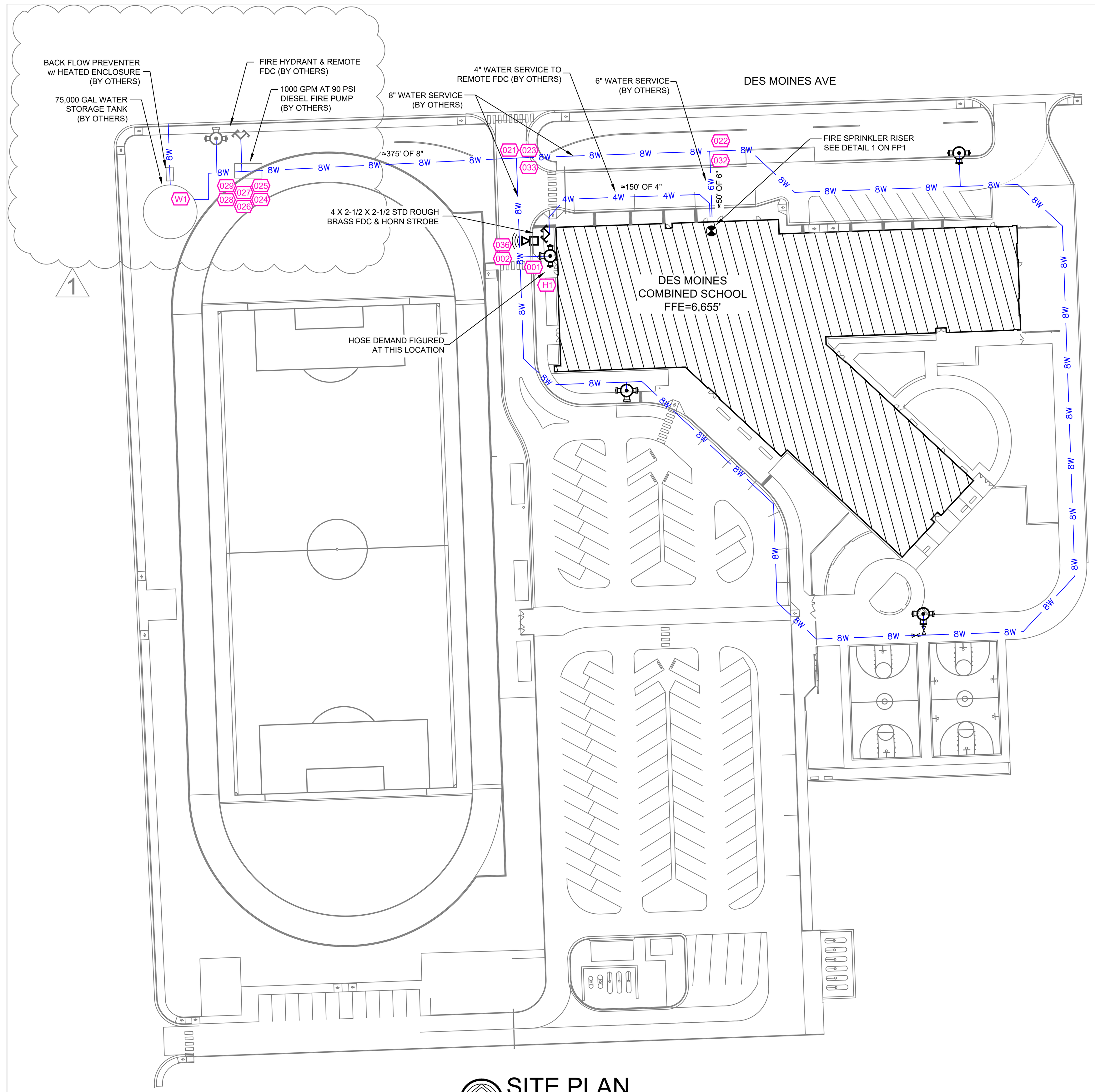


SITE PLAN
SCALE: 1" = 50'-0"

GENERAL NOTES

1. INTERNATIONAL BUILDING CODE (2022)
   1.1. OCCUPANCY: **E-EDUCATIONAL**
   1.2. TYPE OF CONSTRUCTION: **TYPE II-B (SPRINKLERED)**
   1.3. SPRINKLERED AREAS (APPROXIMATE - SEE ARCHITECTURAL PLANS FOR ACTUAL)

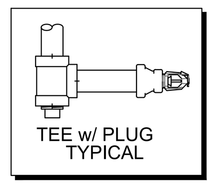
   SCHOOL = 45,261 S.F.

   1.4. INSTALLATION STANDARDS:
   SPRINKLER SYSTEM DESIGNED AND INSTALLED PER NFPA-13 (2019)
2. SPRINKLER PIPE TYPES:

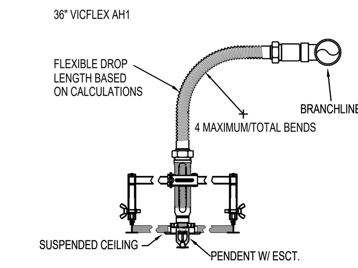
   -WET-
   2.1. 1" BRANCH LINES TO BE BLK SCHEDULE 40 PIPING WITH THREADED FITTINGS
   2.2. 1-1/2" BRANCH LINES TO BE BLK SCHEDULE 10 PIPING WITH GROOVED FITTINGS
   2.3. 2-1/2" THROUGH 3" MAIN LINES TO BE BLK SCHEDULE 10 PIPING WITH GROOVED FITTINGS
3. DESIGN CRITERIA:
   3.1. WELDING, MECHANICS, & WOOD SHOPS INCLUDING THEIR CANOPIES ARE DESIGNED TO ORDINARY HAZARD GROUP II
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 - **SEE PLAN FOR HANGING REQ.**
   4.3. ALL SPRIGS TO BE 1" PIPE
5. SYMBOLS USED ON DRAWINGS:
   +10' PIPE ELEVATION A.F.F
   -6' PIPE ELEVATION BELOW B.O.D
   OH1 ROOM HAZARD CLASSIFICATION (ALL ROOMS ARE CONSIDERED LIGHT HAZARD UNLESS NOTED)
   F1 HYDRAULIC CALCULATION JUNCTION POINT
   0'-0" CEILING HEIGHT
6. SCOPE OF WORK:
   6.1. TO INSTALL NEW WET SPRINKLER SYSTEMS IN DES MOINES COMBINED SCHOOL BUILDING.
   6.2. ALL AREAS OF THE BUILDING TO BE INSTALLED AND COVERED IN ACCORDANCE WITH THE LOCAL AUTHORITY HAVING JURISDICTION AND PER NFPA 13

