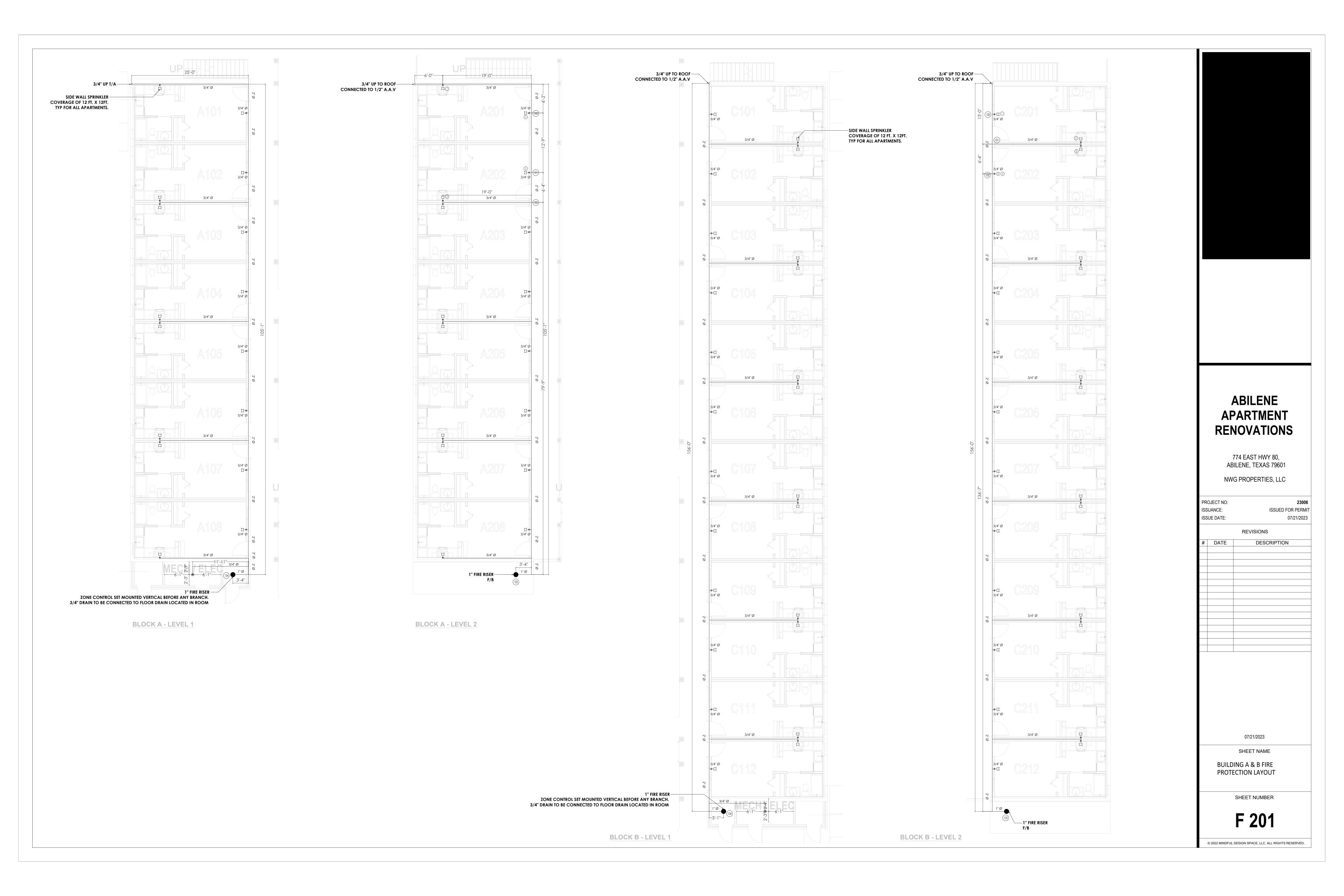
GDI ENGINEERING

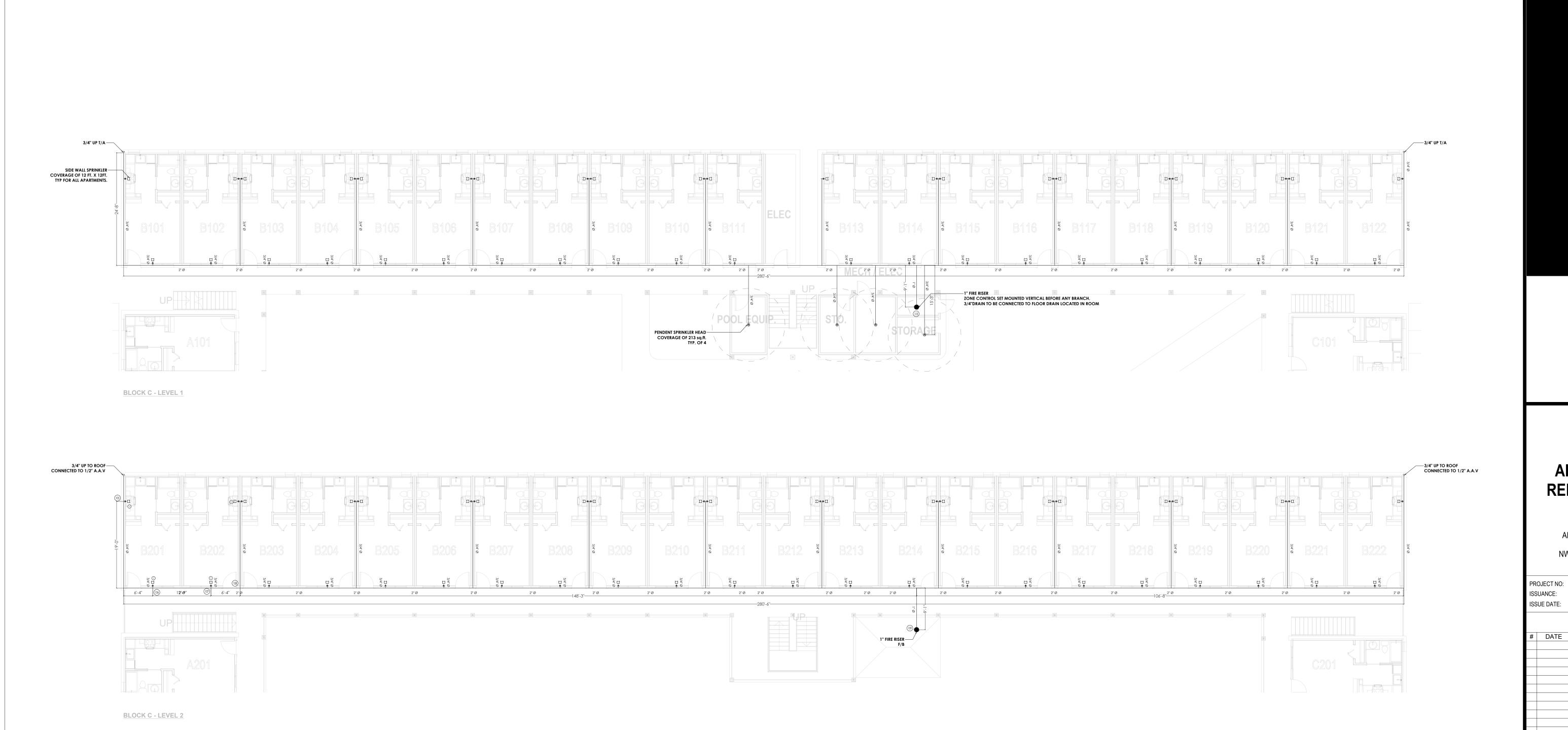


Abilene Apartment

Multifamily

Abilene- Texas





ABILENE APARTMENT RENOVATIONS

774 EAST HWY 80, ABILENE, TEXAS 79601

NWG PROPERTIES, LLC

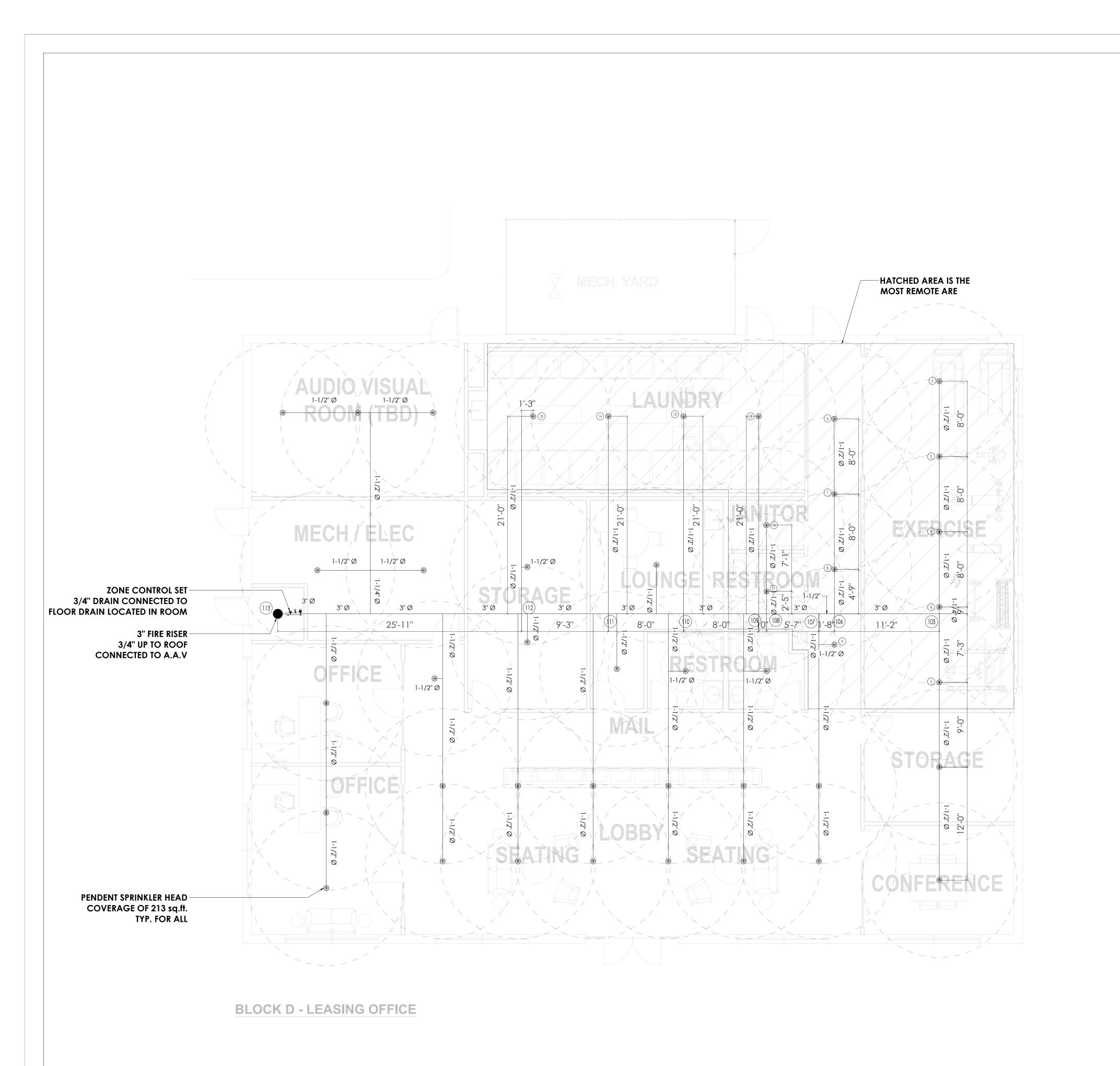
PR	OJECT NO:	2300
ISS	UANCE:	ISSUED FOR PERM
ISS	UE DATE:	07/21/2023
		REVISIONS
#	DATE	DESCRIPTION

