
3. Minimum pipe size shall be 1" nominal pipe.
4. All Sch.-10 & Boley Flow piping has welded outlets & grooved fittings all welding per NFPA-13 (3-82).
5. No installation or fabrication to begin without approved shop dwgs.
6. All Pipe Locations are to be Field Measured Prior to Fabrication and Installation by Sprinkler Contractor.
7. All Dimensions Shown are Center to Center.
8. High Temperature Heads are to be Field Located Where Required.
9. Provide one spare head cabinet w/ 6 hds. & one hd wrench.
10. Hangers are to be U.L. Listed and P.M. Approved.
11. Electrical wiring, alarm, detection and supervisory by owner.
12. Owner's responsibility to provide adequate heating to prevent wet system piping from freezing.

SPRINKLER LEGEND
SEE PLAN

APPROVAL STAMPS



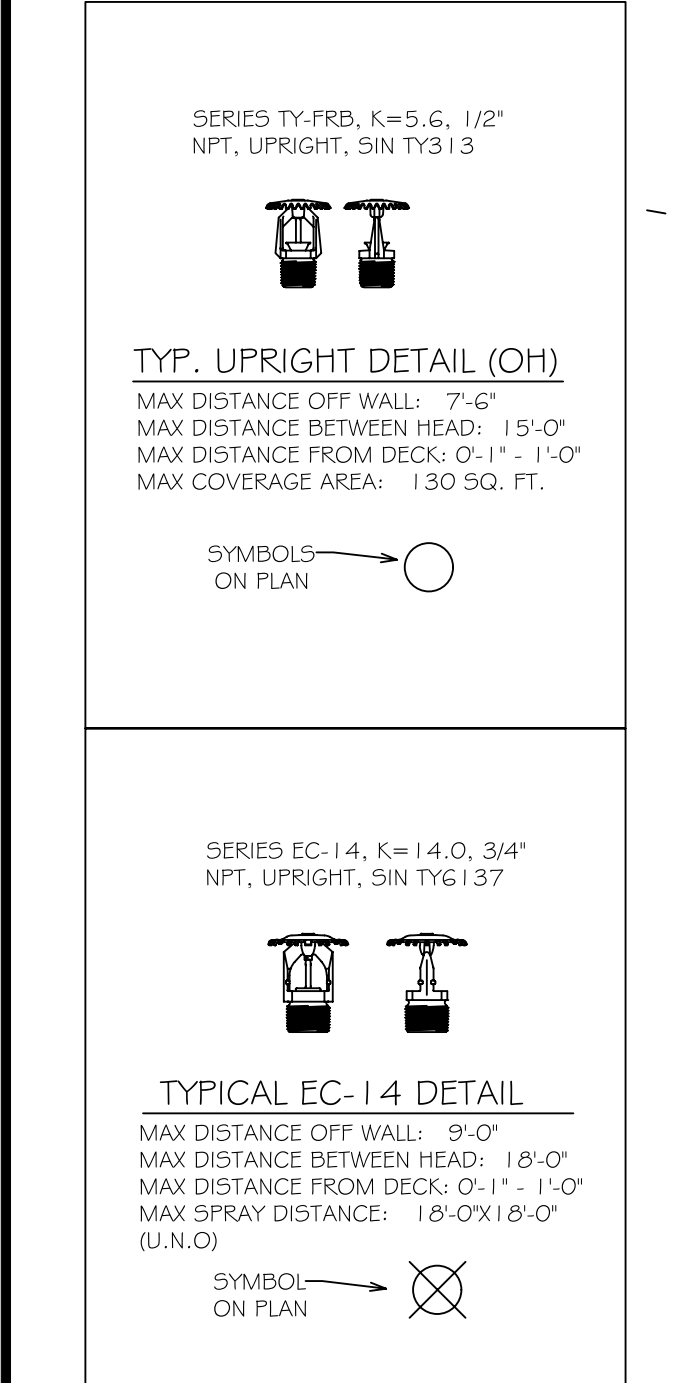
FIRE PROTECTION PLAN
RIDGEDALE EXECUTIVE APARTMENTS
12501 RIDGEDALE DRIVE
MINNETONKA, MN 55305
Drawing Title: FIRE PROTECTION PLAN
Contract No. **C19-31**
Drawing Date: 06/27/2019
Scale: 1/8" = 1'-0"
Drawn By:
Approval By: STATE FIRE MARSHAL DIV.
SHEET NO. **1 of 6**



DESIGN AREA #1 HAZARD: OH1
 Zone: 1 System Type: WET
 Location: SW CORNER OF GARAGE

Flowing Outlets: 6 Remote Area: 1505
 Density: 0.15 Flow: 555 gpm @ 50.1 psi
 Calculation Safety: 15.7 psi
 Includes: 250 gpm Hose Allowance

NOTE:
 NO REMOTE AREA REDUCTION DUE TO
 STANDARD RESPONSE SPRINKLERS.
 CALCULATED 1500 SF.



- General Notes**
- System installed per NFPA-13 (2010) and State Fire Marshal.
 - All equipment for this system shall be U.L. listed.
 - Minimum pipe size shall be 1" nominal pipe.
 - All Sch-40 & Boley Flow piping has welded outlets & grooved fittings all welding per NFPA-13 (3-82).
 - No installation or fabrication to begin without approved shop dwgs.
 - All Pipe Locations are to be Field Measured Prior to Fabrication and Installation by Sprinkler Contractor.
 - All Dimensions Shown are Center to Center.
 - High Temperature Heads are to be Field Located Where Required.
 - Provide one spare head cabinet w/ 6 hds. & one hd wrench.
 - Hangers are to be U.L. Listed and P.M. Approved.
 - Electrical wiring, alarm, detection and supervisory by owner.
 - Owner's responsibility to provide adequate heating to prevent wet system piping from freezing.

