

GLENWOOD-PEDLAR RANGER STATION ADDITION AND RENOVATIONS

JUNE 2, 2017

(95 PERCENT REVIEW SET)



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GLENWOOD-PEDLAR
RANGER
OFFICE
ADDITION
AND
RENOVATIONS

PROGRESS
DRAWINGS
NOT FOR
CONSTRUCTION

A 001 COVER

06 02 2017

Revisions:
△ MNTH. DAY. YEAR

Drawn By: Author

Review By: Checker

Project No. 16XXX

Sheet No.

001

SHEET INDEX

SITE

A 001 COVER
L 101 SITE LAYOUT
L 102 CONSTRUCTION DETAILS

ARCHITECTURE

A 101 OVERALL PLAN
A 102 ADDITION PLAN
A 103 ROOF AND CEILING PLAN
A 201 ELEVATIONS
A 301 INTERIOR ELEVATIONS
A 302 INTERIOR DETAILS
A 501 BUILDING SECTIONS
A 502 SECTIONS AND DETAILS
A 601 SCHEDULES

ELECTRICAL

E001 DETAILS, SCHEDULES AND SYMBOLS
E101 DEMOLITION PLAN
E201 LIGHTING PLAN
E301 POWER AND DATA PLAN
E401 PANELBOARD SCHEDULES RISER DIAGRAM

MECHANICAL

M001 MECHANICAL EQUIPMENT NOTES, LEGEND AND DETAILS
M101 DEMOLITION AND NEW WORK PLANS
M201 ATTIC DUCTWORK PLAN

PLUMBING

P001 LEGEND, ABBREVIATIONS, SCHEDULES AND DETAILS
P101 DEMOLITION PLAN
P201 SANITARY AND STORM PLAN
P301 DOMESTIC PLAN

PLUMBING

P001 LEGEND, ABBREVIATIONS, SCHEDULES AND
DETAILS

P101 DEMOLITION PLAN
P201 SANITARY AND STORM PLAN
P301 DOMESTIC PLAN

NATIONAL FOREST SERVICE -

Project Data

HSPC # 1605
April 29, 2016

Project Description

Addition to existing building shall constitute improvements to the Glenwood Pedlar Ranger district offices of the NPS. The improved facilities shall accommodate 25 -30 staff with space for small conferences and limited interpretive/educational programs for the public as well as public business desk.

Codes and Standards

Virginia Uniform Statewide Building Code version 2012 IBC 2012 All citations ref. to IBC u.n.o. all citations below refer to IBC 2012 U.N.O.

Use Group

304 Business B

General Building Heights and Areas

Building is not Sprinklered	Rating
503.1 Construction Classification - Type V	0
Structural Frame	0
Bearing Walls, ext and int	0
Nonbearing walls, ext	0
Nonbearing walls,int	0
Floor	0
Roof	0
Allowable Height and Building Areas	
Business B	2 stories 9,000
Actual Height and Building Areas	
Business B	1 stories 5,300

Occupant Loads/Floor

1004.1.2 Business B	max/gsf	floor area	allwd occ
Business B	100	5,300	53 30 actual

Means of Egress

1005.3.2 Width (components other than stairways) w/out sprinkler	Business	Other	inches	occs	inches	min req.	provided
1018.2	Business	Other	0.2	30	6	44"	44"

1007 Accessible Means of Egress

1007, 1015.1	1 accessible rtd	per 1015.1: One (1) exit req. per 1-49 occ.s / B occupncy
1007, 1015.1	1 accessible rtd	per 1015.1: One (1) exit req. per 1-49 occ.s / B occupncy

Doors

1008.1.2 Door swing.	Egress doors shall be of the pivoted or side-hinged swinging type.
1008.1.2 Door swing.	Egress doors shall be of the pivoted or side-hinged swinging type.
	Egress doors shall be 3' wide min
	Doors shall swing in direction of egress, >50 occs only

Exit Access

Common Path	Business	75 lf
Common Path	Business	75 lf
Exit Access Travel Distance	Business	200 lf
Corridors	Fire resistance rating	0 hrs
	Business	0 hrs
	Width	44" min
	Business	44" min
	Deadends	20' max in corridors

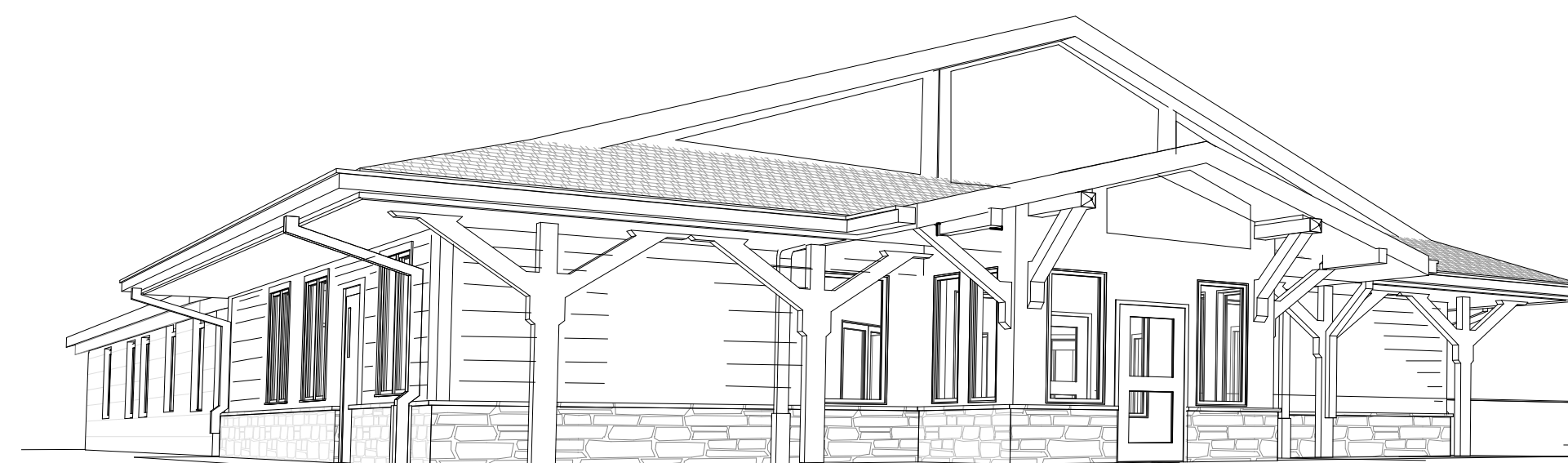
Accessibility

Accessible route - within site from public transportation, accessible parking, streets, sidewalks
Entrances - 50% of public entrances accessible 100% Public actual
Parking - 2

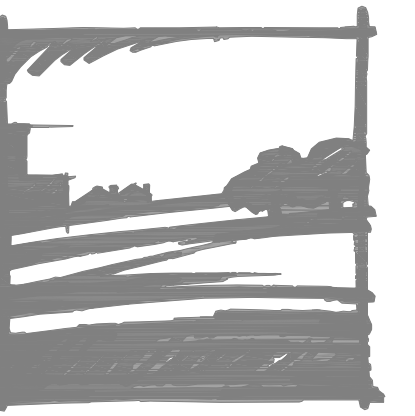
Plumbing Systems

2902.1 - 3: Minimum Number of Fixtures (separate facilities for employees applies see existing building to remain)

Business	M	F	M	F	DF	Serv Sink
Business	M	F	M	F	DF	Serv Sink
30 occs	1	1	1	1	1	1/flr



1 EARLY STUDY



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**GLENWOOD-PEDLAR
RANGER OFFICE
ADDITION AND
RENOVATIONS**

Seal

Title:

SITE LAYOUT

Date: 02 JUNE 2017

Revisions:

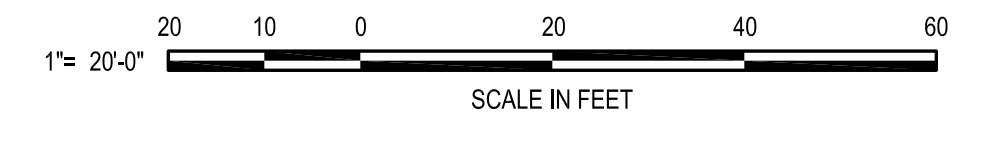
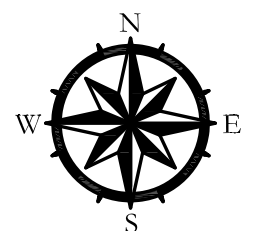
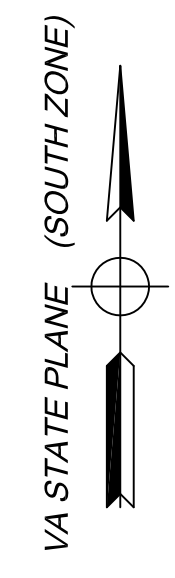
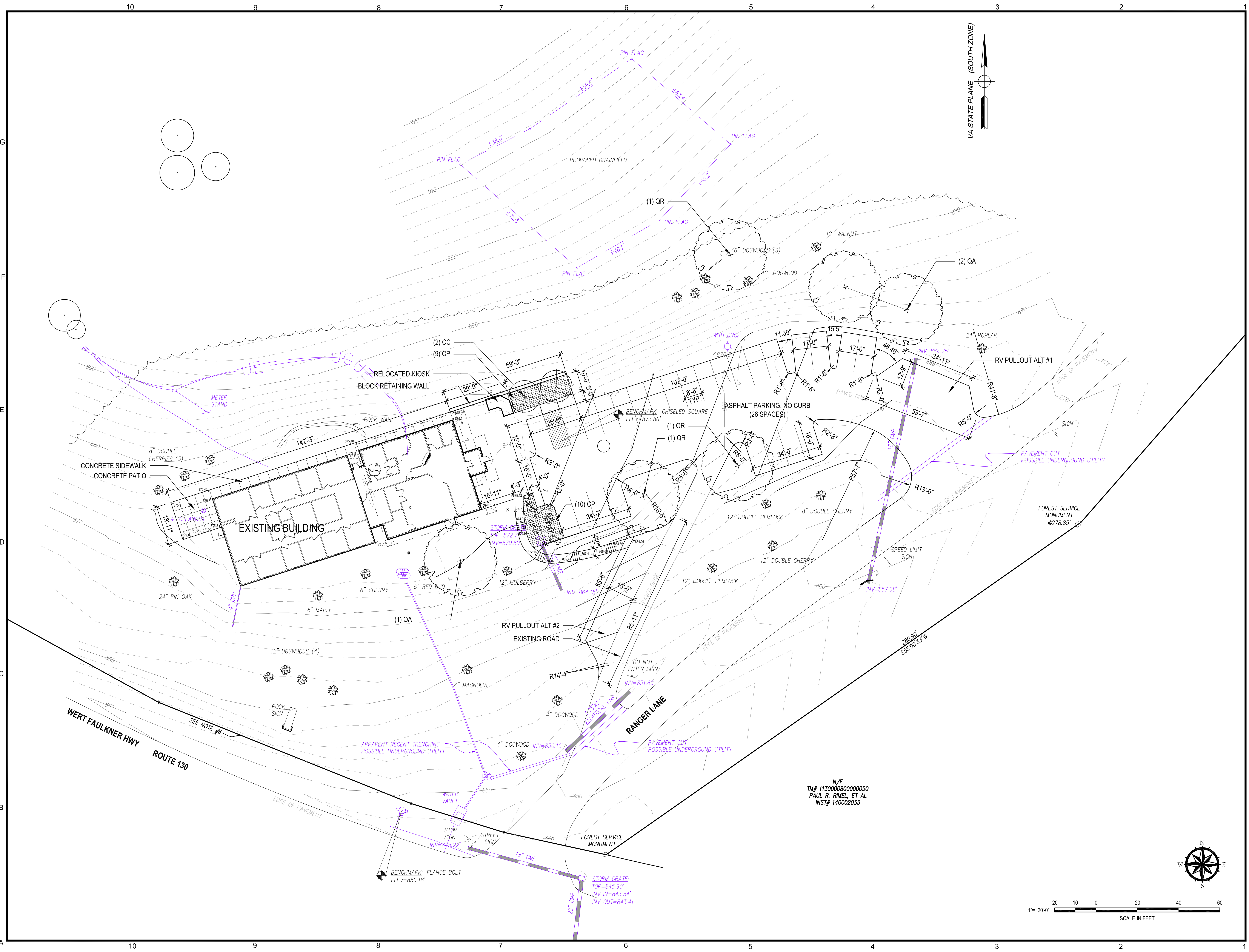
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Project No. 1605

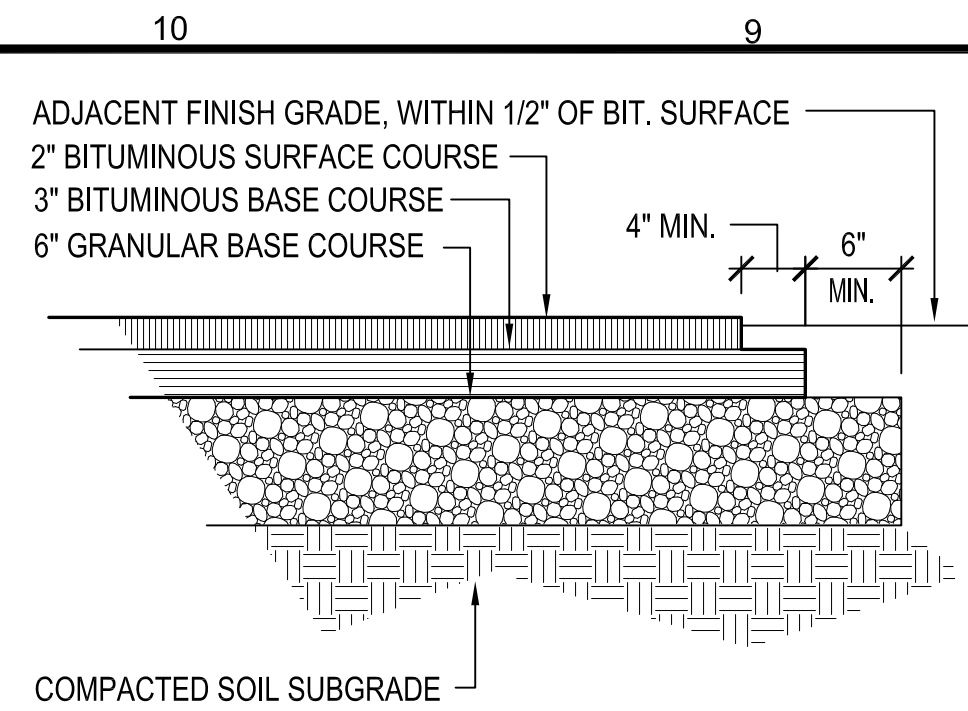
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L-101

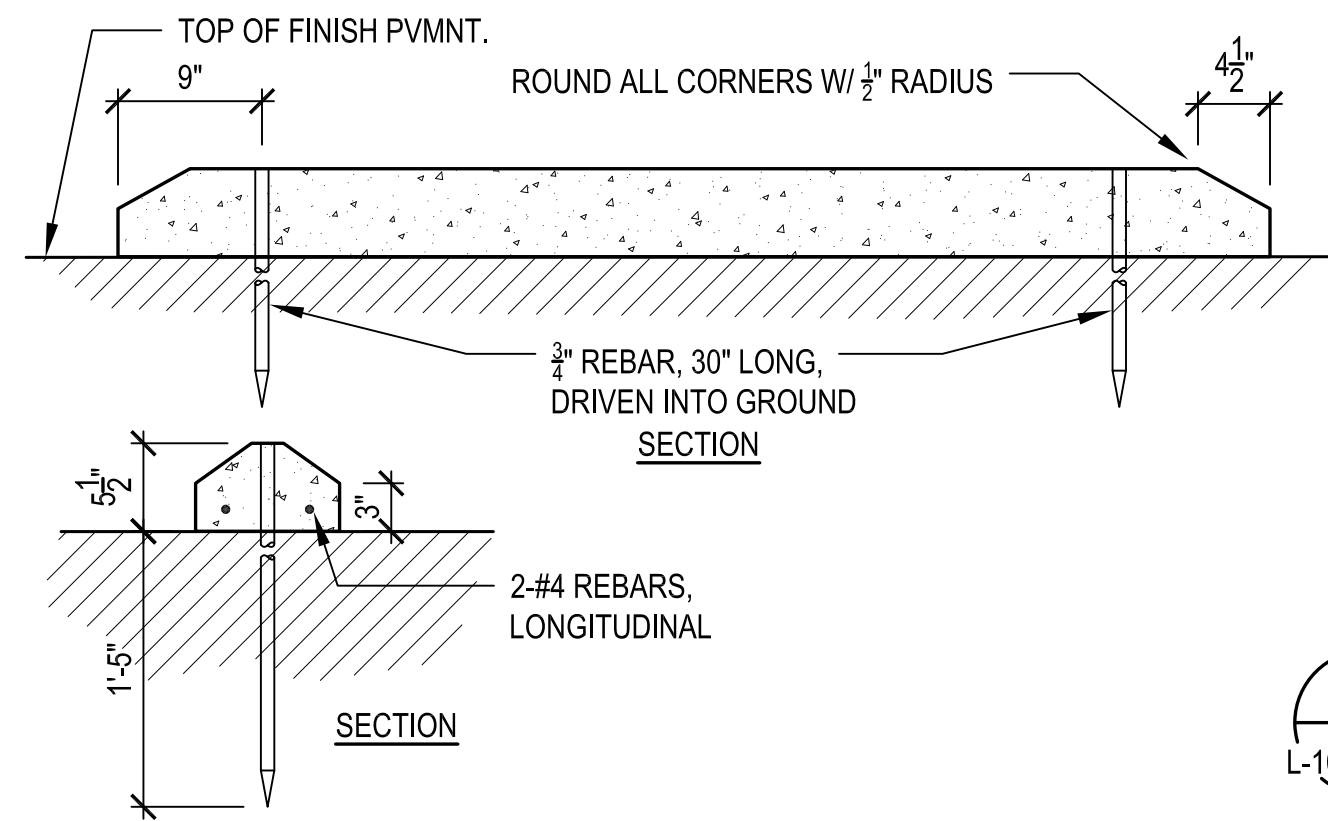
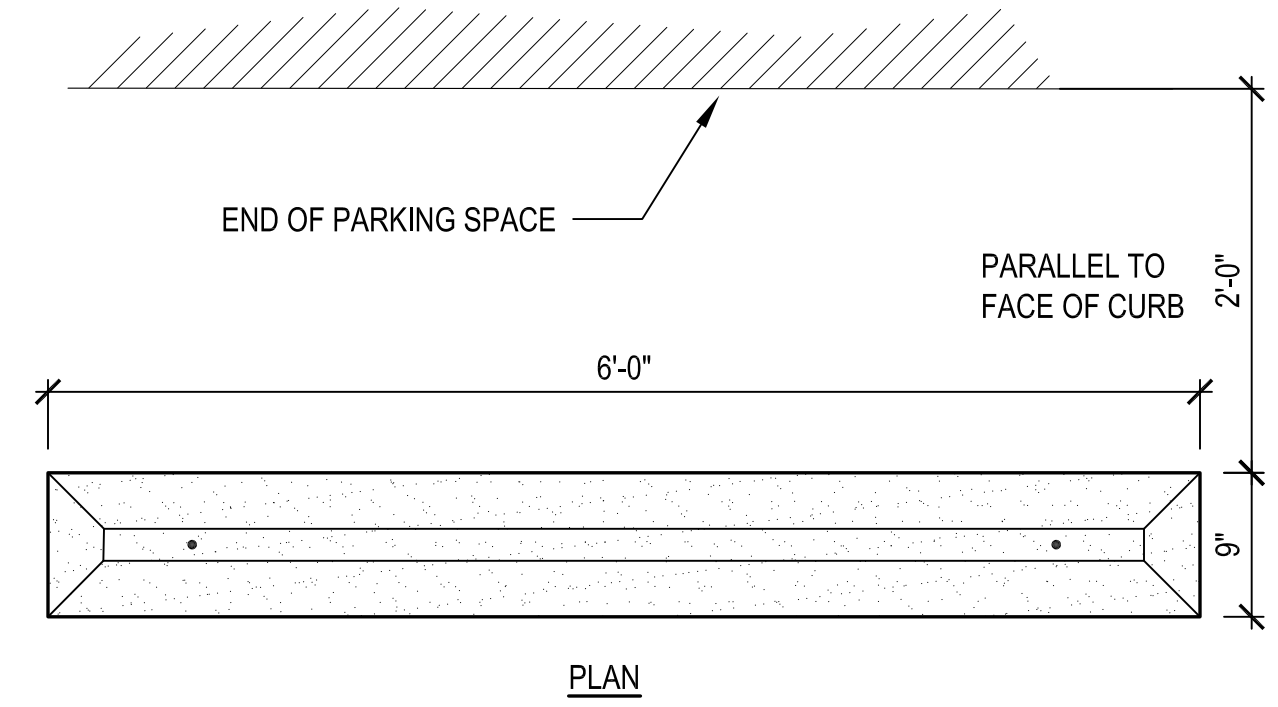


N/F
TM# 1130000800000050
PAUL R. RIMEL, ET AL
INST# 140002033

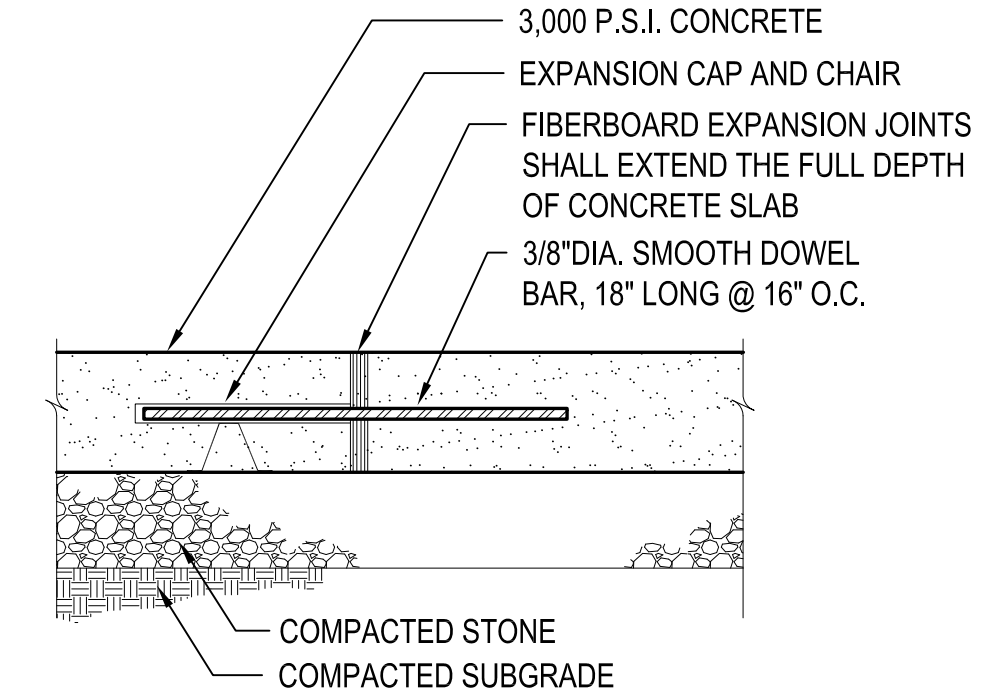
Jun 02, 2017 - 3:56pm hillsnorth
 Y:\2016\1605 Glenwood Pedlar Ranger Addition\1\CODE 5- Work Produced\LANDSCAPE\Plot Sheet.dwg



9 ASPHALT PAVING
Scale: 1" = 1'-0"

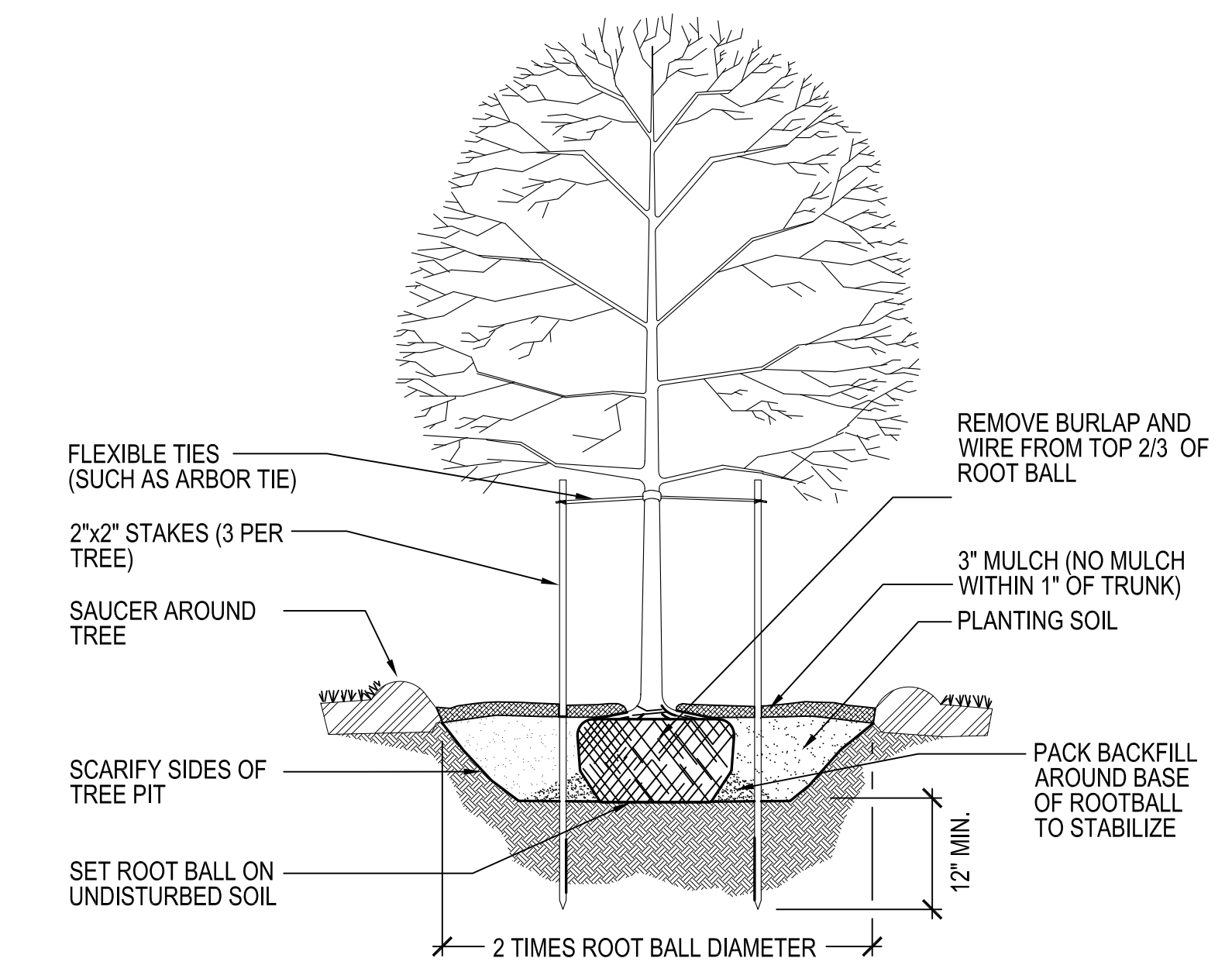


4 CONCRETE EXPANSION JOINT
Scale: 1-1/2" = 1'-0"

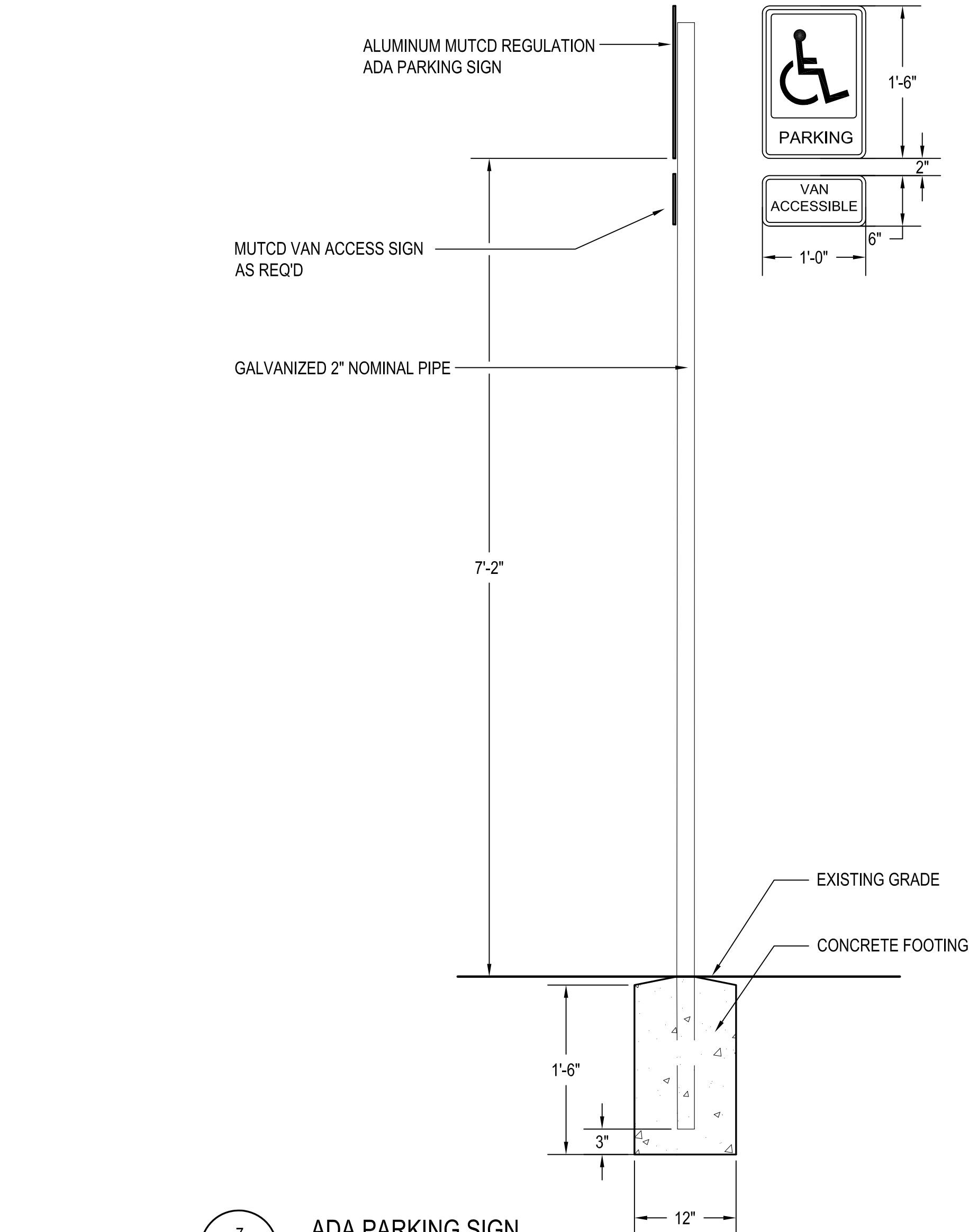


NOTE: EXPANSION JOINTS BETWEEN EXIST. AND NEW WORK SHALL REQUIRE THAT THE DOWELS BE DRILLED AND GROUTED INTO THE EXIST. CONC.

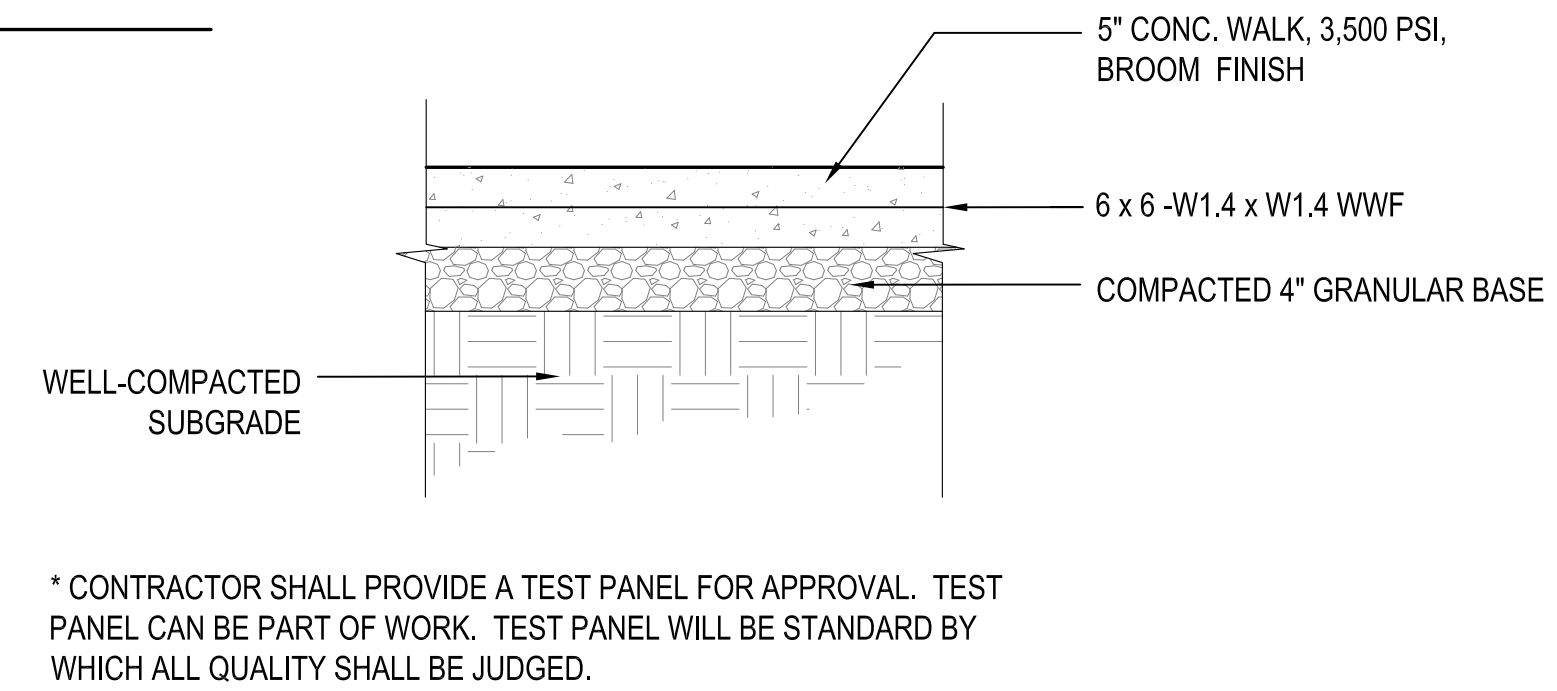
3 TYPICAL TREE PLANTING
Scale: NTS



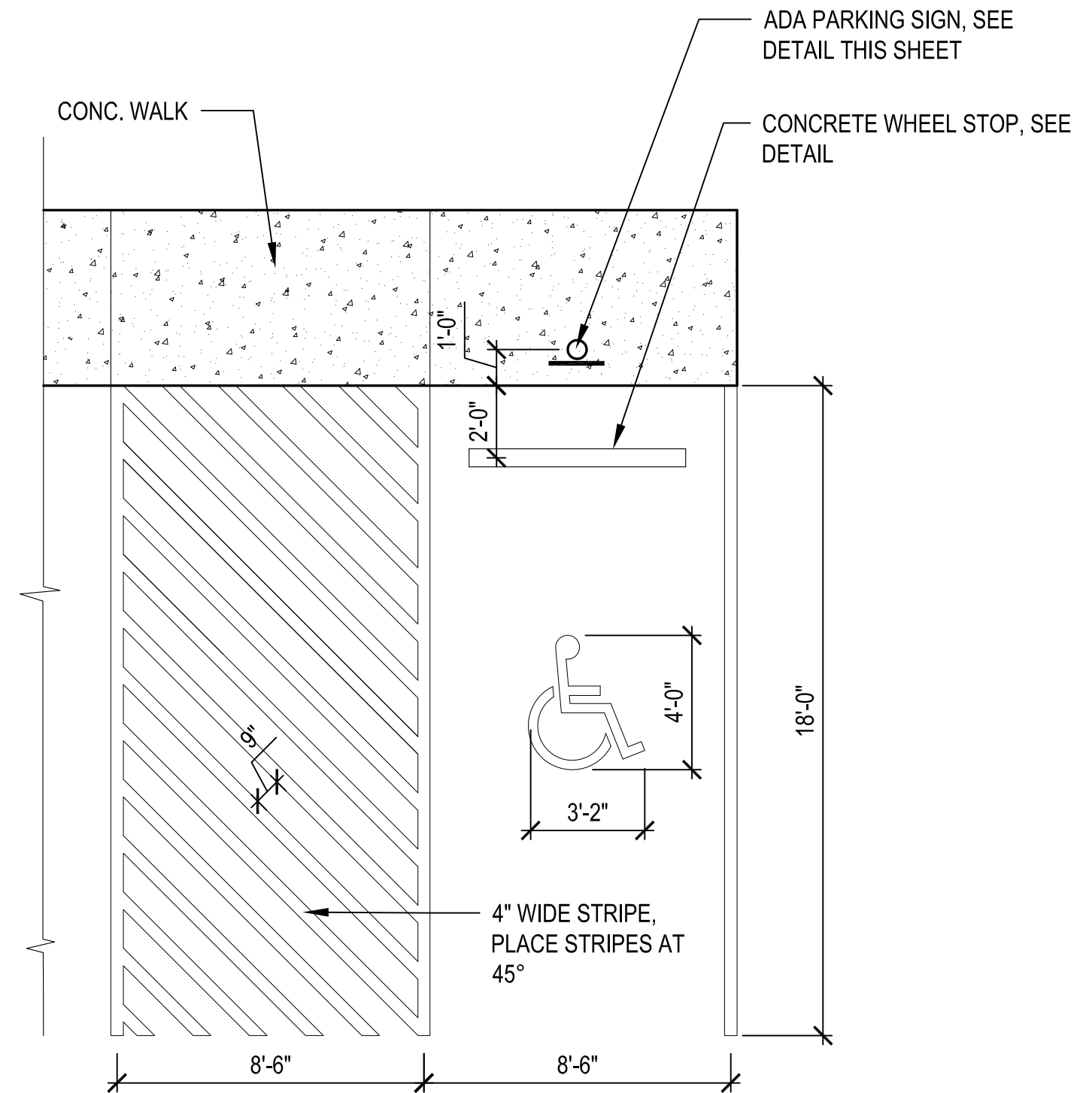
8 CONCRETE WHEELSTOP
Scale: 1" = 1'-0"



