



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

SPRINKLER SYSTEM - GENERAL INFORMATION
FOR LVL-BRIDGE DISTRICT - ZONE 1
220 MAPLE STREET DES MOINES, IA 50309

HIGH PILED STORAGE: YES NO OCCUPANCY CLASS: LIGHT/OHL
RACK STORAGE: YES NO DATE: 3/30/22

COMMODITY CLASS: N/A FLOW TEST DATA: _____
MAX STORAGE HT.: N/A FT. STATIC: 110 PSI
AISLE WIDTH MIN.: N/A FT. RESD.: 94 PSI
ENCAPSULATION: YES NO FLOW: 2981 PSI
SOLID SHELVING: YES NO PITOT: 54 PSI
FLAMMABLE/COMBUSTIBLE LIQUIDS: YES NO DATE: 10/26/21
OTHER SHELVING: YES NO LOCATION: 220 MAPLE ST

HAZARDOUS MATERIALS: YES NO LOCATION OF AUX./LOW POINT DRAINS: KYAK/BIKE ROOM 136
IDEAL PALETTES: YES NO
ANTIFREEZE SYSTEMS: YES NO

ORIGINAL MAIN DRAIN TEST RESULTS:
DRY OR AUX. SYSTEMS: YES NO STATIC: _____ PSI
LOCATION: N/A RESD: _____ PSI

NOTE: ANY BOXES LEFT BLANK FIELD FORM TO FILL OUT DURING FINAL SYSTEM TESTING AND PROJECT CLOSOUTS.

SPRINKLER SYSTEM - GENERAL INFORMATION
FOR LVL-BRIDGE DISTRICT - ZONE 2
220 MAPLE STREET DES MOINES, IA 50309

HIGH PILED STORAGE: YES NO OCCUPANCY CLASS: LIGHT/OHL
RACK STORAGE: YES NO DATE: 3/30/22

COMMODITY CLASS: N/A FLOW TEST DATA: _____
MAX STORAGE HT.: N/A FT. STATIC: 110 PSI
AISLE WIDTH MIN.: N/A FT. RESD.: 94 PSI
ENCAPSULATION: YES NO FLOW: 2981 PSI
SOLID SHELVING: YES NO PITOT: 54 PSI
FLAMMABLE/COMBUSTIBLE LIQUIDS: YES NO DATE: 10/26/21
OTHER SHELVING: YES NO LOCATION: 220 MAPLE ST

HAZARDOUS MATERIALS: YES NO LOCATION OF AUX./LOW POINT DRAINS: LOBBY 130
IDEAL PALETTES: YES NO
ANTIFREEZE SYSTEMS: YES NO

ORIGINAL MAIN DRAIN TEST RESULTS:
DRY OR AUX. SYSTEMS: YES NO STATIC: _____ PSI
LOCATION: N/A RESD: _____ PSI

NOTE: ANY BOXES LEFT BLANK FIELD FORM TO FILL OUT DURING FINAL SYSTEM TESTING AND PROJECT CLOSOUTS.

SPRINKLER SYSTEM - GENERAL INFORMATION
FOR LVL-BRIDGE DISTRICT - ZONE 3
220 MAPLE STREET DES MOINES, IA 50309

HIGH PILED STORAGE: YES NO OCCUPANCY CLASS: LIGHT/OHL
RACK STORAGE: YES NO DATE: 3/30/22

COMMODITY CLASS: N/A FLOW TEST DATA: _____
MAX STORAGE HT.: N/A FT. STATIC: 110 PSI
AISLE WIDTH MIN.: N/A FT. RESD.: 94 PSI
ENCAPSULATION: YES NO FLOW: 2981 PSI
SOLID SHELVING: YES NO PITOT: 54 PSI
FLAMMABLE/COMBUSTIBLE LIQUIDS: YES NO DATE: 10/26/21
OTHER SHELVING: YES NO LOCATION: 220 MAPLE ST

HAZARDOUS MATERIALS: YES NO LOCATION OF AUX./LOW POINT DRAINS: _____
IDEAL PALETTES: YES NO
ANTIFREEZE SYSTEMS: YES NO

ORIGINAL MAIN DRAIN TEST RESULTS:
DRY OR AUX. SYSTEMS: YES NO STATIC: _____ PSI
LOCATION: N/A RESD: _____ PSI

NOTE: ANY BOXES LEFT BLANK FIELD FORM TO FILL OUT DURING FINAL SYSTEM TESTING AND PROJECT CLOSOUTS.

SPRINKLER SYSTEM - GENERAL INFORMATION
FOR LVL-BRIDGE DISTRICT - ZONE 4
220 MAPLE STREET DES MOINES, IA 50309

HIGH PILED STORAGE: YES NO OCCUPANCY CLASS: LIGHT/OHL
RACK STORAGE: YES NO DATE: 3/30/22

COMMODITY CLASS: N/A FLOW TEST DATA: _____
MAX STORAGE HT.: N/A FT. STATIC: 110 PSI
AISLE WIDTH MIN.: N/A FT. RESD.: 94 PSI
ENCAPSULATION: YES NO FLOW: 2981 PSI
SOLID SHELVING: YES NO PITOT: 54 PSI
FLAMMABLE/COMBUSTIBLE LIQUIDS: YES NO DATE: 10/26/21
OTHER SHELVING: YES NO LOCATION: 220 MAPLE ST

HAZARDOUS MATERIALS: YES NO LOCATION OF AUX./LOW POINT DRAINS: _____
IDEAL PALETTES: YES NO
ANTIFREEZE SYSTEMS: YES NO

ORIGINAL MAIN DRAIN TEST RESULTS:
DRY OR AUX. SYSTEMS: YES NO STATIC: _____ PSI
LOCATION: N/A RESD: _____ PSI

NOTE: ANY BOXES LEFT BLANK FIELD FORM TO FILL OUT DURING FINAL SYSTEM TESTING AND PROJECT CLOSOUTS.

SPRINKLER SYSTEM - GENERAL INFORMATION
FOR LVL-BRIDGE DISTRICT - ZONE 5
220 MAPLE STREET DES MOINES, IA 50309

HIGH PILED STORAGE: YES NO OCCUPANCY CLASS: LIGHT/OHL
RACK STORAGE: YES NO DATE: 3/30/22

COMMODITY CLASS: N/A FLOW TEST DATA: _____
MAX STORAGE HT.: N/A FT. STATIC: 110 PSI
AISLE WIDTH MIN.: N/A FT. RESD.: 94 PSI
ENCAPSULATION: YES NO FLOW: 2981 PSI
SOLID SHELVING: YES NO PITOT: 54 PSI
FLAMMABLE/COMBUSTIBLE LIQUIDS: YES NO DATE: 10/26/21
OTHER SHELVING: YES NO LOCATION: 220 MAPLE ST

HAZARDOUS MATERIALS: YES NO LOCATION OF AUX./LOW POINT DRAINS: _____
IDEAL PALETTES: YES NO
ANTIFREEZE SYSTEMS: YES NO

ORIGINAL MAIN DRAIN TEST RESULTS:
DRY OR AUX. SYSTEMS: YES NO STATIC: _____ PSI
LOCATION: N/A RESD: _____ PSI

NOTE: ANY BOXES LEFT BLANK FIELD FORM TO FILL OUT DURING FINAL SYSTEM TESTING AND PROJECT CLOSOUTS.

SPRINKLER SYSTEM - GENERAL INFORMATION
FOR LVL-BRIDGE DISTRICT - ZONE 6
220 MAPLE STREET DES MOINES, IA 50309

HIGH PILED STORAGE: YES NO OCCUPANCY CLASS: LIGHT/OHL
RACK STORAGE: YES NO DATE: 3/30/22

COMMODITY CLASS: N/A FLOW TEST DATA: _____
MAX STORAGE HT.: N/A FT. STATIC: 110 PSI
AISLE WIDTH MIN.: N/A FT. RESD.: 94 PSI
ENCAPSULATION: YES NO FLOW: 2981 PSI
SOLID SHELVING: YES NO PITOT: 54 PSI
FLAMMABLE/COMBUSTIBLE LIQUIDS: YES NO DATE: 10/26/21
OTHER SHELVING: YES NO LOCATION: 220 MAPLE ST

HAZARDOUS MATERIALS: YES NO LOCATION OF AUX./LOW POINT DRAINS: KYAK/BIKE ROOM 136
IDEAL PALETTES: YES NO
ANTIFREEZE SYSTEMS: YES NO

