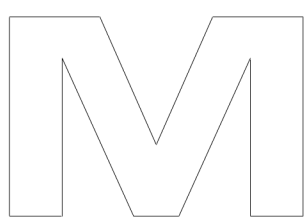


## FIRE PROTECTION PLANS



**F. E. MORAN, INC. FIRE PROTECTION**  
16815 COLLEGE BLVD.  
LENEXA, KS 66219  
(217) 356-0700 (217) 356-0777 FAX

MISSOURI COA: E-2022012018

## SCOPE OF WORK

### SCOPE OF WORK:

- \*\* FURNISH & INSTALL (11) NEW WET PIPE SPRINKLER SYSTEM FOR THE NEW BUILDING.
- \*\* FURNISH & INSTALL A NEW FIRE PUMP AND ACCESSORIES
- \*\* FIRE PUMP ROOM POINT OF CONNECTION (START OF CONTRACT): 10" FLANGE, 12" ABOVE THE FINISHED FLOOR IN THE FIRE PUMP ROOM.
- \*\*FEED RISER POINT OF CONNECTION (START OF CONTRACT): 8" FLANGE, 12" ABOVE THE FINISHED FLOOR IN THE FIRE PUMP ROOM. TWO LOCATED ON EACH END OF THE BUILDING AND ONE ON EACH SIDE.
- \*\* INSTALL (18) 2½" HOSE VALVES LOCATED AT MAN DOORS AND FED FROM ADJACENT SYSTEMS

### NOT INCLUDED:

- \*\* WIRING OF ELECTRICAL DEVICES
- \*\* FIRE EXTINGUISHERS
- \*\* STANDPIPES AND HOSE STATIONS
- \*\* FIRE PUMP CONTROLLER AUTO TRANSFER SWITCH
- \*\* UNDERGROUND PIPING AND TESTING
- \*\* COLUMN SPRINKLERS
- \*\* SEISMIC BRACING
- \*\* PAINTED PIPING
- \*\* CONCRETE PADS
- \*\* COMPONENT IDENTIFICATION BEYOND NFPA 13 REQUIREMENTS
- \*\* ACCESS PANELS
- \*\* CUTTING AND PATCHING
- \*\* PIPE SLEEVES
- \*\* WALL POST INDICATOR VALVE
- \*\* PUMP CONTROLLER AUTOMATIC TRANSFER SWITCH

## CODE INFORMATION

### CODE INFORMATION:

- \*\*NFPA 13, 2016 EDITION: INSTALLATION OF SPRINKLER SYSTEMS
- \*\*NFPA 20, 2016 EDITION: INSTALLATION OF CENTRIFUGAL FIRE PUMPS
- \*\*INTERNATIONAL BUILDING & FIRE CODE, 2018 EDITION
- \*\*LOCAL AMENDMENTS

### BUILDING INFO:

IBC OCCUPANCY CLASSIFICATION: S-1  
IBC CONSTRUCTION TYPE: I-B  
IBC SEISMIC DESIGN CATEGORY: B  
HIGHEST FLOOR ELEVATION FROM FIRE DEPARTMENT VEHICLE ACCESS: GRADE  
NUMBER OF STORIES: 1  
BUILDING AREA: 433,364 S.F.

## GENERAL REQUIREMENTS

- \*\* SUPPLY A SPARE SPRINKLER CABINET WITH WRENCH FOR EACH SPRINKLER TYPE AS REQUIRED BY NFPA 13.
- \*\* IDENTIFY ALL HYDRAULICALLY CALCULATED SYSTEMS WITH A PERMANENTLY MARKED AND WEATHERPROOF SIGN.

- \*\* ALL NEW PIPING OR PIPING MODIFICATIONS WHICH AFFECT MORE THAN 20 SPRINKLERS SHALL BE HYDROSTATICALLY TESTED AT 200 PSI OR 60 PSI OVER THE SYSTEM WORKING PRESSURE. THE SYSTEM SHALL MAINTAIN THIS PRESSURE WITHOUT LOSS FOR 2 HOURS.
- \*\* ALL NEW PIPING OR PIPING MODIFICATIONS WHICH AFFECT 20 SPRINKLERS OR LESS SHALL BE TESTED AT THE SYSTEM WORKING PRESSURE.
- \*\* ALL PIPING MODIFICATIONS WHICH CANNOT BE ISOLATED FROM THE EXISTING SYSTEM, SHALL BE TESTED AT THE SYSTEM WORKING PRESSURE.
- \*\* THE LOCAL FIRE/BUILDING INSPECTOR IS TO BE NOTIFIED 48 HOURS IN ADVANCE OF ALL TESTING.

- UNDERGROUND TESTING AND FLUSHING:  
\*\* ALL UNDERGROUND PIPE SHALL BE TESTED AND FLUSHED BY THE INSTALLING CONTRACTOR AS REQUIRED BY NFPA 24 BEFORE ANY OVERHEAD SPRINKLER PIPING IS CONNECTED.

- ALL UNDERGROUND PIPE SHALL BE TESTED AND FLUSHED BY THE INSTALLING CONTRACTOR AS REQUIRED BY NFPA 24 BEFORE ANY OVERHEAD SPRINKLER PIPING IS CONNECTED.

## VALVES

- \*\* ALL VALVES CONTROLLING WATER FLOW TO SPRINKLERS SHALL BE INDICATING & SUPERVISED.
- \*\* ALL VALVES SHALL BE ACCESSIBLE AT ALL TIMES AND PERMANENTLY IDENTIFIED.
- \*\* THE IDENTIFICATION OF CONTROL VALVES SHALL INCLUDE A DESCRIPTION OR DIAGRAM OF WHAT THEY CONTROL.
- \*\* ALL TRAPPED PORTIONS OF SPRINKLER PIPING SHALL BE PROVIDED WITH A LOW POINT DRAIN AS REQUIRED BY NFPA 13.

## PIPE HANGERS

- \*\* 2½"-6" HANGER RINGS ARE TO BE ADJUSTABLE SWIVEL RINGS, ZINC PLATED, MANUFACTURED TO ANS/MSS SP-89 STANDARDS.
- \*\* 2½"-4" CLEVIS HANGERS ARE TO BE ADJUSTABLE CLEVIS RINGS, PLAIN, MANUFACTURED TO ANS/MSS SP-69 STANDARDS.
- \*\* HANGERS AND SEISMIC BRACING ARE TO BE INSTALLED PER NFPA 13 REQUIREMENTS.
- \*\* HANGER ROD SIZES AND LOCATIONS ARE TO BE AS REQUIRED BY NFPA 13.

## DESIGN CRITERIA - LIGHT HAZARD

SPRINKLER SYSTEM DESIGN CRITERIA - LIGHT HAZARD AREA/DENSITY (WET & SINGLE INTERLOCKED PREACTION SYSTEMS):  
THE NEW SYSTEM HAS BEEN DESIGNED WITH A DESIGN DENSITY OF .10 GPM/S.F. OVER THE MOST REMOTE AND DEMANDING DESIGN AREA OF 1500 S.F. WITH 225 S.F. (15') MAXIMUM SPRINKLER HEAD SPACING AND 100 GPM OUTSIDE HOSE ALLOWANCE. WHERE ROOF OR CEILING SLOPES EXCEED A PITCH OF 2:12, THE DESIGN AREA HAS BEEN INCREASED IN SIZE BY UP TO 1950 S.F. THE DESIGN AREA MAY BE REDUCED IN SIZE IN ACCORDANCE WITH NFPA 13 DUE TO THE USE OF QUICK RESPONSE SPRINKLERS BUT SHALL NEVER CONTAIN LESS THAN 5 SPRINKLERS. TOTAL SYSTEM SIZE SHALL NOT EXCEED 52,000 S.F.

WHERE EXTENDED COVERAGE SPRINKLERS ARE UTILIZED, THE MINIMUM DESIGN AREA SHALL BE 5 SPRINKLERS WITH 400 S.F. (20') MAXIMUM SPRINKLER HEAD SPACING. EXTENDED COVERAGE SPRINKLERS SHALL NOT BE USED WHERE ROOF OR CEILING SLOPES EXCEED A PITCH OF 2:12. WHERE SPECIFICALLY LISTED FOR SUCH USE, EXTENDED COVERAGE SPRINKLERS MAY BE USED FOR ROOF OR CEILING SLOPES UP TO A 4:12 PITCH.

WHEN A REDUCTION IN THE DESIGN AREA IS NOT USED, SPRINKLER DISCHARGE IN SMALL ROOMS SUCH AS CLOSETS AND WASHROOMS CONTAINING A SINGLE SPRINKLER MAY BE OMITTED FROM THE HYDRAULIC CALCULATIONS.

DRAWING SYMBOLS	
★ 0" TS	TO TOP OF STEEL OR ROOF DECK
★ 0" TS	TO FLOOR
—	HANGER LOCATION
—	HYDRAULIC NODE
—	ELECTRIC ALARM BELL

## WET SYSTEM PIPE & FITTINGS

### WET-PIPE SPRINKLER SYSTEM BLACK PIPE:

- \*\* 1" LINE PIPING SHALL BE BLACK STEEL SCH. 40 PIPE, MANUFACTURED TO ASTM A63 OR A795 STANDARDS.
- \*\* 2½" LINE PIPING SHALL BE BLACK STEEL SCH. 7 PIPE, MANUFACTURED TO ASTM A795 STANDARDS.

- \*\* 8" MAIN PIPING SHALL BE BLACK STEEL SCH. 10 PIPE, MANUFACTURED TO ASTM A135 STANDARDS.
- \*\* 2'-6" MAIN PIPING SHALL BE BLACK STEEL SCH. 7 PIPE, MANUFACTURED TO ASTM A795 STANDARDS.

### WET-PIPE SPRINKLER SYSTEM BLACK FITTINGS:

- \*\* 1" BRANCH LINE FITTINGS SHALL BE BLACK DUCTILE IRON THREADED, CLASS 150 STANDARD, MANUFACTURED PER ANS/ASME B16.3, U.L. LISTED FOR FIRE PROTECTION USE UP TO 175 PSI WORKING PRESSURE.
- \*\* 12" - 3" BRANCH LINE PIPE OUTLETS TO BE WELDED MANUFACTURED TO ASTM A53 & ANSI B1.20.1 STANDARDS.
- \*\* 1 1/4"-3" BRANCH LINE FITTINGS SHALL BE STANDARD GROOVED DUCTILE IRON, MANUF. TO ASTM A536 STANDARDS.

- \*\* 2½"-8" MAIN PIPE BRANCH OUTLETS TO BE WELDED MANUFACTURED TO ASTM A53 & ANSI B1.20.1 STANDARDS.
- \*\* 2½"-8" MAIN PIPE FITTINGS SHALL BE STANDARD GROOVED DUCTILE IRON, MANUF. TO ASTM A536 STANDARDS.
- \*\* 2½"-8" MAIN PIPE FITTINGS SHALL BE STANDARD GROOVED STEEL, MANUF. TO ASTM A536/A53 STANDARDS.

## DESIGN CRITERIA - ESFR

### SPRINKLER SYSTEM DESIGN CRITERIA (ESFR)-PALLETIZED/SOLID-PILE/RACK STORAGE:

FROM NFPA 13, 2016 EDITION TABLE 16.3.3.1  
COMMODITY CLASSIFICATION: CLASS I, II, III OR IV, ENCAPSULATED OR UNENCAPSULATED, NO OPEN TOP CONTAINERS  
STORAGE ARRANGEMENT: PALLETIZED/SOLID-PILE/SINGLE & DOUBLE ROW RACKS WITH NO SOLID SHELVING  
CONSTRUCTION TYPE: ALL TYPES  
MAXIMUM STORAGE HEIGHT: 35 FEET  
MAXIMUM CEILING/ROOF HEIGHT: 40 FEET  
MINIMUM CLEARANCE FROM SPRINKLER DEFLECTOR TO TOP OF STORAGE: 36 INCHES  
SPRINKLER TYPE: ESFR (EARLY SUPPRESSION FAST-RESPONSE)  
SPRINKLER K-FACTOR: 16.8  
SPRINKLER TEMPERATURE RATING: 205°F  
SPRINKLER ORIENTATION: PENDENT  
MAXIMUM SPRINKLER DEFLECTOR DISTANCE BELOW CEILING: 14 INCHES  
MINIMUM SPRINKLER DEFLECTOR DISTANCE BELOW CEILING: 6 INCHES  
MAXIMUM SPRINKLER SPACING/AREA: 10 FEET/100 S.F.  
MINIMUM SPRINKLER SPACING: 8 FEET/64 S.F.  
TYPE OF SYSTEM: WET  
NUMBER OF DESIGN SPRINKLERS: 12  
MINIMUM SPRINKLER OPERATING PRESSURE: 52 PSI  
INSIDE HOSE STREAM ALLOWANCE: 0 GPM  
OUTSIDE HOSE STREAM ALLOWANCE: 250 GPM  
TOTAL HOSE STREAM ALLOWANCE: 250 GPM  
IN-RACK SPRINKLERS: NO

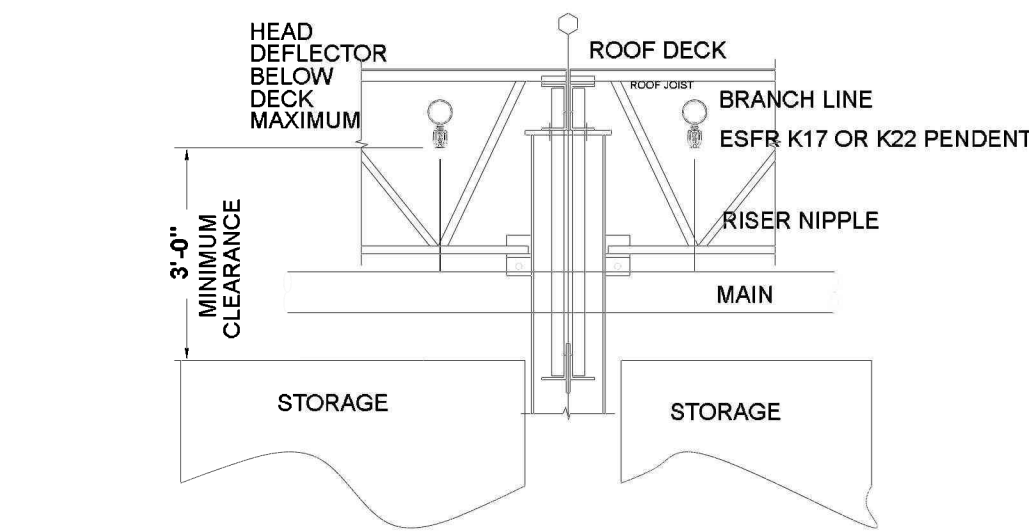
### SPRINKLER SYSTEM DESIGN CRITERIA (ESFR)-PALLETIZED/SOLID-PILE/RACK STORAGE:

FROM NFPA 13, 2016 EDITION TABLE 16.3.3.1  
COMMODITY CLASSIFICATION: CLASS I, II, III OR IV, ENCAPSULATED OR UNENCAPSULATED, NO OPEN TOP CONTAINERS  
STORAGE ARRANGEMENT: PALLETIZED/SOLID-PILE/SINGLE & DOUBLE ROW RACKS WITH NO SOLID SHELVING  
CONSTRUCTION TYPE: ALL TYPES  
MAXIMUM STORAGE HEIGHT: 40 FEET  
MAXIMUM CEILING/ROOF HEIGHT: 45 FEET  
MINIMUM CLEARANCE FROM SPRINKLER DEFLECTOR TO TOP OF STORAGE: 36 INCHES  
SPRINKLER TYPE: ESFR (EARLY SUPPRESSION FAST-RESPONSE)  
SPRINKLER K-FACTOR: 22.4  
SPRINKLER TEMPERATURE RATING: 205°F  
SPRINKLER ORIENTATION: PENDENT  
MAXIMUM SPRINKLER DEFLECTOR DISTANCE BELOW CEILING: 18 INCHES  
MINIMUM SPRINKLER DEFLECTOR DISTANCE BELOW CEILING: 6 INCHES  
MAXIMUM SPRINKLER SPACING/AREA: 10 FEET/100 S.F.  
MINIMUM SPRINKLER SPACING: 8 FEET/64 S.F.  
TYPE OF SYSTEM: WET  
NUMBER OF DESIGN SPRINKLERS: 12  
MINIMUM SPRINKLER OPERATING PRESSURE: 40 PSI  
INSIDE HOSE STREAM ALLOWANCE: 0 GPM  
OUTSIDE HOSE STREAM ALLOWANCE: 250 GPM  
TOTAL HOSE STREAM ALLOWANCE: 250 GPM  
IN-RACK SPRINKLERS: NO

SYSTEMS SHALL BE WET ONLY.

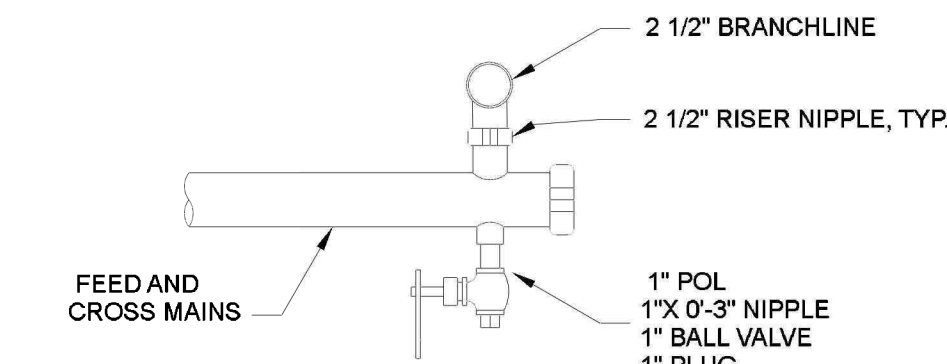
ROOF OR CEILING SLOPES SHALL NOT EXCEED A PITCH OF 2:12.

TOTAL SYSTEM SIZE SHALL NOT EXCEED 40,000 S.F. COMBINED HIGH PILED/RACK STORAGE & LIGHT/ORDINARY HAZARD SYSTEMS MAY COVER UP TO 52,000 S.F.



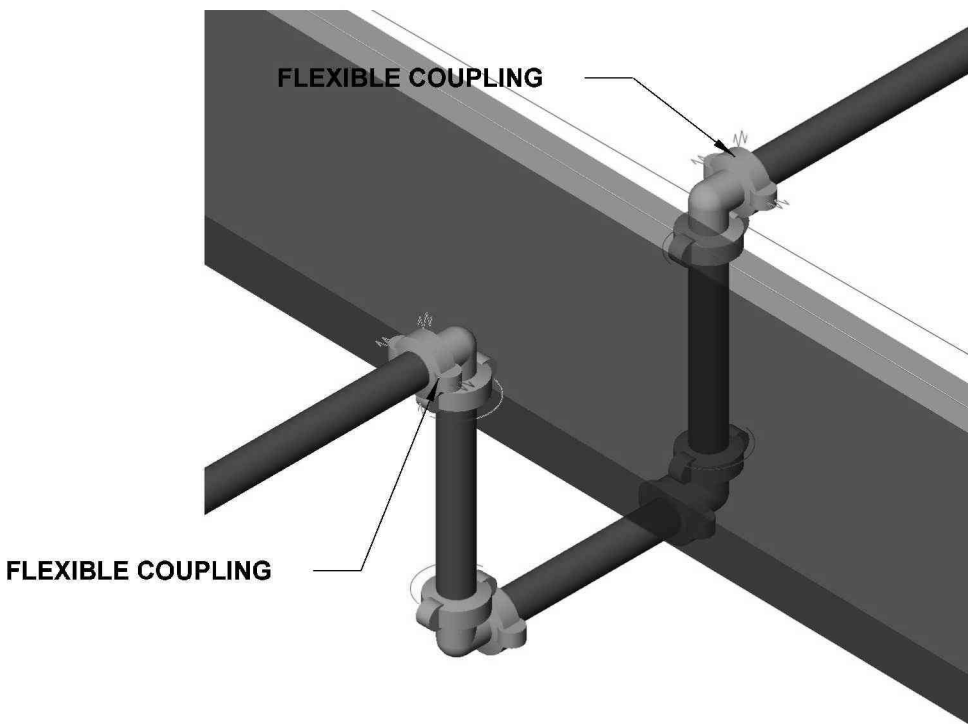
## STORAGE CLEARANCE

N.T.S.



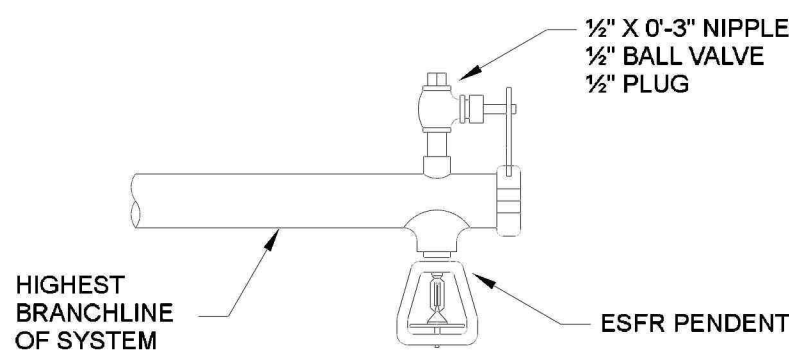
## TYPICAL DRAIN DETAIL

N.T.S.



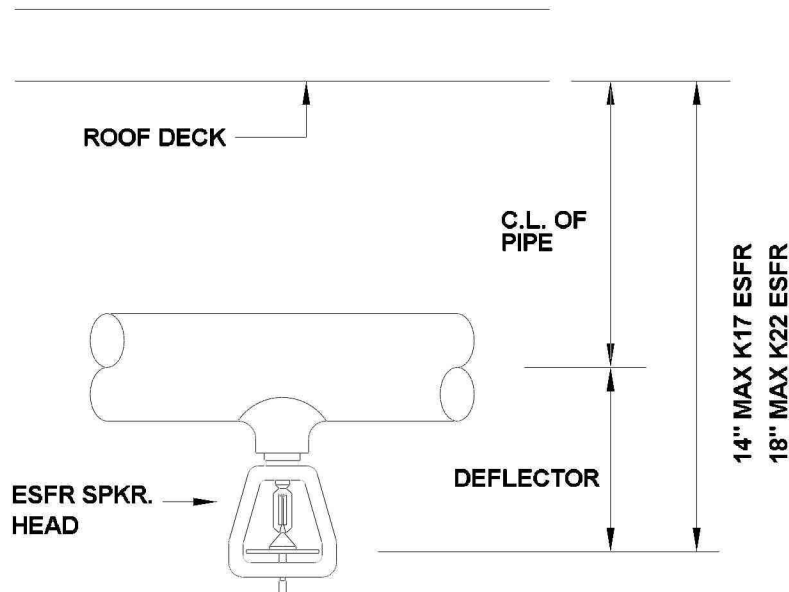
## TYPICAL LINE AT EXPANSION JOINT

N.T.S.



## MANUAL AIR VENT DETAIL

N.T.S.



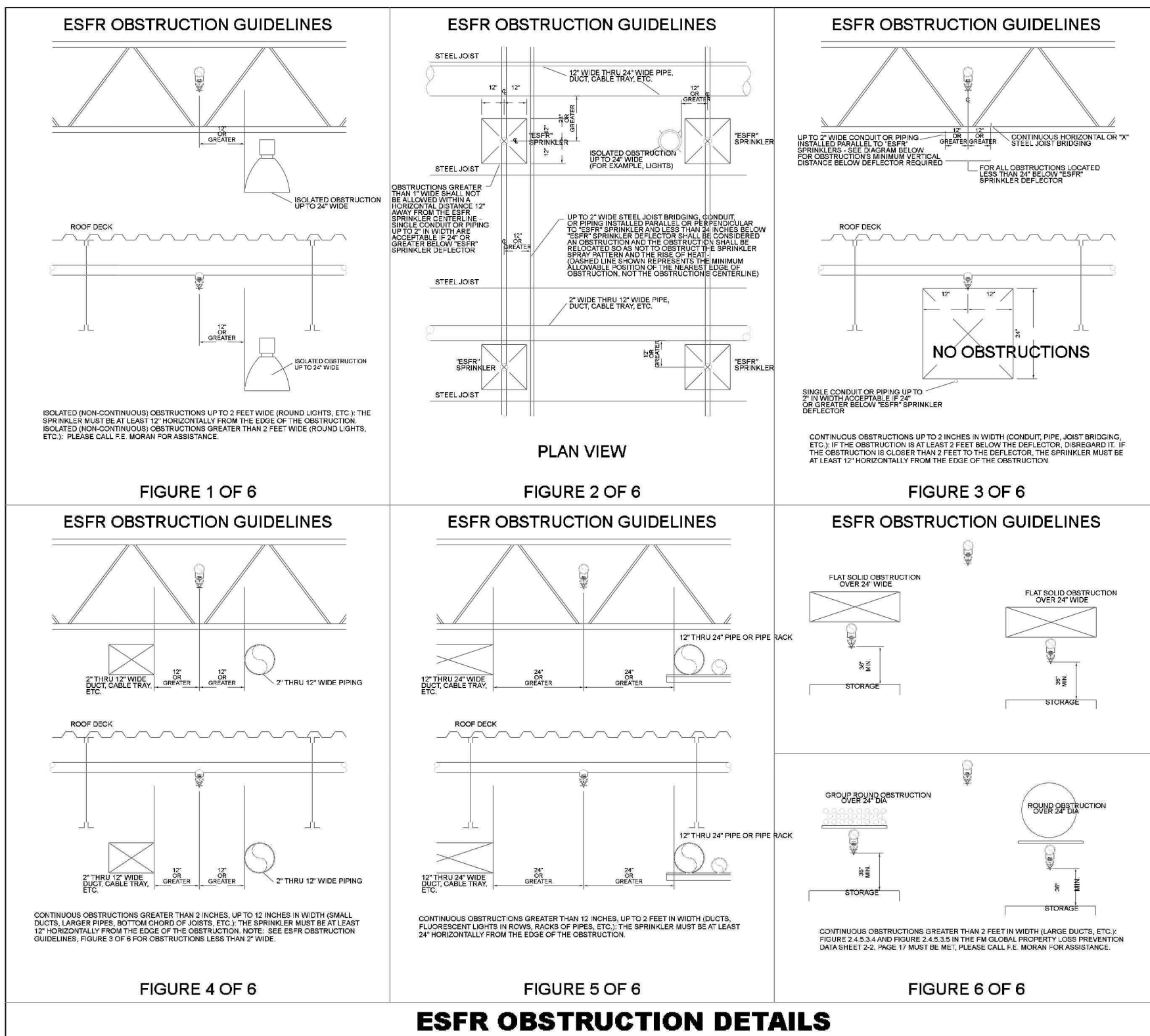
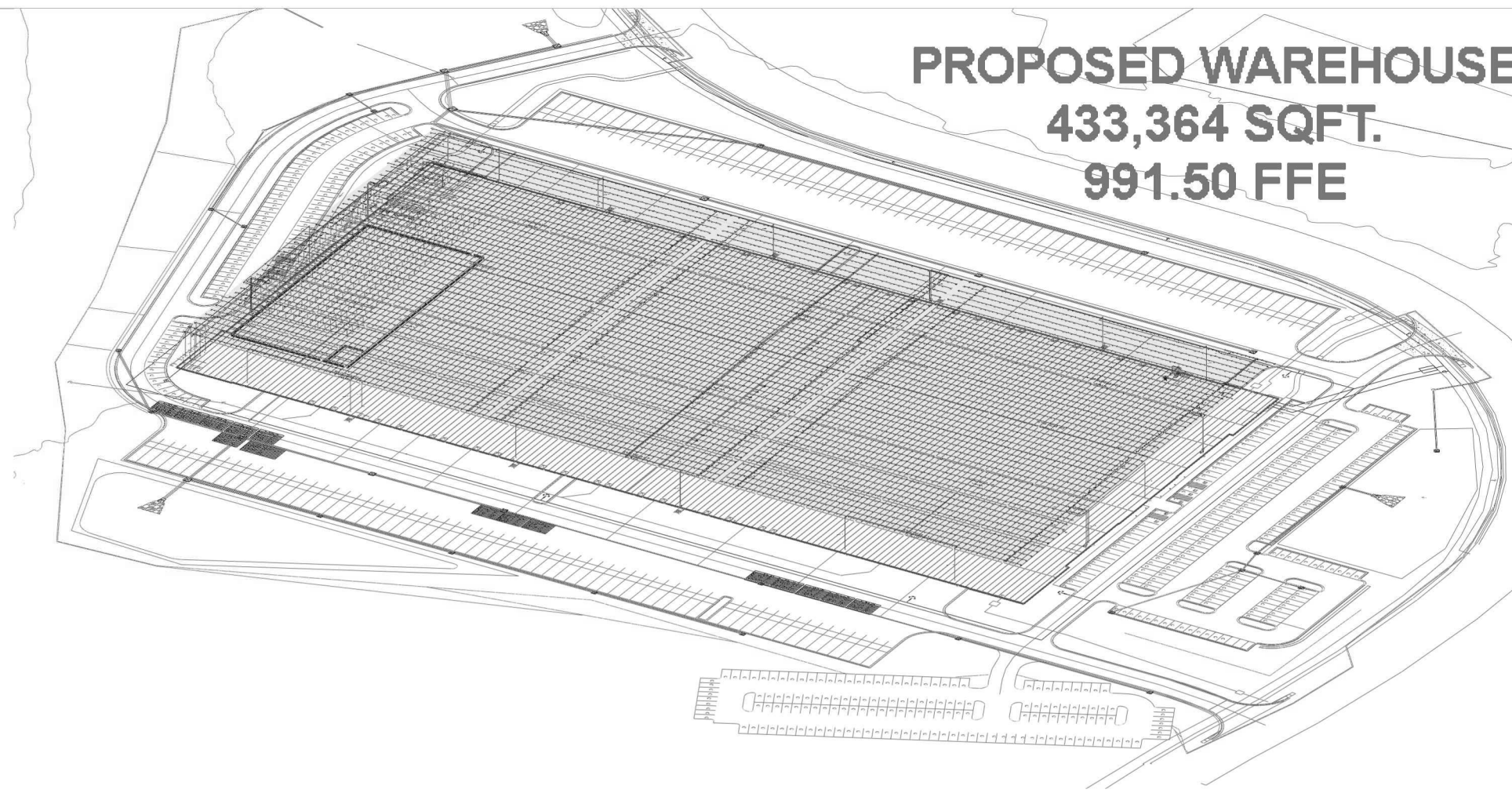
## ESFR PENDENT DETAIL

N.T.S.