07/21/2023 SHEET NAME

BUILDING C FIRE PROTECTION LAYOUT

SHEET NUMBER

F 202



ABILENE APARTMENT RENOVATIONS

774 EAST HWY 80, ABILENE, TEXAS 79601

NWG PROPERTIES, LLC

PROJECT NO: 23006
ISSUANCE: ISSUED FOR PERMIT
ISSUE DATE: 07/21/2023

REVISIONS

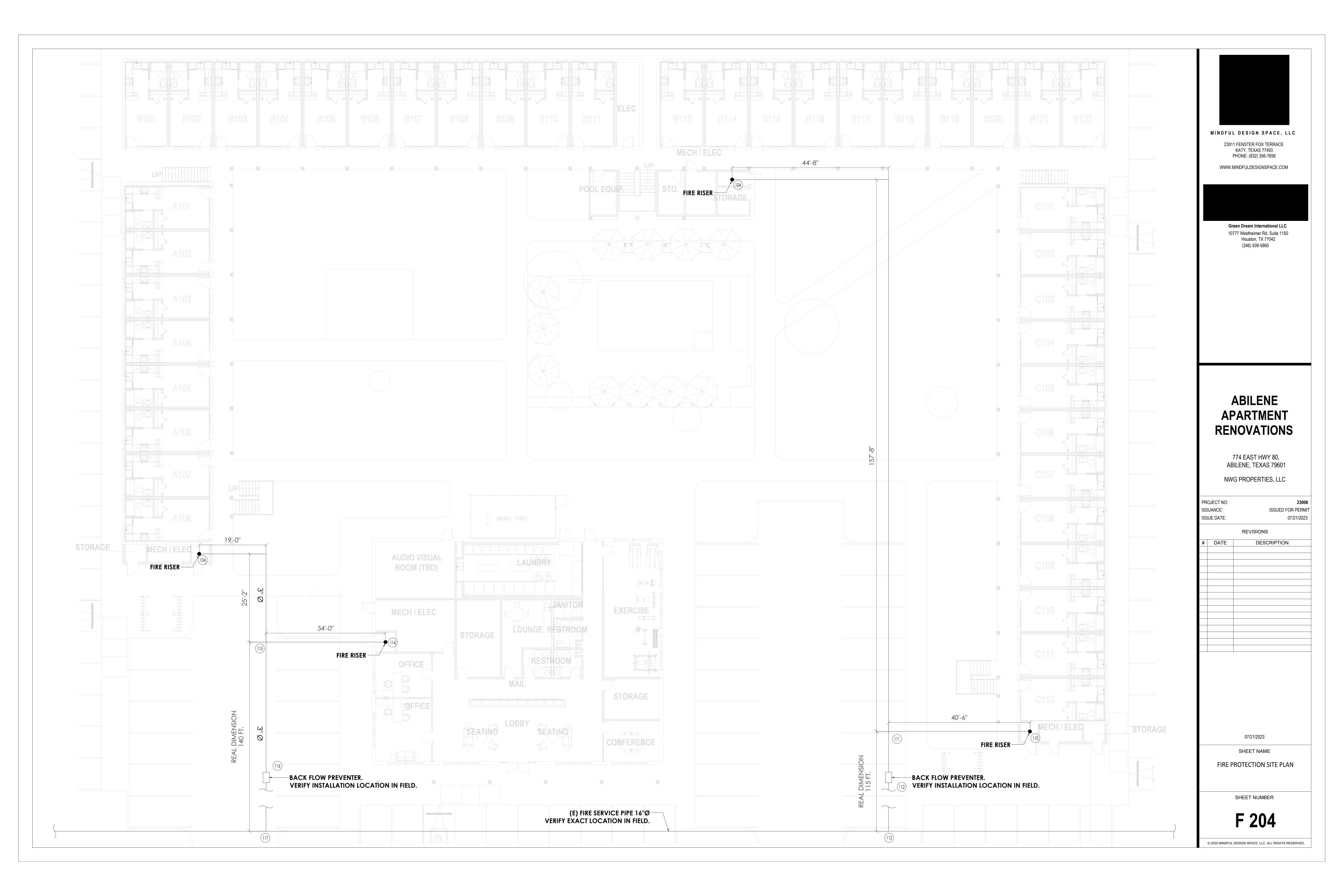
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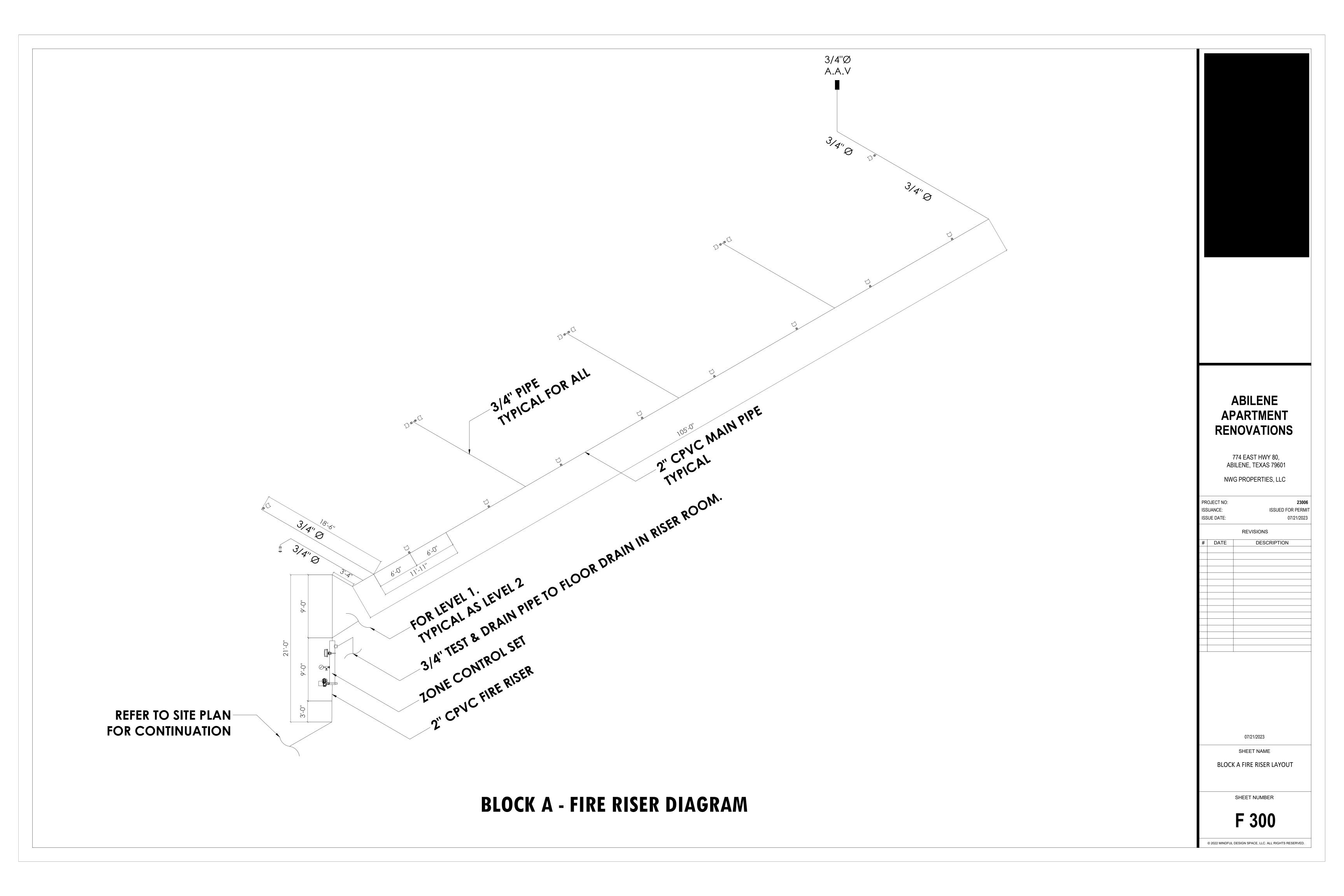
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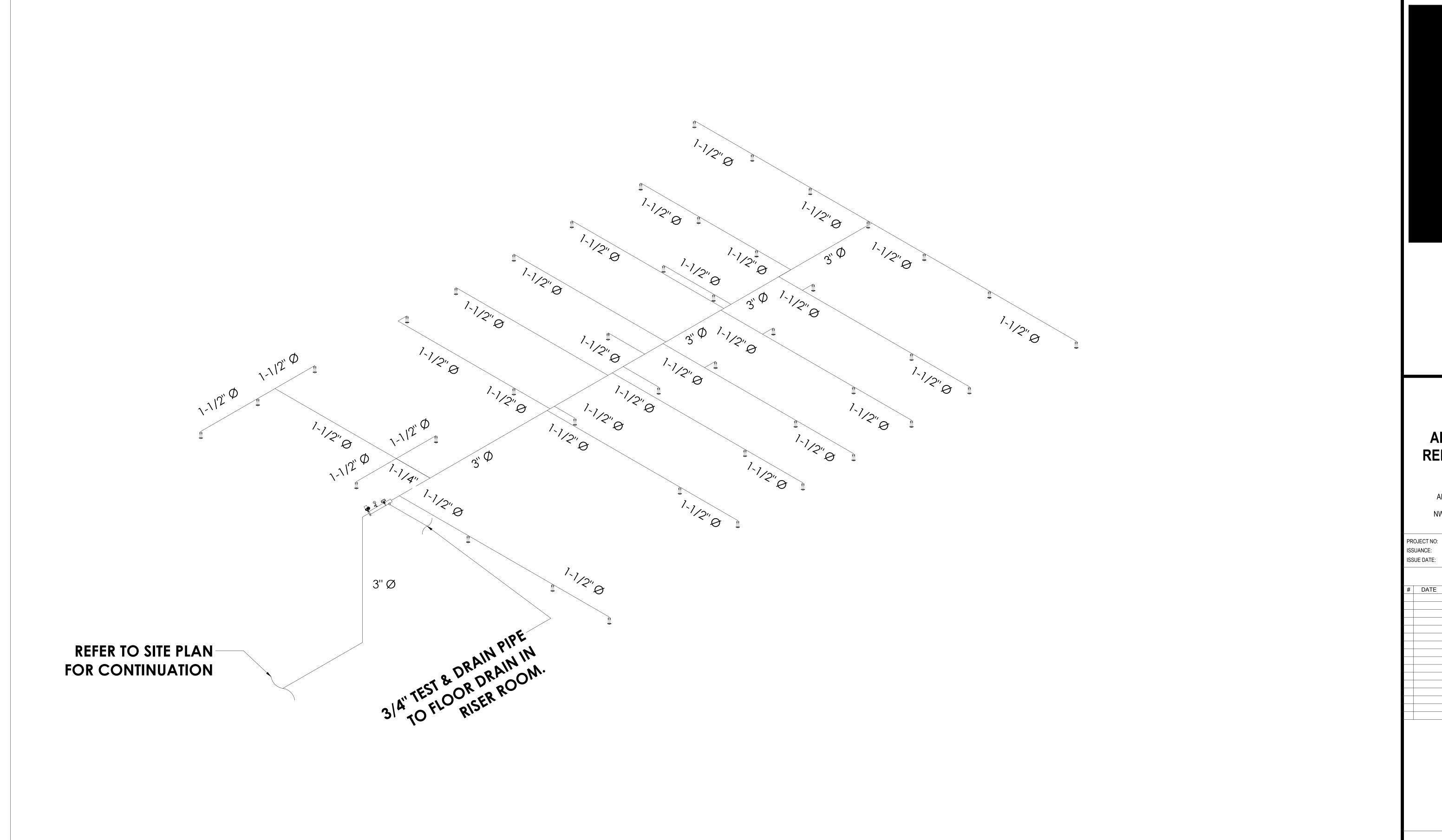
SHEET NAME
BUILDING D LEASING OFFICE
FIRE PROTECTION LAYOUT

