

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

STEEL PIPE EXCEPT THREADED LIGHTWALL	NOMINAL PIPE SIZE (IN.)							
	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"
THREADED LIGHTWALL STEEL PIPE	NA	12'-0"	12'-0"	15'-0"	15'-0"	15'-0"	15'-0"	15'-0"
BLAZEMASTER CPVC	5'-6"	6'-0"	6'-6"	7'-0"	8'-0"	9'-0"	10'-0"	NA

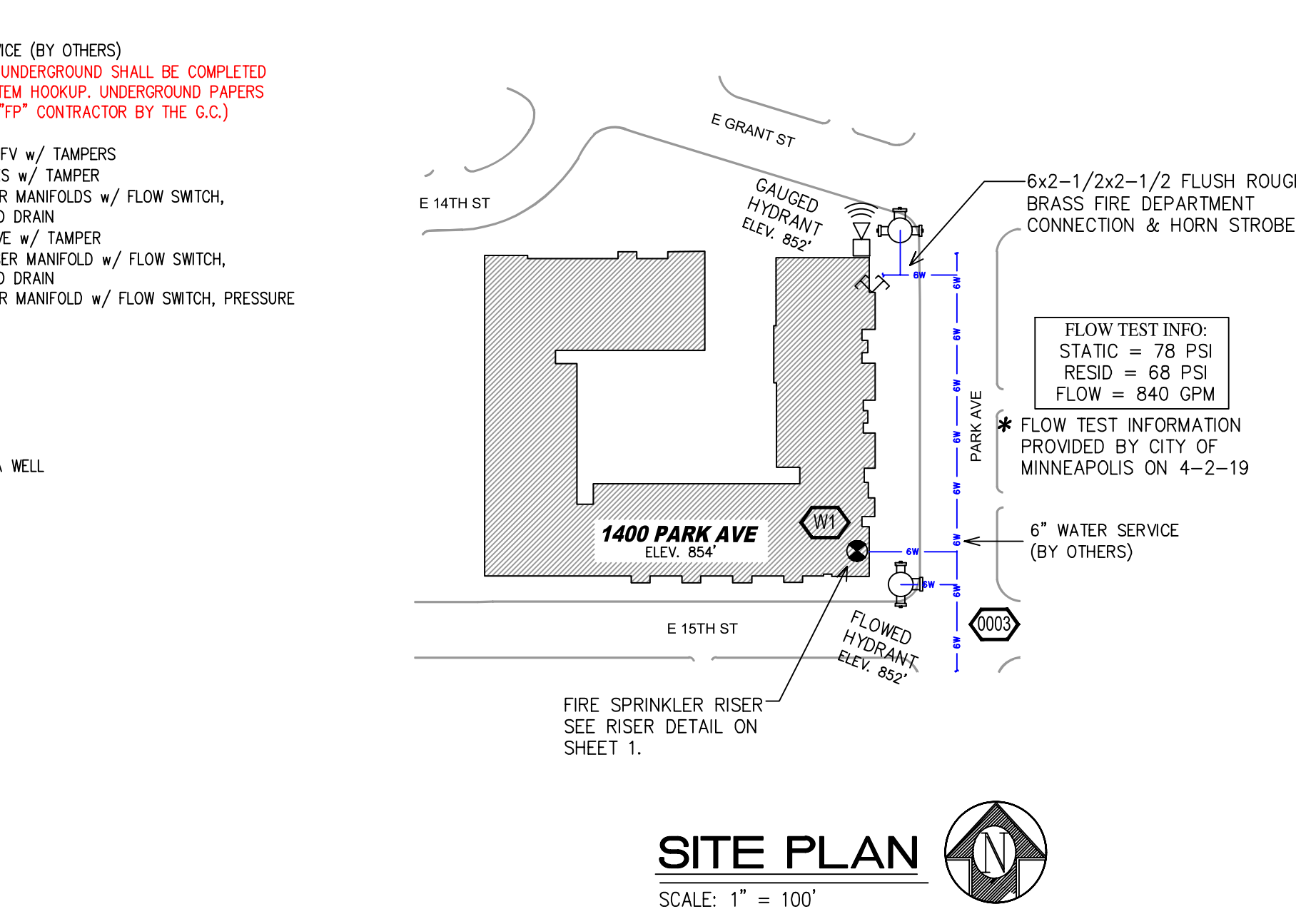
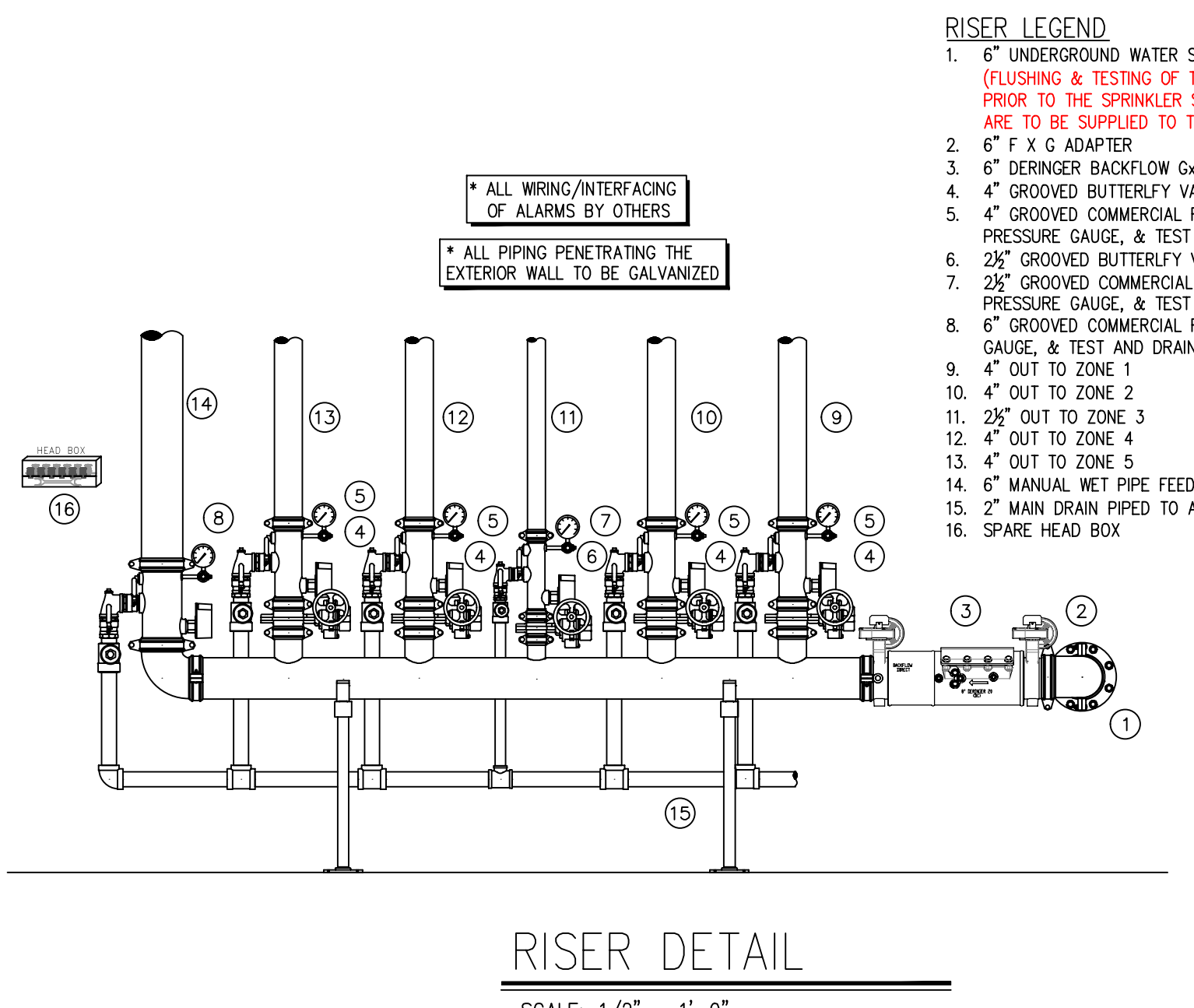
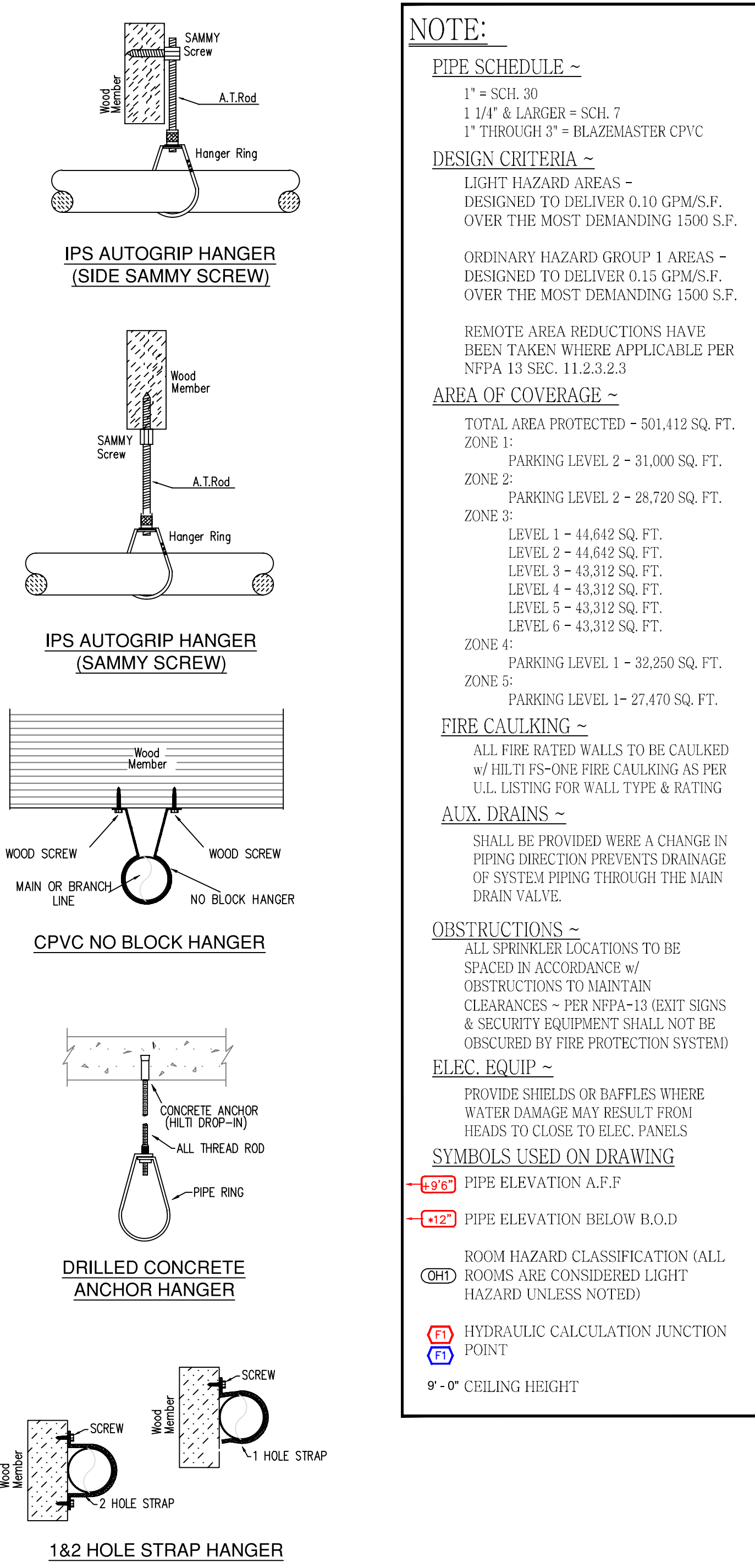
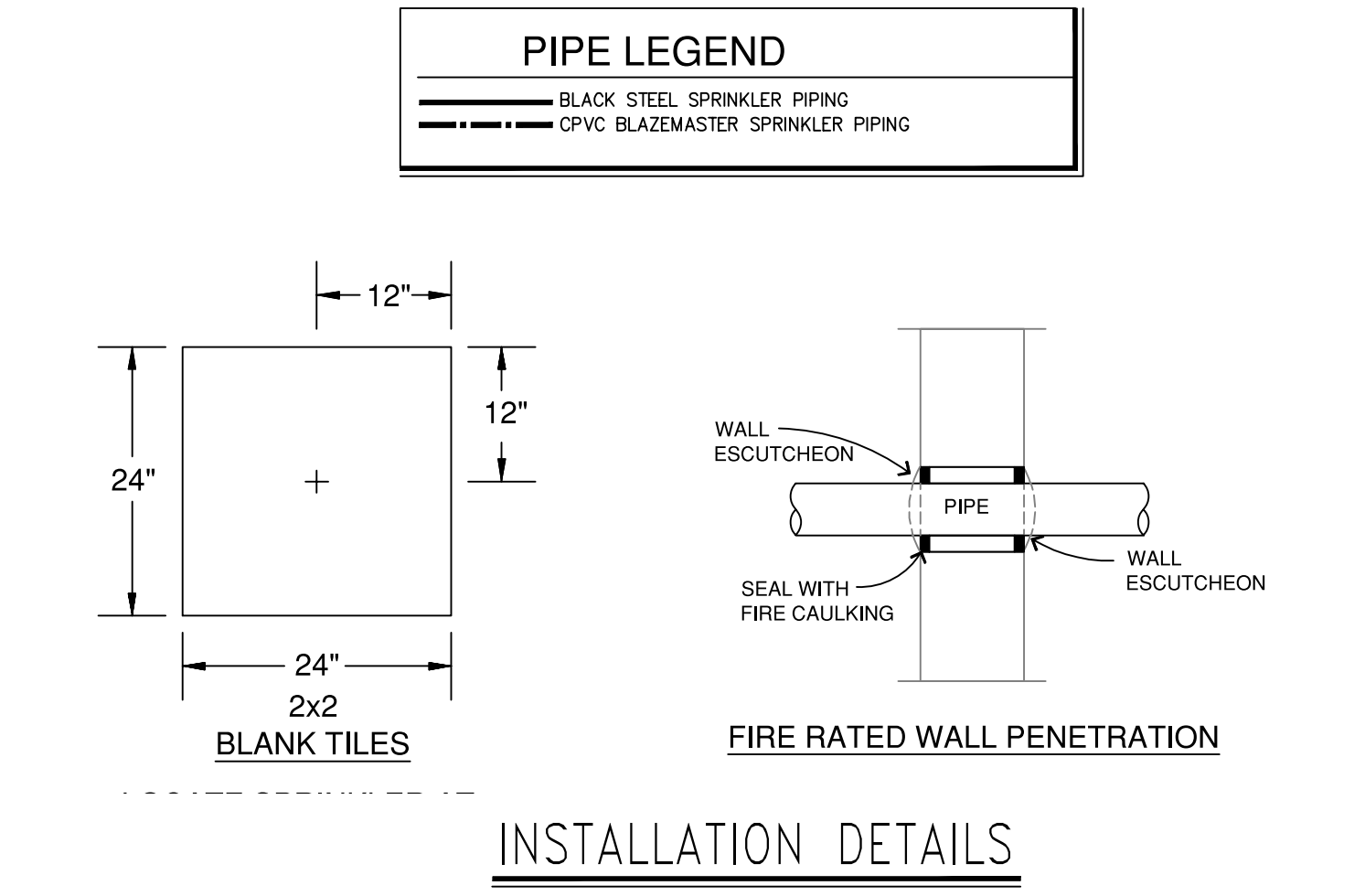
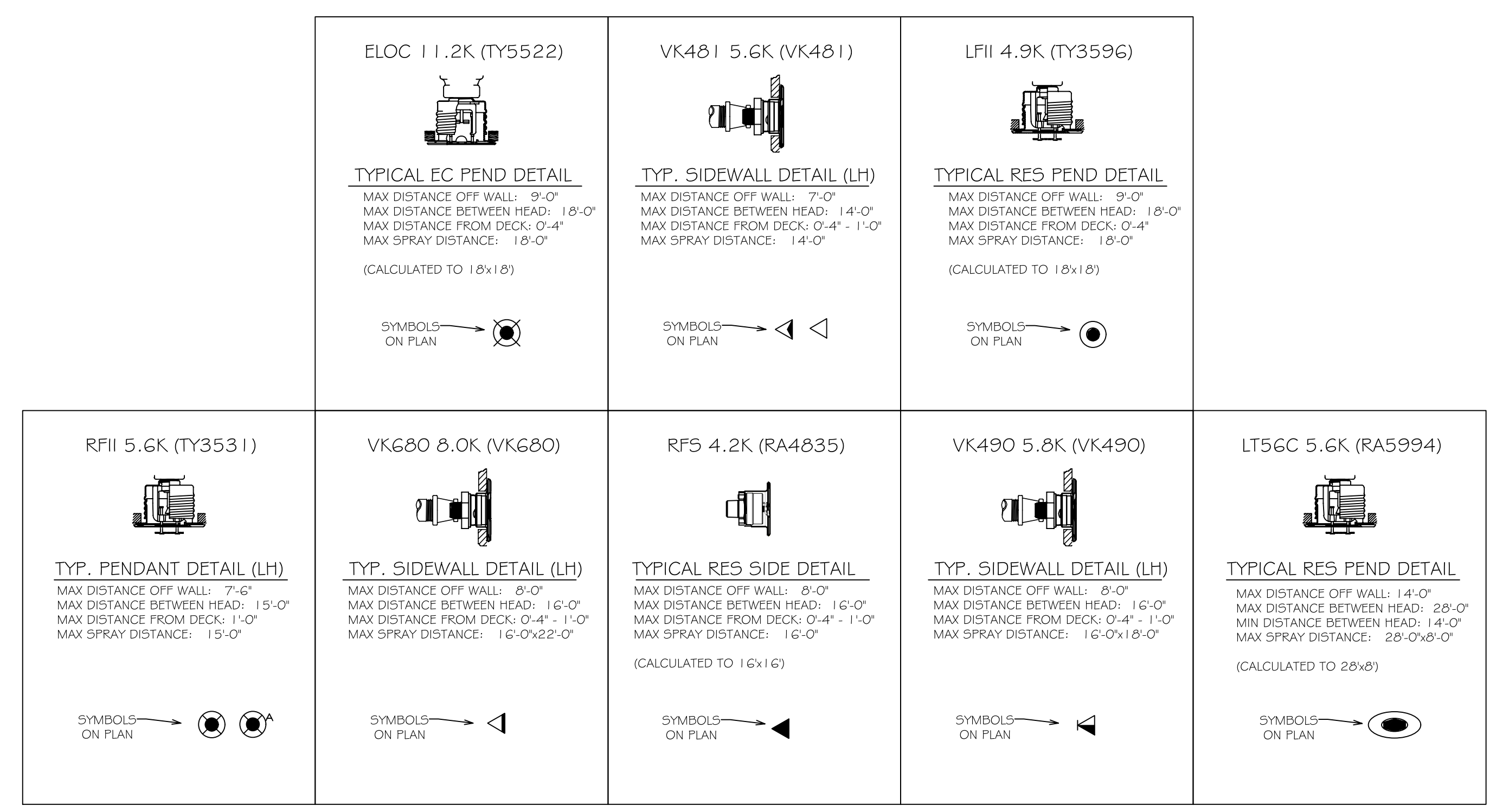
NFPA 13 HANGER SPACING