7 ADA PARKING SIGN
Scale: 1" = 1'-0"

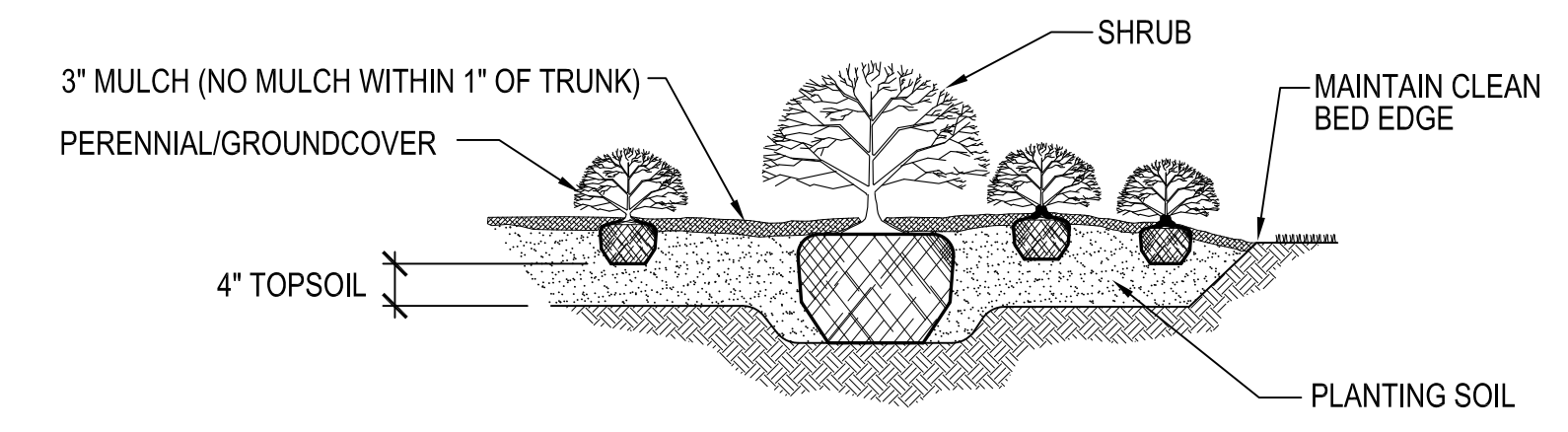


5 CONCRETE PAVING
Scale: 1" = 1'-0"

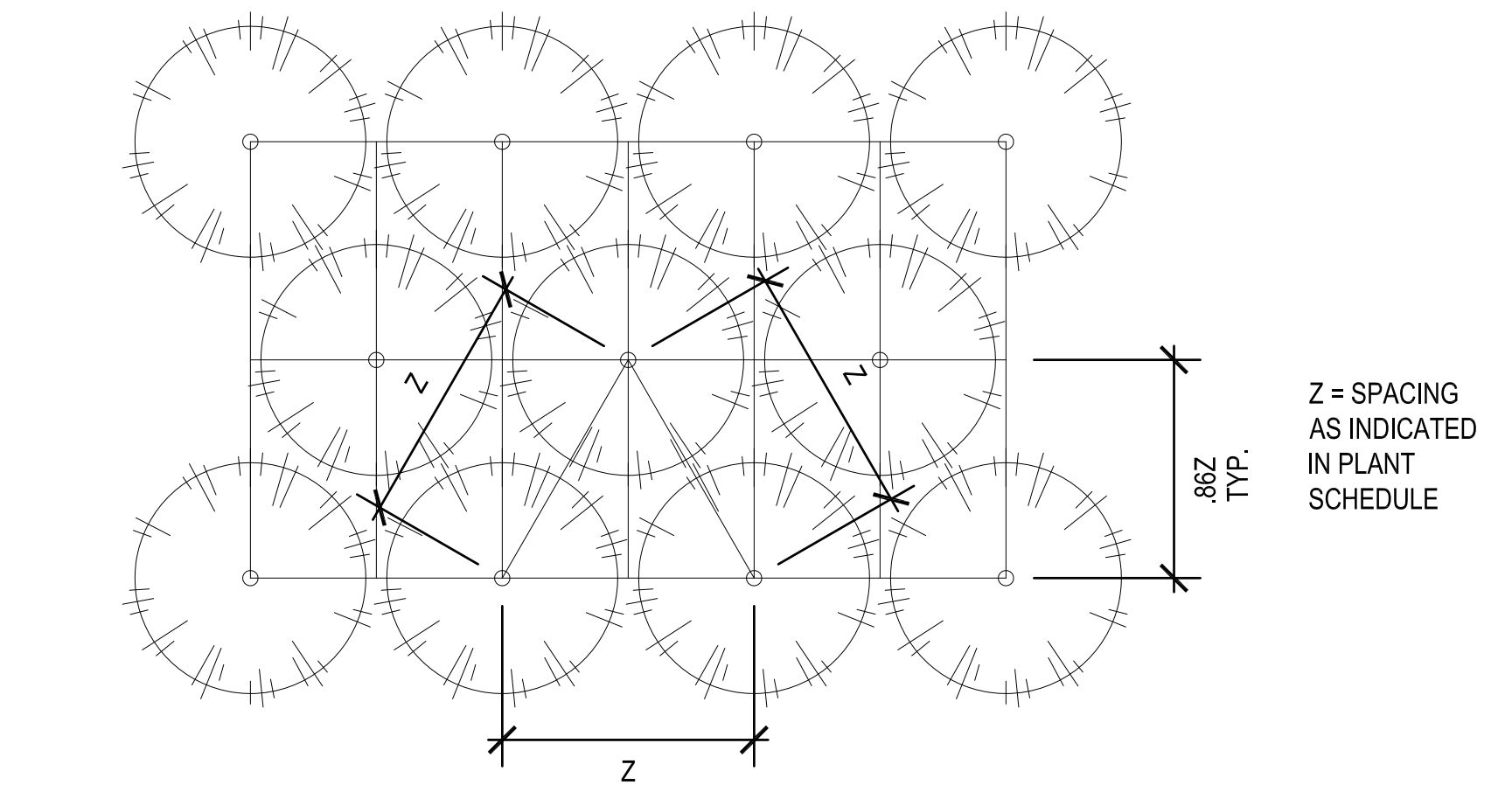


6 ADA PARKING
Scale: 1/4" = 1'-0"

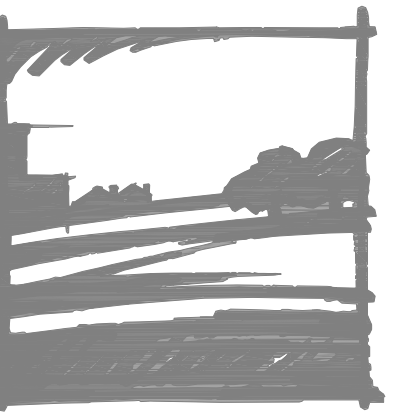
2 TYPICAL SHRUB & PERENNIAL PLANTING
Scale: NTS



1 TYPICAL PLANT SPACING
Scale: NTS



PLANT SCHEDULE						
QTY	ID	SCIENTIFIC NAME	COMMON NAME	SIZE	SPACING	NOTES
TREES						
2	CC	<i>Cercis canadensis</i>	Eastern Redbud	2"-2.5" cal.	as shown	
3	QA	<i>Quercus alba</i>	Appalachian Spring Flowering Dogwood	1"-1.5" cal.	as shown	
3	QR	<i>Quercus rubra</i>	Milky Way Kousa Dogwood	1"-1.5" cal.	as shown	
SHRUBS						
19	CP	<i>Comptonia peregrina</i>	Sweet Fern	#3	6' o.c.	



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Seal

Title:
**CONSTRUCTION
DETAILS**

Date: 02 JUNE 2017

Revisions:

Drawn By: GWILE

Review By: HG

Project No. 1605

Sheet No.

L-102

Jun 02, 2017 - 11:47am hillsnorth
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FOUNDATION
DRAWINGS

06 02 2017

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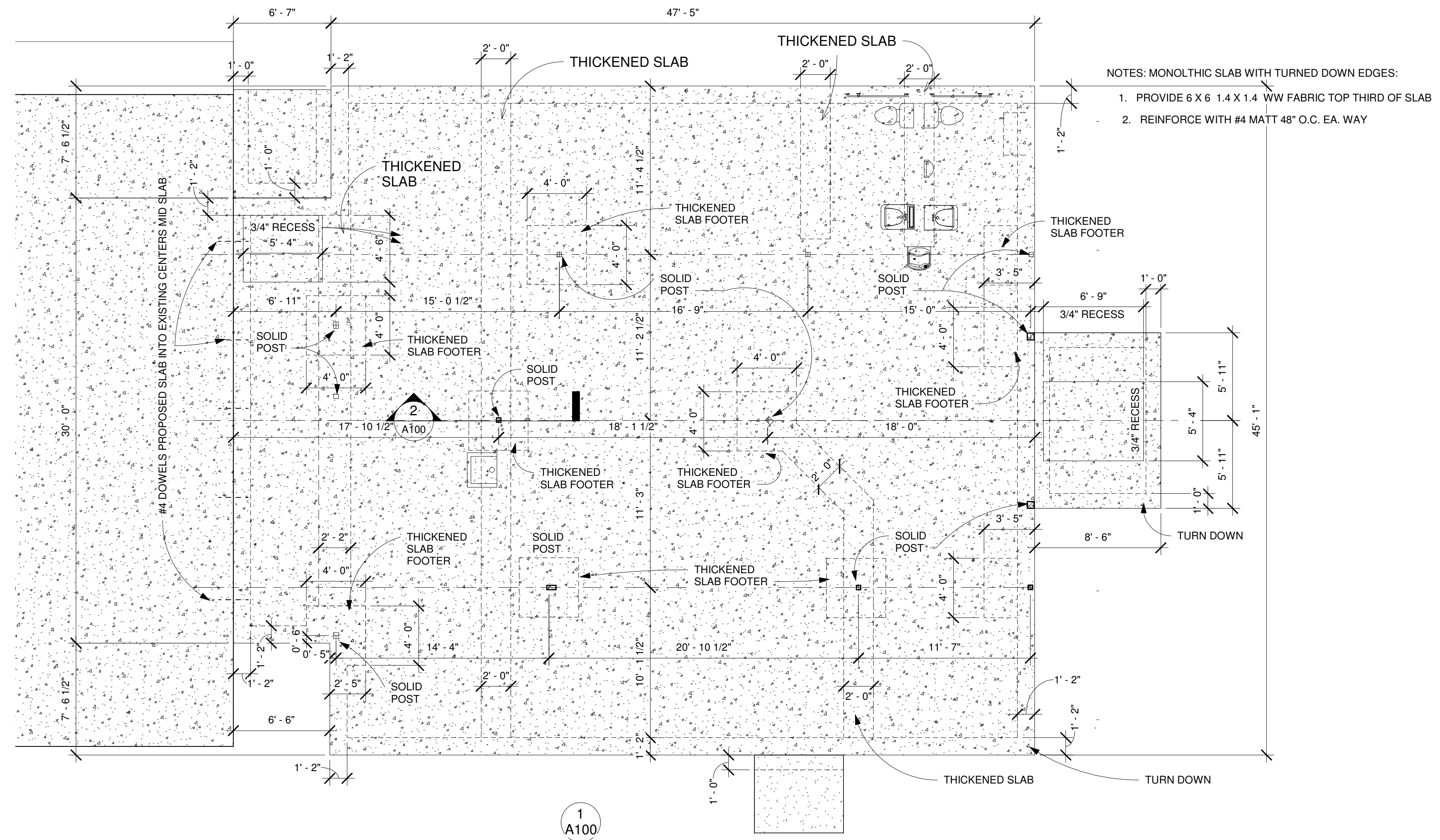
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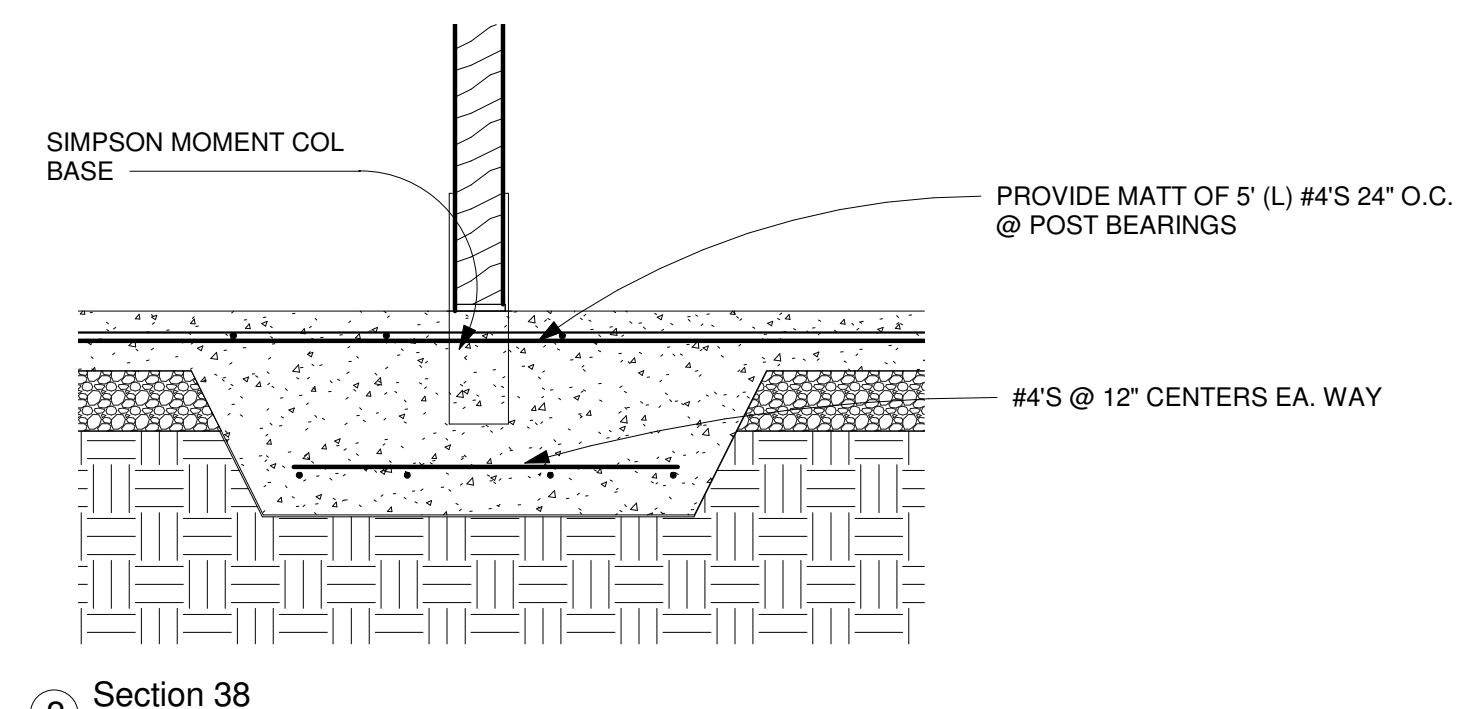
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A100

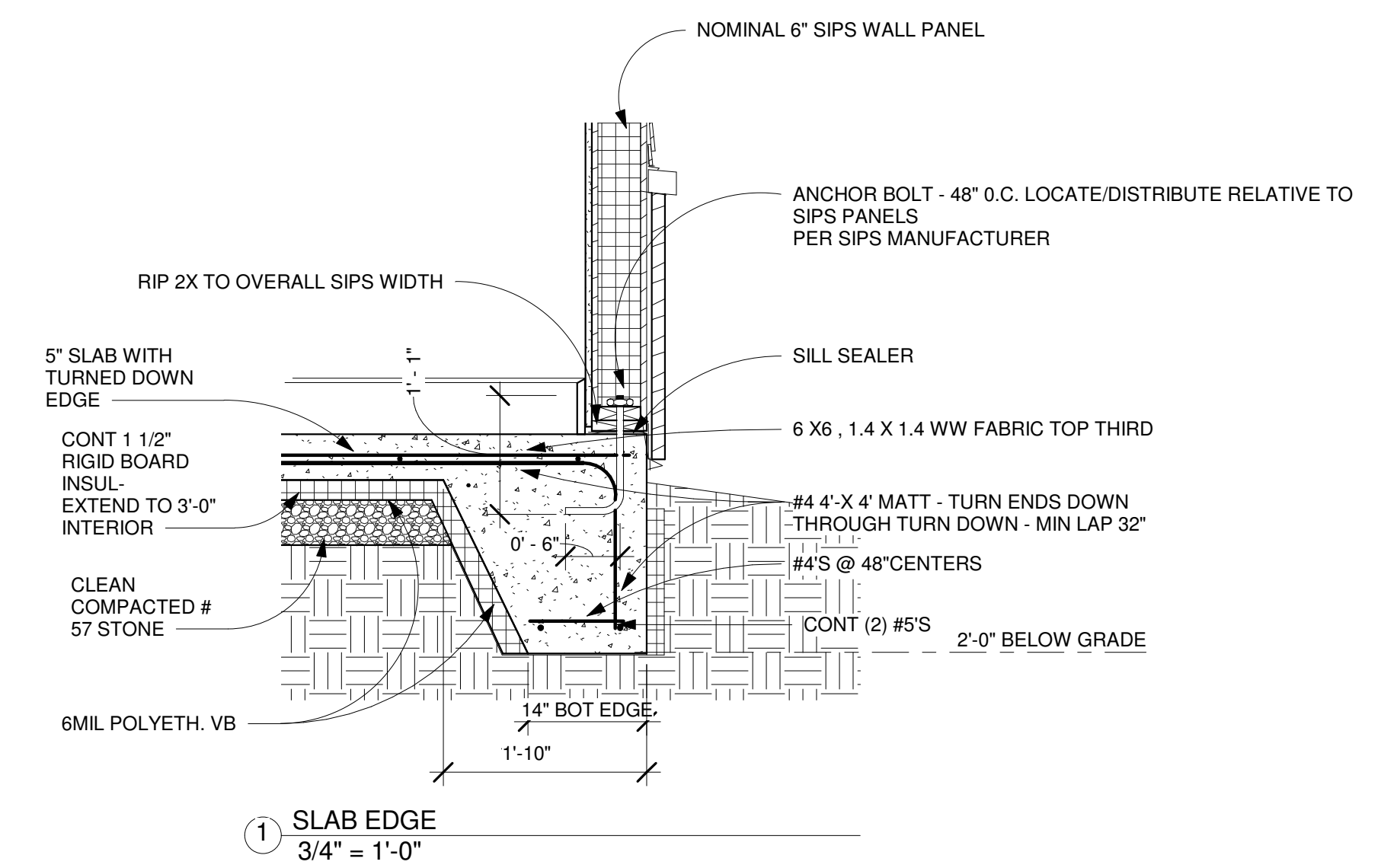


- NOTES: MONOLITHIC SLAB WITH TURNED DOWN EDGES:
1. PROVIDE 6 X 6 1.4 X 1.4 WW FABRIC TOP THIRD OF SLAB
 2. REINFORCE WITH #4 MATT 48" O.C. EA. WAY

1 FLOOR PLAN - slab
3/16" = 1'-0"



2 Section 38
3/4" = 1'-0"



1 SLAB EDGE
3/4" = 1'-0"



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A 101 OVERALL PLAN

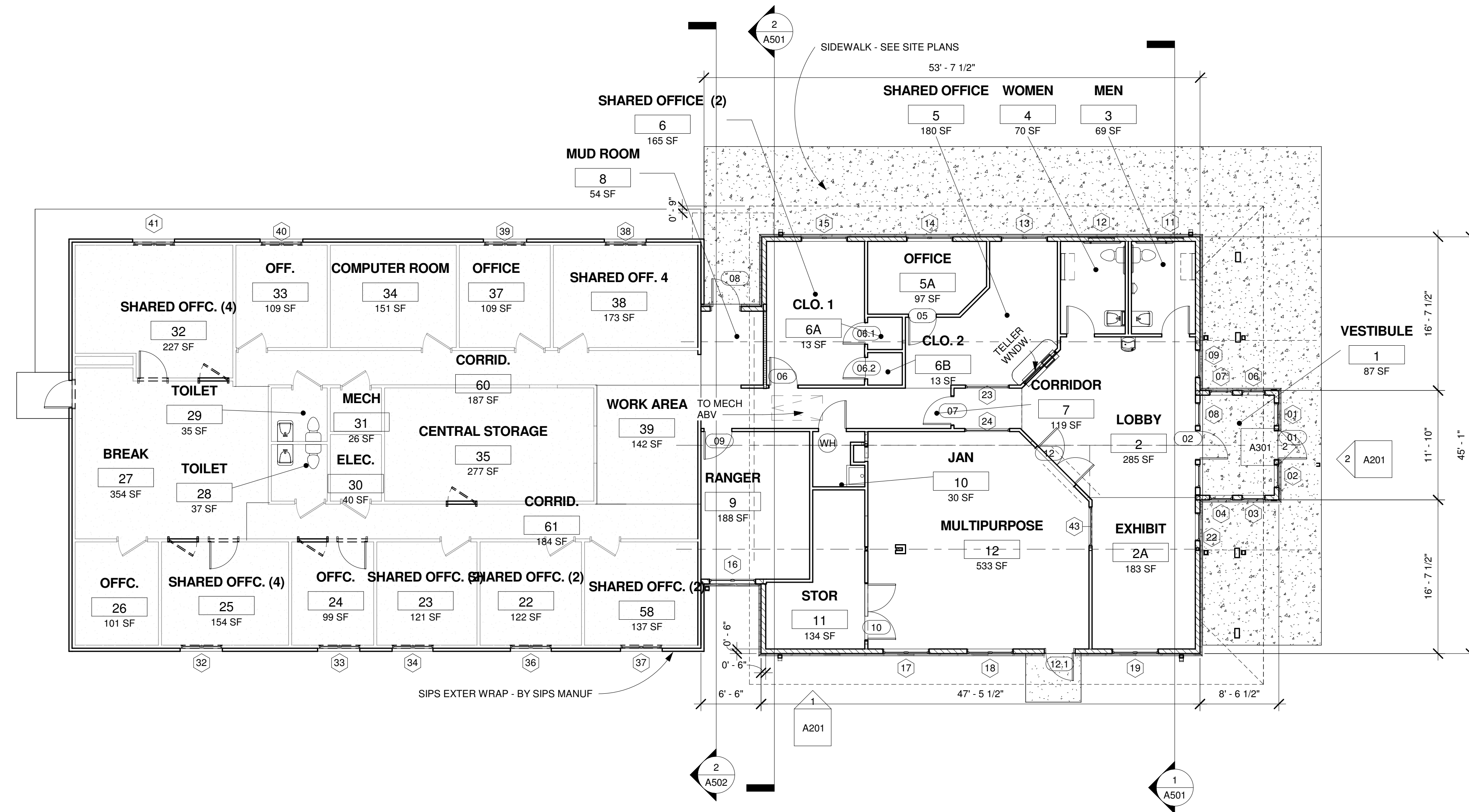
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A101



1 FLOOR PLAN - OVERALL
1/8" = 1'-0"

G
F
E
D
C
B
A

10 9 8 7 6 5 4 3 2 1



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A 102 ADDITION PLAN

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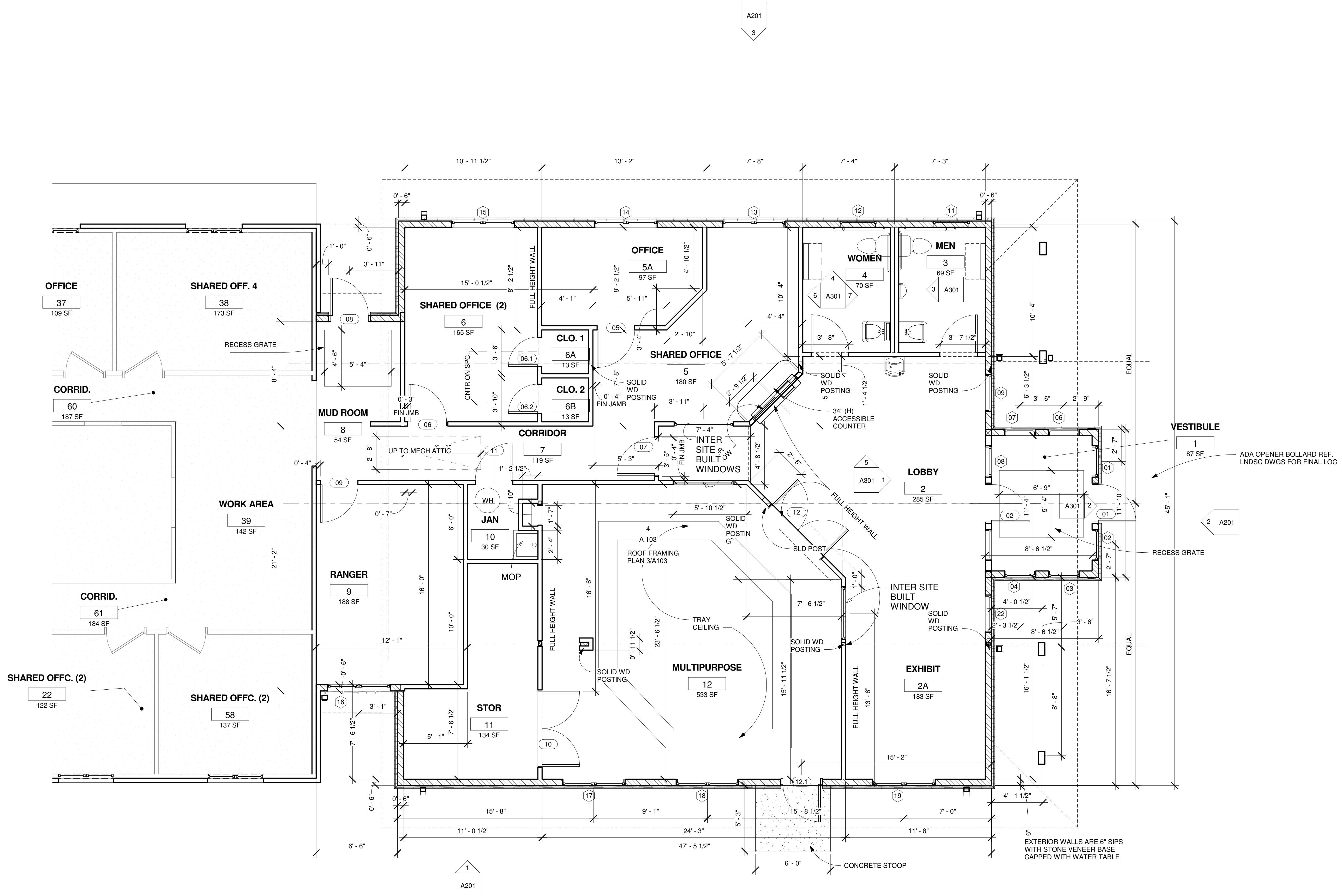
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Sheet No.

A102



1 FLOOR PLAN - ADDITION
1/4" = 1'-0"



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**ROOF AND
CEILING PLANS**

06 02 2017

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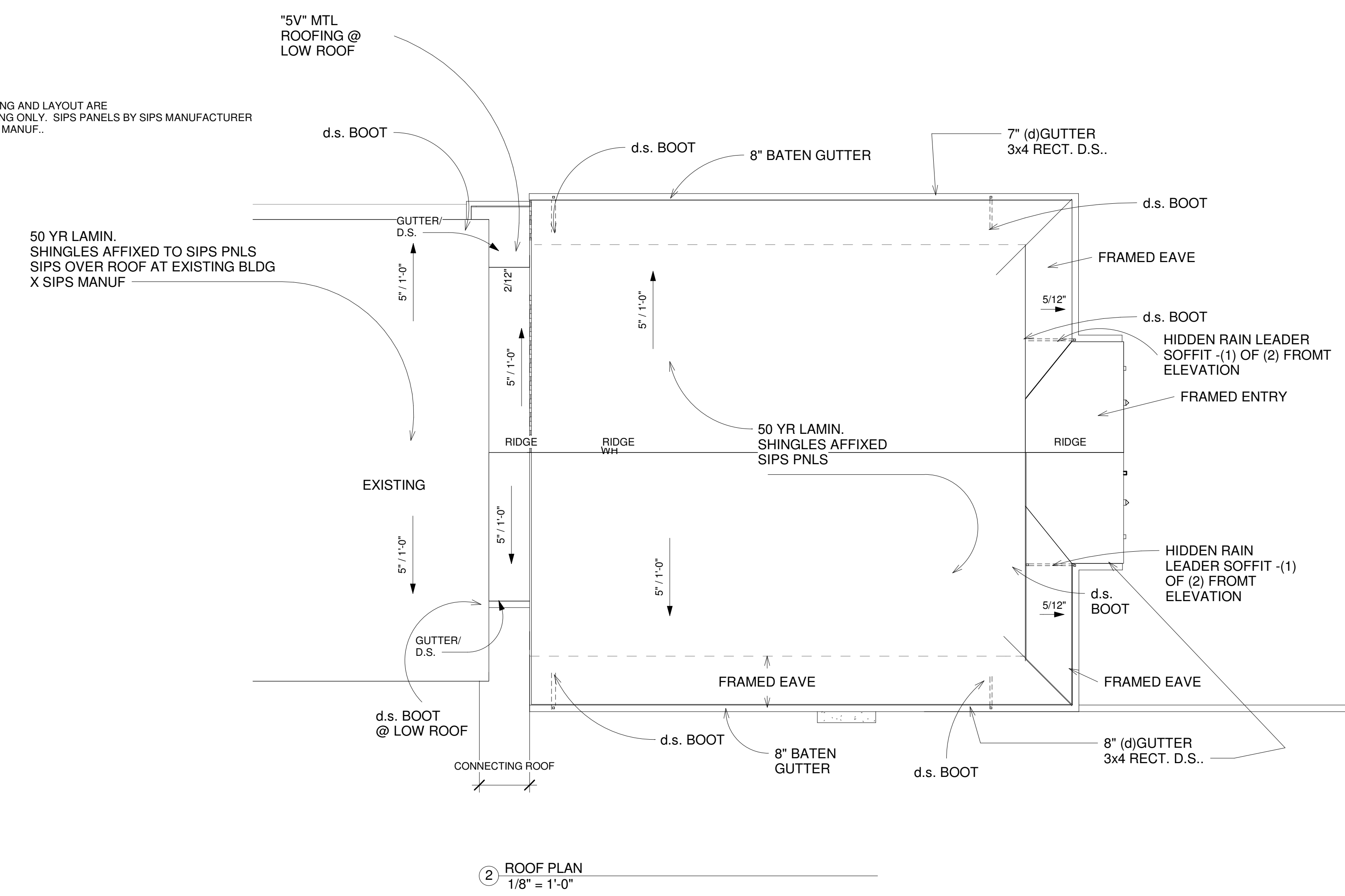
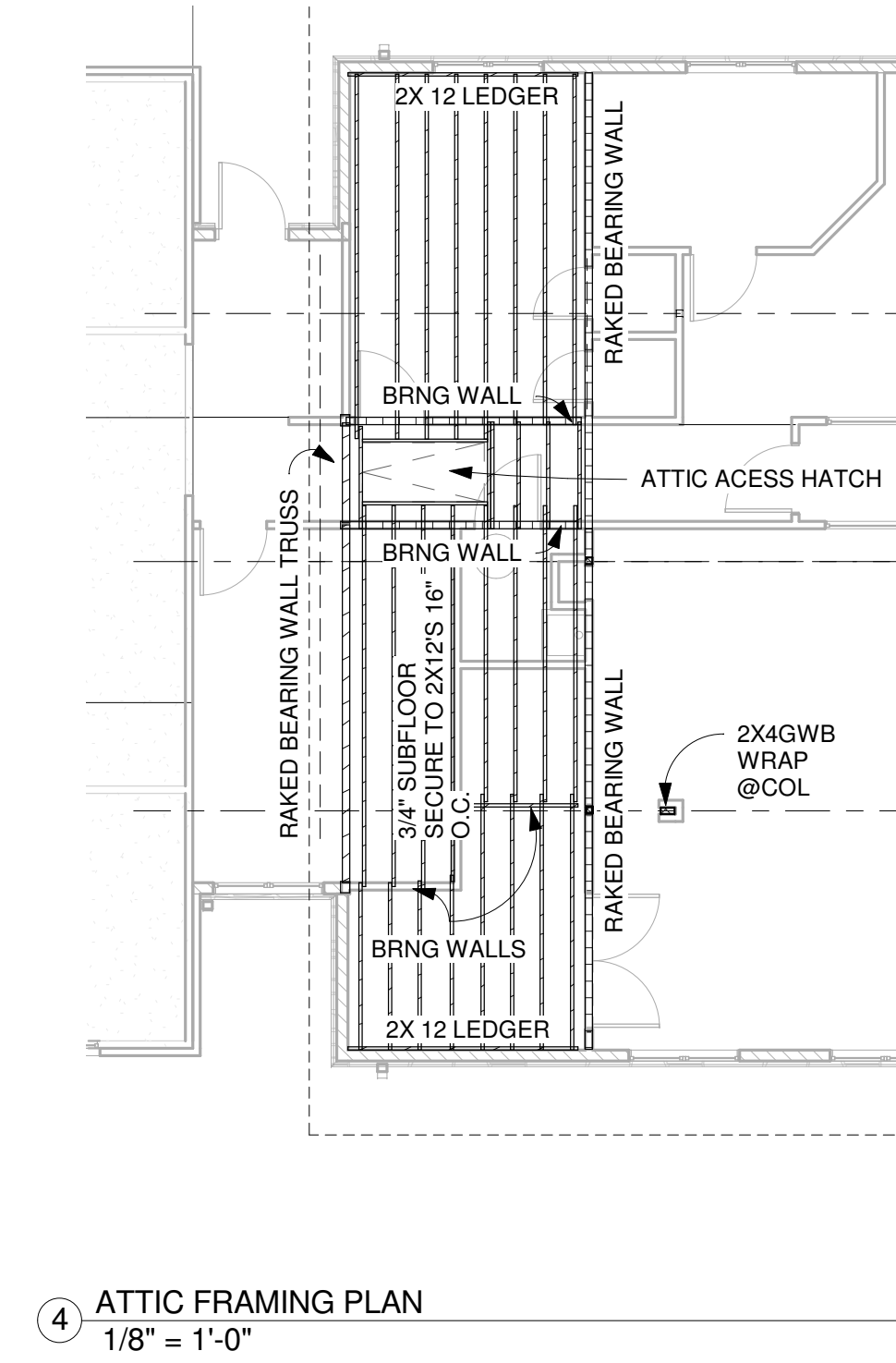
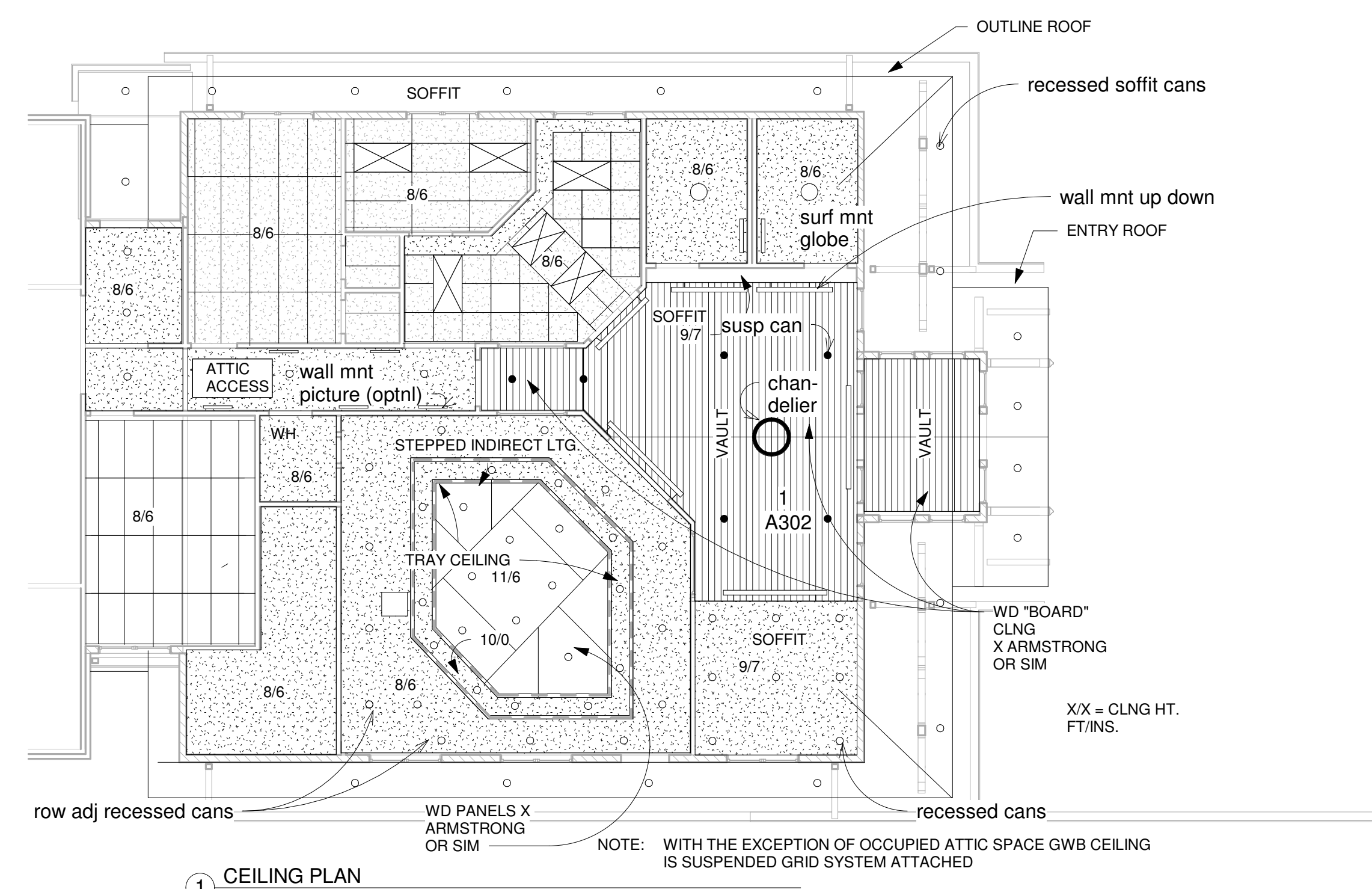
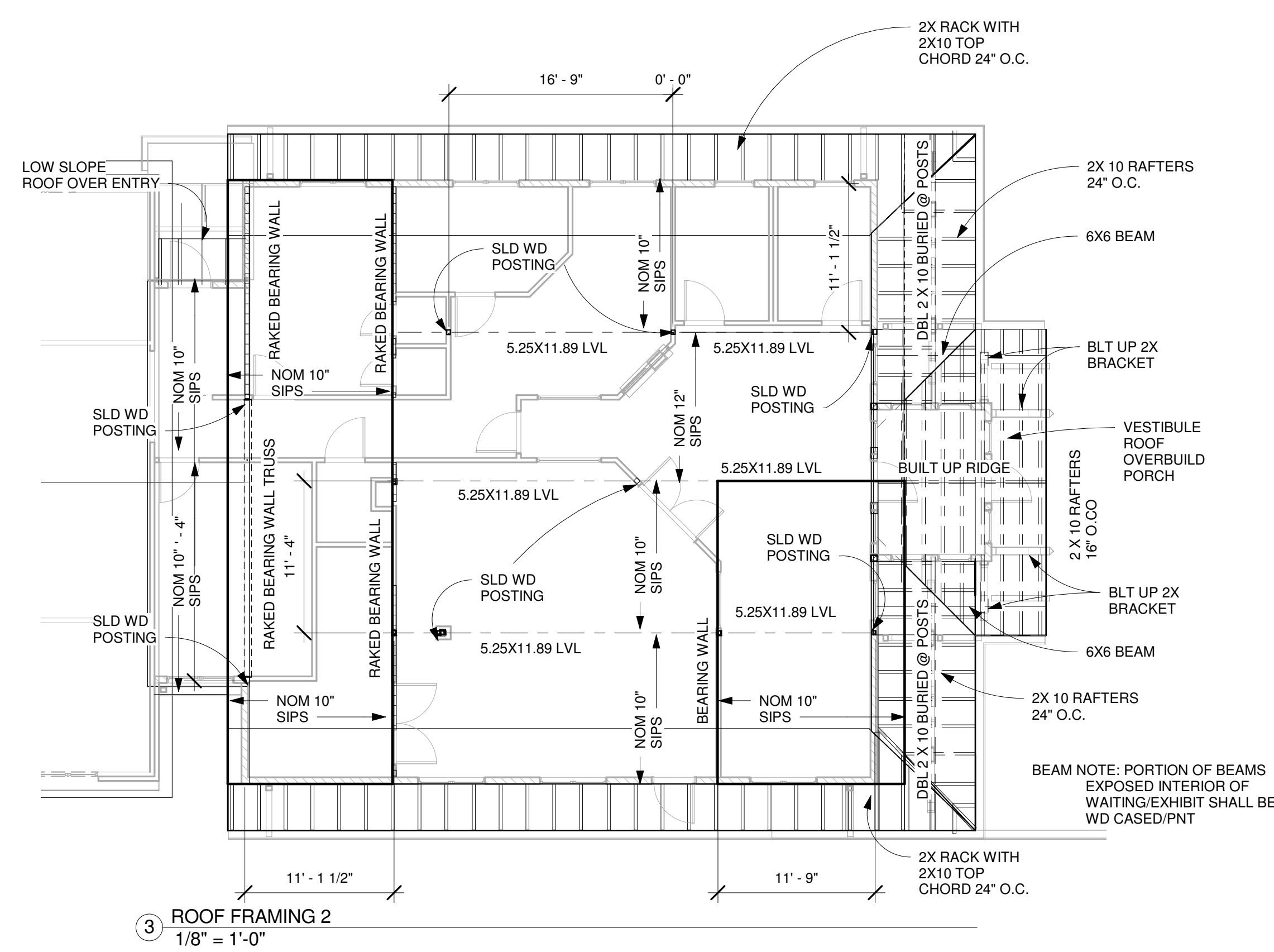
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A103





