



CITY OF MADISON ZONING BOARD OF APPEALS VARIANCE APPLICATION

\$500 Filing Fee

Type or legibly print using blue or black ink.

Address of Subject Property: 801 S. Whitney Way

Name of Owner: Pete Holmgren, Madison Water Utility

Address of Owner (if different than above): 119 East Olin Ave Madison, WI 53713

Daytime Phone: 608-261-5530 Evening Phone: _____

Email Address: pholmgren@madisonwater.org

Name of Applicant (Owner's Representative): Isaac Steinmeyer, Short Elliot Hendrickson, Inc.

Address of Applicant: 10 North Bridge St. Chippewa Falls, WI 54729

Daytime Phone: 715-505-4092 Evening Phone: _____

Email Address: isteinmeyer@sehinc.com

Description of Requested Variance:

Madison Water Utility is proposing to reconstruct their existing Unit Well 12 (UW 12) facility at 801 S. Whitney Way. The property was approved to be rezoned from CN to PR by Common Council on November 25, 2025. Per City Ordinance, the side setback for PR is 30 feet. The existing wellhouse does not meet this setback. The proposed wellhouse will not meet the setback either. Relocating the building is not feasible because it is fixed to the existing well's location.

See reverse side for more instructions.

FOR OFFICE USE ONLY

Amount Paid: \$500
Receipt: 157400-0001
Filing Date: 1/15/2025
Received By: Gaby Arteaga
Parcel Number: 070930417021
Zoning District: WP-12, PR
Alder District: 11

Hearing Date: 1/15/2026
Published Date: 1/8/2026
Appeal Number: LNDVAR-2026-00001
GQ: _____
Code Section(s): 28.095 (3)

Standards for Variance

The Zoning Board of Appeals will only grant a variance if it finds that your proposal meets the following standards. Please explain how your variance request meets these standards.

1. There are conditions unique to the property of the applicant that do not apply generally to other properties in the district.

The municipal water supply well at the UW 12 site is 980' deep. The well cannot be relocated. The proposed wellhouse maintains the existing wellhouse location, so that the well can be located inside the building.

2. The variance is not contrary to the spirit, purpose, and intent of the regulations in the zoning district and is not contrary to the public interest.

The PR district is usually located adjacent to residential zoning districts. The 30' setback is typically needed to allow separation from residential homes. The UW 12 site is surrounded by roadways including the Beltline, an off ramp, and Whitney Way. There are no direct neighbors to the site. A reduction in side setback does not impact nearby properties.

3. For an area (setbacks, etc.) variance, compliance with the strict letter of the ordinance would unreasonably prevent use of the property for a permitted purpose or would render compliance with the ordinance unnecessarily burdensome.

The wellhouse cannot be relocated due to the location of the existing well. The well itself is approximately 30' from the property line. A building to house the well is not able to meet the 30' setback.

4. The alleged difficulty or hardship is created by the terms of the ordinance rather than by a person who has a present interest in the property.

The setbacks drive the hardship.

5. The proposed variance shall not create substantial detriment to adjacent property.

The proposed project will not affect adjacent property, as UW 12 has been in operation at the same location for 70 years. The Beltline was actually developed around the UW 12 facility, which is the cause of the reduced setback on the Beltline side of the property.

6. The proposed variance shall be compatible with the character of the immediate neighborhood.

There are no character impacts to the immediate neighborhood. Existing use of the site is to be maintained. Also the character of the existing facility is being integrated with the proposed architectural design.

Application Requirements

The Zoning Board of Appeals may refer or deny applicants with incomplete applications. Note, the maximum printed size for drawings is 11” x 17.” Please provide the following information:

<input checked="" type="checkbox"/>	<p>Pre-application meeting with staff. Before you submit this application, meet with the Zoning Administrator. Together, you will discuss your proposed project and submission material. Contact Zoning at least one week prior to the application submission deadline to schedule the meeting. Your application will not be accepted unless a pre-application meeting has been held.</p> <p style="text-align: right; color: red; font-weight: bold;">Meeting Date: 10/29/2025 with Kate Bannon</p>
<input checked="" type="checkbox"/>	<p>Site plan, drawn to scale. We recommend a registered survey, but it is not required. On the plan, show the following:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Lot lines. <input type="checkbox"/> Existing and proposed structures. Include dimensions and setback distances to all property lines. <input type="checkbox"/> Approximate location of structures on properties next to variance. <input type="checkbox"/> Major landscape elements, fencing, retaining walls or other relevant site features. <input type="checkbox"/> Scale (1” = 20’ or 1’ = 30’ preferred). <input type="checkbox"/> North arrow.
<input checked="" type="checkbox"/>	<p>Elevations from all directions showing existing and proposed. Show the existing structure and proposed addition(s).</p>
<input checked="" type="checkbox"/>	<p>Interior floor plan of existing and proposed structure, if required. Most additions and expansions will require floor plans.</p>
<input type="checkbox"/>	<p>Front yard variance requests. Show the front yard setback of all other properties on the same block face.</p> <p>(NA)</p>
<input type="checkbox"/>	<p>Lakefront setback variance requests. Provide a survey prepared by a registered land surveyor.</p> <p>(NA) The survey must show existing setbacks of buildings on adjacent lots.</p>
<input type="checkbox"/>	<p>Variance requests involving slope, grade, or trees. Show:</p> <p>(NA)</p> <ul style="list-style-type: none"> <input type="checkbox"/> Approximate location and amount of slope. <input type="checkbox"/> Direction of drainage. <input type="checkbox"/> Location, species and size of trees.
<input checked="" type="checkbox"/>	<p>Email digital copies of all plans and drawings to: zoning@cityofmadison.com.</p>
<input checked="" type="checkbox"/>	<p>Pay \$500 filing fee on or before submission deadline. Payment may be made in person by appointment at the Zoning counter, by mail to City of Madison Building Inspection, P. O. Box 2984, Madison WI 53701-2984, or placed in the drop box at the Doty Street entrance to the Madison Municipal Building 215 Martin Luther King Jr. Blvd. When mailing or using the drop box, please include a note that payment is for a variance application, state the subject property address and provide your contact information. NOTE: FEE TO BE PAID VIA INTER-DEPARTMENTAL TRANSFER (WATER UTILITY) - SEE OWNER INFORMATION FOR COORDINATING</p>
<input checked="" type="checkbox"/>	<p>CHECK HERE. I understand that as part of my variance request, City of Madison staff will need access to my property. Staff will take photographs and do a pre-hearing inspection of the property. I give City Staff permission to enter my property, inspect the property, and take photographs.</p>
<input checked="" type="checkbox"/>	<p>CHECK HERE. I acknowledge that any statements implied as fact require evidence.</p>

CHECK HERE. City of Madison staff has given me a copy of the standards that the Zoning Board of Appeals will use to review variance applications.

Owner's Signature:  Date: 12/11/2025

Pete Holmgren - Water Utility Chief Engineer
pholmgren@madisonwater.org
608-261-5530

------(For Office Use Only)-----

DECISION

The Board, in accordance with its findings of fact, hereby determines that the requested variance for _____ **(does) (does not)** meet all the standards for a variance. Further findings of fact are stated in the minutes of this public hearing.

The Zoning Board of Appeals: **Approved** **Denied** **Conditionally Approved**

Zoning Board of Appeals Chair:

Date:

Notice of Public Hearing Signs

The City of Madison zoning ordinance requires applicants to post signs for public hearings of the Board of Zoning Appeals (ZBA) on the properties requesting a variance or appeal.

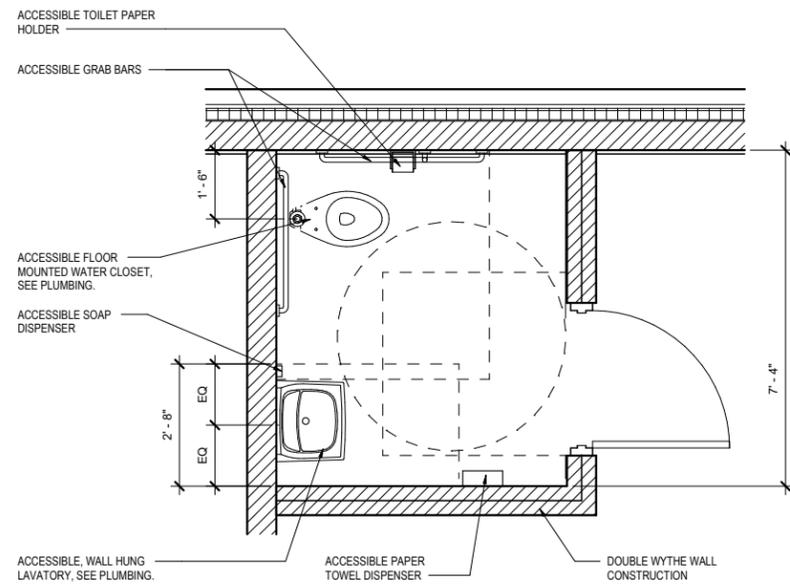
Sign Pickup

- Signs must be picked up at the Building Inspection Zoning Counter, which is open by appointment only. Schedule an appointment at: <https://www.cityofmadison.com/dpced/bi/schedule-a-counter-appointment/3423/>. The Zoning Counter is located in the Madison Municipal Building at 215 Martin Luther King, Jr. Blvd., Ste. 017, Madison, WI 53701.
- Signs will include a short description of the request, the address of the property subject to the hearing, applicant name, phone number, and email, and the date and time of the ZBA hearing. You may receive phone calls or emails regarding your request from people who see the signs.

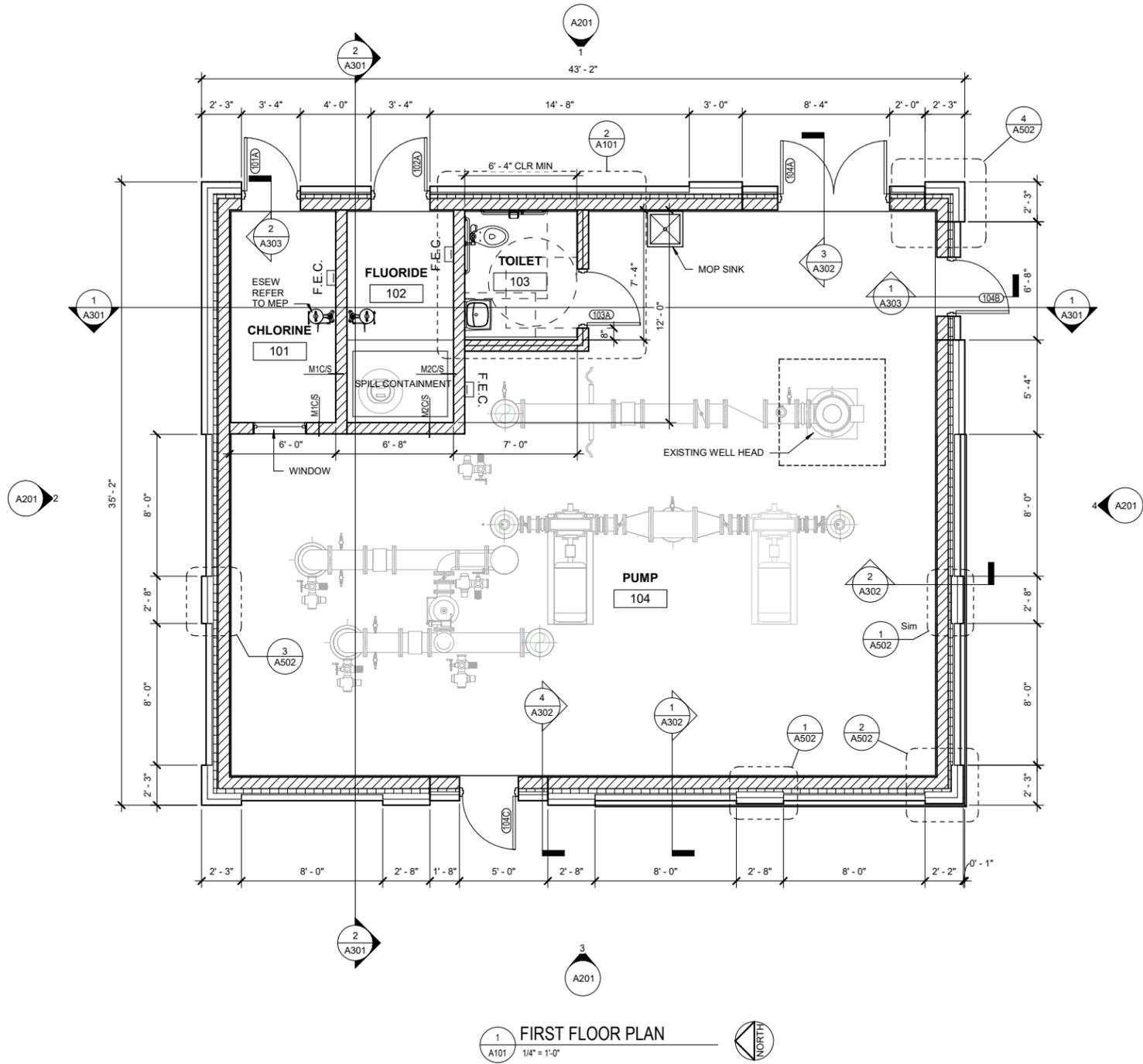
Sign Posting

- Signs must be posted at least 21 days prior to the ZBA meeting date.
- Signs must be on the property which is the subject of the public hearing.
- If the property has frontage on more than street, a sign shall be placed facing each street.
- Signs must be posted on private property. Signs may not be in the City right-of-way, public terrace, on a public tree or on a street sign. It is recommended that the signs be placed not more than five feet behind the property line.
- Signs and the information on the signs must face the street so that they are visible to pedestrians and vehicles from the street and the public walkway.
- When there is no front yard to post signs, you may post signs on the outside of the building, in a ground floor window or glass door. Signs should not be displayed more than six feet above the ground or sidewalk. The intent is for signs to be visible to the public.
- Signs shall not be posted in a location that would obstruct the views of any traffic or entrances or exits to the property.
- Signs must be removed no more than seven days after the hearing.

If you have any questions, please call our office at 608-266-4551.



2 TOILET ROOM ENLARGED PLAN
 A101 1/2" = 1'-0"

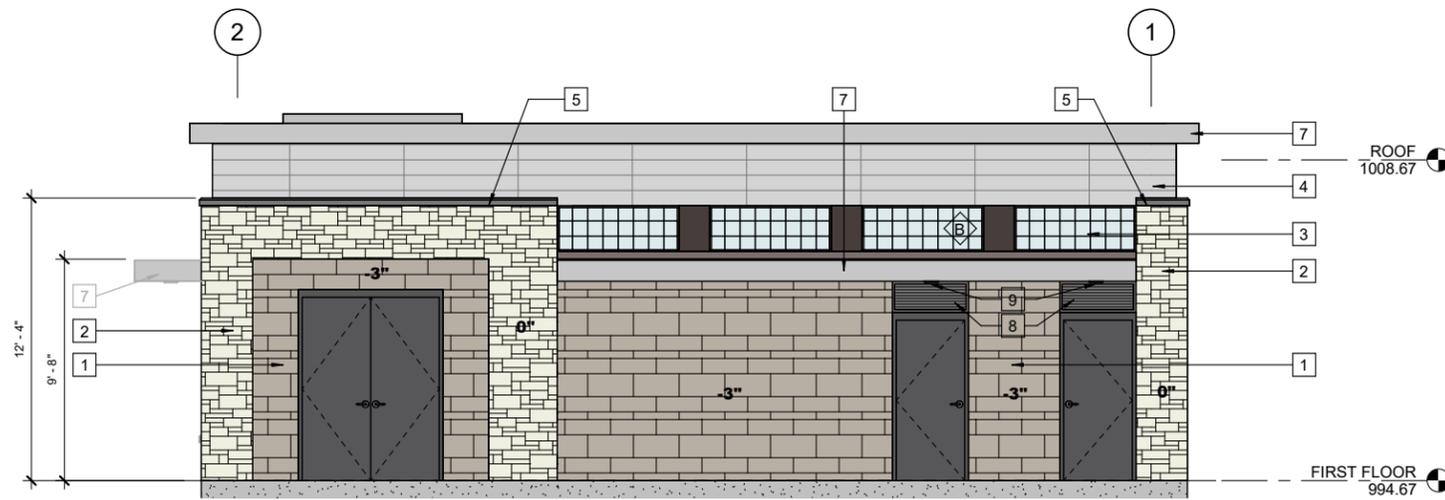


1 FIRST FLOOR PLAN
 A101 1/4" = 1'-0"

GENERAL NOTES:

1. SEE STRUCTURAL DRAWINGS FOR ALL DETAILS RELATED TO CMU REINFORCING.
2. ALL CMU SURFACES EXPOSED TO VIEW SHALL BE BURNISHED FACED UNITS.
3. PROVIDE BULLNOSE UNITS AT CORNERS AND JAMBS.
4. PROVIDE LINTEL UNITS OVER OPENINGS.
5. PROVIDE BURNISHED SILL UNITS AT SILL CONDITIONS. ALL WALLS HAVE COVERED BASE STARTER COURSE.
6. CONSTRUCT WALLS COMMON TO PUMP ROOM SO THAT GOOD SIDE FACES THE PUMP ROOM.
7. SEE OTHER DRAWINGS FOR EQUIPMENT LOCATIONS AND HOUSE KEEPING PADS.
8. REFER TO DIVISION 9 SPECIFICATIONS FOR INTERIOR FINISHES.

