El Monte Cart Shed

PLAN SHEETS

Project Location

El Monte Golf Course
1300 Valley Dr, Ogden, UT, 84401

COVER
SHEETS 17
PAGE 0

REV	DATE	DESCRIPTION
0	MM/DD/YY	DESCRIPTION

TECHNICALLY PROFESSIONALLY ENGINEERED
Digitally signed by DANIEL SHIPP GILLIES
DANIEL SHIPP GILLIES
NO. 4939584-2202
EXP. 12/31/2025
CIVIL
STATE OF UTAH

DESIGNED DSG
DRAWN DSG
CHECKED
DATE 10/6/25

DRAWING SCALE
This bar measures exactly one inch on the original drawing
H: N/A (22x34) (11x17)
V: N/A (22x34) (11x17)

COVER SHEET

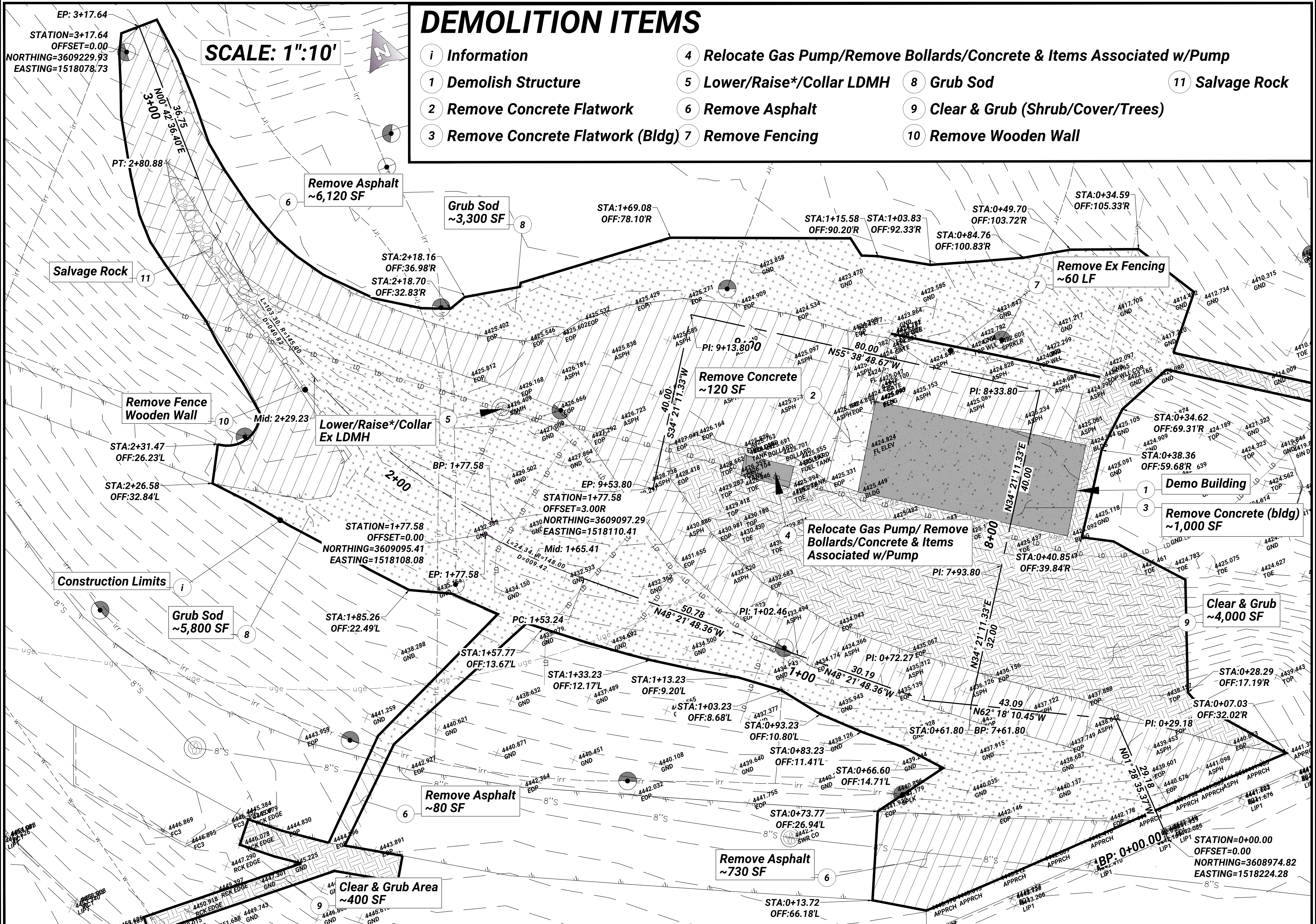
EL MONTE MAINTENANCE SHED
EL MONTE GOLF COURSE

DRAWING NAME: Dalton's Final - AAA NEW El Monte - MAINTENANCE SHED FINAL.pln
PLOTTED: 10/6/2025 12:14 PM

Ogden UTAH Still Untamed
2549 Washington Blvd, Suite 760 Ogden, UT 84401
Phone: 801-629-8980 engineering.ogdencity.com

DEMOLITION ITEMS

- i Information
- 1 Demolish Structure
- 2 Remove Concrete Flatwork
- 3 Remove Concrete Flatwork (Bldg)
- 4 Relocate Gas Pump/Remove Bollards/Concrete & Items Associated w/Pump
- 5 Lower/Raise*/Collar LDMH
- 6 Remove Asphalt
- 7 Remove Fencing
- 8 Grub Sod
- 9 Clear & Grub (Shrub/Cover/Trees)
- 10 Remove Wooden Wall
- 11 Salvage Rock



SCALE: 1":10'
EP: 3+17.64
STATION=3+17.64
OFFSET=0.00
NORTHING=3609229.93
EASTING=1518078.73
PT: 2+80.88
Remove Asphalt ~6,120 SF
Grub Sod ~3,300 SF
Salvage Rock
Remove Fence Wooden Wall
Mid: 2+29.23
Lower/Raise*/Collar Ex LDMH
STA:2+31.47 OFF:26.23'L
STA:2+26.58 OFF:32.84'L
STATION=1+77.58
OFFSET=0.00
NORTHING=3609095.41
EASTING=1518108.08
Construction Limits
Grub Sod ~5,800 SF
STA:1+85.26 OFF:22.49'L
PC: 1+53.24
STA:1+57.77 OFF:13.67'L
STA:1+33.23 OFF:12.17'L
STA:1+13.23 OFF:9.20'L
STA:1+03.23 OFF:8.68'L
STA:0+93.23 OFF:10.80'L
STA:0+83.23 OFF:11.41'L
STA:0+66.60 OFF:14.71'L
STA:0+73.77 OFF:26.94'L
STA:0+13.72 OFF:66.18'L
Remove Asphalt ~80 SF
Remove Asphalt ~730 SF
Clear & Grub Area ~400 SF
Remove Concrete ~120 SF
Relocate Gas Pump/ Remove Bollards/Concrete & Items Associated w/Pump
Demo Building
Remove Concrete (bldg) ~1,000 SF
Clear & Grub ~4,000 SF
Remove Ex Fencing ~60 LF
STA:1+69.08 OFF:78.10'R
STA:1+15.58 OFF:90.20'R
STA:1+03.83 OFF:92.33'R
STA:0+84.76 OFF:100.83'R
STA:0+49.70 OFF:103.72'R
STA:0+34.59 OFF:105.33'R
STA:2+18.16 OFF:36.98'R
STA:2+18.70 OFF:32.83'R
STA:0+34.62 OFF:69.31'R
STA:0+38.36 OFF:59.68'R
STA:0+40.85 OFF:39.84'R
STA:0+28.29 OFF:17.19'R
STA:0+07.03 OFF:32.02'R
PI: 9+13.80
PI: 8+33.80
PI: 7+93.80
PI: 1+02.46
PI: 0+72.27
PI: 0+29.18
EP: 9+53.80
BP: 1+77.58
EP: 1+77.58
Mid: 1+65.41
STATION=1+77.58
OFFSET=3.00R
NORTHING=3609097.29
EASTING=1518110.41
BP: 7+61.80
STA:0+61.80
BP: 0+00.00
STATION=0+00.00
OFFSET=0.00
NORTHING=3608974.82
EASTING=1518224.28
N00° 42' 36.40"E 36.75
L=103.30 R=145.00 D=040.82
N55° 38' 48.67"W 80.00
S34° 21' 11.33"W 40.00
N34° 21' 11.33"E 40.00
N34° 21' 11.33"E 32.00
N48° 21' 48.36"W 50.78
N48° 21' 48.36"W 30.19
N62° 18' 10.45"W 43.09
N01° 28' 35.37"W 29.18
L=24.34 R=148.00 D=009.42

DEMO

SHEETS 17

PAGE 1

REV	DATE	DESCRIPTION
0	MM/DD/YY	DESCRIPTION

DATE 10/6/25

DESIGNED	DSG
DRAWN	DSG
CHECKED	

DRAWING SCALE

H: 1" = 10' (22x34) (11x17)

V: N/A (22x34) (11x17)

This bar measures exactly one inch on the original drawing

DEMOLITION

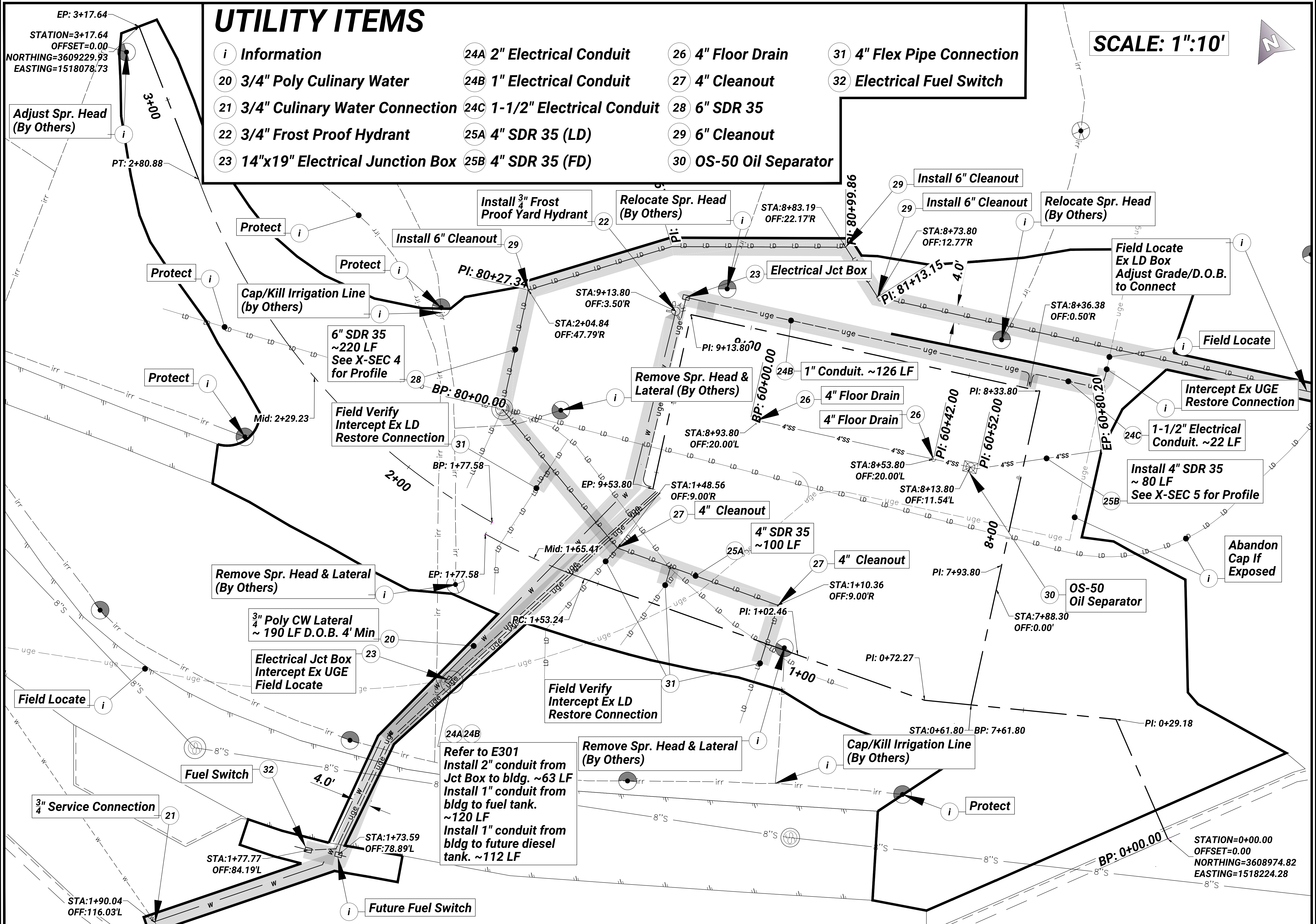
EL MONTE MAINTENANCE SHED

EL MONTE GOLF COURSE

Ogden UTAH Still Untamed™

2549 Washington Blvd, Suite 760 Ogden, UT 84401

Phone: 801-629-8980 engineering.ogdencity.com


UTILITY ITEMS
i Information
20 3/4" Poly Culinary Water
21 3/4" Culinary Water Connection
22 3/4" Frost Proof Hydrant
23 14"x19" Electrical Junction Box
24A 2" Electrical Conduit
24B 1" Electrical Conduit
24C 1-1/2" Electrical Conduit
25A 4" SDR 35 (LD)
25B 4" SDR 35 (FD)
26 4" Floor Drain
27 4" Cleanout
28 6" SDR 35
29 6" Cleanout
30 OS-50 Oil Separator
31 4" Flex Pipe Connection
32 Electrical Fuel Switch
SCALE: 1":10'
EP: 3+17.64
STATION=3+17.64
OFFSET=0.00
NORTHING=3609229.93
EASTING=1518078.73
Adjust Spr. Head (By Others)
PT: 2+80.88
Protect
Protect
Protect
Protect
Cap/Kill Irrigation Line (by Others)
Install 3/4" Frost Proof Yard Hydrant
Install 6" Cleanout
Relocate Spr. Head (By Others)
Install 6" Cleanout
Install 6" Cleanout
Relocate Spr. Head (By Others)
STA:8+83.19
OFF:22.17'R
PI: 80+99.86
STA:8+73.80
OFF:12.77'R
PI: 81+13.15
4.0'
Field Locate Ex LD Box Adjust Grade/D.O.B. to Connect
PI: 80+27.34
Electrical Jct Box
STA:9+13.80
OFF:3.50'R
STA:2+04.84
OFF:47.79'R
STA:8+36.38
OFF:0.50'R
Field Locate
6" SDR 35 ~220 LF See X-SEC 4 for Profile
PI: 9+13.80
9+00
60+00.00
1" Conduit. ~126 LF
Intercept Ex UGE Restore Connection
Remove Spr. Head & Lateral (By Others)
4" Floor Drain
4" Floor Drain
BP: 80+00.00
PI: 8+33.80
Field Verify Intercept Ex LD Restore Connection
Mid: 2+29.23
PI: 60+42.00
PI: 60+52.00
EP: 60+80.20
1-1/2" Electrical Conduit. ~22 LF
STA:8+93.80
OFF:20.00'L
STA:8+53.80
OFF:20.00'L
Install 4" SDR 35 ~ 80 LF See X-SEC 5 for Profile
BP: 1+77.58
2+00
EP: 9+53.80
STA:1+48.56
OFF:9.00'R
STA:8+13.80
OFF:11.54'L
4" Cleanout
4" SDR 35 ~100 LF
8+00
Abandon Cap If Exposed
Mid: 1+65.41
4" Cleanout
Remove Spr. Head & Lateral (By Others)
EP: 1+77.58
STA:1+10.36
OFF:9.00'R
PI: 7+93.80
OS-50 Oil Separator
3/4" Poly CW Lateral ~ 190 LF D.O.B. 4' Min
PC: 1+53.24
PI: 1+02.46
STA:7+88.30
OFF:0.00'
Electrical Jct Box Intercept Ex UGE Field Locate
PI: 0+72.27
1+00
Field Verify Intercept Ex LD Restore Connection
Field Locate
STA:0+61.80
BP: 7+61.80
PI: 0+29.18
Refer to E301
Install 2" conduit from Jct Box to bldg. ~63 LF
Install 1" conduit from bldg to fuel tank. ~120 LF
Install 1" conduit from bldg to future diesel tank. ~112 LF
Remove Spr. Head & Lateral (By Others)
Cap/Kill Irrigation Line (By Others)
Fuel Switch
4.0'
Protect
3/4" Service Connection
STA:1+73.59
OFF:78.89'L
STA:1+77.77
OFF:84.19'L
BP: 0+00.00
STATION=0+00.00
OFFSET=0.00
NORTHING=3608974.82
EASTING=1518224.28
STA:1+90.04
OFF:116.03'L
Future Fuel Switch

UTIL

SHEETS 17 PAGE 2

DESIGNED DSG
DRAWN DSG
DATE 10/6/25

DRAWING SCALE
H: 1" = 10' (22x34) (11x17)
V: N/A (22x34) (11x17)

UTILITIES

EL MONTE MAINTENANCE SHED

EL MONTE GOLF COURSE

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Phone: 801-629-8980 engineering.ogdencity.com

WALL ITEMS

- (i) Information
- (40) Rock Wall 36"-12"+
- (41) Rock Wall 24"-8"

SCALE: 1":10'

EP: 3+17.64
STATION=3+17.64
OFFSET=0.00
NORTHING=3609229.93
EASTING=1518078.73

3+00

PT: 2+80.88

Landscape Rock Wall "D"
79 LF ~ 236 SF
40

PI: 40+55.00
PI: 40+58.52
40+89
50+38
EP: 50+37.94
EP: 40+88.79
40+00
50+00
PI: 50+28.06
BP: 50+00.00
BP: 40+00.00
PI: 50+25.00
PI: 9+13.80
9+00

Landscape Rock Wall "C"
28 LF ~ 62 SF
40

PI: 8+33.80

Mid: 2+29.23

BP: 1+77.58
2+00
EP: 9+53.80

Landscape Rock Wall "B"
46 LF ~ 100 SF
40

8+00
30+57
EP: 30+56.84
PT: 30+51.84
PI: 7+93.80
30+00
BP: 30+00.00
Mid: 30+42.80
PC: 30+33.77
Mid: 1+65.41
EP: 1+77.58
PI: 1+02.46
PC: 1+53.24
PI: 0+72.27
1+00
PI: 0+29.18
STA:0+61.80
BP: 7+61.80

Landscape Rock Wall "A"
30 LF ~ 60 SF
41

PI: 20+07.88
PI: 20+37.16
20+00
20+45
BP: 20+00.00
PI: 20+15.77
BP: 0+00.00
EP: 20+45.26

STATION=0+00.00
OFFSET=0.00
NORTHING=3608974.82
EASTING=1518224.28

WALL 1
PAGE 3
SHEETS 17

REV	DATE MM/DD/YY	DESCRIPTION
0		

Daniel Gillies
REGISTERED PROFESSIONAL ENGINEER
DANIEL SHIPP GILLIES
NO. 4929584-2202
EXP. 12/31/2025
CIVIL
STATE OF UTAH

DESIGNED DSG
DRAWN DSG
CHECKED
DATE 10/6/25

DRAWING SCALE
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WALL PLAN

EL MONTE MAINTENANCE SHED
EL MONTE GOLF COURSE

DRAWING NAME: Dalton's Final - AAA NEW El Monte - MAINTENANCE SHED FINAL.dwg 5/6/2025 12:14 PM

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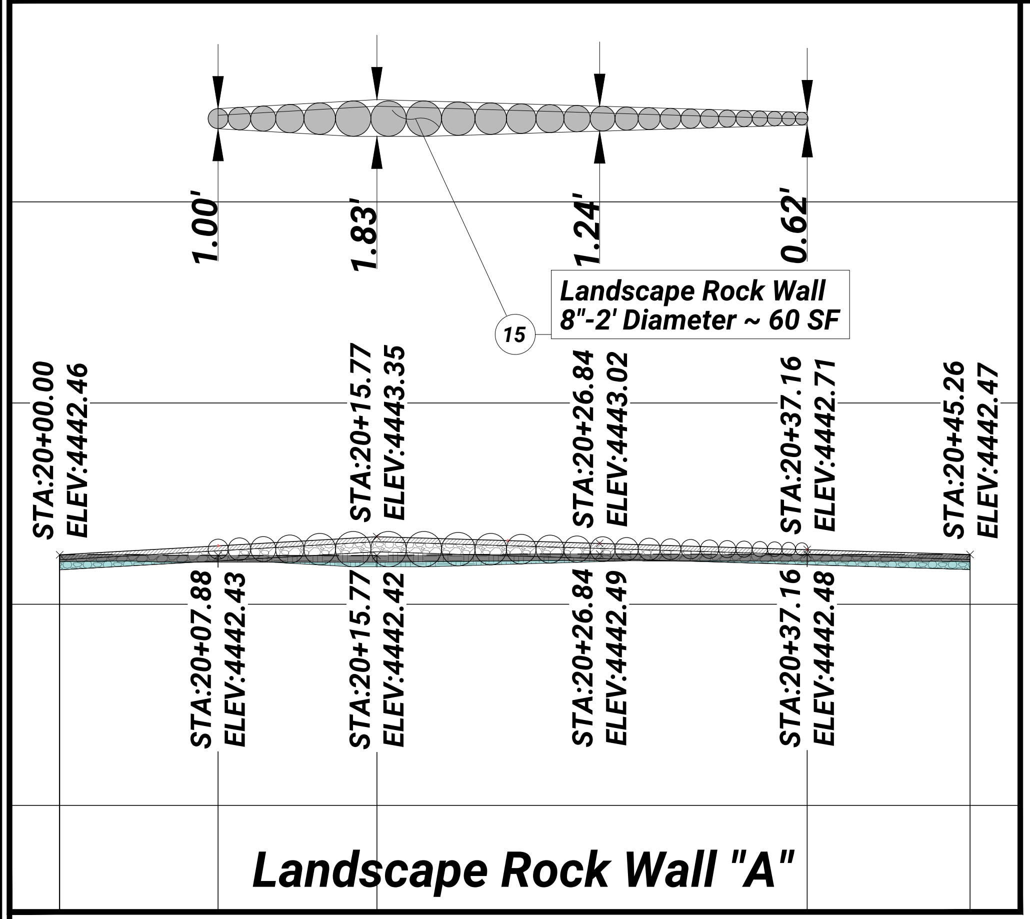

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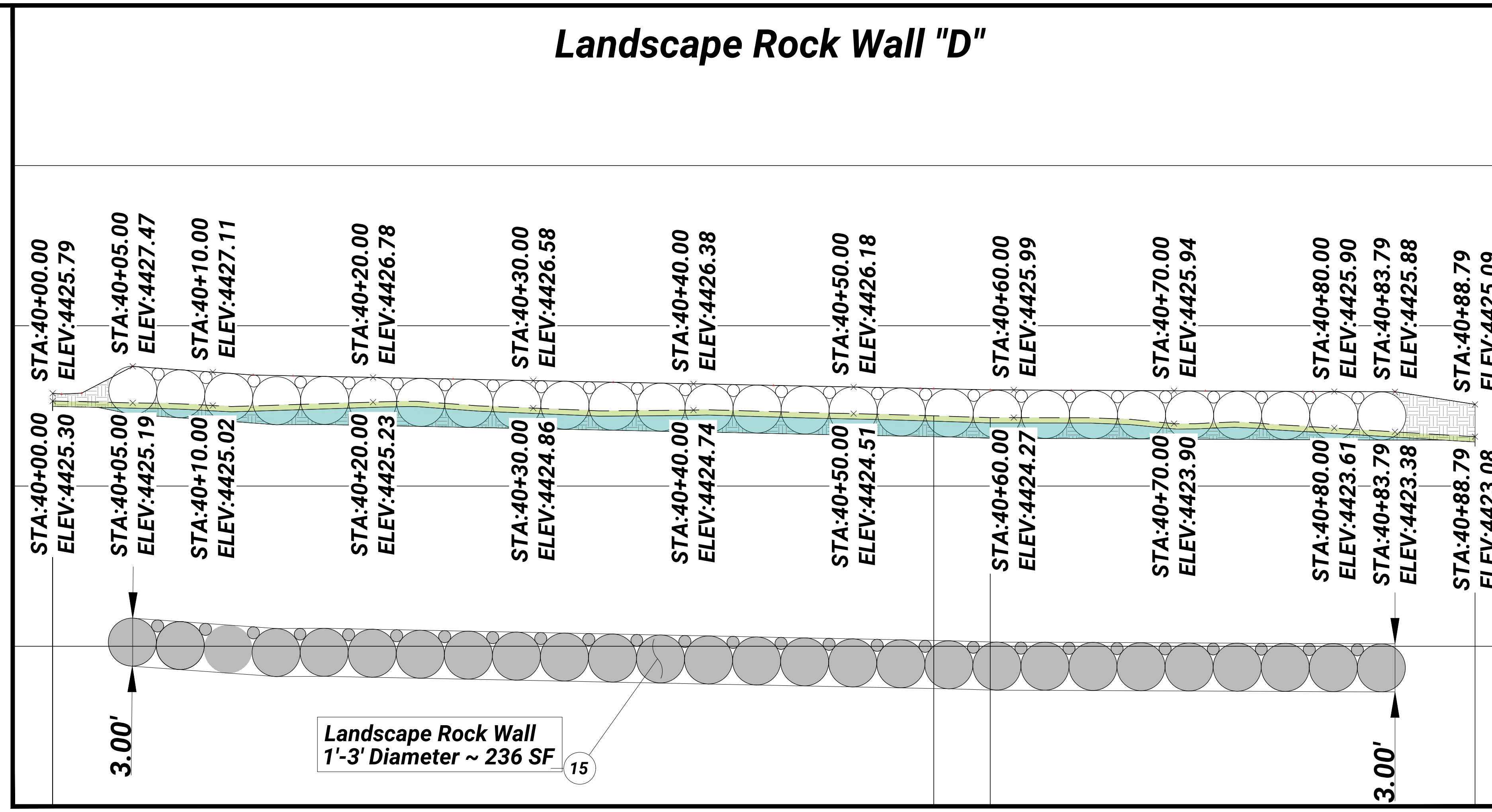
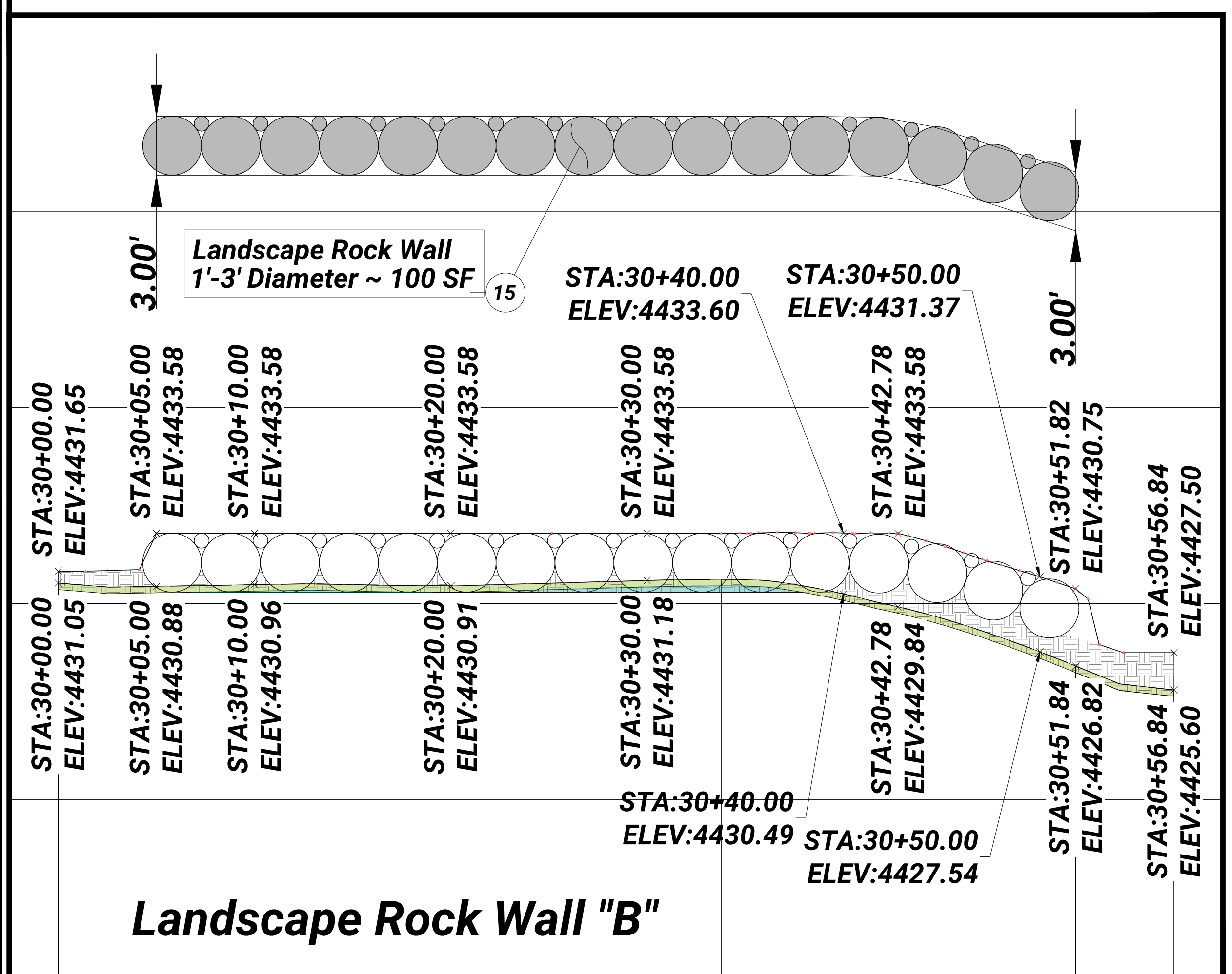


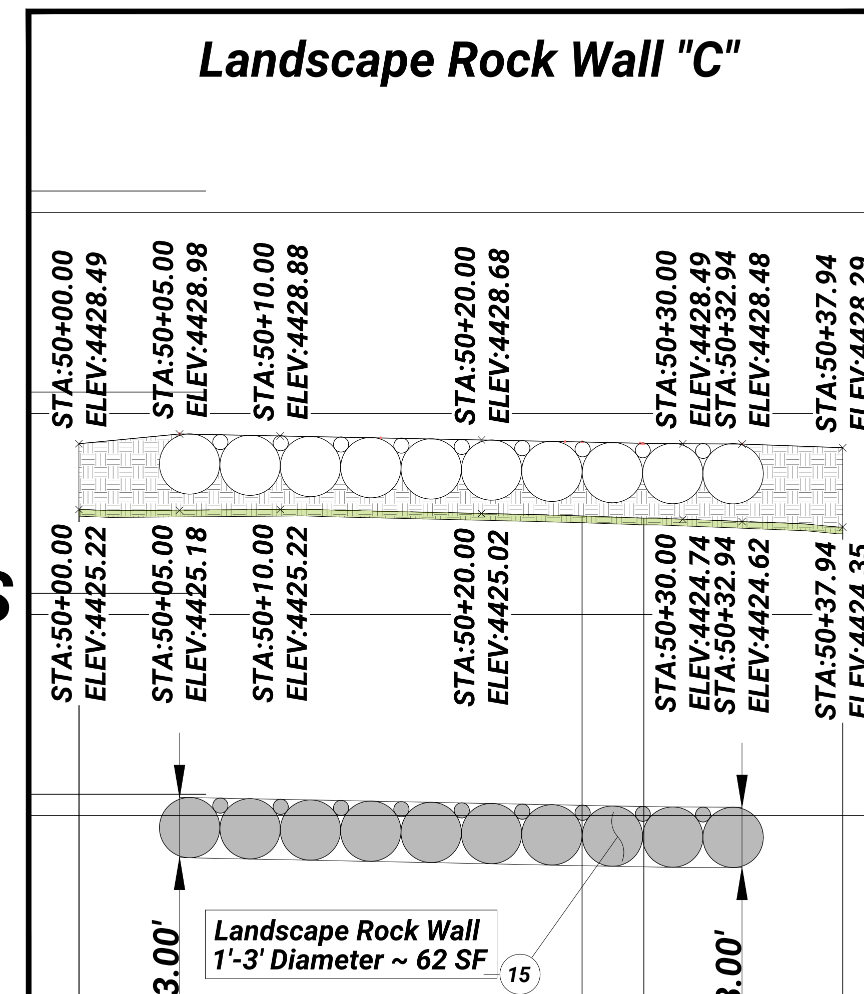


DEMOLITION ITEMS

- Remove Asphalt
- Grub Sod
- Clear & Grub Area
- Remove Concrete
- Unclassified Excavation

CONSTRUCTION ITEMS

- Install 3" HMA
- UTBC (t=6")
- Import Common Fill
- Topsoil
- 6" Concrete Flatwork
- Sod



WALL 2

PAGE 4 SHEETS 17

REV	DATE MM/DD/YY	DESCRIPTION
0		

DANIEL SHIPP GILLIES — PROFESSIONAL ENGINEER — CIVIL — STATE OF UTAH

DESIGNED DSG | DRAWN DSG | CHECKED

DATE 10/6/25

DRAWING SCALE
H: 1" = 10' (22x34) (11x17)
V: N/A (22x34) (11x17)

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WALL PROFILES

EL MONTE MAINTENANCE SHED

EL MONTE GOLF COURSE

Ogden UTAH Still Untamed™
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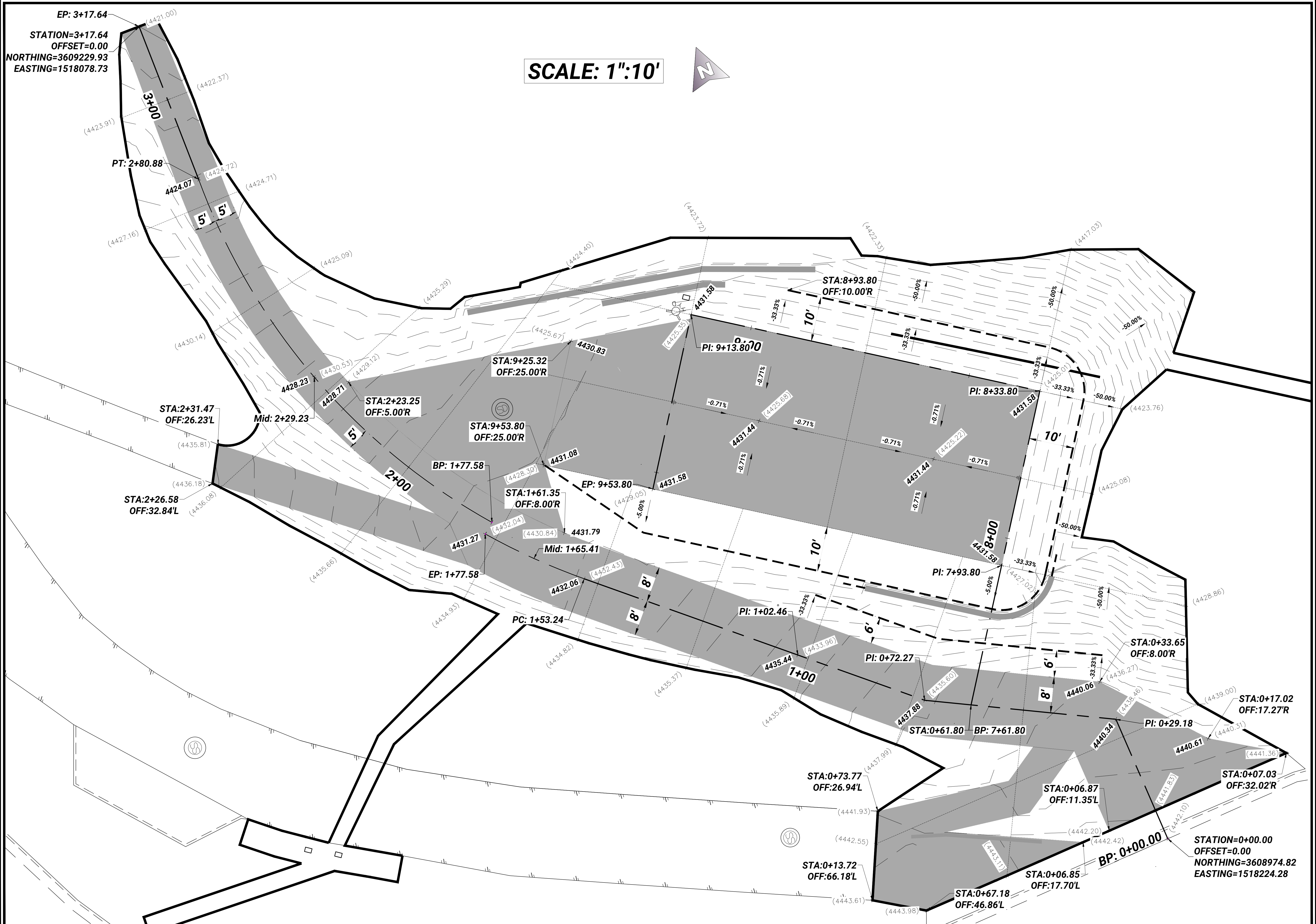

SCALE: 1":10'
N
EP: 3+17.64
STATION=3+17.64
OFFSET=0.00
NORTHING=3609229.93
EASTING=1518078.73
3+00
PT: 2+80.88
4424.07
5'
5'
STA:2+31.47
OFF:26.23'L
Mid: 2+29.23
4428.23
4428.71
STA:2+23.25
OFF:5.00'R
STA:2+26.58
OFF:32.84'L
2+00
BP: 1+77.58
STA:1+61.35
OFF:8.00'R
4431.27
4431.79
Mid: 1+65.41
EP: 1+77.58
4432.06
PC: 1+53.24
8'
8'
STA:9+25.32
OFF:25.00'R
4430.83
STA:9+53.80
OFF:25.00'R
4431.08
EP: 9+53.80
4431.58
PI: 9+13.80
9+00
STA:8+93.80
OFF:10.00'R
10'
PI: 8+33.80
4431.58
10'
4431.44
4431.44
8+00
4431.58
PI: 7+93.80
10'
PI: 1+02.46
6'
PI: 0+72.27
4435.44
1+00
4437.88
STA:0+61.80
BP: 7+61.80
6'
8'
4440.06
STA:0+33.65
OFF:8.00'R
PI: 0+29.18
4440.34
4440.61
STA:0+17.02
OFF:17.27'R
STA:0+07.03
OFF:32.02'R
STA:0+73.77
OFF:26.94'L
STA:0+06.87
OFF:11.35'L
STA:0+13.72
OFF:66.18'L
STA:0+06.85
OFF:17.70'L
STA:0+67.18
OFF:46.86'L
BP: 0+00.00
STATION=0+00.00
OFFSET=0.00
NORTHING=3608974.82
EASTING=1518224.28

GRADE

PAGE 5

SHEETS 17

REV	DATE	DESCRIPTION
0	MM/DD/YY	DESCRIPTION

DANIEL SHARP GILLIES — PROFESSIONAL ENGINEER — CIVIL — STATE OF UTAH

DESIGNED	DSG	DATE
DRAWN	DSG	10/6/25
CHECKED		

DRAWING SCALE

H: 1" = 10' (22x34) (11x17)

V: N/A (22x34) (11x17)

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GRADING

EL MONTE MAINTENANCE SHED

EL MONTE GOLF COURSE

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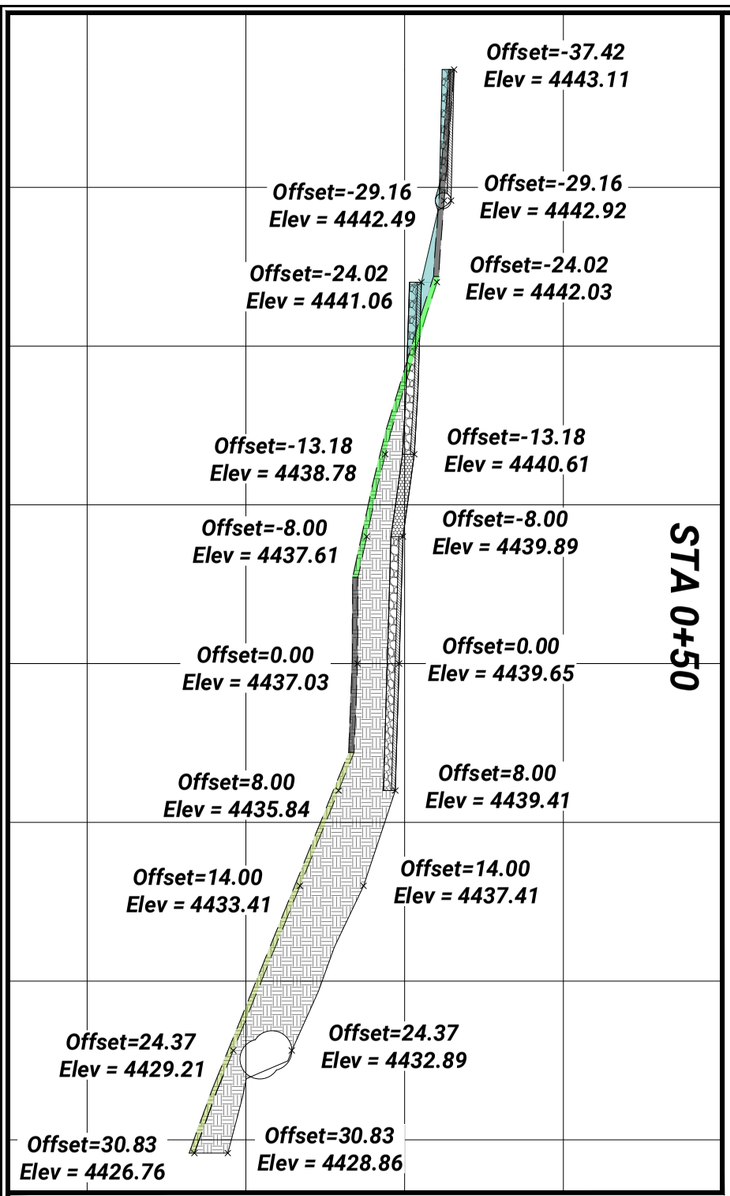
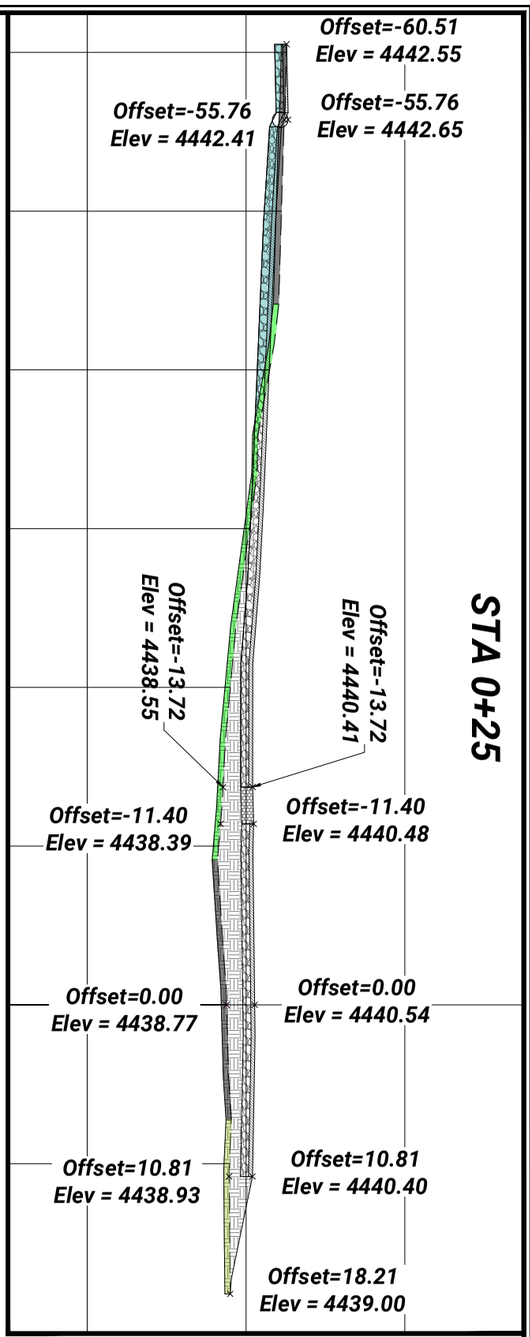
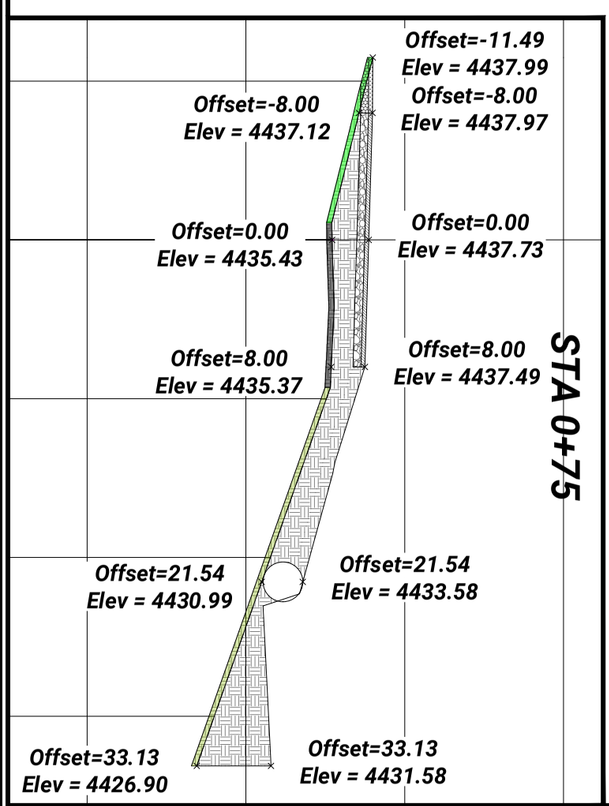




SCALE: 1":5'



CONSTRUCTION ITEMS

- Install 3" HMA
- UTBC (t=6")
- Import Common Fill
- Topsoil
- 6" Concrete Flatwork
- Sod

DEMOLITION ITEMS

- Remove Asphalt
- Grub Sod
- Clear & Grub Area
- Remove Concrete
- Unclassified Excavation

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CROSS SECTIONS

EL MONTE MAINTENANCE SHED

EL MONTE GOLF COURSE

DRAWING NAME: Dalton's Final - AAA NEW El Monte - MAINTENANCE SHED FINAL.dwg PLOT DATE: Thursday, October 9, 2025 12:14 PM

DESIGNED	DSG	DATE
DRAWN	DSG	10/6/25
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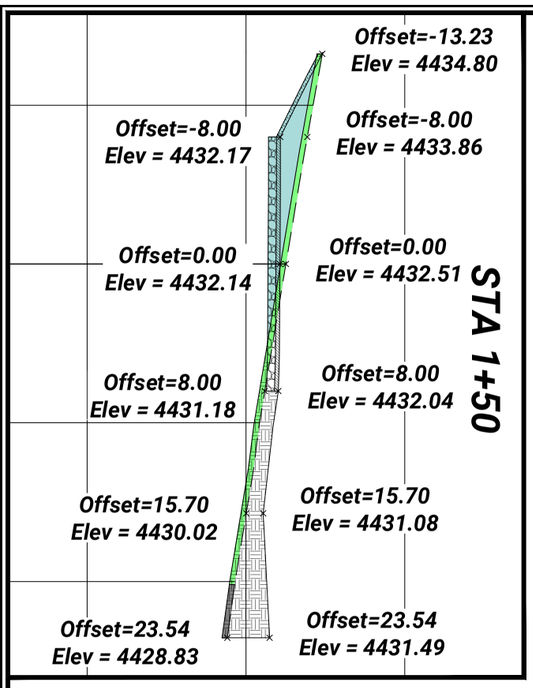
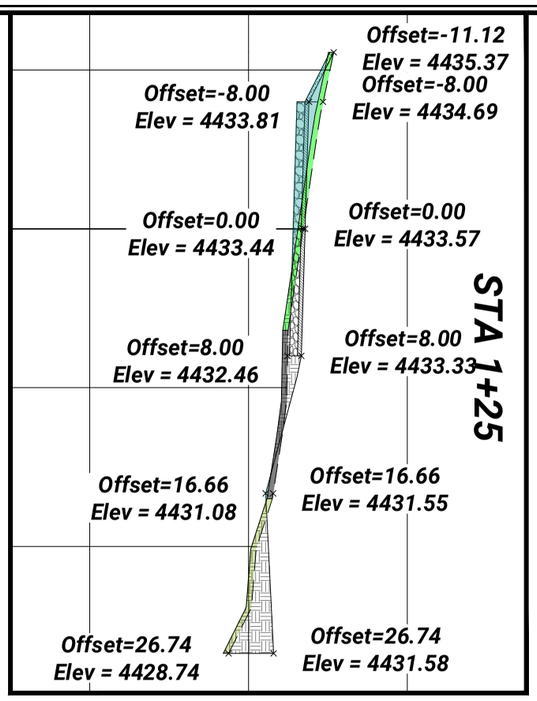
REV	DATE	DESCRIPTION
0	MM/DD/YY	DESCRIPTION

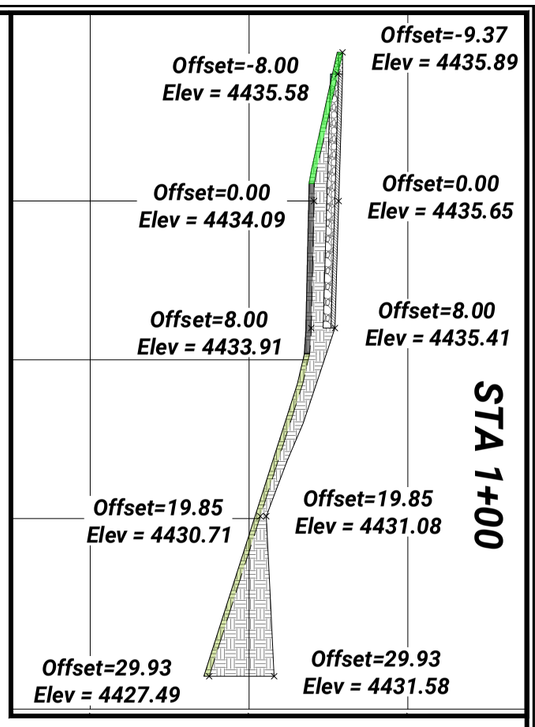
X-SEC 1

SHEETS 17

PAGE 6







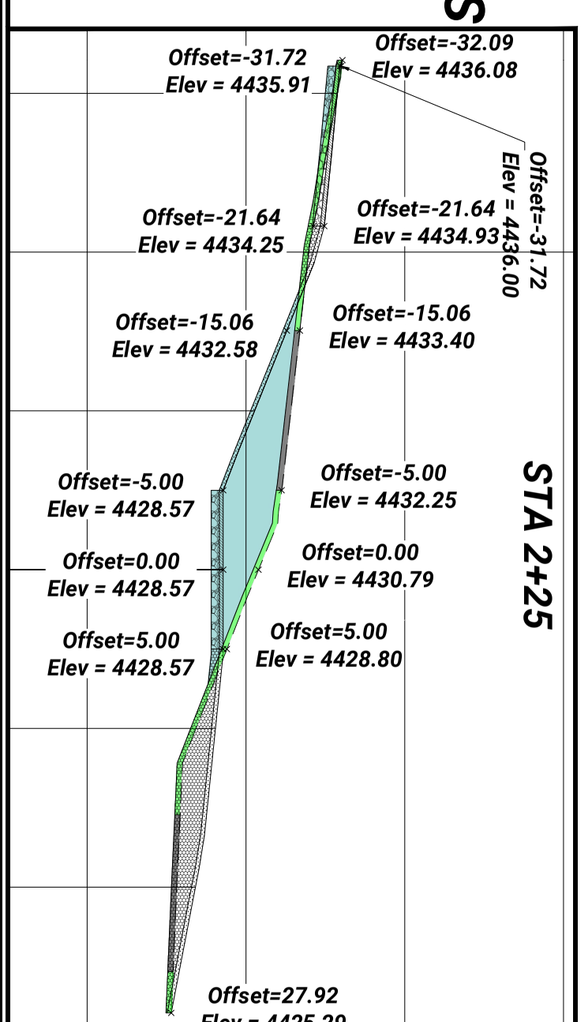
CONSTRUCTION ITEMS

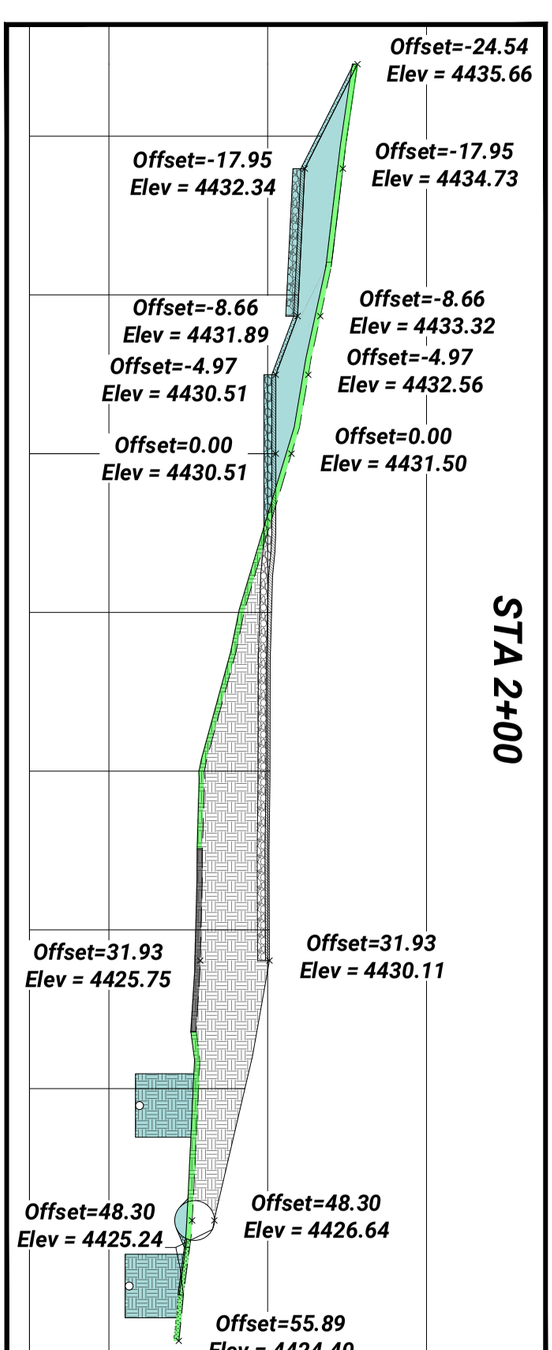
- Sod
- 6" Concrete Flatwork
- Topsoil
- Import Common Fill
- UTBC (t=6")
- Install 3" HMA

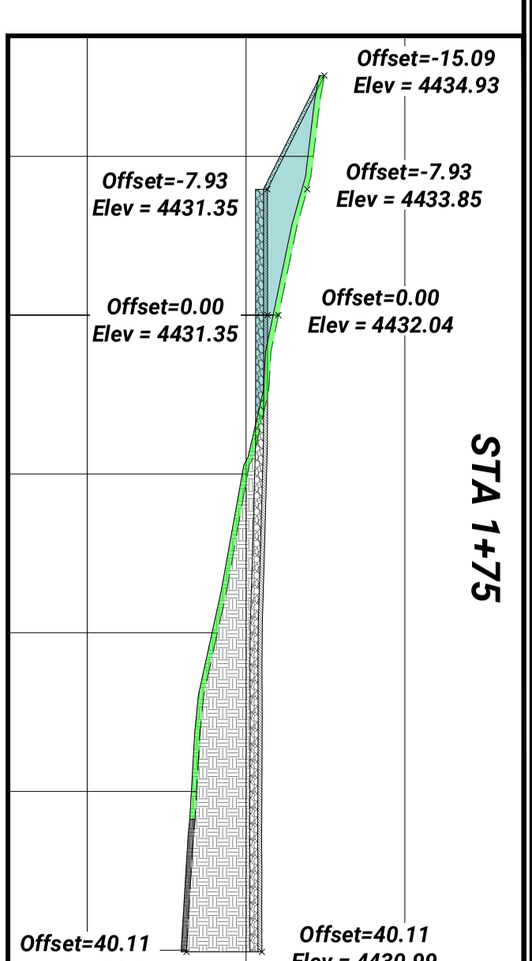
DEMOLITION ITEMS

- Unclassified Excavation
- Remove Concrete
- Clear & Grub Area
- Grub Sod
- Remove Asphalt

SCALE: 1":5'







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CROSS SECTIONS

EL MONTE MAINTENANCE SHED

EL MONTE GOLF COURSE

DRAWING NAME: Dalton's Final - AAA NEW El Monte - MAINTENANCE SHED FINAL.dwg PLOT DATE: Thursday, October 9, 2025 12:14 PM

DESIGNED	DSG	DATE
DRAWN	DSG	10/6/25
CHECKED		

DRAWING SCALE

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V: N/A (22x34) (11x17)

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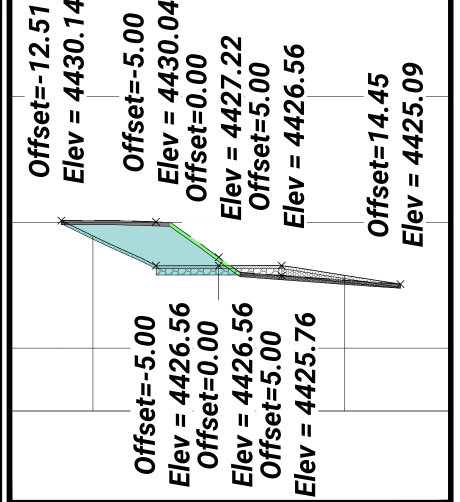
REV	DATE	DESCRIPTION
0	MM/DD/YY	DESCRIPTION

X-SEC 2

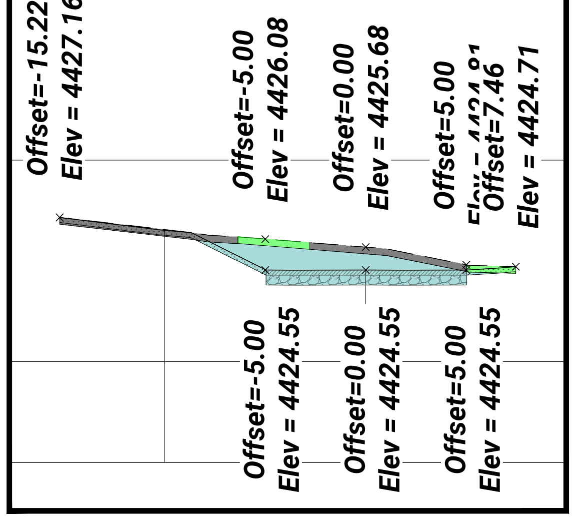
SHEETS 17

PAGE 7

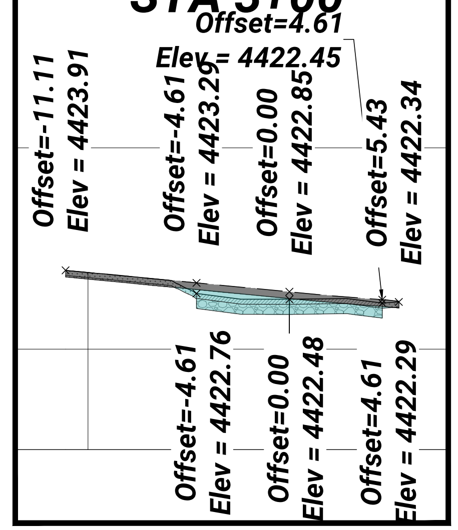
STA 2+50



STA 2+75



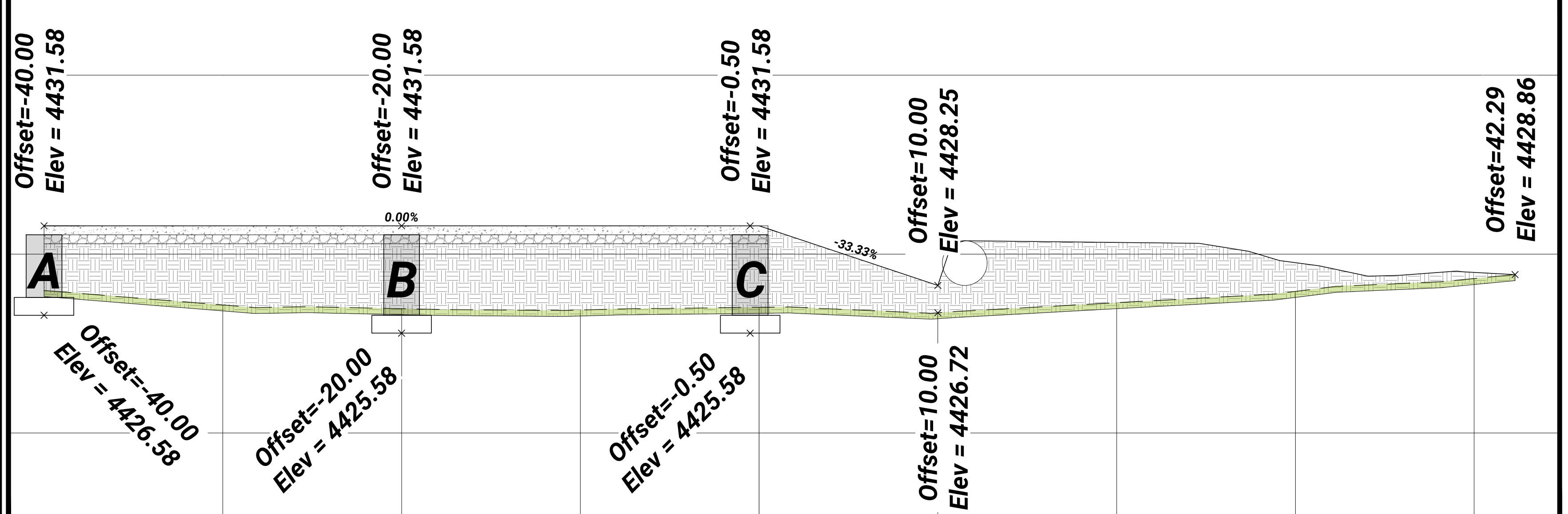
STA 3+00



DEMOLITION ITEMS

- Remove Asphalt
- Grub Sod
- Clear & Grub Area
- Remove Concrete
- Unclassified Excavation

STA 7+93.80

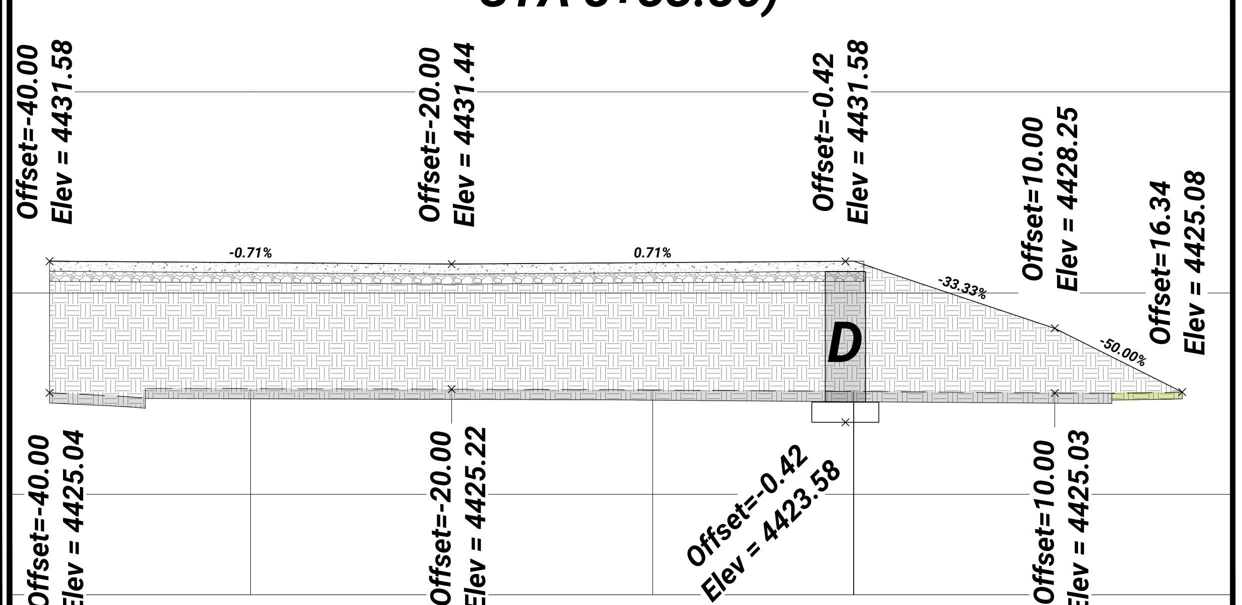


CONSTRUCTION ITEMS

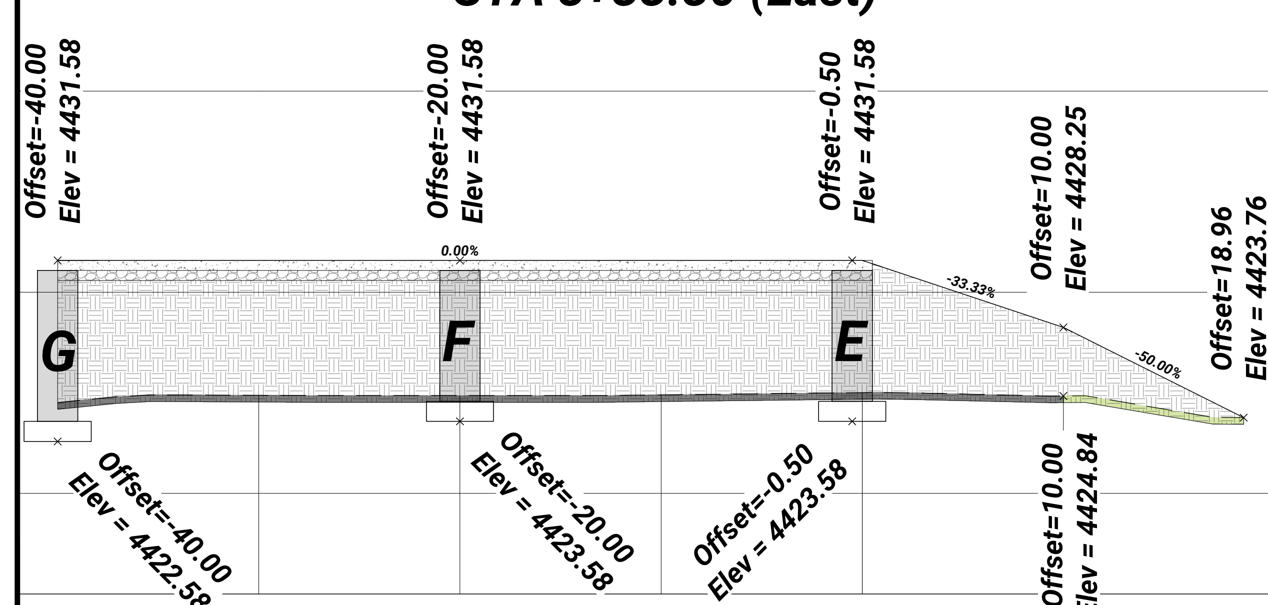
- Install 3" HMA
- UTBC (t=6")
- Import Common Fill
- Topsoil
- 6" Concrete Flatwork
- Sod