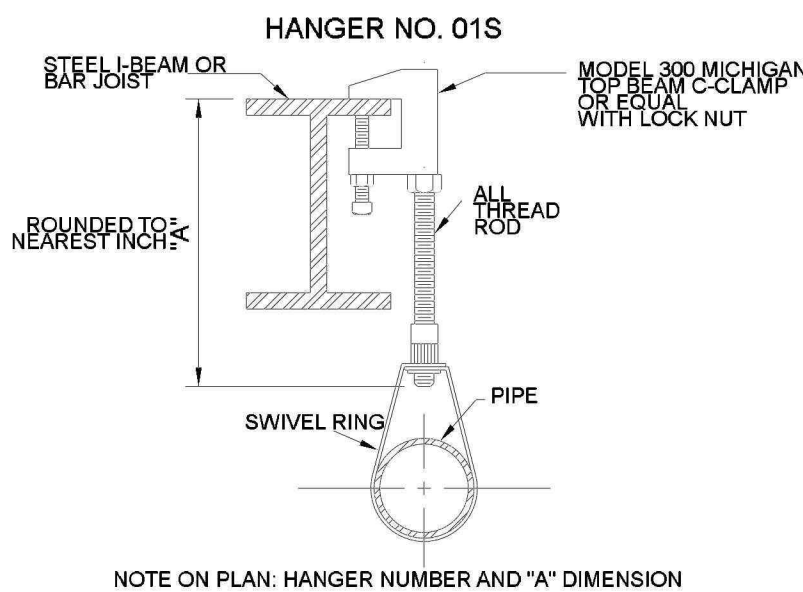
HANGER INSTALLATION REQUIREMENTS								
MAXIMUM DISTANCE BETWEEN HANGERS								
NOMINAL PIPE SIZE	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"	3"	4"
BLAZEMASTER-OPV-G	5'-6"	8'-0"	8'-8"	7'-0"	8'-0"	9'-0"	10'-0"	N/A
THREADED LIGHTWALL	N/A	12'-0"	12'-0"	12'-0"	12'-0"	12'-0"	12'-0"	N/A
STEEL PIPE (7/10/40)	N/A	12'-0"	12'-0"	15'-0"	15'-0"	15'-0"	15'-0"	15'-0"

THE UNSUPPORTED LENGTH BETWEEN THE END SPRINKLER AND THE LAST HANGER ON THE LINE SHALL NOT EXCEED 36" FOR 1" PIPE, 48" FOR 1 1/4" PIPE AND 60" FOR 1 1/2" PIPE OR LARGER

THE CUMULATIVE HORIZONTAL LENGTH OF AN UNSUPPORTED ARMOR TO A SPRINKLER, SPRINKLER DROP, OR SPRIG-UP SHALL NOT EXCEED 24"



## ESFR OBSTRUCTION DETAILS



## TOP BEAM C-CLAMP DETAIL

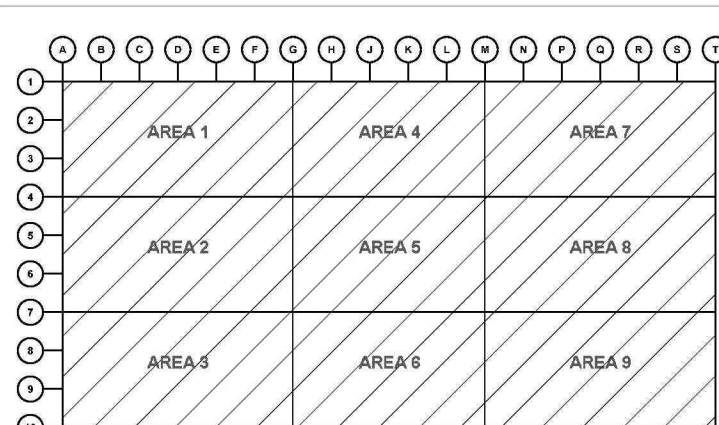
N.T.S.

## DRAWING INDEX

FP0-0- SYSTEM NOTES  
FP1-0- HYDRAULIC SITE PLAN  
FP2-0- OVERHEAD PIPING PLAN  
FP2.1.1- AREA 1: SYSTEMS 1-2  
FP2.1.2- AREA 1: SYSTEMS 1-2 (CONT.)  
FP2.2.1- AREA 2: SYSTEMS 2-3  
FP2.2.2- AREA 2: SYSTEMS 2-3 (CONT.)  
FP2.3.1- AREA 3: SYSTEMS 3-4  
FP2.3.2- AREA 3: SYSTEMS 3-4 (CONT.)  
FP2.4- AREA 4: SYSTEM 05  
FP2.5- AREA 5: SYSTEM 06  
FP2.6- AREA 6: SYSTEM 07  
FP2.7.1- AREA 7: SYSTEMS 08-09  
FP2.7.2- AREA 7: SYSTEMS 08-09 (CONT.)  
FP2.8.1- AREA 8: SYSTEMS 09-10  
FP2.8.2- AREA 8: SYSTEM 09-10 (CONT.)  
FP2.9.1- AREA 9: SYSTEMS 10-11  
FP2.9.2- AREA 9: SYSTEMS 10-11 (CONT.)  
FP3-0- FIRE PUMP & RISER DETAIL



JASIEL COLBERT  
NICET LEVEL 1  
AUTO. SPRINKLER SYS. LAYOUT  
VALID THROUGH MARCH 03, 2025



## KEY PLAN



**CURRAN**  
ARCHITECTURE

5719 LAWTON LOOP E. DR. #212  
INDIANAPOLIS, IN 46216  
O :: 317.288.0681  
F :: 317.288.0753



**SCANNELL**  
PROPERTIES

## CERTIFICATION



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## PROJECT INFORMATION

LEE'S SUMMIT LOGISTICS

BUILDING A LOT I

NW CORNER OF  
NE TUDOR RD & MAIN ST  
LEE'S SUMMIT, MO 64086

## ISSUE DATES

PERMIT SET 02.18.22

TENANT IMPROVEMENT 09.07.22

210300

## FP0.0

SYSTEM NOTES

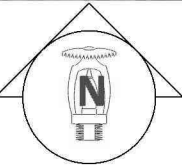


ALL UNDERGROUND PIPING AND  
APPURTENANCES WILL BE PROVIDED BY  
OTHERS



VICINITY SITE MAP

N.T.S.



WATER FLOW TEST DATA	
DATE	03.31.2022
STATIC PRESSURE	97 PSI (980 ELEV.)
RESIDUAL PRESSURE	88 PSI @ 1900 GPM
SOURCE INFO	LEE'S SUMMIT WATER UTILITIES



**CURRAN**  
ARCHITECTURE

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INDIANAPOLIS, IN 46216  
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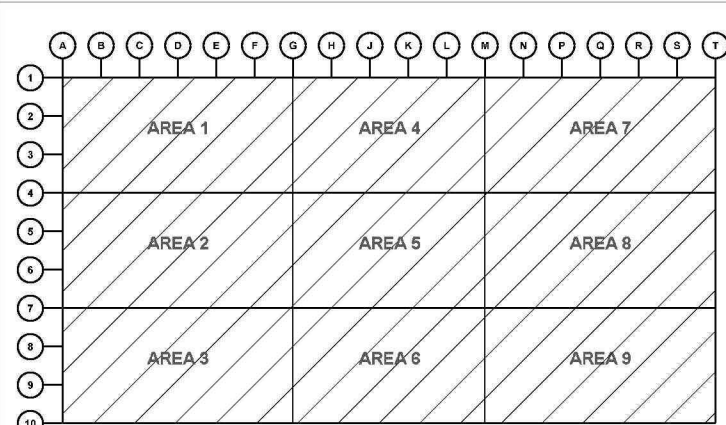
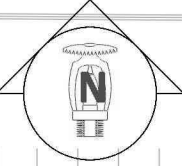
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**FP1.0**  
HYDRAULIC SITE  
PLAN

PROPOSED WAREHOUSE  
433,364 SQFT.  
991 FFE

HYDRAULIC SITE PLAN

SCALE: 1" = 40'-0"



KEY PLAN





\_\_\_\_\_



## PROJECT INFORMATION

NW CORNER OF  
NE TUDOR RD & MAIN ST  
LEE'S SUMMIT, MO 64086

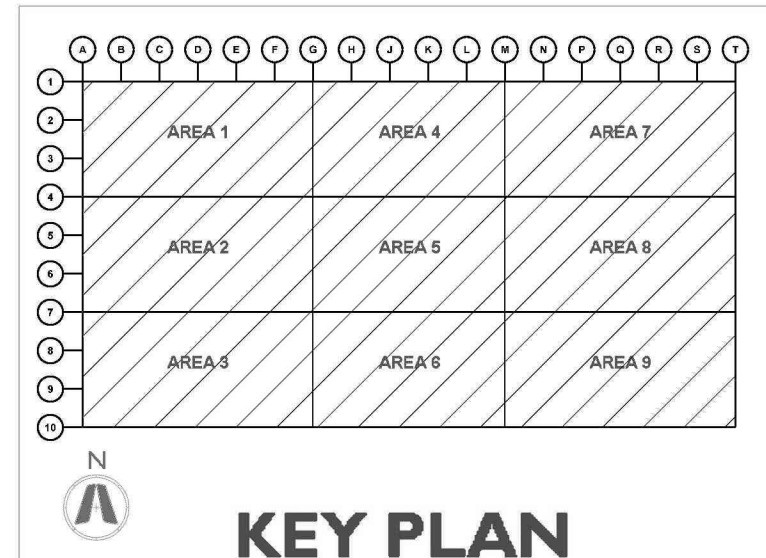
1	TENANT IMPROVEMENT	09.07.22
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## FP2.0

## OVERHEAD PIPING LAYOUT



**\*\*JOIST BRIDGING ROWS CANNOT BE ERECTED WITHIN OF 1'-6" OF ANY SURROUNDING ESRF BRANCH LINE CENTERLINE**







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ARCHITECTURE

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PROJECT INFORMATION

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LEE'S SUMMIT, MO 64086

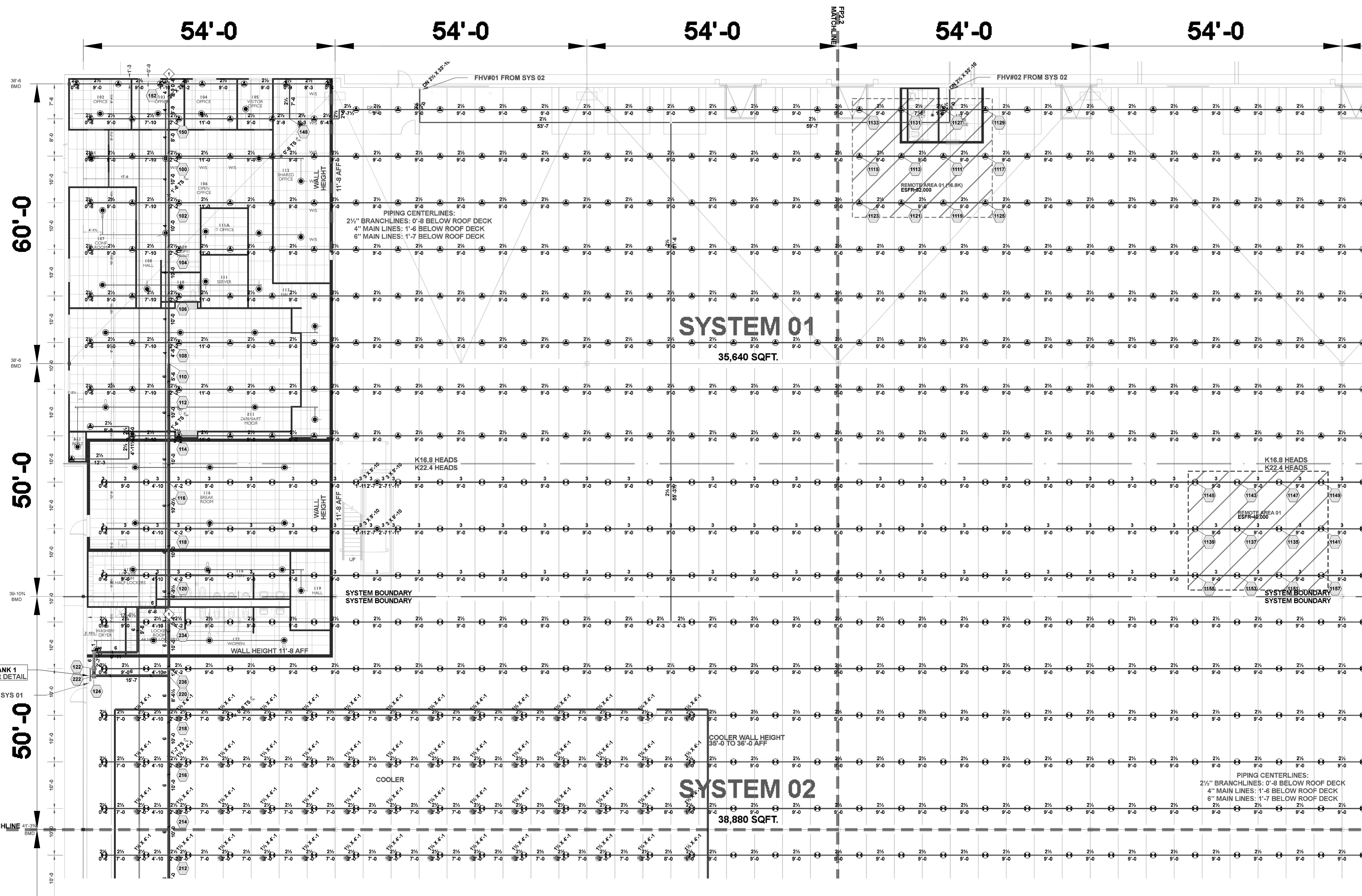
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TENANT IMPROVEMENT 09.07.22

210300

**FP2.1.1**

AREA 1: SYSTEMS  
01-02



Hydraulic Information	
Remote Area 01 (K16.8)	
OCCUPANCY CLASSIFICATION	ESFR
MIN. END HEAD PRESSURE	52.000 (ESFR)
TOTAL HOSE STREAMS	250.00
TOTAL HEADS FLOWING	12
K-FACTOR	16.8
TOTAL WATER REQUIRED	1711.60
TOTAL PRESSURE REQUIRED	75.095
BASE OF RISER (GPM)	1711.60
BASE OF RISER (PSI)	75.095
SAFETY MARGIN (PSI)	+14.486 (16.2%)

Hydraulic Information	
Remote Area 01	
OCCUPANCY CLASSIFICATION	ESFR
MIN. END HEAD PRESSURE	40.000 (ESFR)
TOTAL HOSE STREAMS	250.00
TOTAL HEADS FLOWING	12
K-FACTOR	22.4
TOTAL WATER REQUIRED	1959.70
TOTAL PRESSURE REQUIRED	68.043
BASE OF RISER (GPM)	1959.70
BASE OF RISER (PSI)	68.043
SAFETY MARGIN (PSI)	+19.427 (22.2%)

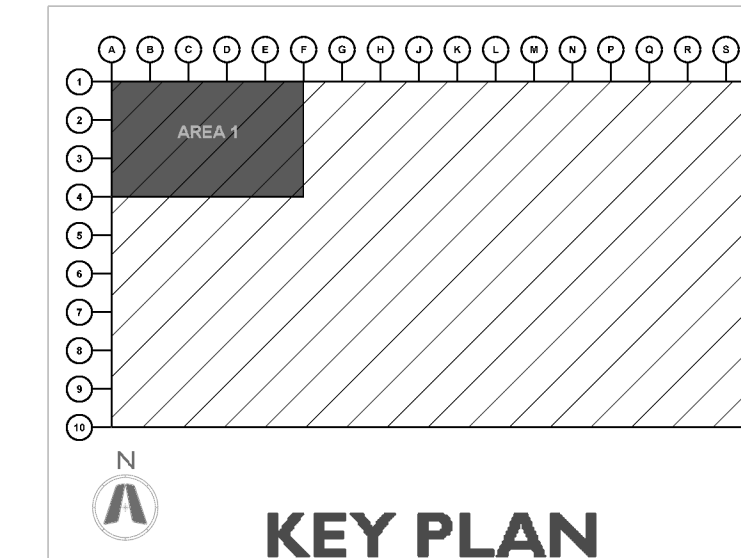
AREA 1: SYSTEMS 01-02

SCALE: 3/32" = 1'-0"

Sprinkler Legend

SYMBOL	QUANTITY	MANUFACTURER	SIN	MODEL	K-FACTOR	TYPE	SIZE	RESPONSE	FINISH	TEMPERATURE	NOTE
▲	2054	VICTAULIC	V4702	FL-QR/ST/ESFR	16.8	PENDENT	3/4"	FAST	BRASS	200°F	
⊗	4	VICTAULIC	V3406	V34	8	PENDENT	3/4"	QUICK	BRASS	200°F	
⊗	2754	VICTAULIC	V3428	ESFR	22.4	PENDENT	1"	FAST	BRASS	200°F	
⊗	48	VIKING	VK600	MICROFAST	5.6	PENDENT	1/2"	QUICK	CHROME	135°F	
⊗	6	VIKING	VK3021		5.6	PENDENT	1/2"	QUICK	CHROME	135°F	
⊗	368	VIKING	VK504	ESFR DRY	16.8	PENDENT	3/4"	QUICK	BRASS	205°F	
TOTAL = 5234											

\*\*JOIST BRIDGING ROWS CANNOT BE ERECTED WITHIN OF 1'-6" OF ANY SURROUNDING ESFR BRANCH LINE CENTERLINE







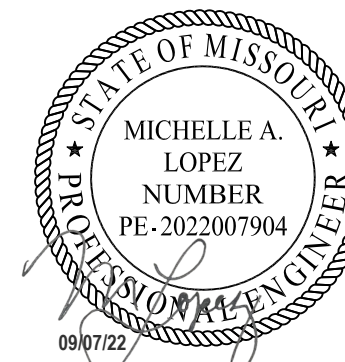
**CURRAN**  
ARCHITECTURE

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LEE'S SUMMIT LOGISTICS  
BUILDING A LOT I

NW CORNER OF  
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LEE'S SUMMIT, MO 64086

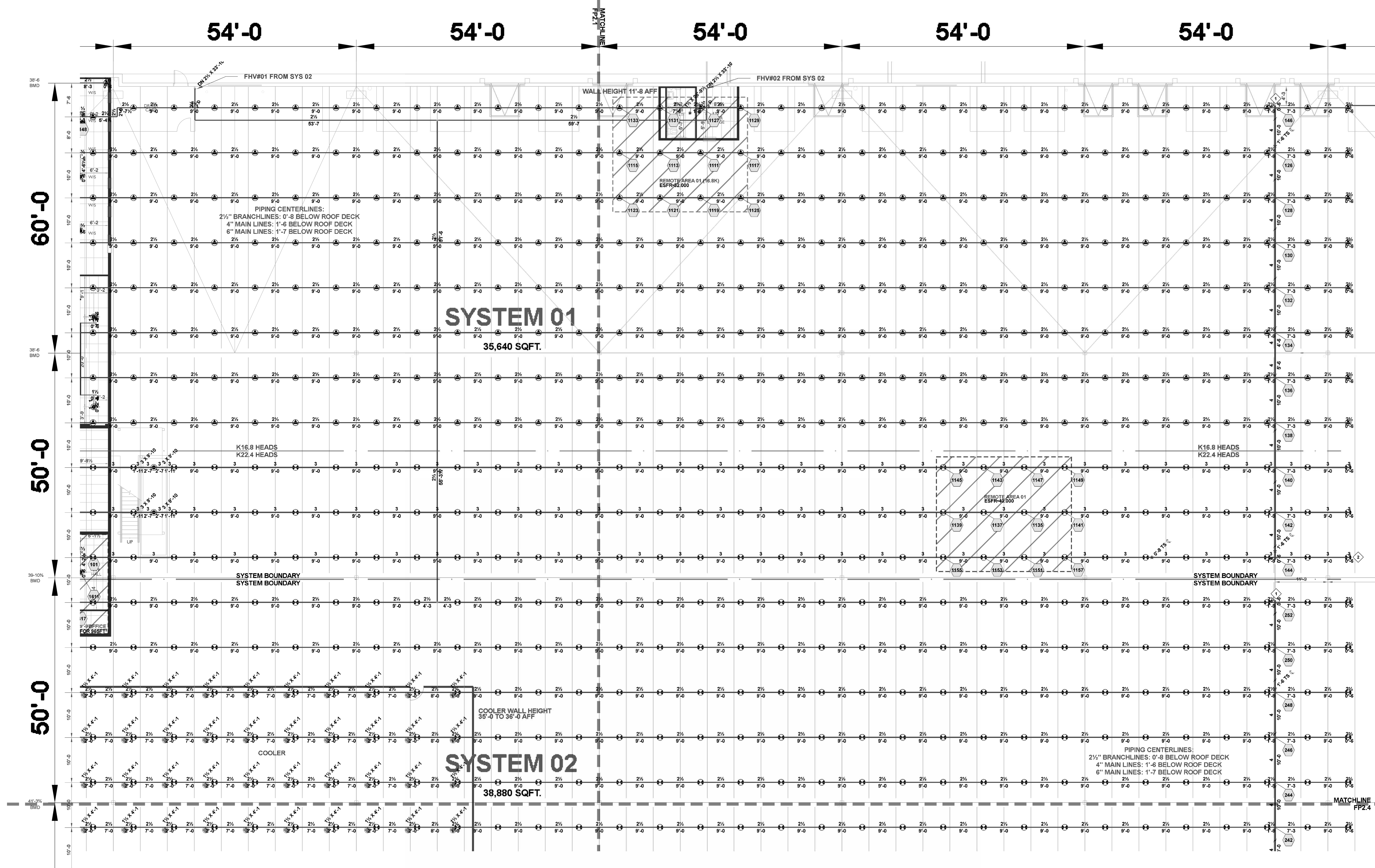
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TENANT IMPROVEMENT 09.07.22

210300

**FP2.1.2**

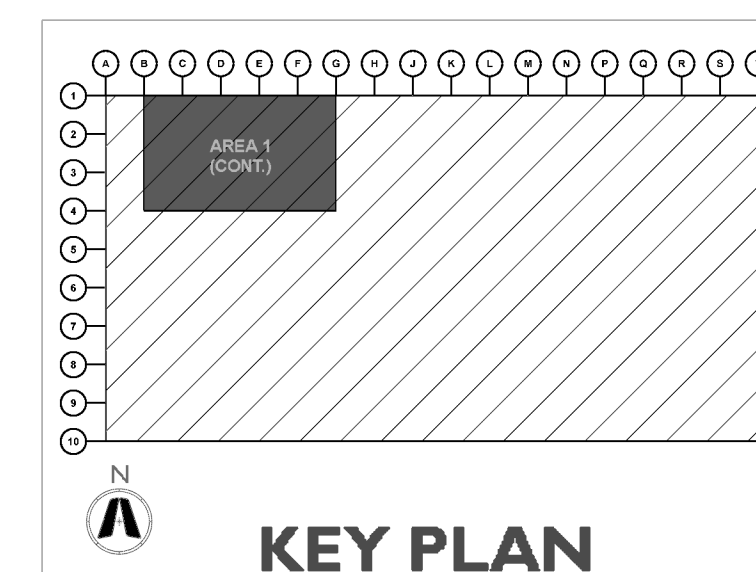
AREA 1 (CONT.):  
SYSTEMS 01-02



Hydraulic Information		Hydraulic Information	
Remote Area 01 (K16.8)		Remote Area 01	
OCCUPANCY CLASSIFICATION	ESFR	OCCUPANCY CLASSIFICATION	ESFR
MIN. END HEAD PRESSURE	52.000 (ESFR)	MIN. END HEAD PRESSURE	40.000 (ESFR)
TOTAL HOSE STREAMS	250.00	TOTAL HOSE STREAMS	250.00
TOTAL HEADS FLOWING	12	TOTAL HEADS FLOWING	12
K-FACTOR	16.8	K-FACTOR	22.4
TOTAL WATER REQUIRED	1711.60	TOTAL WATER REQUIRED	1959.70
TOTAL PRESSURE REQUIRED	75.095	TOTAL PRESSURE REQUIRED	68.043
BASE OF RISER (GPM)	1711.60	BASE OF RISER (GPM)	1959.70
BASE OF RISER (PSI)	75.095	BASE OF RISER (PSI)	68.043
SAFETY MARGIN (PSI)	+14.486 (16.2%)	SAFETY MARGIN (PSI)	+19.427 (22.2%)

Sprinkler Legend										
SYMBOL	QUANTITY	MANUFACTURER	SIN	MODEL	K-FACTOR	TYPE	SIZE	RESPONSE	FINISH	TEMPERATURE
▲	2054	VICTAULIC	V4702	FL-QR/ST/ESFR	16.8	PENDENT	3/4"	FAST	BRASS	200°F
⊗	4	VICTAULIC	V3406	V34	8	PENDENT	3/4"	QUICK	BRASS	200°F
⊗	2754	VICTAULIC	V3428	ESFR	22.4	PENDENT	1"	FAST	BRASS	200°F
⊗	48	VIKING	VK600	MICROFAST	5.6	PENDENT	1/2"	QUICK	CHROME	135°F
⊗	6	VIKING	VK3021		5.6	PENDENT	1/2"	QUICK	CHROME	135°F
⊗	368	VIKING	VK504	ESFR DRY	16.8	PENDENT	3/4"	QUICK	BRASS	205°F
TOTAL = 5234										