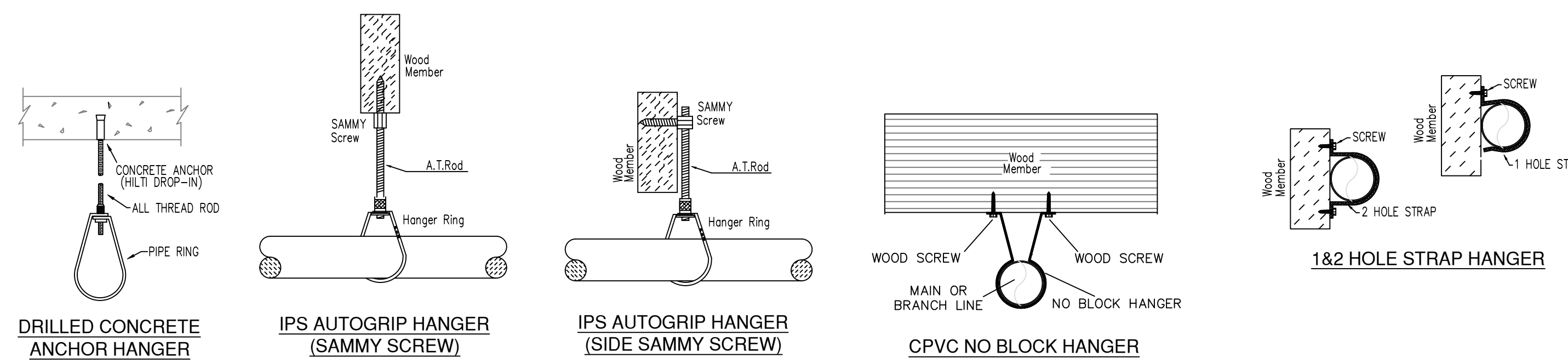
ORIGINAL MAIN DRAIN TEST RESULTS:
DRY OR AUX. SYSTEMS: YES NO STATIC: _____ PSI
LOCATION: N/A RESD: _____ PSI

NOTE: ANY BOXES LEFT BLANK FIELD FORM TO FILL OUT DURING FINAL SYSTEM TESTING AND PROJECT CLOSOUTS.

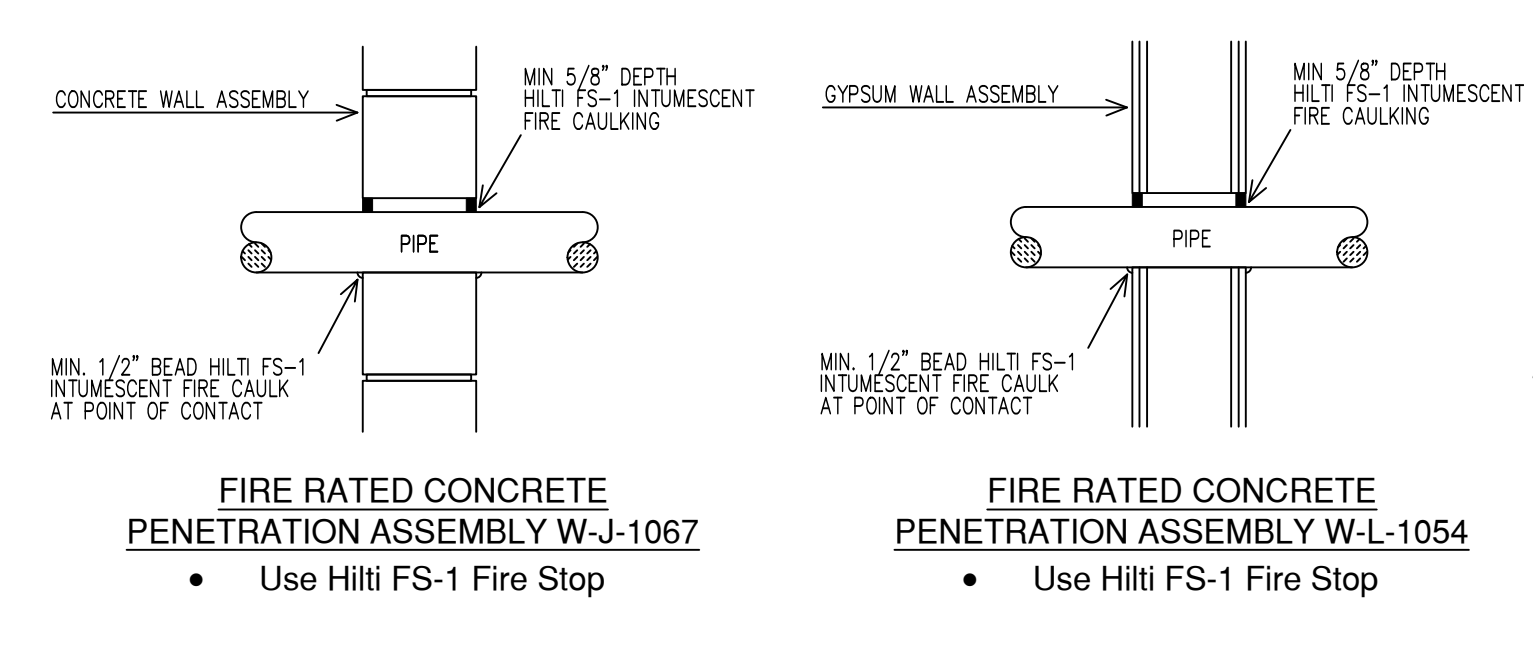
MAXIMUM DISTANCE BETWEEN HANGERS (FT.-IN.)

THREADED LIGHTWALL STEEL PIPE SPEARS FLAMEGUARD CPVC	NOMINAL PIPE SIZE (IN.)							
	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"
	NA	12-0	12-0	12-0	12-0	NA	NA	NA
	5-6	6-0	6-6	7-0	8-0	10-0	NA	NA