NOTE: ALL DRAWING SCALES ARE FOR PLANS PRINTED ON 34"x22" SHEETS



1 EAST ELEVATION
A201 1/4" = 1'-0"



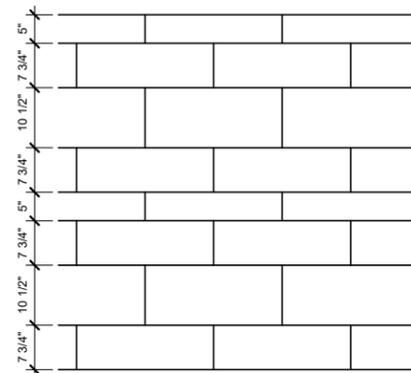
2 NORTH ELVEVATION
A201 1/4" = 1'-0"



3 WEST ELEVATION
A201 1/4" = 1'-0"



4 SOUTH ELEVATION
A201 1/4" = 1'-0"



NOTE: STONE LENGTHS VARY BETWEEN 8" AND 32", STONE HEIGHT COURSING AS SHOWN ABOVE. SEE SPECIFICATIONS FOR STONE TYPE

Exterior Stone Veneer Coursing

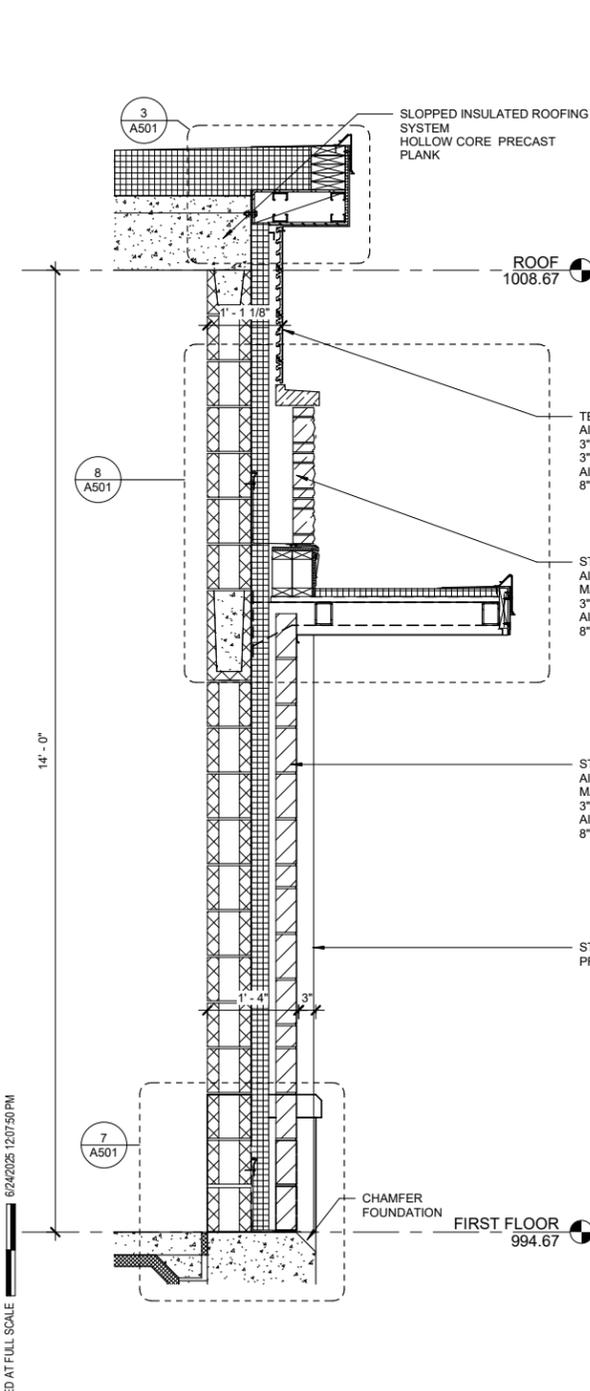
GENERAL NOTES:

- 1. ALL CAST STONE COPINGS PROJECT NOMINALLY 1.5" BEYOND FACE OF STONE

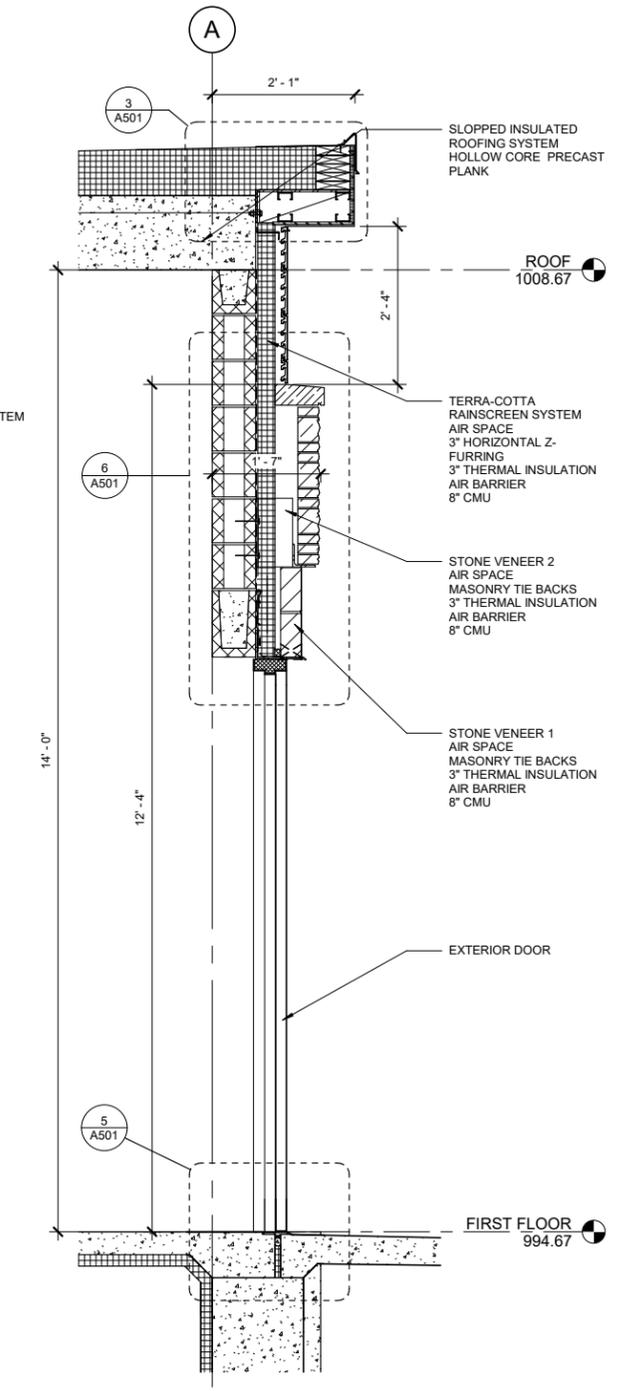
KEY NOTES:

- 1 STONE VENEER 1
- 2 STONE VENEER 2
- 3 TRANSLUCENT FIBERGLASS SANDWICH PANEL WALL SYSTEM
- 4 8" H x 5'-0" LONG TERRA COTTA RAIN SCREEN SYSTEM
- 5 CAST STONE COPING 1
- 6 CAST STONE COPING 2
- 7 METAL FASCIA
- 8 LOUVER REFER TO DA6
- 9 SOFFIT LIGHT CENTER ON DOOR REFER TO ELECTRICAL DRAWINGS
- 10 SALVAGED STONE SIGNAGE FROM EXISTING BUILDING. CLEAN STONE AND PAINT RECESSED LETTERING.
- 11 BUILDING ADDRESS COORDINATE WITH OWNER
- 12 SALVAGED STONE VENEER FROM EXISTING BUILDING.

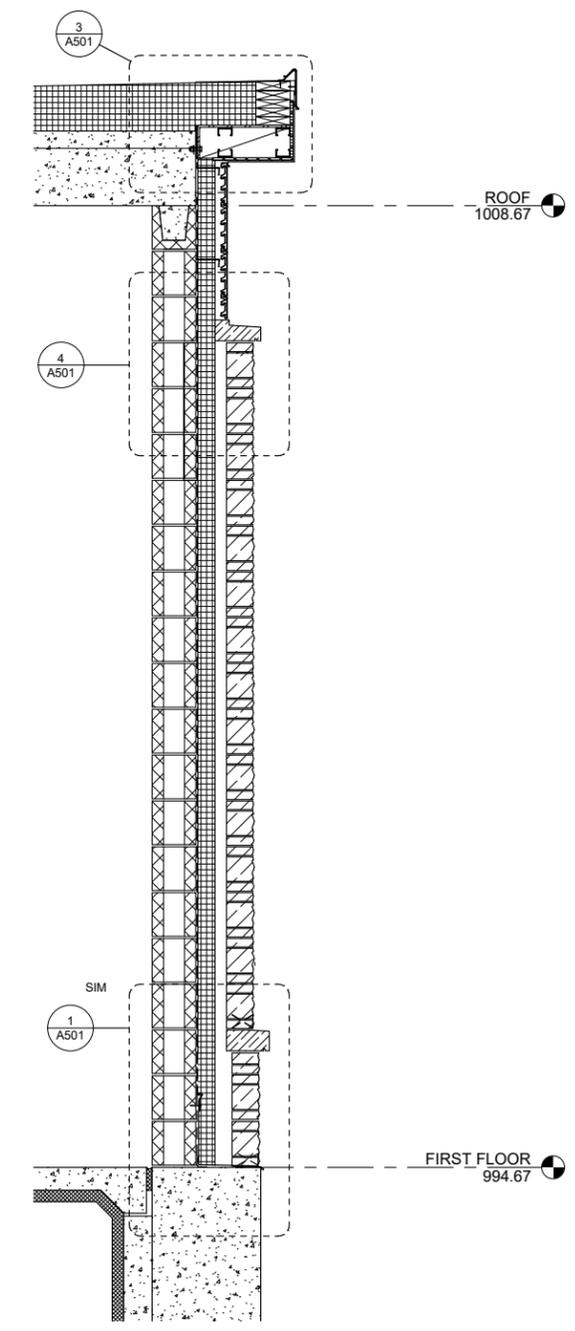
NOTE: ALL DRAWING SCALES ARE FOR PLANS PRINTED ON 34"x22" SHEETS



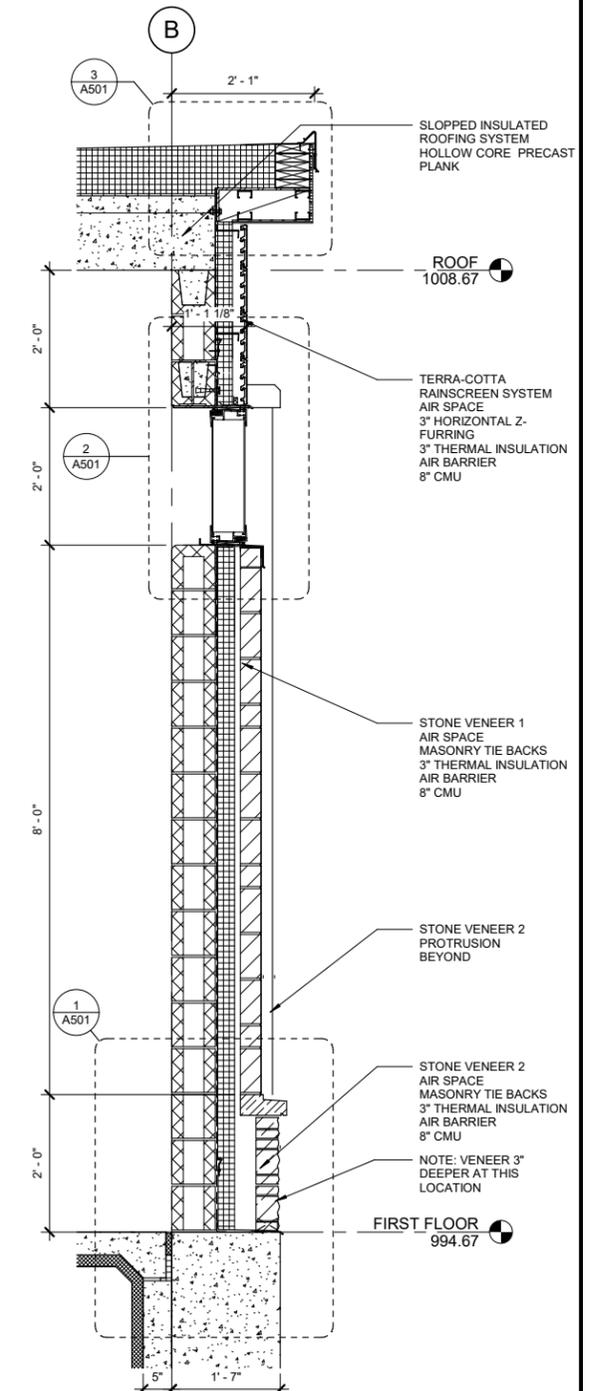
4 WALL SECTION - STONE WALL AT CANOPY
A302 3/4" = 1'-0"



3 WALL SECTION - STONE WALL AT DOOR
A302 3/4" = 1'-0"



2 WALL SECTION - STONE WALL
A302 3/4" = 1'-0"



1 SECTION THRU CLERESTORY WINDOW
A302 3/4" = 1'-0"

THIS BAR IS INTENDED TO BE 1" PRINTED AT FULL SCALE 6/24/2025 12:07:50 PM

NOTE: ALL DRAWING SCALES ARE FOR PLANS PRINTED ON 34"x22" SHEETS

MADISON, WISCONSIN
UNIT WELL 12 RECONSTRUCTION

801 S. Whitney Way, Madison
WI, 53711

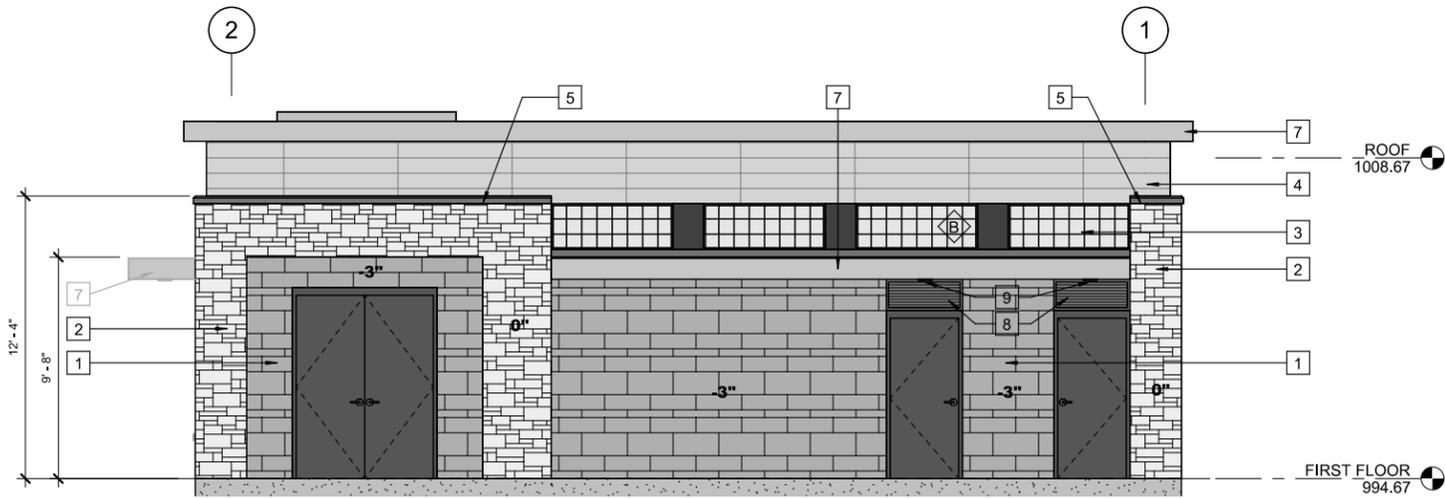
This drawing is an instrument of service and shall remain the property of Short Elliott Hendrickson, Inc. (SEH). This drawing, concept and ideas contained herein shall not be used, reproduced, revised, or retained without the express written approval of SEH. Submission or distribution of this drawing to meet official or regulatory requirements or for purposes in connection with the project is not to be construed as publication in derogation of any of the rights of SEH. COPYRIGHT © 2024 Short Elliott Hendrickson, Inc. All Rights Reserved.

