



# Bull Run TREATMENT PROJECTS

# Filtration

## Technical Memorandum

**Subject:** Filtration Facility Architectural Plans

**PWB Project #s:** W02229

**Date:** September 23, 2022

**To:** Lyda Hakes, P.E., Project Manager  
Portland Water Bureau

**From:** Mark Graham, P.E., Project Manager  
Stantec

**Prepared by:** Casey Hagerman, AIA  
MWA Architects

**Reviewed by:** Mark Graham, P.E.  
Stantec

Jeff McGraw, AIA  
MWA Architects



in association with  
  
and other firms

The set of drawings attached to this technical memorandum (TM) were prepared in support of the City of Portland Water Bureau’s Bull Run Treatment Facilities’ land use applications in Multnomah County. These drawings reflect the current status of the Filtration Facility design, which is approximately 90% complete as of the date of this TM. The drawings have been prepared and compiled for the specific purpose of addressing conformance to Multnomah County land use requirements as expressed in the Multnomah County Code.

The contents of the set of drawings are listed in the table below.

Table 1. Architectural Plans		
Drawing Number	Area Description	Drawing Description
LU-GEN-A-012	Site Plan	Site plan showing occupiable vs. utilitarian areas
LU-11-A-302	Administration Building	Overall First Floor Plan
LU-11-A-305	Administration Building	Second Floor Plan – Offices/Lab
LU-11-A-401	Administration Building	Elevations – 1
LU-11-A-402	Administration Building	Elevations – 2
LU-11-A-403	Administration Building	Elevations – 3
LU-11-A-501	Administration Building	Building Sections – 1
LU-11-A-502	Administration Building	Building Sections – 2
LU-12-A-301	Maintenance Building	First Floor Plan
LU-12-A-401	Maintenance Building	Elevations
LU-12-A-501	Maintenance Building	Building Sections
LU-12-A-601	Storage Building	Plans, Elevation and Section
LU-12-A-602	Recycle Enclosure	Plans, Elevation and Section
LU-15-A-107	Main Electrical Complex	Floor Plan
LU-15-A-108	Main Electrical Complex	Elevations
LU-15-A-109	Main Electrical Complex	Sections
LU-16-A-100	North Electrical Complex	Floor Plan
LU-16-A-101	North Electrical Complex	Elevations
LU-16-A-102	North Electrical Complex	Sections
LU-30-A-302	Treatment Process Complex	Lower Floor Plan
LU-30-A-303	Treatment Process Complex	Upper Floor Plan
LU-30-A-401	Treatment Process Complex	Sections
LU-30-A-501	Treatment Process Complex	Elevations
LU-31-A-401	Flash Mix Building	Elevations 1
LU-31-A-402	Flash Mix Building	Elevations 2
LU-35-A-401	Filter Building	Elevations 1
LU-35-A-402	Filter Building	Elevations 2

Table 1. Architectural Plans		
Drawing Number	Area Description	Drawing Description
LU-40-A-301	Finished Water Electrical and Stair Buildings	Floor Plan
LU-40-A-401	Finished Water Electrical Building	Elevations 1
LU-40-A-402	Finished Water Flash Mix Building	Elevations 2
LU-40-A-403	Finished Water Stair Building	Elevations
LU-40-A-501	Finished Water	Building Sections
LU-46-A-301	Pleasant Home Pump Station	Overall Plans
LU-46-A-401	Pleasant Home Pump Station	Elevations
LU-46-A-501	Pleasant Home Pump Station	Building Sections
LU-51-A-301	Washwater Clarification Enclosure	Plan, Elevations
LU-65-A-301	Mechanical Dewatering	Level 1 Floor Plan
LU-65-A-302	Mechanical Dewatering	Level 2 Floor Plan
LU-65-A-401	Mechanical Dewatering	Exterior Elevations
LU-65-A-501	Mechanical Dewatering	Building Sections
LU-70-A-100	Chemical Building	Floor Plans
LU-70-A-101	Chemical Building	Exterior Elevations – 1
LU-70-A-102	Chemical Building	Exterior Elevations – 2
LU-70-A-103	Chemical Building	Building Sections
LU-81-A-100	Ozone Generation Building	Floor Plan
LU-81-A-101	Ozone Generation Building	Exterior Elevations
LU-81-A-102	Ozone Generation Building	Building Sections
LU-93-A-100	Electrical Building	Floor Plan
LU-93-A-101	Electrical Building	Elevations
LU-93-A-102	Electrical Building	Sections

## **Attachment A: Architectural Plans**

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46 Pleasant Home Pump Station

Stormwater Area

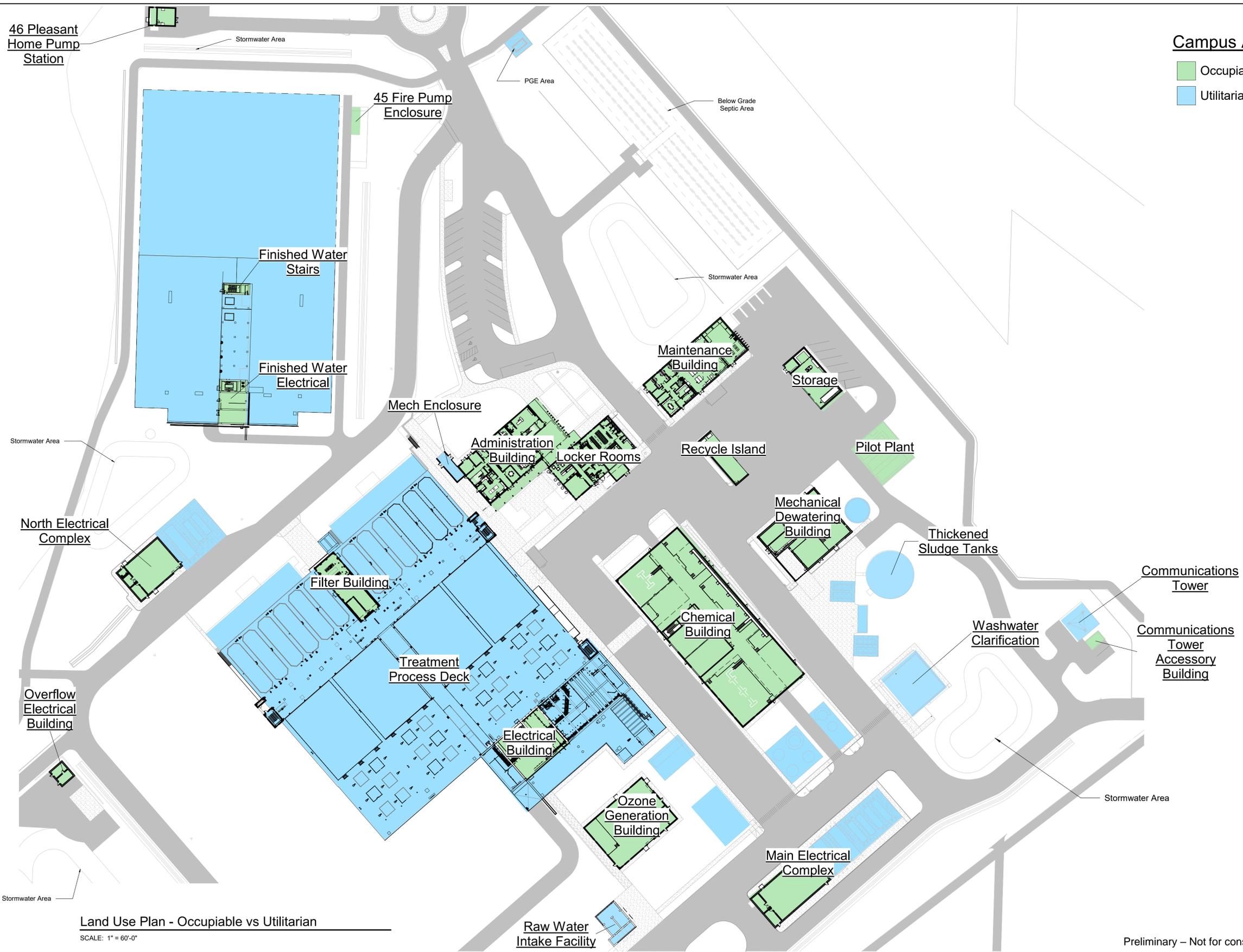
45 Fire Pump Enclosure

PGE Area

Below Grade Septic Area

**Campus Area Types**

- Occupiable
- Utilitarian



**Land Use Plan - Occupiable vs Utilitarian**

SCALE: 1" = 60'-0"

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Checked By	Const Supvr	RM
Project Mgr	Date	08/15/22

**PORTLAND WATER BUREAU**

FROM FOREST TO FAUCET

David W. Peters, Engineering Manager, PE No 16683



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**Bull Run Filtration Facility**

**Architectural**

Land Use Site Plan



SAP Project No	W02229
1/4 Section	3765 / 3766
Sheet No	LU-GEN-A-012
of	









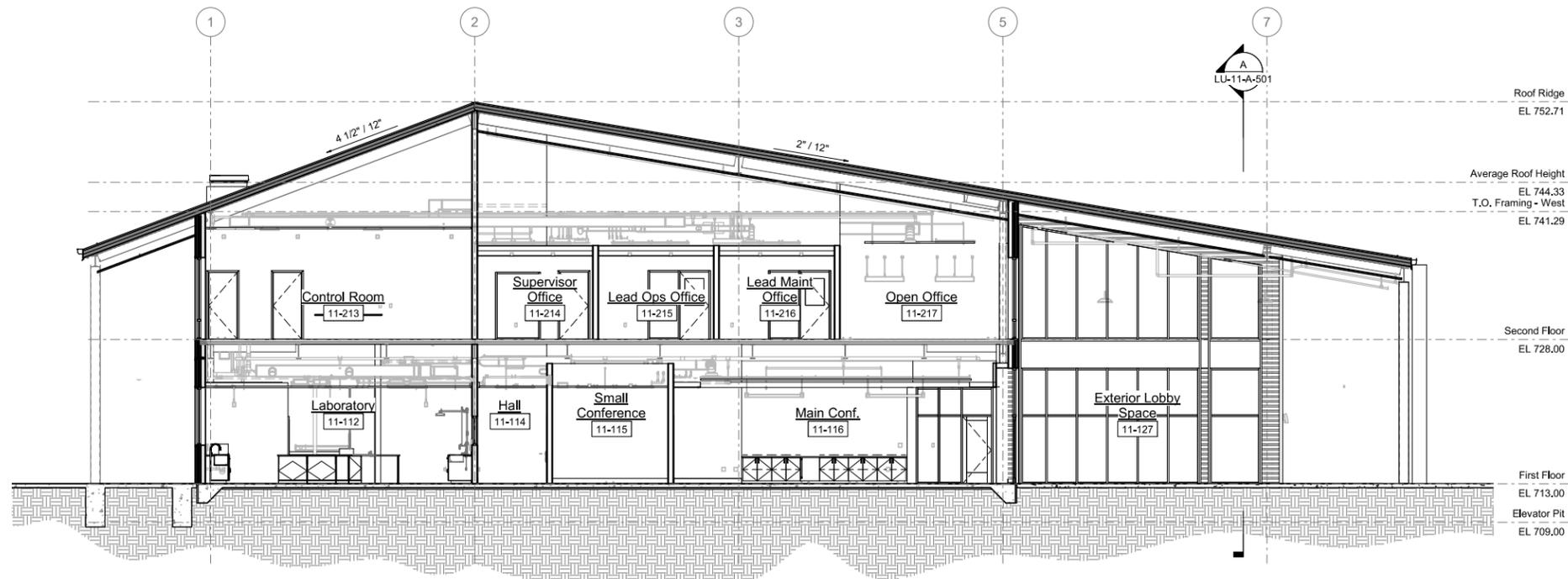


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**A** Section  
LU-11-A-302 SCALE: 1/8" = 1'-0"



**B** Section  
LU-11-A-302 SCALE: 1/8" = 1'-0"

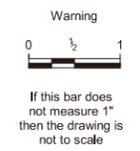


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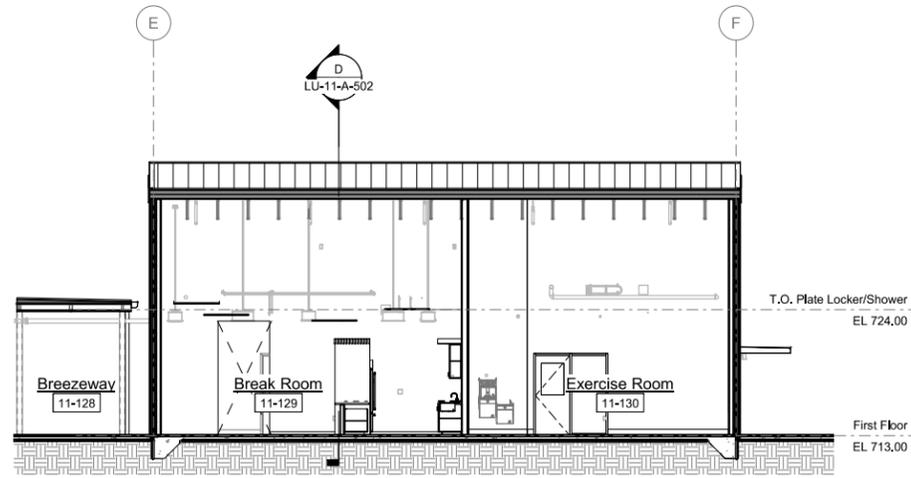


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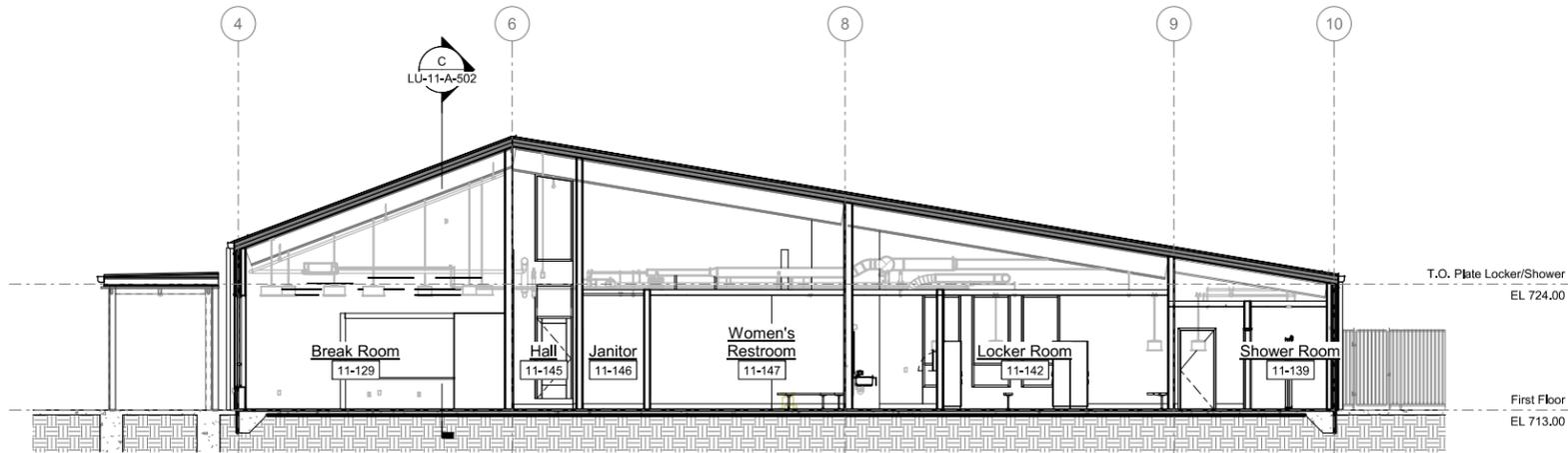


**Bull Run Filtration Facility**  
Architectural  
Administration Building  
Building Sections -1

SAP Project No	W02229
1/4 Section	3765 / 3766
Sheet No	LU-11-A-501
of	



**C** Section  
 LU-11-A-302 SCALE: 1/8" = 1'-0"



**D** Section  
 LU-11-A-302 SCALE: 1/8" = 1'-0"



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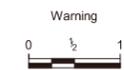
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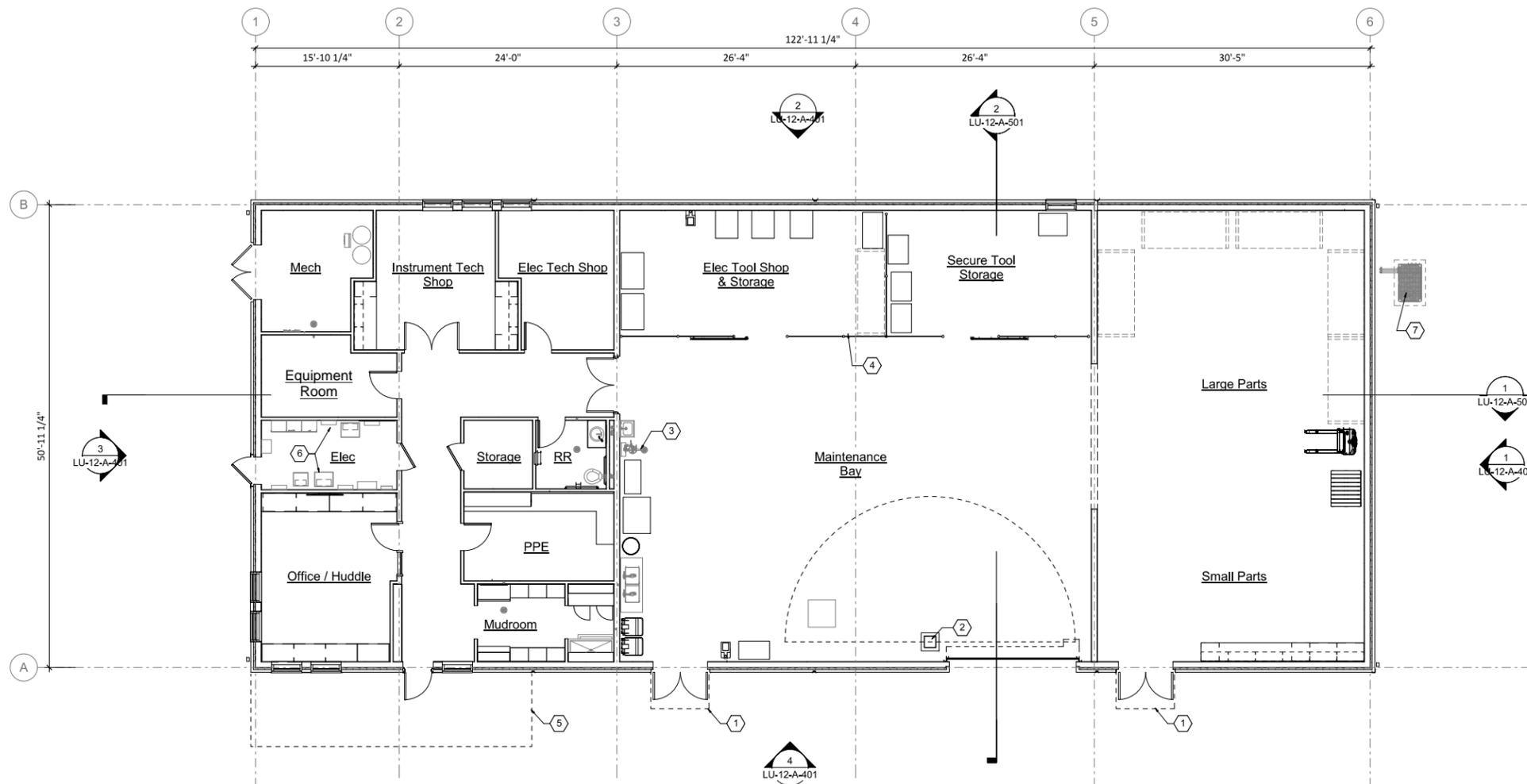
**Bull Run Filtration Facility**  
 Architectural  
 Administration Building  
 Building Sections - 2