SYM	CNT	POSITION	FINISH	TEMP	K	NPT	SIN	MFG.	MODEL#	ESCUTCHEON	MAX SPACING
○	107	UPRIGHT	BRASS	200	5.60	1/2"	TY313	TYCO	TY-FRB	N/A	130 SQ. FT. / 225 SQ. FT.
◁	3	SIDEWALL	BRASS	200	5.60	1/2"	TY3351	TYCO	TY-B	N/A	14' x 14'
◀	4	DRY SIDEWALL	CHROME	200	11.20	1"	TY5339	TYCO	DS-3	N/A	16' x 20'
	40	PENDENT	WHITE	200	11.20	3/4"	TY5237	TYCO	EC-11	RECESSED	18' x 18'
	75	PENDENT	WHITE	200	5.60	1/2"	TY323	TYCO	TY-FRB	RECESSED	15' x 15'
	74	PENDENT	WHITE	200	5.60	1/2"	TY3531	TYCO	RFII	CONCEALED	15' X 15'
	44	PENDENT	WHITE	205	11.20	3/4"	VK636	VIKING	MIRAGE QREC	CONCEALED	20' x 20'
	42	HEAD CAGE									
	343	TOTAL HEADS									

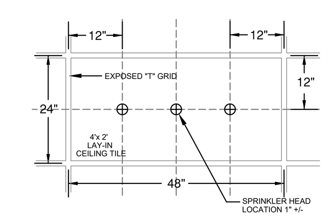
SPRINKLER HEAD LEGEND



OVERHEAD DOOR SIDEWALL DETAIL
SCALE: ¼" = 1'-0"



FLEXIBLE SPRINKLER DROP DETAILS



CEILING TILE DETAIL

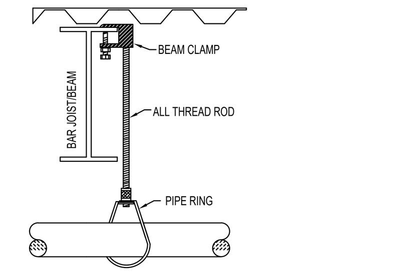


TABLE 17.4.2.1(a) MAXIMUM DISTANCE BETWEEN HANGERS (FT-IN.)

NOMINAL PIPE SIZE (IN)	1	1-1/4	1-1/2	2	2-1/2	3	4	6
STEEL PIPE	12-0	12-0	15-0	15-0	15-0	15-0	15-0	15-0

FIGURE A-17.4.3.4 DISTANCE FROM SPRINKLER TO HANGER

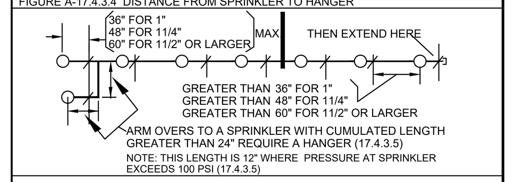


TABLE 17.2.1.1 HANGER ROD SIZE

PIPE SIZE	DIAM. OF ROD	PIPE SIZE	DIAM. OF ROD
1" UP TO AND INCLUDING 4"	3/8"	6 AND 8	1/2"

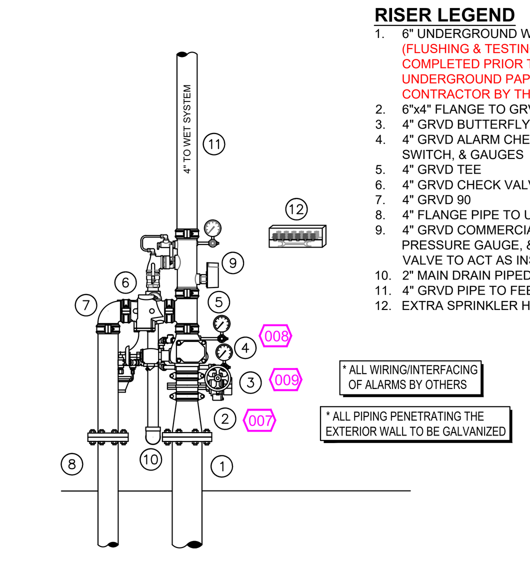
PIPE HANGER NOTES & DETAILS

UNSUPPORTED LENGTHS – END SPRINKLER TO LAST HANGER

NOMINAL PIPE SIZE (in.)	1"	1-1/4"	1-1/2"	2"	2-1/2"	3"	4"	6"
UNSUPPORTED LENGTH STEEL PIPE	36"	48"	60"	60"	60"	60"	15'-0"	15'-0"