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GLENWOOD-PEDLAR RANGER OFFICE ADDITION AND RENOVATIONS

PROGRESS
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CONSTRUCTION

A 201 ELEVATIONS

06 02 2017

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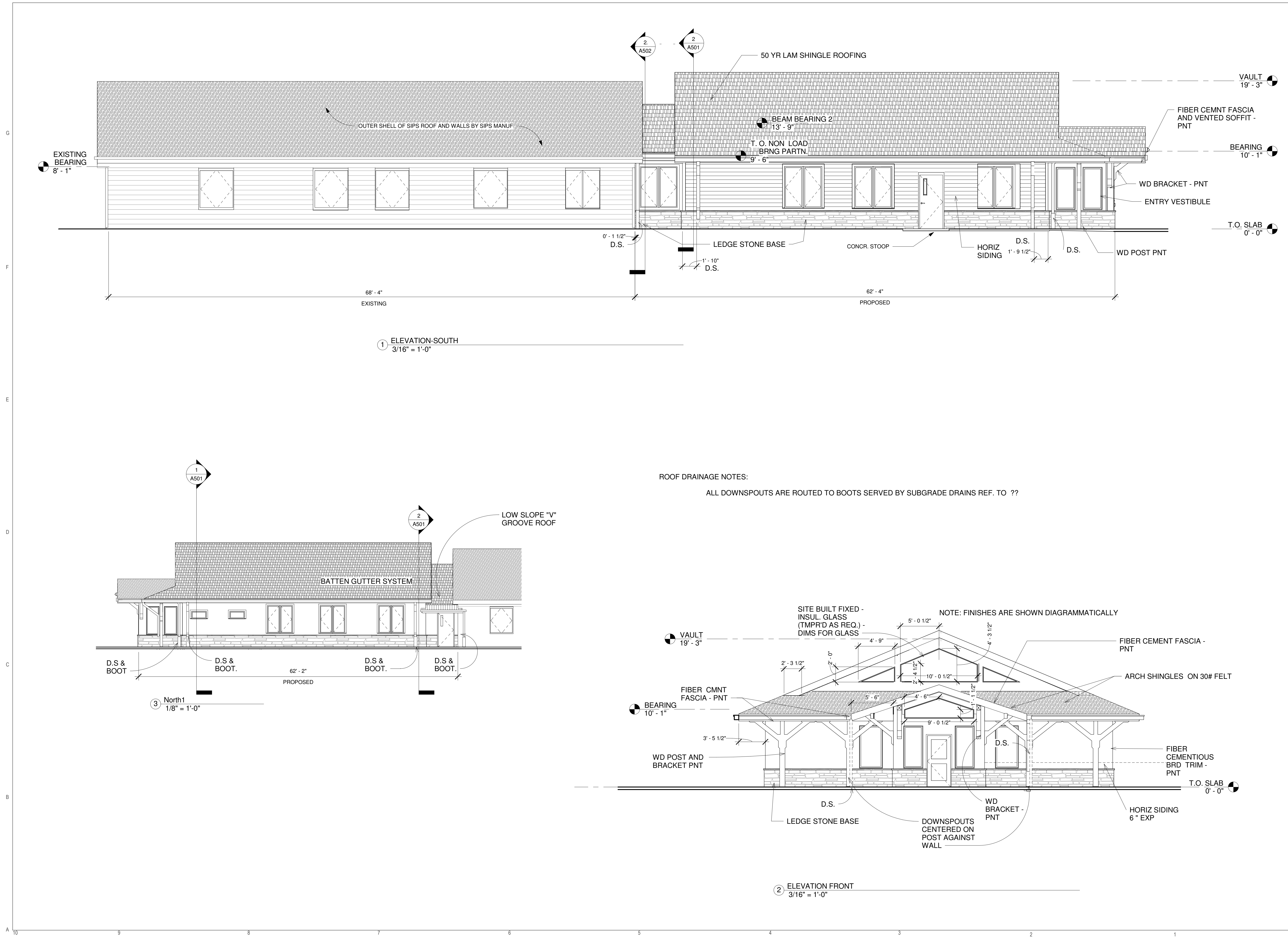
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A201



ROOF DRAINAGE NOTES:

ALL DOWNSPOUTS ARE ROUTED TO BOOTS SERVED BY SUBGRADE DRAINS REF. TO ??



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**GLENWOOD-PEDLAR
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**PROGRESS
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CONSTRUCTION**

**INTERIOR
ELEVATIONS**

06 02 2017

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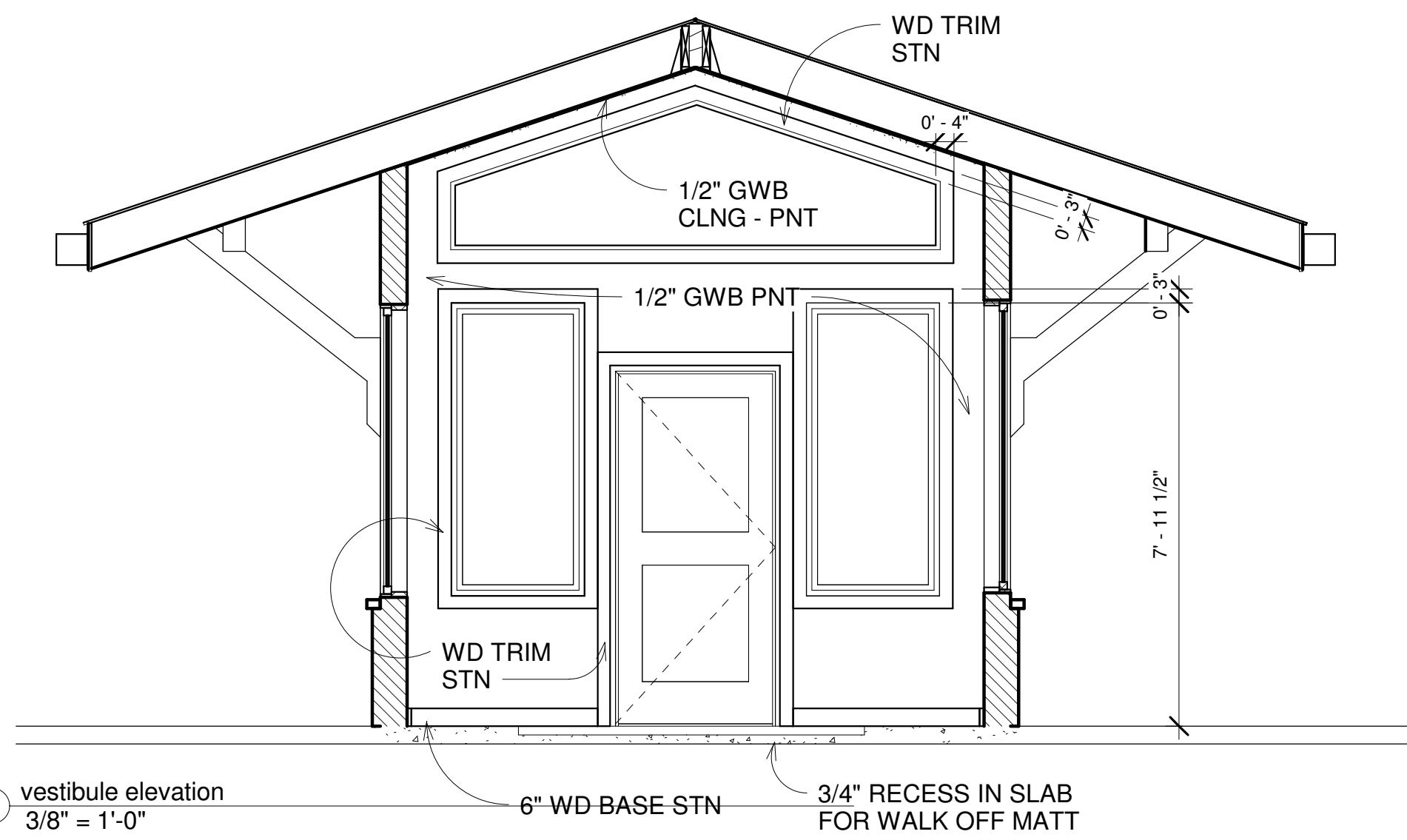
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Project No. 16XXX

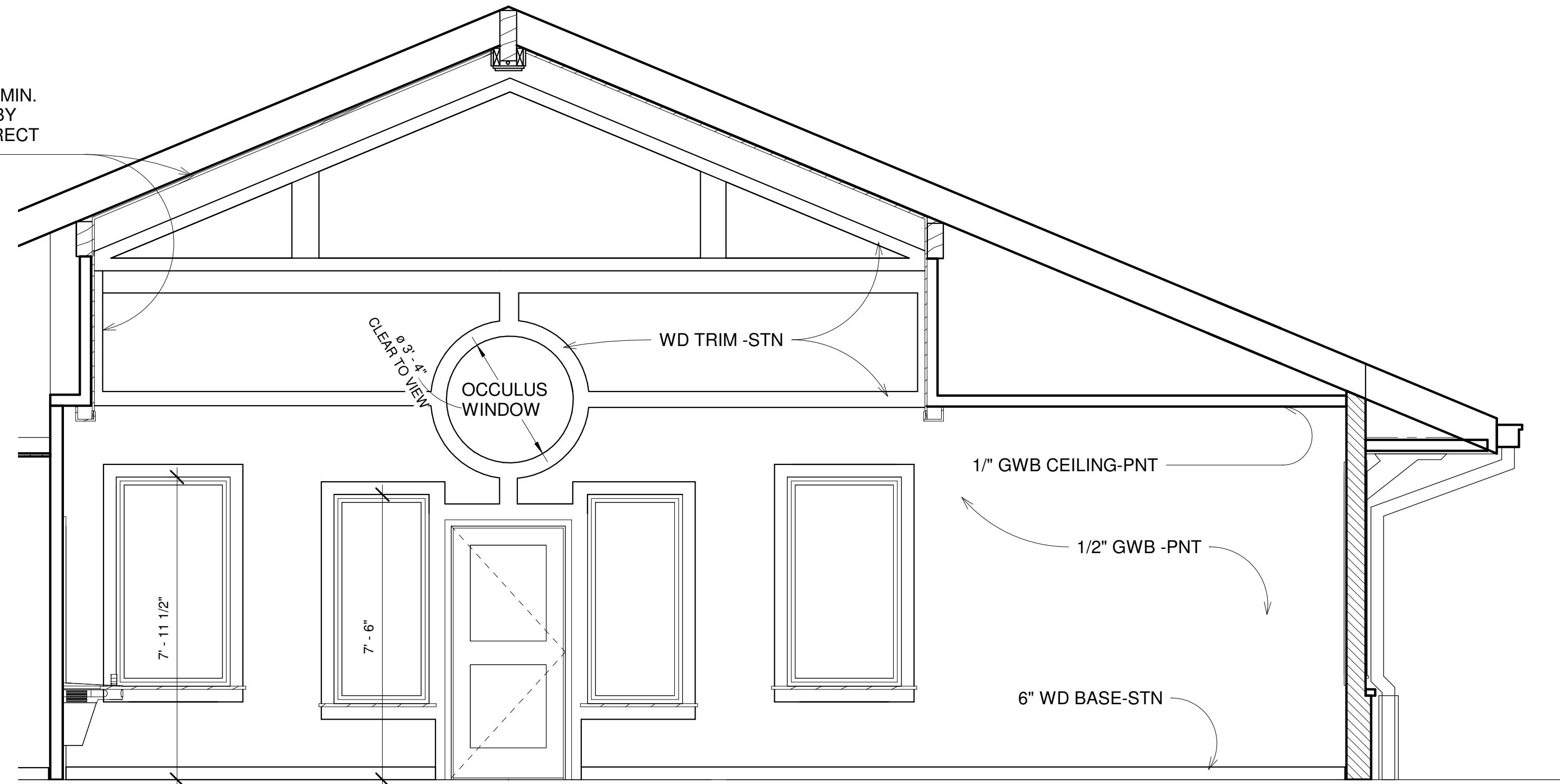
Sheet No.

A301

"WOODHAVEN" LAMIN.
CEILING PANELS BY
'ARMSTRONG' DIRECT
ADHERE



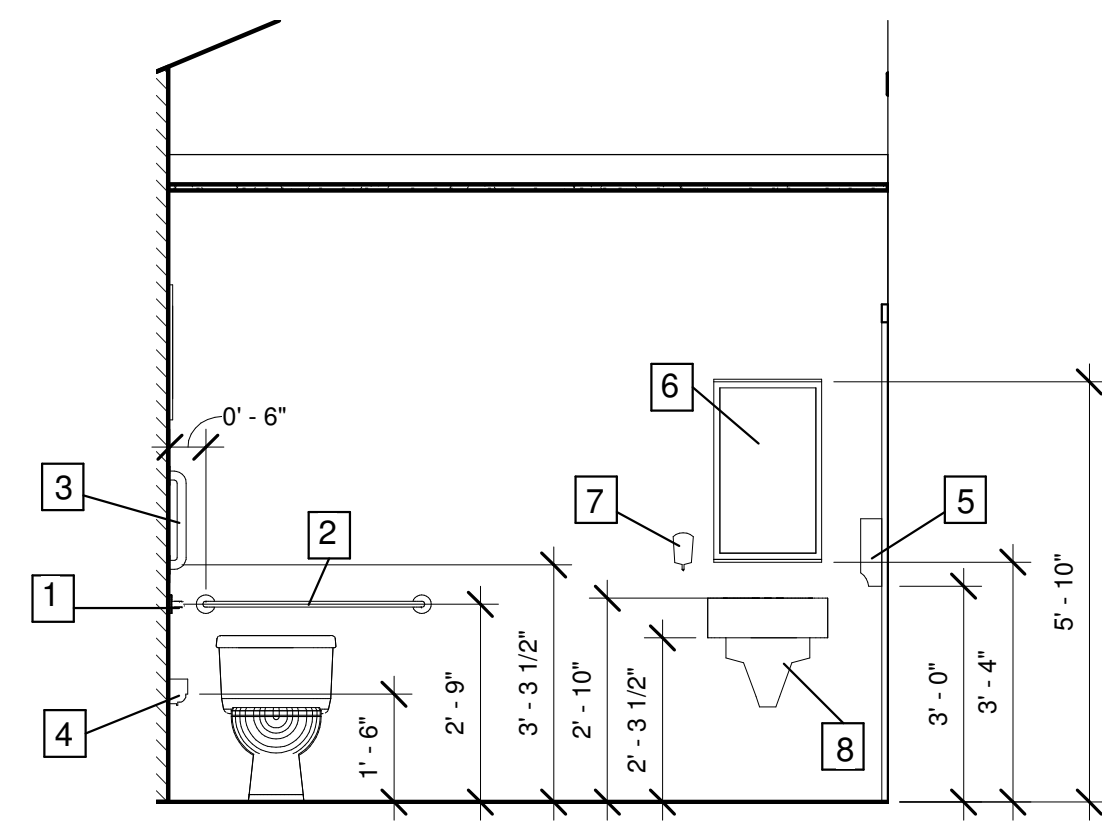
② vestibule elevation
3/8" = 1'-0"



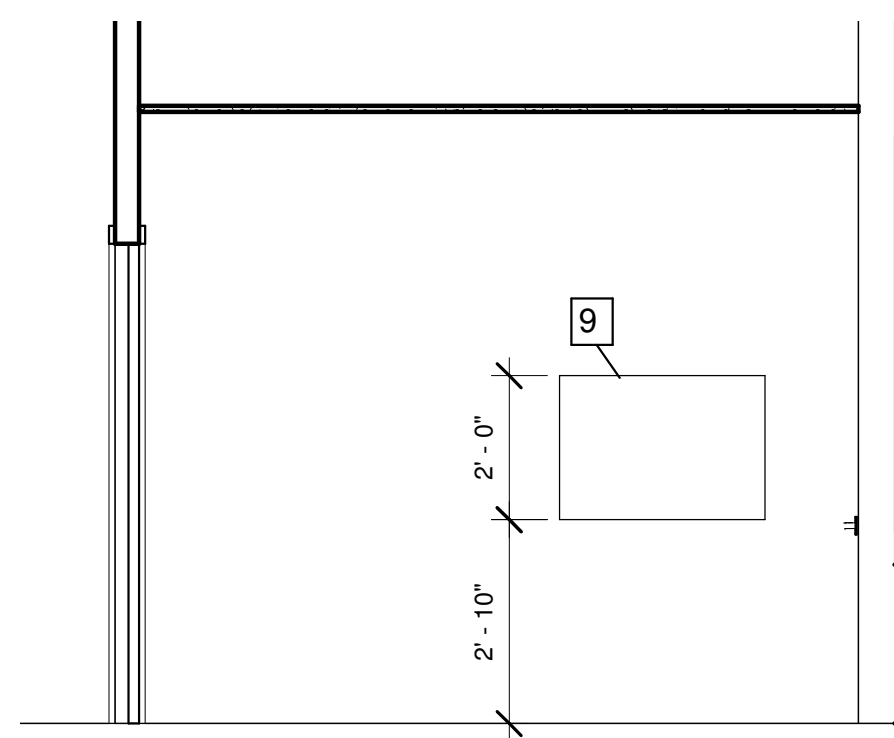
① entrance elevation
3/8" = 1'-0"

TOILET ACCESSORIES

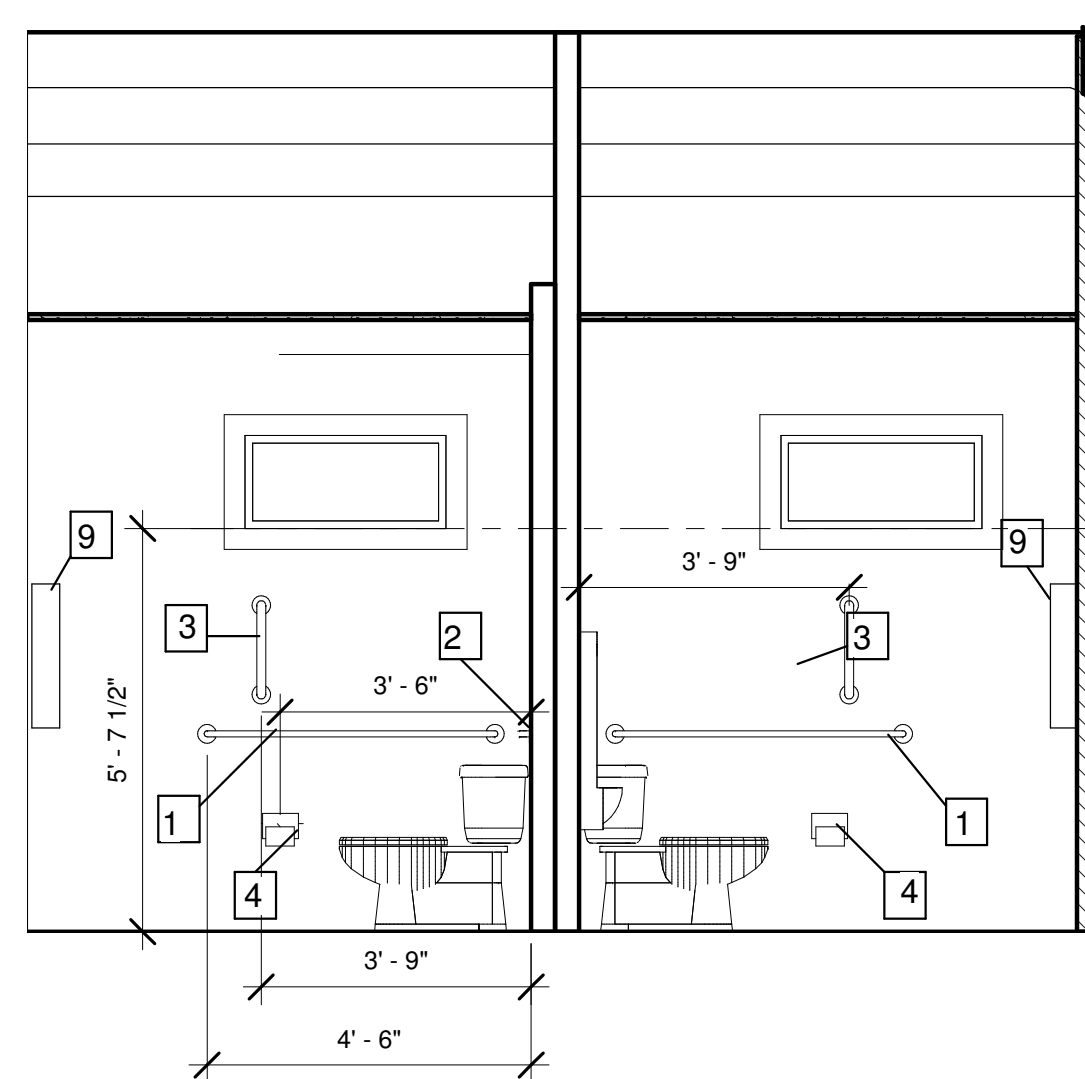
TAG	ACCESSORY	MANUFACTURER	NOTES
1	48" STNLS GRAB BAR W/ SNAP FLANGE	BOBRICK B-5806 SATIN FINISH PEENED GRIPPIN SURFACE	
2	36" STNLS GRAB BAR W/SNAP FLANGE	BOBRICK B-5806 SATIN FINISH PEENED GRIPPIN SURFACE	
3	18" STNLS GRAB BAR W/SNAP FLANGE	BOBRICK B-5806 SATIN FINISH PEENED GRIPPIN SURFACE	
4	TOILET PAPER DISPENSER	BOBRICK B-2888 22 GA STNLS STL	
5	PAPER TOWEL DISPENSER	BOBRICK B-2621 22 GA STNLS STL ALL WELD	
6	MIRROR WITH STNLS EDGE AND SHELF	BOBRICK B-293 24" W x 36" H MIRROR WITH STNLS EDGE	
7	HAND SOAP DISPENSER	BOBRICK B-156 SURFACE MOUNT	
8	PIPE PROTECTOR SURROUND	TRUEBRO UNDERSINK PIPEGUARD	
9	BABY CHANGING STATION	AMERA WALL MOUNT ADA ACCESSIBLE #100 EHSC	
10	FREE STANDING WASTE RECEPTACLE	BOBRICK B-2888 22 GA STNLS STL	



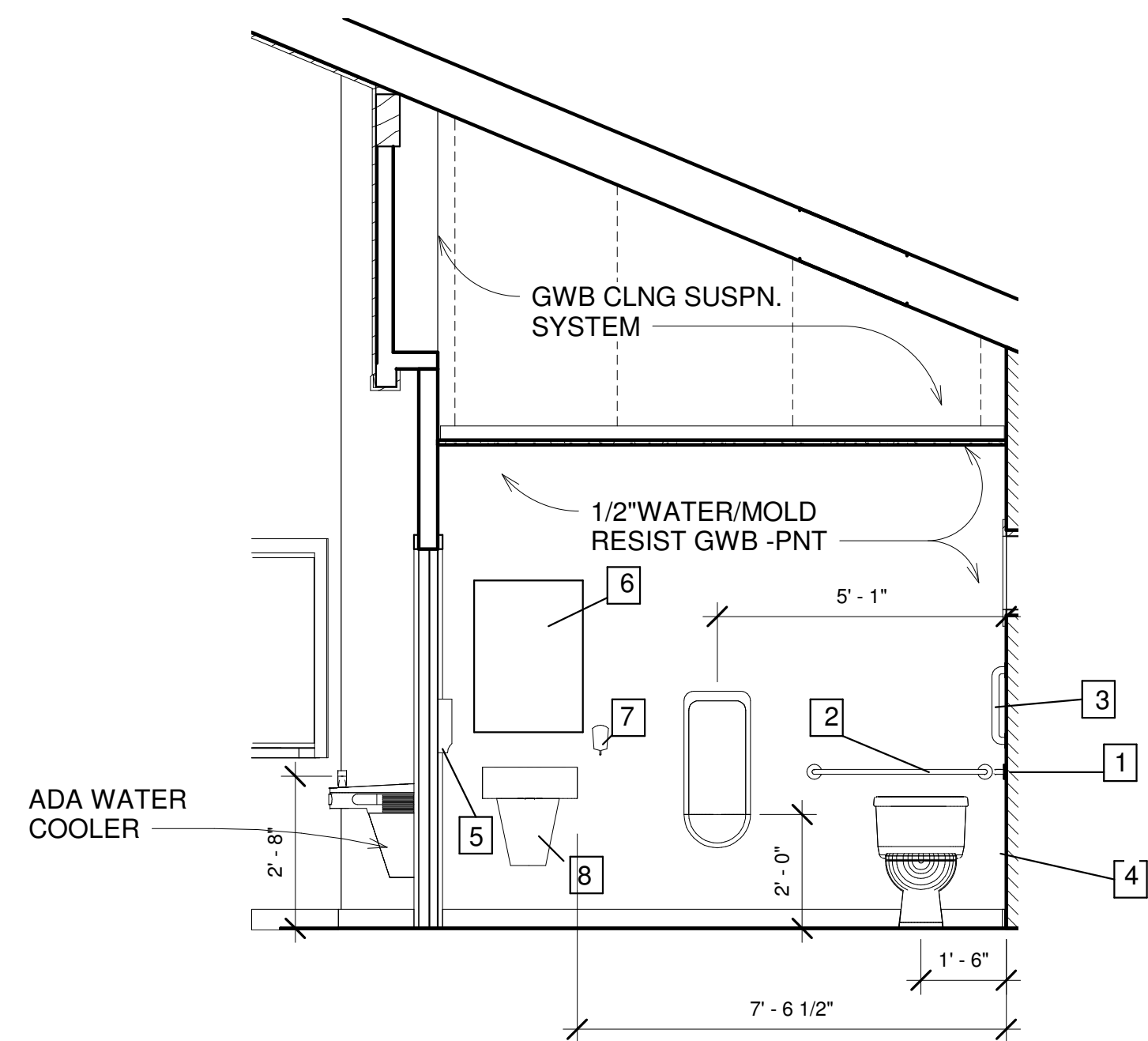
⑦ INTERIOR ELEVATION 2c
3/8" = 1'-0"



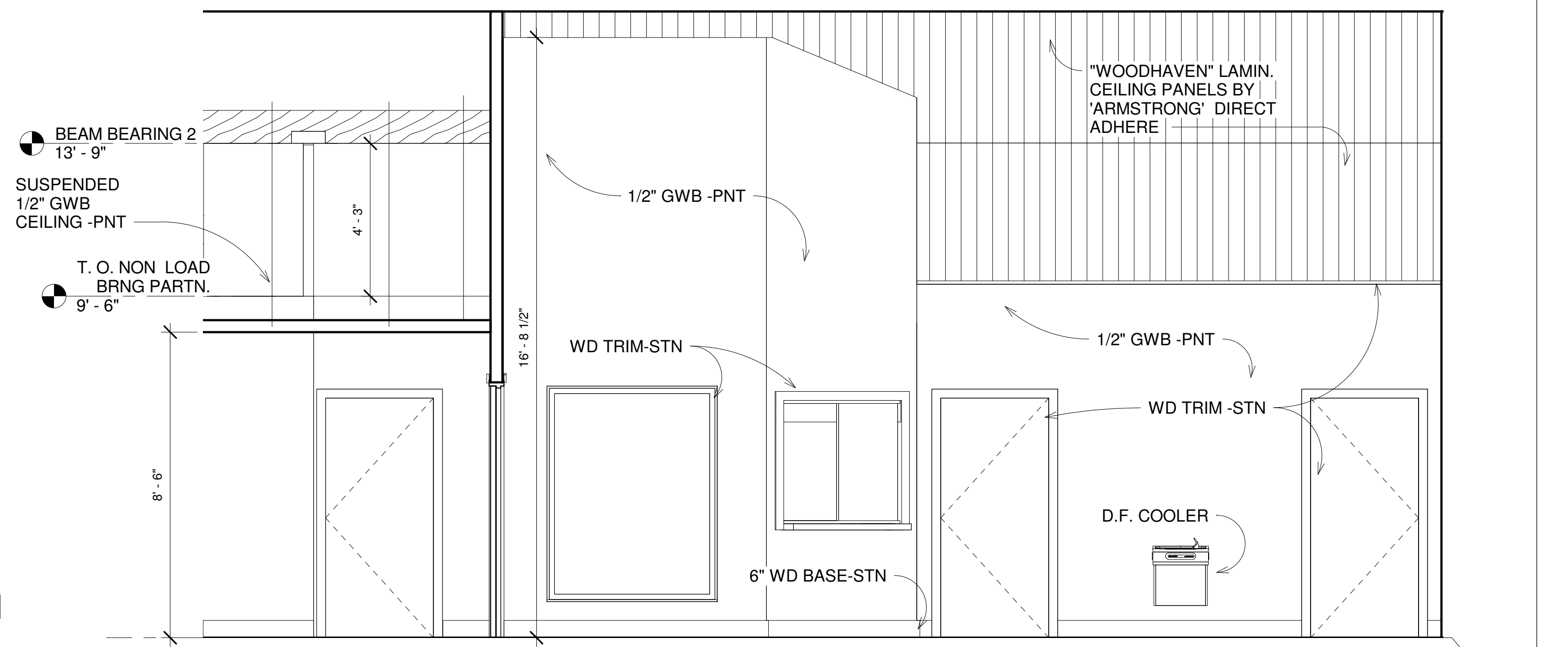
⑥ INTERIOR ELEVATION 2
3/8" = 1'-0"



④ INTERIOR ELEVATION 2b
3/8" = 1'-0"



③ INTERIOR ELEVATION 3a
3/8" = 1'-0"



⑤ INTERIOR ELEVATION
3/8" = 1'-0"



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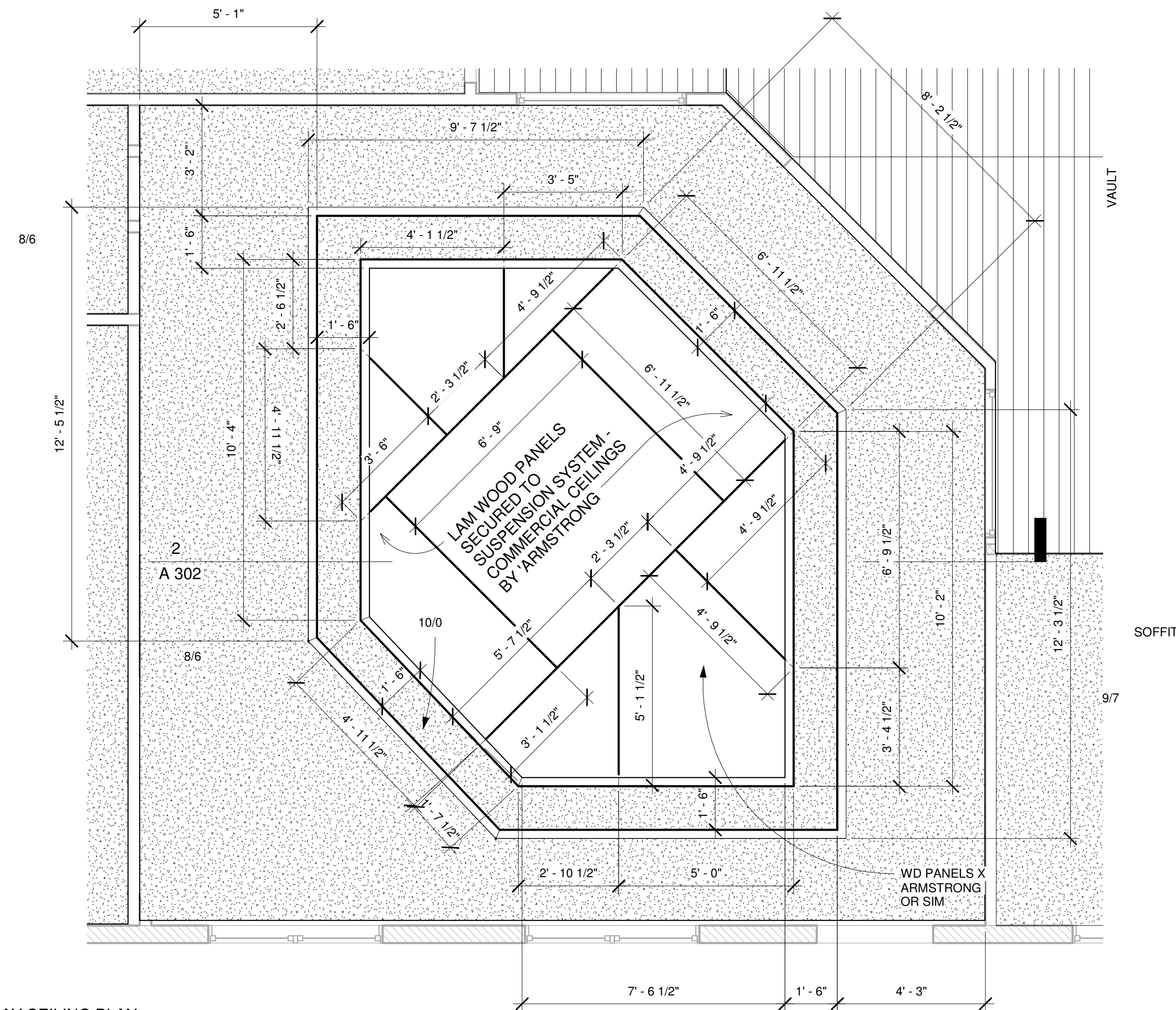
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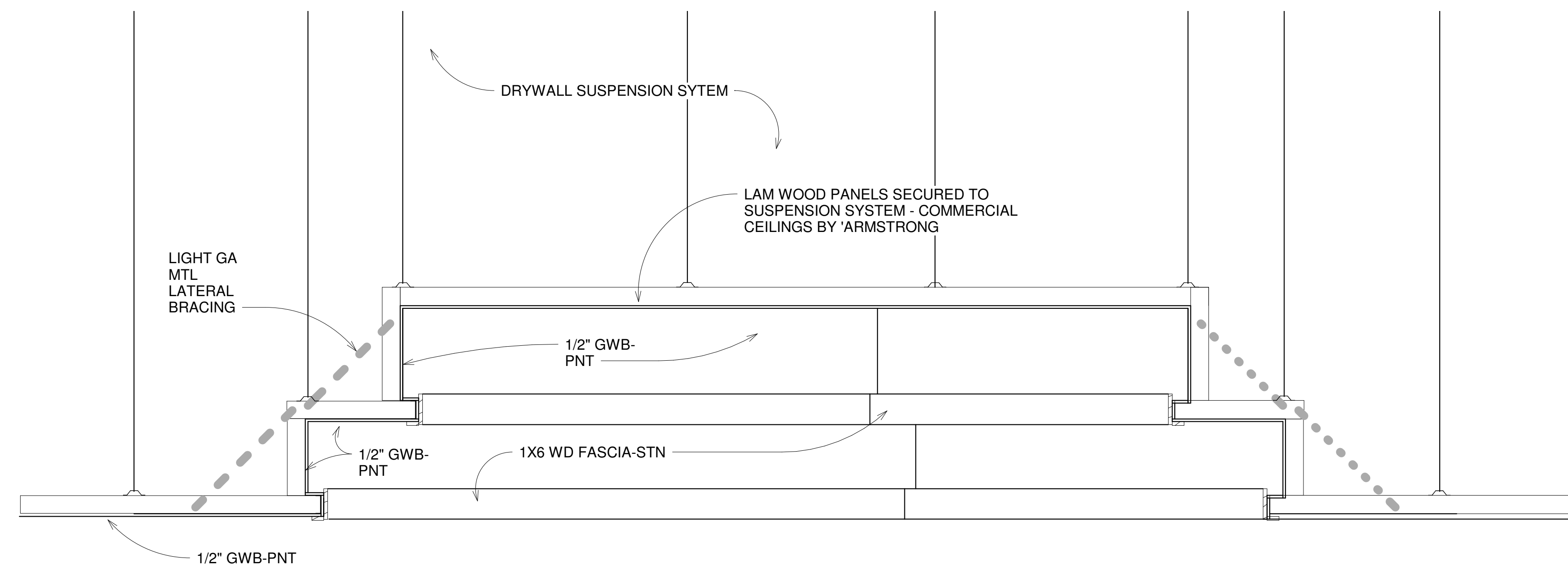
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A302