SPRINKLER LEGEND

SEE PLAN

xxxx Total This Job

APPROVAL STAMPS

SPRINKLER SELECTION MODIFICATIONS 6-27-19

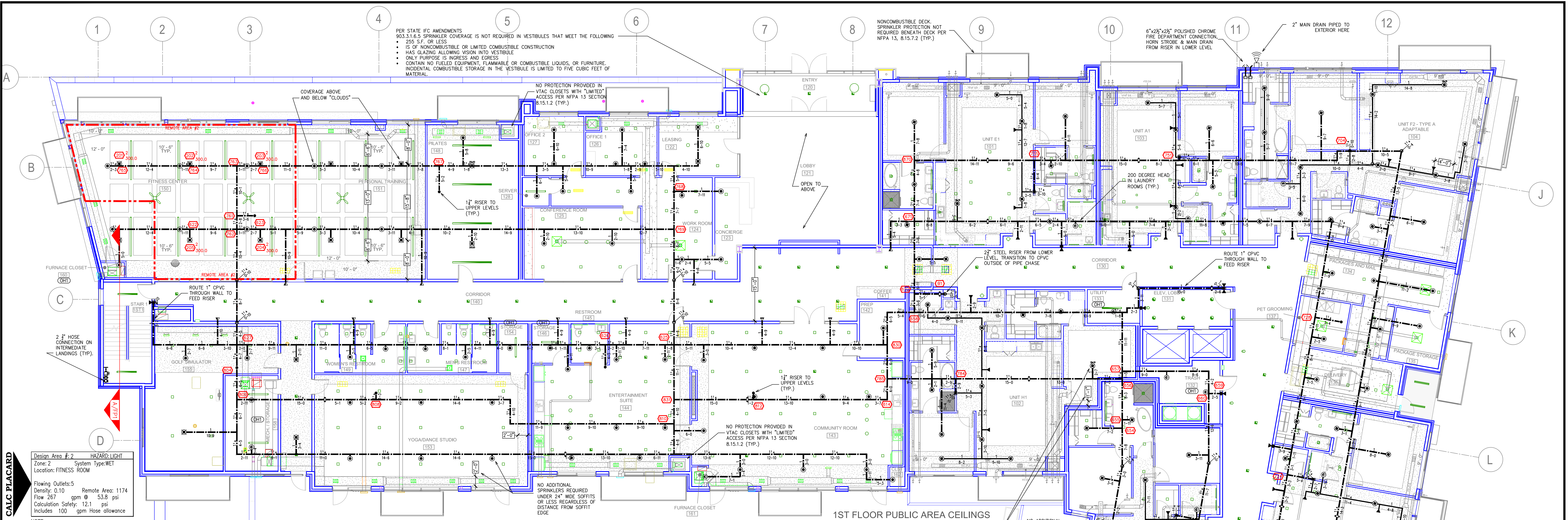
ITEM NO.	POSITION	TRIP TK.	SPR.	MPG.	MODEL	TEST POSITION	HEAD BOX (2 DIM)
1	13-1	14.0	1/2"	5.6	TY6137	EC-14	N/A
2	13-2	14.0	1/2"	5.6	TY6137	EC-14	N/A
3	13-3	14.0	1/2"	5.6	TY6137	EC-14	N/A
4	13-4	14.0	1/2"	5.6	TY6137	EC-14	N/A
5	13-5	14.0	1/2"	5.6	TY6137	EC-14	N/A
6	13-6	14.0	1/2"	5.6	TY6137	EC-14	N/A
7	13-7	14.0	1/2"	5.6	TY6137	EC-14	N/A
8	13-8	14.0	1/2"	5.6	TY6137	EC-14	N/A
9	13-9	14.0	1/2"	5.6	TY6137	EC-14	N/A
10	13-10	14.0	1/2"	5.6	TY6137	EC-14	N/A
11	13-11	14.0	1/2"	5.6	TY6137	EC-14	N/A
12	13-12	14.0	1/2"	5.6	TY6137	EC-14	N/A
13	13-13	14.0	1/2"	5.6	TY6137	EC-14	N/A
14	13-14	14.0	1/2"	5.6	TY6137	EC-14	N/A
15	13-15	14.0	1/2"	5.6	TY6137	EC-14	N/A
16	13-16	14.0	1/2"	5.6	TY6137	EC-14	N/A
17	13-17	14.0	1/2"	5.6	TY6137	EC-14	N/A
18	13-18	14.0	1/2"	5.6	TY6137	EC-14	N/A
19	13-19	14.0	1/2"	5.6	TY6137	EC-14	N/A
20	13-20	14.0	1/2"	5.6	TY6137	EC-14	N/A
21	13-21	14.0	1/2"	5.6	TY6137	EC-14	N/A
22	13-22	14.0	1/2"	5.6	TY6137	EC-14	N/A
23	13-23	14.0	1/2"	5.6	TY6137	EC-14	N/A
24	13-24	14.0	1/2"	5.6	TY6137	EC-14	N/A
25	13-25	14.0	1/2"	5.6	TY6137	EC-14	N/A
26	13-26	14.0	1/2"	5.6	TY6137	EC-14	N/A
27	13-27	14.0	1/2"	5.6	TY6137	EC-14	N/A
28	13-28	14.0	1/2"	5.6	TY6137	EC-14	N/A
29	13-29	14.0	1/2"	5.6	TY6137	EC-14	N/A
30	13-30	14.0	1/2"	5.6	TY6137	EC-14	N/A
31	13-31	14.0	1/2"	5.6	TY6137	EC-14	N/A
32	13-32	14.0	1/2"	5.6	TY6137	EC-14	N/A
33	13-33	14.0	1/2"	5.6	TY6137	EC-14	N/A
34	13-34	14.0	1/2"	5.6	TY6137	EC-14	N/A
35	13-35	14.0	1/2"	5.6	TY6137	EC-14	N/A
36	13-36	14.0	1/2"	5.6	TY6137	EC-14	N/A
37	13-37	14.0	1/2"	5.6	TY6137	EC-14	N/A
38	13-38	14.0	1/2"	5.6	TY6137	EC-14	N/A
39	13-39	14.0	1/2"	5.6	TY6137	EC-14	N/A
40	13-40	14.0	1/2"	5.6	TY6137	EC-14	N/A
41	13-41	14.0	1/2"	5.6	TY6137	EC-14	N/A
42	13-42	14.0	1/2"	5.6	TY6137	EC-14	N/A
43	13-43	14.0	1/2"	5.6	TY6137	EC-14	N/A
44	13-44	14.0	1/2"	5.6	TY6137	EC-14	N/A
45	13-45	14.0	1/2"	5.6	TY6137	EC-14	N/A
46	13-46	14.0	1/2"	5.6	TY6137	EC-14	N/A
47	13-47	14.0	1/2"	5.6	TY6137	EC-14	N/A
48	13-48	14.0	1/2"	5.6	TY6137	EC-14	N/A
49	13-49	14.0	1/2"	5.6	TY6137	EC-14	N/A
50	13-50	14.0	1/2"	5.6	TY6137	EC-14	N/A
51	13-51	14.0	1/2"	5.6	TY6137	EC-14	N/A
52	13-52	14.0	1/2"	5.6	TY6137	EC-14	N/A
53	13-53	14.0	1/2"	5.6	TY6137	EC-14	N/A
54	13-54	14.0	1/2"	5.6	TY6137	EC-14	N/A
55	13-55	14.0	1/2"	5.6	TY6137	EC-14	N/A
56	13-56	14.0	1/2"	5.6	TY6137	EC-14	N/A
57	13-57	14.0	1/2"	5.6	TY6137	EC-14	N/A
58	13-58	14.0	1/2"	5.6	TY6137	EC-14	N/A
59	13-59	14.0	1/2"	5.6	TY6137	EC-14	N/A
60	13-60	14.0	1/2"	5.6	TY6137	EC-14	N/A
61	13-61	14.0	1/2"	5.6	TY6137	EC-14	N/A
62	13-62	14.0	1/2"	5.6	TY6137	EC-14	N/A
63	13-63	14.0	1/2"	5.6	TY6137	EC-14	N/A
64	13-64	14.0	1/2"	5.6	TY6137	EC-14	N/A
65	13-65	14.0	1/2"	5.6	TY6137	EC-14	N/A
66	13-66	14.0	1/2"	5.6	TY6137	EC-14	N/A
67	13-67	14.0	1/2"	5.6	TY6137	EC-14	N/A
68	13-68	14.0	1/2"	5.6	TY6137	EC-14	N/A
69	13-69	14.0	1/2"	5.6	TY6137	EC-14	N/A
70	13-70	14.0	1/2"	5.6	TY6137	EC-14	N/A
71	13-71	14.0	1/2"	5.6	TY6137	EC-14	N/A
72	13-72	14.0	1/2"	5.6	TY6137	EC-14	N/A
73	13-73	14.0	1/2"	5.6	TY6137	EC-14	N/A
74	13-74	14.0	1/2"	5.6	TY6137	EC-14	N/A
75	13-75	14.0	1/2"	5.6	TY6137	EC-14	N/A
76	13-76	14.0	1/2"	5.6	TY6137	EC-14	N/A
77	13-77	14.0	1/2"	5.6	TY6137	EC-14	N/A
78	13-78	14.0	1/2"	5.6	TY6137	EC-14	N/A
79	13-79	14.0	1/2"	5.6	TY6137	EC-14	N/A
80	13-80	14.0	1/2"	5.6	TY6137	EC-14	N/A
81	13-81	14.0	1/2"	5.6	TY6137	EC-14	N/A
82	13-82	14.0	1/2"	5.6	TY6137	EC-14	N/A
83	13-83	14.0	1/2"	5.6	TY6137	EC-14	N/A
84	13-84	14.0	1/2"	5.6	TY6137	EC-14	N/A
85	13-85	14.0	1/2"	5.6	TY6137	EC-14	N/A
86	13-86	14.0	1/2"	5.6	TY6137	EC-14	N/A
87	13-87	14.0	1/2"	5.6	TY6137	EC-14	N/A
88	13-88	14.0	1/2"	5.6	TY6137	EC-14	N/A
89	13-89	14.0	1/2"	5.6	TY6137	EC-14	N/A
90	13-90	14.0	1/2"	5.6	TY6137	EC-14	N/A
91	13-91	14.0	1/2"	5.6	TY6137	EC-14	N/A
92	13-92	14.0	1/2"	5.6	TY6137	EC-14	N/A
93	13-93	14.0	1/2"	5.6	TY6137	EC-14	N/A
94	13-94	14.0	1/2"	5.6	TY6137	EC-14	N/A
95	13-95	14.0	1/2"	5.6	TY6137	EC-14	N/A
96	13-96	14.0	1/2"	5.6	TY6137	EC-14	N/A
97	13-97	14.0	1/2"	5.6	TY6137	EC-14	N/A
98	13-98	14.0	1/2"	5.6	TY6137	EC-14	N/A
99	13-99	14.0	1/2"	5.6	TY6137	EC-14	N/A
100	13-100	14.0	1/2"	5.6	TY6137	EC-14	N/A



