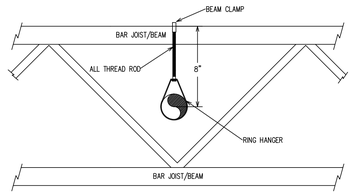
GENERAL NOTES

1. INTERNATIONAL BUILDING CODE (2018)
   - 1.1. OCCUPANCY: S-1
   - 1.2. TYPE OF CONSTRUCTION: II-B
   - 1.3. SPRINKLERED AREA (APPROXIMATE - SEE ARCHITECTURAL PLANS FOR ACTUAL)
     - TOTAL AREA = 293,773 S.F.
     - ZONE 1 ESFR = 39,468 S.F.
     - ZONE 2 ESFR = 36,373 S.F.
     - ZONE 3 ESFR = 36,962 S.F.
     - ZONE 4 ESFR = 34,082 S.F.
     - ZONE 5 ESFR = 36,694 S.F.
     - ZONE 6 ESFR = 34,082 S.F.
     - ZONE 7 ESFR = 39,470 S.F.
     - ZONE 8 ESFR = 36,373 S.F.
   - 1.4. INSTALLATION STANDARDS:
     - 1.4.1. SPRINKLER SYSTEM DESIGNED AND INSTALLED PER NFPA-13 (2016)
     - 1.4.2. FIRE PUMP DESIGNED AND INSTALLED PER NFPA-20 (2016)
2. SPRINKLER PIPE TYPES:
   - 2.1. 1" BRANCH LINES TO BE BLK MEGA THREAD PIPING WITH THREADED FITTINGS
   - 2.2. 1½" THROUGH 4" MAIN & BRANCH LINES TO BE BLK LIGHTWALL PIPING WITH GROOVED FITTINGS
   - 2.3. 6" THROUGH 8" MAIN TO BE BLK SCH 10 PIPING WITH GROOVED FITTINGS
3. DESIGN CRITERIA
   - 3.1. LIGHT HAZARD AREAS DESIGNED TO DELIVER 0.10 GPM/S.F. OVER THE MOST DEMANDING 1500 S.F.
   - 3.2. ORDINARY HAZARD GROUP II AREAS DESIGNED TO DELIVER 0.20 GPM/S.F. OVER THE MOST DEMANDING 1500 S.F.
   - 3.3. REMOTE AREA REDUCTIONS HAVE BEEN TAKEN WHERE APPLICABLE PER NFPA 13 SEC. 11.2.3.2.3
   - 3.5. STORAGE DESIGN CRITERIA:
     - 3.5.1. NFPA 13 = 12 SPRINKLERS @ 52 PSI PER NFPA 13 TABLES:
       - 3.5.1.1. 14.4.1 ALLOWS FOR THE STORAGE OF CLASS I - IV COMMODITIES TO A HEIGHT OF 35' WITH A 40' MAX ROOF HEIGHT IN SOLID PILES.
       - 3.5.1.2. 15.4.1 ALLOWS FOR THE STORAGE OF CARTONED UNEXPANDED AND EXPOSED UNEXPANDED GROUP "A" PLASTICS TO A HEIGHT OF 35' WITH A 40' MAX ROOF HEIGHT IN SOLID PILES
       - 3.5.1.3. 16.3.3.1 ALLOWS FOR THE STORAGE CLASS I - IV COMMODITIES TO A HEIGHT OF 35' WITH A 40' MAX ROOF HEIGHT IN RACKS
       - 3.5.1.4. 17.3.3.1 ALLOWS FOR THE STORAGE OF CARTONED UNEXPANDED AND EXPOSED UNEXPANDED GROUP "A" PLASTICS TO A HEIGHT OF 35' WITH A 40' MAX ROOF HEIGHT IN RACKS
       - 3.5.1.5. NO STORAGE OF CARTONED EXPANDED OR EXPOSED EXPANDED GROUP "A" PLASTICS IN RACKS OR SOLID PILES
       - 3.5.1.6. NO TIRE STORAGE OR ROLLED PAPER
     - 3.5.2. NOTES:
       - OPEN-FRAME RACK STORAGE
       - 35'-0" MAX TO THE TOP OF STORAGE
       - 40'-0" MAX CEILING HEIGHT
       - NO PLASTIC CONTAINERS
       - NO OPEN TOP CONTAINERS
4. NOTES:
   - 4.1. ALL MATERIAL TO BE NEW AND MEET U.L. STANDARDS
   - 4.2. HANGERS TO BE INSTALLED IN ACCORDANCE WITH NFPA 13 (2016) - SEE PLAN FOR HANGING REQUIREMENTS
5. SYMBOLS USED ON DRAWINGS:
   - +0'-0" PIPE ELEVATION A.F.F.
   - -1'-2" PIPE ELEVATION BELOW B.O.D
   - (OH1) ROOM HAZARD CLASSIFICATION (ALL ROOMS ARE CONSIDERED LIGHT HAZARD UNLESS NOTED WITH EXCEPTION OF THE WAREHOUSE)
   - (FP1) HYDRAULIC CALCULATION JUNCTION POINT
   - 18'-0" CEILING HEIGHT
6. SCOPE OF WORK:
   - 6.1. ALL AREAS OF THE NEW FACILITY TO BE INSTALLED AND COVERED IN ACCORDANCE WITH THE LOCAL AUTHORITY HAVING JURISDICTION AND PER NFPA 13 (2016)
   - 6.2. ALL AREAS OF THE WAREHOUSE TO BE PROTECTED WITH ESFR WET PIPE SYSTEMS. OWNER TO ENSURE 40° F MIN TEMP.
   - 6.3. FIRE PUMP TO BE INSTALLED IN ACCORDANCE WITH NFPA 20 (2016)



HANGER DETAIL

ZONE #7	ZONE #5	ZONE #3	ZONE #1
ZONE #8	ZONE #6	ZONE #4	ZONE #2

ZONE MAP

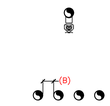
NTS

WATER FILLED PIPE WEIGHTS 2"–8" (LBS)

NPS	2"	2 ½"	3"	4"	6"	8"
WT./FT	2.640	3.354	4.336	5.619	9.298	16.960
WATER FILLED WT./FT.	4.222	5.895	7.949	11.789	23.038	40.086

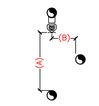
PIPE WEIGHTS

ESFR DETAILS



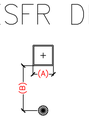
GROUPS OF PIPES, CONDUITS, CABLE TRAYS, OR SIMILAR OBSTRUCTIONS SHALL BE CONSIDERED SEPARATE IF (B) IS EQUAL TO 3X THE WIDTH OF THE OBSTRUCTION, OTHERWISE ALL OBSTRUCTIONS SHALL BE TREATED AS ONE.