① TRAY CEILING PLAN
3/8" = 1'-0"



② TRAY CEILING DETAILS
3/4" = 1'-0"



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A 501 BUILDING
SECTIONS

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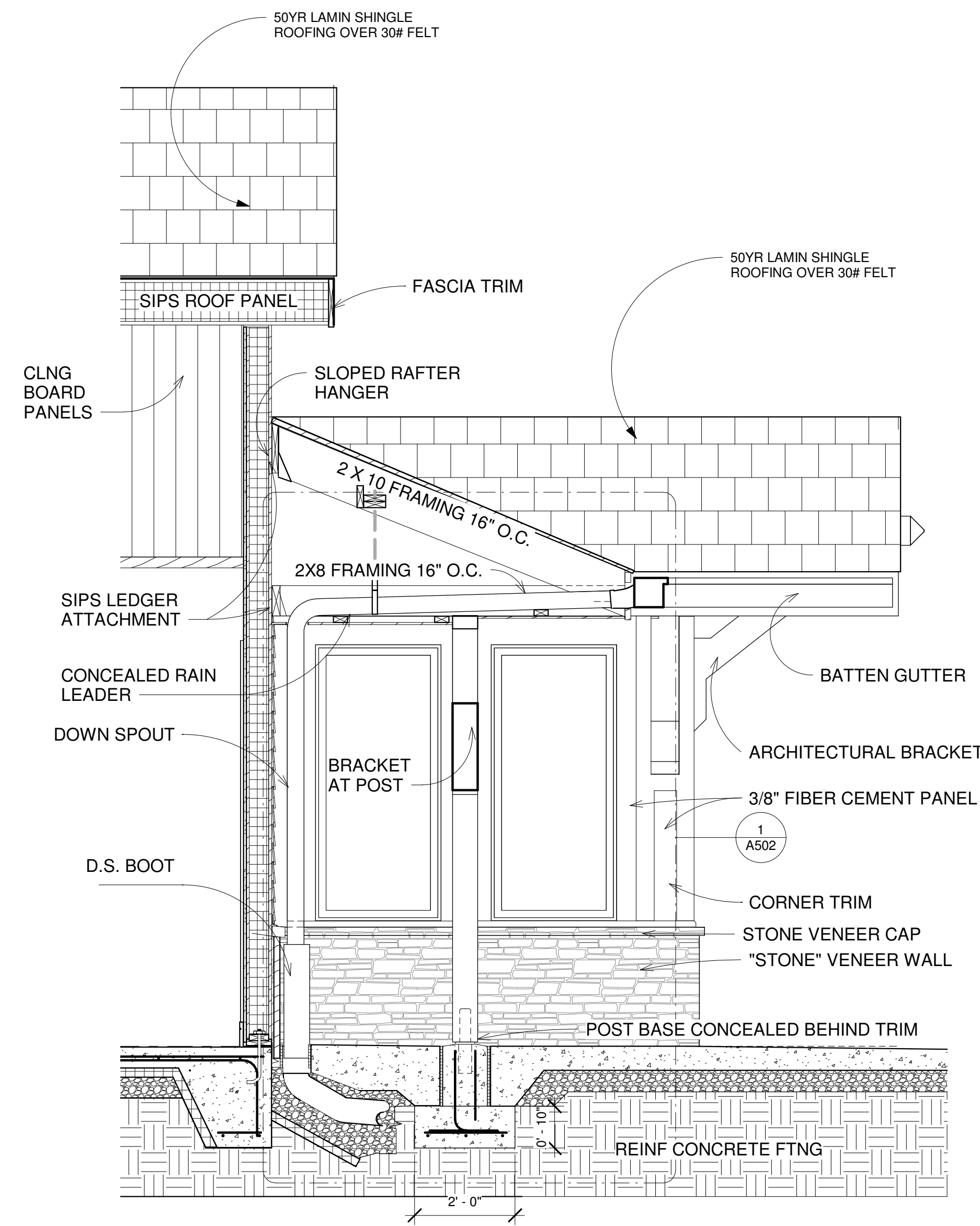
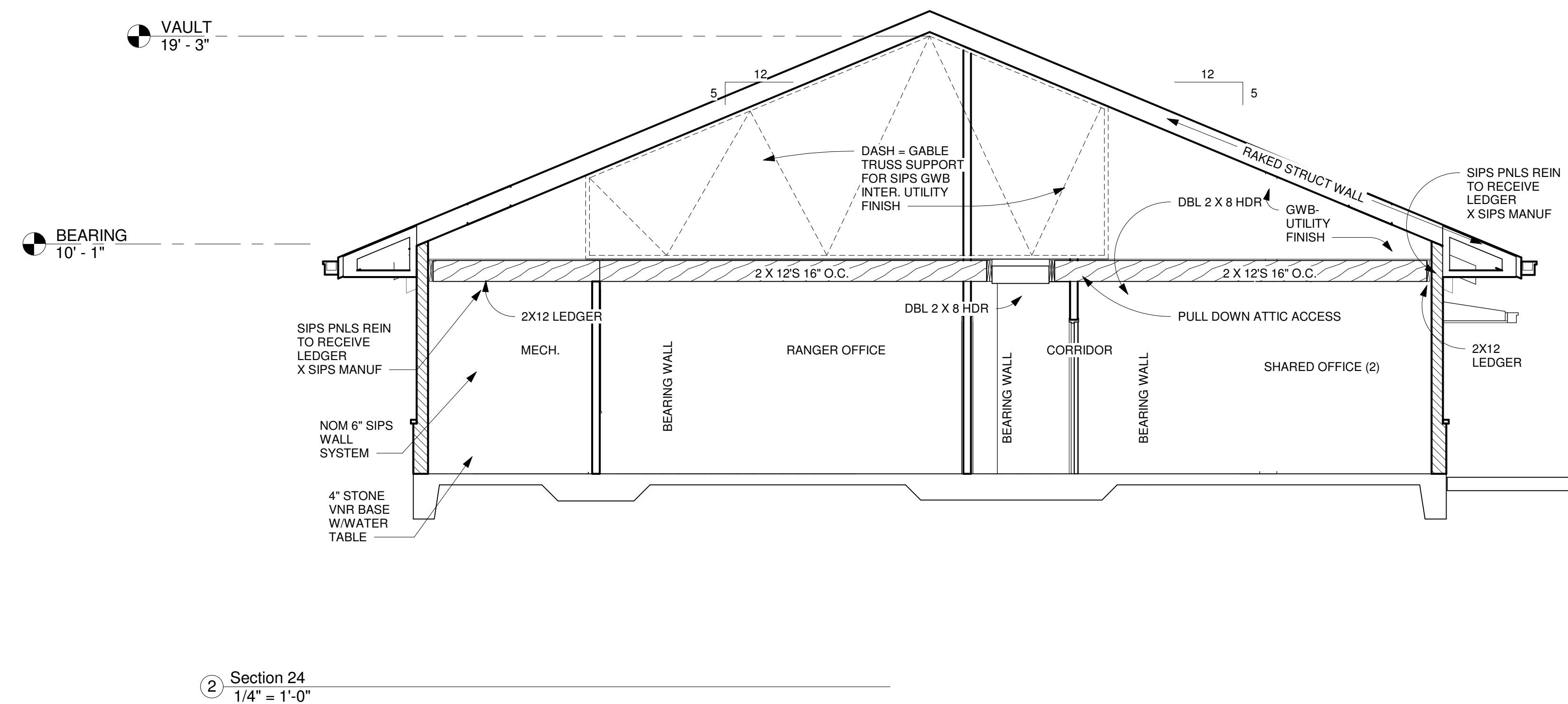
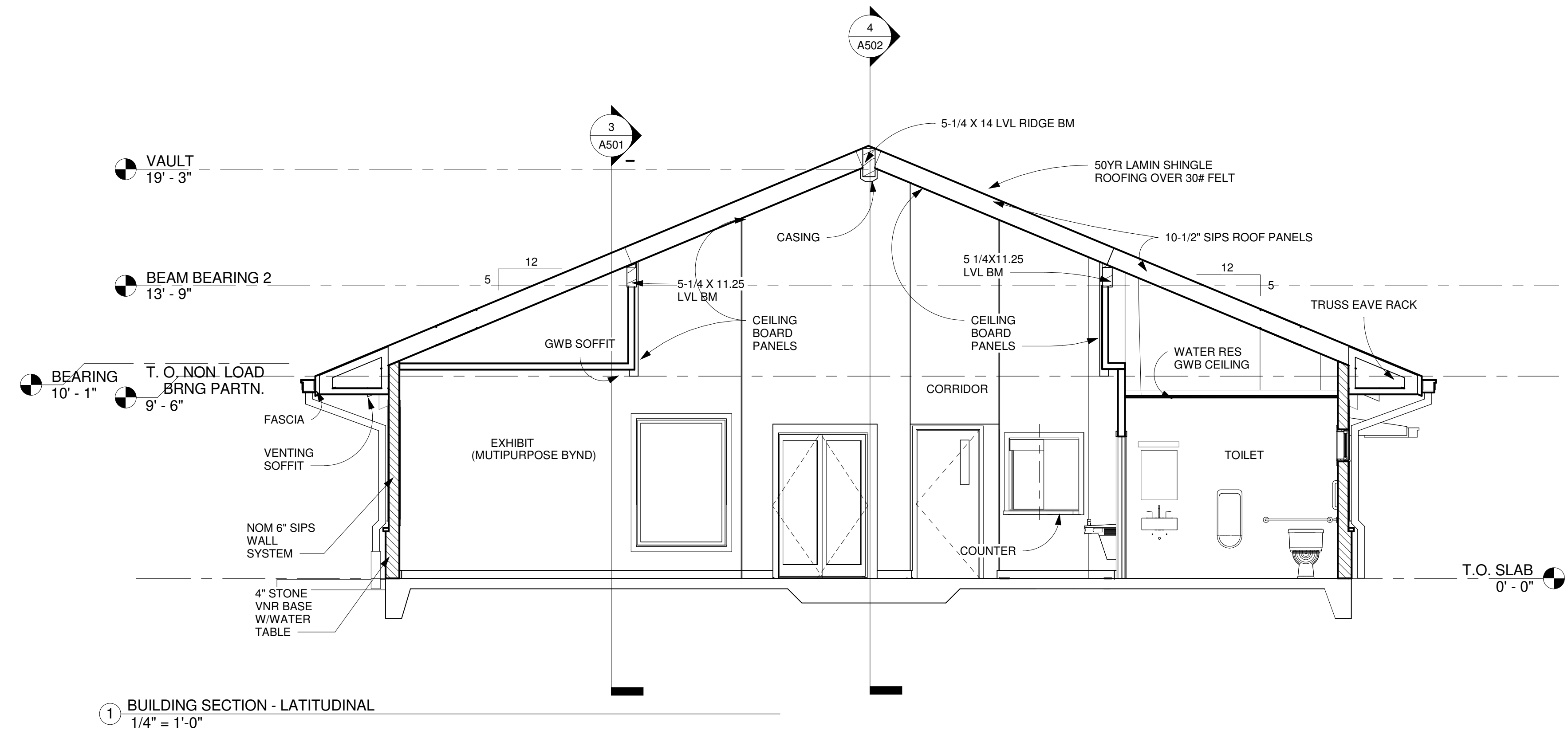
Sheet No.

A501

NOTE: STRUCTURAL DESIGN, FRAMING AND LAYOUT ARE
PRELIMINARY AND FOR PRICING ONLY. SIPS PANELS BY SIPS MANUFACTURER
FINAL ENGINEERING BY SIPS MANUF..

G
F
E
D
C
B
A

10 9 8 7 6 5 4 3 2 1





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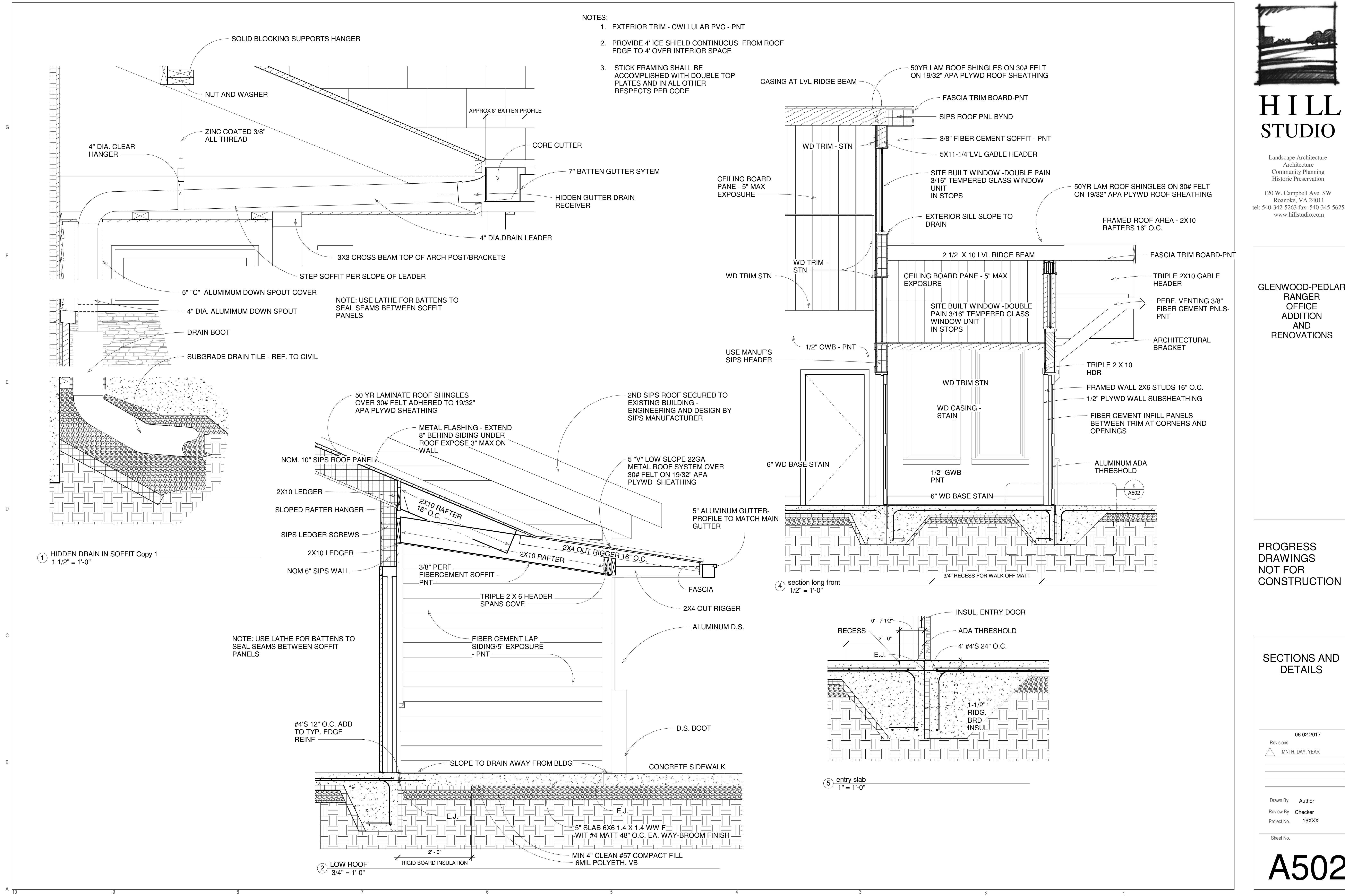
PROGRESS DRAWINGS
NOT FOR
CONSTRUCTION

SECTIONS AND DETAILS

Revisions:
06 02 2017
Mnth. Day. Year
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Review By: Checker
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Sheet No.

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- NOTES:
1. EXTERIOR TRIM - CWLLULAR PVC - PNT
 2. PROVIDE 4" ICE SHIELD CONTINUOUS FROM ROOF EDGE TO 4" OVER INTERIOR SPACE
 3. STICK FRAMING SHALL BE ACCOMPLISHED WITH DOUBLE TOP PLATES AND IN ALL OTHER RESPECTS PER CODE





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**GLENWOOD-PEDLAR
RANGER
OFFICE
ADDITION
AND
RENOVATIONS**

**PROGRESS
DRAWINGS
NOT FOR
CONSTRUCTION**

SCHEDULES

06 02 2017

Revisions:
△ MNTH. DAY. YEAR

Drawn By: Author
Review By: Checker
Project No. 16XXX

Sheet No.

A601

Window Schedule

Mark	Width	Height	Family
01	2' - 6"	5' - 6"	Fixed
02	2' - 6"	5' - 6"	Fixed
03	2' - 6"	5' - 6"	Fixed
04	2' - 6"	5' - 6"	Fixed
06	2' - 6"	5' - 6"	Fixed
07	2' - 6"	5' - 6"	Fixed
08	2' - 6"	5' - 6"	Fixed
09	3' - 0"	5' - 6"	Fixed
11	3' - 0"	1' - 6"	Transom with Trim
12	3' - 0"	1' - 6"	Transom with Trim
13	5' - 0"	5' - 6"	Casement Dbl with Trim
14	5' - 0"	5' - 6"	Casement Dbl with Trim
15	5' - 0"	5' - 6"	Casement Dbl with Trim
16	5' - 0"	5' - 6"	Casement Dbl with Trim
17	5' - 0"	5' - 6"	Casement Dbl with Trim
18	5' - 0"	5' - 6"	Casement Dbl with Trim
19	5' - 0"	5' - 6"	Casement Dbl with Trim
22	3' - 0"	5' - 6"	Fixed
23	4' - 9"	6' - 0"	Instance - Fixed
24	4' - 10"	6' - 0"	Instance - Fixed
32	4' - 6"	5' - 0"	Casement Dbl with Trim
33	4' - 6"	5' - 0"	Casement Dbl with Trim
34	4' - 6"	5' - 0"	Casement Dbl with Trim
36	4' - 6"	5' - 0"	Casement Dbl with Trim
37	4' - 6"	5' - 0"	Casement Dbl with Trim
38	4' - 6"	5' - 0"	Casement Dbl with Trim
39	4' - 6"	5' - 0"	Casement Dbl with Trim
40	4' - 6"	5' - 0"	Casement Dbl with Trim
41	4' - 6"	5' - 0"	Casement Dbl with Trim
43	4' - 3"	6' - 0"	Instance - Fixed
45	2' - 6"	5' - 6"	Fixed
SPCLTY INTERIOR	4' - 10"	3' - 8 1/2"	Window-Transaction-Sliding_A mortex_SSTW

**ROOM FINISH SCHEDULE
ADDITION**

ROOM/SPACE	FLOOR	BASE	WALL	CEILING	REMARKS
1 VESTIBULE	STAIN SEAL CONCRETE	4-1/4" "REVEAL" RESILIENT BASE BY JOHNSONITE	1/12" GWB - PNT	WOOD BRD PNL SYSTEM	PROVIDE WALK OFF RECESSED FLOOR GRATE
2 LOBBY	STAIN SEAL CONCRETE	4-1/4" "REVEAL" RESILIENT BASE BY JOHNSONITE	1/12" GWB - PNT	WOOD BRD PNL SYSTEM	
2A EXHIBIT	STAIN SEAL CONCRETE	4-1/4" "REVEAL" RESILIENT BASE BY JOHNSONITE	1/12" GWB - PNT	PNT GWB	
3 MEN	STAIN SEAL CONCRETE	4-1/4" "REVEAL" RESILIENT BASE BY JOHNSONITE	1/2" WATER AND MOLD RESISTANT GWB PNT	water/mold resist GWB-PNT	PAPERLESS GWB
4 WOMEN	STAIN SEAL CONCRETE	4-1/4" "REVEAL" RESILIENT BASE BY JOHNSONITE	1/2" WATER AND MOLD RESISTANT GWB PNT	water/mold resist GWB-PNT	PAPERLESS GWB
5 SHARED OFF.	ENG WD LAMINATE	4-1/4" "REVEAL" RESILIENT BASE BY JOHNSONITE	1/12" GWB - PNT	ACT SYSTEM	
5A OFFICE	ENG WD LAMINATE	4-1/4" "REVEAL" RESILIENT BASE BY JOHNSONITE	1/12" GWB - PNT	ACT SYSTEM	
6 OFFICE	ENG WD LAMINATE	4-1/4" "REVEAL" RESILIENT BASE BY JOHNSONITE	1/12" GWB - PNT	ACT SYSTEM	
6A CLOSET	ENG WD LAMINATE	4-1/4" "REVEAL" RESILIENT BASE BY JOHNSONITE	1/12" GWB - PNT	ACT SYSTEM	
6B CLOSET	ENG WD LAMINATE	4-1/4" "REVEAL" RESILIENT BASE BY JOHNSONITE	1/12" GWB - PNT	ACT SYSTEM	
7 CORRIDOR	STAIN SEAL CONCRETE	4-1/4" "REVEAL" RESILIENT BASE BY JOHNSONITE	1/12" GWB - PNT	1/12" GWB - PNT	
8 MUD ROOM	STAIN SEAL CONCRETE	4-1/4" "REVEAL" RESILIENT BASE BY JOHNSONITE	1/12" GWB - PNT	1/12" GWB - PNT	PROVIDE WALK OFF RECESSED FLOOR GRATE
9 RANGER	ENG WD LAMINATE	4-1/4" "REVEAL" RESILIENT BASE BY JOHNSONITE	1/12" GWB - PNT	ACT SYSTEM	
10 STO.	STAIN SEAL CONCRETE	4-1/4" "REVEAL" RESILIENT BASE BY JOHNSONITE	1/12" GWB - PNT	1/12" GWB - PNT	
11 MECHANICAL	STAIN SEAL CONCRETE	4-1/4" "REVEAL" RESILIENT BASE BY JOHNSONITE	1/12" GWB - PNT	1/12" GWB - PNT	
12 MULTI PURPOSE	CARPET SQUARES	4-1/4" "REVEAL" RESILIENT BASE BY JOHNSONITE	1/12" GWB - PNT	ARCH WOOD PNLNG IN TRAY CONFIG	

① FINISH SCHEDULE
1/4" = 1'-0"

WINDOW NOTES:

- INTERIOR WINDOWS WITHIN 2 FEET OF DOORS OR OVER 4 SQUARE FEET OR WITHIN 18" OF FLOOR SHALL BE TEMPERED
- EXTERIOR WINDOWS SHALL BE ENERGY STAR RATED INSUL DBL PANE LOW "E" UNITS
- INTERIOR FIXED WINDOWS SHALL AT CONTRACTORS DISCRETION BE SITE BUILT IN NOM 1 X 1 CLEAR WD STOPS WITH HIDDEN SCREW FASTENERS @ 2' CENTERS
- WINDOW TREATMENTS:
PROVIDE MINIBLINDS TO ALL INTERIOR WINDOWS
PROVIDE MINIBLINDS TO ALL EXTERIOR WINDOWS
- SITE BUILT HIGH WINDOWS AT ENTRIES AND MAIN GABLE: REFER TO ELEVATIONS FOR GLASS DIMENSIONS

DOOR

DOOR CHARACTERISTICS	MARK	THK	WDTH	HT	MATER	FRAME	FRAME TYPE	GLASS	FUNCTION	SET	REMARKS
	1.000	1 3/4"	3'-0"	6'-8"	insul mtl	hvy mtl	rabbet - wld 1 pc.	2 lite tempr	Entry	1 auto ADA	
	2.000	1 3/4"	3'-0"	6'-8"	insul mtl	hvy mtl	rabbet - wld 1 pc.	2 lite tempr	passg prvcy	2	
	3.000	1 3/4"	3'-0"	6'-8"	wd sld core	wd	pre hung	1/2 Lite	passg prvcy	3	mini blinds
	4.000	1 3/4"	3'-0"	6'-8"	wd sld core	wd	pre hung	""	passg office	6	
	5.000	1 3/4"	3'-0"	6'-8"	wd sld core	hvy mtl	rabbet wld 1 pc.	1/2 Lite tempr	passg enhanced secur	4 remote	mini blinds
	6.000	1 3/4"	3'-0"	6'-8"	insul mtl	hvy mtl	rabbet wld 1 pc.	vision lite	passg enhanced secur	4 remote	
	6.100	1 3/4"	2-4"	6'-8"	wd sld core	wd	pre hung	""	clo lock	5	
	6.200	1 3/4"	2-4"	6'-8"	wd sld core	wd	pre hung	""	clo lock	5	
	7.000	1 3/4"	3'-0"	6'-8"	wd sld core	wd	pre hung	""	passg office	6	
	8.000	1 3/4"	3'-0"	6'-8"	wd sld core	wd	pre hung	Vision Lite	passg office	6	
	9.000	1 3/4"	3'-0"	6'-8"	wd sld core	wd	pre hung	Vision Lite	passg office	6	
	10.000	1 3/4"	(PR) 3'-0"	6'-8"	wd sld core	wd	pre hung	""	clo lock	5	
	11.000	1 3/4"	3'-0"	6'-8"	wd sld core	wd	pre hung	""	clo lock	5	
	12.000	1 3/4"	(pr) 3'-0"	6'-8"	wd sld core	wd	pre hung	Full Lite tempr	passg lock class	6	mini blinds

② DOOR SCHEDULE
3/32" = 1'-0"



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**ELECTRICAL -
DETAILS,
SCHEDULES &
SYMBOLS**

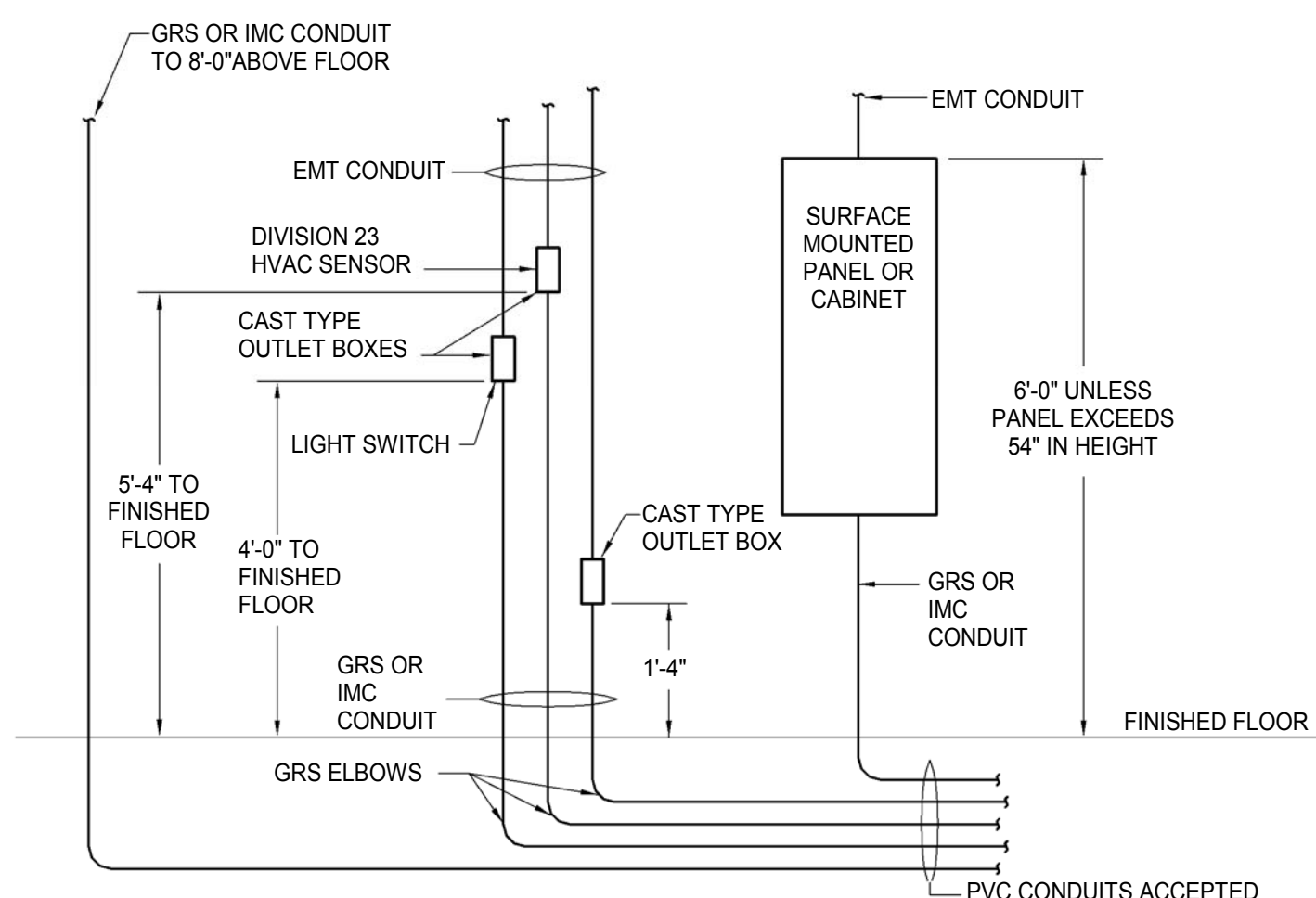
Issue Date
Revisions:
Mnth. Day. Year

Drawn By: Author
Review By: Checker
Project No: 16XXX

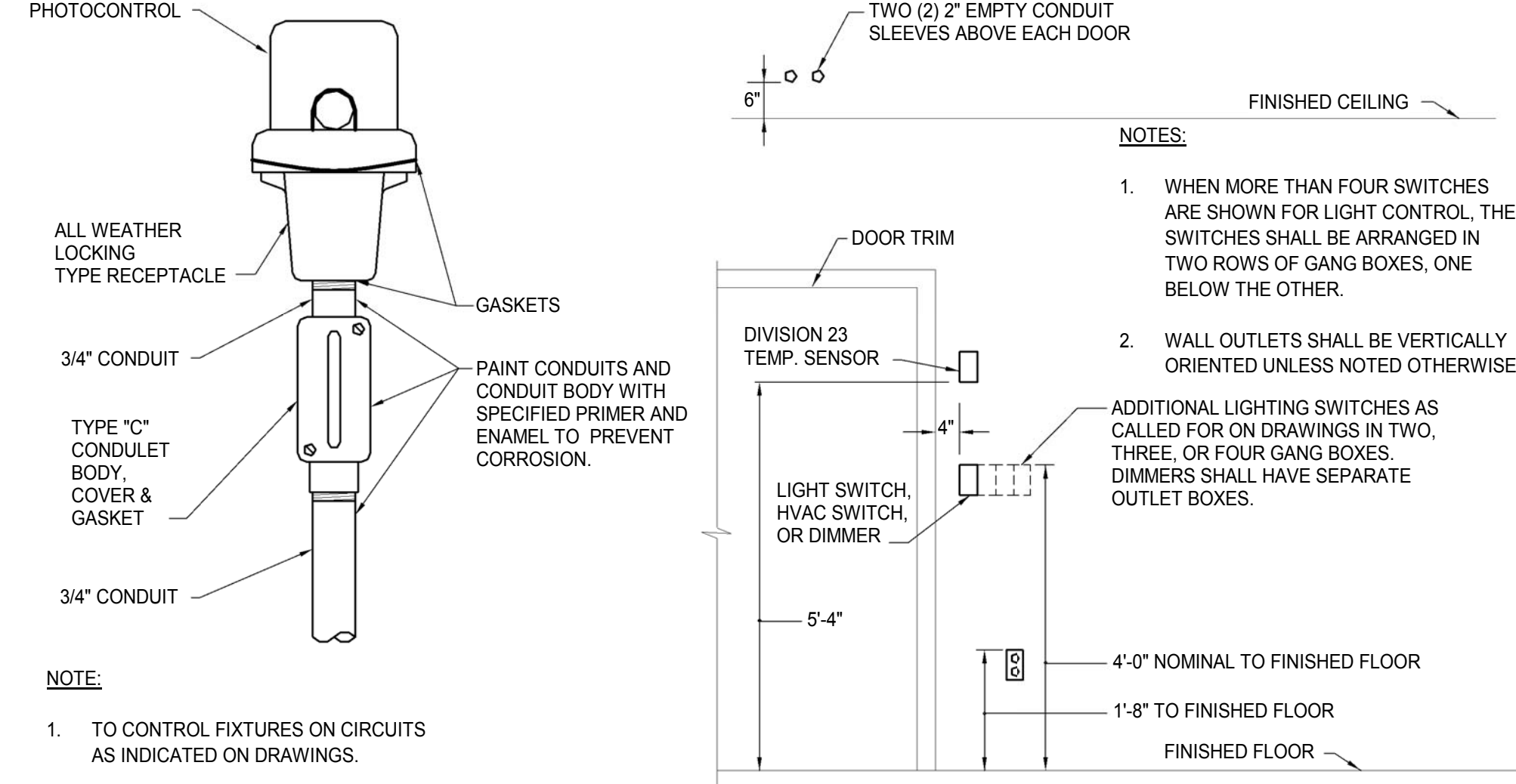
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E001

SYSTEM	AFF TOP OF OUTLET UNLESS NOTED	ELECTRICAL SYMBOLS		
		SYMBOL	DESCRIPTION	
LIGHTING			CEILING OUTLET WITH LED FIXTURE	
			CEILING OUTLET WITH LED FIXTURE	
			CEILING OUTLET WITH LED FIXTURE	
	8'-0" OR AS NOTED		WALL OUTLET WITH LED FIXTURE	
			FLUORESCENT EMERGENCY BATTERY PACK, MOUNTED IN OR ON TOP OF FIXTURE	
			CEILING OUTLET WITH INCANDESCENT, HID OR COMPACT LED FIXTURE	
			CEILING OUTLET WITH EXIT SIGN FIXTURE, SINGLE OR DOUBLE FACED AS REQUIRED AS INDICATED BY SHADING, WITH ARROWS AS INDICATED	
	ABV DOOR LINTEL		WALL OUTLET WITH EXIT SIGN FIXTURE, SINGLE OR DOUBLE FACED AS REQUIRED AS INDICATED BY SHADING, WITH ARROWS AS INDICATED	
			CEILING MOUNTED OCCUPANCY SENSOR, WATT STOPPER #DT-300 SERIES OR EQUAL, WITH POWER PACK	
			WALL MOUNTED OCCUPANCY SENSOR, WATT STOPPER #DT-300 SERIES OR EQUAL, WITH POWER PACK	
			PHOTO CELL	
			LIGHTING CONTROL WIRE	
4'-0"	D	INCANDESCENT DIMMER (120V, 1, 2000VA)		
4'-0"	S	LOCAL SWITCH, SINGLE POLE, 120-277V, 20A		
FIRE ALARM			ADDRESSABLE FIRE ALARM SYSTEM SMOKE (PHOTOELECTRIC) DETECTOR, CEILING	
	4'-0"		FIRE ALARM SYSTEM DUAL-ACTION PULL STATION, WALL WITH SPECIFIED SHIELD	
	7'-4"		FIRE ALARM, AUDIO/VISUAL (SPEAKER/STROBE) ALARM, WALL	
	7'-4"		FIRE ALARM, VISUAL (STROBE) ONLY ALARM, WALL	
5'-0"	RCC	REMOTE COMMAND CENTER FOR FIRE ALARM SYSTEM, FLUSH MOUNT		
6'-0"	FACP	MAIN FIRE ALARM CONTROL PANEL, DIVISION 28		
RECEPTACLES	1'-8"		125V, 3W, 20A, 2P, 1-1/2" DUPLEX RECEPTACLE, WALL NEMA 5-20R	
	AS REQUIRED FOR EWC	EWC	125V, 3W, 20A, 2P, 1-1/2" DUPLEX GROUND FAULT RECEPTACLE, WALL, LOCATED WITHIN EWC COVER NEMA 5-20R	
	1'-8"		125V, 3W, 20A, 2P, 1-1/2" DUPLEX GROUND FAULT RECEPTACLE, WALL, IN DOUBLE-GANG BOX NEMA 5-20R	
	1'-8"		125V, 3W, 20A, 2P, 1-1/2" DUPLEX GROUND FAULT RECEPTACLE, WALL NEMA 5-20R	
	ACS	GFA	125V, 3W, 20A, 2P, 1-1/2" DUPLEX GROUND FAULT RECEPTACLE, WALL NEMA 5-20R	
	1'-8"		125V, 3W, 20A, 2P, 1-1/2" DUPLEX GROUND FAULT RECEPTACLE, WALL WITH WEATHER PROTECTIVE COVER NEMA 5-20R	
	ACS	ACS	125V, 3W, 20A, 2P, 1-1/2" DUPLEX RECEPTACLE, WALL ABOVE COUNTER BACKSPASH NEMA 5-20R	
		---	CONDUIT UNDER FLOOR OF AREA WHERE SHOWN	
			GROUNDING ELECTRODE CONDUCTOR (GEC) CONNECTED TO GROUND	
	5'-0"		HEAVY-DUTY DISCONNECT SWITCH	
BOXES AND WIRING	5'-0"		MOTOR PROTECTIVE SWITCH (W/PILOT AND HEATER(S))	
			JUNCTION BOX	
			PULLBOX	
	6'-0"		ELECTRICAL PANEL, SURFACE MOUNT	
		WALL HEATER, FLUSH MOUNTED, BY DIVISION 23		
DATA	1'-8"		VOICE DATA OUTLET WITH 1" 1/4" CONDUIT BACK TO DATA RACK	
			DATA RACK	
CONDUITS		--UE--	UNDERGROUND ELECTRICAL FEEDER	
		--USE--	UNDERGROUND SECONDARY	
		--UTC--	UNDERGROUND TELEPHONE CIRCUIT	
		--UC--	UNDERGROUND COMMUNICATIONS CONDUIT OR CONDUITS	
MISC.			TELECOMMUNICATIONS MAIN GROUNDING BUS BAR PER SPECIFICATIONS	
			TELECOMMUNICATIONS GROUNDING BUS BAR PER SPECIFICATIONS	
	7'-6"		MOTION DETECTOR	
DEMOLITION	4'-0"		KEY PAD	
			WALL MOUNTED LIGHT FIXTURE TO BE REMOVED	
			SWITCH TO BE REMOVED	
		RECEPTACLE TO BE REMOVED		