SAP Project No	W022229
1/4 Section	3765 / 3766
Sheet No	LU-11-A-502
of	



Sheet Keynotes

- 1 Bent metal canopy
- 2 Jib Crane
- 3 Emergency Eyewash Shower
- 4 Chainlink Fence and Gate
- 5 Metal Framed Canopy
- 6 Electrical Equipment
- 7 HVAC Equipment



**1** Floor Plan  
 12-A-401 SCALE: 1/8" = 1'-0"

BIM 360/Bull Run Filtration Facility W02229\_FF\_12\_A.rvt

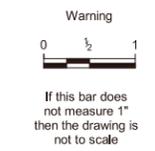


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**Bull Run Filtration Facility**  
 Architectural  
 Maintenance Building  
 First Floor Plan

SAP Project No	W02229
1/4 Section	3765 / 3766
Sheet No	LU-12-A-301
of	









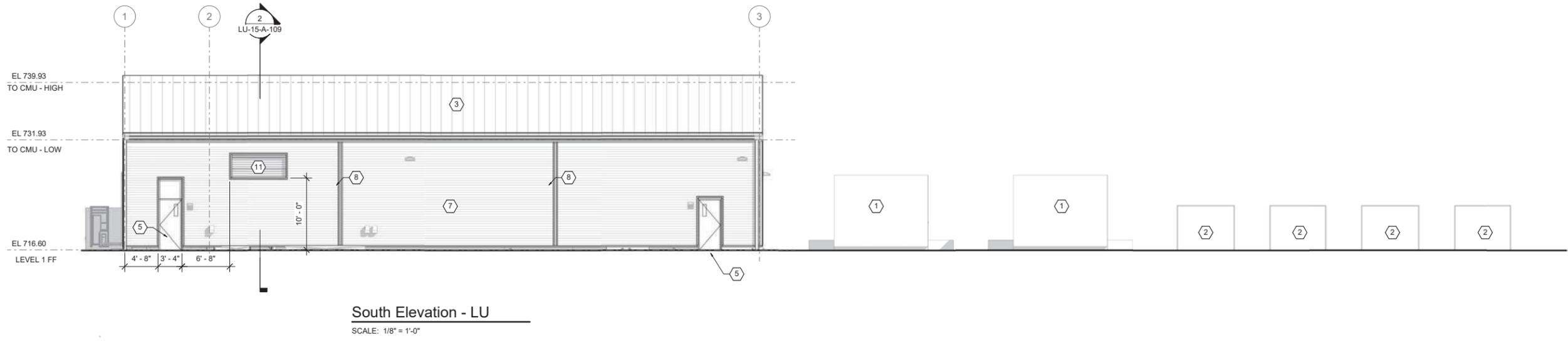
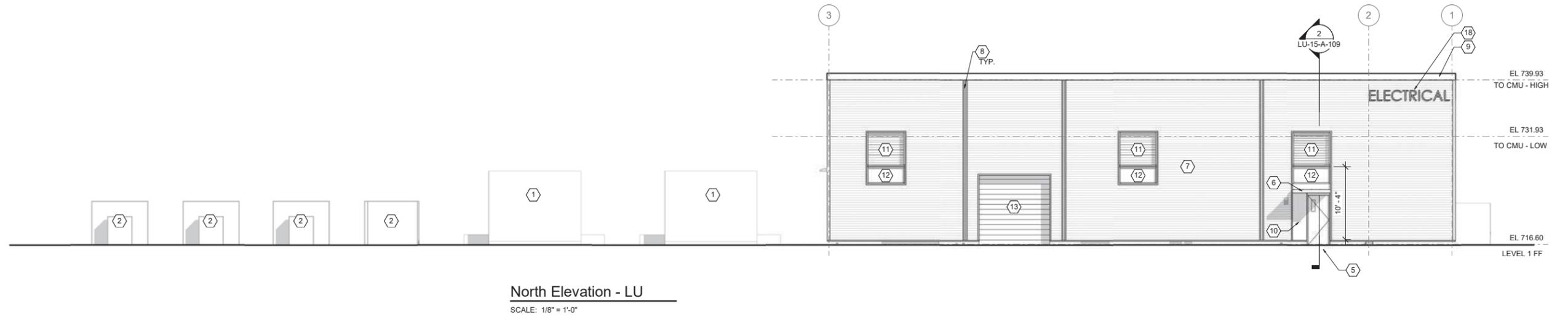
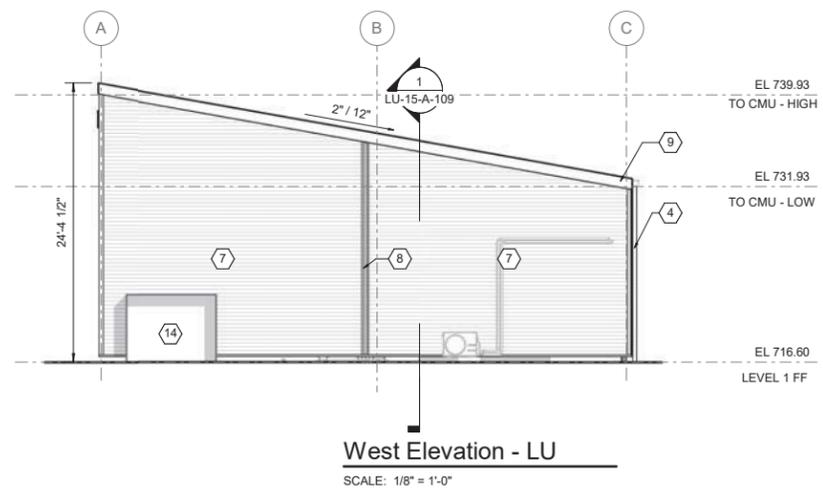
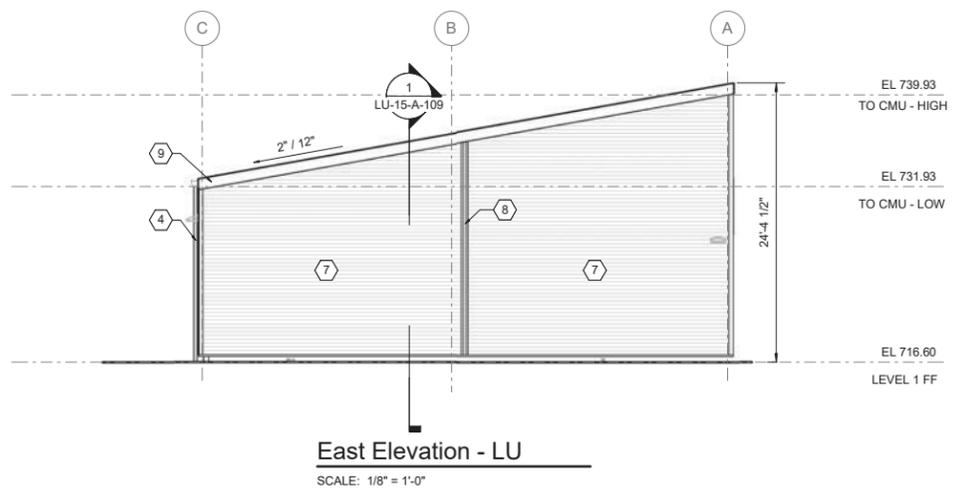


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SHEET KEYNOTE

- 1 Generator
- 2 Fuel Tanks
- 3 Standing seam metal roofing and flashings color light grey
- 4 Metal downspout
- 5 Hollow metal door
- 6 Bent metal canopy
- 7 Horizontal formed metal wall panel (FMP-1), color dark blue
- 8 Panel joint
- 9 Metal Fascia
- 10 Insulated metal wall panel (IMP-1), color medium grey
- 11 Metal louver
- 12 Aluminum storefront system
- 13 Overhead coiling door
- 14 Electrical equipment
- 18 Dimensional letter signage

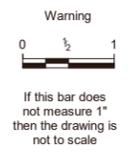


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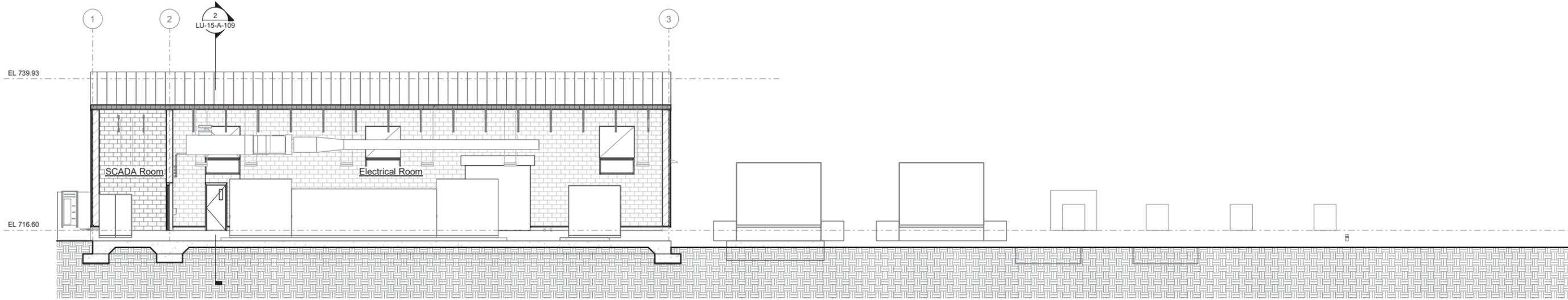


**Bull Run Filtration Facility**  
Architectural  
Main Electrical Complex  
Elevations

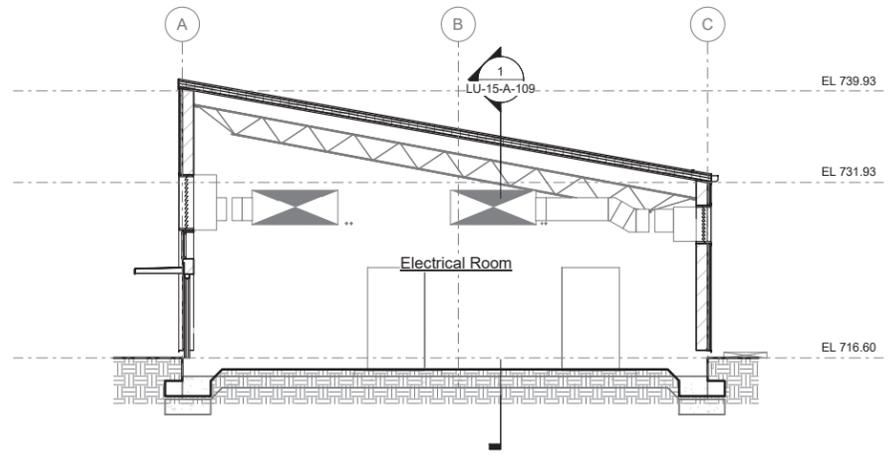
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1/4 Section	3765 / 3766
Sheet No	LU-15-A-108
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**Section 2**  
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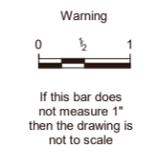


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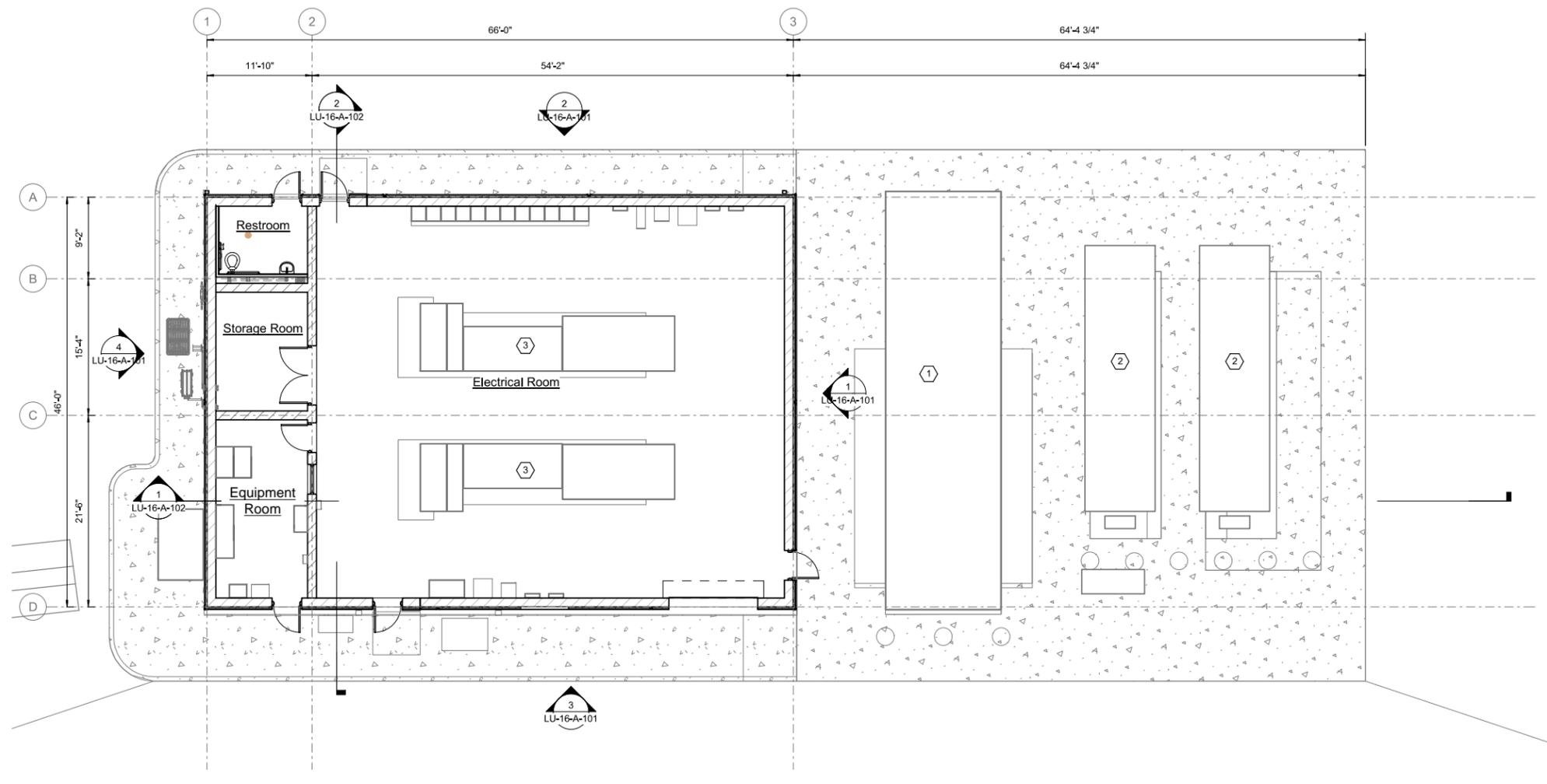


**Bull Run Filtration Facility**  
**Architectural**  
Main Electrical Complex  
Sections

SAP Project No	W02229
1/4 Section	3765 / 3766
Sheet No	LU-15-A-109
of	

SHEET KEYNOTE

- 1 Generator
- 2 Fuel tank
- 3 Electrical equipment



Floor Plan - LU  
SCALE: 1/8" = 1'-0"

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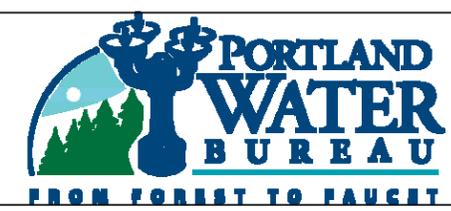
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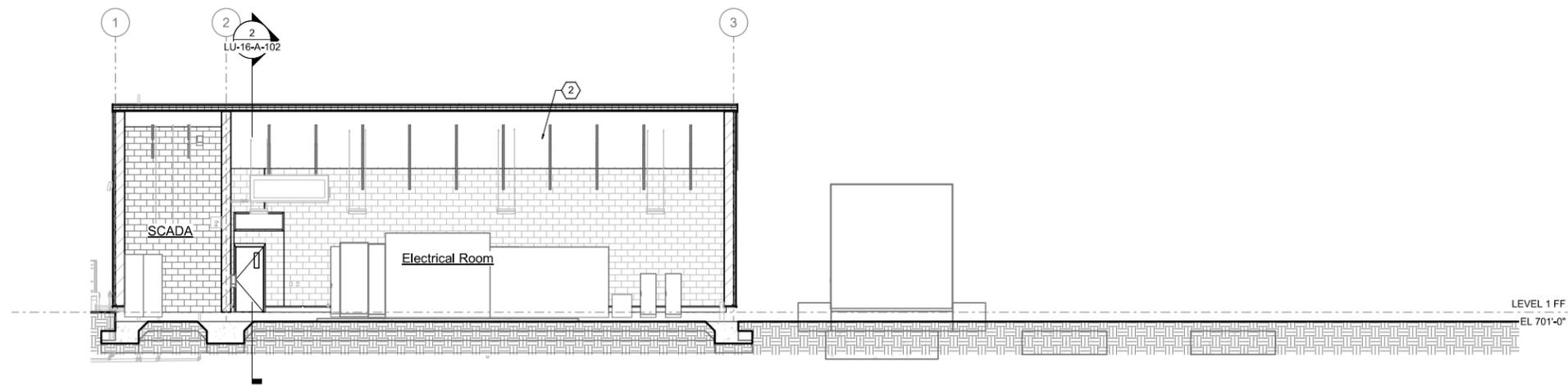
**Bull Run Filtration Facility**  
Architectural  
North Electrical Complex  
Floor Plan