SEH Project	182222
Checked By	JRL
Drawn By	JRL
Project Status	Issue Date
DNR SUBMITTAL	6/30/2025

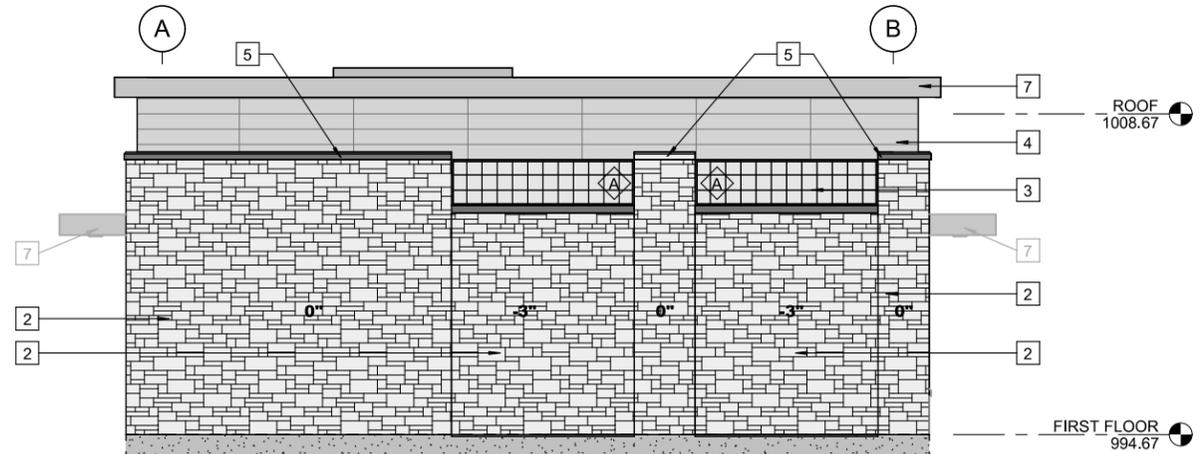
REVISION SCHEDULE		
REV. #	DESCRIPTION	DATE

WALL SECTIONS

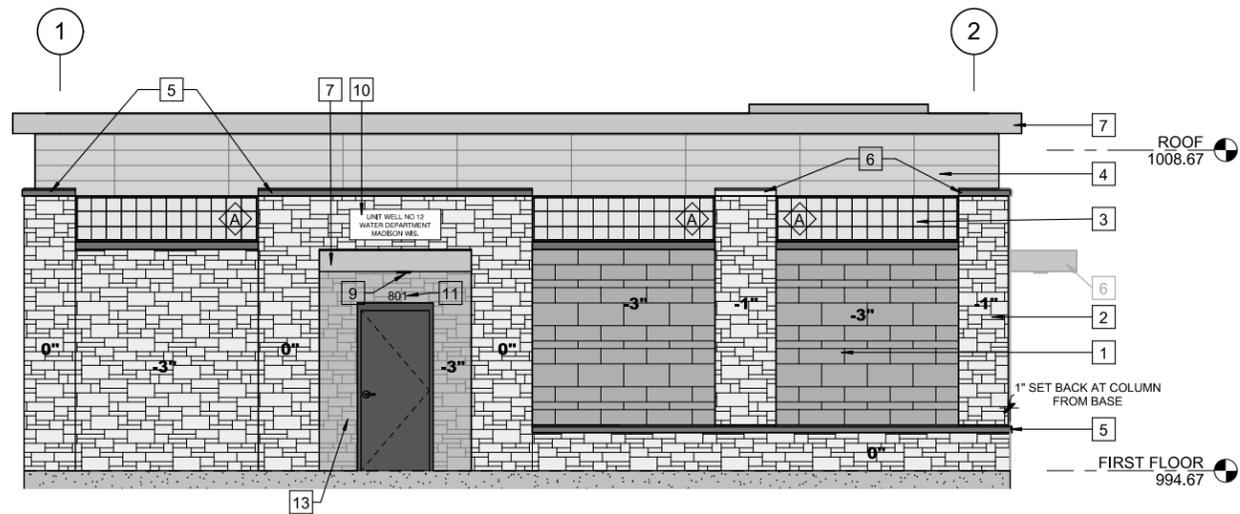
01
A302



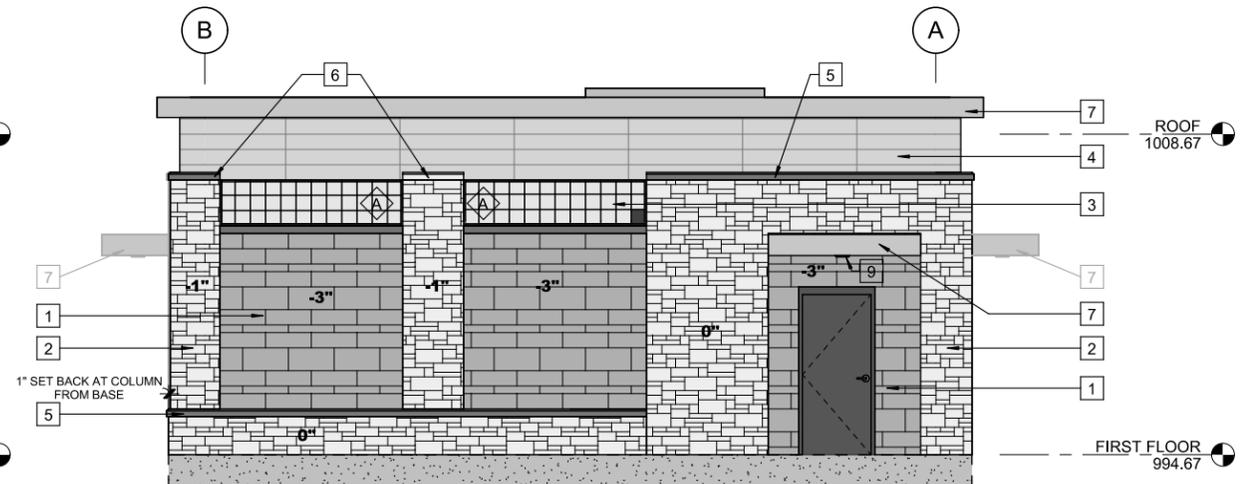
1 EAST ELEVATION
A201 1/4" = 1'-0"



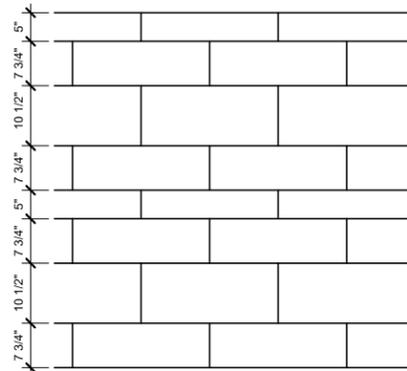
2 NORTH ELVEVATION
A201 1/4" = 1'-0"



3 WEST ELEVATION
A201 1/4" = 1'-0"



4 SOUTH ELEVATION
A201 1/4" = 1'-0"



NOTE: STONE LENGTHS VARY BETWEEN 8" AND 32", STONE HEIGHT COURSING AS SHOWN ABOVE. SEE SPECIFICATIONS FOR STONE TYPE

Exterior Stone Veneer Coursing

GENERAL NOTES:

- 1. ALL CAST STONE COPINGS PROJECT NOMINALLY 1.5" BEYOND FACE OF STONE

KEY NOTES:

- 1 STONE VENEER 1
- 2 STONE VENEER 2
- 3 TRANSLUCENT FIBERGLASS SANDWICH PANEL WALL SYSTEM
- 4 8" H x 5'-0" LONG TERRA COTTA RAIN SCREEN SYSTEM
- 5 CAST STONE COPING 1
- 6 CAST STONE COPING 2
- 7 METAL FASCIA
- 8 LOUVER REFER TO DA6
- 9 SOFFIT LIGHT CENTER ON DOOR REFER TO ELECTRICAL DRAWINGS
- 10 SALVAGED STONE SIGNAGE FROM EXISTING BUILDING. CLEAN STONE AND PAINT RECESSED LETTERING.
- 11 BUILDING ADDRESS COORDINATE WITH OWNER
- 12 SALVAGED STONE VENEER FROM EXISTING BUILDING.

NOTE: ALL DRAWING SCALES ARE FOR PLANS PRINTED ON 34"x22" SHEETS

MADISON, WISCONSIN
UNIT WELL 12 RECONSTRUCTION

801 S. Whitney Way, Madison WI, 53711

This drawing is an instrument of service and shall remain the property of Short Elliott Hendrickson, Inc. (SEH). This drawing, concepts and ideas contained herein shall not be used, reproduced, revised, or retained without the express written approval of SEH. Submission or distribution of this drawing to meet official or regulatory requirements or for purposes in connection with the project is not to be construed as publication in derogation of any of the rights of SEH. COPYRIGHT © 2024 Short Elliott Hendrickson, Inc. All Rights Reserved.

SEH Project 182222
Checked By JRL
Drawn By JRL

Project Status Issue Date
DNR SUBMITTAL 6/30/2025

REVISION SCHEDULE		
REV. #	DESCRIPTION	DATE

EXTERIOR ELEVATIONS

01
A201

CONSTRUCTION DRAWINGS FOR UNIT WELL 12 RECONSTRUCTION FOR MADISON WATER UTILITY MADISON, WISCONSIN



Project Owner

MADISON, WISCONSIN
UNIT WELL 12 RECONSTRUCTION

801 S. Whitney Way
Madison WI, 53711

This drawing is an instrument of service and shall remain the property of Short Elliott Hendrickson, Inc. (SEH). This drawing, concept and ideas contained herein shall not be used, reproduced, revised, or retained without the express written approval of SEH. Submission or distribution of this drawing to meet official or regulatory requirements or for purposes in connection with the project is not to be construed as publication in derogation of any of the rights of SEH.

SEH Project MADWU 182222
Checked By IS
Drawn By DD

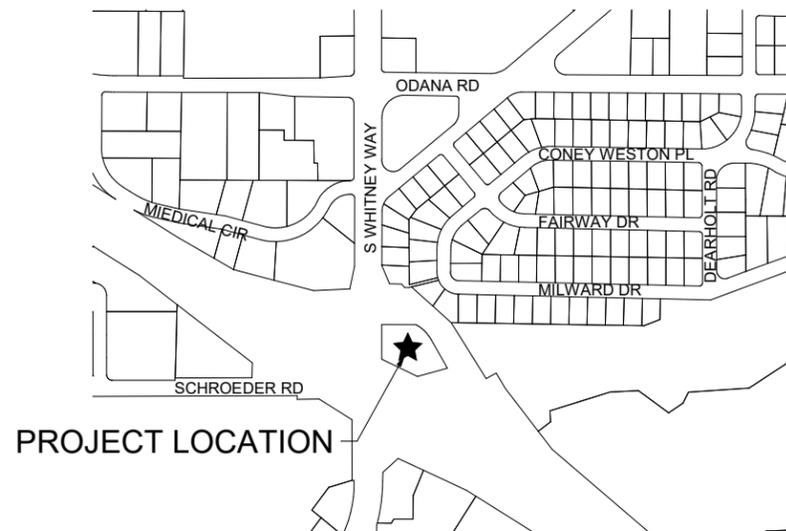
Project Status Issue Date
DNR SUBMITTAL 6/30/2025

REVISION SCHEDULE
REV. # DESCRIPTION DATE

TITLE SHEET

G001

THIS BAR IS INTENDED TO BE 1" PRINTED AT FULL SCALE 6/26/2025 9:10:28 AM





SHEET NUMBERING LEGEND

STRUCTURE IDENTIFIER OR SHEET TYPE

- G** GENERAL INFORMATION
- C** SITE WORK
- D** DETAILS

SERIES DRAWING NUMBER

- 000** GENERAL
- 100** PLAN VIEWS
- 200** ELEVATION VIEWS
- 300** SECTION VIEWS
- 400** LARGE SCALE VIEWS
- 500** DETAILS
- 600** SCHEDULES
- 900** 3D VIEWS

DISCIPLINE

- G** GENERAL
- C** CIVIL
- S** STRUCTURAL
- A** ARCHITECTURAL
- P** PROCESS
- M** MECHANICAL
- E** ELECTRICAL
- IC** INSTRUMENTATION / CONTROLS

SHEET
01
P101

GENERAL

G001	TITLE SHEET
G002	SHEET INDEX
S001	GENERAL STRUCTURAL ABBREVIATIONS, SYMBOLS AND TABLES
S002	GENERAL STRUCTURAL NOTES
A001	GENERAL INFORMATION AND ABBREVIATIONS
P001	GENERAL PROCESS INFORMATION
P002	HYDRAULIC PROFILE, FLOW SCHEMATIC AND BASIS OF DESIGN
M001	MECHANICAL SYMBOLS AND ABBREVIATIONS
E001	SYMBOLS, ABBREVIATIONS AND NOTES