MAXIMUM DISTANCE BETWEEN HANGERS

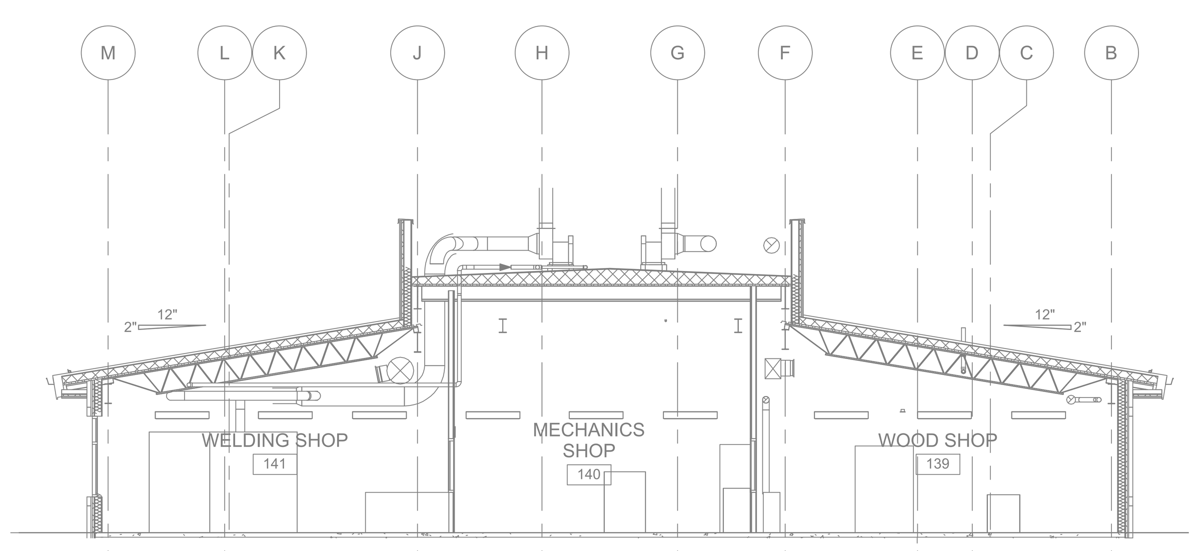
NOMINAL PIPE SIZE (in.)	1"	1-1/4"	1-1/2"	2"	2-1/2"	3"	4"	6"
GROOVED– SCH 10 & LIGHTWALL STEEL PIPE	12'-0"	12'-0"	15'-0"	15'-0"	15'-0"	15'-0"	15'-0"	15'-0"
THREADED– SCH. 40 STEEL PIPE	12'-0"	12'-0"	12'-0"	12'-0"	12'-0"	12'-0"	N/A	N/A



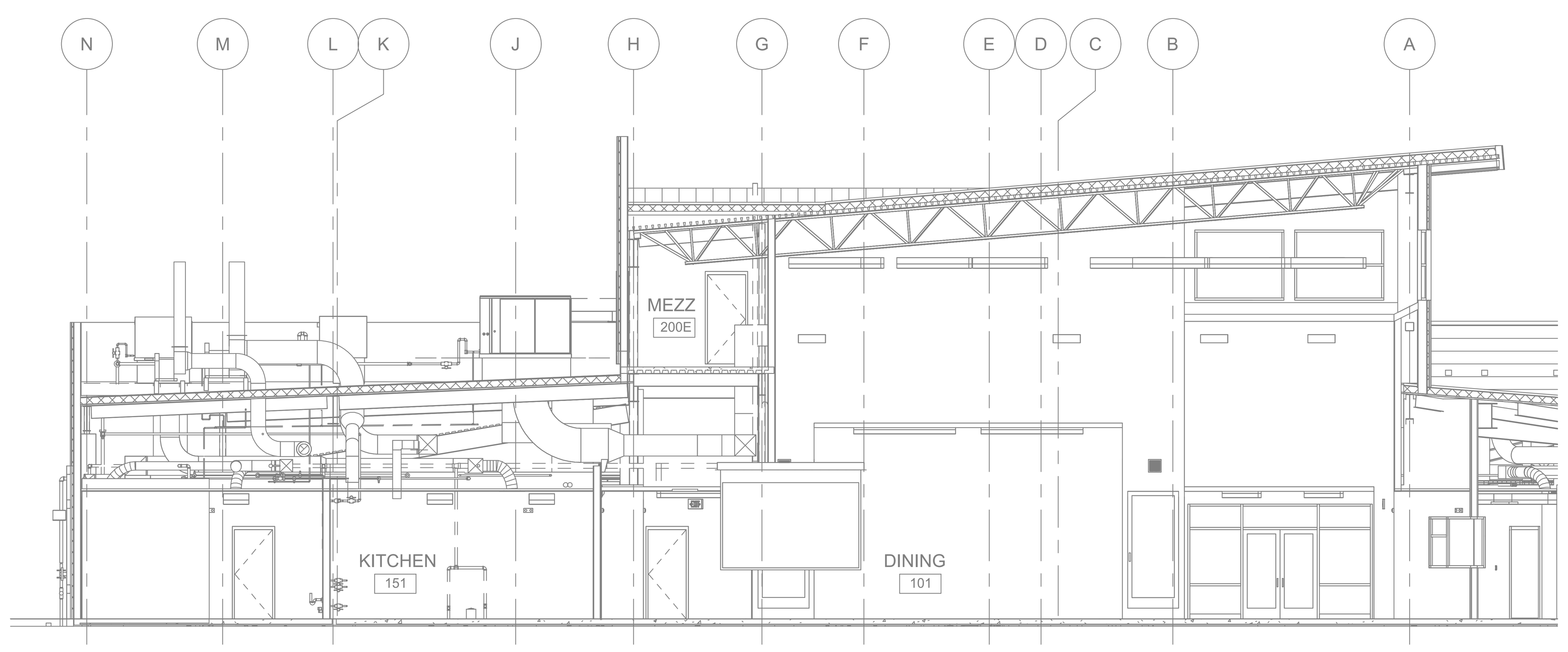
RISER LEGEND
1. 6" UNDERGROUND WATER SERVICE (BY OTHERS)
   (FLUSHING & TESTING OF THE UNDERGROUND SHALL BE COMPLETED PRIOR TO THE SPRINKLER SYSTEM HOOKUP. UNDERGROUND PAPERS ARE TO BE SUPPLIED TO THE "FP" CONTRACTOR BY THE G.C.)
2. 6"x4" FLANGE TO GRVD CONCENTRIC REDUCER
3. 4" GRVD BUTTERFLY VALVE
4. 4" GRVD ALARM CHECK VALVE w/ RETARD CHAMBER, PRESSURE SWITCH, & GAUGES
5. 4" GRVD TEE
6. 4" GRVD CHECK VALVE
7. 4" GRVD 90
8. 4" FLANGE PIPE TO UG REMOTE FDC
9. 4" GRVD COMMERCIAL RISER MANIFOLD w/ FLOW SWITCH, PRESSURE GAUGE, & TEST AND DRAIN w/ PRV. TEST AND DRAIN VALVE TO ACT AS INSPECTOR'S TEST. SEE
10. 2" MAIN DRAIN PIPED TO OUTSIDE
11. 4" GRVD PIPE TO FEED WET SYSTEM
12. EXTRA SPRINKLER HEADS w/ TOOLS

1 RISER DETAIL
SCALE: ½" = 1'-0"

DESIGN NARRATIVE
THIS PROJECT CONSISTS OF A NEW WET PIPE FIRE SPRINKLER SYSTEM INSTALLED IN NEW ADDITION. SPRINKLER SYSTEM WILL BE SUPPLIED BY 75,000 GAL OUTDOOR STORAGE TANK AND 1000 GPM @ 90 PSI DIESEL FIRE PUMP. THIS ADDITION SHALL BE FULLY SPRINKLERED. THIS SPRINKLER SYSTEM SHALL MEET DESIGN PER THE 2022 IBC / IFC AND NFPA 13 (2019). THIS SYSTEM IS DESIGNED AND SHALL BE INSTALLED PER NFPA 13 (2019).