SAP Project No	W02229
1/4 Section	3765 / 3766
Sheet No	LU-16-A-100
of	

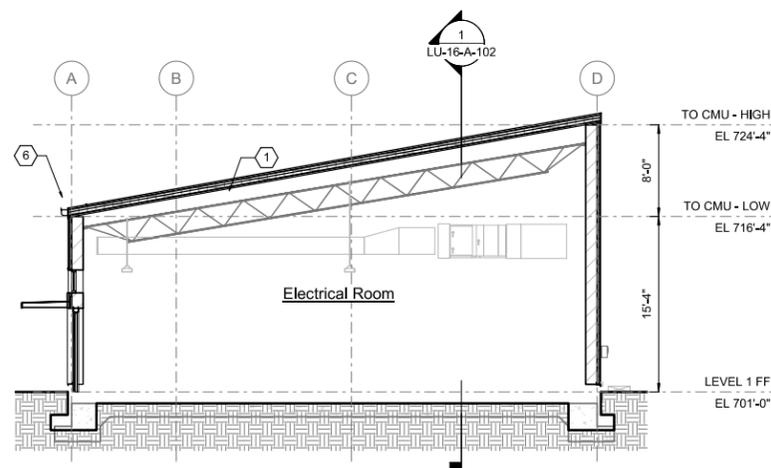


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**Section 2**  
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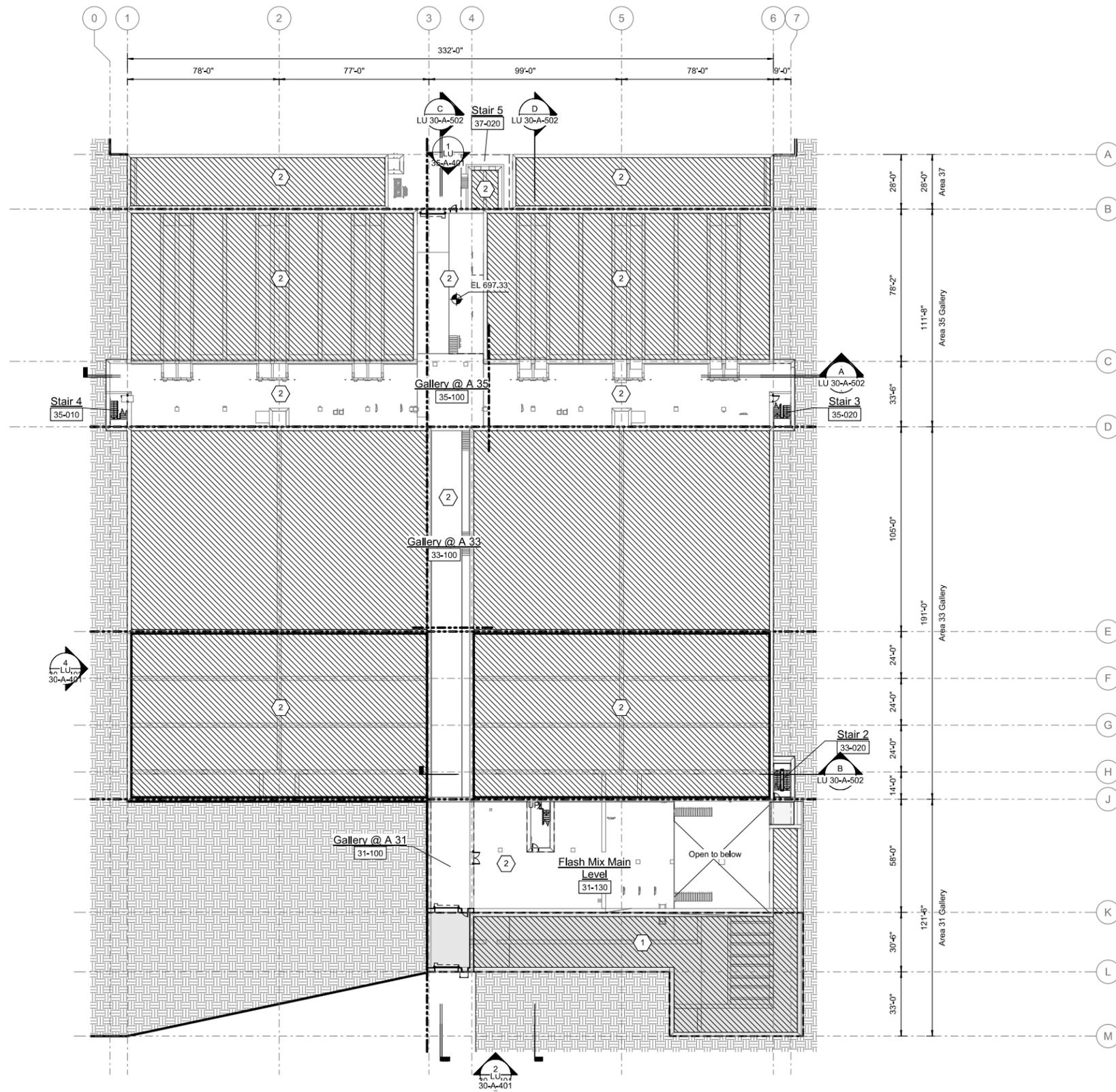


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**Bull Run Filtration Facility**  
Architectural  
North Electrical Complex  
Sections

SAP Project No	W02229
1/4 Section	3765 / 3766
Sheet No	LU-16-A-102
of	



Overall Gallery Plan

SCALE: 1/32" = 1'-0"

General Sheet Notes

- 1 Gallery Plan represents areas mostly below grade.

Sheet Keynotes

- 1 \*Ozone Contactor\* Add Alternate
- 2 Utilitarian use

Legend

- WATER TANKS / UNOCCUPIED AREA
- ADDITIVE ALTERNATIVE
- SOIL



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Bull Run Filtration Facility

Architectural  
Treatment Process Complex

Floor Plan

SAP Project No  
W02229

1/4 Section

3765 / 3766

Sheet No

LU 30-A-302

of



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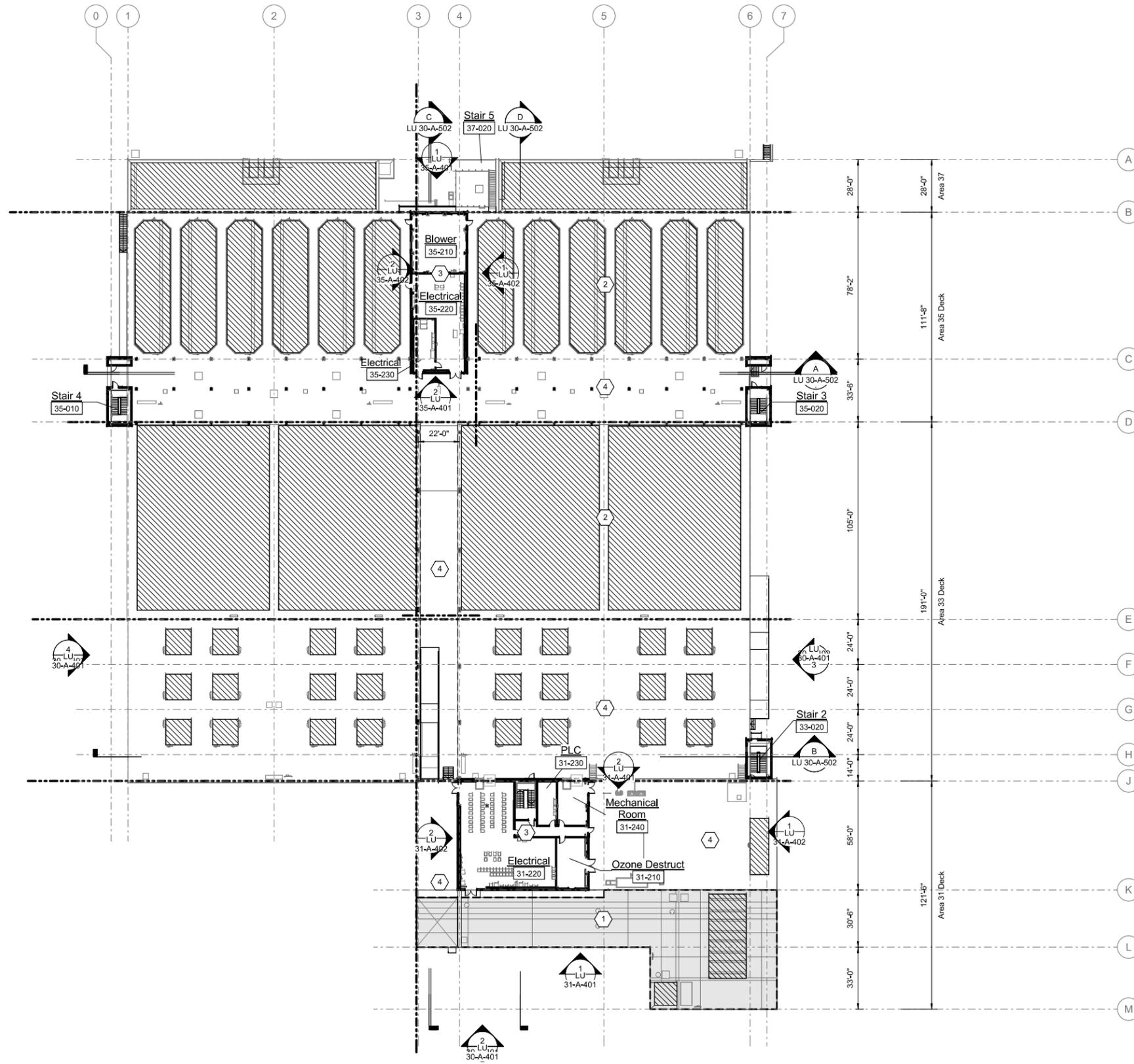
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**Overall Deck Plan**  
SCALE: 1/32" = 1'-0"

**General Sheet Notes**

- 1 Deck Level Plan represents areas mostly at grade.

**Sheet Keynotes**

- 1 \*Ozone Contactor\* Add Alternate
- 2 Utilitarian use
- 3 Occupiable space, see architectural drawings
- 4 Basin Deck

**Legend**

- WATER TANKS / UNOCCUPIED AREA
- ADDITIVE ALTERNATIVE



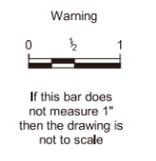
Preliminary – Not for construction **LAND USE**

**Bull Run Filtration Facility**  
Architectural  
Treatment Process Complex  
Floor Plan

SAP Project No  
**W02229**  
1/4 Section  
3765 / 3766  
Sheet No  
**LU 30-A-303**  
of



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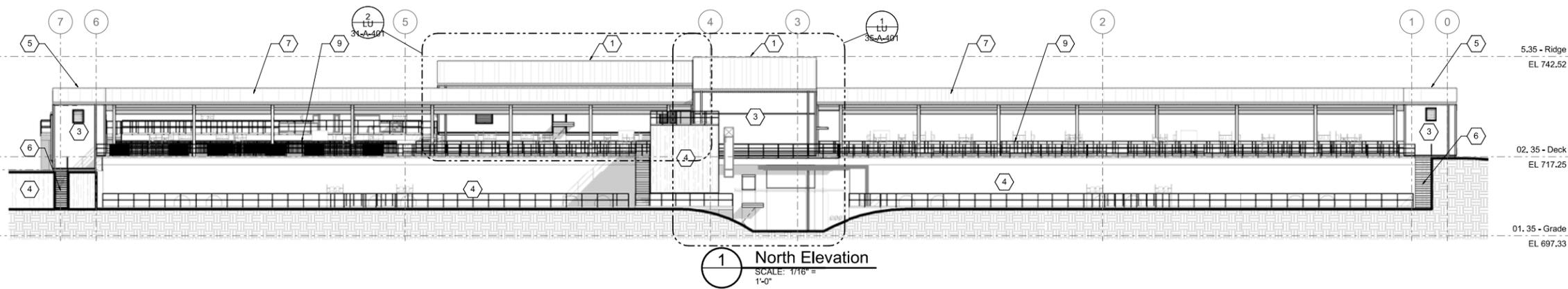


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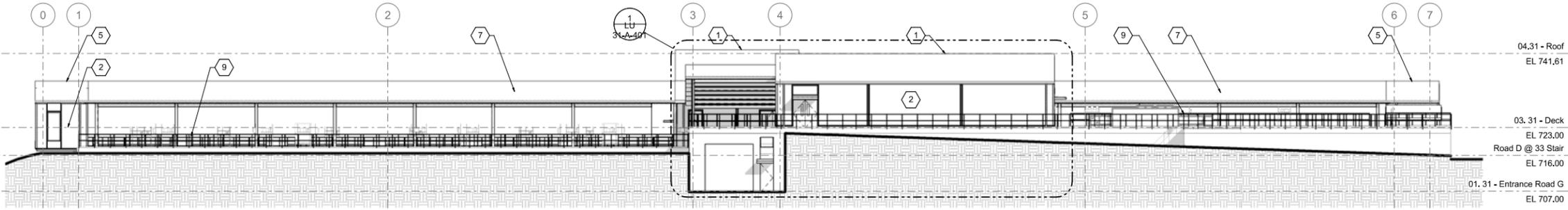


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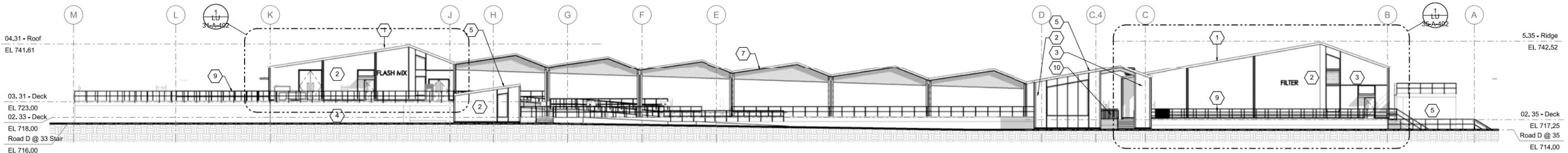
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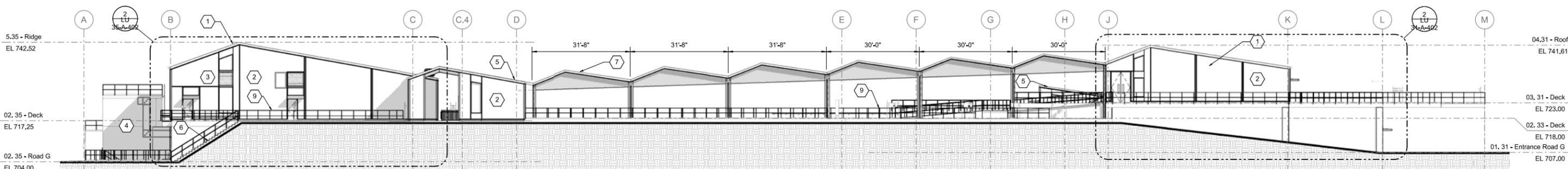
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**2 South Elevation**  
SCALE: 1/16" = 1'-0"



**3 East Elevation**  
SCALE: 1/16" = 1'-0"



**4 West Elevation**  
SCALE: 1/16" = 1'-0"

- Sheet Keynotes**
- 1 Occupiable building, see architectural drawings
  - 2 Horizontal formed metal wall panel (FMP-1) Dark Blue
  - 3 Vertical formed metal wall panel (FMP-2) Dark Blue
  - 4 Cast in place concrete basin, see structural drawings
  - 5 Stair enclosure
  - 6 Exterior stair
  - 7 Metal framed canopy covered walkway
  - 9 Metal Railing assembly, see detail as shown
  - 10 ADA metal railing assembly - see detail as shown

- Legend**
- WATER TANKS / UNOCCUPIED AREA
  - ADDITIVE ALTERNATIVE
  - SOIL

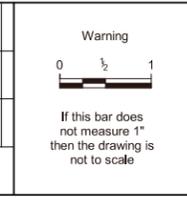


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Project Mgr	Date



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**Bull Run Filtration Facility**  
Architectural  
Treatment Process Complex  
Floor Plan