GROUPS OF PIPE, CONDUIT, ETC.



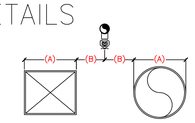
CONTINUOUS OBSTRUCTIONS 2" OR LESS IN DIAMETER LOCATED DIRECTLY BENEATH SPRINKLER DIMENSION "A" SHALL BE A MINIMUM 24" BELOW. IF DIMENSION "A" IS <24" THE OBSTRUCTION DIMENSION "B" SHALL BE A MINIMUM OF 12"

PIPE, CONDUIT, ETC.



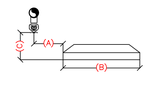
VERTICAL OBSTRUCTIONS WERE (A) IS ≤12" (B) SHALL BE A MINIMUM OF 12". WERE (A) IS 12"–24" (B) SHALL BE A MINIMUM OF 24". FOR VERTICAL OBSTRUCTIONS OR COLUMNS ≥24" A SPRINKLER SHALL BE INSTALLED ON OPPOSITE SIDES OF THE OBSTRUCTION

COLUMNS



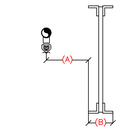
CONTINUOUS OBSTRUCTIONS SHALL NOT REQUIRE ADDITIONAL SPRINKLERS WHERE (A) IS ≤24" (B) SHALL BE A MINIMUM OF 12". WHERE (A) IS 12"–24" (B) SHALL BE A MINIMUM OF 24"

DUCT, PIPE, ETC.



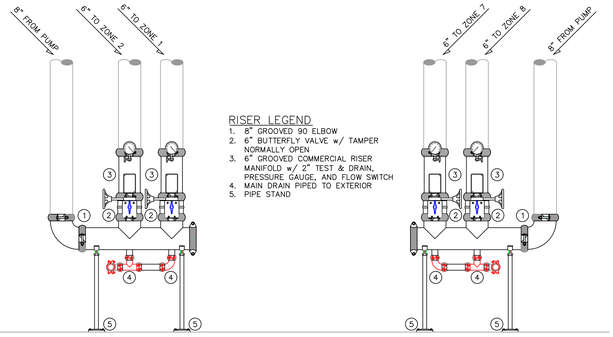
ISOLATED OBSTRUCTIONS WHERE (B) IS ≤24" A SPRINKLER SHALL BE A MINIMUM OF 12" FROM THE NEARIEST EDGE OF THE OBSTRUCTION. WILL NOT REQUIRE ADDITIONAL SPRINKLERS. DIMENSION (C) HAS NO MIN OR MAX DISTANCE.

NON-CONT. LIGHTS (2x4)



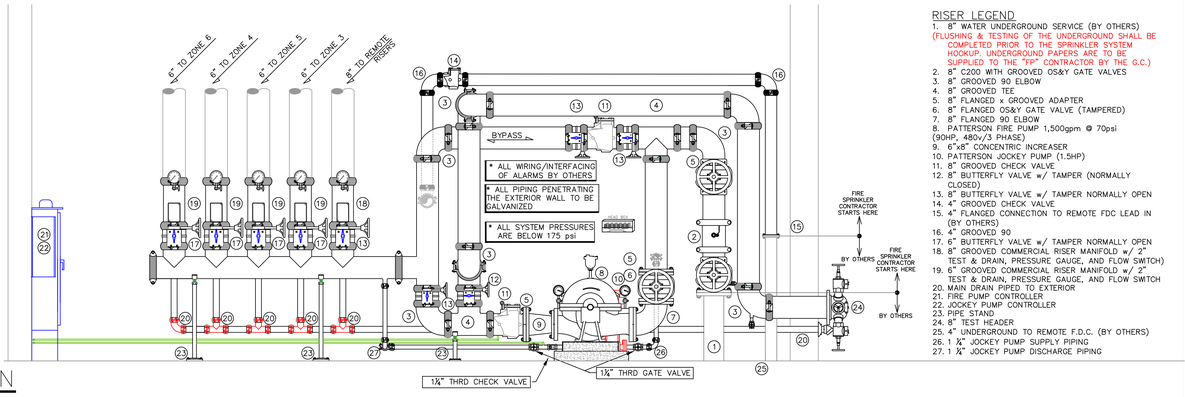
ESFR SPRINKLERS SHALL BE POSITIONED A MINIMUM 12" HORIZONTALLY (A) FROM EDGE OF BAR JOIST UNLESS (B) IS ≤6" IN WIDTH

BAR JOIST



RISER LEGEND
1. 8" GROOVED 90 ELBOW
2. 6" BUTTERFLY VALVE w/ TAMPER NORMALLY OPEN
3. 6" GROOVED COMMERCIAL RISER MANIFOLD w/ 2" TEST & DRAIN, PRESSURE GAUGE, AND FLOW SWITCH
4. MAIN DRAIN PIPED TO EXTERIOR
5. PIPE STAND