SHEET NUMBER

F 203







BLOCK D - FIRE RISER DIAGRAM

ABILENE APARTMENT RENOVATIONS

774 EAST HWY 80, ABILENE, TEXAS 79601 NWG PROPERTIES, LLC

OJECT NO: 23006
SUANCE: ISSUED FOR PERMIT
SUE DATE: 07/21/2023

REVISIONS

DATE DESCRIPTION

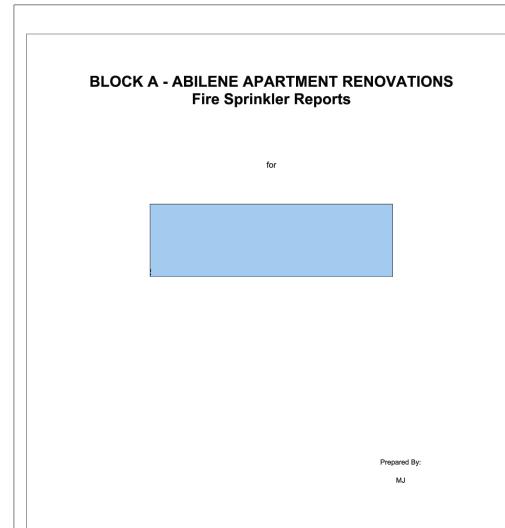
07/21/2023

SHEET NAME

BLOCK D FIRE RISER LAYOUT

SHEET NUMBER

F 303



July 18, 2023

Fire - Fire Sprinkler Hyd Mac-Corp s.a.r.l.	raulics Calculation Program		Bloo	Elite Software Developme	ovations	Fire - Fi Mac-Cor	re Sprinkler Hydraulics Calcu p.s.a.r.l.	ulation Program
	ect Data Report				Page 2		Sprinkler Input	Data
General Data						Node	Input Data	
Project Title: Designed By: Code Reference:	Block A - Abilene Apartme Renovations MJ NFPA 13R	nt	Project File Name: Block Afiw Date: July 18, 2023 Approving Agency:			Node No.	Node Description Branch Description	Area Group Branch Dia. (in)
Client Name: Address: Company Name: Company Address:			Phone: City, State Zip Code: Representative: City And State:			1	Sprinkler 	0.000
Phone: Building Name: Contact at Building:			Building Owner: Phone at Building:			2	Sprinkler 	0.000
Address Of Building:	774 EAST HWY 80, ABILI TEXAS 79601	ENE,	City, State Zip Code:			3	Sprinkler 	0.000
Project Data					Ī	4	Sprinkler 	0.000
Description Of Hazard Design Area Of Water Default Sprinkler K-Fa	r Application: 852		Sprinkler System Type: Maximum Area Per Sprinkler: Default Pipe Material:	213 ft² CPVC SDR 13.5		100	No Discharge	0.000
Inside Hose Stream A In Rack Sprinkler Allo	Allowance: 0.00	gpm gpm	Outside Hose Stream Allowance:	0.00 gpm		101	No Discharge	0.000
Sprinkler Specification Make: Size:	ns		Model: Temperature Rating:	0 F		102	No Discharge	0.000
Water Supply	Test Data		Tomporatare Taung			103	No Discharge	0.000
Source Of Information Test Hydrant ID:			Date Of Test:			104	No Discharge	0.000
Hydrant Elevation: Test Flow Rate:		ft gpm	Static Pressure: Test Residual Pressure:	0.00 psi 45.00 psi		115	No Discharge	0.000
Calculated System Fl			Calculated Inflow Residual Pressure:	26.83 psi		116	No Discharge	0.000
Calculation Pr	roject Data					117	No Discharge	0.000
Calculation Mode: HMD Minimum Reside Number Of Active No		psi	Minimum Desired Flow Density:	0.05 gpm/ft²				
Number Of Active Pip Number Of Active Spi			Number Of Inactive Pipes: Number Of Inactive Sprinklers:	0				