NFPA 13 HANGER SPACING



HANGER DETAILS



FIRE CAULKING DETAIL

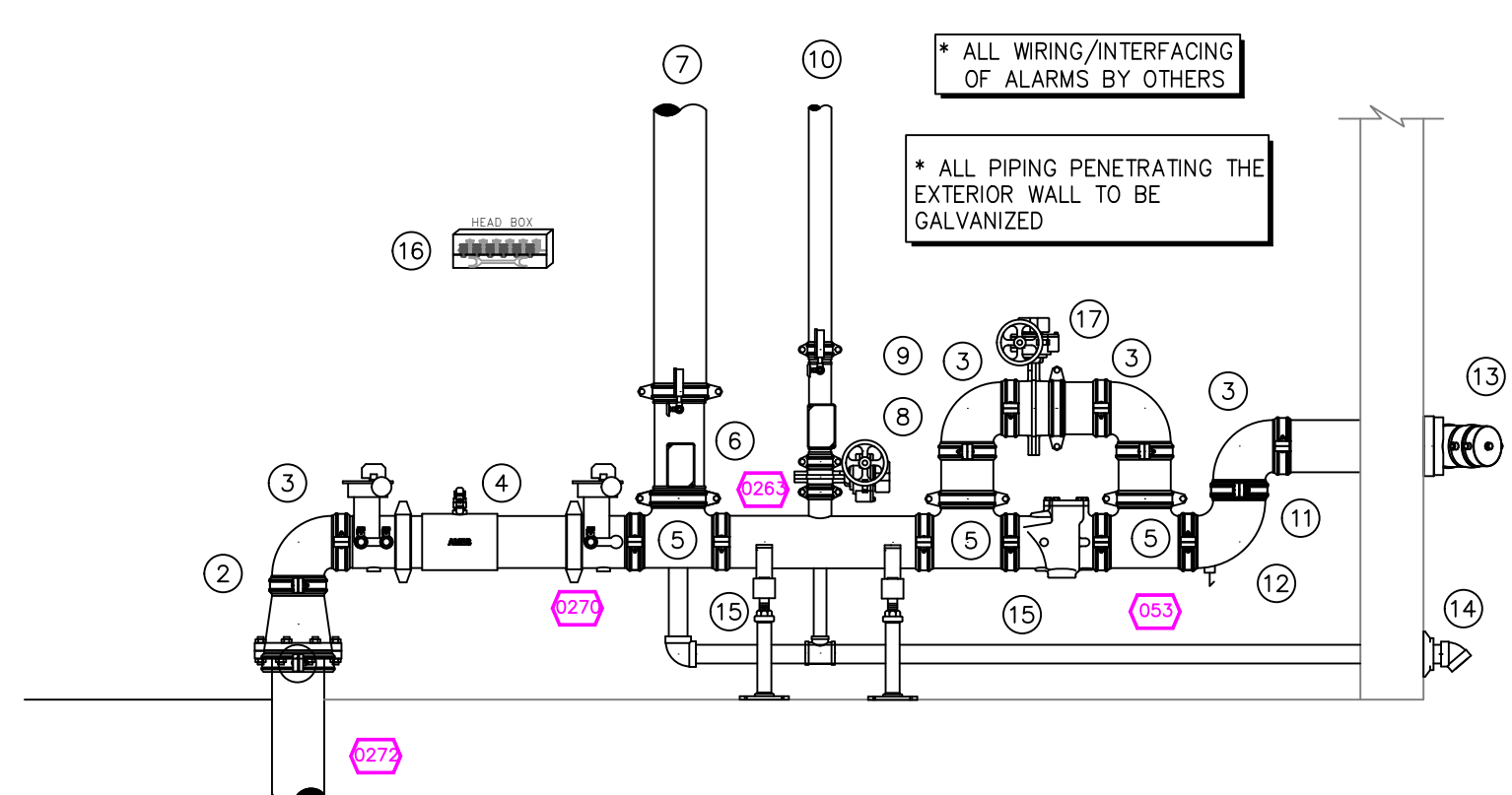
PIPE LEGEND

— BLACK STEEL SPRINKLER PIPING
— CPVC SPEARS FLAMEGUARD SPRINKLER PIPING

SYM	CONT	POSITION	FINISH	TEMP	K	NPT	ISN	MFG.	MODEL#	ESD/OTHER	MAX SPACING
916	PENDENT	WHITE	155	4.90	1/2"	RA3516	RELIABLE	FT RES	SEMI-RECESS	18X18 U.N.O.	
239	PENDENT	WHITE	200	5.60	1/2"	RA1414	RELIABLE	FTFR56	SEMI-RECESS	130 S.F. U.N.O.	
37	PENDENT	WHITE	155	5.60	1/2"	RA1414	RELIABLE	FTFR56	SEMI-RECESS	15X15	
64	SIDEWALL	WHITE	155	5.60	1/2"	RA1564	RELIABLE	DR56	SEMI-RECESS	28X8 U.N.O.	
30	SIDEWALL	WHITE	155	5.60	1/2"	RA1435	RELIABLE	FTFR56	SEMI-RECESS	14X14	
41	UPRIGHT	BRASS	200	5.60	1/2"	RA1425	RELIABLE	FTFR56	N/A	15X15 U.N.O.	
86	SIDEWALL	WHITE	200	5.60	1"	RA5714	RELIABLE	F3QR56	SEMI-RECESS	14X14	
70	UPRIGHT	BRASS	200	11.20	3/4"	RA7326	RELIABLE	JT12	N/A	18X18 U.N.O.	
3	SIDEWALL	WHITE	200	8.00	5/4"	FTFR80	RELIABLE	FTFR80	SEMI-RECESS	16X16 U.N.O.	
11	SPRIG	BRASS	200	11.20	3/4"	RA7326	RELIABLE	JT12	N/A	18X18 U.N.O.	
43	PENDENT	BRASS	155	4.90	1/2"	RA3516	RELIABLE	FT RES	N/A	18X18 U.N.O.	
8	SPRIG	BRASS	200	5.60	1/2"	RA1425	RELIABLE	FTFR56	N/A	15X15 U.N.O.	
3	SIDEWALL	WHITE	200	5.60	1"	V3510	MCTAULIC	VS1	SEMI-RECESS	14X14	
3	SIDEWALL	WHITE	200	5.60	1"	VK188	WIKING	WK-DRY	SEMI-RECESS	15X16	
179	SPRIG	BRASS	200	5.60	1/2"	WK950	N/A	N/A	N/A	14X14	
288	UPRIGHT	BRASS	288	11.20	3/4"	RA7326	RELIABLE	JT12	N/A	15X15 U.N.O.	

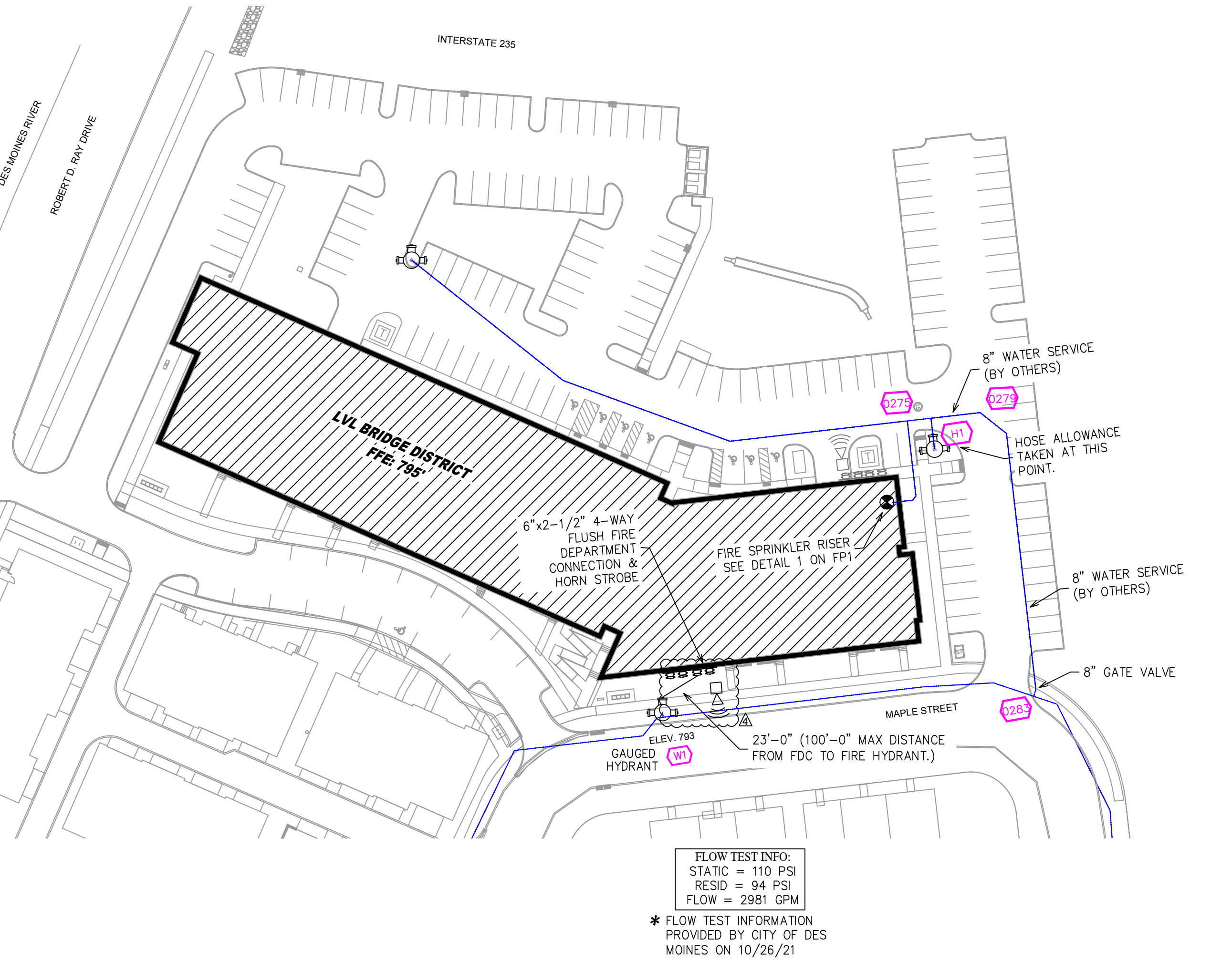
1736 TOTAL SPRINKLERS

SPRINKLER HEAD LEGEND



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

- RISER LEGEND**
- 8" GROOVED 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.
 - 6" GROOVED FLANGED ADAPTER NIPPLE
 - 6" GROOVED TEE
 - 6" AMES COLT C200 BACKFLOW G&G B/V w/ TAMPER
 - 6" GROOVED COMMERCIAL RISER MANIFOLD w/ FLOW SWITCH, PRESSURE GAUGE, & TEST AND DRAIN
 - 6" OUT TO STANDPIPE (ZONES 2-6)
 - 2 1/2" GROOVED BUTTERFLY VALVE w/ TAMPER
 - 2 1/2" GROOVED COMMERCIAL RISER MANIFOLD w/ FLOW SWITCH, PRESSURE GAUGE, & TEST AND DRAIN
 - 2 1/2" OUT TO ZONE 1
 - 6" GROOVED CHECK VALVE
 - 6" GROOVED DRAIN 90 W/AUTOMATIC BALL DRIP VALVE
 - 6" X 2-1/2" 4-WAY FDC
 - 2" MAIN DRAIN PIPED TO OUTSIDE
 - PIPE STANDS
 - SPARE HEAD BOX
 - 6" GROOVED BUTTERFLY VALVE w/ TAMPER (NORMALLY CLOSED)