SAP Project No	W02229
1/4 Section	3765 / 3766
Sheet No	LU 30-A-401
of	

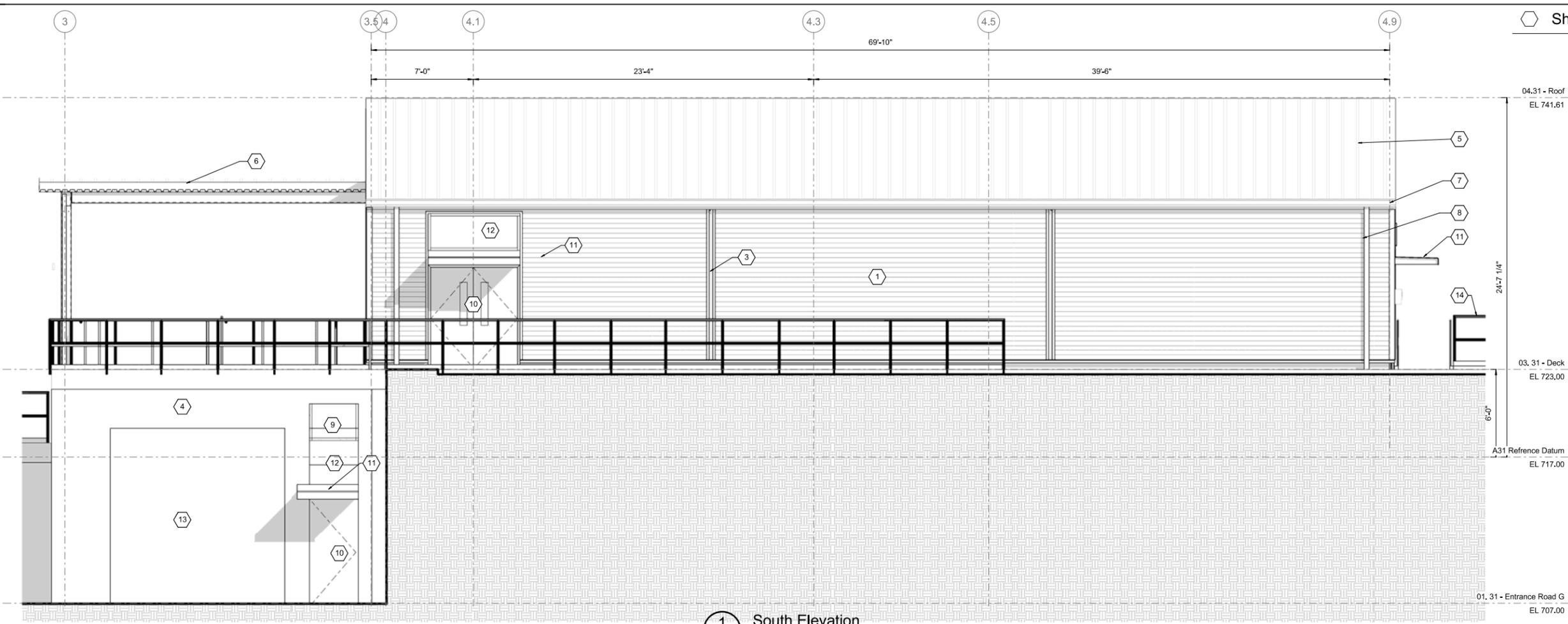


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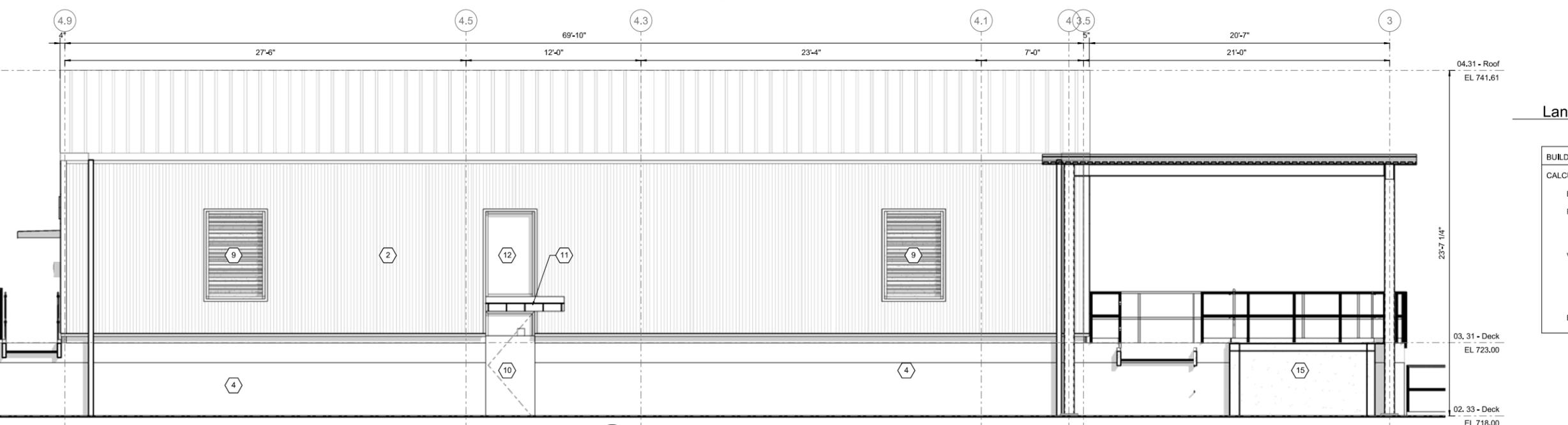
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**Sheet Keynotes**

- 1 Horizontal formed metal wall panel (FMP-1)
- 2 Vertical formed metal wall panel (FMP-2)
- 3 Metal panel reveal joint
- 4 Cast in place concrete basin, see structural drawings
- 5 Standing seam metal roofing
- 6 Metal framed canopy covered walkway
- 7 Sheet metal gutter
- 8 Sheet metal downspout
- 9 Metal louver, see building mechanical drawings
- 10 Hollow metal door and frame
- 11 Bent metal canopy
- 12 Aluminum storefront window
- 13 Overhead colling door
- 14 Architectural metal railing assembly - see detail as shown
- 15 Concrete ramp



**1 South Elevation**  
SCALE: 1/4" = 1'-0"



**2 North Elevation**  
SCALE: 1/4" = 1'-0"

**Land Use Height and Calculations**

	ALLOWED	PROPOSED
BUILDING HEIGHT DATUM	35'-0"	21'-10"
CALCULATIONS		
Building Height = Vertical distance from Reference Datum		
Reference Datum is 10' above the lowest adjoining grade, given that the deck is more than 10' above the lowest adjoining grade.		
707' + 10'-0" = 717' or 6'-0" below deck level		
Vertical distance is the average height of the highest gable of a pitched roof from deck level.		
13'-0" (deck to tallest wall) + 18'-8" (deck to ridge) = 31'-8"		
31'-8" / 2 = 15'-10" Average Gable Height from Deck		
Building Height = 15'-10" + 6'-0" = 21'-10"		



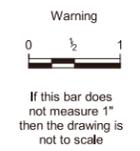
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Drawn By	Const Mgr
Checked By	Const Supvr
Project Mgr	Date



David W. Peters, Principal Engineer, PE No 16683



**Bull Run Filtration Facility**  
Architectural  
Flash Mix Building  
Elevations 1

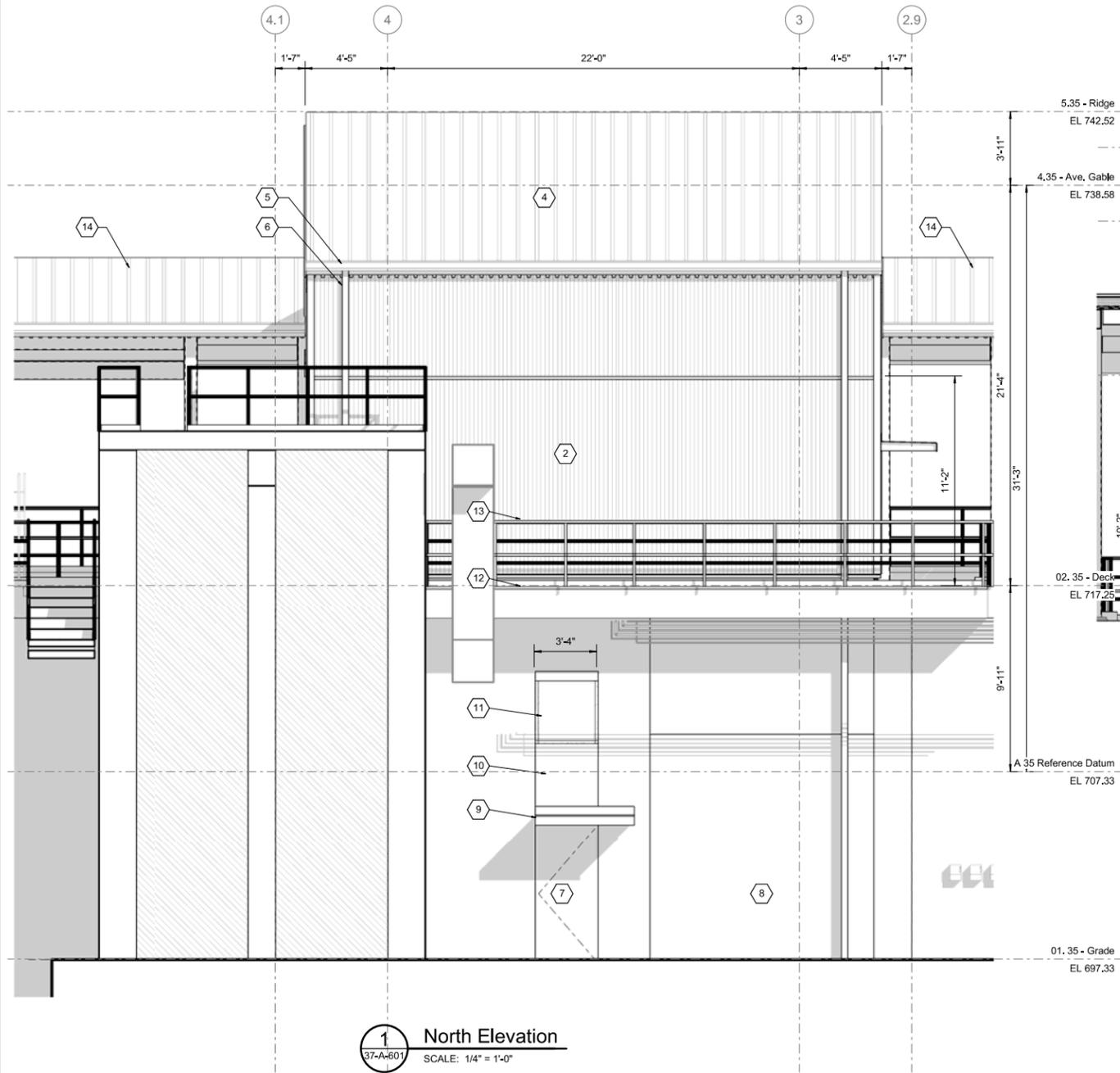
SAP Project No	W02229
1/4 Section	3765 / 3766
Sheet No	LU 31-A-401
of	



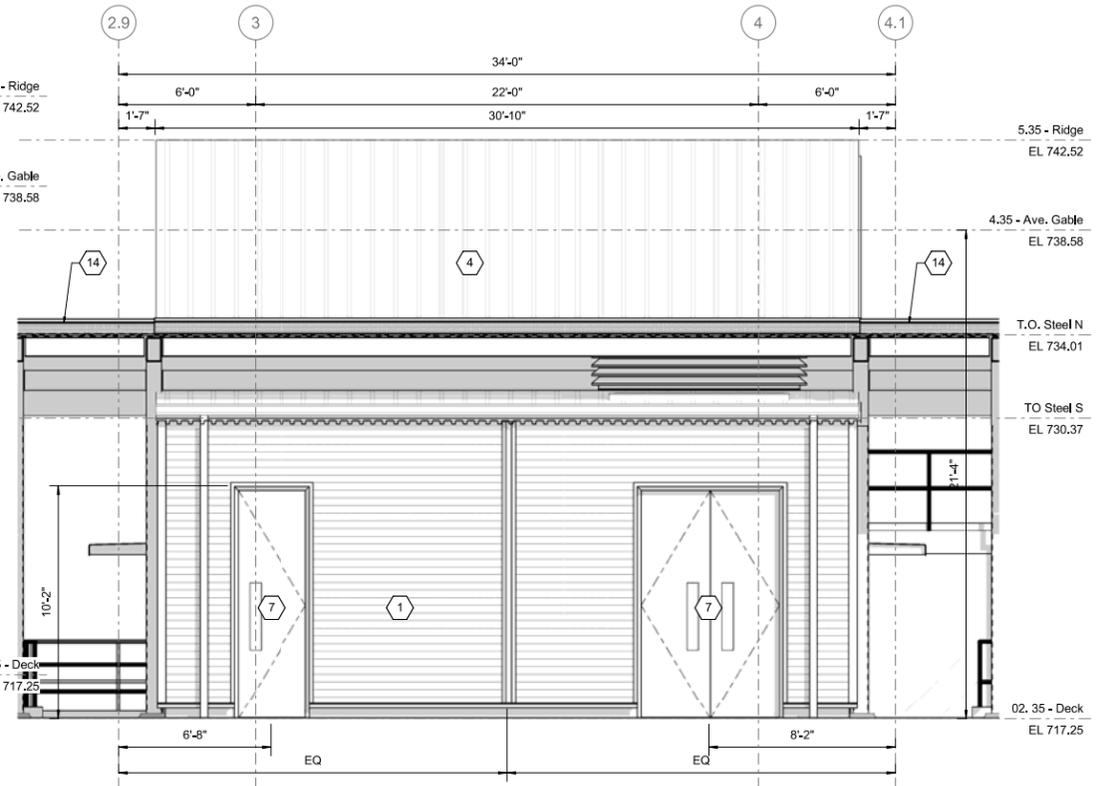
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Sheet Keynotes

- 1 Horizontal formed metal wall panel (FMP-1) \*Colors TBD\*
- 2 Vertical formed metal wall panel (FMP-2) \*Colors TBD\*
- 4 Standing seam metal roofing
- 5 Sheet metal gutter
- 6 Sheet metal downspout
- 7 Hollow metal door and frame
- 8 Overhead coiling door
- 9 Bent metal canopy
- 10 Aluminum storefront window
- 11 Metal louver, see building mechanical drawings
- 12 Concrete catwalk
- 13 Metal railing assembly - see detail as shown
- 14 Metal framed canopy covered walkway



**1 North Elevation**  
 SCALE: 1/4" = 1'-0"



**2 South Elevation**  
 SCALE: 1/4" = 1'-0"

Land Use Height and Calculations

	ALLOWED	PROPOSED
BUILDING HEIGHT DATUM	35'-0"	31'-3"
CALCULATIONS		
Building Height = Vertical distance from Reference Datum		
Reference Datum is 10' above the lowest adjoining grade, given that the deck is more than 10' above the lowest adjoining grade.		
$697.33' + 10' = 707.33'$ or $9'-11"$ below deck level		
Vertical distance is the average height of the highest gable of a pitched roof from deck level.		
$17'-4"$ (deck to tallest wall) + $25'-4"$ (deck to ridge) = $42'-8"$		
$42'-8" / 2 = 21'-4"$ Average Gable Height from Deck		
Building Height = $21'-4" + 9'-11" = 31'-3"$		

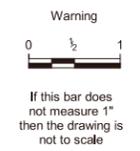


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Revision			
Survey		XXXX	



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Checked By	Const Supvr
Project Mgr	Date



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**Bull Run Filtration Facility**  
 Architectural  
 Filter Building  
 Elevations 1

SAP Project No	W02229
1/4 Section	3765 / 3766
Sheet No	LU 35-A-401
of	



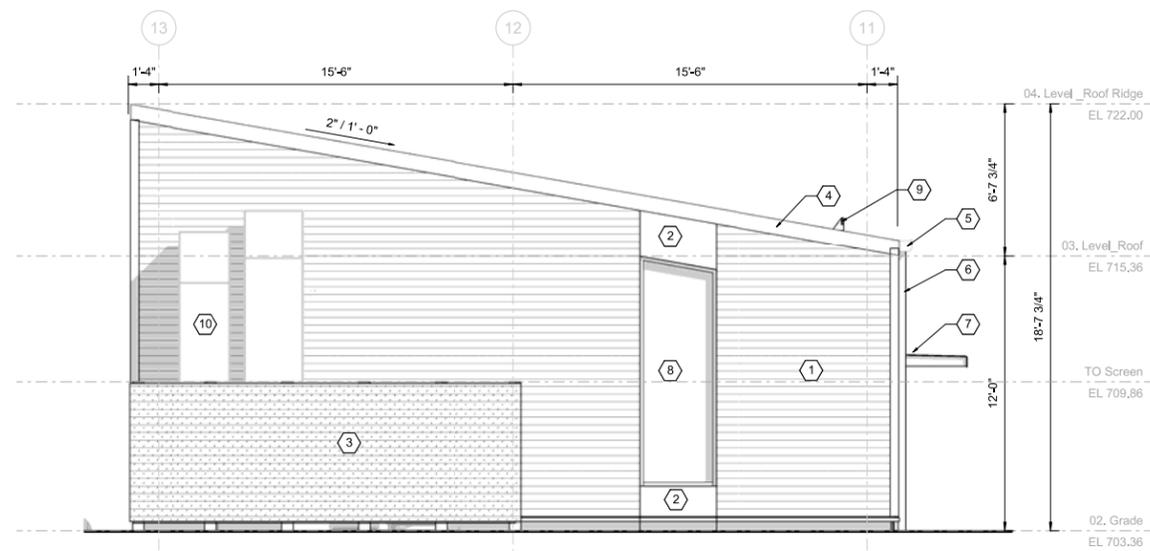


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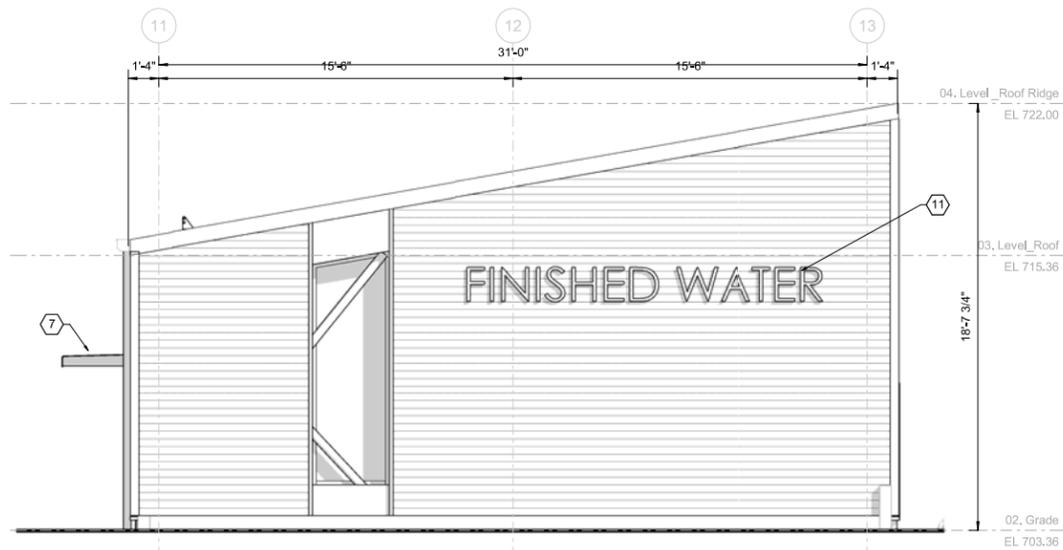
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Sheet Keynotes

- 1 Horizontal formed metal wall panel (FMP-1) Dark Blue
- 2 Insulated metal wall panel (IMP-1) Medium Grey
- 3 Horizontal perforated metal wall panel (PMP-1) Dark Blue
- 4 Standing seam metal roofing
- 5 Metal fascia
- 6 Sheet metal gutter
- 7 Sheet metal downspout
- 8 Bent metal plate canopy
- 9 Aluminum storefront window with light grey flashing
- 10 Snow guard
- 11 18" Dimensional letter signage