SCOPE OF WORK:
TO INSTALL A NEW FIRE SPRINKLER SYSTEM IN THE 1400 PARK AVENUE APARTMENT BUILDING AS SHOWN ON SHOP DRAWINGS PER NFPA 13 & 14. THE SYSTEM WILL CONSIST OF A MANUAL WET STANDPIPE SYSTEM WITH 6 STANDPIPE RISERS AND 2 1/2" HOSE VALVES ON THE MAIN LEVEL LANDINGS. IT WILL ALSO HAVE 2 WET ZONES FOR EACH LEVEL OF THE PARKING GARAGE, 1 WET ZONE FOR THE RESIDENTIAL FLOORS 1 THROUGH 6. ALL PIPING IN PARKING GARAGE OR EXPOSED TO VIEW TO BE STEEL AND ALL PIPING IN OCCUPIED SPACES TO BE CONCEALED BLAZEMASTER CPVC PIPING WITH CONCEALED SPRINKLER HEADS. FDC WILL BE LOCATED ON THE NORTHEAST CORNER OF THE 1ST FLOOR.

SYM	QTY	POSITION	FINISH	TEMP	K	NPT	SIN	MPG	MODEL#	ESCUOTHEON	HEAD BOX (2 mm)
566	200	UFR	BRASS	200	11.20	3/4"	TY5137	TYCO	EC-11	N/A	2
21	200	UFR	BRASS	200	5.60	1/2"	TY3131	TYCO	TY-FRB	N/A	2
105	200	PEND	COLOR MATCH	155	5.60	1/2"	TY3531	TYCO	RFI	CONCEALED	2
4	200	SPRIG	BRASS	200	11.20	3/4"	TY5137	TYCO	EC-11	N/A	2
7	200	PEND	COLOR MATCH	160	11.20	3/4"	TY5222	TYCO	ELOC	CONCEALED	2
450	200	PEND	COLOR MATCH	200	5.60	1/2"	TY3531	TYCO	RFI	CONCEALED	2
8	165	SIDE	COLOR MATCH	165	5.60	1/2"	VK481	WIKING	VK	CONCEALED	2
1610	160	PEND	COLOR MATCH	160	4.90	1/2"	TY3586	TYCO	LFI	CONCEALED	2
17	165	SIDE	COLOR MATCH	165	8.00	3/4"	VK680	WIKING	VKEC	CONCEALED	2
87	205	SIDE	COLOR MATCH	205	5.60	1/2"	VK481	WIKING	VK	CONCEALED	2
20	155	PEND	COLOR MATCH	155	5.60	1/2"	RA5994	RELIABLE	LT58C	CONCEALED	2
1547	165	SIDE	COLOR MATCH	165	4.20	1/2"	RA4835	RELIABLE	RFS	CONCEALED	2
UFR	286	UFR	BRASS	286	5.60	1/2"	TY3131	TYCO	TY-FRB	N/A	2
SPRIG	286	SPRIG	BRASS	286	11.20	3/4"	TY5137	TYCO	EC-11	N/A	2
UFR	286	UFR	BRASS	286	11.20	3/4"	TY5137	TYCO	EC-11	N/A	2
6	165	SIDE	COLOR MATCH	165	5.80	1/2"	VK490	WIKING	FREDDOM	CONCEALED	2
3	200	SIDE	BRASS	200	5.60	1/2"	TY3331	TYCO	TY-FRB	N/A	2

TOTAL HEADS 3484

SPRINKLER SPACING DETAILS



General Notes

- System installed per NFPA-13 (2010 Edition) 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 & Eddy Pipe piping has welded outlets & grooved fittings all welding per NFPA-13 (5-8.2).
- 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/ 6 hds. & one hd wrench.
- Hangers are to be U.L. Listed and P.M. Approved.
- No installation or fabrication to begin without approved shop dwgs.
- 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



FIRE PROTECTION PLAN

1400 PARK AVENUE
1400 PARK AVENUE SOUTH
MINNEAPOLIS, MN 55404

Contract No. **C19-33**
Drawing Date: 09/19/2019
Scale: 1/8" = 1'-0"
Drawn By:
Approval By: STATE FIRE MARSHAL DIV.
SHEET NO. **1 of 17**

NOTE:

PIPE SCHEDULE -
1" = SCH. 30
1 1/4" & LARGER = SCH. 7
1" THROUGH 3" = BLAZEMASTER CPVC

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

AREA OF COVERAGE -
TOTAL AREA PROTECTED - 501,412 SQ. FT.

ZONE 1:
PARKING LEVEL 2 - 31,000 SQ. FT.

ZONE 2:
PARKING LEVEL 2 - 28,720 SQ. FT.

ZONE 3:
LEVEL 1 - 44,642 SQ. FT.
LEVEL 2 - 44,642 SQ. FT.
LEVEL 3 - 43,312 SQ. FT.
LEVEL 4 - 43,312 SQ. FT.
LEVEL 5 - 43,312 SQ. FT.
LEVEL 6 - 43,312 SQ. FT.

ZONE 4:
PARKING LEVEL 1 - 32,250 SQ. FT.

ZONE 5:
PARKING LEVEL 1 - 27,470 SQ. FT.