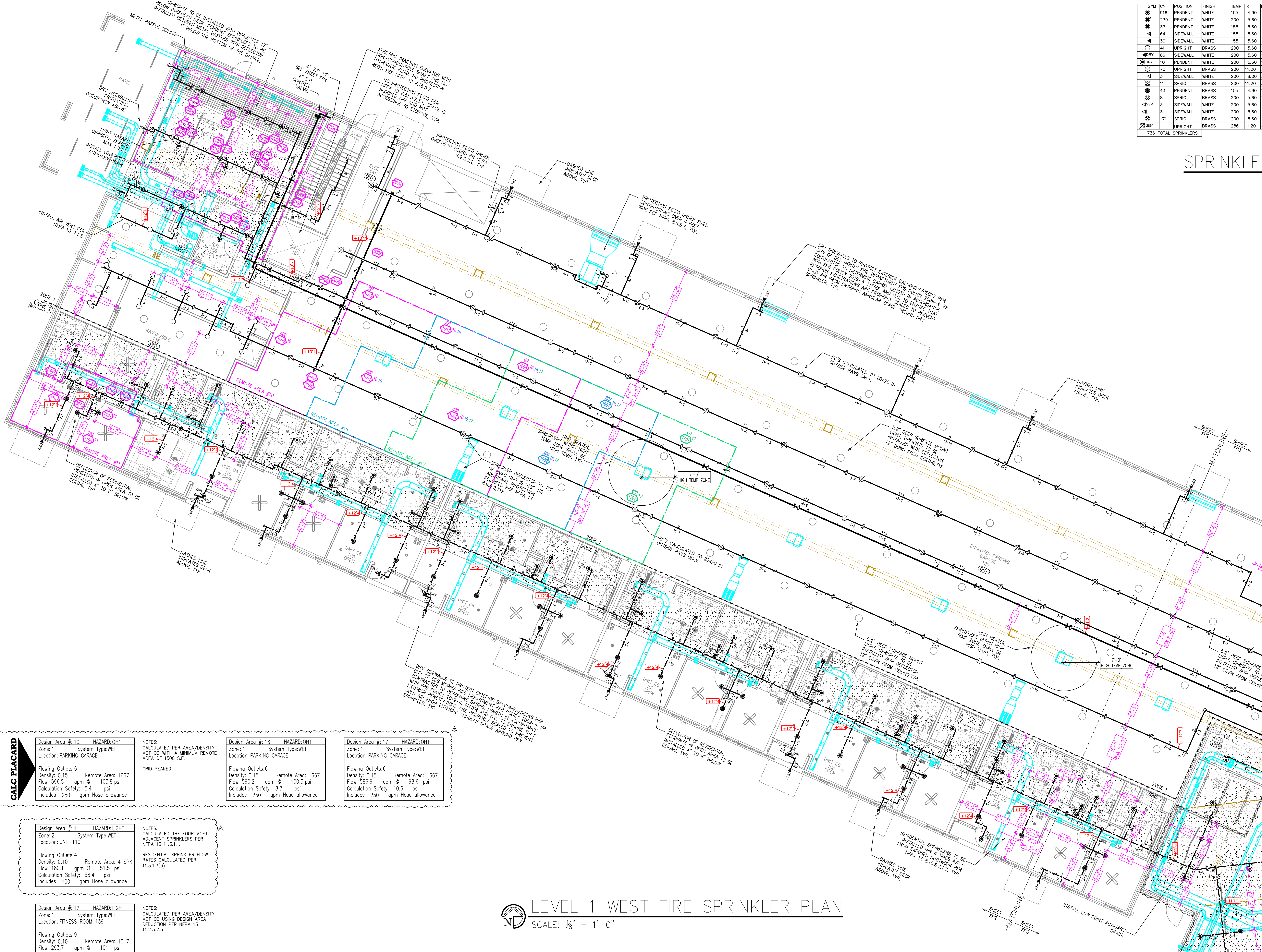


SITE PLAN
SCALE: 1" = 50'-0"

<p>IT IS THE RESPONSIBILITY OF THE OWNER TO PROVIDE THE HEAT REQUIRED TO MAINTAIN A MINIMUM TEMPERATURE OF 40°F IN THE STRUCTURE TO PREVENT FREEZING OF ANY WATER IN THE SPRINKLER SYSTEM.</p>	NO. 4	DATE 1-25-2023	REVISION RELOCATED FDC TO MAPLE STREET & REVISED STANDPIPE PLACARD - PER GC & AHJ	<p>DRY SYSTEM INFO</p> <p>CAPACITY: GALLONS</p> <p>NEEDS TO MEET @ SEC.</p> <p>LOSS REGD.</p> <p>AIR COMP MANF.</p> <p>AIR COMP MODEL</p> <p>AIR COMP SIZE</p> <p>AIR COMP VOLT</p>	<p>STOCKLIST INFO</p> <p>COLOR CODE</p> <p>LINE NO. TO</p> <p>BUY AMERICAN</p> <p>PIPE WALL SCHEDULE</p> <p>RATED PRESSURE</p> <p>MAINS</p> <p>SPECIALS</p>	<p>WATER SUPPLY</p> <p>STATIC 110 P.S.I.</p> <p>RESIDUAL 94 P.S.I.</p> <p>FLOW 2981 GPM</p> <p>TEST DATE: 10/26/21</p> <p>FIRE PUMP</p> <p>RATED PRESSURE P.S.I.</p> <p>RATED FLOW GPM</p>	<p>APPROVALS</p> <p>SPRINKLER TYPE</p> <p>FINISH</p> <p>ESB</p> <p>SIN</p> <p>MODEL</p> <p>NPT</p> <p>K</p> <p>TEMP</p> <p>QTY</p>	<p>SYSTEM TYPE</p> <p>SCALE 1/8" = 1'-0"</p> <p>DATE 3/30/22</p> <p>TOTAL MINIMUM THIS PROJECT 1735</p> <p>PIPE SIZED HYDRAULIC CALC</p> <p>CONTRACT NUMBER 20046</p>	<p>GRAPHICAL SCALE</p> <p>CONTRACT NAME</p> <p>LEVEL-BRIDGE DISTRICT 220 MAPLE STREET DES MOINES, IA 50309</p>	<p>SHEET FP1 OF 11</p>	
	<p>PROJECT MANAGER:</p> <p>N.I.C.E.T. CERTIFIED FIRE SPRINKLER SYSTEM DESIGNERS</p> <p>SYSTEM DESIGNED BY: _____</p> <p>INSURANCE AUTHORITY REFERENCE NUMBER: _____</p>		<p>TOTAL SPRINKLERS THIS DRAWING</p>		<p>CONTRACT NUMBER</p>		<p>DATE</p>		<p>SCALE</p>		<p>GRAPHICAL SCALE</p>

SYM	QTY	POSITION	FINISH	TEMP	K	NPT	SR	MFG.	MODEL#	ESCUTCHEON	MAX SPACING
⊙	916	PENDENT	WHITE	155	4.80	1/2"	RA3516	RELIABLE	F17 RES	SEMI-RECESS	18X18 U.N.O.
⊙	239	PENDENT	WHITE	200	5.60	1/2"	RA1414	RELIABLE	F1FR56	SEMI-RECESS	130 S.F. U.N.O.
⊙	37	PENDENT	WHITE	155	5.60	1/2"	RA1414	RELIABLE	F1FR56	SEMI-RECESS	15X15
◄	64	SIDEWALL	WHITE	155	5.60	1/2"	RA1564	RELIABLE	DH56	SEMI-RECESS	28X8 U.N.O.
◄	30	SIDEWALL	WHITE	155	5.60	1/2"	RA1435	RELIABLE	F1FR56	SEMI-RECESS	14X14
⊙	41	UPRIGHT	BRASS	200	5.60	1/2"	RA1425	RELIABLE	F1FR56	N/A	15X15 U.N.O.
◄	86	SIDEWALL	WHITE	200	5.60	1"	R3734	RELIABLE	F3OR	SEMI-RECESS	14X14
⊙	10	PENDENT	WHITE	200	5.60	1"	RA5714	RELIABLE	F3OR56	SEMI-RECESS	15X15
⊙	70	UPRIGHT	BRASS	200	11.20	3/4"	RA7326	RELIABLE	J112	N/A	18X18 U.N.O.
◄	3	SIDEWALL	WHITE	200	8.00	3/4"	F1FR80	RELIABLE	F1FR80	SEMI-RECESS	18X18 U.N.O.
⊙	11	SPRIG	BRASS	200	11.20	3/4"	RA7326	RELIABLE	J112	N/A	18X18 U.N.O.
⊙	43	PENDENT	BRASS	155	4.90	1/2"	RA3516	RELIABLE	F17 RES	N/A	18X18 U.N.O.
⊙	8	SPRIG	BRASS	200	5.60	1/2"	RA1425	RELIABLE	F1FR56	N/A	15X15 U.N.O.
◄	3	SIDEWALL	WHITE	200	5.60	1"	V3510	VICTAULIC	V51	SEMI-RECESS	14X14
◄	3	SIDEWALL	WHITE	200	5.60	1"	WK188	WIKING	WK-DRY	SEMI-RECESS	18X18
⊙	171	SPRIG	BRASS	200	5.60	1/2"	WK950	WIKING	WK950	N/A	14X14
⊙	286	UPRIGHT	BRASS	286	11.20	3/4"	RA7326	RELIABLE	J112	N/A	15X15 U.N.O.
1736 TOTAL SPRINKLERS											