1 North Elevation  
SCALE: 1/4" = 1'-0"



2 South Elevation  
SCALE: 1/4" = 1'-0"

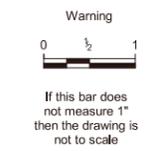


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Revision			
Survey		XXXX	

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Checked By	Const Supvr
Project Mgr	Date



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**Bull Run Filtration Facility**

Architectural  
Finished Water  
Electrical Building  
Elevations

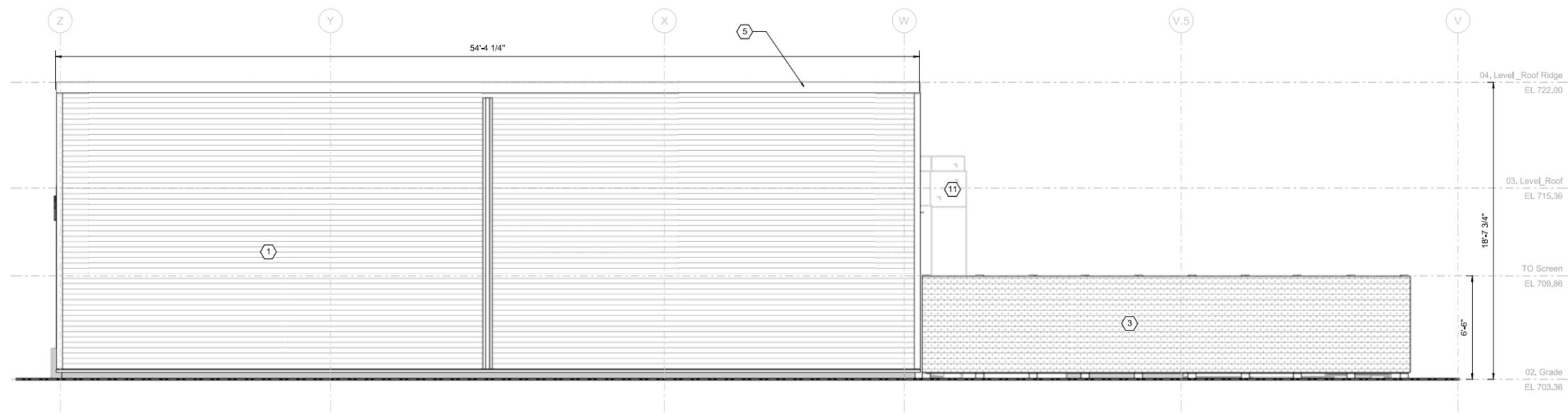
SAP Project No	W02229
1/4 Section	3765 / 3766
Sheet No	LU 40-A-401
of	

Sheet Keynotes

- 1 Insulated metal wall panel (IMP-1) Medium Grey
- 2 Horizontal perforated metal wall panel (PMP-1) Dark Blue
- 3 Standing seam metal roofing
- 4 Metal fascia
- 5 Sheet metal gutter
- 6 Sheet metal downspout
- 7 Bent metal plate canopy
- 8 Aluminum storefront window with light grey flashing
- 9 Hollow metal door and frame with light grey flashing
- 10 HVAC equipment, see building mechanical drawings



**1 West Elevation**  
SCALE: 1/4" = 1'-0"



**2 East Elevation**  
SCALE: 1/4" = 1'-0"



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**Bull Run Filtration Facility**  
Architectural  
Finished Water  
Electrical Building  
Elevations

SAP Project No <b>W02229</b>
1/4 Section 3765 / 3766
Sheet No LU 40-A-402
of



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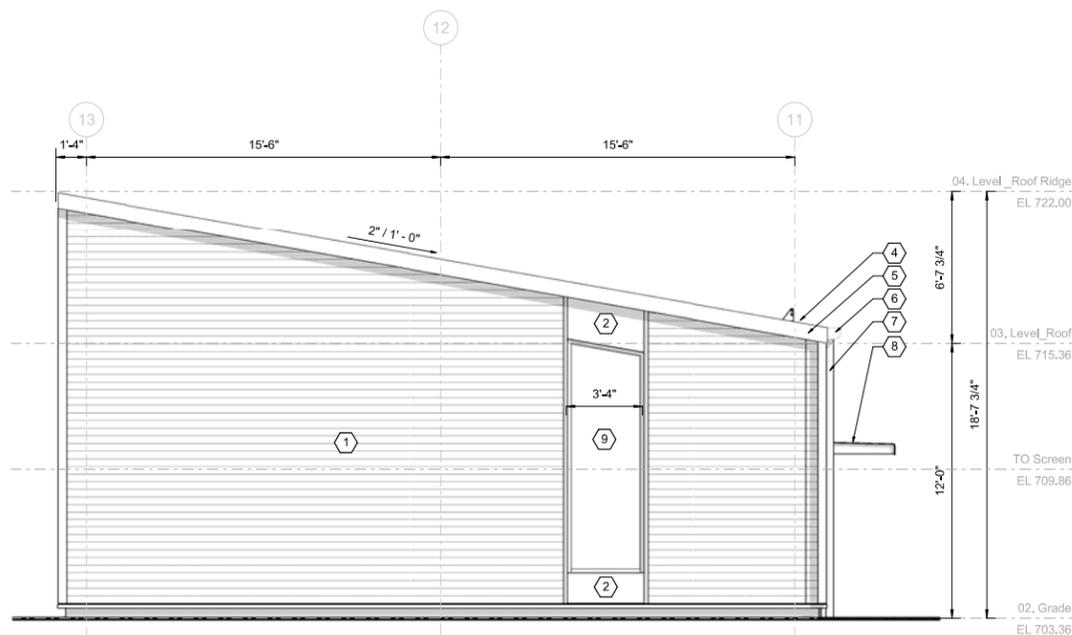
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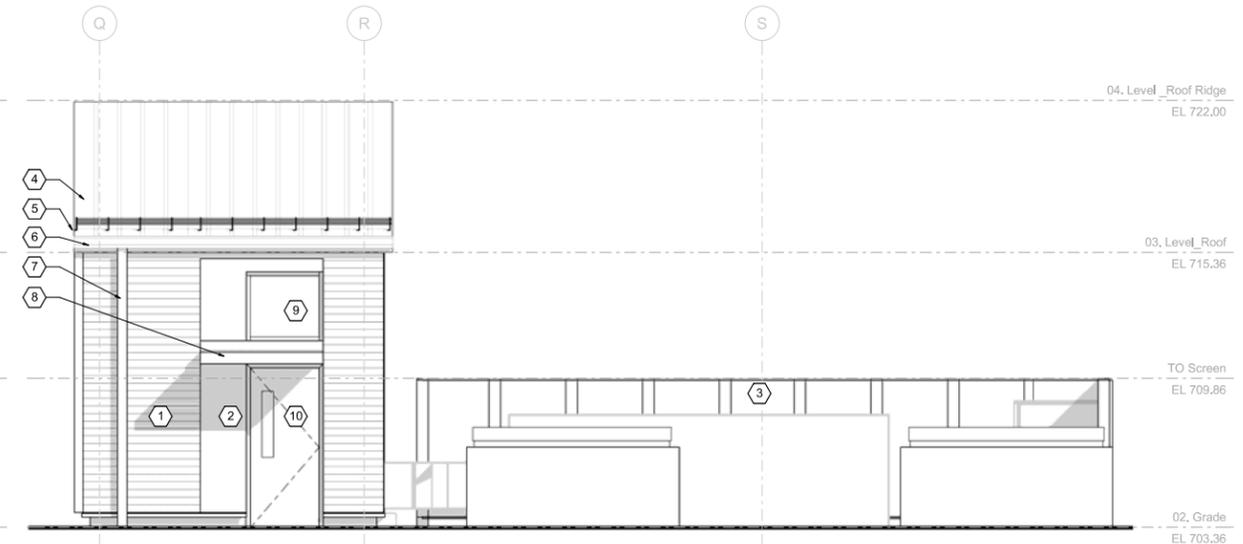
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Sheet Keynotes

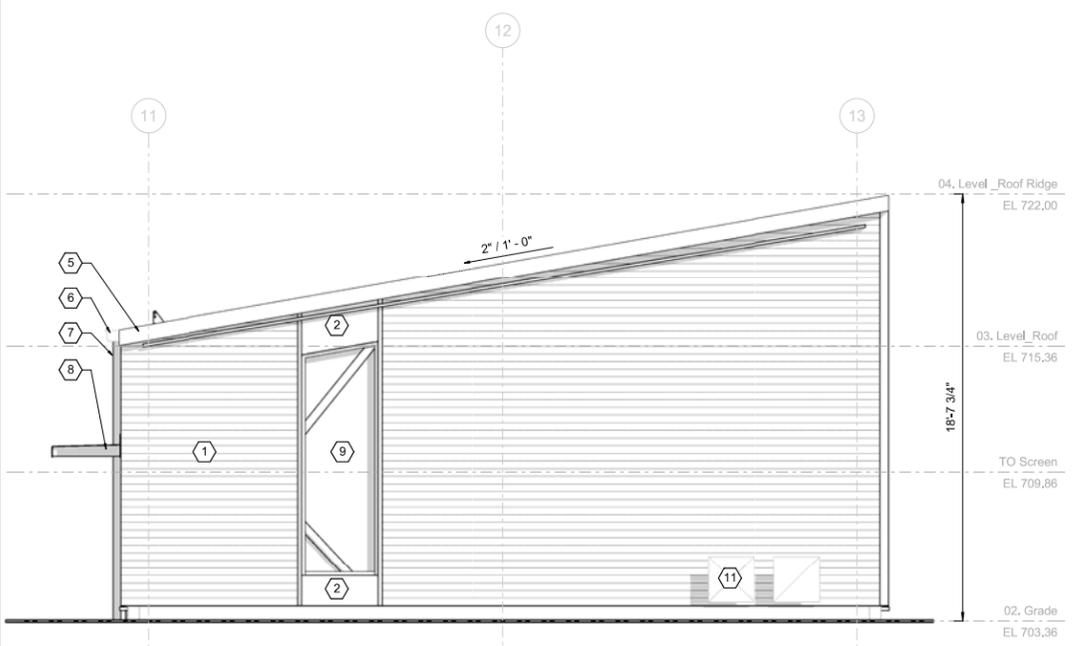
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- 2 Insulated metal wall panel (IMP-1) Medium Grey
- 3 Horizontal perforated metal wall panel (PMP-1)
- 4 Standing seam metal roofing
- 5 Metal fascia
- 6 Sheet metal gutter
- 7 Sheet metal downspout
- 8 Bent metal plate canopy
- 9 Aluminum storefront window with light grey flashing
- 10 Hollow metal door and frame with light grey flashing
- 11 HVAC equipment, see building mechanical drawings



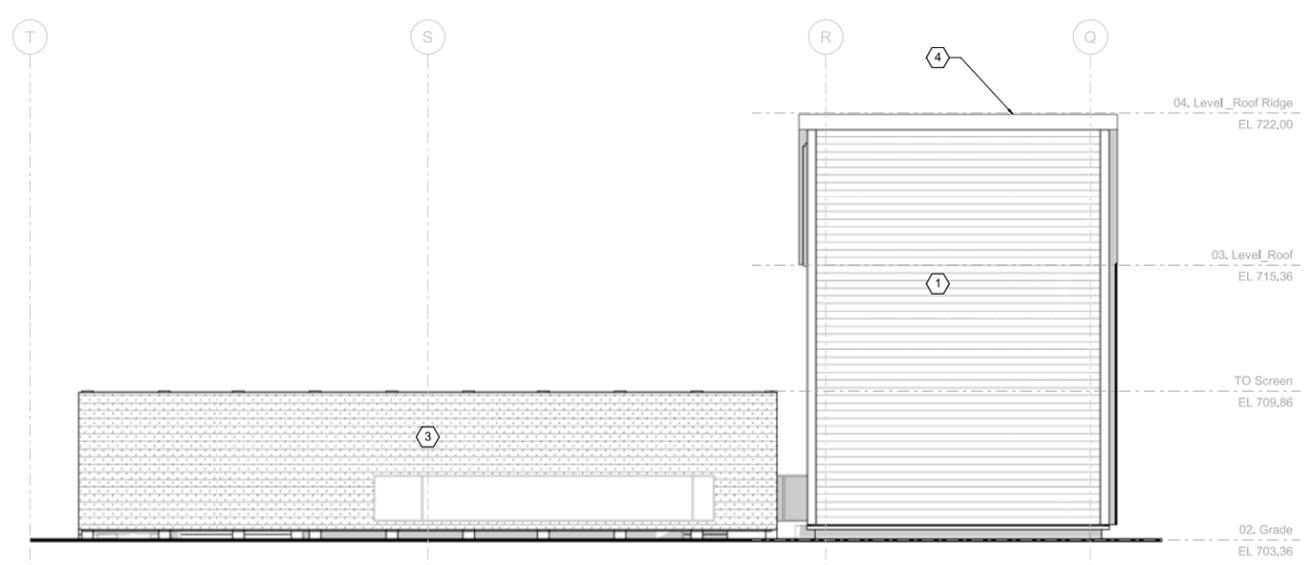
**1 North Elevation**  
40-A-306 SCALE: 1/4" = 1'-0"



**3 West Elevation**  
SCALE: 1/4" = 1'-0"



**2 South Elevation**  
SCALE: 1/4" = 1'-0"



**4 East Elevation**  
SCALE: 1/4" = 1'-0"

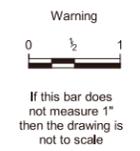


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Project Mgr	Date



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**Bull Run Filtration Facility**  
Architectural  
Finished Water  
Stair Building  
Elevations

SAP Project No	W02229
1/4 Section	3765 / 3766
Sheet No	LU 40-A-403
of	

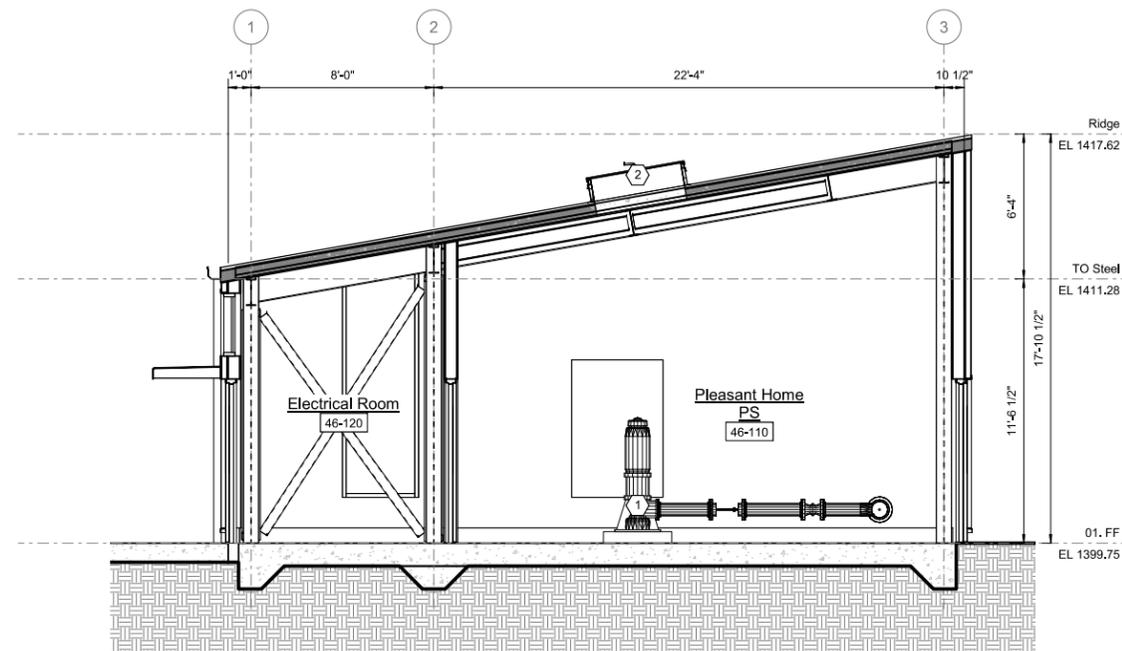






Sheet Keynotes

- 1 Process equipment, see process mechanical drawings
- 2 Dome roof hatch 48"x48"



**1** East-West Section  
 46-A-301 SCALE: 1/4" = 1'-0"



Preliminary – Not for construction **LAND USE**

**Bull Run Filtration Facility**  
**Architectural**  
 Pleasant Home Pump Station  
 Building Sections

SAP Project No  
**W02229**

1/4 Section

3765 / 3766

Sheet No

LU 46-A-501

of



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Project Mgr	Date

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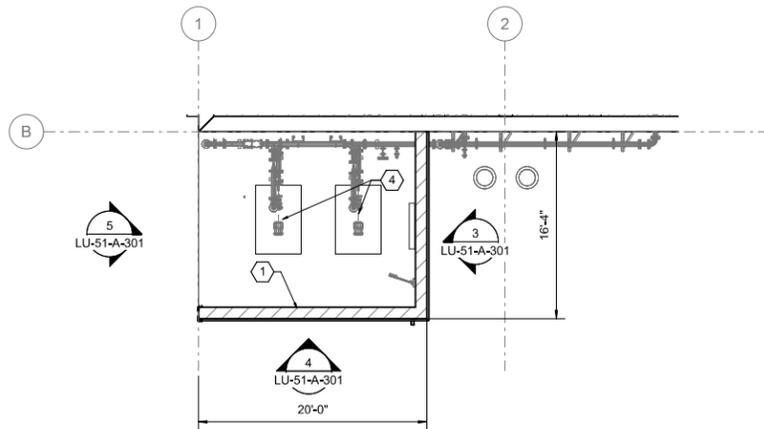