SCALE: 1":5'

STA 8+33.80)



STA 8+33.80 (East)



X-SEC 3

PAGE 8

SHEETS 17

REV	DATE	DESCRIPTION
0	MM/DD/YY	DESCRIPTION

CIVIL
STATE OF UTAH

DESIGNED ▶ DSG
DRAWN ▶ DSG
CHECKED ▶

DATE 10/6/25

DRAWING SCALE
H: 1" = 10' (22x34) (11x17)
V: N/A (22x34) (11x17)

This bar measures exactly one inch on the original drawing

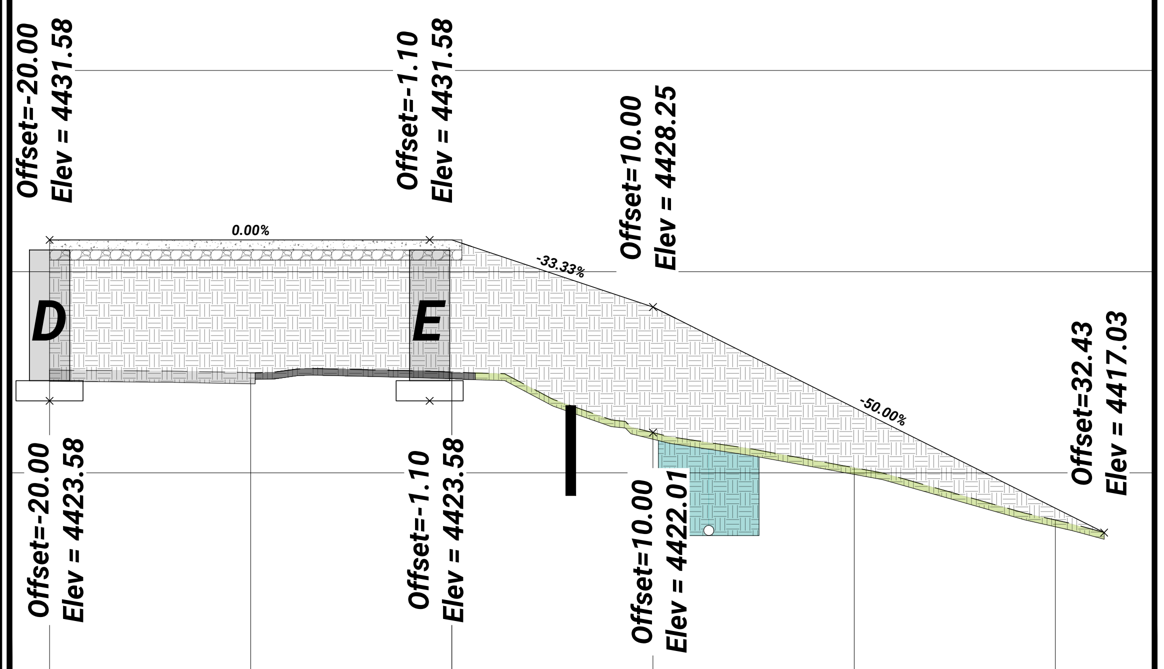
CROSS SECTIONS

EL MONTE MAINTENANCE SHED

EL MONTE GOLF COURSE

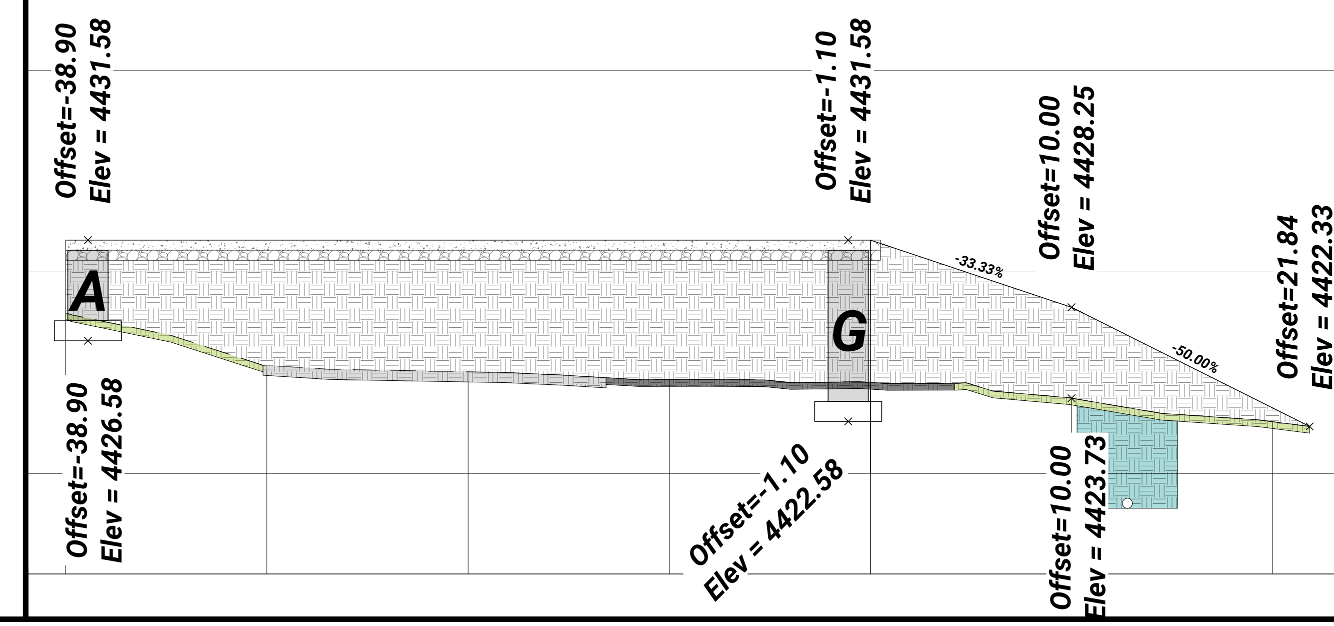
Ogden UTAH Still Untamed™
2549 Washington Blvd, Suite 760 Ogden, UT 84401
Phone: 801-629-8980 engineering.ogdencity.com

STA 8+33.80 (North)

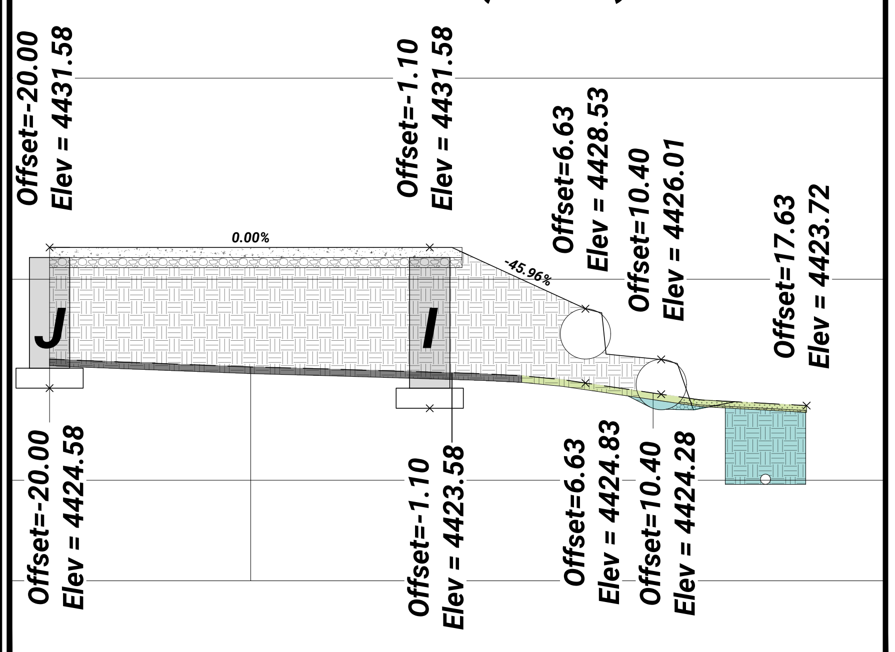


SCALE: 1":5'

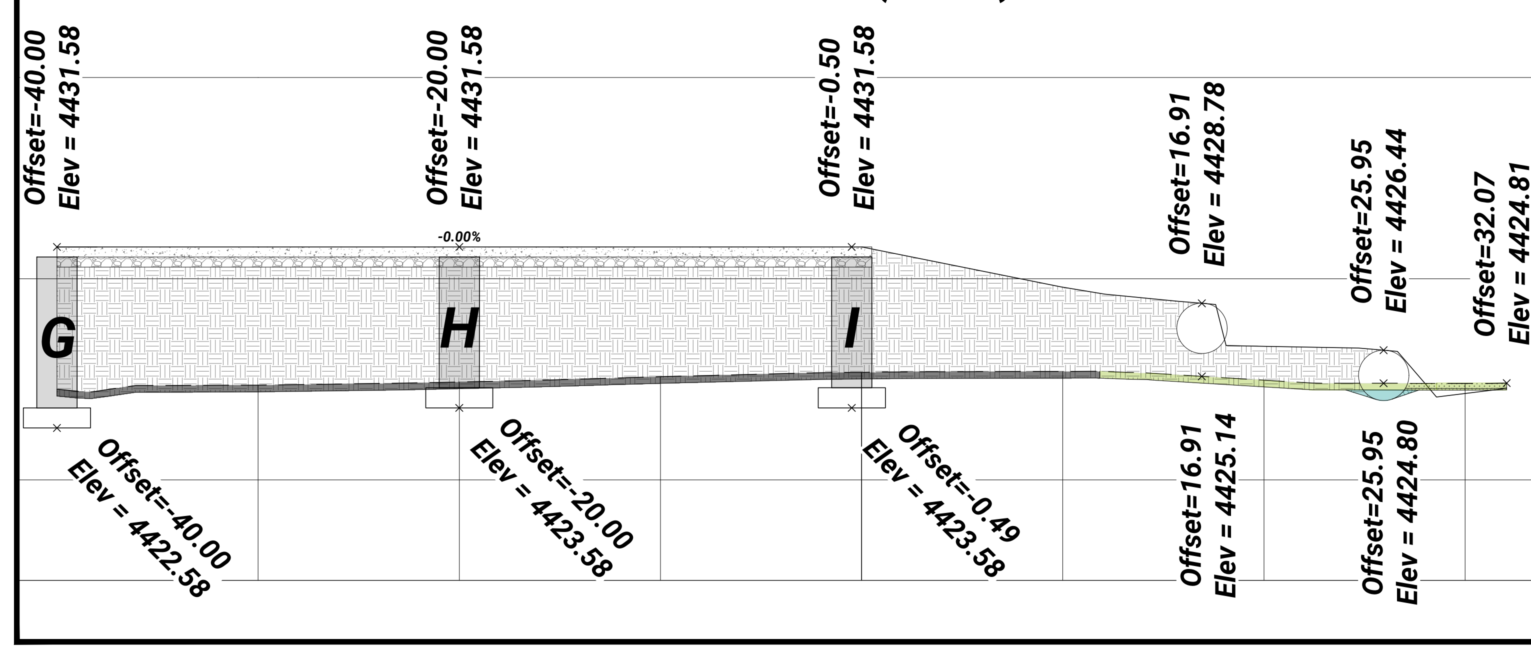
STA 8+73.80



STA 9+13.80 (North)



STA 9+13.80 (West)



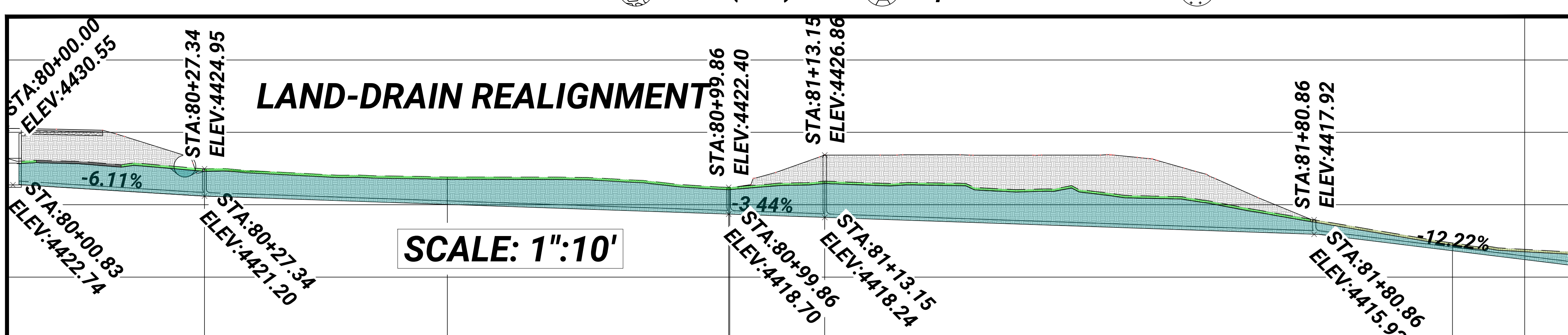
CONSTRUCTION ITEMS

- Install 3" HMA
- Import Common Fill
- 6" Concrete Flatwork
- UTBC (t=6")
- Topsoil
- Sod

DEMOLITION ITEMS

- Remove Asphalt
- Grub Sod
- Clear & Grub Area
- Remove Concrete
- Unclassified Excavation

LAND-DRAIN REALIGNMENT



SCALE: 1":10'

X-SEC 4

9 PAGE

17 SHEETS

REV	DATE	DESCRIPTION
0	MM/DD/YY	DESCRIPTION

DESIGNED DSG
DRAWN DSG
CHECKED

DATE 10/6/25

DRAWING SCALE
H: 1" = 10' (22x34) (11x17)
V: N/A (22x34) (11x17)

This bar measures exactly one inch on the original drawing

CROSS SECTIONS

EL MONTE MAINTENANCE SHED

EL MONTE GOLF COURSE

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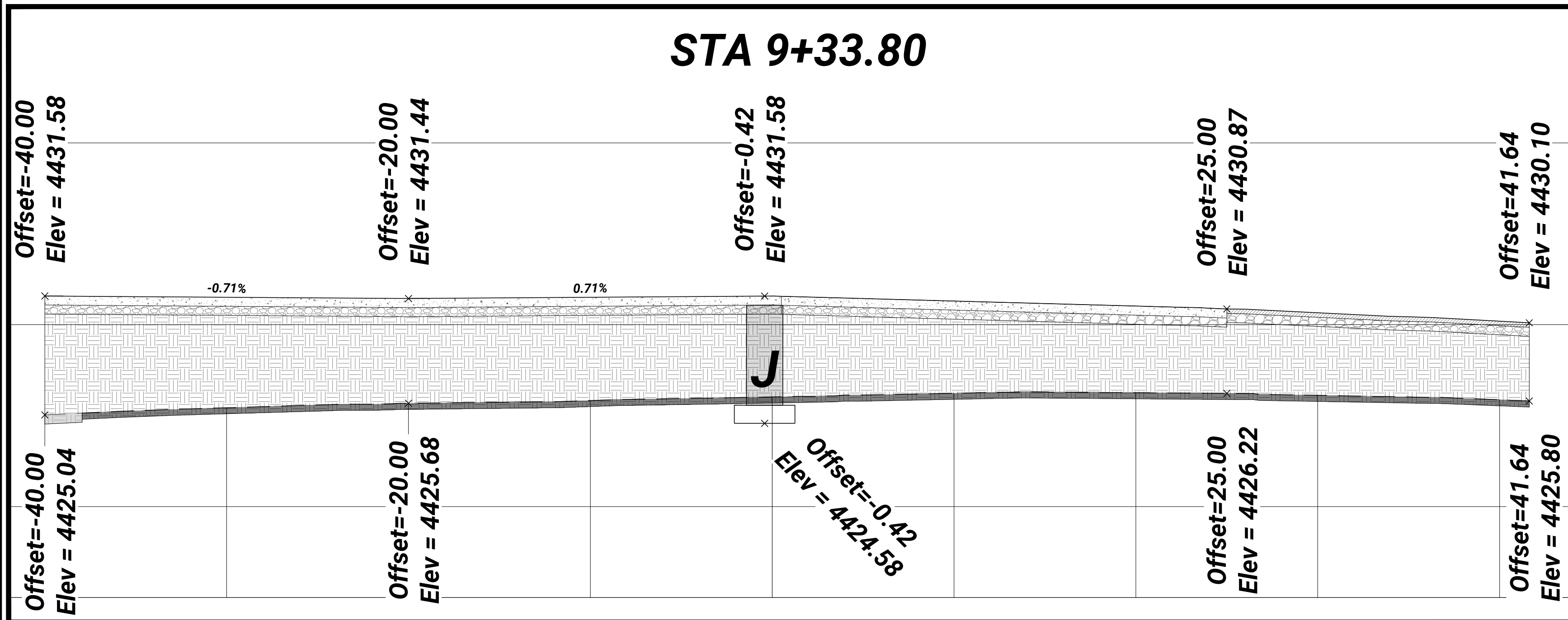
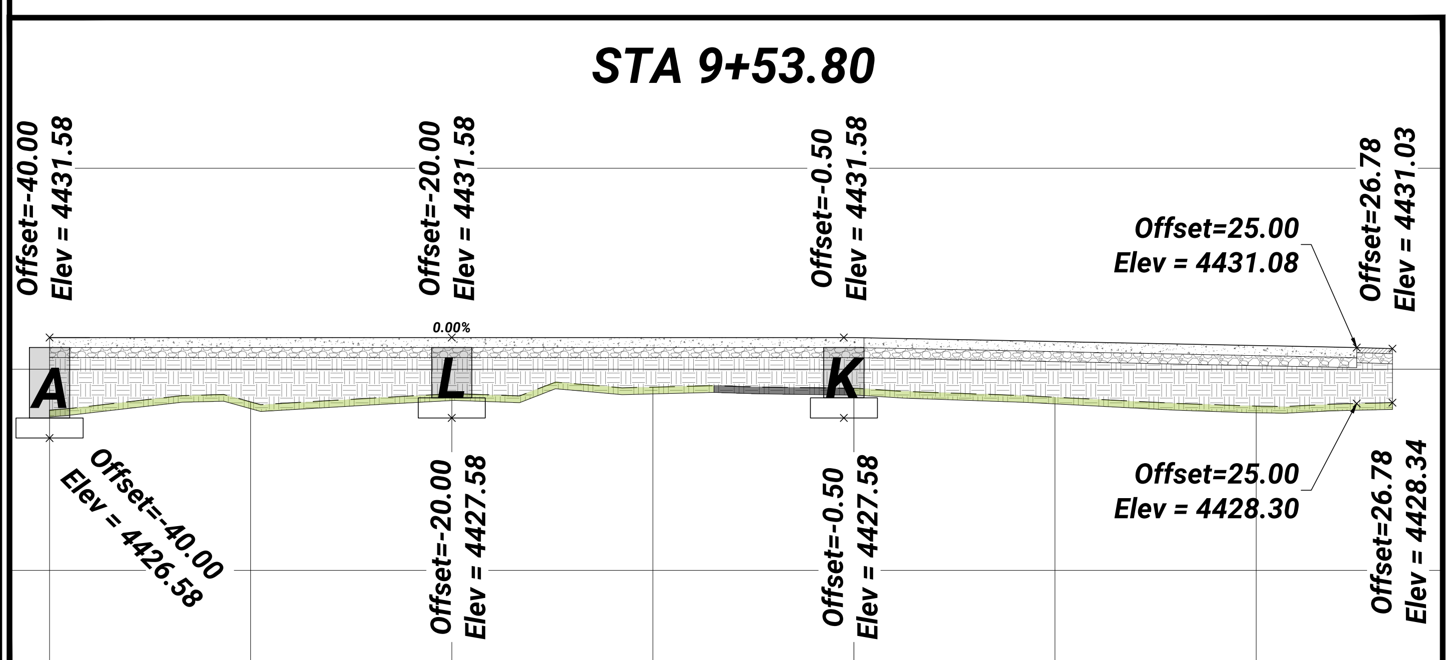
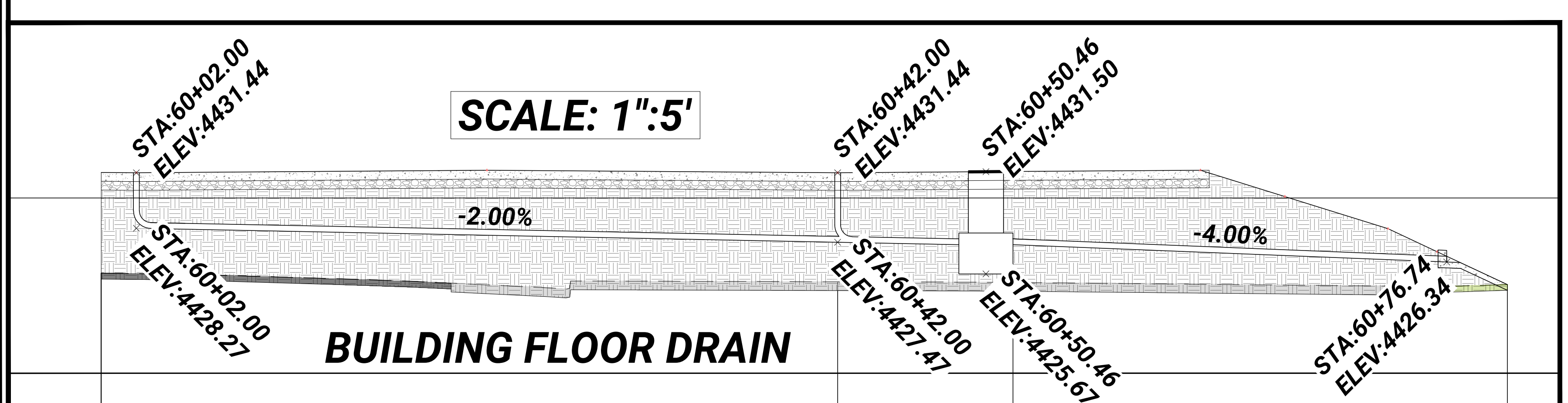


SCALE: 1":5'





DEMOLITION ITEMS

- Remove Asphalt
- Grub Sod
- Clear & Grub Area
- Remove Concrete
- Unclassified Excavation

CONSTRUCTION ITEMS

- Install 3" HMA
- UTBC (t=6")
- Import Common Fill
- Topsoil
- 6" Concrete Flatwork
- Sod

X-SEC 5

PAGE 10

SHEETS 17

REV	DATE	DESCRIPTION
0	MM/DD/YY	DESCRIPTION

DATE 10/6/25

DESIGNED DSG
DRAWN DSG
CHECKED

DRAWING SCALE
H: 1" = 10' (22x34) (11x17)
V: N/A (22x34) (11x17)

This bar measures exactly one inch on the original drawing

CROSS SECTIONS

EL MONTE MAINTENANCE SHED

EL MONTE GOLF COURSE

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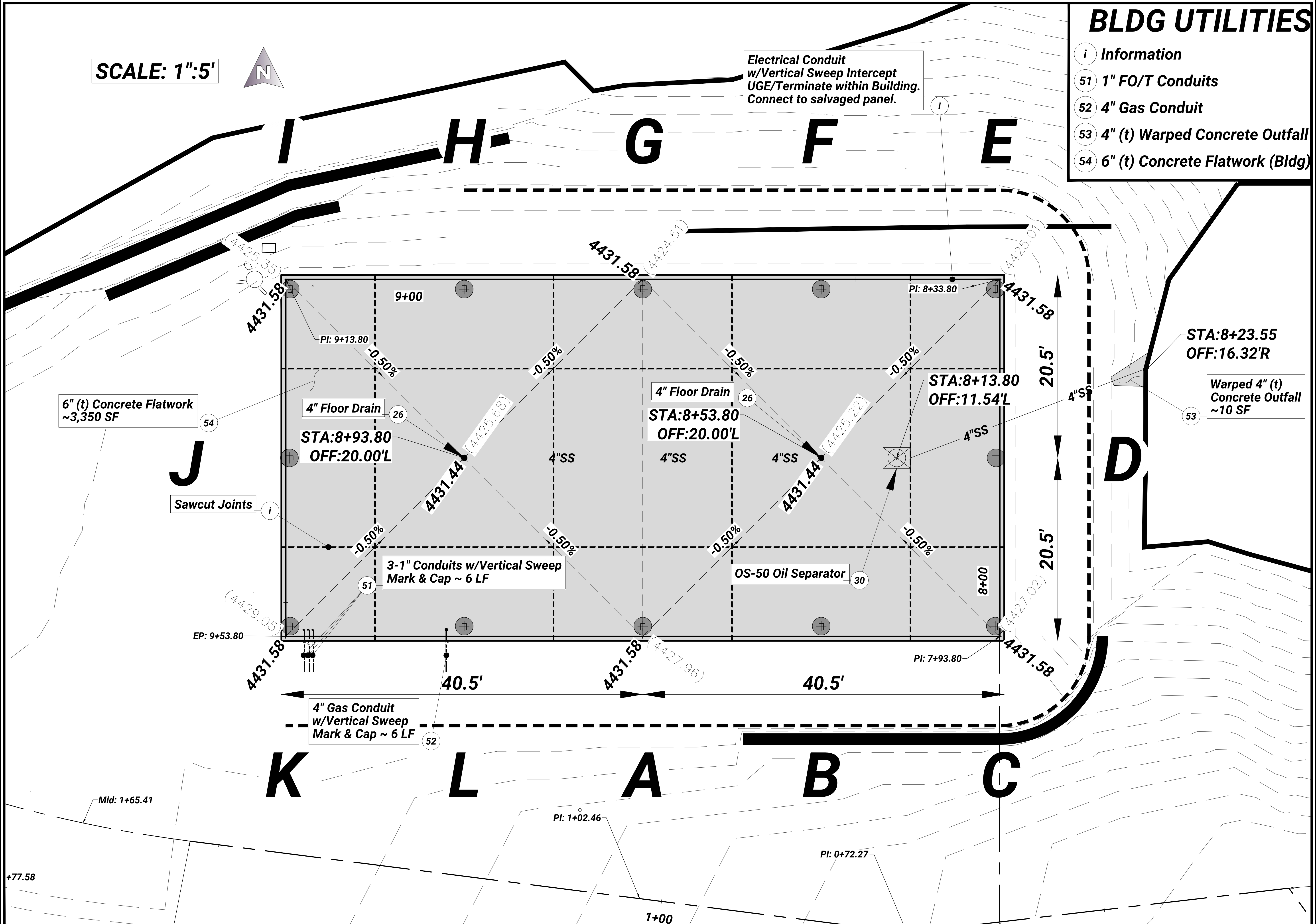
SCALE: 1":5'
N
BLDG UTILITIES
i Information
51 1" FO/T Conduits
52 4" Gas Conduit
53 4" (t) Warped Concrete Outfall
54 6" (t) Concrete Flatwork (Bldg)
Electrical Conduit w/Vertical Sweep Intercept UGE/Terminate within Building. Connect to salvaged panel.
I
H
G
F
E
J
D
K
L
A
B
C
9+00
8+00
1+00
PI: 9+13.80
PI: 8+33.80
PI: 7+93.80
EP: 9+53.80
STA:8+23.55
OFF:16.32'R
Warped 4" (t) Concrete Outfall ~10 SF
6" (t) Concrete Flatwork ~3,350 SF
4" Floor Drain
STA:8+93.80
OFF:20.00'L
STA:8+53.80
OFF:20.00'L
STA:8+13.80
OFF:11.54'L
4"SS
Sawcut Joints
3-1" Conduits w/Vertical Sweep Mark & Cap ~ 6 LF
OS-50 Oil Separator
4" Gas Conduit w/Vertical Sweep Mark & Cap ~ 6 LF
40.5'
20.5'
-0.50%
4431.58
4431.44
(4425.35)
(4424.51)
(4425.01)
(4425.68)
(4425.22)
(4429.05)
(4427.96)
(4427.02)
Mid: 1+65.41
PI: 1+02.46
PI: 0+72.27
+77.58
PC: 1+53.24

B-PAD

PAGE 11

SHEETS 17

REV	DATE	DESCRIPTION
0	MM/DD/YY	DESCRIPTION

PROFESSIONAL ENGINEER — DANIEL SHIPP GILLIES — CIVIL — STATE OF UTAH

DESIGNED: DSG
DRAWN: DSG
CHECKED:
DATE: 10/6/25

DRAWING SCALE
H: 1" = 10' (22x34) (11x17)
V: N/A (22x34) (11x17)

This bar measures exactly one inch on the original drawing

BUILDING PAD

EL MONTE MAINTENANCE SHED

EL MONTE GOLF COURSE

Ogden UTAH Still Untamed
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Phone: 801-629-8980 engineering.ogdencity.com

FOUNDATION LAYOUT

(i) Information

(55) Footings/Foundations

SCALE: 1":5'

Footing/Foundation - Typ
See Foundation Details
12 EA
55

PI: 9+13.80

Alignment=Structure East-North
Station=9+14.90
Offset=-0.500

Alignment=Structure East-North
Station=8+93.80
Offset=-1.104

Alignment=Structure East-North
Station=8+73.80
Offset=-1.104

Alignment=Structure East-North
Station=8+53.80
Offset=-1.104

Alignment=Structure East-North
Station=8+32.71
Offset=-0.500

PI: 8+33.80

9+00

Alignment=Structure East-North
Station=9+33.80
Offset=-0.417

Alignment=Structure East-North
Station=8+13.80
Offset=-0.417

Sawcut Joints
(i)

8+00

Alignment=Structure East-North
Station=9+52.65
Offset=-0.500

Alignment=Structure East-North
Station=7+94.94
Offset=-0.500

EP: 9+53.80

Alignment=Structure East-North
Station=9+52.65
Offset=-20.000

Alignment=Structure East-North
Station=8+73.80
Offset=-38.858

Alignment=Structure East-North
Station=7+94.94
Offset=-20.000

PI: 7+93.80

Contractor to verify
foundation placement
with building anchor plan

Mid: 1+65.41

+77.58

PC: 1+53.24

PI: 1+02.46

1+00

PI: 0+72.27

FOUND

SHEETS 17 PAGE 12

REV	DATE	DESCRIPTION
0	MM/DD/YY	DESCRIPTION

DANIEL SHAY GILLIES
NO. 4926584-2202
EXP. 12/31/2025
CIVIL
STATE OF UTAH

DESIGNED DSG
DRAWN DSG
CHECKED

DATE 10/6/25

DRAWING SCALE
H: 1" = 10' (22x34) (11x17)
V: N/A (22x34) (11x17)

This bar measures exactly one inch on the original drawing

FOUNDATION LAYOUT

EL MONTE MAINTENANCE SHED

EL MONTE GOLF COURSE

PLOT DATE: 1/13/2026 12:15 PM

DRAWING NAME: Foundation Layout.dwg

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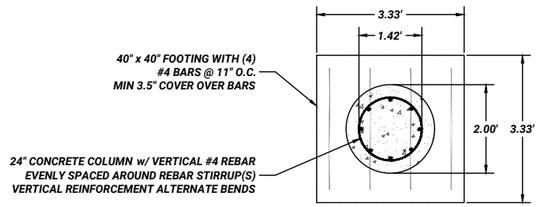
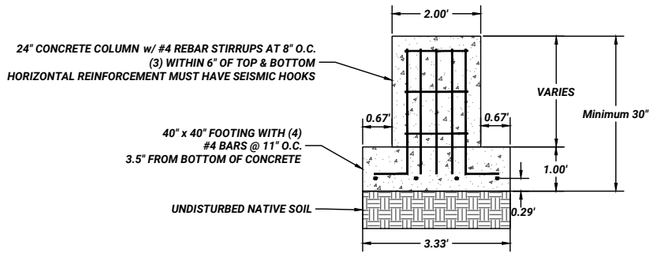
Phone: 801-629-8980 engineering.ogdencity.com

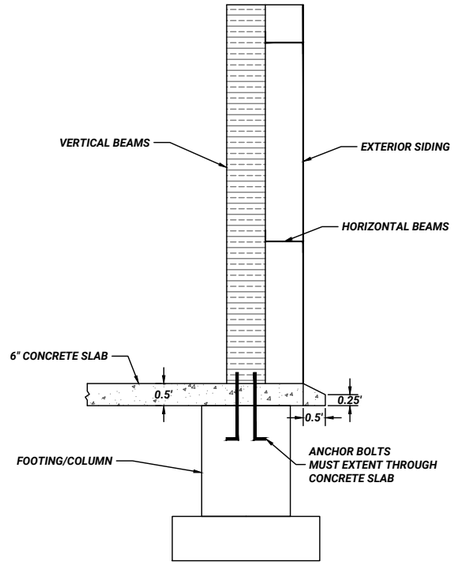


Plan View

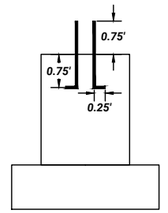


Profile View

FOOTING & COLUMN DETAIL



SLAB DETAIL



ANCHOR BOLT LAYOUT

FD-1

SHEET 13

REVISION 0

REV	DATE	DESCRIPTION
0	MM/DD/YY	DESCRIPTION

PROFESSIONAL ENGINEER — REGISTERED — Daniel Gillies (Jan 21, 2026 09:26:56 MST) — DANIEL SHIPP GILLIES — NO. 4920684-2202 — EXP. 12/31/2025 — CIVIL — STATE OF UTAH

DESIGNED DBR
DRAWN DBR
CHECKED DSG

DATE 12/23/2025

DRAWING SCALE
H: 1" = 20' (22x34) 1" = 40' (11x17)
V: 1" = 5' (22x34) 1" = 10' (11x17)

This bar measures exactly one inch on the original drawing

FOUNDATION DETAILS

EL MONTE CART SHED
1300 VALLEY DR

DRAWING NAME: Foundation Detail.dwg

PLOT DATE: 1/13/2026 12:15 PM

Ogden UTAH Still Untamed™
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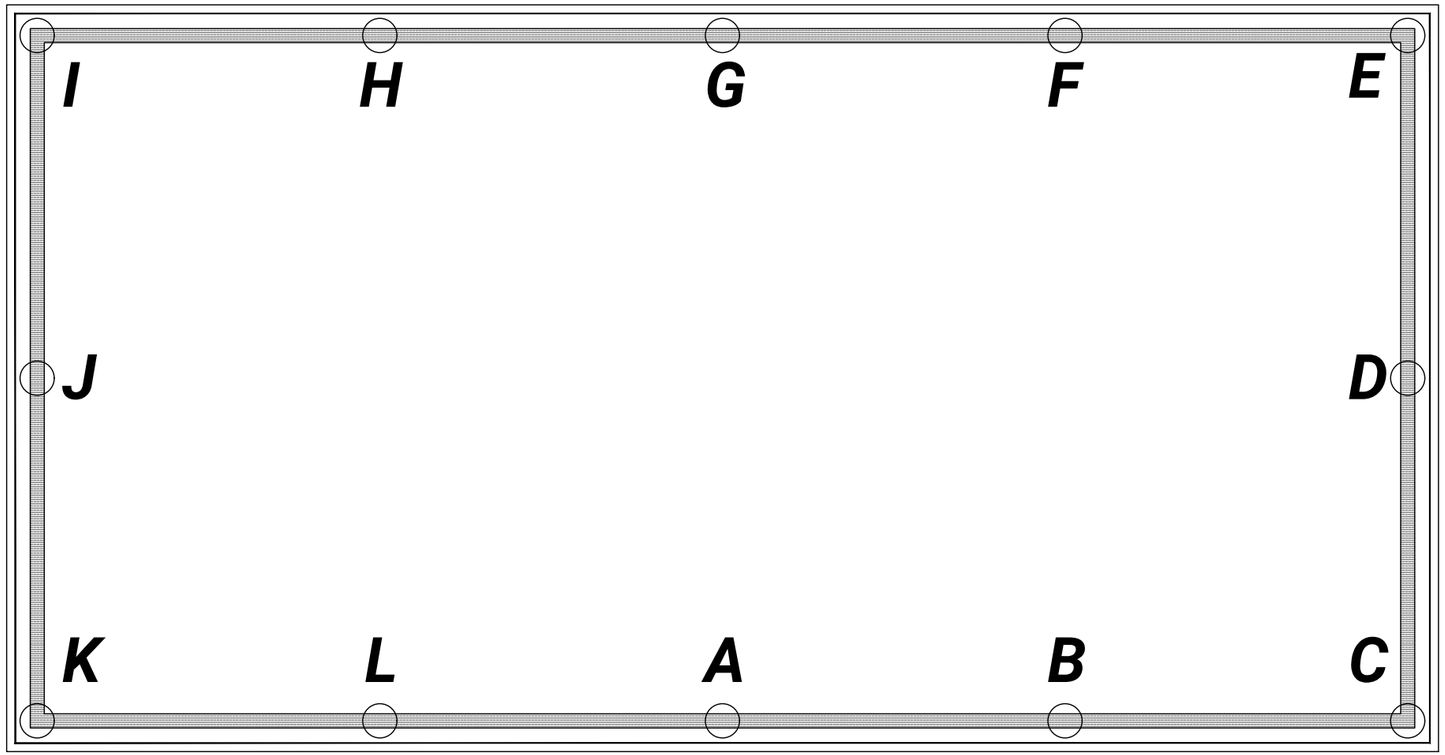
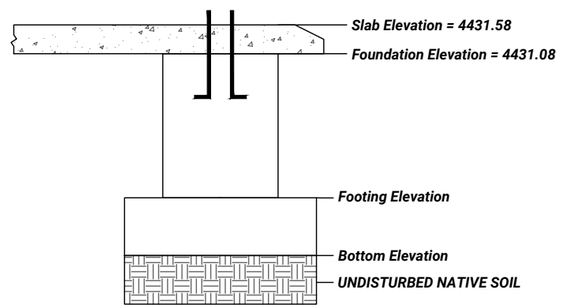
Phone: 801-629-8980 engineering.ogdencity.com



Elevation Breakdown				
Column	Slab Elevation	Foundation Elevation	Footing Elevation	Bottom Elevation
A	4431.58	4431.08	4427.96	4426.96
B	4431.58	4431.08	4427.02	4426.02
C	4431.58	4431.08	4427.02	4426.02
D	4431.58	4431.08	4425.10	4424.10
E	4431.58	4431.08	4425.01	4424.01
F	4431.58	4431.08	4424.86	4423.86
G	4431.58	4431.08	4424.51	4423.51
H	4431.58	4431.08	4424.87	4423.87
I	4431.58	4431.08	4425.35	4424.35
J	4431.58	4431.08	4426.03	4425.03
K	4431.58	4431.08	4429.05	4428.05
L	4431.58	4431.08	4428.78	4427.78



ELEVATION DETAIL

FD-2

SHEET 14

REVISION 0

REV	DATE: MM/DD/YY	DESCRIPTION
0		DESCRIPTION

REGISTERED PROFESSIONAL ENGINEER — Daniel Gillies (Jan 21, 2026 06:26:56 MST) — DANIEL SHAW GILLIES — NO. 4559084-2202 — EXP. 12/31/2026 — CIVIL — STATE OF UTAH

DESIGNED ▶ DBR
DRAWN ▶ DBR 12/23/2025
CHECKED ▶ DSG

DRAWING SCALE
H: 1" = 20' (22x34) 1" = 40' (11x17)
V: 1" = 5' (22x34) 1" = 10' (11x17)

This bar measures exactly one inch on the original drawing

FOUNDATION ELEVATIONS

EL MONTE CART SHED
1300 VALLEY DR

PLOT DATE: 1/13/2026 12:15 PM
DRAWING NAME: Foundation Detail.dwg

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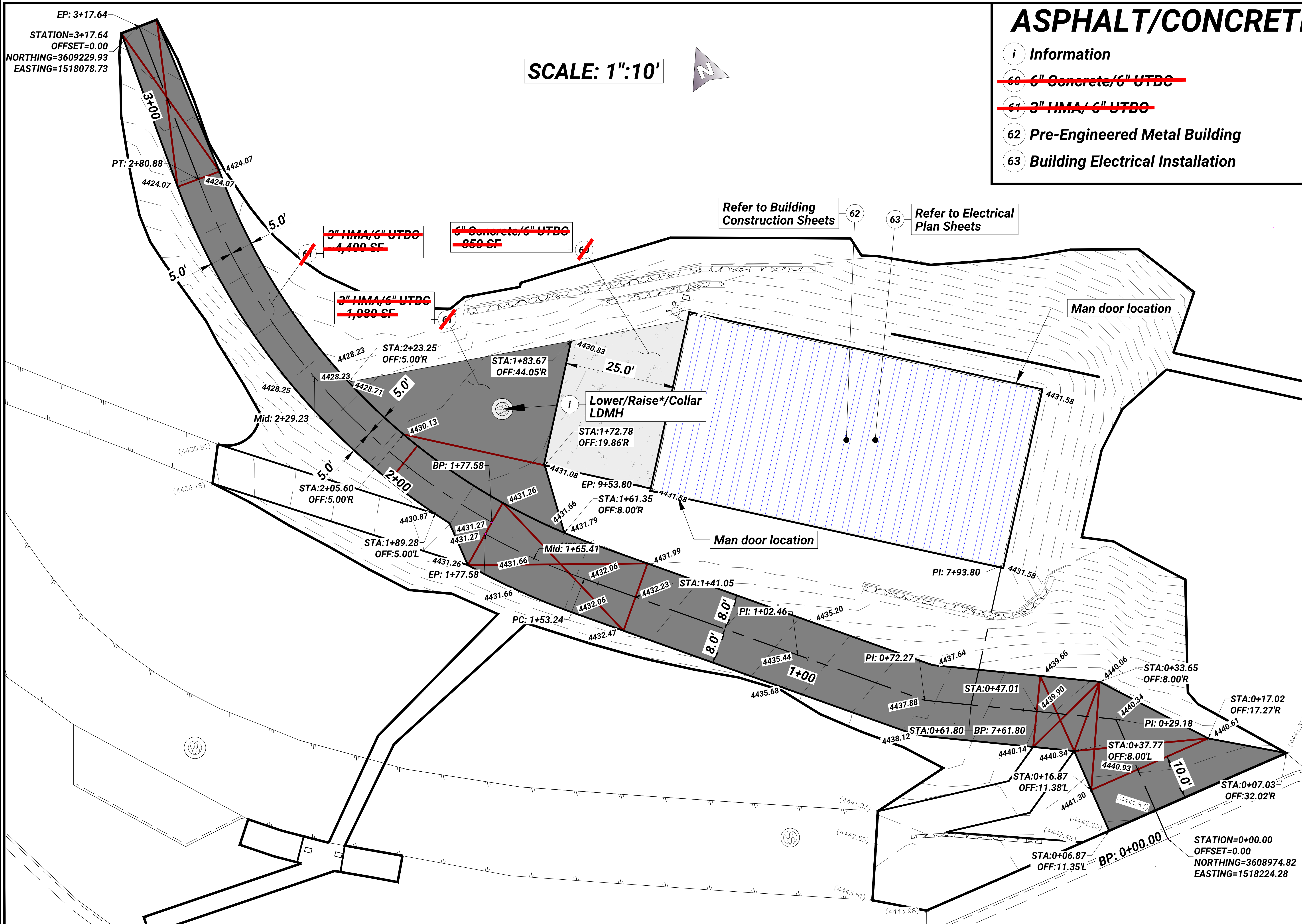
Phone: 801-629-8980 engineering.ogdencity.com

ASPHALT/CONCRETE

- (i) Information
- ~~60 6" Concrete/6" UTBC~~
- ~~61 3" HMA/ 6" UTBC~~
- 62 Pre-Engineered Metal Building
- 63 Building Electrical Installation



SCALE: 1":10'
N
EP: 3+17.64
STATION=3+17.64
OFFSET=0.00
NORTHING=3609229.93
EASTING=1518078.73
3+00
PT: 2+80.88
4424.07
4424.07
4424.07
5.0'
5.0'
~~3" HMA/6" UTBC~~
~~4,400 SF~~
~~6" Concrete/6" UTBC~~
~~850 SF~~
~~3" HMA/6" UTBC~~
~~1,080 SF~~
Refer to Building Construction Sheets
62
63
Refer to Electrical Plan Sheets
Man door location
4428.23
STA:2+23.25
OFF:5.00'R
4428.23
4428.71
4428.25
5.0'
Mid: 2+29.23
STA:1+83.67
OFF:44.05'R
4430.83
25.0'
Lower/Raise*/Collar LDMH
4430.13
STA:1+72.78
OFF:19.86'R
BP: 1+77.58
4431.08
5.0'
STA:2+05.60
OFF:5.00'R
2+00
EP: 9+53.80
4431.58
STA:1+61.35
OFF:8.00'R
4431.26
4431.66
4431.79
4430.87
4431.27
4431.27
STA:1+89.28
OFF:5.00'L
Mid: 1+65.41
Man door location
4431.26
EP: 1+77.58
4431.66
4432.06
4431.99
4432.23
STA:1+41.05
4431.66
4432.06
PC: 1+53.24
8.0'
8.0'
PI: 1+02.46
4435.20
4432.47
PI: 7+93.80
4431.58
4431.58
4435.44
1+00
PI: 0+72.27
4437.64
4435.68
4439.66
4440.06
STA:0+33.65
OFF:8.00'R
STA:0+47.01
4439.90
4437.88
4440.34
STA:0+17.02
OFF:17.27'R
PI: 0+29.18
4440.61
STA:0+61.80
BP: 7+61.80
4438.12
STA:0+37.77
OFF:8.00'L
4440.14
4440.34
4440.93
10.0'
STA:0+16.87
OFF:11.38'L
4441.30
STA:0+07.03
OFF:32.02'R
STA:0+06.87
OFF:11.35'L
BP: 0+00.00
STATION=0+00.00
OFFSET=0.00
NORTHING=3608974.82
EASTING=1518224.28
(4435.81)
(4436.18)
(4441.93)
(4442.55)
(4443.61)
(4443.98)
(4442.20)
(4442.42)
(4441.83)
(4441.36)

CONST 1
15 PAGE
17 SHEETS

REV	DATE	DESCRIPTION
0	MM/DD/YY	DESCRIPTION

Professional Engineer – Daniel Gillies – State of Utah – Civil

DESIGNED	DSG	DATE
DRAWN	DSG	10/6/25
CHECKED		

DRAWING SCALE
H: 1" = 10' (22x34) (11x17)
V: N/A (22x34) (11x17)
This bar measures exactly one inch on the original drawing

SURFACE IMPROVEMENTS
EL MONTE MAINTENANCE SHED
EL MONTE GOLF COURSE

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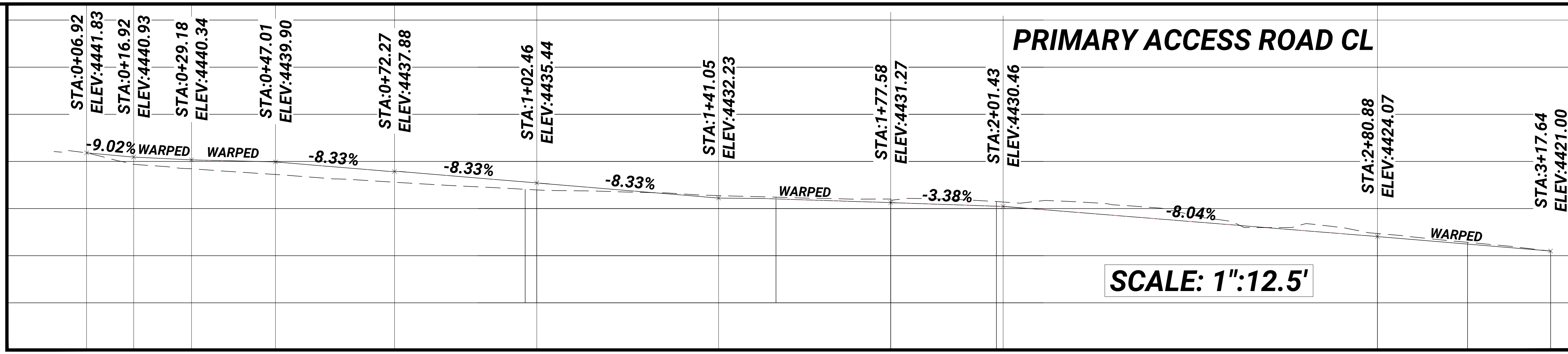
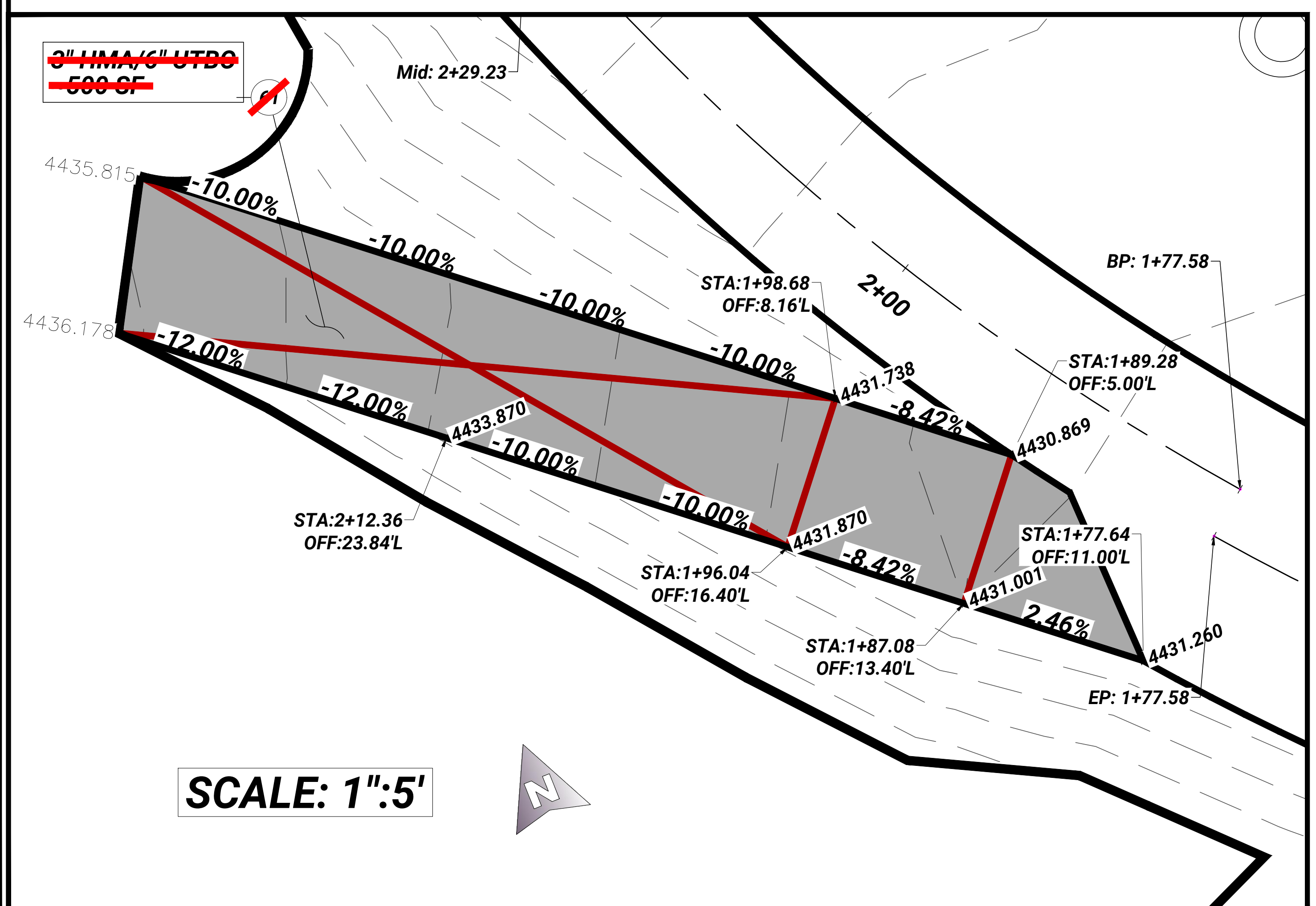


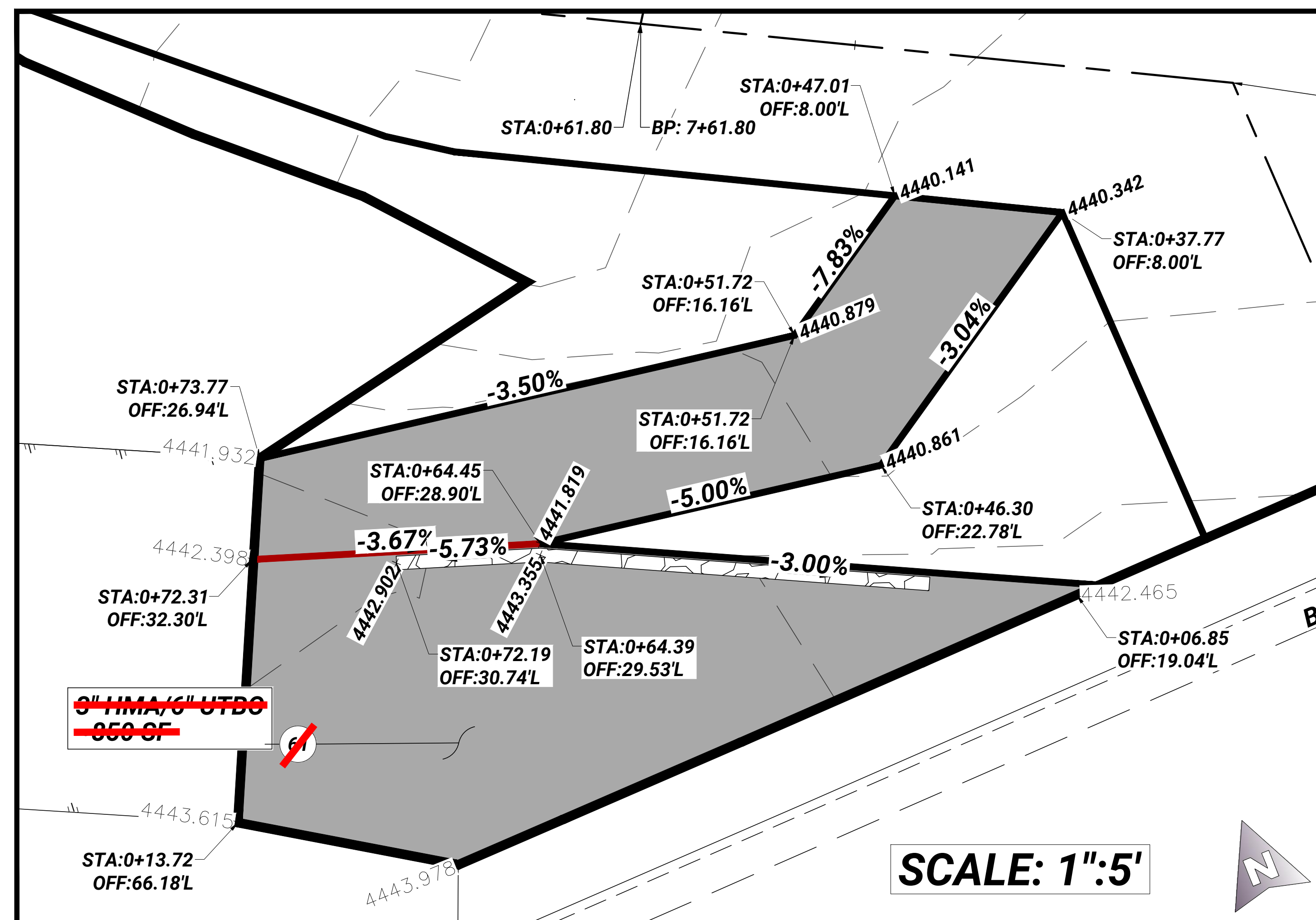
ASPHALT/CONCRETE

(i) Information

~~60 6" Concrete/6" UTBC~~

~~61 3" HMA/ 6" UTBC~~





CONST 2

16 PAGE

17 SHEETS

REV | DATE MM/DD/YY | DESCRIPTION

0

DESIGNED DSG | DRAWN DSG | CHECKED

DATE 10/6/25

DRAWING SCALE H: 1" = 10' (22x34) (11x17) V: N/A

This bar measures exactly one inch on the original drawing

MINOR ASHPALT WORK

EL MONTE MAINTENANCE SHED

EL MONTE GOLF COURSE

Ogden UTAH Still Untamed™

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Phone: 801-629-8980 engineering.ogdencity.com

Ogden City to Complete Landscape & Irrigation Installation.

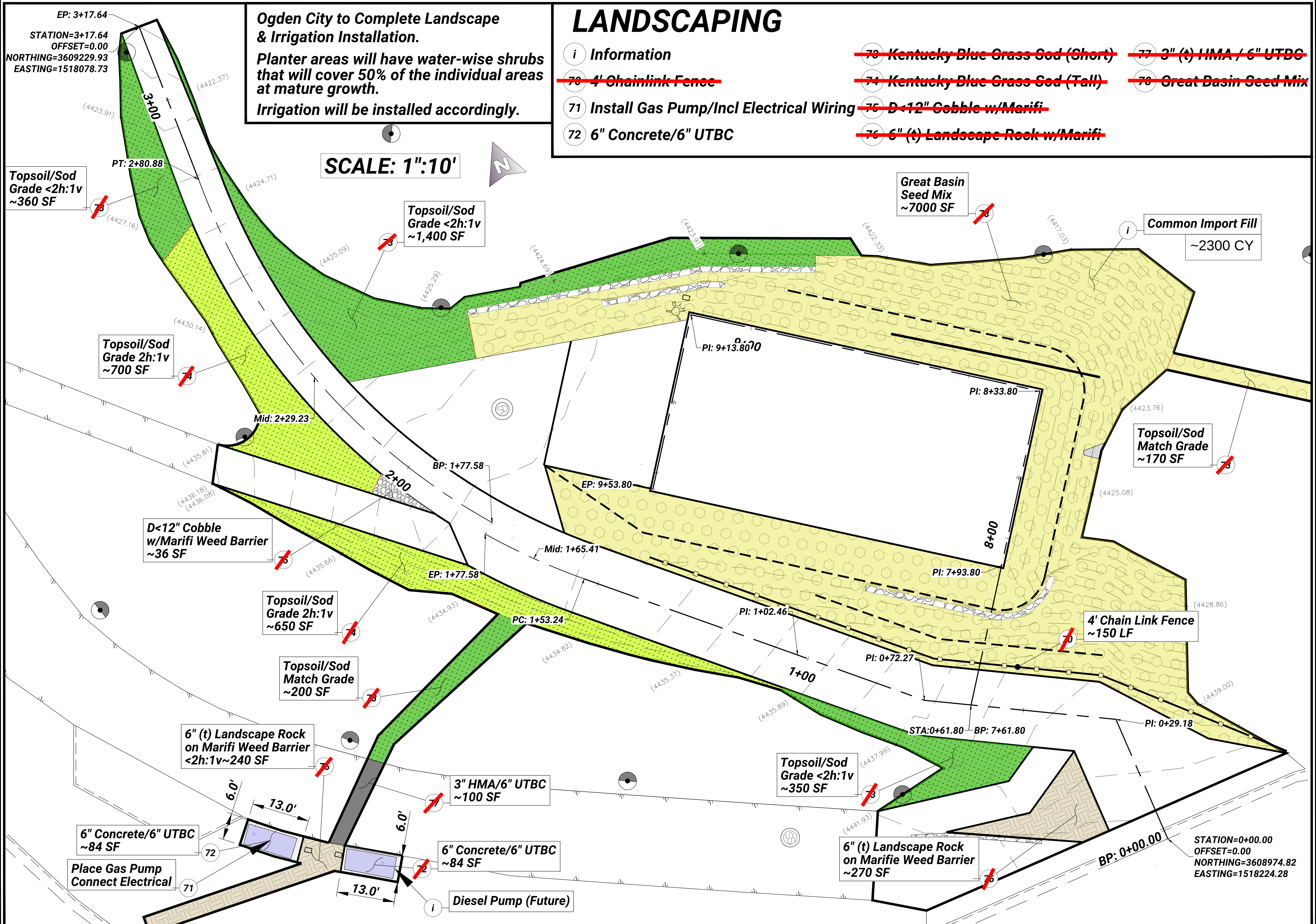
Planter areas will have water-wise shrubs that will cover 50% of the individual areas at mature growth.

Irrigation will be installed accordingly.