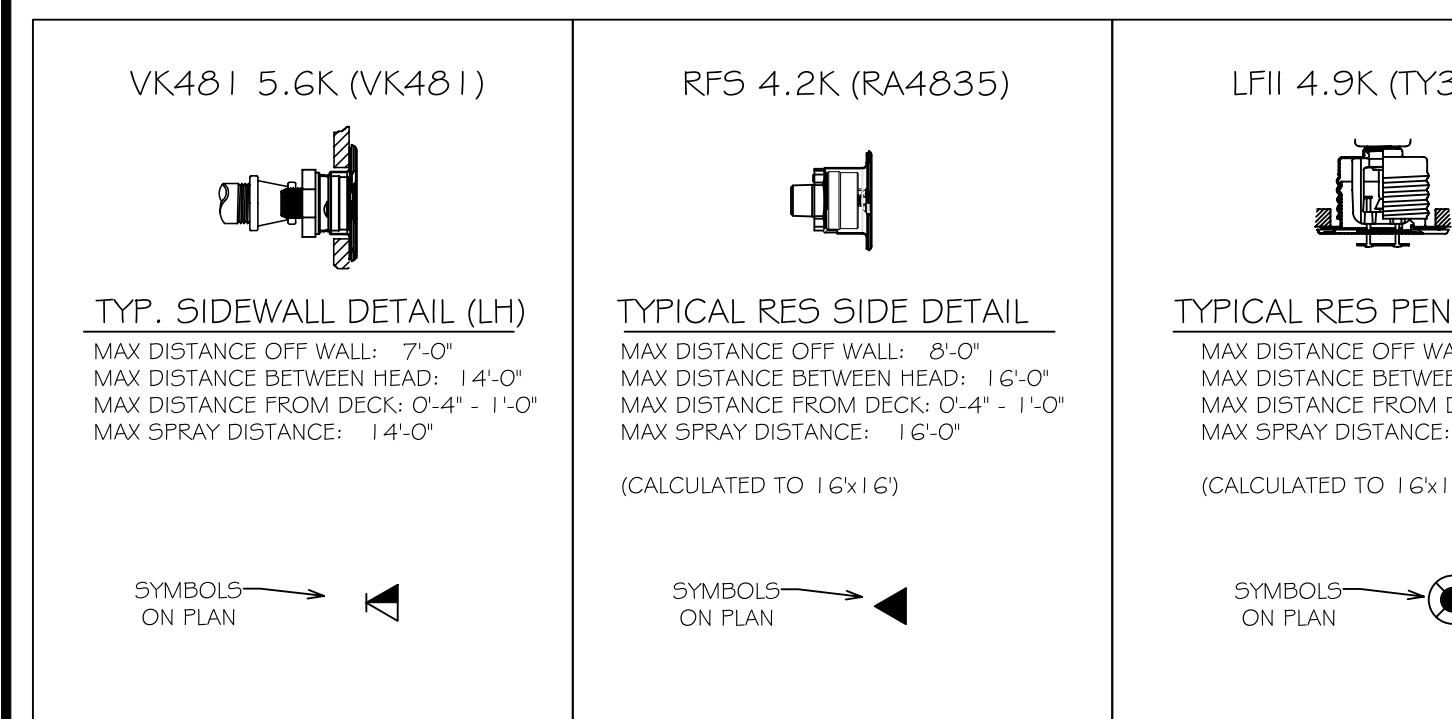
FIRE PROTECTION PLAN

RIDGEDALE EXECUTIVE APARTMENTS
 12501 RIDGEDALE DRIVE
 MINNETONKA, MN 55305

Contract No: **C19-31**
 Drawing Date: 06/27/2019
 Scale: 1/8" = 1'-0"
 Drawing By: STATE FIRE MARSHAL DIV.
 SHEET NO. 2 of 6



LEVEL 1 AREA "A" FIRE SPRINKLER PLAN
SCALE= 1/8" = 1'-0"



SPRINKLER SELECTION MODIFICATIONS 6-27-19

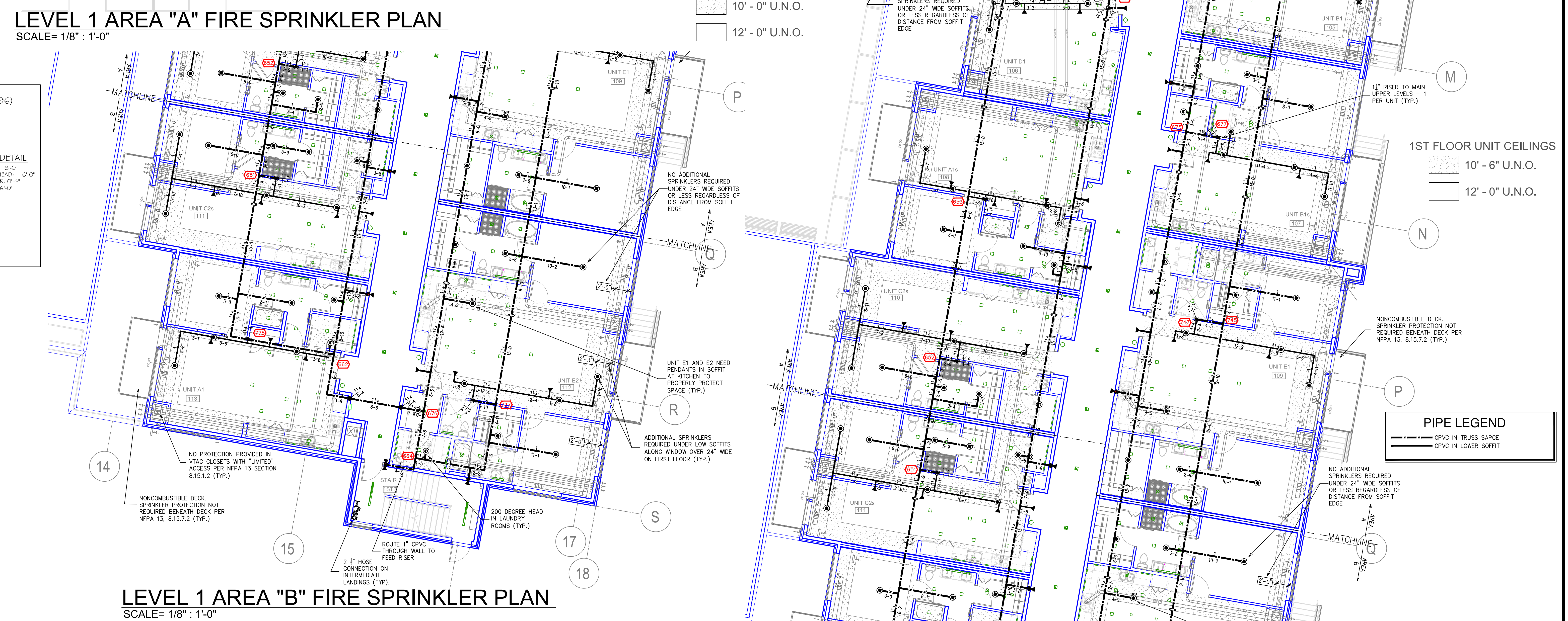
SYN	UNIT	POSITION	FINISH	TEMP	TI	INFT	SN	NFPA	MODEL	ESOUTCHOON	HEAD BOX (2 min)
153	UPR	BRASS	200	14.00	3/4"	TY6137	Typo	EC-14	N/A		2
21	UPR	BRASS	200	5.60	1/2"	TY313	Typo	TY-FRB	N/A		2
6	UPR	BRASS	286	14.00	3/4"	TY6137	Typo	EC-14	N/A		2
14	SIDE	WHITE	205	5.60	1/2"	VK481	WIKING	Conc	CONCEALED		2
75	PEND	WHITE	155	5.60	1/2"	TY3531	Typo	Rfii	CONCEALED		2
86	PEND	WHITE	200	5.60	1/2"	TY3531	Typo	Rfii	CONCEALED		2
17	PEND	WHITE	160	11.20	3/4"	TY5522	Typo	ELOC	CONCEALED		2
806	SIDE	WHITE	165	4.20	1/2"	RA4835	RELIABLE	RFS	CONCEALED		2
10	SIDE	WHITE	165	5.60	1/2"	RA5035	RELIABLE	GG	CONCEALED		2
2	SIDE	WHITE	165	8.00	1/2"	RA4762	RELIABLE	GG	CONCEALED		2
463	PEND	WHITE	160	4.90	1/2"	TY3596	Typo	LFII	CONCEALED		2
4	SIDE	BRASS	200	5.60	1/2"	TY3531	Typo	TY-FRB	N/A		2
1359 TOTAL HEADS											