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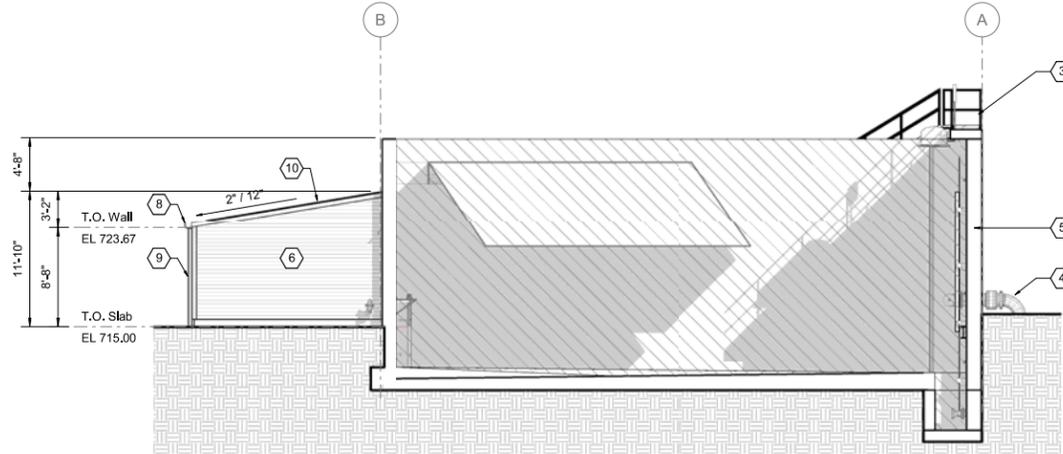
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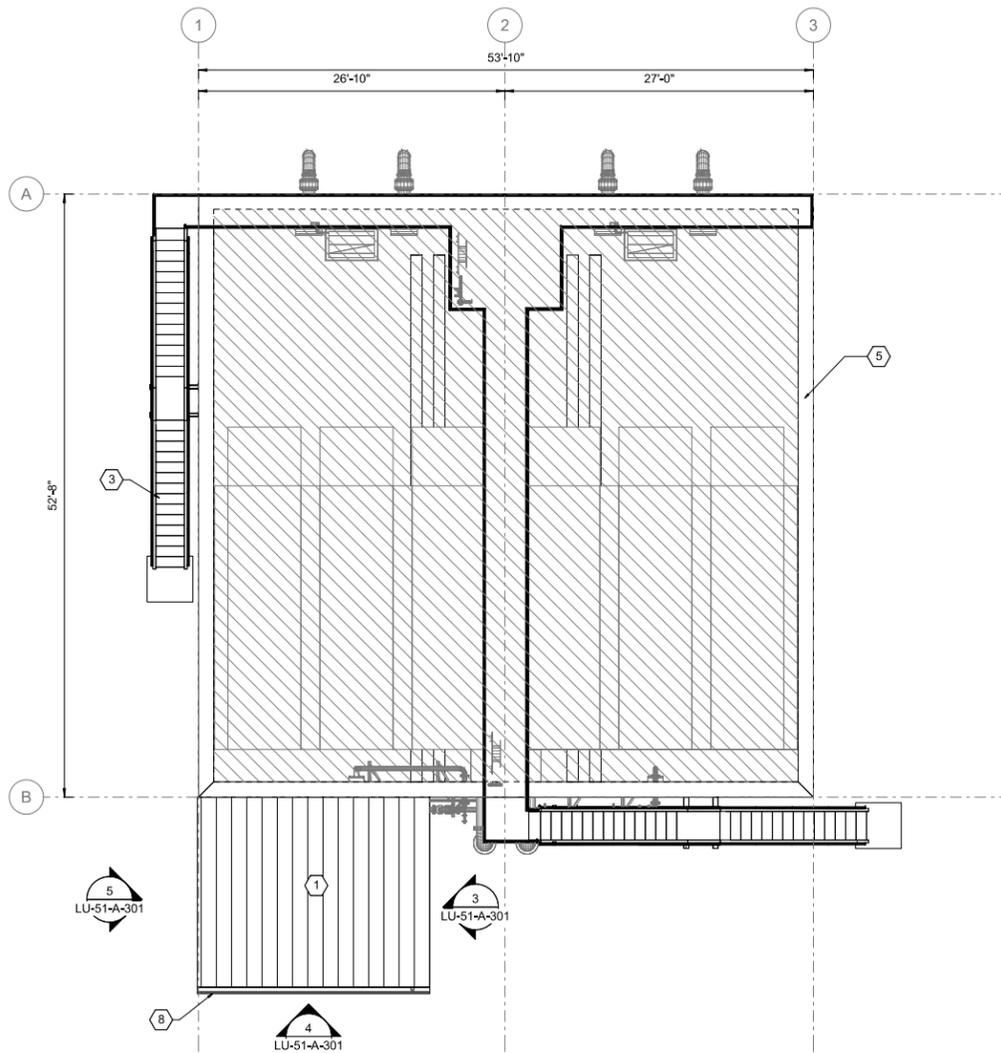
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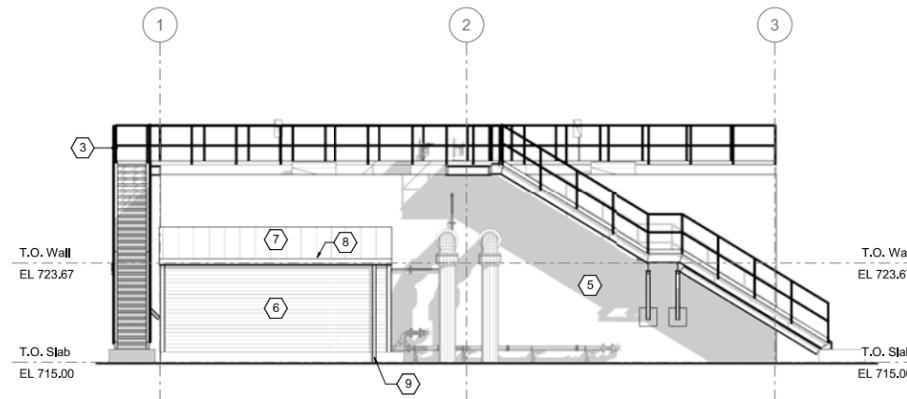
**1 Floor Plan**  
51-A-401 SCALE: 1/8" = 1'-0"



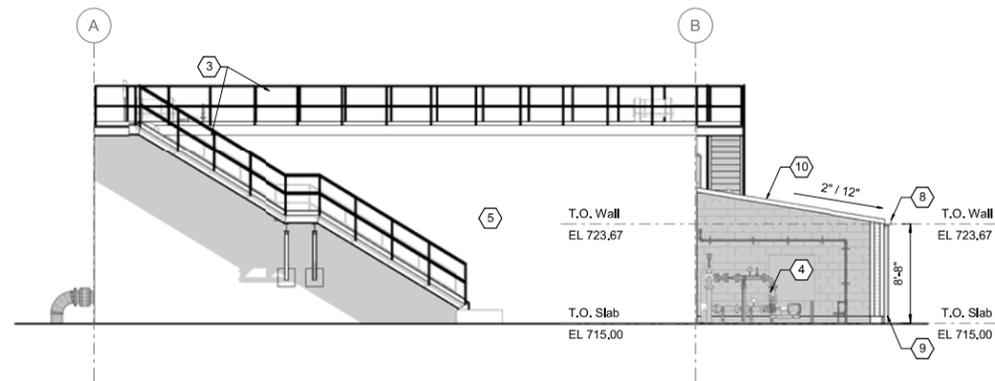
**3 Elevation & Section**  
SCALE: 1/8" = 1'-0"



**2 Roof Plan**  
51-A-401 SCALE: 1/8" = 1'-0"



**4 Elevation**  
SCALE: 1/8" = 1'-0"



**5 Elevation**  
SCALE: 1/8" = 1'-0"

**Sheet Keynotes**

- 1 CMU
- 3 Metal stair and railing assembly
- 4 Pump Equipment, see process mechanical
- 5 Cast In place concrete basin
- 6 Horizontal formed metal wall panel (FMP-1), Dark Blue
- 7 Standing seam metal roofing, Light Grey
- 8 Metal gutter, Light Grey
- 9 Metal downspout
- 10 Fascia flashing, Light Grey

**Legend**

- Water Tanks / Unoccupied Area
- Soil

BIM 360/Bull Run Filtration Facility W02229\_FF\_51\_A.rvt

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Survey		XXXX	



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Project Mgr	Date



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Preliminary – Not for construction **LAND USE**

**Bull Run Filtration Facility**  
Architectural  
Wastewater Clarification Enclosure  
Plan, Elevations

SAP Project No	W02229
1/4 Section	3765 / 3766
Sheet No	LU-51-A-301
of	

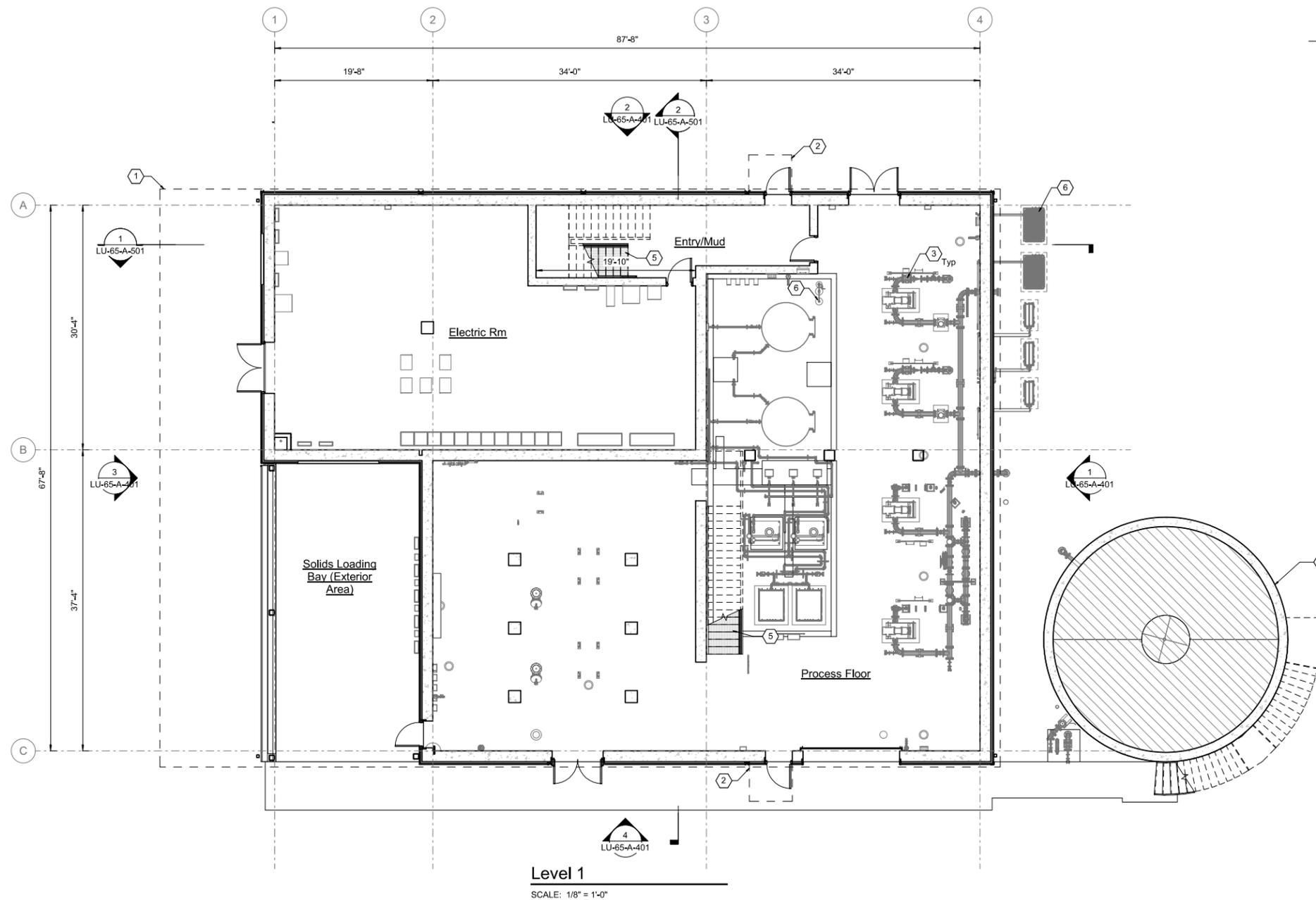


Sheet Keynotes

- 1 Line of roof above
- 2 Canopy above
- 3 Process mechanical equipment
- 5 Metal Grate Stair / Railing
- 6 HVAC equipment
- 7 Sludge Tank

Legend

Water Tanks / Unoccupied Area



Preliminary – Not for construction **LAND USE**

**Bull Run Filtration Facility**  
**Architectural**  
**Mechanical Dewatering**  
 Level 1 Floor Plan

SAP Project No  
**W02229**

1/4 Section

3765 / 3766

Sheet No

LU-65-A-301

of

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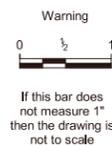
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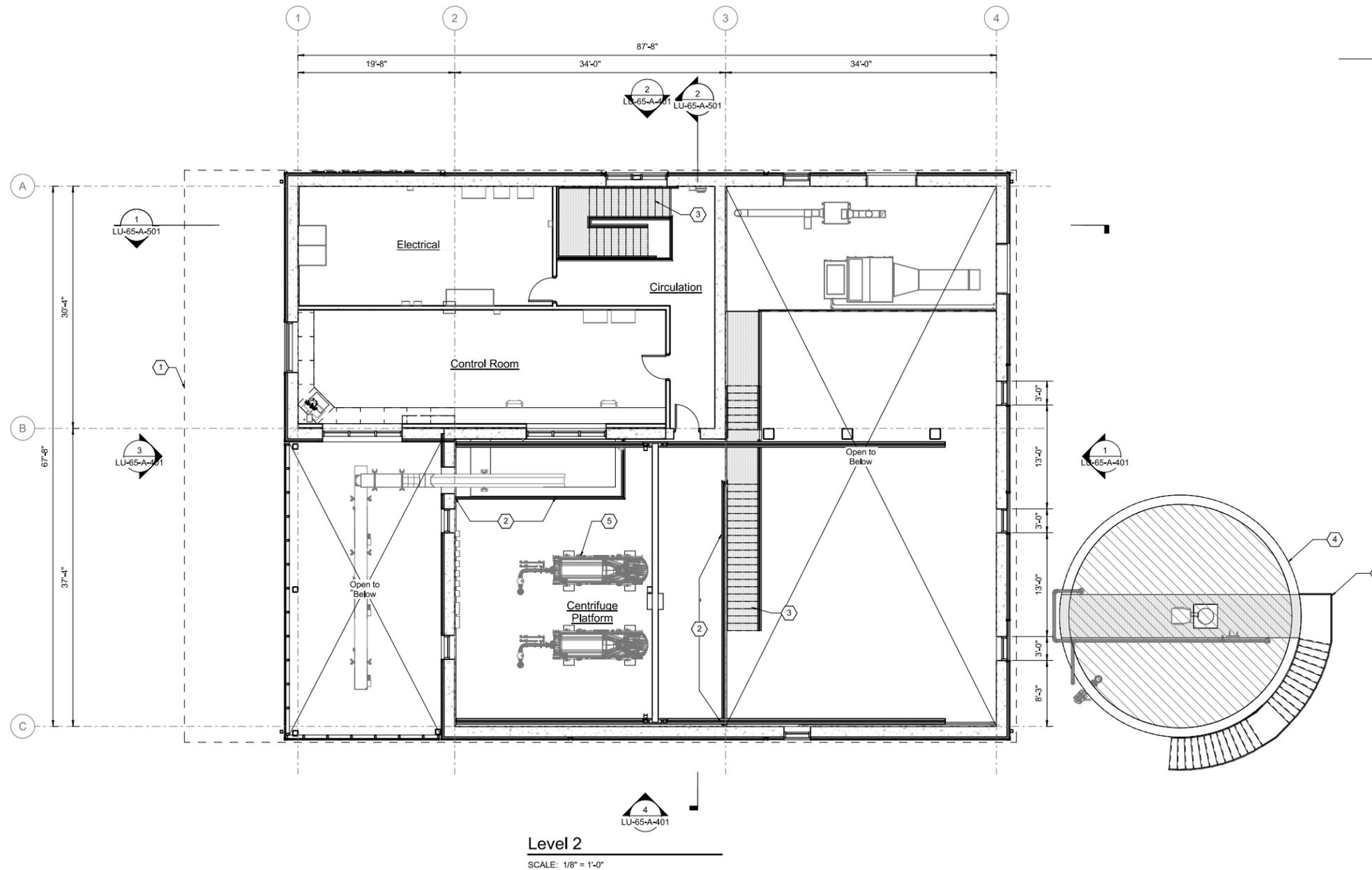


Sheet Keynotes

- 1 Line of roof above
- 2 Removable Gaurdtrail Area, in 8'-0" sections
- 3 Metal Grate Stair / Railing
- 4 Sludge Tank
- 5 Process mechanical equipment