CIVIL

C101	SITE PLAN
C102	REMOVALS PLAN
C103	GRADING & EROSION CONTROL PLAN
C104	WATER MAIN SYSTEM MAP

01 WELLHOUSE

01 S101	FOUNDATION PLAN
01 S102	FLOOR PLAN
01 S103	ROOF FRAMING PLAN
01 S201	REINFORCING ELEVATIONS
01 S301	BUILDING SECTIONS
01 S501	CONCRETE DETAILS
01 S502	PRECAST AND MASONRY DETAILS
01 S503	STRUCTURAL DETAILS
01 A002	BUILDING DEMOLITION REFERENCE DRAWING
01 A003	BUILDING DEMOLITION REFERENCE DRAWING
01 A004	CODE PLAN
01 A101	FLOOR PLAN
01 A102	CLERESTORY PLAN
01 A103	ROOF PLAN
01 A201	EXTERIOR ELEVATIONS
01 A301	BUILDING SECTIONS
01 A302	WALL SECTIONS
01 A303	WALL SECTIONS
01 A501	DETAILS
01 A502	DETAILS
01 A601	SCHEDULES AND DETAILS
01 P101	WELLHOUSE FLOOR PLAN
01 P301	WELLHOUSE SECTIONS
01 P302	WELLHOUSE SECTIONS
01 P501	WELLHOUSE PROCESS DETAILS
01 P502	WELLHOUSE PROCESS DETAILS
01 P503	WELL NO. 12 PROFILE & ASSEMBLY DETAILS
01 M101	HVAC PLAN
01 M102	DOMESTIC WATER AND GAS PLAN
01 M103	SANITARY WASTE AND VENT PLAN
01 M104	MECHANICAL ROOF PLAN
01 M105	FIRE PROTECTION PLAN
01 M201	RISER DIAGRAMS
01 M202	RISER DIAGRAMS
01 M301	MECHANICAL SCHEDULES
01 M302	PLUMBING SCHEDULES
01 M303	MECHANICAL DETAILS
01 M304	MECHANICAL DETAILS
01 E071	ELECTRICAL REMOVAL PLAN
01 E101	ELECTRICAL SITE PLAN
01 E201	LIGHTING PLAN
01 E301	POWER AND INSTRUMENTATION PLAN
01 E501	ONE-LINE DIAGRAM
01 E502	ONE-LINE DIAGRAM
01 E601	ELECTRICAL SCHEMATICS
01 E701	SCHEDULES
01 E801	ELECTRICAL DETAILS

02 RESERVOIR

02 P101	WATER STORAGE TANK PLAN & SECTION
02 P301	WATER STORAGE TANK SECTION
02 P302	WATER STORAGE TANK ELEVATIONS & SECTIONS
02 P501	WATER STORAGE TANK STRUCTURAL DETAILS
02 P502	WATER STORAGE TANK INLET, OUTLET, & MIXING SYSTEM DETAILS
02 P503	WATER STORAGE TANK ACCESSORY DETAILS
02 P504	WATER STORAGE TANK ACCESSORY DETAILS
02 P505	WATER STORAGE TANK ACCESSORY DETAILS
02 P506	WATER STORAGE TANK ACCESSORY DETAILS

THIS BAR IS INTENDED TO BE 1" PRINTED AT FULL SCALE 6/30/2025 10:57:00 AM

MADISON, WISCONSIN
UNIT WELL 12 RECONSTRUCTION

801 S. Whitney Way
Madison WI, 53711

This drawing is an instrument of service and shall remain the property of Short Elliott Hendrickson, Inc. (SEH). This drawing, concepts and ideas contained herein shall not be used, reproduced, revised, or retained without the express written approval of SEH.

Submission or distribution of this drawing to meet official or regulatory requirements or for purposes in connection with the project is not to be construed as publication or derogation of any of the rights of SEH.

COPYRIGHT © 2022
Short Elliott Hendrickson, Inc.
All Rights Reserved.

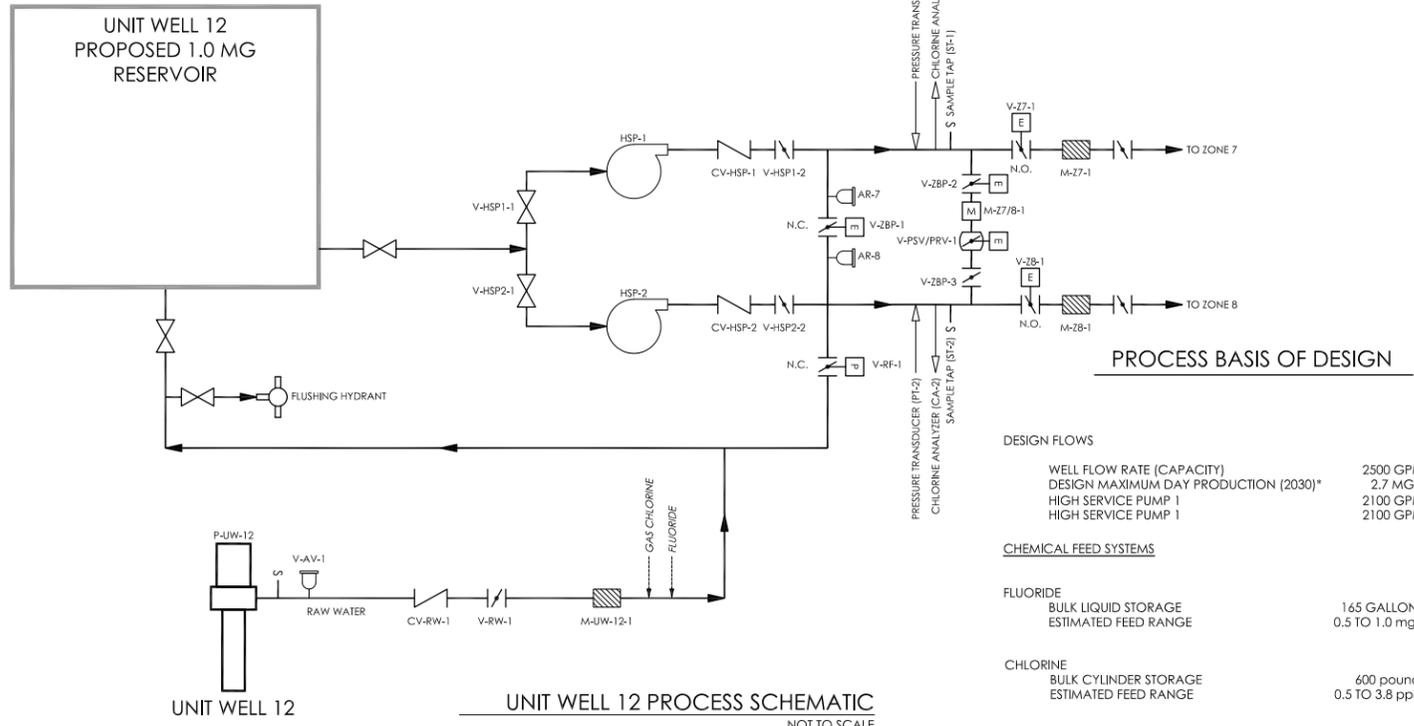
SEH Project	MADWU 182222
Checked By	IS
Drawn By	DD

Project Status	Issue Date
DNR SUBMITTAL	6/30/2025

REVISION SCHEDULE		
REV. #	DESCRIPTION	DATE

SHEET INDEX

G002



PROCESS BASIS OF DESIGN

DESIGN FLOWS

WELL FLOW RATE (CAPACITY) 2500 GPM
 DESIGN MAXIMUM DAY PRODUCTION (2030)* 2.7 MGD
 HIGH SERVICE PUMP 1 2100 GPM
 HIGH SERVICE PUMP 2 2100 GPM

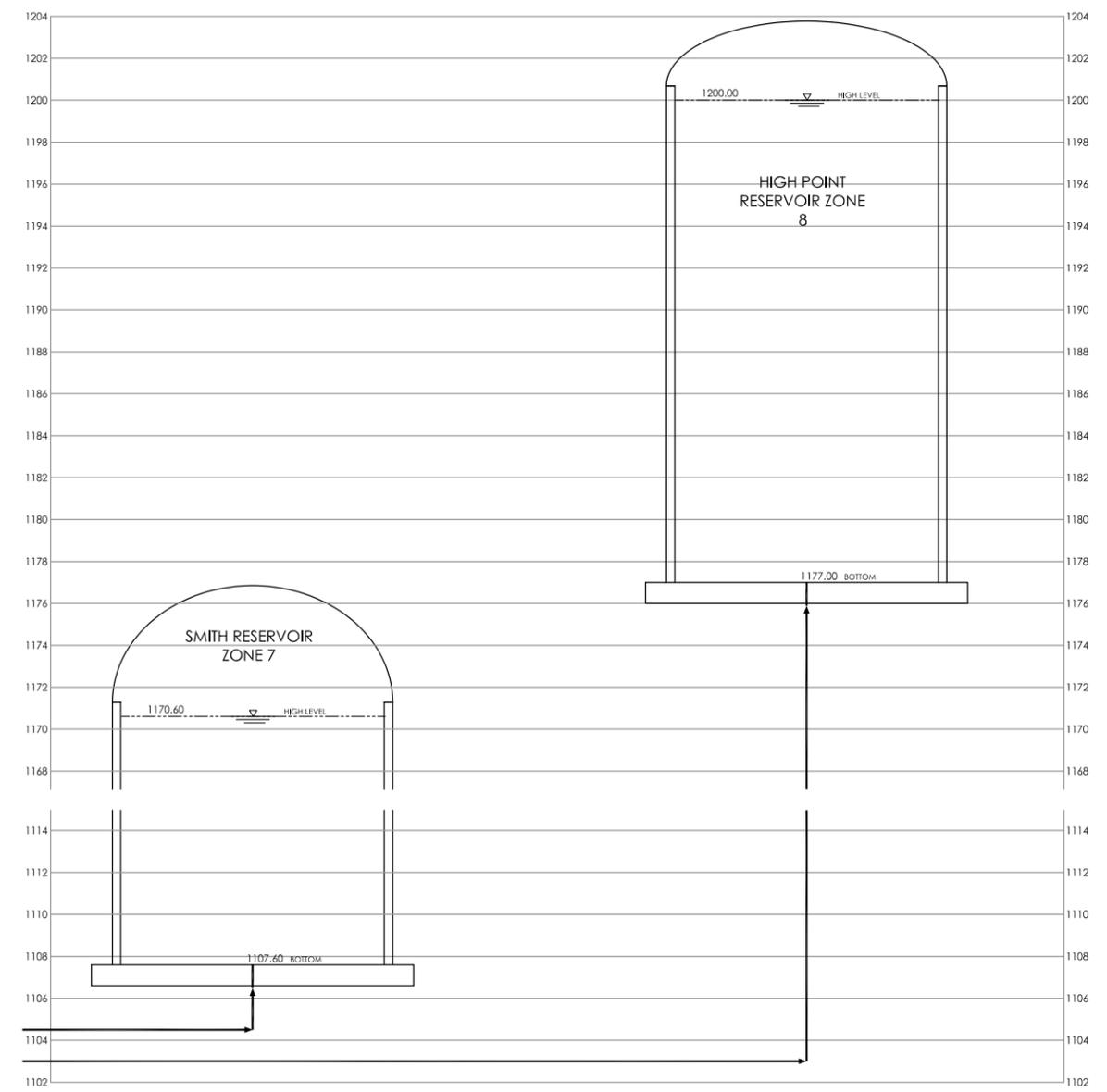
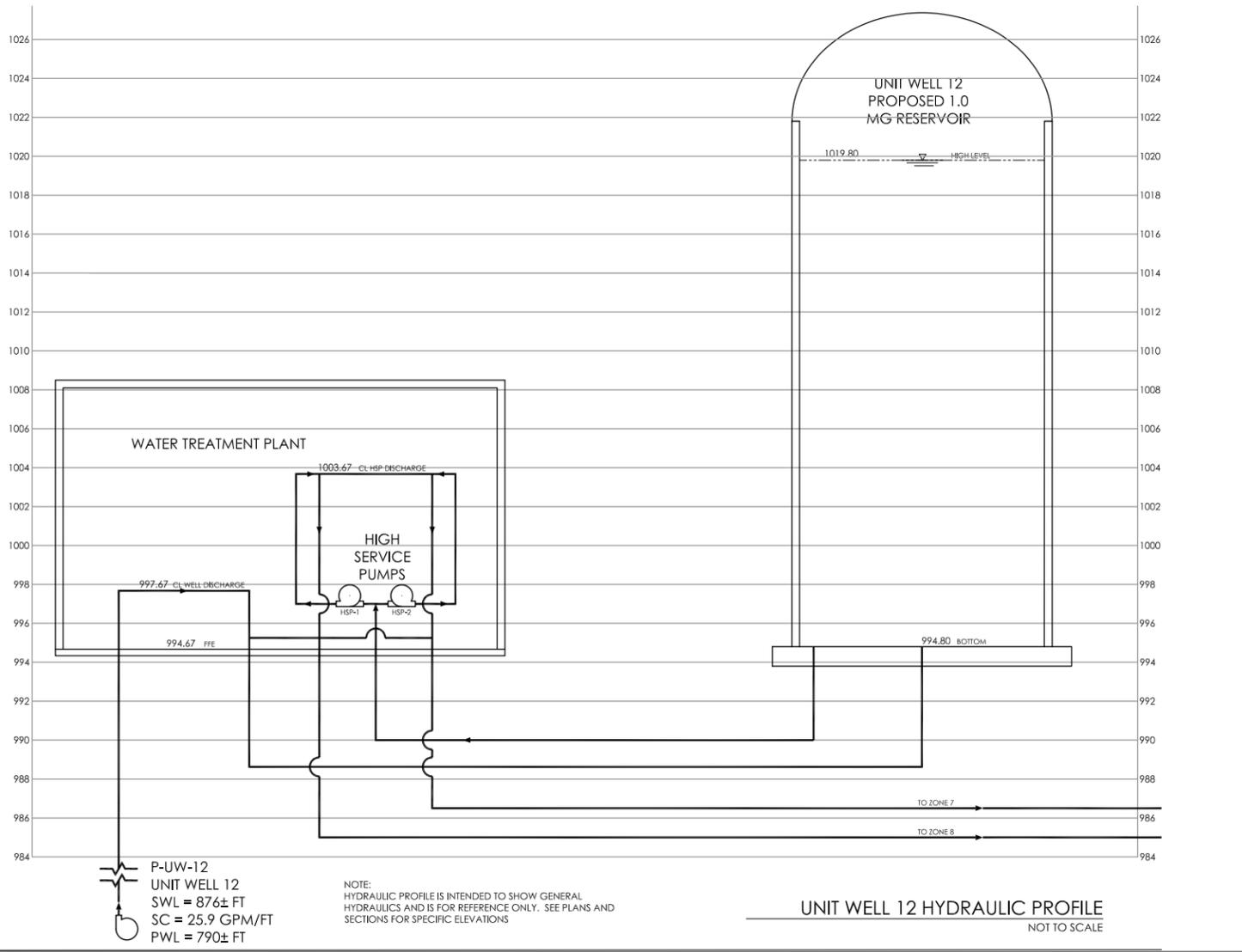
CHEMICAL FEED SYSTEMS

FLUORIDE
 BULK LIQUID STORAGE 165 GALLONS
 ESTIMATED FEED RANGE 0.5 TO 1.0 mg/l

CHLORINE
 BULK CYLINDER STORAGE 600 pounds
 ESTIMATED FEED RANGE 0.5 TO 3.8 ppm

Automated System Process Valves									
Name	Location	Size	Type	Operator	Purpose	Oper. Press.	Fall Pos.	Notes	
V-ZBP-1	Bypass Between Zone 7 and 8 Discharge Piping	12-inch	Butterfly	Electric Actuator	Flow Directional Control water flow to each zone.	< 90 psi	Closed	Closed = One pump feeds each zone, Open = Two pumps feed one zone.	
V-Z7-1	Discharge to Zone 7	12-inch	Butterfly	Electric Actuator	Controls Water Flow to Zone 7	< 90 psi	Open		
V-Z8-1	Discharge to Zone 8	12-inch	Butterfly	Electric Actuator	Controls Water Flow to Zone 8	< 90 psi	Open		
V-RF-1	Reservoir Fill Piping	8-inch	Butterfly	Electric Actuator	Controls Water Flow Dist. To Reservoir	< 90 psi	Closed		
V-PSV/PRV-1	Connection between Zone 7 and 8	8-inch	Globe	Solenoid	Move flow from Zone 8 to 7 (PRV) or Zone 7 to 8 (PSV)	< 50 psi	Closed	Set to provide a minimum pressure to each side of the valve.	