Elite Software Development, Inc. ck A - Abilene Apartment Renovations Page 2	Fire - F Mac-Co	ire Sprinkler Hydraulics Calcu orp s.a.r.l.	lation Program	200		Block	Elite Software Development, A - Abilene Apartment Renovati Pag	Inc. tions ge 3
	Fire	Sprinkler Input	Data					
1	Nod	e Input Data						
	Node No.	Node Description Branch Description	Area Group Branch Dia. (in)	Sprinkler KFactor (K) Branch Len. (ft)	Pressure Estimate (psi) Branch Stnd Fittings	Node Elev (ft) Branch Non- Stnd Fittings (ft)	Non-Sprinkler Flow (gpm) Branch Sprk KFactor (K)	
	1	Sprinkler	0.000	4.40 0.0	5.86	21.00 0.0	0.00 0.00	
	2	Sprinkler 	0.000	4.40 0.0	7.94 	21.00 0.0	0.00 0.00	
	3	Sprinkler 	0.000	4.40 0.0	8.05	21.00 0.0	0.00 0.00	
	4	Sprinkler 	0.000	4.40 0.0	6.79	21.00 0.0	0.00 0.00	
213 ft²	100	No Discharge	0.000	N/A 0.0	8.27	21.00 0.0	0.00 0.00	
CPVC SDR 13.5 0.00 gpm	101	No Discharge	0.000	N/A 0.0	8.38	21.00 0.0	0.00 0.00	
0.5	102	No Discharge	0.000	N/A 0.0	8.56	21.00 0.0	0.00 0.00	
0 F	103	No Discharge	0.000	N/A 0.0	11.74	21.00 0.0	0.00 0.00	
1	104	No Discharge	0.000	N/A 0.0	21.58	0.00 0.0	0.00 0.00	
0.00 psi	115	No Discharge	0.000	N/A 0.0	22.96	0.00 0.0	0.00 0.00	
45.00 psi 26.83 psi	116	No Discharge	0.000	N/A 0.0	23.96	0.00 0.0	0.00 0.00	
1	117	No Discharge	0.000	N/A 0.0	26.83	0.00 0.0	0.00 0.00	
0.05 gpm/ft²								
0								
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	rp s.a.r.l.	kler Hydraulics Calculation	Program	4			Elite Software Development, Inc A - Abilene Apartment Renovation Page			
Fire	Spri	nkler Input Da	ta							
Pipe	Inpu	t Data								
Beg. Node	End. Node	Pipe Description	Nominal Diameter (inch)	Type Group	Fitting Data	Nominal Length (feet)	Fitting Length (feet)	Total Length (feet)	CFactor (gpm/inc h-psi)	
1	100	CPVC SDR 13.5	0.750	0	E2T	26.00	13.00	39.00	150	
2	100	CPVC SDR 13.5	0.750	0	Т	1.00	3.00	4.00	150	
100	101	CPVC SDR 13.5	2.000	0	Т	13.00	10.00	23.00	150	
3	101	CPVC SDR 13.5	0.750	0	Т	1.00	3.00	4.00	150	
101	102	CPVC SDR 13.5	2.000	0	Т	7.00	10.00	17.00	150	
4	102	CPVC SDR 13.5	0.750	0	2T	19.00	6.00	25.00	150	
102	103	CPVC SDR 13.5	2.000	0	2E7T	85.00	92.00	177.00	150	
103	104	CPVC SDR 13.5	2.000	0	ET	21.00	21.00	42.00	150	
104	115	CPVC SDR 13.5	2.000	0	2ET	45.00	32.00	77.00	150	
116	117	CPVC SDR 13.5	2.000	0	2T	140.00	20.00	160.00	150	
115	116	Backflo Prev	1.000	Loss						

Fire - Fire Sprinkler Hydraulics Calculation Program Mac-Corp s.a.r.l.					<u> </u>			lite Software Develor - Abilene Apartment	Fire - Fire Mac-Corp	Sprinkler H s.a.r.l.
Fire	Sprinl	der O	utput Dat	a					Fire S	Sprink
Over	all Nod	le Gro	upings Ou	tput Data					Overa	II Pipe
Pipe S Beg. Node	egment End. Node	Pipe Type Group	Pipe Flow Rate (gpm)	Sprinkler Flow At Beg. Node (gpm)	Non-Sprink Out (+) (gpm)	ler Flow In (-) (gpm)	Beg. Node Residual Pressure (psi)	Imbalance Flow At Beg. Node (gpm)	Beg. End. Node	Nodal KFactor (K)
2	100	0	0.00	10.65 12.40	0.00	0.00	5.86 7.94	0.00000	1 100	4.40 0.00
3	101	0	0.00	12.48	0.00	0.00	8.05	0.00000	2	4.40
100 100 100	102 1 2 101	0 0 0	0.00 0.00 0.00 0.00	0.00	0.00	0.00	6.79 8.27	0.00000	3 101	0.00 C 4.40 0.00
101 101 101	3 100 102	0 0 0	0.00 0.00 0.00	0.00	0.00	0.00	8.38		100 101	0.00 0.00 C
102 102 102	4 101 103	0 0 0	0.00 0.00 0.00	0.00	0.00	0.00	8.56		4 102	4.40 0.00 C
103 103	102 104	0	0.00 0.00	0.00	0.00	0.00	11.74		101 102	0.00
104 104	103 115	0 0	0.00 0.00	0.00	0.00	0.00	21.58			С
115 115	104 116	0	0.00 0.00	0.00	0.00	0.00	22.96		102 103	0.00 0.00 C
116 116	115 117	0	0.00 0.00	0.00	0.00	0.00	23.96		103 104	0.00
117	116	0	0.00	0.00	0.00	0.00	26.83		104 115	0.00 0.00 C
									115	Backflo Prev 1.00 psi
									116 117	0.00 0.00