Legend

Water Tanks / Unoccupied Area



Level 2

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



Preliminary – Not for construction LAND USE

Bull Run Filtration Facility

Architectural  
Mechanical Dewatering

Level 2 Floor Plan

SAP Project No  
W02229

1/4 Section  
3765 / 3766

Sheet No  
LU-65-A-302

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Date

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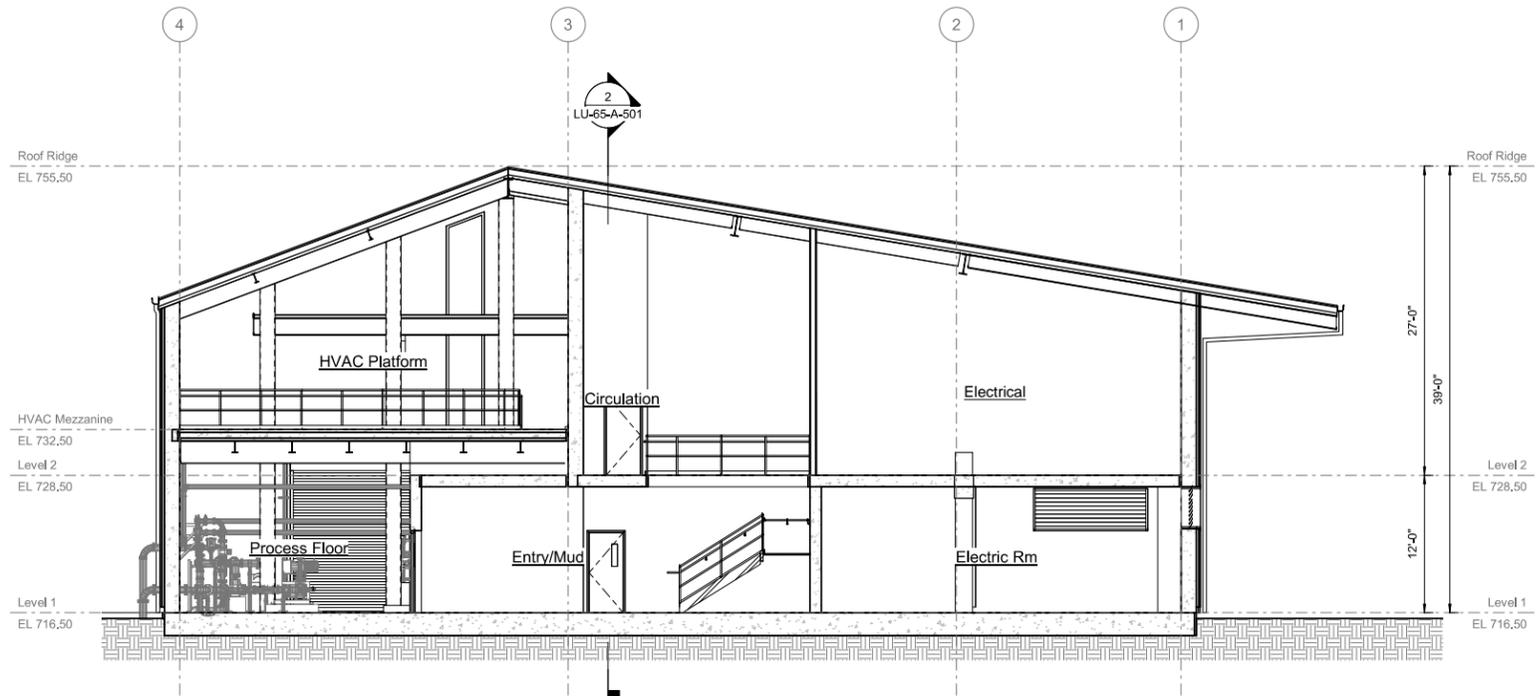
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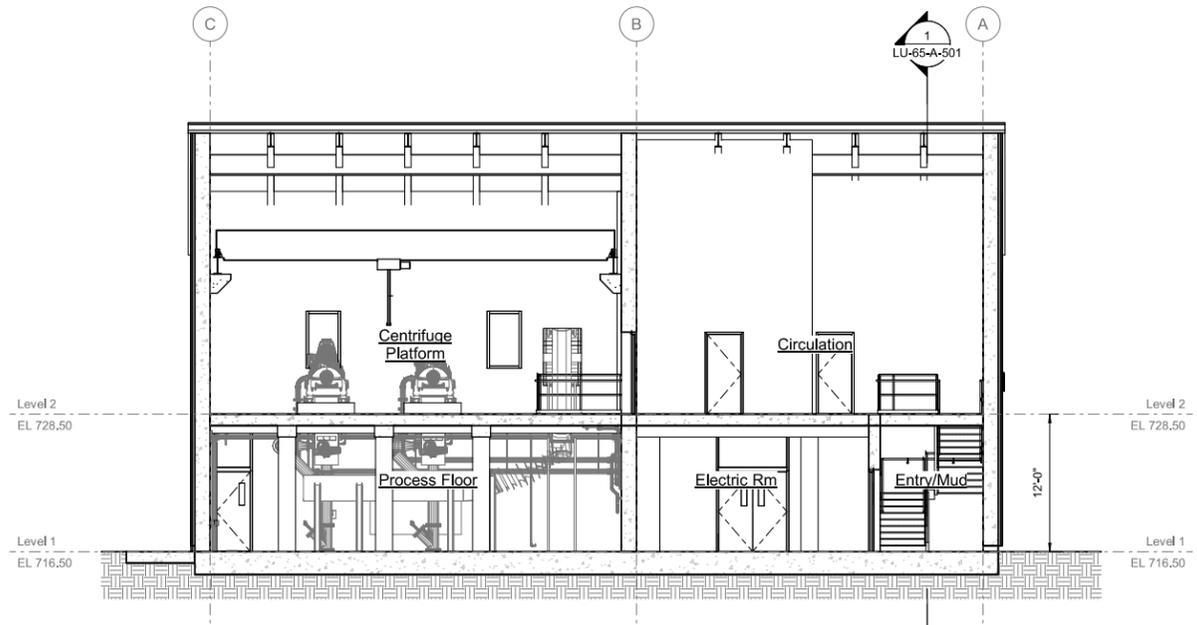


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**1 Building Section**  
 LU-65-A-301 SCALE: 1/8" = 1'-0"



**2 Building Section**  
 LU-65-A-301 SCALE: 1/8" = 1'-0"

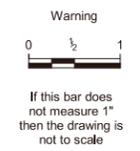


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Checked By	Const Supvr
Project Mgr	Date



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**Bull Run Filtration Facility**  
 Architectural  
 Mechanical Dewatering  
 Building Sections

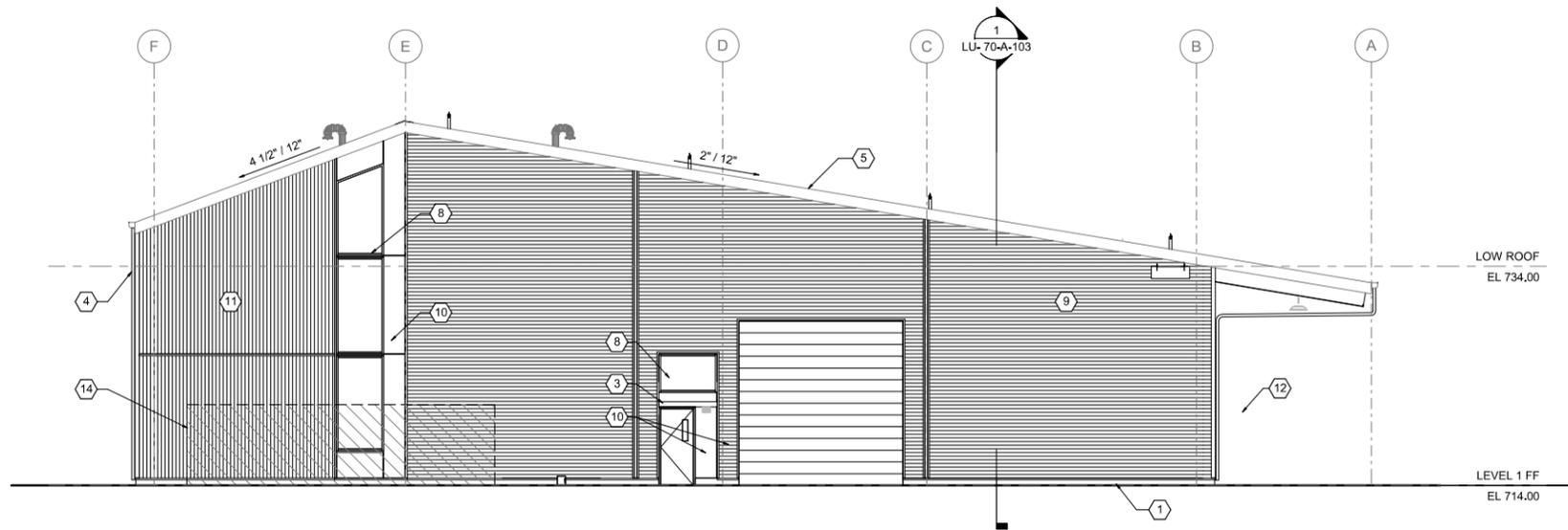
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1/4 Section	3765 / 3766
Sheet No	LU-65-A-501
of	



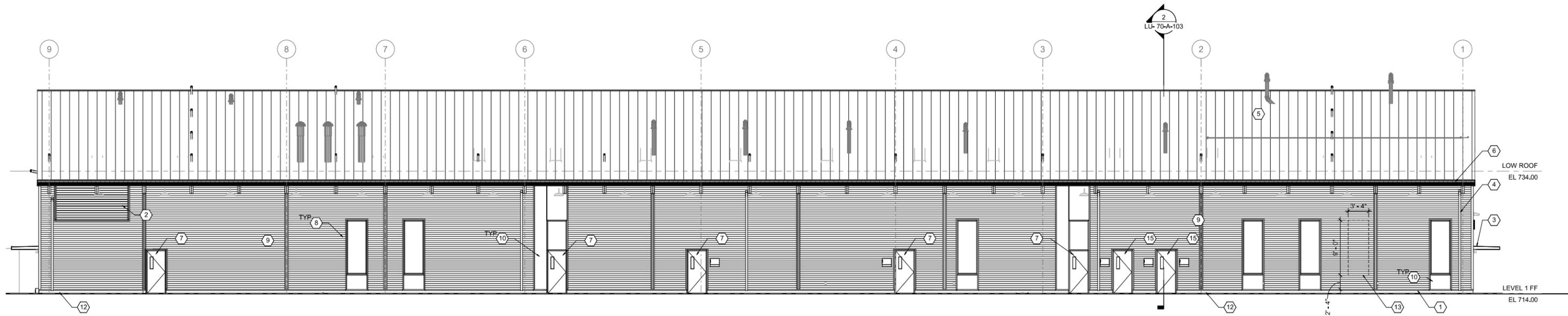


Sheet Keynotes

- 1 Concrete curb, see Structural drawings
- 2 Metal Louver
- 3 Canopy
- 4 Metal downspout
- 5 Standing seam metal roof, light grey
- 6 Metal gutter
- 7 HM door
- 8 Aluminum storefront window
- 9 Horizontal formed metal panel, dark blue (FMP-1)
- 10 Flat insulated metal panel, medium grey (IMP-1)
- 11 Vertical formed metal panel, dark blue (FMP-2)
- 12 Emergency shower / Eyewash
- 13 Extent of knockout framing for future louver
- 14 HVAC equipment, see buiding mechanical drawings
- 15 FRP door



**1** LU - South Elevation  
SCALE: 1/8" = 1'-0"



**2** LU - East Elevation  
SCALE: 1/8" = 1'-0"



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		Project Mgr	Date

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Date

**Bull Run Filtration Facility**

Architectural  
Chemical Building

Exterior Elevations - 2

SAP Project No  
**W02229**

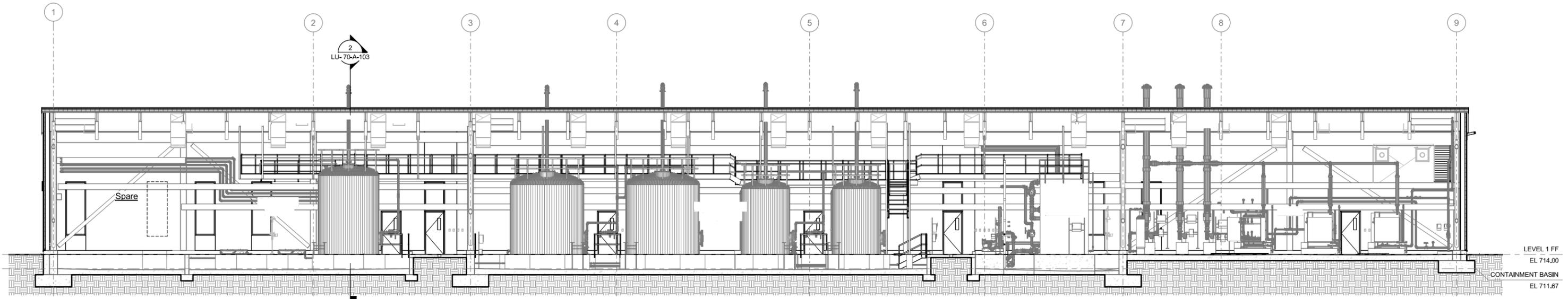
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3765 / 3766

Sheet No  
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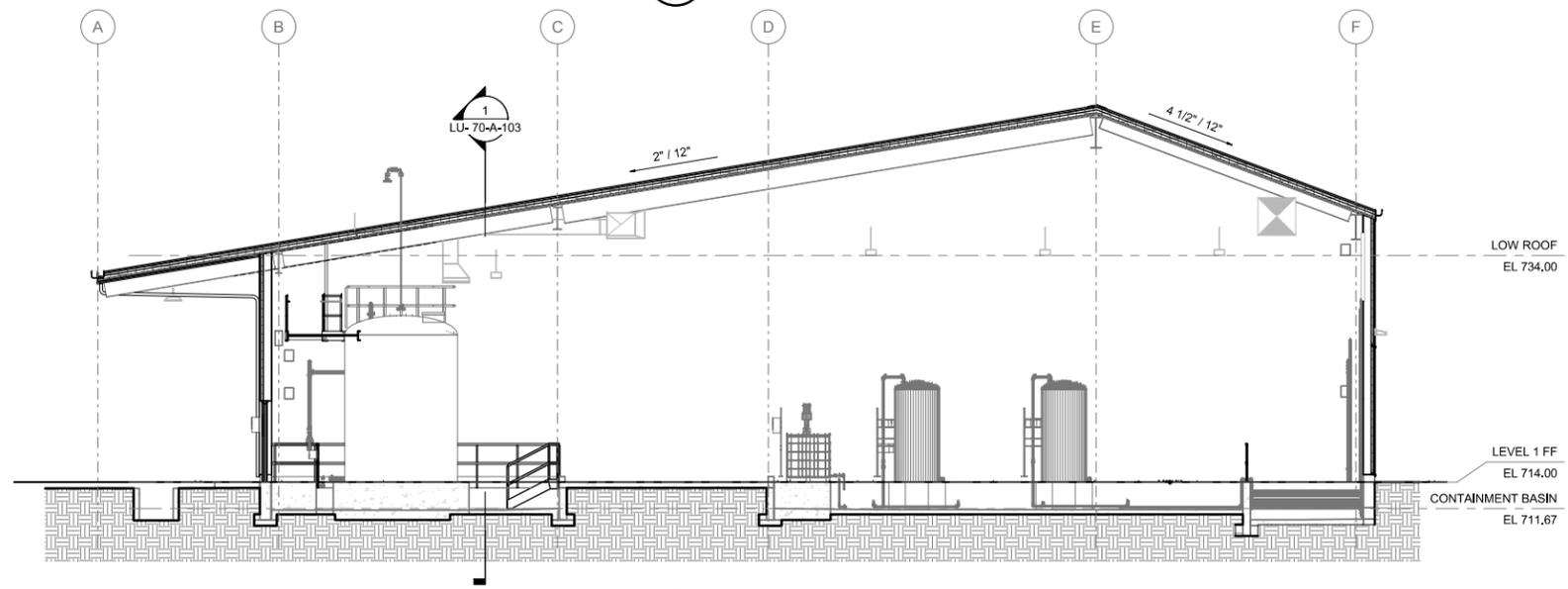
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**1** Section  
SCALE: 1/8" = 1'-0"



**2** Section  
SCALE: 1/8" = 1'-0"



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**PORTLAND WATER BUREAU**  
FROM FOREST TO FAUCET

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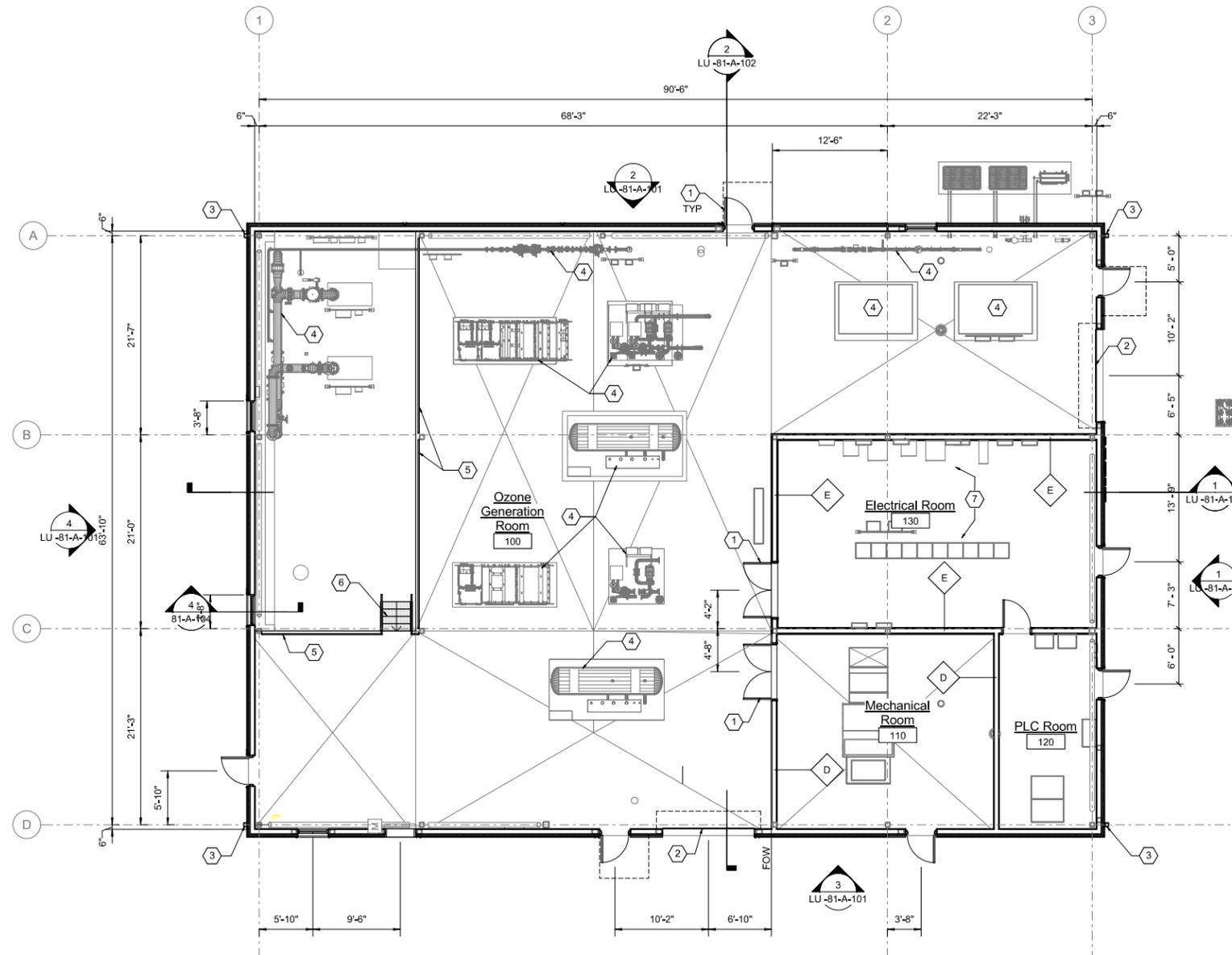