\*JOIST BRIDGING ROWS CANNOT BE ERECTED WITHIN OF 1'-6"  
OF ANY SURROUNDING ESFR BRANCH LINE CENTERLINE







\_\_\_\_\_

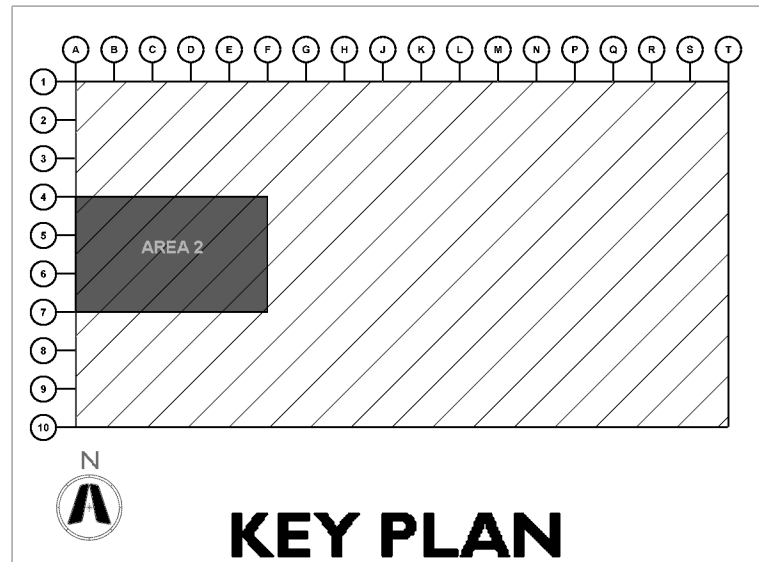


## PROJECT INFORMATION

NW CORNER OF  
E TUDOR RD & MAIN ST  
LEE'S SUMMIT, MO 64086

### FP2.2.1

AREA 2: SYSTEM  
02-03

[illegible]





**CURRAN**  
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5719 LAWTON LOOP E. DR. #212  
INDIANAPOLIS, IN 46216  
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PROJECT INFORMATION

LEE'S SUMMIT LOGISTICS  
BUILDING A LOT I

NW CORNER OF  
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LEE'S SUMMIT, MO 64086

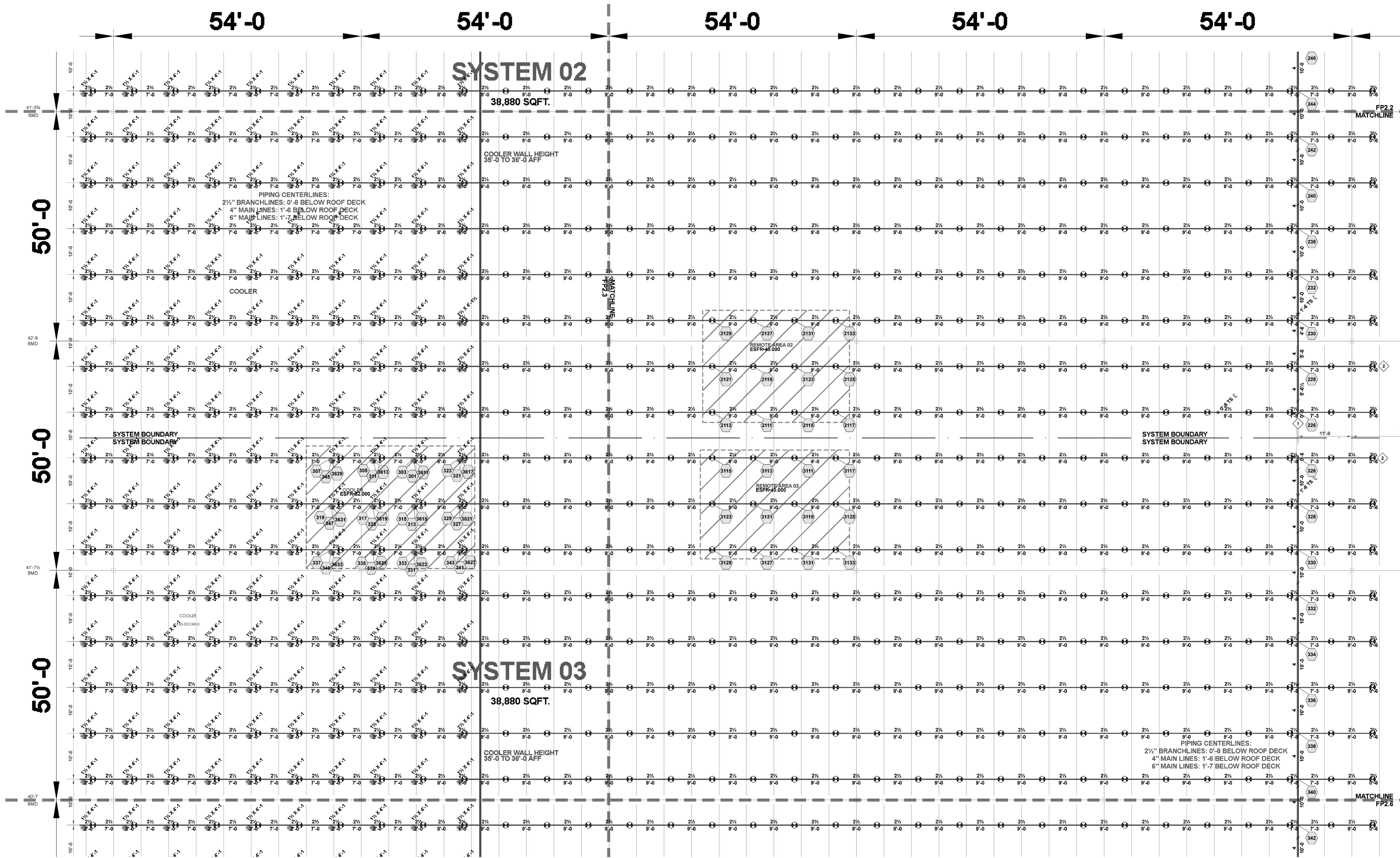
ISSUE DATES

PERMIT SET 02.18.22  
TENANT IMPROVEMENT 09.07.22

210300

**FP2.2**

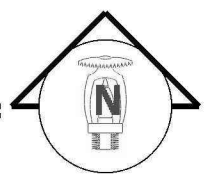
AREA 2(CONT):  
SYSTEMS 02-03



Hydraulic Information	
Remote Area 02	
OCCUPANCY CLASSIFICATION	ESFR
MIN. END HEAD PRESSURE	40.000 (ESFR)
TOTAL HOSE STREAMS	250.00
TOTAL HEADS FLOWING	12
K-FACTOR	22.4
TOTAL WATER REQUIRED	1956.70
TOTAL PRESSURE REQUIRED	78.341
BASE OF RISER (GPM)	1956.70
BASE OF RISER (PSI)	78.341
SAFETY MARGIN (PSI)	+9.156 (10.5%)

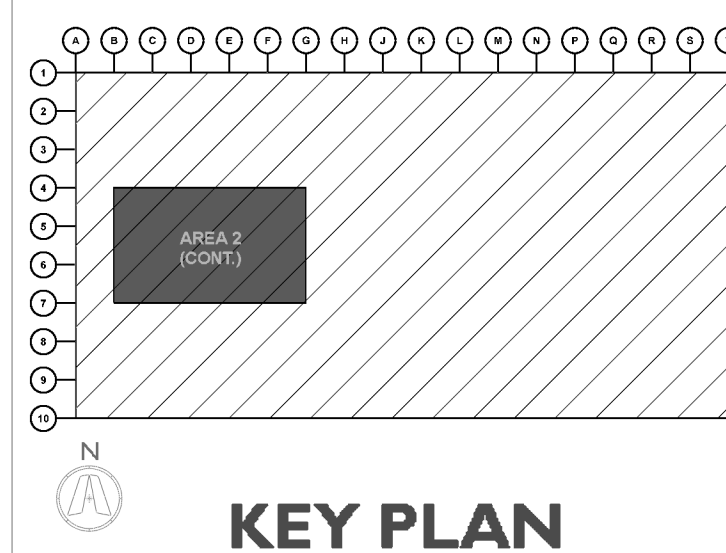
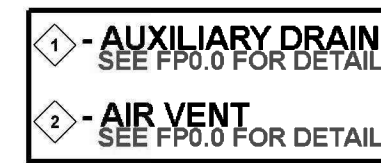
Hydraulic Information	
Remote Area 03	
OCCUPANCY CLASSIFICATION	ESFR
MIN. END HEAD PRESSURE	40.000 (ESFR)
TOTAL HOSE STREAMS	250.00
TOTAL HEADS FLOWING	12
K-FACTOR	22.4
TOTAL WATER REQUIRED	1958.59
TOTAL PRESSURE REQUIRED	79.726
BASE OF RISER (GPM)	1958.59
BASE OF RISER (PSI)	79.726
SAFETY MARGIN (PSI)	+7.754 (8.9%)

AREA 2(CONT): SYSTEMS 02-03  
SCALE: 3/32" = 1'-0"



Sprinkler Legend										
SYMBOL	QUANTITY	MANUFACTURER	SIN	MODEL	K-FACTOR	TYPE	SIZE	RESPONSE	FINISH	TEMPERATURE
	2054	VICTAULIC	V4702	FL-QR/ST/ESFR	16.8	PENDENT	3/4"	FAST	BRASS	200°F
	4	VICTAULIC	V3406	V34	8	PENDENT	3/4"	QUICK	BRASS	200°F
	2754	VICTAULIC	V3428	ESFR	22.4	PENDENT	1"	FAST	BRASS	200°F
	48	VIKING	VK600	MICROFAST	5.6	PENDENT	1/2"	QUICK	CHROME	135°F
	368	VIKING	VK3021	ESFR DRY	5.6	PENDENT	1/2"	QUICK	CHROME	135°F
	368	VIKING	VK504	ESFR DRY	16.8	PENDENT	3/4"	QUICK	BRASS	205°F
TOTAL = 5234										

\*\*JOIST BRIDGING ROWS CANNOT BE ERECTED WITHIN OF 1'-6" OF ANY SURROUNDING ESFR BRANCH LINE CENTERLINE







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PROJECT INFORMATION

LEE'S SUMMIT LOGISTICS  
BUILDING A LOT I

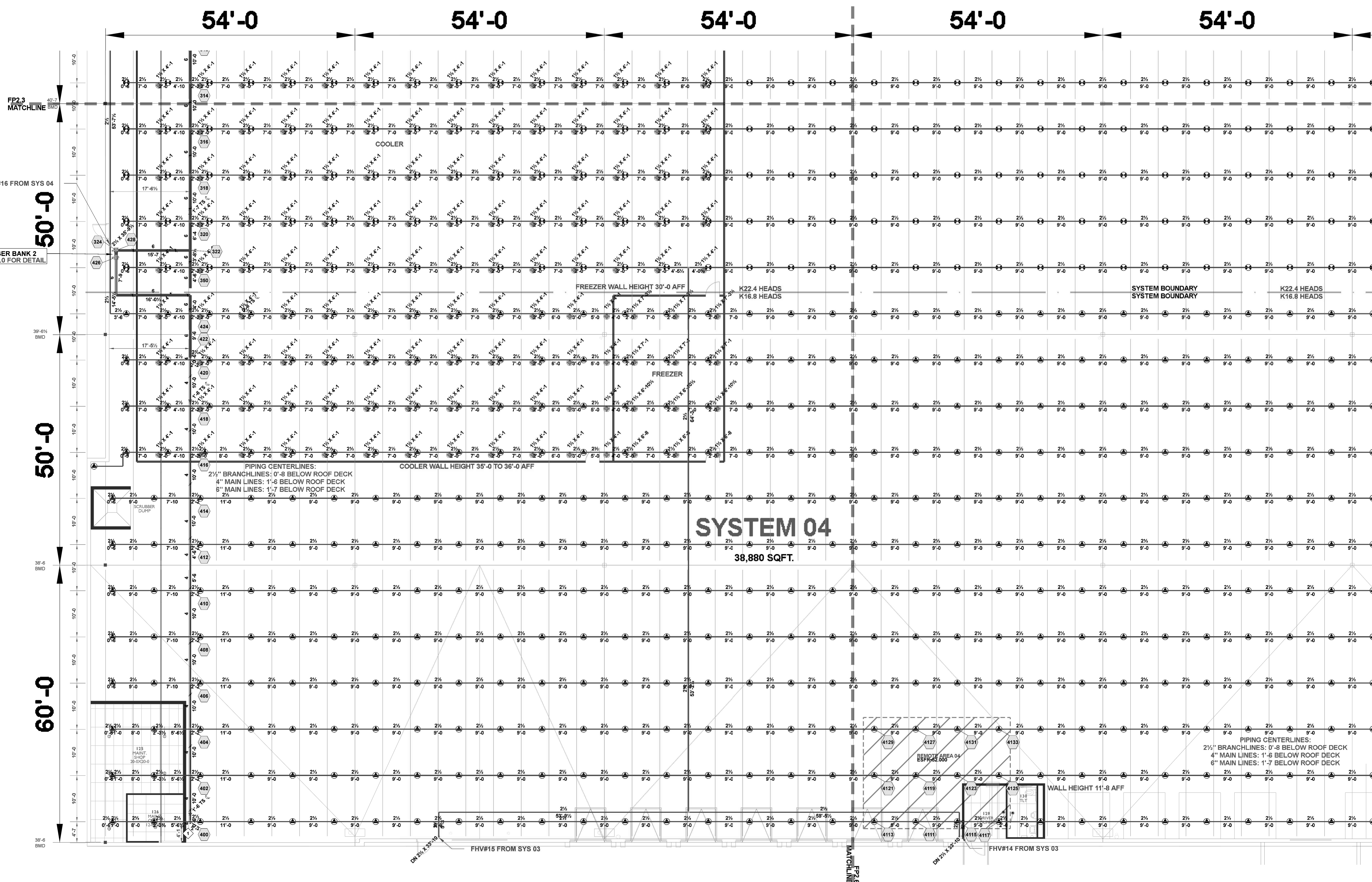
NW CORNER OF  
NE TUDOR RD & MAIN ST  
LEE'S SUMMIT, MO 64086

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TENANT IMPROVEMENT 09.07.22

210300

**FP2.3.1**  
AREA 3: SYSTEMS  
03-04



#### Hydraulic Information

Remote Area 04

OCCUPANCY CLASSIFICATION	ESFR
MIN. END HEAD PRESSURE	52,000 (ESFR)
TOTAL HOSE STREAMS	250.00
TOTAL HEADS FLOWING	12
K-FACTOR	16.8
TOTAL WATER REQUIRED	1708.55
TOTAL PRESSURE REQUIRED	80.726
BASE OF RISER (GPM)	1708.55
BASE OF RISER (PSI)	80.726
SAFETY MARGIN (PSI)	+8.879 (9.9%)

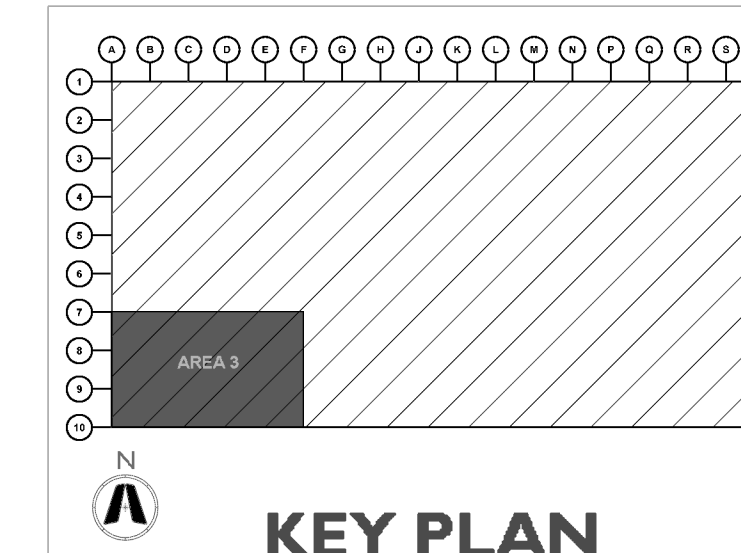
#### AREA 3: SYSTEMS 03-04

SCALE: 3/32" = 1'-0"

#### Sprinkler Legend

SYMBOL	QUANTITY	MANUFACTURER	SIN	MODEL	K-FACTOR	TYPE	SIZE	RESPONSE	FINISH	TEMPERATURE	NOTE
▲	2054	VICTAULIC	V4702	FL-QR/ST/ESFR	16.8	PENDENT	3/4	FAST	BRASS	200°F	
⊗	4	VICTAULIC	V3406	V34	8	PENDENT	3/4	QUICK	BRASS	200°F	
⊙	2754	VICTAULIC	V3428	ESFR	22.4	PENDENT	1	FAST	BRASS	200°F	
●	48	VIKING	VK600	MICROFAST	5.6	PENDENT	1/2	QUICK	CHROME	135°F	
⊙	6	VIKING	VK3021		5.6	PENDENT	1/2	QUICK	CHROME	135°F	
◆	368	VIKING	VK504	ESFR DRY	16.8	PENDENT	3/4	QUICK	BRASS	205°F	
	TOTAL = 5234										

\*\*JOIST BRIDGING ROWS CANNOT BE ERECTED WITHIN OF 1'-6" OF ANY SURROUNDING ESFR BRANCH LINE CENTERLINE







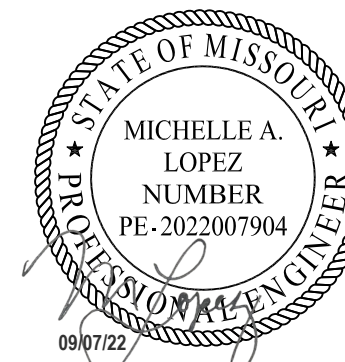
**CURRAN**  
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PROJECT INFORMATION

LEE'S SUMMIT LOGISTICS  
BUILDING A LOT I  
NW CORNER OF  
NE TUDOR RD & MAIN ST  
LEE'S SUMMIT, MO 64086

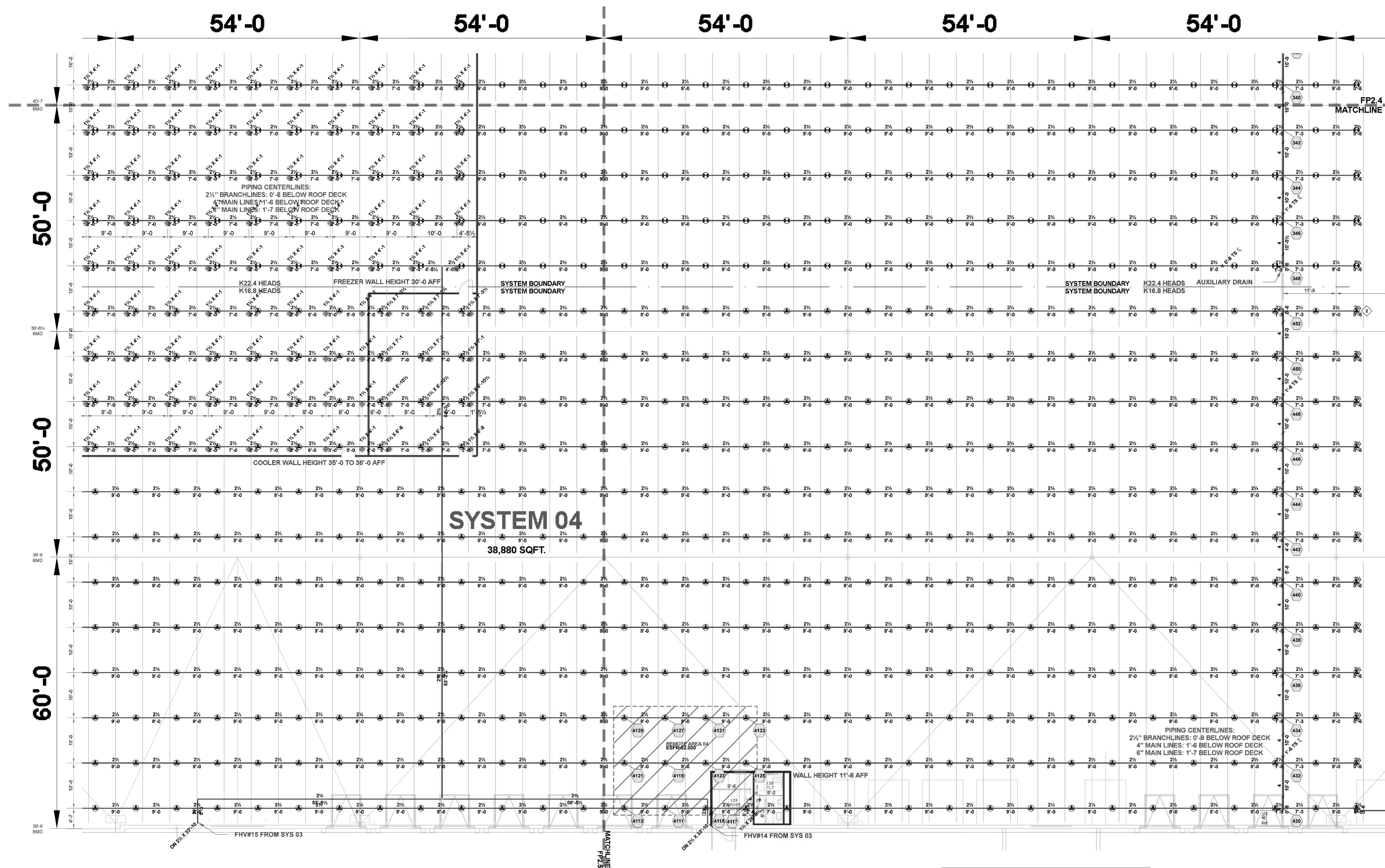
ISSUE DATES

PERMIT SET 02.18.22  
TENANT IMPROVEMENT 09.07.22

210300

**FP2.3.2**

AREA 3(CONT.):  
SYSTEMS 03-04



Hydraulic Information	
Remote Area 04	
OCCUPANCY CLASSIFICATION	ESFR
MIN. END HEAD PRESSURE	52.000 (ESFR)
TOTAL HOSE STREAMS	250.00
TOTAL HEADS FLOWING	12
K-FACTOR	16.8
TOTAL WATER REQUIRED	1708.55
TOTAL PRESSURE REQUIRED	80.726
BASE OF RISER (GPM)	1708.55
BASE OF RISER (PSI)	80.726
SAFETY MARGIN (PSI)	+8.879 (9.9%)

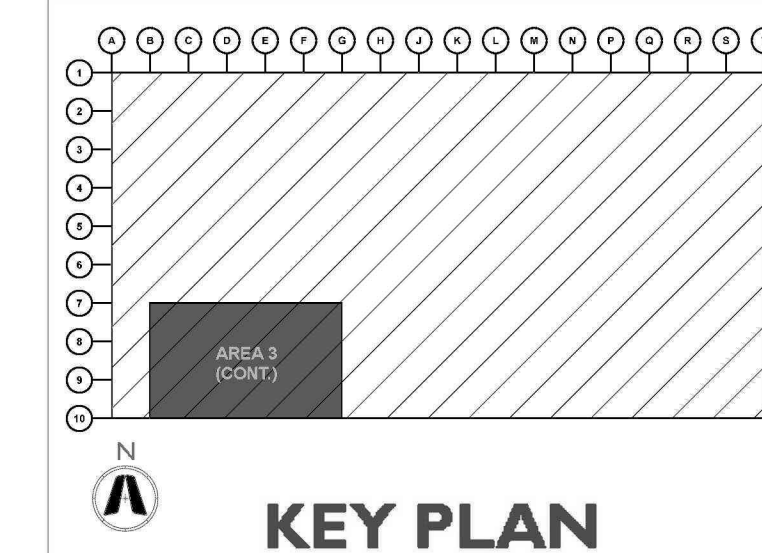
AREA 3(CONT.): SYSTEMS 03-04

SCALE: 3/32" = 1'-0"

Sprinkler Legend										
SYMBOL	QUANTITY	MANUFACTURER	SIN	MODEL	K-FACTOR	TYPE	SIZE	RESPONSE	FINISH	TEMPERATURE
▲	2054	VICTAULIC	V4702	FL-QR/ST/ESFR	16.8	PENDENT	3/4"	FAST	BRASS	200°F
⊗	4	VICTAULIC	V3406	V34	8	PENDENT	3/4"	QUICK	BRASS	200°F
⊕	2754	VICTAULIC	V3428	ESFR	22.4	PENDENT	1"	FAST	BRASS	200°F
●	48	VIKING	VK600	MICROFAST	5.6	PENDENT	1/2"	QUICK	CHROME	135°F
⊙	6	VIKING	VK3021		5.6	PENDENT	1/2"	QUICK	CHROME	135°F
◆	368	VIKING	VK504	ESFR DRY	16.8	PENDENT	3/4"	QUICK	BRASS	205°F
TOTAL = 5234										