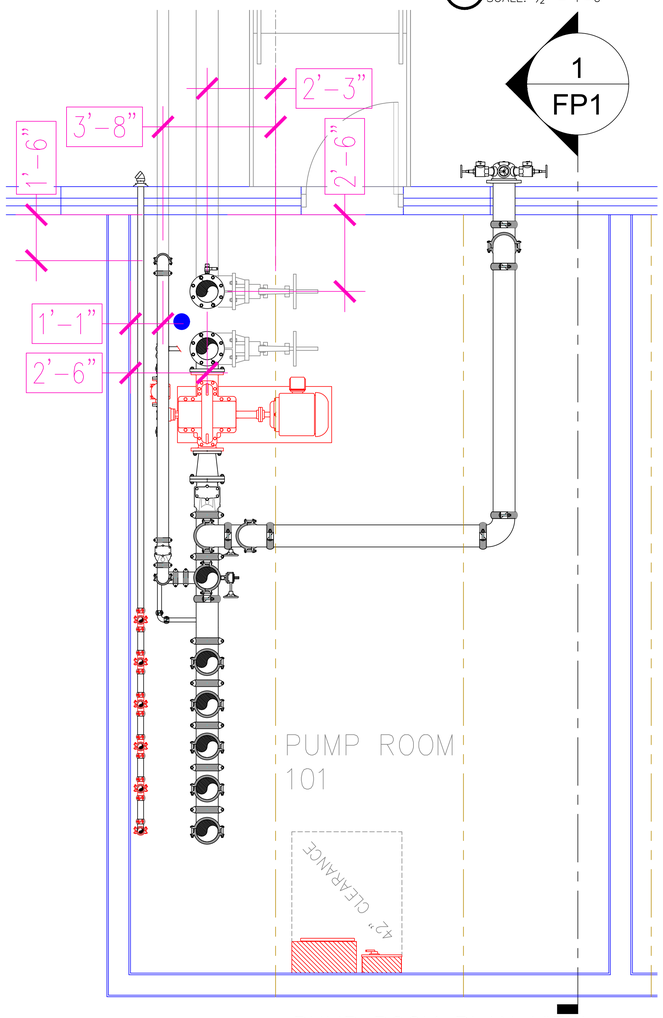
3 REMOTE RISER SECTION
SCALE: ½" = 1'–0"



RISER LEGEND
1. 8" WATER UNDERGROUND SERVICE (BY OTHERS)
(FLUSHING & TESTING OF THE UNDERGROUND SHALL BE COMPLETED PRIOR TO THE SPRINKLER SYSTEM HOOKUP. UNDERGROUND PAPERS ARE TO BE SUPPLIED TO THE "FP" CONTRACTOR BY THE G.C.)
2. 8" C200 WITH GROOVED OS&Y GATE VALVES
3. 8" GROOVED 90 ELBOW
4. 8" GROOVED TEE
5. 8" FLANGED x GROOVED ADAPTER
6. 8" FLANGED OS&Y GATE VALVE (TAMPERED)
7. 8" FLANGED 90 ELBOW
8. PATTERSON FIRE PUMP 1,500gpm @ 70psi (90HP, 480v/3 PHASE)
9. 6"x8" CONCENTRIC INCREASER
10. PATTERSON JOCKEY PUMP (1.5HP)
11. 8" GROOVED CHECK VALVE
12. 8" BUTTERFLY VALVE w/ TAMPER (NORMALLY CLOSED)
13. 8" BUTTERFLY VALVE w/ TAMPER NORMALLY OPEN
14. 4" GROOVED CHECK VALVE
15. 4" FLANGED CONNECTION TO REMOTE FDC LEAD IN (BY OTHERS)
16. 4" GROOVED 90
17. 8" BUTTERFLY VALVE w/ TAMPER NORMALLY OPEN
18. 8" GROOVED COMMERCIAL RISER MANIFOLD w/ 2" TEST & DRAIN, PRESSURE GAUGE, AND FLOW SWITCH)
19. 6" GROOVED COMMERCIAL RISER MANIFOLD w/ 2" TEST & DRAIN, PRESSURE GAUGE, AND FLOW SWITCH
20. MAIN DRAIN PIPED TO EXTERIOR
21. FIRE PUMP CONTROLLER
22. JOCKEY PUMP CONTROLLER
23. PIPE STAND
24. 8" TEST HEADER
25. 4" UNDERGROUND TO REMOTE F.D.C. (BY OTHERS)
26. 1 ¼" JOCKEY PUMP SUPPLY PIPING
27. 1 ¼" JOCKEY PUMP DISCHARGE PIPING

2 REMOTE RISER SECTION
SCALE: ½" = 1'–0"

1 PUMP ROOM SECTION
SCALE: ½" = 1'–0"



4 PUMP ROOM PLAN VIEW
SCALE: ½" = 1'–0"

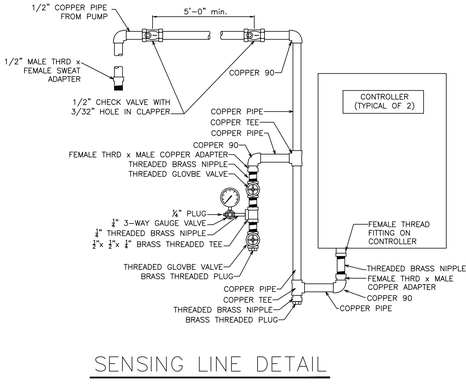
HEAD LEGEND

SYM	CNT	POSITION	FINISH	TEMP	K	NPT	SIN	MFG.	MODEL #	ESCUTCHEON
◉	3,160	PENDENT	BRASS	205	16.80	3/4"	VK503	VIKING	VK503	N/A
○	8	UPRIGHT	BRASS	200	5.60	1/2"	VK300	VIKING	VK300	N/A
	3,168	TOTAL SPRINKLERS								

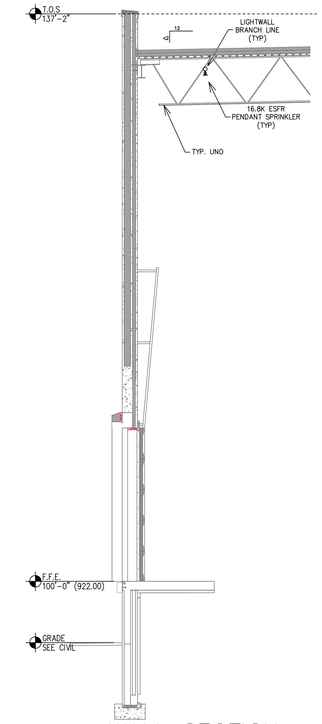
MAXIMUM DISTANCE BETWEEN HANGERS (FT.–IN.)