SPRINKLER HEAD LEGEND



HAZARD: OH1

Zone: 1 System Type: WET
Location: PARKING GARAGE

Flowing Outlets: 6
Density: 0.15 Remote Area: 1667
Flow 596.5 gpm @ 103.8 psi
Calculation Safety: 5.4 psi
Includes 250 gpm Hose allowance

HAZARD: OH1

Zone: 1 System Type: WET
Location: PARKING GARAGE

Flowing Outlets: 6
Density: 0.15 Remote Area: 1667
Flow 590.2 gpm @ 100.5 psi
Calculation Safety: 8.7 psi
Includes 250 gpm Hose allowance

HAZARD: OH1

Zone: 1 System Type: WET
Location: PARKING GARAGE

Flowing Outlets: 6
Density: 0.15 Remote Area: 1667
Flow 586.9 gpm @ 98.6 psi
Calculation Safety: 10.6 psi
Includes 250 gpm Hose allowance

HAZARD: LIGHT

Zone: 2 System Type: WET
Location: UNIT 110

Flowing Outlets: 4
Density: 0.10 Remote Area: 4 SPK
Flow 180.1 gpm @ 51.5 psi
Calculation Safety: 58.4 psi
Includes 100 gpm Hose allowance

HAZARD: LIGHT

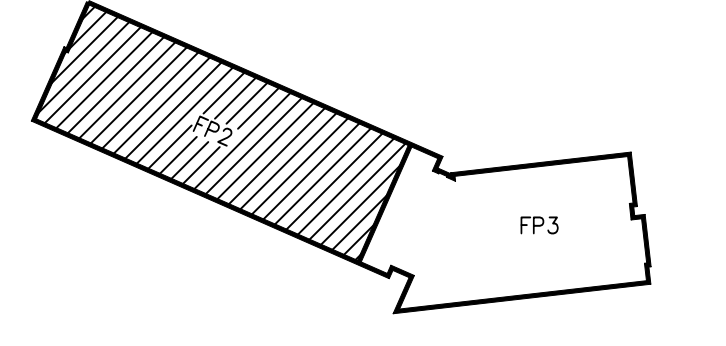
Zone: 1 System Type: WET
Location: FITNESS ROOM 139

Flowing Outlets: 9
Density: 0.10 Remote Area: 1017
Flow 293.7 gpm @ 101 psi
Calculation Safety: 8.8 psi
Includes 100 gpm Hose allowance