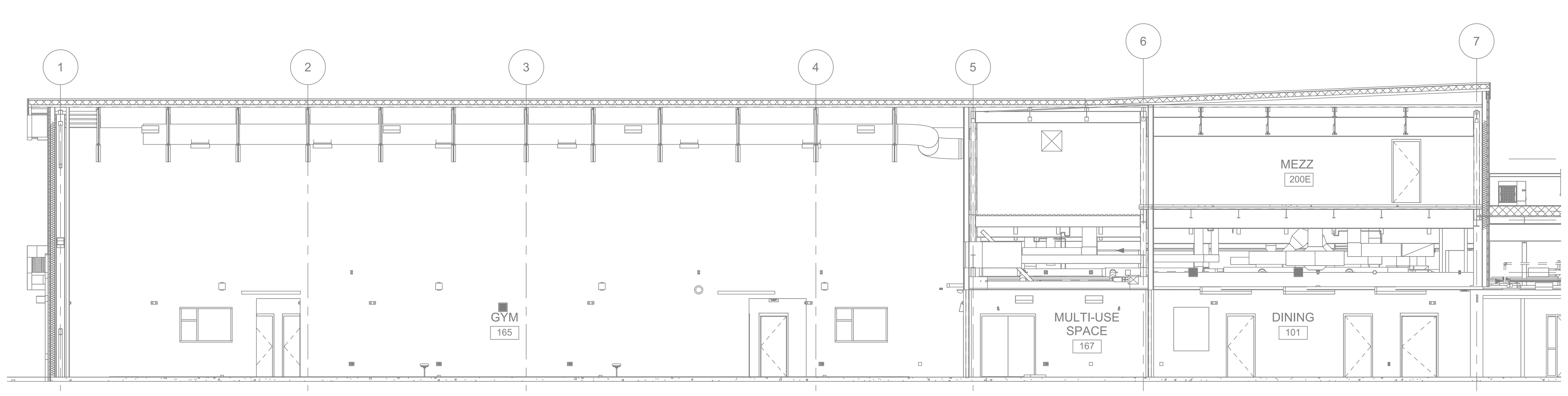


B BUILDING SECTION
SCALE= 1/8" : 1'-0"



C BUILDING SECTION
SCALE= 1/8" : 1'-0"

INSTALLERS NOTE:
1. ONLY 1 SPRINKLER CAN BE RELOCATED FROM ONE SPRINKLER OUTLET
2. ADDED SPRINKLERS SHALL BE PIPED BACK TO THE MAIN EXCEPT ON GRIDDED SYSTEM, THEN THEY CAN BE CUT INTO BRANCHLINE.
3. ALL ARM–OVER 1'–0" OR OVER SHALL HAVE A HANGER.



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

IMPORTANT NOTE TO OWNER

It is the OWNERS responsibility to insure the complete SPRINKLER SYSTEM is tested and maintained per the latest edition of N.F.P.A. #25 and the AUTHORITY HAVING JURISDICTION.

It is the OWNERS responsibility to MAINTAIN ADEQUATE heat at all times throughout the entire building to prevent freeze up of the fire protection system.

PROJECT DATA
DES MOINES COMBINED SCHOOL

ADDRESS:
DES MOINES SCHOOL
500 DES MOINES AVE.
DES MOINES, NM 88418

OWNER:
DES MOINES MUNICIPAL SCHOOL
500 DES MOINES AVE
DES MOINES, NM 88418

OCCUPANCY: E-Educational
TYPE OF CONSTRUCTION: II-B Fully Sprinklered

TOTAL AREA: 45,261 sf

REVISIONS

DATE	DESCRIPTION	BY
8/15/2024	UPDATE DESIGN NARRITIVE, ADDED TOS/BOD	MDK
1/30/2025	REVIEW COMMENTS	DS

Symbols

Symbol	Description
⬡	Hydraulic Reference Points
[18 Bts]	Elev. Below Top of Steel
[8-6]	Elev. Above Finished Floor
+ (TOS 20-0	Elev. of Top of Steel
(10-0)	Ceiling Height
⟋	Denotes Hanger Location
o	Rise up or down

BUILDING PERMIT # 2020-

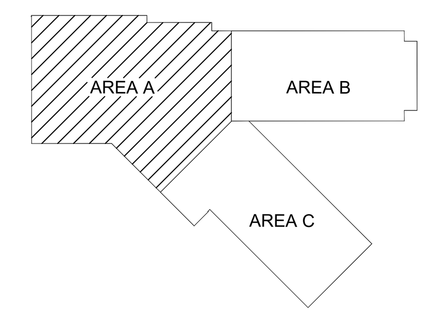
DES MOINES COMBINED SCHOOL
YUCCA ELEMENTARY SCHOOL ADDITION
500 DES MOINES AVE.
DES MOINES, NM 88418