	NOMINAL PIPE SIZE (IN.)								
	1"	1 ¼"	1 ½"	2"	2 ½"	3"	4"	6"	8"
STEEL PIPE EXCEPT THREADED LIGHTWALL	12–0	12–0	15–0	15–0	15–0	15–0	15–0	15–0	15–0
THREADED LIGHTWALL STEEL PIPE	12–0	12–0	12–0	12–0	NA	NA	NA	NA	NA

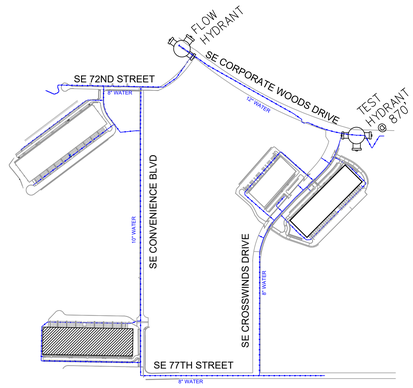
NFPA 13 HANGER SPACING



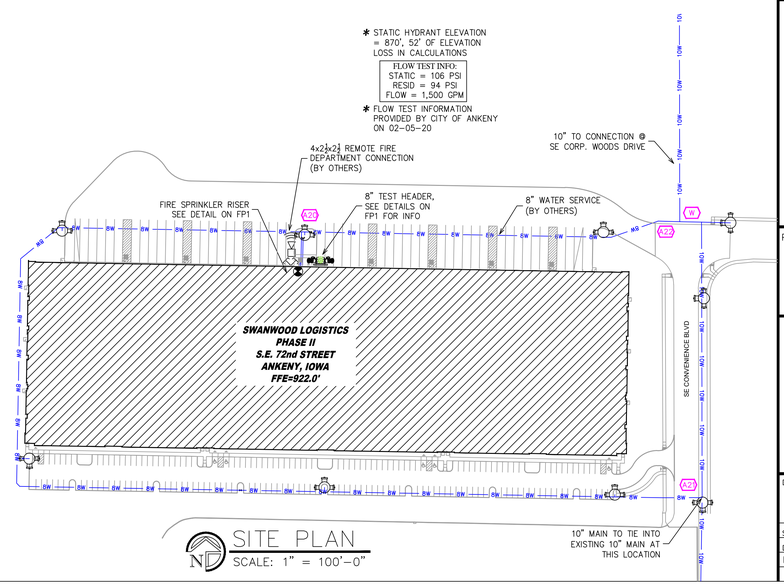
SENSING LINE DETAIL



A WALL SECTION
SCALE: ¼" = 1'–0"



VICINITY PLAN
N.T.S



SITE PLAN
SCALE: 1" = 100'–0"

CLIENT:

OPUS
DESIGN BUILD, L.L.C

1860 NW 118TH STREET,
SUITE 250, CLIVE, IA 50325
515.446.4950

NO.	DATE	REVISIONS	DRAWN	CHECKED

N
W E
S
2' 4' 6' 8' 10' 12' 14' 16' 18'

PROJECT NAME: FIRE SPRINKLER PLANS FOR
SWANWOOD LOGISTICS PHASE II
S.E. 72nd STREET
ANKENY, IA 50021

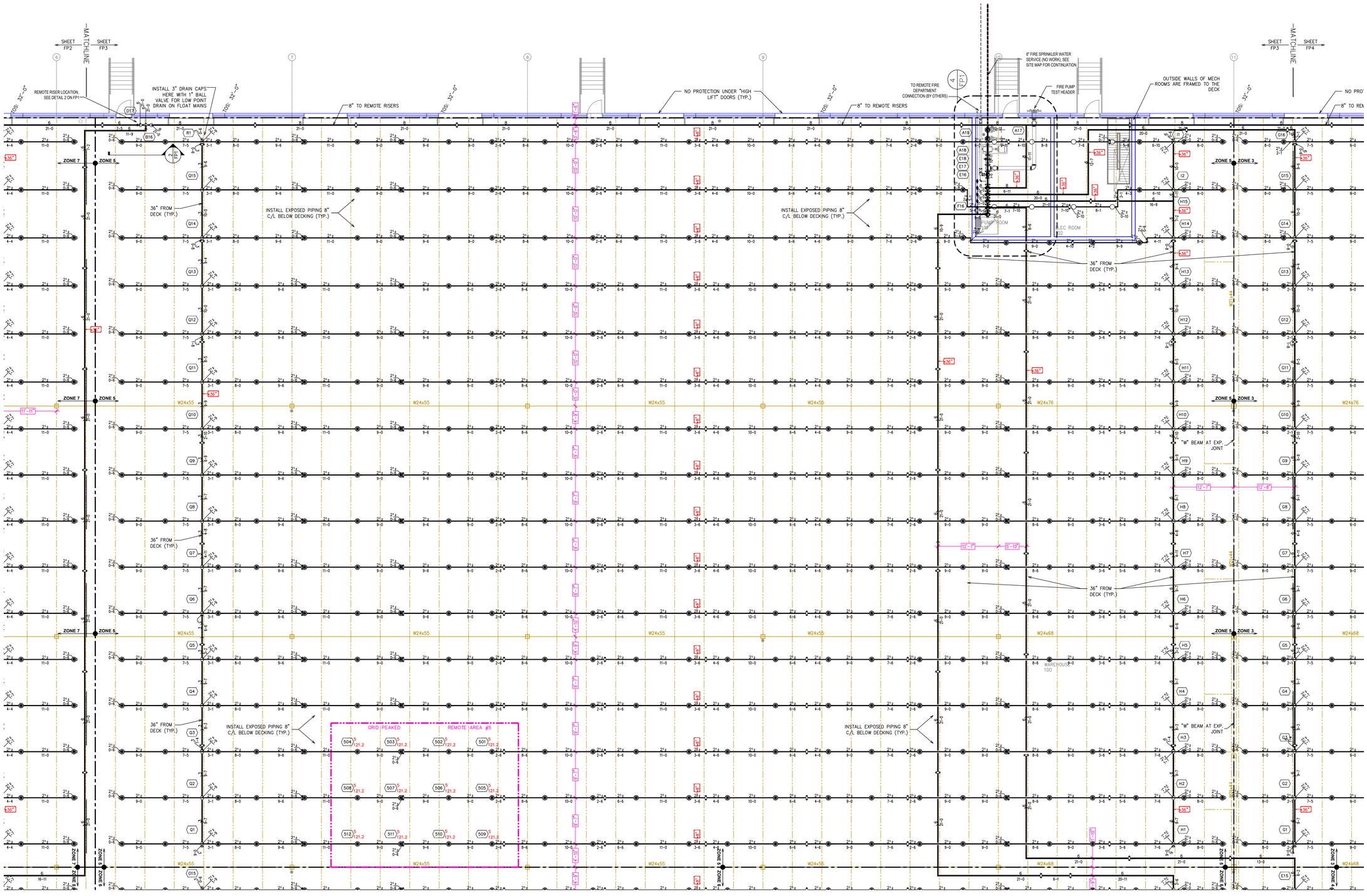
STAMP:

DRAWING TITLE:
FIRE SPRINKLER PLAN

SCALE:	1/8"=1'–0"
DRAWN BY:	JVG
DATE:	2/9/22

DWG NO.: FP-1

SHEET 1 OF 9



FIRE SPRINKLER PLAN – AREA B

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

HEAD LEGEND

SYM	CNT	POSITION	FINISH	TEMP	K	NPT	SIN	MFG.	MODEL#	ESCUTCHEON
●	3,160	PENDENT	BRASS	205	16.80	3/4"	VK503	VIKING	VK503	N/A
○	8	UPRIGHT	BRASS	200	5.60	1/2"	VK300	VIKING	VK300	N/A
	3,168	TOTAL SPRINKLERS								

CALC PLACARD

Design Area #: **5**	HAZARD: **ESFR**
Zone: **5**	System Type: **WET**
Location: **WAREHOUSE**	
Flowing Outlets: **12**	
Head PSI: **52**	Remote Area:**12 HEADS**
Req. @ Pump Discharge (BOR): Flow: **1464** gpm @ **112.1**psi	
Req. @ City Supply Flow: **1714** gpm @ **47.8** psi	
Calculation Safety: **22.9**psi	
Includes **250** gpm Hose allowance	

ZONE MAP

NTS

ZONE #7	ZONE #5	ZONE #3	ZONE #1
ZONE #8	ZONE #6	ZONE #4	ZONE #2

KEY PLAN

NTS

A FP2	B FP3	C FP4	D FP5
E FP6	F FP7	G FP8	H FP9

CLIENT:

OPUS
DESIGN BUILD, L.L.C

1860 NW 118TH STREET,
SUITE 250, CLIVE, IA 50325
515.446.4950

NO.	DATE	REVISIONS	DRAWN	CHECKED

N W E S

2 4 6 8 10' 12' 14' 16' 18'

PROJECT NAME: FIRE SPRINKLER PLANS FOR

SWANWOOD LOGISTICS PHASE II

S.E. 72nd STREET
ANKENY, IA 50021

STAMP:

DRAWING TITLE:

FIRE SPRINKLER PLAN

SCALE:	1/8"=1'-0"
DRAWN BY:	JVG
DATE:	2/9/22

DWG NO.: FP-3

SHEET 3 OF 9

GENERAL NOTES

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   - 1.2. TYPE OF CONSTRUCTION: II-B
   - 1.3. SPRINKLERED AREA (APPROXIMATE - SEE ARCHITECTURAL PLANS FOR ACTUAL)
     - TOTAL AREA = 274,300 S.F.
     - ZONE 1 ESFR = 34,800 S.F.
     - ZONE 2 ESFR = 34,800 S.F.
     - ZONE 3 ESFR = 33,800 S.F.
     - ZONE 4 ESFR = 33,800 S.F.
     - ZONE 5 ESFR = 31,400 S.F.
     - ZONE 6 ESFR = 28,500 S.F.
     - ZONE 7 ESFR = 38,600 S.F.
     - ZONE 8 ESFR = 38,600 S.F.
   - 1.4. INSTALLATION STANDARDS:
     - 1.4.1. SPRINKLER SYSTEM DESIGNED AND INSTALLED PER NFPA-13 (2016)
     - 1.4.2. FIRE PUMP DESIGNED AND INSTALLED PER NFPA-20 (2016)
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     - 3.5.2. NOTES:
       - OPEN-FRAME RACK STORAGE
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       - 40'-0" MAX CEILING HEIGHT
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4. NOTES:
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   - 4.2. HANGERS TO BE INSTALLED IN ACCORDANCE WITH NFPA 13 (2016) - SEE PLAN FOR HANGING REQUIREMENTS
5. SYMBOLS USED ON DRAWINGS:
   - -9'9" PIPE ELEVATION A.F.F
   - +12" PIPE ELEVATION BELOW B.O.D
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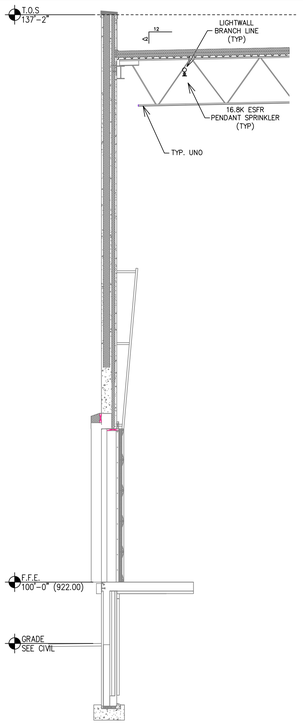
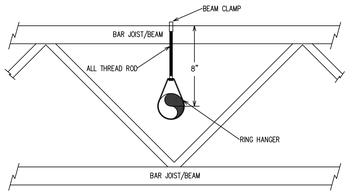
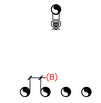


A WALL SECTION
SCALE: ¼" = 1'-0"



HANGER DETAILS

ESFR DETAILS



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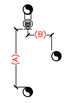

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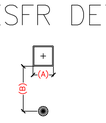
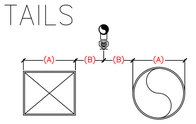
PIPE, CONDUIT, ETC.



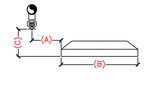
VERTICAL OBSTRUCTIONS WHERE (A) IS ≤12" (B) SHALL BE A MINIMUM OF 12".WHERE (A) IS 12"-24" (B) SHALL BE A MINIMUM OF 24", FOR VERTICAL OBSTRUCTIONS OR COLUMNS >24" A SPRINKLER SHALL BE INSTALLED ON OPPOSITE SIDES OF THE OBSTRUCTION

COLUMNS



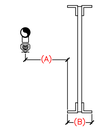
CONTINUOUS OBSTRUCTIONS SHALL NOT REQUIRE ADDITIONAL SPRINKLERS WHERE (A) IS ≤12" (B) SHALL BE A MINIMUM OF 12", WHERE (A) IS 12"-24" (B) SHALL BE A MINIMUM OF 24"

DUCT, PIPE, ETC.