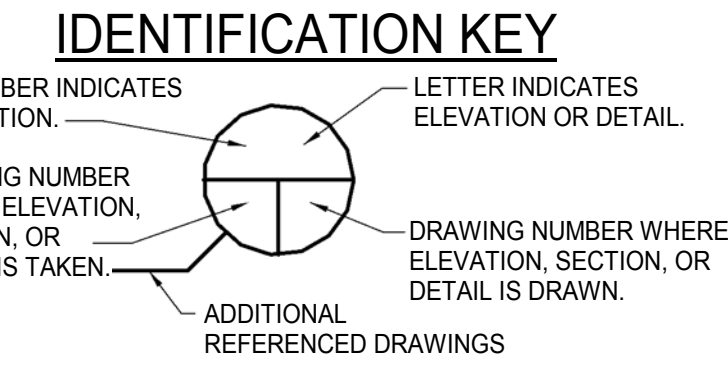
TYPICAL ELEVATION FOR SURFACE MOUNTED OUTLET BOXES, PANELS AND CABINETS IN MECHANICAL & ELECTRICAL ROOMS
NO SCALE



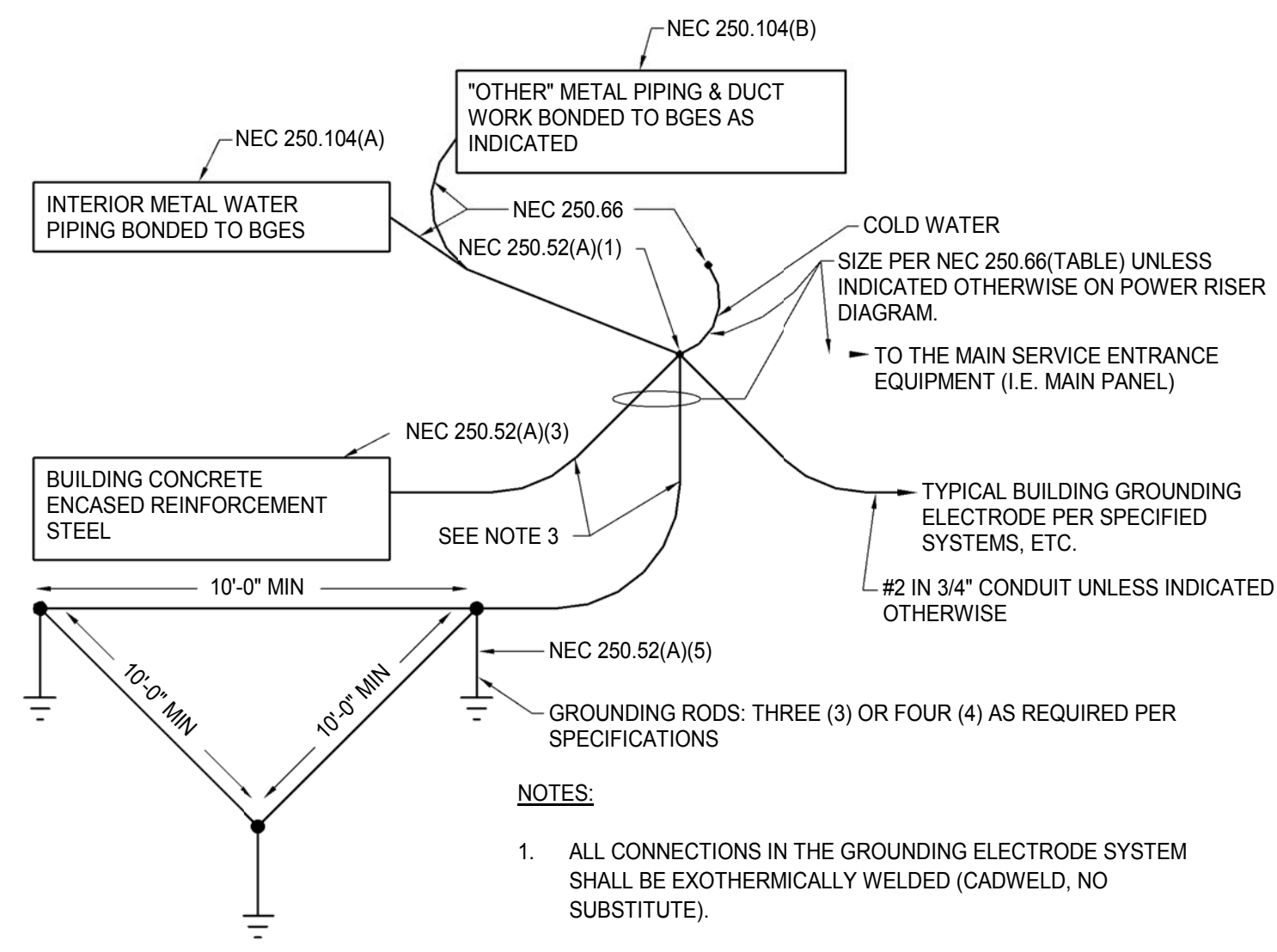
PHOTOCELL MOUNTING DETAIL
NO SCALE



TYPICAL ELEVATION FOR MOUNTING OUTLET BOXES AT DOORS
NO SCALE

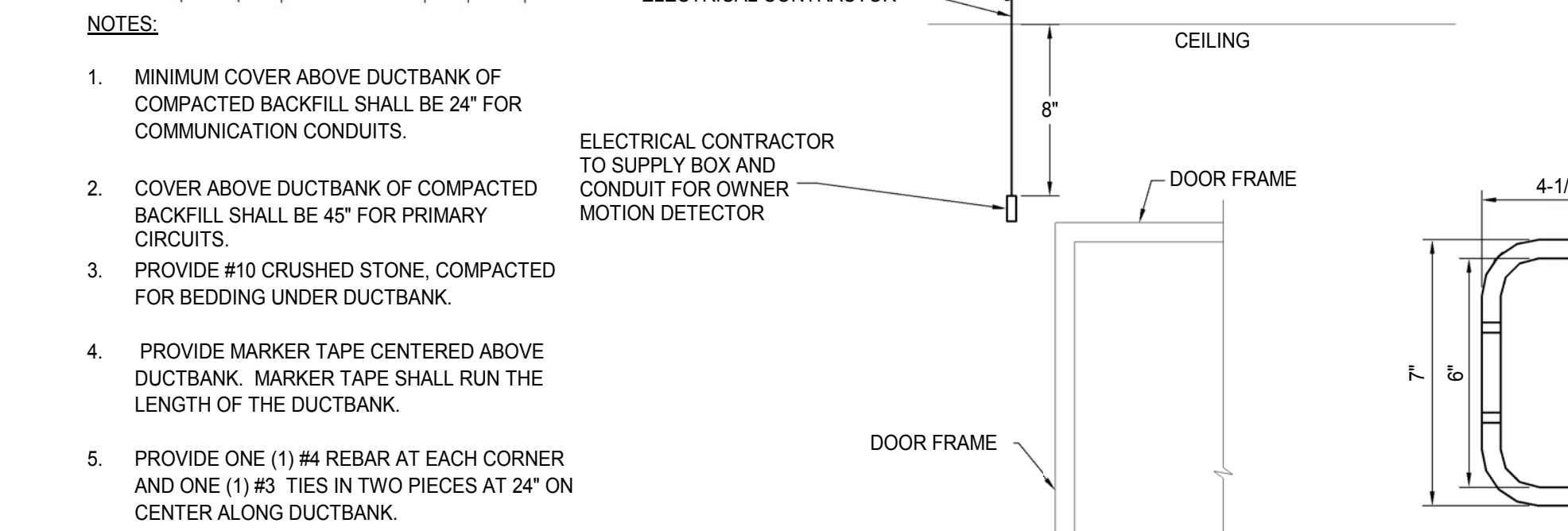


SECTION, ELEVATION, OR DETAIL SYMBOL

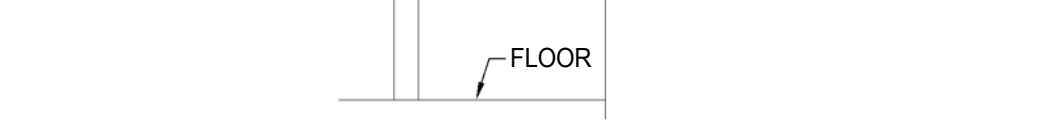


- NOTES:**
- ALL CONNECTIONS IN THE GROUNDING ELECTRODE SYSTEM SHALL BE EXOTHERMICALLY WELDED (CADWELD, NO SUBSTITUTE).
 - BOND ALL GROUNDING ELECTRODE METALLIC RACEWAYS PER NEC 250.64(B).
 - NEC 250.50 ALLOWS THE UNSPLICED GROUNDING ELECTRODE CONDUCTOR TO BE RUN TO ANY OF THE ABOVE CONVENIENT GROUNDING ELECTRODES IN THE GROUNDING ELECTRODE SYSTEM. THEREFORE, ALL THE ABOVE GROUNDING ELECTRODE CONDUCTORS SHALL BE SIZED PER NEC 250.66 (TABLE) TO PERMIT THIS APPLICATION, UNLESS INDICATED OTHERWISE ON POWER RISER DIAGRAM.

BUILDING GROUNDING ELECTRODE SYSTEM (BGES) SCHEMATIC



DUCTBANK SECTION
NO SCALE



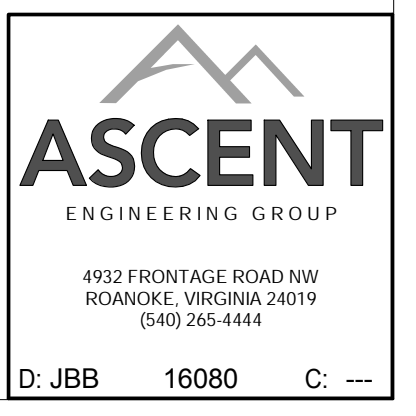
CABLE HOOK
NO SCALE



BUILDING INTRUSION ALARM SYSTEM TYPICAL MOTION DETECTOR ELEVATION
NOT TO SCALE

LIGHTING FIXTURE SCHEDULE				
TYPE	VOLTAGE	MANUFACTURER	MODEL	DESCRIPTION
1	120 V	LITECONTROL	12L-W-ID-STD-08-SOF-40K-I025-D090-D0-1-C-120	WALL MOUNTED INDIRECT/DIRECT LED FIXTURE. COMPLETE WITH EXTRUDED ALUMINUM HOUSING, VARIABLE INTENSITY OUTPUT TECHNOLOGY, SPECIFIED LED DIMMING DRIVER, LEDS RATED FOR MINIMUM OF 61,000 HOURS, 4000K COLOR TEMPERATURE, AND MINIMUM 82CRI. FINISH COLOR TO BE DETERMINED BY THE ARCHITECT.
1a	120 V	LITECONTROL	12L-W-ID-STD-06-SOF-40K-I025-D090-D0-1-C-121	WALL MOUNTED INDIRECT/DIRECT LED FIXTURE. COMPLETE WITH EXTRUDED ALUMINUM HOUSING, VARIABLE INTENSITY OUTPUT TECHNOLOGY, SPECIFIED LED DIMMING DRIVER, LEDS RATED FOR MINIMUM OF 61,000 HOURS, 4000K COLOR TEMPERATURE, AND MINIMUM 82CRI. FINISH COLOR TO BE DETERMINED BY THE ARCHITECT.
2	120 V	LITECONTROL	32L-R40-P-40K-R230-D01-1C-120	PENDANT MOUNTED LED. COMPLETE WITH ENCLOSED DRIVER DIE FORMED STEEL, RING-ROLL FORMED FROM EXTRUDED ALUMINUM JOINED BY DIE CAST ALUMINUM BRACKETS, FLEXIBLE ACRYLIC DIFFUSER, VARIABLE INTENSITY OUTPUT, SPECIFIED LED DIMMING DRIVER, 4000K COLOR TEMPERATURE, MINIMUM 82CRI, AND LEDS RATED FOR 100,000 HOURS MINIMUM. FINISH COLORS TO BE DETERMINED BY THE ARCHITECT.
3	120 V	LITECONTROL	32L-C-P-D-40K-D300-D01-1C-120	PENDANT MOUNTED LED DOWNLIGHT. COMPLETE WITH ENCLOSED DRIVER DIE FORMED STEEL, DIE CAST ALUMINUM HOUSING WITH STEEL CANOPY, FLEXIBLE ACRYLIC DIFFUSER, VARIABLE INTENSITY OUTPUT, SPECIFIED LED DIMMING DRIVER, 4000K COLOR TEMPERATURE, LEDS RATED FOR 54,000 HOURS MINIMUM, AND SUSPENSION KIT 1/16" CLASS 2 AIRCRAFT CABLE. FINISH COLORS TO BE DETERMINED BY THE ARCHITECT.
4	120 V	GOTHAM	EVO 40/25 4AR MWD LSS EZ1 NPS80EZ	RECESS MOUNTED 4" APERTURE LED DOWNLIGHT WITH SELF-FLANGED SEMI-SPECULAR, MATTE DIFFUSE FINISH TRIM, 45 DEGREE CUTOFF OF SOURCE AND SOURCE IMAGE, BOUNDING RAY OPTICAL DESIGN, 4000K COLOR TEMPERATURE, 2500 LUMEN LED PACKAGE, CLEAR APERTURE, MEDIUM WIDE DISTRIBUTION, AND ELDOLED 1% DIMMING DRIVER FOR USE WITH nLIGHT DIMMING PACK CONTROLS TO BE PROVIDED.
6	120 V	VISA	CB5500 L40K-K MVOLT G5IL G5IL OLIN REM REM	WALL MOUNTED 28" x 4" LED FIXTURE, SMOOTH SURFACE, COMPLETE WITH LUMICOR DIFFUSER MATERIAL AND WHITE MATTE POWDER COAT FINISH, OYSTER LINEN LUMICOR LENS, WET LOCATION LISTED, LEDS RATED FOR 60,000 HOURS MINIMUM, 4000 LUMEN OUTPUT, 4000K COLOR TEMPERATURE, AND SPECIFIED DRIVER.
7	120 V	GOTHAM	ICO ADJ 40/25 T20 LSS	RECESS MOUNTED 6" ADJUSTABLE LED DOWNLIGHT WITH SELF-FLANGED SEMI-SPECULAR, MATTE DIFFUSE FINISH TRIM, 45 DEGREE CUTOFF OF SOURCE AND SOURCE IMAGE, BOUNDING RAY OPTICAL DESIGN, 4000K COLOR TEMPERATURE, 2500 LUMEN LED PACKAGE, CLEAR APERTURE, MEDIUM WIDE DISTRIBUTION, AND ELDOLED 1% DIMMING DRIVER FOR USE WITH nLIGHT DIMMING PACK CONTROLS TO BE PROVIDED.
8	120 V	LITHONIA	2RTL4 60L EZ1 LP840 N80	RECESS MOUNTED 2x4" LED VOLUMETRIC LIGHT FIXTURE, ONE-PIECE, COLD-ROLLED STEEL REFLECTOR WITH EMBOSSED FACETS, POLYESTER POWDER PAINT AFTER FABRICATION, IMPACT MODIFIED ACRYLIC PRISMATIC REFRACTORS WITH POLYMER LIGHT-DIFFUSING FILM, 6000 LUMEN LED PACKAGE.
9	120 V	LITHONIA	2RTL2 40L EZ1 LP840 N80	RECESS MOUNTED 2x2" VOLUMETRIC LED FIXTURE, ONE-PIECE, COLD-ROLLED STEEL REFLECTOR WITH EMBOSSED FACETS, POLYESTER POWDER PAINT AFTER FABRICATION, IMPACT MODIFIED ACRYLIC PRISMATIC REFRACTORS WITH POLYMER LIGHT-DIFFUSING FILM, 4000 LUMEN LED PACKAGE WITH ELDOLED 1% DIMMING DRIVER, 4000K COLOR TEMPERATURE, nLIGHT CONTROL SYSTEM, INCLUDING LOW-VOLTAGE CONTROLLERS, WITH 80% LUMEN MANAGEMENT.
10	120 V	GOTHAM	LDN6 40/25 L06 120 EZ1 NPS80EZ WL	RECESS MOUNTED 6" WET LOCATION APERTURE LED DOWNLIGHT WITH SELF-FLANGED SEMI-SPECULAR, MATTE DIFFUSE FINISH TRIM, 45 DEGREE CUTOFF OF SOURCE AND SOURCE IMAGE, BOUNDING RAY OPTICAL DESIGN, 4000K COLOR TEMPERATURE, 2500 LUMEN LED PACKAGE, CLEAR APERTURE, MEDIUM WIDE DISTRIBUTION, AND ELDOLED 1% DIMMING DRIVER FOR USE WITH nLIGHT DIMMING PACK CONTROLS TO BE PROVIDED.
11	120 V	VODE	107-WG-01-4-WA-18-00-AA-2-0-Z-SO-3 0-1-0-AL-0 SERIES	WALL MOUNTED LED LIGHT FIXTURE WITH WING TYPE END RAILS, MAIN SINGLE RAIL 4" LONG, 18" WALL MOUNTING ARMS, ALL ALUMINUM PARTS, 18" ARM CORD, ZERO CANOPY POWER CONNECTION 7'-6" ABOVE THE FINISHED FLOOR, TRANSLUCENT FLAT WHITE LENS, REMOTE LED DRIVERS WITH ZIPPER BOARD, 3000K LEDS, AND CRI OF 83. LOCATE REMOTE DRIVERS ABOVE ACCESSIBLE CEILINGS.
12	120 V	LITHONIA	ZL2N L48 5000LM MOD 40K 80CRI GALV	SURFACE OR SUSPENDED LED STRIP LIGHT WITH COMPACT DESIGN CHANNEL AND COVER FORMED FROM COLD ROLLED STEEL, GALVANIZED FINISH, 5000 LUMEN LED PACKAGE, MEDIUM DIFFUSE LENS, 4000K COLOR TEMPERATURE, 80CRI COLOR RENDERING, LED DRIVER FOR USE WITH nLIGHT CONTROL

EXIT LIGHT FIXTURE SCHEDULE				
TYPE	VOLTAGE	MANUFACTURER	MODEL	DESCRIPTION
CEILING EXIT	120 V	BEGHELLI	FME HT LR 1 (OR 2) M AT BA 120SA	CEILING MOUNTED EXIT LIGHT
WALL EXIT	120 V	BEGHELLI	FME HT LR 1 W AT BA 120SA	WALL MOUNTED EXIT LIGHT



D: JBB 16080 C: ---



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GLENWOOD-PEDLAR RANGER OFFICE ADDITION AND RENOVATIONS

PROGRESS
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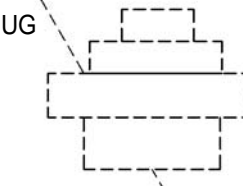
ELECTRICAL - DEMOLITION PLAN

Issue Date	
Revisions:	
△	MINTH. DAY. YEAR

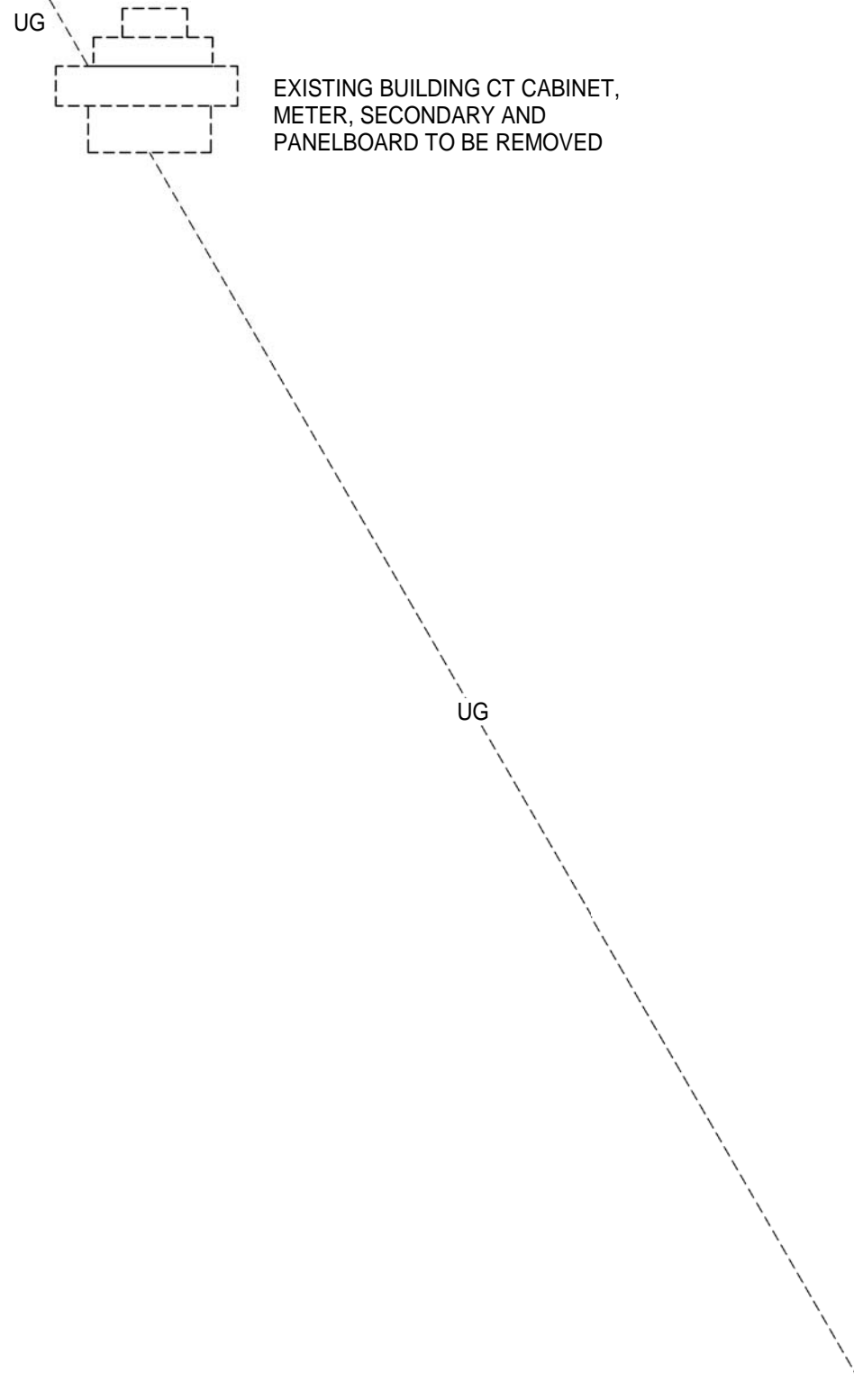
Drawn By:	Author
Review By:	Checker
Project No.:	16XXX
Sheet No.:	

E101

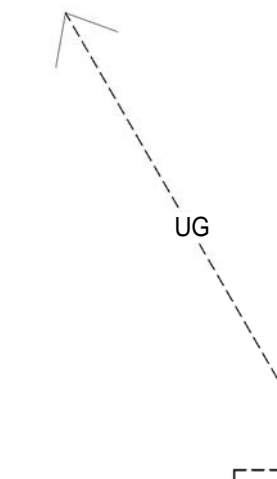
SECONDARY TO POLE TO BE REMOVED.



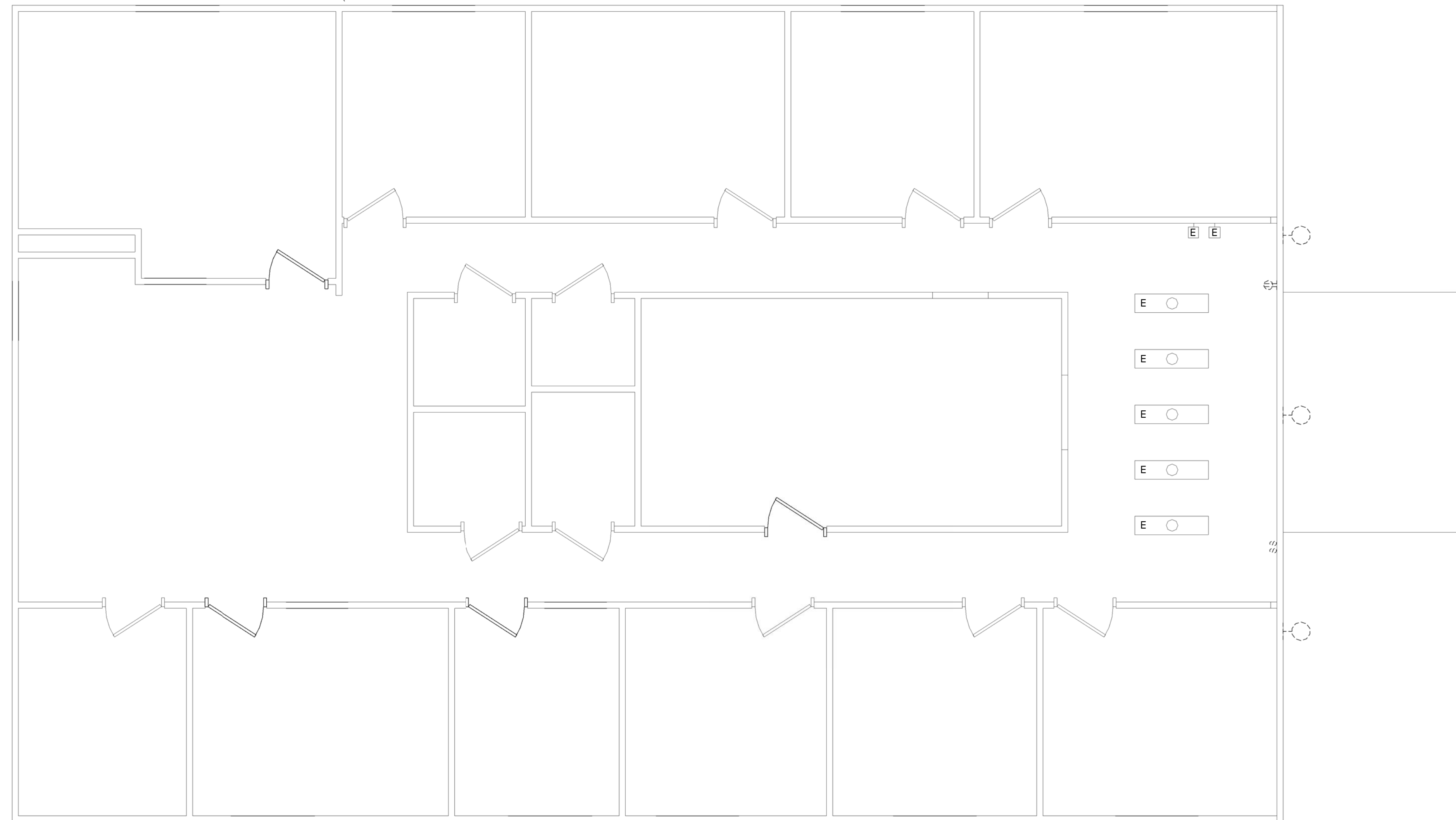
EXISTING BUILDING CT CABINET,
METER, SECONDARY AND
PANELBOARD TO BE REMOVED



SECONDARY TO POLE TO BE REMOVED.



EXISTING CT CABINET, METER, AND
PANELBOARDS TO BE REMOVED.



① Level 1 - Electrical - Demolition Plan
1/4" = 1'-0"

ASCENT
ENGINEERING GROUP
4932 FRONTAGE ROAD NW
ROANOKE, VIRGINIA 24019
(540) 265-4444

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Roanoke, VA 24011
tel: 540-342-5263 fax: 540-345-5625
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GLENWOOD-PEDLAR RANGER OFFICE ADDITION AND RENOVATIONS

PROGRESS
DRAWINGS
NOT FOR
CONSTRUCTION

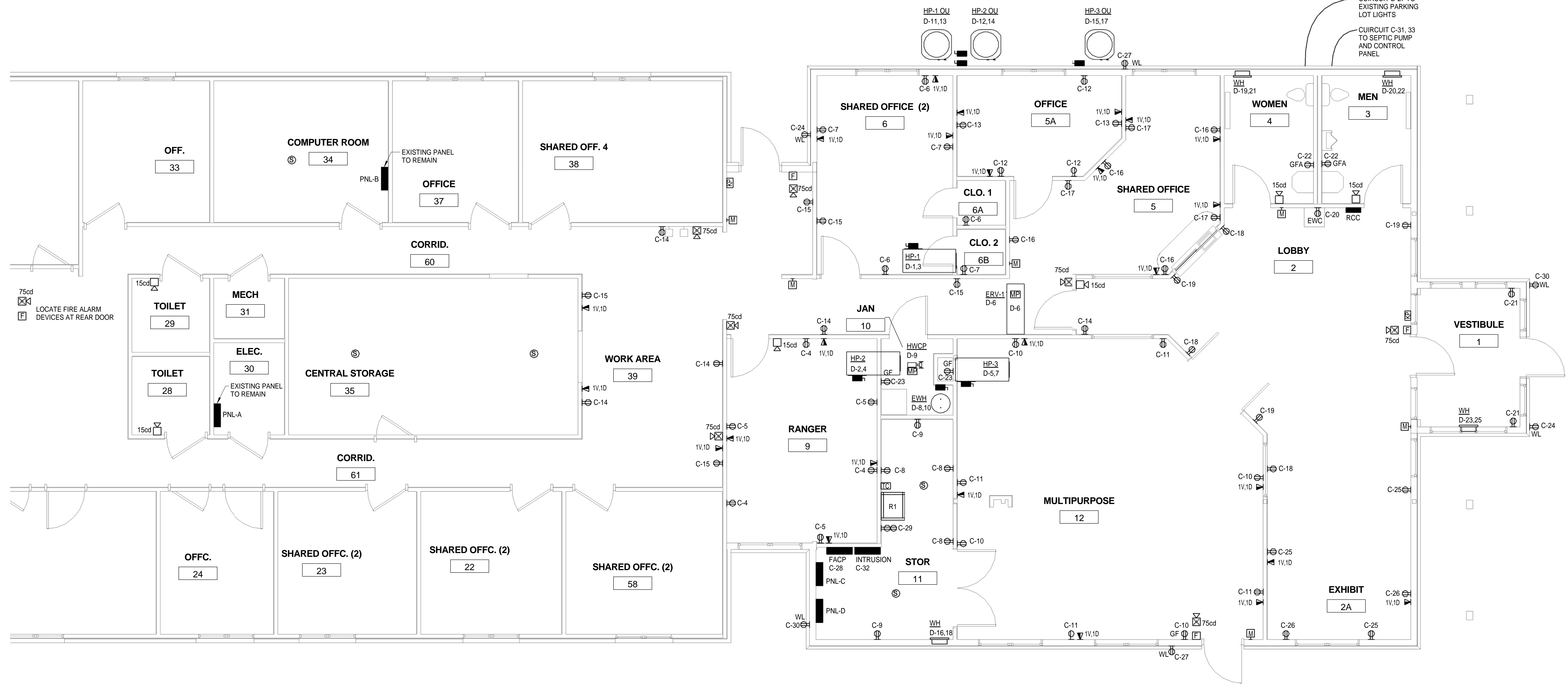
ELECTRICAL - POWER PLAN

Revisions:
Issue Date
MINTH. DAY. YEAR

Drawn By: Author
Review By: Checker
Project No. 16XXX

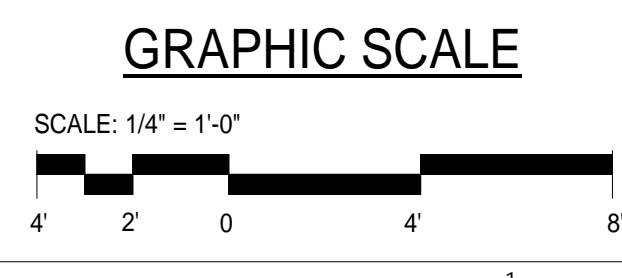
Sheet No.

E301



1 Electrical - Power Plan
1/4" = 1'-0"

THESE DRAWINGS ARE BASED ON HISTORICAL DRAWINGS OF THE EXISTING BUILDING. CONTRACTOR SHALL VERIFY ALL CONDITIONS PRIOR TO FABRICATION OF SYSTEM. MODIFICATIONS SHALL BE MADE ONLY AFTER APPROVAL BY THE ENGINEER.



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10 9 8 7 6 5 4 3 2 1



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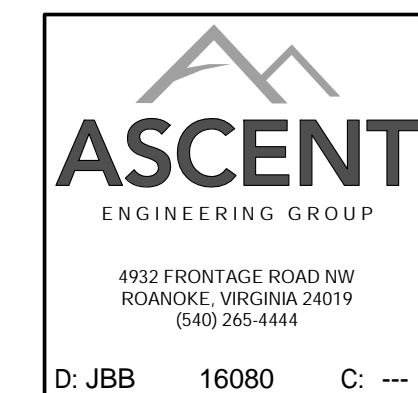
**GLENWOOD-PEDLAR
RANGER
OFFICE
ADDITION
AND
RENOVATIONS**

**PROGRESS
DRAWINGS
NOT FOR
CONSTRUCTION**

**ELECTRICAL -
PANEL
SCHEDULES**

Issue Date
Revisions:
MINTH. DAY. YEAR
Drawn By: Author
Review By: Checker
Project No. 16XXX
Sheet No.

E401



PANEL: D
LOCATION: STOR 11
SUPPLY FROM: D
ENCLOSURE:
VOLTS: 120/240 Single
PHASE: 1
WIRE: 3
MAINS RATING: 400 A
NEUTRAL RATING: 400 A
KAIC RATING: 10

CKT	DESCRIPTION	TRIP	POLES	PHASE A...	PHASE B...	POLES	TRIP	DESCRIPTION	CKT	
1	HP-1	50 A	2	4.3	4.3		2	50 A HP-2	2	
3	--	--	--			4.3	4.3	--	4	
5	HP-3	50 A	2	4.8	0.9		1	20 A ERV-1	6	
7	--	--	--			4.8	3	2	40 A EWH	8
9	HVAC	20 A	1	0	3		--	--	10	
11	HP-1 OU	20 A	2			1.3	1.3	2	20 A HP-2 OU	12
13	--	--	--	1.3	1.3		--	--	14	
15	HP-3 OU	20 A	2			1.6	1	2	20 A WALL HEATER STOR 11	16
17	--	--	--	1.6	1		--	--	18	
19	WALL HEATER WOMEN 4	20 A	2			1	1	2	20 A WALL HEATER MEN 3	20
21	--	--	--	1	1		--	--	22	
23	WALL HEATER VESTIBULE 1	20 A	2			1	15.4	2	150 A PANELC	24
25	--	--	--	1	14.9		--	--	26	
27	EXISTING PARKING LOT LIGHTS	20 A	1			0.6	10	2	225 A EXISTING PANELS A & B	28
29	SPARE	20 A	1	0	10		--	--	30	
31	SPARE	20 A	1			0	0	1	20 A SPARE	32
33	SPARE	20 A	1	0	0			1	20 A SPARE	34
35	SPARE	20 A	1			0	0	1	20 A SPARE	36
37	SPARE	20 A	1	0	0			1	20 A SPARE	38
39	SPARE	20 A	1			0	0	1	20 A SPARE	40
41	SPARE	20 A	1	0	0			1	20 A SPARE	42
TOTAL LOAD:		50279 VA				50451 VA				
TOTAL AMPS:		419 A				420 A				

LEGEND:
KAIC STANDS FOR 1000 AMPS INTERRUPTING CURRENT.

NOTES:
400A MAIN BREAKER

PANEL: C
LOCATION: STOR 11
SUPPLY FROM: D
ENCLOSURE:
VOLTS: 120/240 Single
PHASE: 1
WIRE: 3
MAINS RATING: 225 A
NEUTRAL RATING: 225 A
KAIC RATING: 10

CKT	DESCRIPTION	TRIP	POLES	PHASE A...	PHASE B...	POLES	TRIP	DESCRIPTION	CKT	
1	LIGHTS SHARED OFFICE (2) 6	20 A	1	1.7	1		1	20 A LIGHTS	2	
3	LIGHTS	20 A	1			0.6	0.5	1	20 A REC. RANGER 9	4
5	REC. RANGER 9	20 A	1	0.5	0.5		1	20 A REC. SHARED OFFICE (2) 6	6	
7	REC. SHARED OFFICE (2) 6	20 A	1			0.5	0.5	1	20 A REC. STOR 11	8
9	REC. STOR 11	20 A	1	0.4	0.7		1	20 A REC. MULTIPURPOSE 12	10	
11	REC. MULTIPURPOSE 12	20 A	1			0.7	0.5	1	20 A REC. OFFICE 5A	12
13	REC. OFFICE 5A	20 A	1	0.4	0.9		1	20 A REC. CORRIDOR 7	14	
15	REC. MUD ROOM 8	20 A	1			0.9	0.7	1	20 A REC. SHARED OFFICE 5	16
17	REC. SHARED OFFICE 5	20 A	1	0.5	0.5		1	20 A REC. LOBBY 2	18	
19	REC. EXHIBIT 2A	20 A	1			0.5	0.2	1	20 A REC. LOBBY 2	20
21	REC. VESTIBULE 1	20 A	1	0.4	0.4		1	20 A REC. WOMEN 4	22	
23	REC. JAN 10	20 A	1			0.4	0.4	1	20 A REC.	24
25	REC. EXHIBIT 2A	20 A	1	0.5	0.4		1	20 A REC. EXHIBIT 2A	26	
27	REC.	20 A	1			0.4	1	1	20 A FACP	28
29	REC. STOR 11	20 A	1	0.2	0.4		1	20 A REC.	30	
31	SEPTIC PUMP	50 A	2			6	1	1	20 A INTRUSION PANEL	32
33	--	--	--	6	0			1	20 A EXIT SIGNS	34
35	SPARE	20 A	1			0	0	1	20 A SPARE	36
37	SPARE	20 A	1	0	0			1	20 A SPARE	38
39	SPARE	20 A	1			0	0	1	20 A SPARE	40
41	SPARE	20 A	1	0	0			1	20 A SPARE	42
TOTAL LOAD:		15390 VA				14870 VA				
TOTAL AMPS:		128 A				124 A				

LEGEND:
KAIC STANDS FOR 1000 AMPS INTERRUPTING CURRENT.