SPRINKLER LEGEND

SYMBOL	DESCRIPTION
(Red circle with number)	SPRINKLER HEAD
(Black line)	PIPE
(Arrow)	FLOW DIRECTION
(Circle with 'R')	RISER
(Circle with 'S')	SOFFIT
(Circle with 'U')	UNIT

General Notes

- System installed per NFPA-13 (2010) And State Fire Marshal.
- All equipment for this system shall be U.L. listed.
- Minimum pipe size shall be 1" nominal pipe.
- All Sch-10 & 304y flow piping has welded outlets & grooved fittings all welding per NFPA-13 (3-6-2).
- No installation or fabrication to begin without approved shop dwgs.
- All Pipe Locations are to be Field Measured Prior to Fabrication and Installation by Sprinkler Contractor.
- All Dimensions Shown are Center to Center.
- High Temperature Heads are to be Field Located Where Required.
- Provide one spare head cabinet w/ 8 hds. & one hd wrench.
- Hangers are to be U.L. Listed and P.M. Approved.
- Electrical wiring, alarm, detection and supervisory by owner.
- Owner's responsibility to provide adequate heating to prevent wet system piping from freezing.



LEVEL 1 AREA "B" FIRE SPRINKLER PLAN
SCALE= 1/8" = 1'-0"

SPRINKLER LEGEND

APPROVAL STAMPS

SEE PLAN

DRIVEN FIRE CONSULTANTS
910 N. SYCAMORE AVENUE; SIOUX FALLS, SD 57110 PHONE: (605)-444-9290

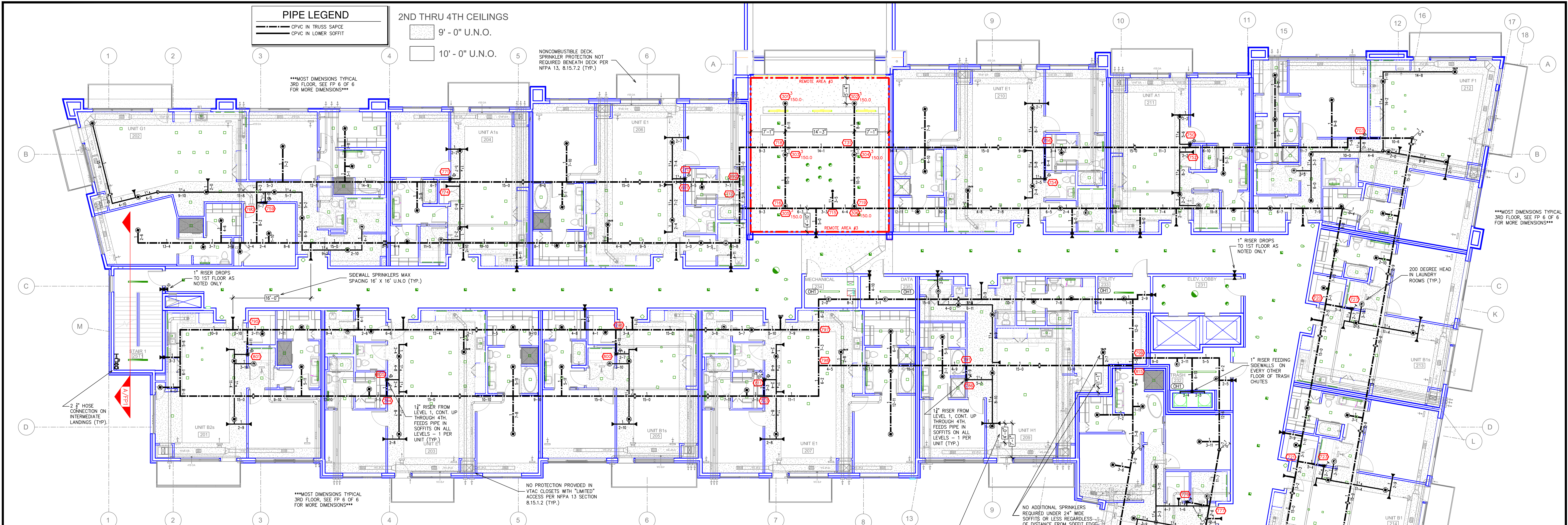
RIDGEDALE EXECUTIVE APARTMENTS
12501 RIDGEDALE DRIVE
MINNETONKA, MN 55305

PIPE LEGEND

--- CPVC IN TRUSS SPACE
--- CPVC IN LOWER SOFFIT

FIRE PROTECTION PLAN

Contract No: **C19-31**
Drawing Date: 06/27/2019
Scale: 1/8" = 1'-0"
Drawn By:
Approval By: STATE FIRE MARSHAL DIV.
SHEET NO. **3 of 6**



LEVEL 2 AREA "A" FIRE SPRINKLER PLAN
SCALE= 1/8" : 1'-0"