LANDSCAPING

- (i) Information
- ~~70 4' Chainlink Fence~~
- 71 Install Gas Pump/Incl Electrical Wiring
- 72 6" Concrete/6" UTBC
- ~~73 Kentucky Blue Grass Sod (Short)~~
- ~~74 Kentucky Blue Grass Sod (Tall)~~
- ~~75 D<12" Cobble w/Marifi~~
- ~~76 6" (t) Landscape Rock w/Marifi~~
- ~~77 3" (t) HMA / 6" UTBC~~
- ~~78 Great Basin Seed Mix~~

SCALE: 1":10'



EP: 3+17.64
STATION=3+17.64
OFFSET=0.00
NORTHING=3609229.93
EASTING=1518078.73
3+00
PT: 2+80.88
Topsoil/Sod Grade <2h:1v ~360 SF
Topsoil/Sod Grade <2h:1v ~1,400 SF
Topsoil/Sod Grade 2h:1v ~700 SF
Mid: 2+29.23
2+00
BP: 1+77.58
D<12" Cobble w/Marifi Weed Barrier ~36 SF
EP: 1+77.58
Mid: 1+65.41
Topsoil/Sod Grade 2h:1v ~650 SF
PC: 1+53.24
Topsoil/Sod Match Grade ~200 SF
6" (t) Landscape Rock on Marifi Weed Barrier <2h:1v~240 SF
3" HMA/6" UTBC ~100 SF
6" Concrete/6" UTBC ~84 SF
Place Gas Pump Connect Electrical
6" Concrete/6" UTBC ~84 SF
Diesel Pump (Future)
13.0'
6.0'
Great Basin Seed Mix ~7000 SF
Common Import Fill
~2300 CY
PI: 9+13.80
PI: 8+33.80
EP: 9+53.80
8+00
PI: 7+93.80
PI: 1+02.46
PI: 0+72.27
1+00
Topsoil/Sod Match Grade ~170 SF
4' Chain Link Fence ~150 LF
STA:0+61.80
BP: 7+61.80
PI: 0+29.18
Topsoil/Sod Grade <2h:1v ~350 SF
6" (t) Landscape Rock on Marifi Weed Barrier ~270 SF
BP: 0+00.00
STATION=0+00.00
OFFSET=0.00
NORTHING=3608974.82
EASTING=1518224.28

LAND

PAGE 17 / SHEETS 17

REV	DATE MM/DD/YY	DESCRIPTION
0		

DATE 10/6/25

DESIGNED DSG · DRAWN DSG · CHECKED

DRAWING SCALE: H: 1" = 10' (22x34) (11x17) · V: N/A (22x34) (11x17)

This bar measures exactly one inch on the original drawing

LANDSCAPING

EL MONTE MAINTENANCE SHED

EL MONTE GOLF COURSE

Ogden UTAH Still Untamed
2549 Washington Blvd, Suite 760 Ogden, UT 84401
Phone: 801-629-8980 engineering.ogdencity.com

ELECTRICAL STANDARDS LEGEND

(ALL SYMBOLS MAY NOT BE USED IN DRAWINGS)

- DIRECT BURIED OR CONCRETE EMBEDDED CONDUIT
- CONDUIT RUN EXPOSED
- PROCESS FLOW
- PNEUMATIC SIGNAL
- ELECTRICAL SIGNAL
- PANEL OR ENCLOSURE
- ???KW G XXXA — STAND–BY GENERATOR ??? DENOTES SIZE; GENERATOR MAIN BREAKER XXX DENOTES BREAKER SIZE
- WP — WALL PACK FIXTURE. MOUNTING HEIGHT AS INDICATED IN DRAWINGS
- FL — FLOOD LIGHT 7'–2" ABOVE FLOOR
- EXIT — EMERGENCY EXIT SIGN 7'–2" ABOVE FLOOR
- EM — EMERGENCY LIGHTING PACK 7'–2" ABOVE FLOOR
- HIGH/LOW BAY LED FIXTURE AS INDICATED IN DRAWINGS AND EQUIPMENT SCHEDULE
- 1' X 4' LED FIXTURE AS INDICATED IN DRAWINGS AND EQUIPMENT SCHEDULE
- G — INDICATOR LAMP – LETTER INDICATES COLOR
- R — FLASHING BEACON – LETTER INDICATES COLOR
- MS — MOTION SENSOR
- EXHAUST FAN
- OTHER LIGHT FIXTURE AS INDICATED IN DRAWINGS.
- AUDIBLE ALARM OR HORN
- JB — UNDERGROUND JUNCTION/PULLBOX – SIZE 5 UNLESS OTHERWISE INDICATED
- J — STEEL JUNCTION/PULLBOX
- E — ELECTRIC MANHOLE
- XX — FUSE; XX – DENOTES AMPERAGE
- GFCI — 120 V GROUND FAULT INTERRUPTER DUPLEX RECEPTACLE
- WP — 120 V DUPLEX RECEPTACLE, WP (WEATHERPROOF)

- 240 V RECEPTACLE
- DISCONNECT SWITCH
- 20A / 3P — CIRCUIT BREAKER – UPPER NUMBER INDICATES AMP TRIP RATING – LOWER NUMBER INDICATES POLES
- MOTOR OVERLOAD
- EQUIPMENT GROUND
- $ — LIGHT SWITCH, SINGLE POLE, MOUNT 4'–6" ABOVE FLOOR ON BUILDING WALL
- $WP — LIGHT SWITCH, SINGLE POINT MOUNT 4'–6" ABOVE FLOOR ON BUILDING WALL, WEATHER PROOF
- R — RELAY
- TR1 — TIMING RELAY
- TDR — TIMING DELAY RELAY
- CR — CONTROL RELAY COIL
- M — MAGNETIC RELAY
- MOMENTARY PUSH–BUTTON SWITCH
- OFF / HAND / AUTO — HAND–OFF–AUTO SELECTOR SWITCH
- NORMALLY CLOSED PUSHBUTTON
- NORMALLY OPEN PUSHBUTTON
- RTM — RUNNING TIME METER
- MOTOR STARTER – NUMBER INDICATES SIZE
- NORMALLY CLOSED CONTACTS
- NORMALLY OPEN CONTACTS
- CONTACTOR OR STARTER, NUMBER DENOTES NEMA SIZE
- 10 — MOTOR – NUMBER INDICATES HORSEPOWER RATING

- FM — FLOW METER
- ETM — ELAPSED TIME METER
- LIMIT SWITCH
- INSTRUMENT TRANSFORMER
- CT — CURRENT TRANSFORMER
- POWER TRANSFORMER
- T — THERMOSTAT
- G.F.I. — GROUND FAULT INTERRUPTER
- AUXILIARY CONTACT
- INTERLOCK
- PUMP
- S OR S — SOLENOID VALVE
- VALVE WITH MANUAL OPERATOR
- M — ELECTRIC MOTOR OPERATED VALVE (MODULATING OR NON–MODULATING)
- M — MOTOR OPERATED VALVE WITH LIMIT SWITCH ASSEMBLY
- I — COMPUTER/CONTROL INPUT
- O — COMPUTER/CONTROL OUTPUT
- LP1–XX — CIRCUIT LABEL: LP1 – PANEL NAME; XX – CIRCUIT NUMBER
- EXPLOSION PROOF SEAL OFF
- PC200.3 — P=POWER, I=CONTROL; C=COPPER, A=ALUMINUM; AMPERAGE; NUMBER OF WIRE
- --- — OTHER SYMBOLS AS SHOWN ON DRAWINGS

GENERAL ELECTRICAL REQUIREMENTS

1. THE COMPLETED INSTALLATION SHALL CONFORM TO ALL APPLICABLE FEDERAL, STATE AND LOCAL CODE ORDINANCES AND REGULATIONS. CONTRACTOR SHALL OBTAIN NECESSARY PERMITS AND INSPECTIONS REQUIRED BY THE GOVERNING AUTHORITIES. ALL WORK SHALL BE DONE IN A NEAT, PROFESSIONAL, FINISHED AND SAFE MANNER, UNDER COMPETENT SUPERVISION. INSTALL GROUNDING AND ALL ELECTRICAL WORK AS REQUIRED BY THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE AS WELL AS ANY OTHER APPLICABLE CODES.
2. MATERIAL, EQUIPMENT AND INSTALLATION SHALL BE IN ACCORDANCE WITH PROJECT SPECIFICATIONS WHICH ARE PART OF THE CONTRACT DOCUMENTS FOR THIS PROJECT.
3. VISIT THE SITE PRIOR TO BIDDING TO BECOME FAMILIAR WITH EXISTING CONDITIONS AND ALL OTHER FACTORS WHICH MAY AFFECT THE EXECUTION OF THIS WORK. INCLUDE ALL RELATED COSTS IN THE INITIAL BID PROPOSAL.
4. ALL MATERIALS SHALL BE NEW AND OF THE BEST QUALITY, MANUFACTURED IN ACCORDANCE WITH NEMA, ANSI, U.L. OR OTHER APPLICABLE STANDARDS. THE USE OF MANUFACTURER'S NAMES, MODELS AND NUMBERS IS INTENDED TO ESTABLISH STYLE, QUALITY, APPEARANCE, USEFULNESS AND BID PRICE. PROPOSED SUBSTITUTIONS SHALL BE SUBMITTED IN WRITING AND APPROVED BY THE ENGINEER BEFORE ORDERING.
5. PROTECT ALL ELECTRICAL MATERIAL AND EQUIPMENT INSTALLED UNDER THIS PROJECT AGAINST DAMAGE BY OTHER TRADES, WEATHER CONDITIONS OR ANY OTHER CAUSES. EQUIPMENT FOUND DAMAGED OR IN OTHER THAN NEW CONDITIONS WILL BE REJECTED AS DEFECTIVE.
6. LEAVE THE SITE CLEAN, REMOVE ALL DEBRIS, EMPTY CARTONS, TOOLS, CONDUIT, WIRE SCRAPS AND ALL MISCELLANEOUS SPARE EQUIPMENT AND MATERIALS USED IN THE WORK DURING CONSTRUCTION. ALL COMPONENTS SHALL BE FREE OF DUST, GRIT AND FOREIGN MATERIALS, LEFT AS NEW BEFORE FINAL ACCEPTANCE OF WORK.
7. ALL CONDUCTORS SHALL BE THHN/THWN COPPER, STRANDED RATED AT 600 VOLTS UNLESS OTHERWISE NOTED. ALUMINUM WIRE WILL NOT BE ALLOWED.
8. ALL CONDUCTORS SHALL BE INSTALLED IN A CONDUIT SYSTEM EXCEPT WHERE NOTED IN DRAWINGS. REFER TO CONDUIT AND CONDUCTOR SCHEDULE FOR CONDUIT TYPE AND SIZE. WHERE CONDUIT SIZE IS NOT CALLED OUT, CONDUIT SHALL BE INSTALLED PER SPECIFICATION 16010 AND SIZED PER LATEST ADOPTED EDITION OF THE NEC.
9. ALL UNDERGROUND CONDUIT TO BE SCHEDULE 40 PVC. MINIMUM DEPTH 30", MINIMUM SIZE 3/4" EXCEPT AS NOTED IN DRAWINGS AND SPECIFICATIONS. ALL UNDERGROUND ELBOWS SHALL BE RIGID LONG SWEEP WRAPPED WITH 3M–50 10 MIL PIPE WRAP OR APPROVED EQUAL EXCEPT FOR COMMUNICATIONS CABLE AND CONDUIT WHEN SPECIFIED DIFFERENTLY ON THE DETAILED ELECTRICAL DRAWINGS.
10. ALL EXPOSED CONDUIT BELOW 4' AFG SHALL BE IMC OR RIGID STEEL CONDUIT, WITH A MINIMUM SIZE OF 1" EXCEPT AS NOTED IN DRAWINGS AND SPECIFICATIONS. EMT WILL BE PERMITTED, ONLY IN WALLS OR ABOVE 4' AFF. EXPOSED PVC CONDUIT SHALL NOT BE PERMITTED UNLESS NOTED OTHERWISE IN DRAWINGS.
11. ALL SAFETY SWITCHES AND OTHER DISTRIBUTION AND CONTROL ELECTRICAL EQUIPMENT SHALL BE RATED FOR HEAVY DUTY SERVICE.
12. ALL WIRING DEVICES SHALL BE SPECIFICATION GRADE GROUNDED BODY TYPE DEVICES.
13. THE CONTRACTOR SHALL INSTALL ALL INSTRUMENTS AND CONTROLS, INCLUDING HVAC AND CONTROL PANELS. THE CONTRACTOR SHALL OBTAIN AND REVIEW ALL INSTRUMENT, CONTROL AND HVAC DRAWINGS FOR TOTAL SCOPE OF WORK.
14. ALL PANELS, DISCONNECTS AND SWITCHGEAR ON THE OUTSIDE OF THE BUILDING SHALL BE NEMA 3R TYPE ENCLOSURES UNLESS OTHERWISE SPECIFIED. CT CABINET AND METER BASE SHALL BE OUTSIDE THE BUILDING.
15. SURGE PROTECTIVE DEVICES (SPD) SHALL BE SIZED FOR 160KA UNLESS OTHERWISE NOTED.
16. ALL CONDUIT FOR ALL EQUIPMENT, INCLUDING EQUIPMENT FURNISHED BY OTHERS, SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR.
17. ALL CONDUIT, WHERE LEAVING ELECTRICAL EQUIPMENT TO GO UNDERGROUND, MUST BE ANCHORED TO THE FOUNDATION WITH STAND–OFF BRACKETS TO ALLOW FOR SUFFICIENT CLEARANCE FOR FOOTINGS AND WALL STUDS ON THE WALLS IN THE BUILDING. ALL RGS CONDUIT AND ELBOWS USED UNDERGROUND WILL BE WRAPPED WITH AN APPROVED PIPE WRAP. (TYP. FOR ALL BUILDINGS)
18. ALL WIRING IN CLASS I HAZARDOUS LOCATIONS SHALL COMPLY WITH NEC 501. AS DEFINED BY NFPA 820.

GENERAL ELECTRICAL ABBREVIATIONS

ACB	AIR CIRCUIT BREAKER	HMI	HUMAN MACHINE INTERFACE	MTU	MASTER TERMINAL UNIT	SE	SERVICE ENTRANCE
AFF	ABOVE FINISHED FLOOR	IC	INSTRUMENTATION CONDUIT	NC	NORMALLY CLOSED	SER	SERVICE ENTRANCE RATED
AFG	ABOVE FINISHED GRADE	IER	INTEGRATED EQUIPMENT RATING	NO	NORMALLY OPEN	SPC	SPARE CONDUIT
ATS	AUTOMATIC TRANSFER SWITCH	INST	INSTRUMENTATION CONDUIT	OL	MOTOR OVERLOAD	SPD	SURGE PROTECTIVE DEVICE
C	CONDUIT	JB	JUNCTION BOX	PB	PULL BOX	SPIC	SPARE INSTRUMENT CONDUIT
CB	CIRCUIT BREAKER	LCP	LOCAL CONTROL PANEL	PCP	PUMP CONTROL PANEL	SSSS	SOLID STATE SOFT START
CTRL	CONTROL	LP	LIGHTING PANEL	PLC	PROGRAMMABLE LOGIC CONTROLLER	TSP	TWISTED SHIELDED PAIR
DS	DISCONNECT SWITCH	MCB	MAIN CIRCUIT BREAKER	RGS	RIGID GALVANIZED STEEL CONDUIT	TVSS	TRANSIENT VOLTAGE SURGE SUPRESSOR
EMG	ELECTRICAL MANHOLE	MCP	MOTOR CIRCUIT PROTECTOR	PP	POWER PANEL	VFD	VARIABLE FREQUENCY DRIVE
EMT	ELECTRICAL METALLIC TUBING	MLO	MAIN LUG ONLY	RTU	REMOTE TERMINAL UNIT	WP	WEATHERPROOF

LIGHTNING PROTECTION

1. PROVIDE A COMPLETE LIGHTNING PROTECTION SYSTEM BY VFC OR APPROVED COMPLYING WITH NFPA 780. SYSTEM TO INCLUDE: CABLING NETWORK, AIR TERMINALS, CONNECTIONS, SPLICES, BONDING, GROUND RING, GROUND RODS, AND ANY OTHER REQUIRED EQUIPMENT. ALL ROOF MOUNTED EQUIPMENT SHALL BE BONDED AND PROTECTED BY THE LIGHTNING PROTECTION SYSTEM. INSTALLER SHALL PROVIDE A UL MASTER LABEL FOR THE LIGHTNING PROTECTION SYSTEM UPON COMPLETION OF THE PROJECT.
2. REFER TO SPECIFICATION 16065SP FOR ADDITIONAL DETAILS.

REV NO.	COMMENT	DATE

REGISTERED PROFESSIONAL ENGINEER — 16-JAN-2026 — No. 362066 — J. RANDALL KNAPP — STATE OF UTAH

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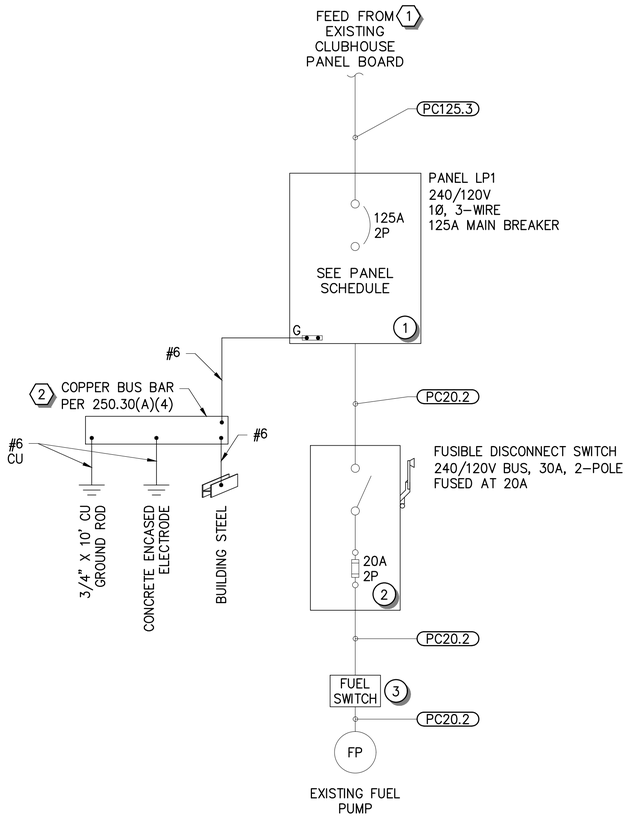
OGDEN CITY

EL MONTE GOLF COURSE SHED
ELECTRICAL
ELECTRICAL NOTES AND SYMBOLS

SEI NO.	DESIGNED	DRAWN	CHECKED	SHEET NO.	
S	KRD	GKP	JRK	1 of 6	E100



PANEL LP1 EL MONTE GOLF COURSE SHED													CU Bus 10 KA SC Rating (RMS)			
VOLTAGE		PH	WIRE													
240/120		1	3 –WIRE	PANEL SCHEDULE CIRCUIT									125 AMP MAIN CB			
CKT NO.	AMPS	POLE	DESCRIPTION	LOAD (VA)			AMPS				LOAD (VA)			DESCRIPTION	POLE	AMPS	CKT NO.
				LIGHT	RECEP	OTHER	L1		L2		OTHER	RECEP	LIGHT				
1	20	1	FUEL DISCONNECT	0	0	696	5.8	12.2			0	0	1469	LIGHTING	1	20	2
3	20	1	COMPRESSOR	0	450	0			3.8	9.0	0	1080	0	RECEPTACLES	1	20	4
5	20	1	SPARE	0	0	0	0.0	0.0			0	0	0	SPARE	1	20	6
7	50	2	IRRIGATION PANEL	0	0	7200			30.0	0.0	0	0	0	SPARE	1	20	8
9	–	–	' '	0	0	0	30.0	0.0			0	0	0	SPARE	1	20	10
11		–		0	0	0			0.0	0.0	0	0	0	SPARE	1	20	12
				0	450	7896	48		43		0	1080	1469				
			Subtotal Watts			8346							2549	Subtotal Watts			
			Total Watts			10895							46	Average Amps			

NEC DIVERSIFIED LOAD CALCULATIONS			
LIGHTING AND CONTINOUS LOADS: (100% CONNECTED LOAD PLUS 25%)	1.5 kVA	Lighting Total kVA:	1.8
RECEPTACLES: (FIRST 10kVA @ 100%, REMAINDER @50%)	1.5 kVA	Receptacles Total kVA:	1.5
ALL OTHER LOADS @ 100% MOTOR TOTALS INCLUDED IN ALL OTHER LOADS WITH LARGEST MOTOR CALCULATED AT 125% PER NEC	7.9 kVA	Other Loads Total kVA:	9.7
		DIVERSIFIED TOTAL kVA	13.1
		AVERAGE AMPS PER PHASE	54.4

SHEET NOTES:

1. ONE–LINE DIAGRAM SHOWS PROPOSED CONFIGURATION. CONTRACTOR SHALL CONFIRM ACTUAL CONFIGURATION WITH UTILITY PRIOR TO CONSTRUCTION AND PROVIDE ALL NECESSARY EQUIPMENT PADS, PULL BOXES OR OTHER ITEMS REQUIRED BY UTILITY.
2. THE CONTRACTOR SHALL COORDINATE ALL WORK WITH OWNER PRIOR TO CONSTRUCTION.
3. THE CONTRACTOR IS RESPONSIBLE FOR ALL TRENCHING, BACKFILL, COMPACTION, AND THE INSTALLATION OF CONDUIT SHOWN AS NEW OR TO BE EXTENDED TO NEW EQUIPMENT LOCATION.
4. PROVIDE BONDING AND GREEN INSULATED GROUND FOR ALL ELECTRICAL ENCLOSURES PER LATEST EDITION OF NEC.

KEY NOTES

(1) CONNECT TO EXISTING 100A FEEDER BREAKER IN CLUBHOUSE PANEL. COMPLETE CIRCUITING WILL BE FIELD ROUTED. WORK WITH OWNER PRIOR TO INSTALLATION FOR PRESERVATION OF BUILDING INTEGRITY.

(2) BOND TO ALL ELECTRODES PRESENT PER NEC 250 AND LOCAL AHJ.

CONDUIT & CONDUCTOR SCHEDULE							
TYPE	CONDUCTOR						CONDUIT SIZE (5)
	USE	METAL	SETS	QTY	SIZE (AWG OR KCMIL)	GND (AWG OR KCMIL)	
PC125.3	POWER	COPPER	1	3	1	6	2"
PC050.3	POWER	COPPER	1	3	6	10	1"
PC20.2	POWER	COPPER	1	2	12	12	1"
PC002.0	POWER		1				1"
PC004.0	POWER		1				1–1/2"

GENERAL NOTES:
- GROUND CONDUCTOR SHALL BE DELETED ON SERVICE ENTRANCE CONDUCTORS.
- SIZE ALL CONDUITS IN ACCORDANCE WITH NEC CHAPTER 9, TABLE 1.

KEYED NOTES:
(1) REFER TO LATEST ADOPTED VERSION OF NEC ARTICLE 310.16 FOR 75C RATED COPPER.
(2) 200% NEUTRAL (OR 2 NEUTRAL CONDUCTORS).
(3) AMPACITY DERATED TO 80% DUE TO (4–6) CURRENT CARRYING CONDUCTORS IS BASED ON NEC 310.15(C)(1).
(4) ALL UNDERGROUND CONDUIT AND CONDUCTORS SHALL BE INSTALLED PER SHEET E501 DETAIL E.
(5) CONDUIT SIZE SHOWN SHALL BE USED UNLESS NOTED IN DRAWING. ALL CONDUIT SHALL BE IN COMPLIENCE PER NEC 2023.

ELECTRICAL EQUIPMENT SCHEDULE					
(X)	DESCRIPTION	QUANTITY	MODEL / SPECIFICATION	MANUFACTURER	COMMENTS
1	PANEL LP1, 120/240V, 1ø, 3–WIRE, 125A MAIN CB CU BUS 10 KAIC, 30 CIRCUIT	1	16010		
2	GENERAL DUTY FUSED DISCONNECT, 30A, 120/240V, 2–POLE, FUSED AT 20 AMPS	1	16010		
3	EXPLOSION PROOF FUEL SWITCH	1	DSDX910	EATON OR EQUAL	LOCKABLE AND TAMPER PROOF.
4	ELECTRICAL PRECAST PULL BOX, 12"x12"x6"	2	OLDCASTLE POLYMER 1212 / 16010	OLDCASTLE OR EQUAL	LID SHALL BE ENGRAVED WITH ELECTRICAL.

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OGDEN CITY

EL MONTE GOLF COURSE SHED
ELECTRICAL
ONE–LINE & SCHEDULES

SEI NO.	DESIGNED	DRAWN	CHECKED	SHEET NO.	
S	KRD	GKP	JRK	2 of 6	E201

P:\ogden city\000000 el monte golf course\04 Dwg\02 Electrical One-line Diagram & Schedules.dwg Jan 16, 2026 11:33am gatlin.penney

NORTH

SCALE
0 15' 30'
HORIZ: 1" = 15'

SHEET NOTES:

1. THE CONTRACTOR WILL BE RESPONSIBLE TO LOCATE ALL EXISTING UNDERGROUND UTILITIES BEFORE ANY EXCAVATION IS PERFORMED. ANY DAMAGE TO EXISTING UTILITIES SHALL BE REPAIRED TO NEW CONDITION OR REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
2. NOT ALL CONDUITS ARE SHOWN. REFER TO CONDUIT AND CONDUCTOR SCHEDULE FOR INDIVIDUAL CONDUIT FILL REQUIREMENTS. CONDUIT LAYOUT SHOWN IS DIAGRAMMATIC ONLY. CONTRACTOR SHALL FIELD ROUTE AS NECESSARY TO ACCOMMODATE FIELD CONDITIONS AND AVOID OTHER STRUCTURES AS REQUIRED.
3. REFER TO DRAWING E201 FOR CONDUIT AND CONDUCTOR IDENTIFICATION.
4. (X) DENOTES ELECTRICAL EQUIPMENT IDENTIFICATION. REFER TO DRAWING E201 FOR ELECTRICAL EQUIPMENT SCHEDULE.

KEY NOTES

1. CONTRACTOR SHALL COORDINATE WITH OWNER AND CONNECT TO EXISTING ELECTRICAL PANEL IN EXISTING CLUBHOUSE BUILDING. CONTRACTOR SHALL PROVIDE ALL CONDUIT, CONDUCTOR, BUILDING PENETRATIONS, CONDUIT SEALS AND ALL REQUIRED ACCESSORIES FOR AN OPERABLE SYSTEM.
2. BUILDING LOCATION IF APPROXIMATE COORDINATE WITH CIVIL PLANS FOR EXACT LOCATION, PAD AND GRADING WORK TO BE PERFORMED.
3. FUEL TANK TO BE MOVED BY OWNER. COORDINATE WORK WITH OWNER PRIOR TO INSTALLATION FOR FINAL LOCATIONS AND STAGING.
4. CONTRACTOR SHALL PROVIDE ALL MOUNTING HARDWARE OR STAND FOR NEW FUEL SHUTOFF SWITCH WITH A LOCKABLE COVER, AT THE FUEL TANK. CONTRACTOR SHALL INSTALL A COMPLETE FUNCTIONAL SYSTEM WITH ALL NECESSARY SEAL OFFS AND OFFSETS PER NEC.
5. COORDINATE ALL ASPHALT CUTS WITH OWNER PRIOR TO WORK BEING PERFORMED. PATCHES ARE TO BE REPAIRED BACK TO OGDEN CITY STANDARDS AND SPECIFICATIONS.
6. CONTRACTOR SHALL LOCATE AND INSPECT EXISTING ELECTRICAL CONDUIT SYSTEM TO EXISTING BUILDING. INTERCEPT CONDUIT AT THIS LOCATION AND TIE INTO NEW BUILDING SERVICE. CONDUIT SHALL BE INSPECTED FOR NEC COMPLIANCE AND A MANDREL SHALL BE PULLED THROUGH EXISTING CONDUIT TO ENSURE SUITABILITY FOR USE. REPLACE CONDUIT IF DAMAGED OR UNDERSIZED.
7. CONDUIT ONLY. CONTRACTOR SHALL INSTALL PULL STRING AND CAP FOR FUTURE USE.
8. CONDUITS TO BE INSTALLED IN JOINT TRENCH WITH WATER LINE SEE CIVIL PLANS. MAINTAIN MIN OF 12" OF SEPARATION BETWEEN ELECTRICAL CONDUIT AND WATER LINE.
9. TIE TO EXISTING PULL AND VALVE BOXES AS DIRECTED BY OWNER.

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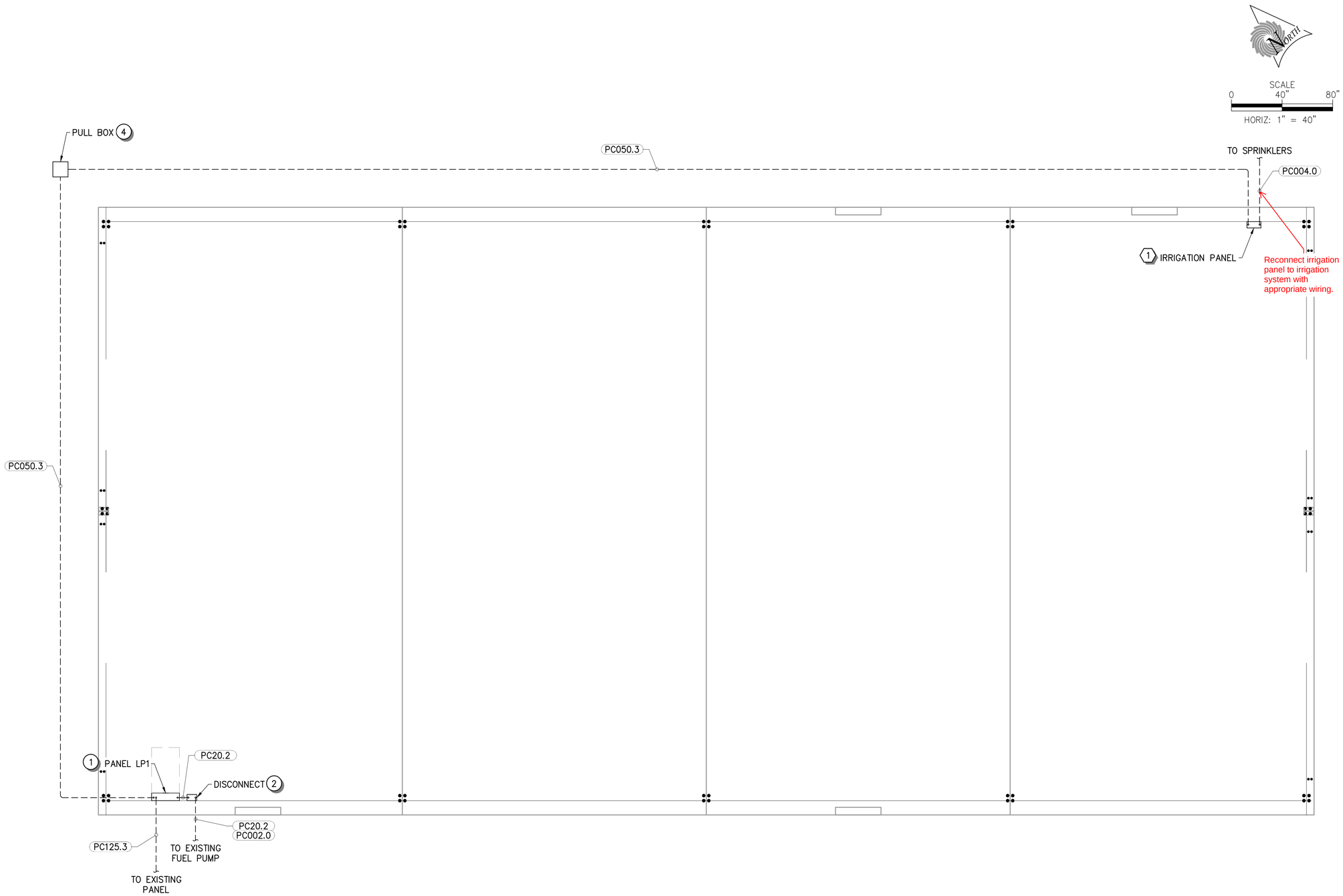
OGDEN CITY

EL MONTE GOLF COURSE SHED
ELECTRICAL
SITE PLAN

SEI NO.	DESIGNED	DRAWN	CHECKED	SHEET NO.
S	KRD	GKP	JRK	3 of 6

E301

A ~ ELECTRICAL SITE PLAN
SCALE 1" = 15' AT SHEET SIZE 22" x 34"



SHEET NOTES:

1. CONTRACTOR TO COMPLY WITH GENERAL ELECTRICAL REQUIREMENTS ON DRAWING E100.
2. CONDUITS SHOWN ARE SCHEMATIC ONLY. CONTRACTOR SHALL FIELD ROUTE CONDUIT AS NECESSARY TO AVOID OBSTACLES AND OTHER EQUIPMENT.
3. NOT ALL CONDUITS ARE SHOWN FOR CLARITY. REFER TO CONDUIT AND CONDUCTOR SCHEDULE FOR ADDITIONAL CIRCUITING INFORMATION.
4. SEE DRAWING E201 FOR CONDUIT AND CONDUCTOR SCHEDULE.
5. (X) DENOTES ELECTRICAL EQUIPMENT IDENTIFICATION. REFER TO DRAWING E201 FOR ELECTRICAL EQUIPMENT SCHEDULE.
6. PROVIDE LIGHTNING PROTECTION PER SPECIFICATION 16065SP AND DRAWING E100.

KEY NOTES

(1) EXISTING PANELS TO BE PROTECTED IN PLACE COORDINATE ALL WORK WITH OWNER PRIOR TO AN WORK BEING PERFORMED.

A ELECTRICAL POWER PLAN
SCALE: 1" = 40" AT SHEET SIZE 22" x 34"

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REGISTERED PROFESSIONAL ENGINEER STATE OF UTAH
16-JAN-2026
No. 362066
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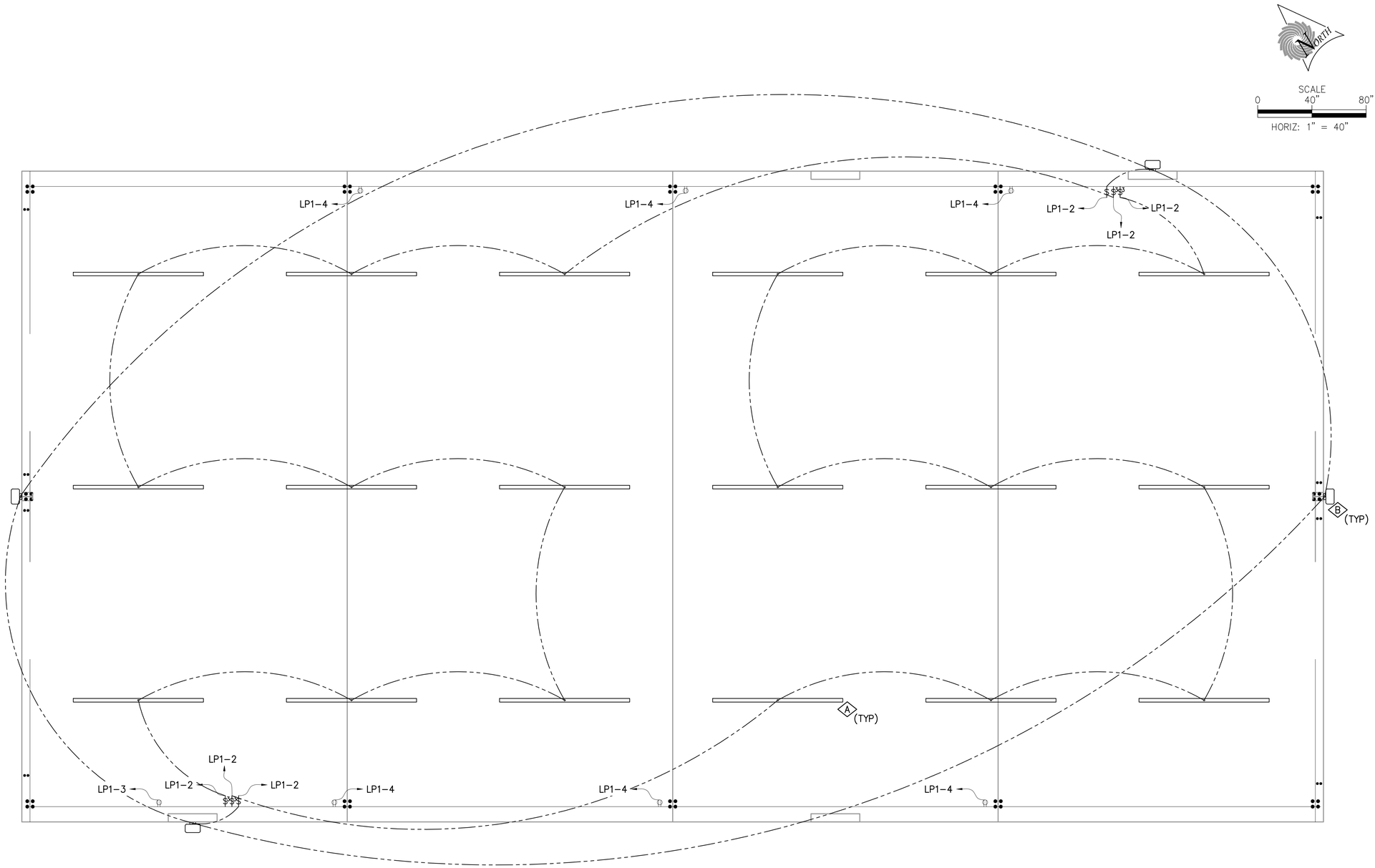
EL MONTE GOLF COURSE SHED
ELECTRICAL
POWER PLAN

SEI NO.	DESIGNED	DRAWN	CHECKED	SHEET NO.	
S	KRD	GKP	JRK	4 of 6	E401

P:\ogden city\00000 el monte golf course\04 Dwg\04 Electrical Building Plan.dwg Jan 16, 2026 11:33am gatlin.penney



SHEET NOTES:

1. CONTRACTOR TO COMPLY WITH GENERAL ELECTRICAL REQUIREMENTS ON DRAWING E100.
2. CONDUITS SHOWN ARE SCHEMATIC ONLY. CONTRACTOR SHALL FIELD ROUTE CONDUIT AS NECESSARY TO AVOID OBSTACLES AND OTHER EQUIPMENT.
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4. SEE DRAWING E201 FOR CONDUIT AND CONDUCTOR SCHEDULE.
5. (X) DENOTES ELECTRICAL EQUIPMENT IDENTIFICATION. REFER TO DRAWING E201 FOR ELECTRICAL EQUIPMENT SCHEDULE.
6. PROVIDE LIGHTNING PROTECTION PER SPECIFICATION 16065SP AND DRAWING E100.

ELECTRICAL LIGHTING FIXTURE SCHEDULE

ITEM #	DESCRIPTION	QUANTITY	MODEL / SPECIFICATION	MANUFACTURER	COMMENTS
A	CSS L96 8000 LUMEN STRIP LIGHTING FIXTURE	18	CSS L96 8000LM UVOLT 40K 80CRI 76W	LITHONIA OR APPROVED EQUAL	
B	D-SERIES EXTERIOR LED WALL LUMINAIRE	4	DSXW1 LED 10C 700 40K T4M MVOLT DDBXB 26W	LITHONIA OR APPROVED EQUAL	OPTIONAL PHOTOCELL (PE) TO BE PROVIDED WITH LIGHTING FIXTURE

A ELECTRICAL LIGHTING AND RECEPTACLE PLAN

SCALE: 1"= 40" AT SHEET SIZE 22" x 34"

811 Know what's below. Call before you dig. 1-800-662-4111

REV NO.	COMMENT	DATE

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16-JAN-2026
No. 362066
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STATE OF UTAH

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OGDEN CITY

EL MONTE GOLF COURSE SHED
ELECTRICAL
LIGHTING & RECEPTACLE PLAN

SET NO.	DESIGNED	DRAWN	CHECKED	SHEET NO.	
S	KRD	GKP	KRD	5 of 6	E402

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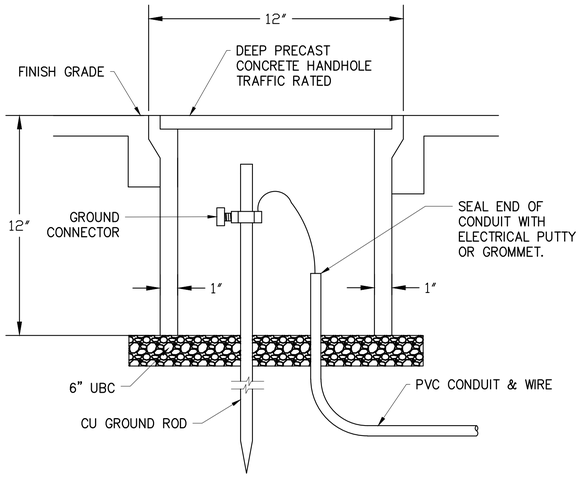
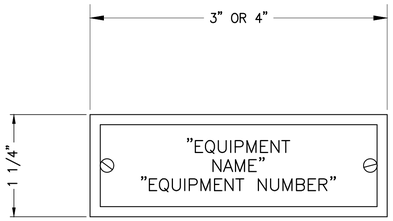


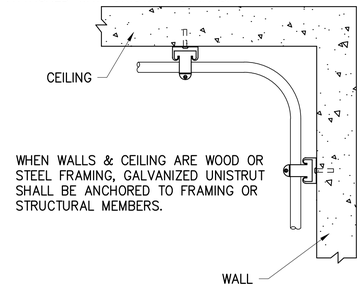
A ~ DETAIL - GROUND WELL
N.T.S.



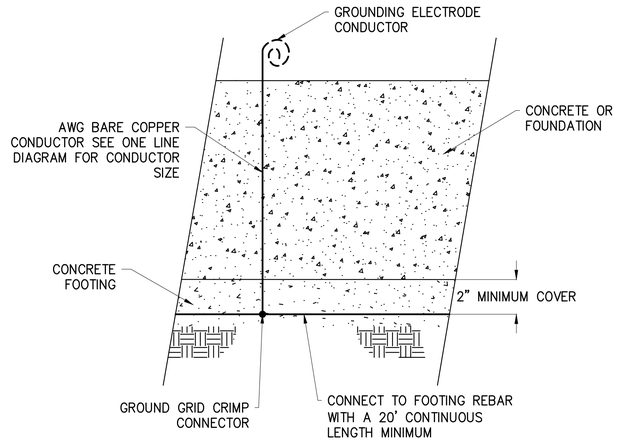
1. ALL LETTERS TO BE WHITE 1/4" HIGH, ON A BLACK BACKGROUND UNLESS NOTED OTHERWISE.
2. ALL NAMEPLATES TO BE MOUNTED ON THE VERTICAL CENTER LINE OF THE CUBICLE OR DEVICE.
3. ATTACH ALL NAMEPLATES WITH STAINLESS STEEL SCREWS.
4. PROVIDE BLANK NAMEPLATES FOR ALL SPARE AND AN ADDITIONAL TEN PERCENT FOR FUTURE DEVICES.

B ~ DETAIL - NAMEPLATE
N.T.S.

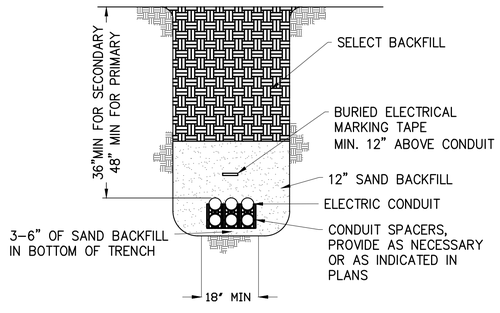
7/8" GALVENIZED UNISTRUT TO BE ANCHORED TO THE WALL & CEILING, THEN CONDUIT SHALL BE RUN AND ATTACHED WITH UNISTRUT STRAPS.



C ~ DETAIL - CONDUIT MOUNT
N.T.S.

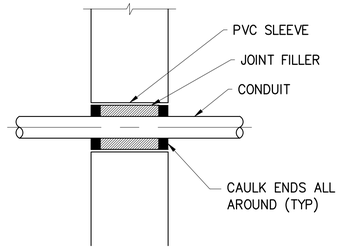


D ~ DETAIL - UFER CONCRETE ENCASED
N.T.S.



1. WARNING TAPE MUST BE PLACED ON TOP OF CONDUIT (5 MILS THICKNESS)
2. ALL TRENCHES MUST BE INSPECTED PRIOR TO BACKFILLING
3. TRENCHES SHOULD BE SPOT BACKFILLED TO PREVENT MOVEMENT OF TAPE DURING BACKFILL.
4. SELECT BACKFILL MUST BE COMPACTED IN 1 FOOT LIFTS TO PREVENT SETTLING.

E ~ DETAIL - UNDERGROUND CONDUIT POWER CABLE TRENCH
N.T.S.



F ~ CONDUIT PENETRATION
N.T.S.

811 Know what's below. Call before you dig. 1-800-662-4111

REV NO.	COMMENT	DATE

REGISTERED PROFESSIONAL ENGINEER
16-JAN-2026
No. 362066
J. RANDALL KNAPP
STATE OF UTAH

SUNRISE ENGINEERING
6875 SOUTH 900 EAST
SALT LAKE CITY, UTAH 84047
TEL 801.523.0100 · FAX 801.523.0990
www.sunrise-eng.com

OGDEN CITY

EL MONTE GOLF COURSE SHED
ELECTRICAL
DETAILS

SEI NO.	DESIGNED	DRAWN	CHECKED	SHEET NO.	
S	KRD	GKP	JRK	6 of 6	E501

Builder/Contractor Responsibilities

Drawing Validity- These drawings, supporting structural calculations and design certification are based on the order documents as of the date of these drawings. These documents describe the material supplied by the manufacturer as of the date of these drawings. Any changes to the order documents after the date on these drawings may void these drawings, supporting structural calculations and design certification. The Builder/Contractor is responsible for notifying the building authority of all changes to the order documents which result in changes to the drawings, supporting structural calculations and design certification.

Builder Acceptance of Drawings- Approval of the manufacturer's drawings and design data affirms that the manufacturer has correctly interpreted and applied the requirements of the order documents and constitutes Builder/Contractor acceptance of the manufacturer's interpretations of the order documents and standard product specifications, including its design, fabrication and quality criteria standards and tolerances. (AISC COSP June 2016 Section 4.4.1)

Code Official Approval - It is the responsibility of the Builder/Contractor to ensure that all project plans and specifications comply with the applicable requirements of any governing building authority. The Builder/Contractor is responsible for securing all required approvals and permits from the appropriate agency as required.

Building Erection - The Builder/Contractor is responsible for all erection of the steel and associated work in compliance with the Metal Building Manufacturers drawings. Temporary supports, such as temporary guys, braces, false work or other elements required for erection will be determined, furnished and installed by the erector (AISC COSP June 2016 Section 7.10.3).

Discrepancies - Where discrepancies exist between the Metal Building plans and plans for other trades, the Metal Building plans will govern. (AISC COSP June 2016 Section 3.3)

Materials by Others - All interface and compatibility of any materials not furnished by the manufacturer are the responsibility of and to be coordinated by the Builder/Contractor or A/E firm. Unless specific design criteria concerning any interface between materials if furnished as a part of the order documents, the manufacturers assumptions will govern.

Modification of the Metal Building from Plans - The Metal Building supplied by the manufacturer has been designed according to the Building Code and specifications and the loads shown on this drawing. Modification of the building configuration, such as removing wall panels or braces, from that shown on these plans could affect the structural integrity of the building. The Metal Building Manufacturer or a Licensed Structural Engineer should be consulted prior to making any changes to the building configuration shown on these drawings. The Metal Building Manufacturer will assume no responsibility for any loads applied to the building not indicated on these drawings.

Foundation Design- The Metal Building Manufacturer is not responsible for the design, materials and workmanship of the foundation. Anchor rod plans prepared by the manufacturer are intended to show only location, diameter and projection of the anchor rods required to attach the Metal Building System to the foundation. It is the responsibility of the end customer to ensure that adequate provisions are made for specifying rod embedment, bearing values, tie rods and or other associated items embedded in the concrete foundation, as well as foundation design for the loads imposed by the Metal Building System, other imposed loads, and the bearing capacity of the soil and other conditions of the building site, (MBMA 06 Sections 3,2,2 and A3)

Shimming - In accordance with Section 6.10 of Chapter 4 Common Industry Practices in the Metal Building Systems Manual, shimming is a normal part of erection and is not subject to claim.

Building Descriptions			
Building ID	Width	Length	Height
Building A	40'-0	80'-0	16'-0

Download panel installation manuals from:
www.CBBmanuals.com

Descargue los manuales de instalación del panel desde:
www.CBBmanuals.com

½" DIA. A325 BOLT GRIP TABLE		
GRIP	LENGTH	BOLT LENGTH / GRIP
0 TO 9/16"	1 1/4" F.T.	NOTE: FULL THREAD ENGAGEMENT IS DEEMED TO HAVE BEEN MET WHEN THE END OF THE BOLT IS FLUSH WITH THE FACE OF THE NUT.
Over 9/16" TO 1 1/16"	1 3/4" F.T.	
Over 1 1/16" TO 1 5/16"	2"	
Over 1 5/16" TO 1 9/16"	2 1/4"	
Over 1 9/16" TO 1 13/16"	2 1/2"	WASHER REQUIRED ONLY WHEN SPECIFIED. WASHER MAY BE LOCATED UNDER HEAD OF BOLT, UNDER NUT, OR AT BOTH AT LOCATIONS NOTED ON ERECTION DRAWINGS. ADD 5/32" FOR EACH WASHER TO MATERIAL THICKNESS TO DETERMINE GRIP.
Over 1 13/16" TO 2 1/16"	2 3/4"	
LOCATIONS OF BOLTS LONGER THAN 2 3/4" NOTED ON ERECTION DRAWINGS		
F.T. DENOTES FULLY THREADED		

MUELLER METAL BUILDINGS, ROOFING & MORE | FORTIFY BUILDING SOLUTIONS™

Sales: 877.268.3553
Muellerinc.com

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13105 Northwest Freeway, Suite 500
Houston, TX 77040
cornerstonebuildingbrands.com

Field Services: 844.840.4603
field.services@cornerstone-bb.com

DESIGN CRITERIA

```
Building Code .....: 2021 IBC
Building Risk Category .....: Normal (Risk Category II)
Roof Dead Load
     Superimposed .....: 2.22 psf
     Collateral .....: 1.00 psf
     (1.00 psf Other)
Roof Live Load .....: 20.00 psf reduction allowed

Snow
     Ground Snow Load (Pg) .....: 43.00 psf
     Snow Importance Factor (I) .: 1.00
     Snow Exposure Factor (Ce) ..: 0.90
     Thermal Factor (Ct) .....: 1.00
     Slope Factor (Cs) .....: 1.00
     Sloped Roof Snow (Ps) .....: 27.09 psf
     Minimum Roof Snow Load (Pm) : 30.00 psf

Wind
     Ultimate Wind Speed (Vult) .: 110 mph
     Nominal Wind Speed (Vasd) ...: 85 mph (IBC section 1609.3.1)
     Serviceability Wind Speed ...: 74 mph
     Ground Elevation Factor ....: 0.85 (4458 ft ASL)
     Wind Exposure Category .....: C
     Exposure Coefficient (MWFRS): 0.860
     Enclosure Classification ...: Enclosed Building
     Internal Pressure Coef (GCpi): 0.18/-0.18
     Unfactored Wall Loads for components not provided by building manufacturer
     Zone 5 Areas (within 4.00* of corner) : 20.82 psf pressure -27.76 psf suction
     Zone 4 Areas (away from corners)      : 20.82 psf pressure -22.55 psf suction
     These values are the maximum values required based on a 10 sq ft area.
     Components with larger areas may have lower wind loads.

Seismic
     Seismic Importance Factor (Ie): 1.00
     Seismic Design Category .....: D
     Soil Site Class .....: D Stiff Soil (Default)
     Ss .....: 1.351 g          Sds ....: 1.081 g
     S1 .....: 0.498 g          Sd1 ....: 0.598 g
     Analysis Procedure .....: Equivalent Lateral Force
     Column Line                    1-5        SWA & SWC
     Basic Force Resisting System   C4         B3
     Response Modification Coefficient (R)  3.50    3.25
     Seismic Response Coefficient (Cs)      0.309   0.333
     Design Base Shear in kips (V)          6.32    6.26
     Basic Structural System (from ASCE 7-16 Table 12.2-1)
     B3 - Ordinary Steel Concentrically Braced Frame
     C4 - Ordinary Steel Moment Frame
```

DEFLECTION CRITERIA

The material supplied by the manufacturer has been designed with the following minimum deflection criteria. The actual deflection may be less depending on actual load and actual member length.

BUILDING DEFLECTION LIMITS .....: BLDG-A

Roof Limits	Rafters	Purlins	Panels
Live: L/	180	150	60
Snow: L/	180	180	60
Serviceability Wind: L/	180	180	60
Total Gravity: L/	120	120	60
Total Uplift: L/	N/A	N/A	60

Frame Limits	Sidesway
Live: H/	60
Snow: H/	60
Serviceability Wind: H/	60
Seismic Drift: H/	40
Total Gravity: H/	60
Service Seismic: H/	40

Wall Limits	Limit
Total Wind Panels: L/	60
Total Wind Girts: L/	90
Total Wind EW Columns: L/	120

The Service Seismic limit as shown here is at service level loads.

PROJECT NOTES

Material properties of steel bar, plate, and sheet used in the fabrication of built-up structural framing members conform to ASTM A529, ASTM A572, or ASTM A1011 with 55 ksi min. yield, except flanges wider than 12" and thicker than 3/8", all flanges thicker than 1", and all webs thicker than 3/8" are 50 ksi min. yield. Rod X-bracing conforms to ASTM A529 or ASTM A572 with 50 ksi min. yield. Cable X-bracing conforms to ASTM A475 7 Strand Extra High-Strength grade. Hot rolled structural shapes conform to ASTM A992, ASTM A529, or ASTM A572 with 50 ksi min. yield. Hot rolled angles, other than flange braces, conform to ASTM A36 minimum. Round and rectangular HSS conforms to ASTM A500 Grade B. Cold-formed steel secondary framing Members conform to ASTM A1011 or ASTM A653 Grade 55 with 55 ksi min. yield. For Canada, material properties conform to CAN/CSA G40.20/G40.21 or equivalent.

Unless otherwise noted, special inspection of fabricated items is not required. Per IBC section 1704.2.5.1, fabricator is approved to perform such work without special inspection through maintenance of IAS AC 472 certification MB-136.

Bolted joints with A325 Type 1 bolts greater than 1/2" diameter are specified as pre-tensioned joints in accordance with the most recent edition of the RCSC Specification for Structural Joints Using ASTM A325 or A490 Bolts. Pre Tensioning can be accomplished by using the turn-of-nut method of tightening, calibrated wrench, twist-off-type tension-control bolts or direct-tension indicator as acceptable to the Inspecting Agency and Building Official. Installation inspection requirements for pre-tensioned joints (Specification for Structural Joints Section 9.2) using turn-of-nut method is suggested. The connections on this project are not slip critical.

Design criteria as noted is as given within order documents and is applied in general accordance with the applicable provisions of the model code and/or specification indicated. Neither the metal building manufacturer nor the certifying engineer declares or attests that the loads as designated are proper for local provisions that may apply or for site specific parameters. The design criteria is supplied by the builder, project owner, or an Architect and/or Engineer of Record for the overall construction project.

This project is designed using manufacturer's standard serviceability criteria. Generally this means that all deflections are within typical performance limits for normal occupancy and standard metal building products.

The metal building manufacturer has not designed the structure for snow accumulation loads at the ground level which may impose snow loads on the wall framing provided by the manufacturer.

This metal building system is designed as an Enclosed Building. Exterior and/or operable components including, but not limited to, doors, windows, vents, etc. ("Components") must be designed to withstand the required component and cladding wind pressures specified by the building code. In order to maintain the metal building system's Enclosed Building condition, all Components shall be closed when wind velocities reach half the designed wind load for the metal building system as shown on the drawings and design criteria documentation. Failure to maintain the metal building system's Enclosed Building condition will violate and void all warranties and certifications applicable to the material supplied by the metal building manufacturer.

The use of fully exposed for the snow exposure results in the rigid frames being designed for only 90 percent of the roof snow load that is used for partially exposed. For a fully exposed snow exposure to be used, all of the following conditions must be true:
1. The roof is exposed to wind on all sides with no obstructions higher than the roof located closer to the building than a distance equal to 10 times the height of the obstruction above the roof.
2. The roof is exposed to wind on all sides with no significant obstructions on the roof such as parapet walls or large roof top mechanical units.
3. The roof is not exposed to accumulation of snow due to drifting or sliding from adjacent structures.

Framed openings, walk doors, and open areas shall be located in the bay and elevation as shown in the erection drawings. The cutting or removal of girts shown on the erection drawings due to the addition of framed openings, walk doors, or open areas not shown may void the design certifications supplied by the metal building manufacturer.

The framing at BLDG A Frame Line 1 and 5 is NOT designed to receive a future bay addition. Corresponding frame reactions are calculated based upon actual tributary area.

Drawing Index

Revision	Date	Description	By	Ck'd

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13105 Northwest Freeway, Suite 500
Houston, TX 77040
cornerstonebuildingbrands.com

FORTIFY BUILDING SOLUTIONS | MUELLER METAL BUILDINGS, ROOFING & MORE

Project Name & Location:
MARA BROWN
1300 VALLEY DR
OGDEN UT 84401-0808

Customer:
CITY OF OGDEN-212366
2549 WASHINGTON BLVD
OGDEN UT 84401
MARA BROWN

Drawing Status:
☐ Issued For Approval (Not For Construction)
☐ Issued For Permit
☒ Issued For Construction

Scale: NOT TO SCALE
Drawn by: AXD 12/9/25
Checked by: MC 12/15/25
Project Engineer: RAR
Job Number: 20-B-91454
Sheet Number: E1 of 14

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KAUSHIKKUMAR J. PATEL, P.E.
UTAH P.E. 12592792-2202

Jan 02, 2026

PROFESSIONAL ENGINEER No. 12592792 KAUSHIKKUMAR J. PATEL STATE OF UTAH

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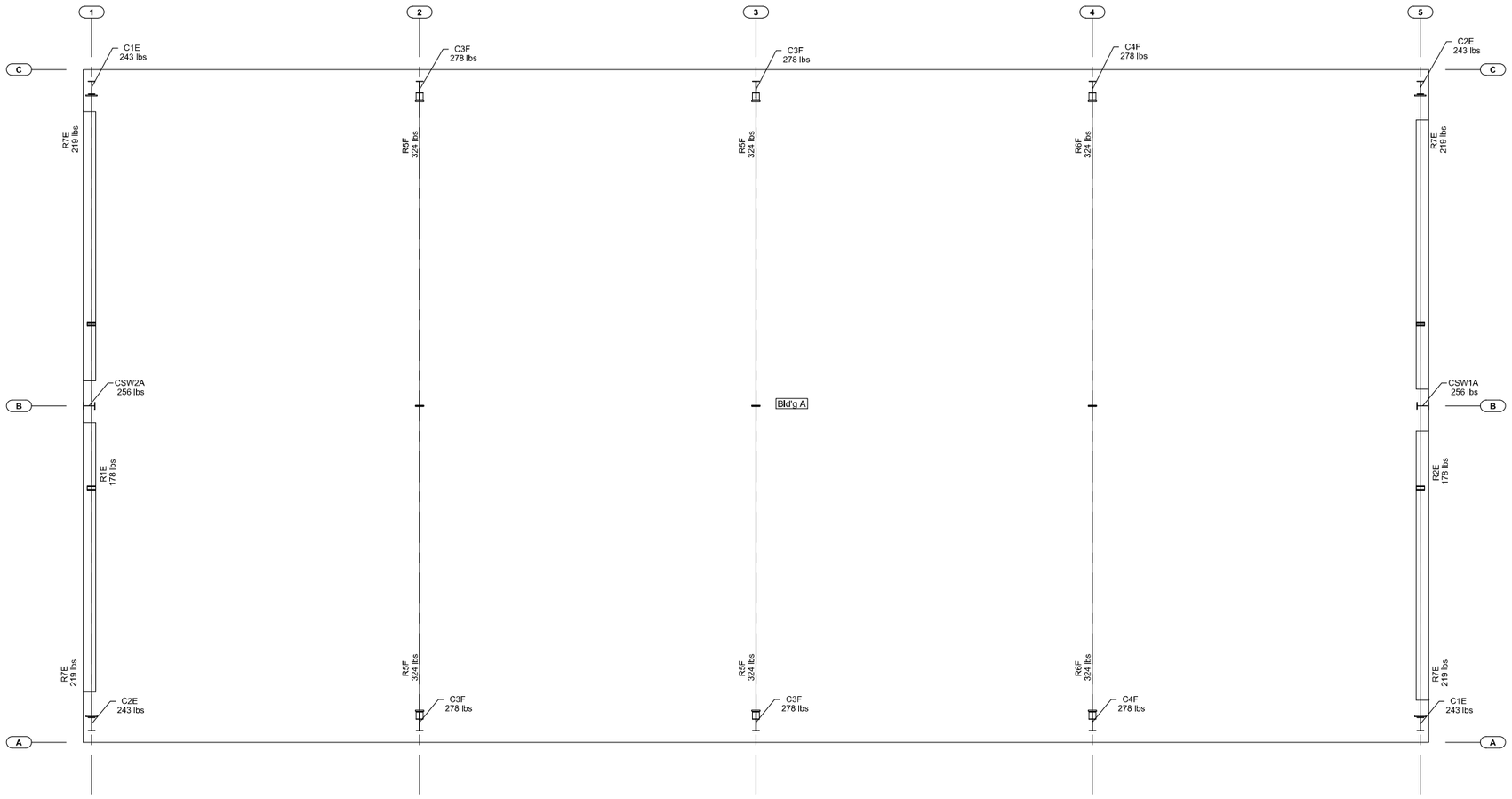
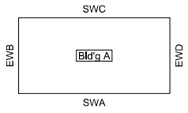


Primary Steel



Key Plan

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Cornerstone Building Brands
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Houston, TX 77040
cornerstonebuildingbrands.com

FORTIFY BUILDING SOLUTIONS

MUELLER METAL BUILDINGS, ROOFING & MORE

Customer:
CITY OF OGDEN-212366
2549 WASHINGTON BLVD
OGDEN UT 84401
MARA BROWN

Project Name & Location:
MARA BROWN
1300 VALLEY DR
OGDEN UT 84401-0808

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Checked by: MC 12/15/25
Project Engineer: RAR
Job Number: 20-B-91454
Sheet Number: E2 of 14

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KAUSHIKKUMAR J. PATEL, P.E.
UTAH P.E. 12592792-2202

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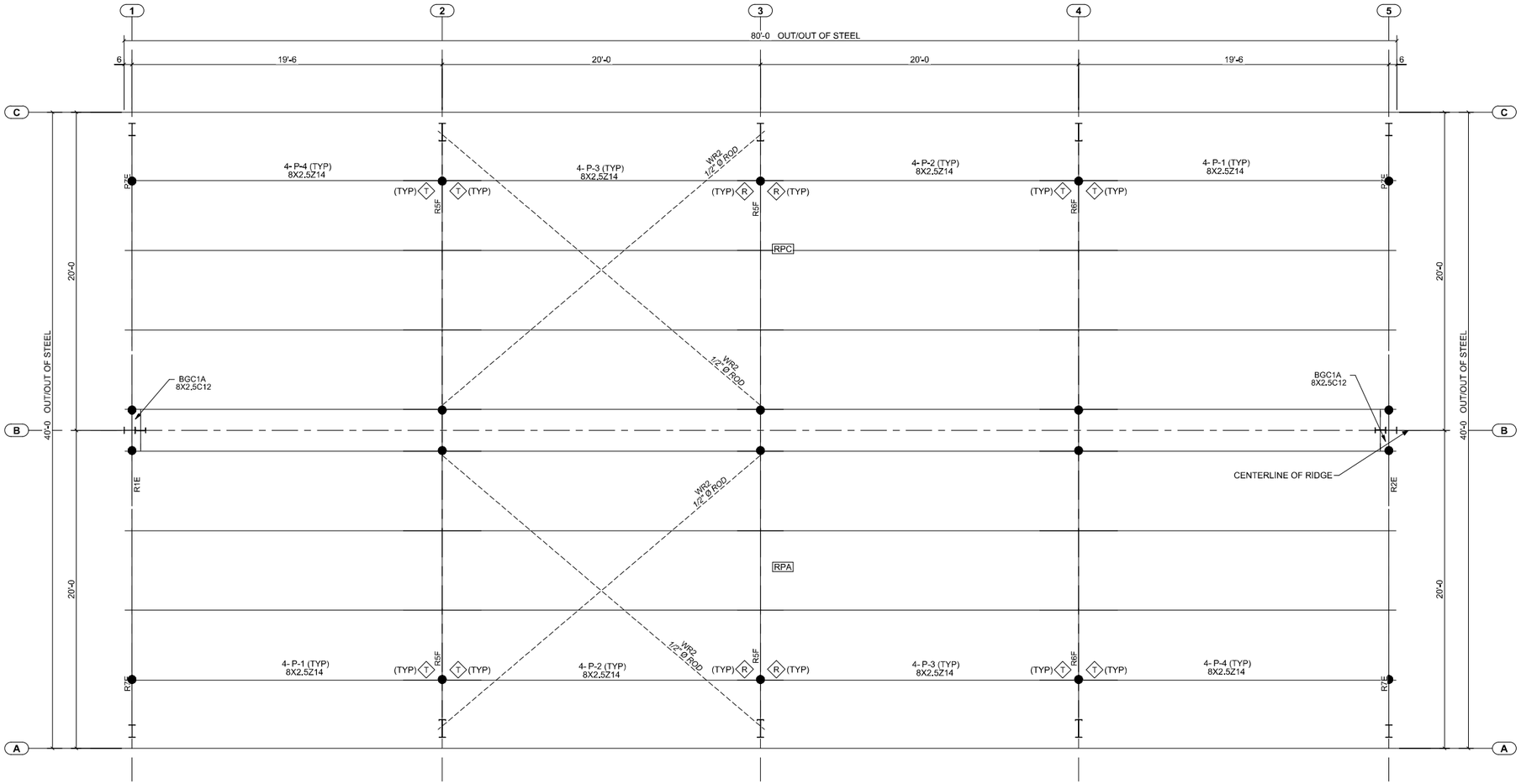
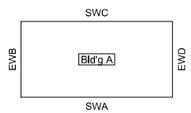
PROFESSIONAL ENGINEER
No. 12592792
KAUSHIKKUMAR J. PATEL
STATE OF UTAH

● — DENOTES: CLIP LOCATION
SC90 AT 8" PURLINS
SC92 AT 10" PURLINS
SC94 AT 12" PURLINS



ZEE SECTION LAP TABLE			
SYMBOL	LAP LENGTH	SYMBOL	LAP LENGTH
G	-0'-0 1/4"	T	2'-5 3/4"
S	0'-3 3/4"	V	3'-1 3/4"
R	1'-5 3/4"	REFER TO CF01122	



Key Plan

Roof Framing

Revision	Date	Description	By	Ck'd

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OGDEN UT 84401
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Scale: NOT TO SCALE
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Project Engineer: RAR
Job Number: 20-B-91454
Sheet Number: E3 of 14

KAUSHIKKUMAR J. PATEL, P.E.
UTAH P.E. 12592792-2202

Jan 02, 2026

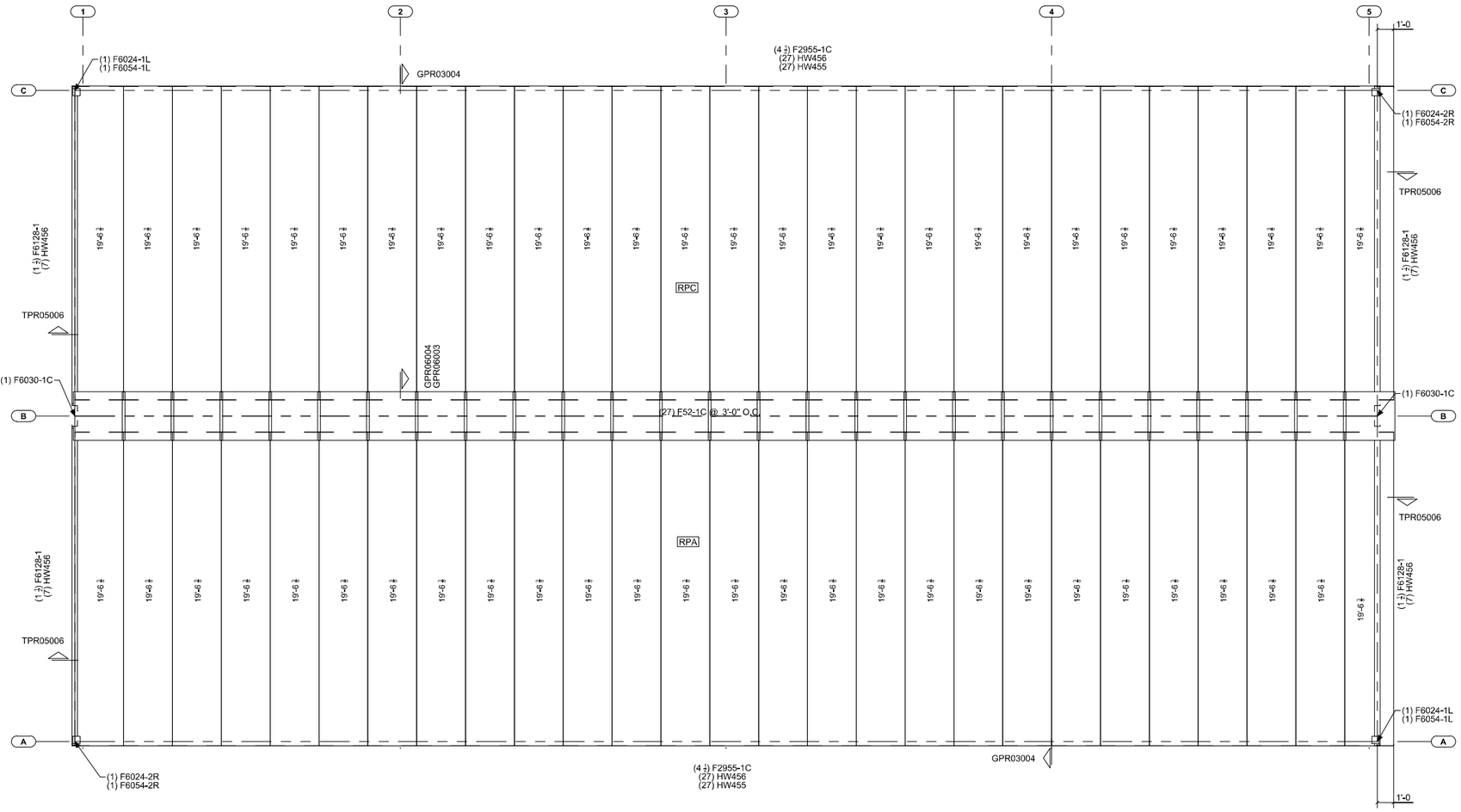
PROFESSIONAL ENGINEER
No. 12592792
KAUSHIKKUMAR J. PATEL
STATE OF UTAH

PBR ROOF PANELS ARE TO BE FIELD CUT IF THE PANELS EXTEND OUTSIDE OF THE ROOF PLANE. PANELS ARE NOT TO BE BACK LAPPED.