\*\*JOIST BRIDGING ROWS CANNOT BE ERECTED WITHIN OF 1'-6" OF ANY SURROUNDING ESFR BRANCH LINE CENTERLINE

▲ - AUXILIARY DRAIN  
SEE FP0.0 FOR DETAIL  
◆ - AIR VENT  
SEE FP0.0 FOR DETAIL







**CURRAN**  
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PROJECT INFORMATION

LEE'S SUMMIT LOGISTICS  
BUILDING A LOT I  
NW CORNER OF  
NE TUDOR RD & MAIN ST  
LEE'S SUMMIT, MO 64086

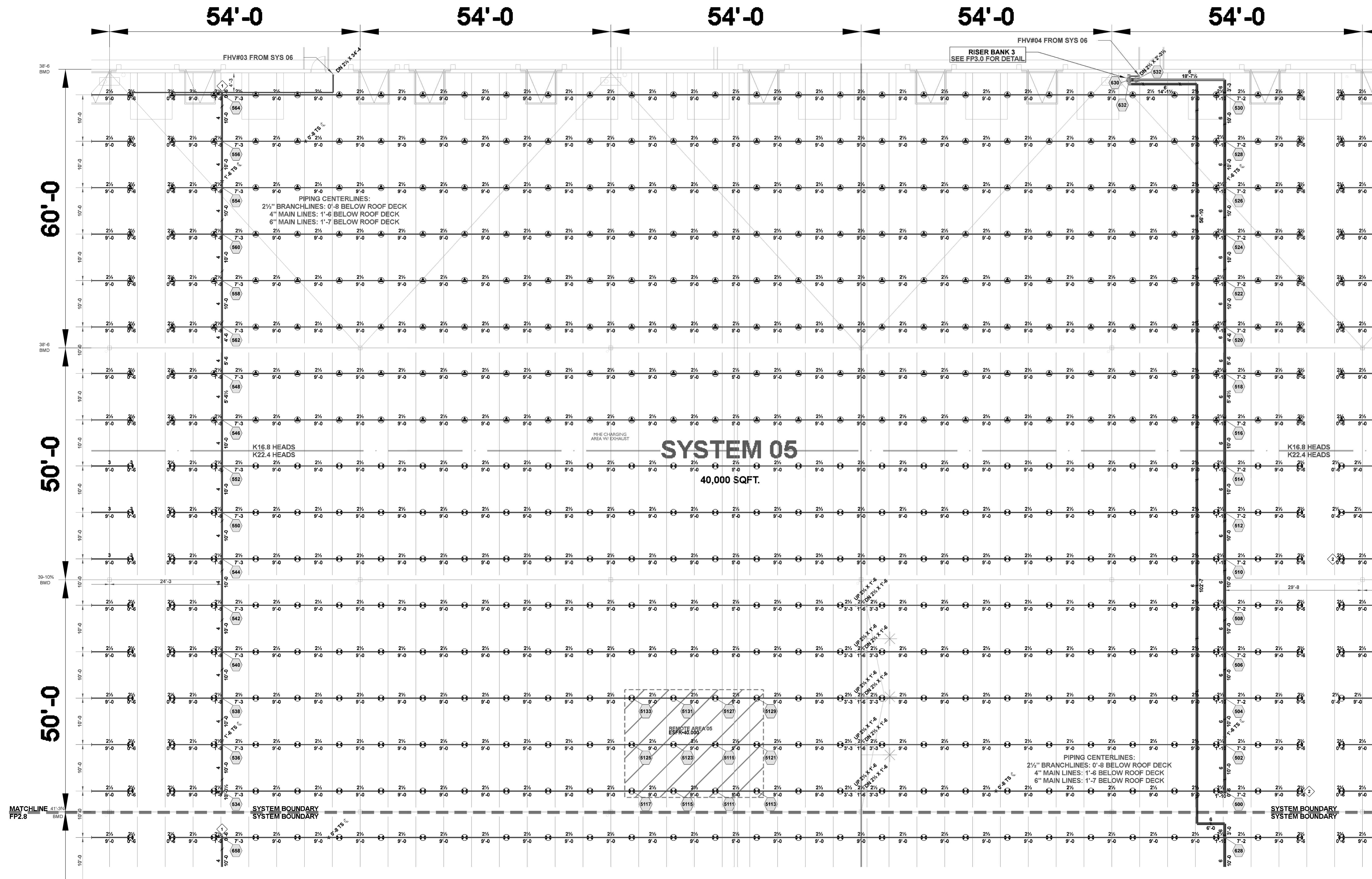
ISSUE DATES

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TENANT IMPROVEMENT 09.07.22

210300

**FP2.4**

AREA 4: SYSTEM 05



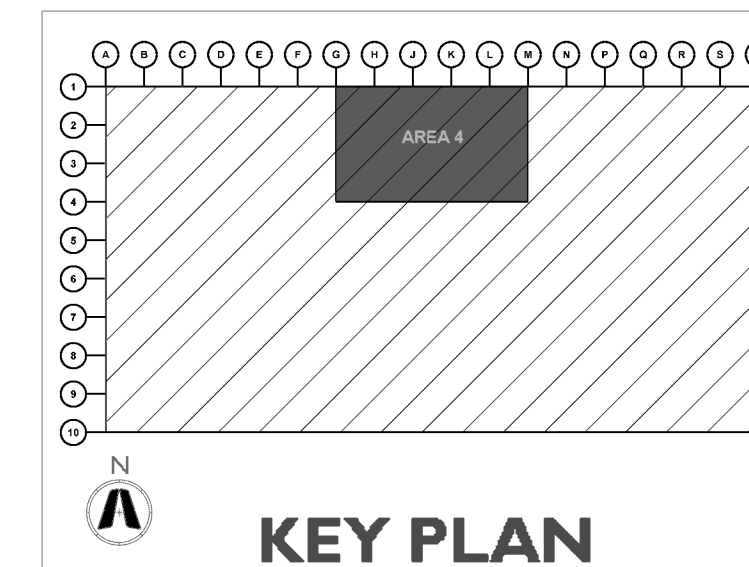
Hydraulic Information	
Remote Area 05	
OCCUPANCY CLASSIFICATION	ESFR
MIN. END HEAD PRESSURE	40,000 (ESFR)
TOTAL HOSE STREAMS	250.00
TOTAL HEADS FLOWING	12
K-FACTOR	22.4
TOTAL WATER REQUIRED	1959.12
TOTAL PRESSURE REQUIRED	73.843
BASE OF RISER (GPM)	1959.12
BASE OF RISER (PSI)	73.843
SAFETY MARGIN (PSI)	+13.633 (15.6%)

AREA 4: SYSTEM 05  
SCALE: 3/32" = 1'-0"

Sprinkler Legend										
SYMBOL	QUANTITY	MANUFACTURER	SIN	MODEL	K-FACTOR	TYPE	SIZE	RESPONSE	FINISH	TEMPERATURE
▲	2054	VICTAULIC	V4702	FL-QR/ST/ESFR	16.8	PENDENT	3/4	FAST	BRASS	200°F
⊗	4	VICTAULIC	V3406	V34	8	PENDENT	3/4	QUICK	BRASS	200°F
●	2754	VICTAULIC	V3428	ESFR	22.4	PENDENT	1	FAST	BRASS	200°F
⊙	48	VIKING	VK600	MICROFAST	5.6	PENDENT	1/2	QUICK	CHROME	135°F
⊖	6	VIKING	VK3021		5.6	PENDENT	1/2	QUICK	CHROME	135°F
◆	368	VIKING	VK504	ESFR DRY	16.8	PENDENT	3/4	QUICK	BRASS	205°F
TOTAL = 5234										

\*\*JOIST BRIDGING ROWS CANNOT BE ERECTED WITHIN OF 1'-6" OF ANY SURROUNDING ESFR BRANCH LINE CENTERLINE

◆ - AUXILIARY DRAIN  
SEE FP0.0 FOR DETAIL  
◆ - AIR VENT  
SEE FP0.0 FOR DETAIL



KEY PLAN





09/07/22

## PROJECT INFORMATION

NW CORNER OF  
THE TUDOR RD & MAIN ST  
LEE'S SUMMIT, MO 64086

## FP2.5







AREA 5: SYSTEM 06

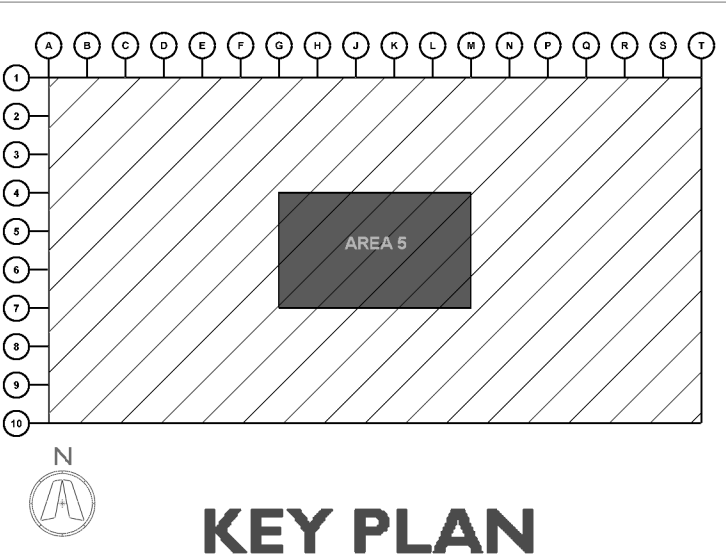


Hydraulic Information	
Remote Area 06	
OCCUPANCY CLASSIFICATION	ESFR
MIN. END HEAD PRESSURE	40.000 (ESFR)
TOTAL HOSE STREAMS	250.00
TOTAL HEADS FLOWING	12
K-FACTOR	22.4
TOTAL WATER REQUIRED	1956.47
TOTAL PRESSURE REQUIRED	80.319
BASE OF RISER (GPM)	1956.47
BASE OF RISER (PSI)	80.319
SAFETY MARGIN (PSI)	+7.719 (8.2%)

**SCALE: 3/32" = 1'-0"**



Sprinkler Legend											
SYMBOL	QUANTITY	MANUFACTURER	SIN	MODEL	K-FACTOR	TYPE	SIZE	RESPONSE	FINISH	TEMPERATURE	NOTE
	2054	VICTAULIC	V4702	FL-QR-ST/ESFR	16.8	PENDENT	¾	FAST	BRASS	200°F	
	4	VICTAULIC	V3406	V34	8	PENDENT	¾	FAST	BRASS	200°F	
	2754	VICTAULIC	V3428	ESFR	22.4	PENDENT	1	QUICK	BRASS	200°F	
	48	VIKING	VK600	MICROFAST	5.6	PENDENT	½	QUICK	CHROME	135°F	
	6	VIKING	VK3021		5.6	PENDENT	½	QUICK	CHROME	135°F	
	368	VIKING	VK504	ESFR DRY	16.8	PENDENT	¾	QUICK	BRASS	205°F	
	TOTAL = 5234										







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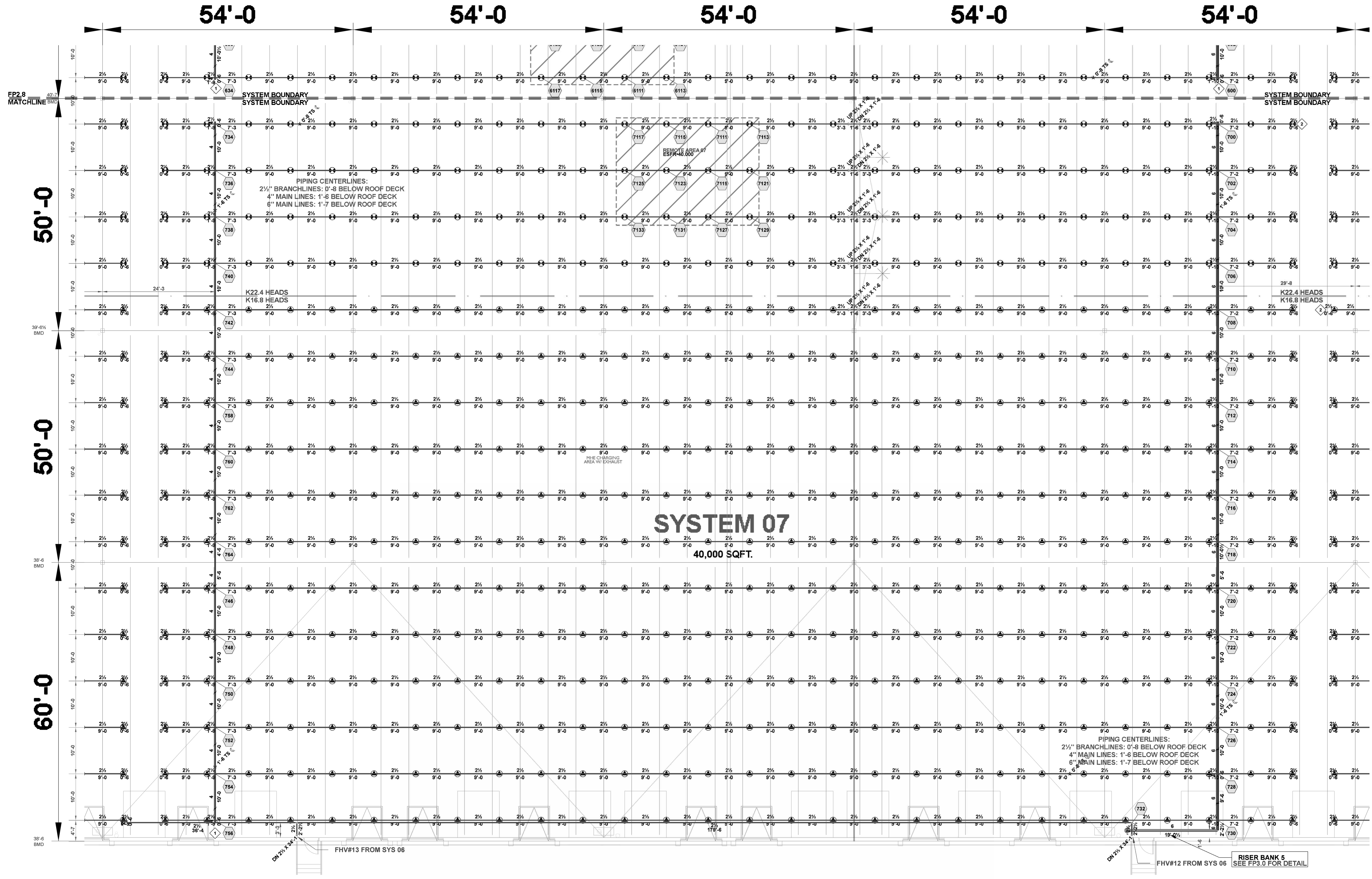
PROJECT INFORMATION

LEE'S SUMMIT LOGISTICS  
BUILDING A LOT I  
NW CORNER OF  
NE TUDOR RD & MAIN ST  
LEE'S SUMMIT, MO 64086

ISSUE DATES

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210300  
**FP2.6**  
AREA 6: SYSTEM 07



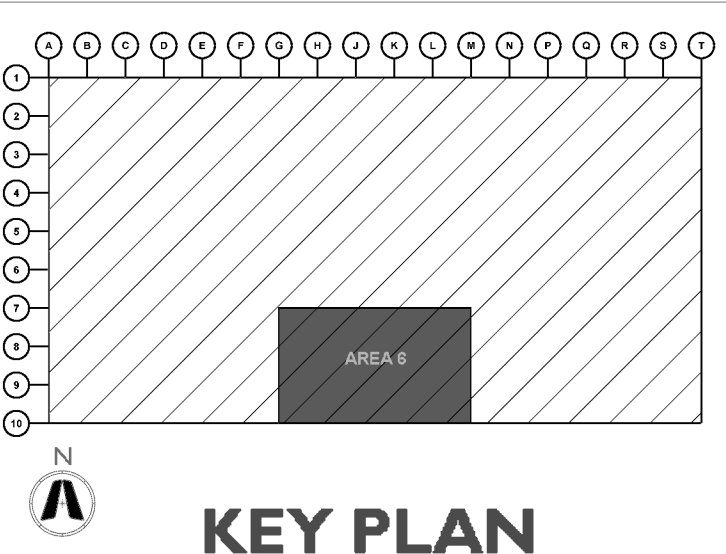
Hydraulic Information	
Remote Area 07	
OCCUPANCY CLASSIFICATION	ESFR
MIN. END HEAD PRESSURE	40.000 (ESFR)
TOTAL HOSE STREAMS	250.00
TOTAL HEADS FLOWING	12
K-FACTOR	22.4
TOTAL WATER REQUIRED	1958.72
TOTAL PRESSURE REQUIRED	74.363
BASE OF RISER (GPM)	1958.72
BASE OF RISER (PSI)	74.363
SAFETY MARGIN (PSI)	+13.116 (15.0%)

AREA 6: SYSTEM 07  
SCALE: 3/32" = 1'-0"

Sprinkler Legend										
SYMBOL	QUANTITY	MANUFACTURER	SIN	MODEL	K-FACTOR	TYPE	SIZE	RESPONSE	FINISH	TEMPERATURE
	2054	VICTAULIC	V4702	FL-QR/ST/ESFR	16.8	PENDENT	3/4"	FAST	BRASS	200°F
	4	VICTAULIC	V3406	V34	8	PENDENT	3/4"	QUICK	BRASS	200°F
	2754	VICTAULIC	V3428	ESFR	22.4	PENDENT	1"	FAST	BRASS	200°F
	48	VIKING	VK600	MICROFAST	5.6	PENDENT	1/2"	QUICK	CHROME	135°F
	6	VIKING	VK3021		5.6	PENDENT	1/2"	QUICK	CHROME	135°F
	368	VIKING	VK504	ESFR DRY	16.8	PENDENT	3/4"	QUICK	BRASS	205°F
TOTAL = 5234										

\*\*JOIST BRIDGING ROWS CANNOT BE ERECTED WITHIN OF 1'-6" OF ANY SURROUNDING ESFR BRANCH LINE CENTERLINE

- AUXILIARY DRAIN  
SEE FP0.0 FOR DETAIL  
 - AIR VENT  
SEE FP0.0 FOR DETAIL







**CURRAN**  
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PROJECT INFORMATION

LEE'S SUMMIT LOGISTICS  
BUILDING A LOT I

NW CORNER OF  
NE TUDOR RD & MAIN ST  
LEE'S SUMMIT, MO 64086

ISSUE DATES

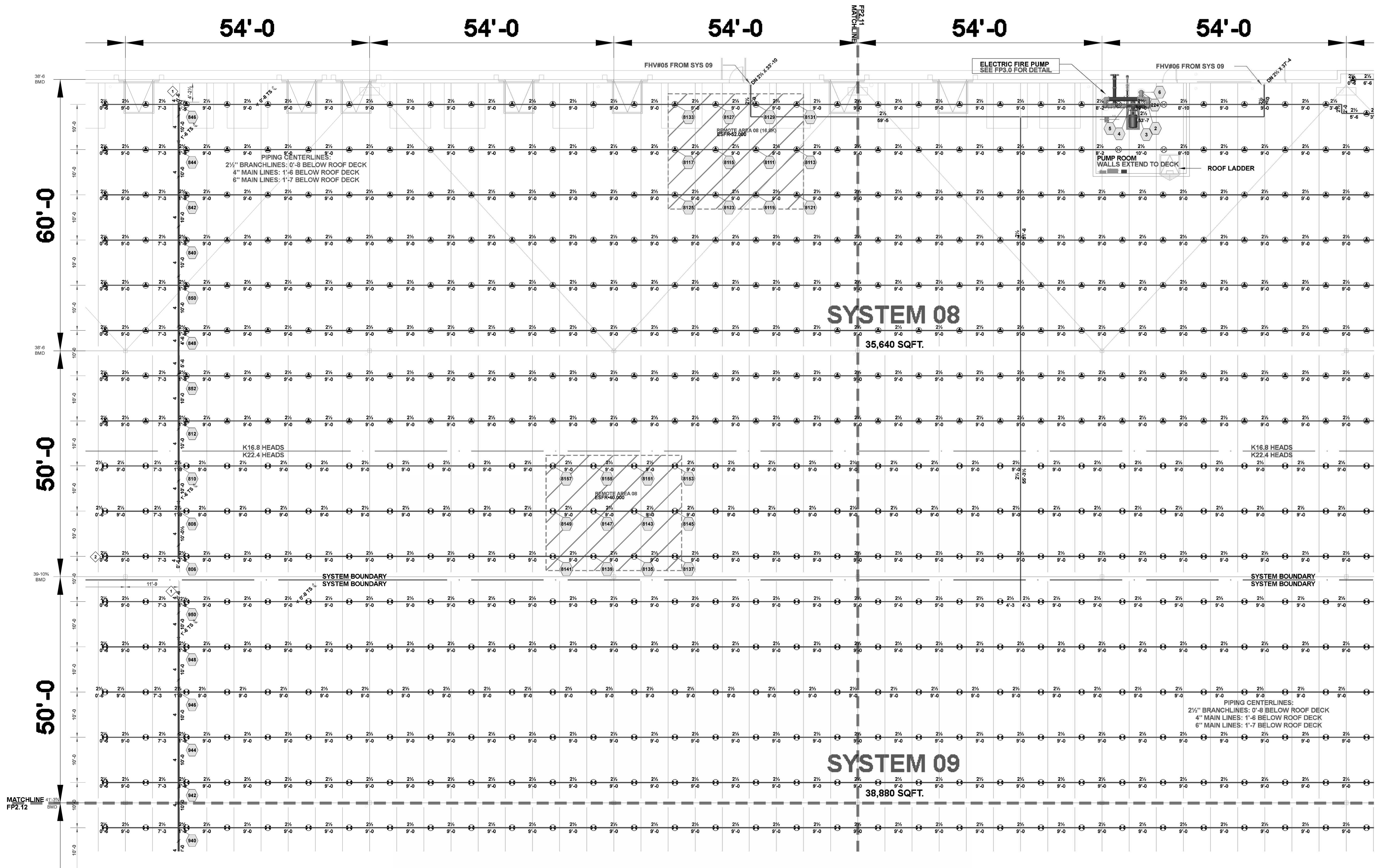
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210300

**FP2.7.1**

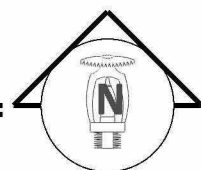
AREA 7: SYSTEMS  
08-09



Hydraulic Information		Hydraulic Information	
Remote Area 08 (K16.8)		Remote Area 08	
OCCUPANCY CLASSIFICATION	ESFR	OCCUPANCY CLASSIFICATION	ESFR
MIN. END HEAD PRESSURE	52,000 (ESFR)	MIN. END HEAD PRESSURE	40,000 (ESFR)
TOTAL HOSE STREAMS	250.00	TOTAL HOSE STREAMS	250.00
TOTAL HEADS FLOWING	12	TOTAL HEADS FLOWING	12
K-FACTOR	16.8	K-FACTOR	22.4
TOTAL WATER REQUIRED	1711.62	TOTAL WATER REQUIRED	1956.80
TOTAL PRESSURE REQUIRED	73.476	TOTAL PRESSURE REQUIRED	81.616
BASE OF RISER (GPM)	1711.62	BASE OF RISER (GPM)	1956.80
BASE OF RISER (PSI)	73.476	BASE OF RISER (PSI)	81.616
SAFETY MARGIN (PSI)	+16.104 (18.0%)	SAFETY MARGIN (PSI)	+5.880 (6.7%)

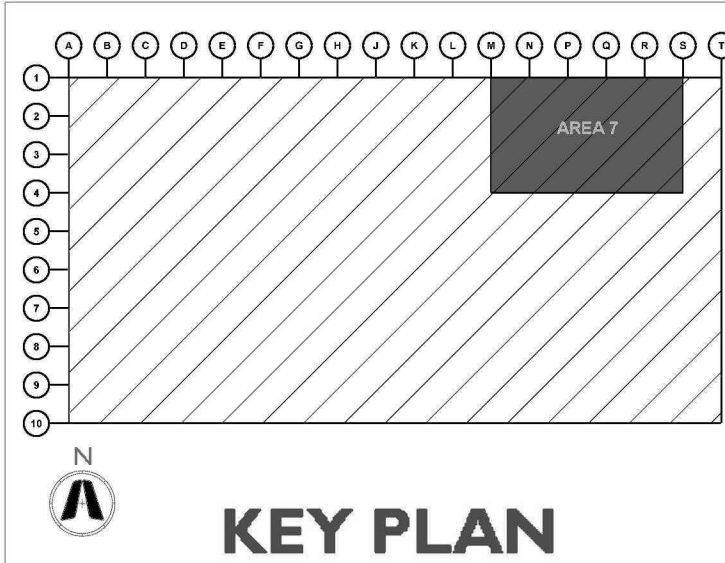
AREA 7: SYSTEMS 08-09

SCALE: 3/32" = 1'-0"



Sprinkler Legend											
SYMBOL	QUANTITY	MANUFACTURER	SIN	MODEL	K-FACTOR	TYPE	SIZE	RESPONSE	FINISH	TEMPERATURE	NOTE
▲	2054	VICTAULIC	V4702	FL-QR/ST/ESFR	16.8	PENDENT	¾	FAST	BRASS	200°F	
⊗	4	VICTAULIC	V3406	V34	8	PENDENT	¾	QUICK	BRASS	200°F	
⊙	2754	VICTAULIC	V3428	ESFR	22.4	PENDENT	1	FAST	BRASS	200°F	
●	48	VIKING	VK600	MICROFAST	5.6	PENDENT	½	QUICK	CHROME	135°F	
○	6	VIKING	VK3021		5.6	PENDENT	½	QUICK	CHROME	135°F	
◆	368	VIKING	VK504	ESFR DRY	16.8	PENDENT	¾	QUICK	BRASS	205°F	
TOTAL = 5234											

\*\*JOIST BRIDGING ROWS CANNOT BE ERECTED WITHIN OF 1'-6" OF ANY SURROUNDING ESFR BRANCH LINE CENTERLINE







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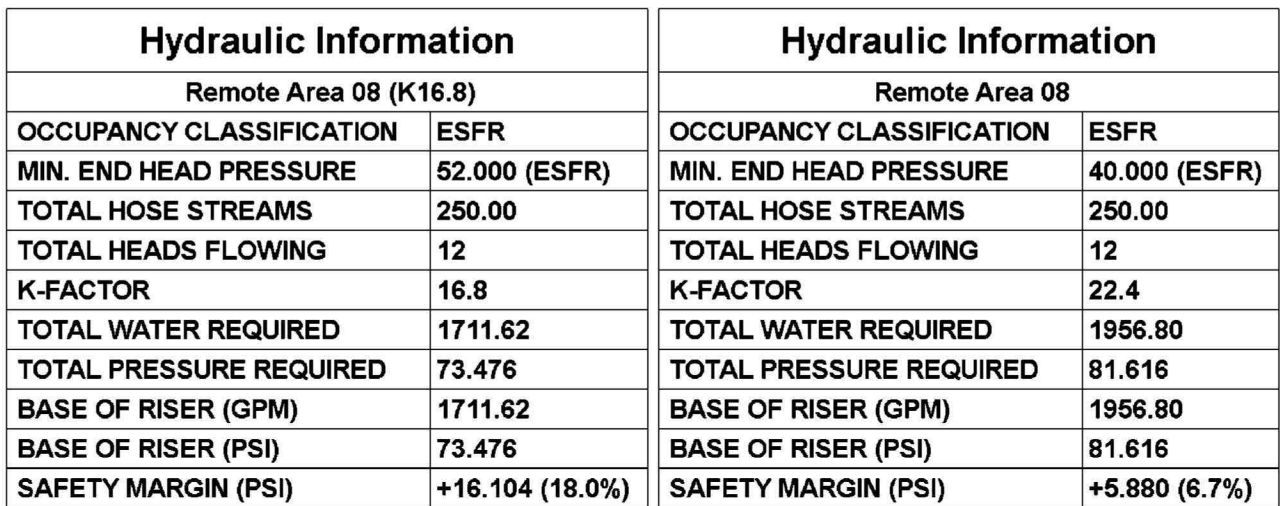








## PROJECT INFORMATION

PERMIT SET 02.18.22

## FP2.7.2

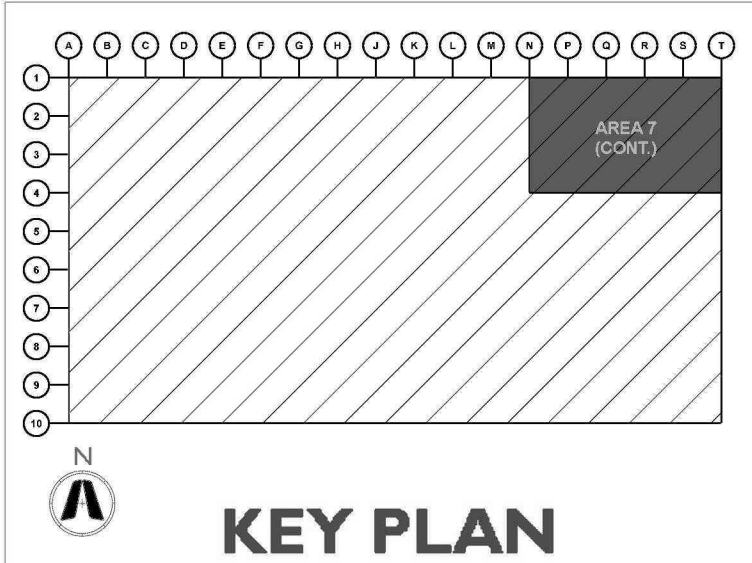
AREA 7(CONT):  
SYSTEMS 08-09



Sprinkler Legend											
SYMBOL	QUANTITY	MANUFACTURER	SIN	MODEL	K-FACTOR	TYPE	SIZE	RESPONSE	FINISH	TEMPERATURE	NOTE
	2054	VICTAULIC	V4702	FL-QR-ST/ESFR	16.8	PENDENT	¾	FAST	BRASS	200°F	
	4	VICTAULIC	V3406	V34	8	PENDENT	¾	QUICK	BRASS	200°F	
	2754	VICTAULIC	V3428	ESFR	22.4	PENDENT	1	FAST	BRASS	200°F	
	48	VIKING	VK600	MICROFAST	5.6	PENDENT	½	QUICK	CHROME	135°F	
	6	VIKING	VK3021		5.6	PENDENT	½	QUICK	CHROME	135°F	
	368	VIKING	VK504	ESFR DRY	16.8	PENDENT	¾	QUICK	BRASS	205°F	
	TOTAL = 5234										