LEVEL 1 WEST FIRE SPRINKLER PLAN

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

PIPE LEGEND	
	BLACK STEEL SPRINKLER PIPING
	CPVC SPEARS FLAMEGUARD SPRINKLER PIPING

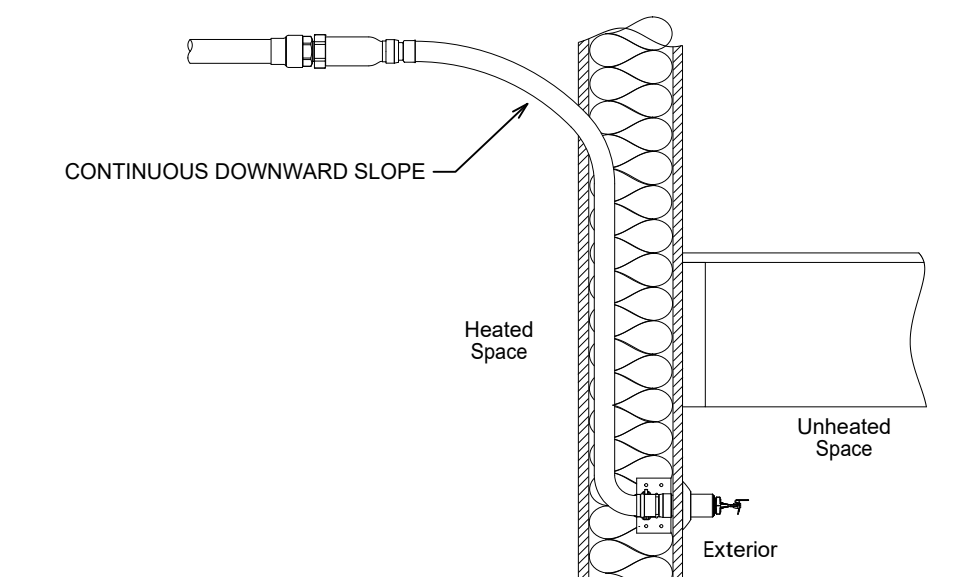


KEY PLAN

<p>IT IS THE RESPONSIBILITY OF THE OWNER TO PROVIDE THE HEAT REQUIRED TO MAINTAIN A MINIMUM TEMPERATURE OF 40°F IN THE STRUCTURE TO PREVENT FREEZING OF ANY WATER IN THE SPRINKLER SYSTEM.</p>		<p>NO. 3 DATE 9-9-2022 REVISION ADDITIONAL REMOTE AREAS ADDED TO PROVE GRID PEAK</p> <p>NO. 4 DATE 1-25-2023 REVISION CHANGED ZONE 2 TO CPVC AND RECALCULATED DESIGN AREAS</p>	<p>DRY SYSTEM INFO</p> <p>CAPACITY: GALLONS NEEDS TO MEET @ SEC. LOSS RECD. AIR COMP MANP. AIR COMP MODEL. AIR COMP SIZE. AIR COMP VOLT.</p>	<p>STOCKLIST INFO</p> <p>COLOR CODE LINE NO. TO MAIN NO. TO PIPE WALL SCHEDULE RATED PRESSURE RATED FLOW SPECIALS</p>	<p>WATER SUPPLY</p> <p>STATIC 110 P.S.I. RESIDUAL 81 P.S.I. FLOW 2881 GPM TEST DATE: 10/26/21 FIRE PUMP RATED PRESSURE P.S.I. RATED FLOW GPM</p>	<p>APPROVALS</p> <p>OWNER CITY</p>	<p>SPRINKLER TYPE</p> <p>WET</p>	<p>FINISH</p> <p>ESC.</p>	<p>SR</p> <p>MODEL</p>	<p>NPT</p> <p>K</p> <p>TEMP</p>	<p>SYM</p> <p>QTY</p>	<p>SYSTEM TYPE</p> <p>SCALE 1/8" = 1'-0"</p> <p>DATE 3/30/22</p>	<p>TOTAL SPRINKLERS THIS PROJECT</p> <p>1735</p>	<p>PIPE SIZED</p> <p>HYDRAULIC CALC</p>	<p>CONTRACT NUMBER</p> <p>20046</p>	<p>GRAPHICAL SCALE</p> <p>2' 4' 6' 8' 10' 12' 14' 16' 18' 20'</p>	<p>CONTRACT NAME</p> <p>LEVEL-BRIDGE DISTRICT 220 MAPLE STREET DES MOINES, IA 50309</p>	<p>SHEET FP2 OF 11</p>
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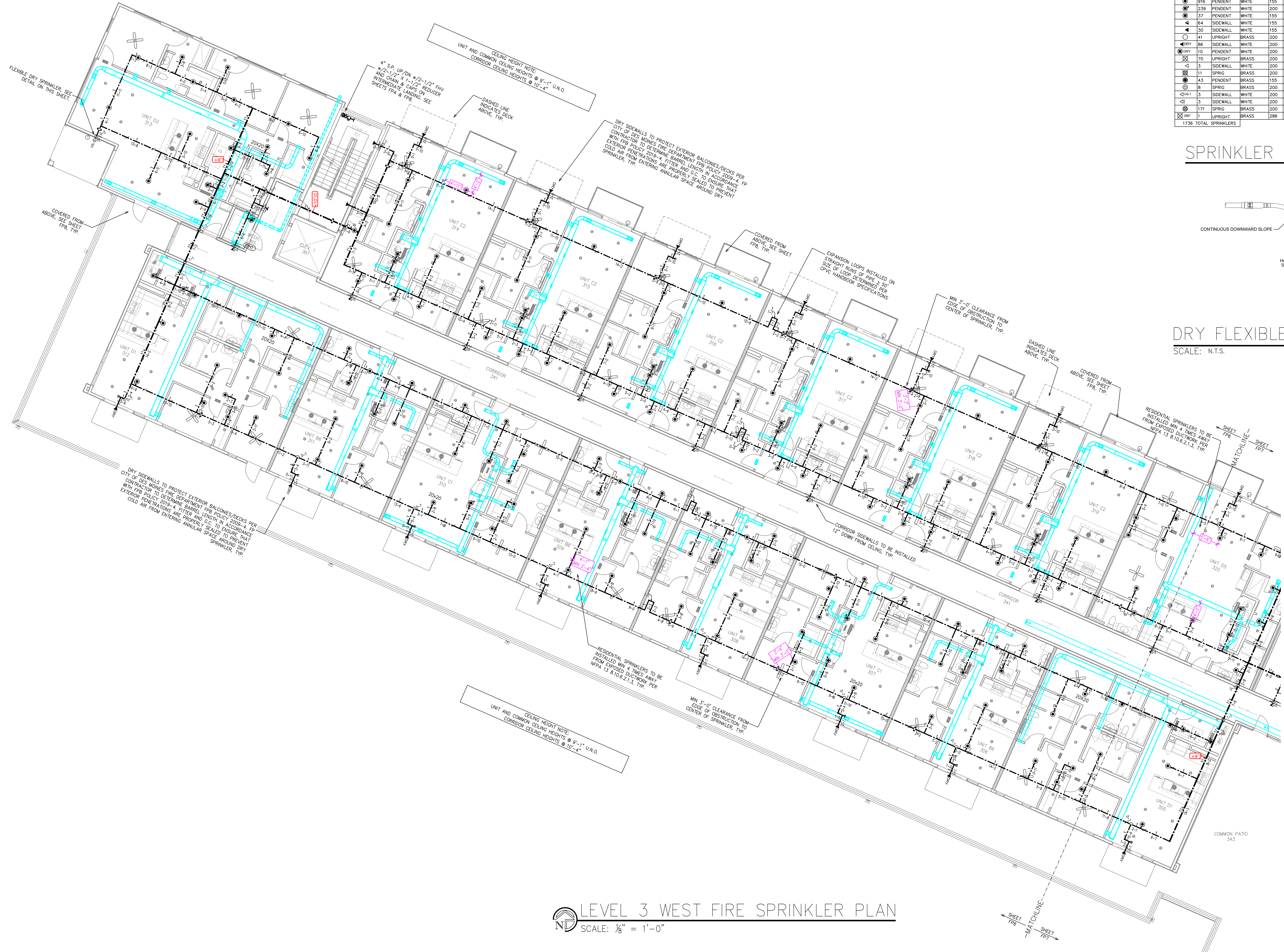
SYM	QTY	POSITION	FINISH	TEMP	K	RPT	SN	MPG	MODEL #	ESD/CHEON	MAX SPACING
⊙	916	PENDENT	WHITE	155	4.90	1/2"	RA3516	RELIABLE	F1 RES	SEMI-RECESS	18X18 U.N.O.
⊙	239	PENDENT	WHITE	200	5.60	1/2"	RA1414	RELIABLE	F1FR56	SEMI-RECESS	130 S.F. U.N.O.
⊙	37	PENDENT	WHITE	155	5.60	1/2"	RA1414	RELIABLE	F1FR56	SEMI-RECESS	15X15
⊙	64	SIDEWALL	WHITE	155	5.60	1/2"	RA1435	RELIABLE	DH56	SEMI-RECESS	28X8 U.N.O.
⊙	30	SIDEWALL	WHITE	155	5.60	1/2"	RA1435	RELIABLE	F1FR56	SEMI-RECESS	14X14
⊙	41	UPRIGHT	BRASS	200	5.60	1/2"	RA1425	RELIABLE	F1FR56	N/A	15X15 U.N.O.
⊙	96	SIDEWALL	WHITE	200	5.60	1"	RS734	RELIABLE	F3QR	SEMI-RECESS	14X14
⊙	10	PENDENT	WHITE	200	5.60	1"	RA5714	RELIABLE	F3QR56	SEMI-RECESS	15X15
⊙	70	UPRIGHT	BRASS	200	11.20	3/4"	RA7328	RELIABLE	J112	N/A	18X18 U.N.O.
⊙	3	SIDEWALL	WHITE	200	8.00	3/4"	F1FR80	RELIABLE	F1FR80	SEMI-RECESS	16X16 U.N.O.
⊙	11	SPRIG	BRASS	200	11.20	3/4"	RA7328	RELIABLE	J112	N/A	18X18 U.N.O.
⊙	43	PENDENT	BRASS	155	4.90	1/2"	RA3516	RELIABLE	F1 RES	N/A	18X18 U.N.O.
⊙	8	SPRIG	BRASS	200	5.60	1/2"	RA1425	RELIABLE	F1FR56	N/A	15X15 U.N.O.
⊙	3	SIDEWALL	WHITE	200	5.60	1"	V3510	VICTAULIC	V31	SEMI-RECESS	14X14
⊙	3	SIDEWALL	WHITE	200	5.60	1"	VK188	VIKING	VK-DRY	SEMI-RECESS	16X16
⊙	171	SPRIG	BRASS	200	5.60	1/2"	VK950	VIKING	VK950	N/A	14X14
⊙	1	UPRIGHT	BRASS	286	11.20	3/4"	RA7328	RELIABLE	J112	N/A	15X15 U.N.O.
1738 TOTAL SPRINKLERS											

SPRINKLER HEAD LEGEND



DRY FLEXIBLE SIDEWALL DETAIL

SCALE: N.T.S.



LEVEL 3 WEST FIRE SPRINKLER PLAN

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

IT IS THE RESPONSIBILITY OF THE OWNER TO PROVIDE THE HEAT REQUIRED TO MAINTAIN A MINIMUM TEMPERATURE OF 40°F IN THE STRUCTURE TO PREVENT FREEZING OF ANY WATER IN THE SPRINKLER SYSTEM.

NO.	DATE	REVISION	DRY SYSTEM INFO	STOCKLIST INFO	WATER SUPPLY	APPROVALS	SPRINKLER TYPE	FINISH	ESC.	SN	MODEL	RPT	K	TEMP	SYM	QTY	SYSTEM TYPE	SCALE	TOTAL MINIMUM THIS PROJECT	PIPE SIZED	CONTRACT NUMBER
			CAPACITY: GALLONS	COLOR CODE:	STATIC: 110 P.S.I.	OWNER											WET	1/8" = 1'-0"	1735	HYDRAULIC CALC	20046
			REQS TO MEET 69 SEC.	LINE NO. TO:	RESIDUAL: 81 P.S.I.	CITY												DATE			
			LOG RECD:	MAIN NO. TO:	FLOW: 2881 GPM													3/30/22			
			AIR COMP MANF:	BUY AMERICAN:	TEST DATE: 10/26/21																
			AIR COMP MODEL:	PIPE WALL SCHEDULE:	FIRE PUMP																
			AIR COMP SIZE:	LINES:	RATED PRESSURE: P.S.I.																
			AIR COMP VOLT:	MAINS:	RATED FLOW: GPM																
				SPECIALS:																	
TOTAL SPRINKLERS THIS DRAWING: 184																					

PROJECT MANAGER:
N.I.C.E.T. CERTIFIED FIRE SPRINKLER SYSTEM DESIGNERS
SYSTEM DESIGNED BY: JH
INSURANCE AUTHORITY REFERENCE NUMBER:

GRAPHICAL SCALE
2' 4' 6' 8' 10' 12' 14' 16' 18' 20'