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					7.					Page 6
Fire S	Sprinkle	er Outp	ut Data							
Overa	II Pipe (Output [)ata							
						q (gpm)	F. L./ft	Pipe-Len.		
Beg. End.	Nodal KFactor	Elevation	Spk/Hose	Residual Pressure	Nom. Dia. Inside Dia.	Q (gpm)	(psi/ft)	Fit-Len.	PF-(psi) PE-(psi)	
Node	(K)	(feet)	Discharge (gpm)	(psi)	C-Value	Velocity	Fittings	Tot-Len.	PT-(psi)	
14000	(14)		(9)111)	(pai)	O-Value	(fps)	Type-Grp	(ft)	1 1-(pai)	
1	4.40	21.00	10.65	5.86	0.75	0.00	0.06179	26.00	2.410	
100	0.00	21.00	0.00	8.27	0.884	10.65	E2T	13.00	0.000	
	CP	VC SDR 13	.5		150	5.57	0	39.00	2.410	
2	4.40	21.00	12.40	7.94	0.75	0.00	0.08186	1.00	0.327	
100	0.00	21.00	0.00	8.27	0.884	12.40	Т	3.00	0.000	
	CP	VC SDR 13	.5		150	6.48	0	4.00	0.327	
3	4.40	21.00	12.48	8.05	0.75	0.00	0.08287	1.00	0.331	
101	0.00	21.00	0.00	8.38	0.884	12.48	Т	3.00	0.000	
	CP	VC SDR 13	.5		150	6.52	0	4.00	0.331	
100	0.00	21.00	0.00	8.27	2.00	0.00	0.00480	13.00	0.110	
101	0.00	21.00	0.00	8.38	2.003	23.05	T	10.00	0.000	
	CP	VC SDR 13	.5		150	2.35	0	23.00	0.110	
4	4.40	21.00	11.47	6.79	0.75	0.00	0.07082	19.00	1.770	
102	0.00	21.00	0.00	8.56	0.884	11.47	2T	6.00	0.000	
	CP	VC SDR 13	.5		150	5.99	0	25.00	1.770	
101	0.00	21.00	0.00	8.38	2.00	0.00	0.01069	7.00	0.182	
102	0.00	21.00	0.00	8.56	2.003	35.53	Т	10.00	0.000	
	CP	VC SDR 13	.5		150	3.62	0	17.00	0.182	
102	0.00	21.00	0.00	8.56	2.00	0.00	0.01794	85.00	3.175	
103	0.00	21.00	0.00	11.74	2.003	47.00	2E7T	92.00	0.000	
	CP	VC SDR 13	.5		150	4.79	0	177.00	3.175	
103	0.00	21.00	0.00	11.74	2.00	0.00	0.01794	21.00	0.753	
104	0.00	0.00	0.00	21.58	2.003	47.00	ET	21.00	9.093	
	CP	VC SDR 13	.5		150	4.79	0	42.00	9.846	
104	0.00	0.00	0.00	21.58	2.00	0.00	0.01794	45.00	1.381	
115	0.00	0.00	0.00	22.96	2.003	47.00	2ET	32.00	0.000	
	CP	VC SDR 13	.5		150	4.79	0	77.00	1.381	
115	Backflo	0.00		22.96		47.00				
	Prev									
116	1.00 psi	0.00		23.96						
110	0.00	0.00	0.00	22.00	2.00	0.00	0.04704	140.00	2.870	
116 117	0.00 0.00	0.00 0.00	0.00 0.00	23.96 26.83	2.00 2.003	0.00 47.00	0.01794 2T	140.00 20.00	0.000	
	0.00	0.00	0.00	20.00	150	4.79	0	160.00	2.870	

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iyarau	lic Sı	ipply/	Dem	and G	raph						
	50 -										
	45										
	40										
psi	35										
an	30				27						
Pressure psi	25										
₽.	20										
	15										
	10										
	5										
	0										
		1 2	3	4	5 Flow	6 rate(x100)	7 gpm	8	9	10	
emano alculated F alculated F kterior Hos	lesidua	Pressui	re: 26.8		tream Fr	om Inflow N	ode To Flo	w: 10.09 psi			
555010 110	quirou	51 1 1131	Оринки	o. Downs	a Juni I II	Z IIIIOW IV	040 10110	го.оо раг			

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Fire - Fire Sprinkler Hydraulic Mac-Corp s.a.r.l.	s Calculation Progran	m	4			te Software Development, Inc. Abilene Apartment Renovations Page 7	Fire - Fire Sprinkler Hydraulics Calculation Program Mac-Corp s.a.r.l.	<u> </u>	Elite Software Development, Inc. Block A - Abilene Apartment Renovations Page 8
Fire Sprinkler C	utput Data						Fire Sprinkler Output Summary		
Overall Sprinkler	Output Data						Hydraulically Most Demanding Sprin	kler Node	I
Flowing Sprinkler Code Node No.	Sprinkler KFactor (K)	Sprinkler Elevation (feet)	Residual Pressure (psi)	Flowing Area (ft²)	Flowing Density (gpm/ft²)	Sprinkler Discharge (gpm)	HMD Sprinkler Node Number: HMD Actual Residual Pressure: HMD Actual GPM:	1 5.86 psi 10.65 gpm	
1 Sub Totals For Non-Group	4.40	21.00	5.86	213.00 213.00	0.050 0.050	10.65 10.65	Sprinkler Summary		
2 Sub Totals For Non-Group	4.40	21.00	7.94	213.00 213.00	0.058 0.058	12.40 12.40	Sprinkler System Type: Specified Area Of Application: Minimum Desired Density:	852.00 ft² 0.050 gpm/ft²	
3 Sub Totals For Non-Group	4.40	21.00	8.05 6.79	213.00 213.00 213.00	0.059 0.059 0.054	12.48 12.48 11.47	Application Average Density: Application Average Area Per Sprinkler: Sprinkler Flow: Average Sprinkler Flow:	0.055 gpm/ft² 213.00 ft² 47.00 gpm 11.75 gpm	
Sub Totals For Non-Group				213.00 852.00	0.054	11.47	Flow Velocity And Imbalance Summa	- '	П
Totals For All Groups				652.00	0.055	47.00	Maximum Flow Velocity (In Pipe 0 - 0) Maximum Velocity Pressure (In Pipe 0 - 0)	0.00 ft/sec 0.00 psi	-1
							Allowable Maximum Nodal Pressure Imbalance: Actual Maximum Nodal Pressure Imbalance: Actual Average Nodal Pressure Imbalance: Actual Maximum Nodal Flow Imbalance: Actual Average Nodal Flow Imbalance:	0.0000 psi 0.0000 psi 0.0000 psi 0.0000 gpm 0.0000 gpm	
							Overall Network Summary		ij
							Number Of Unique Pipe Sections: Number Of Flowing Sprinklers:	11 4	
							Pipe System Water Volume:	52.41 gal	
							Sprinkler Flow: Non-Sprinkler Flow: Demand Flow Excluding Exterior Hose Flow: Exterior Hose Flow:	47.00 gpm 0.00 gpm 47.00 gpm 500.00 gpm	
							Minimum Required Residual Pressure At System Inflow Node: Demand Flow At System Inflow Node:	26.83 psi 547.00 gpm	
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ABILENE APARTMENT RENOVATIONS