**Bull Run Filtration Facility**  
Architectural  
Chemical Building  
Building Sections

SAP Project No	W02229
1/4 Section	3765 / 3766
Sheet No	LU- 70-A-103
of	

Sheet Keynotes

- 1 Hollow metal door
- 2 Overhead ceiling door
- 3 Metal downspout
- 4 Process mechanical equipment
- 5 Guardrail
- 6 FRP stair
- 7 Electrical equipment



1 LU - Level 1 Floor Plan  
SCALE: 1/8" = 1'-0"



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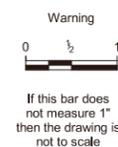
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Project Mgr	Date



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**Bull Run Filtration Facility**  
Architectural  
Ozone Generation Building  
Floor Plan

SAP Project No	W02229
1/4 Section	3765 / 3766
Sheet No	LU -81-A-100
of	



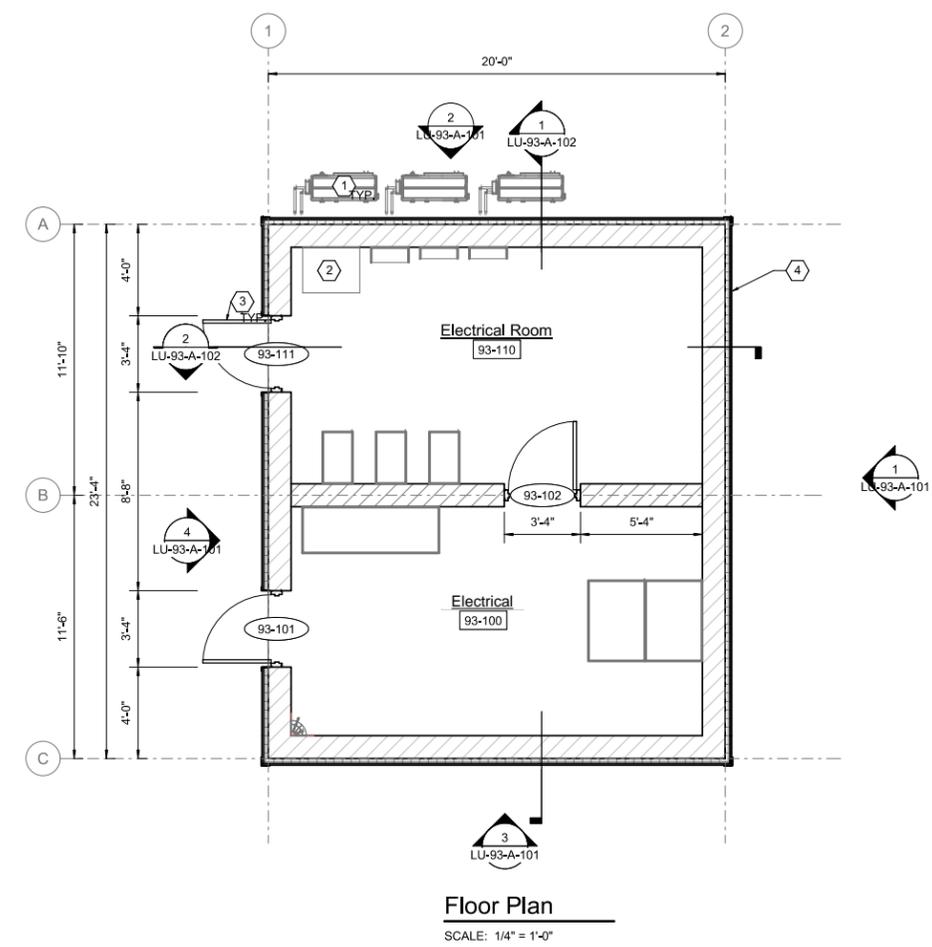


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Sheet Keynotes

- 1 HVAC equipment
- 2 Electrical equipment
- 3 Hollow Metal door
- 4 CMU walls with formed metal siding



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No	Date	Description	Appd
Revision			
Survey		XXXX	



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Project Mgr		Date

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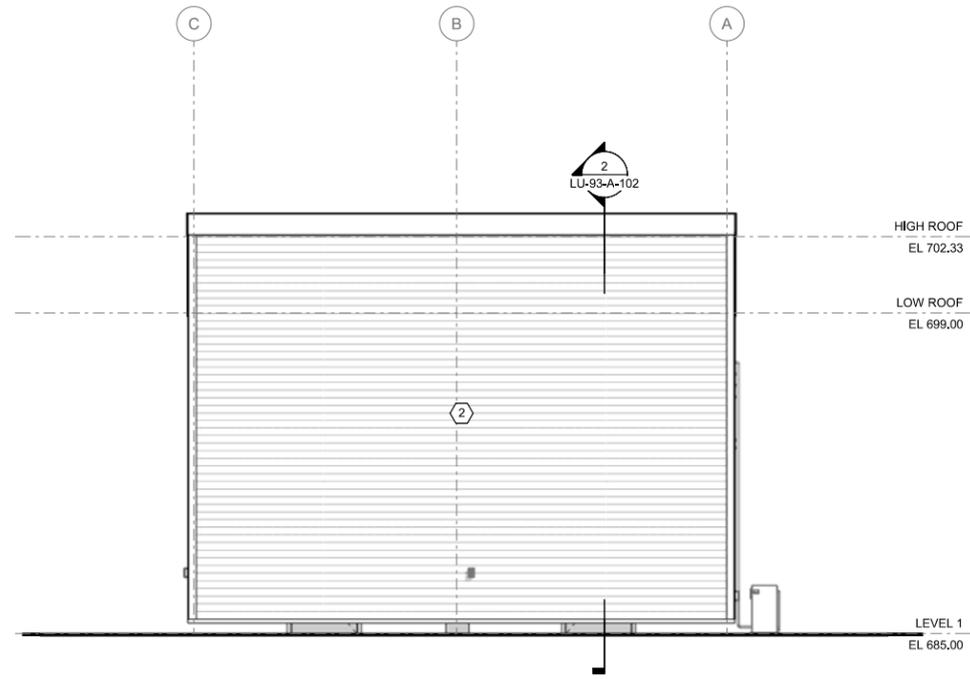


**Bull Run Filtration Facility**  
 Architectural  
 Electrical Building  
 Floor Plan

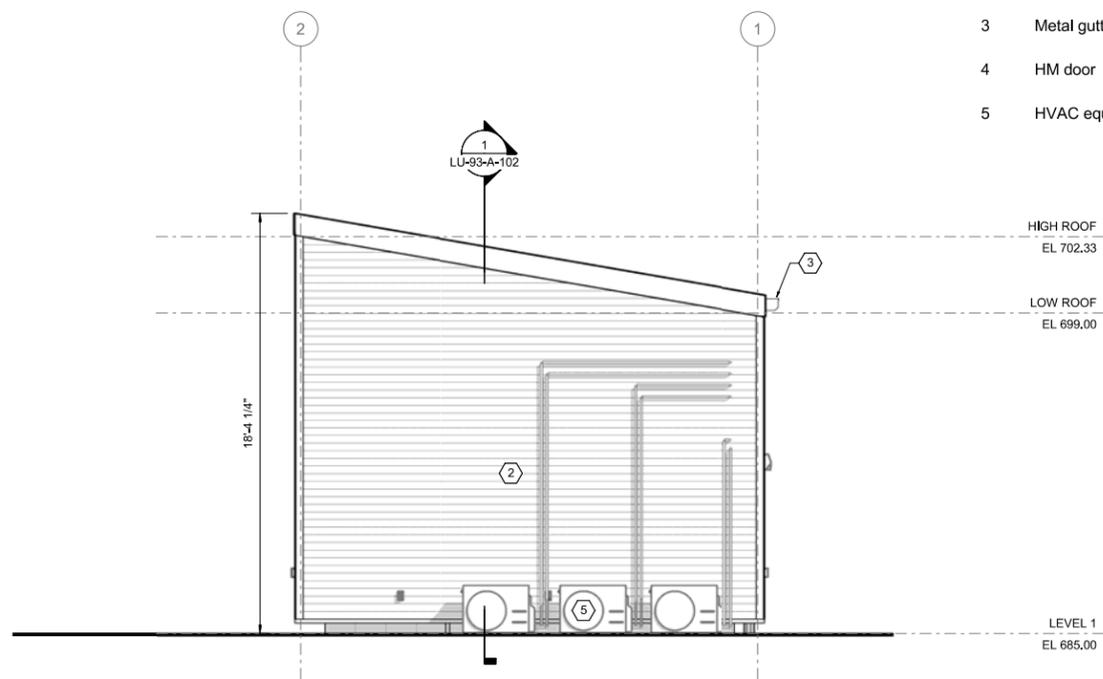
SAP Project No  
**W02229**  
 1/4 Section  
 3765 / 3766  
 Sheet No  
 LU-93-A-100  
 of

Sheet Keynotes

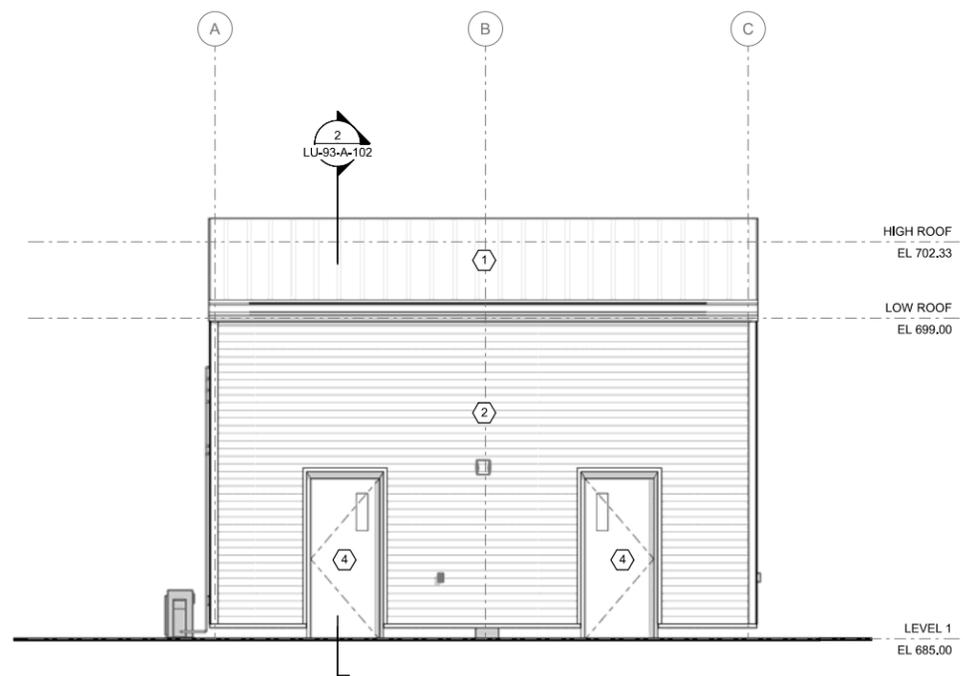
- 1 Standing seam metal roofing, and roof flashings color light grey
- 2 Horizontal formed metal panel (FMP-1), color dark blue
- 3 Metal gutter
- 4 HM door
- 5 HVAC equipment, see building mechanical drawings



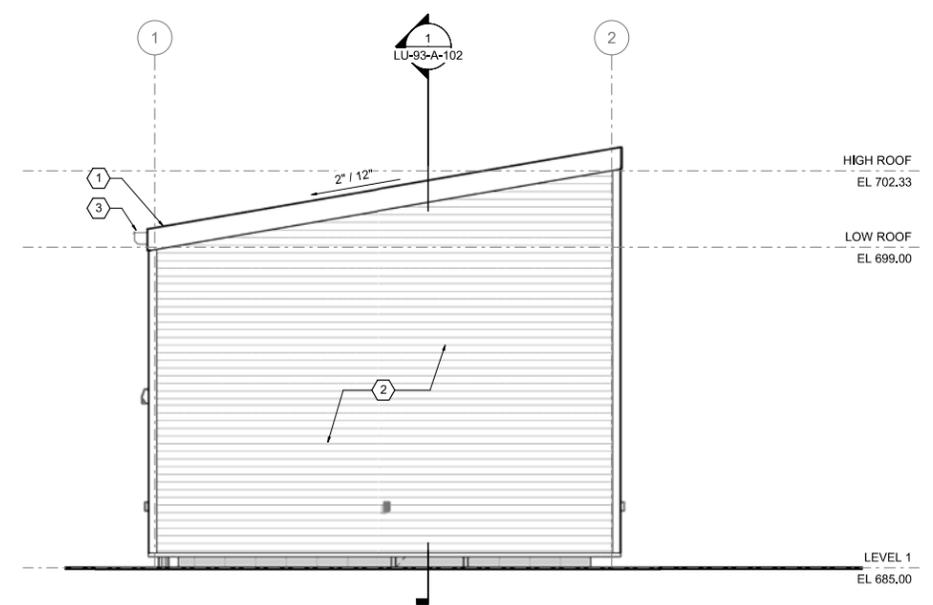
**LU - East Elevation**  
SCALE: 1/4" = 1'-0"



**LU-North Elevation**  
SCALE: 1/4" = 1'-0"



**LU-West Elevation**  
SCALE: 1/4" = 1'-0"



**LU-South Elevation**  
SCALE: 1/4" = 1'-0"



Preliminary – Not for construction LAND USE

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No	Date	Description	Appd
Revision			

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Designed By	JJM	Program Mgr
Drawn By	MB	Const Mgr
Checked By		Const Supvr
Project Mgr		Date

Warning

If this bar does not measure 1" then the drawing is not to scale



David W. Peters, Principal Engineer, PE No 16683

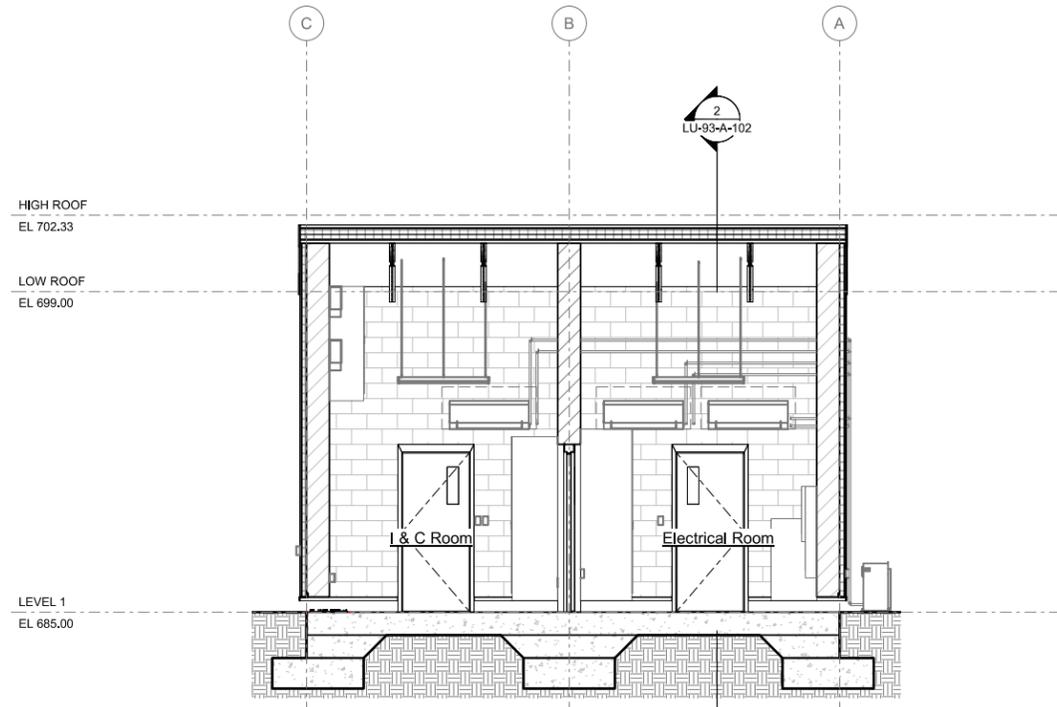


**Bull Run Filtration Facility**  
Architectural  
Electrical Building  
Elevations

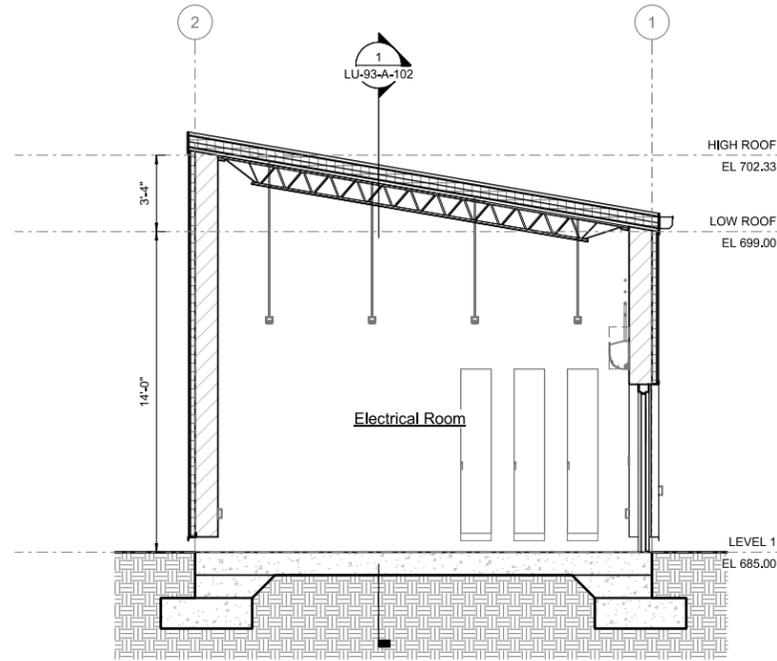
SAP Project No	W02229
1/4 Section	3765 / 3766
Sheet No	LU-93-A-101
of	

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**Section**  
SCALE: 1/4" = 1'-0"



**Section**  
SCALE: 1/4" = 1'-0"



Preliminary – Not for construction LAND USE

No	Date	Description	Appd
Revision			
Survey		XXXX	



Designed By	JJM	Program Mgr
Drawn By	MB	Const Mgr
Checked By		Const Supvr
Project Mgr		Date

Warning  
0 1/2 1  
If this bar does not measure 1" then the drawing is not to scale



David W. Peters, Principal Engineer, PE No 16683



**Bull Run Filtration Facility**  
Architectural  
Electrical Building  
Sections

SAP Project No  
**W02229**  
1/4 Section  
3765 / 3766  
Sheet No  
**LU-93-A-102**  
of