Standard Process Valves									
Name	Location	Size	Type	Operator	Notes				
V-AV-1	Unit Well 12 Wellhead	3-inch	Air Release / Vacuum	Pressure	NPT Threaded				
CV-RW-1	Unit Well 12 Wellhead	12-inch	Swing Check	Counter Weight	Flanged				
V-RW-1	Well 12 Isolation	12-inch	Butterfly	Handwheel	Flanged				
V-HSP1-1	High Lift Pump 1 Suction	8-inch	Butterfly	Handwheel	Flanged				
V-HSP2-1	High Lift Pump 2 Suction	8-inch	Butterfly	Handwheel	Flanged				
CV-HSP1	High Lift Pump 1 Discharge	12-inch	Swing Check	Counter Weight	Flanged				
CV-HSP2	High Lift Pump 2 Discharge	12-inch	Swing Check	Counter Weight	Flanged				
V-HSP1-2	High Lift Pump 1 Discharge	6-inch	Butterfly	Handwheel	Flanged				
V-HSP2-2	High Lift Pump 2 Discharge	6-inch	Butterfly	Handwheel	Flanged				
V-ZBP-3	Isolation (Zone 7/8)	8-inch	Butterfly	Handwheel	Flanged				
V-AR-Z7	Zone 7 Discharge Piping	2-inch	Air Release	Pressure	NPT Threaded				
V-AR-Z8	Zone 8 Discharge Piping	2-inch	Air Release	Pressure	NPT Threaded				



Madison Water Utility
UNIT WELL 12 RECONSTRUCTION

801 S. Whitney Way
 Madison WI 53711

This drawing is an instrument of service and shall remain the property of Short Elett Henderson, Inc. (SEH). This drawing, concepts and ideas contained herein shall not be used, reproduced, copied, or related without the express written approval of SEH. Submission or distribution of this drawing to meet official or regulatory requirements or for purposes in connection with the project is not to be construed as publication in derogation of any of the rights of SEH.

SEH Project MADWU 182222
 Checked By IS
 Drawn By DD

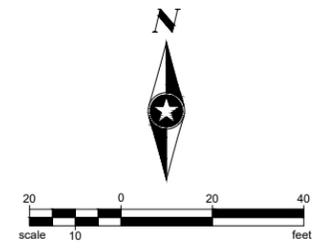
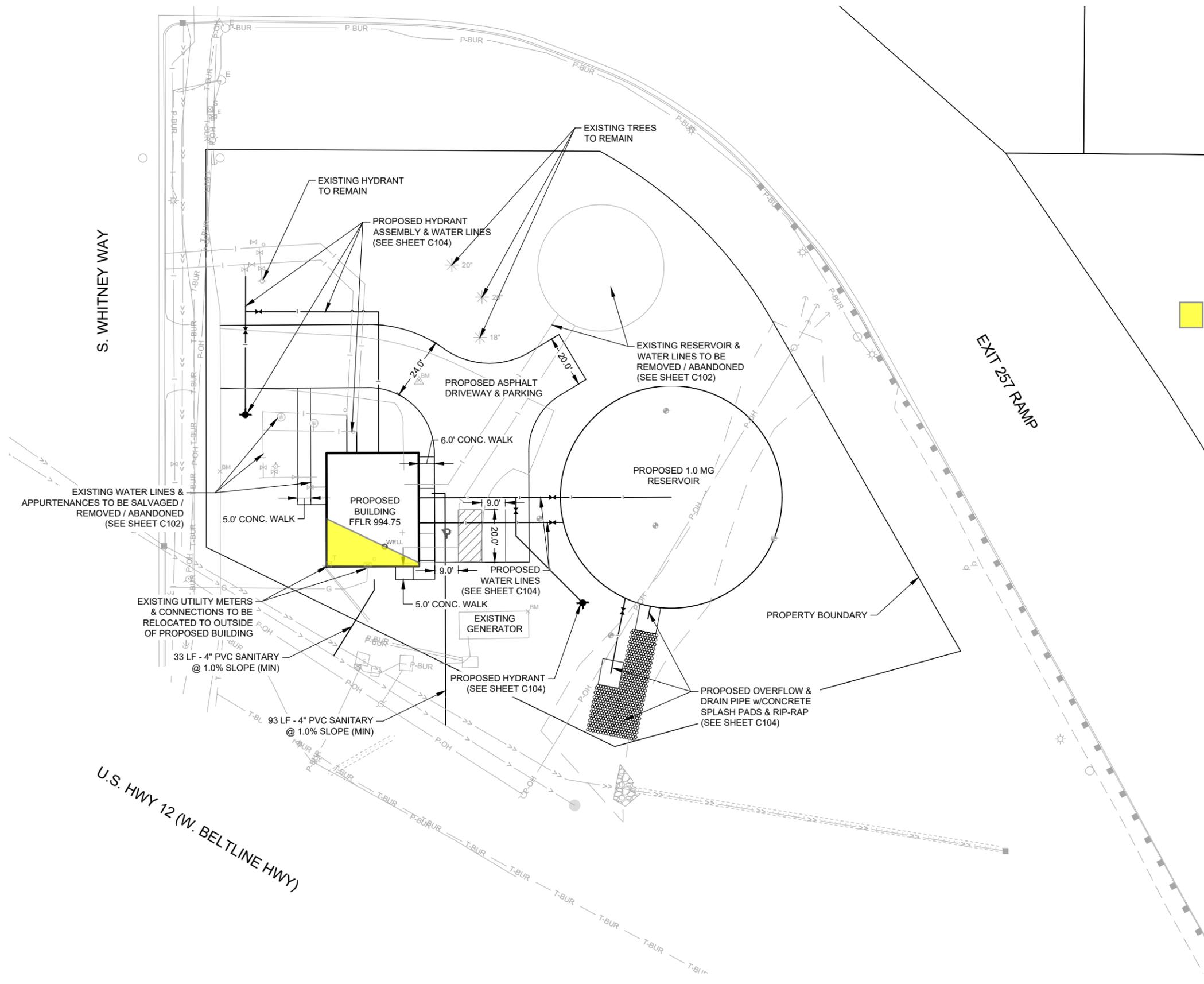
Project Status DNR SUBMITTAL Issue Date 6/30/2025

REV.#	DESCRIPTION	DATE

HYDRAULIC PROFILE, FLOW SCHEMATIC AND BASIS OF DESIGN

THIS BAR IS INTENDED TO BE 1" PRINTED AT FULL SCALE

Save: 9/19/2025 2:06 PM noswald Plct: 9/19/2025 5:50 PM X:\K\MMADWU182222\5-final-dgn\51-drawings\10-Civil\cad\dwg\sheet\MA182222_SP.dwg



Side Yard Setback Variance for New Wellhouse

Required 30'
Proposed 13.5'
Variance 16.5'



Project Owner

MADISON, WISCONSIN
UNIT WELL 12 RECONSTRUCTION
801 S. Whitney Way
Madison WI, 53711

This drawing is an instrument of service and shall remain the property of Shortt Elliott Hendrickson, Inc. (SEH). This drawing, concepts and ideas contained herein shall not be used, reproduced, revised, or retained without the express written approval of SEH.
Submission or distribution of this drawing to meet official or regulatory requirements or for purposes in connection with the project is not to be construed as publication or derogation of any of the rights of SEH.
COPYRIGHT © 2024
Shortt Elliott Hendrickson, Inc.
All Rights Reserved.

SEH Project MADWU_182222
Checked By KB
Drawn By PAL

Project Status Issue Date
DNR SUBMITTAL 06/30/2025
CITY SUBMITTAL 09/22/2025

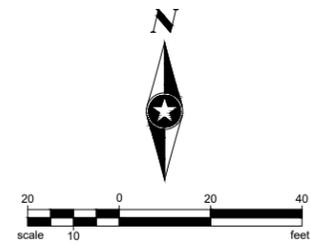
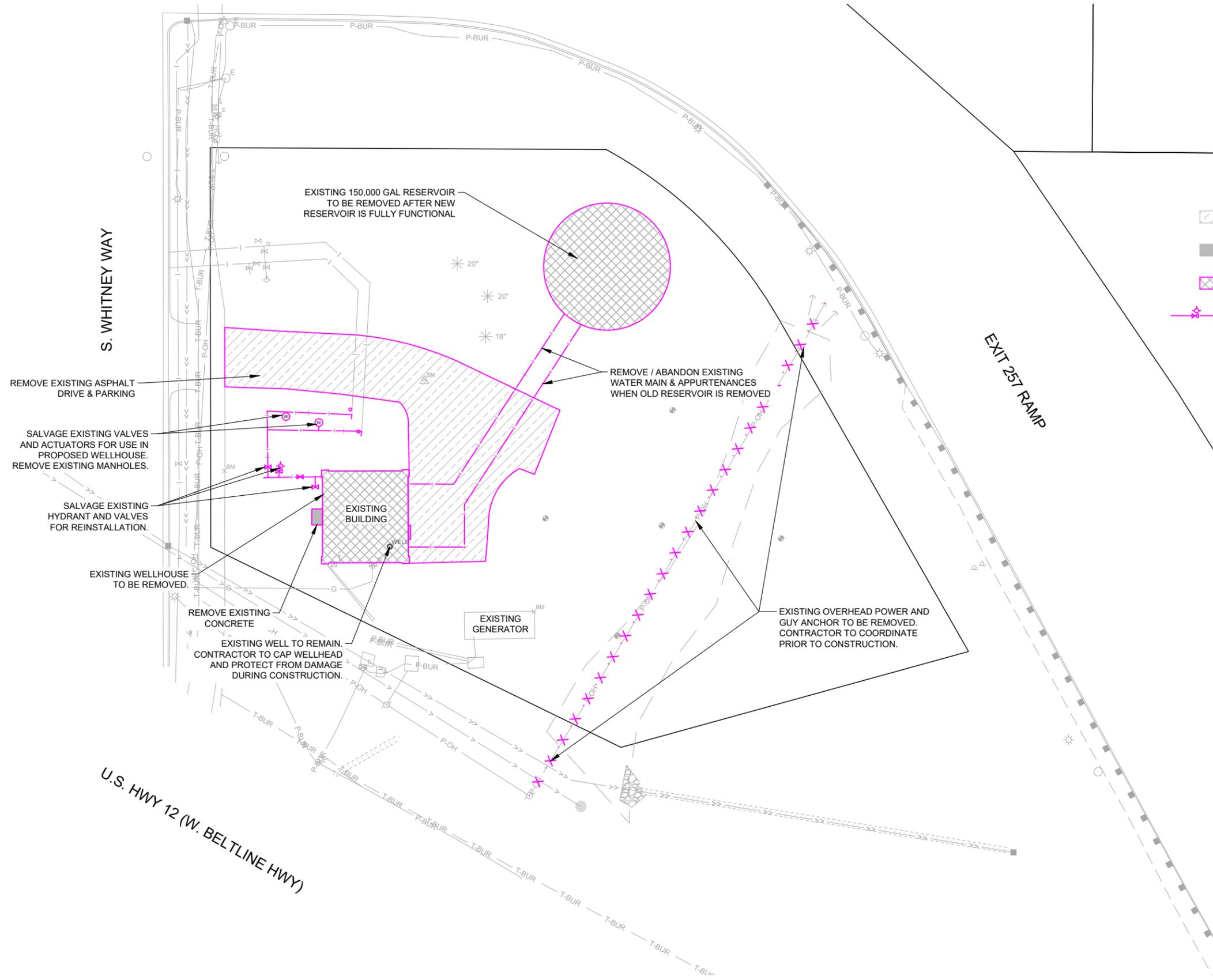
REVISION SCHEDULE
REV. # DESCRIPTION DATE

SITE PLAN

C101

THIS BAR IS INTENDED TO BE 1" PRINTED AT FULL SCALE

Save: 9/19/2025 12:22 PM plbecki Plot: 9/19/2025 5:50 PM X:\KOWIMAD\WU1822225-1\final-dgn\51-drawings\10-Civil\caddwg\sheet\MA182222_RE.dwg



REMOVALS

- BITUMINOUS DRIVE REMOVAL
- CONCRETE PAVEMENT REMOVAL
- STRUCTURE REMOVAL
- WATER MAIN & APPURTENANCES REMOVAL



Project Owner

**MADISON, WISCONSIN
UNIT WELL 12 RECONSTRUCTION**

801 S. Whitney Way
Madison WI, 53711

This drawing is an instrument of service and shall remain the property of Short Elliot Hendrickson, Inc. (SEH). This drawing, concepts and ideas contained herein shall not be used, reproduced, revised, or retained without the express written approval of SEH.
Submission or distribution of this drawing to meet official or regulatory requirements or for purposes in connection with the project is not to be construed as publication in derogation of any of the rights of SEH.

SEH Project MADWU_182222
Checked By KB
Drawn By PAL

Project Status Issue Date
DNR SUBMITTAL 06/30/2025
CITY SUBMITTAL 09/22/2025

REVISION SCHEDULE		
REV. #	DESCRIPTION	DATE

REMOVALS PLAN

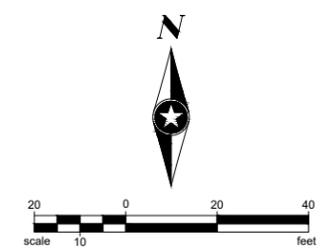
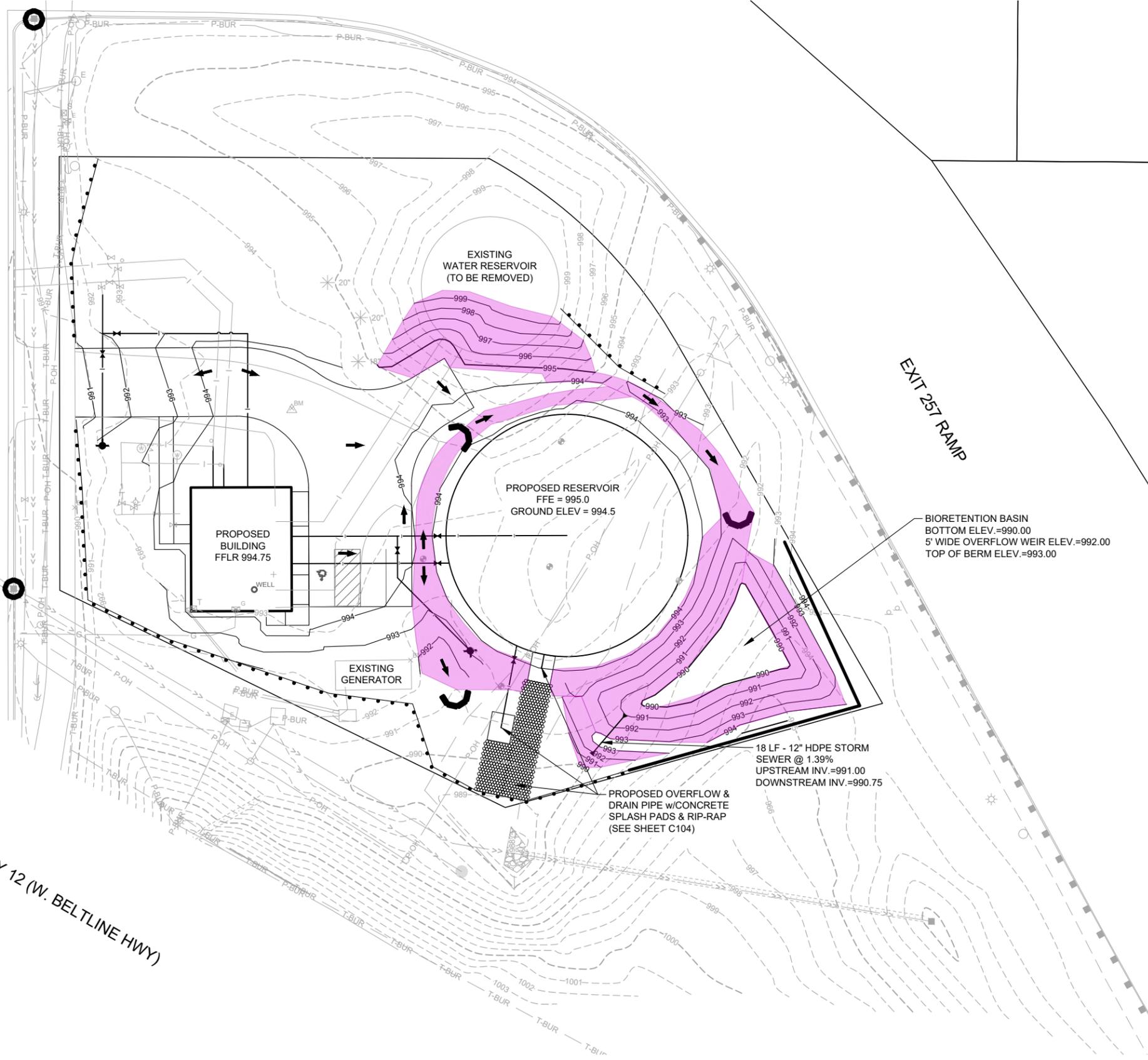
C102

THIS BAR IS INTENDED TO BE 1" PRINTED AT FULL SCALE

Save: 9/19/2025 2:03 PM noswald Plot: 9/19/2025 5:51 PM X:\KOI\MADWU\182222\5-final-dgn\51-drawings\10-Civil\cad\dwg\sheet\MA182222_GP-EC.dwg

S. WHITNEY WAY

U.S. HWY 12 (W. BELTLINE HWY)



GRADING & EROSION CONTROL LEGEND

- CLASS I - TYPE 'A' ECRM
- DRAINAGE DIRECTION
- INLET PROTECTION
- SEDIMENT LOG DITCH CHECK
- SILT FENCE



Project Owner

**MADISON, WISCONSIN
UNIT WELL 12 RECONSTRUCTION**

801 S. Whitney Way
Madison WI, 53711

This drawing is an instrument of service and shall remain the property of Shortt Eiland Hendrickson, Inc. (SEH). This drawing, concepts and ideas contained herein shall not be used, reproduced, revised, or retained without the express written approval of SEH.