774 EAST HWY 80, ABILENE, TEXAS 79601

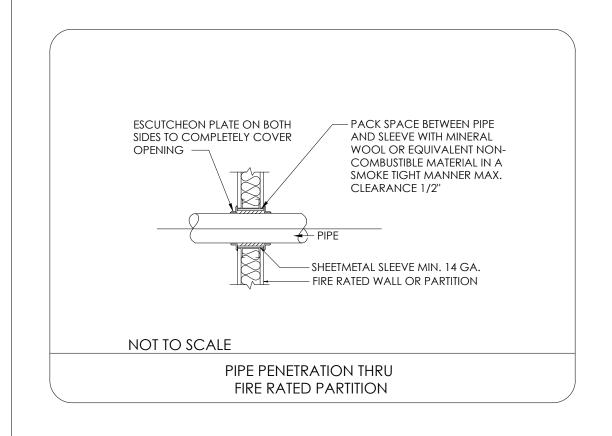
NWG PROPERTIES, LLC

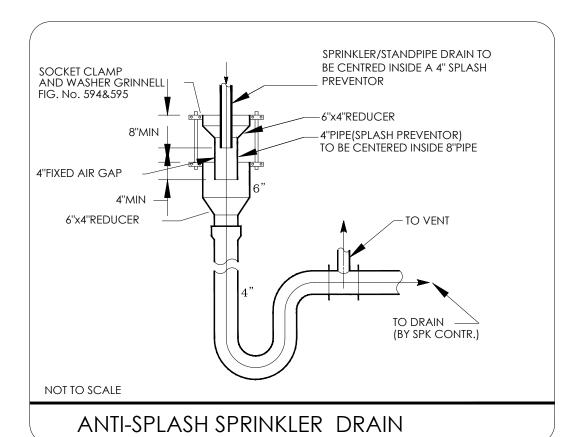
ISSUANCE: ISSUED FOR PERMIT ISSUE DATE: 07/21/2023 REVISIONS DESCRIPTION

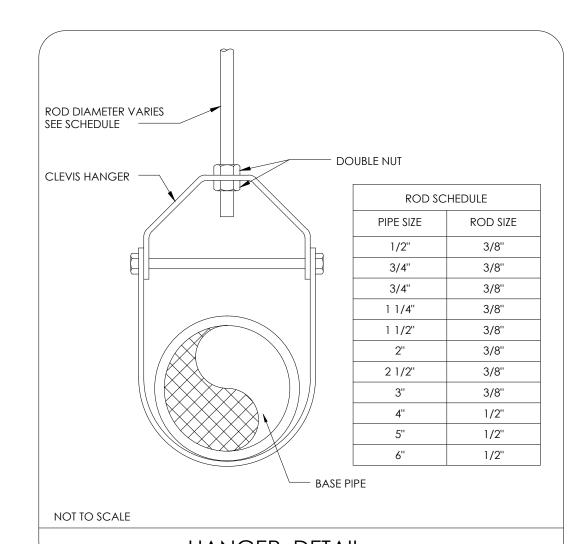
07/21/2023

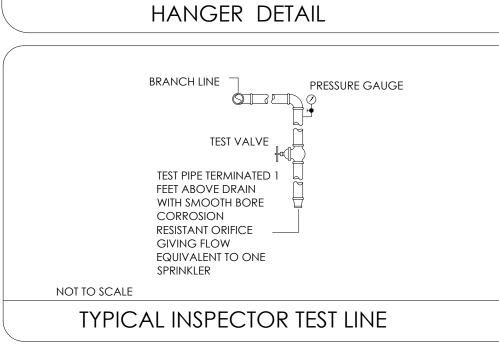
SHEET NAME BUILDING A FIRE PROTECTION HYDRAULIC CALCULATION

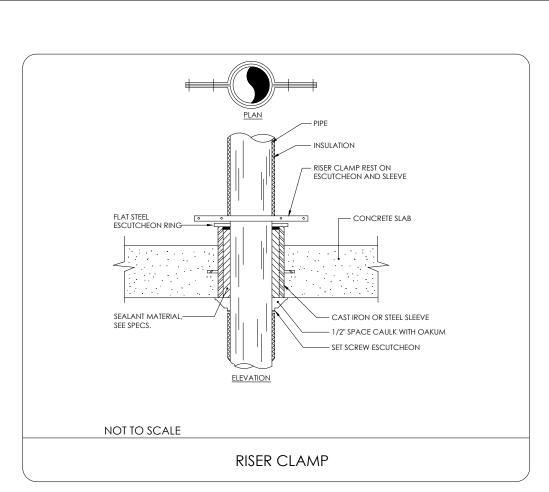
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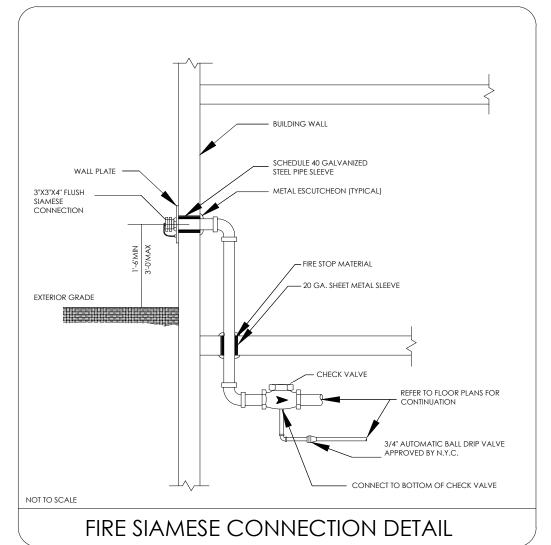