FIRE CAULKING -
ALL FIRE RATED WALLS TO BE CAULKED
w/ UL LISTED 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
SPECIFIED IN ACCORDANCE w/
OBSTRUCTIONS TO MAINTAIN
CLEARANCES - PER NFPA-13 (EXIT SIGNS
& SECURITY EQUIPMENT SHALL NOT BE
OBSERVED 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

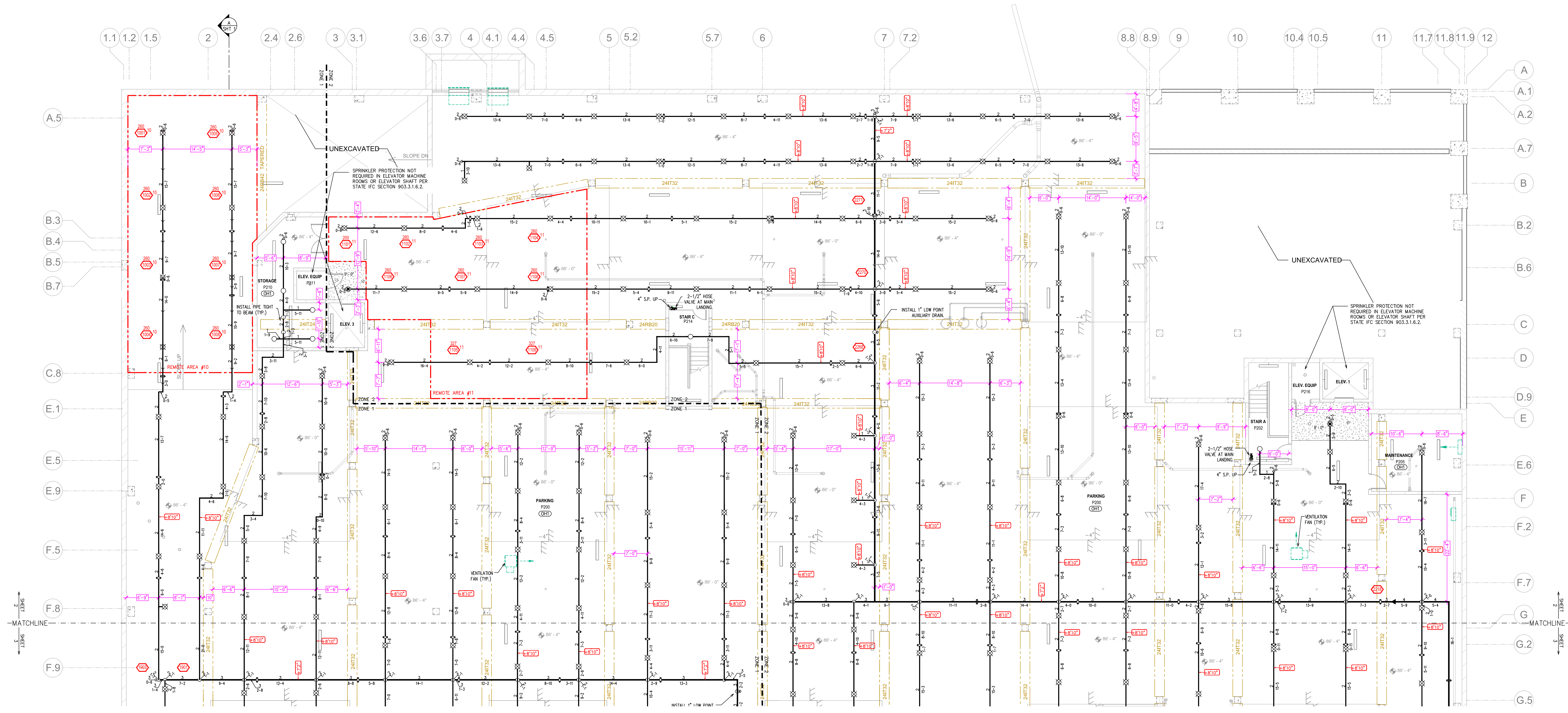
6'-2" PIPE ELEVATION A.F.F.

6'-2" PIPE ELEVATION BELOW B.O.D.

ROOM HAZARD CLASSIFICATION (ALL
ROOMS ARE CONSIDERED LIGHT
HAZARD UNLESS NOTED)

HYDRAULIC CALCULATION JUNCTION
POINT

9'-0" CEILING HEIGHT

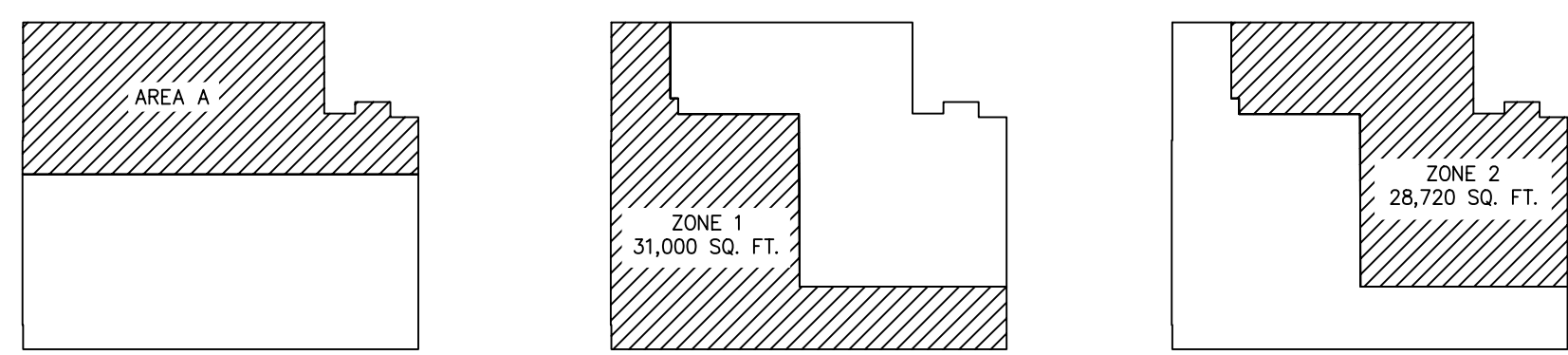


LEVEL P2 - AREA 'A' - FIRE SPRINKLER PLAN
SCALE = 1/8" = 1'-0"

SYW	QTY	POSITION	FINISH	TEMP	K	NPT	SIN	MFG.	MODEL#	DESC/NOTCH	HEAD	BOX (2 min)
566	UPR		BRASS	200	11.20	3/4"	TY5137	TYCO	EC-11	N/A		2
21	UPR		BRASS	200	5.60	1/2"	TY3131	TYCO	TY-FRB	N/A		2
105	PEND		COLOR MATCH	155	5.60	1/2"	TY3531	TYCO	RFI	CONCEALED		2
4	SPRIG		BRASS	200	11.20	3/4"	TY5137	TYCO	EC-11	N/A		2
7	PEND		COLOR MATCH	160	11.20	3/4"	TY5522	TYCO	ELOC	CONCEALED		2
450	PEND		COLOR MATCH	200	5.60	1/2"	TY3531	TYCO	RFI	CONCEALED		2
8	SIDE		COLOR MATCH	165	5.60	1/2"	VK481	VIKING	VK	CONCEALED		2
1610	PEND		COLOR MATCH	160	4.90	1/2"	TY3596	TYCO	LFI	CONCEALED		2
17	SIDE		COLOR MATCH	155	8.00	3/4"	WK680	VIKING	WKC	CONCEALED		2
57	SIDE		COLOR MATCH	205	5.60	1/2"	VK481	VIKING	VK	CONCEALED		2
20	PEND		COLOR MATCH	155	5.60	1/2"	RA5994	RELIABLE	LT56C	CONCEALED		2
1547	SIDE		COLOR MATCH	165	4.20	1/2"	RA4835	RELIABLE	RFS	CONCEALED		2
1	UPR		BRASS	286	5.60	1/2"	TY3131	TYCO	TY-FRB	N/A		2
SPRIG			BRASS	286	11.20	3/4"	TY5137	TYCO	EC-11	N/A		2
UPR			BRASS	286	11.20	3/4"	TY5137	TYCO	EC-11	N/A		2
6	SIDE		COLOR MATCH	165	5.80	1/2"	VK490	VIKING	FREEDOM	CONCEALED		2
13	SIDE		BRASS	200	5.60	1/2"	TY3331	TYCO	TY-FRB	N/A		2
TOTAL HEADS 3454												

SPRINKLER LEGEND

PIPE LEGEND	
	BLACK STEEL SPRINKLER PIPING
	CPVC BLAZEMASTER SPRINKLER PIPING



KEY MAP / ZONE MAP

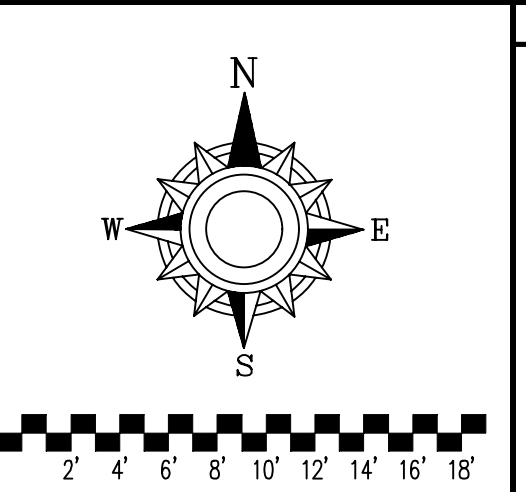
CALC PLACARD

Design Area #: 10 HAZARD: QH1
Zone: 1 System Type: WET
Location: PARKING LEVEL 2 NW CORNER
Flowing Outlets: 8
Density: .15 Remote Area: 1500
Flow 360.7 gpm @ 64.9 psi
Calculation Safety: 8.1 psi
Includes 250 gpm Hose allowance

NOTES: CALCULATED 8 HEADS IN A 1500 S.F. REMOTE AREA. NO REDUCTION USED DUE TO THE USE OF STANDARD SPRAY SPRINKLERS.