CONTRACT NAME
LEVEL-BRIDGE DISTRICT
220 MAPLE STREET
DES MOINES, IA 50309

SYM	QTY	POSITION	FINISH	TEMP	K	NPT	SN	MFG.	MODEL#	ESCUTCHION	MAX SPACING
⊙	916	PENDENT	WHITE	155	4.80	1/2"	RA3516	RELIABLE	F1R56	SEM-RECESS	18X18 U.N.O.
⊙	239	PENDENT	WHITE	200	5.60	1/2"	RA1414	RELIABLE	F1FR56	SEM-RECESS	13.0 S.F. U.N.O.
⊙	37	PENDENT	WHITE	155	5.60	1/2"	RA1414	RELIABLE	F1FR56	SEM-RECESS	15X15
◄	64	SIDEWALL	WHITE	155	5.60	1/2"	RA1435	RELIABLE	DH56	SEM-RECESS	28X8 U.N.O.
◄	30	SIDEWALL	WHITE	155	5.60	1/2"	RA1435	RELIABLE	F1FR56	SEM-RECESS	14X14
⊙	41	UPRIGHT	BRASS	200	5.60	1/2"	RA1425	RELIABLE	F1FR56	N/A	15X15 U.N.O.
◄	86	SIDEWALL	WHITE	200	5.60	1"	RA734	RELIABLE	F3GR	SEM-RECESS	14X14
⊙	10	PENDENT	WHITE	200	5.60	1"	RA5714	RELIABLE	F3GR56	SEM-RECESS	15X15
⊙	70	UPRIGHT	BRASS	200	11.20	3/4"	RA7326	RELIABLE	J112	N/A	18X18 U.N.O.
◄	3	SIDEWALL	WHITE	200	8.00	3/4"	F1FR80	RELIABLE	F1FR80	SEM-RECESS	16X16 U.N.O.
⊙	11	SPRIG	BRASS	200	11.20	3/4"	RA7326	RELIABLE	J112	N/A	18X18 U.N.O.
⊙	43	PENDENT	BRASS	155	4.90	1/2"	RA3516	RELIABLE	F1R56	N/A	18X18 U.N.O.
⊙	8	SPRIG	BRASS	200	5.60	1/2"	RA1425	RELIABLE	F1FR56	N/A	15X15 U.N.O.
◄	3	SIDEWALL	WHITE	200	5.60	1"	V3510	VICTALUC	V31	SEM-RECESS	14X14
◄	3	SIDEWALL	WHITE	200	5.60	1"	VK188	VIKING	VK-DRY	SEM-RECESS	16X16
⊙	171	SPRIG	BRASS	200	5.60	1/2"	VK950	VIKING	VK950	N/A	14X14
⊙	1	UPRIGHT	BRASS	286	11.20	3/4"	RA7326	RELIABLE	J112	N/A	15X15 U.N.O.
1736 TOTAL SPRINKLERS											

SPRINKLER HEAD LEGEND



- HAZARD: LIGHT**
- Design Area #2**
 Zone: 6 System Type: WET
 Location: COMMON ROOM 541
 Flowing Outlets: 9
 Density: 0.10 Remote Area: 1009
 Flow 246.5 gpm @ 104.2 psi
 Calculation Safety: 5.6 psi
 Includes 100 gpm Hose allowance
- Design Area #3**
 Zone: 6 System Type: WET
 Location: ATTIC SPACE
 Flowing Outlets: 8
 Density: 0.10 Remote Area: 1044
 Flow 242 gpm @ 103.5 psi
 Calculation Safety: 6.4 psi
 Includes 100 gpm Hose allowance
- Design Area #4**
 Zone: 6 System Type: WET
 Location: CORRIDOR 523
 Flowing Outlets: 3
 Density: 0.10 Remote Area: 75 LF
 Flow 170.7 gpm @ 76.8 psi
 Calculation Safety: 33.1 psi
 Includes 100 gpm Hose allowance
- Design Area #5**
 Zone: 6 System Type: WET
 Location: UNIT 511
 Flowing Outlets: 4
 Density: 0.10 Remote Area: 4 SPK
 Flow 185.2 gpm @ 82.7 psi
 Calculation Safety: 27.2 psi
 Includes 100 gpm Hose allowance

NOTES: CALCULATED PER AREA/DENSITY METHOD USING DESIGN AREA REDUCTION PER NFPA 13 11.2.3.2.3.

NOTES: CALCULATED PER MANUFACTURE SPECIFICATION SHEET, 1000 S.F. OR 6 SPRINKLERS, WHICHEVER IS GREATER.

NOTES: CALCULATED ALL SPRINKLERS WITHIN 75 LF PER NFPA 13 11.2.3.3.6.

NOTES: CALCULATED THE FOUR MOST ADJACENT SPRINKLERS PER NFPA 13 11.3.1.1.

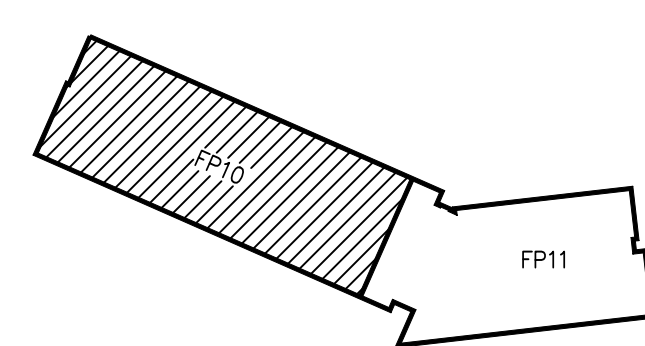
- Design Area #15** HAZARD: LIGHT
 Zone: 6 System Type: WET
 Location: ATTIC
 Flowing Outlets: 7
 Density: 0.10 Remote Area: 1055
 Flow 224.4 gpm @ 86.1 psi
 Calculation Safety: 21.7 psi
 Includes 100 gpm Hose allowance
- Design Area #19** HAZARD: LIGHT
 Zone: 6 System Type: WET
 Location: ATTIC
 Flowing Outlets: 7
 Density: 0.10 Remote Area: 1055
 Flow 223.7 gpm @ 85.2 psi
 Calculation Safety: 21.7 psi
 Includes 100 gpm Hose allowance
- Design Area #20** HAZARD: LIGHT
 Zone: 6 System Type: WET
 Location: ATTIC
 Flowing Outlets: 7
 Density: 0.10 Remote Area: 1055
 Flow 224.9 gpm @ 87.6 psi
 Calculation Safety: 22.1 psi
 Includes 100 gpm Hose allowance
- Design Area #21** HAZARD: LIGHT
 Zone: 6 System Type: WET
 Location: ATTIC
 Flowing Outlets: 7
 Density: 0.10 Remote Area: 1055
 Flow 222.8 gpm @ 87.9 psi
 Calculation Safety: 22 psi
 Includes 100 gpm Hose allowance