Non-Standard PBR Roof Panel Fasteners

#3A member fasteners are to be used for panel to secondary attachment in lieu of #3 shown on the R Drawings

RPC
Panel Type = PBR
Panel Color = GALVALUME PLUS
Panel Overhang From Outer Steel = 3"



RPA
Panel Type = PBR
Panel Color = GALVALUME PLUS
Panel Overhang From Outer Steel = 3"

SWC
EWB
Bldg A
EWD
SWA
Key Plan

Roof Sheeting RPA & RPC

Revision	Date	Description	By	Ck'd

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Scale: NOT TO SCALE
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Checked by: MC 12/15/25
Project Engineer: RAR
Job Number: 20-B-91454
Sheet Number: E4 of 14

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KAUSHIKKUMAR J. PATEL, P.E.
UTAH P.E. 12592792-2202

Jan 02, 2026

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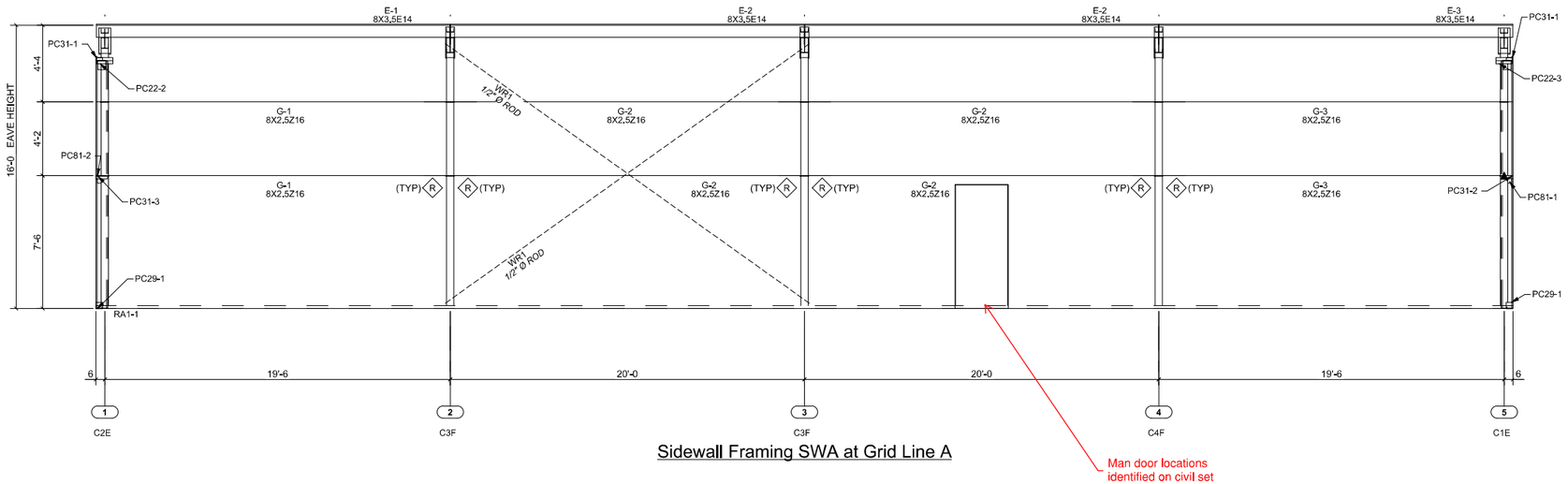
PROFESSIONAL ENGINEER
No. 12592792
KAUSHIKKUMAR J. PATEL
STATE OF UTAH

▲ – *DENOTES: (4) 1/2"Ø BOLTS AT PURLIN OR GIRT CONNECTION TO CLIP. REFER TO CF01122*

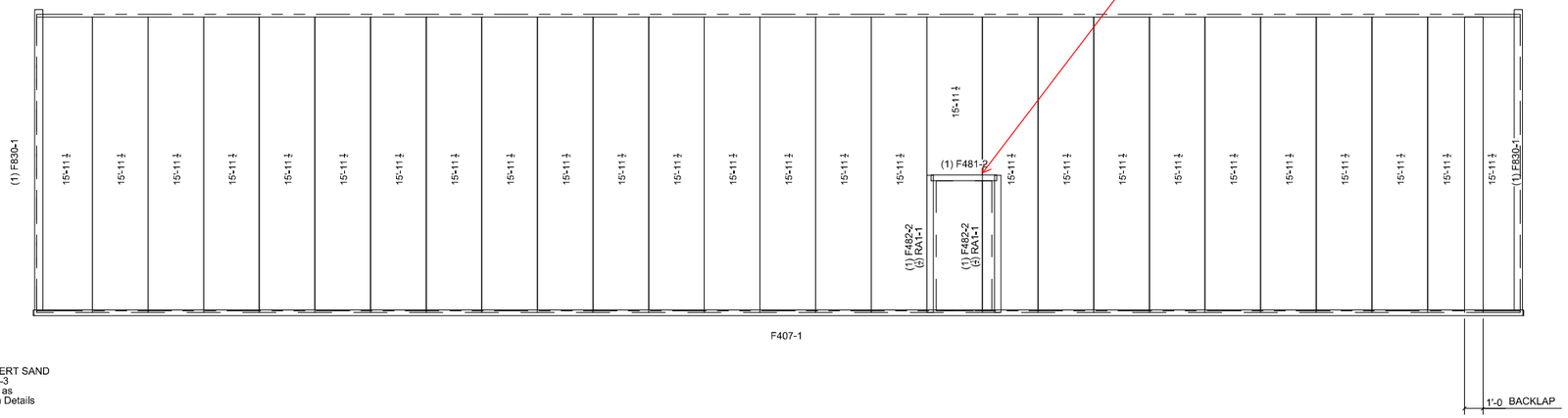
Non-Standard PBR Wall Panel Fasteners

#17B member fasteners are to be used for panel to secondary attachment in lieu of #17A shown on the R Drawings



Sidewall Framing SWA at Grid Line A

Man door locations identified on civil set



PBR Wall Panels
Panel Coverage = 3'-0"
Panel Color = S200 DESERT SAND
Panel Pkg. Req'd. = PBS-3
Field Cut Panel and Trim as required per Construction Details

Sidewall Sheeting SWA

ZEE SECTION LAP TABLE			
SYMBOL	LAP LENGTH	SYMBOL	LAP LENGTH
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S	0'-3 3/4"	V	3'-1 3/4"
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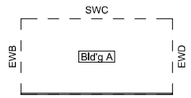

Key Plan

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Project Engineer:	RAR
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Sheet Number:	E5 of 14

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UTAH P.E. 12592792-2202

Jan 02, 2026

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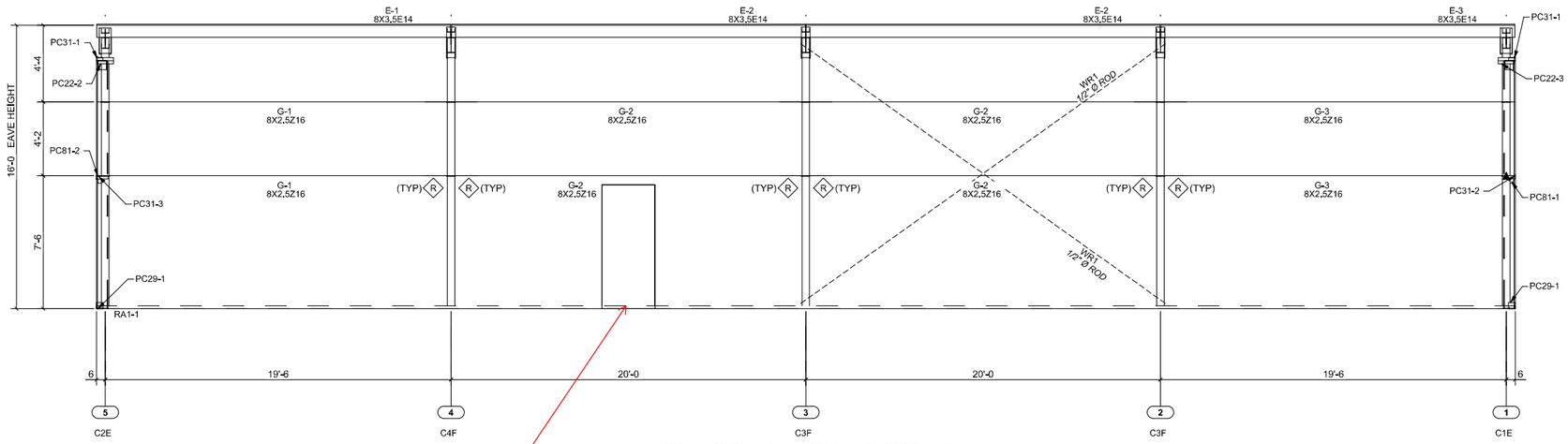
PROFESSIONAL ENGINEER
No. 12592792
KAUSHIKKUMAR J. PATEL
STATE OF UTAH

▲ – *DENOTES: (4) 1/2"Ø BOLTS AT PURLIN OR GIRT CONNECTION TO CLIP. REFER TO CF01122*

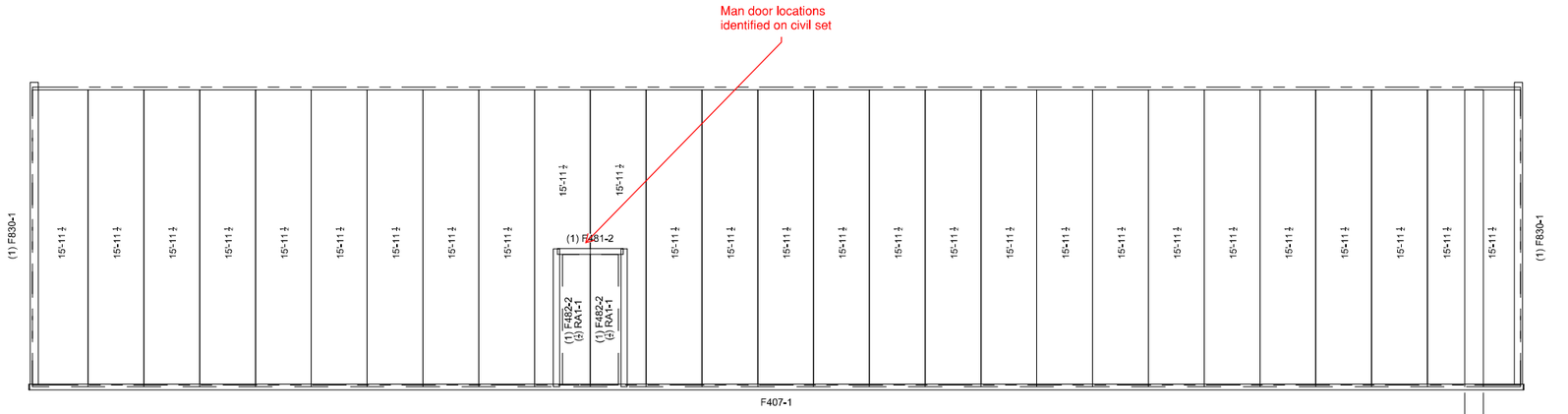
Non-Standard PBR Wall Panel Fasteners

#17B member fasteners are to be used for panel to secondary attachment in lieu of #17A shown on the R Drawings



Sidewall Framing SWC at Grid Line C

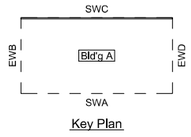
Man door locations identified on civil set



PBR Wall Panels
Panel Coverage = 3'-0"
Panel Color = S200 DESERT SAND
Panel Pkg. Req'd. = PBS-4
Field Cut Panel and Trim as required per Construction Details

Sidewall Sheeting SWC

ZEE SECTION LAP TABLE			
SYMBOL	LAP LENGTH	SYMBOL	LAP LENGTH
G	-0'-0 1/4"	T	2'-5 3/4"
S	0'-3 3/4"	V	3'-1 3/4"
R	1'-5 3/4"	REFER TO CF01122	



Key Plan

Revision	Date	Description	By	Ck'd

Cornerstone Building Brands
13105 Northwest Freeway, Suite 500
Houston, TX 77040
cornerstonebuildingbrands.com

FORTIFY BUILDING SOLUTIONS | MUELLER METAL BUILDINGS, ROOFING & MORE

Project Name & Location:
MARA BROWN
1300 VALLEY DR
OGDEN UT 84401-0808

Customer:
CITY OF OGDEN-212366
2549 WASHINGTON BLVD
OGDEN UT 84401
MARA BROWN

Drawing Status:
☐ *Issued For Approval (Not For Construction)*
☐ *Issued For Permit*
☒ *Issued For Construction*

Scale: NOT TO SCALE
Drawn by: AXD 12/9/25
Checked by: MC 12/15/25
Project Engineer: RAR
Job Number: 20-B-91454
Sheet Number: E6 of 14

The engineer whose seal appears hereon is employed by or is contracted to provide engineering services for the manufacturer, Cornerstone Building Brands or one of its affiliates, for the materials described herein. Said seal or certification is limited to the products designed and manufactured by manufacturer only. The undersigned engineer is not the overall engineer of record for this project.

KAUSHIKKUMAR J. PATEL, P.E.
UTAH P.E. 12592792-2202

Jan 02, 2026

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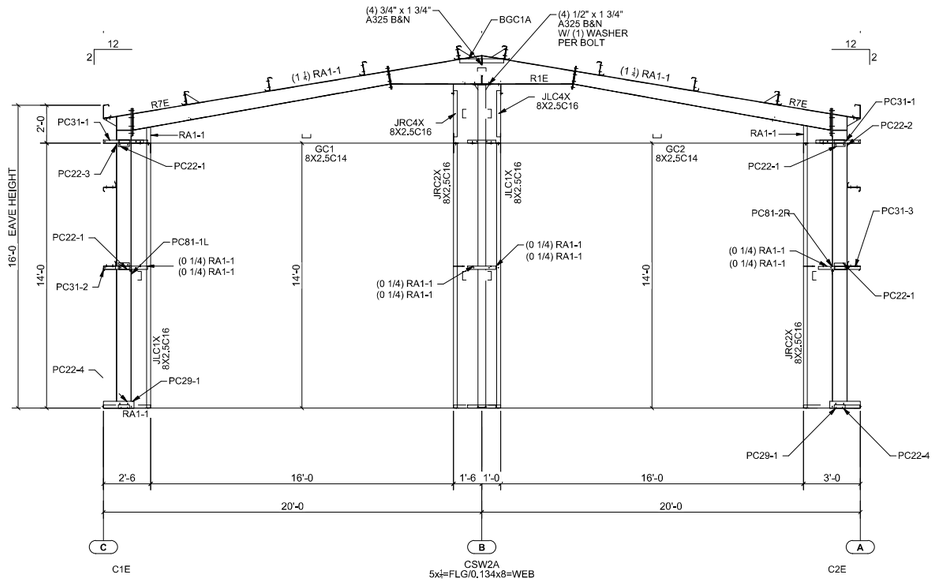
PROFESSIONAL ENGINEER
No. 12592792
KAUSHIKKUMAR J. PATEL
STATE OF UTAH

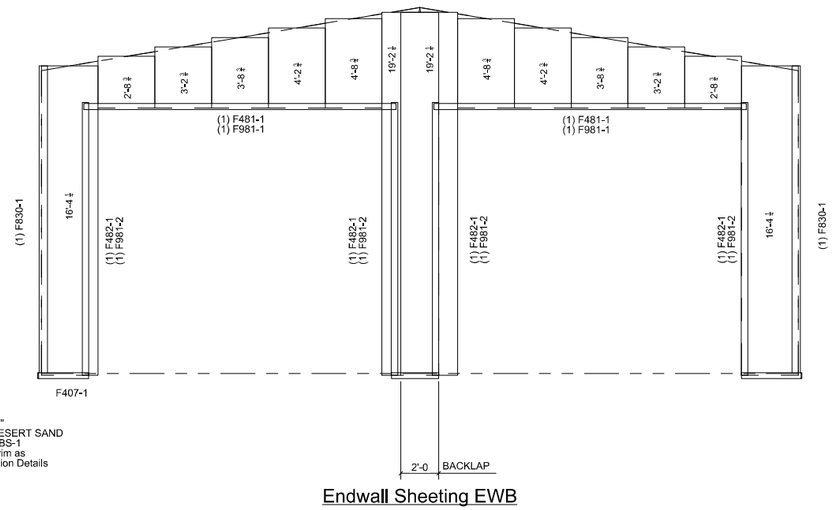
Non-Standard PBR Wall Panel Fasteners

#17B member fasteners are to be used for panel to secondary attachment in lieu of #17A shown on the R Drawings

NOTE: FIELD BEVEL CUT WALL PANELS AT ENDWALLS TO FOLLOW ROOF SLOPE

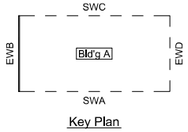


Endwall Framing EWB at Grid Line 1



PBR Wall Panels
Panel Coverage = 3'-0"
Panel Color = S200 DESERT SAND
Panel Pkg. Req'd. = PBS-1
Field Cut Panel and Trim as required per Construction Details

Endwall Sheeting EWB



Key Plan

Revision	Date	Description	By	Ck'd

Cornerstone Building Brands
13105 Northwest Freeway, Suite 500
Houston, TX 77040
cornerstonebuildingbrands.com

FORTIFY BUILDING SOLUTIONS
MUELLER METAL BUILDINGS, ROOFING & MORE

Project Name & Location:
MARA BROWN
1300 VALLEY DR
OGDEN UT 84401-0808

Customer:
CITY OF OGDEN-212366
2549 WASHINGTON BLVD
OGDEN UT 84401
MARA BROWN

Drawing Status:
☐ *Issued For Approval (Not For Construction)*
☐ *Issued For Permit*
☒ *Issued For Construction*

Scale:	NOT TO SCALE
Drawn by:	AXD 12/9/25
Checked by:	MC 12/15/25
Project Engineer:	RAR
Job Number:	20-B-91454
Sheet Number:	E7 of 14

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KAUSHIKKUMAR J. PATEL, P.E.
UTAH P.E. 12592792-2202

Jan 02, 2026

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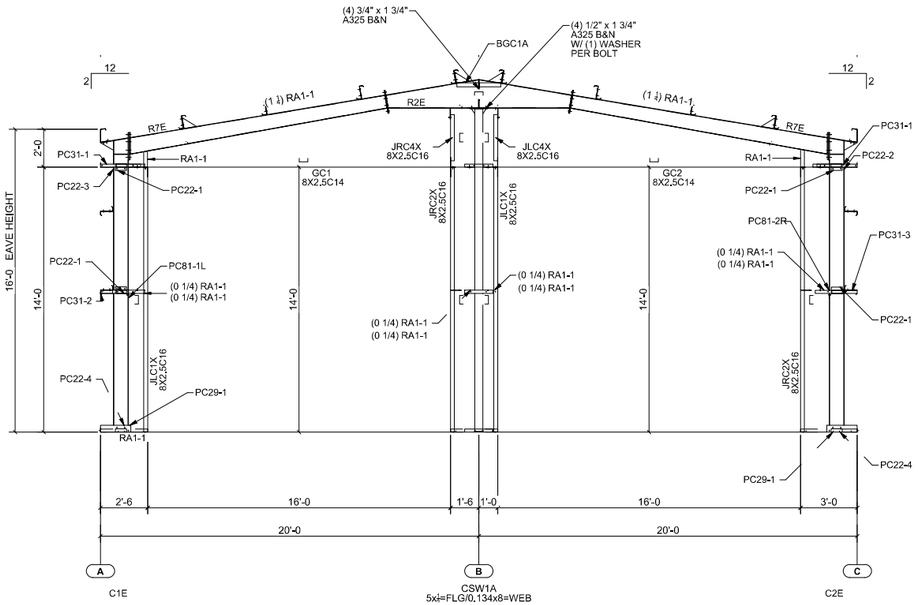
PROFESSIONAL ENGINEER
No. 12592792
KAUSHIKKUMAR J. PATEL
STATE OF UTAH

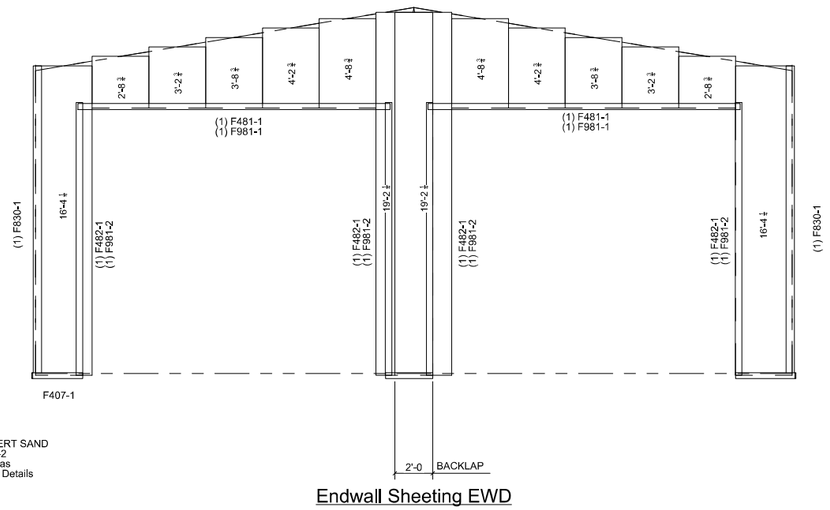
Non-Standard PBR Wall Panel Fasteners

#17B member fasteners are to be used for panel to secondary attachment in lieu of #17A shown on the R Drawings

NOTE: FIELD BEVEL CUT WALL PANELS AT ENDWALLS TO FOLLOW ROOF SLOPE

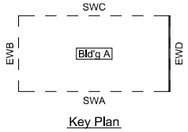


Endwall Framing EWD at Grid Line 5



PBR Wall Panels
Panel Coverage = 3'-0"
Panel Color = S200 DESERT SAND
Panel Pkg. Req'd. = PBS-2
Field Cut Panel and Trim as required per Construction Details

Endwall Sheeting EWD



Key Plan

Revision	Date	Description	By	Ck'd

Cornerstone Building Brands
13105 Northwest Freeway, Suite 500
Houston, TX 77040
cornerstonebuildingbrands.com

FORTIFY BUILDING SOLUTIONS
MUELLER METAL BUILDINGS, ROOFING & MORE

Project Name & Location:
MARA BROWN
1300 VALLEY DR
OGDEN UT 84401-0808

Customer:
CITY OF OGDEN-212366
2549 WASHINGTON BLVD
OGDEN UT 84401
MARA BROWN

Drawing Status:
☐ Issued For Approval (Not For Construction)
☐ Issued For Permit
☒ Issued For Construction

Scale:	NOT TO SCALE
Drawn by:	AXD 12/9/25
Checked by:	MC 12/15/25
Project Engineer:	RAR
Job Number:	20-B-91454
Sheet Number:	E8 of 14

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KAUSHIKKUMAR J. PATEL, P.E.
UTAH P.E. 12592792-2202

Jan 02, 2026

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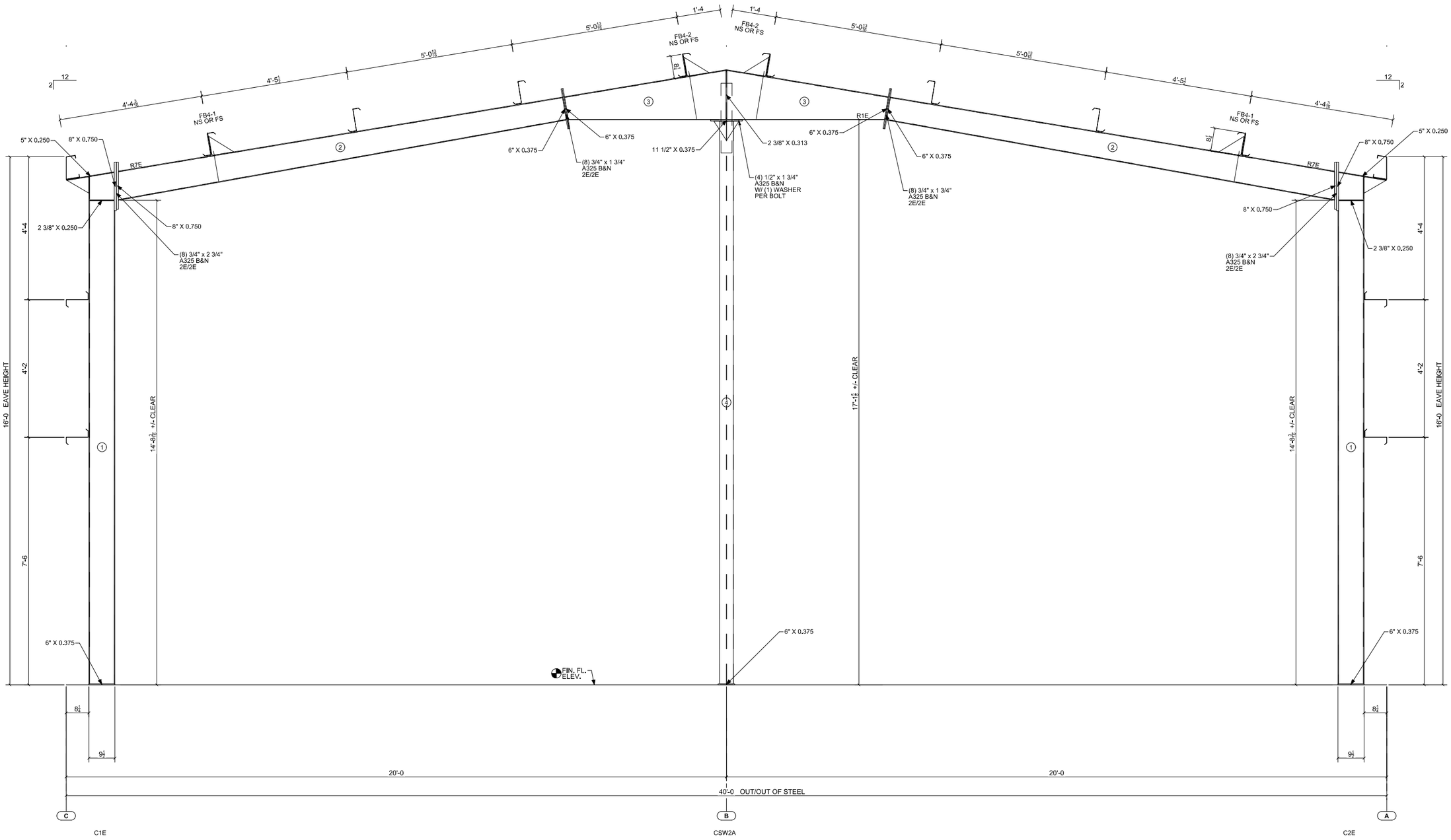
PROFESSIONAL ENGINEER
No. 12592792
KAUSHIKKUMAR J. PATEL
STATE OF UTAH

20-B-91454\ver01-rafael.arcerabadan\BLDG-A\Drftg\x03L (12/03/25 17:11:05)

GENERAL NOTES
FRAME CLEARANCES SHOWN ARE APPROXIMATE AND MAY VARY DUE TO CONDITIONS (DEFLECTION).

VERTICAL CLEARANCE DIMENSIONS ARE FROM FINISHED FLOOR REFERENCE ELEVATION.

APPROXIMATE MEMBER WEIGHTS	
PART MARK	WEIGHT
R1E	176
R7E	218
C1E	243
C2E	243
CSW2A	256



PRIMARY BUILT-UP MEMBER SIZES							
MARK	OUTSIDE FLG THICK	OUTSIDE FLG WIDTH	INSIDE FLG THICK	INSIDE FLG WIDTH	WEB THICK	WEB START DEPTH	WEB END DEPTH
1	0.2500	5"	0.2500	5"	0.1340	9.0000	9.0000
2	0.2500	5"	0.2500	5"	0.1340	10.0000	8.0046
3	0.2500	5"	0.2500	5"	0.1340	8.0625	18.0000
4	0.2500	5"	0.2500	5"	0.1340	8.0000	8.0000

Cross Section at Frame Line 1

Revision	Date	Description	By	Ck'd

Cornerstone Building Brands
13105 Northwest Freeway, Suite 500
Houston, TX 77040
cornerstonebuildingbrands.com

Project Name & Location:
MARA BROWN
1300 VALLEY DR
OGDEN UT 84401-0808

Customer:
CITY OF OGDEN-212366
2549 WASHINGTON BLVD
OGDEN UT 84401
MARA BROWN

Drawing Status:
☐ Issued For Approval (Not For Construction)
☐ Issued For Permit
☒ Issued For Construction

Scale: NOT TO SCALE
Drawn by: AXD 12/9/25
Checked by: MC 12/15/25
Project Engineer: RAR
Job Number: 20-B-91454
Sheet Number: E9 of 14

The engineer whose seal appears hereon is employed by or is contracted to provide engineering services for the manufacturer, Cornerstone Building Brands or one of its affiliates, for the materials described herein. Said seal or certification is limited to the products designed and manufactured by manufacturer only. The undersigned engineer is not the overall engineer of record for this project.

KAUSHIKKUMAR J. PATEL, P.E.
UTAH P.E. 12592792-2202

Jan 02, 2026

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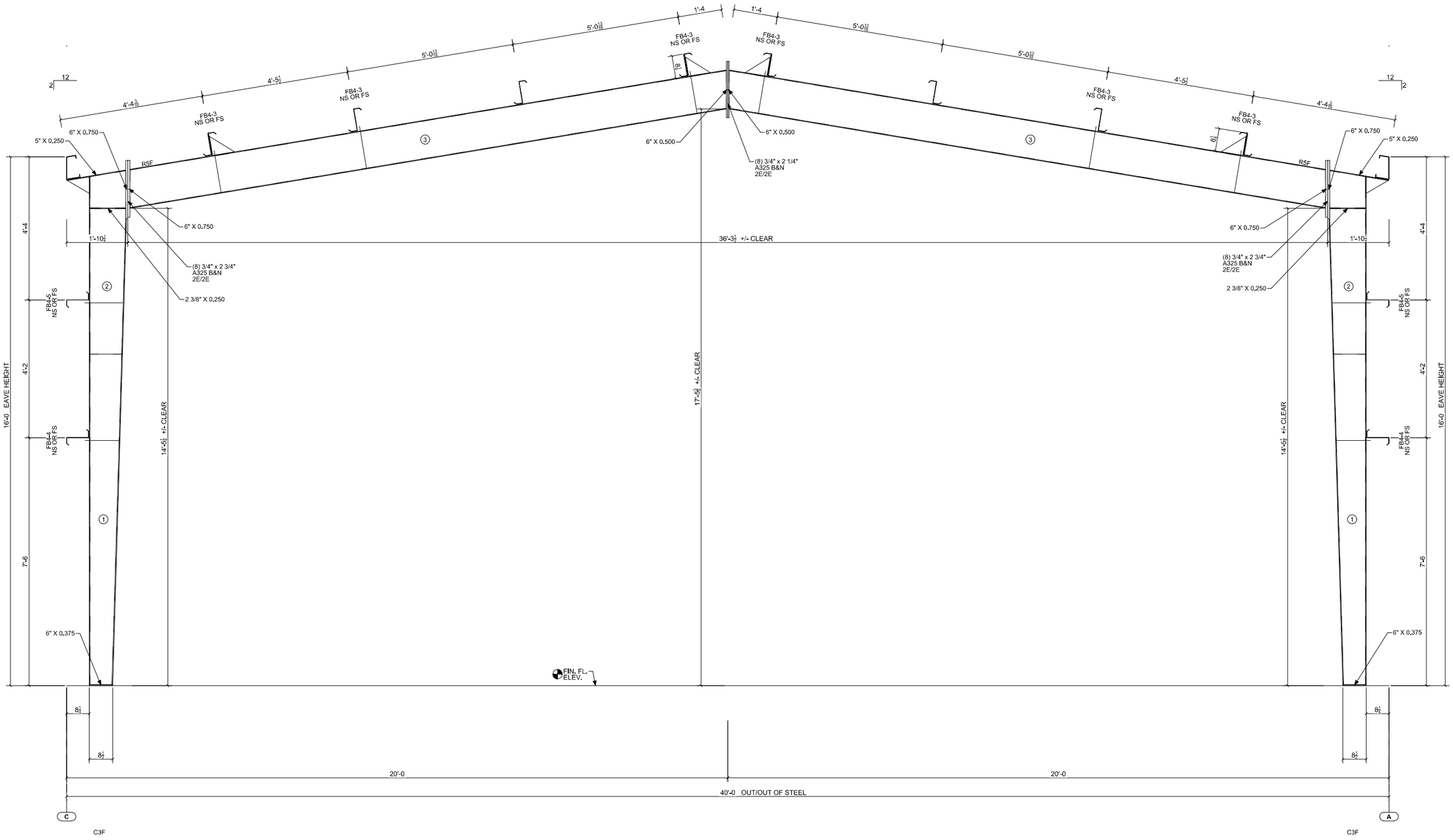
PROFESSIONAL ENGINEER
No. 12592792
KAUSHIKKUMAR J. PATEL
STATE OF UTAH

20-B-91454\ver01-rafael.arcerabadan\BLDG-A\Drftg\x01L (12/03/25 17:10:50)

GENERAL NOTES
FRAME CLEARANCES SHOWN ARE APPROXIMATE AND MAY VARY DUE TO CONDITIONS (DEFLECTION).

VERTICAL CLEARANCE DIMENSIONS ARE FROM FINISHED FLOOR REFERENCE ELEVATION.

APPROXIMATE MEMBER WEIGHTS	
PART MARK	WEIGHT
R5F	322
C3F	278



Cross Section at Frame Line 2

PRIMARY BUILT-UP MEMBER SIZES							
MARK	OUTSIDE FLG THICK	OUTSIDE FLG WIDTH	INSIDE FLG THICK	INSIDE FLG WIDTH	WEB THICK	WEB START DEPTH	WEB END DEPTH
(1)	0.2500	5"	0.2500	5"	0.1340	8.0000	11.5471
(2)	0.2500	5"	0.2500	5"	0.2500	11.5471	13.0000
(3)	0.2500	5"	0.2500	5"	0.1340	13.5000	13.5000

Revision	Date	Description	By	Ck'd

Cornerstone Building Brands
13105 Northwest Freeway, Suite 500
Houston, TX 77040
cornerstonebuildingbrands.com

FORTIFY BUILDING SOLUTIONS
MUELLER METAL BUILDINGS, ROOFING & MORE

Customer:
CITY OF OGDEN-212366
2549 WASHINGTON BLVD
OGDEN UT 84401
MARA BROWN

Project Name & Location:
MARA BROWN
1300 VALLEY DR
OGDEN UT 84401-0808

Drawing Status:
☐ Issued For Approval (Not For Construction)
☐ Issued For Permit
☒ Issued For Construction

Scale:	NOT TO SCALE
Drawn by:	AXD 12/9/25
Checked by:	MC 12/15/25
Project Engineer:	RAR
Job Number:	20-B-91454
Sheet Number:	E10 of 14

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KAUSHIKKUMAR J. PATEL, P.E.
UTAH P.E. 12592792-2202

Jan 02, 2026

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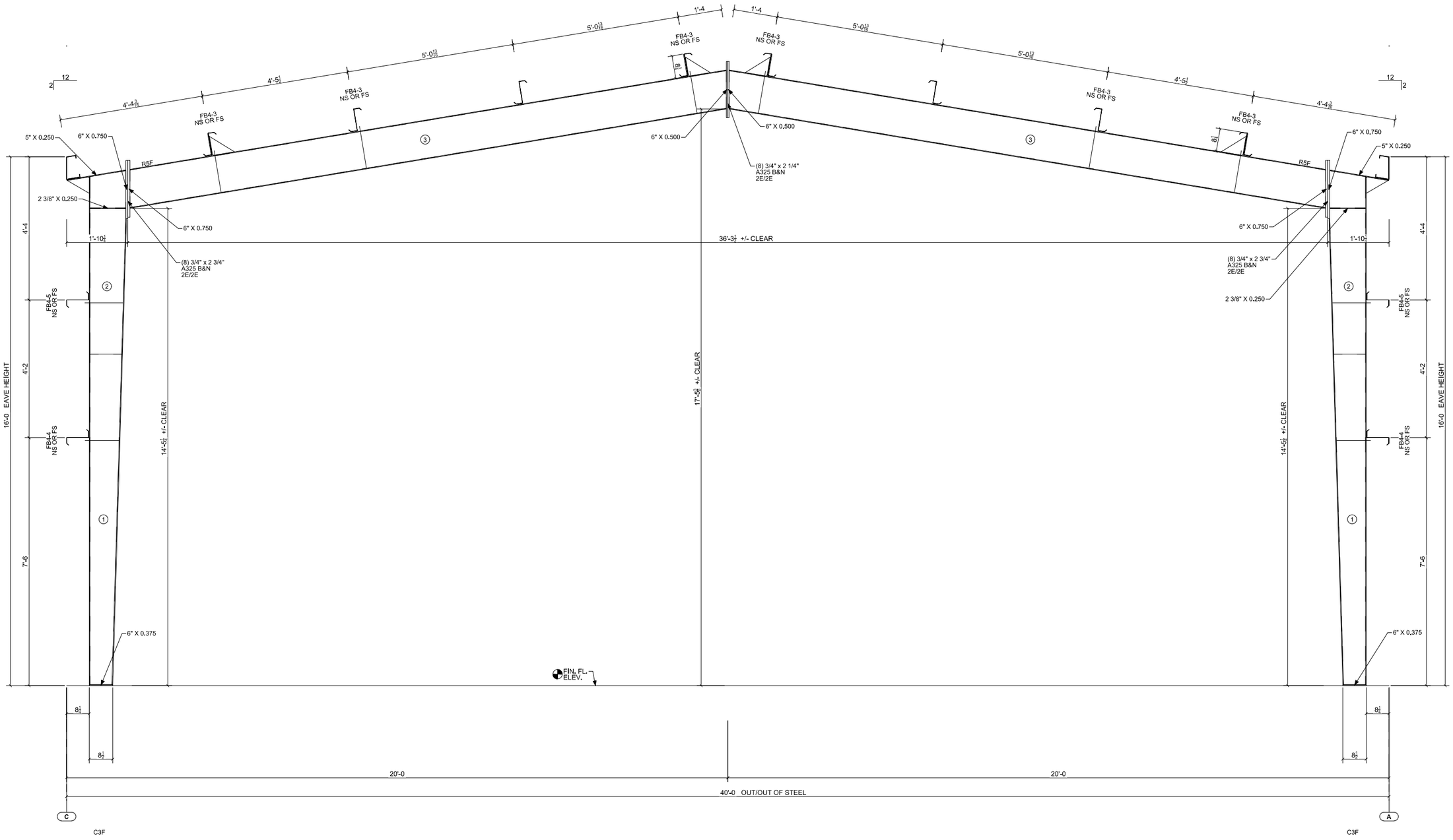
PROFESSIONAL ENGINEER
No. 12592792
KAUSHIKKUMAR J. PATEL
STATE OF UTAH

20-B-91454\ver01-rafael.arcerabadan\BLDG-A\Drftg\x01L (12/03/25 17:10:50)

GENERAL NOTES
FRAME CLEARANCES SHOWN ARE APPROXIMATE AND MAY VARY DUE TO CONDITIONS (DEFLECTION).

VERTICAL CLEARANCE DIMENSIONS ARE FROM FINISHED FLOOR REFERENCE ELEVATION.

APPROXIMATE MEMBER WEIGHTS	
PART MARK	WEIGHT
R5F	322
C3F	278



Cross Section at Frame Line 3

PRIMARY BUILT-UP MEMBER SIZES							
MARK	OUTSIDE FLG THICK	OUTSIDE FLG WIDTH	INSIDE FLG THICK	INSIDE FLG WIDTH	WEB THICK	WEB START DEPTH	WEB END DEPTH
(1)	0.2500	5"	0.2500	5"	0.1340	8.0000	11.5471
(2)	0.2500	5"	0.2500	5"	0.2500	11.5471	13.0000
(3)	0.2500	5"	0.2500	5"	0.1340	13.5000	13.5000

Revision	Date	Description	By	Ck'd

Cornerstone Building Brands
13105 Northwest Freeway, Suite 500
Houston, TX 77040
cornerstonebuildingbrands.com

FORTIFY BUILDING SOLUTIONS

MUELLER METAL BUILDINGS, ROOFING & MORE

Customer:
CITY OF OGDEN-212366
2549 WASHINGTON BLVD
OGDEN UT 84401
MARA BROWN

Project Name & Location:
MARA BROWN
1300 VALLEY DR
OGDEN UT 84401-0808

Drawing Status:
☐ Issued For Approval (Not For Construction)
☐ Issued For Permit
☒ Issued For Construction

Scale: NOT TO SCALE
Drawn by: AXD 12/9/25
Checked by: MC 12/15/25
Project Engineer: RAR
Job Number: 20-B-91454
Sheet Number: E11 of 14

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KAUSHIKKUMAR J. PATEL, P.E.
UTAH P.E. 12592792-2202

Jan 02, 2026

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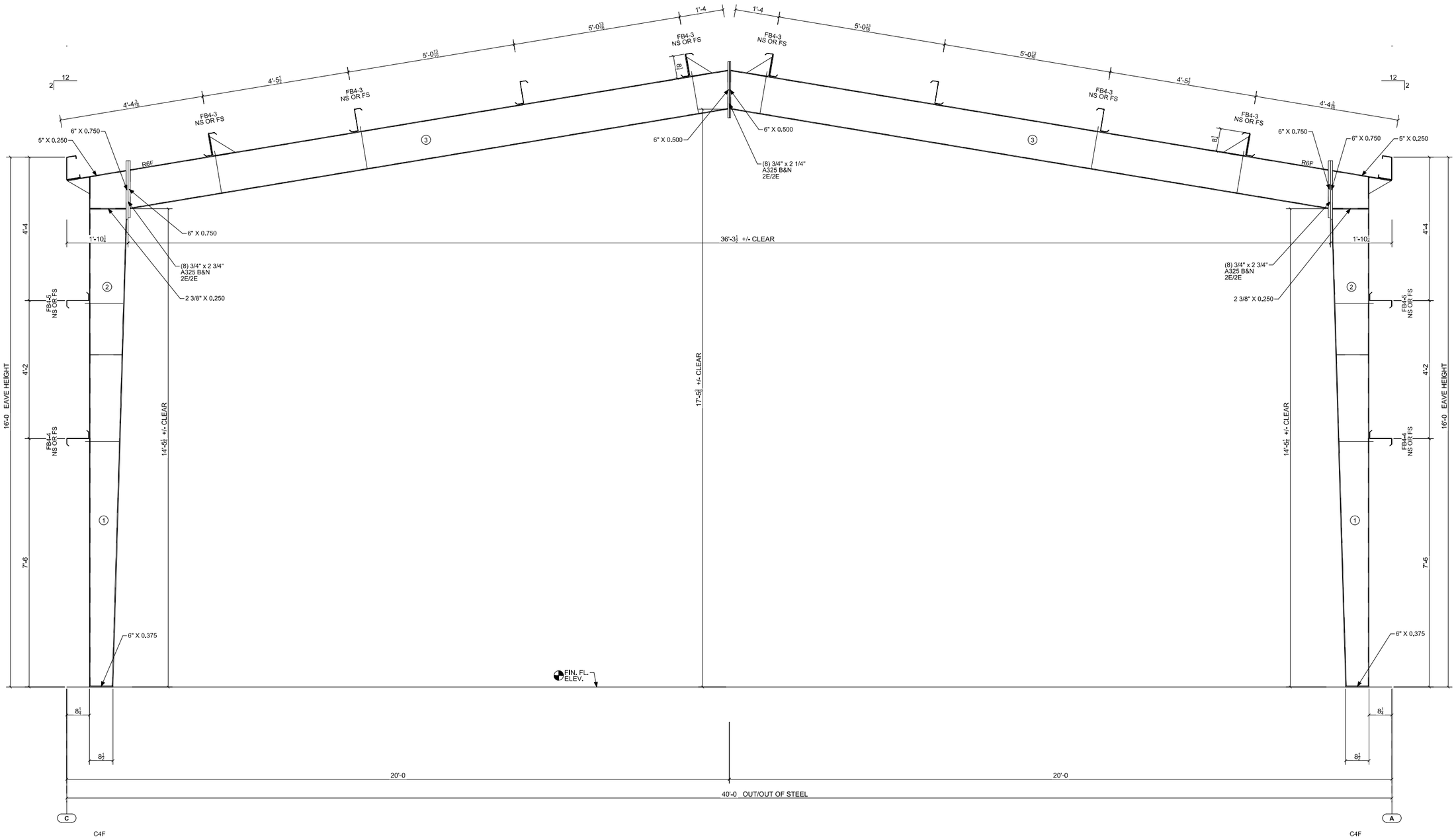
PROFESSIONAL ENGINEER
No. 12592792
KAUSHIKKUMAR J. PATEL
STATE OF UTAH

20-B-91454\ver01-rafael.arcerabadan\BLDG-A\Drftg\x01L (12/03/25 17:10:50)

GENERAL NOTES
FRAME CLEARANCES SHOWN ARE APPROXIMATE AND MAY VARY DUE TO CONDITIONS (DEFLECTION).

VERTICAL CLEARANCE DIMENSIONS ARE FROM FINISHED FLOOR REFERENCE ELEVATION.

APPROXIMATE MEMBER WEIGHTS	
PART MARK	WEIGHT
R6F	322
C4F	278



Cross Section at Frame Line 4

PRIMARY BUILT-UP MEMBER SIZES							
MARK	OUTSIDE FLG THICK	OUTSIDE FLG WIDTH	INSIDE FLG THICK	INSIDE FLG WIDTH	WEB THICK	WEB START DEPTH	WEB END DEPTH
1	0.2500	5"	0.2500	5"	0.1340	8.0000	11.5471
2	0.2500	5"	0.2500	5"	0.2500	11.5471	13.0000
3	0.2500	5"	0.2500	5"	0.1340	13.5000	13.5000

Revision	Date	Description	By	Ck'd

Cornerstone Building Brands
13105 Northwest Freeway, Suite 500
Houston, TX 77040
cornerstonebuildingbrands.com

FORTIFY BUILDING SOLUTIONS

MUELLER METAL BUILDINGS, ROOFING & MORE

Project Name & Location:
MARA BROWN
1300 VALLEY DR
OGDEN UT 84401-0808

Customer:
CITY OF OGDEN-212366
2549 WASHINGTON BLVD
OGDEN UT 84401
MARA BROWN

Drawing Status:
☐ Issued For Approval (Not For Construction)
☐ Issued For Permit
☒ Issued For Construction

Scale: NOT TO SCALE
Drawn by: AXD 12/9/25
Checked by: MC 12/15/25
Project Engineer: RAR
Job Number: 20-B-91454
Sheet Number: E12 of 14

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KAUSHIKKUMAR J. PATEL, P.E.
UTAH P.E. 12592792-2202

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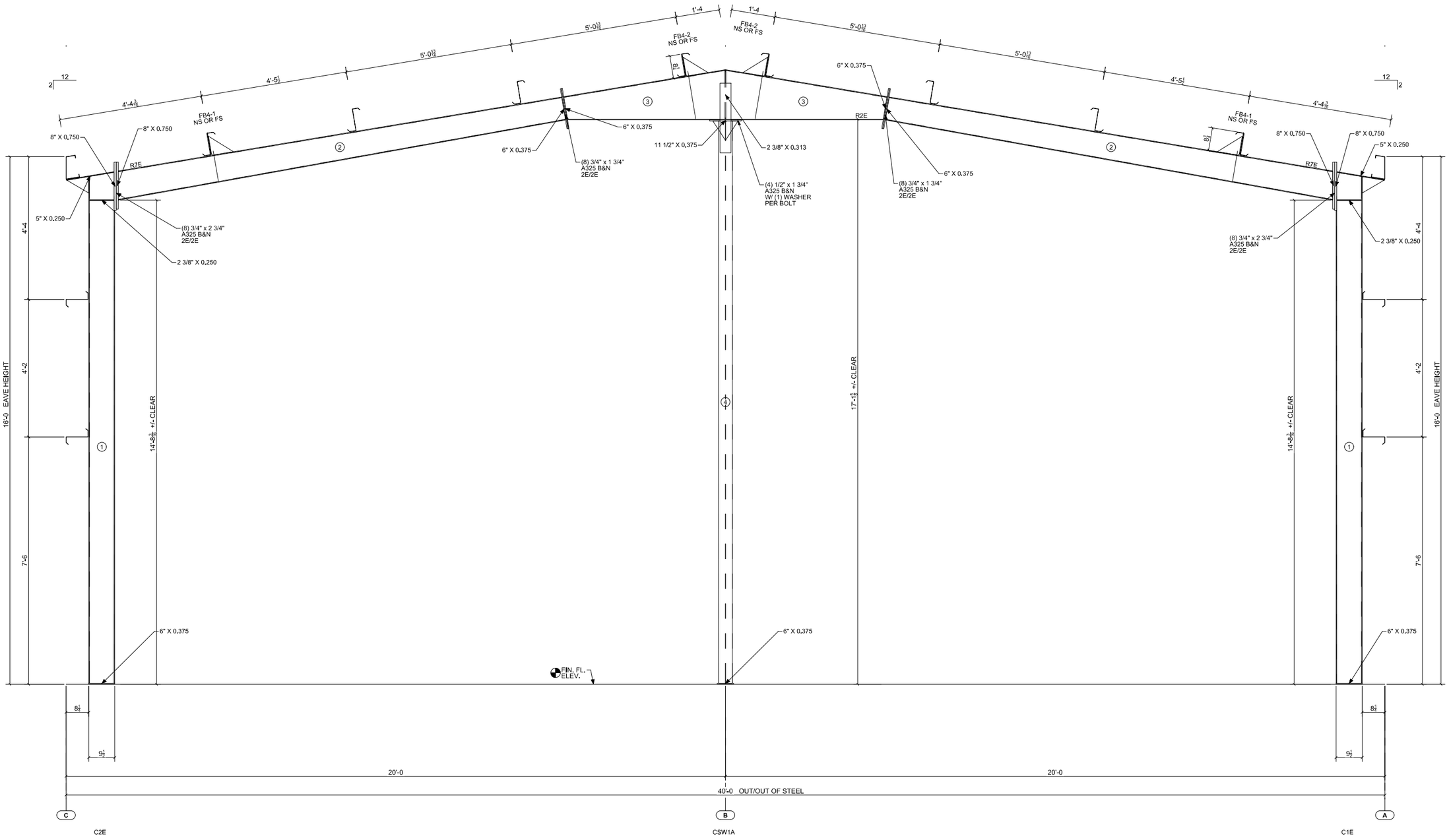
PROFESSIONAL ENGINEER
No. 12592792
KAUSHIKKUMAR J. PATEL
STATE OF UTAH

GENERAL NOTES
FRAME CLEARANCES SHOWN ARE APPROXIMATE AND MAY VARY DUE TO CONDITIONS (DEFLECTION).

VERTICAL CLEARANCE DIMENSIONS ARE FROM FINISHED FLOOR REFERENCE ELEVATION.

APPROXIMATE MEMBER WEIGHTS	
PART MARK	WEIGHT
R2E	176
R7E	218
C1E	243
C2E	243
CSW1A	256



PRIMARY BUILT-UP MEMBER SIZES							
MARK	OUTSIDE FLG THICK	OUTSIDE FLG WIDTH	INSIDE FLG THICK	INSIDE FLG WIDTH	WEB THICK	WEB START DEPTH	WEB END DEPTH
1	0.2500	5"	0.2500	5"	0.1340	9.0000	9.0000
2	0.2500	5"	0.2500	5"	0.1340	10.0000	8.0046
3	0.2500	5"	0.2500	5"	0.1340	8.0625	18.0000
4	0.2500	5"	0.2500	5"	0.1340	8.0000	8.0000

Cross Section at Frame Line 5

Revision	Date	Description	By	Ck'd

Cornerstone Building Brands
13105 Northwest Freeway, Suite 500
Houston, TX 77040
cornerstonebuildingbrands.com

FORTIFY BUILDING SOLUTIONS | MUELLER METAL BUILDINGS, ROOFING & MORE

Project Name & Location:
MARA BROWN
1300 VALLEY DR
OGDEN UT 84401-0808

Customer:
CITY OF OGDEN-212366
2549 WASHINGTON BLVD
OGDEN UT 84401
MARA BROWN

Drawing Status:
☐ Issued For Approval (Not For Construction)
☐ Issued For Permit
☒ Issued For Construction

Scale: NOT TO SCALE
Drawn by: AXD 12/9/25
Checked by: MC 12/15/25
Project Engineer: RAR
Job Number: 20-B-91454
Sheet Number: E13 of 14

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KAUSHIKKUMAR J. PATEL, P.E.
UTAH P.E. 12592792-2202

Jan 02, 2026

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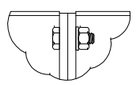
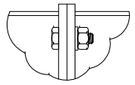
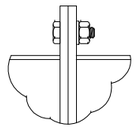
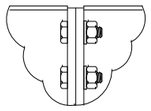
PROFESSIONAL ENGINEER
No. 12592792
KAUSHIKKUMAR J. PATEL
STATE OF UTAH

CONNECTION CODES
(FOR TOP AND BOTTOM BOLT PATTERN)


CONNECTION 1B, 1I OR 1P


CONNECTION 1F


CONNECTION 1E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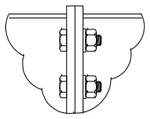
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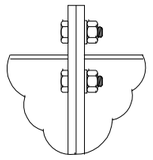
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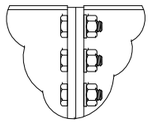
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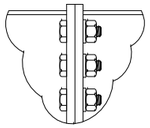
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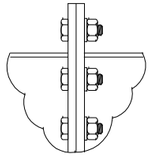
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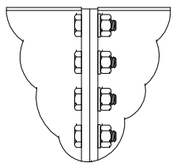
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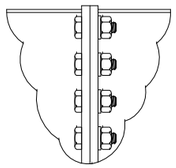
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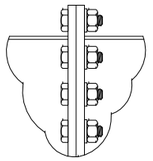
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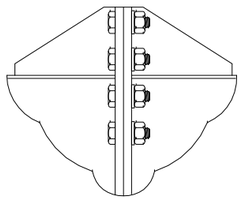

CONNECTION 4X

4 E /2 E H
- CONNECTION DESIGNATION
  - BLANK = STANDARD CONNECTION
  - H = HEAVY CONNECTION
- BOTTOM CONNECTION CODE
- BOTTOM QUANTITY OF BOLT ROWS
- CONNECTION DESIGNATION
  - BLANK = STANDARD CONNECTION
  - H = HEAVY CONNECTION
- TOP CONNECTION CODE
- TOP QUANTITY OF BOLT ROWS

CONNECTION CODE FORMAT

CONNECTION CODE DESCRIPTION

B = THIS DESCRIPTION CODE IS USED TO DEFINE SHEAR CONNECTIONS. BOLTS ARE LOCATED INSIDE THE TOP FLANGE AND CONNECTION PLATE IS RECESSED 1/8" BELOW THE TOP FLANGE. CONNECTION PLATE LENGTH MUST BE A MINIMUM OF HALF THE RAFTER WEB DEPTH AND SHALL NOT EXCEED THE RAFTER TOTAL DEPTH.

E = THIS DESCRIPTION CODE IS USED TO DEFINE MOMENT CONNECTIONS. BOLTS ARE LOCATED WITH ONE SET OUTSIDE THE TOP OR BOTTOM FLANGE AND THE REMAINING SETS ARE LOCATED INSIDE THE TOP OR BOTTOM FLANGE.

F = THIS DESCRIPTION CODE IS USED TO DEFINE MOMENT CONNECTIONS. BOLTS ARE LOCATED INSIDE THE TOP OR BOTTOM FLANGE AND CONNECTION PLATE PROJECTS 1/2" BEYOND THE TOP OR BOTTOM FLANGE.

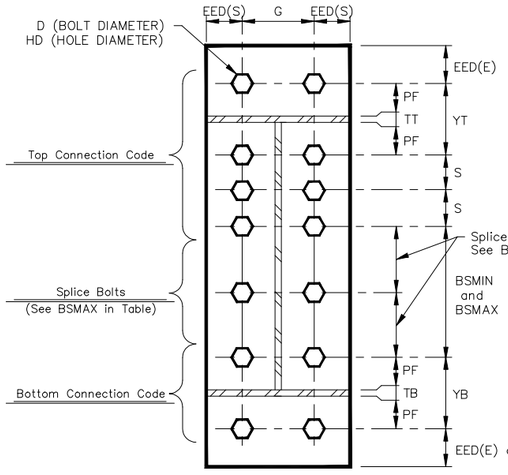
I = THIS DESCRIPTION CODE IS USED TO DEFINE MOMENT CONNECTIONS. BOLTS ARE LOCATED INSIDE THE TOP OR BOTTOM FLANGE AND CONNECTION PLATE IS RECESSED 1/8" BELOW THE TOP OR BOTTOM FLANGE.

P = THIS DESCRIPTION CODE IS USED TO DEFINE SHEAR CONNECTIONS. BOLTS ARE LOCATED INSIDE THE TOP FLANGE AND CONNECTION PLATE IS RECESSED 1/8" BELOW THE TOP FLANGE. CONNECTION PLATE LENGTH MUST BE A MINIMUM OF HALF THE RAFTER WEB DEPTH AND SHALL NOT EXCEED THE RAFTER TOTAL DEPTH.

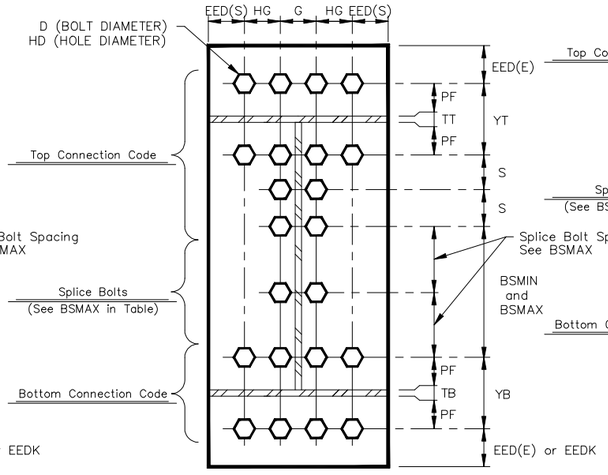
4X = THIS DESCRIPTION CODE IS USED TO DEFINE MOMENT CONNECTIONS. BOLTS ARE LOCATED WITH TWO SETS EACH SIDE OF THE TOP OR BOTTOM FLANGE WITH A GUSSET PLATE OUTSIDE THE TOP AND BOTTOM FLANGE OR COLUMN CAP PLATE.