SPRINKLER SELECTION MODIFICATIONS 6-27-19
SPRINKLER SPACING DETAILS

<p>VK481 5.6K (VK481)</p> <p>TYP. SIDEWALL DETAIL (LH)</p> <p>MAX DISTANCE OFF WALL: 7'-0" MAX DISTANCE BETWEEN HEAD: 14'-0" MAX DISTANCE FROM DECK: 0'-4" - 1'-0" MAX SPRAY DISTANCE: 14'-0"</p> <p>SYMBOLS ON PLAN</p>	<p>RFS 4.2K (RA4835)</p> <p>TYPICAL RES SIDE DETAIL</p> <p>MAX DISTANCE OFF WALL: 8'-0" MAX DISTANCE BETWEEN HEAD: 16'-0" MAX DISTANCE FROM DECK: 0'-4" - 1'-0" MAX SPRAY DISTANCE: 16'-0"</p> <p>(CALCULATED TO 16x16)</p> <p>SYMBOLS ON PLAN</p>	<p>LFII 4.9K (TY3596)</p> <p>TYPICAL RES PEND DETAIL</p> <p>MAX DISTANCE OFF WALL: 8'-0" MAX DISTANCE BETWEEN HEAD: 16'-0" MAX DISTANCE FROM DECK: 0'-4" - 1'-0" MAX SPRAY DISTANCE: 16'-0"</p> <p>(CALCULATED TO 16x16)</p> <p>SYMBOLS ON PLAN</p>
<p>RFLI 5.6K (TY3531)</p> <p>TYP. PENDANT DETAIL (LH)</p> <p>MAX DISTANCE OFF WALL: 7'-0" MAX DISTANCE BETWEEN HEAD: 15'-0" MAX DISTANCE FROM DECK: 1'-0" MAX SPRAY DISTANCE: 15'-0"</p> <p>SYMBOLS ON PLAN</p>	<p>ELOC 11.2K (TY5522)</p> <p>TYPICAL EC PEND DETAIL</p> <p>MAX DISTANCE OFF WALL: 8'-0" MAX DISTANCE BETWEEN HEAD: 16'-0" MAX DISTANCE FROM DECK: 0'-4" - 1'-0" MAX SPRAY DISTANCE: 16'-0"</p> <p>(CALCULATED TO 16x16)</p> <p>SYMBOLS ON PLAN</p>	

SPRINKLER SELECTION MODIFICATIONS 6-27-19

SNW	QTY	POSITION	FINISH	TEMP	K	NPT	SNK	MFG.	MODEL#	ESOURCE/HEAD BOX (2 rtd)
153	UPR	BRASS	200	14.00	3/4"	TY6137	TYCO	EC-14	N/A	2
21	UPR	BRASS	200	5.60	1/2"	TY313	TYCO	TY-FRB	N/A	2
6	UPR	BRASS	286	14.00	3/4"	TY6137	TYCO	EC-14	N/A	2
14	SIDE	WHITE	205	5.60	1/2"	TK481	TKWING	CONCEALED	2	
75	PEND	WHITE	155	5.60	1/2"	TY3531	TYCO	RFLI	CONCEALED	2
86	PEND	WHITE	200	5.60	1/2"	TY3531	TYCO	RFLI	CONCEALED	2
17	PEND	WHITE	160	11.20	3/4"	TY5522	TYCO	ELOC	CONCEALED	2
506	SIDE	WHITE	165	4.20	1/2"	RA4835	RELIABLE	RFS	CONCEALED	2
10	SIDE	WHITE	165	5.60	1/2"	RA5035	RELIABLE	GS	CONCEALED	2
12	SIDE	WHITE	165	8.00	1/2"	RA4762	RELIABLE	GS	CONCEALED	2
463	PEND	WHITE	160	4.90	1/2"	TY3596	TYCO	LFII	CONCEALED	2
6	SIDE	BRASS	200	5.60	1/2"	TY3531	TYCO	TY-FRB	N/A	2
1359 TOTAL HEADS										

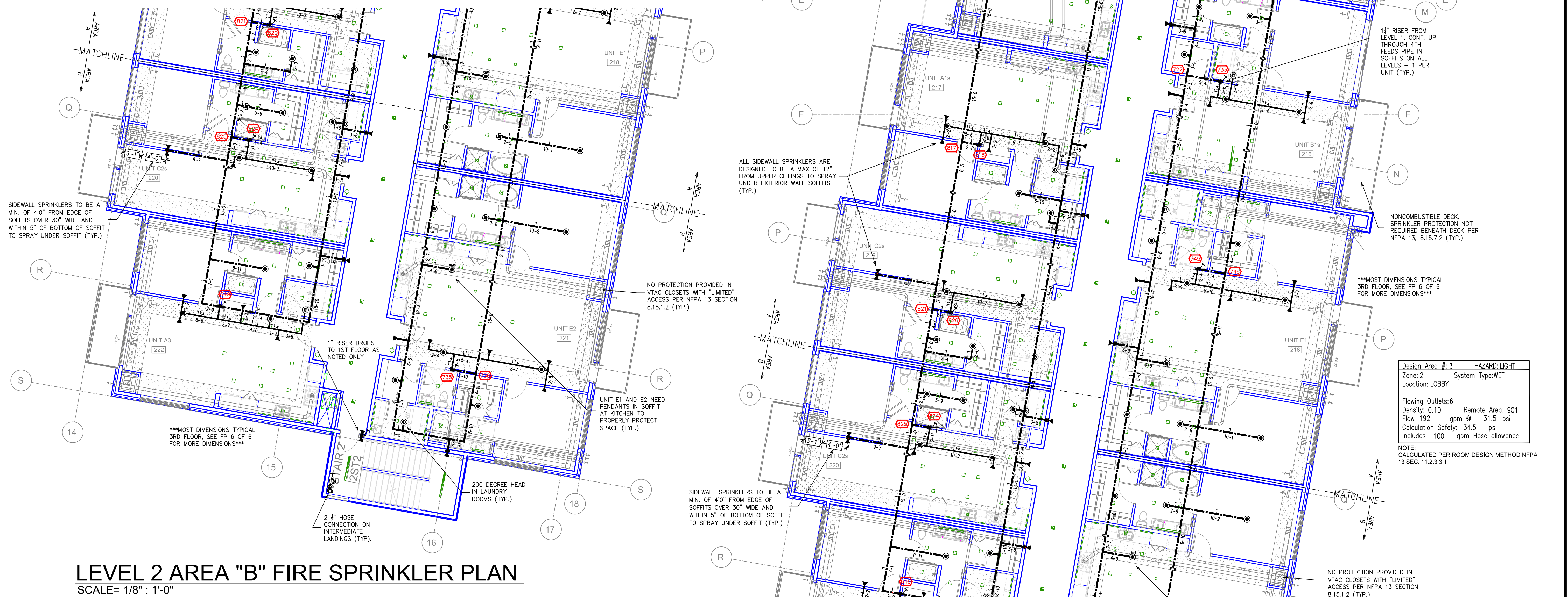
SPRINKLER LEGEND

General Notes

- System installed per NFPA-13 (2010) and State Fire Marshal.
- All equipment for this system shall be U.L. listed.
- Minimum pipe size shall be 1" nominal pipe.
- All Sch-10 & Bddy Flow piping has welded outlets & grooved fittings all welding per NFPA-13 (3-82).
- No installation or fabrication to begin without approved shop dwgs.
- All Pipe Locations are to be Field Measured Prior to Fabrication and Installation by Sprinkler Contractor.
- All Dimensions Shown are Center to Center.
- High Temperature Heads are to be Field Located Where Required.
- Provide one spare head cabinet w/ 8 hds. & one hd wrench.
- Hangers are to be U.L. Listed and P.M. Approved.
- Electrical wiring, alarm, detection and supervisory by owner.
- Owner's responsibility to provide adequate heating to prevent wet system piping from freezing.