Submission or distribution of this drawing to meet official or regulatory requirements or for purposes in connection with the project is not to be construed as publication in derogation of any of the rights of SEH.

COPYRIGHT © 2024
Shortt Eiland Hendrickson, Inc.
All Rights Reserved.

SEH Project	MADWU_182222
Checked By	KB
Drawn By	PAL

Project Status	Issue Date
DNR SUBMITTAL	06/30/2025
CITY SUBMITTAL	09/22/2025

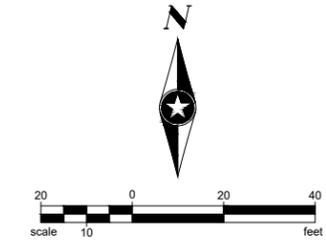
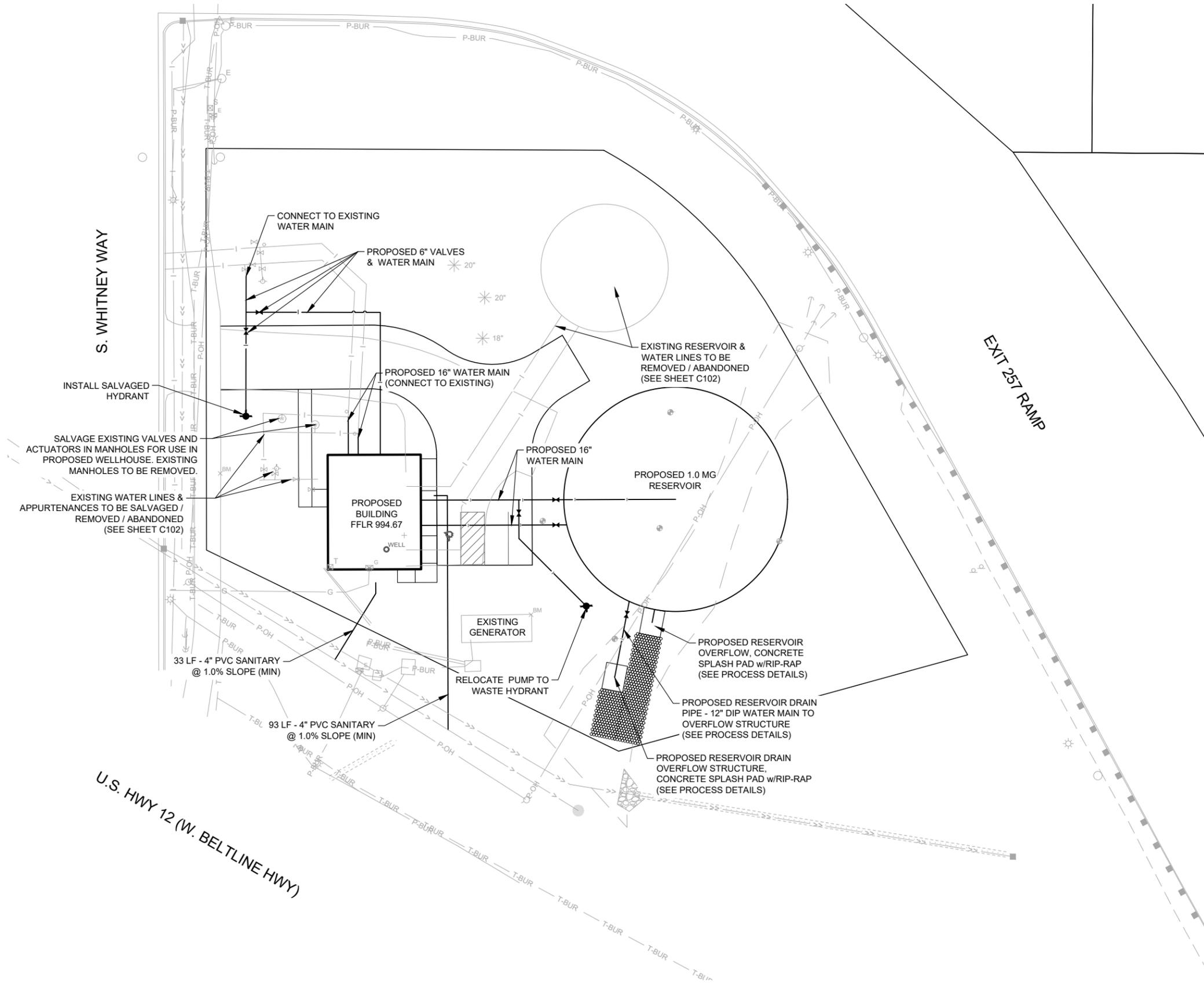
REVISION SCHEDULE		
REV. #	DESCRIPTION	DATE

GRADING & EROSION CONTROL PLAN

C103

THIS BAR IS INTENDED TO BE 1" PRINTED AT FULL SCALE

Save: 9/19/2025 12:21 PM ipilbecki Plot: 9/19/2025 5:51 PM X:\ICOM\MAD\WU\182222\5-final-dgn\51-drawings\10-Civil\cadd\dwg\sheet\MA182222_PL-WM.dwg



Project Owner

MADISON, WISCONSIN
UNIT WELL 12 RECONSTRUCTION

801 S. Whitney Way
 Madison WI, 53711

This drawing is an instrument of service and shall remain the property of Shortt Ebbel-Hendrickson, Inc. (SEH). This drawing, concepts and ideas contained herein shall not be used, reproduced, revised, or retained without the express written approval of SEH.

Submission or distribution of this drawing to meet official or regulatory requirements or for purposes in connection with the project is not to be construed as publication in derogation of any of the rights of SEH.

COPYRIGHT © 2024
 Shortt Ebbel-Hendrickson, Inc.
 All Rights Reserved

SEH Project	MADWU_182222
Checked By	KB
Drawn By	PAL

Project Status	Issue Date
DNR SUBMITTAL	06/30/2025
CITY SUBMITTAL	09/22/2025

REVISION SCHEDULE		
REV. #	DESCRIPTION	DATE

WATER MAIN SYSTEM MAP

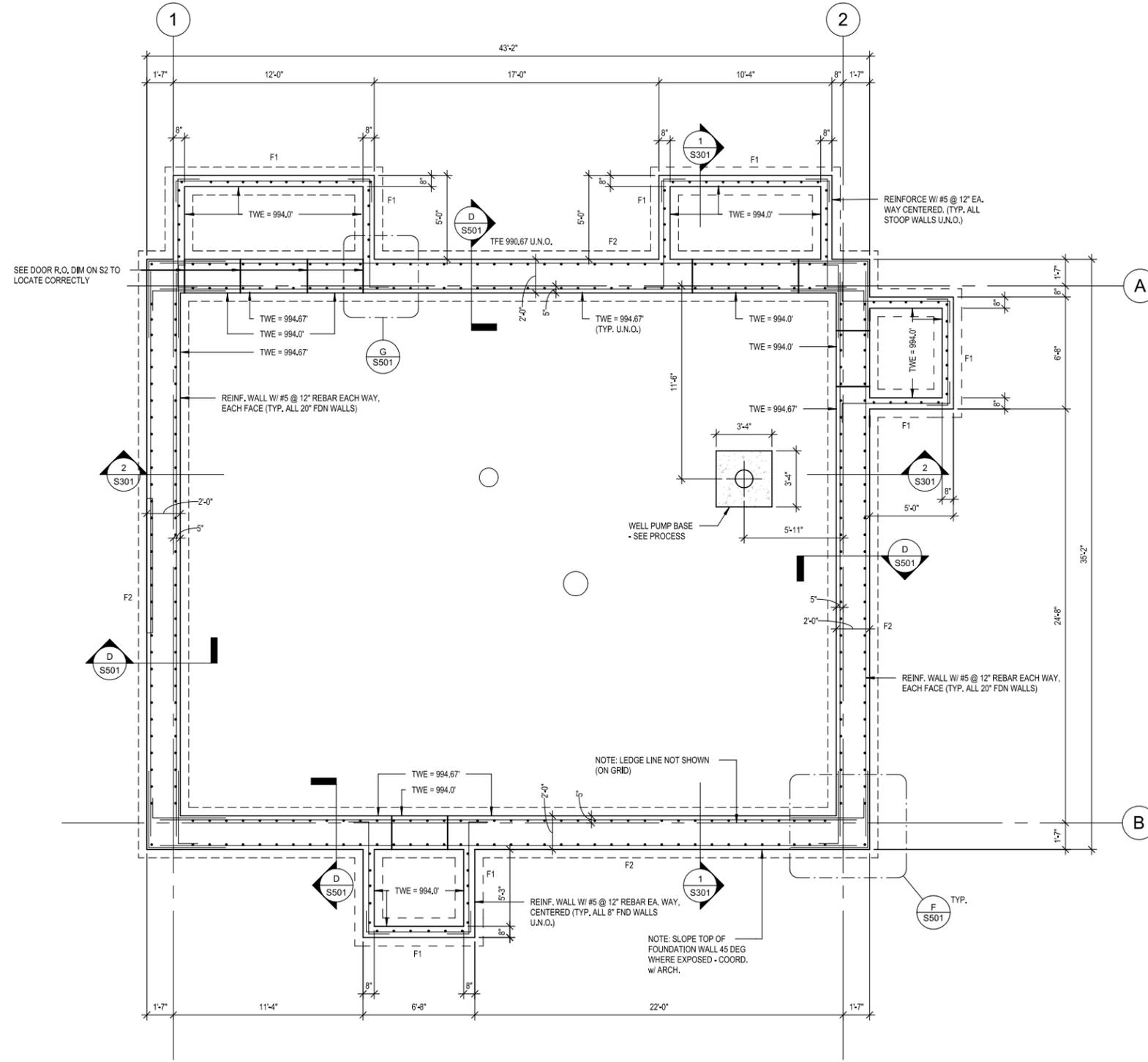
C104

PLAN NOTES

1. TWE = TOP OF FOUNDATION WALL ELEVATION
2. TFE = TOP OF FOOTING ELEVATION = 990.67 U.N.O.
3. VERIFY DIMENSIONS, ELEVATIONS, AND MATERIALS WITH ARCHITECTURAL AND PROCESS.
4. CONTRACTOR OPTIONS AT MECHANICAL & ELECTRICAL LINES THROUGH FOUNDATION - SEE HDS1, JDS1, KDS1, LDS1
5. 'Fx' DENOTES FOOTING TYPE, REFERENCE SCHEDULE ON THIS SHEET.

FOOTING SCHEDULE		
MARK	SIZE	REINFORCING
F1	24" WIDE x 12" DEEP x CONTINUOUS	(2) #5 REBAR, BOTTOM
F2	36" WIDE x 12" DEEP x CONTINUOUS	(3) #5 REBAR, BOTTOM
F3	24" WIDE x 12" DEEP x CONTINUOUS THICKENED SLAB	(2) #5 REBAR, BOTTOM

SEE SHEET S2 FOR LOCATION OF THICKENED SLABS F3.



FOUNDATION PLAN
 1/4" = 1'-0"

THIS BAR IS INTENDED TO BE 1" PRINTED AT FULL SCALE

Project Owner

**MADISON, WISCONSIN
 UNIT WELL 12 RECONSTRUCTION**

801 S. Whitney Way
 Madison WI, 53711

This drawing is an instrument of service and shall remain the property of SEH. This drawing, concepts and ideas contained herein shall not be used, reproduced, revised, or returned without the express written approval of SEH. SEH shall not be held responsible for any errors or omissions in this drawing. SEH shall not be held responsible for any errors or omissions in this drawing. SEH shall not be held responsible for any errors or omissions in this drawing.