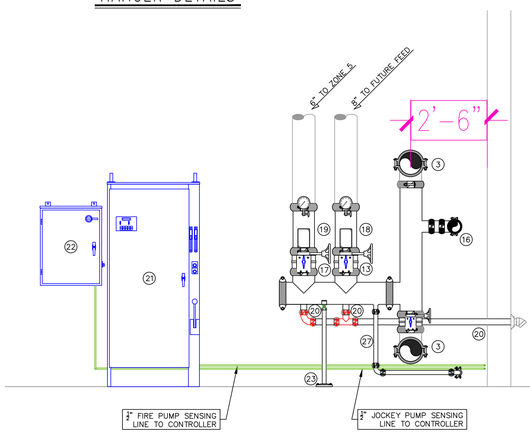
ISOLATED OBSTRUCTIONS WHERE (B) IS ≤24" A SPRINKLER SHALL BE A MINIMUM OF 12" FROM THE NEARREST EDGE OF THE OBSTRUCTION. WILL NOT REQUIRE ADDITIONAL SPRINKLERS. DIMENSION (C) HAS NO MIN OR MAX DISTANCE.

NON-CONT. LIGHTS (2x4)



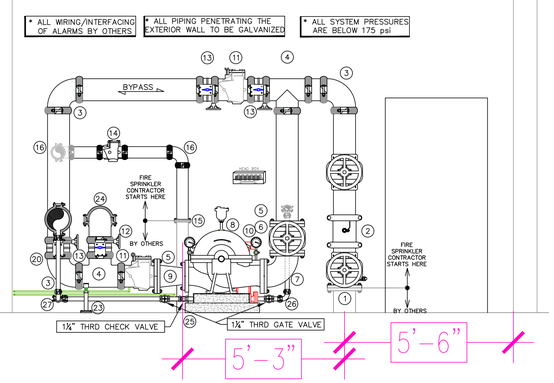
ESFR SPRINKLERS SHALL BE POSITIONED A MINIMUM 12" HORIZONTALLY (A) FROM EDGE OF BAR JOIST UNLESS (B) IS ≤4" IN WIDTH

BAR JOIST

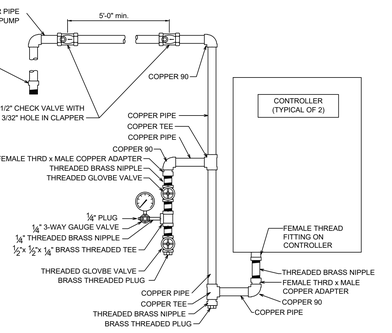


2 PUMP ROOM SECTION
SCALE: ½" = 1'-0"

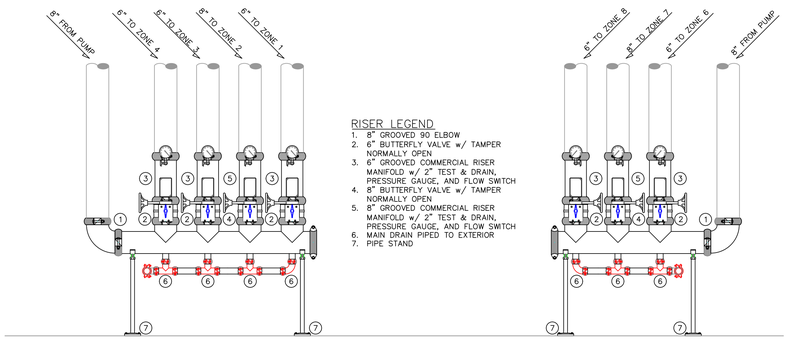
RISER LEGEND
1. 8" WATER UNDERGROUND SERVICE (BY OTHERS) (FLUSHING & TESTING OF THE UNDERGROUND SHALL BE COMPLETED PRIOR TO THE SPRINKLER SYSTEM HOOKUP. UNDERGROUND PAPERS ARE TO BE SUPPLIED TO THE "FP" CONTRACTOR BY THE G.C.)
2. 8" C200 WITH GROOVED OS&Y GATE VALVES
3. 8" GROOVED 90 ELBOW
4. 8" GROOVED TEE
5. 8" FLANGED x GROOVED ADAPTER
6. 8" FLANGED OS&Y GATE VALVE (TAMPERED)
7. 8" FLANGED 90 ELBOW
8. PATTERSON FIRE PUMP 1,500gpm @ 70psi (90HP, 480v/3 PHASE)
9. 6"x8" CONCENTRIC INCREASER
10. PATTERSON JOCKEY PUMP (1.5HP)
11. 8" GROOVED CHECK VALVE
12. 8" BUTTERFLY VALVE w/ TAMPER (NORMALLY CLOSED)
13. 8" BUTTERFLY VALVE w/ TAMPER NORMALLY OPEN
14. 4" GROOVED CHECK VALVE
15. 4" FLANGED CONNECTION TO REMOTE FDC LEAD IN (BY OTHERS)
16. 4" GROOVED 90
17. 6" BUTTERFLY VALVE w/ TAMPER NORMALLY OPEN
18. 8" GROOVED COMMERCIAL RISER MANIFOLD w/ 2" TEST & DRAIN, PRESSURE GAUGE, AND FLOW SWITCH)
19. 6" GROOVED COMMERCIAL RISER MANIFOLD w/ 2" TEST & DRAIN, PRESSURE GAUGE, AND FLOW SWITCH
20. MAIN DRAIN PIPED TO EXTERIOR
21. FIRE PUMP CONTROLLER
22. JOCKEY PUMP CONTROLLER
23. PIPE STAND
24. 8" TEST HEADER
25. 4" UNDERGROUND TO REMOTE F.D.C. (BY OTHERS)
26. 1 ¼" JOCKEY PUMP SUPPLY PIPING
27. 1 ¼" JOCKEY PUMP DISCHARGE PIPING



1 PUMP ROOM SECTION
SCALE: ½" = 1'-0"



SENSING LINE DETAIL



RISER LEGEND
1. 8" GROOVED 90 ELBOW
2. 6" BUTTERFLY VALVE w/ TAMPER NORMALLY OPEN
3. 6" GROOVED COMMERCIAL RISER MANIFOLD w/ 2" TEST & DRAIN, PRESSURE GAUGE, AND FLOW SWITCH
4. 8" BUTTERFLY VALVE w/ TAMPER NORMALLY OPEN
5. 8" GROOVED COMMERCIAL RISER MANIFOLD w/ 2" TEST & DRAIN, PRESSURE GAUGE, AND FLOW SWITCH
6. MAIN DRAIN PIPED TO EXTERIOR
7. PIPE STAND