LEVEL 5 WEST FIRE SPRINKLER PLAN

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

PIPE LEGEND

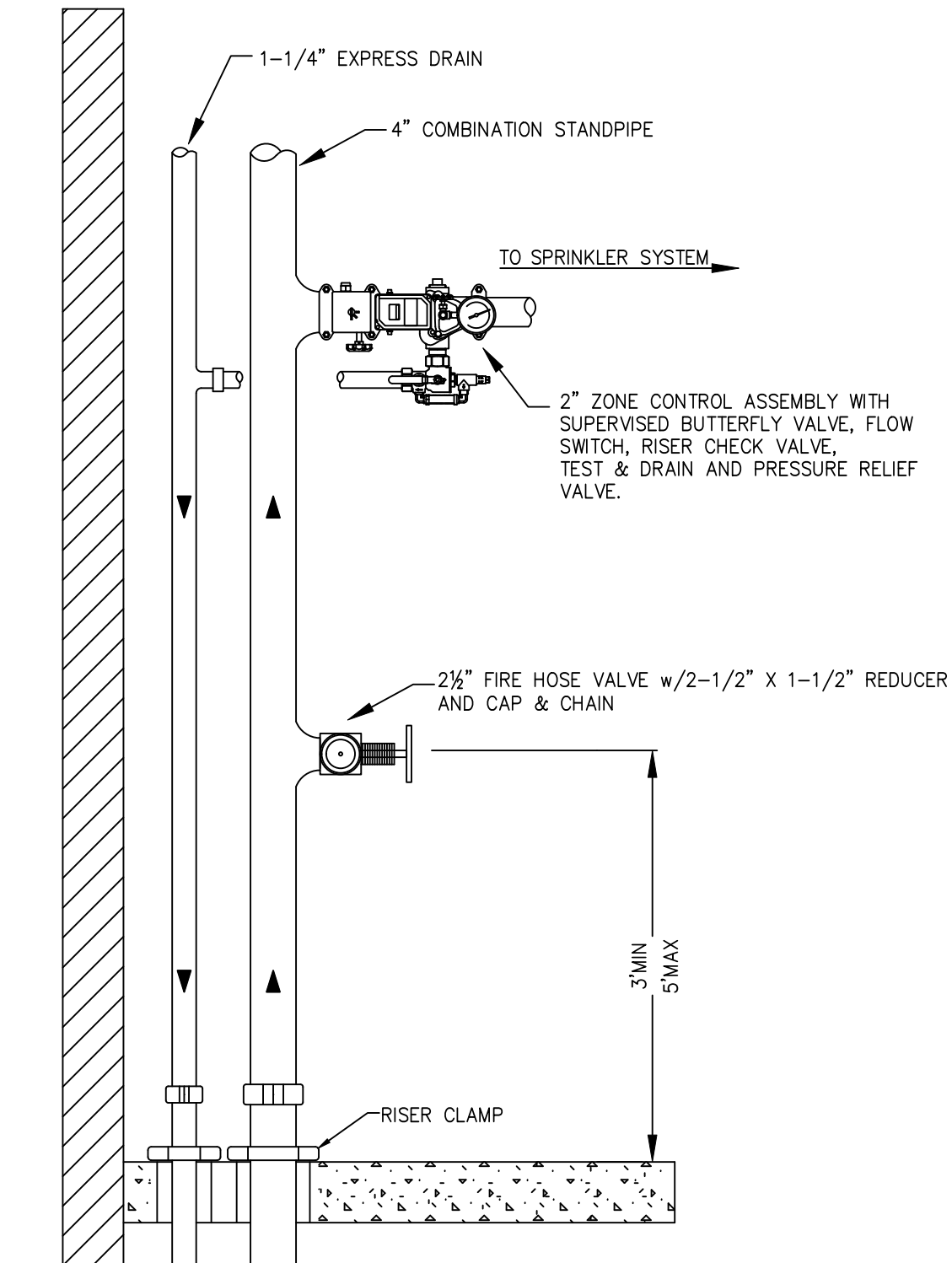
—	BLACK STEEL SPRINKLER PIPING
---	CPVC SPEARS FLAMEGUARD SPRINKLER PIPING



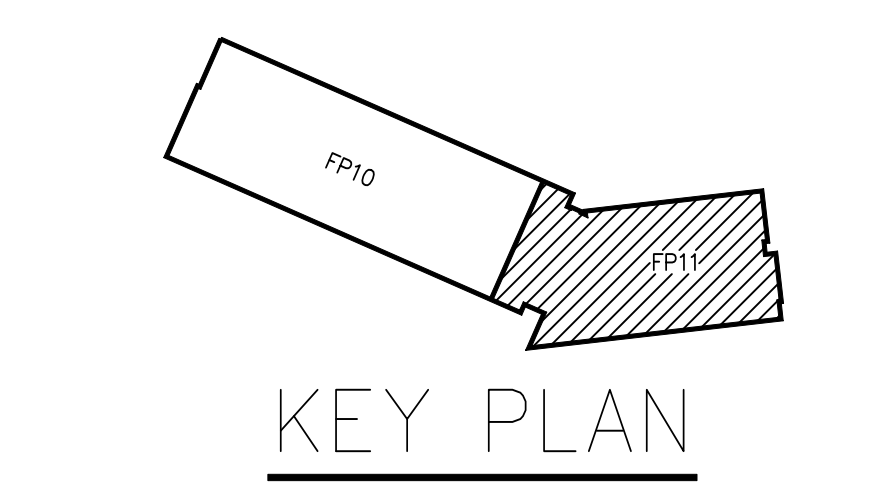
NO.	DATE	REVISION	DRY SYSTEM INFO		STOCKLIST INFO		WATER SUPPLY		APPROVALS	SPRINKLER TYPE	FINISH	ESC.	SN	MODEL	NPT	K	TEMP	SYM	QTY	SYSTEM TYPE	SCALE	TOTAL SPRINKLERS THIS PROJECT	PIPE SIZED	CONTRACT NUMBER
			CAPACITY	GALLONS	COLOR CODE	STATIC	RESIDUAL	OWNER																
1	7-13-2022	REVISED NOTES FOR FINALIZED ROOF TRUSS INFORMATION					110	8.8												WET	1/8" = 1'-0"	1735	HYDRAULIC CALC	20046
2	10-11-2022	ADDED CALC ATTIC GRID PEAKED PER CITY REVIEW COMMENTS					281	8.8													3/30/22			
3	9-8-2022	ADDITIONAL REMOTE AREAS ADDED TO PROVE GRID PEAKED																						
PROJECT MANAGER: N.I.C.E.T. CERTIFIED FIRE SPRINKLER SYSTEM DESIGNERS SYSTEM DESIGNED BY: JH INSURANCE AUTHORITY REFERENCE NUMBER:																								
GRAPHICAL SCALE 2' 4' 6' 8' 10' 12' 14' 16' 18' 20' CONTRACT NAME LEVEL-BRIDGE DISTRICT 220 MAPLE STREET DES MOINES, IA 50309																								
SHEET FP10 OF 11																								

SYM	CNT	POSITION	FINISH	TEMP	K	RPT	SN	MPG	MODEL#	ESCUTCHEON	MAX SPACING	
⊙	1916	PENDENT	WHITE	155	4.90	1/2"	RA3516	RELIABLE	F1 RES	SEMI-RECESS	18X18 U.N.O.	
⊙	239	PENDENT	WHITE	200	5.60	1/2"	RA1414	RELIABLE	F1FR56	SEMI-RECESS	130 S.F. U.N.O.	
⊙	37	PENDENT	WHITE	155	5.60	1/2"	RA1414	RELIABLE	F1FR56	SEMI-RECESS	15X15	
◀	64	SIDEWALL	WHITE	155	5.60	1/2"	RA1564	RELIABLE	DH56	SEMI-RECESS	28X8 U.N.O.	
◀	30	SIDEWALL	WHITE	155	5.60	1/2"	RA1435	RELIABLE	F1FR56	SEMI-RECESS	14X14	
⊙	41	UPRIGHT	BRASS	200	5.60	1/2"	RA1425	RELIABLE	F1FR56	N/A	15X15 U.N.O.	
◀	86	SIDEWALL	WHITE	200	5.60	1"	RS734	RELIABLE	F30R	SEMI-RECESS	14X14	
⊙	10	PENDENT	WHITE	200	5.60	1"	RA5714	RELIABLE	F30R56	SEMI-RECESS	15X15	
⊙	70	UPRIGHT	BRASS	200	11.20	3/4"	RA7326	RELIABLE	J112	N/A	18X18 U.N.O.	
◀	3	SIDEWALL	WHITE	200	8.00	3/4"	F1FR80	RELIABLE	F1FR80	SEMI-RECESS	16X16 U.N.O.	
⊙	11	SPRIG	BRASS	200	11.20	3/4"	RA7326	RELIABLE	J112	N/A	18X18 U.N.O.	
⊙	43	PENDENT	BRASS	155	4.90	1/2"	RA3516	RELIABLE	F1 RES	N/A	18X18 U.N.O.	
⊙	8	SPRIG	BRASS	200	5.60	1/2"	RA1425	RELIABLE	F1FR56	N/A	15X15 U.N.O.	
◀	3	SIDEWALL	WHITE	200	5.60	1"	V3510	VICTALIC	V51	SEMI-RECESS	14X14	
◀	3	SIDEWALL	WHITE	200	5.60	1"	VK188	VIKING	VK-DRY	SEMI-RECESS	16X16	
⊙	171	SPRIG	BRASS	200	5.60	1/2"	VK950	VIKING	VK950	N/A	14X14	
⊙	286	1	UPRIGHT	BRASS	286	11.20	3/4"	RA7326	RELIABLE	J112	N/A	15X15 U.N.O.
1736 TOTAL SPRINKLERS												

SPRINKLER HEAD LEGEND



ZONE CONTROL DETAIL
SCALE: N.T.S.



LEVEL 5 EAST FIRE SPRINKLER PLAN

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

IT IS THE RESPONSIBILITY OF THE OWNER TO PROVIDE THE HEAT REQUIRED TO MAINTAIN A MINIMUM TEMPERATURE OF 40°F IN THE STRUCTURE TO PREVENT FREEZING OF ANY WATER IN THE SPRINKLER SYSTEM.	NO.	DATE	REVISION	DRY SYSTEM INFO		STOCKLIST INFO		WATER SUPPLY		APPROVALS	SYSTEM TYPE	SCALE	TOTAL SPRINKLERS THIS PROJECT	PIPE SIZED	CONTRACT NUMBER
				CAPACITY:	GALLONS	COLOR CODE:	STATIC	110	P.S.I.	OWNER		WET	1/8" = 1'-0"	1735	HYDRAULIC CALC
				REQUIRED TO MEET @ SEC:		LINE NO. TO:	RESIDUAL	81	P.S.I.	CITY					
				LOSS REQD:		MAIN NO. TO:	FLOW	2881	GPM						
				AIR COMP MANF:		BUY AMERICAN:	TEST DATE:	10/26/21							
				AIR COMP MODEL:		PIPE WALL SCHEDULE:	FIRE PUMP								
				AIR COMP SIZE:		LINES:	RATED PRESSURE:	P.S.I.							
				AIR COMP VOLT:		MAINS:	RATED FLOW:	GPM							
						SPECIALS:									
TOTAL SPRINKLERS THIS DRAWING											191				
PROJECT MANAGER:											N.I.C.E.T. CERTIFIED FIRE SPRINKLER SYSTEM DESIGNERS				
SYSTEM DESIGNED BY:											INSURANCE AUTHORITY REFERENCE NUMBER:				
GRAPHICAL SCALE 2' 4' 6' 8' 10' 12' 14' 16' 18' 20'															
CONTRACT NAME LEVEL-BRIDGE DISTRICT 220 MAPLE STREET DES MOINES, IA 50309															
SHEET FP11 OF 11															