Design Area #: 11 HAZARD: QH1
Zone: 2 System Type: WET
Location: PARKING LEVEL 2 N
Flowing Outlets: 9
Density: .15 Remote Area: 1500
Flow 558.5 gpm @ 63 psi
Calculation Safety: 8.6 psi
Includes 250 gpm Hose allowance

NOTES: CALCULATED 9 HEADS IN A 1500 S.F. REMOTE AREA. NO REDUCTION USED DUE TO THE USE OF STANDARD SPRAY SPRINKLERS.



General Notes

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SPRINKLER LEGEND

SEE PLAN

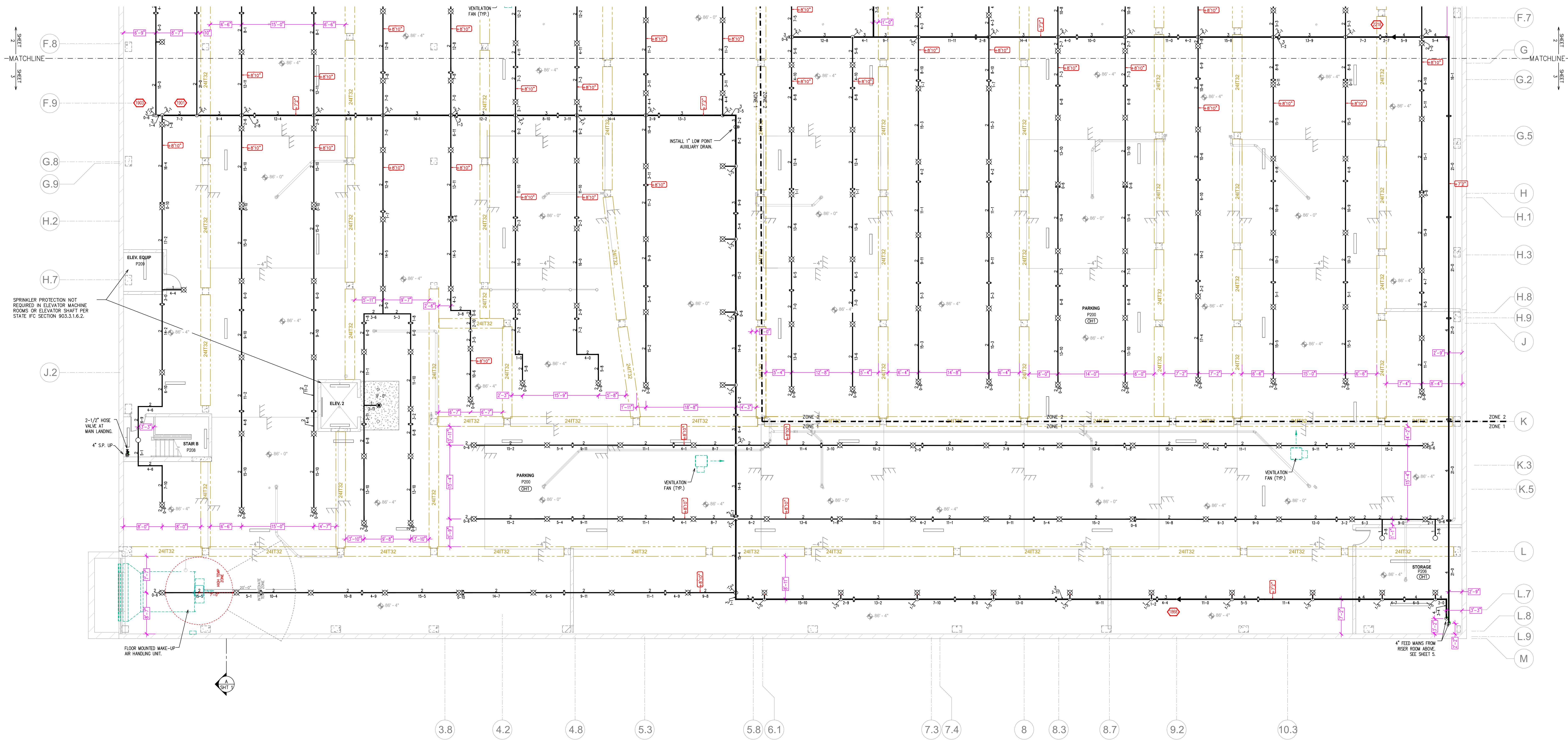
APPROVAL STAMPS

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

FIRE PROTECTION PLAN

1400 PARK AVENUE
1400 PARK AVENUE SOUTH
MINNEAPOLIS, MN 55404

Contract No. **C19-33**
Drawing Date: 09/19/2019
Scale: 1/8" = 1'-0"
Drawn By:
Approval By: STATE FIRE MARSHAL DIV.
SHEET NO. **2 of 17**



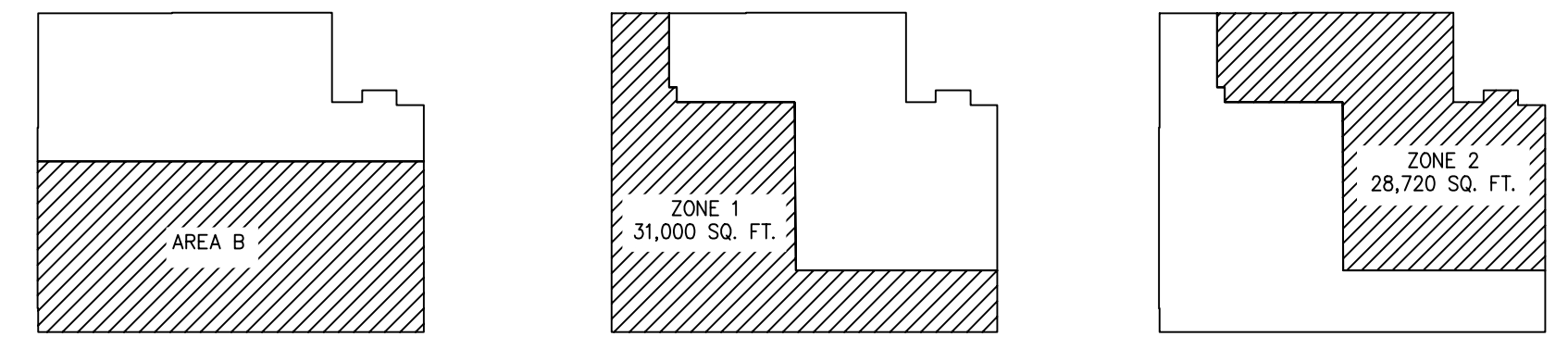
LEVEL P2 - AREA 'B' - FIRE SPRINKLER PLAN
SCALE = 1/8" = 1'-0"