CONNECTION BOLT DATA

NAME	DESCRIPTION FOR A325 BOLT DIMENSIONS		A325 CONNECTION BOLT DIMENSIONS					
D	DIAMETER OF THE BOLT		1/2"	3/4"	7/8"	1"	1 1/4"	1 1/2"
HD	BOLT HOLE DIAMETER		9/16"	13/16"	15/16"	1 1/16"	1 5/16"	1 9/16"
G	BOLT GAUGE		2 1/2"	3"	4"	3 1/2"	4"	5 1/2"
	MAX. WEB THICKNESS (Max. 5/16" Fillet Weld) WITHOUT WASHER		1"	1 1/8"	1 7/8"	1 1/4"	1 3/8"	2 1/8"
	MAX. WEB THICKNESS (Max. 5/16" Fillet Weld) WITH WASHER		3/4"	7/8"	1 5/8"	7/8"	7/8"	1 7/8"
HG	HEAVY CONN. BOLT GAUGE		N/A	2 1/4"	2 5/8"	3"	3 3/4"	4"
S	NORMAL BOLT SPACING		2 1/2"	3"	3 1/4"	3 1/2"	4"	4 1/2"
BSMIN	MINIMUM SPACING BETWEEN TOP & BOTTOM SETS OF BOLTS		1 1/2"	2 1/4"	2 5/8"	3"	3 3/4"	4"
BSMAX	MAXIMUM BOLT SPACING BETWEEN TOP AND BOTTOM SETS OF BOLTS ON CONNECTION PLATES		2'-0"	2'-0"	2'-0"	2'-0"	2'-0"	2'-0"
	SPLICE BOLT SPACING (NOT TO EXCEED 2'-0)		1/2 BSMAX (±1/16") WHEN BSMAX = 2'-0 1/16" TO 4'-0 1/3 BSMAX (±1/16") WHEN BSMAX = 4'-0 1/16" TO 6'-0 1/4 BSMAX (±1/16") WHEN BSMAX = 6'-0 1/16" TO 8'-0					
BFCD	MINIMUM BOLT-TO-FLANGE CLEARANCE AT OUT OF NUT SEE BOLT AT FLANGE DETAIL		1 1/2"	1 3/4"	1 7/8"	2 1/4"	2 1/2"	2 3/4"
PF	MINIMUM BOLT-TO-FLANGE CLEARANCE AT CONNECTION PLATE SEE BOLT AT FLANGE DETAIL		(BFCD + RNWT) PF INSIDE OF FLANGE IS INCREASED BASED ON THE YT & YB VALUE. PF FOR CONNECTION B, F, I AND P ARE THE SAME AS USED ON CONNECTION E					
NWT	NUT AND WASHER THICKNESS		SEE BOLT AT FLANGE DETAIL. NUT THICKNESS IS EQUAL TO THE BOLT DIAMETER AND .15625" WASHER THICKNESS IS USED EVEN IF A WASHER IS NOT REQUIRED.					
RNWT	RISE ON NUT AND WASHER THICKNESS							
TT	THICKNESS TOP FLANGE		REFER TO FRAME CROSS SECTION DRAWING FOR LARGEST FLANGE THICKNESS EITHER SIDE OF THE CONNECTION.					
TB	THICKNESS BOTTOM FLANGE							
YT	BOLT SPACING TOP (ROUND UP TO NEXT 1/2", MIN = S)		3" + TT	3 1/2" + TT	3 3/4" + TT	4 1/2" + TT	5" + TT	5 1/2" + TT
YB	BOLT SPACING BOTTOM (ROUND UP TO NEXT 1/2", MIN = S)		or TB Sloped	or TB Sloped	or TB Sloped	or TB Sloped	or TB Sloped	or TB Sloped
EED(E)	MINIMUM END EDGE DIMENSION		1 1/4"	1 1/4"	1 1/2"	1 3/4"	2 1/4"	2 5/8"
EED(S)	MINIMUM SIDE EDGE DIMENSION		3/4"	1"	1 1/8"	1 1/4"	1 5/8"	2 1/4"
EEDK	END EDGE DIMENSION AT KNEE CONNECTION		1 3/8"	1 3/8"	1 5/8"	1 7/8"	2 3/8"	2 3/4"
BCWM	MINIMUM BOLT CLEARANCE FROM A FLANGE OR WEB WELD	WITHOUT WASHER	7/16"	5/8"	3/4"	13/16"	1"	1 3/8"
		WITH HARDENED WASHER	9/16"	3/4"	7/8"	1"	1 1/4"	1 1/2"
WCSM	MINIMUM WIDTH OF CONNECTION PLATE (Standard Connection)		5"	6"	8"	8"	10"	12"
WCHM	MINIMUM WIDTH OF CONNECTION PLATE (Heavy Connection)		N/A	10"	12"	12"	16"	18"
TCMIN	MINIMUM THICKNESS OF CONNECTION PLATE		1/4"	3/8"	7/16"	1/2"	5/8"	1"



STANDARD CONNECTION DESIGNATION
(CODE 4E/2E SHOWN)



HEAVY CONNECTION DESIGNATION
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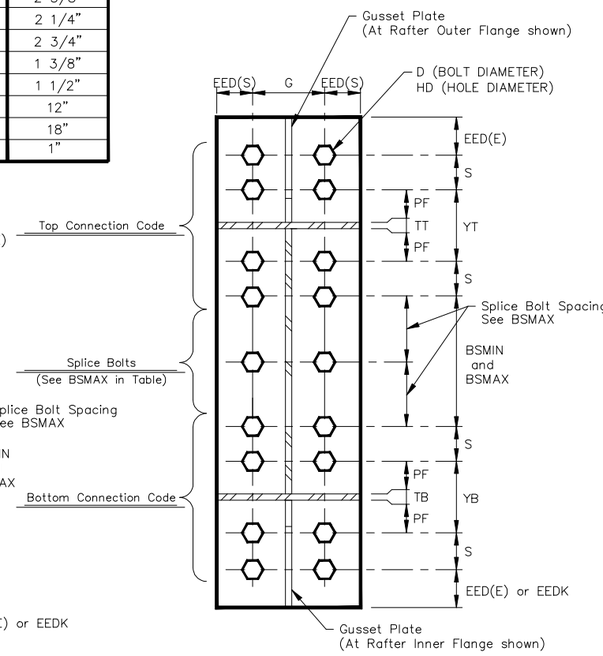
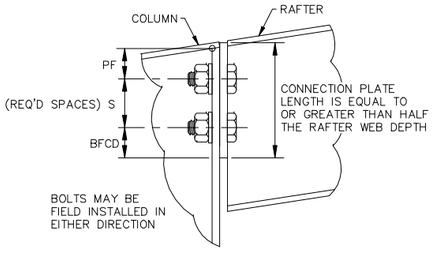
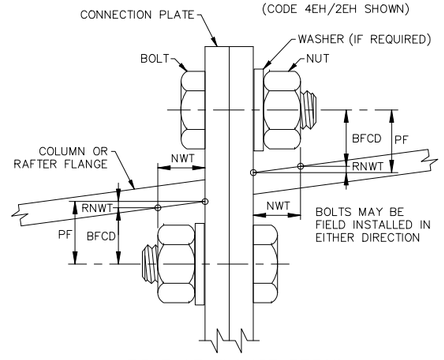


4X CONNECTION DESIGNATION
(CODE 4X/4X SHOWN)



CONNECTION B & P
(Low Side Shown, High Side Similar)



BOLT AT FLANGE DETAIL
(Top Flange Shown, Bottom Flange Similar)

Frame Documentation
A325 Connection Bolt Details

Page 05-12-10
Date Mar '24 Rev 06

B 4E/2EH
- Connection Code (See "Connection Code Format" on this drawing)
- Connection Location

CROSS SECTION CONNECTION CODE KEY
(AS SHOWN AT CONNECTIONS ON FRAME CROSS SECTION DRAWINGS)

Flange Brace Material Schedule	
Part Mark	Material
FB4_	L 2" x 2" x 14 Ga.
FB5_	L 2" x 2" x 14 Ga.
FB6_	L 2" x 2" x 1/8"
FB7_	L 2 1/2" x 2 1/2" x 3/16"

Ck'd	By	Description	Date	Revision

Cornerstone Building Brands
13105 Northwest Freeway, Suite 500
Houston, TX 77040
cornerstonebuildingbrands.com

FORTIFY BUILDING SOLUTIONS

MUELLER METAL BUILDING SYSTEMS & MORE

Project Name & Location:
MARA BROWN
1300 VALLEY DR
OGDEN UT 84401-0808

Customer:
CITY OF OGDEN-212366
2549 WASHINGTON BLVD
OGDEN UT 84401
MARA BROWN

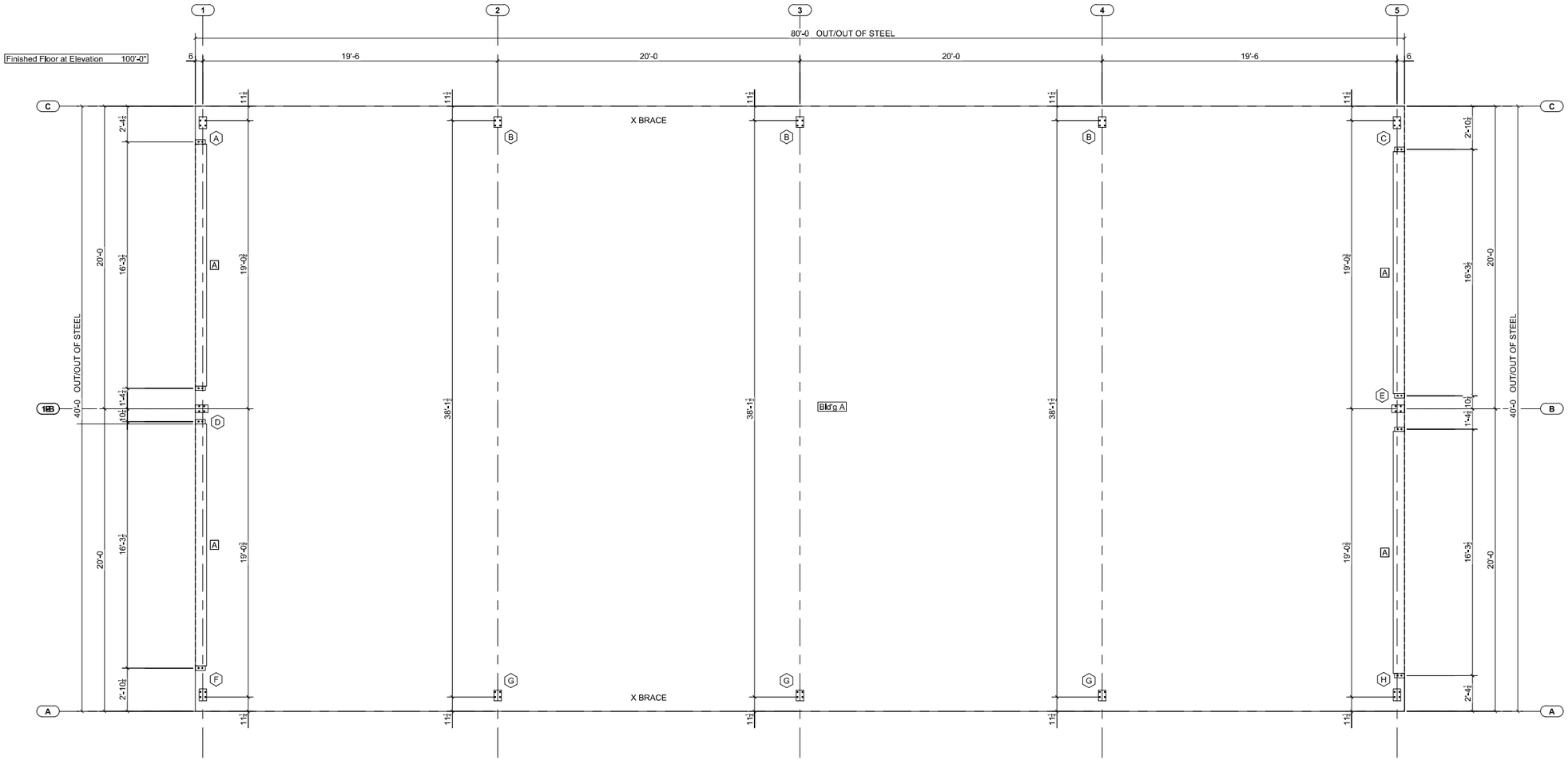
Drawing Status:
☐ Issued For Approval (Not For Construction)
☐ Issued For Permit
☒ Issued For Construction

Scale: NOT TO SCALE
Drawn by: AXD 12/9/25
Checked by: MC 12/15/25
Project Engineer: RAR
Job Number: 20-B-91454
Sheet Number: E14 of 14

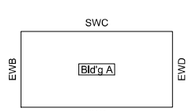
KAUSHIKKUMAR J. PATEL, P.E.
UTAH P.E. 12592792-2202

Jan 02, 2026

PROFESSIONAL ENGINEER
No. 12592792
KAUSHIKKUMAR J. PATEL
STATE OF UTAH



FRAMED OPENING SCHEDULE			
MARK	DESCRIPTION	DETAIL	QUAN.
A	16'-0" X 14'-0" FRAMED OPENING	3	4



Key Plan

Anchor Rod Setting Plan

Anchor Rod Drawings

1) This drawing is for anchor rod placement only and is not foundation design.
2) Foundation must be square and level with all anchor rods true in size, location, and projection.
3) Projection shown must be held to keep threads clear of finished concrete.
4) This structural design data includes magnitude and location of design loads and support conditions, material properties, and type and size of major structural members necessary to show compliance with the Order Documents at the time of this issue. Any change to building loads or dimensions may change structural member sizes and locations shown. This structural design data will be superseded and voided by any future mailing.
5) Anchor rod size as noted on the drawings has been determined by shear and tension at the bottom of the base plate. The length of the anchor rod and method of load transfer to the foundation are to be determined by the foundation engineer. Anchor rods are not provided by the metal building manufacturer.
6) Anchor rods are ASTM F1554 Gr. 36 material unless noted otherwise.
7) 3000 psi concrete compressive strength (f'c) is assumed for the purpose of column base plate design unless otherwise noted.

Revision	Date	Description	By	Ck'd

Cornerstone Building Brands
13105 Northwest Freeway, Suite 500
Houston, TX 77040
cornerstonebuildingbrands.com

FORTIFY BUILDING SOLUTIONS

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Scale: NOT TO SCALE
Drawn by: DJC 12/5/25
Checked by:
Project Engineer: RAR
Job Number: 20-B-91454
Sheet Number: F1 of 4

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KAUSHIKKUMAR J. PATEL, P.E.
UTAH P.E. 12592792-2202

Jan 02, 2026

PROFESSIONAL ENGINEER
No. 12592792
KAUSHIKKUMAR J. PATEL
STATE OF UTAH

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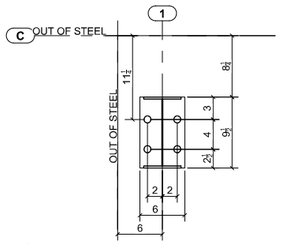
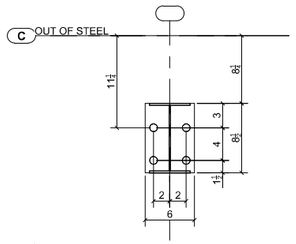
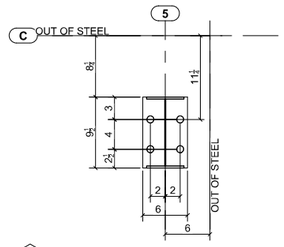


BASE PLATE SIZE = 6"W x 9 2"L x ¾" THICK
ANCHOR ROD SIZE = ¾" DIA. (F1554 GR.36)
ANCHOR ROD PROJECTION = 3"
BOTTOM OF BASE PLATE ELEVATION = 100'-0"
(ANCHOR BOLTS, NUTS AND WASHERS NOT BY MBM)



BASE PLATE SIZE = 6"W x 8 2"L x ¾" THICK
ANCHOR ROD SIZE = ¾" DIA. (F1554 GR.36)
ANCHOR ROD PROJECTION = 3"
BOTTOM OF BASE PLATE ELEVATION = 100'-0"
(ANCHOR BOLTS, NUTS AND WASHERS NOT BY MBM)



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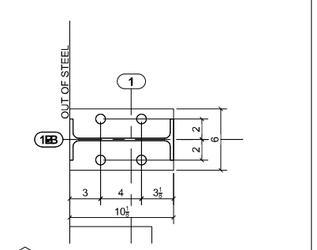
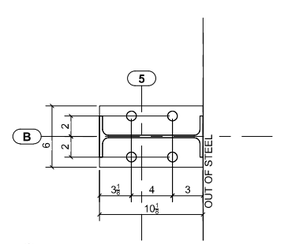
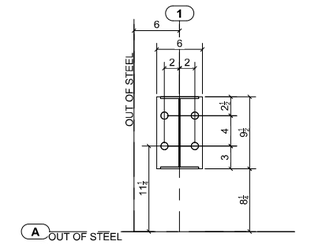


BASE PLATE SIZE = 6"W x 10 2"L x ¾" THICK
ANCHOR ROD SIZE = ¾" DIA. (F1554 GR.36)
ANCHOR ROD PROJECTION = 3"
BOTTOM OF BASE PLATE ELEVATION = 100'-0"
(ANCHOR BOLTS, NUTS AND WASHERS NOT BY MBM)



BASE PLATE SIZE = 6"W x 10 2"L x ¾" THICK
ANCHOR ROD SIZE = ¾" DIA. (F1554 GR.36)
ANCHOR ROD PROJECTION = 3"
BOTTOM OF BASE PLATE ELEVATION = 100'-0"
(ANCHOR BOLTS, NUTS AND WASHERS NOT BY MBM)



BASE PLATE SIZE = 6"W x 9 2"L x ¾" THICK
ANCHOR ROD SIZE = ¾" DIA. (F1554 GR.36)
ANCHOR ROD PROJECTION = 3"
BOTTOM OF BASE PLATE ELEVATION = 100'-0"
(ANCHOR BOLTS, NUTS AND WASHERS NOT BY MBM)

BASE PLATE SIZE = 6"W x 8 2"L x ¾" THICK
ANCHOR ROD SIZE = ¾" DIA. (F1554 GR.36)
ANCHOR ROD PROJECTION = 3"
BOTTOM OF BASE PLATE ELEVATION = 100'-0"
(ANCHOR BOLTS, NUTS AND WASHERS NOT BY MBM)

BASE PLATE SIZE = 6"W x 9 2"L x ¾" THICK
ANCHOR ROD SIZE = ¾" DIA. (F1554 GR.36)
ANCHOR ROD PROJECTION = 3"
BOTTOM OF BASE PLATE ELEVATION = 100'-0"
(ANCHOR BOLTS, NUTS AND WASHERS NOT BY MBM)

BASE PLATE SIZE = 3 2"W x 8"L x ¾" THICK
ANCHOR ROD SIZE = ¾" DIA. (F1554 GR.55)
ANCHOR ROD PROJECTION = 2"
BOTTOM OF BASE PLATE ELEVATION = 100'-0"
(ANCHOR BOLTS, NUTS AND WASHERS NOT BY MBM)

AISC Code Of Standard Practice Tolerances For Setting Anchor Rods

Anchor Rod Setting Tolerances

Base Plate And Anchor Rod

FRAMED OPENING RAMP DETAIL
OPTIONAL

Revision	Date	Description	By	Ck'd

Cornerstone Building Brands
13105 Northwest Freeway, Suite 500
Houston, TX 77040
cornerstonebuildingbrands.com

FORTIFY BUILDING SOLUTIONS

MUELLER METAL BUILDINGS, ROOFING & MORE

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Scale: NOT TO SCALE
Drawn by: DJC 12/5/25
Checked by:
Project Engineer: RAR
Job Number: 20-B-91454
Sheet Number: F2 of 4

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KAUSHIKKUMAR J. PATEL, P.E.
UTAH P.E. 12592792-2202

Jan 02, 2026

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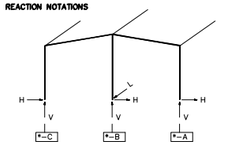
PROFESSIONAL ENGINEER
No. 12592792
KAUSHIKKUMAR J. PATEL
STATE OF UTAH

FRAME ID #3 — USER NAME: Rafael.arcerabad — DATE: 12/03/25 PAGE: 2-2
ms1 40./16./10.25 20./110./ — JOB NAME: 91454A — FILE: frame_1.fra

SUPPORT REACTIONS FOR EACH LOAD GROUP
*LOCATION: Gridlines: 1 — TIME: 17:11:05
NOTES:(1) All reactions are in kips and kip-ft.
(2) Primary wind load cases are not concurrent.
(3) X-bracing reactions (RBPULW and RBUPEQ) are combined withLWL and LEQ groups only.

REACTION NOTATIONS



LOAD GROUP REACTION TABLE GRIDLINES * = 1

COLUMN	*-C			*-A			*-B		
LOAD GROUP	H	V	L	H	V	L	H	V	L
DL	0.0	0.5	−0.0	−0.0	0.5	−0.0	0.0	1.0	−0.0
COLL	0.0	0.1	−0.0	−0.0	0.1	−0.0	0.0	0.2	−0.0
PLL1	0.1	2.0	−0.0	−0.1	−0.2	−0.0	0.0	2.3	−0.0
PLL2	0.1	−0.2	−0.0	−0.1	2.0	−0.0	−0.0	2.3	−0.0
SNOW	0.2	2.7	−0.0	−0.2	2.7	−0.0	0.0	6.9	−0.0
LL	0.2	1.8	−0.0	−0.2	1.8	−0.0	0.0	4.6	−0.0
EQ	−0.4	−0.3	−0.0	−0.4	0.3	−0.0	0.2	0.0	−0.4
WL1	−1.7	−3.0	−0.0	−1.6	−0.7	−0.0	0.0	−4.3	−0.0
WL2	−2.1	−2.1	−0.0	−1.2	0.2	−0.0	0.0	−3.1	−0.0
LWL1	0.9	−2.5	−0.0	−0.5	−1.7	−0.0	−0.0	−3.5	−3.1
LWL2	0.5	−1.7	−0.0	−0.9	−2.5	−0.0	−0.0	−3.5	−3.1
LWL3	0.5	−1.7	−0.0	−0.1	−0.9	−0.0	0.0	−2.3	3.1
LWL4	0.1	−0.9	−0.0	−0.5	−1.7	−0.0	0.0	−2.3	3.1
WL3	1.6	−0.7	−0.0	1.7	−3.0	−0.0	−0.0	−4.3	−0.0
WL4	1.2	0.2	−0.0	2.1	−2.1	−0.0	−0.0	−3.1	−0.0
SBAL	0.2	2.4	−0.0	−0.2	2.4	−0.0	0.0	6.3	−0.0
RS	0.2	0.4	−0.0	−0.2	2.9	−0.0	−0.0	5.3	−0.0
LS	0.2	2.9	−0.0	−0.2	0.4	−0.0	0.0	5.3	−0.0

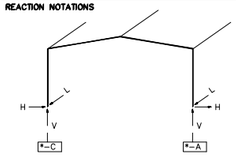
LOAD GROUP DESCRIPTION
DL : Roof Dead Load
COLL : Roof Collateral Load
PLL1 : Pattern Live Load [PLLxx]
PLL2 : Pattern Live Load [PLLxx]
SNOW : Roof Snow Load
LL : Roof Live Load
EQ : Lateral Seismic Load [parallel to plane of frame]
WL1 : Wind from Left to Right with +GCpi
WL2 : Wind from Left to Right with −GCpi
LWL1 : Windward Corner Left with +GCpi
LWL2 : Windward Corner Right with +GCpi
LWL3 : Windward Corner Left with −GCpi
LWL4 : Windward Corner Right with −GCpi
WL3 : Wind from Right to Left with +GCpi
WL4 : Wind from Right to Left with −GCpi
SBAL : Code Calculated Balanced Roof Snow Load
RS : Unbalanced Right Roof Snow Load
LS : Unbalanced Left Roof Snow Load

ADDITIONAL NOTES:
(1) Pattern live or snow load cases are not concurrent with any other live or snow load cases.

FRAME ID #1 — USER NAME: Rafael.arcerabad — DATE: 12/03/25 PAGE: 1-2
cs 40./16./19.75 20./110./4 — JOB NAME: 91454A — FILE: frames_2_4.fra

SUPPORT REACTIONS FOR EACH LOAD GROUP
*LOCATION: Gridlines: 2 4 — TIME: 17:10:50
NOTES:(1) All reactions are in kips and kip-ft.
(2) The seismic overstrength factor (Omega) is not included in the "RBDWEQ" and "RBUPEQ" Load Group reactions.
Seismic "BASE-ONLY" combination reactions include an overstrength factor of: 2.000
(3) Primary wind load cases are not concurrent.
(4) X-bracing reactions (RBPULW and RBUPEQ) are combined with LWL and LEQ groups only.

REACTION NOTATIONS



LOAD GROUP REACTION TABLE GRIDLINES * = 2 4

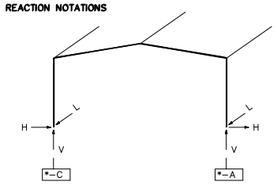
COLUMN	*-C			*-A		
LOAD GROUP	H	V	L	H	V	L
DL	0.4	1.4	−0.0	−0.4	1.4	−0.0
COLL	0.1	0.4	−0.0	−0.1	0.4	−0.0
SNOW	3.5	11.9	−0.0	−3.5	11.8	−0.0
LL	1.4	4.7	−0.0	−1.4	4.7	−0.0
RBDWEQ	−0.0	2.5	−0.0	0.0	2.5	−0.0
EQ	−0.7	−0.6	−0.0	−0.7	0.6	−0.0
RBUPEQ	0.0	−2.5	−3.1	−0.0	−2.5	−3.1
WL1	−3.4	−6.9	−0.0	−0.9	−4.1	−0.0
WL2	−3.7	−4.2	−0.0	−0.7	−1.4	−0.0
WL3	0.9	−4.1	−0.0	3.4	−6.9	−0.0
WL4	0.7	−1.4	−0.0	3.7	−4.2	−0.0
LWL1	0.4	4.7	−0.0	−0.0	−4.9	−0.0
RBUPLW	0.0	−2.3	−2.9	−0.0	−2.3	−2.9
LWL2	0.0	−4.9	−0.0	−0.4	−5.9	−0.0
LWL3	0.2	−3.1	−0.0	0.2	−2.2	−0.0
LWL4	−0.2	−2.2	−0.0	−0.2	−3.1	−0.0
SBAL	3.2	10.7	−0.0	−3.2	10.7	−0.0
RS	2.7	6.0	−0.0	−2.7	10.7	−0.0

LOAD GROUP DESCRIPTION
DL : Roof Dead Load
COLL : Roof Collateral Load
SNOW : Roof Snow Load
LL : Roof Live Load
RBDWEQ : Downward Acting Rod Brace Load from Long. Seismic
EQ : Lateral Seismic Load [parallel to plane of frame]
RBUPEQ : Upward Acting Rod Brace Load from Long. Seismic
WL1 : Wind from Left to Right with +GCpi
WL2 : Wind from Left to Right with −GCpi
WL3 : Wind from Right to Left with +GCpi
WL4 : Wind from Right to Left with −GCpi
LWL1 : Windward Corner Left with +GCpi
RBUPLW : Upward Acting Rod Brace Load from Long. Wind
LWL2 : Windward Corner Right with +GCpi
LWL3 : Windward Corner Left with −GCpi
LWL4 : Windward Corner Right with −GCpi
SBAL : Code Calculated Balanced Roof Snow Load
RS : Unbalanced Right Roof Snow Load

FRAME ID #1 — USER NAME: Rafael.arcerabad — DATE: 12/03/25 PAGE: 1-3
cs 40./16./19.75 20./110./4 — JOB NAME: 91454A — FILE: frames_2_4.fra

SUPPORT REACTIONS FOR EACH LOAD GROUP
*LOCATION: Gridlines: 2 4 — TIME: 17:10:50
NOTES:(1) All reactions are in kips and kip-ft.
(2) The seismic overstrength factor (Omega) is not included in the "RBDWEQ" and "RBUPEQ" Load Group reactions.
Seismic "BASE-ONLY" combination reactions include an overstrength factor of: 2.000
(3) Primary wind load cases are not concurrent.
(4) X-bracing reactions (RBPULW and RBUPEQ) are combined with LWL and LEQ groups only.

REACTION NOTATIONS



LOAD GROUP REACTION TABLE GRIDLINES * = 2 4

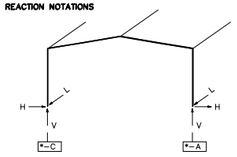
COLUMN	*-C			*-A		
LOAD GROUP	H	V	L	H	V	L
LS	2.7	10.7	−0.0	−2.7	6.0	−0.0
RBDWLW	−0.0	2.3	−0.0	0.0	2.3	−0.0

LOAD GROUP DESCRIPTION
LS : Unbalanced Left Roof Snow Load
RBDWLW : Downward Acting Rod Brace Load from Long. Wind

FRAME ID #2 — USER NAME: Rafael.arcerabad — DATE: 12/03/25 PAGE: 2-2
cs 40./16./20. 20./110./43. — JOB NAME: 91454A — FILE: frame_3.fra

SUPPORT REACTIONS FOR EACH LOAD GROUP
*LOCATION: Gridlines: 3 — TIME: 17:10:59
NOTES:(1) All reactions are in kips and kip-ft.
(2) The seismic overstrength factor (Omega) is not included in the "RBDWEQ" and "RBUPEQ" Load Group reactions.
Seismic "BASE-ONLY" combination reactions include an overstrength factor of: 2.000
(3) Primary wind load cases are not concurrent.
(4) X-bracing reactions (RBPULW and RBUPEQ) are combined with LWL and LEQ groups only.

REACTION NOTATIONS



LOAD GROUP REACTION TABLE GRIDLINES * = 3

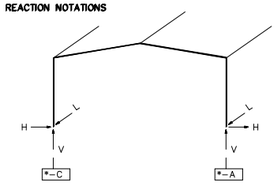
COLUMN	*-C			*-A		
LOAD GROUP	H	V	L	H	V	L
DL	0.4	1.4	−0.0	−0.4	1.4	−0.0
COLL	0.1	0.4	−0.0	−0.1	0.4	−0.0
SNOW	3.6	12.0	−0.0	−3.6	12.0	−0.0
LL	1.4	4.8	−0.0	−1.4	4.8	−0.0
RBDWEQ	−0.0	2.5	−0.0	0.0	2.5	−0.0
EQ	−0.7	−0.6	−0.0	−0.7	0.6	−0.0
RBUPEQ	0.0	−2.5	−3.1	−0.0	−2.5	−3.1
WL1	−3.5	−7.0	−0.0	−0.9	−4.2	−0.0
WL2	−3.7	−4.2	−0.0	−0.7	−1.4	−0.0
WL3	0.9	−4.2	−0.0	3.5	−7.0	−0.0
WL4	0.7	−1.4	−0.0	3.7	−4.2	−0.0
LWL1	0.5	−5.9	−0.0	−0.0	−5.0	−0.0
RBUPLW	0.0	−2.3	−2.9	−0.0	−2.3	−2.9
LWL2	0.0	−5.0	−0.0	−0.5	−5.9	−0.0
LWL3	0.2	−3.2	−0.0	0.2	−2.2	−0.0
LWL4	−0.2	−2.2	−0.0	−0.2	−3.2	−0.0
SBAL	3.2	10.8	−0.0	−3.2	10.8	−0.0
RS	2.7	6.1	−0.0	−2.7	10.9	−0.0

LOAD GROUP DESCRIPTION
DL : Roof Dead Load
COLL : Roof Collateral Load
SNOW : Roof Snow Load
LL : Roof Live Load
RBDWEQ : Downward Acting Rod Brace Load from Long. Seismic
EQ : Lateral Seismic Load [parallel to plane of frame]
RBUPEQ : Upward Acting Rod Brace Load from Long. Seismic
WL1 : Wind from Left to Right with +GCpi
WL2 : Wind from Left to Right with −GCpi
WL3 : Wind from Right to Left with +GCpi
WL4 : Wind from Right to Left with −GCpi
LWL1 : Windward Corner Left with +GCpi
RBUPLW : Upward Acting Rod Brace Load from Long. Wind
LWL2 : Windward Corner Right with +GCpi
LWL3 : Windward Corner Left with −GCpi
LWL4 : Windward Corner Right with −GCpi
SBAL : Code Calculated Balanced Roof Snow Load
RS : Unbalanced Right Roof Snow Load

FRAME ID #2 — USER NAME: Rafael.arcerabad — DATE: 12/03/25 PAGE: 2-3
cs 40./16./20. 20./110./43. — JOB NAME: 91454A — FILE: frame_3.fra

SUPPORT REACTIONS FOR EACH LOAD GROUP
*LOCATION: Gridlines: 3 — TIME: 17:10:59
NOTES:(1) All reactions are in kips and kip-ft.
(2) The seismic overstrength factor (Omega) is not included in the "RBDWEQ" and "RBUPEQ" Load Group reactions.
Seismic "BASE-ONLY" combination reactions include an overstrength factor of: 2.000
(3) Primary wind load cases are not concurrent.
(4) X-bracing reactions (RBPULW and RBUPEQ) are combined with LWL and LEQ groups only.

REACTION NOTATIONS



LOAD GROUP REACTION TABLE GRIDLINES * = 3

COLUMN	*-C			*-A		
LOAD GROUP	H	V	L	H	V	L
LS	2.7	10.9	−0.0	−2.7	6.1	−0.0
RBDWLW	−0.0	2.3	−0.0	0.0	2.3	−0.0

LOAD GROUP DESCRIPTION
LS : Unbalanced Left Roof Snow Load
RBDWLW : Downward Acting Rod Brace Load from Long. Wind

NOTES

1) THE REACTIONS PROVIDED ARE BASED ON THE ORDER DOCUMENTS AT THE TIME OF MAILING. ANY CHANGES TO BUILDING LOADS OR DIMENSIONS MAY CHANGE THE REACTIONS. THE REACTIONS WILL BE SUPERSEDED AND VOIDED BY ANY FUTURE MAILING.
2) THE REACTIONS PROVIDED HAVE BEEN CREATED WITH THE FOLLOWING LAYOUT (UNLESS NOTED OTHERWISE).
a) A REACTION TABLE IS PROVIDED WITH THE REACTIONS FOR EACH LOAD GROUP.
b) RIGID FRAMES
(1) GABLED BUILDINGS
(a) LEFT AND RIGHT COLUMNS ARE DETERMINED AS IF VIEWING THE LEFT SIDE OF THE BUILDING, AS SHOWN ON THE ANCHOR ROD DRAWING, FROM THE OUTSIDE OF THE BUILDING.
(b) INTERIOR COLUMNS ARE SPACED FROM LEFT SIDE TO RIGHT SIDE.
(2) SINGLE SLOPE BUILDINGS
(a) LEFT COLUMN IS THE LOW SIDE COLUMN.
(b) RIGHT COLUMN IS THE HIGH SIDE COLUMN.
(c) INTERIOR COLUMNS ARE SPACED FROM LOW SIDE TO HIGH SIDE.
c) ENDWALLS
(1) LEFT AND RIGHT COLUMNS ARE DETERMINED AS IF VIEWING THE WALL FROM THE OUTSIDE.
(2) INTERIOR COLUMNS ARE SPACED FROM LEFT TO RIGHT.
d) ANCHOR ROD SIZE IS DETERMINED BY SHEAR AND TENSION AT THE BOTTOM OF THE BASE PLATE. THE LENGTH OF THE ANCHOR ROD AND METHOD OF LOAD TRANSFER TO THE FOUNDATION ARE TO BE DETERMINED BY THE FOUNDATION ENGINEER.
e) ANCHOR RODS ARE ASTM F1554 Gr. 36 MATERIAL UNLESS NOTED OTHERWISE ON THE ANCHOR ROD LAYOUT DRAWING.
f) X-BRACING
(1) ROD BRACING REACTIONS HAVE BEEN INCLUDED IN VALUES SHOWN IN THE REACTION TABLES.
(2) FOR IBC AND UBC BASED BUILDING CODES, WHEN X-BRACING IS PRESENT IN THE SIDEWALL, INDIVIDUAL LONGITUDINAL SEISMIC LOADS (RBUPEQ AND RBDWEQ) DO NOT INCLUDE THE AMPLIFICATION FACTOR, Ω_0
(3) FOR CANADA BUILDING CODE (NBC), WHEN X-BRACING IS PRESENT IN THE SIDEWALL OR ENDWALL, INDIVIDUAL LONGITUDINAL SEISMIC LOADS (RBUPEQ & RBDWEQ) ARE MULTIPLIED BY FORCE REDUCTION FACTOR, Rd, WHEN SPECIFIED SHORT-PERIOD SPECTRAL ACCELERATION RATIO $I_E F_a S_a(0.2)$ IS GREATER THAN 0.45.
3) REACTIONS ARE PROVIDED AS UN-FACTORED FOR EACH LOAD GROUP APPLIED TO THE COLUMN. THE FOUNDATION ENGINEER WILL APPLY THE APPROPRIATE LOAD FACTORS AND COMBINE THE REACTIONS IN ACCORDANCE WITH THE BUILDING CODE AND DESIGN SPECIFICATIONS TO DETERMINE BEARING PRESSURES AND CONCRETE DESIGN. THE FACTORS APPLIED TO LOAD GROUPS FOR THE STEEL COLUMN DESIGN MAY BE DIFFERENT THAN THE FACTORS USED IN THE FOUNDATION DESIGN.
a) FOR PROJECTS USING ULTIMATE DESIGN WIND SPEEDS SUCH AS 2012 IBC, 2015 IBC, OR FLORIDA BUILDING CODE, THE WIND LOAD REACTIONS ARE AT A STRENGTH VALUE WITH A LOAD FACTOR OF 1.0.
b) FOR IBC CODES, THE SEISMIC REACTIONS PROVIDED ARE AT A STRENGTH LEVEL AND DO NOT CONTAIN THE RHO FACTOR.
c) FOR NBCC CODES, THE SEISMIC REACTIONS PROVIDED DO NOT CONTAIN THE $R_d R_o$ FACTOR.
THE MANUFACTURER DOES NOT PROVIDE "MAXIMUM" LOAD COMBINATION REACTIONS. HOWEVER, THE INDIVIDUAL LOAD REACTIONS PROVIDED MAY BE USED BY THE FOUNDATION ENGINEER TO DETERMINE THE APPLICABLE LOAD COMBINATIONS FOR HIS/HER DESIGN PROCEDURES AND ALLOW FOR AN ECONOMICAL FOUNDATION DESIGN.

Revision	Date	Description	By	Ck'd

Cornerstone Building Brands
13105 Northwest Freeway, Suite 500
Houston, TX 77040
cornerstonebuildingbrands.com

FORTIFY BUILDING SOLUTIONS

Project Name & Location:
MARA BROWN
1300 VALLEY DR
OGDEN UT 84401-0808

MUELLER METAL BUILDINGS, ROOFING & MORE

Customer:
CITY OF OGDEN-212366
2549 WASHINGTON BLVD
OGDEN UT 84401
MARA BROWN

Drawing Status:
☐ *Issued For Approval (Not For Construction)*
☐ *Issued For Permit*
☒ *Issued For Construction*

Scale:	NOT TO SCALE
Drawn by:	DJC 12/5/25
Checked by:	
Project Engineer:	RAR
Job Number:	20-B-91454
Sheet Number:	F3 of 4

KAUSHIKKUMAR J. PATEL, P.E.
UTAH P.E. 12592792-2202

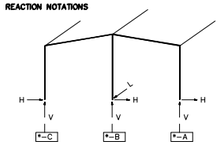
Jan 02, 2026

PROFESSIONAL ENGINEER — No. 12592792 — KAUSHIKKUMAR J. PATEL — STATE OF UTAH

FRAME ID #4 — USER NAME: Rafael.arcerabad — DATE: 12/03/25 — PAGE: 4-2
ms1 40./16./10.25 20./110./ — JOB NAME: 91454A — FILE: frame_5.fra

SUPPORT REACTIONS FOR EACH LOAD GROUP
*LOCATION: Gridlines: 5 — TIME: 17:10:54
NOTES: (1) All reactions are in kips and kip-ft.
(2) Primary wind load cases are not concurrent.
(3) X-bracing reactions (RBPULW and RBUPEQ) are combined withLWL and LEQ groups only.

REACTION NOTATIONS



LOAD GROUP REACTION TABLE GRIDLINES * = 5

COLUMN	*--C			*--A			*--B		
LOAD GROUP	H	V	L	H	V	L	H	V	L
DL	0.0	0.5	-0.0	-0.0	0.5	-0.0	0.0	1.0	-0.0
COLL	0.0	0.1	-0.0	-0.0	0.1	-0.0	0.0	0.2	-0.0
PLL1	0.1	2.0	-0.0	-0.1	-0.2	-0.0	0.0	2.3	-0.0
PLL2	0.1	-0.2	-0.0	-0.1	2.0	-0.0	-0.0	2.3	-0.0
SNOW	0.2	2.7	-0.0	-0.2	2.7	-0.0	0.0	6.9	-0.0
LL	0.2	1.8	-0.0	-0.2	1.8	-0.0	0.0	4.6	-0.0
EQ	-0.4	-0.3	-0.0	-0.4	0.3	-0.0	0.2	0.0	-0.4
WL1	-1.7	-3.0	-0.0	-1.6	-0.7	-0.0	0.0	-4.3	-0.0
WL2	-2.1	-2.1	-0.0	-1.2	0.2	-0.0	0.0	-3.1	-0.0
LWL1	0.9	-2.5	-0.0	-0.5	-1.7	-0.0	-0.0	-3.5	-3.1
LWL2	0.5	-1.7	-0.0	-0.9	-2.5	-0.0	-0.0	-3.5	-3.1
LWL3	0.5	-1.7	-0.0	-0.1	-0.9	-0.0	0.0	-2.3	3.1
LWL4	0.1	-0.9	-0.0	-0.5	-1.7	-0.0	0.0	-2.3	3.1
WL3	1.6	-0.7	-0.0	1.7	-3.0	-0.0	-0.0	-4.3	-0.0
WL4	1.2	0.2	-0.0	2.1	-2.1	-0.0	-0.0	-3.1	-0.0
SBAL	0.2	2.4	-0.0	-0.2	2.4	-0.0	0.0	6.3	-0.0
RS	0.2	0.4	-0.0	-0.2	2.9	-0.0	-0.0	5.3	-0.0
LS	0.2	2.9	-0.0	-0.2	0.4	-0.0	0.0	5.3	-0.0

LOAD GROUP DESCRIPTION

DL : Roof Dead Load
COLL : Roof Collateral Load
PLL1 : Pattern Live Load [PLLxx]
PLL2 : Pattern Live Load [PLLxx]
SNOW : Roof Snow Load
LL : Roof Live Load
EQ : Lateral Seismic Load [parallel to plane of frame]
WL1 : Wind from Left to Right with +GCpi
WL2 : Wind from Left to Right with -GCpi
LWL1 : Windward Corner Left with +GCpi
LWL2 : Windward Corner Right with +GCpi
LWL3 : Windward Corner Left with -GCpi
LWL4 : Windward Corner Right with -GCpi
WL3 : Wind from Right to Left with +GCpi
WL4 : Wind from Right to Left with -GCpi
SBAL : Code Calculated Balanced Roof Snow Load
RS : Unbalanced Right Roof Snow Load
LS : Unbalanced Left Roof Snow Load

ADDITIONAL NOTES:

(1) Pattern live or snow load cases are not concurrent with any other live or snow load cases.

NOTES

1) THE REACTIONS PROVIDED ARE BASED ON THE ORDER DOCUMENTS AT THE TIME OF MAILING. ANY CHANGES TO BUILDING LOADS OR DIMENSIONS MAY CHANGE THE REACTIONS. THE REACTIONS WILL BE SUPERSEDED AND VOIDED BY ANY FUTURE MAILING.
2) THE REACTIONS PROVIDED HAVE BEEN CREATED WITH THE FOLLOWING LAYOUT (UNLESS NOTED OTHERWISE).
a) A REACTION TABLE IS PROVIDED WITH THE REACTIONS FOR EACH LOAD GROUP.
b) RIGID FRAMES
(1) GABLED BUILDINGS
(a) LEFT AND RIGHT COLUMNS ARE DETERMINED AS IF VIEWING THE LEFT SIDE OF THE BUILDING, AS SHOWN ON THE ANCHOR ROD DRAWING, FROM THE OUTSIDE OF THE BUILDING.
(b) INTERIOR COLUMNS ARE SPACED FROM LEFT SIDE TO RIGHT SIDE.
(2) SINGLE SLOPE BUILDINGS
(a) LEFT COLUMN IS THE LOW SIDE COLUMN.
(b) RIGHT COLUMN IS THE HIGH SIDE COLUMN.
(c) INTERIOR COLUMNS ARE SPACED FROM LOW SIDE TO HIGH SIDE.
c) ENDWALLS
(1) LEFT AND RIGHT COLUMNS ARE DETERMINED AS IF VIEWING THE WALL FROM THE OUTSIDE.
(2) INTERIOR COLUMNS ARE SPACED FROM LEFT TO RIGHT.
d) ANCHOR ROD SIZE IS DETERMINED BY SHEAR AND TENSION AT THE BOTTOM OF THE BASE PLATE. THE LENGTH OF THE ANCHOR ROD AND METHOD OF LOAD TRANSFER TO THE FOUNDATION ARE TO BE DETERMINED BY THE FOUNDATION ENGINEER.
e) ANCHOR RODS ARE ASTM F1554 Gr. 36 MATERIAL UNLESS NOTED OTHERWISE ON THE ANCHOR ROD LAYOUT DRAWING.
f) X-BRACING
(1) ROD BRACING REACTIONS HAVE BEEN INCLUDED IN VALUES SHOWN IN THE REACTION TABLES.
(2) FOR IBC AND UBC BASED BUILDING CODES, WHEN X-BRACING IS PRESENT IN THE SIDEWALL, INDIVIDUAL LONGITUDINAL SEISMIC LOADS (RBUPEQ AND RBDWEQ) DO NOT INCLUDE THE AMPLIFICATION FACTOR, Ω_0.
(3) FOR CANADA BUILDING CODE (NBC), WHEN X-BRACING IS PRESENT IN THE SIDEWALL OR ENDWALL, INDIVIDUAL LONGITUDINAL SEISMIC LOADS (RBUPEQ & RBDWEQ) ARE MULTIPLIED BY FORCE REDUCTION FACTOR, Rd, WHEN SPECIFIED SHORT-PERIOD SPECTRAL ACCELERATION RATIO $I_E F_a S_a(0.2)$ IS GREATER THAN 0.45.
3) REACTIONS ARE PROVIDED AS UN-FACTORED FOR EACH LOAD GROUP APPLIED TO THE COLUMN. THE FOUNDATION ENGINEER WILL APPLY THE APPROPRIATE LOAD FACTORS AND COMBINE THE REACTIONS IN ACCORDANCE WITH THE BUILDING CODE AND DESIGN SPECIFICATIONS TO DETERMINE BEARING PRESSURES AND CONCRETE DESIGN. THE FACTORS APPLIED TO LOAD GROUPS FOR THE STEEL COLUMN DESIGN MAY BE DIFFERENT THAN THE FACTORS USED IN THE FOUNDATION DESIGN.
a) FOR PROJECTS USING ULTIMATE DESIGN WIND SPEEDS SUCH AS 2012 IBC, 2015 IBC, OR FLORIDA BUILDING CODE, THE WIND LOAD REACTIONS ARE AT A STRENGTH VALUE WITH A LOAD FACTOR OF 1.0.
b) FOR IBC CODES, THE SEISMIC REACTIONS PROVIDED ARE AT A STRENGTH LEVEL AND DO NOT CONTAIN THE RHO FACTOR.
*c) FOR NBCC CODES, THE SEISMIC REACTIONS PROVIDED DO NOT CONTAIN THE R_d*R_o FACTOR.*
THE MANUFACTURER DOES NOT PROVIDE "MAXIMUM" LOAD COMBINATION REACTIONS. HOWEVER, THE INDIVIDUAL LOAD REACTIONS PROVIDED MAY BE USED BY THE FOUNDATION ENGINEER TO DETERMINE THE APPLICABLE LOAD COMBINATIONS FOR HIS/HER DESIGN PROCEDURES AND ALLOW FOR AN ECONOMICAL FOUNDATION DESIGN.

Revision	Date	Description	By	Ck'd

Cornerstone Building Brands
13105 Northwest Freeway, Suite 500
Houston, TX 77040
cornerstonebuildingbrands.com

FORTIFY BUILDING SOLUTIONS
MUELLER METAL BUILDINGS, ROOFING & MORE

Project Name & Location:
MARA BROWN
1300 VALLEY DR
OGDEN UT 84401-0808

Customer:
CITY OF OGDEN-212366
2549 WASHINGTON BLVD
OGDEN UT 84401
MARA BROWN

Drawing Status:
☐ *Issued For Approval (Not For Construction)*
☐ *Issued For Permit*
☒ *Issued For Construction*

Scale: NOT TO SCALE
Drawn by: DJC 12/5/25
Checked by:
Project Engineer: RAR
Job Number: 20-B-91454
Sheet Number: F4 of 4

The engineer whose seal appears hereon is employed by or is contracted to provide engineering services for the manufacturer, Cornerstone Building Brands or one of its affiliates, for the materials described herein. Said seal or certification is limited to the products designed and manufactured by manufacturer only. The undersigned engineer is not the overall engineer of record for this project.

KAUSHIKKUMAR J. PATEL, P.E.
UTAH P.E. 12592792-2202

Jan 02, 2026

This item has been electronically signed and sealed by Kaushikkumar J. Patel, P.E. on the date and/or time stamp shown using a digital signature. Printed copies of this document are not considered signed and sealed and the signature must be verified by a 3rd Party Certificate Authority on any electronic copy.

PROFESSIONAL ENGINEER
No. 12592792
KAUSHIKKUMAR J. PATEL
STATE OF UTAH

Field Service Procedures

In Order To Give You Prompt Services And Keep Problems To A Minimum, Please Handle Any Shortages Or Back Charges In The Following Manner:

1. Carefully Check Your Packing List While Unloading.
2. Mark Any Items Which Appear To Be Missing And Notify The Field Service Department At The Number Shown In The Title Block As Soon As Possible. Calling Someone Else Could Delay The Proper Response.

INITIAL CLAIM:
In The Event Of An Error, The Customer Must Promptly Make A Written Or Verbal "Initial Claim" to The Manufacturer For The Correction Of Design, Drafting, Bill Of Materials Or Fabrication Error.
The "Initial Claim" Includes:

1. Description Of The Nature And Extent Of The Errors, Including Quantities.
2. Description Of The Nature And Extent Of Proposed Corrective Work, Including Estimated Man-Hours.
3. Materials To Be Purchased From Other Than the Manufacturer, Including Estimated Quantities and Cost.
4. Maximum Total Cost Of Proposed Corrective Work And Materials To Be Purchased From Other Than The Manufacturer.

SHORT MATERIALS:
Immediately Upon Delivery Of Materials, Quantities Are To Be Verified By The Customer Against Quantities That Are Billed On The Shipping Documents. Neither The Manufacturer Nor The Carrier Is Responsible For Material Shortages Against The Quantities Billed On The Shipping Documents If Such Shortages Are Not Noted On The Shipping Documents When The Material Is Delivered And Acknowledged By The Carrier's Agent. If The Carrier Is The Manufacturer, Claims For Shortages Are To Be Made By The Customer To The Common Carrier. If The Material Quantities Received Are Correct According To The Quantities Billed On The Shipping Documents, But Are Less Than The Quantities Ordered Or The Quantities That Are Necessary To Complete The Metal Building According To The Order Documents, Claim Is To Be Made To The Manufacturer.

DAMAGED OR DEFECTIVE MATERIAL:
Damaged Or Defective Material, Regardless Of The Degree Of Damage, Must be Noted On The Shipping Documents By The Customer And Acknowledged By The Carrier's Agent. The Manufacturer Is Not Responsible For Material Damaged In Unloading Of Packages Or Nested Materials, Including, But Not Limited To: Fasteners, Sheet Metal, "C" And "Z" Sections And Covering Panels That Become Wet And/Or Damaged By Water While In The Possession Of Others. Packaged Or Nested Material That Become Wet In Transit Must Be Unpacked, Unstacked And Dried By The Customer. If The Carrier Is The Manufacturer, The Customer Must Make Claim For Damaged Directly To The Manufacturer. If The Carrier Is A Common Carrier, The Customer Must Make The Claim For Damage To The Common Carrier. The Manufacturer Is Not Liable For Any Claim Whatsoever Including, But Not Limited To Labor Charges Of Consequential Damages Resulting From Customer's Use Of Damaged Or Defective Materials That Can Be Detected By Visual Inspection.

EXCESSIVE MATERIAL:
The Manufacturer Reserves The Right To Recover Any Material Delivered In Excess Of Those Required By The Order Documents.

OIL CANNING IS NOT A CAUSE FOR REJECTION

Authorization For Corrective Work

Normal Erection Operations Include The Correction Of Minor Misfits By Amounts Of Reaming, Chipping, Welding Or Cutting And The Drawing Of Elements Into Line Through The Use Of Drift Pins. Errors That Cannot Be Corrected By The Foregoing Means Or Which Require Major Changes In The Member Configuration Should Be Reported Immediately To The Owner And The Fabricator By The Erector, To Enable Whoever Is Responsible Either To Correct The Error Or Approve The Most Efficient And Economical Method Of Correction To Be Used By Others. (AISC 303-10, Section 7.14). If The Error Is The Fault Of The Manufacturer An "Authorization For Corrective Work" Must Be Issued In Writing By The Manufacturer To Authorize The Corrective Work At A Cost Not To Exceed The Maximum Total Cost Set Forth. Alternative Corrective Work Other Than That Proposed In The "Initial Claim" May Be Directed By The Manufacturer In The "Authorization Of Corrective Work". Only The Field Service Department May Authorize Corrective Work.

FINAL CLAIM:
The "Final Claim" In Writing Must Be Forwarded By The Customer To The Manufacturer Within (10) Days Of The Completion Of The Corrective Work Authorized By The Manufacturer.

THE "FINAL CLAIM" MUST INCLUDE:

1. Actual Number Of Man-Hours By Dated Of Direct Labor Use On Corrective Work And Actual Hourly Rate Of Pay.
2. Taxes And Insurance On Total Actual Direct Labor.
3. Other Direct Costs On Actual Direct Labor.
4. Cost Of Materials (Not Minor Supplies) Authorized By The Manufacturer To Be Purchased From Other Than The Manufacturer, Including Copies Of Paid Invoices.
5. Total Actual Direct Cost Of Corrective Work (Sum Of 1, 2, 3, And 4). The "Final Claims Are Credited To The Customer By The Manufacturer In The Amount Not To Exceed The Lesser Of The Maximum Total Cost Set Forth In The "Authorization For Corrective Work" Or The Total Direct Cost Of Corrective Work.

** IMPORTANT NOTE **
Cost Of Equipment (Rental Or Depreciation), Small Tools, Supervision, Overhead And Profit Are Not Subjected To Claims.

SHIPMENT ARRIVAL TIME:
Every Effort Will Be Made To See That The Carrier Arrives At The Jobsite On The Requested Hour. Manufacturer Makes No Warranty And Accepts No Responsibility For Costs Associated With A Shipment Not Arriving At The Requested Time Unless A Separate Agreement Has Been Made In Writing For A Guaranteed Arrival Time.

Unloading, Handling And Storage

STRUCTURAL:
A Great Amount Of Time And Trouble Can Be Saved If The Building Parts Are Unloaded At The Building Site According To A Pre-Arranged Plan. Proper Location And Handling Of Components Will Eliminate Unnecessary Handling.

NOTE:
Piece Marks Are Stenciled On The Primary Structural Members At The Lower End, 1'-0" From The End. Inspect All Shipments Prior To Releasing The Tie-downs For Loads That May Have Shifted During Transit.

REMEMBER SAFETY FIRST:
Blocking Under Columns And Rafters Protect The Splice Plates And The Slab From Damage During The Unloading Process. It Also Facilitates The Placing Of Slings And Cables Around Members For Later Lifting And Allows Members To Be Bolted Together Into Sub-assemblies While On The Ground. Extra Care Should Always Be Exercised In The Unloading Operation To Prevent Injuries From Handling Steel And To Prevent Damage To Materials And The Concrete Slab. If Water Is Allowed To Remain For Extended Periods In Bundles Of Primed Parts Such As Girts, Purlins, Etc., The Pigment Will Fade And The Paint Will Gradually Soften Reducing Its Bond To The Steel. Therefore, Upon Receipt Of A Job, All Bundles Of Primed Parts Should Be Stored At An Angle To Allow Any Trapped Water To Drain Away And Permit Air Circulation For Drying. Puddles Of Water Should Not Be Allowed To Collect And Remain On Columns Or Rafters For Same Reason.

The Coat Of Shop Primer Is Intended To Protect The Steel Framing Only For A Short Period Of Exposure To Ordinary Atmospheric Conditions. The Coat Of Shop Primer Does Not Provide The Uniformity Of Appearance, Or The Durability And Corrosion Resistance Of A Field Applied Finish Coat Of Paint Over Shop Primer.

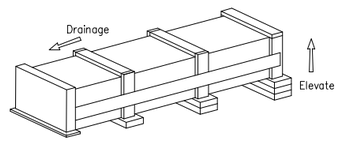
Roof And Wall Panels

Manufacturer's Roof And Wall Panels Include Color Coated, Galvalume, And Galvanized, Provide Excellent Service Under Widely Varied Conditions. All Unloading And Erection Personnel Should Fully Understand That These Panels Are Quality Merchandise, Which Merits Cautious Care And Handling.

UNDER NO CIRCUMSTANCES SHOULD PANELS BE HANDLED ROUGHLY
Packages Of Sheets Should Be Lifted Off The Truck With Extreme Care Taken To Ensure That No Damage Occurs To Ends Of The Sheets Or to Side Ribs. The Packages Should Be Stored Off The Ground Sufficiently High To Allow Air Circulation Underneath The Packages. This Avoids Ground Moisture And Deters People From Walking On The Packages. One End Of The Package Should Be Elevated To Encourage Drainage In Case Of Rain. The Manufacturer Exercises Caution During Fabrication An Shipping Operations To Ensure That All Panel Stock Is Kept Dry. However Due To Climatic Conditions, Water Formed By Condensation Of Humid Air Become Trapped Between Sheets. Water Can Also Be Trapped Between The Stacked Sheets When Exposed To Rain. This May Discoloration Caused By Trapped Moisture. The Stain Is Usually Superficial And Has Little Effect On The Appearance Or Service Life Of The Panels As Long As It Not Permitted To Remain On The Panel. However, Moisture In Contact With The Surface Of The panel Over An Extended Period Can Severely Attack The Finish And Reduce The Effective Service Life. See R1-07 Titled "Damage From Condensation Or Trapped Water".

CAUTION:
Care Should Always Be Taken When Walking On Panels. Use Safety Lines And Net When Necessary. Panels Are Slippery, Wipe Dry Any Moisture Or Surface Material That Has Puddle From Bundles Stored On A Slope. Dew, Frost, Or Other Forms Of Moisture Greatly Increase The Slipperiness Of The Panels. Always Assume Panel Surface Is Slippery And Act Accordingly. Never Walk Of Step On Skylights Or Translucent Panels.

Use Wood Blocking To Elevate And Slope The Panels In A Manner That Allows Moisture To Drain. Wood Blocking Placed Between Bundles Will Provide Additional Air Circulation. When Handling Or Uncrating The Panels, Lift Rather Than Slide Them Apart. Burred Edges May Scratch The Coated Surfaces When Sheets Are Slid Over One Another. Never Allow Panels To Be Walked On While On The Ground.



Roof And Wall Panel Damage During Construction

The Quality Of Workmanship In Steel Construction Practices And Handling Methods Used During The Construction Of The Metal Building Can Significantly Affect The Appearance And Performance Of The Building Panels. Panel Damage During Construction Can Be The Result Of Faulty Installation Methods And/or Carelessness.

Overdriven Fasteners Cause Indentations Or Shallow Pockets In The Panel Around The Fastener Head. Rain Water Or Condensation Moisture Combined With Atmospheric Pollutants (principally Sulfur Dioxides) And Dirt Particles Collect In These Pockets. The Combination Of Pollutants And Water Creates Acid Solutions That Will Cause Corrosion Damage To The Panel And Fastener. Rain May Wash Some Pollutants Away, But Moisture In Form Of High Humidity Can Keep These Areas Wet And Continue The Problem. Overdriving The Fastener Also Forces The Sealing Washer From Under The Head Creating A Leak At This Point. Proper Torque Adjustment Of The Screw Gun Or Preferably The Use Of A Depth Gauge Will Eliminate The Problem Of Overdriven Fasteners.

It Is Extremely Important That All Drill Shavings From The Installation Of Panel Fasteners And Fillings From The Saw Cutting Of Panels Be Removed From The Panel Surface. Corrosion Can Occur In A Matter Of Hours When These Shavings Or Fillings Are Not Removed And Are In Contact With Water Or Condensed Moisture. When Panels Are Pre-Drilled Or Cut In The Stack Prior To Erection All Shavings Must Be Cleaned From Both Sides Of The Panel To Prevent Corrosion Of The Panel By These Particles. It Is Imperative That The Roof Be Swept Clean At Least Daily And Certainly At Job Completion. The Final Cleaning Of The Roof Should Be Done Prior To Installing The Gutter So That The Shavings Are Not Deposited Into The Gutter And Left To Corrode. Any Other Foreign Objects Or Debris Left By Construction Personnel Should Also Be Removed From The Roof During The Erection Of The Roof And The Installation Of Such Equipment As Air Condition Units, Etc..

Personnel Walking On The Panel Can Cause Damage. Workmen Should Step Or Walk In The Broad Flat Areas Of The Panel And Avoid Stepping On The Panel Ends And Edges Which Can Be Bent By Careless Handling. If This Damage Is Severe, The Edges Must Be Straighten Prior To Erection Since The Appearance And/or Weather Tightness Of The Panel Could Be Affected. Dragging One Panel Across Another Can Cut Or Abrade The Coating Causing Unsightly Marks On The Panel Surface.

Attempts To Erect Panels During Windy Conditions Should Be Avoided To Prevent Damage And Of Safety Considerations.

Leaving Dirt Piled Against The Exterior Wall Panels At The Foundation Will Cause Panel Damage. This Dirt May Be Wet Or At Least Contain Some Moisture. Mud May Have Splashed Onto The Wall During Construction. Corrosion Damage May Occur Where This Dirt Or Mud Contacts The Panel. In Areas Where Lime Stabilization Of The Soil Is Required, Corrosion Damage From The Soil's Content Will Be Accelerated And Most Likely Be Severe. All Dirt Must Be Removed From The Panel Walls At The Time Of Completion Of Work. Pre-Painted Panels May Require Touch-up If The Coating Has Been Damaged During Handling Or Erection.

The Appearance Of The Building May Be Affected If Damaged Spots Or Scratches Are Located In Highly Visible Places Such As Around Doors, Windows, Etc.. If Damage Is Extensive Then Replacement Of The Entire Panel Should Be Considered.

Types Of Finishes

SHOP PRIMED STEEL:
All Structural Members Of The Metal Building System Not Fabricated Of Corrosion Resistant Material Or Protected By A Corrosion Resistant Coating Are Painted With One Coat Of Shop Primer Meeting The Performance Requirements Of SSPC Paint Specification No.15. The Coat Of Shop Primer Is Intended To Protect The Steel Framing For Only A Short Period Of Exposure To Ordinary Atmospheric Conditions. Shop Primed Steel Which Is Stored In The Field Pending Erection Should Be Kept Free Of The Ground And So Positioned As To Minimize Water Holding Pockets, Dust, Mud And Other Contamination Of The Primer Film. Repairs Of Damaged To Primed Surfaces And/Or Removal Of Foreign Material Due To Improper Field Storage Or Site Conditions Are Not The Responsibility Of The Manufacturer. The Manufacturer Is Not Responsible For Deterioration Of The Shop Coat Of Primer Or Corrosion That May Result From Exposure To Atmospheric And Environmental Conditions, Nor The Compatibility Of The Primer To Any Field Applied Coating. Minor Abrasions To The Shop Coat (Including Galvanizing) Caused By Handling, Loading, Shipping, Unloading And Erection After Painting Or Galvanizing Are Unavoidable. (MBMA 2012, Chapter IV 4.2.4).

GALVALUME:
Galvalume Is The Trade Name For A Patented Steel Sheet And Coil Product Having A Coating Of Corrosion Resistant Aluminum-Zinc Alloy. The Mixture Is Balanced To Obtain The Coating That Retains The Corrosion Resistance And Heat Reflectivity Of Aluminum And Galvanic Protection Of Zinc. The Best Properties Of Both Aluminum And Zinc Are Combined In This Coating And Offer Added Service Life For The Building.

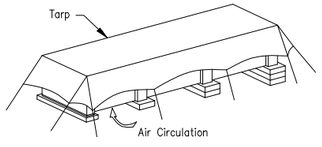
Pre-Painted:
Using Galvalume Steel As A Substrate, Pre-Painted Steel Is Given An Additional Rust Inhibitor Primer Coat. This Primer Coat Further Increases The Corrosion Resistance. These Coatings Are Applied To The Exterior Surface Of The Panels And A Wash Coat Designed Only For Interior Use, Is Applied On The Opposite Side. Galvalume And Pre-Painted Steel Can Give Excellent Service For Many Years If A Few Rules Concerning Their Care And Maintenance Are Observed. All Of These Finishes Are Equally Subject To Damage And Corrosion When Care Is Not Provided.

PAINT AND COATING MAINTENANCE:
Remove Smudge Marks From Bare Galvalume:
Formula 409 Has Proven To Be Somewhat Effective. Lightly Rub With A Clean Cloth And Rinse With Water. Do Not Rub More Than Required To Remove Smudge Marks. No Product Will Remove All Smudge Marks.
Remove Rust Stains:
Soft Scrub Without Bleach Has Proven To be Somewhat Effective. Rub With A Soft Cloth And Rinse With Water. Do Not Rub More Than Required To Remove Stain. No Product Will Completely Remove Rust Stains.
To Touch-Up Scratches In Paint (Not Bare Metal):
Clean Area To Be Painted With Mild Detergent. Rinse Thoroughly And Dry. Using A Small Artist's Brush, Lightly Apply A Minimal Amount Of Color Matched Touch-Up Pain Required To Fill/Cover The Scratch. Contact The Building Manufacturer For Assistance With Ordering/Purchasing Touch-Up Paint As Needed.

Damage From Condensation Or Trapped Water

It Is Extremely Important That The Panels Be Monitored For Evidence Or Trapped Water Or Moisture Condensation While Awaiting Erection. High Humidity Conditions With Temperature Cycling Will Cause Condensation Between Panels Within The Bundle. Condensation Can Occur Frequently Near The Sea Coast Or Other Large Bodies Of Water.

If Jobsite Covers Are Used, They Should Be Tied Away From The Bundle At Corners To Allow Air Circulation Around The Bundle. This Will Help Prevent Moisture Evaporating From The Ground Or Building Floor From Condensing On The Panels. Plastic Or Other Impermeable Covers Are Not Recommended. Immediate Action Is Required If The Panels Are Found To Be Wet From Any Cause. The Bundles Must Be Opened And Each Panel Un-Stacked And Thoroughly Dried On Both Sides. Re-Stacking The Panel At A Slight Angle To Each Other To Prevent Nesting Will Allow Air Circulation And Assist In Keeping The Panel Dry. In Severe Conditions Large Fans Can Be Used To Circulate Air Between The Un-Stacked Panels And Accelerate Drying. Damage To The panel Coating Occurs When Panels Become Wet And Are Allowed To stay wet. damage Can Occur To Nested Panels Within 24 to 48 Hours. This Damage Shows Corrosion And Discoloration Of The Panel Surface And Is Commonly Called Wet Storage. Stain, Zinc Oxidation, Or "White Rust".



A Softening Of The Paint Film Can Occur With Pre-Painted Steel Under Wet Storage Conditions And The Durability Of The Panel Finish Substantially Decrease. Bare Galvanized And Galvalume Panels React More Quickly To Surface Oxidation Since They Lack The Additional Protection Of Paint. Zinc Coated Or Galvalume Panels Under Normal Exposure Form A Zinc Aluminum Oxide Film On Their Surface Allowing A Slow Oxidation Process Called "Weathering" To Occur That Inhibits Further Corrosion. In Nested Bundles Constant Contact Of The Panels With Condensed Or Trapped Water Prevents This Weathering Process.

Rapid Oxidation Of The Zinc or Zinc Aluminum Coating Can Now Occur And May Lead To "Red Rust" In A Short Time. If Discoloration Or Stains Are Minor A Household Cleaner Of The Type Used On Porcelain Sinks And Bathtubs May Be Used To Remove Stains. Wire Brushing Or Abrasive Materials Should be Avoided Since Scratching Or Removal Of The Coating Could Occur. Panel With Significant Damage Should Be Replaced By The Buyer Prior To Erection.

Safety Commitment

The Builder/Contractor Is Responsible For Applying And Observing All Pertinent Safety Rules And OSHA Standards As Applicable.

The Building Manufacturer Has A Commitment To Manufacture Quality Building Components That Can Be Safely Erected. However The Safety Commitment And Job Site Practices Of The Erector Are Beyond The Control Of The Building Manufacturer.

It Is Strongly Recommended That Safe Working Conditions And Accident Prevention Practices Be The Top Priority Of Any Job Site.

Local, State And Federal Safety And health Standards, Whether Standard Statuary Or Customary, Should Always Be Followed To Help Ensure Worker Safety.

Make Sure All Employees Know The Safest And Most Productive Way Of Erecting A Building. Emergency Procedures Should Be Known To All Employees. Daily Meetings Highlighting Safety Procedures Are Also Recommended. The Use Of Hard Hats, Rubber Sole Shoes For Roof Work, Proper Equipment For Handling Material And Safety Nets Where Applicable Are Recommended

.

For The Purposes Of Determining Lift Requirements, No Bundle Supplied By The Manufacturer Will Exceed 4,000 Pounds. For Further Information Also reference The Bill Of Materials For Individual Member Weights Of Structural Members. If Additional Information Is Required Contact The Field Service Department.