CONTRACTOR:
WEIL CONSTRUCTION
PO BOX 65606
ALBUQUERQUE, NM 87193

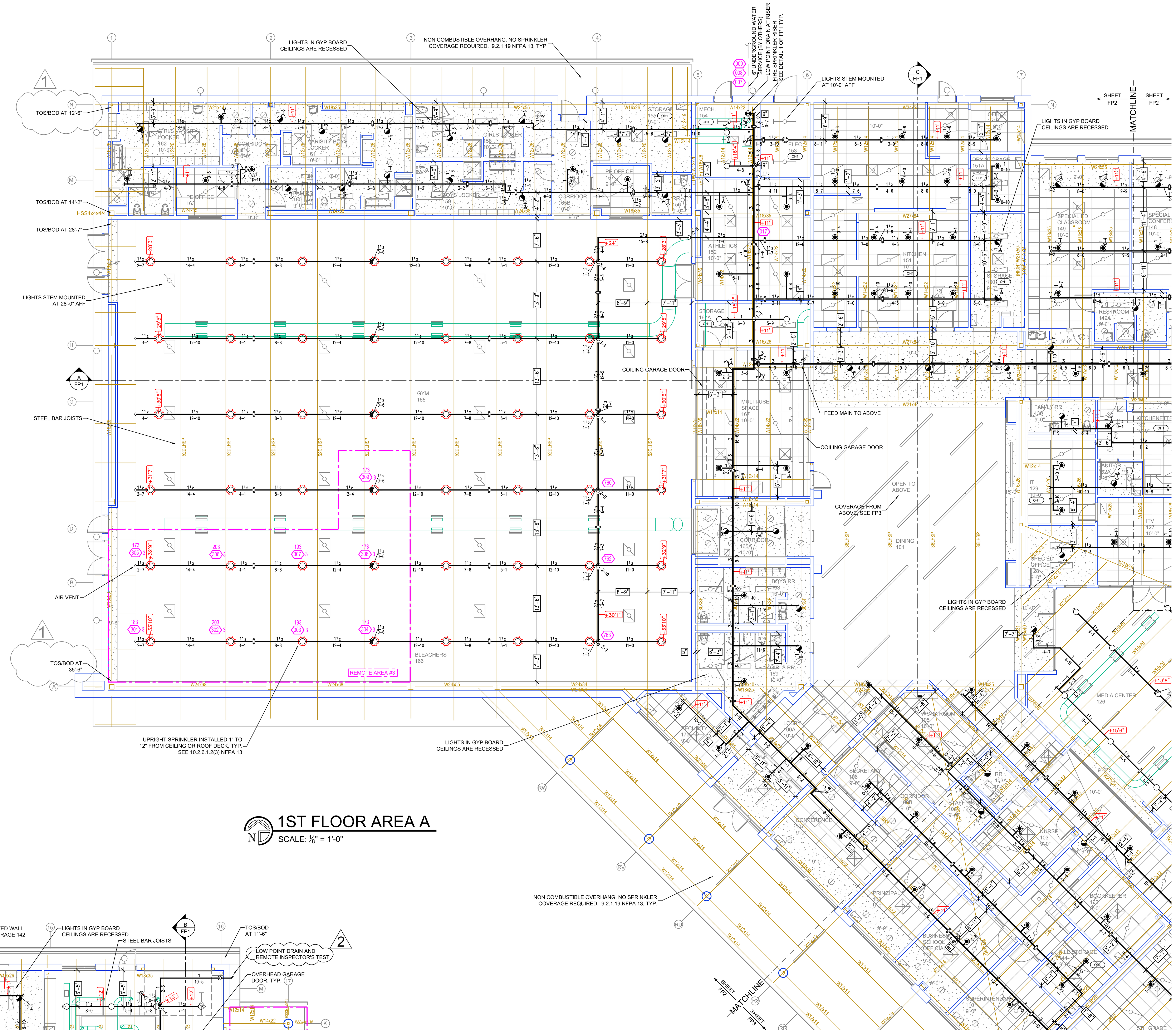
FIRE SPRINKLER DRAWING

PERMIT NO.	2020-
CONTRACT NO.	2359
APPROVAL:	CITY FIRE MARSHAL
DRAWN BY:	MDK
SCALE:	AS NOTED
DATE:	7/16/2024

FP1 OF 3



PLAN KEY

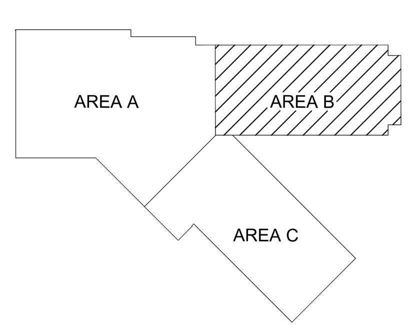


1ST FLOOR AREA A

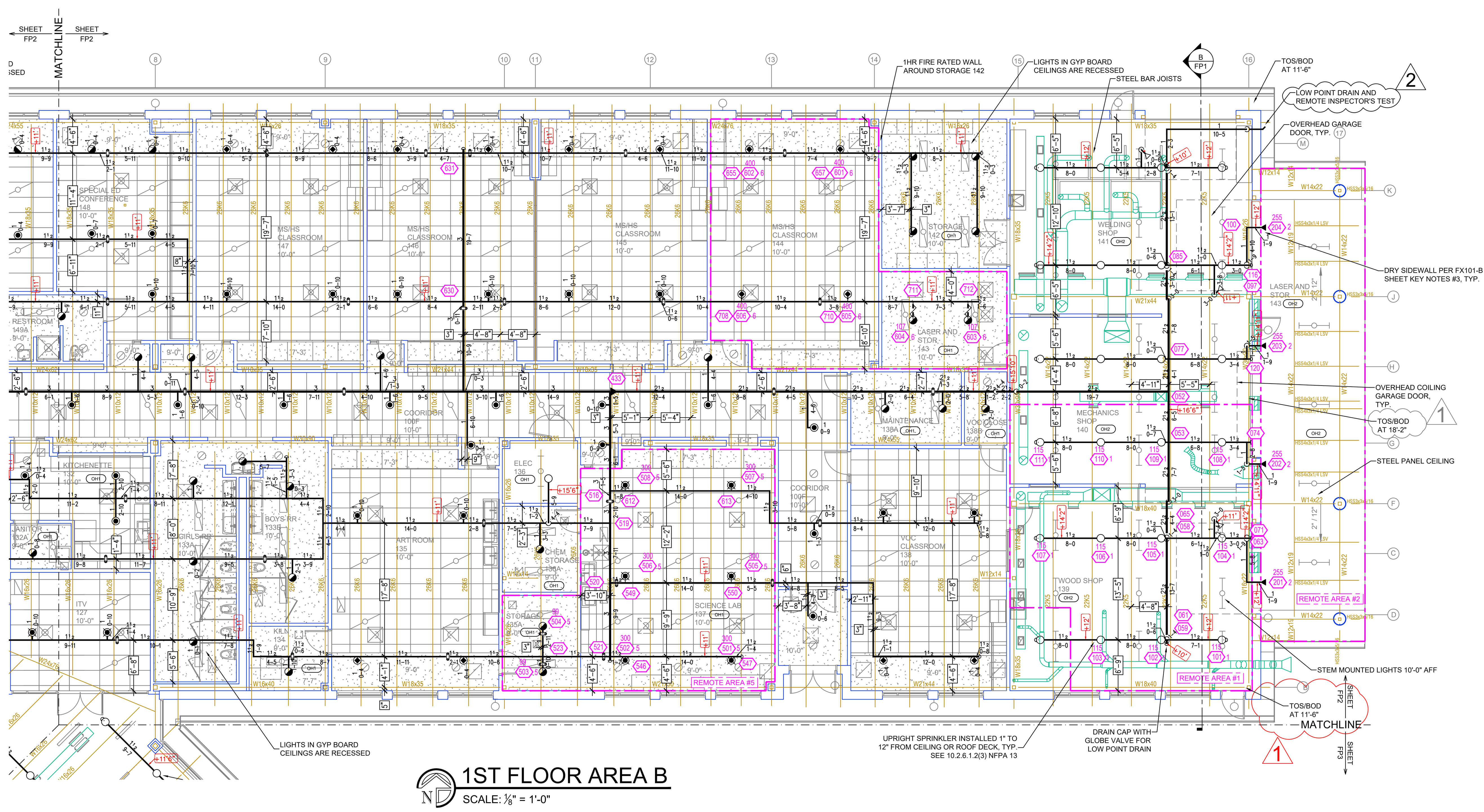
SCALE: 1/8" = 1'-0"