SPRINKLER LEGEND: SEE PLAN

APPROVAL STAMPS



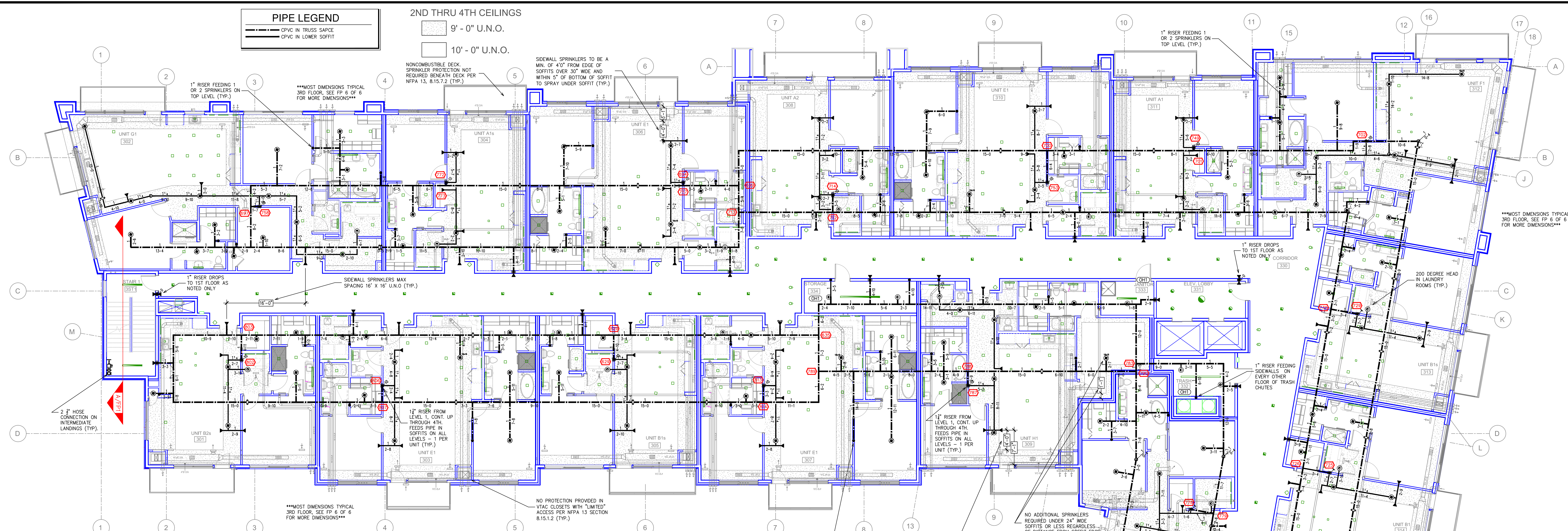
LEVEL 2 AREA "B" FIRE SPRINKLER PLAN
SCALE= 1/8" : 1'-0"

DRIVEN
FIRE CONSULTANTS

910 N. SYCAMORE AVENUE; SIOUX FALLS, SD 57110 PHONE: (605)-444-9290

RIDGEDALE EXECUTIVE APARTMENTS
12501 RIDGEDALE DRIVE
MINNETONKA, MN 55305

Contract No: **C19-31**
Drawing Date: 06/27/2019
Scale: 1/8" = 1'-0"
Drawing By: STATE FIRE MARSHAL DIV.
Approval By: STATE FIRE MARSHAL DIV.
SHEET NO. **4 of 6**



LEVEL 3 AREA "A" FIRE SPRINKLER PLAN
SCALE= 1/8" = 1'-0"

SPRINKLER SELECTION MODIFICATIONS 6-27-19
SPRINKLER SPACING DETAILS

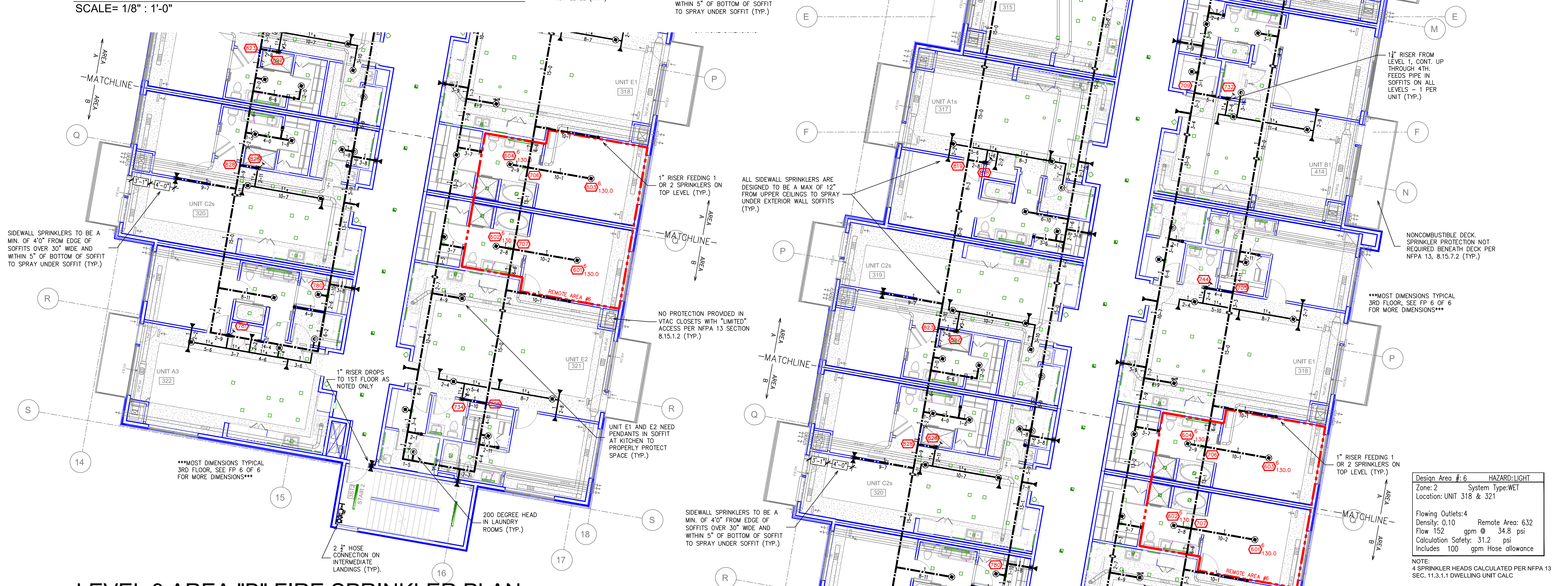
<p>VK461 5.6K (VK461)</p> <p>TYP. SIDEWALL DETAIL (LH) MAX DISTANCE OFF WALL: 7'-0" MAX DISTANCE BETWEEN HEAD: 14'-0" MAX DISTANCE FROM DECK: 0'-4" - 1'-0" MAX SPRAY DISTANCE: 14'-0"</p> <p>SYMBOLS ON PLAN</p>	<p>RFS 4.2K (RA4635)</p> <p>TYPICAL RES SIDE DETAIL MAX DISTANCE OFF WALL: 8'-0" MAX DISTANCE BETWEEN HEAD: 16'-0" MAX DISTANCE FROM DECK: 0'-4" - 1'-0" MAX SPRAY DISTANCE: 16'-0" (CALCULATED TO 16x16)</p> <p>SYMBOLS ON PLAN</p>	<p>LFII 4.9K (TY359G)</p> <p>TYPICAL RES PEND DETAIL MAX DISTANCE OFF WALL: 8'-0" MAX DISTANCE BETWEEN HEAD: 16'-0" MAX DISTANCE FROM DECK: 0'-4" - 1'-0" MAX SPRAY DISTANCE: 16'-0" (CALCULATED TO 16x16)</p> <p>SYMBOLS ON PLAN</p>
<p>RFI 5.6K (TY3531)</p> <p>TYP. PENDANT DETAIL (LH) MAX DISTANCE OFF WALL: 7'-0" MAX DISTANCE BETWEEN HEAD: 15'-0" MAX DISTANCE FROM DECK: 0'-4" - 1'-0" MAX SPRAY DISTANCE: 15'-0"</p> <p>SYMBOLS ON PLAN</p>	<p>ELOC 11.2K (TY5522)</p> <p>TYPICAL EC PEND DETAIL MAX DISTANCE OFF WALL: 8'-0" MAX DISTANCE BETWEEN HEAD: 16'-0" MAX DISTANCE FROM DECK: 0'-4" - 1'-0" MAX SPRAY DISTANCE: 16'-0" (CALCULATED TO 16x16)</p> <p>SYMBOLS ON PLAN</p>	