ICE AND SNOW REMOVAL:
Excessive Ice And Snow Removal Should Be Removed From The Roof Immediately To Prevent Damage To Roof And Possible Collapse. Do Not Use Metal Tools To remove The Ice Or Snow As This Can Damage The Paint And/Or Galvalume Coatings. Also Be Careful Around Pipes And Flashing's.
Be Extremely Careful If Your Roof Has Light Transmitting Panels. These Panels Will Not Support A Person's Weight And Will Be Difficult Or Impossible To See If They Are Covered With Ice Or Snow. See MBMA Low-Rise Building Systems Manual, Appendix A8 For Details On Snow Removal Procedures. These Procedures Should Commence When Half Of The Design Roof Snow Load Is Realized.

DEBRIS REMOVAL:
Any Foreign Debris Such As Sawdust,Dirt, Leaves, Animal Droppings, Etc. Will Cause Corrosion Of The Roof, Gutters, Trim, Etc. If Left On The Building Surface For A Long Enough Time. The Roof Should Be Periodically Inspected For Such Conditions And If Found, They Should Be Rectified In A Manner Consistent With These Roof Maintenance Guidelines. Never Allow Treated Lumber Or Concrete/Mortar/Grout To Come In Contact With Roof Panels, Especially Galvalume For Extended Periods Of Time.

PERIODIC INSPECTION:
All High-Strength Shall Be Periodically Be Inspected For Tightness. Particularly In Crane Buildings And After Seismic Or Wind Activity. The Crane Manufacturer Will Specify A Minimum Period But It Should Not Exceed Two Years.

DRAINAGE:

1. Keep Roof Free Of Debris And Keep Debris Out Of Gutter To Allow Water Quickly Drain From The Roof.
2. Do Not Use Wood Blocking To Hold Equipment Off The Panel Seams. This Blocks The Flow Of Water And Hold Moisture.
3. Do Not Allow Rooftop AC Units Or Evaporative Coolers To Drain Onto The Roof.
4. Anything That Traps Or Holds Moisture On A Roof Will Cause Premature Corrosion.

Roof Maintenance Guidelines

1. Inspect Roof For Damage After Heavy Storms.

2. Inspect And Reseal As Necessary All Roof Curbs And Other Penetrations With Urethane Sealant.

3. Always Get Manufacturer Approval Before Making Any Modifications To The Roof.

4. Repaint Any Areas That Are Susceptible To Rust As Required.

5. When Performing Roof Maintenance, Always Take The Following Precautions:
   a. Use Fall Protection And Other Safety Protection As Required.
   b. Do Not Walk On Roof Flashing Such As Gutter, Rake, Hip Or Ridge Flash.
   c. Do Not Walk On Light Transmitting Panels (LTP's). They Will Not Support A Person's Weight.
   d. Guard All LTP's And Roof Openings.
   e. Step Only In The Panel Flat Directly On Or In Close Proximity To A Supporting Roof Structural.

6. After Other Trades Have Been On The Roof For Any Reason, Inspect The Roof For Damage Caused By Workers Including Chemical Or Solvent Spills, Scratches In The Paint Or Galvalume Coating, Excessive Foot Traffic And Punctures. Make Sure That All Debris Or Scrap Left Behind By Workers Is Removed From The Roof Immediately. Avoid Using Cutoff Saws And Welding Equipment Over The Roof. The Roof Must Adequately Protected.

FOOT TRAFFIC:
Keep Foot Traffic To A Minimum. Heavy Foot Traffic Can Cause Ponding On Low Pitched Roofs. This Is Particularly True Just Upslope From The Eave And At Endlaps.
Always Walk In The Flat Of The Panel Near A Supporting Roof Structural. Do Not Walk On Trim Or In Gutters.
On Bare Galvalume Roofs, Excessive Foot Traffic May Cause Black Burnish Marks. If Regular Foot Traffic Is Planned For A Roof, Provisions Should Be Made For A Properly Designed And Installed Walkway System. In Order To Limit Access To The Roof, Roof Hatches Or Access Ladders Should Be Locked At All Times. A Sign Posted At The Access Site Stating That Only Authorized Personnel Are Allowed On The Roof. In Addition A Log Book Should Be Kept Of All Visits To The Roof And The Reason For Such Visits.

DISSIMILAR METALS:
Never Allow Your Roof To Come In Contact With, Or Water Runoff From Any Dissimilar Metal Including But Not Limited To:
Copper, Lead Or Graphite, This Includes Copper And Arsenic Salts Used In Treated Lumber, Calcium Used In Concrete, Mortar And Grout.

Never Step On Light Transmitting Panels (LTP's) Or Unattended Roof Panels

Panels May Collapse
If Not Properly Secured

Roof Panels Must Be Completely Attached To The Purlins And To Panels On Either Side Before They Can Be A Safe Walking Surface. Light Transmitting Panels LTP's) Translucent Panels Can Never Be Considered As A Walking Surface.

Partially Attached Or Unattached Panels Should Never Be Walked On!

Do Not:

1. Step On Rib At Edge Of Panel.

2. Step Near Crease In Rib At Edge Of Panel.

3. Step Within 5 Feet Of Edge On Unsecured Panel.

A Single Roof Panel Must Never Be Used As A Work Platform. An OSHA Approved Runway Should Be Used For Work Platforms. (Consult OSHA Safety And Health Regulations For The Construction Industry). Safety First!

Revision	Date	Description	By	Ck'd

Cornerstone Building Brands
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Houston, TX 77040
cornerstonebuildingbrands.com

FORTIFY BUILDING SOLUTIONS
MUELLER METAL BUILDINGS, ROOFING & MORE

Project Name & Location:
MARA BROWN
1300 VALLEY DR
OGDEN UT 84401-0808

Customer:
CITY OF OGDEN-212366
2549 WASHINGTON BLVD
OGDEN UT 84401
MARA BROWN

Drawing Status:
☐ Issued For Approval (Not For Construction)
☐ Issued For Permit
☒ Issued For Construction

Scale:	NOT TO SCALE	
Drawn by:	AXD	12/9/25
Checked by:	MC	12/15/25
Project Engineer:		
Job Number:	20-B-91454	
Sheet Number:	R1 of 12	

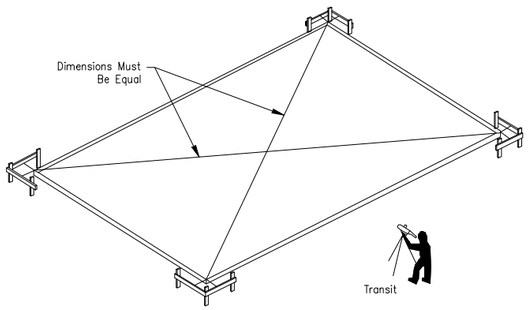
KAUSHIKKUMAR J. PATEL. P.E.
UTAH P.E. 12592792-2202

Jan 02, 2026

PROFESSIONAL ENGINEER
No. 12592792
KAUSHIKKUMAR J. PATEL
STATE OF UTAH

Building Anchorage

1. To Determine That The Foundation Is Square, Measure Diagonal Dimensions To Be Sure They Are Of Equal Length.
2. To Determine That The Foundation Is Level, Set Up A Transit Or Level And Use A Level Rod To Obtain The Elevation At All Columns.
3. Carefully Check The Location Of All Anchor Rods Against The Anchor Rod Setting Plan Furnished By The Manufacturer. All Dimensions Must Be Identical To Assure A Proper Start-up.

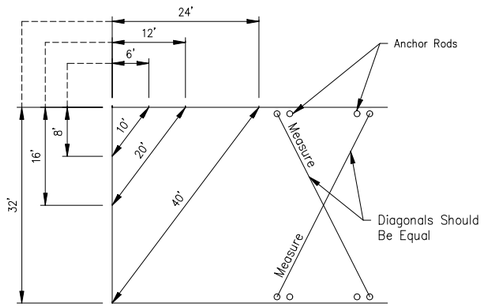


Pre-Erection Notes:

The Following Notes, Procedures And Suggested Recommendations Are Important Parts Of The Pre-Erection Process.

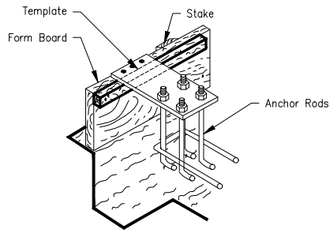
1.) Prior To The Time The Erection Crew Arrives, A Responsible Person Should Check The Job Site For Foundation Readiness, Square, And Accuracy And Anchor Rod Size And Location.

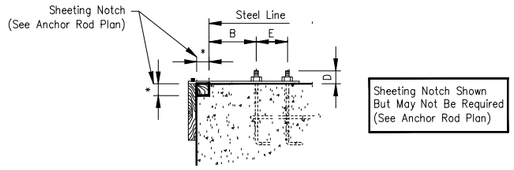
The Drawing Shown Below Indicates A Method Which May Be Used To Check The Foundation And Bolts For Square.



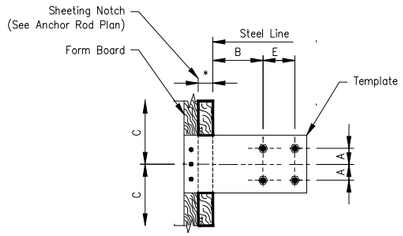
Measure Along Adjacent Sides Of Foundation Using A Pair Of Dimensions Shown. If The Diagonal Distance Between These Points Is As Noted, The Corner Is Square. Diagonal Measurements Between Opposite Anchor Rods Will Indicate If These Bolts Are Set Square.

It Is Extremely Important That Anchor Rods Are Placed Accurately And In Accordance With The Anchor Rod Setting Plan. All Anchor Rods Should Be Held In Place With A Template Or Similar Means, So That They Will Remain Plumb And In Correct Location During The Placement Of The Concrete. A Final Check Should Be Made After Completion Of The Concrete Work And Prior To The Steel Installation. This Will Allow Necessary Corrections To Be Made Before Costly Installation Labor And Equipment Arrives.





Projection Of Anchor Rods (D) Given On Anchor Rod Plan

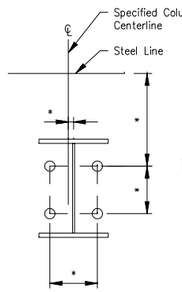


Dimensions A, B, And C Given On Anchor Rod Plan

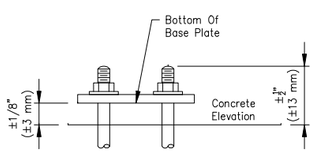
AISC Code Of Standard Practice For Steel Building And Bridges
Tolerances For Setting Anchor Rods

Anchor Rod Diameter, Inches (mm) *Horizontal Variation, Inches (mm)

$\frac{3}{4}$" and $\frac{7}{8}$" (19 And 22 mm)	$\frac{1}{4}$" (6 mm)
1", $1\frac{1}{4}$", $1\frac{1}{2}$" (25, 31, 38 mm)	$\frac{3}{8}$" (10 mm)
$1\frac{3}{4}$", 2", $2\frac{1}{2}$" (44, 50, 63 mm)	$\frac{1}{2}$" (13 mm)



ANCHOR ROD SETTING TOLERANCES



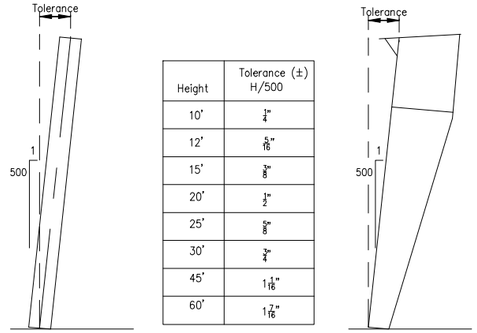
BASE PLATE AND ANCHOR ROD TOLERANCES

* Horizontal Variations Vary Depending On Anchor Rod Diameter. See Above

Erection Tolerances

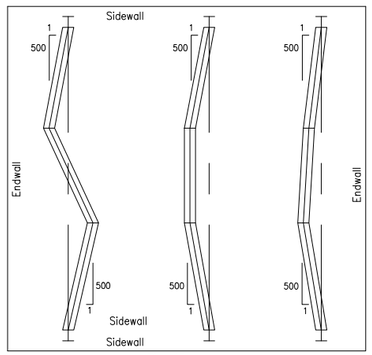
ERECTION BRACING:
It Is The Responsibility Of The Erector To Determine, Furnish And Install All Temporary Supports Such As Temporary Guys, Beams, Falsework, Cribbing, Or Other Elements Required For The Erection Operation (In Accordance With Section 7.10.3 Of ANSI/AISC 303, Code Of Standard Practice For Steel Building And Bridges).

COLUMN ALIGNMENT TOLERANCES



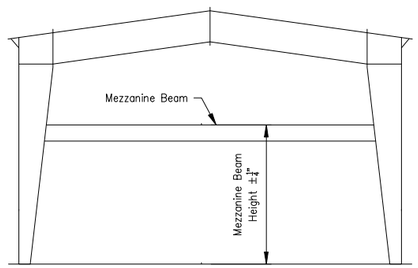
Height	Tolerance (±) H/500
10'	$\frac{1}{4}$"
12'	$\frac{5}{16}$"
15'	$\frac{3}{8}$"
20'	$\frac{1}{2}$"
25'	$\frac{5}{8}$"
30'	$\frac{3}{4}$"
45'	$1\frac{1}{16}$"
60'	$1\frac{7}{16}$"

ALIGNMENT TOLERANCE FOR MEMBERS WITH FIELD SPLICES



Plan View

MEZZANINE BEAM HEIGHT TOLERANCE



General Erection Notes

1.) All Structural Framing Members, Purlins, Girts, Clips, Flange Braces, Bolts, Bracing Systems, Roof And Wall Panels, Etc. Must Be Installed As Shown On Erection Drawings.

2.) It Is Extremely Important, Especially During Construction, That Panels At The Eaves, Rakes And Ridges Be Kept Secure.

Panel Cautions And Notes

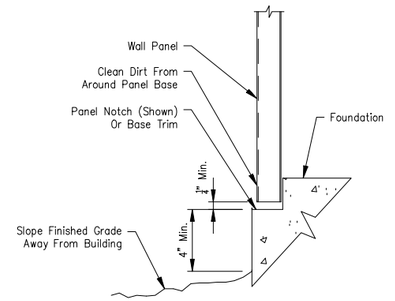
To Minimize Potential Of Corrosive Action At The Bottom Edge Of Wall Panels, The Contractor Must Assure That The Following Procedures Are Followed:

1.) The Concrete Foundation Should Be Cured For A Minimum Of Seven (7) Days Before Wall Panels Are Installed. (Uncured Concrete Is Highly Alkaline And Metal Panels Can Undergo Varying Degrees Of Corrosive Attack When In Direct Contact With The Concrete.) After The First Week Of The Curing Cycle, The Reaction Between Metallic Coatings On Steel And The Concrete Is Essentially Halted.

2.) Top Of Finish Grade At Building To Be A Minimum Of Four (4) Inches Below Bottom Of Panel.

3.) Finish Grade Is To Slope Away From Building To Ensure Proper Drainage.

4.) Upon Completion Of Finish Grading, All Dirt Is To Be Cleaned From Around Base Of Wall Panel Where It May Have Collected In Panel Notch Or On Base Trim.



Fastener Installation

Correct Fastener Installation Is One Of The Most Critical Steps When Installing Roof/Wall Panels. Drive The Fastener In Until It Is Tight And The Washer Is Firmly Seated. Do Not Overdrive Fasteners.
A Slight Extrusion Of Neoprene Around The Washer Is A Good Visual Tightness Check. Always Use The Proper Tool To Install Fasteners. A Fastener Driver (Screw Gun) With A RPM Of 1700-2000 Should Be Used For Self-Drilling Screws. A 500-600 RPM Fastener Driver Should Be Used For Self-Tapping Screws. Discard Worn Sockets, These Can Cause The Fastener To Wobble During Installation.

Note: Always Remove Metal Filings From Surface Of Panels At The End Of Each Work Period. Rusting Filings Can Destroy The Paint Finish And Void Any Warranty.

Correct Compression Of Sealing Washer | Too Tight Compression Of Sealing Washer | Too Loose Compression Of Sealing Washer

Tape And Tube Sealant

Proper Tape And Tube Sealant Application Is Critical To The Weather Tightness Of A Building. Tape Sealant Should Not Be Stretched When Installed. Apply Only To Clean, Dry Surfaces. Keep Only Enough Sealants On The Roof That Can Be Installed In A Day. During Warm Weather, Store Sealants In A Cool Dry Place. During Cold Weather (below 60°) Sealants Must Be Kept Warm (60°-90°) Until Application. After Tape Sealant Has Been Applied, Keep Protective Paper In Place Until Panel Is Ready To Be Installed.

Important Note

All Details, Recommendations And Suggestions Contained In This Erection Guide Of This Drawings Set Are For General Guidelines Only, And Not Meant To Be All-inclusive. Industry Accepted Installation Practices With Regard To All Areas Not Specifically Discussed In This Section Should Be Followed. Only Experienced, Knowledgeable Installers Familiar With Accepted Practices Should Be Used To Assure A Quality Project.

It Is Emphasized That The Manufacturer Is Only A Manufacturer Of Metal Building Components And Is Not Engaged In The Installation Of Its Products. Opinions Expressed By The Manufacturer About Installation Practices Noted In The Erection Guide Are Intended To Represent Only A Guide. Both The Quality And Safety Of Installation And The Ultimate Customer Satisfaction With The Completed Building Are Determined By The Experience, Expertise, And Skills Of The Installation Crews, As Well As The Equipment Available For Handling The Materials. Actual Installation Operations, Techniques And Site Conditions Are Beyond The Manufacturers Control.

Revision	Date	Description	By	Ck'd

Cornerstone Building Brands
13105 Northwest Freeway, Suite 500
Houston, TX 77040
cornerstonebuildingbrands.com

FORTIFY BUILDING SOLUTIONS

Project Name & Location:
MARA BROWN
1300 VALLEY DR
OGDEN UT 84401-0808

MUELLER METAL BUILDINGS, ROOFING & WALLS

Customer:
CITY OF OGDEN-212366
2549 WASHINGTON BLVD
OGDEN UT 84401
MARA BROWN

Drawing Status:
☐ Issued For Approval (Not For Construction)
☐ Issued For Permit
☒ Issued For Construction

Scale: NOT TO SCALE
Drawn by: AXD 12/9/25
Checked by: MC 12/15/25
Project Engineer:
Job Number: 20-B-91454
Sheet Number: R2 of 12

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KAUSHIKKUMAR J. PATEL, P.E.
UTAH P.E. 12592792-2202

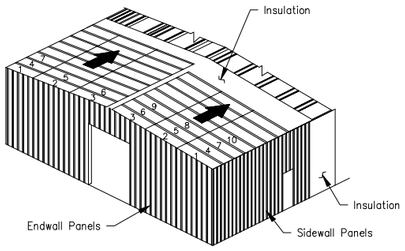
Jan 02, 2026

This item has been electronically signed and sealed by Kaushikkumar J. Patel, P.E. on the date and/or time stamp shown using a digital signature. Printed copies of this document are not considered signed and sealed and the signature must be verified by a 3rd Party Certificate Authority on any electronic copy.

PROFESSIONAL ENGINEER
No. 12592792
KAUSHIKKUMAR J. PATEL
STATE OF UTAH

PBR Roof Panels

For PBR Roofs With Ridge Panels, It Is Recommended That Both Sides Of The Ridge Be Sheeted Simultaneously. This Will Keep The Insulation Covered For The Maximum Amount Of Time And The Panel Ribs Can Be Kept In Proper Alignment For The Ridge Panel. This Is Critical On The PBR Panels So That The Ridge Caps Can Be Properly Installed. Check For Proper Coverage As The Sheeting Progresses.



Install The First Run Of Roof Panels Across The Building From Eave To Eave Or Eave To Ridge. To Allow Proper Installation Of The Rake Trim, The Starting Location For The First Panel Must Be As Shown In The Rake Details Included With The Erection Drawings. When The First Run Is Properly Located And Aligned With The Correct Endlaps And Eave Overhangs, Fasten To Purlins. Roof Panels Should Be Installed So That The Sidelap Is In A Direction Away From Prevailing Wind. Refer To Appropriate Lap Details Included With The Erection Drawings.

Install Remaining Roof Insulation And Panels. To Avoid Accumulative Error Due To Panel Coverage Gain Or Loss, Properly Align Each Panel Before It Is Fastened. Occasional Checks Should Be Made To Ensure That Correct Panel Coverage Is Maintained. Special Attention Should Be Given To Fastener, Sealant and Closure Requirements. Refer To Details Included With The Erection Drawings.

At Finishing End Of Roof, The Last panels May Require Field Modification For Installation Of Rake Trim. Refer To Rake Details Included With The Erection Drawings. DO NOT BACK LAP THROUGH FASTENED ROOF PANELS.

NOTE: Roof Types And Installation Requirements Will Vary. Refer To The Appropriate Details For Specific Panel Used.

IMPORTANT: Loose Fasteners, Blind Rivets, Drill shavings, Etc.. Must Be Removed From The Roof To Guard Against Corrosion.

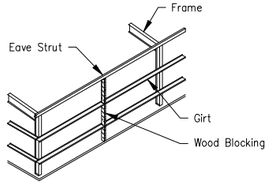
Wall Panels

Proper Horizontal And Vertical Alignment Of Supporting Structure (Girts Or Other Framing) Is The Responsibility Of The Installer. Failure To Align The Secondary members Properly Prior To Wall Installation Can Have A Direct Impact On The Final Appearance And Performance Of The Installed Wall System For Which The Metal Building Manufacturer Is Not Responsible.

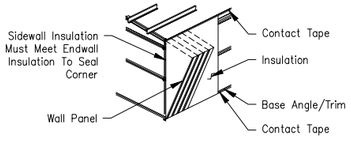
Before Installing Wall Panels, The Girts Must Be Aligned To A Level Position So That There Is No Visible Sag. This Should Be Done Directly Ahead of Panel Installation.

Girt Leveling May Be Accomplished By Standing A Section Of Gable Angle Vertically Against The Outside Girt Flanges At Approximate Mid-bay Location. When Girts Are Level, Attach The Girt Flanges To The Angle With Vise Grip Pliers Or Temporary Screws. Wood Blocking Cut To Fit The Spaces May Also Be Used For Alignment.

Note:
Temporary Girt Blocking Is Not Recommended On Concealed Fastener Panels. The Removal Of The Blocks After Panel Installation Can Cause Oil Canning.



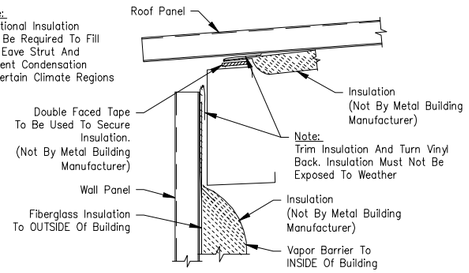
Note:
Wall Panel Type And Installation Details Will Vary. Refer To The Erection Drawings And Details For The Specific Panel Used For Your Building.



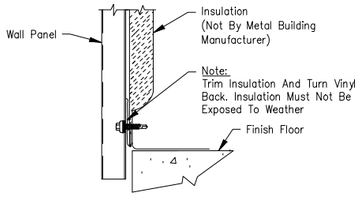
If Walls Are To Be Insulated With Blanket Insulation Over Girt Girt Flanges, Base And Eave, Place A Continuous Run Of Contact Tape Along The Eave Strut And Base Member.

Note:
At The Base, Cut Off The Insulation A Minimum Of ½" Above The Bottom Of The Wall Panel. This Will Prevent The Insulation From Hanging Below The Wall Panel And Wicking Moisture.

Note:
Additional Insulation May Be Required To Fill The Eave Strut And Prevent Condensation In Certain Climate Regions



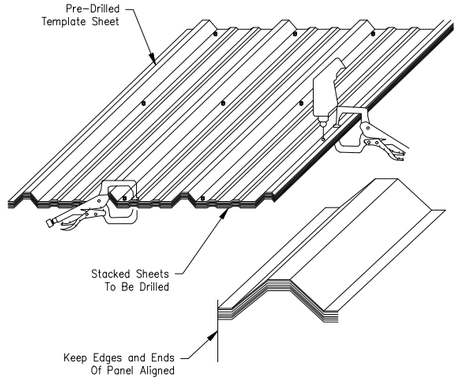
Eave Detail
(See Erection Drawings)



Base Detail
(See Erection Drawings)

Sidewall Panels Should Be Installed So That The Panel Sidelap Is In A Direction Away From The Prevailing Wind. Refer To Appropriate Lap Detail Included With Erection Drawings.)

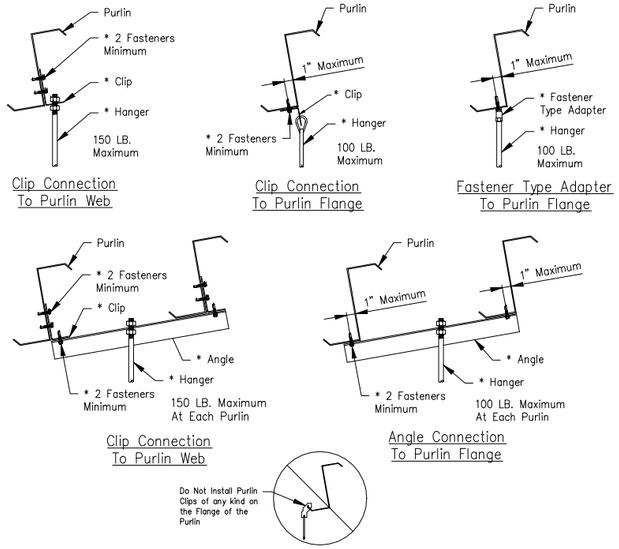
Note:
Check Periodically To Ensure That All Panels Are Aligned And Plumb.



Screw Alignment Panel
(Through Fastened Panel Only)

Note:
After Drilling Panels, It Is Important To Clean Metal Filings Off All Panel Surfaces, Including Between Panels That Are Not Installed That Day, To Avoid Rust Stains.

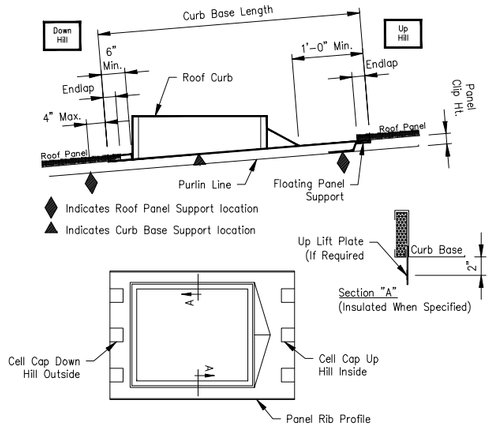
Suggested Method Of Purlin Attachment For Building Accessories



* Denotes Material Not Provided By Metal Building Manufacturer.

The Total Hanger Load Shall Not Exceed The Design Collateral Load For The Building. Example:
5'-0 (Purlin Spacing) X 5'-0 (Hanger Spacing) X 6 PSF (collateral Load) = 150 Lbs.
See Cover Sheet For Design Collateral Load For This Building.
Note: If The Building Is Designed For 0 PSF Collateral Load, Then Adding Any Suspended System (i.e. Duct Work, Piping, Lights, Ceilings, Etc.) Will Correspondingly Reduce The Design Live Load.

Roof Curbs When Not Supplied By Building Manufacturer



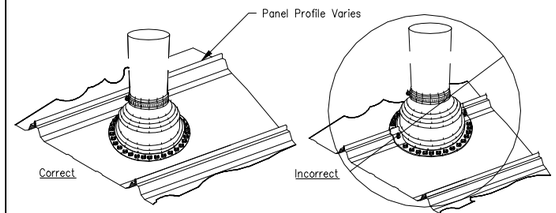
The Curb Details Shown Illustrate The Building Manufacturers Recommended Curb Style And Installation Method. It Is The Erector/Installer's Responsibility To Provide The Proper Curb Style And Install Them In Accordance With The Procedures Established By These Details. Failure By The Erector/Installer To Follow These Recommendations May Result In The Curbs Damaging The Roof System Or Excluded From Warranties.

All Roof Curbs To Be:
1. .080 Aluminum Or 18 Ga. Stainless Steel (No Galvalume© Or Galvanized).
2. Panel Rib To Panel Rib (No Flat Skirt Or Lay-Over Curbs).
3. Installed With Down Hill End Over Panel And Up Hill End Under Panel Application For Water Flow At Panel Splice.
4. Up Lift Prevention For Clip Applied Roof Systems Are Required If:
   a. Wind Loads Exceed 110 MPH.
   b. Curb Base Crosses A Purlin.
5. Supported on (4) Sides By Primary Or Secondary Framing.
6. Maximum Single Curb Weight Recommended Is 1500 Lbs.

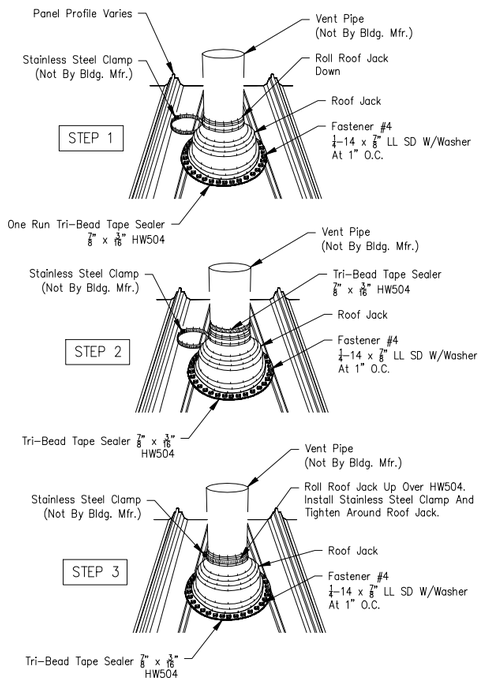
Roof Jack Installation when Not Supplied By Building Manufacturer

General Installation Notes

- Do Not Use Galvanized Roof Jacks, Lead Hats, Or Other Residential Grade Roof Jacks. These Roof Jacks Do Not Have 20 Year Service Life And In Case Of Lead Hats Will Cause Galvanic Corrosion Of The Roof Panel.
- Use EPDM Rubber Roof Jacks With An Integral Aluminum Band Bonded Into The Perimeter Of The Base. EPDM Roof Jacks Have A Temperature Range From −65°F To 212°F. Use Silicone Roof Jacks For High Temperatures. Silicone Roof Jacks Have A Temperature Range Of −100°F To 437°F.
- Retrofit Roof Jacks Are Available For Applications In Which The Top Of The Pipe Is Inaccessible, Eliminating The Possibility Of Sliding The Roof Jack Over The Top Of The Pipe.
- Do Not Use Tube Sealant To Seal The Roof Jack To The Roof Panels. Use Roll Tape Sealer Between The Roof Jack And The Roof Panel And Attach The Roof Jack To The Roof Panel With Fastener #4 ¼ – 14 X ⅞" LL SD W/washer At 1" O.C. Around The Base Of The Roof Jack. See Table Below For Quantities.
- Trim The Top Of The Roof Jack To Fit Over The Pipe, Roll Down The Roof Jack Over The Pipe And Apply Tape Sealer For The Perimeter Of The Roof Jack Base Between The Roof Jack And The Roof Panel. Apply Tape Sealer Around The Pipe And Install A Stainless Steel Clamp (Not By Bldg. Mfr.) Over The Top Of The Roof Jack And Firmly Tighten To Form A Secure Compression Seal.
- If The Pipe Diameter Is So Large To Block The Flow Of Water Down The Roof Panel, A Flat Base Roof Curb Must Be Installed Into The Roof And The Roof Jack Will Be Sealed To The Curb. A Two Piece Curb May Be Required When The Top Of The Pipe Is Inaccessible.
- In Northern Climates, The Pipe Penetration Should Be Protected From Moving Ice Or Snow With A Snow Retention System Immediately Up Slope From The Pipe.



Install Pipe In Center To Allow Base Of Roof Jack To Lay Flat on Panel. Cannot Encompass More Than 75% Of Panel.



Revision	Date	Description	By	Ck'd

Cornerstone Building Brands
13105 Northwest Freeway, Suite 500
Houston, TX 77040
cornerstonebuildingbrands.com

FORTIFY BUILDING SOLUTIONS

MUELLER METAL BUILDINGS, ROOFING & MORE

Project Name & Location:
MARA BROWN
1300 VALLEY DR
OGDEN UT 84401-0808

Customer:
CITY OF OGDEN-212366
2549 WASHINGTON BLVD
OGDEN UT 84401
MARA BROWN

Drawing Status:
☐ Issued For Approval (Not For Construction)
☐ Issued For Permit
☒ Issued For Construction

Scale:	NOT TO SCALE
Drawn by:	AXD 12/9/25
Checked by:	MC 12/15/25
Project Engineer:	
Job Number:	20-B-91454
Sheet Number:	R3 of 12

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KAUSHIKKUMAR J. PATEL, P.E.
UTAH P.E. 12592792-2202

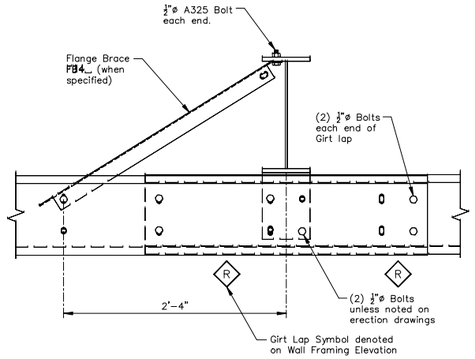
Jan 02, 2026

This item has been electronically signed and sealed by Kaushikkumar J. Patel, P.E. on the date and/or time stamp shown using a digital signature. Printed copies of this document are not considered signed and sealed and the signature must be verified by a 3rd Party Certificate Authority on any electronic copy.

PROFESSIONAL ENGINEER
No. 12592792
KAUSHIKKUMAR J. PATEL
STATE OF UTAH

By-Pass Girt to Column - Standard Connection - Flange Brace FB4_

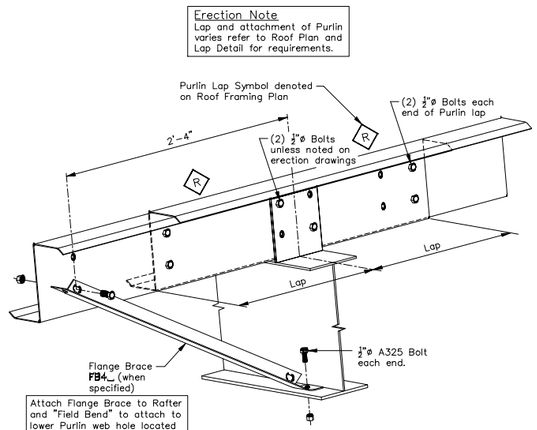
Page CF01124 | Date May '19 | Rev 02



Erection Note
Flange Braces may be required one or both sides of Column.
For requirements, and locations at Main Frame and Rigid Frame in Endwall refer to "Cross Section".
For requirements, and locations at Bearing Frame Endwall refer to "Elevation Plan".

Purlin to Rafter - Standard Connection - Flange Brace FB4_

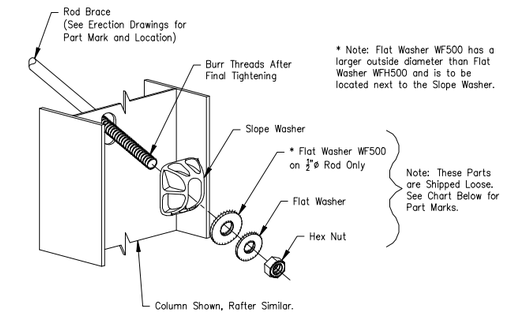
Page CF02036 | Date May '19 | Rev 01

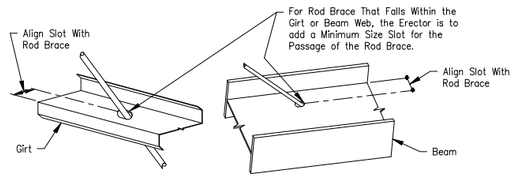


Erection Note
Flange Braces may be required one or both sides of Rafter.
For requirements, and locations at Main Frame and Rigid Frame in Endwall refer to "Cross Section".
For requirements, and locations at Bearing Frame Endwall refer to "Roof Plan".

Rod Brace Attachment at Web

Page PF04101 | Date Nov '25 | Rev 04

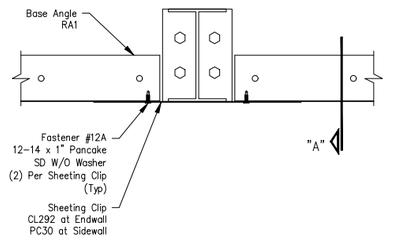


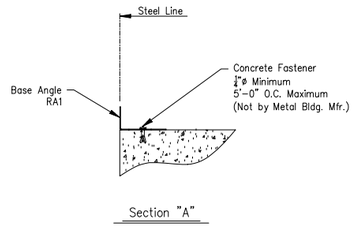


Part Marks for Rod Brace Assembly					
Rod Brace Diameter	Rod Brace	Slope Washer	* Flat Washer	Flat Washer	Hex Nut
½"ø	WR08____	WS110	* WF500	WFH500	HSN500
⅝"ø	WR10____	WS110	None	WFH625	HSN625
¾"ø	WR12____	WS120	None	WFH750	HSN750
⅞"ø	WR14____	WS120	None	WFH875	HSN875
1"ø	WR16____	WS130	None	WFH1000	HSN1000

Column Base Angle Detail With Flush Column

Page BF01005 | Date Apr '16 | Rev 00



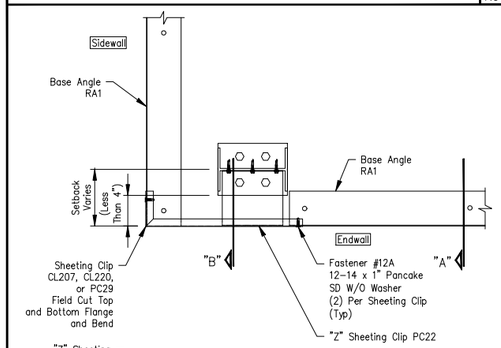


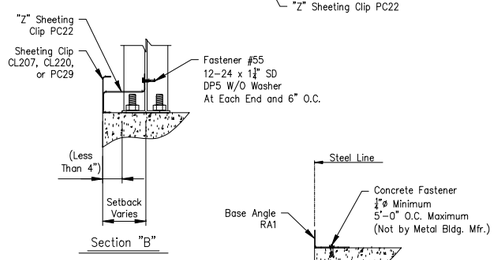
Section "A"

Base framing is supplied in standard lengths. Modifications such as cutting at columns or openings, are to be handled in the field.

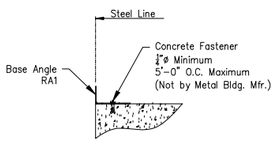
Corner Base Angle Detail With By-Pass Sidewall Column Setback Less Than 4"

Page BF01013 | Date Nov '17 | Rev 02





Section "B"

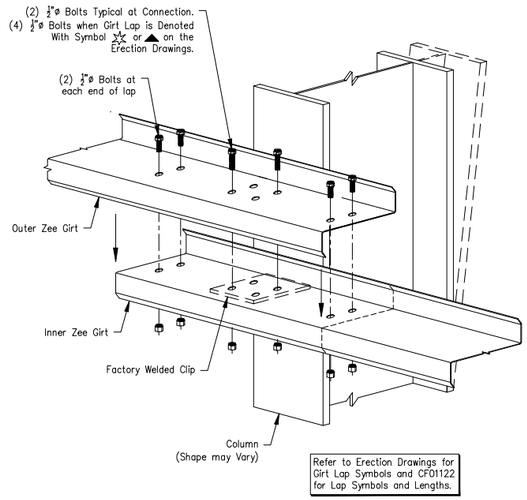


Section "A"

Base framing is supplied in standard lengths. Modifications such as cutting at columns or openings, are to be handled in the field.

Girt Connection At Bypass Column

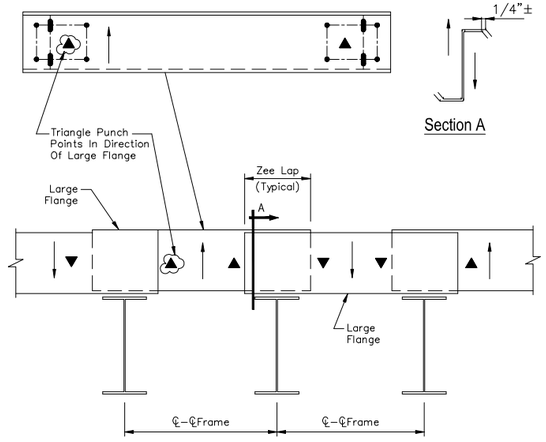
Page CF01120 | Date May '23 | Rev 03



All Bolts to be ¾"ø Unless Noted.
For Required Length Refer to Grip Table on Erection Drawings.

Bypass Zee Installation

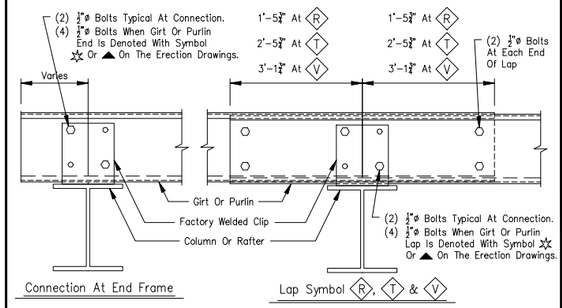
Page CF01121 | Date Apr '19 | Rev 01



The large leg of the Zee must be alternated from top to bottom in order to nest the member correctly. A triangle has been added to the end of the Zee near the connection holes, that will point to the large leg of the member.

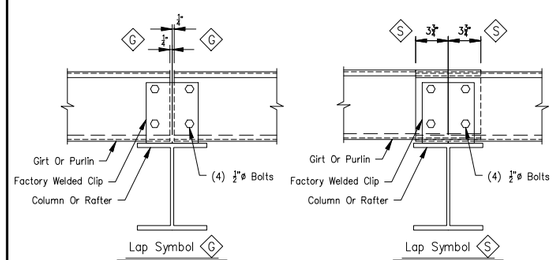
Girt And Purlin Connection At Bypass Column And Rafter

Page CF01122 | Date May '23 | Rev 04



Connection At End Frame

Lap Symbol R, T & V



Lap Symbol G

Lap Symbol S

ZEE SECTION LAP TABLE			
SYMBOL	LAP LENGTH	SYMBOL	LAP LENGTH
G	-0'-0½"	T	2'-5¾"
S	0'-3½"	V	3'-1¾"
R	1'-5¾"		

Refer to Erection Drawings for Lap Symbol at Girt and Purlin Connection.

All Bolts to be ¾"ø Unless Noted.
For Required Length Refer to Grip Table on Erection Drawings.

Jan 02, 2026

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PROFESSIONAL ENGINEER
No. 12592792
KAUSHIKKUMAR J. PATEL
STATE OF UTAH

Revision	Date	Description	By	Ck'd

Cornerstone Building Brands
13105 Northwest Freeway, Suite 500
Houston, TX 77040
cornerstonebuildingbrands.com

FORTIFY BUILDING SOLUTIONS

MUELLER METAL BUILDINGS, ROOFING & MORE

Project Name & Location:
MARA BROWN
1300 VALLEY DR
OGDEN UT 84401-0808

Customer:
CITY OF OGDEN-212366
2549 WASHINGTON BLVD
OGDEN UT 84401
MARA BROWN

Drawing Status:
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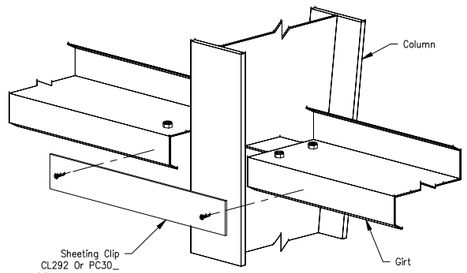
Scale: NOT TO SCALE
Drawn by: AXD 12/9/25
Checked by: MC 12/15/25
Project Engineer:
Job Number: 20-B-91454
Sheet Number: R4 of 12

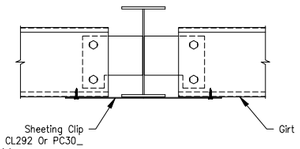
The engineer whose seal appears hereon is employed by or is contracted to provide engineering services for the manufacturer, Cornerstone Building Brands or one of its affiliates, for the materials described herein. Said seal or certification is limited to the products designed and manufactured by manufacturer only. The undersigned engineer is not the overall engineer of record for this project.

KAUSHIKKUMAR J. PATEL, P.E.
UTAH P.E. 12592792-2202

Girts At Column
Flush Sidewall Or Endwall Girts

Page CF01123 | Date Apr '19 | Rev 02

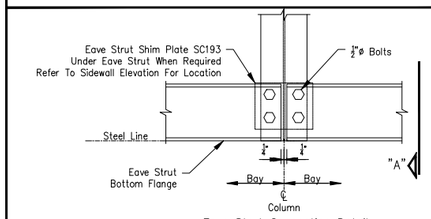




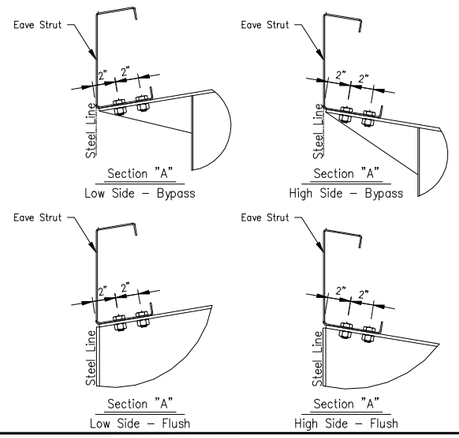
Notes:
Zee Girt Shown
Cee Girt Similar
All Bolts To Be ¾"ø Unless Noted
For Required Length Refer To Grip
Table On Erection Drawings.

Eave Strut Connection
Flush / Bypass Column - Interior Bay Column - Roof Slope 4 ½:12 Or Less

Page CF02030 | Date Sep '17 | Rev 02



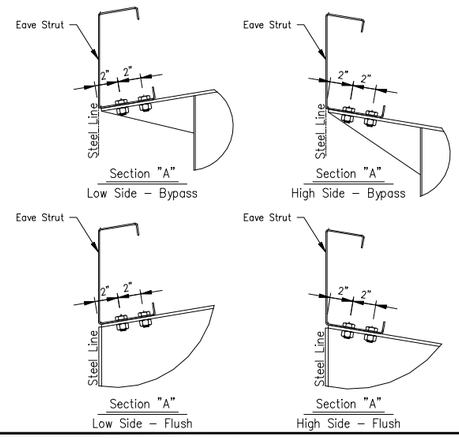
Eave Strut Connection Detail
Flush / Bypass Column – Interior Bay Column



Eave Strut Connection
Flush / Bypass Column - End Bay Column - Roof Slope 4 ½:12 Or Less

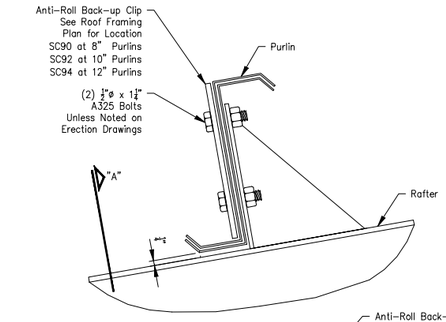
Page CF02033 | Date Sep '17 | Rev 04

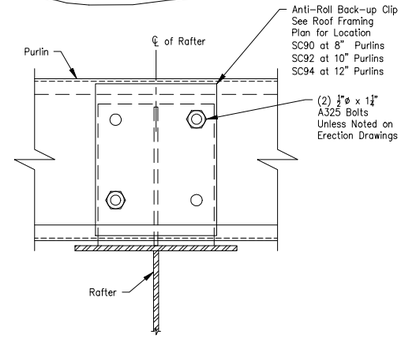
Eave Strut Connection Detail
Flush / Bypass Column – End Bay Column



Purlin with Anti-Roll Back-up Clip
at Rafter

Page CF02035 | Date Dec '14 | Rev 04

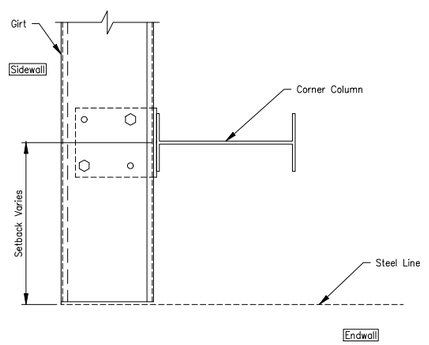




Section A

8" Sidewall Girts and Non-Aligned Girts or Open Endwall
at Bypass Corner Column with Variable Frame Setback

Page EF03503 | Date Jan '16 | Rev 01

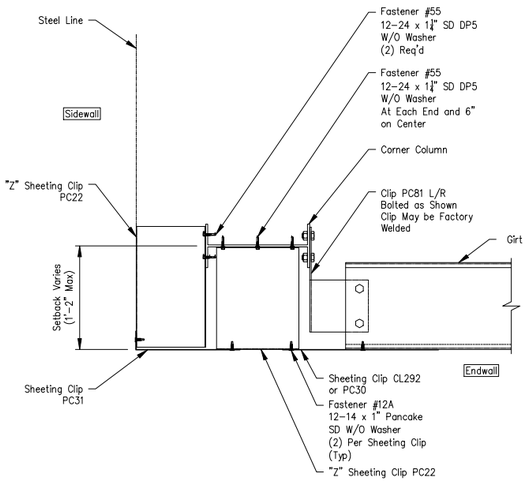


Note:
Zee Girt Shown
Cee Girt Similar

All Bolts To Be ¾"ø Unless Noted.
For Required Length Refer To Grip
Table On Erection Drawings.

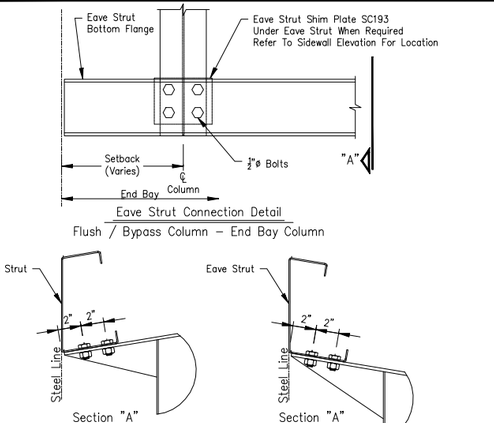
Bypass Sidewall and Endwall Girts - No Sidewall Girt - Variable Frame
Setback - Endwall Girt Attaches to Inner Column Flange

Page EF03517 | Date Feb '17 | Rev 00



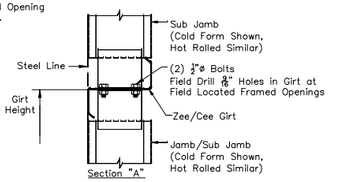
Welded Clips - Framed Opening Connections - Cold Form and Hot Rolled
Cee - Vertical Lift Hardware

Page AC01221 | Date May '19 | Rev 02



Three Sided Framed Opening
with Vertical Lift Hardware

** Girt within opening is
provided when Framed Opening
is to be paneled over.



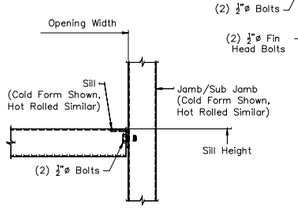
Section "A"

Welded Clips - Framed Opening Connections - Cold Form and Hot Rolled
Base, Girt, Header, and Sill to Jamb

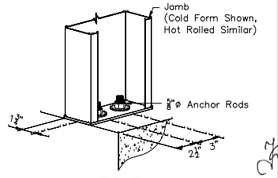
Page AC01223 | Date May '19 | Rev 02

Header to Jamb

Girt to Jamb



Sill to Jamb



Jamb to Finish Floor

Jan 02, 2026
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No. 12592792
KAUSHIKKUMAR J. PATEL
STATE OF UTAH

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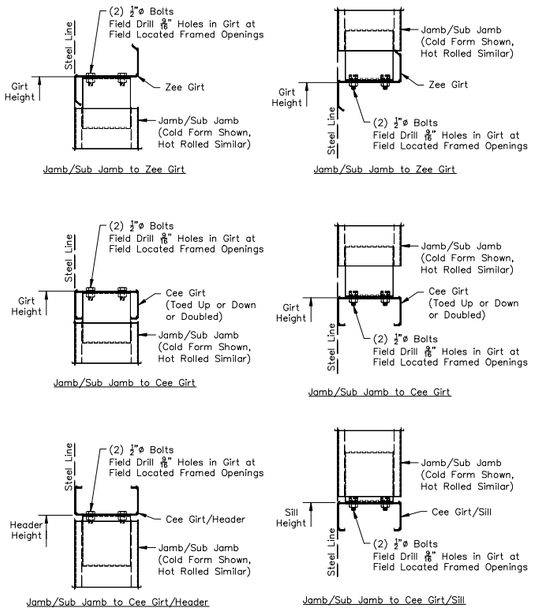
Checked by: MC 12/15/25
Project Engineer:
Job Number: 20-B-91454
Sheet Number: R5 of 12

KAUSHIKKUMAR J. PATEL, P.E.
UTAH P.E. 12592792-2202

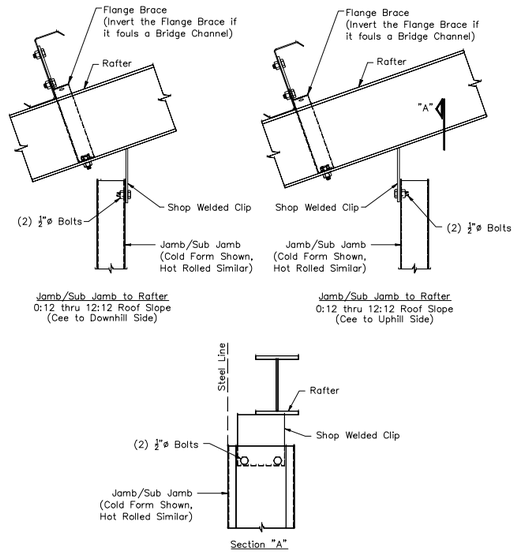
Welded Clips - Framed Opening Connections - Cold Form and Hot Rolled Jamb/Sub Jamb to Zee/Cee Girt or Header/Sill

Page AC01224 | Date May '19 | Rev 01



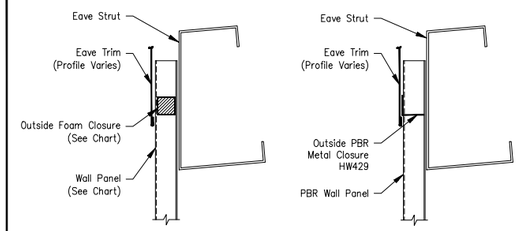
Welded Clips - Framed Opening Connections - Cold Form and Hot Rolled Cee - Jamb/Sub Jamb to Rafter - Factory and Field Located

Page AC01227 | Date May '19 | Rev 02



Single Skin Wall Panel Outside Closure Requirements at Eave

Page GD06002 | Date Jun '23 | Rev 03

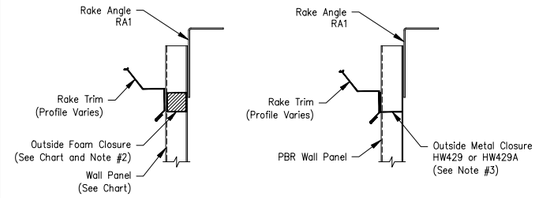


Note:
Foam Closures Are Required When Job Requires Air Infiltration Or Sealed Wall Requirements, See GD16002.

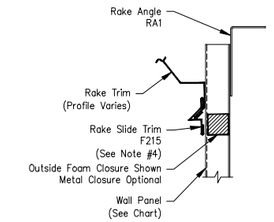
Wall Panel	Foam Closure
PBR	HW456
AVP	HW465
PBU	HW460
NuWall	HW424
PBC	HW462
PBD	HW463
ShadowRib	HW412
Designer Series (Fluted Only)	HW4037
RBR (Reverse Rolled PBR)	HW455
RBU (Reverse Rolled PBU)	HW459
7.2	HW461

Single Skin Wall Panel Outside Closure Requirements at Rake

Page GD06003 | Date Jun '23 | Rev 03



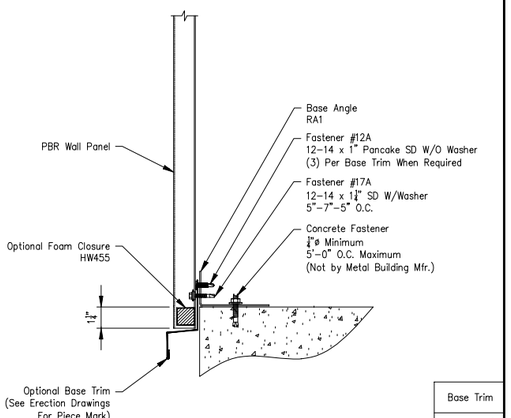
Notes:
1. Outside Panel Closures are Required at all Sheeted Endwalls.
2. PBR Wall Panel Outside Foam Closures HW456 Required for Roof Slope 4:12 or Less and HW422 for Roof Slope Greater Than 4:12. Field Form/Notch HW422 to Panel Profile.
3. PBR Wall Panel Outside Metal Closure HW429 for Roof Slope 0 :12 Thru 1½ :12 and HW429A for Roof Slope Greater Than 3½ :12 Thru 4½ :12.
4. Rake Slide Trim Required for All Standing Seam Roofs and at Screw Down Roof Runs Greater Than 100'-0"
5. Foam Closures are Required when Job Requires Air Infiltration or Sealed Wall Requirements, See GD16002.



Wall Panel	Foam Closure
PBR	HW456/HW422
AVP	HW465
PBU	HW460
NuWall	HW424
PBC	HW462
PBD	HW463
ShadowRib	HW412
Designer Series (Fluted Only)	HW4037
RBR (Reverse Rolled PBR)	HW455
RBU (Reverse Rolled PBU)	HW459
7.2	HW461

PBR Wall Panel
Base Angle Without Panel Recess

Page PW02101 | Date Apr '18 | Rev 02

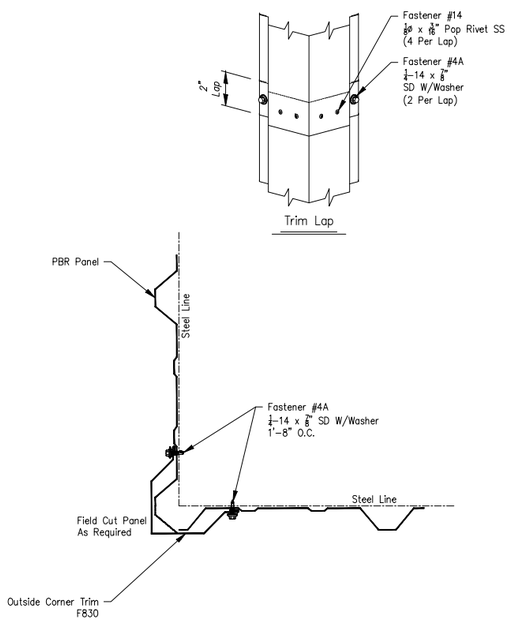


Base Trim
F406
F407
F408

Wall panel must be held off of base trim a minimum of ¼" to prevent bottom of wall panel from rusting.

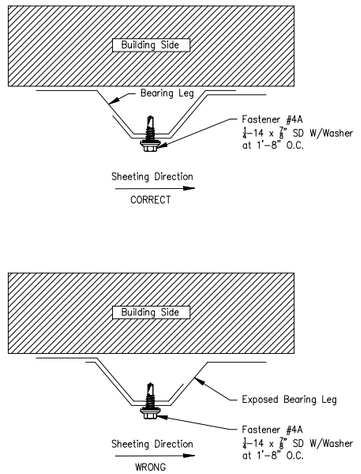
PBR Wall Panel
Outside Corner - On Module

Page PW03001 | Date Apr '19 | Rev 08



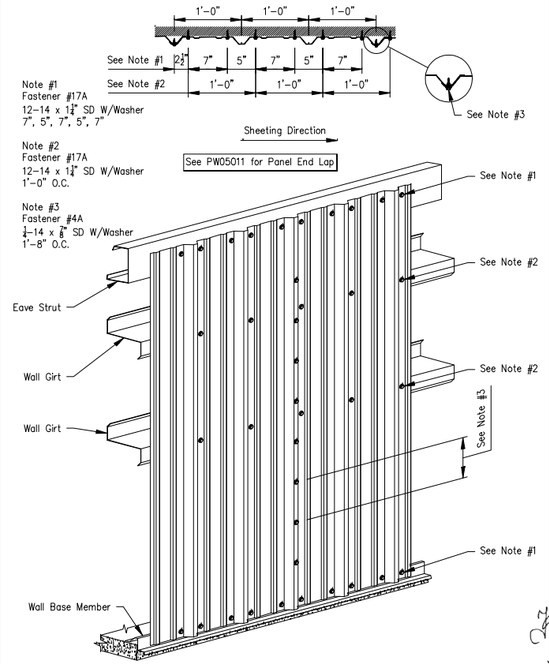
PBR Wall Panel
Panel Side Lap

Page PW05002 | Date Mar '19 | Rev 03



PBR Wall Panel
Fastener Location

Page PW05003 | Date Aug '15 | Rev 04



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2549 WASHINGTON BLVD
OGDEN UT 84401
MARA BROWN

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1300 VALLEY DR
OGDEN UT 84401-0808

Drawing Status:
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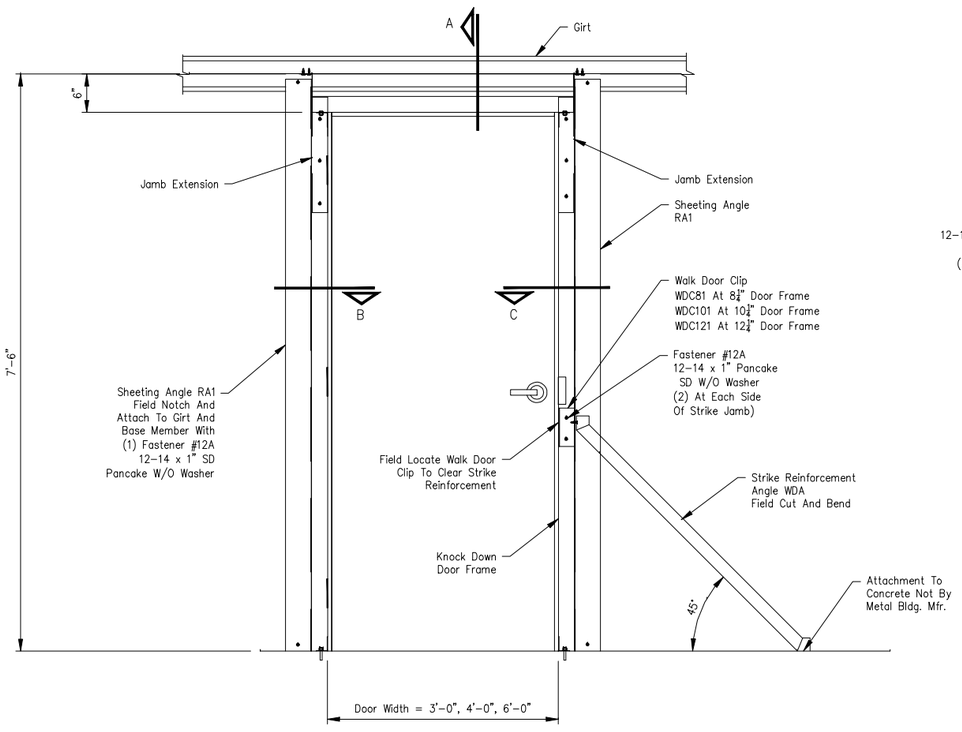
Drawn by: AXD 12/9/25
Checked by: MC 12/15/25
Project Engineer:
Job Number: 20-B-91454
Sheet Number: R6 of 12

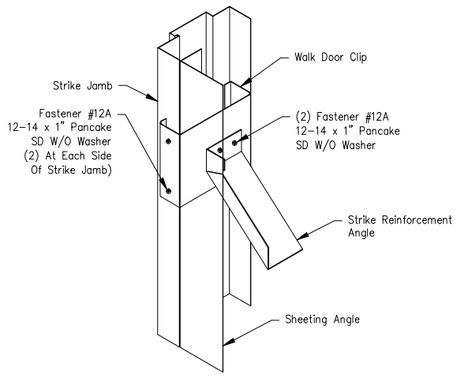
KAUSHIKKUMAR J. PATEL, P.E.
UTAH P.E. 12592792-2202

Jan 02, 2026

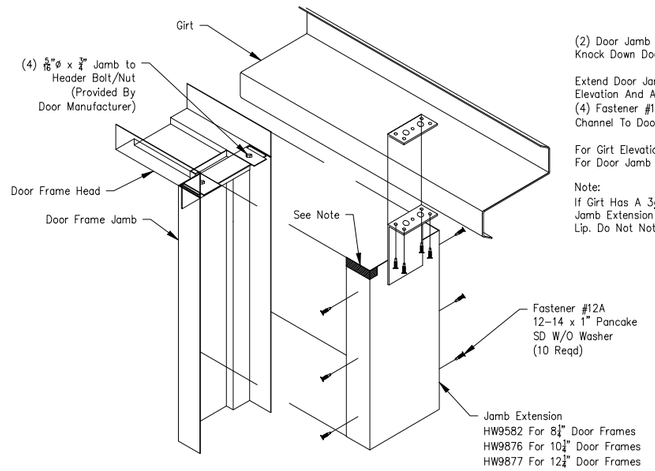
PROFESSIONAL ENGINEER
No. 12592792
KAUSHIKKUMAR J. PATEL
STATE OF UTAH



Door Elevation



Walk Door Clip/Strike Reinforcement Angle Isometric



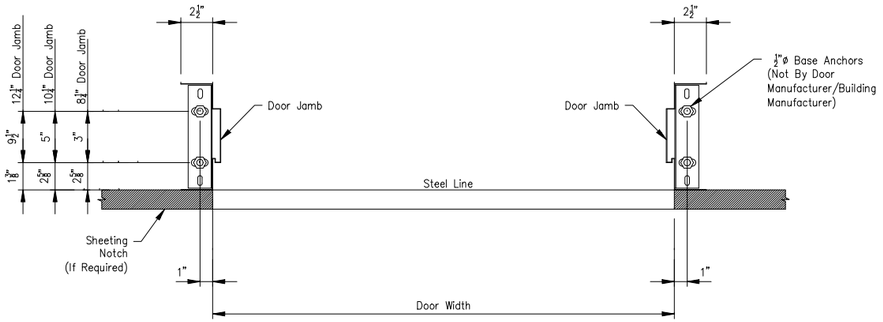
(2) Door Jamb Extensions Are Required For All Knock Down Doors.