Design Area #: 3	HAZARD: LH
Zone: 1	System Type: WET
Location: GYM 165	
Flowing Outlets: 11	
Density: 0.10	Remote Area: 1647
Req'd @ Base of Riser	
Flow 195.9 gpm @ 51.7 psi	
Req'd @ Pump Discharge	
Flow 295.9 gpm @ 57.7 psi	
Calculation Safety: 40.5 psi	
Includes 100 gpm Hose allowance	

NOTE: 1500sf NO REDUCTION DUE TO 35'-6" CEILING HEIGHT PER NFPA 13 FIG. 11.2.3.2.3.1



PLAN KEY



1ST FLOOR AREA B

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

SYM	CNT	POSITION	FINISH	TEMP	K	NPT	SIN	MFG.	MODEL#	ESCUTCHEON	MAX SPACING
	107	UPRIGHT	BRASS	200	5.60	1/2"	TY313	TYCO	TY-FRB	N/A	130 SQ. FT. / 225 SQ. FT.
	3	SIDEWALL	BRASS	200	5.60	1/2"	TY3351	TYCO	TY-B	N/A	14' x 14'
	4	DRY SIDEWALL	CHROME	200	11.20	1"	TY5339	TYCO	DS-3	N/A	16' x 20'
	40	PENDENT	WHITE	200	11.20	3/4"	TY5237	TYCO	EC-11	RECESSED	18' x 18'
	75	PENDENT	WHITE	200	5.60	1/2"	TY323	TYCO	TY-FRB	RECESSED	15' x 15'
	74	PENDENT	WHITE	200	5.60	1/2"	TY3531	TYCO	RFII	CONCEALED	15' X 15'
	44	PENDENT	WHITE	205	11.20	3/4"	VK636	VIKING	MIRAGE QREC	CONCEALED	20' x 20'
	42	HEAD CAGE									
	343	TOTAL HEADS									

SPRINKLER HEAD LEGEND

Design Area #: 1	HAZARD: OH2
Zone: 1	System Type: WET
Location: WOOD SHOP 139	
Flowing Outlets: 11	
Density: 0.20	Remote Area: 1121
Req'd @ Base of Riser	
Flow 269.2 gpm @ 53.4 psi	
Req'd @ Pump Discharge	
Flow 519.2 gpm @ 60.4 psi	
Calculation Safety: 36.4 psi	
Includes 250 gpm Hose allowance	

NOTE: 1500sf REDUCED BY 28% TO 1080sf DUE TO 18' CEILING HEIGHT PER NFPA 13 FIG. 11.2.3.2.3.1

Design Area #: 2	HAZARD: OH2
Zone: 1	System Type: DRY
Location: SHOPS CANOPY	
Flowing Outlets: 4	
Density: 0.20	Remote Area: 859
Req'd @ Base of Riser	
Flow 209.1 gpm @ 52.4 psi	
Req'd @ Pump Discharge	
Flow 459.1 gpm @ 58.9 psi	
Calculation Safety: 38.3 psi	
Includes 250 gpm Hose allowance	

NOTE: CALCULATED ALL OF CANOPY AREA

CALC PLACARD

Design Area #: 5	HAZARD: OH1
Zone: 1	System Type: WET
Location: SCIENCE LAB 137	
Flowing Outlets: 8	
Density: 0.15	Remote Area: 933
Req'd @ Base of Riser	
Flow 351.5 gpm @ 59.8 psi	
Req'd @ Pump Discharge	
Flow 601.5 gpm @ 67.5 psi	
Calculation Safety: 28.6 psi	
Includes 250 gpm Hose allowance	

NOTE: 1500sf REDUCED BY 40% TO 900sf DUE TO 10' CEILING HEIGHT PER NFPA 13 FIG. 11.2.3.2.3.1

N W E S

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

IMPORTANT NOTE TO OWNER

It is the OWNERS responsility to insure the complete SPRINKLER SYSTEM is tested and maintained per the latest edition of N.F.P.A. #25 and the AUTHORITY HAVING JURISDICTION.

It is the OWNERS responsility to MAINTAIN ADEQUATE heat at all times throughout the entire building to prevent freeze up of the fire protection system.