SPRINKLER SELECTION MODIFICATIONS 6-27-19

SYM	QTY	POSITION	FRSH	TRIP	HT	BLK	MTS	NOTICE	ESCUTCHION	HEAD BOX (2 min)
153	UPR	BRASS	200	14.00	3/4"	TY6137	Yes	EC-14	N/A	2
21	UPR	BRASS	200	5.60	1/2"	TY313	Yes	TY-FRB	N/A	2
6	UPR	BRASS	286	14.00	3/4"	TY6137	Yes	EC-14	N/A	2
14	SIDE	WHITE	205	5.60	1/2"	VK461	VIKING	Conc	CONCEALED	2
75	PEND	WHITE	155	5.60	1/2"	TY3531	Yes	RFS	CONCEALED	2
86	PEND	WHITE	200	5.60	1/2"	TY3531	Yes	RFS	CONCEALED	2
17	PEND	WHITE	160	11.20	3/4"	TY5522	Yes	ELOC	CONCEALED	2
506	SIDE	WHITE	165	4.20	1/2"	RA4835	RELIABLE	RFS	CONCEALED	2
10	SIDE	WHITE	165	5.60	1/2"	RA5035	RELIABLE	G6	CONCEALED	2
2	SIDE	WHITE	165	8.00	1/2"	RA4762	RELIABLE	G6	CONCEALED	2
443	PEND	WHITE	160	4.90	1/2"	TY3596	Yes	LFI	CONCEALED	2
6	SIDE	BRASS	200	5.60	1/2"	TY3331	Yes	TY-FRB	N/A	2
1359 TOTAL HEADS										

SPRINKLER LEGEND

- General Notes**
- System installed per NFPA-13 (2010) and State Fire Marshal.
 - All equipment for this system shall be U.L. listed.
 - Minimum pipe size shall be 1" nominal pipe.
 - All Sch-40 & Boley Flow piping has welded outlets & grooved fittings all welding per NFPA-13 (3-82).
 - No installation or fabrication to begin without approved shop dwgs.
 - All Pipe Locations are to be Field Measured Prior to Fabrication and Installation by Sprinkler Contractor.
 - All Dimensions Shown are Center to Center.
 - High Temperature Heads are to be Field Located Where Required.
 - Provide one spare head cabinet w/ 6 hds. & one hd wrench.
 - Hangers are to be U.L. Listed and F.E.M. Approved.
 - Electrical wiring, alarm, detection and supervisory by owner.
 - Owner's responsibility to provide adequate heating to prevent wet system piping from freezing.



LEVEL 3 AREA "B" FIRE SPRINKLER PLAN
SCALE= 1/8" = 1'-0"

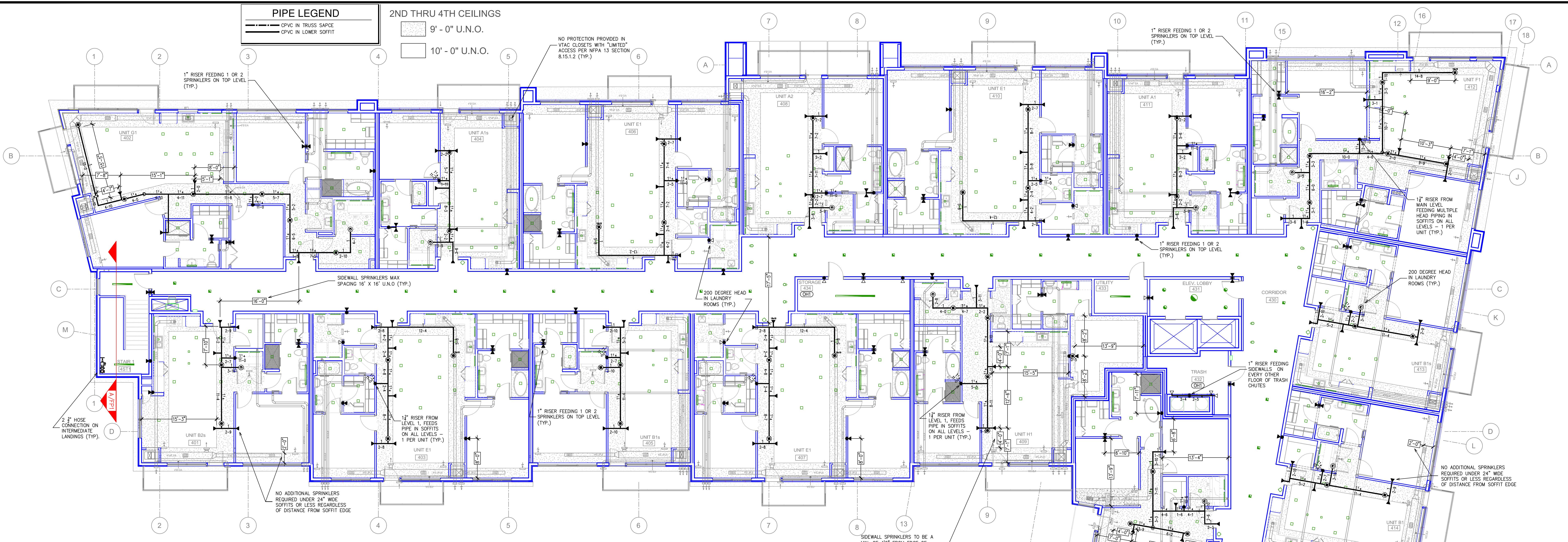
<p>SPRINKLER LEGEND</p> <p>SEE PLAN</p>	<p>APPROVAL STAMPS</p>	<p>DRIVEN FIRE CONSULTANTS 910 N. SYCAMORE AVENUE, SIOUX FALLS, SD 57110 PHONE: (605)-444-9290</p>	<p>RIDGEDALE EXECUTIVE APARTMENTS 12501 RIDGEDALE DRIVE MINNETONKA, MN 55305</p>	<p>FIRE PROTECTION PLAN</p> <p>Design Area # 6 HAZARD: LIGHT Zone: 2 System Type: WEL Location: UNIT 318 & 321 Flowing Outlets: 4 Remote Area: 632 Density: 0.10 Remote Area: 34.8 psi Flow 152 gpm @ 34.8 psi Calculation Safety: 31.2 psi Includes 100 gpm Hose allowance</p> <p>NOTE: 4 SPRINKLER HEADS CALCULATED PER NFPA 13 SEC. 11.3.1.1 DWELLING UNIT CALC.</p>	<p>Contract No. C19-31 Drawing Date: 05/29/2019 Scale: 1/8" = 1'-0" Drawn By: Approval By: STATE FIRE MARSHAL DIV. SHEET NO. 5 of 6</p>
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PIPE LEGEND

— CPVC IN TRUSS SPACE
 - - - CPVC IN LOWER SOFFIT

2ND THRU 4TH CEILINGS
 9' - 0" U.N.O.
 10' - 0" U.N.O.

NO PROTECTION PROVIDED IN VYAC CLOSETS WITH "LIMITED" ACCESS PER NFPA 13 SECTION 8.15.1.2 (TYP.)