SYM	ICRT	POSITION	FINISH	TEMP	K	RPT	SPR	MPG	MODEL#	ESC/OTCHECK	HEAD BOX (2 min)
566	UPR	BRASS	200	11.20	1/2"	TY5137	TYCO	EC-11	N/A		2
21	UPR	BRASS	200	5.60	1/2"	TY3131	TYCO	TY-FRB	N/A		2
105	PEND	COLOR MATCH	155	5.60	1/2"	TY3531	TYCO	RFI	CONCEALED		2
4	SPRIG	BRASS	200	11.20	3/4"	TY5137	TYCO	EC-11	N/A		2
7	PEND	COLOR MATCH	180	11.20	3/4"	TY5522	TYCO	ELOC	CONCEALED		2
490	PEND	COLOR MATCH	200	5.60	1/2"	TY3531	TYCO	RFI	CONCEALED		2
18	SIDE	COLOR MATCH	165	5.60	1/2"	WK481	VIKING	WK	CONCEALED		2
1610	PEND	COLOR MATCH	180	4.90	1/2"	TY3596	TYCO	LFI	CONCEALED		2
17	SIDE	COLOR MATCH	185	8.00	3/4"	WK680	VIKING	WKEC	CONCEALED		2
87	SIDE	COLOR MATCH	205	5.60	1/2"	WK481	VIKING	WK	CONCEALED		2
20	PEND	COLOR MATCH	155	5.60	1/2"	RA5994	RELIABLE	LT98C	CONCEALED		2
1547	SIDE	COLOR MATCH	165	4.20	1/2"	RA4835	RELIABLE	RFS	CONCEALED		2
1	UPR	BRASS	286	5.60	1/2"	TY3131	TYCO	TY-FRB	N/A		2
1	SPRIG	BRASS	286	11.20	3/4"	TY5137	TYCO	EC-11	N/A		2
1	UPR	BRASS	286	11.20	3/4"	TY5137	TYCO	EC-11	N/A		2
6	SIDE	COLOR MATCH	165	5.80	1/2"	WK490	VIKING	FREEDOM	CONCEALED		2
3	SIDE	BRASS	200	5.60	1/2"	TY3531	TYCO	TY-FRB	N/A		2

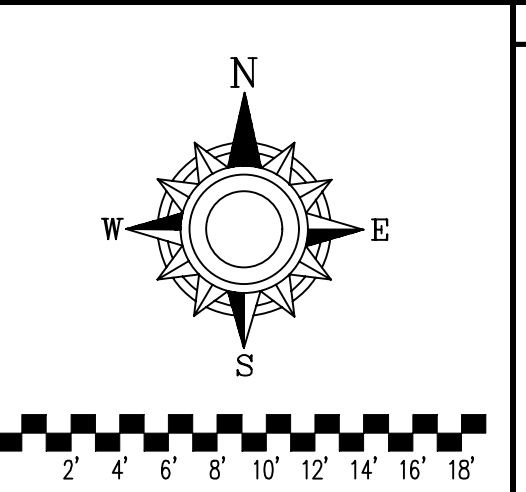
TOTAL HEADS 3454

SPRINKLER LEGEND

PIPE LEGEND	
	BLACK STEEL SPRINKLER PIPING
	OPVC BLAZEMASTER SPRINKLER PIPING



KEY MAP / ZONE MAP



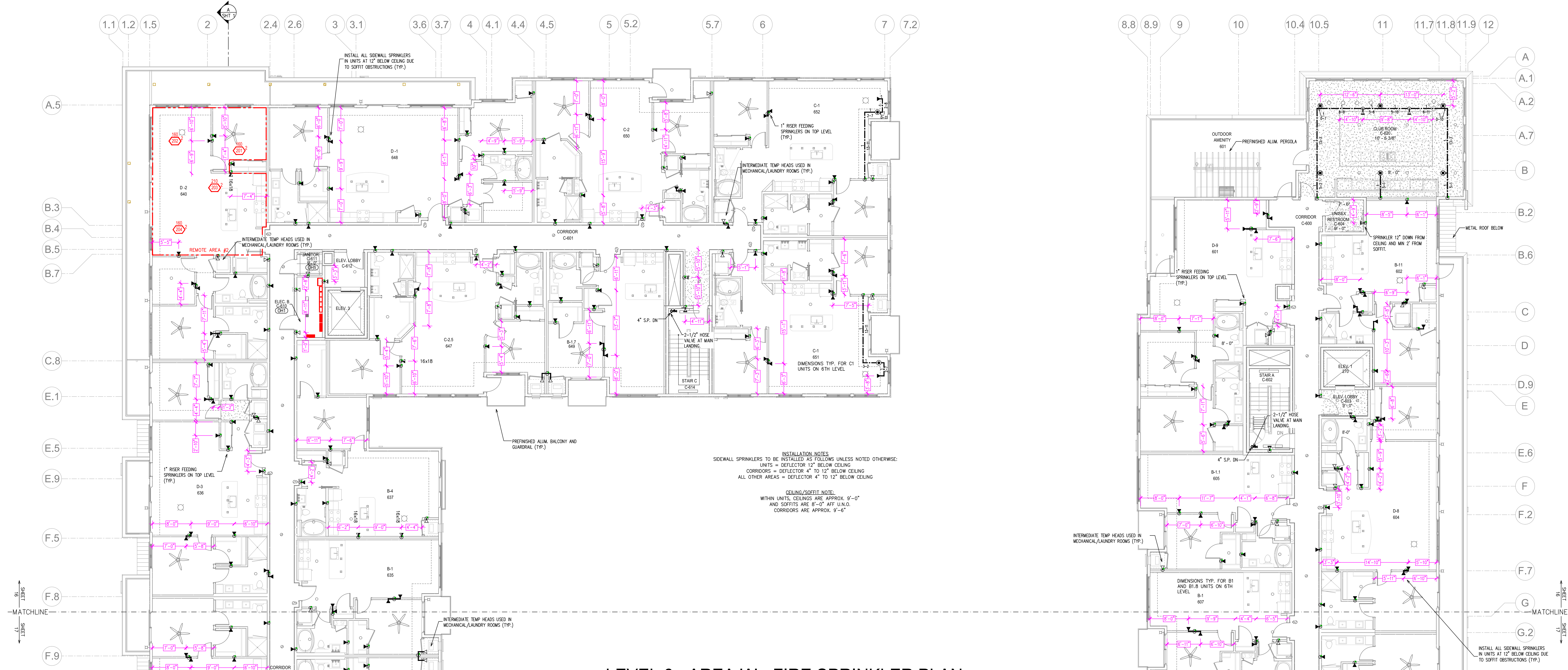
- General Notes**
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 - Hangers are to be U.L. Listed and P.M. Approved.
 - Electrical wiring, alarm, detection and supervisory by owner.
 - Owner's responsibility to provide adequate heating to prevent wet system piping from freezing.

SPRINKLER LEGEND
SEE PLAN

APPROVAL STAMPS

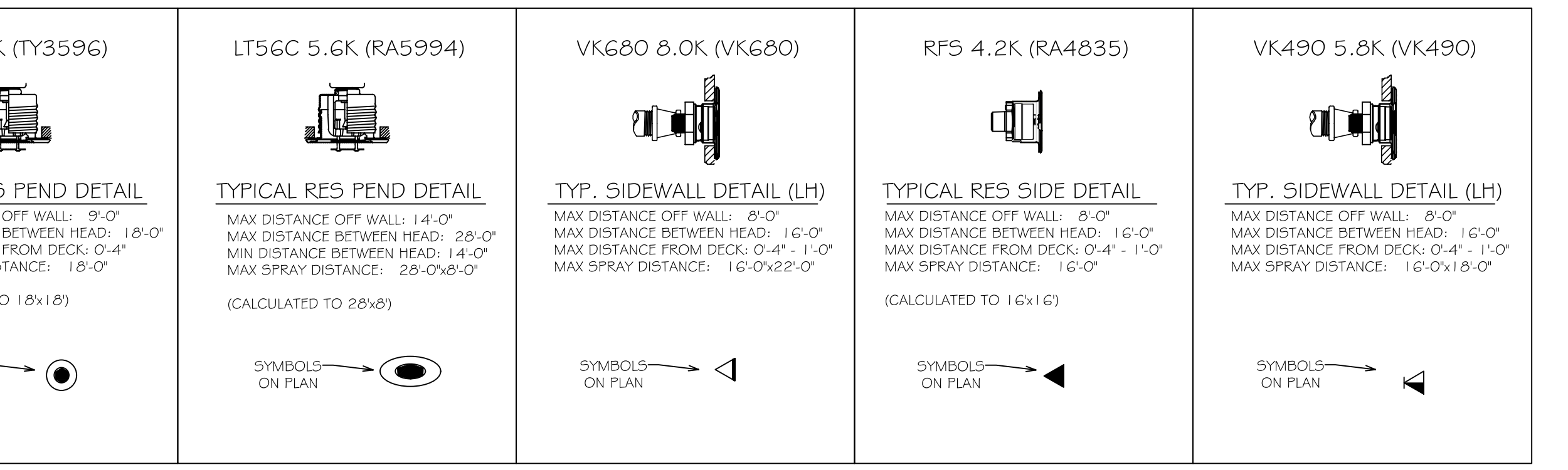
Drawing Title: **FIRE PROTECTION PLAN**
1400 PARK AVENUE
1400 PARK AVENUE SOUTH
MINNEAPOLIS, MN 55404