SEH Project MADWU 182222
 Checked By BAW
 Drawn By ALC

Project Status Issue Date
 DNR SUBMITTAL 6/30/2025

REVISION SCHEDULE

REV.#	DESCRIPTION	DATE

FOUNDATION PLAN

**01
 S101**

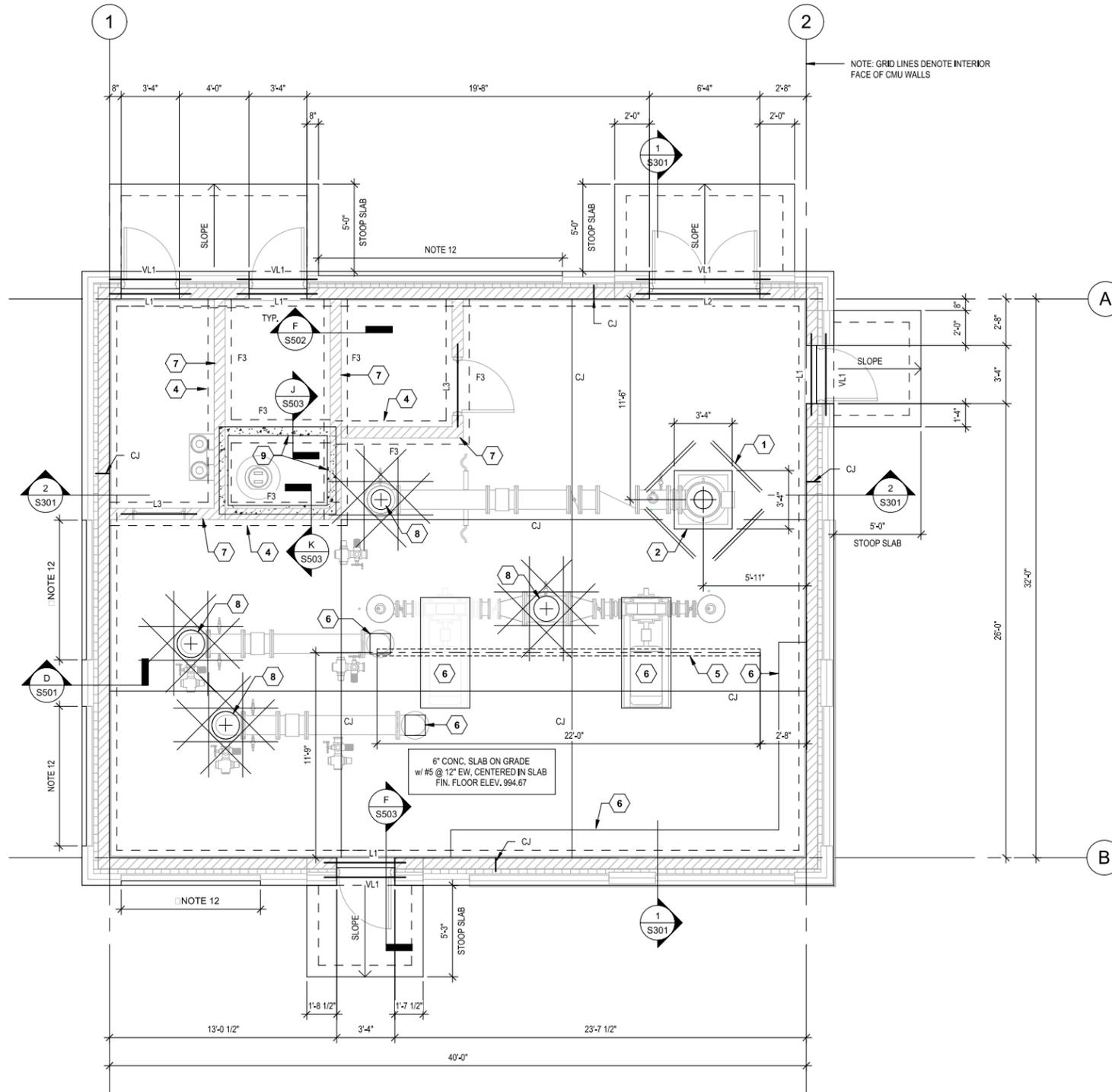


PLAN NOTES

1. FFE, FINISHED FLOOR ELEVATION = 994.67'
2. TFE, TOP OF FOOTING ELEVATION = 990.67' U.N.O.
3. VERIFY ALL DIMENSIONS, ELEVATIONS, AND MATERIALS WITH ARCHITECTURAL AND PROCESS DRAWINGS.
4. HOIST, TROLLEY, AND LIFTED LOAD 4,000 POUNDS.
5. MASONRY CONTRACTOR SHALL COORDINATE W/ ELECTRICAL CONTRACTOR TO CUT BLOCK NEATLY FOR OPENINGS NEEDED BY ELECTRICAL CONTRACTOR.
6. SEE DETAILS A/D/S1 AND B/D/S1 FOR STANDARD CONCRETE EQUIPMENT PAD & PEDESTAL DETAILS, COORDINATE LOCATIONS AND DIMENSIONS WITH PROCESS, MECHANICAL, AND ELECTRICAL.
7. FOR CONTRACTION JOINTS (C.J.) OR SAWCUT WITHIN 18 HOURS OF CONCRETE PLACEMENT - SEE C/D/S1, MAXIMUM SPACING OF CONTRACTION JOINTS TO BE 15'-0".
8. 'F'x' DENOTES FOOTING TYPE, SEE SHEET S1 FOR FOOTING SCHEDULE.
9. 'L'x' INDICATES LINTEL - SEE LINTEL SCHEDULE ON SHEET S3.
10. D.O. DENOTES DOOR ROUGH OPENING
W.O. DENOTES WINDOW ROUGH OPENING
11. ALL CMU SURFACES EXPOSED TO VIEW ARE GLAZED FACE.
12. BEVEL TOP OF CONCRETE FOUNDATION WALL 3" AT 45 DEG. WHERE EXPOSED TO SHED RAIN WATER, COORDINATE EXTENTS WITH ARCHITECTURAL.

KEYNOTES:

- 1 PROVIDE ADDITIONAL REINFORCEMENT PER DETAIL D/D/S3 AT ALL RE-ENTRANT CORNERS.
- 2 WELL HEAD AND VERTICAL TURBINE PUMP - SEE PROCESS, PROVIDE 1/2" EXPANSION JOINT MATERIAL AND CAULK BETWEEN FLOOR SLAB AND CONCRETE PUMP BASE.
- 3 4" ELECTRICAL EQUIPMENT PADS - SEE STANDARD DETAIL A/D/S1.
- 4 THICKENED SLAB, SEE DETAIL F/D/S2, SEE FOOTING SCHEDULE ON SHEET S1 FOR THICKNESS, WIDTH, AND REINFORCING.
- 5 MONORAIL ABOVE - SEE DETAIL J/D/S2 AND NOTE 4 ON THIS SHEET. COORDINATE FINAL LOCATION W/ PUMP LIFT POINTS.
- 6 HOUSEKEEPING PAD OR PUMP PEDISTAL - REFERENCE TYPICAL DETAIL A/D/S1 OR B/D/S1.
- 7 8" INTERIOR PARTITION WALLS CONSTRUCTED OF 2 WYTHES 4" CMU - GLAZED, SECURE WYTHES TOGETHER WITH STAINLESS STEEL LADDER REINFORCEMENT AT 8" O.C. VERTICALLY, REINFORCE W/ #3 REBAR AT 32" HORIZ., MORTARED BETWEEN WYTHES. SEE ARCHITECTURAL DRAWINGS
- 8 PIPE PENETRATION THROUGH CONCRETE CAST-IN-PLACE SLAB ON GRADE. PROVIDE ADDITIONAL REINFORCING PER DETAIL H/D/S1, TYP.
- 9 CIP CONCRETE CONTAINMENT CURB.



1 FLOOR PLAN
S102 1/4" = 1'-0"



**MADISON, WISCONSIN
UNIT WELL 12 RECONSTRUCTION**

801 S. Whitney Way
Madison WI, 53711

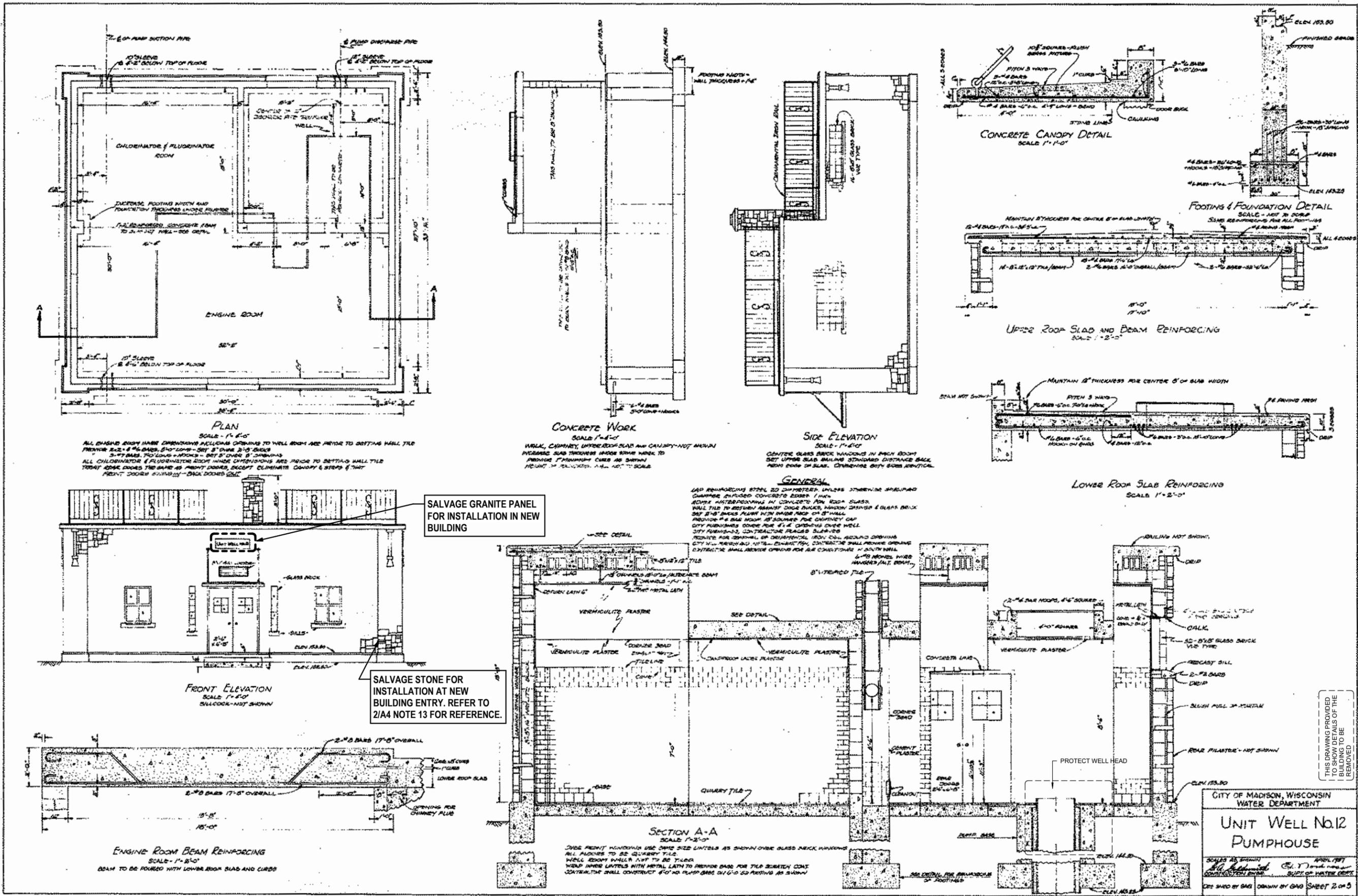
This drawing is an instrument of service and shall remain the property of SEH. This drawing, concepts and ideas contained herein shall not be used, reproduced, revised, or returned without the express written approval of SEH.
SEH Project MADWU 182222
Checked By BAW
Drawn By ALC

Project Status Issue Date
DNR SUBMITTAL 6/30/2025

REV. #	DESCRIPTION	DATE

FLOOR PLAN

**01
S102**



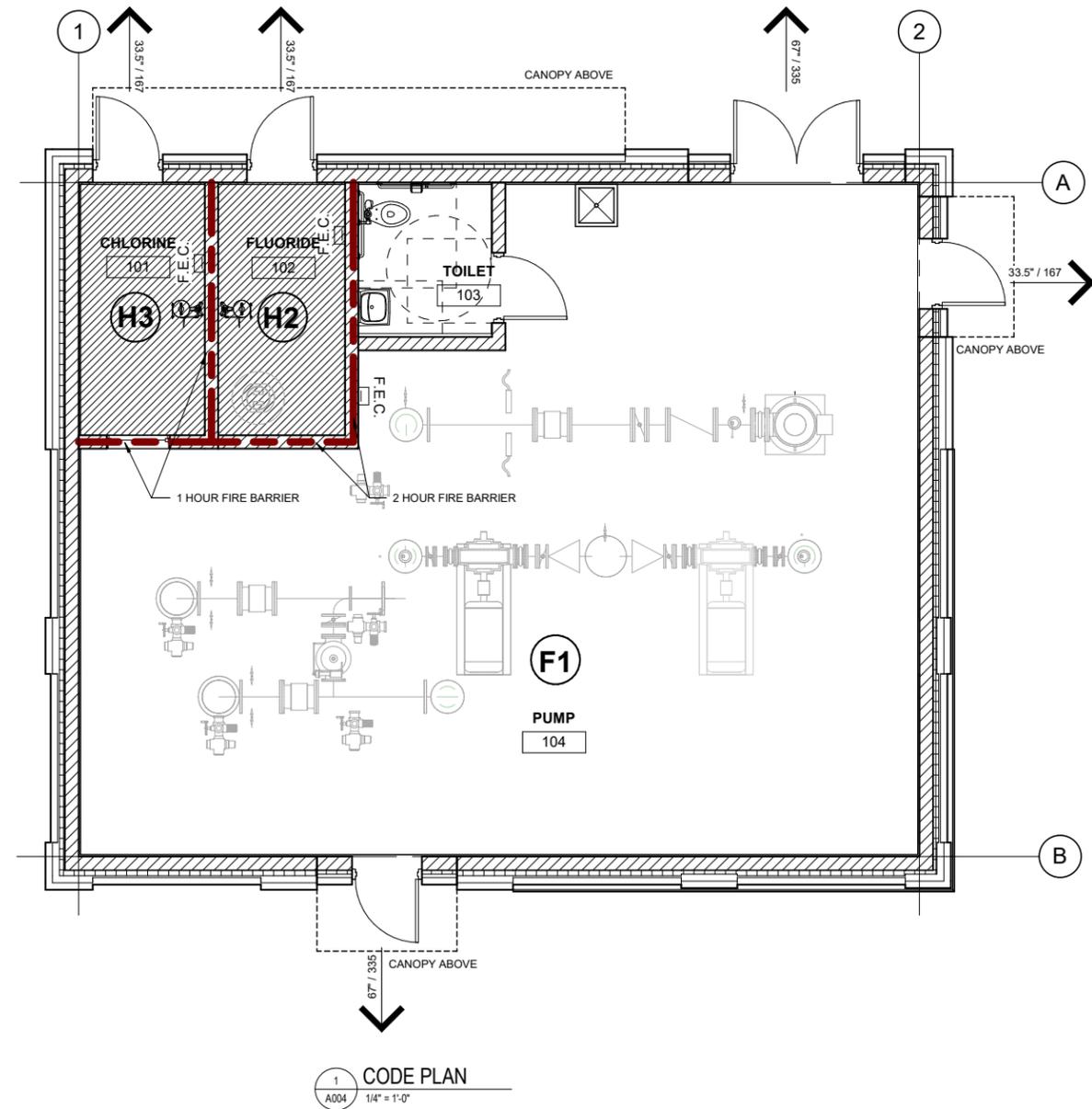
THIS BAR IS INTENDED TO BE 1" PRINTED AT FULL SCALE 6/24/2025 12:07:43 PM

CODE LEGEND

Fire barriers shall be permanently identified with stenciling in accessible and concealed locations at intervals not exceeding 30' along the barrier



CODE INFORMATION				
UNIT WELL 12 WATER TREATMENT PLANT Madison, WI				
General Code Information				
ITEM	INFORMATION	REMARKS		
Design code:	2015 IBC			
Occupancy Type:	Separated Use F-1 Factory Industrial (water treatment) H-2 Hazardous (Fluoride Room) H-3 Hazardous (Chlorine Room)			
Occupancy Separations	Fire Rating			
F-1-H-2	2 hour			
F-1-H-3	1 hour			
H-2-H-3	1 hour			
Construction type:	IB			
Fully Sprinkled?	Yes			
Hazardous Materials				
Chemical	Chemical Classification	Max Control Area Qun. Actual Quantity *		
Chlorine Gas	Oxidizing Gas, Corrosive, Toxic	300 LB 600 LB		
23% Hydrofluoric Acid	Toxic, Corrosive	1000 LB 1670 LB		
Notes: A. Actual quantity is for combined storage and closed systems use. B. Control area quantity per 307.1(1) Footnote i.				
General Building Information				
ITEM	ALLOWABLE	ACTUAL		
Building height & no. of stories:				
Stories	2	1		
Building Height	80'	14'		
Area per floor level				
F-1	8,500 SF	1,120 SF		
H-2	3,000 SF	72 SF		
H-3	5,000 SF	72 SF		
		Building Total Area: 1,500 SF		
Means of Egress				
ITEM	REQUIRED	PROVIDED / REMARKS		
Number of Exits	2 per floor	2 provided per floor		
Travel Distances				
	EXIT ACCESS / COMMON PATH			
F-1	250 FT / 75 FT	OK/OK		
H-2	150 FT / 25 FT	OK/OK		
H-3	150 FT / 25 FT	OK/OK		
Fire Resistances, Suppression and Alarm				
ITEM	REQUIRED	PROVIDED		
Fire Resistance Rating for all Building Components:	0	Per Table 601		
Fire Suppression	Fully Sprinkled	Fully Sprinkled		
Sanitary Fixtures				
Fixtures required per IBC Chapter 3, COMM 62 and table 2902.1 BUILDING IS NOT NORMALLY OCCUPIED				
Compliance Check	Water Closets	Lavatories	Drinking Fountain	Service Sink
	Male / Female	Male / Female	N/A	N/A
Number of fixtures Required	N/A	N/A	0	1
Number of fixtures Provided	1	1	0	1



1 CODE PLAN
A004 1/4" = 1'-0"

NOTE: ALL DRAWING SCALES ARE FOR PLANS PRINTED ON 34"x22" SHEETS

THIS BAR IS INTENDED TO BE 1" PRINTED AT FULL SCALE 6/24/2025 12:07:48 PM

MADISON, WISCONSIN
UNIT WELL 12 RECONSTRUCTION

801 S. Whitney Way, Madison
WI, 53711

This drawing is an instrument of service and shall remain the property of Short Elliott Hendrickson, Inc. (SEH). This drawing, concept and ideas contained herein shall not be used, reproduced, revised, or retained without the express written approval of SEH. Submission or distribution of this drawing to meet official or regulatory requirements or for purposes in connection with the project is not to be construed as publication in derogation of any of the rights of SEH. COPYRIGHT © 2024 Short Elliott Hendrickson, Inc. All Rights Reserved.