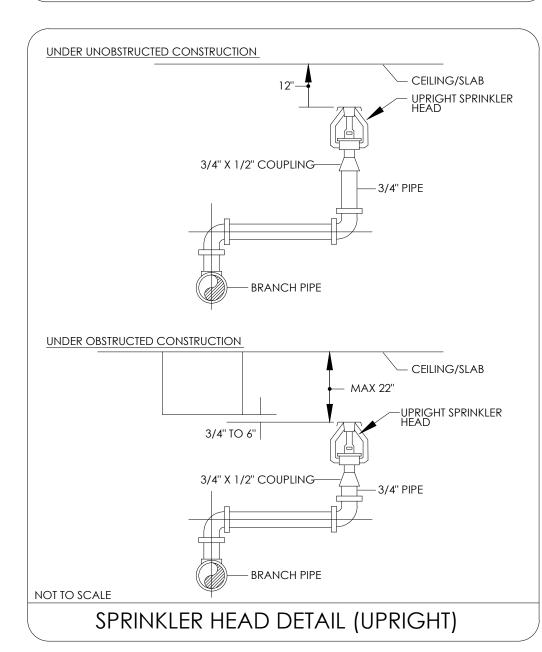


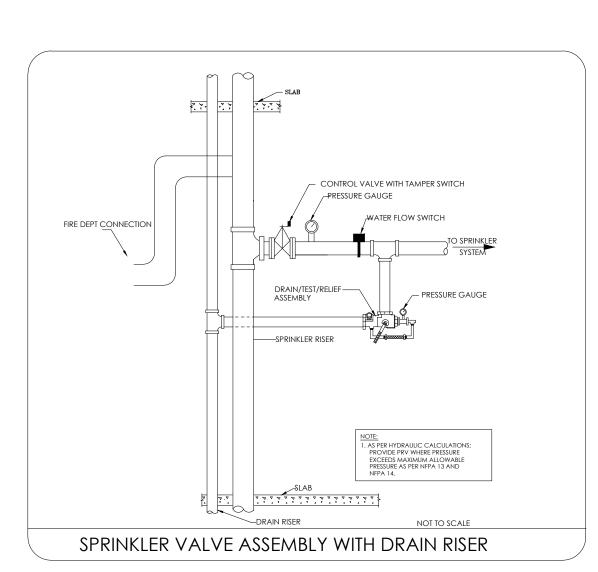


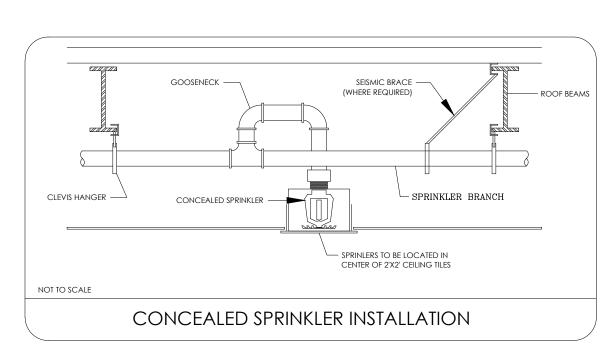


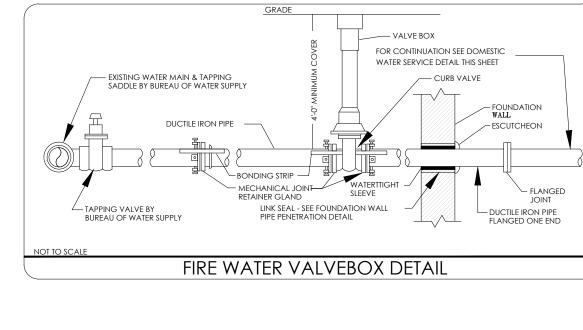


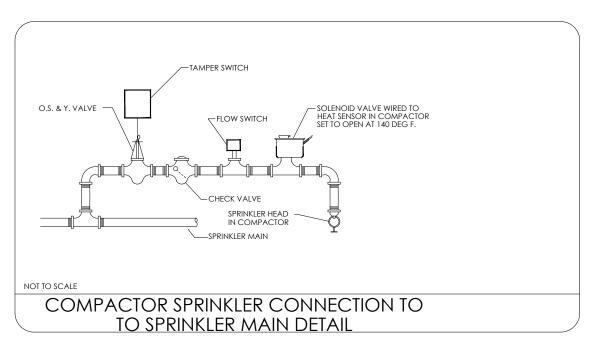


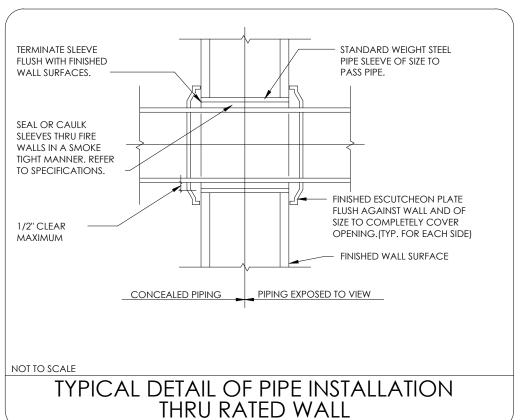


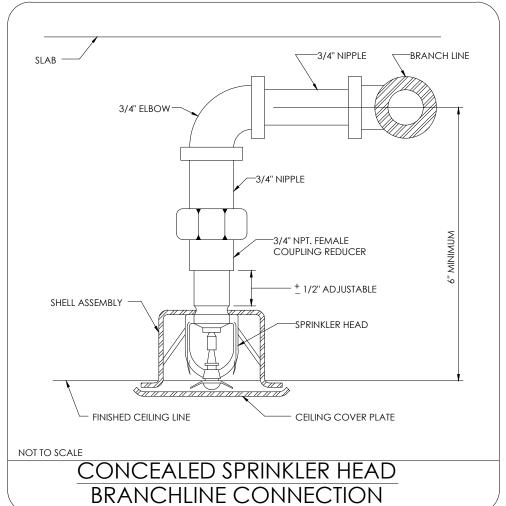


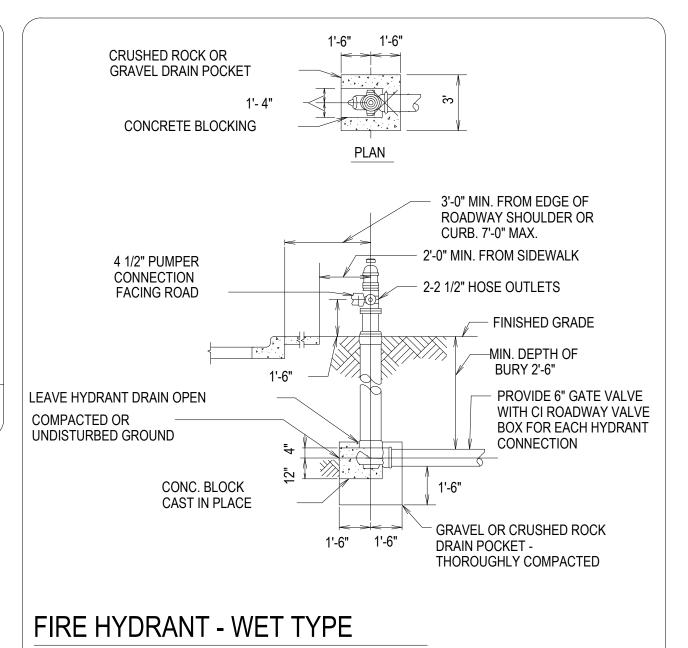














774 EAST HWY 80, ABILENE, TEXAS 79601

NWG PROPERTIES, LLC

6" ELECTRIC HORN INSTALLED AND WIRED BY OTHERS Ø 1-1/2" (TO BE INSTALLED IN BETWEEN LEVELS -TO BE HEARD THROUGHOUT ALL PORTIONS OF BUILDING) 300# GAUGE 3/4" BALL VALVE — 1-1/2"Ø (TEST & DRAIN) -FLOW SWITCH USE COPPER PIPE (WIRING BY OTHERS) @ 3'-6" CHECK VALVE 1-1/2"Ø *DRAIN TO BE EITHER COPPER TO DOMESTIC **— ※** @ 1'-0" OR PAINTED CPVC TO PROTECT _ (AWAY) FROM SUNLIGHT EXPOSURE* RISER CONTROL VALVE *MUST DRAIN INTO OPEN 1-1/2"Ø 1-1/2" OS&Y GATE VALVE PLANTER AREAS * W/BYPASS AND TAMPER SWITCH ******-@ 0'-0" *7/16" ORIFICE SPRINKLER 1-1/2"Ø TO BE PROVIDED IN INSPECTOR'S TEST & DRAIN.* RISER DETAIL NOT TO SCALE *DETAIL IS SCHEMATIC ONLY. RISER IS LOCATED IN WALL,

PROJECT NO: 23006
ISSUANCE: ISSUED FOR PERMIT
ISSUE DATE: 07/21/2023

REVISIONS

DATE DESCRIPTION

07/21/2023

SHEET NAME

FIRE PROTECTION GENERAL

DETAILS

SHEET NUMBER

F 500