PROJECT DATA

DES MOINES COMBINED SCHOOL

ADDRESS:
DES MOINES SCHOOL
500 DES MOINES AVE.
DES MOINES, NM 88418

OWNER:
DES MOINES MUNICIPAL SCHOOL
500 DES MOINES AVE
DES MOINES, NM 88418

OCCUPANCY: E-Educational

TYPE OF CONSTRUCTION: II-B Fully Sprinklered

TOTAL AREA: 45,261 sf

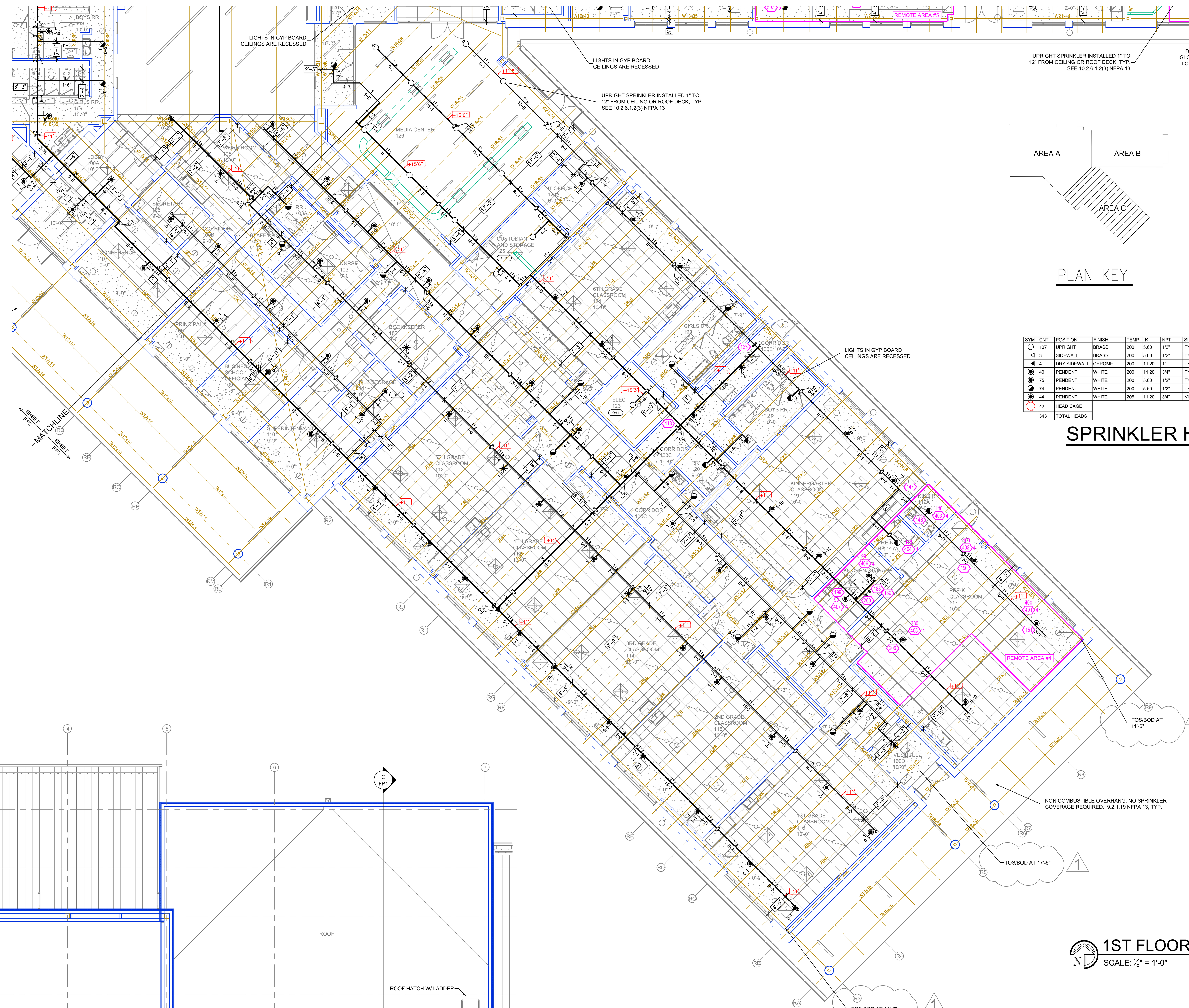
BUILDING PERMIT # 2020-

DES MOINES COMBINED SCHOOL
YUCCA ELEMENTARY SCHOOL ADDITION
500 DES MOINES AVE.
DES MOINES, NM 88418

CONTRACTOR:
WEIL CONSTRUCTION
PO BOX 65606
ALBUQUERQUE, NM 87193

FIRE SPRINKLER DRAWING

PERMIT NO. 2020-
CONTRACT NO. 2359
APPROVAL: CITY FIRE MARSHAL
DRAWN BY: MDK
SCALE: AS NOTED
DATE: 7/16/2024



PLAN KEY

SYM	CNT	POSITION	FINISH	TEMP	K	NPT	SIN	MFG.	MODEL#	ESCUTCHEON	MAX SPACING
○	107	UPRIGHT	BRASS	200	5.60	1/2"	TY313	TYCO	TY-FRB	N/A	130 SQ. FT. / 225 SQ. FT.
◁	3	SIDEWALL	BRASS	200	5.60	1/2"	TY3351	TYCO	TY-B	N/A	14' x 14'
◀	4	DRY SIDEWALL	CHROME	200	11.20	1"	TY5339	TYCO	DS-3	N/A	16' x 20'
	40	PENDENT	WHITE	200	11.20	3/4"	TY5237	TYCO	EC-11	RECESSED	18' x 18'
	75	PENDENT	WHITE	200	5.60	1/2"	TY323	TYCO	TY-FRB	RECESSED	15' x 15'
	74	PENDENT	WHITE	200	5.60	1/2"	TY3531	TYCO	RFII	CONCEALED	15' X 15'
	44	PENDENT	WHITE	205	11.20	3/4"	VK636	VIKING	MIRAGE QREC	CONCEALED	20' x 20'
	42	HEAD CAGE									
	343	TOTAL HEADS									