1 - **AUXILIARY DRAIN**  
SEE FP0.0 FOR DETAIL

2 - **AIR VENT**  
SEE FP0.0 FOR DETAIL







**CURRAN**  
ARCHITECTURE

5719 LAWTON LOOP E. DR. #212  
INDIANAPOLIS, IN 46216  
O :: 317.288.0681  
F :: 317.288.0753



CERTIFICATION



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PROJECT INFORMATION

LEE'S SUMMIT LOGISTICS  
BUILDING A LOT I  
NW CORNER OF  
NE TUDOR RD & MAIN ST  
LEE'S SUMMIT, MO 64086

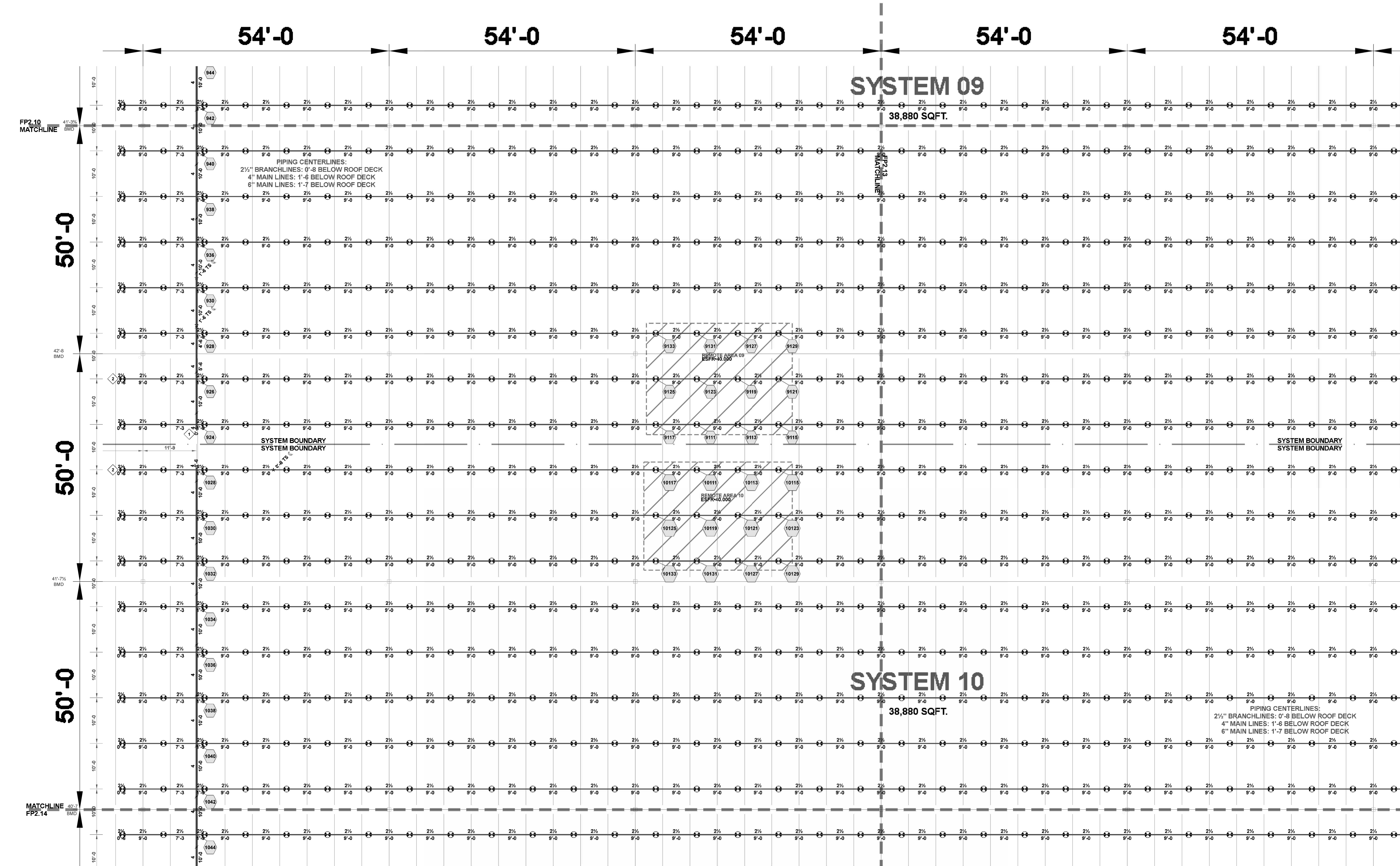
ISSUE DATES

PERMIT SET 02.18.22

TENANT IMPROVEMENT 09.07.22

210300

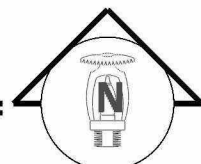
**FP2.8.1**  
AREA 8: SYSTEMS  
09-10



Hydraulic Information		Hydraulic Information	
Remote Area 09		Remote Area 10	
OCCUPANCY CLASSIFICATION	ESFR	OCCUPANCY CLASSIFICATION	ESFR
MIN. END HEAD PRESSURE	40.000 (ESFR)	MIN. END HEAD PRESSURE	40.000 (ESFR)
TOTAL HOSE STREAMS	250.00	TOTAL HOSE STREAMS	250.00
TOTAL HEADS FLOWING	12	TOTAL HEADS FLOWING	12
K-FACTOR	22.4	K-FACTOR	22.4
TOTAL WATER REQUIRED	1956.70	TOTAL WATER REQUIRED	1958.89
TOTAL PRESSURE REQUIRED	75.314	TOTAL PRESSURE REQUIRED	77.654
BASE OF RISER (GPM)	1956.70	BASE OF RISER (GPM)	1958.89
BASE OF RISER (PSI)	75.314	BASE OF RISER (PSI)	77.654
SAFETY MARGIN (PSI)	+12.183 (13.9%)	SAFETY MARGIN (PSI)	+9.826 (11.2%)

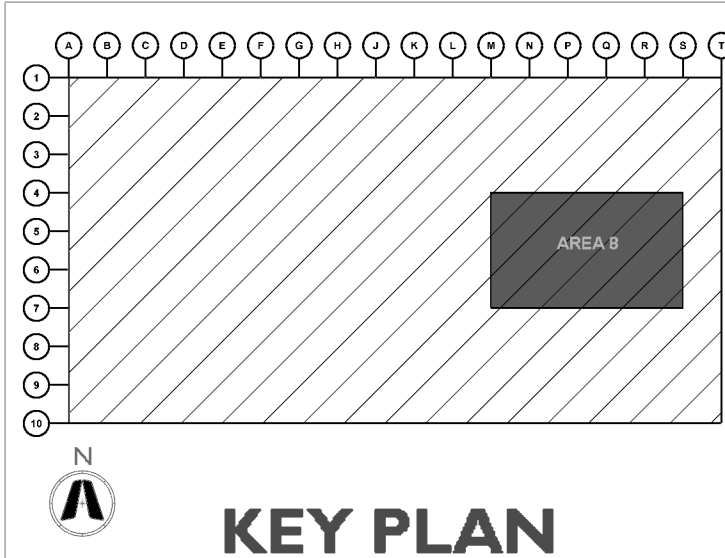
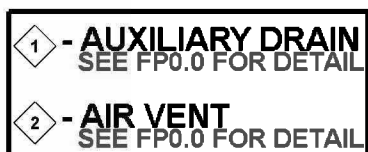
AREA 8: SYSTEMS 09-10

SCALE: 3/32" = 1'-0"



Sprinkler Legend										
SYMBOL	QUANTITY	MANUFACTURER	SIN	MODEL	K-FACTOR	TYPE	SIZE	RESPONSE	FINISH	TEMPERATURE
	2054	VICTAULIC	V4702	FL-QR/ST/ESFR	16.8	PENDENT	3/4"	FAST	BRASS	200°F
	4	VICTAULIC	V3406	V34	8	PENDENT	3/4"	QUICK	BRASS	200°F
	2754	VICTAULIC	V3428	ESFR	22.4	PENDENT	1"	FAST	BRASS	200°F
	48	VIKING	VK600	MICROFAST	5.6	PENDENT	1/2"	QUICK	CHROME	135°F
	6	VIKING	VK3021		5.6	PENDENT	1/2"	QUICK	CHROME	135°F
	368	VIKING	VK504	ESFR DRY	16.8	PENDENT	3/4"	QUICK	BRASS	205°F
TOTAL = 5234										

\*\*JOIST BRIDGING ROWS CANNOT BE ERECTED WITHIN OF 1'-6" OF ANY SURROUNDING ESFR BRANCH LINE CENTERLINE







SCANNELL  
PROPERTIES

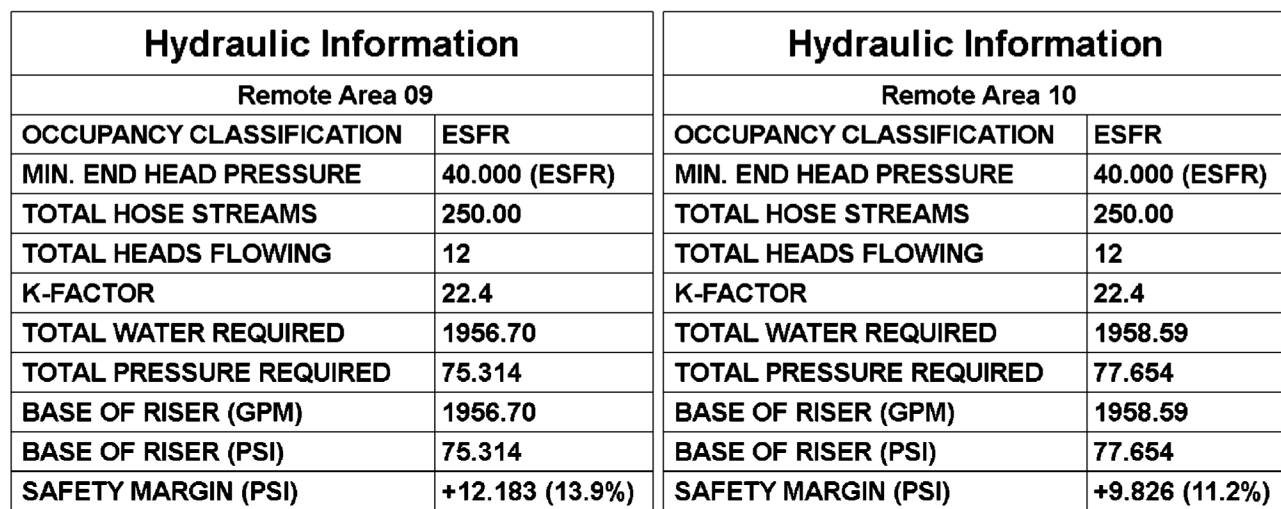
## PROJECT INFORMATION







NW CORNER OF  
THE TUDOR RD & MAIN ST  
LEE'S SUMMIT, MO 64086

PERMIT SET	02.18.22
TENANT IMPROVEMENT	09.07.22

## FP2.8.2

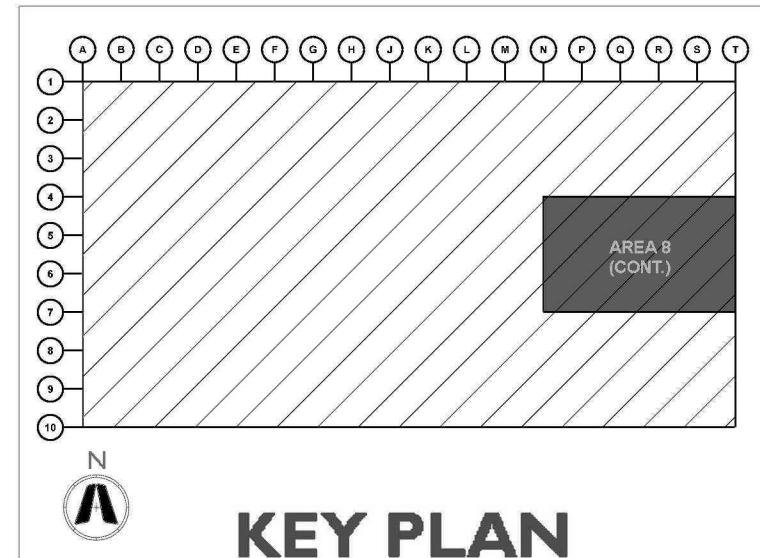
AREA 8 (CONT.):  
SYSTEMS 09-10



Sprinkler Legend											
SYMBOL	QUANTITY	MANUFACTURER	SIN	MODEL	K-FACTOR	TYPE	SIZE	RESPONSE	FINISH	TEMPERATURE	NOTE
	2054	VICTAULIC	V4702	FL-QR-ST/ESFR	16.8	PENDENT	¾	FAST	BRASS	200°F	
	4	VICTAULIC	V3406	V34	8	PENDENT	¾	FAST	BRASS	200°F	
	2754	VICTAULIC	V3428	ESFR	22.4	PENDENT	1	QUICK	BRASS	200°F	
	48	VIKING	VK600	MICROFAST	5.6	PENDENT	½	QUICK	CHROME	135°F	
	6	VIKING	VK3021		5.6	PENDENT	½	QUICK	CHROME	135°F	
	368	VIKING	VK504	ESFR DRY	16.8	PENDENT	¾	QUICK	BRASS	205°F	
	TOTAL = 5234										

1 - **AUXILIARY DRAIN**  
SEE FP0.0 FOR DETAIL

2 - **AIR VENT**  
SEE FP0.0 FOR DETAIL







**CURRAN**  
ARCHITECTURE

5719 LAWTON LOOP E. DR. #212  
INDIANAPOLIS, IN 46216  
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F :: 317 . 288 . 0753



**SCANNELL**  
PROPERTIES

CERTIFICATION



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PROJECT INFORMATION

LEE'S SUMMIT LOGISTICS  
BUILDING A LOT I

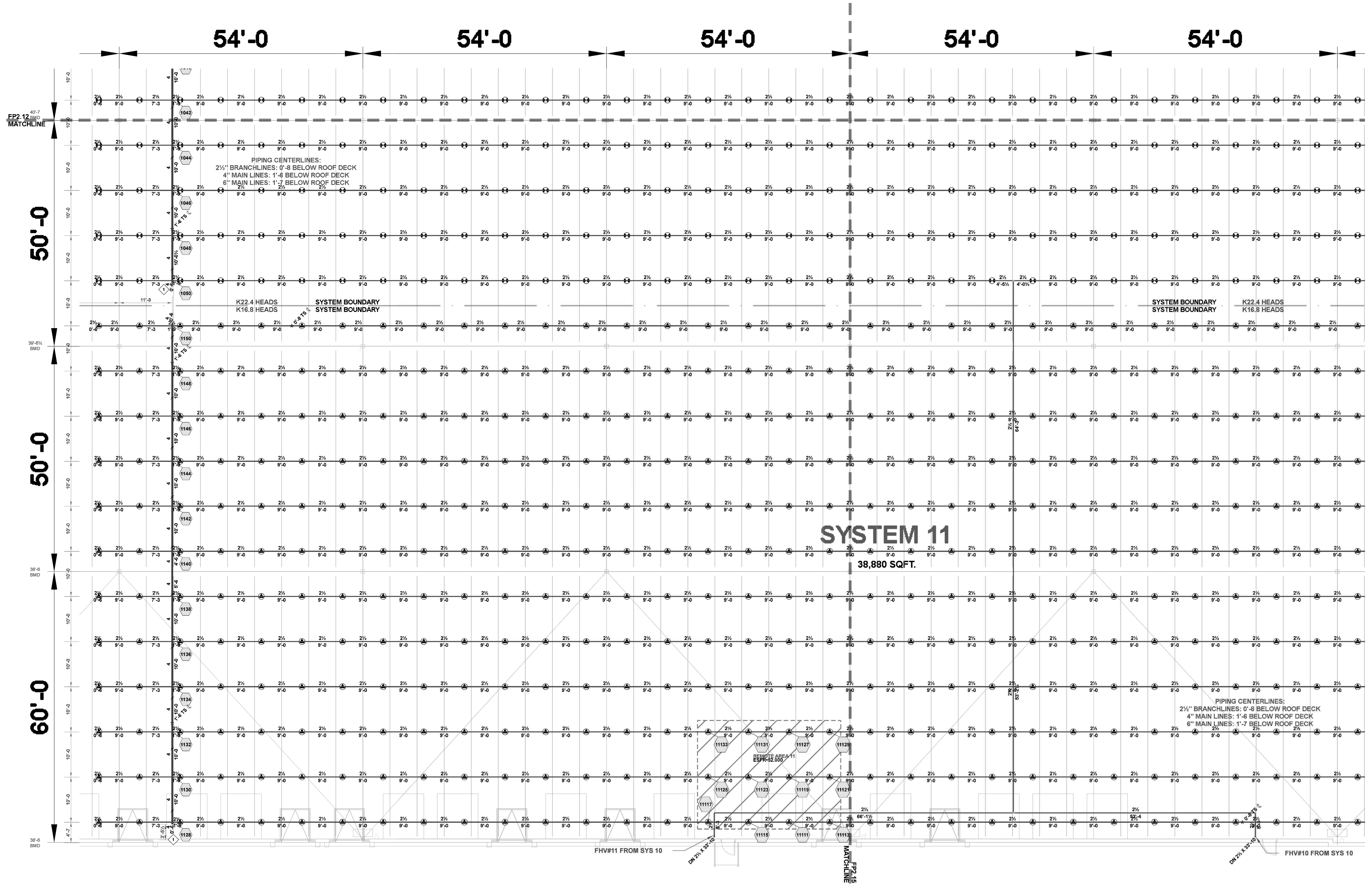
NW CORNER OF  
NE TUDOR RD & MAIN ST  
LEE'S SUMMIT, MO 64086

ISSUE DATES

PERMIT SET 02.18.22







TENANT IMPROVEMENT 09.07.22

210300  
**FP2.9.1**  
AREA 9: SYSTEMS  
10-11

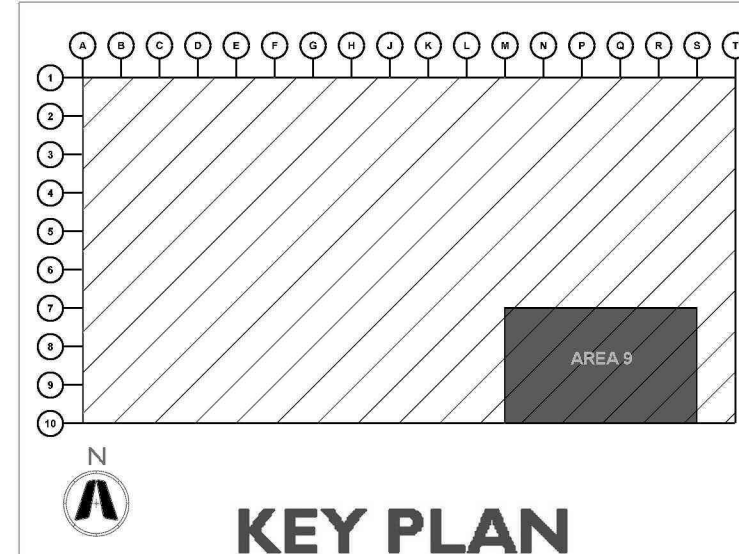


Hydraulic Information	
Remote Area 11	
OCCUPANCY CLASSIFICATION	ESFR
MIN. END HEAD PRESSURE	52,000 (ESFR)
TOTAL HOSE STREAMS	250.00
TOTAL HEADS FLOWING	12
K-FACTOR	16.8
TOTAL WATER REQUIRED	1708.55
TOTAL PRESSURE REQUIRED	79.115
BASE OF RISER (GPM)	1708.55
BASE OF RISER (PSI)	79.115
SAFETY MARGIN (PSI)	+10.490 (11.7%)

AREA 9: SYSTEMS 10-11  
SCALE: 3/32" = 1'-0"

Sprinkler Legend											
SYMBOL	QUANTITY	MANUFACTURER	SIN	MODEL	K-FACTOR	TYPE	SIZE	RESPONSE	FINISH	TEMPERATURE	NOTE
	2054	VICTAULIC	V4702	FL-QR/ST/ESFR	16.8	PENDENT	3/4"	FAST	BRASS	200°F	
	4	VICTAULIC	V3406	V34	8	PENDENT	3/4"	QUICK	BRASS	200°F	
	2754	VICTAULIC	V3428	ESFR	22.4	PENDENT	1"	FAST	BRASS	200°F	
	48	VIKING	VK600	MICROFAST	5.6	PENDENT	1/2"	QUICK	CHROME	135°F	
	6	VIKING	VK3021		5.6	PENDENT	1/2"	QUICK	CHROME	135°F	
	368	VIKING	VK504	ESFR DRY	16.8	PENDENT	3/4"	QUICK	BRASS	205°F	
TOTAL = 5234											

\*\*JOIST BRIDGING ROWS CANNOT BE ERECTED WITHIN OF 1'-6" OF ANY SURROUNDING ESFR BRANCH LINE CENTERLINE





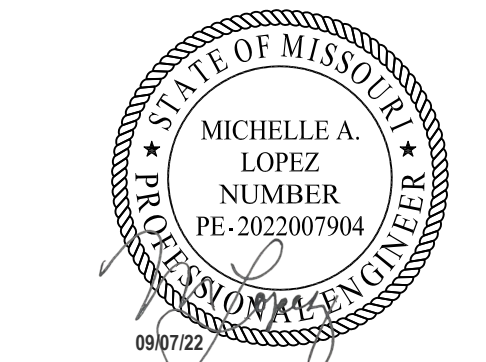


**CURRAN**  
ARCHITECTURE

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PROPERTIES

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PROJECT INFORMATION

LEE'S SUMMIT LOGISTICS  
BUILDING A LOT I

NW CORNER OF  
NE TUDOR RD & MAIN ST  
LEE'S SUMMIT, MO 64086

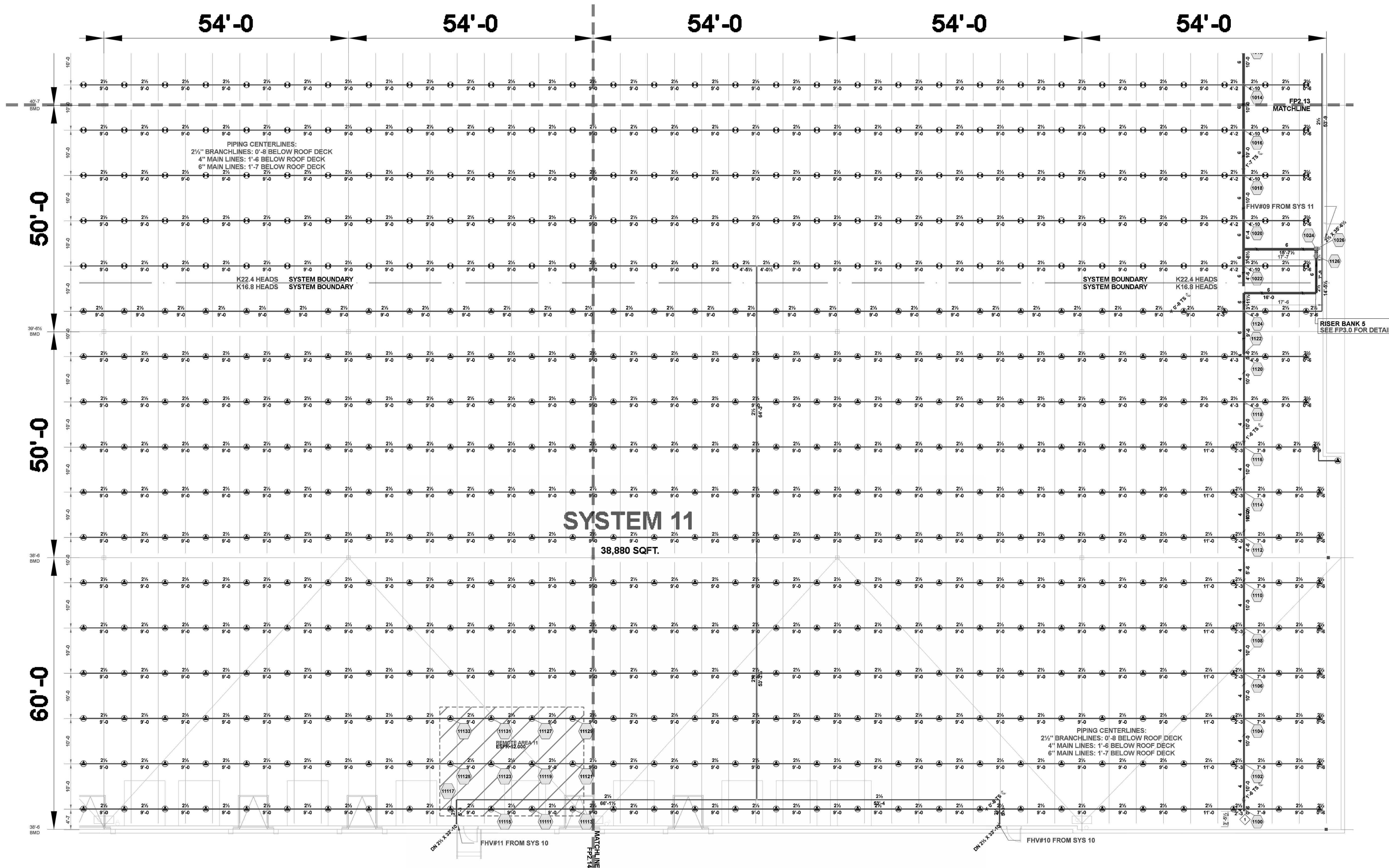
ISSUE DATES

PERMIT SET 02.18.22

TENANT IMPROVEMENT 09.07.22

210300

**FP2.9.2**  
AREA 9(CONT.):  
SYSTEMS 10-11







**CURRAN**  
ARCHITECTURE

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INDIANAPOLIS, IN 46216  
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PROJECT INFORMATION

LEE'S SUMMIT LOGISTICS  
BUILDING A LOT I  
NW CORNER OF  
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LEE'S SUMMIT, MO 64086