3 REMOTE RISER SECTION
SCALE: ½" = 1'-0"

4 REMOTE RISER SECTION
SCALE: ½" = 1'-0"

HEAD LEGEND

SYM	CNT	POSITION	FINISH	TEMP	K	NPT	SIN	MFG.	MODEL#	ESC.
◉	2721	PEND	BRASS	205	16.80	3/4"	VK503	VIKING	VK-ESFR	N/A
⊠	4	UPR	BRASS	200	11.20	3/4"	VK532	VIKING	VKEC	N/A
◉	16	PEND	CHROME	155	5.60	1/2"	VK302	VIKING	VK302	SEMI REC
⊠	13	PEND	CHROME	155	11.20	3/4"	VK534	VIKING	VK534	SEMI REC
	2754	TOTAL SPRINKLERS								

WATER FILLED PIPE WEIGHTS 2"-8" (LBS)

NPS	2"	2 ½"	3"	4"	6"	8"
WT./FT	2.640	3.354	4.336	5.619	9.298	16.960
WATER FILLED WT./FT.	4.222	5.895	7.949	11.789	23.038	40.086

PIPE WEIGHTS

SPRINKLER SPACING DETAILS

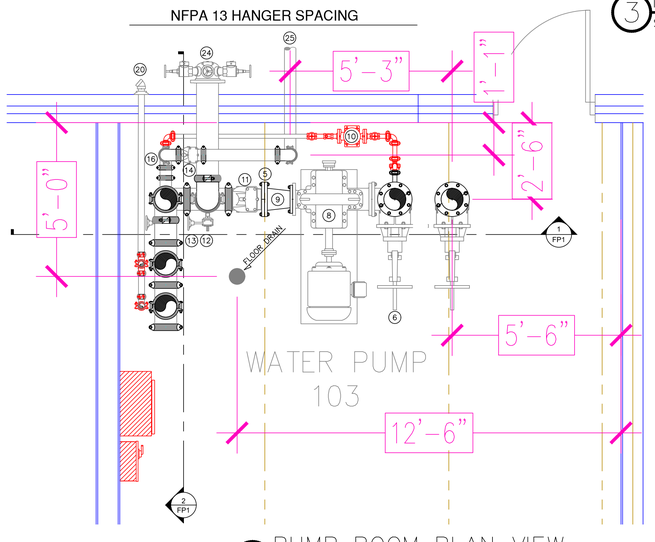
ESFR PENDENT SPRINKLER, K=16.8, 3/4" NPT, SIN VKS03

TYP. ESFR-17 DETAIL

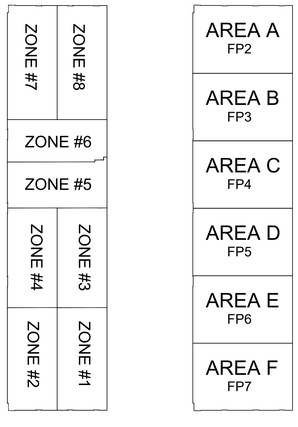
MIN DISTANCE BETWEEN HEADS: 8'-0"
MAX DISTANCE BETWEEN HEAD: 10'-0"
MAX DISTANCE FROM DECK: 6"-14"
MAX COVERAGE AREA: 100 SQ. FT.
MIN COVERAGE AREA: 64 SQ. FT.
SYMBOLS ON PLAN

MAXIMUM DISTANCE BETWEEN HANGERS (FT.-IN.)									
	NOMINAL PIPE SIZE (IN.)								
	1"	1 ¼"	1 ½"	2"	2 ½"	3"	4"	6"	8"
STEEL PIPE EXCEPT THREADED LIGHTWALL	12-0	12-0	15-0	15-0	15-0	15-0	15-0	15-0	15-0
THREADED LIGHTWALL STEEL PIPE	12-0	12-0	12-0	12-0	NA	NA	NA	NA	NA

NFPA 13 HANGER SPACING

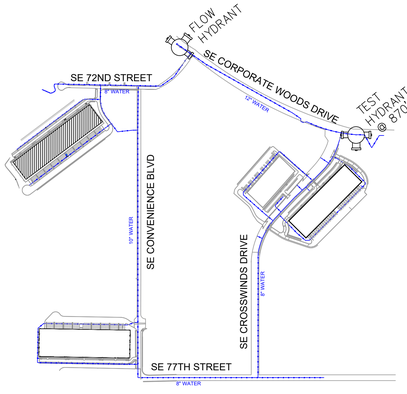


4 PUMP ROOM PLAN VIEW
SCALE: ½" = 1'-0"

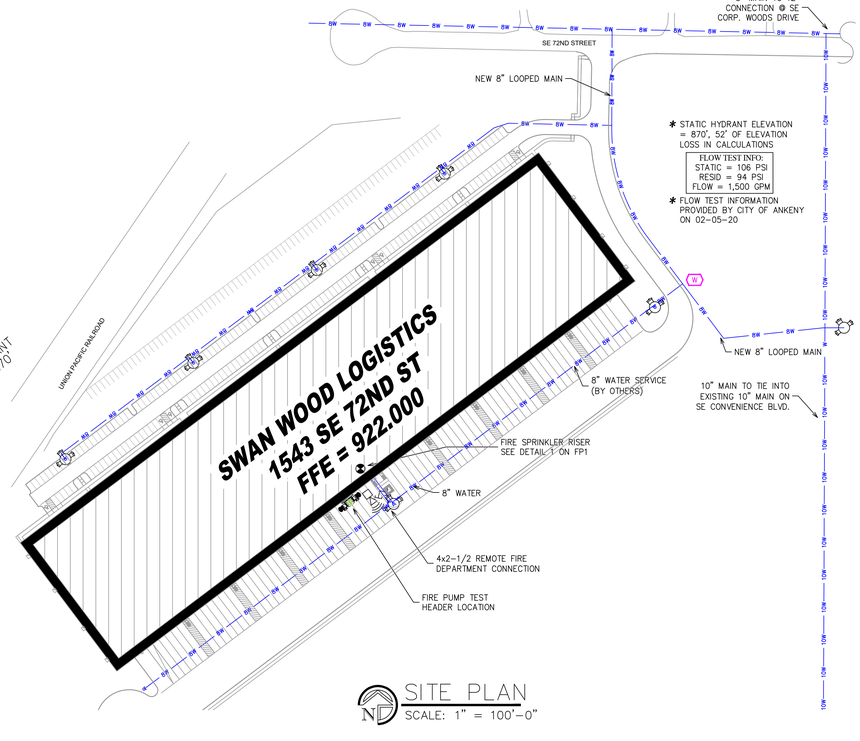


ZONE MAP
NTS

KEY PLAN
NTS



VICINITY PLAN
N.T.S.