Contract No. **C19-33**
Drawing Date: 09/19/2019
Scale: 1/8" = 1'-0"
Drawn By:
Approval By: STATE FIRE MARSHAL DIV.
SHEET NO. **3 of 17**

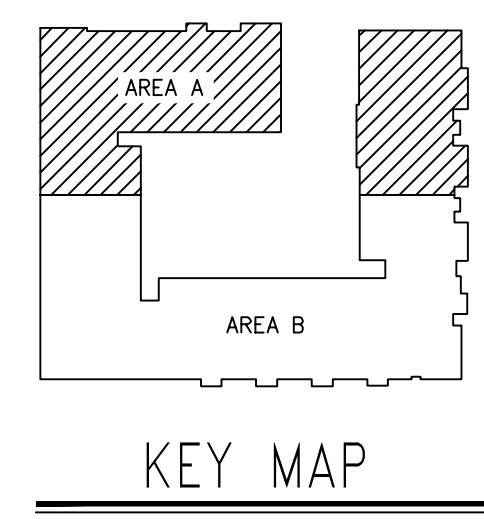


LEVEL 6 - AREA 'A' - FIRE SPRINKLER PLAN
SCALE = 1/8" = 1'-0"

SPRINKLER SPACING DETAILS



SYM	QTY	POSITION	FINISH	TEMP	K	NPT	SN	MFG.	MODEL#	ESCUTCHEON	HEAD_BOX (2 min)
566	UPR	BRASS	200	11.20	3/4"	TY5137	TYCO	EC-11	N/A		2
21	UPR	BRASS	200	5.60	1/2"	TY3131	TYCO	TY-FRB	N/A		2
105	PEND	COLOR MATCH	155	5.60	1/2"	TY3531	TYCO	RF11	CONCEALED		2
4	SPRIG	BRASS	200	11.20	3/4"	TY5137	TYCO	EC-11	N/A		2
7	PEND	COLOR MATCH	160	11.20	3/4"	TY5522	TYCO	ELDC	CONCEALED		2
450	PEND	COLOR MATCH	200	5.60	1/2"	TY3531	TYCO	RF11	CONCEALED		2
8	SIDE	COLOR MATCH	165	5.60	1/2"	VK481	VIKING	VK	CONCEALED		2
1610	PEND	COLOR MATCH	160	4.90	1/2"	TY3566	TYCO	LF11	CONCEALED		2
17	SIDE	COLOR MATCH	165	8.00	3/4"	VK680	VIKING	VK6C	CONCEALED		2
87	SIDE	COLOR MATCH	205	5.60	1/2"	VK481	VIKING	VK	CONCEALED		2
20	PEND	COLOR MATCH	155	5.60	1/2"	RA5994	RELIABLE	LT56C	CONCEALED		2
547	SIDE	COLOR MATCH	165	4.20	1/2"	RA4835	RELIABLE	RFS	CONCEALED		2
1	UPR	BRASS	286	5.60	1/2"	TY3131	TYCO	TY-FRB	N/A		2
11	SPRIG	BRASS	286	11.20	3/4"	TY5137	TYCO	EC-11	N/A		2
1	UPR	BRASS	286	11.20	3/4"	TY5137	TYCO	EC-11	N/A		2
6	SIDE	COLOR MATCH	165	5.80	1/2"	VK490	VIKING	FREEDOM	CONCEALED		2
13	SIDE	BRASS	200	5.60	1/2"	TY3531	TYCO	TY-FRB	N/A		2
TOTAL HEADS 3454											



Design Area #: 2 HAZARD: LIGHT
Zone: 3 System Type: WET
Location: UNIT 640
Flowing Outlets: 4 Remote Area: 4 SPK
Flow 174 gpm @ 68.4 psi
Calculation Safety: 9
Includes 100 gpm Hose allowance

NOTES:
CALCULATED 4 ADJACENT SPRINKLERS THAT PROVIDE THE GREATEST HYDRAULIC DEMAND, PER NFPA 13 11.3.1.1.

SPRINKLER LEGEND

	BLACK STEEL SPRINKLER PIPING
	CPVC BLAZEMASTER SPRINKLER PIPING

General Notes

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SPRINKLER LEGEND

SEE PLAN

APPROVAL STAMPS

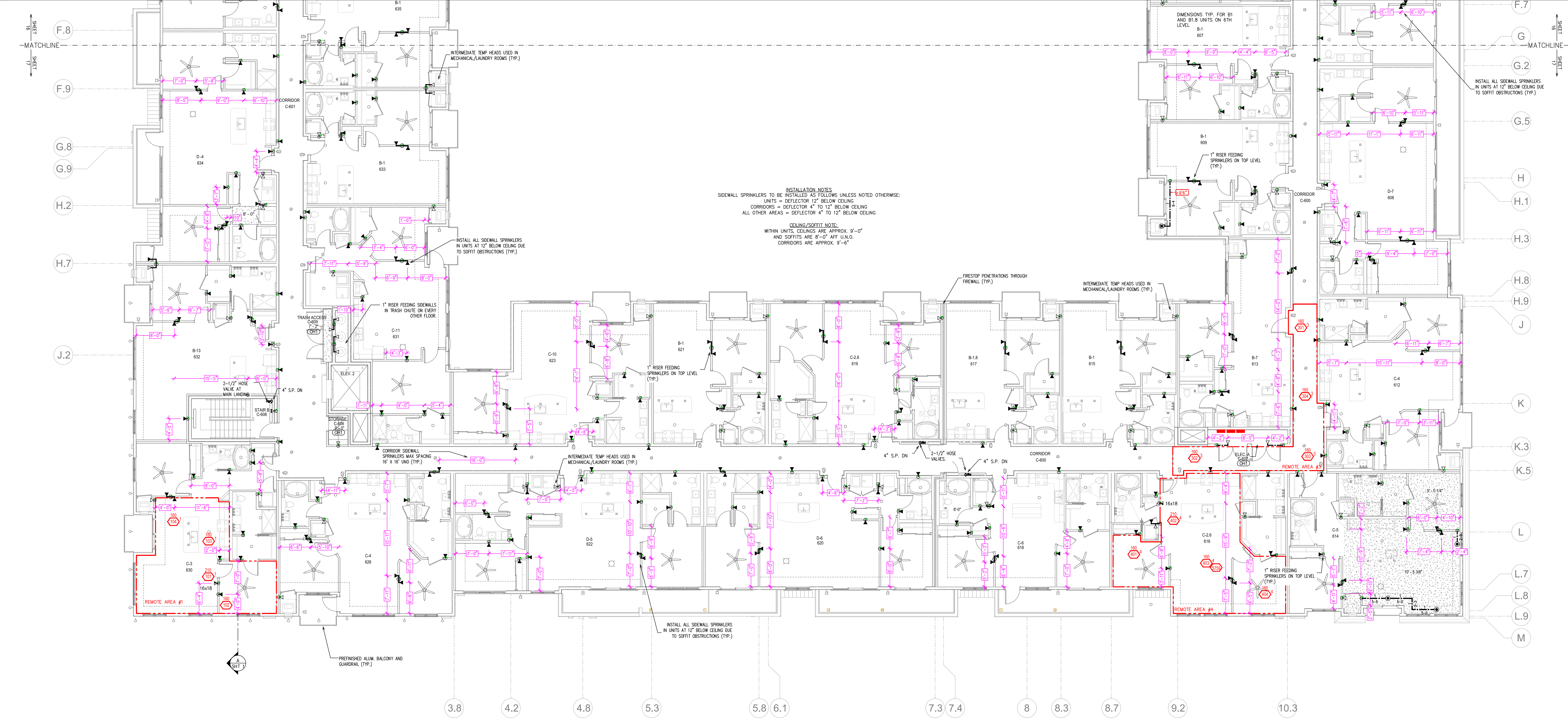


Contract No. C19-33

Drawing Title: FIRE PROTECTION PLAN

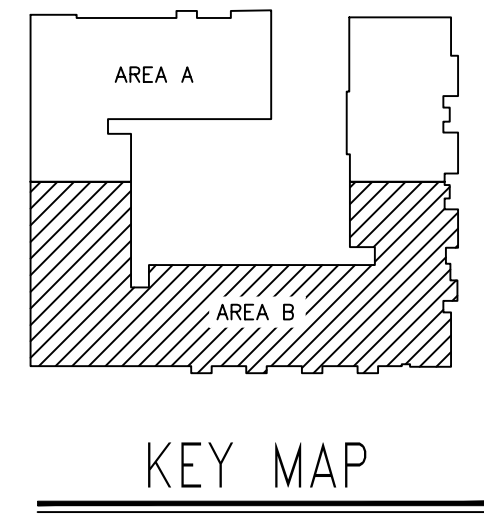
1400 PARK AVENUE
1400 PARK AVENUE SOUTH
MINNEAPOLIS, MN 55404