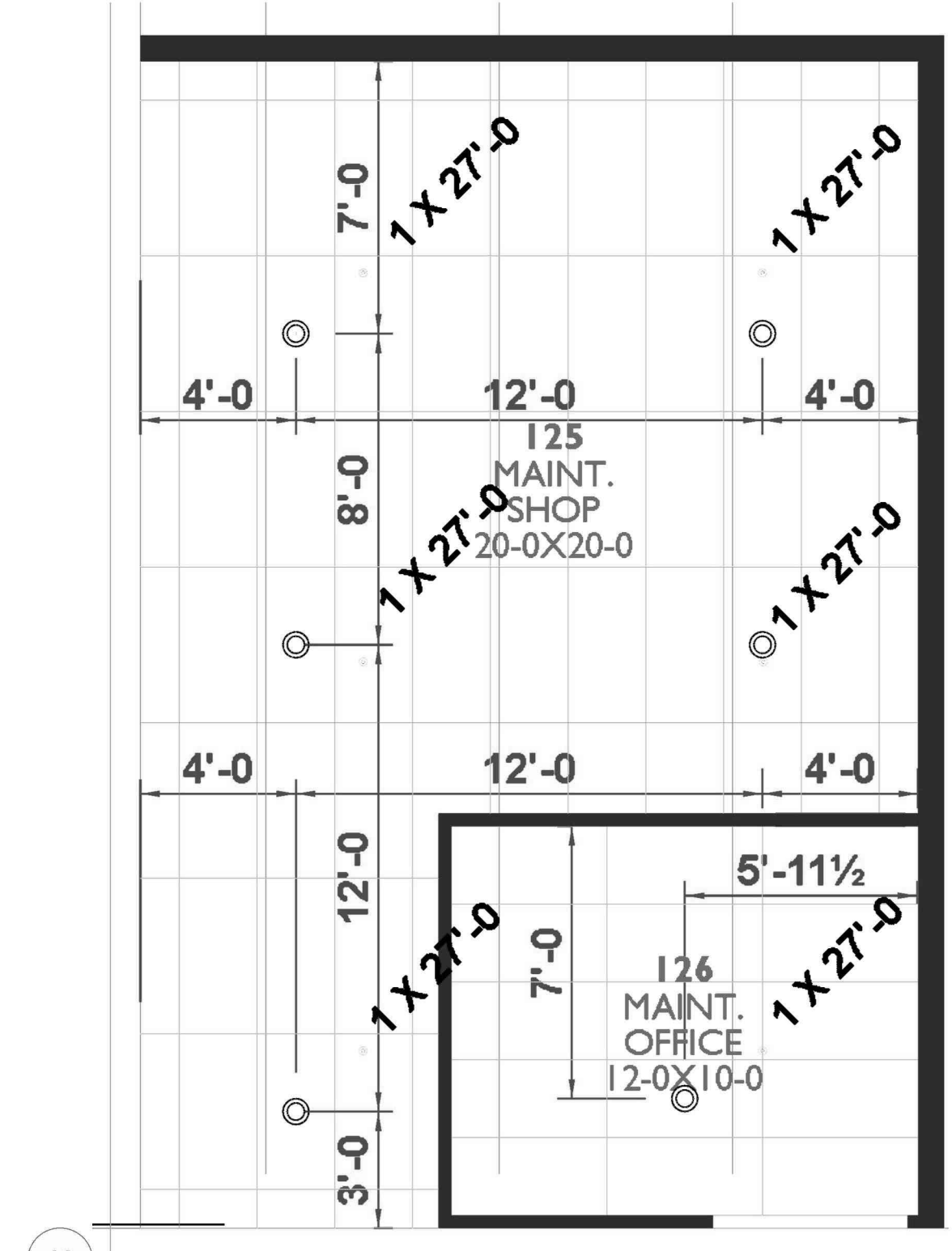
ISSUE DATES

PERMIT SET 02.18.22  
TENANT IMPROVEMENT 09.07.22

210300

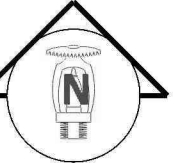
**FP2.10**

TENANT  
IMPROVEMENT  
OFFICE PLAN

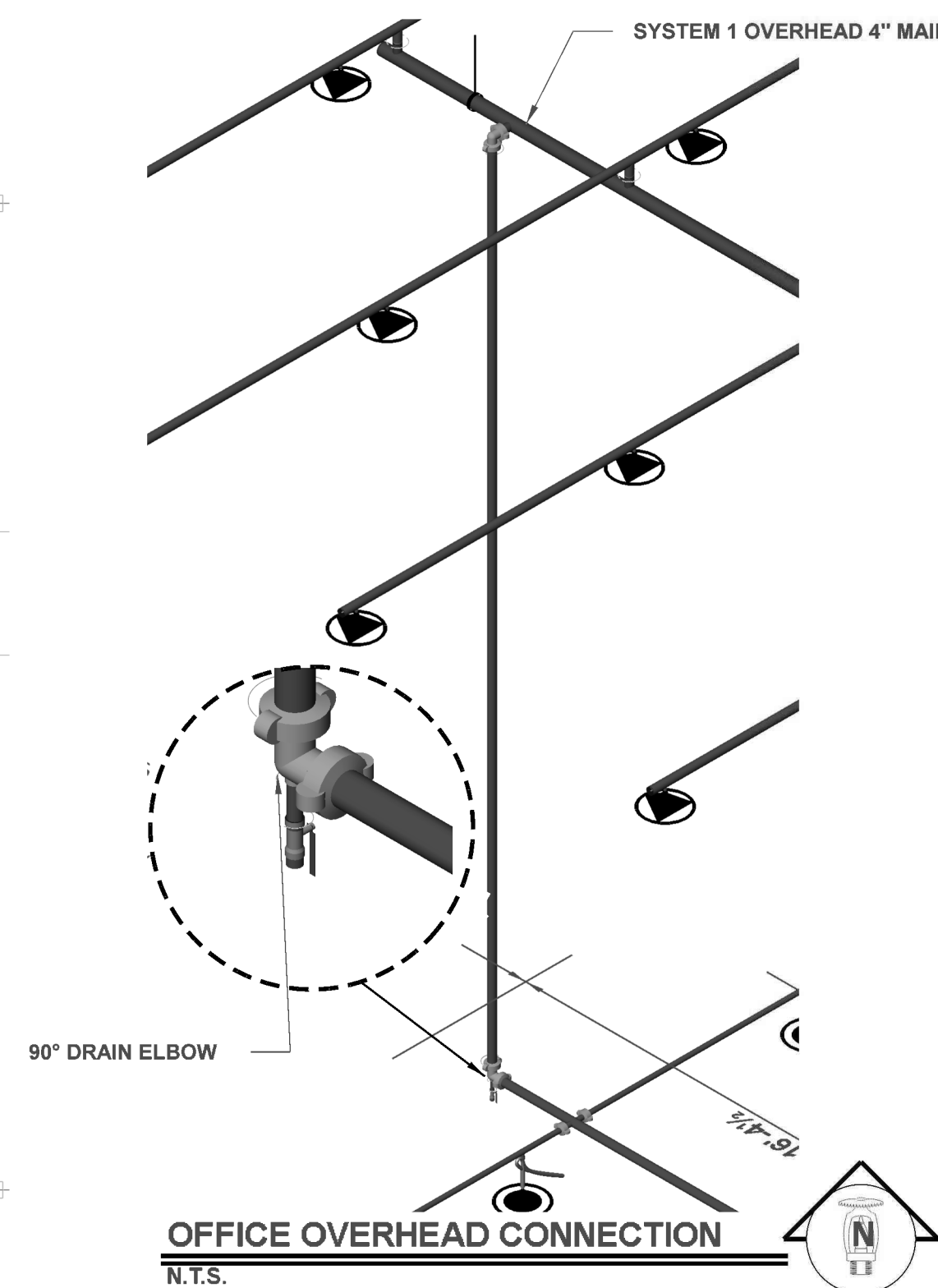


MAINT. SHOP SPRINKLER LAYOUT

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

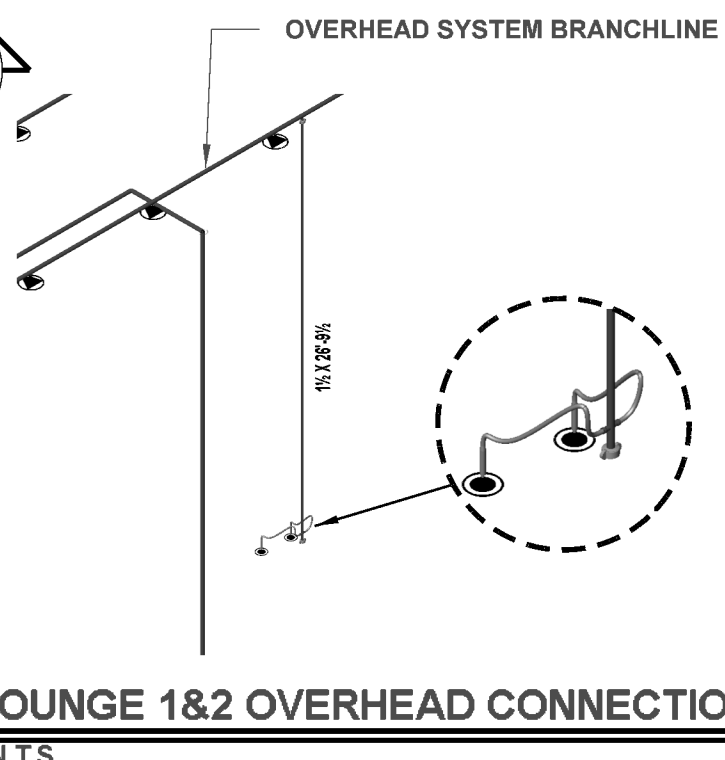
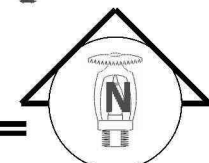


Hydraulic Information	
Remote Area Office	
OCCUPANCY CLASSIFICATION	LIGHT HAZARD
DENSITY (GPM/FT²)	0.10 FOR 1500FT² (ACTUAL 965FT²)
QUICK RESPONSE REDUCTION	9'-8" CEILING (40.0%) 900FT²
TOTAL HOSE STREAMS	100.00
TOTAL HEADS FLOWING	7
K-FACTOR	5.6
TOTAL WATER REQUIRED	388.74
TOTAL PRESSURE REQUIRED	42.659
BASE OF RISER (GPM)	388.74
BASE OF RISER (PSI)	42.659
SAFETY MARGIN (PSI)	+53.863 (55.8%)



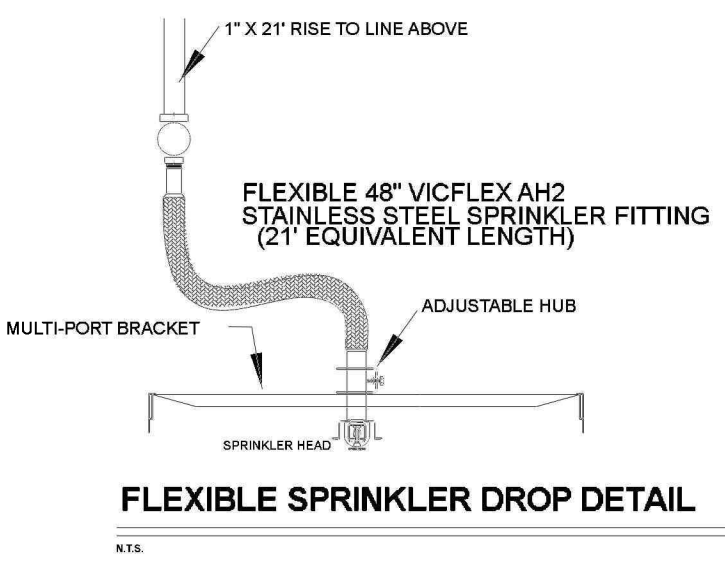
OFFICE OVERHEAD CONNECTION

N.T.S.



LOUNGE 1&2 OVERHEAD CONNECTION

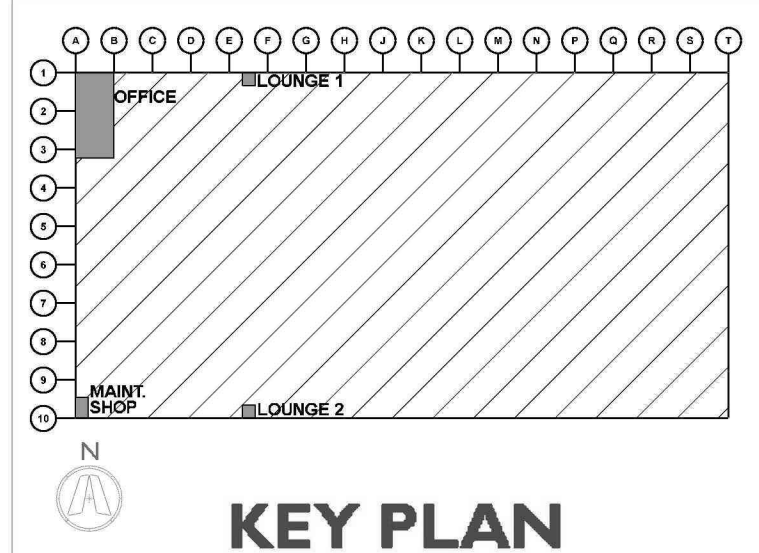
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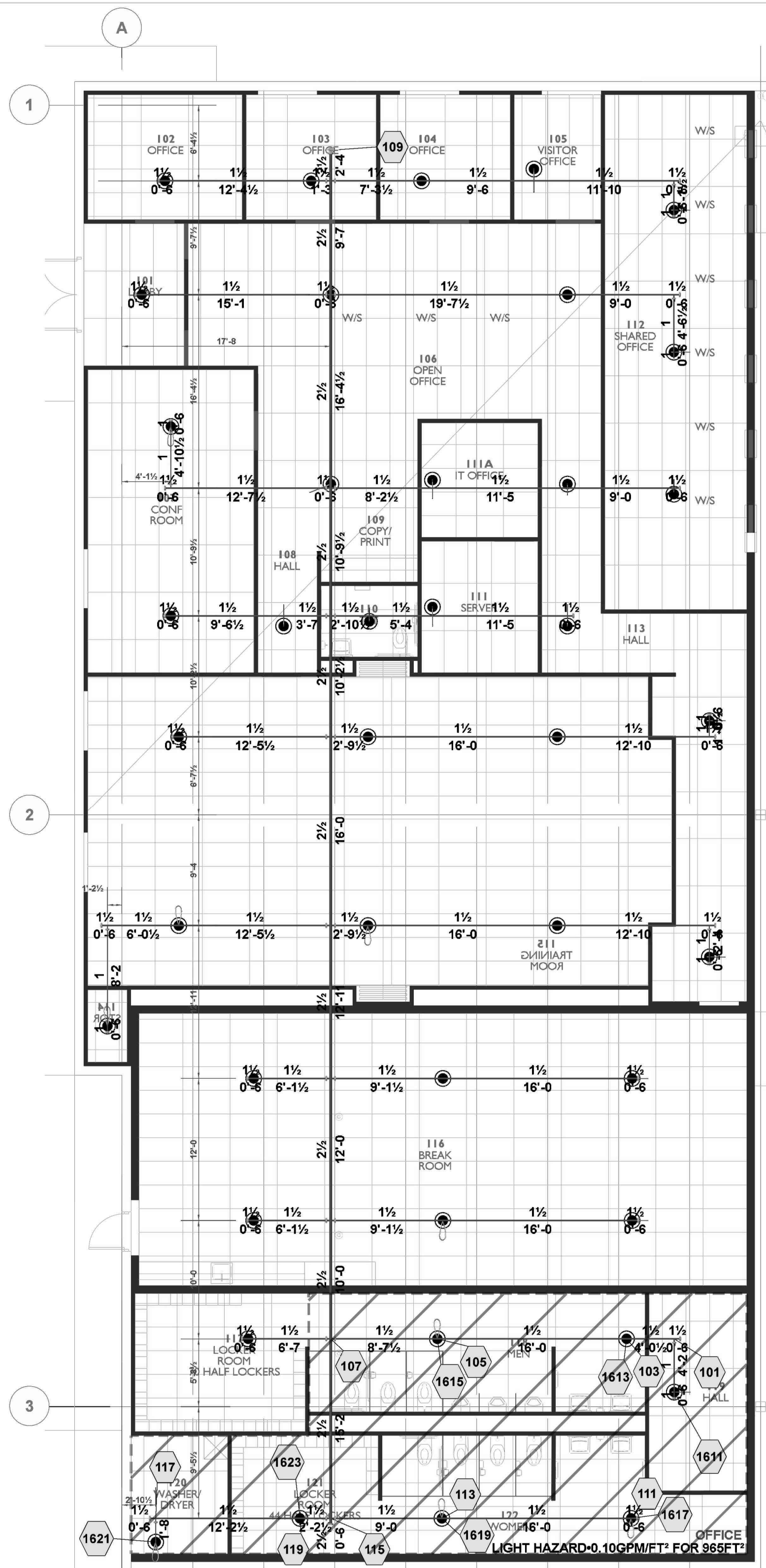
FLEXIBLE SPRINKLER DROP DETAIL

N.T.S.

Sprinkler Legend										
SYMBOL	MANUFACTURER	SIN	MODEL	QUANTITY	K-FACTOR	TYPE	SIZE	RESPONSE	FINISH	TEMPERATURE
▲	VICTAULIC	V4702	FL-QR/ST/ESFR	2054	16.8	PENDENT	3/4"	FAST	BRASS	200°F
⊗	VICTAULIC	V3406	V34	4	9	PENDENT	3/4"	QUICK	BRASS	200°F
◆	VICTAULIC	V3428	ESFR	2754	22.4	PENDENT	1"	FAST	BRASS	200°F
●	VIKING	VK600	MICROFAST	48	5.6	PENDENT	1/2"	QUICK	CHROME	135°F
⊙	VIKING	VK3021		6	5.6	PENDENT	1/2"	QUICK	CHROME	135°F
◆	VIKING	VK504	ESFR DRY	368	16.8	PENDENT	3/4"	QUICK	BRASS	205°F
				TOTAL = 5234						



KEY PLAN

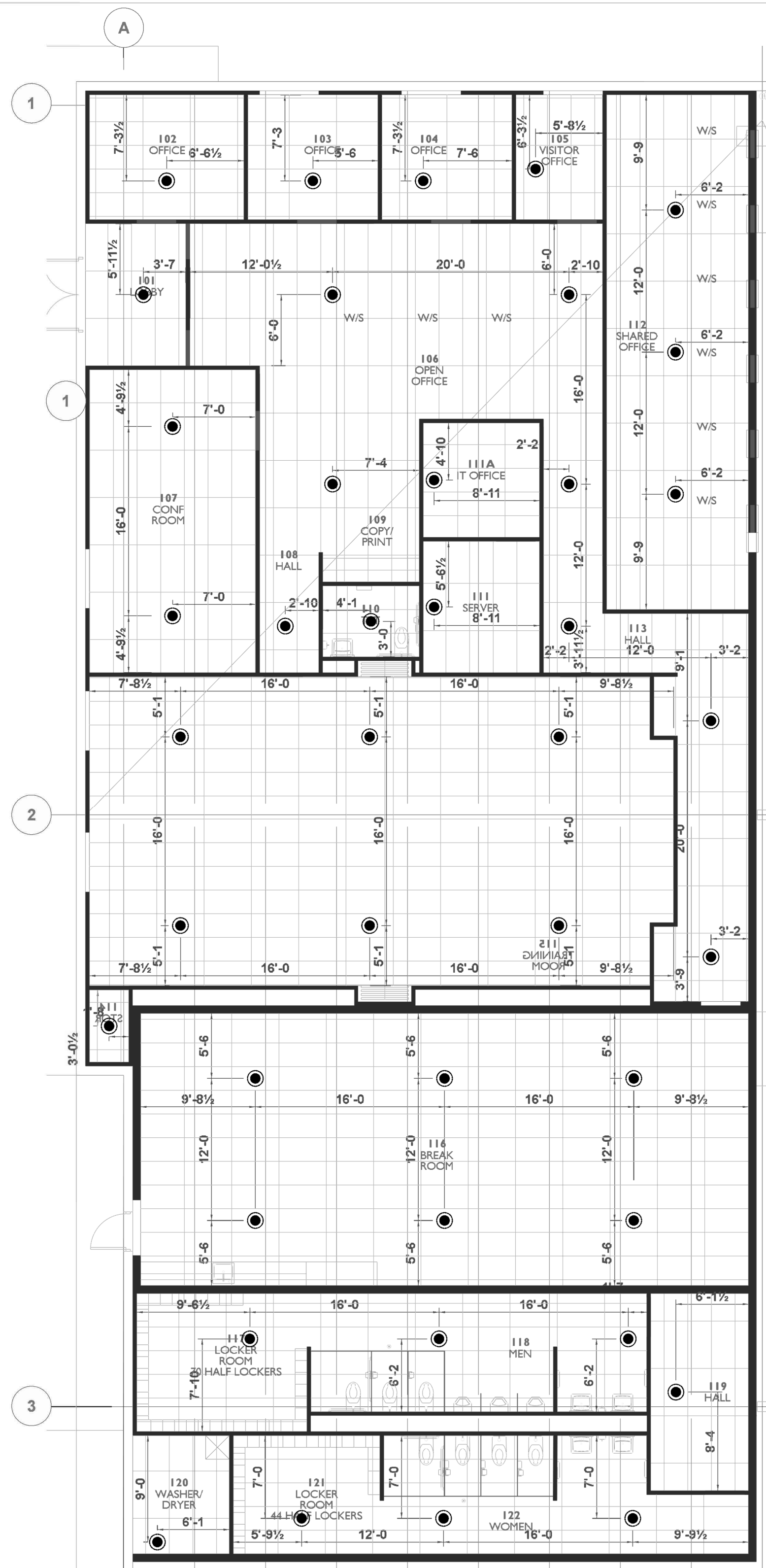


OFFICE PIPING LAYOUT

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

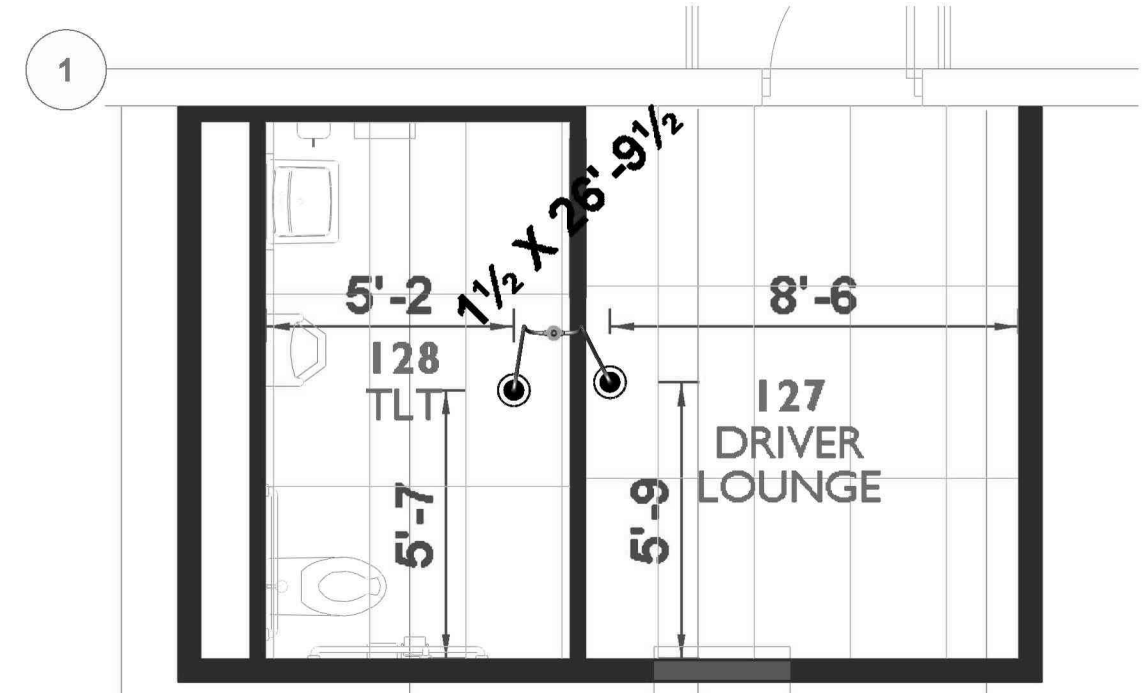
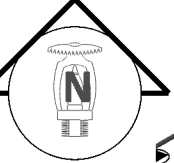


\*\*ACT ELEVATIONS: 9'-8" AFF  
\*\*PIPING CENTERLINES: 10'-8" AFF



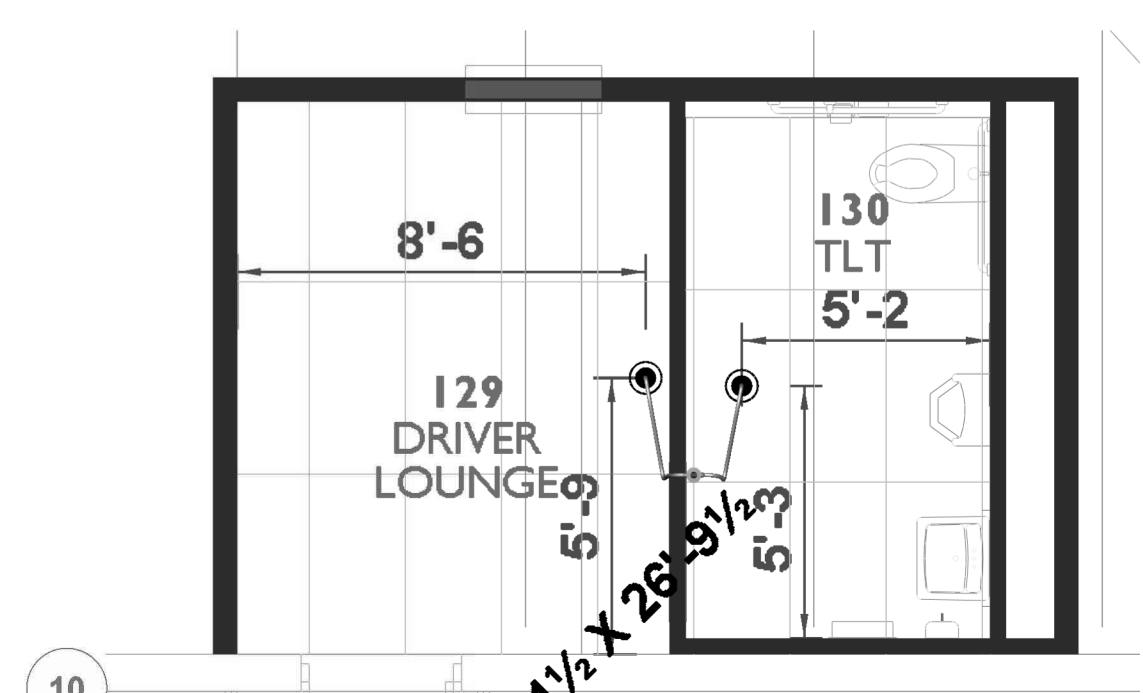
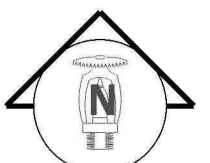
OFFICE SPRINKLER REFLECTED CEILING PLAN

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



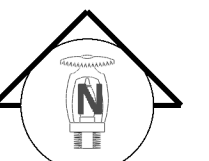
DRIVERS LOUNGE 1 REFLECTED CEILING PLAN

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



DRIVERS LOUNGE 2 REFLECTED CEILING PLAN

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







**CURRAN**  
ARCHITECTURE  
5719 LAWTON LOOP E. DR. #212  
INDIANAPOLIS, IN 46216  
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PROPERTIES