Extend Door Jamb Extension To The 7'-6" Girt Elevation And Attach To The Web Of The Girt With (4) Fastener #12A, Attach Door Jamb Extension Channel To Door Jamb With (6) Fastener #12A.

For Girt Elevations Above 7'-6" Refer To AC05132 For Door Jamb Extension Requirements.

Note:
If Girt Has A 3½" Flange, Field Notch Jamb Extension Channel To Clear Girt Lip. Do Not Notch Girt Lip.

Door Jamb Extension Isometric

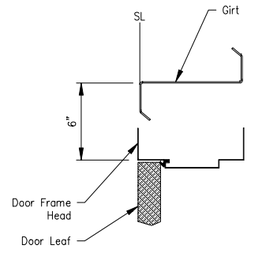


The Adequacy Of The ½"ø Base Anchor Is Not The Responsibility Of The Building Manufacturer. The Adequacy Of These Base Anchors Should Be Determined By A Qualified Foundation Engineer.

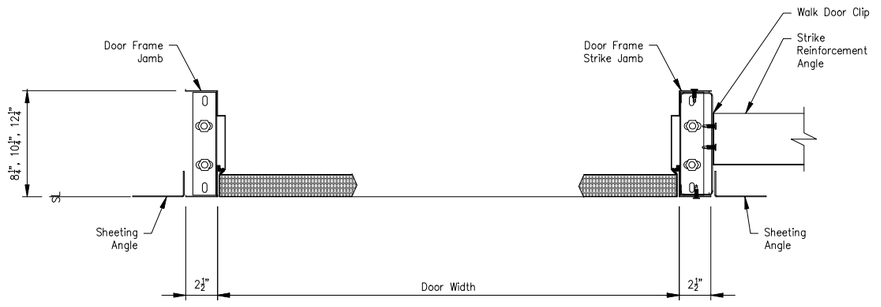
Verify Door Jamb Base Clip Dimensions With Patterns Shown Prior To Placement Of Door Anchors And Adjust Patterns If Needed.

Note: 12¼" Frames May Not Have Kerf Door Frame Feature Depending On Door Manufacturer.

Knock Down Door Anchor Placement



Section A



Section B

Section C

Revision	Date	Description	By	Ck'd

Cornerstone Building Brands
13105 Northwest Freeway, Suite 500
Houston, TX 77040
cornerstonebuildingbrands.com

Project Name & Location:
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Project Engineer:	
Job Number:	20-B-91454
Sheet Number:	R7 of 12

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KAUSHIKKUMAR J. PATEL, P.E.
UTAH P.E. 12592792-2202

Jan 02, 2026

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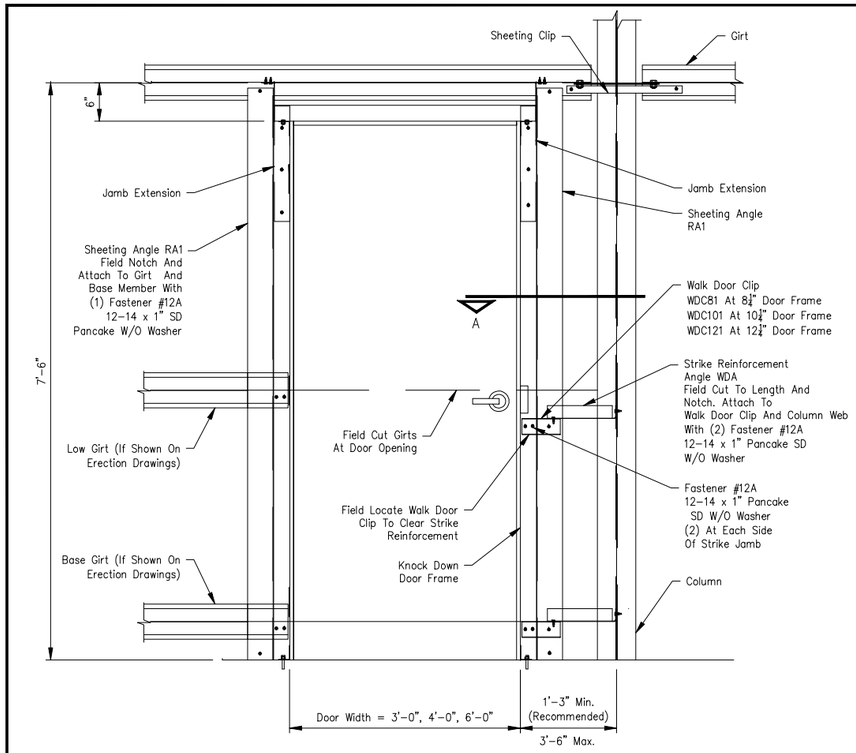
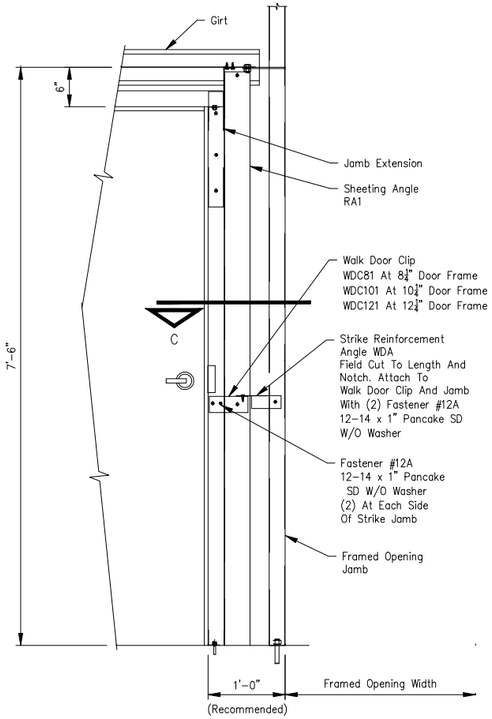
PROFESSIONAL ENGINEER
No. 12592792
KAUSHIKKUMAR J. PATEL
STATE OF UTAH

Knock Down Door - Girt At 7'-6" Without Low Girt

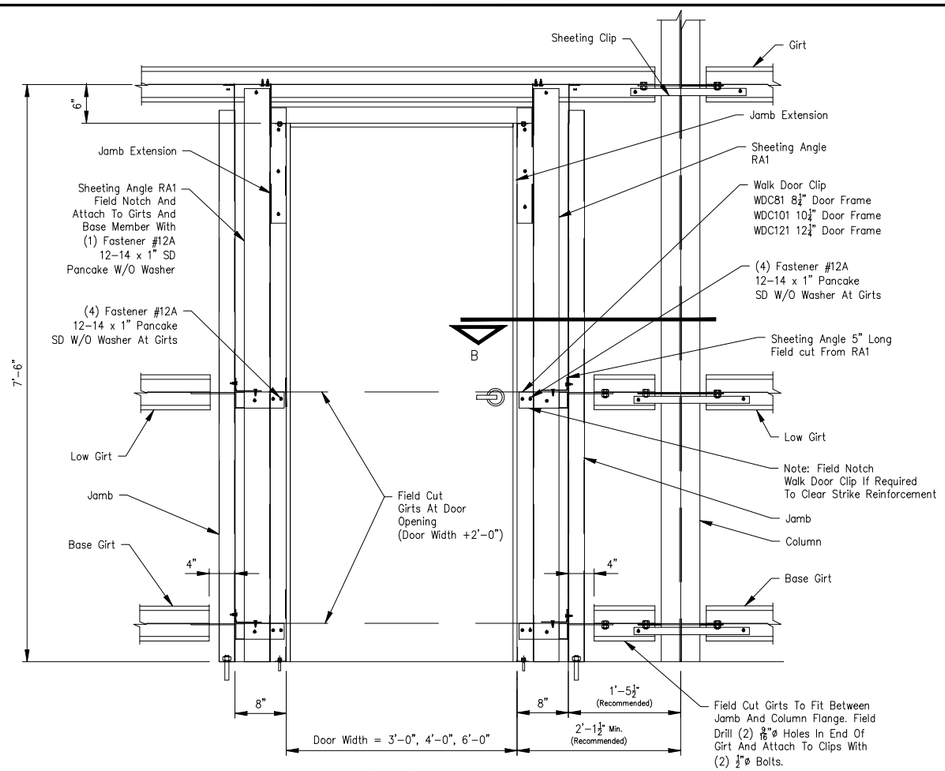
Page	
AC05200	
Date	Rev
Jul '25	01



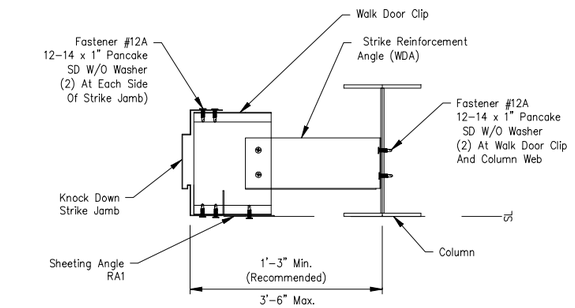
Door Elevation Without Jambs



Door Elevation Without Jambs At Framed Opening Jamb

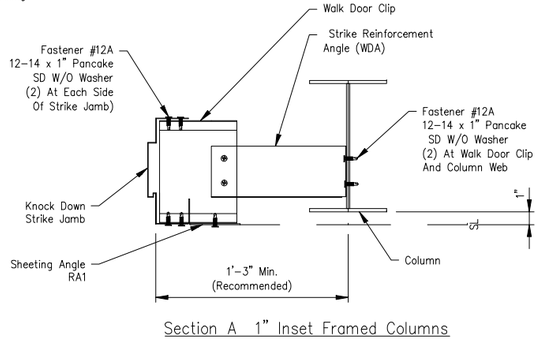


Door Elevation With Jambs

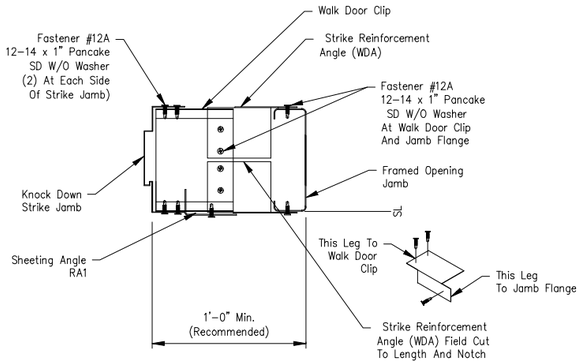


Section A Flush Framed Columns

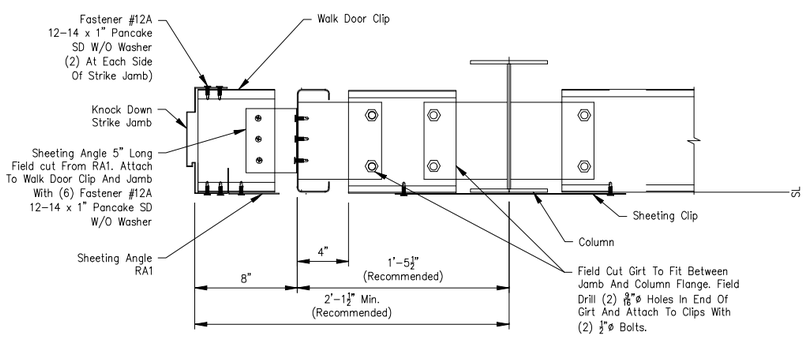
Note:
Fasteners Attaching To Column Webs May Require Pre Drilling



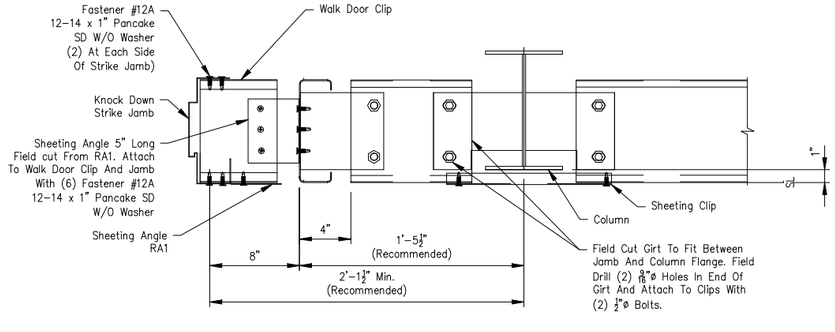
Section A 1" Inset Framed Columns



Section C Minimum Side Clearance At A Framed Opening Jamb



Section B Flush Framed Columns



Section B 1" Inset Framed Columns

Knock Down Doors - Side Clearances

Page	
AC05209	
Date	Rev
Jul '25	02

Ck'd	By	Description	Date	Revision

Cornerstone Building Brands
13105 Northwest Freeway, Suite 500
Houston, TX 77040
cornerstonebuildingbrands.com

FORTIFY BUILDING SOLUTIONS

MUELLER METAL BUILDINGS, ROOFING & MORE

Project Name & Location:
MARA BROWN
1300 VALLEY DR
OGDEN UT 84401-0808

Customer:
CITY OF OGDEN-212366
2549 WASHINGTON BLVD
OGDEN UT 84401
MARA BROWN

Drawing Status:
☐ Issued For Approval (Not For Construction)
☐ Issued For Permit
☒ Issued For Construction

Scale:	NOT TO SCALE	
Drawn by:	AXD	12/9/25
Checked by:	MC	12/15/25
Project Engineer:		
Job Number:	20-B-91454	
Sheet Number:	R8 of 12	

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KAUSHIKKUMAR J. PATEL, P.E.
UTAH P.E. 12592792-2202

Jan 02, 2026

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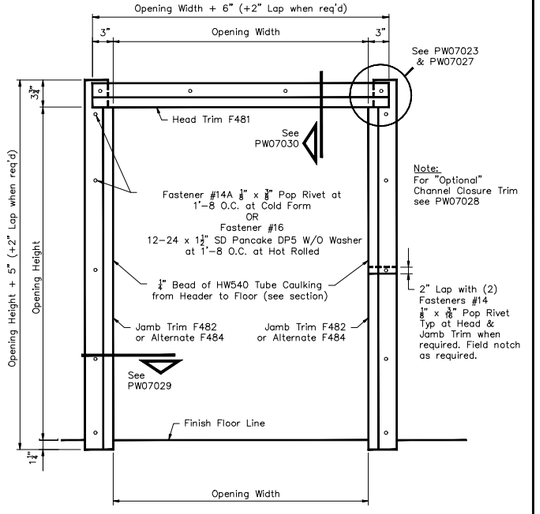
PROFESSIONAL ENGINEER
No. 12592792
KAUSHIKKUMAR J. PATEL
STATE OF UTAH

PBR Wall Panel - Three Sided Framed Opening - Trim Installation with Field Notch Panel at Head Trim

Page PW07022 | Date Mar '20 | Rev 05

Note: Trim Installation can be done by Field Notch Panel as shown on PW07022 & PW07023 OR with Field Notch and Bend Tabs at Head Trim as shown on PW07024 & PW07025.



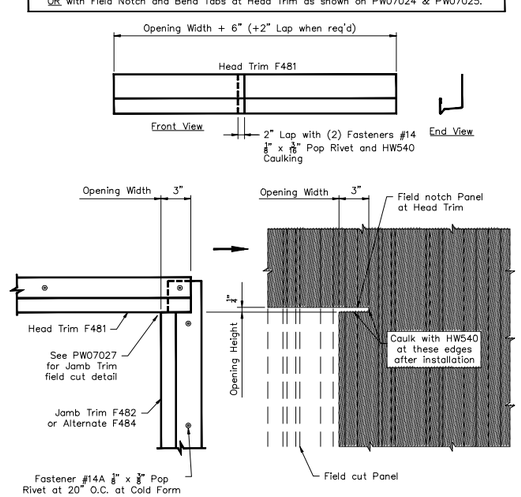
Note: All trim is to be installed BEFORE blanket insulation is applied to walls.

Note: Field measure Opening Width and Height before making field cuts and adjust cut dimensions accordingly.

PBR Wall Panel - Three Sided Framed Opening Field Notch Panel at Head Trim

Page PW07023 | Date Mar '20 | Rev 05

Note: Trim Installation can be done by Field Notch Panel as shown on PW07022 & PW07023 OR with Field Notch and Bend Tabs at Head Trim as shown on PW07024 & PW07025.



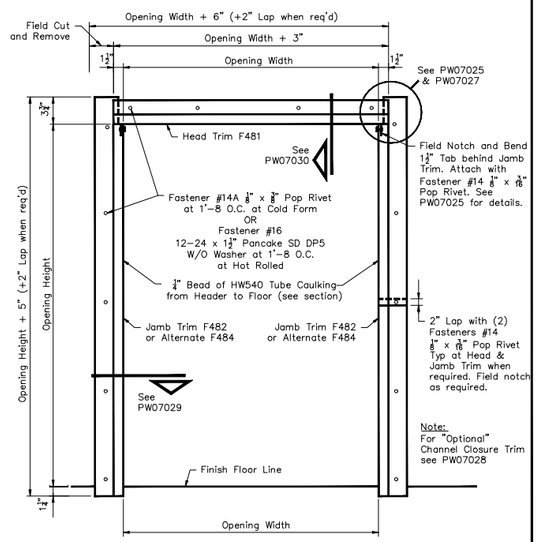
Note: All trim is to be installed BEFORE blanket insulation is applied to walls

Note: Panel position is shown with Panel Rib and Opening on 1'-0 module. Location of Rib may vary depending on the Opening Width and location. Field measure before cutting Panel and Trim.

PBR Wall Panel - Three Sided Framed Opening - Trim Installation with Field Notch and Bend Tabs at Head Trim

Page PW07024 | Date Mar '20 | Rev 05

Note: Trim Installation can be done by Field Notch Panel as shown on PW07022 & PW07023 OR with Field Notch and Bend Tabs at Head Trim as shown on PW07024 & PW07025.



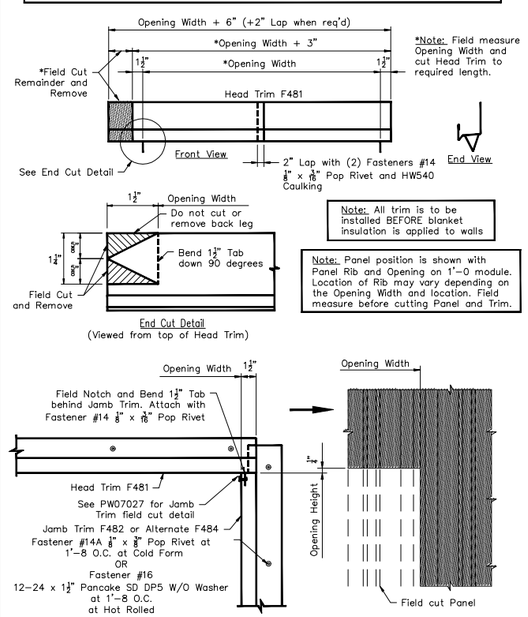
Note: All trim is to be installed BEFORE blanket insulation is applied to walls.

Note: Field measure Opening Width and Height before making field cuts and adjust cut dimensions accordingly.

PBR Wall Panel - Three Sided Framed Opening - Field Notch and Bend Tabs at Head Trim

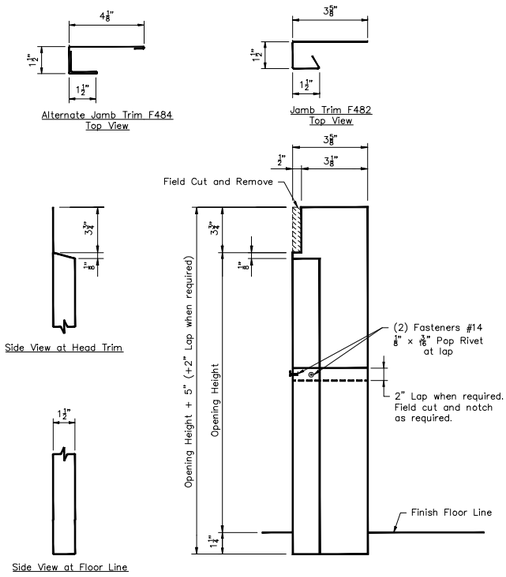
Page PW07025 | Date Mar '20 | Rev 05

Note: Trim Installation can be done by Field Notch Panel as shown on PW07022 & PW07023 OR with Field Notch and Bend Tabs at Head Trim as shown on PW07024 & PW07025.



PBR Wall Panel - Three Sided Framed Opening Jamb Trim Field Cut Details

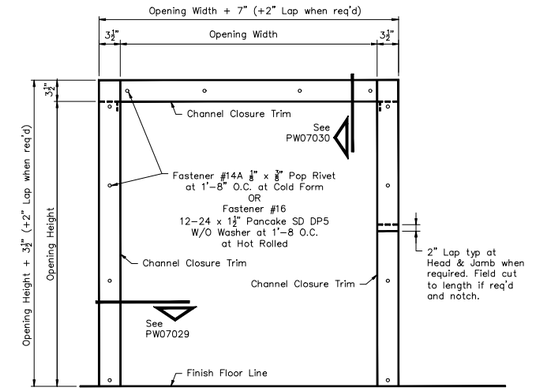
Page PW07027 | Date Mar '20 | Rev 04



Note: Field measure Opening Height before making field cuts and adjust cut dimensions accordingly.

PBR Wall Panel - Three Sided Framed Opening "Optional" Channel Closure Trim

Page PW07028 | Date May '19 | Rev 04



Optional Channel Closure Trim Piece Mark

F981	– 8" Member	F2993	– 10¼" Member
F2994	– 8¼" Member	F169	– 12" Member
F982	– 10" Member	F2995	– 12¼" Member

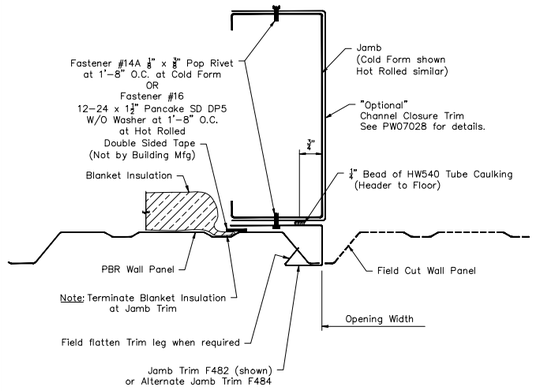
Note: All trim is to be installed BEFORE blanket insulation is applied to walls.

Note: Field measure Opening Width and Height before making field cuts and adjust cut dimensions accordingly.

Note: The interior leg of the Channel Closure Trim is to be oriented (±1/8") to match the interior leg of the Header or Jamb.

PBR Wall Panel - Three Sided Framed Opening - Jamb Trim Installation

Page PW07029 | Date Mar '20 | Rev 05

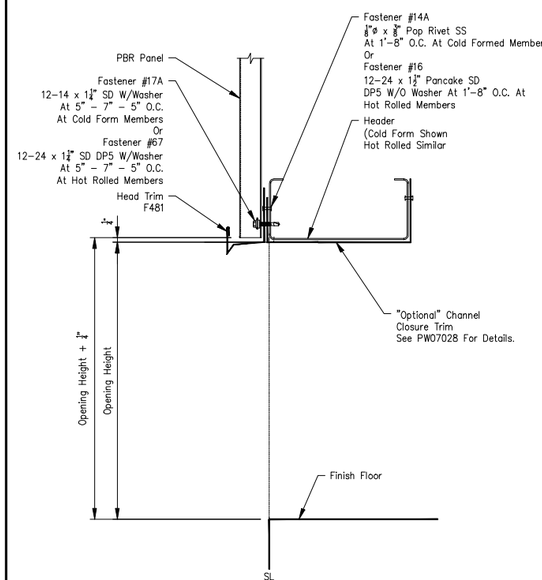


Note: All trim is to be installed BEFORE blanket insulation is applied to walls.

Note: Panel position is shown with Panel Rib and Opening on 1'-0" module. Location of Rib may vary depending on the Opening Width and location. Field measure before cutting Panel and Trim.

PBR Wall Panel - Three Sided Framed Opening Head Trim Installation

Page PW07030 | Date Oct '19 | Rev 03



Jan 02, 2026

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PROFESSIONAL ENGINEER No. 12592792 KAUSHIKKUMAR J. PATEL STATE OF UTAH

Revision	Date	Description	By	Ck'd

Cornerstone Building Brands
13105 Northwest Freeway, Suite 500
Houston, TX 77040
cornerstonebuildingbrands.com

FORTIFY BUILDING SOLUTIONS

MUELLER METAL BUILDINGS, ROOFING & MORE

Project Name & Location:
MARA BROWN
1300 VALLEY DR
OGDEN UT 84401-0808

Customer:
CITY OF OGDEN-212366
2549 WASHINGTON BLVD
OGDEN UT 84401
MARA BROWN

Drawing Status:
☐ Issued For Approval (Not For Construction)
☐ Issued For Permit
☒ Issued For Construction

Scale: NOT TO SCALE
Drawn by: AXD 12/9/25
Checked by: MC 12/15/25
Project Engineer:
Job Number: 20-B-91454
Sheet Number: R9 of 12

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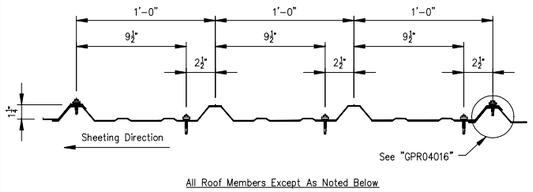
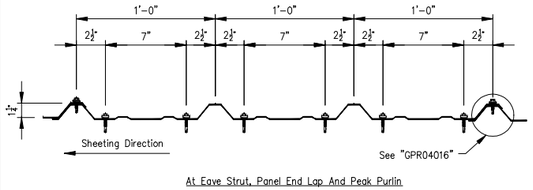
KAUSHIKKUMAR J. PATEL, P.E.
UTAH P.E. 12592792-2202

PBR Roof Panel
Fastener And Tape Sealant Location

Page GPR00011 | Date Apr '19 | Rev 01



All Roof Members Except As Noted Below

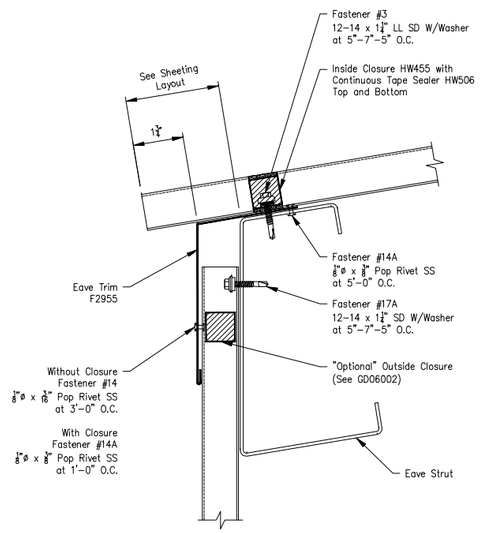


At Eave Strut, Panel End Lap And Peak Purlin

Note:
Screw patterns shown satisfy U.L. 90 requirements for roof.

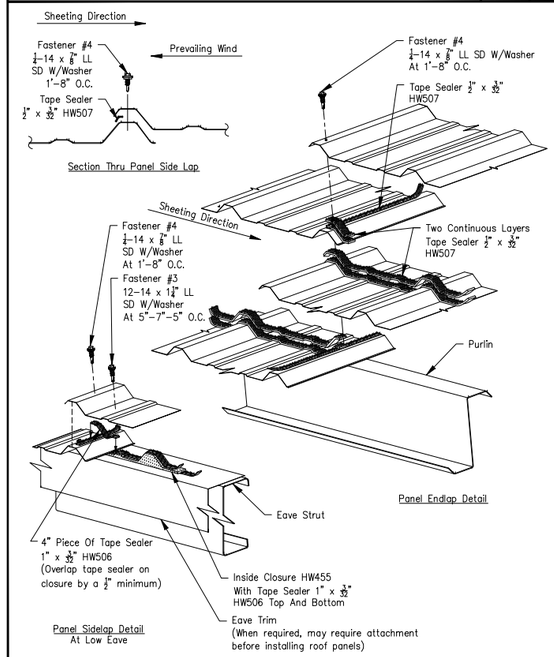
PBR Panel
Flat Eave Trim - Sheeted Wall

Page GPR03004 | Date Feb '17 | Rev 05



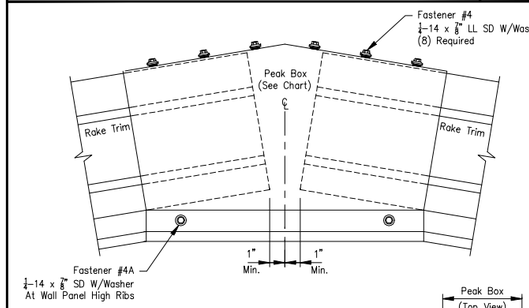
PBR Roof Panel
Side Lap And End Lap Details

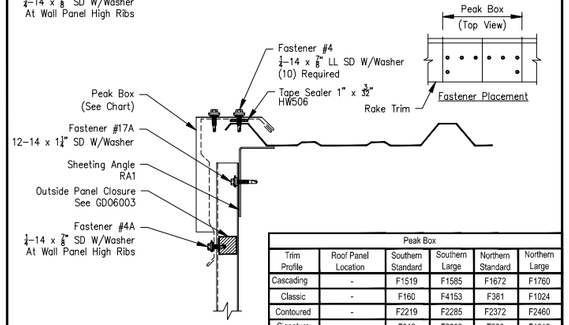
Page GPR04016 | Date Apr '19 | Rev 04



PBR Roof Panel
Peak Box At Fixed Ridge

Page GPR05001 | Date Jun '21 | Rev 08



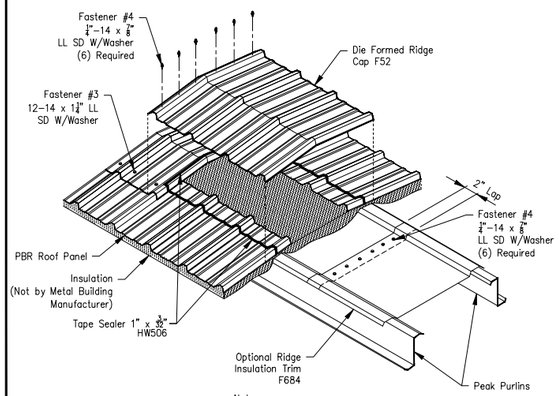


Note:
Flashing profile varies dependent on the building order. Attachment as illustrated is applicable for all profiles.

Peak Box					
Trim Profile	Roof Panel Location	Southern Standard	Southern Large	Northern Standard	Northern Large
Cascading	-	F1519	F1585	F1672	F1760
Classic	-	F160	F4153	F381	F1024
Contoured	-	F2219	F2285	F2372	F2460
Signature	-	F916	F3853	F236	F1018
Edgecraft	SL <= 3"	F6028	F6029	F6030	F6031
Edgecraft	> 3" <= 3"	F6036	F6037	F6038	F6039
Sculptured	SL <= 3"	F7052	F7055	F7058	F7061
Sculptured	> 3" <= 3"	F7064	F7067	F7070	F7073

PBR Roof Panel
Fixed Ridge Detail

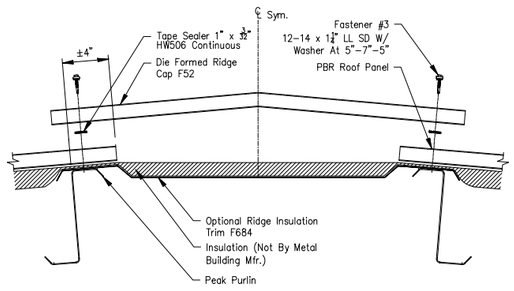
Page GPR06003 | Date Apr '19 | Rev 04



Note:
Install optional ridge insulation trim F684 as insulation and roof sheeting is being applied. Temporary attachment, if required, is not by metal building manufacturer.

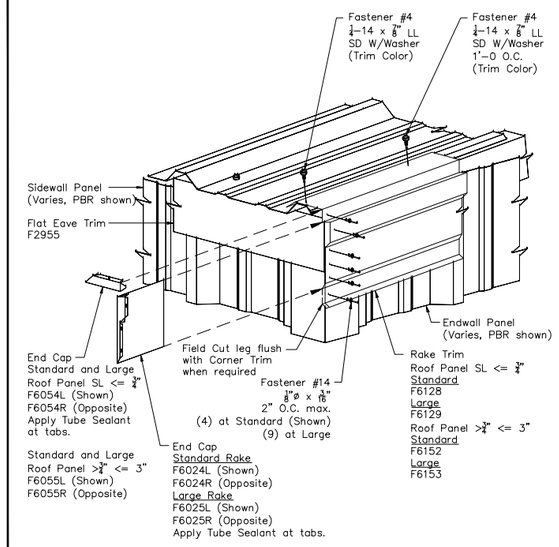
PBR Roof Panel
Section Thru Fixed Ridge

Page GPR06004 | Date Apr '19 | Rev 04



PBR Roof Panel - Northern Standard and Northern Large Edgecraft
Low Eave Rake Corner with Flat Eave Trim - ¾" thru 1¾" Wall Panel

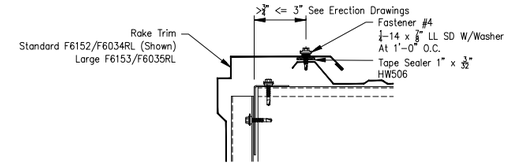
Page TPR04009 | Date Nov '20 | Rev 02



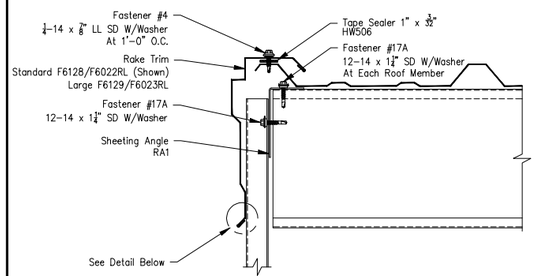
See Construction Details for required attachment of Eave Trim and Rake Trim to Wall. Wall Panel Closures not shown for clarity.

PBR Roof Panel - Northern Standard And Northern Large
Edgecraft Rake Trim - Sheeted Wall

Page TPR05006 | Date Jul '20 | Rev 00



Alternate Roof Rib Location



Cornerstone Building Brands
13105 Northwest Freeway, Suite 500
Houston, TX 77040
cornerstonebuildingbrands.com

FORTIFY BUILDING SOLUTIONS

MUELLER METAL BUILDINGS, ROOFING & MORE

Project Name & Location:
MARA BROWN
1300 VALLEY DR
OGDEN UT 84401-0808

Customer:
CITY OF OGDEN-212366
2549 WASHINGTON BLVD
OGDEN UT 84401
MARA BROWN

Drawing Status:
☐ Issued For Approval (Not For Construction)
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Revision	Date	Description	By	Ck'd

Scale: NOT TO SCALE
Drawn by: AXD 12/9/25
Checked by: MC 12/15/25
Project Engineer:
Job Number: 20-B-91454
Sheet Number: R10 of 12

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KAUSHIKKUMAR J. PATEL, P.E.
UTAH P.E. 12592792-2202

Jan 02, 2026

PROFESSIONAL ENGINEER
No. 12592792
KAUSHIKKUMAR J. PATEL
STATE OF UTAH

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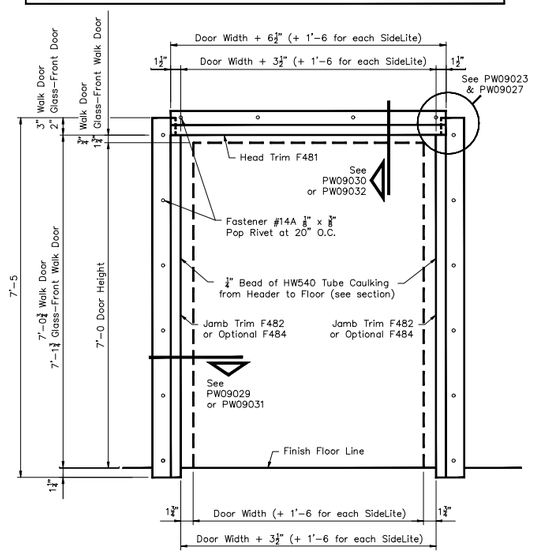
PBR Wall Panel - Walk Door & Glass-Front Walk Door - Trim Installation with Field Notch Panel at Head Trim

Page PW09022 | Date Mar '20 | Rev 03

Note: Trim Installation can be done by Field Notch Panel as shown on PW09022 & PW09023 OR with Field Notch and Bend Tabs at Head Trim as shown on PW09024 & PW09025.



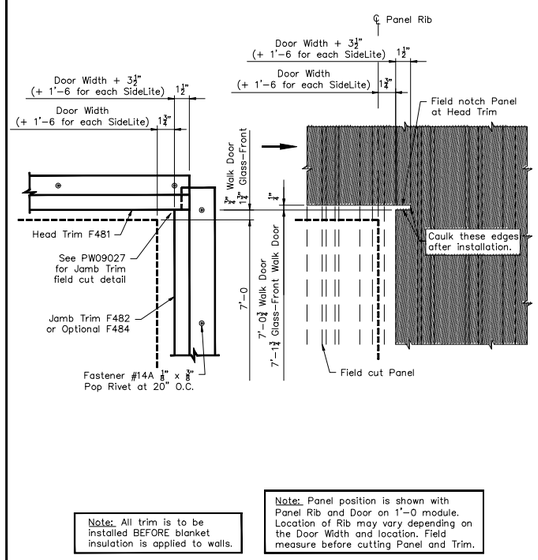
Note: All trim is to be installed BEFORE blanket insulation is applied to walls.

Note: Field measure Door Width and Height before making field cuts and adjust cut dimensions accordingly.

PBR Wall Panel - Walk Door And Glass-Front Walk Door Field Notch Panel at Head Trim

Page PW09023 | Date Mar '20 | Rev 02

Note: Trim Installation can be done by Field Notch Panel as shown on PW09022 & PW09023 OR with Field Notch and Bend Tabs at Head Trim as shown on PW09024 & PW09025.



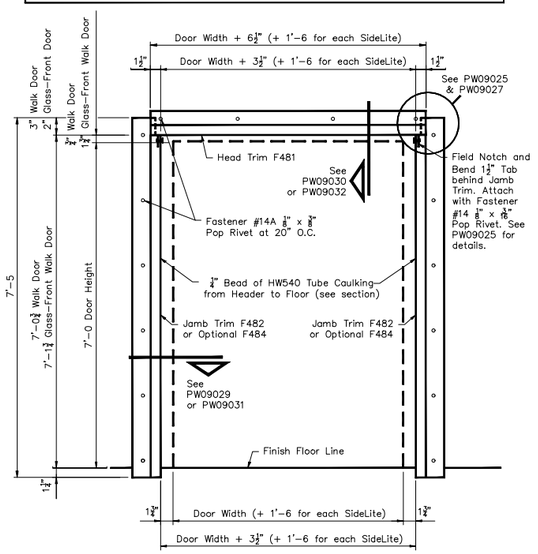
Note: All trim is to be installed BEFORE blanket insulation is applied to walls.

Note: Panel position is shown with Panel Rib and Door on 1'-0 module. Location of Rib may vary depending on the Door Width and location. Field measure before cutting Panel and Trim.

PBR Wall Panel - Walk Door & Glass-Front Walk Door - Trim Installation with Field Notch and Bend Tabs at Head Trim

Page PW09024 | Date Mar '20 | Rev 03

Note: Trim Installation can be done by Field Notch Panel as shown on PW09022 & PW09023 OR with Field Notch and Bend Tabs at Head Trim as shown on PW09024 & PW09025.



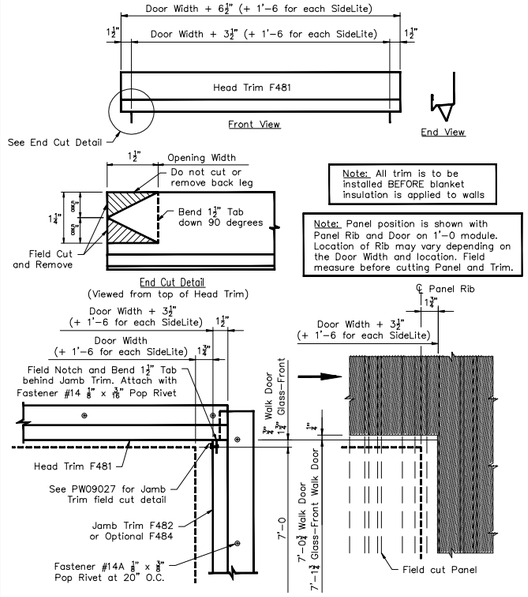
Note: All trim is to be installed BEFORE blanket insulation is applied to walls.

Note: Field measure Door Width and Height before making field cuts and adjust cut dimensions accordingly.

PBR Wall Panel - Walk Door And Glass-Front Walk Door - Field Notch and Bend Tabs at Head Trim

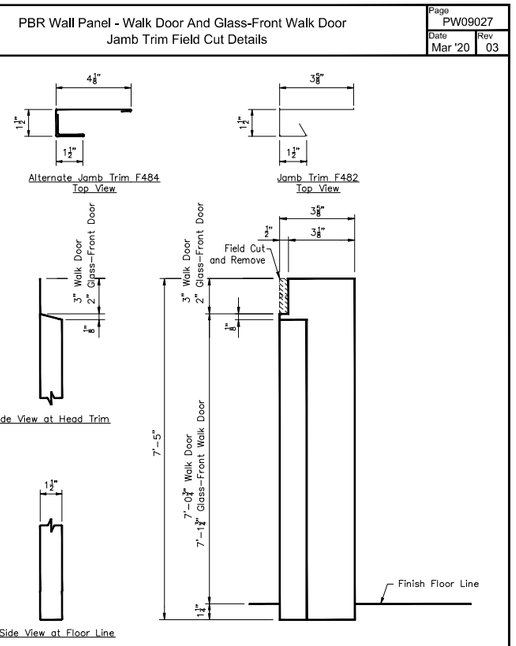
Page PW09025 | Date Mar '20 | Rev 02

Note: Trim Installation can be done by Field Notch Panel as shown on PW09022 & PW09023 OR with Field Notch and Bend Tabs at Head Trim as shown on PW09024 & PW09025.



PBR Wall Panel - Walk Door And Glass-Front Walk Door Jamb Trim Field Cut Details

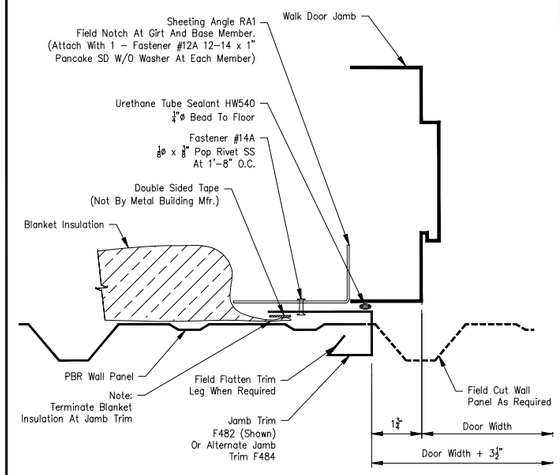
Page PW09027 | Date Mar '20 | Rev 03



Note: Field measure Door Height before making field cuts and adjust cut dimensions accordingly so that Jamb Trim fits to Head Trim & at 1½" below Finish Floor Line.

PBR Wall Panel - Knock Down Door Jamb Trim Installation

Page PW09031 | Date Mar '20 | Rev 07



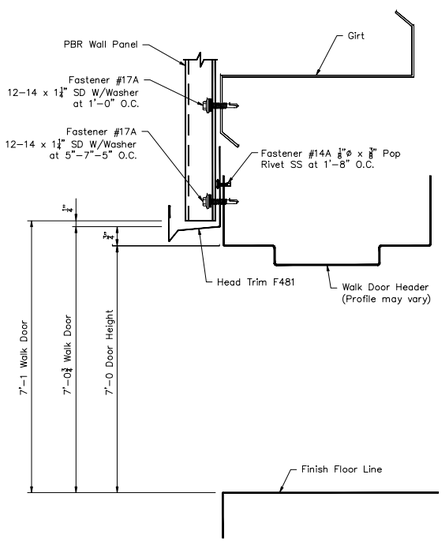
Alternate Jamb Trim F484

Note:
All Trim Is To Be Installed BEFORE Blanket Insulation Is Applied To Walls.

Location Of Panel Rib May Vary Depending On Door Width, Door Location And Panel Starting Location. Refer To Erection Drawings For Panel Layout. Field Measure Before Cutting Panel And Trim.

PBR Wall Panel - Knock Down Walk Door - Head Trim Installation

Page PW09032 | Date May '19 | Rev 03



Note: All trim is to be installed BEFORE blanket insulation is applied to walls.

PBR Roof Panel - Perimeter Trim Reference Edgecraft Northern Standard Trim

Page TPR00003 | Date Sep '20 | Rev 01

	Gutter	Gutter Lap	Gutter End Cap	Expansion Cap/Cover	Gutter Support
	F6122/F6002RL	2" Lap	F6014	F6010/F6006	F550
	Fastener #4 1/4–14 x ⅞" LL SD W/Washer 1'–0" O.C. Roof Color	52" Tube Sealant (11) Fastener #14 Trim Color	27" Tube Sealant (11) Fastener #14 Trim Color	(7) Fastener #14 Trim Color	(2) Fastener #4 1/4–14 x ⅞" LL SD W/Washer Roof Color; (1) Fastener #4 1/4–14 x ⅞" LL SD W/Washer Trim Color
3" thru 4¾" Wall Panel	Rake SL <= ¾"	Rake Lap SL <= ¾"	Rake >¾" <= 3"	Rake Lap >¾" <= 3"	Rake Cap SL <= ¾"
	F6128/F6022RL	2" Lap	F6152/F6034RL	2" Lap	F6054RL/F6024RL
	Fastener #4 1/4–14 x ⅞" LL SD W/Washer 1'–0" O.C. Fastener #4A 1/4–14 x ⅞" SD W/Washer 1'–0" O.C. Trim Color	15" Tube Sealant (6) Fastener #14 (1) Fastener #4 1/4–14 x ⅞" LL SD W/Washer Trim Color	Fastener #4 1/4–14 x ⅞" LL SD W/Washer 1'–0" O.C. Fastener #4A 1/4–14 x ⅞" SD W/Washer 1'–0" O.C. Trim Color	18" Tube Sealant (6) Fastener #14 (2) Fastener #4 1/4–14 x ⅞" LL SD W/Washer Trim Color	24" Tube Sealant (4) Fastener #14 (2) Fastener #4 1/4–14 x ⅞" LL SD W/Washer Trim Color
3" thru 1¾" Wall Panel	High Side	High Side Lap	Outside Corner	Inside Corner	Rake Cap >¾" <= 3"
	F6140/F6082RL	2" Lap	Right as Shown	Field Work	F6055RL/F6024RL
	Fastener #4 1/4–14 x ⅞" LL SD W/Washer 1'–0" O.C. #4A Screw 1/4–14 x ⅞" SD W/Washer 1'–0" O.C. Trim Color	23" Tube Sealant (9) Fastener #14 (3) Fastener #4 1/4–14 x ⅞" LL SD W/Washer Trim Color	34" Tube Sealant (8) Fastener #14 (6) Fastener #4 1/4–14 x ⅞" LL SD W/Washer Trim Color	34" Tube Sealant (4) Fastener #4 1/4–14 x ⅞" LL SD W/Washer At 3" O.C. Trim Color	30" Tube Sealant (4) Fastener #14 (3) Fastener #4 1/4–14 x ⅞" LL SD W/Washer Trim Color
	Outside Corner	Inside Corner	Outside Corner	Inside Corner	Peak Box
	Right as shown	Field Work	Field Work	Field Work	F6030 SL <= 3" F6038 >3" <= 3"
	31" Tube Sealant (18) Fastener #14 (6) Fastener #4 1/4–14 x ⅞" LL SD W/Washer Trim Color	31" Tube Sealant (12) Fastener #14 (2) Fastener #4 1/4–14 x ⅞" LL SD W/Washer Trim Color	74" Tube Sealant (12) Fastener #14 Trim Color	74" Tube Sealant (12) Fastener #14 Trim Color	(12) Fastener #4 1/4–14 x ⅞" LL SD W/Washer (3) Fastener #4A 1/4–14 x ⅞" SD W/Washer Trim Color

Jan 02, 2026

This item has been electronically signed and sealed by Kaushikkumar J. Patel, P.E. on the date and/or time stamp shown using a digital signature. Printed copies of this document are not considered signed and sealed and the signature must be verified by a 3rd Party Certificate Authority on any electronic copy.

PROFESSIONAL ENGINEER No. 12592792 KAUSHIKKUMAR J. PATEL STATE OF UTAH

Revision	Date	Description	By	Ck'd

Cornerstone Building Brands
13105 Northwest Freeway, Suite 500
Houston, TX 77040
cornerstonebuildingbrands.com

FORTIFY BUILDING SOLUTIONS

MUELLER METAL BUILDING, ROOFING & MORE

Customer:
CITY OF OGDEN–212366
2549 WASHINGTON BLVD
OGDEN UT 84401
MARA BROWN

Drawing Status:
☐ Issued For Approval (Not For Construction)
☐ Issued For Permit
☒ Issued For Construction

Project Name & Location:
MARA BROWN
1300 VALLEY DR
OGDEN UT 84401–0808

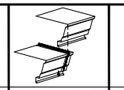
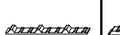
Scale: NOT TO SCALE
Drawn by: AXD 12/9/25
Checked by: MC 12/15/25
Project Engineer:
Job Number: 20-B-91454
Sheet Number: R11 of 12

The engineer whose seal appears hereon is employed by or is contracted to provide engineering services for the manufacturer, Cornerstone Building Brands or one of its affiliates, for the materials described herein. Said seal or certification is limited to the products designed and manufactured by manufacturer only. The undersigned engineer is not the overall engineer of record for this project.

KAUSHIKKUMAR J. PATEL, P.E.
UTAH P.E. 12592792-2202

PBR Roof Perimeter Trim Reference
Trim Fastener and Sealants

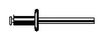
Page TPR00008 | Date May '22 | Rev 01

				
EAVE BOX	EAVE BOX LAP	Eave Box End Cap	Closure Vented Ridge	Metal Closure
F6075	2" LAP	F6076RL	HW4040	HW4041
Fastener #14A 5"-0" O.C. Fastener #4A 1/4-14 x 3/8" SD W/Washer 1"-0" O.C. Trim Color	(6) Fastener #14 2'-0" Tube Sealant	(8) Fastener #14 1'-9" Tube Sealant	(3) Fastener #3 12-14 x 1 1/2" LL SD W/Washer (2) Fastener #4 1/4-14 x 3/8" LL SD W/Washer Roof Color 2'-4" Tape Mastic	(3) Fastener #3 12-14 x 1 1/2" LL SD W/Washer (2) Fastener #4 1/4-14 x 3/8" LL SD W/Washer Roof Color 2'-4" Tape Mastic
				
Expansion Ridge Trim	Ridge Closure	Flat Eave Trim	Inside Closure	Outside Closure
F675	F679	F2955	HW455	HW456
Fastener #4 1/4-14 x 3/8" LL SD W/Washer 2 runs at 6" O.C. (16) Fastener #4 1/4-14 x 3/8" LL SD W/Washer per lap Trim Color 5'-8" Tube Sealant	2'-4" Tube Caulking (12) Fastener #4 1/4-14 x 3/8" LL SD W/Washer Trim Color	9" Tube Sealant (2) #14 per lap #14 3'-0" O.C. w/out closure #14A 1'-0" O.C. w/closure Trim Color		
				
Parapet Rake Trim	Rake Slide Trim	Ridge Cap	Parapet High Side	Sheeting Angle Longitudinal Ridge
F852	F215	F52	F326	SA85
2'-3" Tube Sealant (3) Fastener #4 1/4-14 x 3/8" LL SD W/Washer Trim Color	Fastener #4A 1/4-14 x 3/8" SD W/Washer 1'-0" O.C. Trim Color	10'-1" Tape Mastic (12) Fastener #3 12-14 x 1 1/2" LL SD W/Washer (6) Fastener #4 1/4-14 x 3/8" LL SD W/Washer Panel Color	2'-8" Tube Sealant (2) Fastener #14 & (5) Fastener #4 1/4-14 x 3/8" LL SD W/Washer per Lap Fastener #4 1/4-14 x 3/8" LL SD W/Washer 1'-0" O.C. Trim Color	20'-0" Long

Fasteners

Page G000004 | Date Jul '17 | Rev 05

Fastener #14



1/8" x 3/16"
Pop Rivet
Stainless Steel

Fastener #14A

1/8" x 3/8"
Pop Rivet
Stainless Steel

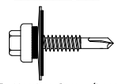
Fastener #24

8 x 5/8"
Nibbed Driller

Fastener #35

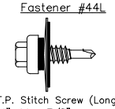
#14 x 1 1/8" O.D.
Bonded Washer

Fastener #43L



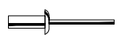
L.T.P. Member Screw (Long Life)
1/4"-14 x 1 1/4"
5/16" Hex Washer Head
W/ 1 1/8" O.D. Washer

Fastener #44L



L.T.P. Stitch Screw (Long Life)
1/4"-14 x 7/8"
5/16" Hex Washer Head
W/ 1 1/8" O.D. Washer

Fastener #226



3/16" x 9/16"
Closed End Rivet

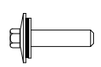
Fastener #228

10 x 1/2"
Grommet Washer

Fastener #271

8-18 x 1/2"
Trim Screw

Fastener HW399



#6 x 1" Rubber Grommet
1/4" Hex Head w/ Washer

Note:
Refer to bill of materials for specific job requirements.

Tape Sealer And Tube Sealant

Page G000005 | Date Feb '24 | Rev 07

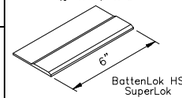
TRI-BEAD TAPE SEALER HW508

3/8" X 7" X 25'-0"

FLAT TAPE SEALER HW507

3/32" X 1" X 50'-0"

TAPE SEALER - SWAGED HW515



3/16" X 2 1/2" X 6"
BattenLok HS SuperLok

TRIPLE BEAD TAPE SEALER HW502

3/16" X 2 1/2" X 20'-0"

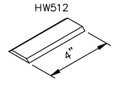
FLAT TAPE SEALER HW506

3/32" X 1" X 45'-0"

URETHANE TUBE SEALANT

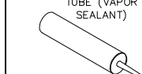
HW540 (White)
HW541 (Gray)
HW542 (Bronze)
Note: 25'-0" per Tube at 1/4" Bead

TAPE SEALER MINOR RIB HW512



3/32" X 1 1/8" X 4"

NON-SKINNING BUTYL TUBE (VAPOR SEALANT)



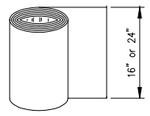
IMP7100 (WHITE)
12'-6" per Tube at 3/8" Bead
HW549 (WHITE)
25'-0" per Tube at 1/4" Bead

DEKSTRIP 7" WIDE = HW5227
DEKSTRIP 9" WIDE = HW5228
DEKSTRIP 12" WIDE = HW5229
DEKSTRIP 18" WIDE = HW5226
COLOR = Gray
SCREWS 2" O.C. MAX. PERIMETER
TAPE SEALER BOTH SIDES
URETHANE TUBE SEALANT HW540 EACH END
TERMINATION STRIP HW5305 EACH END (1" Wide x 4'-0" Long Alum.)

2" WIDE X 24 GA. STRAPPING

- FL471 - 100'-0" Roll Galvalume Plus Only
- FL569 - 500'-0" Roll Galvalume Plus or White Wash Coat

FLEXIBLE MEMBRANE (EPDM)



- HW520 - 16" x 50'-0" Roll
- HW521 - 24" x 50'-0" Roll

NOTE:
Refer to bill of materials for specific job requirements

PBR, PBU, AVP, RBR And RBU
Panel Fasteners

Page G000006 | Date Jun '23 | Rev 10

Wall Fasteners	Roof Fasteners Long Life (Optional at Wall)	
Member Screw Fastener #17A 12-14 x 1 1/4" 5/8" Hex Washer Head w/washer	Member Screw Fastener #3 12-14 x 1 1/4" 5/8" Hex Washer Head w/washer	
Member Screw Optional Fastener #17B 12-14 x 1 1/2" 5/8" Hex Washer Head w/washer	Member Screw Optional Fastener #3A 12-14 x 1 1/2" 5/8" Hex Washer Head w/washer	
Member Screw Optional Fastener #28 12-14 x 2" 5/8" Hex Washer Head w/washer	Member Screw Optional Fastener #58 12-14 x 2" 5/8" Hex Washer Head w/washer	
Stitch Screw Fastener #4A 1/4-14 x 3/8" 5/8" Hex Washer Head w/washer	Stitch Screw Fastener #4 1/4-14 x 3/8" 5/8" Hex Washer Head w/washer	

NOTE: Refer to bill of materials for specific job requirements

Various Fasteners

Page G000009 | Date Nov '16 | Rev 11

Fastener #17
12-14 x 1" SD W/Washer 5/8" Hex Head

Fastener #38
1/4-14 x 3/8" SD W/O Washer 5/8" Hex Head

Fastener #12A
12-14 x 1" Pancake SD W/O Washer

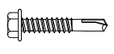
Fastener #55
12-24 x 1 1/4" SD DP5 W/O Washer 5/8" Hex Head

Fastener #70
12-24 x 1 1/2" SD DP5 W/O Washer 5/8" Hex Head

Fastener #142
1/4-14 x 1 1/2" SD W/O Washer 5/8" Hex Head

Fastener #76
12-14 x 2" SD W/O Washer 5/8" Hex Head

Fastener #61
12-14 x 1 1/4" SD W/O Washer 5/8" Hex Head



Fastener #18
1/4-14 x 1 1/4" SD W/O Washer 5/8" Hex Head

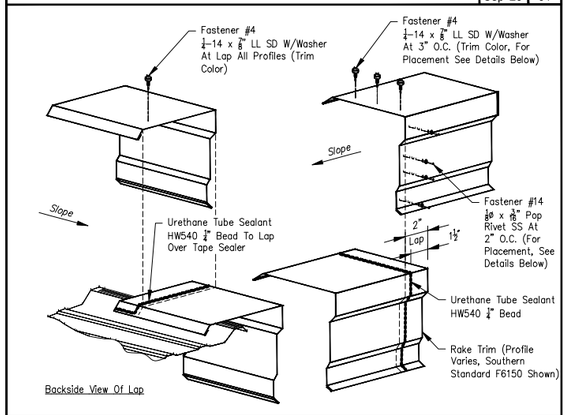
Fastener #16
12-24 x 1 1/2" Pancake SD DP5 W/O Washer

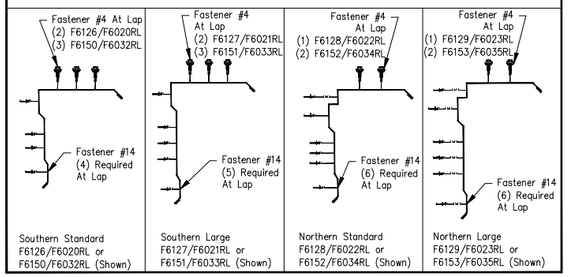
NOTE:
Refer to Bill of Materials for Specific job Requirements

Fastener #46
1/4-14 x 3/8" LL ST Type B W/Washer 5/8" Hex Head

PBR Roof Panel
Edgecraft Rake Trim End Lap Installation Detail - 3/4" thru 1 3/4" Wall Panel

Page TPR05010 | Date Sep '20 | Rev 01





Ck'd	By	Description	Date	Revision

FORTIFY BUILDING SOLUTIONS
MUELLER METAL BUILDINGS, ROOFING & MORE
Cornerstone Building Brands
13105 Northwest Freeway, Suite 500
Houston, TX 77040
cornerstonebuildingbrands.com

Customer: CITY OF OGDEN-212366
2549 WASHINGTON BLVD
OGDEN UT 84401
MARA BROWN

Project Name & Location:
MARA BROWN
1300 VALLEY DR
OGDEN UT 84401-0808

Drawing Status:
☐ Issued For Approval (Not For Construction)
☐ Issued For Permit
☒ Issued For Construction

Scale: NOT TO SCALE
Drawn by: AXD 12/9/25
Checked by: MC 12/15/25
Project Engineer:
Job Number: 20-B-91454
Sheet Number: R12 of 12

KAUSHIKKUMAR J. PATEL, P.E.
UTAH P.E. 12592792-2202

Jan 02, 2026

PROFESSIONAL ENGINEER
No. 12592792
KAUSHIKKUMAR J. PATEL
STATE OF UTAH

FORTIFY
BUILDING SOLUTIONS™

December 03, 2025

CITY OF OGDEN-212366
2549 WASHINGTON BLVD
Ogden, UT 84401

20-B-91454
MARA BROWN
1300 VALLEY DR OGDEN, UT 84401-0808
40'0" x 80'0" x 16'0"

To Whom It May Concern:

This is to certify that materials for the subject structure have been designed in accordance with the order documents, specifically as shown per the attached Engineering Design Criteria Sheet.

Aspects of code compliance as related to use or occupancy, such as sprinkler requirements, are not addressed by these documents.

These materials, when properly erected on an adequate foundation in accordance with the erection drawings as supplied and using the components as furnished, will meet the attached loading requirements.

This certification does not cover field modifications, or the design of materials not furnished by Heritage Building Systems.

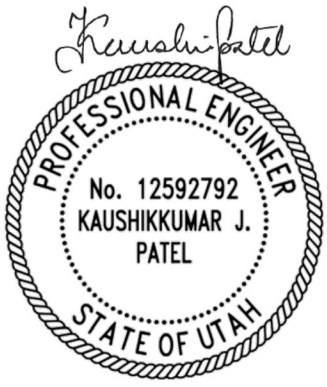
The attached design criteria and calculations are to remain with and form part of this Letter of Certification.

The calculations and the metal building they represent are the product of Heritage Building Systems or a division of its affiliate Cornerstone Building Brands. The engineer whose seal appears hereon is employed by either Heritage Building Systems or a division of its affiliate Cornerstone Building Brands and is not the engineer of record for this project.

Cordially,

Heritage Building Systems
Materials for Metal Buildings
A Cornerstone Building Brands Company

Kaushikkumar J. Patel, P.E.
Design Engineer



12/08/2025

This document has been digitally signed.

DESIGN PACKAGE

BUILDER: CITY OF OGDEN-212366
CUSTOMER: MARA BROWN
JOB NUMBER: 20-B-91454

TABLE OF CONTENTS

Note to Detailing: Eds2Tekla Report (Y)
Original Design Completed thru Change Order # 0
Date: 12/03/2025

Revision History

Rev#	Update Reactions?	Reason for Revision	Pages Revised	Date Revised	Eng.

Design Engineer: Rafael Arce Rabadan (Caryville)
Checking Engineer: Emmanuel Lopez Guillen
Sealing Engineer: Kaushikkumar J. Patel, P.E.

Job Number .....: 20-B-91454
Builder .....: CITY OF OGDEN-212366
Jobsite Location .....: MARA BROWN, OGDEN, UT

Building Code .....: 2021 IBC

Building Risk Category .....: Normal (Risk Category II)
Roof Dead Load
Superimposed .....: 2.22 psf
Collateral .....: 1.00 psf
(1.00 psf Other)
Roof Live Load .....: 20.00 psf reduction allowed

Snow
Ground Snow Load (Pg) .....: 43.00 psf
Snow Importance Factor (I) .: 1.00
Snow Exposure Factor (Ce) ..: 0.90
Thermal Factor (Ct) .....: 1.00
Slope Factor (Cs) .....: 1.00
Sloped Roof Snow (Ps) .....: 27.09 psf
Minimum Roof Snow Load (Pm) : 30.00 psf

Wind
Ultimate Wind Speed (Vult) .: 110 mph
Nominal Wind Speed (Vasd) ..: 85 mph (IBC section 1609.3.1)
Serviceability Wind Speed ..: 74 mph
Ground Elevation Factor ....: 0.85 (4458 ft ASL)
Wind Exposure Category .....: C
Exposure Coefficient (MWFRS): 0.860
Enclosure Classification ...: Enclosed Building
Internal Pressure Coef (GCpi): 0.18/-0.18
Unfactored Wall Loads for components not provided by building manufacturer
Zone 5 Areas (within 4.00' of corner) : 20.82 psf pressure -27.76 psf suction
Zone 4 Areas (away from corners) : 20.82 psf pressure -22.55 psf suction
These values are the maximum values required based on a 10 sq ft area.
Components with larger areas may have lower wind loads.