LEVEL 4 AREA "A" FIRE SPRINKLER PLAN

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

SPRINKLER SELECTION MODIFICATIONS 6-27-19
SPRINKLER SPACING DETAILS

<p>VK481 5.6K (VK481)</p> <p>TYP. SIDEWALL DETAIL (LH) MAX DISTANCE OFF WALL: 7'-0" MAX DISTANCE BETWEEN HEAD: 14'-0" MAX DISTANCE FROM DECK: 0'-4" - 1'-0" MAX SPRAY DISTANCE: 14'-0"</p>	<p>RFS 4.2K (RA4835)</p> <p>TYPICAL RES SIDE DETAIL MAX DISTANCE OFF WALL: 8'-0" MAX DISTANCE BETWEEN HEAD: 16'-0" MAX DISTANCE FROM DECK: 0'-4" - 1'-0" MAX SPRAY DISTANCE: 16'-0"</p>	<p>LFII 4.9K (TY359G)</p> <p>TYPICAL RES PEND DETAIL MAX DISTANCE OFF WALL: 9'-0" MAX DISTANCE BETWEEN HEAD: 16'-0" MAX DISTANCE FROM DECK: 0'-4" - 1'-0" MAX SPRAY DISTANCE: 16'-0"</p>
<p>RFI 5.6K (TY3531)</p> <p>TYP. PENDANT DETAIL (LH) MAX DISTANCE OFF WALL: 7'-0" MAX DISTANCE BETWEEN HEAD: 15'-0" MAX DISTANCE FROM DECK: 1'-0" MAX SPRAY DISTANCE: 15'-0"</p>	<p>ELOC 11.2K (TY5222)</p> <p>TYPICAL EC PEND DETAIL MAX DISTANCE OFF WALL: 8'-0" MAX DISTANCE BETWEEN HEAD: 16'-0" MAX DISTANCE FROM DECK: 0'-4" - 1'-0" MAX SPRAY DISTANCE: 16'-0"</p>	

SPRINKLER SELECTION MODIFICATIONS 6-27-19

SYM	QTY	POSITION	FRSH	TEMP	K	INPT	SRN	MPG	MODEL#	DESC/CHECK	HEAD BOX (2 min)
133	UPR	BRASS	200	14.00	1/2"	TY6137	Type	EC-14	N/A	N/A	2
21	UPR	BRASS	200	5.60	1/2"	TY913	Type	TY-FRB	N/A	N/A	2
6	UPR	BRASS	286	14.00	3/4"	TY6137	Type	EC-14	N/A	N/A	2
14	SIDE	WHITE	205	5.60	1/2"	VK481	W/ING	Conc.	CONCEALED	2	
75	PEND	WHITE	155	5.60	1/2"	TY3531	Type	RFI	CONCEALED	2	
86	PEND	WHITE	200	5.60	1/2"	TY3531	Type	RFI	CONCEALED	2	
17	PEND	WHITE	160	11.20	1/2"	TY5222	Type	ELOC	CONCEALED	2	
506	SIDE	WHITE	165	4.20	1/2"	RA4835	RELIABLE	RFS	CONCEALED	2	
10	SIDE	WHITE	165	5.60	1/2"	RA5035	RELIABLE	GG	CONCEALED	2	
12	SIDE	WHITE	165	8.00	1/2"	RA4762	RELIABLE	GG	CONCEALED	2	
463	PEND	WHITE	160	4.90	1/2"	TY3596	Type	LFII	CONCEALED	2	
8	SIDE	BRASS	200	5.60	1/2"	TY3531	Type	TY-FRB	N/A	2	
1359 TOTAL HEADS											

CALC MODIFICATION 6-27-19
 Design Area #: 5 HAZARD: LIGHT
 Zone: 2 System Type: WET
 Location: 4TH FLOOR CORRIDOR
 Flowing Outlets: 4
 Density: 0.10 Remote Area: 367
 Flow 167 gpm @ 549.2 psi
 Calculation Safety: 16.7 psi
 Includes 100 gpm Hose allowance

CALC MODIFICATION 6-27-19
 Design Area #: 4 HAZARD: LIGHT
 Zone: 2 System Type: WET
 Location: UNIT 421
 Flowing Outlets: 4
 Density: 0.10 Remote Area: 567
 Flow 173 gpm @ 58.0 psi
 Calculation Safety: 8.0 psi
 Includes 100 gpm Hose allowance

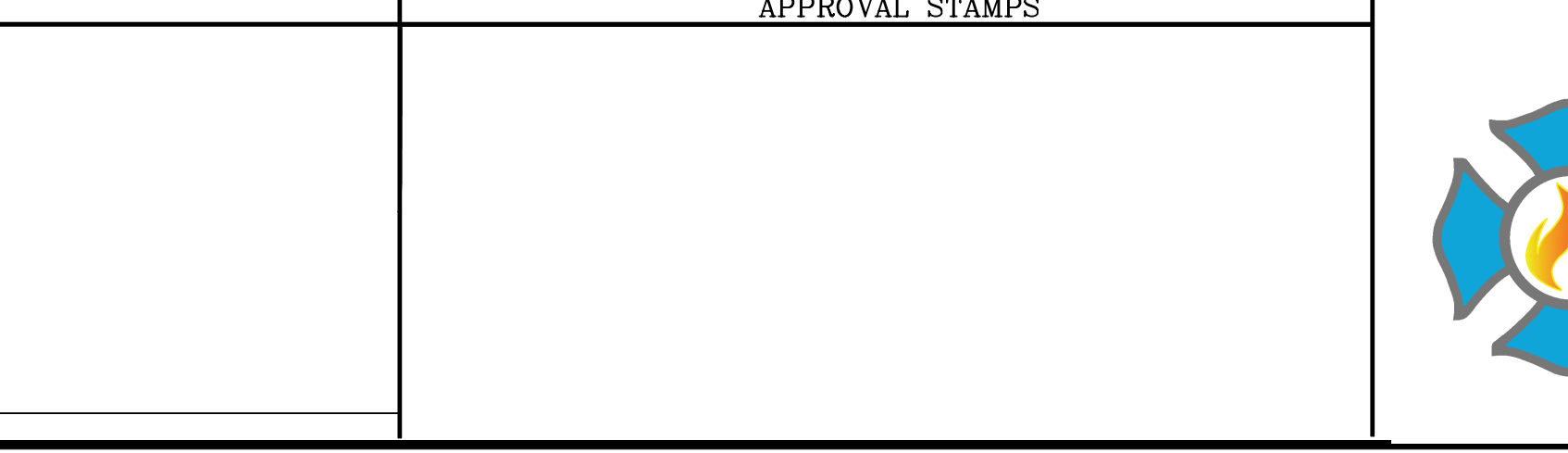
SPRINKLER LEGEND

- General Notes**
- System installed per NFPA-13 (2010) and State Fire Marshal.
 - All equipment for this system shall be U.L. listed.
 - Minimum pipe size shall be 1" nominal pipe.
 - All Sch-40 & Boley flow piping has welded outlets & grooved fittings all welding per NFPA-13 (3-82).
 - No installation or fabrication to begin without approved shop dwgs.
 - All Pipe Locations are to be Field Measured Prior to Fabrication and Installation by Sprinkler Contractor.
 - All Dimensions Shown are Center to Center.
 - High Temperature Heads are to be Field Located Where Required.
 - Provide one spare head cabinet w/ 6 hds. & one hd wrench.
 - Hangers are to be U.L. Listed and P.M. Approved.
 - Electrical wiring, alarm, detection and supervisory by owner.
 - Owner's responsibility to provide adequate heating to prevent wet system piping from freezing.

LEVEL 4 AREA "B" FIRE SPRINKLER PLAN



LEVEL 4 AREA "B" FIRE SPRINKLER PLAN



SPRINKLER LEGEND



APPROVAL STAMPS

DRIVEN
 FIRE CONSULTANTS
 910 N. SYCAMORE AVENUE, STOUX FALLS, SD 57110 PHONE: (605)-444-9290

RIDGEDALE EXECUTIVE APARTMENTS
 12501 RIDGEDALE DRIVE
 MINNETONKA, MN 55305

Contract No: **C19-31**
 Drawing Date: 06/27/2019
 Scale: 1/8" = 1'-0"
 Drawn By: STATE FIRE MARSHAL DIV.
 Approval By: STATE FIRE MARSHAL DIV.
 SHEET NO. **6 of 6**