Drawing Date: 09/19/2019
Scale: 1/8" = 1'-0"
Drawn By:
Approval By: STATE FIRE MARSHAL DIV.
SHEET NO. 16 of 17



LEVEL 6 - AREA 'B' - FIRE SPRINKLER PLAN
SCALE= 1/8" = 1'-0"

SYM	QTY	POSITION	FINISH	TEMP	K	NPT	SNK	WPL	MODEL#	ESDUTCHEN	HEAD_BOX (2 min)
566	1	UPRR	BRASS	200	11.20	3/4"	TY3137	TYCO	EC-11	N/A	2
21	1	UPRR	BRASS	200	5.60	1/2"	TY3131	TYCO	TY-FRB	N/A	2
105	1	PEND	COLOR MATCH	155	5.60	1/2"	TY3531	TYCO	RFII	CONCEALED	2
4	1	SPRIG	BRASS	200	11.20	3/4"	TY3137	TYCO	EC-11	N/A	2
7	1	PEND	COLOR MATCH	160	11.20	3/4"	TY3522	TYCO	ELOC	CONCEALED	2
450	1	PEND	COLOR MATCH	200	5.60	1/2"	TY3531	TYCO	RFII	CONCEALED	2
8	1	SIDE	COLOR MATCH	165	5.60	1/2"	VK481	WVING	VK	CONCEALED	2
1610	1	PEND	COLOR MATCH	160	4.90	1/2"	TY3596	TYCO	LFPI	CONCEALED	2
17	1	SIDE	COLOR MATCH	165	8.00	3/4"	VK680	WVING	VKEG	CONCEALED	2
87	1	SIDE	COLOR MATCH	205	5.60	1/2"	VK481	WVING	VK	CONCEALED	2
20	1	PEND	COLOR MATCH	155	5.60	1/2"	RA5994	RELIABLE	LT56C	CONCEALED	2
547	1	SIDE	COLOR MATCH	165	4.20	1/2"	RA4835	RELIABLE	RFS	CONCEALED	2
1	1	UPRR	BRASS	286	5.60	1/2"	TY3131	TYCO	TY-FRB	N/A	2
1	1	SPRIG	BRASS	286	11.20	3/4"	TY3137	TYCO	EC-11	N/A	2
1	1	UPRR	BRASS	286	11.20	3/4"	TY3137	TYCO	EC-11	N/A	2
6	1	SIDE	COLOR MATCH	165	5.80	1/2"	VK490	WVING	FREEDOM	CONCEALED	2
5	1	SIDE	BRASS	200	5.60	1/2"	TY3331	TYCO	TY-FRB	N/A	2
TOTAL HEADS 3454											



SPRINKLER LEGEND



CALC PLACARD

Design Area #:	HAZARD:	Light
Zone: 3	System Type:	WET
Location:	UNIT 630	
Flowing Outlets: 4		
Density: 1		
Flow 173.9 gpm @ 65.6 psi		
Calculation Safety: 11.9 psi		
Includes 100 gpm hose allowance		

NOTES: CALCULATED 4 ADJACENT SPRINKLERS THAT PRODUCE THE GREATEST HYDRAULIC DEMAND, PER NFPA 13 11.3.1.1.

Design Area #:	HAZARD:	Light
Zone: 3	System Type:	WET
Location:	CORRIDOR 600	
Flowing Outlets: 4		
Density: 1		
Flow 166.6 gpm @ 58.6 psi		
Calculation Safety: 18.7 psi		
Includes 100 gpm hose allowance		

NOTES: CALCULATED 4 ADJACENT SPRINKLERS THAT PRODUCE THE GREATEST HYDRAULIC DEMAND, PER NFPA 13 11.3.1.1.

Design Area #:	HAZARD:	Light
Zone: 3	System Type:	WET
Location:	UNIT 604	
Flowing Outlets: 4		
Density: 1		
Flow 176.2 gpm @ 69.3 psi		
Calculation Safety: 8.1 psi		
Includes 100 gpm hose allowance		

NOTES: CALCULATED 4 ADJACENT SPRINKLERS THAT PRODUCE THE GREATEST HYDRAULIC DEMAND, PER NFPA 13 11.3.1.1.

SPRINKLER SPACING DETAILS

<p>RFII 5.6K (TY3531)</p> <p>TYP. PENDENT DETAIL (LH)</p> <p>MAX DISTANCE OFF WALL: 7'-0"</p> <p>MAX DISTANCE BETWEEN HEAD: 15'-0"</p> <p>MAX DISTANCE FROM DECK: 1'-0"</p> <p>MAX SPRAY DISTANCE: 15'-0"</p> <p>SYMBOLS ON PLAN</p>	<p>VK481 5.6K (VK481)</p> <p>TYP. SIDEWALL DETAIL (LH)</p> <p>MAX DISTANCE OFF WALL: 7'-0"</p> <p>MAX DISTANCE BETWEEN HEAD: 14'-0"</p> <p>MAX DISTANCE FROM DECK: 0'-4" - 1'-0"</p> <p>MAX SPRAY DISTANCE: 14'-0"</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"</p> <p>MAX DISTANCE BETWEEN HEAD: 18'-0"</p> <p>MAX DISTANCE FROM DECK: 0'-4" - 1'-0"</p> <p>MAX SPRAY DISTANCE: 18'-0"</p> <p>(CALCULATED TO 18x18)</p> <p>SYMBOLS ON PLAN</p>	<p>LT56C 5.6K (RA5994)</p> <p>TYPICAL RES PEND DETAIL</p> <p>MAX DISTANCE OFF WALL: 14'-0"</p> <p>MAX DISTANCE BETWEEN HEAD: 16'-0"</p> <p>MAX DISTANCE FROM DECK: 0'-4" - 1'-0"</p> <p>MAX SPRAY DISTANCE: 28'-0"</p> <p>(CALCULATED TO 28x28)</p> <p>SYMBOLS ON PLAN</p>	<p>VK680 8.0K (VK680)</p> <p>TYP. SIDEWALL DETAIL (LH)</p> <p>MAX DISTANCE OFF WALL: 8'-0"</p> <p>MAX DISTANCE BETWEEN HEAD: 16'-0"</p> <p>MAX DISTANCE FROM DECK: 0'-4" - 1'-0"</p> <p>MAX SPRAY DISTANCE: 16'-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"</p> <p>MAX DISTANCE BETWEEN HEAD: 16'-0"</p> <p>MAX DISTANCE FROM DECK: 0'-4" - 1'-0"</p> <p>MAX SPRAY DISTANCE: 16'-0"</p> <p>(CALCULATED TO 16x16)</p> <p>SYMBOLS ON PLAN</p>	<p>VK490 5.8K (VK490)</p> <p>TYP. SIDEWALL DETAIL (LH)</p> <p>MAX DISTANCE OFF WALL: 8'-0"</p> <p>MAX DISTANCE BETWEEN HEAD: 16'-0"</p> <p>MAX DISTANCE FROM DECK: 0'-4" - 1'-0"</p> <p>MAX SPRAY DISTANCE: 16'-0"</p> <p>SYMBOLS ON PLAN</p>
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General Notes

- System installed per NFPA-13 (2010 Edition) 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 & Eddy Pipe 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 Shows 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

APPROVAL STAMPS

910 N. SYCAMORE AVENUE, STIOUX FALLS, SD 57110 PHONE: (605) 444-9200

Drawing Title: **FIRE PROTECTION PLAN**

1400 PARK AVENUE

1400 PARK AVENUE SOUTH

MINNEAPOLIS, MN 55404

Contract No. **C19-33**

Drawing Date: 09/19/2019

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

Drawn By:

Approval By: STATE FIRE MARSHAL DIV.

SHEET NO. 17 of 17