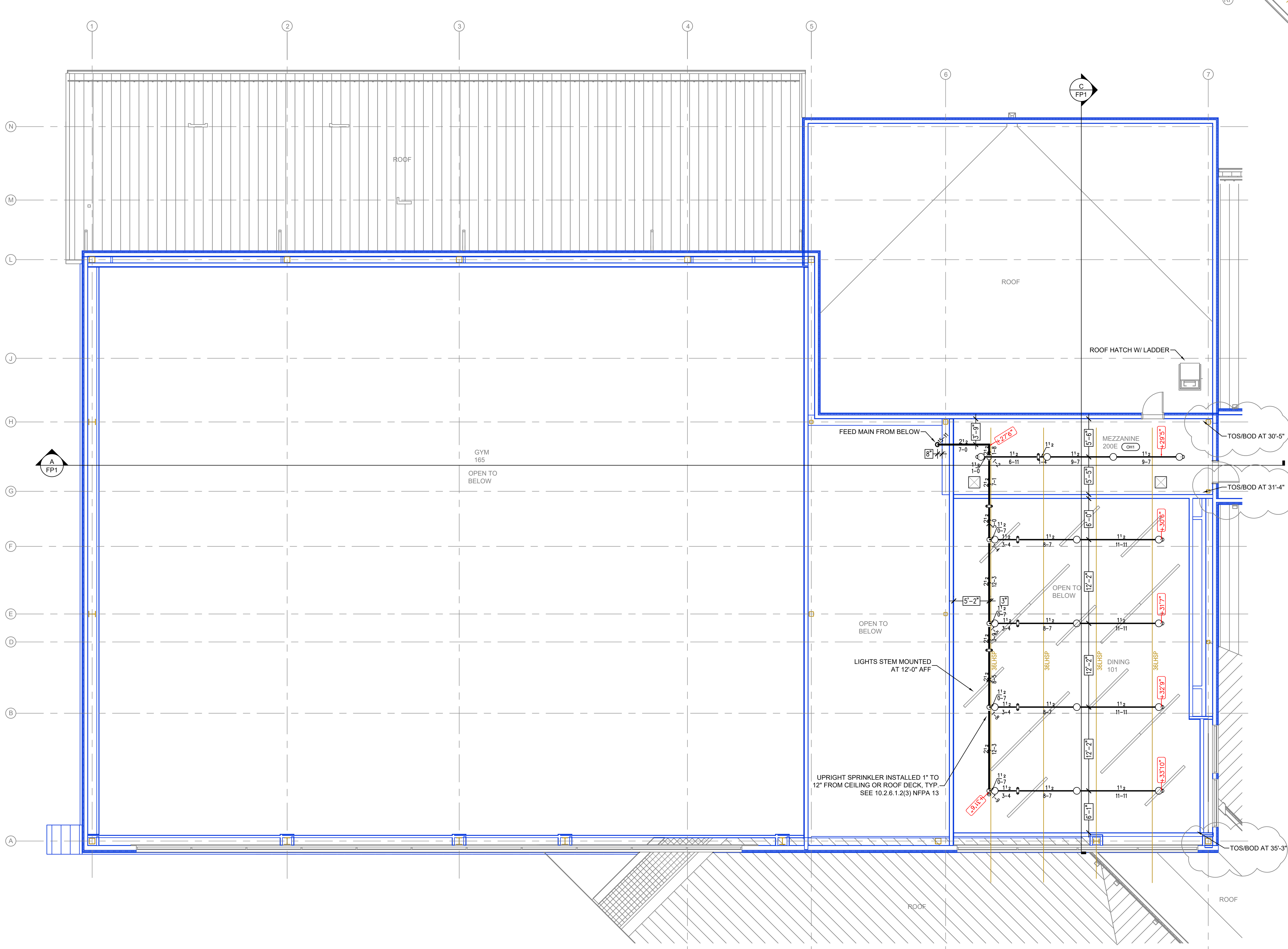
SPRINKLER HEAD LEGEND

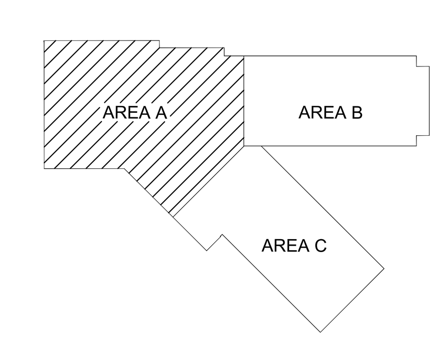
Design Area #: 4 HAZARD: LH
Zone: 1 System Type: WET
Location: PRE–K 117

Flowing Outlets: 4
Density: 0.10 Remote Area: 956
Req'd @ Base of Riser
Flow 245.1 gpm @ 70.9 psi
Req'd @ Pump Discharge
Flow 345.1 gpm @ 77.3 psi
Calculation Safety: 20.7 psi
Includes 100 gpm Hose allowance

NOTE: 1500sf REDUCED BY 40% TO 900sf DUE TO 10' CEILING HEIGHT PER NFPA 13 FIG. 11.2.3.2.3.1

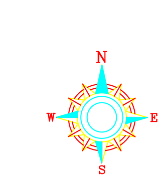
1ST FLOOR AREA C
SCALE: 1/8" = 1'-0"





PLAN KEY

2ND FLOOR AREA A
SCALE: 1/8" = 1'-0"



IMPORTANT NOTE TO OWNER

It is the OWNERS responsibility to insure the complete SPRINKLER SYSTEM is tested and maintained per the latest edition of N.F.P.A. #25 and the AUTHORITY HAVING JURISDICTION.

It is the OWNERS responsibility to MAINTAIN ADEQUATE heat at all times throughout the entire building to prevent freeze up of the fire protection system.

PROJECT DATA
DES MOINES COMBINED SCHOOL

ADDRESS:
DES MOINES SCHOOL
500 DES MOINES AVE.
DES MOINES, NM 88418

OWNER:
DES MOINES MUNICIPAL SCHOOL
500 DES MOINES AVE
DES MOINES, NM 88418

OCCUPANCY: E-Educational
TYPE OF CONSTRUCTION: II-B Fully Sprinklered

TOTAL AREA: 45,261 sf

BUILDING PERMIT # 2020-

DES MOINES COMBINED SCHOOL
YUCCA ELEMENTARY SCHOOL ADDITION
500 DES MOINES AVE.
DES MOINES, NM 88418

CONTRACTOR:
WEIL CONSTRUCTION
PO BOX 65606
ALBUQUERQUE, NM 87193

FIRE SPRINKLER DRAWING
PERMIT NO. 2020-
CONTRACT NO. 2359
APPROVAL: CITY FIRE MARSHAL
DRAWN BY: MDK
SCALE: AS NOTED
DATE: 7/16/2024
FP3 OF 3