CERTIFICATION



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PROJECT INFORMATION

LEE'S SUMMIT LOGISTICS  
BUILDING A LOT I  
NW CORNER OF  
NE TUDOR RD & MAIN ST  
LEE'S SUMMIT, MO 64086

ISSUE DATES

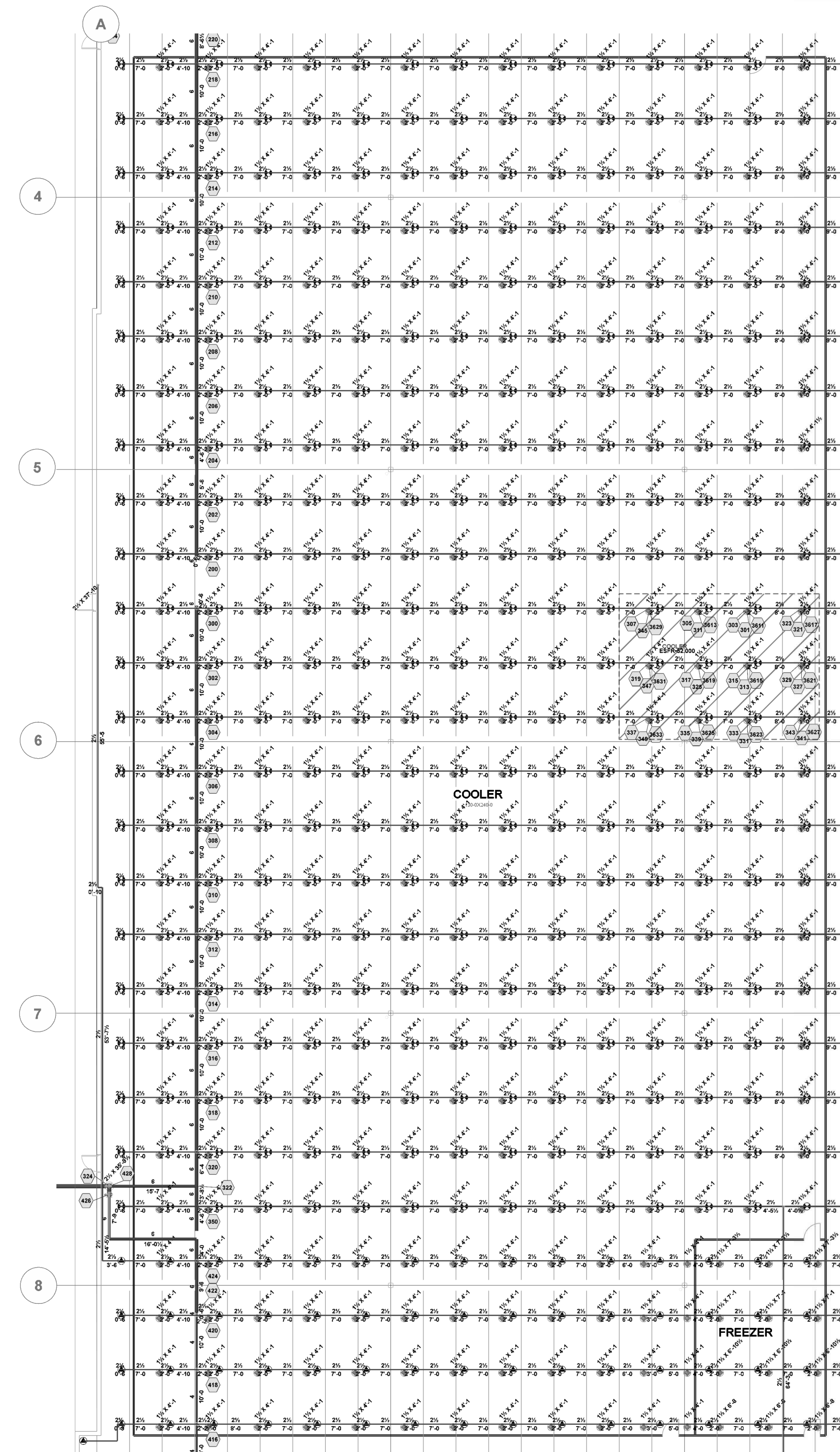
PERMIT SET 02.18.22  
TENANT IMPROVEMENT 09.07.22

210300

**FP2.11**

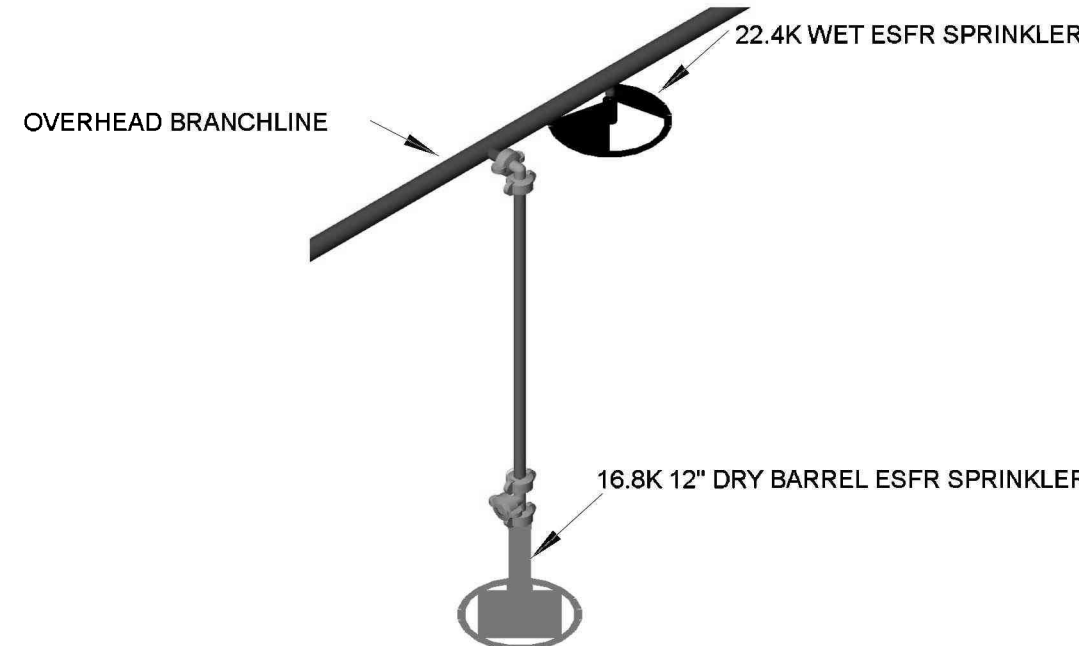
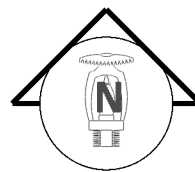
TENANT  
IMPROVEMENT  
COOLER PLAN

Hydraulic Information	
Remote Area Cooler	
OCCUPANCY CLASSIFICATION	ESFR
MIN. END HEAD PRESSURE	52.000 (ESFR)
TOTAL HOSE STREAMS	250.00
TOTAL HEADS FLOWING	12
K-FACTOR	16.8
TOTAL WATER REQUIRED	1708.14
TOTAL PRESSURE REQUIRED	73.255
BASE OF RISER (GPM)	1708.14
BASE OF RISER (PSI)	73.255
SAFETY MARGIN (PSI)	+16.353 (18.2%)



COOLER/FREEZER OVERHAD LAYOUT

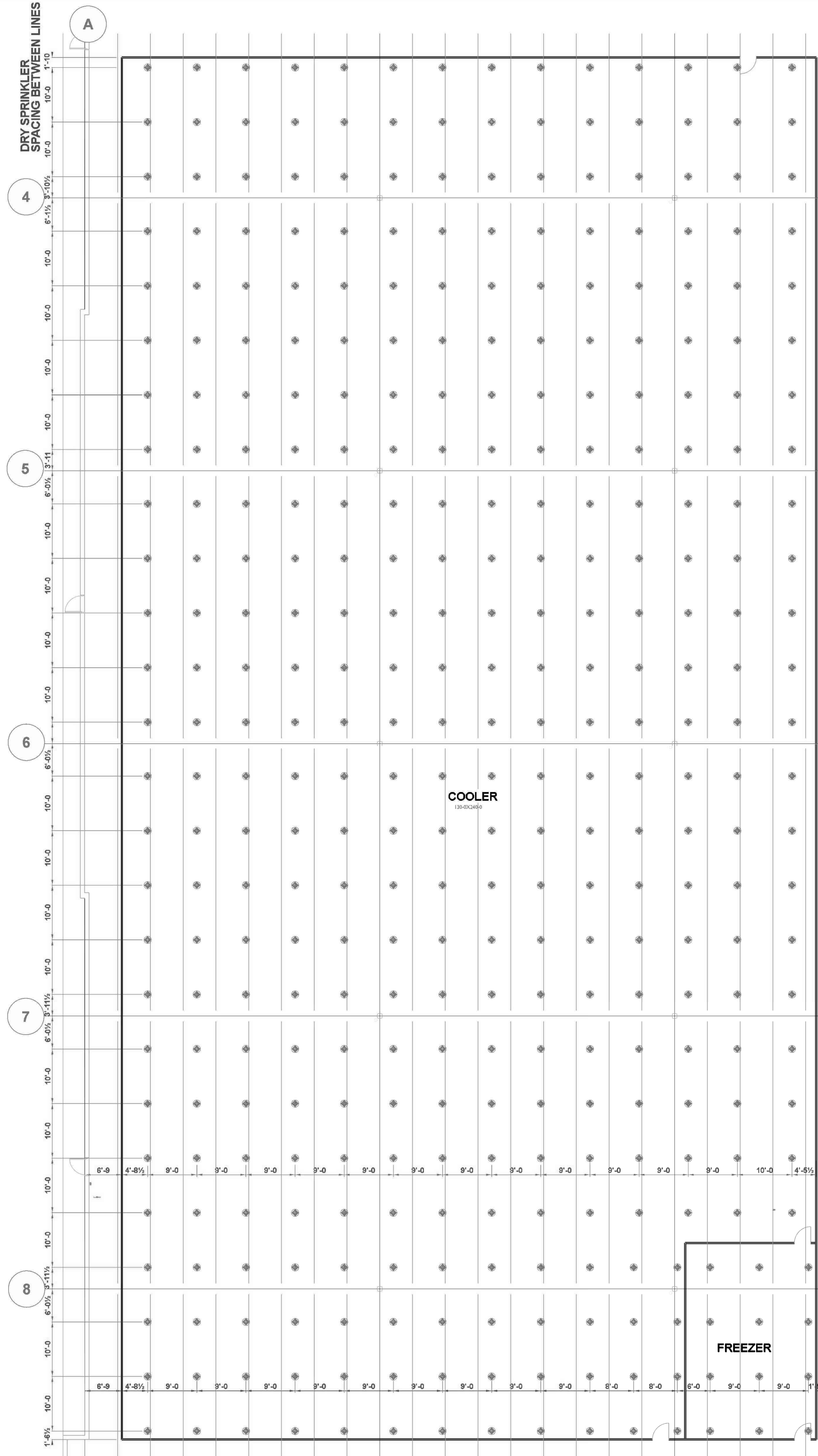
SCALE: 1/16" = 1'-0"



DRY BARREL OVERHEAD CONNECTION

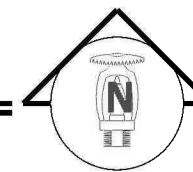
N.T.S.

\*\*COOLER CEILING ELEVATION: 6'-4 BELOW DECK  
\*\*COOLER CEILING THICKNESS: 0'-5  
\*\*BRANCHLINE CENTERLINES: 0'-3 BELOW DECK

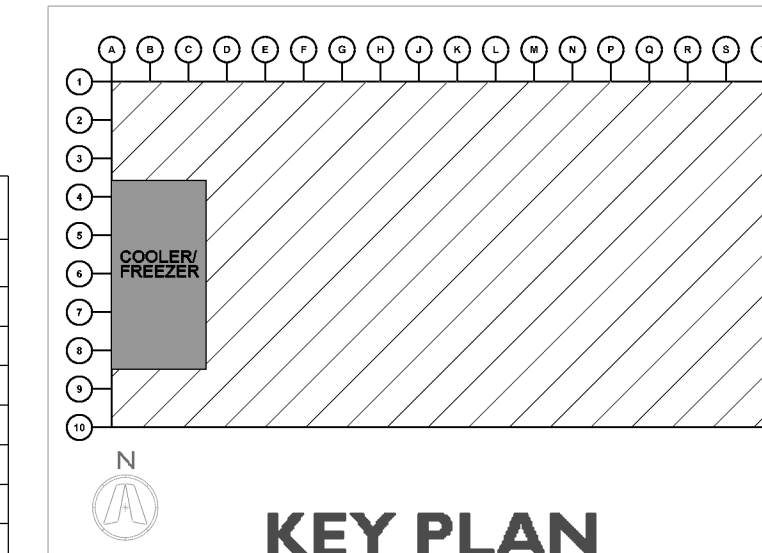
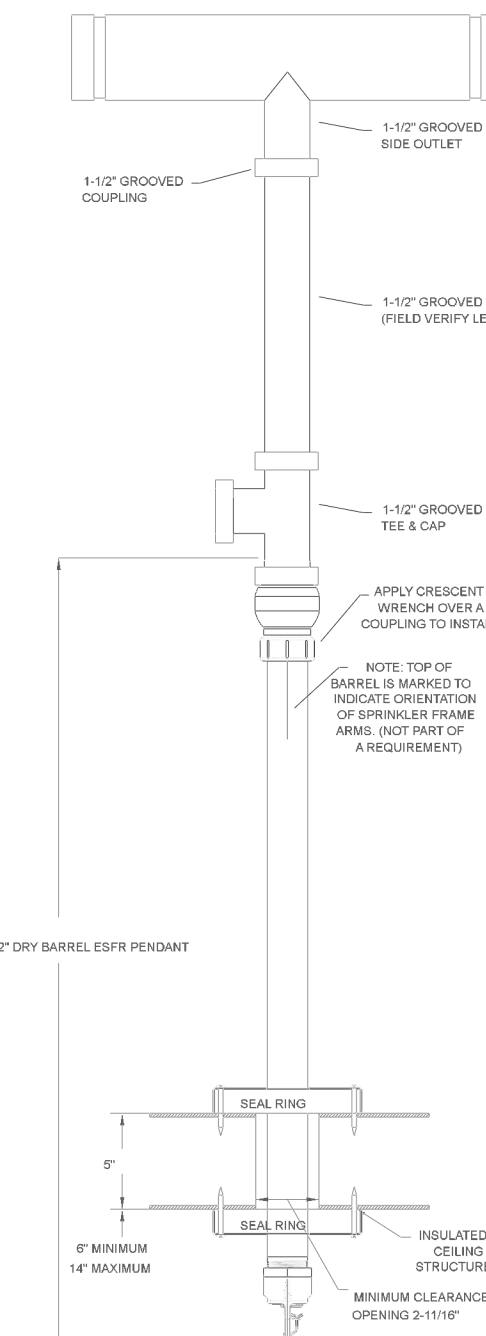


COOLER/FREEZER LAYOUT

SCALE: 1/16" = 1'-0"

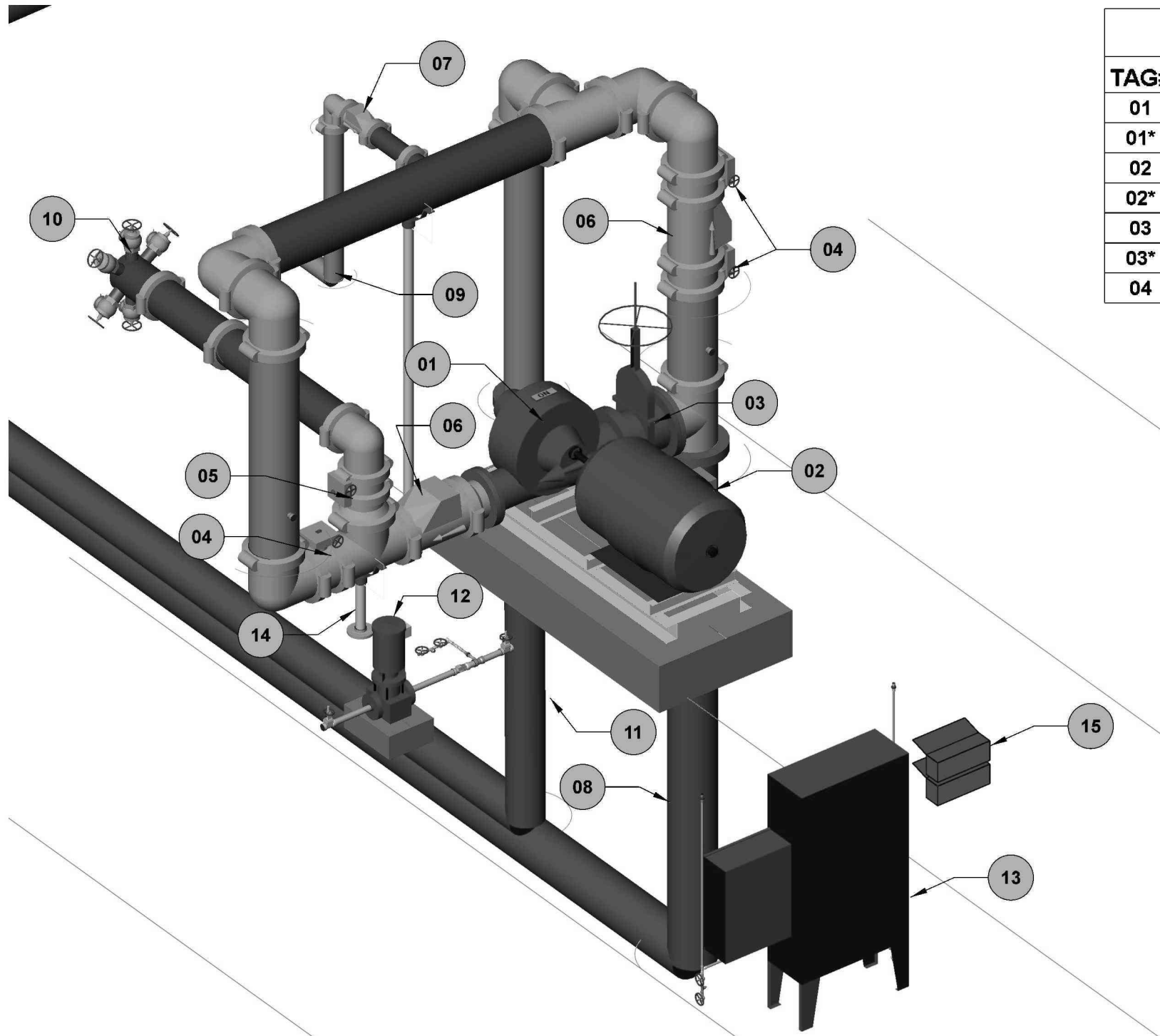


Sprinkler Legend											
SYMBOL	MANUFACTURER	SIN	MODEL	QUANTITY	K-FACTOR	TYPE	SIZE	RESPONSE	FINISH	TEMPERATURE	NOTE
	VICTAULIC	V4702	FL-QR/ST/ESFR	2054	16.8	PENDENT	3/4	FAST	BRASS	200°F	
	VICTAULIC	V3406	V34	4	8	PENDENT	3/4	QUICK	BRASS	200°F	
	VICTAULIC	V3428	ESFR	2754	22.4	PENDENT	1	FAST	BRASS	200°F	
	VIKING	VK600	MICROFAST	48	5.6	PENDENT	1/2	QUICK	CHROME	135°F	
	VIKING	VK3021		6	5.6	PENDENT	1/2	QUICK	CHROME	135°F	
	VIKING	VK504	ESFR DRY	368	16.8	PENDENT	3/4	QUICK	BRASS	205°F	
				TOTAL = 5234							

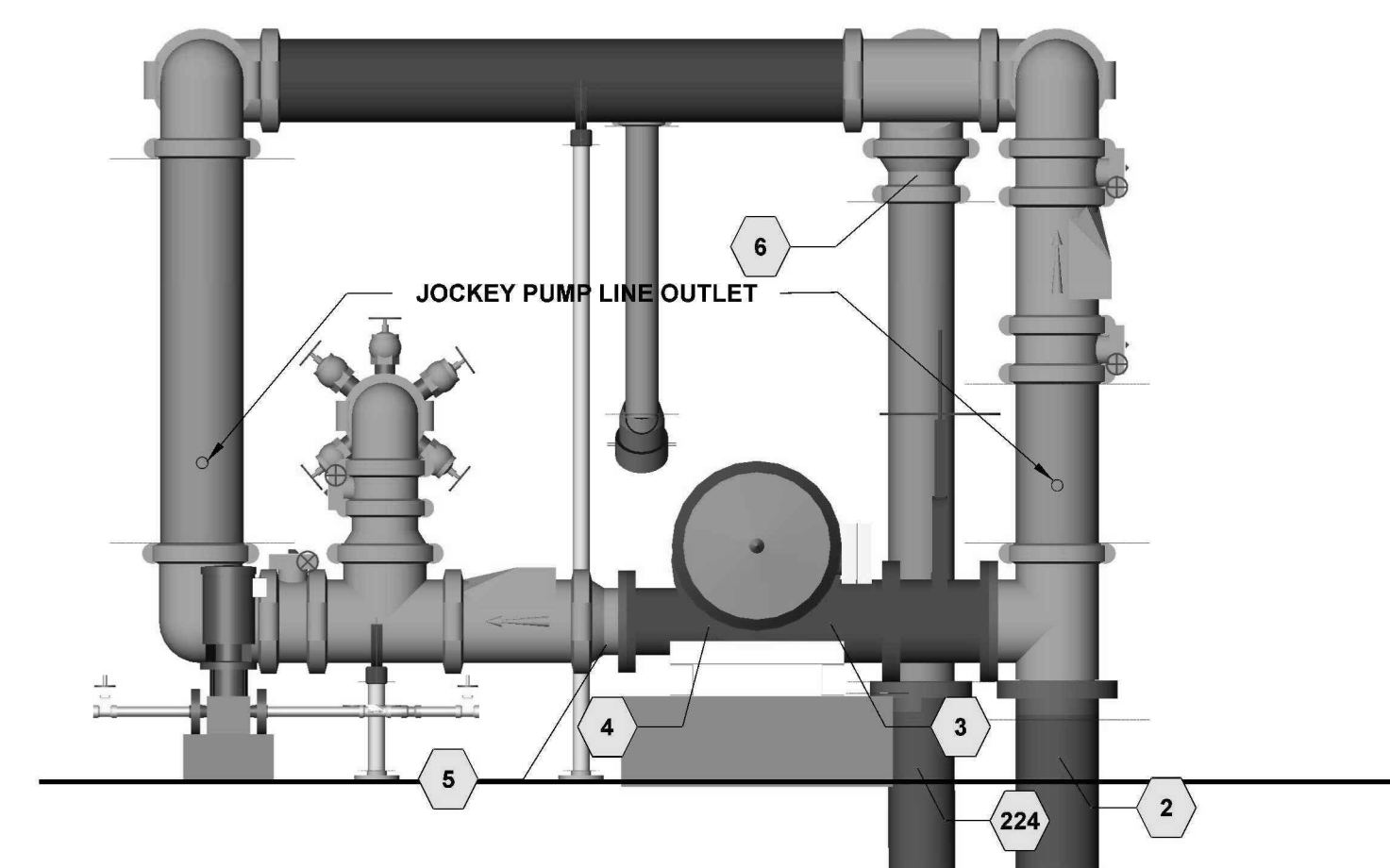


KEY PLAN





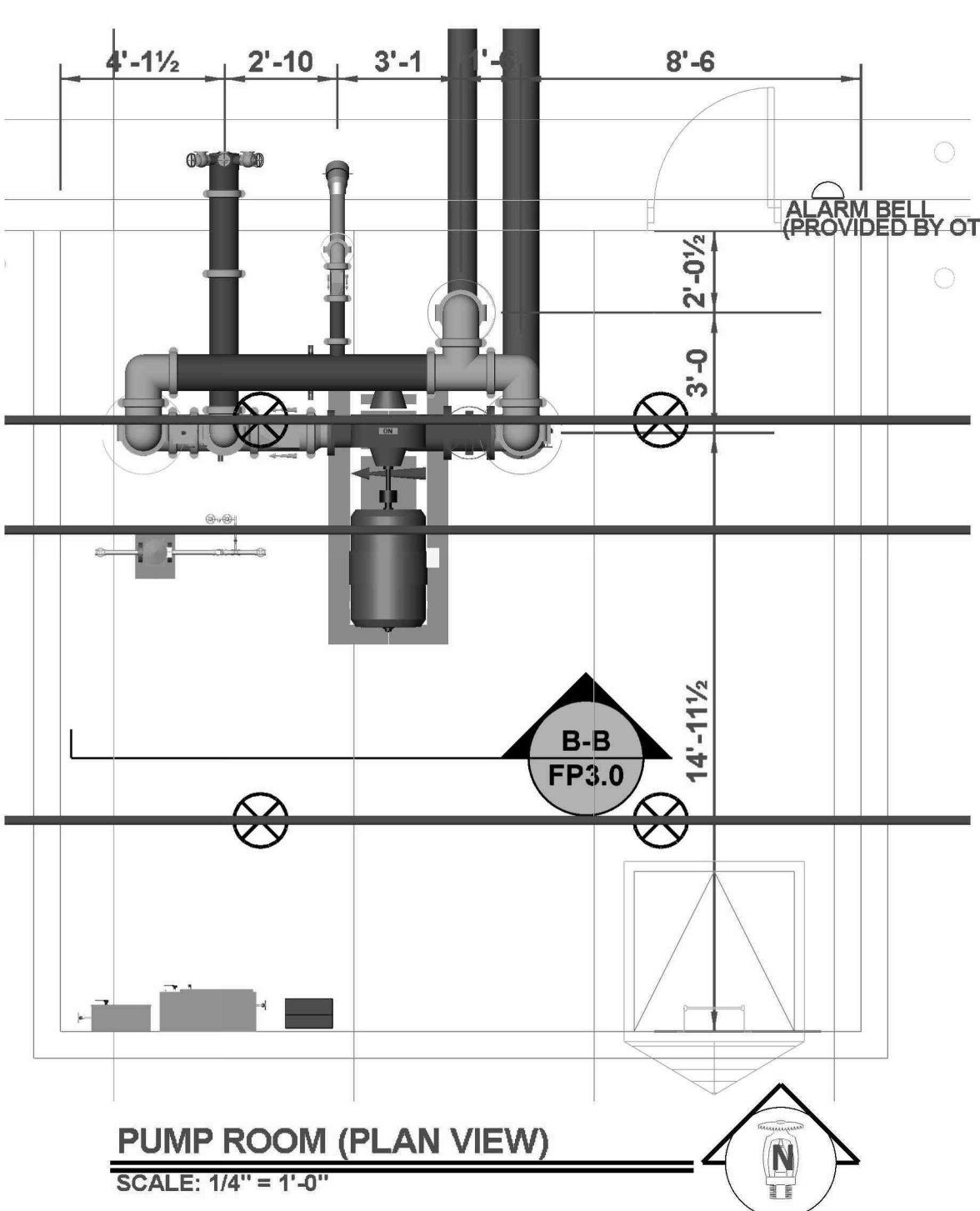
**PUMP ROOM (3D VIEW)**  
SCALE: 3/32" = 1'-0"