NOTES:

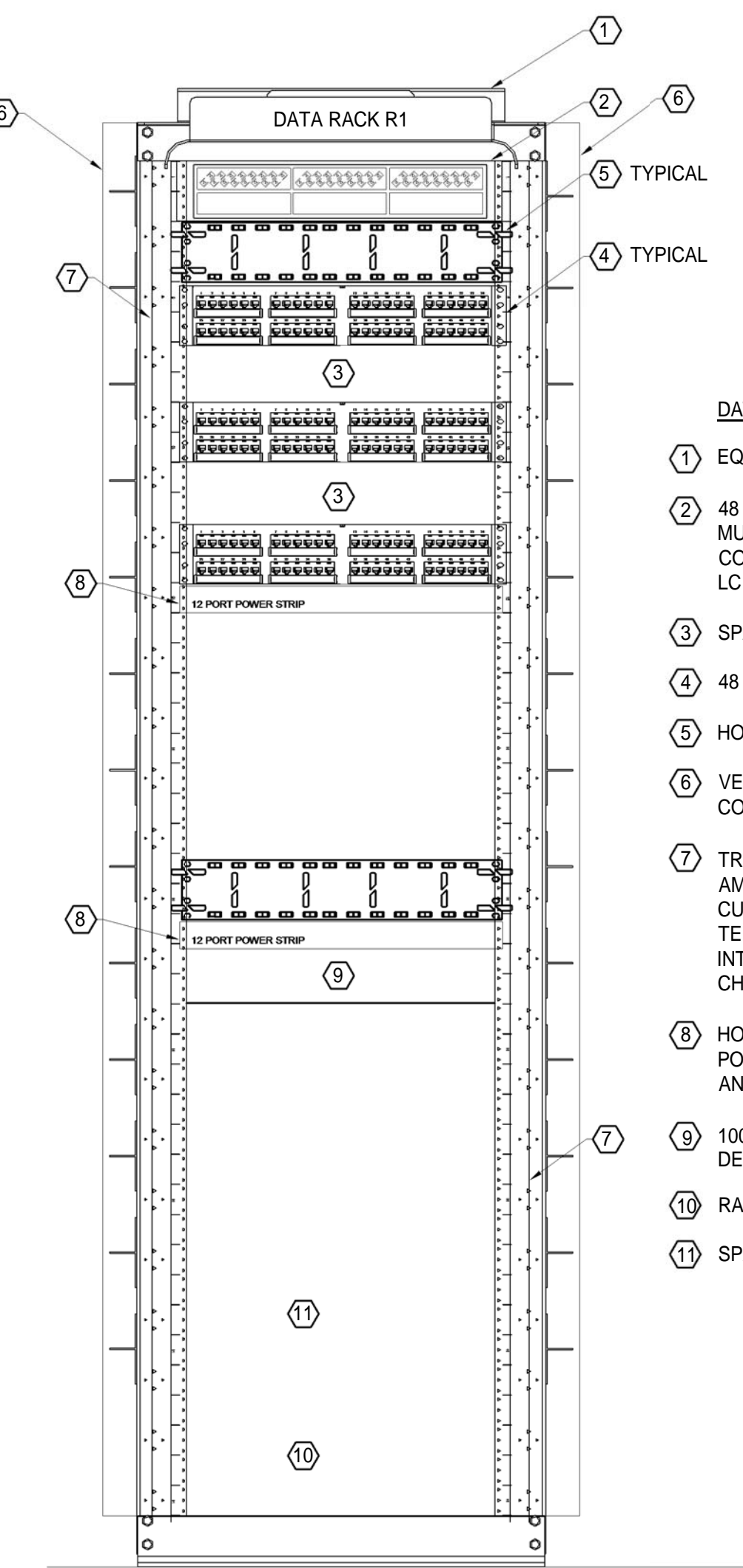
DIVISION 23 - MECHANICAL EQUIPMENT

MARK	VOLTAGE	POLES	kVA
EWH	240 V	2	6 kVA
HP-1	240 V	2	8.53 kVA
HP-1 OU	240 V	2	2.56 kVA
HP-2	240 V	2	8.53 kVA
HP-2 OU	240 V	2	2.56 kVA
HP-3	240 V	2	9.57 kVA
HP-3 OU	240 V	2	3.18 kVA
WH	240 V	2	2 kVA
HWCP	120 V	1	0 kVA
ERV-1	115 V	1	0.95 kVA

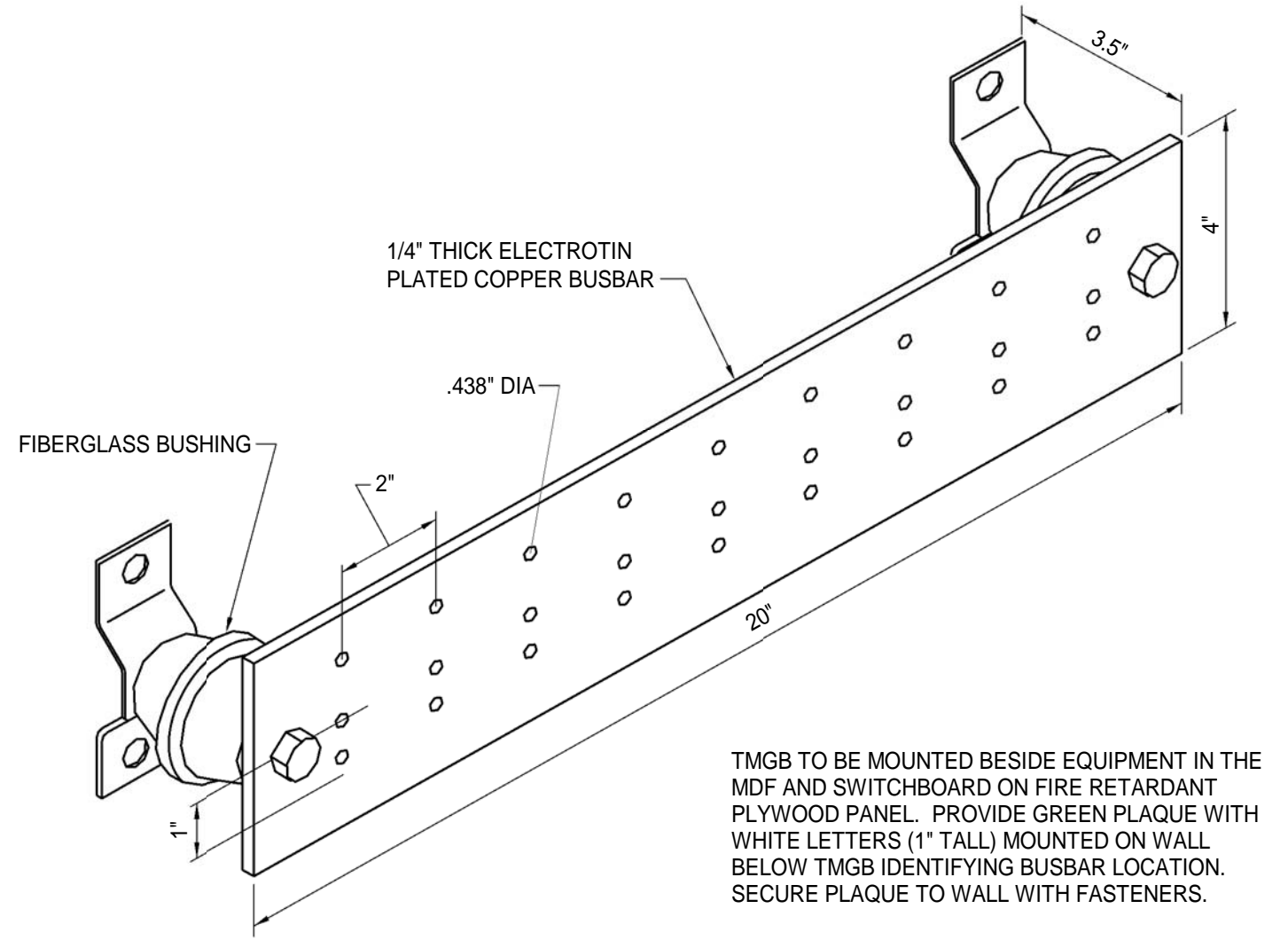
**BRANCH CIRCUIT
WIRE SIZE TABLE**

DEVICE RATING	RUNS	PHASE	NEUT.	EGC	CONDUIT
20	1	#12	#12	#12	3/4"
30	1	#10	#10	#10	3/4"
40	1	#8	#8	#10	3/4"
50	1	#6	#6	#10	1"
60	1	#4	#4	#10	1-1/4"
70	1	#4	#4	#8	1-1/4"
80	1	#3	#3	#8	1-1/2"
90	1	#2	#2	#8	1-1/2"
100	1	#1	#1	#8	1-1/2"
125	1	#1/0	#1/0	#6	2"
150	1	#1/0	#1/0	#6	2"
200	1	#3/0	#3/0	#6	2-1/2"
225	1	#4/0	#4/0	#4	2-1/2"
250	1	#250	#250	#4	3"
300	1	#350	#350	#4	3-1/2"
350	1	#500	#500	#3	4"
400	1	#500	#500	#3	4"
450	2	#4/0	#4/0	#2	2-1/2"
500	2	#250	#250	#2	3"
600	2	#350	#350	#1	3-1/2"
700	2	#500	#500	#1/0	4"
800	3	#350	#350	#1/0	3-1/2"

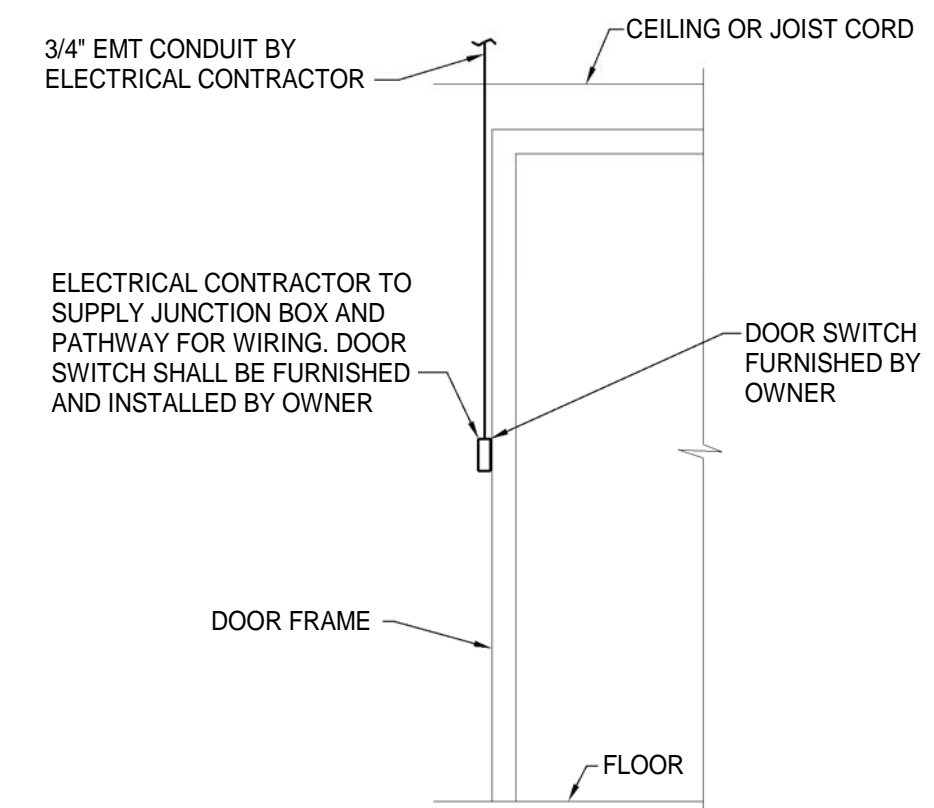
NOTES:
1. WIRE SIZING IS BASED ON 2008 NEC TABLES 250.66 AND 310.16.
2. DEVICE RATING REPRESENTS THE MAXIMUM SIZE OVERCURRENT PROTECTION DEVICE FOR WHICH THE ASSOCIATED WIRE MAY BE UTILIZED.



- DATA RACK NOTES THIS SHEET:**
- EQUIPMENT RACK BOLTED TO THE FLOOR.
 - 48 PORT FIBER ENCLOSURE COMPLETE WITH ENOUGH MULTI-MODE CONNECTORS, PLATES AND MULTI-MODE COUPLERS TO ACCOMMODATE 12, 50.0 MICRON MULTIMODE LC CONNECTIONS AND 8.0 MICRON SINGLE MODE LC CONNECTIONS.
 - SPACE FOR OWNER PROVIDED ETHERNET DATA SWITCH.
 - 48 PORT CATEGORY 6 PATCH PANEL.
 - HORIZONTAL CABLE MANAGEMENT.
 - VERTICAL CABLE MANAGEMENT WITH HINGE GROOVED COVERS.
 - TRIPP LITE VERTICAL SINGLE PHASE SWITCHED PDU, 20 AMP, 24 NEMA 5-15/20 RECEPTACLE OUTLETS, VISUAL CURRENT METER, TEMPERATURE MONITORING DEVICES, TEMPERATURE ALARM INTERFACE, AND ETHERNET INTERFACE FOR REPORTING POWER AND LOAD CHARACTERISTICS.
 - HORIZONTAL POWER STRIP COMPLETE WITH SIX (6) POWER OUTLETS, ON/OFF SWITCH, EXTENSION CORD AND NO SURGE SUPPRESSION.
 - 100 PAIR RACK MOUNTED 110 STYLE PUNCH DOWN BLOCK FOR DEDICATED PHONE LINES.
 - RACK MOUNTED UPS
 - SPACE FOR OWNER PROVIDED EQUIPMENT.

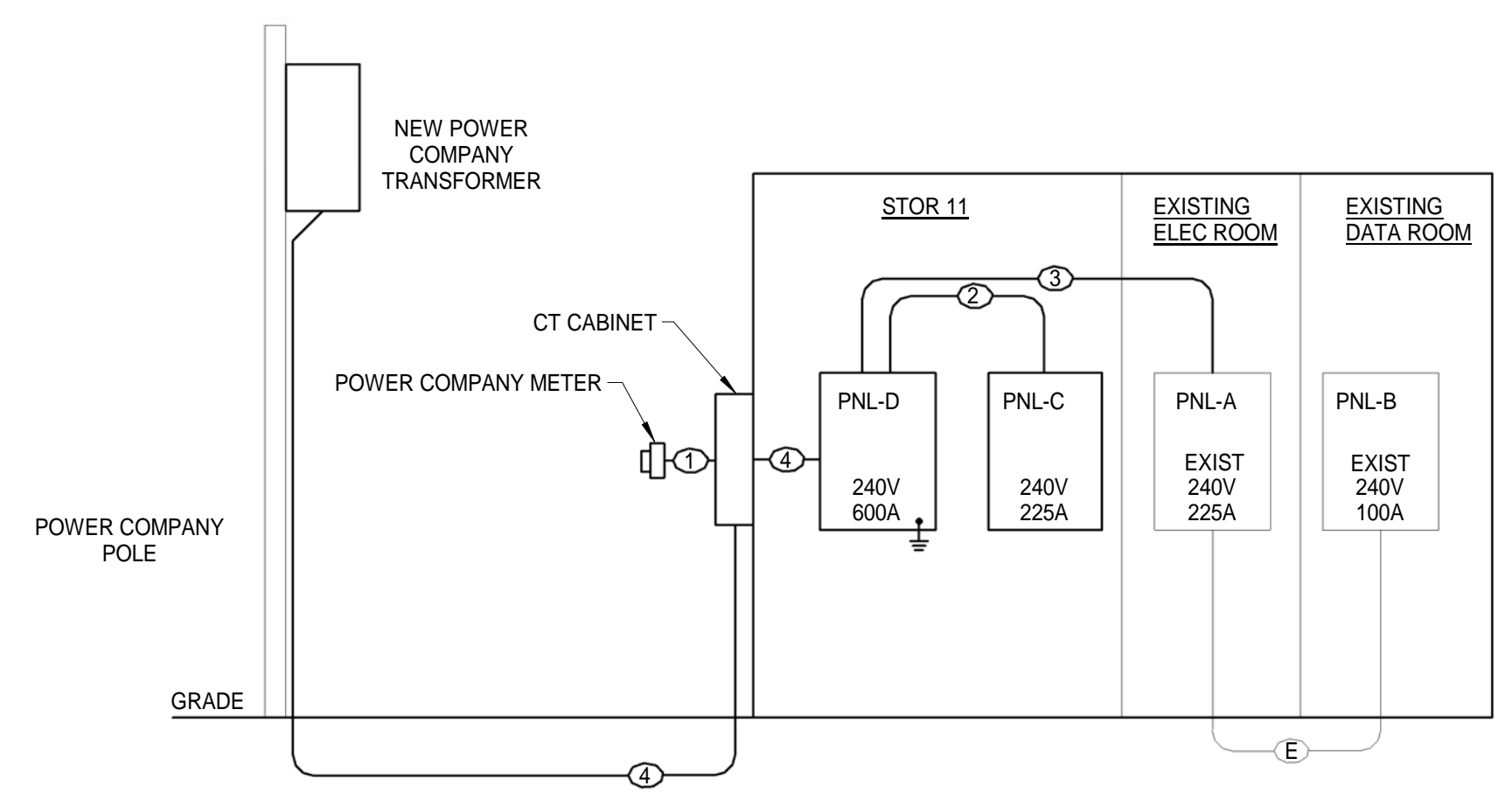


**TELECOMMUNICATIONS
MAIN GROUNDING BUSBAR (TMGB)**
NO SCALE



- NOTE:**
- CONTRACTOR TO COORDINATE PLACEMENT OF CONDUIT FOR DOOR SWITCH WITH APPROVED DOOR MANUFACTURER.

**BUILDING INTRUSION ALARM SYSTEM
TYPICAL DOOR SWITCH ELEVATION**
NOT TO SCALE



- RISER NOTES:**
- ONE (1) 1.25" EMPTY CONDUIT FOR METER WIRING BY THE POWER COMPANY
 - 3-#1/0 & 1-#6 IN 2" CONDUIT
 - 3-#4/0 & 1-#2 IN 2.5" CONDUIT
 - 2 (3-#350 & 1-#2/0 IN 3.5" CONDUIT)

POWER RISER DIAGRAM
NO SCALE

DATA RACK LAYOUT R1 IN IDF Stor 11
SCHEMATIC
DATA RACK R1 IN MDF CLOSET
DATA DROPS = ##
WIRELESS PoE PORTS = ##
TOTAL DATA DROPS = ##

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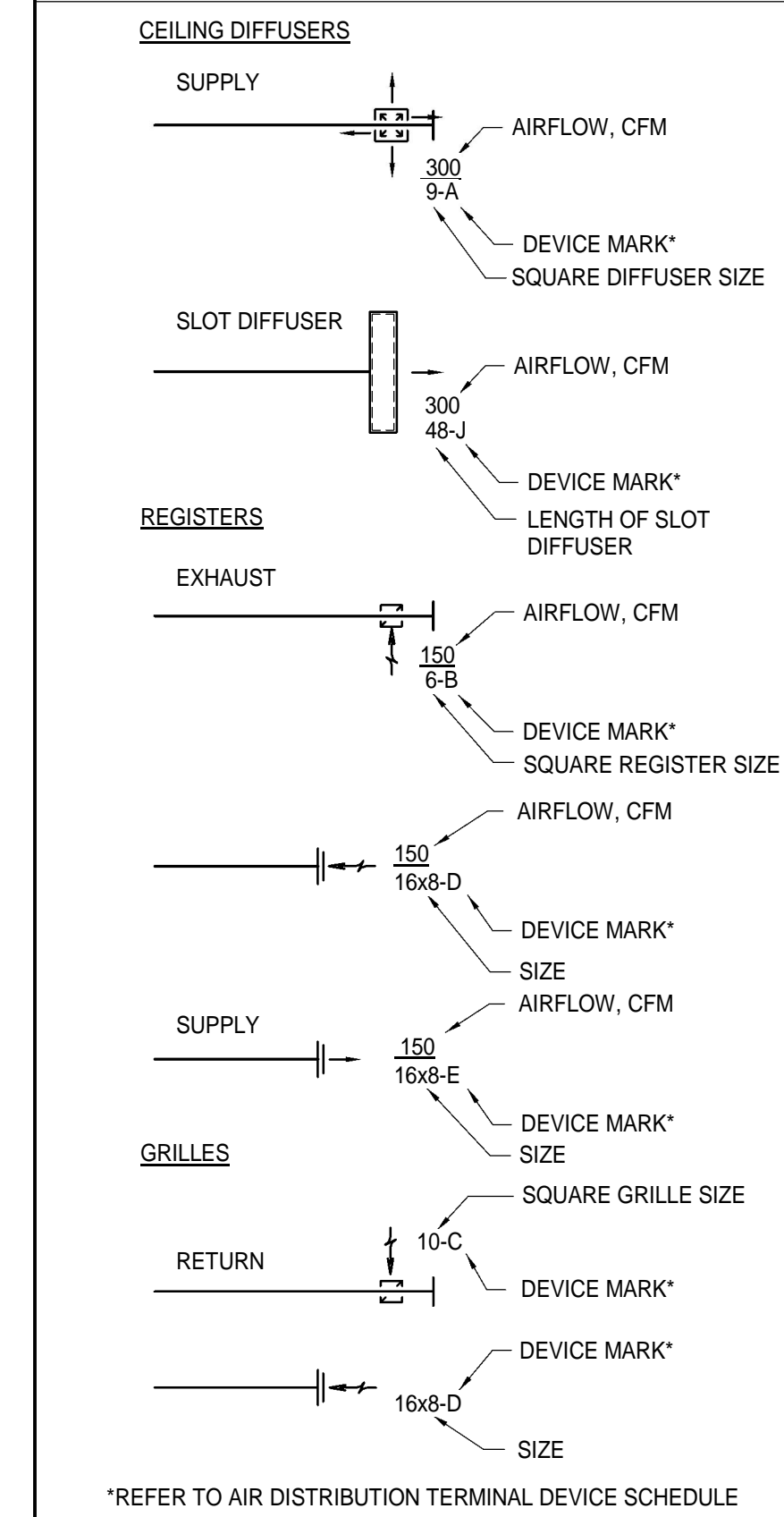
10 9 8 7 6 5 4 3 2 1

AIR HANDLERS																			
MARK	OUTSIDE AIR		SUPPLY FAN			COOLING COIL				HEATING COIL			FILTER		MAX. WEIGHT, LBS.	MANUFACTURER	INDOOR UNIT MODEL NO.	OUTDOOR UNIT MODEL NO.	
	TOTAL AIR, CFM	HIGH MIN CFM	EXT. H2O	HP	MAX BHP	MAX RPM	CAPACITY, MBH	ENTERING AIR, °DB	ENTERING AIR TEMP., °WB	LEAVING AIR TEMP., °DB	LEAVING AIR TEMP., °WB	ENT. AIR, °F	TOTAL CAP., MBH	KW					NO. OF STAGE S
HP-1	0	0	0.00	0			0.0	95.0	95.0										
HP-2	0	0	0.00	0			0.0	95.0	95.0										
HP-3	0	0	0.00	0			0.0	95.0	95.0										

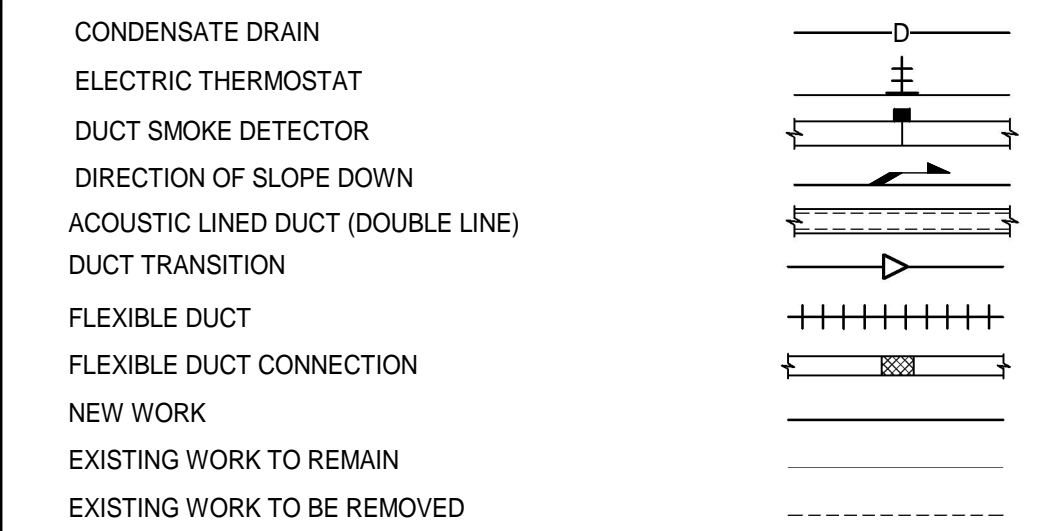
AIR DISTRIBUTION TERMINAL DEVICE SCHEDULE					
MARK	MANUFACTURER	MODEL	DESCRIPTION	DAMPER	FINISH
A	PRICE	AMD	LAY-IN	OBD	WHITE
B	PRICE	RCG	SURFACE	OBD	WHITE
C	PRICE	RCG	SURFACE	---	WHITE
D	PRICE	SDR	(5) 1/2" SLOTS	---	CUSTOM
E	PRICE	SDS	(2) 1/2" SLOTS	PC	CUSTOM

WALL HEATERS						
MARK	MANUFACTURER	HEATING CAPACITY, KW	HEATING CAPACITY, MBH	MODEL NO.	REMARKS	QUANTITY
WH	MARKEL	2	6.8	3452	RECESSED	4

DIFFUSER, REGISTER & GRILLE LEGEND



LEGEND



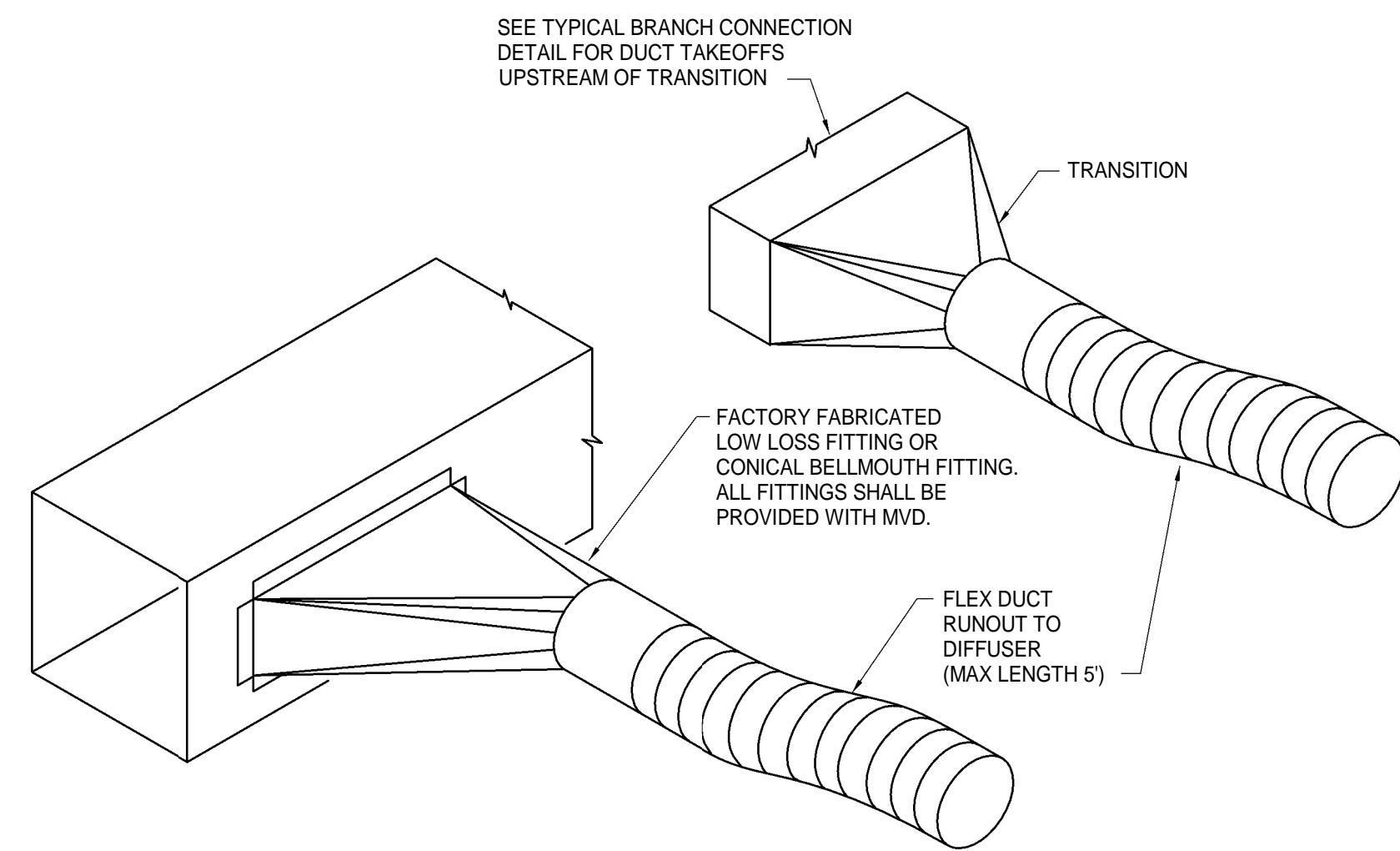
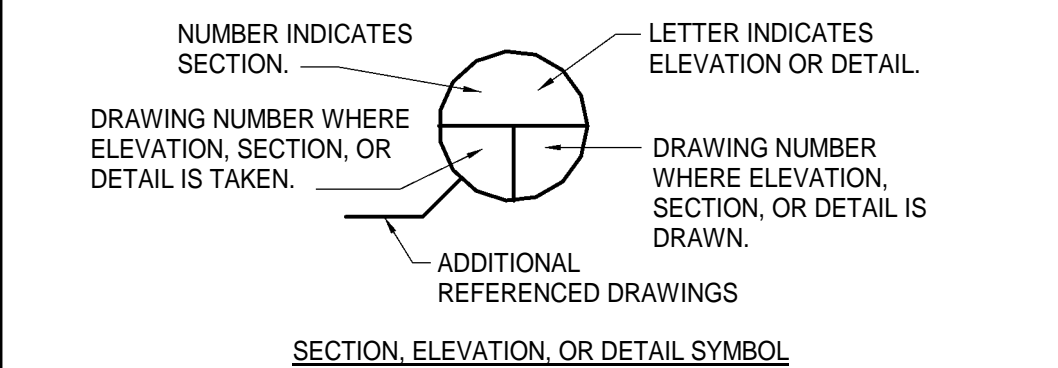
STANDARD ABBREVIATIONS

Ø	DIAMETER	HR	HOUR
x/x	FLAT OVAL	HZ	HERTZ
ABV	ABOVE	IN	INCH(ES)
AFD	ABOVE FINISHED FLOOR	KW	KILOWATTS
APD	AIR PRESSURE DROP	LAT	LEAVING AIR TEMPERATURE
ARRGMT	ARRANGEMENT	LBS	POUNDS
AUTO	AUTOMATIC	LVD	LOW VOLTAGE MOTOR OPERATED DAMPER
AAV	AUTOMATIC AIR VENT	LWT	LEAVING WATER TEMPERATURE
AUX	AUXILIARY	MAV	MANUAL AIR VENT
BEL	BELOW	MAX	MAXIMUM
BTU	BRITISH THERMAL UNIT	MBH	THOUSAND BTU PER HOUR
BTUH	BTU PER HOUR	MECH	MECHANICAL
CAP	CAPACITY	MFG	MANUFACTURER
CFM	CUBIC FEET PER MINUTE	MIN	MINIMUM
CMU	CONCRETE MASONRY UNIT	MOD	MOTOR OPERATED DAMPER (LINE VOLTAGE)
CO	CLEANOUT	MP SW	MOTOR PROTECTIVE SWITCH
CONC	CONCRETE	MTD	MOUNTED
CONN	CONNECT	MVD	MANUAL VOLUME DAMPER
CONT	CONTINUATION	NC	NORMALLY CLOSED
CR	CONTROL RELAY	NIC	NOT IN CONTRACT
CTR	CURRENT RELAY	NO	NORMALLY OPEN
CW	COLD WATER	NTS	NOT TO SCALE
DB	DRY BULB	OA	OUTSIDE AIR
dB	DECIBEL	OAT	OUTSIDE AIR TEMPERATURE
DDC	DIRECT DIGITAL CONTROL	OBD	OPPOSED BLADE DAMPER
DIM	DIMENSIONS	OCC	OCCUPANCY or OCCUPIED
DISC	DISCONNECT SWITCH	PD	PRESSURE DROP
DP	DOUBLE POLE	PLP	PHASE LOSS PROTECTION
DN	DOWN	RA	RETURN AIR
EXST	EXISTING	RECT	RECTANGULAR
EA	EACH	SDR	DUCT SMOKE DETECTOR
EAT	ENTERING AIR TEMPERATURE	SDPR	SMOKE DAMPER
ELEC	ELECTRIC	SS	STAINLESS STEEL
EQUIP	EQUIPMENT	S/S	START-STOP
ENT	ENTERING	SUSP	SUSPENDED
EWT	ENTERING WATER TEMP	SW	SWITCH
ESP	EXTERNAL STATIC PRESSURE	TEMP	TEMPERATURE
°F	FAHRENHEIT	TYP	TYPICAL
FA	FIRE ALARM	V	VERTICAL
FDPR	FIRE DAMPER	W	WATTS
FSDPR	COMBINATION FIRE/SMOKE DAMPER	WB	WET BULB
FIN FL	FINISHED FLOOR	WC	WATER COLUMN
FL	FLOOR	WG	WATER GAUGE
FLA	FULL LOAD AMPS	WS	WATER STOP
FP	FREEZE PROTECTION	WT	WEIGHT
FR	FROM or FAN RELAY	w	WITH
FS	FIRESTAT		
FT	FEET		
GAL	GALLONS		
GPM	GALLONS PER MINUTE		
H2O	WATER COLUMN or WATER GAUGE		
HOA	HAND-OFF-AUTOMATIC		
HP	HORSEPOWER		

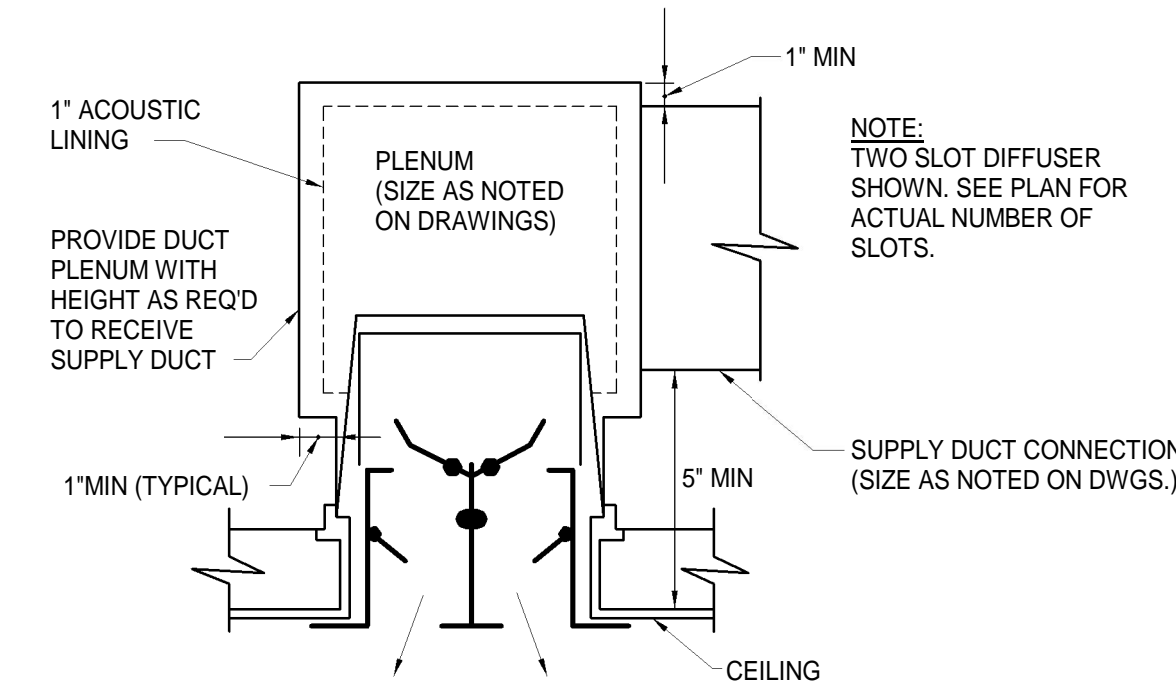
COORDINATION NOTE

ALL DUCTWORK AND PIPES SHALL BE COORDINATED WITH OTHER DUCTS, PIPES, LIGHTS, STRUCTURAL SYSTEM, CEILING SUPPORTS AND FRAMING BEFORE INSTALLATION. MINOR DUCT OFFSETS AND TRANSITIONS SHALL BE PROVIDED AS REQUIRED. WHERE TRANSITIONS ARE REQUIRED, CROSS SECTIONAL AREA OF DUCT SHALL NOT BE REDUCED. MEASUREMENTS FOR VERTICAL CLEARANCES OF DUCTWORK SHALL BE TAKEN AT THE JOB SITE BEFORE FABRICATION OF ANY DUCTWORK.