SITE PLAN
SCALE: 1" = 100'-0"

CLIENT:

OPUS
DESIGN BUILD, L.L.C

1860 NW 118TH STREET,
SUITE 250, CLIVE, IA 50325
515.446.4950

NO.	DATE	REVISIONS	DRAWN	CHECKED

SYMBOLS

Symbol	Description
	Ceiling Height
-9'0"	Elev. Below Top of Steel
+9'0"	Elev. Above Finished Floor
F1	Hydraulic Reference Points
A	Common Connection Point
	Denotes Hanger Location
C	Rise up or down
	Electrical Light
OH1	Room Hazard Classification
	Sprinkler Head Cage

PROJECT NAME: FIRE SPRINKLER PLANS FOR

SWAN WOOD LOGISTICS
1543 SE 72ND ST
ANKENY, IA

STAMP:

DRAWING TITLE:

FIRE SPRINKLER PLAN

SCALE: 1/8"=1'-0"	DWG NO.: FP-1
DRAWN BY: JVG	
DATE: 10/27/21	SHEET 1 OF 7

ZONE MAP
NTS

AREA A FP2
AREA B FP3
AREA C FP4
AREA D FP5
AREA E FP6
AREA F FP7

KEY PLAN
NTS

HEAD LEGEND

SYM	CNT	POSITION	FINISH	TEMP	K	NPT	SIN	MFG.	MODEL#	ESC.
◉	2721	PEND	BRASS	205	16.80	3/4"	VK503	VIKING	VK–ESFR	N/A
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	2754	TOTAL SPRINKLERS								

CALC PLACARD

Design Area #: **6** HAZARD: **ESFR**
Zone: **6** System Type: **WET**
Location: **WAREHOUSE**
Flowing Outlets: **12**
Head PSI: **52** Remote Area:**12 HEADS**
Req. @ Pump Discharge (BOR):
Flow:**1463** gpm @ **122.3**psi
Req. @ City Supply
Flow:**1713** gpm @ **58.0** psi
Calculation Safety: **12.7** psi
Includes **250** gpm Hose allowance

CALC PLACARD

Design Area #: **5** HAZARD: **ESFR**
Zone: **5** System Type: **WET**
Location: **WAREHOUSE**
Flowing Outlets: **12**
Head PSI: **52** Remote Area:**12 HEADS**
Req. @ Pump Discharge (BOR):
Flow:**1464** gpm @ **118.5**psi
Req. @ City Supply
Flow:**1714** gpm @ **54.2** psi
Calculation Safety: **16.5**psi
Includes **250** gpm Hose allowance

ZONE #7 | ZONE #8
ZONE #6
ZONE #5
ZONE #4 | ZONE #3
ZONE #2 | ZONE #1

MATCHLINE — AREA B FP3 / AREA C FP4

REMOTE AREA #6

REMOTE AREA #5

DEVIATIONS FROM THE MAXIMUM SPRINKLER SPACING SHALL BE PERMITTED TO ELIMINATE OBSTRUCTIONS CREATED BY STRUCTURAL ELEMENTS PER NFPA 13 2022

INSTALL MAIN TIGHT TO "W" BEAM (TYP.)

INSTALL EXPOSED PIPING 8" C/L BELOW DECKING (TYP.)

NO PROTECTION UNDER "HIGH LIFT" DOORS (TYP.)

INSTALL 4" DRAIN CAP HERE WITH 1" BALL VALVE FOR LOW POINT DRAIN ON FLOAT MAINS

OUTSIDE WALLS OF OFFICE'S ARE FRAMED TO THE DECK

8" BULK TO REMOTE RISER

1" DROP TO 1'–0" ABOVE GRID, FLEX TO SPRINKLER HEAD IN CEILING (TYP.)

OUTSIDE WALLS OF OFFICE ARE FRAMED TO THE DECK

8" BULK FEED FROM RISER 4 FP1

4" TO REMOTE F.D.C. (NO WORK), SEE SITE MAP FOR CONTINUATION

INSTALL 4" DRAIN CAP HERE WITH 1" BALL VALVE FOR LOW POINT DRAIN ON

8" FIRE SPRINKLER WATER SERVICE (NO WORK), SEE SITE MAP FOR CONTINUATION

TOS: 37'-2"

TOS: 37'-5"

ELECTRICAL ROOM 102

WAREHOUSE 100

WATER PUMP 103

OFFICE 211

OFFICE 212

CONFERENCE ROOM 213

STORAGE 215

MEN'S 216

WOMEN'S 214

CORRIDOR 217

WOMEN'S 219

MEN'S 218

BREAK ROOM 220

CORRIDOR 202

VESTIBULE 201

OFFICE 203

OFFICE 204

OFFICE 205

OFFICE 206

OPEN OFFICE 209

DRIVER'S LOUNGE 207

OFFICE 208

WAITING 201

FIRE SPRINKLER PLAN – AREA C
SCALE: 1/8" = 1'–0"

CLIENT:

OPUS
DESIGN BUILD, L.L.C

1860 NW 118TH STREET,
SUITE 250, CLIVE, IA 50325
515.446.4950

NO.	DATE	REVISIONS	DRAWN	CHECKED

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PROJECT NAME: FIRE SPRINKLER PLANS FOR

SWAN WOOD LOGISTICS
1543 SE 72ND ST
ANKENY, IA

STAMP:

DRAWING TITLE:
FIRE SPRINKLER PLAN

SCALE: 1/8"=1'–0"
DRAWN BY: JVG
DATE: 10/27/21
DWG NO.: FP-4
SHEET 4 OF 7