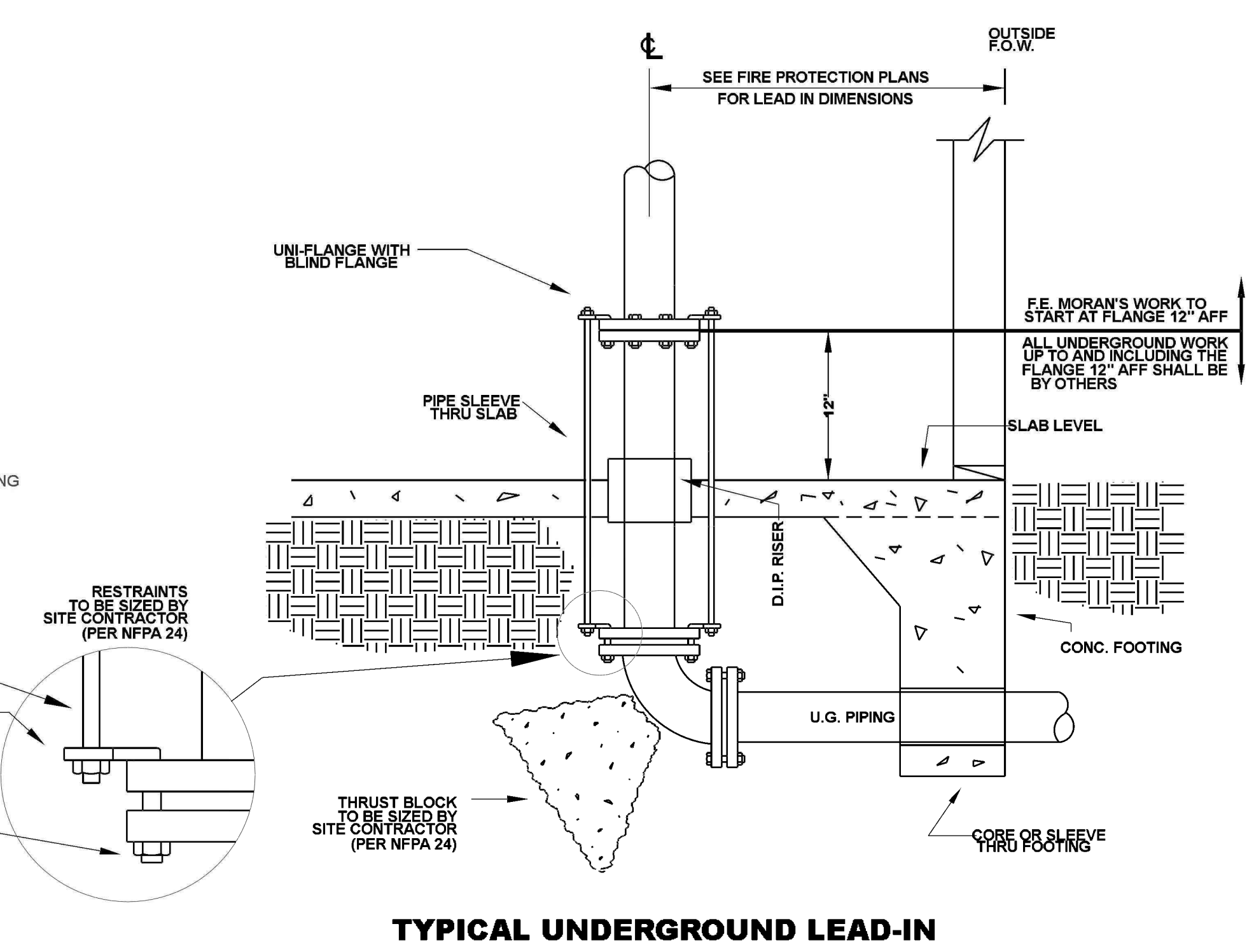
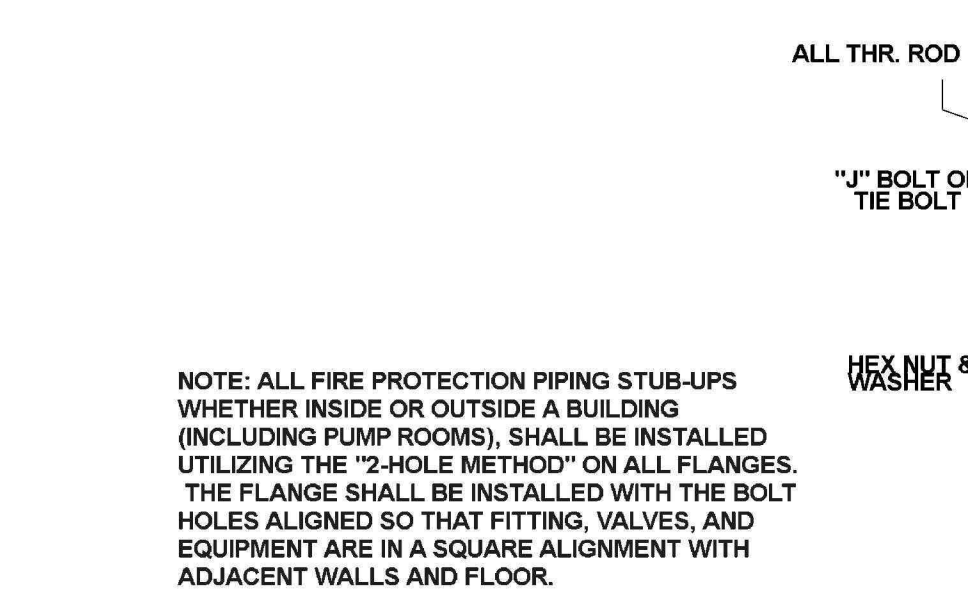
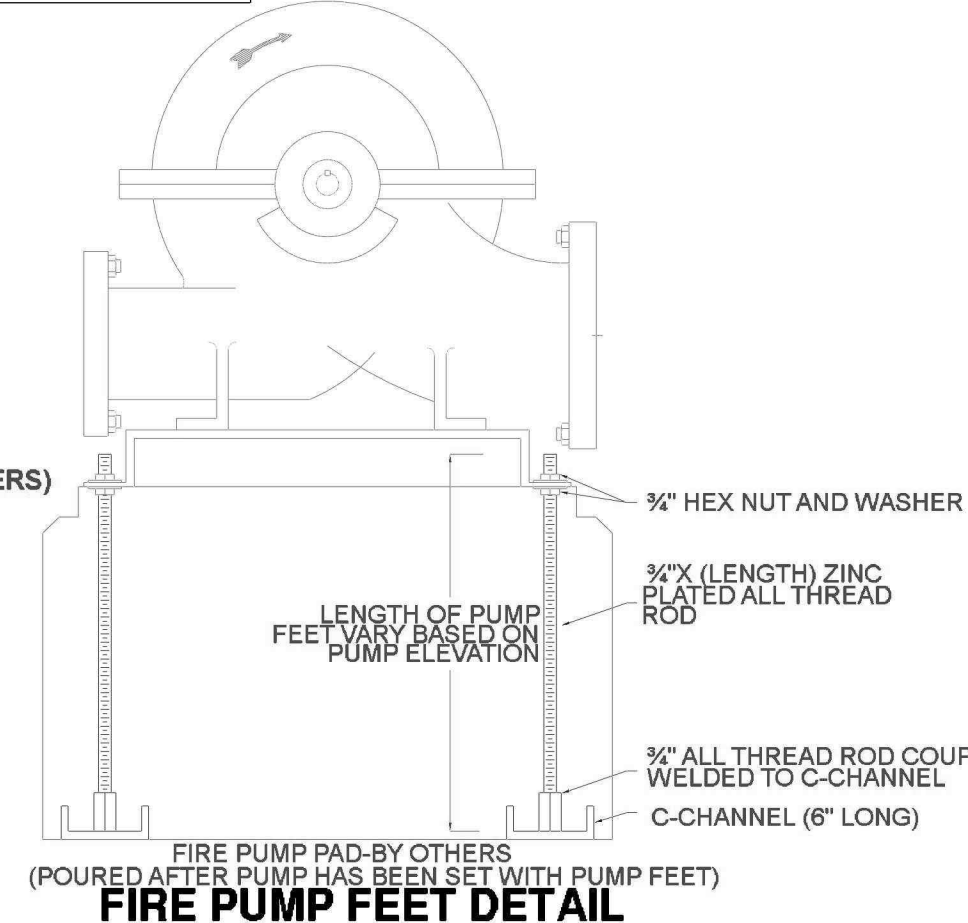
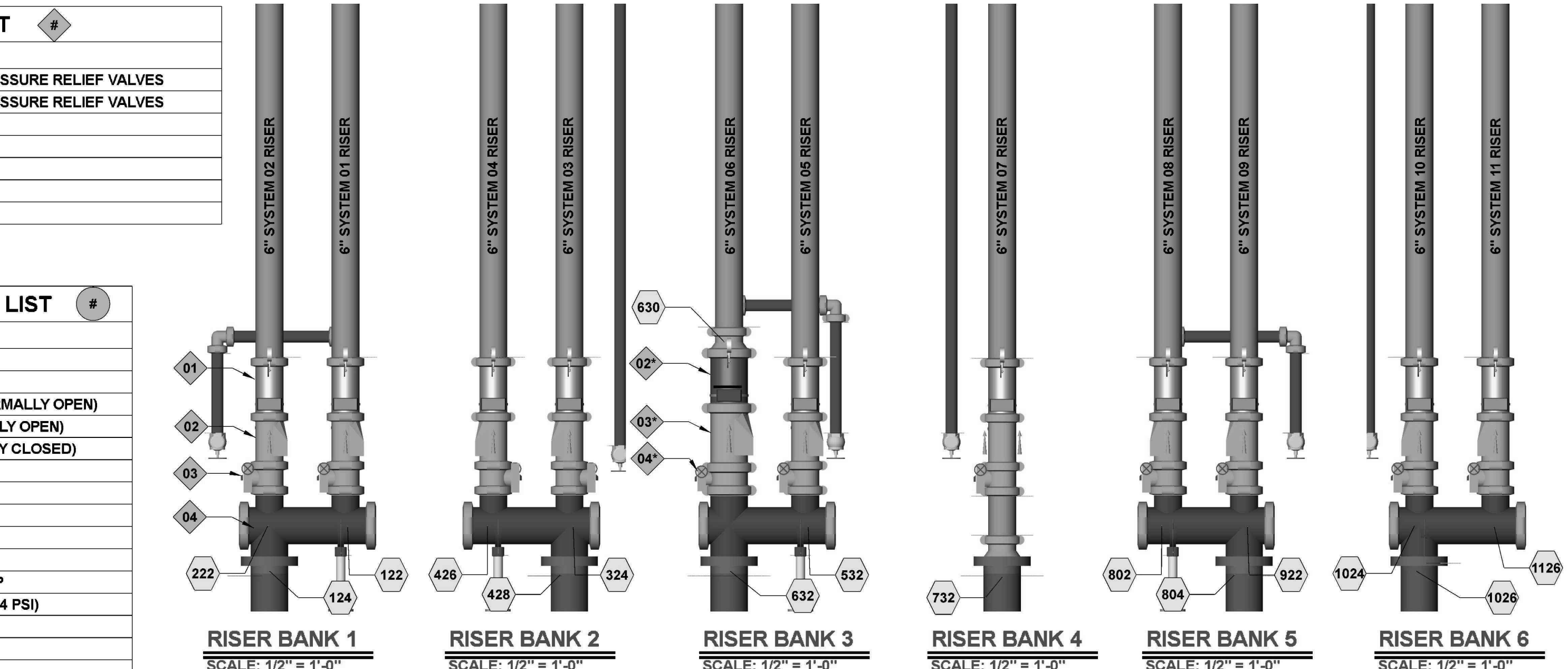
**FIRE PUMP (SECTION B-B)**  
SCALE: 1/2" = 1'-0"

FIRE PUMP RISER BANK MATERIAL LIST	
TAG#	MATERIAL CALL OUT
01	6" RISER MANIFOLD W/ FLOW SWITCH, INSP. TEST AND 2" MAIN DRAIN, & PRESSURE RELIEF VALVES
01*	8" RISER MANIFOLD W/ FLOW SWITCH, INSP. TEST AND 2" MAIN DRAIN, & PRESSURE RELIEF VALVES
02	6" CHECK VALVE
02*	8" CHECK VALVE
03	6" BUTTERFLY VALVE W/ TAMPER (NORMALLY OPEN)
03*	8" BUTTERFLY VALVE W/ TAMPER (NORMALLY OPEN)
04	8" RISER BANK HEADER

FIRE PUMP ROOM MATERIAL LIST	
TAG#	MATERIAL CALL OUT
01	2000 GPM @ 60 PSI 10X8 FIRE PUMP
02	SPP 100 HP ELECTRIC MOTOR
03	10" FLG OS&Y GATE VALVE W/ TAMPER (NORMALLY OPEN)
04	10" BUTTERFLY VALVE W/ TAMPER (NORMALLY OPEN)
05	8" BUTTERFLY VALVE W/ TAMPER (NORMALLY CLOSED)
06	10" CHECK VALVE
07	4" CHECK VALVE
08	10" UNDERGROUND SUPPLY PIPING
09	4" FDC PIPING W/ STORZ TYPE CONNECTION
10	8X2½(6) TEST HEADER
11	10" WATER DISCHARGE PIPING TO FIRE LOOP
12	2 HP JOCKEY PUMP ASSEMBLY (15 GPM @ 104 PSI)
13	ELECTRIC & JOCKEY PUMP CONTROLLERS
14	10" PIPE STAND
15	SPARE HEAD BOXES



**PUMP ROOM (PLAN VIEW)**  
SCALE: 1/4" = 1'-0"



**TYPICAL UNDERGROUND LEAD-IN**

**FIRE PUMP NOTES:**  
-IN ADDITION TO THE FOLLOWING NOTES, ALL WORK AND MATERIAL SHALL CONFORM TO NFPA 13 AND NFPA 20, AS APPLICABLE

**NFPA 20 REQUIREMENTS:**

**EQUIPMENT PROTECTION:**  
SUITABLE MEANS SHALL BE PROVIDED FOR MAINTAINING THE TEMPERATURE OF A PUMP ROOM OR PUMP HOUSE, WHERE REQUIRED, ABOVE 40 DEG F. ARTIFICIAL LIGHT SHALL BE PROVIDED IN THE PUMP ROOM OR PUMP HOUSE. EMERGENCY LIGHTING SHALL BE PROVIDED BY FIXED OR PORTABLE BATTERY OPERATED LIGHTS, INCLUDING FLASHLIGHTS. EMERGENCY LIGHTS SHALL NOT BE CONNECTED TO AN ENGINE STARTING BATTERY. PROVISION SHALL BE MADE FOR VENTILATION OF THE PUMP ROOM OR PUMP HOUSE. FLOORS SHALL BE PITCHED FOR ADEQUATE DRAINAGE OF ESCAPING WATER AWAY FROM CRITICAL EQUIPMENT SUCH AS THE PUMP, DRIVER, CONTROLLER, ECT. THE PUMP ROOM OR PUMP HOUSE SHALL BE PROVIDED WITH A FLOOR DRAIN THAT WILL DISCHARGE TO A FROST-FREE LOCATION.

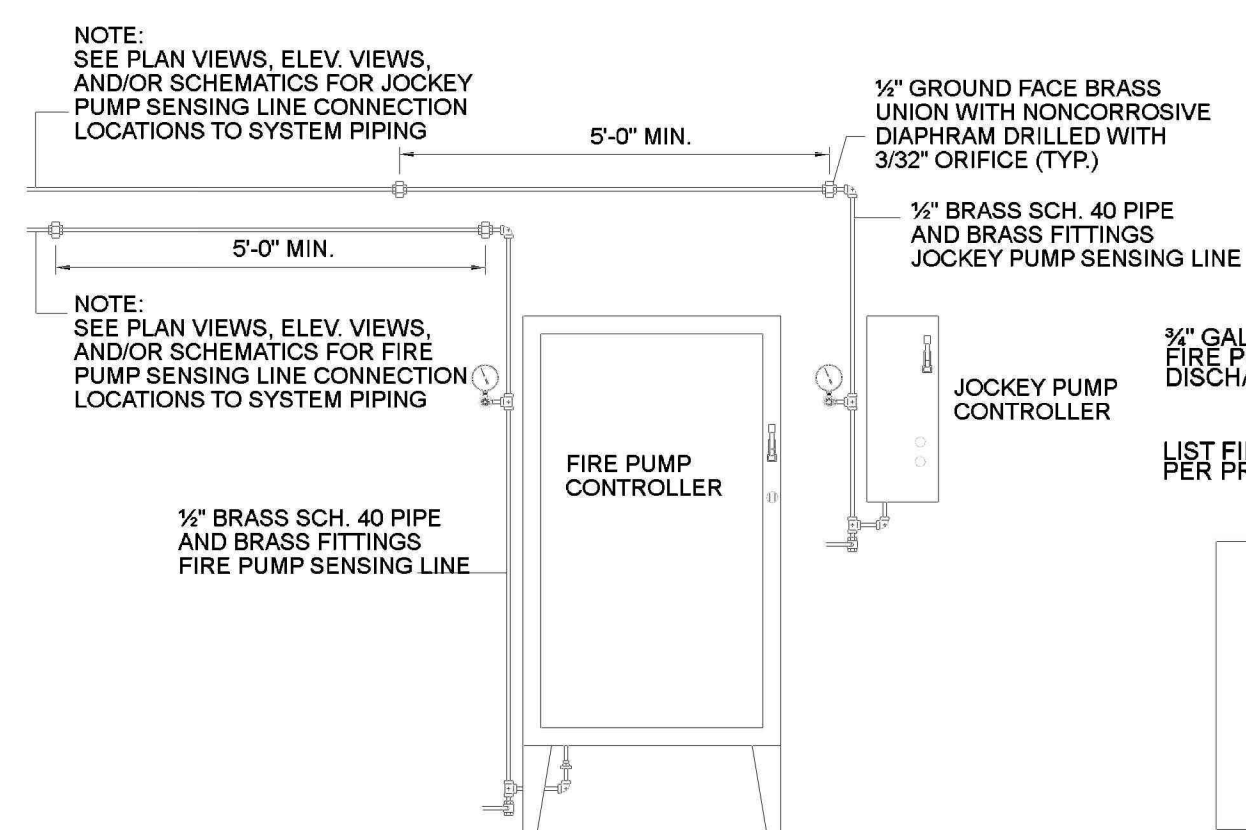
**PIPE AND FITTINGS:**  
WHERE CORROSIVE CONDITIONS EXIST, THE STEEL SUCTION PIPE SHALL BE GALVANIZED. ALL PROVISIONS FOR WELDED PIPE SHALL BE IN ACCORDANCE WITH NFPA 51B, STANDARD FOR FIRE PREVENTION DURING WELDING, CUTTING, AND OTHER HOT WORK.

**SUCTION PIPE AND FITTINGS:**  
THE SUCTION PIPE SHALL BE INSTALLED AND TESTED IN ACCORDANCE WITH NFPA. A BY-PASS SHALL BE INSTALLED AROUND THE PUMP WHEN THE SUCTION PRESSURE IS OF MATERIAL VALUE WITHOUT THE PUMP. THE PIPE SIZE OF THE BY-PASS SHALL BE AS LARGE AS THE SIZE REQUIRED FOR SUCTION PIPE IN NFPA 20. THE BY-PASS CONTROL VALVES SHALL BE NORMALLY OPEN

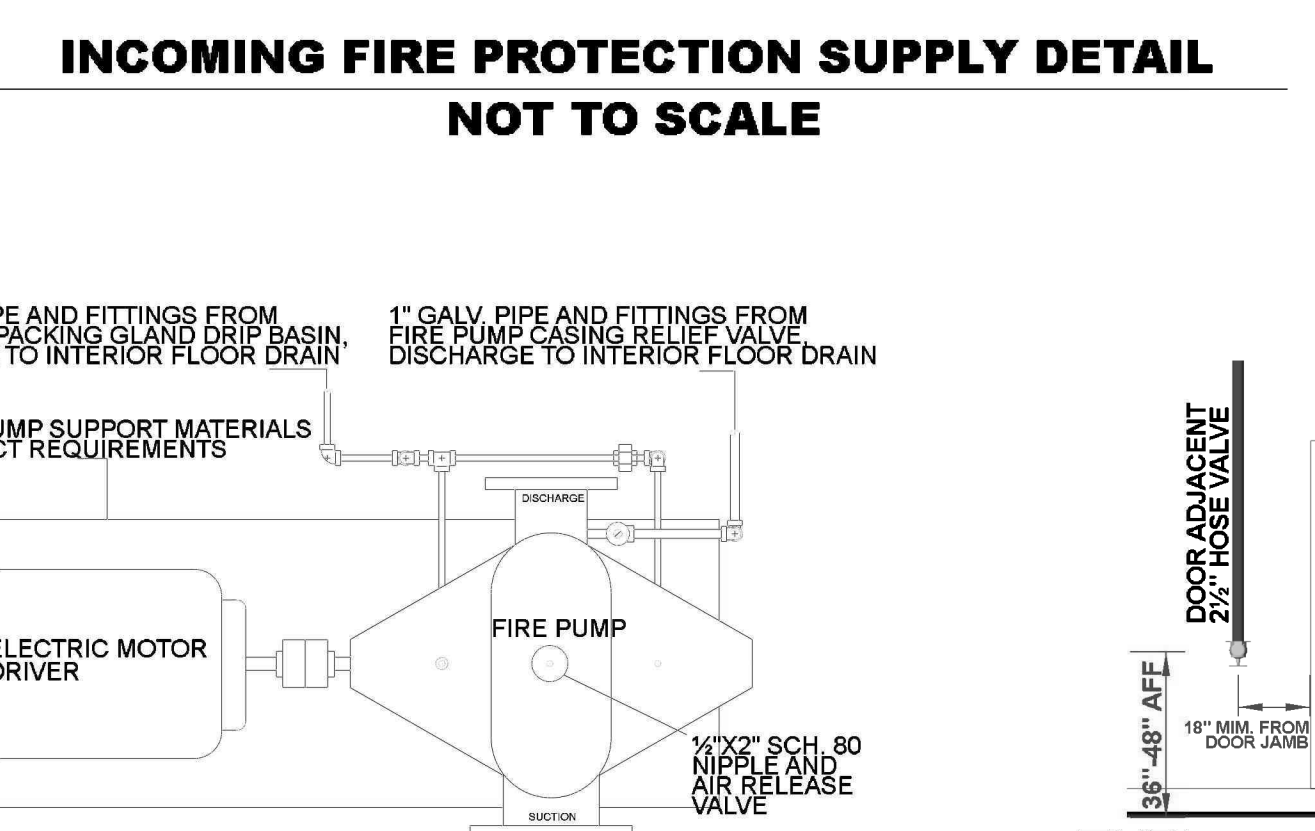
**DISCHARGE PIPE:**  
SHALL BE HYDROSTATICALLY TESTED IN ACCORDANCE WITH NFPA 13. THE SIZE OF THE PUMP DISCHARGE PIPE AND FITTINGS SHALL BE NOT LESS THAN THAT GIVEN IN NFPA 20.

**ELECTRIC DRIVE FOR PUMPS:**  
ALL ELECTRICAL WORK TO SUPPLY POWER TO THE FIRE PUMP SHALL BE IN ACCORDANCE WITH CHAPTER 6 OF NFPA 20. ELECTRICAL WORK SHALL COMPLY WITH NFPA 70, ARTICLE 695 AND OTHER APPLICABLE ARTICLES. THE FIRE PUMP FEEDER CIRCUIT CONDUCTORS AND THEIR ACCESSORIES SHALL BE DEDICATED AND PROTECTED TO RESIST POSSIBLE DAMAGE BY FIRE, STRUCTURAL FAILURE, OR OPERATIONAL ACCIDENT. THE SUPPLY CONDUCTORS DIRECTLY CONNECT THE POWER SOURCE TO THE LISTED FIRE PUMP CONTROLLER.

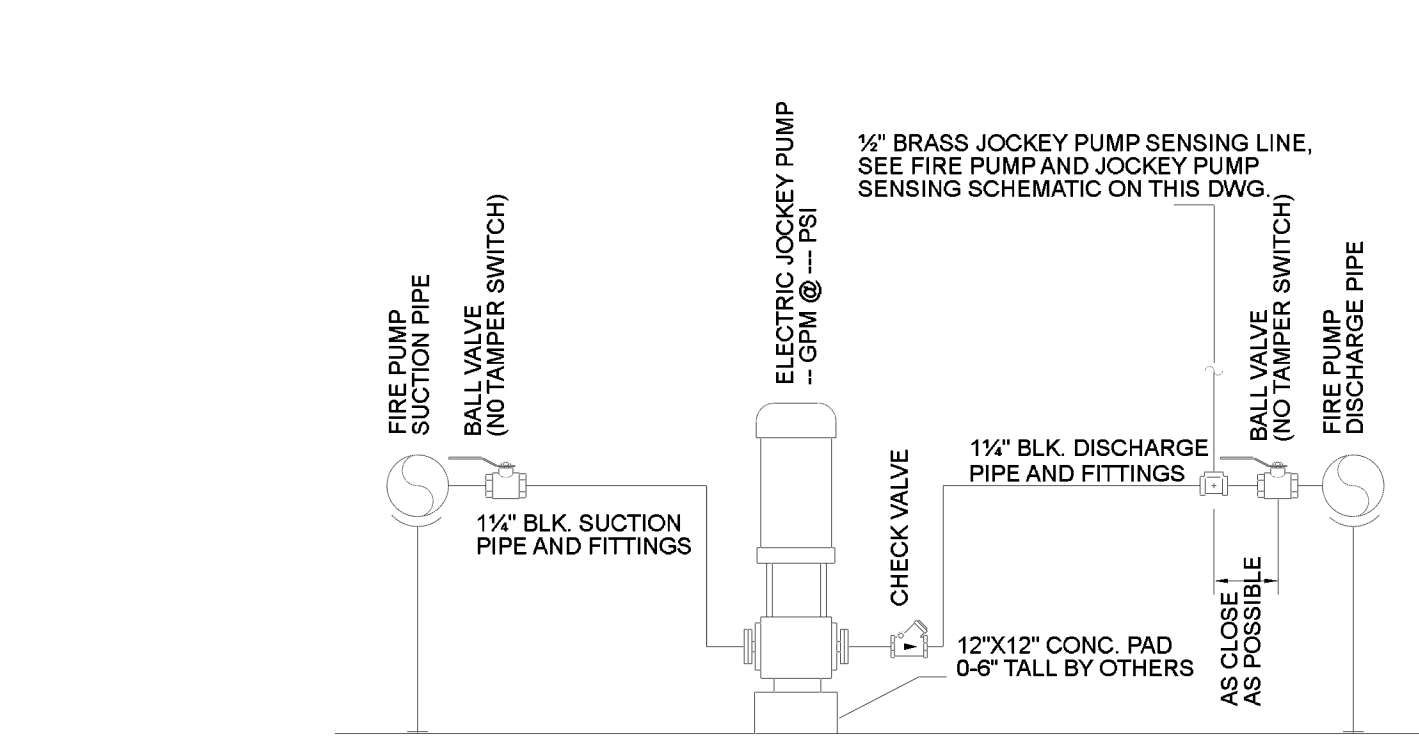
**FIRE PUMP CONTROLLER:**  
SHALL BE WIRED FOR MANUAL SHUTDOWN. FIRE PUMP SHALL BE MONITORED FOR THE FOLLOWING CONDITIONS: FIRE PUMP OR MOTOR RUNNING, LOSS OF PHASE, PHASE REVERSAL.



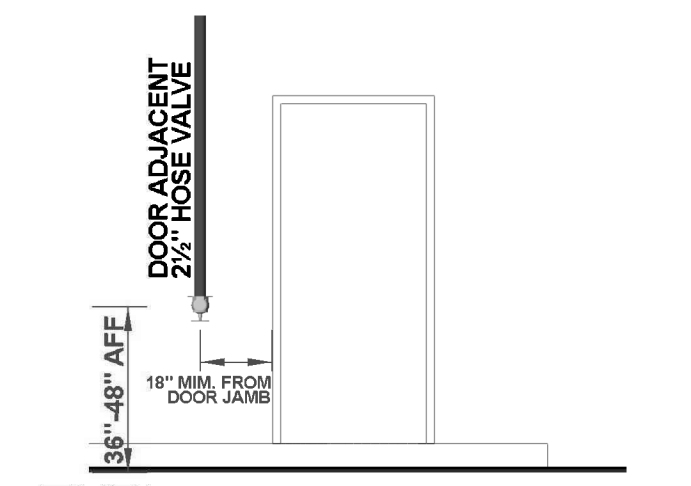
**FIRE PUMP AND JOCKEY PUMP SENSING SCHEMATIC**  
NO SCALE



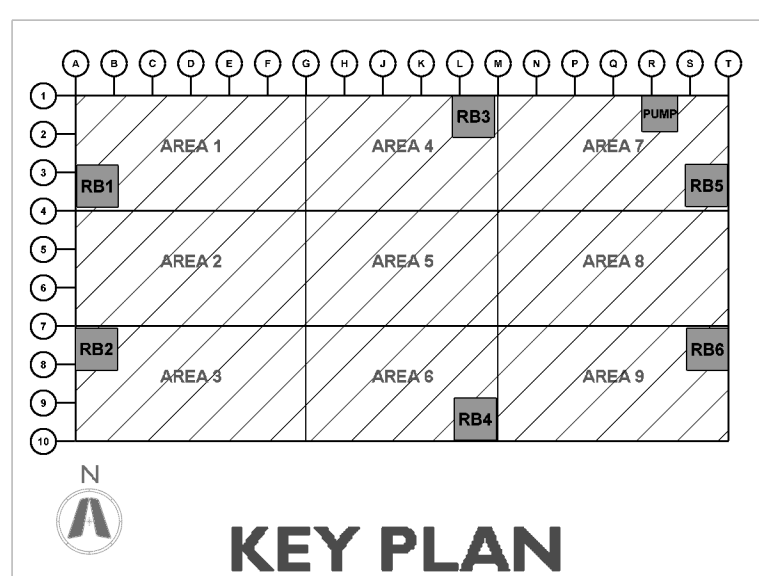
**ELECTRIC FIRE PUMP SCHEMATIC**  
NO SCALE



**JOCKEY PUMP SCHEMATIC**  
NO SCALE



**TYPICAL HOSE STATION**  
N.T.S.



**KEY PLAN**