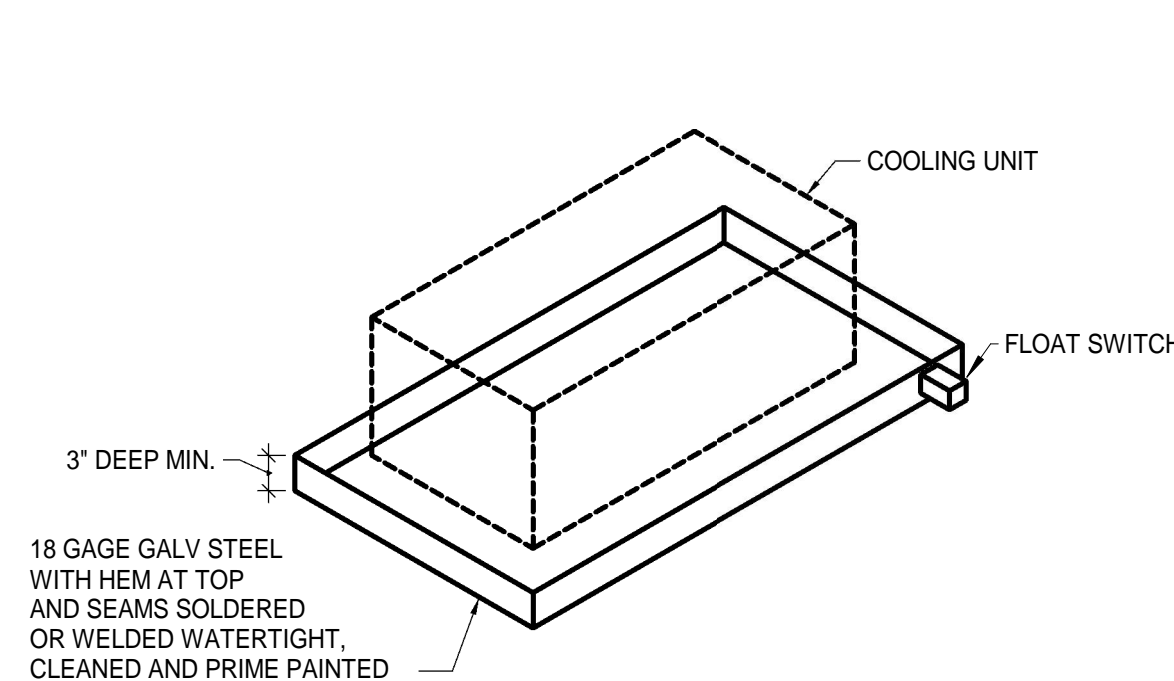
IDENTIFICATION KEY



CONNECTIONS FOR FLEX DUCT (TYP)
SCHEMATIC

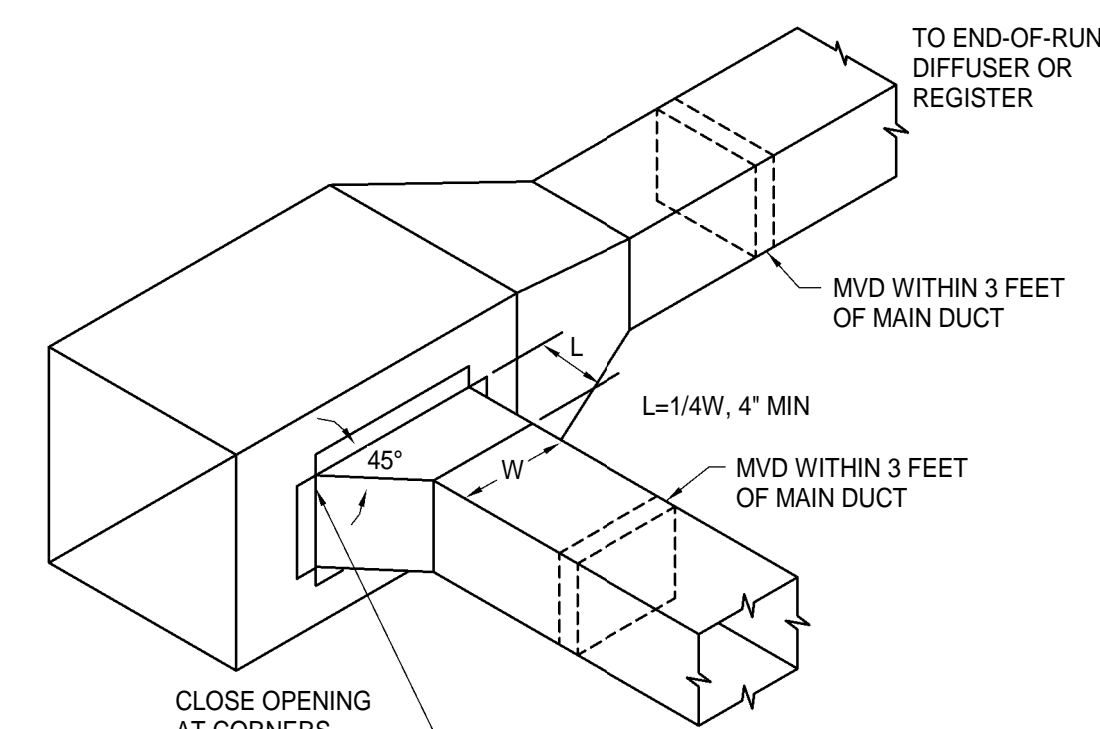


MOUNTING DETAIL FOR LINEAR DIFFUSERS
NO SCALE

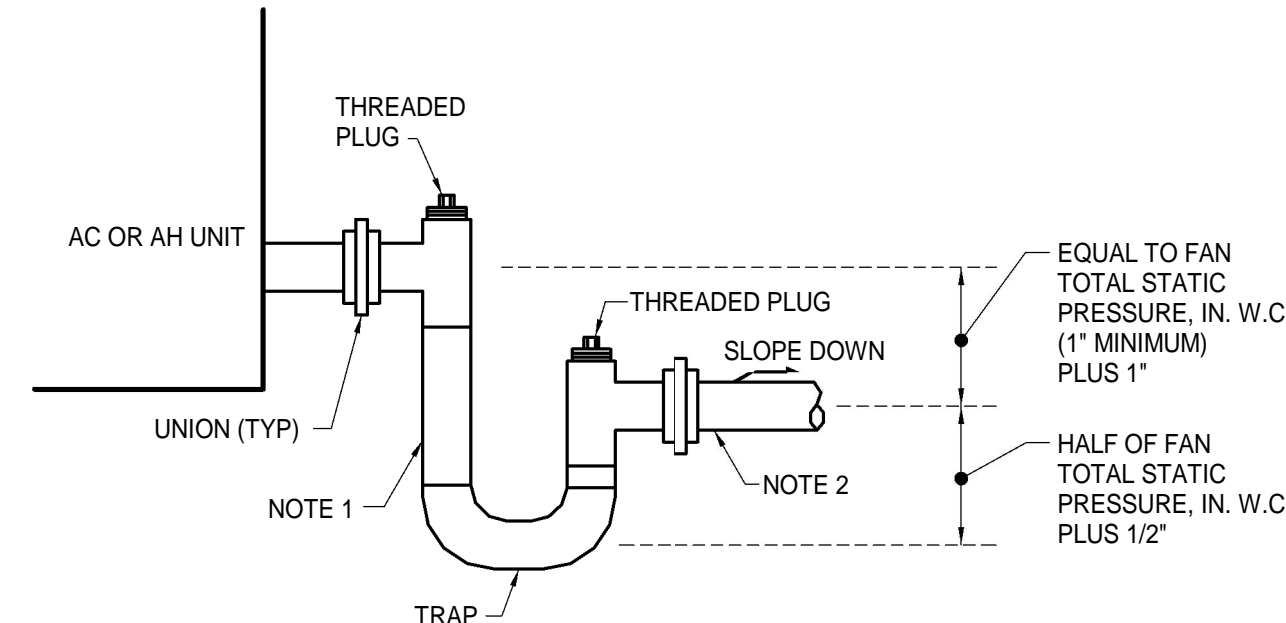


- NOTES:**
- ALL UNITS SHALL HAVE AUXILIARY DRAIN PAN UNDER ENTIRE UNIT.
 - DRAIN PAN SHALL BE REINFORCED WITH GALVANIZED STEEL ANGLES TO PREVENT SAGGING OR FLEXING WHEN FULL OF WATER.
 - PAN SHALL EXTEND MINIMUM 3" BEYOND SIDES OF UNIT.

AUXILIARY DRAIN PAN
NO SCALE



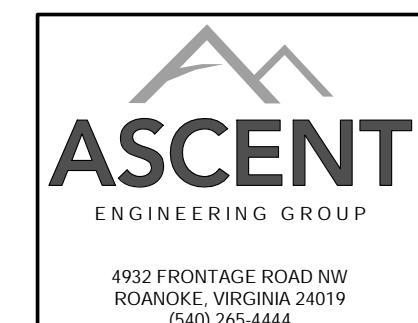
BRANCH CONNECTIONS DETAIL FOR SUPPLY, RETURN & EXHAUST DUCT (TYP)
SCHEMATIC



- NOTES:**
- DRAIN LINE SHALL BE FULL SIZE OF UNIT CONNECTION, BUT NO SMALLER THAN 3/4".
 - EXTEND TO NEAREST ROOF/FLOOR DRAIN UNLESS NOTED OTHERWISE.
 - ARRANGEMENT SHOWN IS SUITABLE FOR DRAW-THROUGH UNITS ONLY.

COOLING COIL CONDENSATE DRAIN
NO SCALE

BUILDING LOAD SUMMARY		
TOTAL HEATING REQUIREMENTS		
TRANSMISSION	=	X,XXX MBH
VENTILATION	=	X,XXX MBH
WARM-UP AND SAFETY	=	X,XXX MBH
TOTAL	=	X,XXX MBH
TOTAL COOLING REQUIREMENTS		
SUM OF PEAK LOADS	=	X,XXX TONS
TOTAL INSTALLED CAPACITY	=	X,XXX TONS
TOTAL INSTALLED CAPACITY, DX	=	X,XXX TONS



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MECHANICAL
EQUIPMENT
NOTES, LEGEND
& DETAILS

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Sheet No.

M001



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MECHANICAL - DEMOLITION AND NEW WORK PLANS

Issue Date

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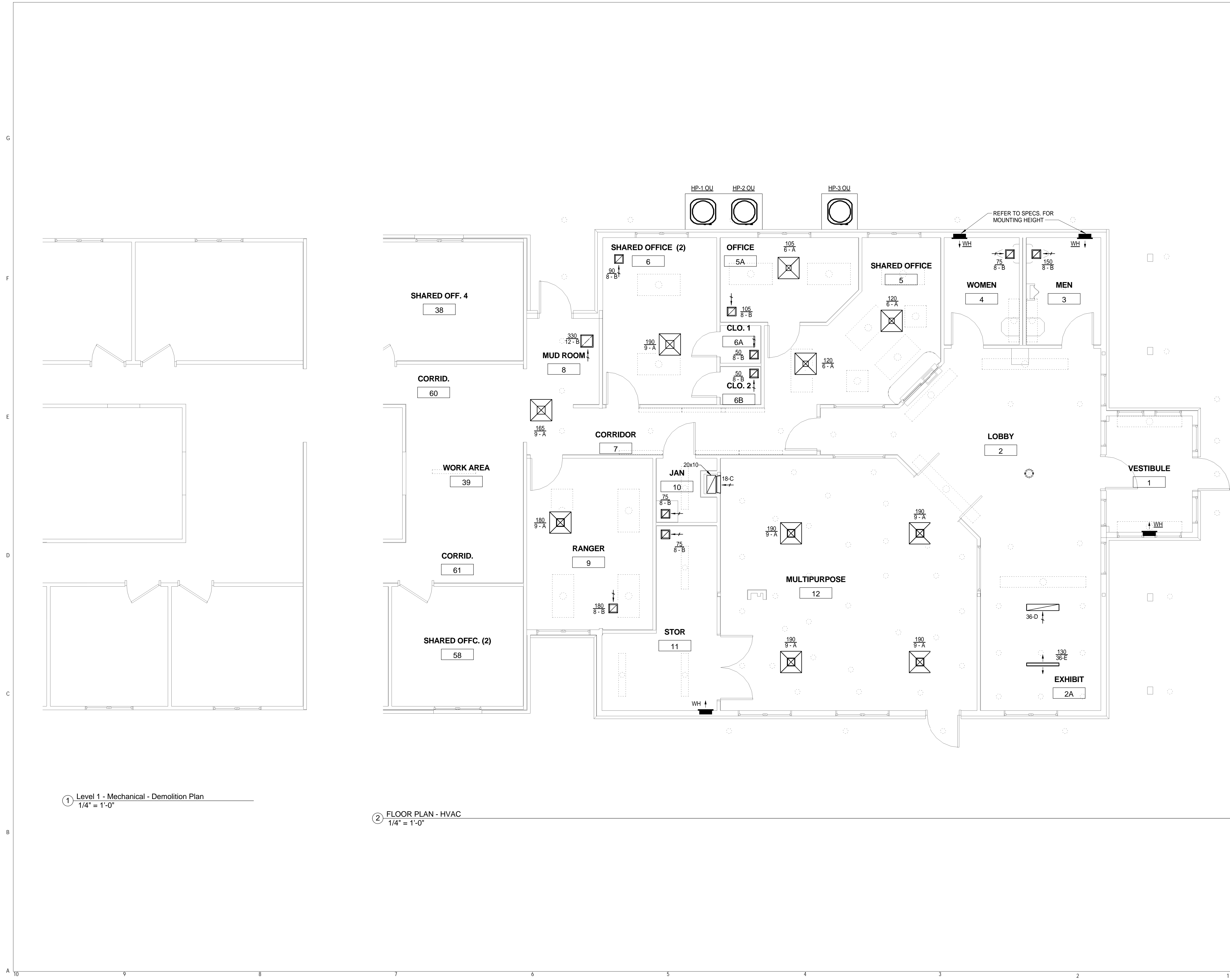
Project No. 16XXX

Sheet No.

M101



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① Level 1 - Mechanical - Demolition Plan
1/4" = 1'-0"

② FLOOR PLAN - HVAC
1/4" = 1'-0"



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MECHANICAL - ATTIC DUCTWORK PLAN

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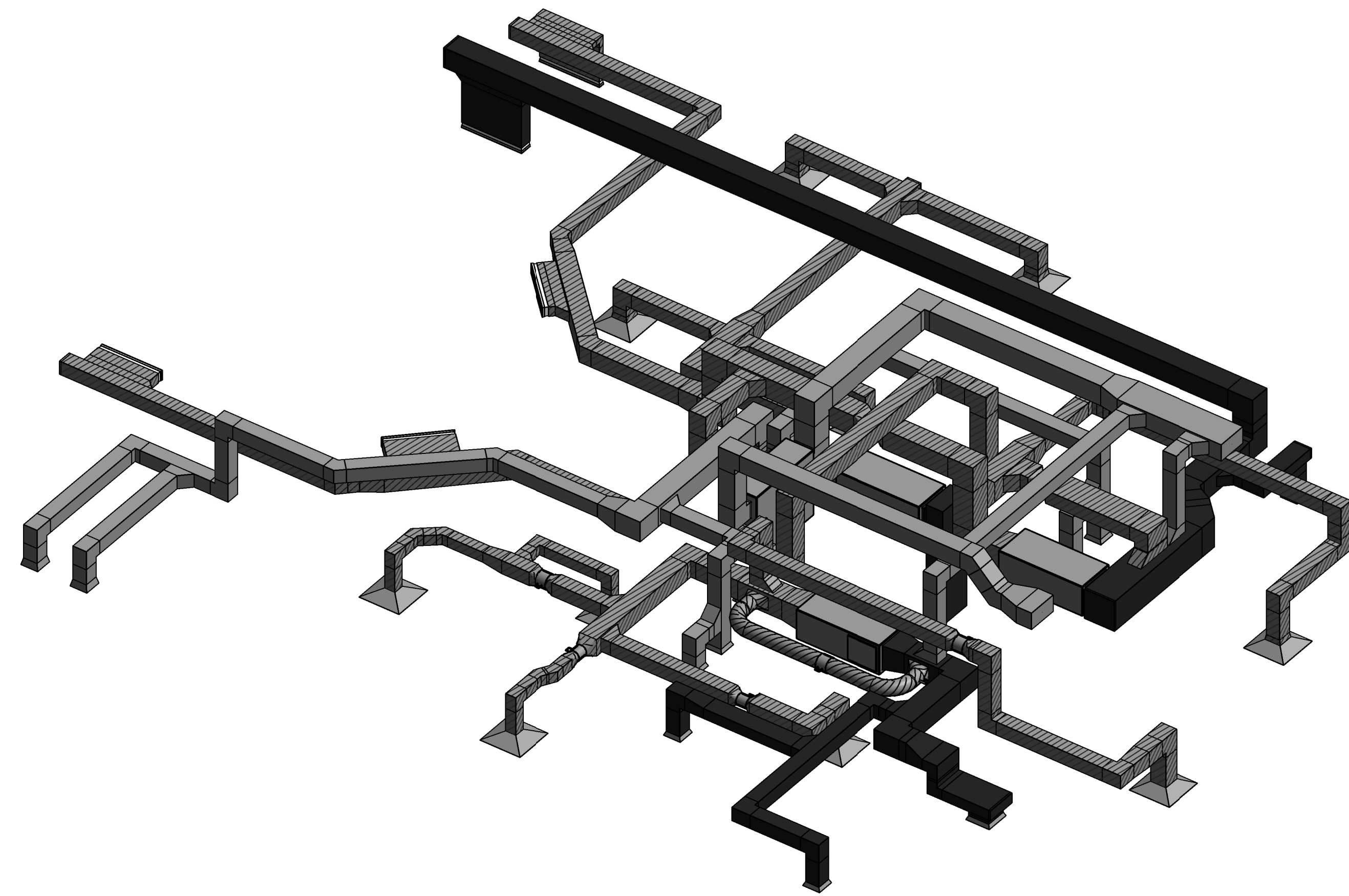
Project No. 16XXX

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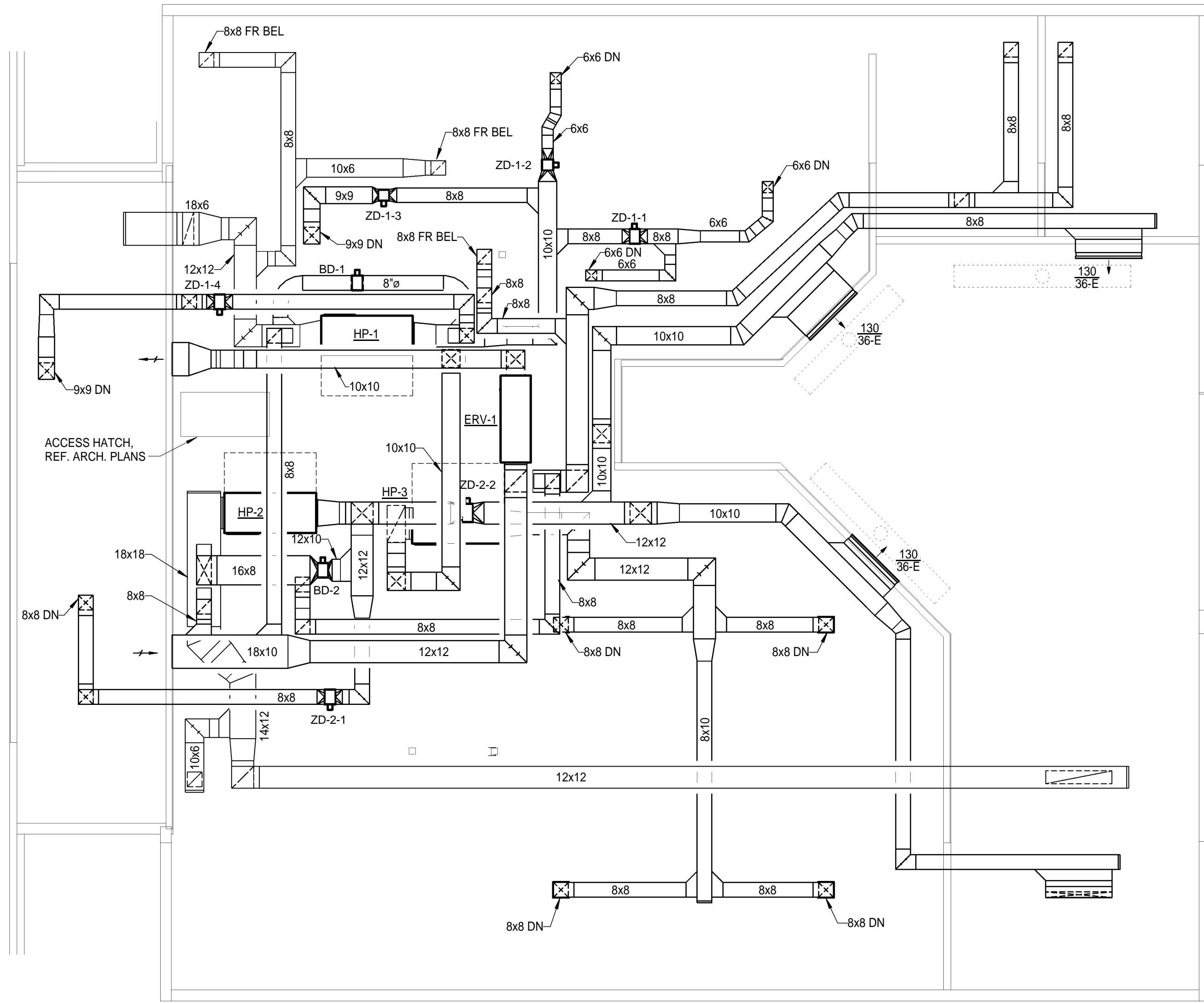
M201



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② 3D ATTIC DUCTWORK RISER



① ATTIC PLAN - HVAC
1/4" = 1'-0"

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10 9 8 7 6 5 4 3 2 1



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**PLUMBING -
LEGEND,
ABBREVIATIONS,
SCHEDULES &
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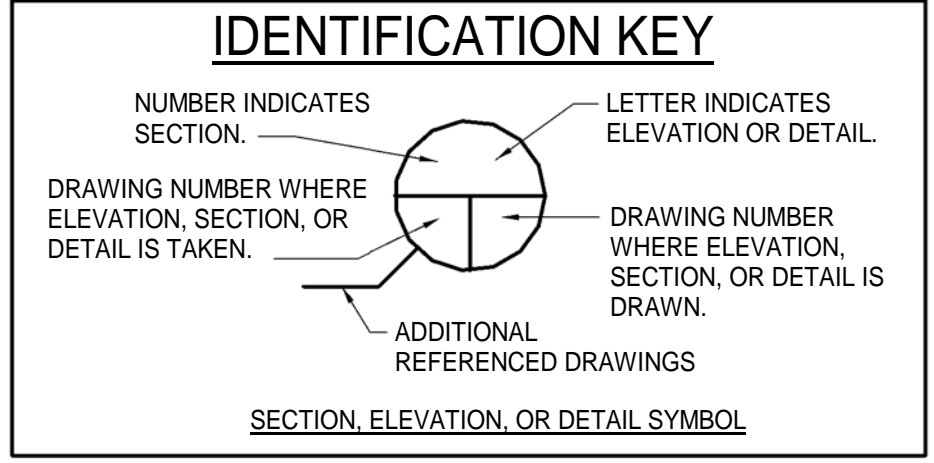
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P001



**PLUMBING LEGEND
SYMBOLS AND ABBREVIATIONS**

TYPICAL PIPING	TEE OR ELBOW FROM TOP OF MAIN		
BRANCH FROM RISER	TOP OF MAIN		
	BOTTOM OF MAIN		
	SIDE OF MAIN		
	IN PLAN		
DIAGRAMMATIC			
COLD WATER		CW	
HOT WATER		HW	
HOT WATER RETURN		HWR	
SANITARY SOIL & WASTE			
SANITARY VENT			
STORM SEWER		SD	
DIRECTION OF SLOPE DOWN			
DIRECTION OF FLOW			
CUTOFF VALVE (IN PLAN)			
CUTOFF VALVE (IN VERTICAL)		CV	
GLOBE VALVE			
CHECK VALVE			
BALANCING COCK			
BACKFLOW PREVENTER		BP	
CONNECT TO EXISTING			
LIMITS OF DEMOLITION			
SHOCK ABSORBER		SA	
STRAINER			
HANDICAPPED ACCESSIBLE FIXTURE			
ABV	- ABOVE	HB	- HOSE BIBB
AD	- ACCESS DOOR	HW	- HOT WATER
BEL	- BELOW	HWR	- HOT WATER RETURN
BP	- BACKFLOW PREVENTER	INV	- INVERT
CI	- CAST IRON	L	- LAVATORY
CO	- CLEAN-OUT	MS	- MOP SINK
CONC	- CONCRETE	OSD	- OPEN SITE DRAIN
CV	- CUTOFF VALVE	PVC	- POLYVINYL CHLORIDE
CW	- COLD WATER	P&T	- PRESSURE & TEMPERATURE
DFU	- DRAINAGE FIXTURE UNIT	REL	- RELIEF VALVE
DN	- DOWN	SA	- SHOCK ABSORBER
DS	- DOWNSPOUT	SAN	- SANITARY
DSB	- DOWNSPOUT BOOT	SC	- SILL COCK
E	- EXISTING	SD	- STORM SEWER
EL	- ELEVATION	SF	- SQUARE FEET
EWC	- ELECTRIC WATER COOLER	U	- URINAL
FD	- FLOOR DRAIN	V	- VENT
FL	- FLOOR	VTR	- VENT-THRU-ROOF
		W	- WASTE
		WC	- WATER CLOSET



- GENERAL PLUMBING NOTES**
- UNDERGROUND SANITARY AND STORM SEWER PIPING EXITING THE BUILDING SHALL BE SCHEDULE 40 PVC TO AT LEAST 5'-0" OUTSIDE THE BUILDING WALL UNLESS INDICATED OTHERWISE.
 - MAKE PROPER H & CW, HWR, W, V, ETC. PIPING CONNECTIONS TO ALL FIXTURES AND EQUIPMENT EVEN THOUGH ALL BRANCH MAINS, ELBOWS, AND CONNECTIONS ARE NOT SHOWN. PROVIDE SHOCK ABSORBER AT ALL FLUSH VALVE FIXTURES.
 - CHECK WITH ARCHITECTURAL WORKING DRAWINGS BEFORE ROUGHING-IN PLUMBING FIXTURES.
 - SLOPES AND INVERT ELEVATIONS OF SEWERS, MANHOLES, SEPTIC TANKS, ETC. SHALL BE ESTABLISHED AND VERIFIED BY PLUMBING CONTRACTOR BEFORE ANY PIPING IS INSTALLED IN ORDER THAT PROPER SLOPES WILL BE MAINTAINED AND NECESSARY INVERT ELEVATIONS OBTAINED.
 - COORDINATE THE LOCATION OF ALL PIPING WITH LIGHTING FIXTURES, DUCT, GRILLES, HEATING, PIPING, ETC..
 - PROVIDE 3/4" CW CONNECTIONS TO URINALS, 3/4" H & CW TO MOP SINKS, 1/2" CW TO TANK TYPE WCS, 1/2" H & CW TO LAVS, AND 1/2" CW CONNECTIONS TO EWCS.
 - PROVIDE 1/8" x 4" x 20" STEEL PLATES FOR HOLDING SUPPORTING BOLTS FOR WALL HANGERS ON LAVATORIES AND URINALS. PLATE TO BE INSTALLED IN WALL CONSTRUCTION BEHIND FIXTURES.
 - ALL CUTOFF VALVES, SHOCK ABSORBERS, ETC. SHALL BE ACCESSIBLE THROUGH AN ACCESS DOOR OR THROUGH LAY-IN CEILING. PROVIDE ACCESS DOOR WHERE REQUIRED.
 - CONTRACTOR SHALL FIELD VERIFY LOCATION OF ALL EXISTING PIPING, MANHOLES, ETC. BEFORE ANY NEW PIPING IS INSTALLED.
 - ALL VENT TERMINALS ABOVE ROOF SHALL BE A MINIMUM OF 25'-0" AWAY FROM HVAC UNITS, AIR INTAKE OR OTHER FRESH AIR INTAKE LOUVERS.

PLUMBING FIXTURE SCHEDULE

FIXTURE TYPE	DESCRIPTION	MOUNTING HEIGHT	COLD WATER, IN.	HOT OR TEMPERED WATER, IN.	WASTE, IN.	VENT, IN.	BASIS OF DESIGN
EWC	WALL HUNG ELECTRIC WATER COOLER WITH BOTTLE FILLER (HC)	42" FLOOR TO BUBBLER ORIFICE	1/2"		2"	1 1/2"	ELKAY LZS8WSP
L	WALL HUNG 20"x18" VITREOUS CHINA LAVATORY (HC)	34" FLOOR TO RIM	1/2"	1/2"	2"	2"	AMERICAN STANDARD 0355.012, MOEN 8800F05
MS	24"x24" MOP SINK, FLOOR MOUNTED, WITH WALL FAUCET, HOSE, AND MOP HOOKS	SINK FLOOR MTG; FAUCET 4'-0" AFF	3/4"	3/4"	3"	2"	FIAT MSB2424
SC	FREEZE PROOF SILLCOCK	18" ABV FIN GRADE	3/4"				JOSAM 71350
U	VITREOUS CHINA WALL MOUNTED URINAL, 0.125GPF (HC)	17" FLOOR TO RIM	3/4"		2"	2"	AMERICAN STANDARD 6590.001, SLOAN REGAL186-0.125XL
WC	FLOOR MOUNTED, 1.1 GPF, PRESSURE ASSISTED FLUSH TANK (HC)	17" FLOOR TO SEAT	1/2"		4"	2"	AMERICAN STANDARD 2467.100

THERMAL EXPANSION TANK

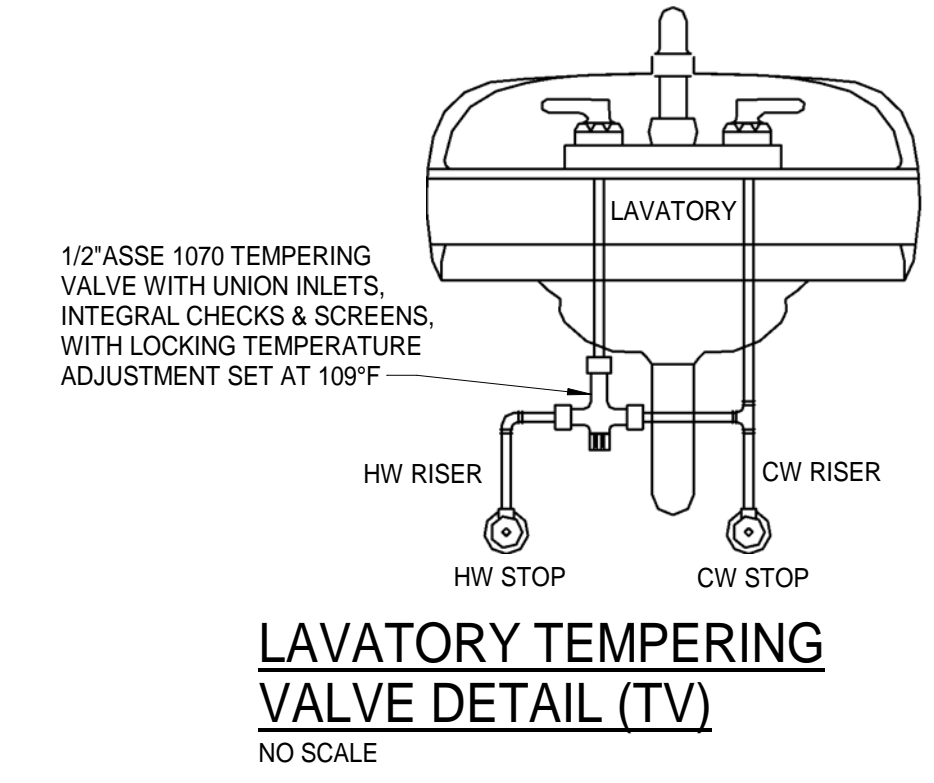
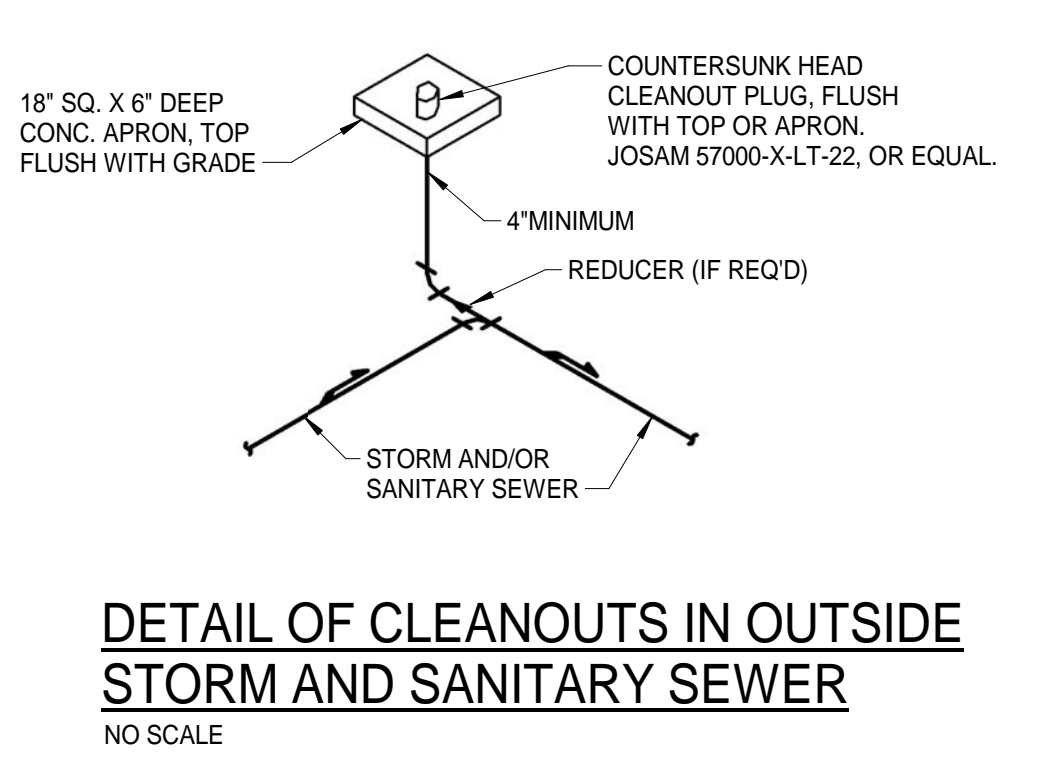
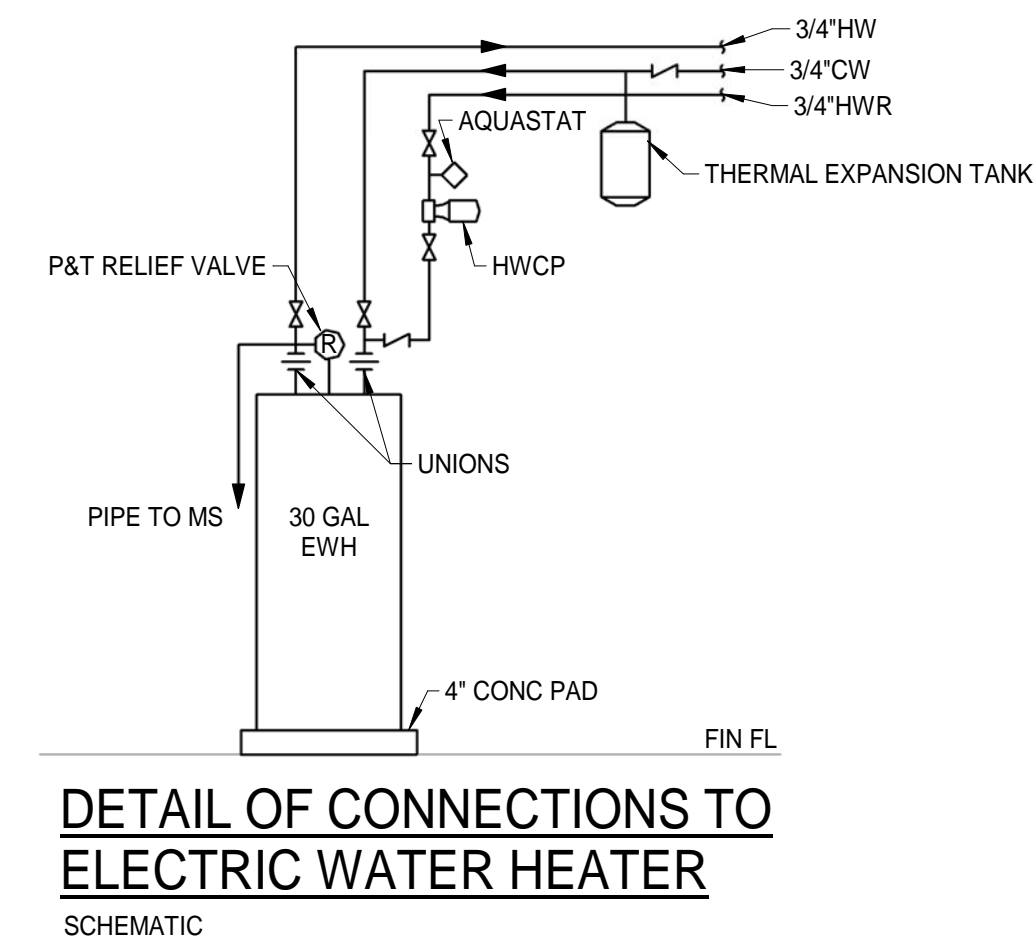
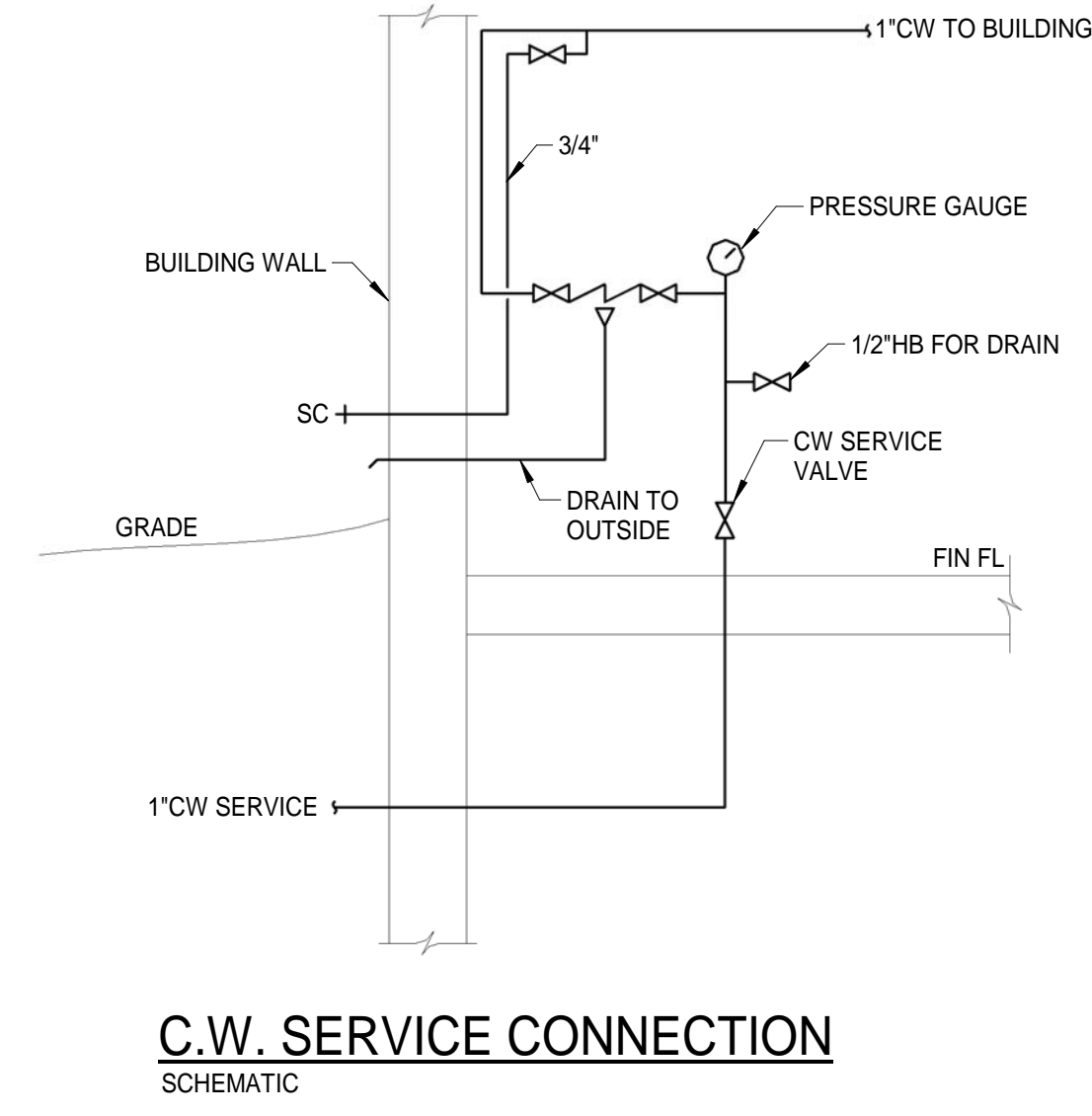
MARK	CAPACITY, GALLONS	ACCEPTANCE VOL., GALLONS	MAXIMUM WORKING PRESSURE, PSIG	MANUFACTURER	MODEL	CONNECTION	QUANTITY
TET	2.0	0.9	125	AMTROL	THERM-X-TROL ST-5	3/4"	1