Seismic
Seismic Importance Factor (Ie): 1.00
Seismic Design Category ....: D
Soil Site Class .....: D Stiff Soil (Default)
Ss .....: 1.351 g Sds ....: 1.081 g
S1 .....: 0.498 g Sd1 ....: 0.598 g
Analysis Procedure .....: Equivalent Lateral Force

Column Line	1-5	SWA & SWC
Basic Force Resisting System	C4	B3
Response Modification Coefficient (R)	3.50	3.25
Seismic Response Coefficient (Cs)	0.309	0.333
Design Base Shear in kips (V)	6.32	6.26

Basic Structural System (from ASCE 7-16 Table 12.2-1)
B3 - Ordinary Steel Concentrically Braced Frame
C4 - Ordinary Steel Moment Frame

Material properties of steel bar, plate, and sheet used in the fabrication of built-up structural framing members conform to ASTM A529, ASTM A572, or ASTM A1011 with 55 ksi min. yield, except flanges wider than 12" and thicker than 3/8", all flanges thicker than 1", and all webs thicker than 3/8" are 50 ksi min. yield. Rod X-bracing conforms to ASTM A529 or ASTM A572 with 50 ksi min. yield. Cable X-bracing conforms to ASTM A475 7 Strand Extra High-Strength grade. Hot rolled structural shapes conform to ASTM A992, ASTM A529, or ASTM A572 with 50 ksi min. yield. Hot rolled angles, other than flange braces, conform to ASTM A36 minimum. Round and rectangular HSS conforms to ASTM A500 Grade B. Cold-formed steel secondary framing Members conform to ASTM A1011 or ASTM A653 Grade 55 with 55 ksi min. yield. For Canada, material properties conform to CAN/CSA G40.20/G40.21 or equivalent.

Unless otherwise noted, special inspection of fabricated items is not required. Per IBC section 1704.2.5.1, fabricator is approved to perform such work without special inspection through maintenance of IAS AC 472 certification MB-136.

Bolted joints with A325 Type 1 bolts greater than 1/2" diameter are specified as pre-tensioned joints in accordance with the most recent edition of the RCSC Specification for Structural Joints Using ASTM A325 or A490 Bolts. Pre Tensioning can be accomplished by using the turn-of-nut method of tightening, calibrated wrench, twist-off-type tension-control bolts or direct-tension indicator as acceptable to the Inspecting Agency and Building Official. Installation inspection requirements for pre-tensioned joints (Specification for Structural Joints Section 9.2) using turn-of-nut method is suggested. The connections on this project are not slip critical.

Design criteria as noted is as given within order documents and is applied in general accordance with the applicable provisions of the model code and/or specification indicated. Neither the metal building manufacturer nor the certifying engineer declares or attests that the loads as designated are proper for local provisions that may apply or for site specific parameters. The design criteria is supplied by the builder, project owner, or an Architect and/or Engineer of Record for the overall construction project.

This project is designed using manufacturer's standard serviceability criteria. Generally this means that all deflections are within typical performance limits for normal occupancy and standard metal building products.

The metal building manufacturer has not designed the structure for snow accumulation loads at the ground level which may impose snow loads on the wall framing provided by the manufacturer.

This metal building system is designed as an Enclosed Building. Exterior and/or operable components including, but not limited to, doors, windows, vents, etc. ("Components") must be designed to withstand the required component and cladding wind pressures specified by the building code. In order to maintain the metal building system's Enclosed Building condition, all Components shall be closed when wind velocities reach half the designed wind load for the metal building system as shown on the drawings and design criteria documentation. Failure to maintain the metal building system's Enclosed Building condition will violate and void all warranties and certifications applicable to the material supplied by the metal building

manufacturer.

The use of fully exposed for the snow exposure results in the rigid frames being designed for only 90 percent of the roof snow load that is used for partially exposed. For a fully exposed snow exposure to be used, all of the following conditions must be true:
1. The roof is exposed to wind on all sides with no obstructions higher than the roof located closer to the building than a distance equal to 10 times the height of the obstruction above the roof.
2. The roof is exposed to wind on all sides with no significant obstructions on the roof such as parapet walls or large roof top mechanical units.
3. The roof is not exposed to accumulation of snow due to drifting or sliding from adjacent structures.

Framed openings, walk doors, and open areas shall be located in the bay and elevation as shown in the erection drawings. The cutting or removal of girts shown on the erection drawings due to the addition of framed openings, walk doors, or open areas not shown may void the design certifications supplied by the metal building manufacturer.

The framing at BLDG A Frame Line 1 and 5 is NOT designed to receive a future bay addition. Corresponding frame reactions are calculated based upon actual tributary area.

Job Number .....: 20-B-91454
Builder .....: CITY OF OGDEN-212366
Jobsite Location .....: MARA BROWN, OGDEN, UT

The material supplied by the manufacturer has been designed with the following minimum deflection criteria. The actual deflection may be less depending on actual load and actual member length.

BUILDING DEFLECTION LIMITS .....: BLDG-A

Roof Limits		Rafters	Purlins	Panels
Live:	L/	180	150	60
Snow:	L/	180	180	60
Serviceability Wind:	L/	180	180	60
Total Gravity:	L/	120	120	60
Total Uplift:	L/	N/A	N/A	60

Frame Limits		Sidesway
Live:	H/	60
Snow:	H/	60
Serviceability Wind:	H/	60
Seismic Drift:	H/	40
Total Gravity:	H/	60
Service Seismic:	H/	40

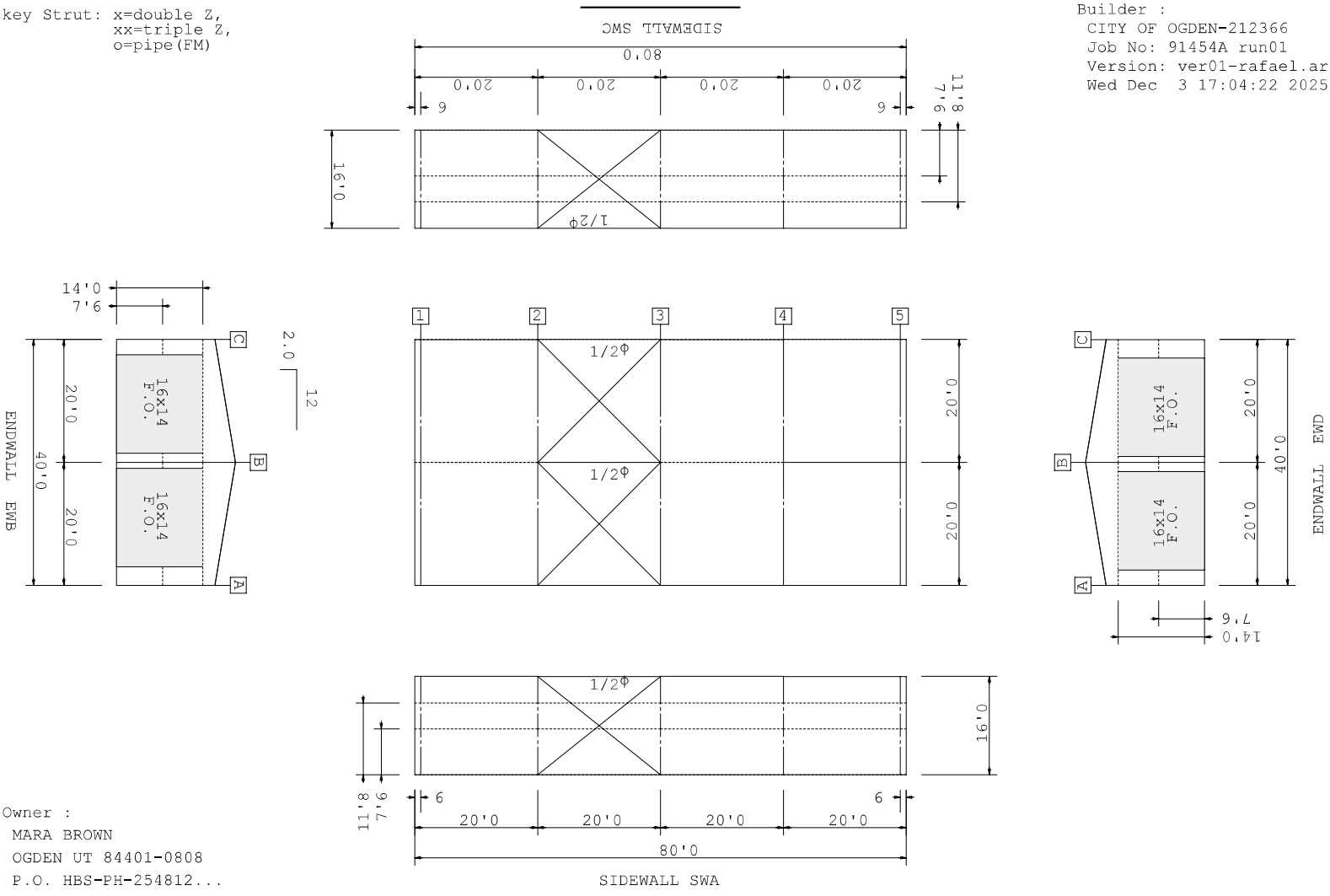
Wall Limits		Limit
Total Wind Panels:	L/	60
Total Wind Girts:	L/	90
Total Wind EW Columns:	L/	120

The Service Seismic limit as shown here is at service level loads.

BUILDING A

key Strut: x=double Z,
xx=triple Z,
o=pipe(FM)

Builder :
CITY OF OGDEN-212366
Job No: 91454A run01
Version: ver01-rafael.arce
Wed Dec 3 17:04:22 2025



Owner :
MARA BROWN
OGDEN UT 84401-0808
P.O. HBS-PH-254812...

BUILDING-A-DESIGN SUMMARY REPORT

All connections use ASTM F3125 Gr. A325N bolts, unless noted otherwise.
All anchor rods are checked according to ASTM F1554 Gr. 36 strengths.

Roof Plane ------- RPA
R:\jobs\Active\Eng\20-B-91454\ver01-rafael.arcerabadan\BLDG-A\run01\AroofRPA_01.edf

Panel ..... PBR
Panel width ..... 36 in.
Panel gage ..... 26 ga.
Purlins ..... 55.0 ksi yield strength
Eave struts ..... 55.0 ksi yield strength

Horz. Purlin Spacing: 2@4.3989 2@5'0 1.2022

Bay #	Length (ft)	Member Size Identification	Brace Locations	L Lap Exten	R Lap Exten
1	20.000	8X2.5Z14	None	S 0.000	2.479 C
2	20.000	8X2.5Z14	None	C 2.479	1.479 C
3	20.000	8X2.5Z14	None	C 1.479	2.479 C
4	20.000	8X2.5Z14	None	C 2.479	0.000 S

Purlin Clip Use 2 A325 Bolts
@ Level: 2,3,4,5
@ Supports: 1,2,3,4,5
Purlin Stiffened Clips
@ Level: 2,5
@ Supports: 1,2,3,4,5
Purlin Backup Plate
@ Level: 2,5
@ Supports: 1,2,3,4,5

Roof Plane ------- RPC
R:\jobs\Active\Eng\20-B-91454\ver01-rafael.arcerabadan\BLDG-A\run01\AroofRPC_01.edf

Panel ..... PBR
Panel width ..... 36 in.
Panel gage ..... 26 ga.
Purlins ..... 55.0 ksi yield strength
Eave struts ..... 55.0 ksi yield strength

Horz. Purlin Spacing: 2@4.3989 2@5'0 1.2022

Bay #	Length (ft)	Member Size Identification	Brace Locations	L Lap Exten	R Lap Exten
1	20.000	8X2.5Z14	None	S 0.000	2.479 C
2	20.000	8X2.5Z14	None	C 2.479	1.479 C
3	20.000	8X2.5Z14	None	C 1.479	2.479 C
4	20.000	8X2.5Z14	None	C 2.479	0.000 S

Purlin Clip Use 2 A325 Bolts
@ Level: 2,3,4,5
@ Supports: 5,4,3,2,1
Purlin Stiffened Clips
@ Level: 2,5
@ Supports: 5,4,3,2,1
Purlin Backup Plate
@ Level: 2,5
@ Supports: 5,4,3,2,1

SWC Eave Strut @ 16.000 (ft): 8X3.5E14 Bays 1
SWC Eave Strut @ 16.000 (ft): 8X3.5E14 Bays 2
SWC Eave Strut @ 16.000 (ft): 8X3.5E14 Bays 3
SWC Eave Strut @ 16.000 (ft): 8X3.5E14 Bays 4

RPC Purlin Strut @ 20.000 (ft): 8X2.5Z14 Bays 1
RPC Purlin Strut @ 20.000 (ft): 8X2.5Z14 Bays 2
RPC Purlin Strut @ 20.000 (ft): 8X2.5Z14 Bays 3
RPC Purlin Strut @ 20.000 (ft): 8X2.5Z14 Bays 4

SWA Eave Strut @ 16.000 (ft): 8X3.5E14 Bays 1
SWA Eave Strut @ 16.000 (ft): 8X3.5E14 Bays 2
SWA Eave Strut @ 16.000 (ft): 8X3.5E14 Bays 3
SWA Eave Strut @ 16.000 (ft): 8X3.5E14 Bays 4

Note: 1) All roof and wall strut bay numbers are as viewing the roof or wall plane
2) All purlin strut locations for all roof planes are measured from back sidewall
3) All purlin strut rows use the same lap lengths as the main purlin design.

4) Eave strut interior connection at SWA uses (2)-1/2" A325 bolts.
5) Eave strut interior connection at SWC uses (2)-1/2" A325 bolts.
6) Eave strut connection at end-frame uses (4)-1/2" A325 bolts.

Bracing ---- Roof: 1 bays Rod
Plane SWA : 1 bays Rod: Hillside Washers
Plane SWC : 1 bays Rod: Hillside Washers
Plane EWB : End Frame
Plane EWD : End Frame

Sidewall Plane SWA -- (8.250" Inset columns)
R:\jobs\Active\Eng\20-B-91454\ver01-rafael.arcerabadan\BLDG-A\run01\AwallSWA_01.edf

Panel ..... PBR
Panel width ..... 36 in.
Panel gage ..... 26 ga.
Girts ..... 55.0 ksi yield strength

Girts Spacing: 7'6 4'2

Bay #	Elev. (ft-in)	Length (ft)	Member Size Identification	Brace Locations	L Lap Exten	R Lap Exten
1	7'6	20.000	8X2.5Z16	None	S 0.000	1.479 C
2	7'6	20.000	8X2.5Z16	None	C 1.479	1.479 C
3	7'6	20.000	8X2.5Z16	None	C 1.479	1.479 C
4	7'6	20.000	8X2.5Z16	None	C 1.479	0.000 S
1	11'8	20.000	8X2.5Z16	None	S 0.000	1.479 C
2	11'8	20.000	8X2.5Z16	None	C 1.479	1.479 C
3	11'8	20.000	8X2.5Z16	None	C 1.479	1.479 C
4	11'8	20.000	8X2.5Z16	None	C 1.479	0.000 S

Note: Maximum distance to extend girt from adjacent bay is 36.00 inches.

Sidewall Plane SWC -- (8.250" Inset columns)
R:\jobs\Active\Eng\20-B-91454\ver01-rafael.arcerabadan\BLDG-A\run01\AwallSWC_01.edf

Panel ..... PBR
Panel width ..... 36 in.
Panel gage ..... 26 ga.
Girts ..... 55.0 ksi yield strength

Girts Spacing: 7'6 4'2

Bay #	Elev. (ft-in)	Length (ft)	Member Size Identification	Brace Locations	L Lap Exten	R Lap Exten
1	7'6	20.000	8X2.5Z16	None	S 0.000	1.479 C
2	7'6	20.000	8X2.5Z16	None	C 1.479	1.479 C
3	7'6	20.000	8X2.5Z16	None	C 1.479	1.479 C
4	7'6	20.000	8X2.5Z16	None	C 1.479	0.000 S
1	11'8	20.000	8X2.5Z16	None	S 0.000	1.479 C
2	11'8	20.000	8X2.5Z16	None	C 1.479	1.479 C
3	11'8	20.000	8X2.5Z16	None	C 1.479	1.479 C
4	11'8	20.000	8X2.5Z16	None	C 1.479	0.000 S

Note: Maximum distance to extend girt from adjacent bay is 36.00 inches.

Endwall Plane EWB Design .....RIGID BEARING FRAME
R:\jobs\Active\Eng\20-B-91454\ver01-rafael.arcerabadan\BLDG-A\run01\AwallEWB_01.edf

Panel ..... PBR
Panel width ..... 36 in.
Panel gage ..... 26 ga.

Girts ..... 55.0 ksi yield strength

Girts Spacing: 7'6 6'6

Bay #	Elev. (ft-in)	Length (ft)	Member Size Identification	Brace Locations	L Lap Exten		R Lap Exten	
1	7'6	19.312	8X2.5Z16	F.O.	S	0.000	0.000	S
2	7'6	19.312	8X2.5Z16	F.O.	S	0.000	0.000	S
1	14'0	19.312	8X2.5C14	None	S	0.000	0.000	S
2	14'0	19.312	8X2.5C14	None	S	0.000	0.000	S

Framed Openings:

Width	Height	Sill Ht	Jamb	Header/Sill	Bay	Distance
16'0	14'0	N/A	8X2.5C16	Toe up Cee	1	2'6
16'0	14'0	N/A	8X2.5C16	Toe up Cee	2	1'0

Columns ----- (0.000" Inset columns)

Col #	Dist. from left	Description Member Size Ident.	Base Elev (ft)	Base plate design information Thickness & rods
1-B	20.000'	Frame Line 1		

Endwall Column to Bridge Channel Connections:

Col. No.	Strut-to-Column Clip Endwall Plane 1
Plane SWC:	
1-B	At Peak, Type 3 Conn.,(4)-1/2" A325N CF Brdg Channel (0.375") w/ (4)-3/4" A325N bolts W8x10 Column Extension w/ 12.000" lap length 8X2.5C12 Bridge Channel
Plane SWA:	

Endwall Plane EWD Design .....RIGID BEARING FRAME
R:\jobs\Active\Eng\20-B-91454\ver01-rafael.arcerabadan\BLDG-A\run01\AwallEWD_01.edf

Panel ..... PBR
Panel width ..... 36 in.
Panel gage ..... 26 ga.

Girts ..... 55.0 ksi yield strength

Girts Spacing: 7'6 6'6

Bay #	Elev. (ft-in)	Length (ft)	Member Size Identification	Brace Locations	L Lap Exten	R Lap Exten
1	7'6	19.312	8X2.5Z16	F.O.	S 0.000	0.000 S
2	7'6	19.312	8X2.5Z16	F.O.	S 0.000	0.000 S
1	14'0	19.312	8X2.5C14	None	S 0.000	0.000 S
2	14'0	19.312	8X2.5C14	None	S 0.000	0.000 S

Framed Openings:

Width	Height	Sill Ht	Jamb	Header/Sill	Bay	Distance
16'0	14'0	N/A	8X2.5C16	Toe up Cee	1	2'6
16'0	14'0	N/A	8X2.5C16	Toe up Cee	2	1'0

Columns ----- (0.000" Inset columns)

Col #	Dist. from left	Description Member Size Ident.	Base Elev (ft)	Base plate design information Thickness & rods
5-B	20.000'	Frame Line 5		

Endwall Column to Bridge Channel Connections:

Col. No.	Strut-to-Column Clip Endwall Plane 5
Plane SWA:	
5-B	At Peak, Type 3 Conn.,(4)-1/2" A325N CF Brdg Channel (0.375") w/ (4)-3/4" A325N bolts W8x10 Column Extension w/ 12.000" lap length 8X2.5C12 Bridge Channel
Plane SWC:	

Frames -----	Type	Span	Live	Wind	Eave	Trib	Grid Labels
	CS	40.000	20.00	110.00	16.00	19.75	2,4
	CS	40.000	20.00	110.00	16.00	20.00	3
	MS	40.000	20.00	110.00	16.00	10.25	1
	MS	40.000	20.00	110.00	16.00	10.25	5

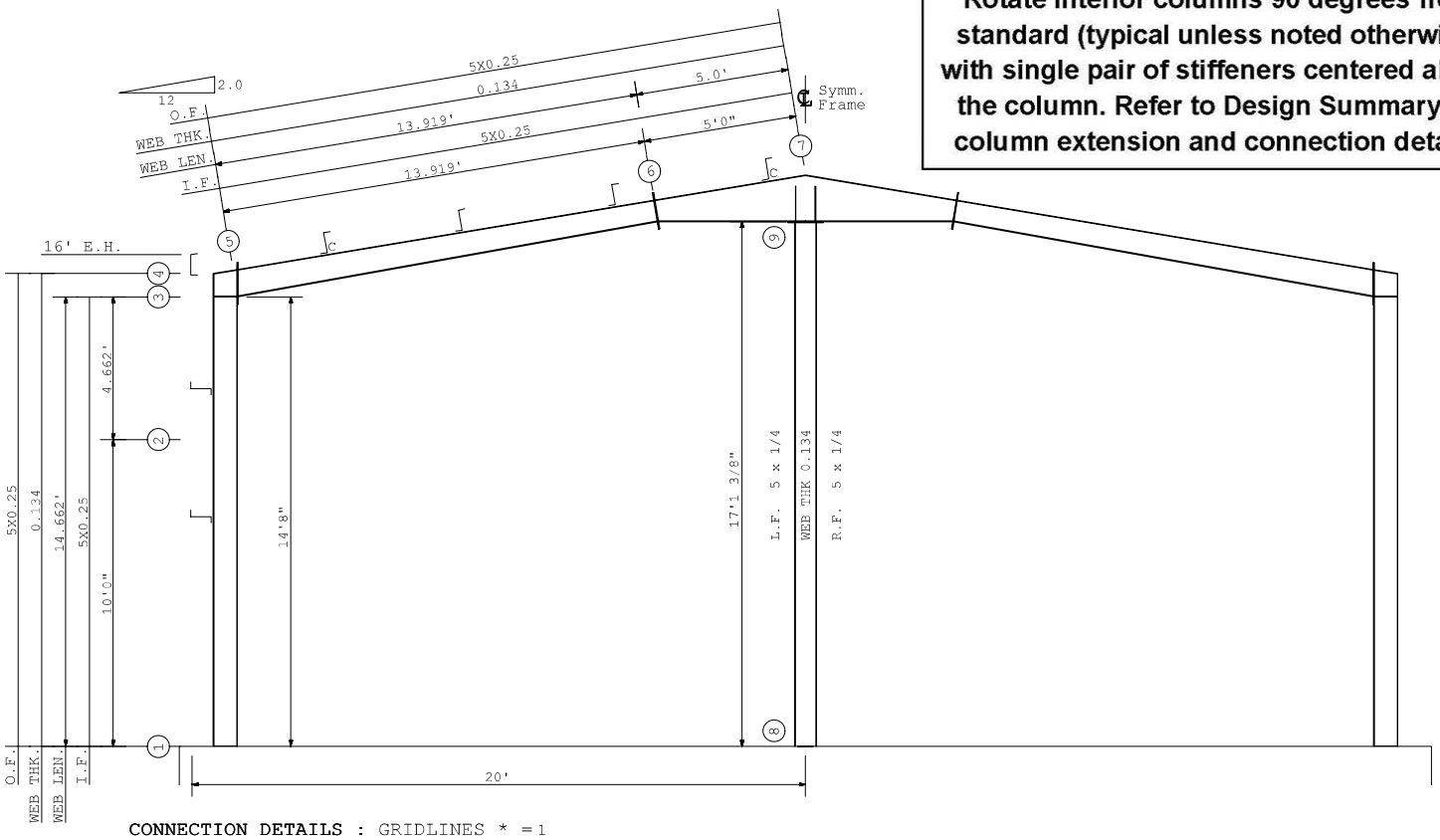
Note: Use square anchor rod layout.

Heritage Building Systems | **FRAME ID #**3 | **USER NAME:**Rafael.arcerabad | **DATE:**12/03/25 **TIME:**17:11:05 **PAGE:** 3 -1
8600 S. I-35, Oklahoma City, OK 73149 | ms1 40./16./10.25 20./110./43. | **JOB NAME:**91454A | **FILE:**frame_1.fra

LOCATION: Gridlines 1
DETAIL FILE: \20-B-91454\ver01-rafael.arcerabadan\BLDG-A\Drftg\x03L
BOLTS:A325 FULLY TIGHT WEIGHT: 1340 lbs
PURLINS(horz. from eave) :8"-Z 2@4'4 13/16",2@5'
GIRTS (vert. from floor): 8"-Z 7'6",4'2"(8.25")

(1) All sectional dimensions are in inches.
(2) All Flange lengths are measured along outer flange.

Rotate interior columns 90 degrees from standard (typical unless noted otherwise) with single pair of stiffeners centered above the column. Refer to Design Summary for column extension and connection details.



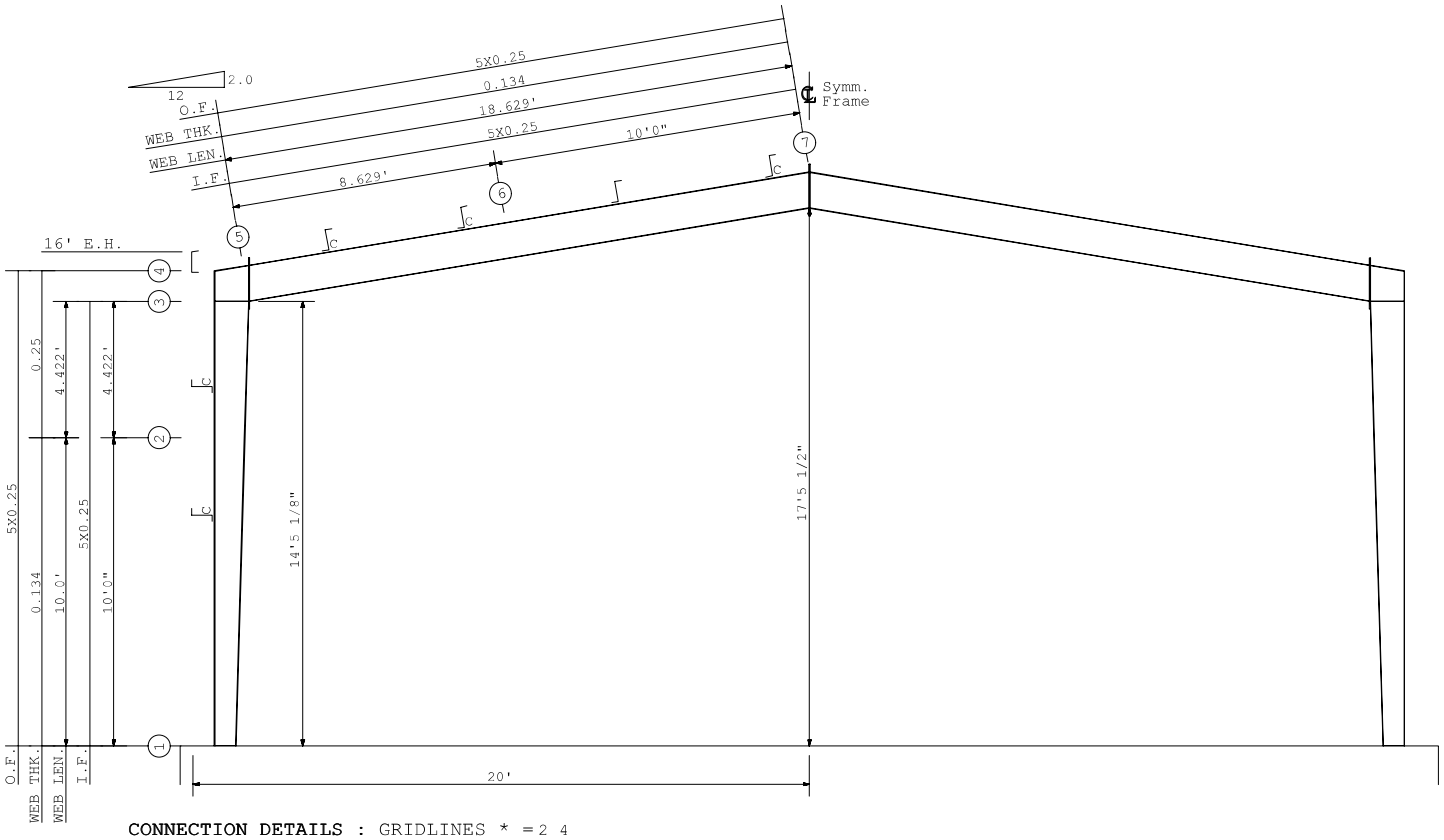
CONNECTION DETAILS : GRIDLINES * = 1

Location	1 *-C	2	3	4	5	6	7	8 *-B	9
Web Dep.	9.0	9.0	9.0	N/A	10.0	8.0	17.5135	8.0	8.0
Type	BASE	SPLICE	HORZ STF	CAP (EXT)	2E/2E	2E/2E	SPLICE	BASE	CAP/STF
Plate(DN)	6.0X0.375	N/A	2.375X0.25	5.0X0.25	8.0X0.75	6.0X0.375	N/A	6.0X0.375	6.0X0.375
Plate(UP)	N/A	N/A	N/A	N/A	8.0X0.75	6.0X0.375	N/A	N/A	2.375X0.3125
Bolts	(4)-3/4	N/A	N/A	N/A	(8)-3/4	(8)-3/4	N/A	(4)-3/4	(4)-1/2

Heritage Building Systems | **FRAME ID #1** | **USER NAME:**Rafael.arcerabad | **DATE:**12/03/25 **TIME:**17:10:50 **PAGE:** 1 -1
8600 S. I-35, Oklahoma City, OK 73149 | cs 40./16./19.75 20./110./43. | **JOB NAME:**91454A | **FILE:**frames_2_4.fra

LOCATION: Gridlines 2 4
DETAIL FILE: \20-B-91454\ver01-rafael.arcerabadan\BLDG-A\Drftg\x01L
BOLTS:A325 FULLY TIGHT WEIGHT: 1248 lbs
PURLINS(horz. from eave) :8"-Z 2@4'4 13/16",2@5'
GIRTS (vert. from floor): 8"-Z 7'6",4'2"(8.25")

(1) All sectional dimensions are in inches.
(2) All Flange lengths are measured along outer flange.

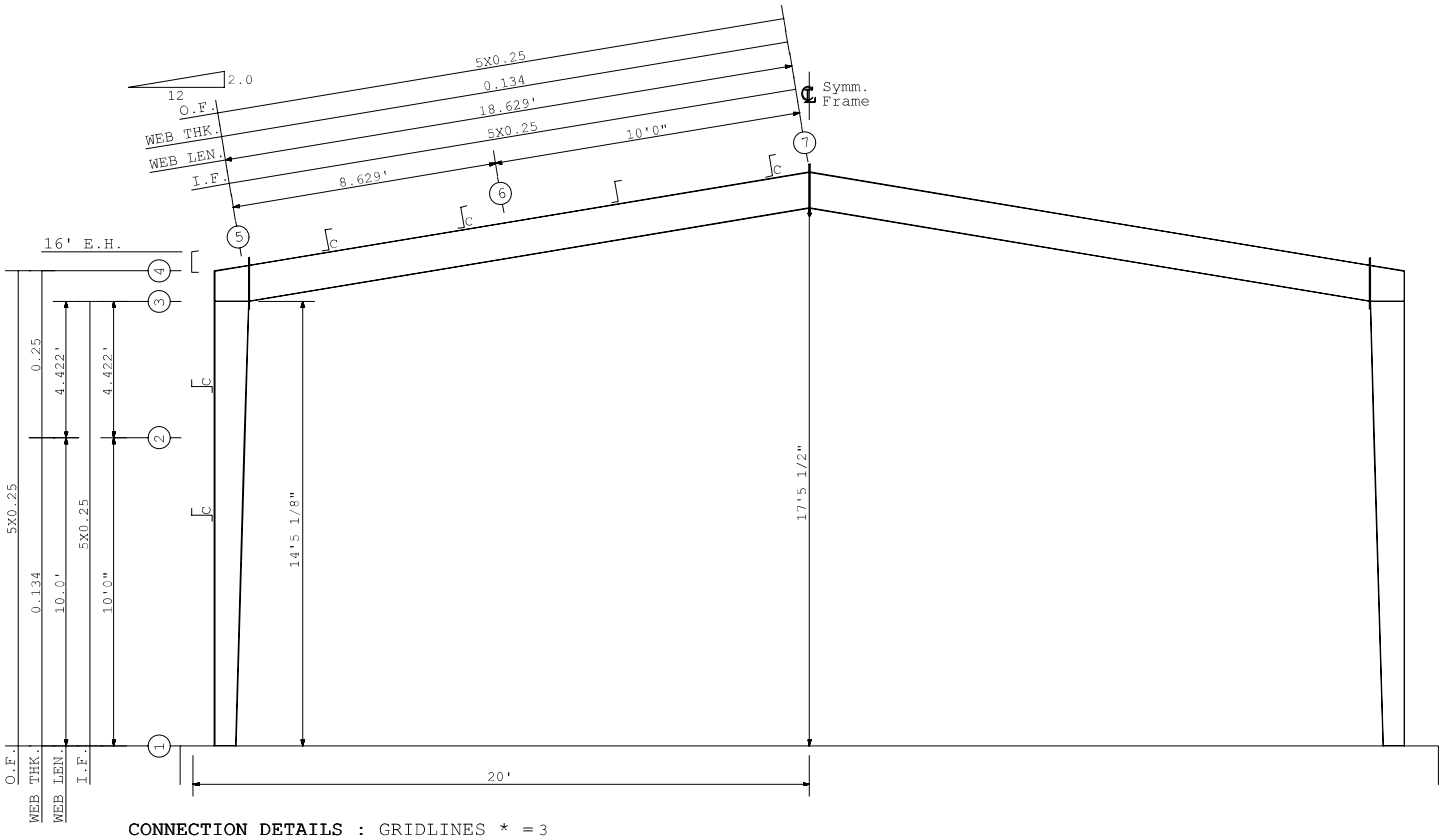


CONNECTION DETAILS : GRIDLINES * = 2 4

Location	(1)*-C	(2)	(3)	(4)	(5)	(6)	(7)
Web Dep.	8.0	11.4668	13.0	N/A	13.5	13.5	13.5
Type	BASE	SPLICE	HORZ STF	CAP (EXT)	2E/2E	SPLICE	2E/2E
Plate(DN)	6.0X0.375	N/A	2.375X0.25	5.0X0.25	6.0X0.75	N/A	6.0X0.5
Plate(UP)	N/A	N/A	N/A	N/A	6.0X0.75	N/A	6.0X0.5
Bolts	(4)-3/4	N/A	N/A	N/A	(8)-3/4	N/A	(8)-3/4

LOCATION: Gridlines 3
DETAIL FILE: \20-B-91454\ver01-rafael.arcerabadan\BLDG-A\Drftg\x02L
BOLTS:A325 FULLY TIGHT WEIGHT: 1248 lbs
PURLINS(horz. from eave) :8"-Z 2@4'4 13/16",2@5'
GIRTS (vert. from floor): 8"-Z 7'6",4'2"(8.25")

(1) All sectional dimensions are in inches.
(2) All Flange lengths are measured along outer flange.



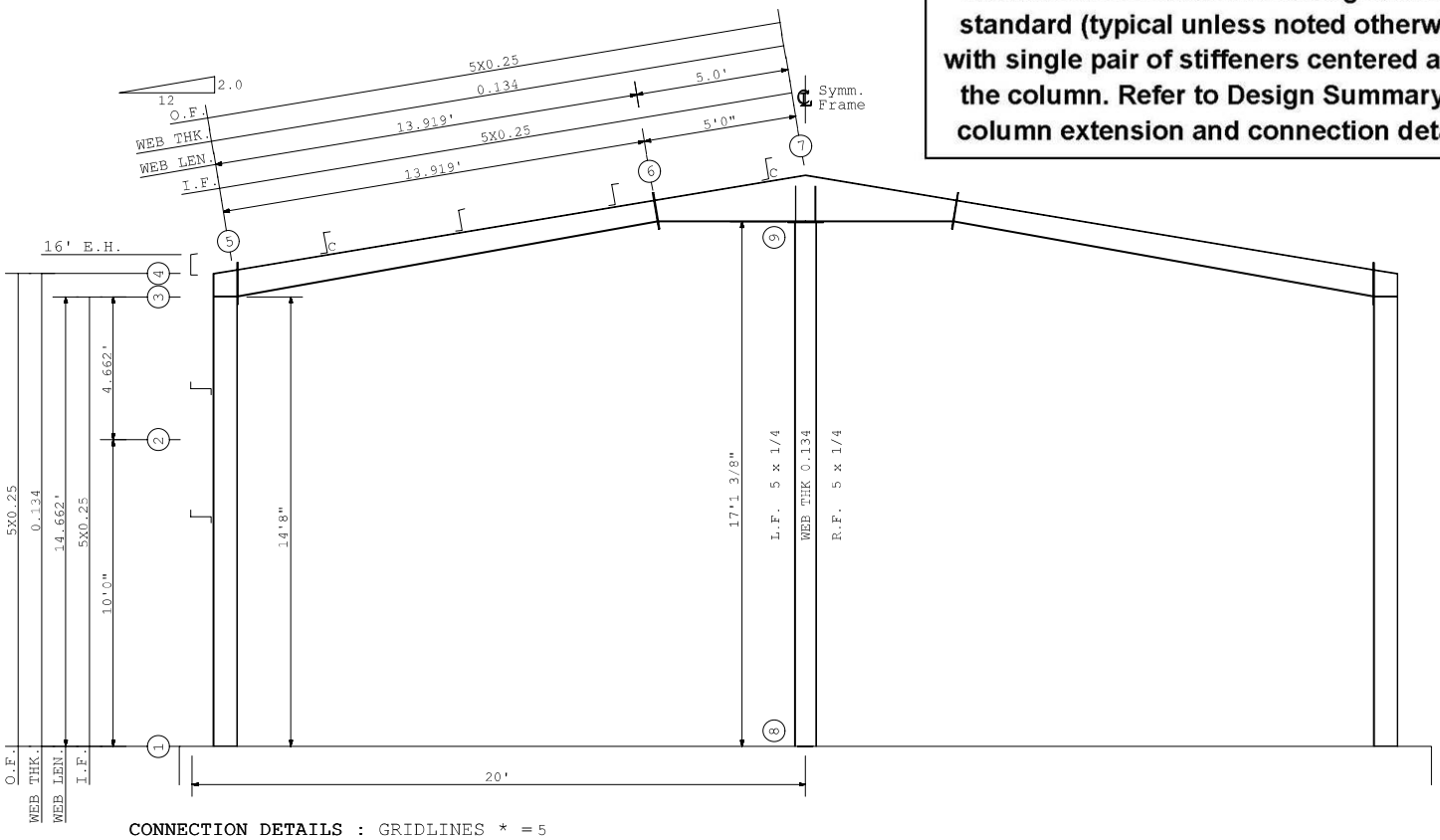
CONNECTION DETAILS : GRIDLINES * = 3

Location	(1)*-C	(2)	(3)	(4)	(5)	(6)	(7)
Web Dep.	8.0	11.4668	13.0	N/A	13.5	13.5	13.5
Type	BASE	SPLICE	HORZ STF	CAP (EXT)	2E/2E	SPLICE	2E/2E
Plate(DN)	6.0X0.375	N/A	2.375X0.25	5.0X0.25	6.0X0.75	N/A	6.0X0.5
Plate(UP)	N/A	N/A	N/A	N/A	6.0X0.75	N/A	6.0X0.5
Bolts	(4)-3/4	N/A	N/A	N/A	(8)-3/4	N/A	(8)-3/4

LOCATION: Gridlines 5
DETAIL FILE: \20-B-91454\ver01-rafael.arcerabadan\BLDG-A\Drftg\x04L
BOLTS:A325 FULLY TIGHT WEIGHT: 1340 lbs
PURLINS(horz. from eave) :8"-Z 2@4'4 13/16",2@5'
GIRTS (vert. from floor): 8"-Z 7'6",4'2"(8.25")

(1) All sectional dimensions are in inches.
(2) All Flange lengths are measured along outer flange.

Rotate interior columns 90 degrees from standard (typical unless noted otherwise) with single pair of stiffeners centered above the column. Refer to Design Summary for column extension and connection details.



CONNECTION DETAILS : GRIDLINES * = 5

Location	(1)*-C	(2)	(3)	(4)	(5)	(6)	(7)	(8)*-B	(9)
Web Dep.	9.0	9.0	9.0	N/A	10.0	8.0	17.5135	8.0	8.0
Type	BASE	SPLICE	HORZ STF	CAP (EXT)	2E/2E	2E/2E	SPLICE	BASE	CAP/STF
Plate(DN)	6.0X0.375	N/A	2.375X0.25	5.0X0.25	8.0X0.75	6.0X0.375	N/A	6.0X0.375	6.0X0.375
Plate(UP)	N/A	N/A	N/A	N/A	8.0X0.75	6.0X0.375	N/A	N/A	2.375X0.3125
Bolts	(4)-3/4	N/A	N/A	N/A	(8)-3/4	(8)-3/4	N/A	(4)-3/4	(4)-1/2

Building: BLDG-A

CDS file name: 20-B-91454_BLDG-A_Eds2Tekla.cds

Planes

Name	File
SWA	\ver01-rafael.arcerabadan\BLDG-A\run01\AwallSWA_01.edf
EWD	\ver01-rafael.arcerabadan\BLDG-A\run01\AwallEWD_01.edf
SWC	\ver01-rafael.arcerabadan\BLDG-A\run01\AwallSWC_01.edf
EWB	\ver01-rafael.arcerabadan\BLDG-A\run01\AwallEWB_01.edf
RPA	\ver01-rafael.arcerabadan\BLDG-A\run01\AroofRPA_01.edf
RPC	\ver01-rafael.arcerabadan\BLDG-A\run01\AroofRPC_01.edf

Frames

Frame Line	Left Frame	Left File	Right Frame	Right File
1	E	\ver01-rafael.arcerabadan\BLDG-A\DRFTG\x03L	E	\ver01-rafael.arcerabadan\BLDG-A\DRFTG\x03L
2	F	\ver01-rafael.arcerabadan\BLDG-A\DRFTG\x01L	F	\ver01-rafael.arcerabadan\BLDG-A\DRFTG\x01L
3	G	\ver01-rafael.arcerabadan\BLDG-A\DRFTG\x02L	G	\ver01-rafael.arcerabadan\BLDG-A\DRFTG\x02L
4	F	\ver01-rafael.arcerabadan\BLDG-A\DRFTG\x01L	F	\ver01-rafael.arcerabadan\BLDG-A\DRFTG\x01L
5	H	\ver01-rafael.arcerabadan\BLDG-A\DRFTG\x04L	H	\ver01-rafael.arcerabadan\BLDG-A\DRFTG\x04L

Portal Frames

Plane Name	Bay	Frame	File

REACTIONS

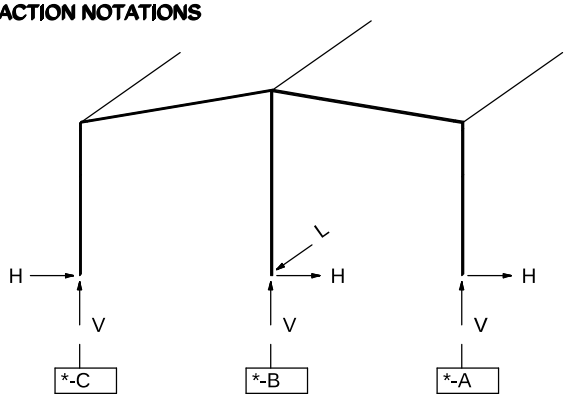
BUILDER: CITY OF OGDEN-212366
CUSTOMER: MARA BROWN
JOB NUMBER: 20-B-91454

Notes

1. The reactions provided are based on the Order Documents at the time of mailing. Any changes to building loads or dimensions may change the reactions. The reactions will be superseded and voided by any future mailing.
2. The reactions provided have been created with the following layout (unless noted otherwise).
    a. A reaction table is provided with the reactions for each load group.
    b. Rigid Frames
    See Note 3.
    c. Endwalls
        1. See Note 3.
    d. X-Bracing
        1. X- Bracing reactions are included in values shown in the reaction tables.
        2. For IBC and UBC based building codes, when x-bracing is present in the sidewall, individual longitudinal seismic loads (RBUPEQ, RBDWEQ, E+, E- and LEQ) do **not** include the amplification factor, W
        3. For IBC and UBC based building codes, when x-bracing is present in the endwall, individual transverse seismic loads (EL & ER) do **not** include the amplification factor, W
    e. The metal building manufacturer is responsible only for the portion of the anchor rod design pertaining to the transfer of forces between the base plate bearing and the anchor rod’s shear and tension. The metal building manufacturer is not responsible for the anchor rod embedment for transfer of forces to the foundation. The metal building manufacturer does not design and is not responsible for the design, material, and construction of the foundation embedments. The end use customer shall assure that adequate provisions are made to the foundation design for loads imposed by column reactions of the building, other imposed loads, and bearing capacity of the soil and other conditions of the building site. It is recommended that the anchorage and foundation of the building be designed by a registered professional engineer competent in the design of such structures.
        i. (ref. Appendix A3 of the MBMA Metal Building Systems Manual)
    f. Anchor rods are ASTM F1554 Gr. 36 material unless noted otherwise on the anchor rod layout drawing.
3. Reactions are provided as un-factored for each load group applied to the column. The factors applied to load groups for the steel column design may be different than the factors used in the foundation design. The foundation engineer shall apply the appropriate load factors and combine the reactions in accordance with the building code and design specifications for proper foundation design.
    a. For projects using ultimate design wind speeds such as 2012 IBC, 2015 IBC, or Florida building code, the wind load reactions are at a **strength** value with a load factor of 1.0.
    b. For IBC codes, the seismic reactions provided are at a **strength** level with a load factor of 1.0, and do not contain the rho factor.
    The manufacturer does not provide "maximum" load combination reactions. However, the individual load reactions provided may be used by the foundation engineer to determine the applicable load combinations for his/her design procedures and allow for an economical foundation design.

SUPPORT REACTIONS FOR EACH LOAD GROUP
***LOCATION: Gridlines:** 1
NOTES:(1) All reactions are in kips and kip-ft. **TIME:**17:11:05
(2) Primary wind load cases are not concurrent.
(3) X-bracing reactions (RBPULW and RBUPEQ) are combined withLWL and LEQ groups only.

REACTION NOTATIONS



LOAD GROUP REACTION TABLE GRIDLINES * = 1

COLUMN	*-C			*-A			*-B		
LOAD GROUP	H	V	L	H	V	L	H	V	L
DL	0.0	0.5	-0.0	-0.0	0.5	-0.0	0.0	1.0	-0.0
COLL	0.0	0.1	-0.0	-0.0	0.1	-0.0	0.0	0.2	-0.0
PLL1	0.1	2.0	-0.0	-0.1	-0.2	-0.0	0.0	2.3	-0.0
PLL2	0.1	-0.2	-0.0	-0.1	2.0	-0.0	-0.0	2.3	-0.0
SNOW	0.2	2.7	-0.0	-0.2	2.7	-0.0	0.0	6.9	-0.0
LL	0.2	1.8	-0.0	-0.2	1.8	-0.0	0.0	4.6	-0.0
EQ	-0.4	-0.3	-0.0	-0.4	0.3	-0.0	0.2	0.0	-0.4
WL1	-1.7	-3.0	-0.0	-1.6	-0.7	-0.0	0.0	-4.3	-0.0
WL2	-2.1	-2.1	-0.0	-1.2	0.2	-0.0	0.0	-3.1	-0.0
LWL1	0.9	-2.5	-0.0	-0.5	-1.7	-0.0	-0.0	-3.5	-3.1
LWL2	0.5	-1.7	-0.0	-0.9	-2.5	-0.0	-0.0	-3.5	-3.1
LWL3	0.5	-1.7	-0.0	-0.1	-0.9	-0.0	0.0	-2.3	3.1
LWL4	0.1	-0.9	-0.0	-0.5	-1.7	-0.0	0.0	-2.3	3.1
WL3	1.6	-0.7	-0.0	1.7	-3.0	-0.0	-0.0	-4.3	-0.0
WL4	1.2	0.2	-0.0	2.1	-2.1	-0.0	-0.0	-3.1	-0.0
SBAL	0.2	2.4	-0.0	-0.2	2.4	-0.0	0.0	6.3	-0.0
RS	0.2	0.4	-0.0	-0.2	2.9	-0.0	-0.0	5.3	-0.0
LS	0.2	2.9	-0.0	-0.2	0.4	-0.0	0.0	5.3	-0.0

LOAD GROUP DESCRIPTION

DL : Roof Dead Load
COLL : Roof Collateral Load
PLL1 : Pattern Live Load [PLLxx]
PLL2 : Pattern Live Load [PLLxx]
SNOW : Roof Snow Load
LL : Roof Live Load
EQ : Lateral Seismic Load [parallel to plane of frame]
WL1 : Wind from Left to Right with +GCpi
WL2 : Wind from Left to Right with -GCpi
LWL1 : Windward Corner Left with +GCpi
LWL2 : Windward Corner Right with +GCpi
LWL3 : Windward Corner Left with -GCpi
LWL4 : Windward Corner Right with -GCpi
WL3 : Wind from Right to Left with +GCpi
WL4 : Wind from Right to Left with -GCpi
SBAL : Code Calculated Balanced Roof Snow Load
RS : Unbalanced Right Roof Snow Load
LS : Unbalanced Left Roof Snow Load

ADDITIONAL NOTES:

(1) Pattern live or snow load cases are not concurrent with any other live or snow load cases.

SUPPORT REACTIONS FOR EACH LOAD GROUP

***LOCATION: Gridlines:** 2 4

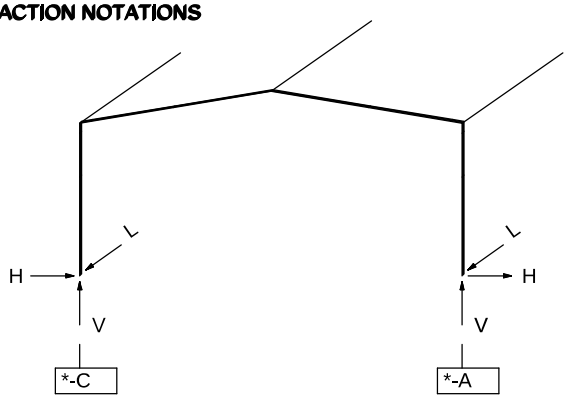
NOTES:(1) All reactions are in kips and kip-ft. **TIME:**17:10:50

(2) The seismic overstrength factor (Omega) is not included in the "RBDWEQ" and "RBUPEQ" Load Group reactions.
Seismic "BASE-ONLY" combination reactions include an overstrength factor of: 2.000

(3) Primary wind load cases are not concurrent.

(4) X-bracing reactions (RBPULW and RBUPEQ) are combined with LWL and LEQ groups only.

REACTION NOTATIONS



LOAD GROUP REACTION TABLE GRIDLINES * = 2 4

COLUMN	*-C			*-A		
LOAD GROUP	H	V	L	H	V	L
DL	0.4	1.4	-0.0	-0.4	1.4	-0.0
COLL	0.1	0.4	-0.0	-0.1	0.4	-0.0
SNOW	3.5	11.9	-0.0	-3.5	11.8	-0.0
LL	1.4	4.7	-0.0	-1.4	4.7	-0.0
RBDWEQ	-0.0	2.5	-0.0	0.0	2.5	-0.0
EQ	-0.7	-0.6	-0.0	-0.7	0.6	-0.0
RBUPEQ	0.0	-2.5	-3.1	-0.0	-2.5	-3.1
WL1	-3.4	-6.9	-0.0	-0.9	-4.1	-0.0
WL2	-3.7	-4.2	-0.0	-0.7	-1.4	-0.0
WL3	0.9	-4.1	-0.0	3.4	-6.9	-0.0
WL4	0.7	-1.4	-0.0	3.7	-4.2	-0.0
LWL1	0.4	-5.9	-0.0	-0.0	-4.9	-0.0
RBUPLW	0.0	-2.3	-2.9	-0.0	-2.3	-2.9
LWL2	0.0	-4.9	-0.0	-0.4	-5.9	-0.0
LWL3	0.2	-3.1	-0.0	0.2	-2.2	-0.0
LWL4	-0.2	-2.2	-0.0	-0.2	-3.1	-0.0
SBAL	3.2	10.7	-0.0	-3.2	10.7	-0.0
RS	2.7	6.0	-0.0	-2.7	10.7	-0.0

LOAD GROUP DESCRIPTION

DL	:	Roof Dead Load
COLL	:	Roof Collateral Load
SNOW	:	Roof Snow Load
LL	:	Roof Live Load
RBDWEQ	:	Downward Acting Rod Brace Load from Long. Seismic
EQ	:	Lateral Seismic Load [parallel to plane of frame]
RBUPEQ	:	Upward Acting Rod Brace Load from Long. Seismic
WL1	:	Wind from Left to Right with +GCpi
WL2	:	Wind from Left to Right with -GCpi
WL3	:	Wind from Right to Left with +GCpi
WL4	:	Wind from Right to Left with -GCpi
LWL1	:	Windward Corner Left with +GCpi
RBUPLW	:	Upward Acting Rod Brace Load from Long. Wind
LWL2	:	Windward Corner Right with +GCpi
LWL3	:	Windward Corner Left with -GCpi
LWL4	:	Windward Corner Right with -GCpi
SBAL	:	Code Calculated Balanced Roof Snow Load
RS	:	Unbalanced Right Roof Snow Load

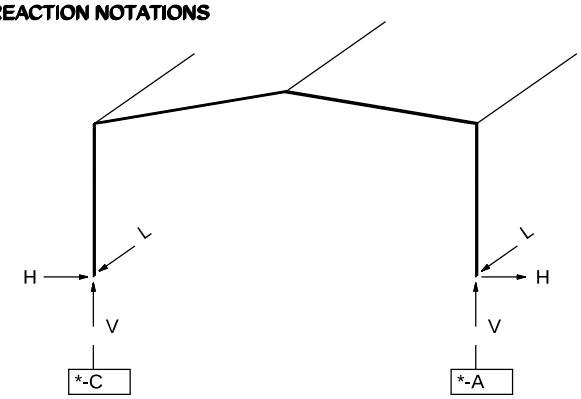
SUPPORT REACTIONS FOR EACH LOAD GROUP

***LOCATION: Gridlines:** 2 4

TIME:17:10:50

NOTES:(1) All reactions are in kips and kip-ft.
(2) The seismic overstrength factor (Omega) is not included in the "RBDWEQ" and "RBUPEQ" Load Group reactions.
Seismic "BASE-ONLY" combination reactions include an overstrength factor of: 2.000
(3) Primary wind load cases are not concurrent.
(4) X-bracing reactions (RBPULW and RBUPEQ) are combined with LWL and LEQ groups only.

REACTION NOTATIONS



LOAD GROUP REACTION TABLE GRIDLINES * = 2 4

COLUMN	*-C			*-A		
LOAD GROUP	H	V	L	H	V	L
LS	2.7	10.7	-0.0	-2.7	6.0	-0.0
RBDWLW	-0.0	2.3	-0.0	0.0	2.3	-0.0

LOAD GROUP DESCRIPTION

LS : Unbalanced Left Roof Snow Load
RBDWLW : Downward Acting Rod Brace Load from Long. Wind

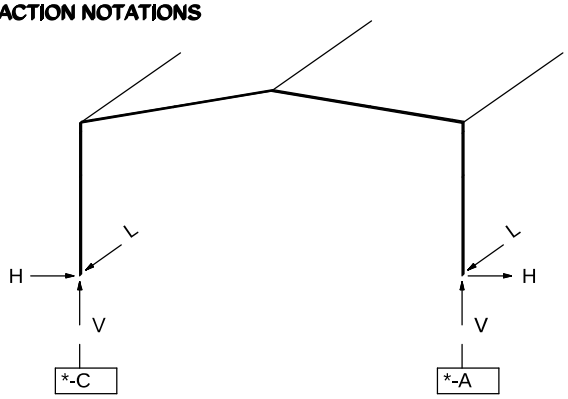
SUPPORT REACTIONS FOR EACH LOAD GROUP

***LOCATION**: **Gridlines**: 3

TIME:17:10:59

NOTES:(1) All reactions are in kips and kip-ft.
(2) The seismic overstrength factor (Omega) is not included in the "RBDWEQ" and "RBUPEQ" Load Group reactions.
Seismic "BASE-ONLY" combination reactions include an overstrength factor of: 2.000
(3) Primary wind load cases are not concurrent.
(4) X-bracing reactions (RBPULW and RBUPEQ) are combined with LWL and LEQ groups only.

REACTION NOTATIONS



LOAD GROUP REACTION TABLE GRIDLINES * = 3

COLUMN	*-C			*-A		
LOAD GROUP	H	V	L	H	V	L
DL	0.4	1.4	-0.0	-0.4	1.4	-0.0
COLL	0.1	0.4	-0.0	-0.1	0.4	-0.0
SNOW	3.6	12.0	-0.0	-3.6	12.0	-0.0
LL	1.4	4.8	-0.0	-1.4	4.8	-0.0
RBDWEQ	-0.0	2.5	-0.0	0.0	2.5	-0.0
EQ	-0.7	-0.6	-0.0	-0.7	0.6	-0.0
RBUPEQ	0.0	-2.5	-3.1	-0.0	-2.5	-3.1
WL1	-3.5	-7.0	-0.0	-0.9	-4.2	-0.0
WL2	-3.7	-4.2	-0.0	-0.7	-1.4	-0.0
WL3	0.9	-4.2	-0.0	3.5	-7.0	-0.0
WL4	0.7	-1.4	-0.0	3.7	-4.2	-0.0
LWL1	0.5	-5.9	-0.0	-0.0	-5.0	-0.0
RBUPLW	0.0	-2.3	-2.9	-0.0	-2.3	-2.9
LWL2	0.0	-5.0	-0.0	-0.5	-5.9	-0.0
LWL3	0.2	-3.2	-0.0	0.2	-2.2	-0.0
LWL4	-0.2	-2.2	-0.0	-0.2	-3.2	-0.0
SBAL	3.2	10.8	-0.0	-3.2	10.8	-0.0
RS	2.7	6.1	-0.0	-2.7	10.9	-0.0

LOAD GROUP DESCRIPTION

DL	:	Roof Dead Load
COLL	:	Roof Collateral Load
SNOW	:	Roof Snow Load
LL	:	Roof Live Load
RBDWEQ	:	Downward Acting Rod Brace Load from Long. Seismic
EQ	:	Lateral Seismic Load [parallel to plane of frame]
RBUPEQ	:	Upward Acting Rod Brace Load from Long. Seismic
WL1	:	Wind from Left to Right with +GCpi
WL2	:	Wind from Left to Right with -GCpi
WL3	:	Wind from Right to Left with +GCpi
WL4	:	Wind from Right to Left with -GCpi
LWL1	:	Windward Corner Left with +GCpi
RBUPLW	:	Upward Acting Rod Brace Load from Long. Wind
LWL2	:	Windward Corner Right with +GCpi
LWL3	:	Windward Corner Left with -GCpi
LWL4	:	Windward Corner Right with -GCpi
SBAL	:	Code Calculated Balanced Roof Snow Load
RS	:	Unbalanced Right Roof Snow Load

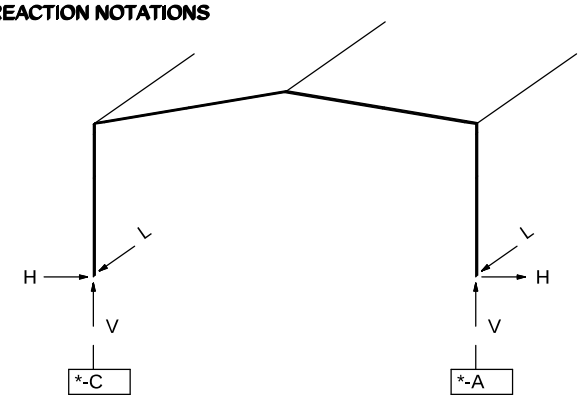
SUPPORT REACTIONS FOR EACH LOAD GROUP

*LOCATION: Gridlines: 3

TIME:17:10:59

NOTES:(1) All reactions are in kips and kip-ft.
(2) The seismic overstrength factor (Omega) is not included in the "RBDWEQ" and "RBUPEQ" Load Group reactions.
Seismic "BASE-ONLY" combination reactions include an overstrength factor of: 2.000
(3) Primary wind load cases are not concurrent.
(4) X-bracing reactions (RBPULW and RBUPEQ) are combined with LWL and LEQ groups only.

REACTION NOTATIONS



LOAD GROUP REACTION TABLE GRIDLINES * = 3

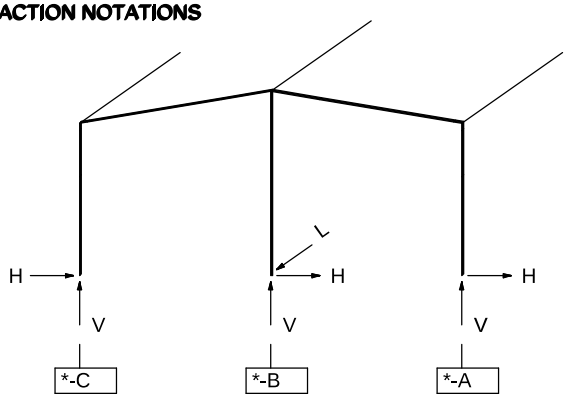
COLUMN	*-C			*-A		
LOAD GROUP	H	V	L	H	V	L
LS	2.7	10.9	-0.0	-2.7	6.1	-0.0
RBDWLW	-0.0	2.3	-0.0	0.0	2.3	-0.0

LOAD GROUP DESCRIPTION

LS : Unbalanced Left Roof Snow Load
RBDWLW : Downward Acting Rod Brace Load from Long. Wind

SUPPORT REACTIONS FOR EACH LOAD GROUP
***LOCATION**: **Gridlines**: 5
NOTES:(1) All reactions are in kips and kip-ft. **TIME**:17:10:54
(2) Primary wind load cases are not concurrent.
(3) X-bracing reactions (RBPULW and RBUPEQ) are combined withLWL and LEQ groups only.

REACTION NOTATIONS



LOAD GROUP REACTION TABLE GRIDLINES * = 5

COLUMN	*-C			*-A			*-B		
LOAD GROUP	H	V	L	H	V	L	H	V	L
DL	0.0	0.5	-0.0	-0.0	0.5	-0.0	0.0	1.0	-0.0
COLL	0.0	0.1	-0.0	-0.0	0.1	-0.0	0.0	0.2	-0.0
PLL1	0.1	2.0	-0.0	-0.1	-0.2	-0.0	0.0	2.3	-0.0
PLL2	0.1	-0.2	-0.0	-0.1	2.0	-0.0	-0.0	2.3	-0.0
SNOW	0.2	2.7	-0.0	-0.2	2.7	-0.0	0.0	6.9	-0.0
LL	0.2	1.8	-0.0	-0.2	1.8	-0.0	0.0	4.6	-0.0
EQ	-0.4	-0.3	-0.0	-0.4	0.3	-0.0	0.2	0.0	-0.4
WL1	-1.7	-3.0	-0.0	-1.6	-0.7	-0.0	0.0	-4.3	-0.0
WL2	-2.1	-2.1	-0.0	-1.2	0.2	-0.0	0.0	-3.1	-0.0
LWL1	0.9	-2.5	-0.0	-0.5	-1.7	-0.0	-0.0	-3.5	-3.1
LWL2	0.5	-1.7	-0.0	-0.9	-2.5	-0.0	-0.0	-3.5	-3.1
LWL3	0.5	-1.7	-0.0	-0.1	-0.9	-0.0	0.0	-2.3	3.1
LWL4	0.1	-0.9	-0.0	-0.5	-1.7	-0.0	0.0	-2.3	3.1
WL3	1.6	-0.7	-0.0	1.7	-3.0	-0.0	-0.0	-4.3	-0.0
WL4	1.2	0.2	-0.0	2.1	-2.1	-0.0	-0.0	-3.1	-0.0
SBAL	0.2	2.4	-0.0	-0.2	2.4	-0.0	0.0	6.3	-0.0
RS	0.2	0.4	-0.0	-0.2	2.9	-0.0	-0.0	5.3	-0.0
LS	0.2	2.9	-0.0	-0.2	0.4	-0.0	0.0	5.3	-0.0

LOAD GROUP DESCRIPTION

DL	:	Roof Dead Load
COLL	:	Roof Collateral Load
PLL1	:	Pattern Live Load [PLLxx]
PLL2	:	Pattern Live Load [PLLxx]
SNOW	:	Roof Snow Load
LL	:	Roof Live Load
EQ	:	Lateral Seismic Load [parallel to plane of frame]
WL1	:	Wind from Left to Right with +GCpi
WL2	:	Wind from Left to Right with -GCpi
LWL1	:	Windward Corner Left with +GCpi
LWL2	:	Windward Corner Right with +GCpi
LWL3	:	Windward Corner Left with -GCpi
LWL4	:	Windward Corner Right with -GCpi
WL3	:	Wind from Right to Left with +GCpi
WL4	:	Wind from Right to Left with -GCpi
SBAL	:	Code Calculated Balanced Roof Snow Load
RS	:	Unbalanced Right Roof Snow Load
LS	:	Unbalanced Left Roof Snow Load

ADDITIONAL NOTES:

(1) Pattern live or snow load cases are not concurrent with any other live or snow load cases.

Galvalume Roof

White Trim

Desert Sand Sides

Pre-colored metal siding and roof.

BLDG-C

SHEET

REVISION 0

REV	DATE	DESCRIPTION
0	MM/DD/YY	DESCRIPTION

DESIGNED ▶ DBR
DRAWN ▶ DBR
CHECKED ▶ DSG

DATE 12/23/2025

DRAWING SCALE
H: 1" = 20' (22x34)
1" = 40' (11x17)
V: 1" = 5' (22x34)
1" = 10' (11x17)

This bar measures exactly one inch on the original drawing

BUILDING COLORS

EL MONTE CART SHED

1300 VALLEY DR

PLOT DATE: 12/24/2025 8:40 AM

DRAWING NAME: Foundation Detail.dwg

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