HOT WATER CIRCULATOR PUMP

MARK	MAX. CAP., GPM	MIN. CAP., GPM	HEAD, FT. H2O	HP	SIZE	MANUFACTURER	SERIES	VOLTAGE, V	PHASE
HWCP	0	0	0	0	3/4"	BELL & GOSSETT	NBF-12F	120	1

WATER HEATER

MARK	LOCATION	CAPACITY	KW	HW CONNECTION	CW CONNECTION	VOLTAGE	MANUFACTURER	MODEL
EWH	10 - JAN	30 gal	6.0	3/4"	3/4"	240 V	RUUD	PRO E30 M2 RU95



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GLENWOOD-PEDLAR RANGER OFFICE ADDITION AND RENOVATIONS

PROGRESS DRAWINGS NOT FOR CONSTRUCTION

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3.03 HANGERS AND SUPPORTS:

- A. HORIZONTAL PIPING: SUPPORT ALL PIPING WITHOUT STRAIN OR SAGGING. HANGERS SHALL BE PIPE RING, SPLIT PIPE RING, EXTENSION SPLIT PIPE CLAMP, OR CLEVIS TYPE, WITH MEANS FOR ADJUSTING LENGTH OF HANGER ROD. HANGERS SHALL BE SUPPORTED FROM BEAM CLAMPS, INSERTS OR APPROVED SOCKETS INSERTED IN SLAB CONSTRUCTION. PIPE HANGER RODS SHALL BE ATTACHED TO THE TOP CHORD ONLY ON STEEL JOISTS AND BEAMS BY JOIST OR BEAM CLAMPS, WITHOUT WELDING. WELDING OF SUPPORT RODS WILL NOT BE PERMITTED WITHOUT WRITTEN APPROVAL OF THE ARCHITECT. ENGINEER. WIRE, THIN STRAP, AND PERFORATED STRAP HANGERS WILL NOT BE ACCEPTABLE.
- B. VERTICAL PIPING: SUPPORT ALL RISERS AND STACKS AT EACH FLOOR WITH RISER CLAMPS. SUPPORT PIPING ON WALLS WITH RING OR SPLIT RING HANGERS WITH WALL FLANGE.
- C. CAST IRON, IRON, AND STEEL PIPING: HANGERS AND SUPPORTS SHALL BE MALLEABLE IRON OR CARBON STEEL.
- D. COPPER PIPING: HANGERS AND SUPPORTS SHALL BE COPPER, BRASS, OR COPPER PLATED STEEL, OR COPPER PLATED MALLEABLE IRON.
- E. INSULATED PIPING: PROVIDE FACTORY FABRICATED SADDLES OR SHIELDS UNDER ALL HANGERS AND SUPPORTS PROVIDED FOR INSULATED WATER PIPING. SIZE SADDLES AND SHIELDS FOR EXACT FIT TO MATE WITH PIPE INSULATION. ALL OTHER INSULATED PIPES SHALL BE SUPPORTED DIRECTLY BY THE HANGER; NO SADDLE OR SHIELD REQUIRED.
- F. HANGER SPACING FOR PVC PIPES: SPACE NOT OVER 5 FT. APART FOR 5 FT. LENGTHS OR 10 FT. APART FOR 10 FT. LENGTHS, LOCATED NEAR A HUB, AND AT EACH FITTING WHERE "NO-HUB" PIPE CONNECTIONS ARE MADE.
- G. HANGER SPACING FOR COPPER AND STEEL PIPES: SPACE NOT OVER 6 FT. APART FOR 1-1/4" OR SMALLER PIPE, AND NOT OVER 10 FT. APART FOR PIPES 1-1/2" OR LARGER. LOCATE HANGERS AT POINTS WHERE PIPES CHANGE DIRECTION. INTERMEDIATE SUPPORTS SHALL BE PROVIDED ON EXPOSED VERTICAL PIPING TO PREVENT SWAYING OF PIPING.

3.04 INSTALLATION:

- A. GRADING OF DOMESTIC WATER PIPING: PIPING SHALL BE SO GRADED TO PERMIT DRAINAGE OF ALL PIPING AT COLD WATER SERVICE VALVES, AT FIXTURES OR OTHER DRAIN VALVES. DRAINAGE OF LOW POINTS SHALL BE ACCOMPLISHED BY EXTENDING 1/4" BRANCHES TO DRAIN VALVES WHERE INDICATED ON DRAWINGS OR WHERE REQUIRED ON THE JOB FOR COMPLETE DRAINAGE OF THE SYSTEMS.
- B. GRADE OF SANITARY PIPING: MINIMUM GRADE SHALL BE 1/4" PER FOOT EXCEPT A MINIMUM GRADE OF 1/8" PER FOOT WILL BE PERMITTED FOR 3" AND LARGER PIPE WHERE REQUIRED TO MEET ESTABLISHED INVERT ELEVATIONS.
- C. CHANGES IN DIRECTION OF SANITARY PIPING: LONG SWEEP 1/4 BENDS, 1/6, 1/8, OR 1/16 BENDS, OR 45 DEGREE OR 1/2 "Y" FITTINGS, EXCEPT SANITARY "TEES" OR SHORT 1/4 BENDS MAY BE USED FOR CHANGES IN DIRECTION OF FLOW FROM THE HORIZONTAL TO THE VERTICAL.
- D. DIELECTRIC FITTINGS: AT ALL LOCATIONS WHERE DISSIMILAR METALS ARE JOINED, PROVIDE DIELECTRIC INSULATING CONNECTIONS ESPECIALLY BUILT TO PREVENT ELECTROLYSIS SUCH AS SPECIAL COUPLINGS, FITTINGS OR UNIONS.

2.05 FIXTURES AND EQUIPMENT[S](O[M]):

- A. GENERAL: PROVIDE AND INSTALL ALL FIXTURES AS INDICATED ON DRAWINGS AND HEREIN SPECIFIED WITH ALL SUPPLIES, WASTE AND VENT CONNECTIONS, ALL FITTINGS, ALL NECESSARY SUPPORTS, FAUCETS, VALVES AND TRAPS. FURNISH INDIVIDUAL STOPS ON SUPPLY PIPES OF ALL FIXTURES EXCEPT FOR SUPPLY PIPES TO FLUSH VALVES WITH INTEGRAL STOPS.
- B. (WC) WATER CLOSETS: VITREOUS CHINA, SIPHON-JET, FLOOR-MOUNTED, ELONGATED BOWL, PRESSURE ASSISTED, TANK TYPE, 1.28 GAL. PER FLUSH, BOLT CAPS, PROVIDE WITH CHURCH NO. 9500C, BENEKE NO. 527, OLSONITE NO. 95, OR ACCEPTED EQUAL BY OTHERS, WHITE OPEN FRONT SEAT WITHOUT COVER.
- C. (U) URINALS: WALL HUNG VITREOUS CHINA, WASHOUT URINAL, 0.125 GAL. PER FLUSH WITH EXPOSED FLUSH VALVE.
- D. (L) LAVATORIES: VITREOUS CHINA LAVATORY WITH BACK, 20" X 18" SIZE, 4" CENTERS, CONCEALED ARM OR WALL HANGER SUPPORT, FURNISHED WITH HEAVY BRASS CHROME FINISH FAUCET, POWERS LM495-2, ASSE 1070 TEMPERING VALVE AND GRID DRAIN. ALL EXPOSED PIPING, CONNECTIONS, ETC. SHALL BE CHROME PLATED.
- E. LAVATORY SUPPORTS FOR STUD AND DRYWALL PARTITIONS: WHERE LAVATORIES ARE MOUNTED ON METAL STUD AND DRYWALL PARTITIONS PROVIDE JOSAM 17100 SERIES, SMITH 0700 SERIES WADE 520 SERIES OR ZURN Z-1231, CONCEALED ARM CARRIERS, MODIFIED AS REQUIRED TO MOUNT LAVATORIES AT SPECIFIED HEIGHT ABOVE FINISHED FLOOR.
- F. LAVATORY FITTINGS: FITTINGS FOR EACH LAVATORY SHALL BE CHROME FINISH CLOSE PATTERN SUPPLY PIPE WITH 3/8" VALVE, LOOSE KEY STOP AND HANDLE, 3/8" THREAD INLET, ESCUTOCHRON, AND 3/8" FLEXIBLE RISER, CHROME FINISH ADJUSTABLE CAST BRASS 1" TRAP WITH SWIVEL JOINT, CLEANOUT PLUG, 17 GAGE TUBING DRAIN TO WALL, SLIP JOINT INLET, ESCUTOCHRON AND SET SCREW, INLET AND OUTLET SIZES TO BE AS REQUIRED BY FIXTURES.
- G. FOR EACH LAVATORY THE STOPS AND DRAIN SHALL BE INSTALLED HIGHER THAN NORMAL; CLOSE UNDER BOTTOM OF LAVATORY, AS DIRECTED ON THE JOB. DRAIN AND WATER SUPPLIES SHALL BE INSULATED FROM BOTTOM OF EACH LAVATORY TO WALL WITH "TRUBRO HANDI LAV-GUARD 102" W. WITH ACCCESSORY 105 AS REQUIRED, BOCAR PRODUCTS "TRAP WRAP" 500R WITH ACCESSORY NO. 500HS OR 500HSK AS REQUIRED OR MCQUIRE "PROWRAP" PW2125 OR PW2125WC WHITE PRE-FORMED SAFETY COVERS TO PREVENT POSSIBLE BURNING OF USER'S LEGS.
- H. (MS) MOP SINK: 24"x24" SIZE, MOLDED STONE FLOOR MOUNTED, FURNISHED WITH ROUGH CHROME TWO HANDLE FAUCET WITH INTEGRAL VACUUM BREAKER, HOSE, HOSE HOLDER, AND MOP HOLDER. PROVIDE CHECK VALVES ON H&CW SUPPLY PIPING.
- I. (EWC) ELECTRIC WATER COOLERS: BARRIER FREE SINGLE UNIT, STAINLESS STEEL TOP AND VINYL CLAD CABINET, AIR COOLED, 120 VOLTS, SINGLE PHASE, 60 CYCLE HERMETICALLY SEALED UNIT, 8.0 GPH CAPACITY WITH BOTTLE FILLER. COLOR SHALL BE AS SELECTED BY THE ARCHITECT.
- J. ELECTRIC WATER HEATER: ELECTRIC WATER HEATER, 4500 WATTS ELEMENT, SINGLE PHASE, 240V, 30 GALLON TANK, T&P RELIEF VALVE, IN-LINE, EXPANSION TANK HAVING A TOTAL VOLUME OF TWO GALLONS, AND CIRCULATING PUMP, CONTROL SHALL BE BY HONEYWELL L6006, OR EQUAL, AQUASTAT, PROVIDE 4 1/2" DIAL THERMOMETER ON HW SUPPLY.

2.06 STERILIZING, FLUSHING AND TESTING:

- A. TESTING OF PIPING SYSTEMS SHALL BE IN ACCORDANCE WITH THE VIRGINIA UNIFORM STATEWIDE BUILDING CODE AND THE INTERNATIONAL PLUMBING CODE SECTION 610.
- B. NEW PIPING SHALL BE STERILIZED, FLUSHED AND TESTED PRIOR TO CONNECTING TO EXISTING PIPING.
- C. DOMESTIC WATER PIPING: STERILIZE WITH CHLORINE, 50 PARTS PER MILLION, FOR A 24-HOUR PERIOD. AFTER WHICH THE SYSTEM SHALL BE FLUSHED BEFORE BEING PUT INTO SERVICE.
- D. FLUSHING OF PIPING: FLUSH ALL PIPING TO REMOVE SEDIMENT, PIPE SCALE, ETC., FROM WATER LINES.

2.07 IDENTIFICATION:

- A. ALL PIPING AND EQUIPMENT SHALL BE IDENTIFIED WITH 1" HIGH STENCILED LETTERS. PIPING SHALL HAVE FLOW DIRECTION ARROWS.

2.08 PIPE INSULATION:

- A. ALL WATER PIPE SHALL BE INSULATED WITH FINE HEAVY DENSITY FIBROUS GLASS INSULATION WITH FOIL-SCRM-WHITE KRAFT PAPER VAPOR BARRIER JACKET MOLDED TO CONFORM TO PIPING OR DRAIN, 0.25 BTU/IN SQ. FT.FHR MAXIMUM 'K' VALUE AT 75°. ALL INSULATING MATERIALS SHALL HAVE A COMPOSITE FLAME SPREAD RATING NOT EXCEEDING 25, AND A SMOKE DEVELOPED RATING NOT EXCEEDING 50 AS TESTED UNDER PROCEDURE ASTM D-84-75, NFPA 255 AND UL 723. ALL INSULATION SHALL BE 1" THICK. INSULATION EXPOSED TO WEATHER SHALL HAVE MINIMUM 0.032 ALUMINUM JACKET WITH ALL JOINTS SEALED WATERTIGHT.

PART 3 - EXECUTION

3.01 PIPING WORK IN GENERAL:

- A. CUT PIPE ACCURATELY TO MEASUREMENT ESTABLISHED AT PROJECT. PROVIDE PLUGS AND CAPS AS INDICATED AND WHERE NECESSARY. PROVIDE PROPERLY FOR EXPANSION CONTRACTION AND DRAINAGE IN ALL PIPING. INSTALL ALL OUTSIDE PIPING BELOW FROST LINE UNLESS OTHERWISE INDICATED.

3.02 PIPE JOINTS AND CONNECTIONS:

- A. SCREW JOINTS: REAM PIPES AFTER CUTTING AND THREADING, FREE FROM FINS AND BURRS. JOINTS SHALL BE MADE WITH COMPOUND OR TEFLON TAPE APPLIED TO MALE THREADS ONLY, AND ALL EXPOSED THREADS ON PIPES MOPPED WITH COMPOUND OR COVERED WITH TAPE TO PREVENT RUST. FULL CUT THREADS. NOT MORE THAN 3 EXPOSED THREADS AFTER JOINT MADE UP TIGHT.
- B. COPPER PIPE JOINTS: ALL SWEAT COPPER FITTINGS FOR WATER, SANITARY, WASTE AND VENT PIPING SHALL BE MADE UP WITH LEAD FREE SOLDER. SOLDER SHALL BE 95.5 TIN ANTIMONY OR 95.4.5-5 TIN-ANTIMONY-SILVER. ALL JOINTS FOR MECHANICALLY FORMED TEE FITTINGS SHALL BE BRAZED IN ACCORDANCE WITH THE COPPER DEVELOPMENT ASSOCIATION COPPER TUBE HANDBOOK USING BCUP SERIES FILLER MATERIAL. REFER HEREINAFTER TO SPECIAL PIPING SYSTEMS FOR SPECIFIC SOLDER REQUIREMENTS.
- C. UNIONS: IN SCREWED PIPE, 2" AND SMALLER, TO BE GROUND JOINT WITH BRASS SEAT; FLANGED UNIONS FOR PIPES LARGER THAN 2".

PLUMBING SPECIFICATIONS

PART 1 - PLUMBING GENERAL REQUIREMENTS:

1.01 PLUMBING GENERAL SPECIFICATIONS:

- A. CONTRACTOR SHALL PROVIDE A COMPLETE AND OPERATING SYSTEM, INCLUDING ALL REQUIRED ACCESSORIES. ALL SYSTEMS SHALL BE FULLY CLEANED, TESTED, BALANCED AND READY FOR OWNER OCCUPANCY, WITH COMPLETE CERTIFIED TESTING AND BALANCING REPORT. CONTRACTOR SHALL PROVIDE SHOP DRAWINGS TO THE ENGINEER FOR APPROVAL. FOR ALL EQUIPMENT INDICATED BY [S] CONTRACTOR SHALL PROVIDE OPERATION AND MAINTENANCE MANUALS FOR ALL EQUIPMENT MARKED WITH [O[M]], BOUND IN A SINGLE BINDER, COMPLETE WITH INDEX, TO THE ENGINEER FOR REVIEW AND TRANSMITTAL TO THE OWNER.
- B. THE COMPLETED PLUMBING INSTALLATION AND ALL MATERIALS AND EQUIPMENT SHALL CONFORM TO ALL LOCAL ORDINANCES, CODES, AND OTHER REGULATIONS AND STANDARDS THAT ARE APPLICABLE. THESE ARE INTENDED AS A MINIMUM AND SHALL BE EXCEEDED IF REQUIRED BY THE SPECIFICATIONS OR THE DRAWINGS. IN THE EVENT OF CONFLICT BETWEEN THE CODES, STANDARDS, OR REGULATIONS AND INFORMATION CONTAINED IN THE CONTRACT DOCUMENTS, THE APPLICABLE CODE, STANDARDS, OR REGULATION SHALL TAKE PRECEDENCE.
- C. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COORDINATION AND PROPER RELATION OF THE PLUMBING WORK TO THE WORK OF OTHER TRADES AND TO ACTUAL BUILDING CONDITIONS. NO ADDITIONAL COMPENSATION NOR EXTENSION OF COMPLETION TIME WILL BE GRANTED FOR EXTRA WORK CAUSED BY THE LACK OF COORDINATION. CONTRACTOR SHALL VISIT THE SITE BEFORE SUBMITTING BIDS TO VERIFY ALL CONDITIONS.
- D. ALL CUTTING AND PATCHING FOR THE INSTALLATION OF NEW WORK IN EXISTING BUILDING SHALL BE DONE BY THE CONTRACTOR INSTALLING THE WORK. PATCHING SHALL BE DONE BY SKILLED TRADESMEN AND FINISH SHALL MATCH ADJACENT AREAS.
- E. EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS TO CONFORM WITH THE DETAILS AND APPLICATION INDICATED.
- F. PROVIDE NECESSARY SUPPORTS FOR ALL EQUIPMENT AND APPURTENANCES AS REQUIRED.
- G. DEMOLITION: REMOVE ALL EQUIPMENT, PIPING AND FIXTURES AS INDICATED ON THE DRAWINGS AND AS REQUIRED. DRAWINGS INDICATE A BRIEF OVERVIEW OF THE DEMOLITION AND ARE NOT INTENDED TO BE ALL INCLUSIVE. ANY ADDITIONAL EQUIPMENT AND/OR PIPING DISCOVERED DURING DEMOLITION AND NOT REUSED SHALL BE REMOVED. ALL PIPES REMAINING AFTER DEMOLITION SHALL BE CAPPED. THE OWNER SHALL SELECT AND RETAIN EQUIPMENT AND MATERIALS TO BE REMOVED AND NOT REUSED. ALL OTHER EQUIPMENT AND MATERIAL SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE PROMPTLY REMOVED FROM THE PREMISES. DEMOLITION SHALL NOT PROCEED UNTIL THE WORK SCHEDULE IS APPROVED BY THE OWNER.
- H. ASBESTOS: CONTRACTOR SHALL REVIEW THE OWNER'S ASBESTOS MANAGEMENT PLAN TO ENSURE SUSPECTED ASBESTOS CONTAINING MATERIALS ARE UNDER SURVEILLANCE.
- I. DISCOVERY: IF DURING THE CONSTRUCTION OF THIS PROJECT, WORK INVOLVING FRIABLE ASBESTOS IS SUSPECTED, OR ENCOUNTERED, ALL WORK IN THIS AREA SHALL BE DISCONTINUED AND THE OWNER OR THE OWNER'S REPRESENTATIVE, SHALL BE NOTIFIED IMMEDIATELY AND THE OWNER WITH HIS OWN FORCE OR BY SEPARATE CONTRACT SHALL BE RESPONSIBLE FOR COMPLETE INVESTIGATION, REMOVAL, AND DISPOSITION OF THE FRIABLE ASBESTOS HAZARD IN ACCORDANCE WITH APPLICABLE LAWS AND REGULATIONS.

PART 2 - PRODUCTS:

2.01 ACCESS DOORS:

- A. FURNISH ACCESS DOORS WHERE INDICATED AND/OR REQUIRED TO PROVIDE ACCESS TO CUTOFF VALVES IN BRANCH HOT AND COLD WATER MAINS, SHOCK ABSORBER, ETC.

2.02 SANITARY AND STORM SEWER SYSTEM:

- A. PIPE AND FITTINGS: SOIL, WASTE, DRAIN AND VENT PIPING SHALL CONFORM TO THE FOLLOWING UNLESS OTHERWISE NOTED:
 1. SANITARY ABOVE AND BELOW FLOOR: SCHEDULE 40 PVC D/WV POLYVINYL CHLORIDE PLASTIC PIPE AND FITTINGS, ASTM D2665, FOR SOLVENT JOINTS.
 2. STORM BELOW GRADE: CORRUGATED, BLACK, FLEXIBLE, PIPING WITH DOWN SPOUT ADAPTORS

2.03 CLEANOUTS

- A. GENERAL: PROVIDE CAST IRON BODY, NICKEL BRONZE TOP, BRASS OR BRONZE SCREW PLUG CLEANOUTS WHEREVER INDICATED, AND WHERE DIRECTION CHANGES IN ACCORDANCE WITH LOCAL CODES. SET CLEANOUT PLUGS IN GRAPHITE GREASE.

2.04 WATER PIPE; FITTINGS AND VALVES:

- A. ABOVE GROUND PIPING: TYPE "L" HARD TEMPER COPPER PIPE CONFORMING TO ASTM B88, CAST OR WROUGHT COPPER SOLDER FITTINGS CONFORMING TO ASME B16.18 OR ASME B16.22.
- B. VALVES FOR USE WITH COPPER PIPE [S]:
 1. CUTOFF VALVES: BRONZE BODY BALL VALVE, CHROMIUM PLATED BALL, THREADED OR SOLDER ENDS, LEVER HANDLE, RATED FOR 600 PSI WOG, APOLLO 70-100/200, MILWAUKEE BA100BA150, NIBCO T-S-585-70 OR ACCEPTED EQUAL.
 2. CUTOFF AND DRAIN VALVES: BRONZE BODY BALL VALVE, CHROMIUM PLATED BALL, THREADED ENDS, DRAIN WITH CAP, RATED FOR 400 PSI WOG, APOLLO 95-100, HAMMOND 8701, WATTS B-6300, SERIES OR ACCEPTED EQUAL. CUTOFF VALVES AS LISTED ABOVE USED WITH A SEPARATE 3/8" VALVE INSTALLED IN LINE AS THE DRAIN VALVE MAY BE USED IN LIEU OF THE VALVE WITH DRAIN PLUG.
 3. GLOBE VALVES: FOR USE IN BY-PASS OR WHERE VALVE IS NORMALLY CLOSED BRONZE, THREADED OR SOLDER ENDS, COMPOSITION DISC, NON-ASBESTOS PACKING RATED FOR 300 PSI WOG, NIBCO S-235, STOCKHAM B24T, GRINNELL 3240SJ OR ANGLE VALVE, NIBCO T-311, STOCKHAM B-222T, GRINNELL 3220, OR ACCEPTED EQUAL.
 4. CHECK VALVES: BRONZE "Y" PATTERN SWING CHECK, BRONZE DISC AND SEAT, THREADED OR SOLDER ENDS, RATED FOR 200 PSI WOG, NIBCO 413, STOCKHAM B-321, MILWAUKEE 507, OR ACCEPTED EQUAL.
 5. BALANCING VALVES: BELL & GOSSETT "CIRCUIT SETTER PLUS" MODEL CB, OR ACCEPTED EQUAL, BRONZE BODY BALL VALVE, TWO READOUT TAPS WITH CAPS, MEMORY STOP, SWEAT OR NPT ENDS, MINIMUM 200 PSI WORKING PRESSURE WOG.
- C. BACKFLOW PREVENTERS: WATTS MODEL 909, WILKINS MODEL 975XL, CONBRACO MODEL 40-200, 2" SIZE, REDUCED PRESSURE ZONE, ASSE 1013 LISTED PROVIDE AIR GAP CONNECTION AND EXTEND VENT TO OUTSIDE.

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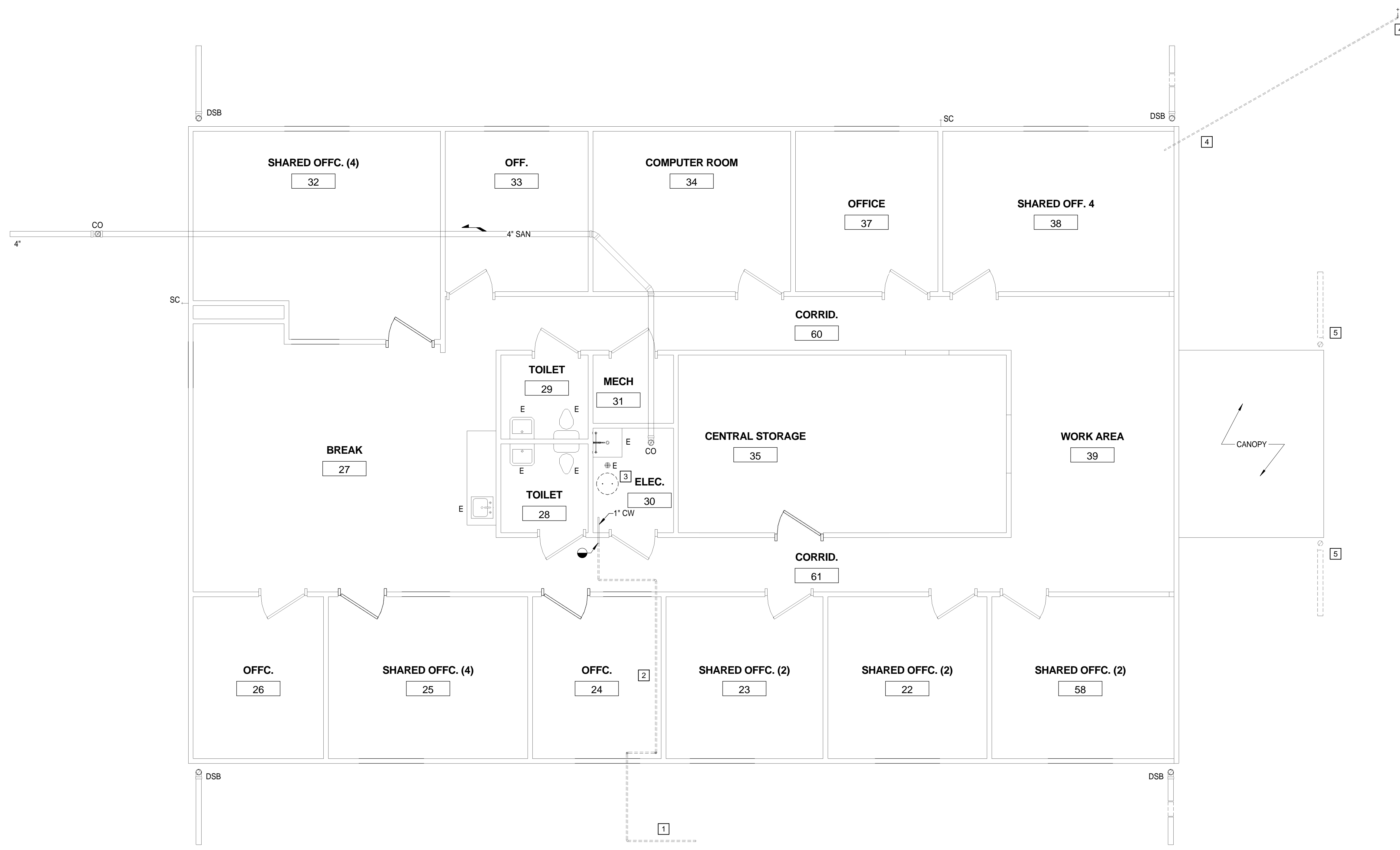
P101

GENERAL NOTES:

1. ALL CW, HW, AND HWR PIPING SHALL BE ABOVE CEILING UNLESS OTHERWISE NOTED.
2. ALL SANITARY PIPING SHALL BE BELOW FINISHED FLOOR UNLESS OTHERWISE NOTED.
3. ALL STORM DRAIN PIPING SHALL BE BELOW FINISHED GRADE UNLESS OTHERWISE NOTED.
4. ALL VENT PIPING SHALL BE ABOVE CEILING UNLESS OTHERWISE NOTED.

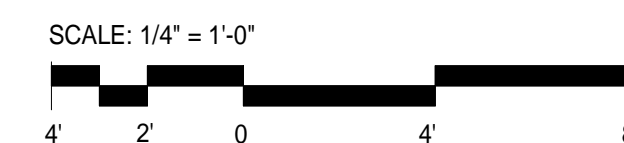
DEMOLITION NOTES:

- 1 REMOVE EXISTING 1" CW SERVICE. MAKE 1" CW FEED READY FOR NEW SERVICE ENTRANCE.
- 2 REMOVE 1" CW ABOVE CEILING TO MAKE READY FOR NEW BACKFEED.
- 3 REMOVE EXISTING ELECTRIC WATER HEATER. CAP CW AND MAKE HW PIPE READY FOR BACKFEED.
- 4 REMOVE EXISTING YARD HYDRANT AND ALL ASSOCIATED SUPPLY PIPING.
- 5 REMOVE EXISTING DOWNSPOUT BOOT AND STORM DRAIN PIPING.



1 DEMOLITION PLAN - PLUMBING
1/4" = 1'-0"

GRAPHIC SCALE



ASCENT
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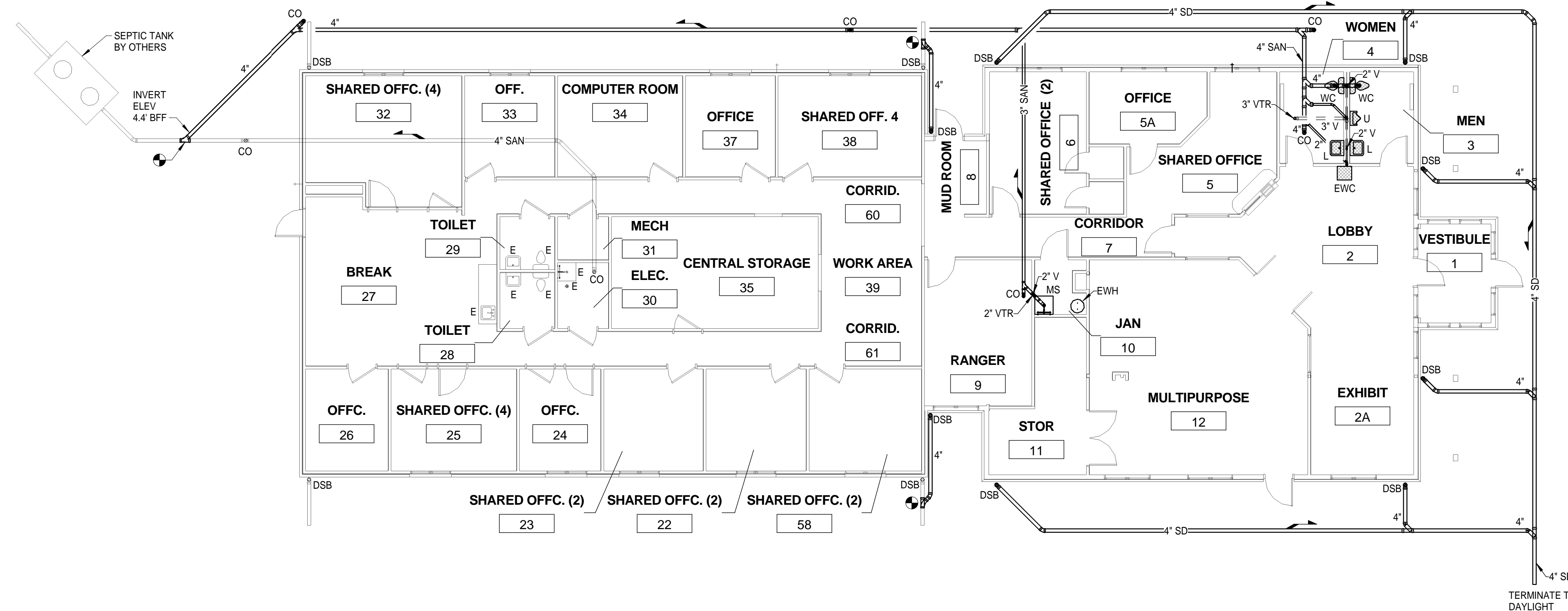
GLENWOOD-PEDLAR RANGER OFFICE ADDITION AND RENOVATIONS

PROGRESS DRAWINGS
NOT FOR CONSTRUCTION

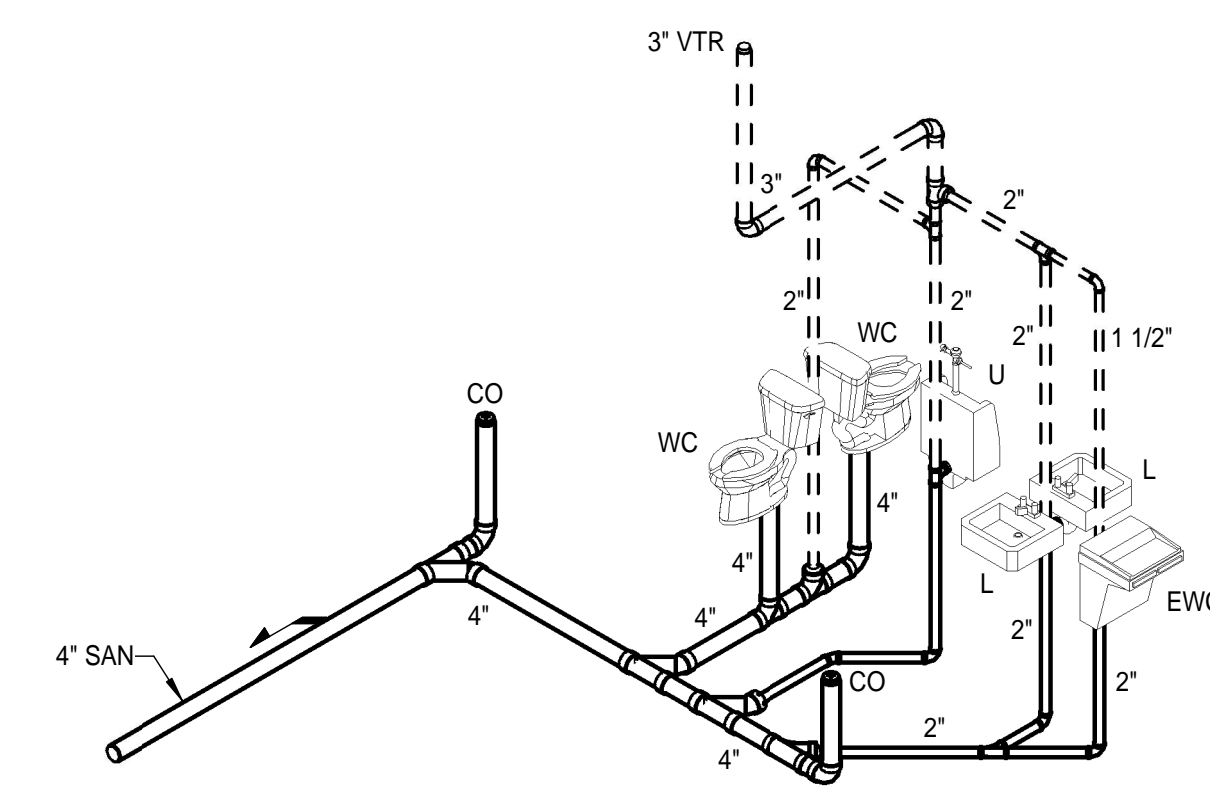
PLUMBING - SANITARY AND STORM PLAN

GENERAL NOTES:

1. ALL SANITARY PIPING SHALL BE BELOW FINISHED FLOOR UNLESS OTHERWISE NOTED.
2. ALL STORM DRAIN PIPING SHALL BE BELOW FINISHED GRADE UNLESS OTHERWISE NOTED.
3. ALL VENT PIPING SHALL BE ABOVE CEILING UNLESS OTHERWISE NOTED.

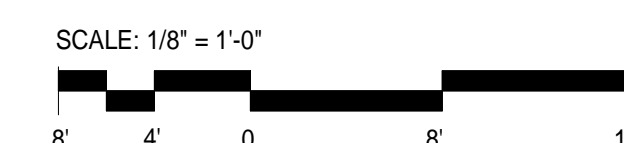


1 FLOOR PLAN - SANITARY AND STORM
1/8" = 1'-0"



2 MEN - 3 AND WOMEN - 4 - PLUMBING RISER - SANITARY

GRAPHIC SCALE



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Issue Date

Revisions:

△ MNTH. DAY. YEAR

Drawn By: Author

Review By: Checker

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