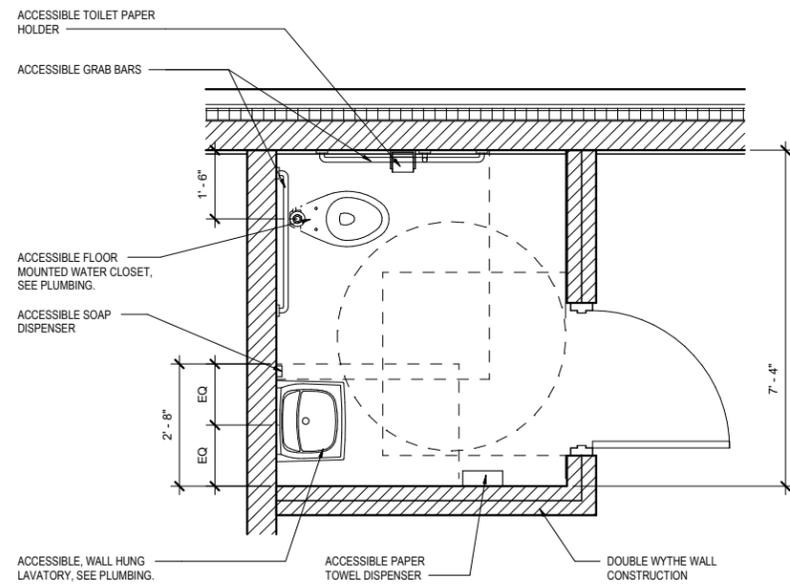
SEH Project 182222
Checked By JRL
Drawn By JRL

Project Status Issue Date
DNR SUBMITTAL 6/30/2025

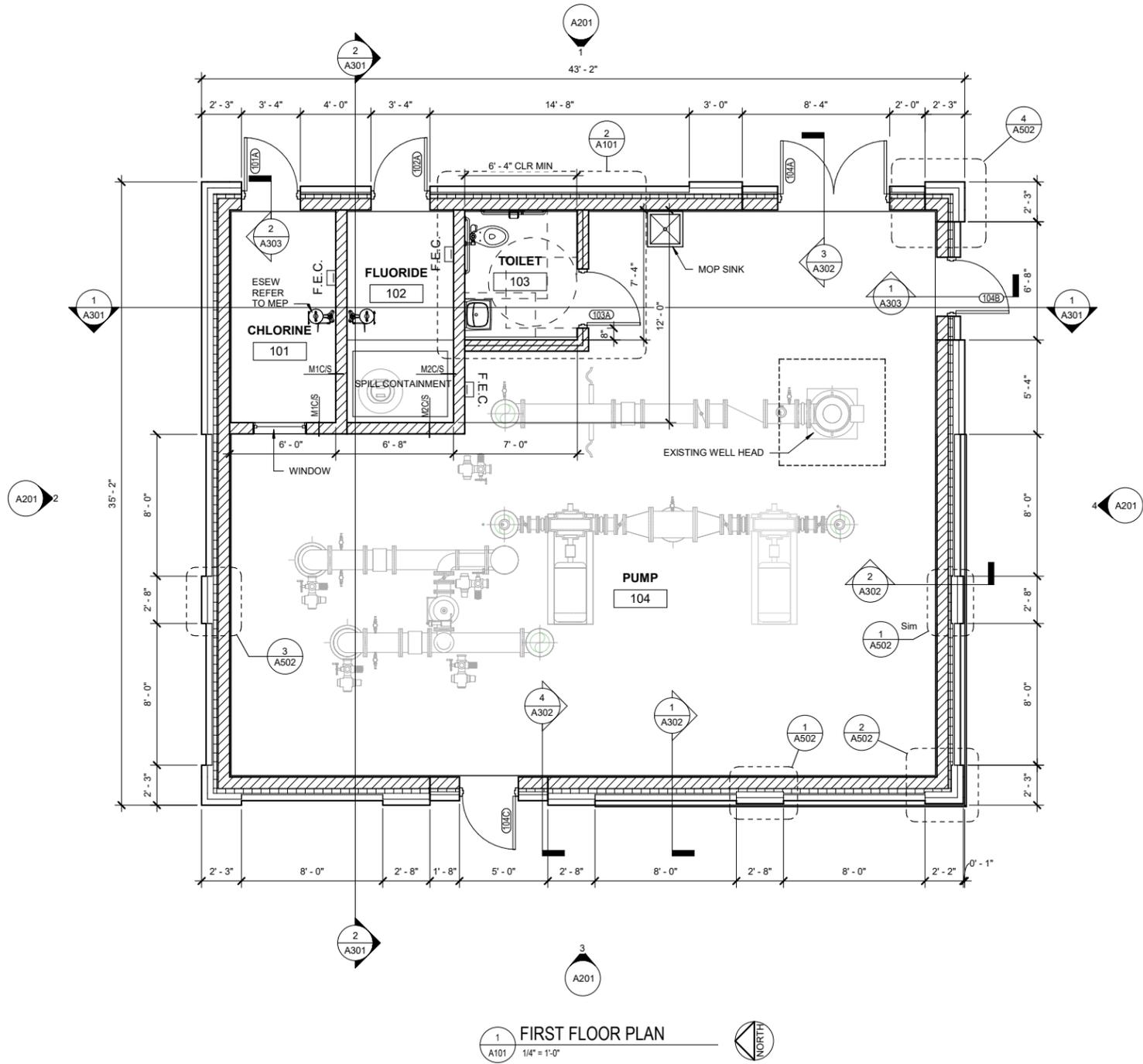
REVISION SCHEDULE
REV. # DESCRIPTION DATE

CODE PLAN

01
A004



2 TOILET ROOM ENLARGED PLAN
 A101 1/2" = 1'-0"

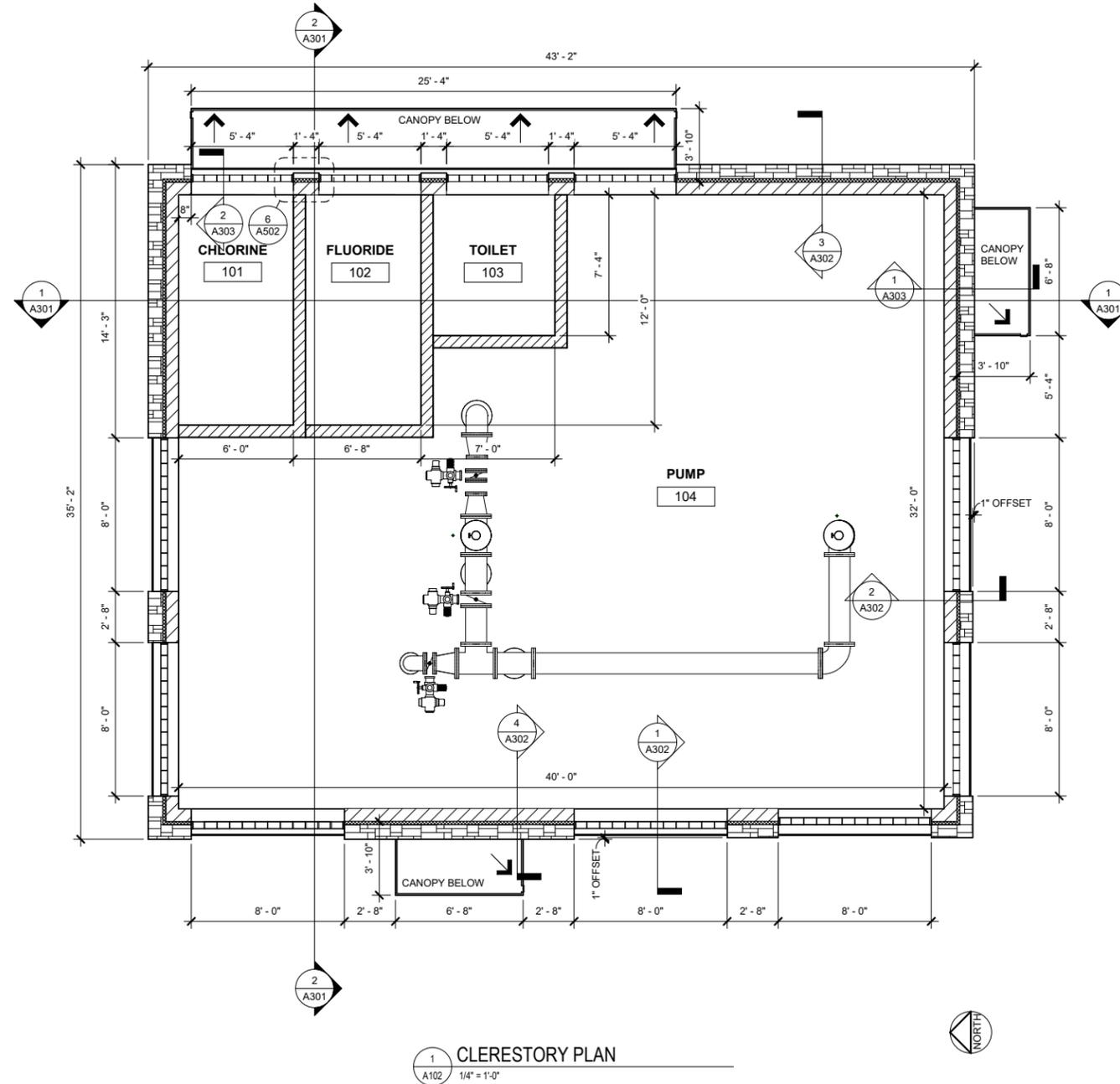


1 FIRST FLOOR PLAN
 A101 1/4" = 1'-0"

GENERAL NOTES:

- SEE STRUCTURAL DRAWINGS FOR ALL DETAILS RELATED TO CMU REINFORCING.
- ALL CMU SURFACES EXPOSED TO VIEW SHALL BE BURNISHED FACED UNITS.
- PROVIDE BULLNOSE UNITS AT CORNERS AND JAMBS.
- PROVIDE LINTEL UNITS OVER OPENINGS.
- PROVIDE BURNISHED SILL UNITS AT SILL CONDITIONS. ALL WALLS HAVE COVERED BASE STARTER COURSE.
- CONSTRUCT WALLS COMMON TO PUMP ROOM SO THAT GOOD SIDE FACES THE PUMP ROOM.
- SEE OTHER DRAWINGS FOR EQUIPMENT LOCATIONS AND HOUSE KEEPING PADS.
- REFER TO DIVISION 9 SPECIFICATIONS FOR INTERIOR FINISHES.

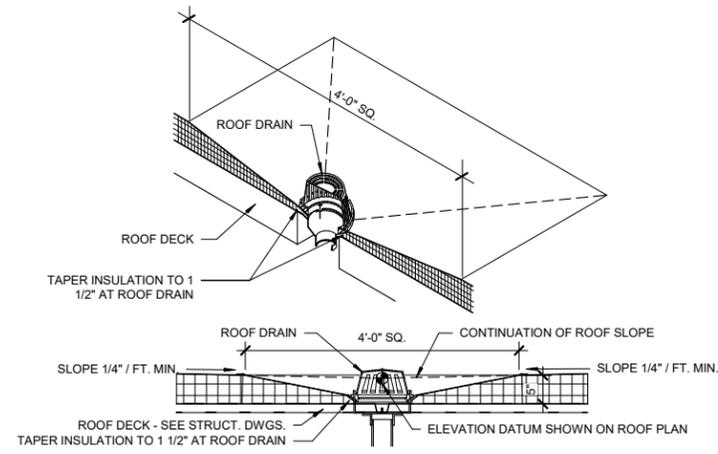
NOTE: ALL DRAWING SCALES ARE FOR PLANS PRINTED ON 34"x22" SHEETS



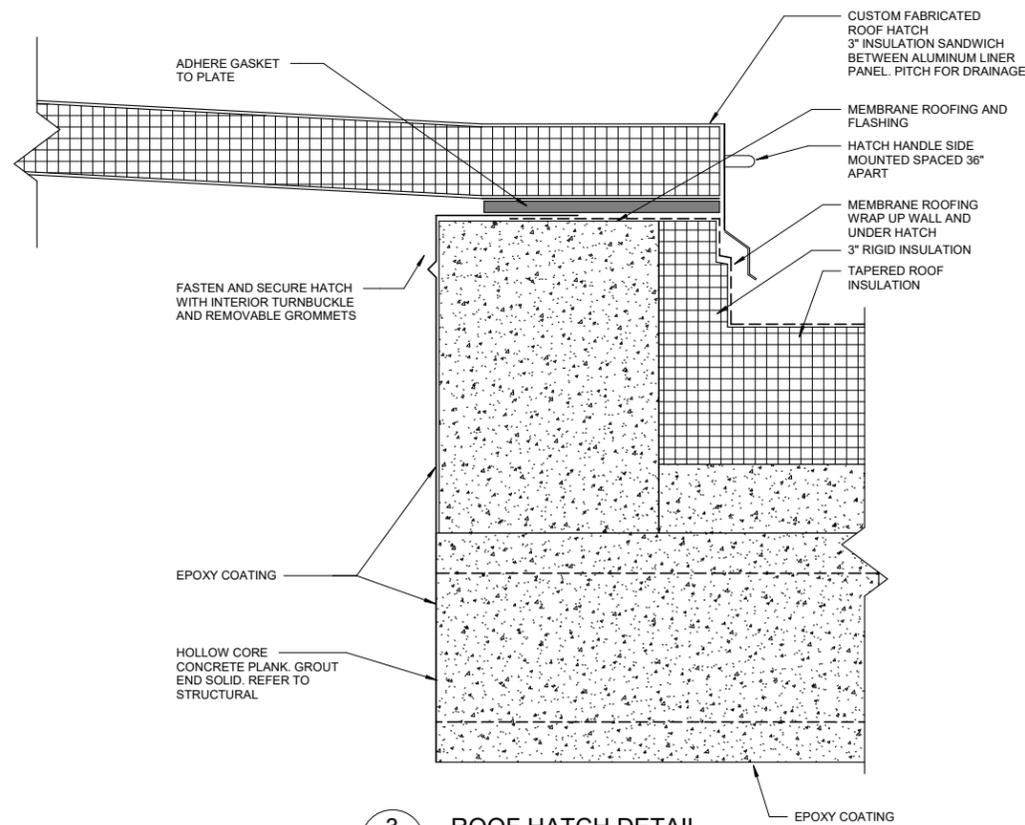
1 CLERESTORY PLAN
 A102 1/4" = 1'-0"

GENERAL NOTES:

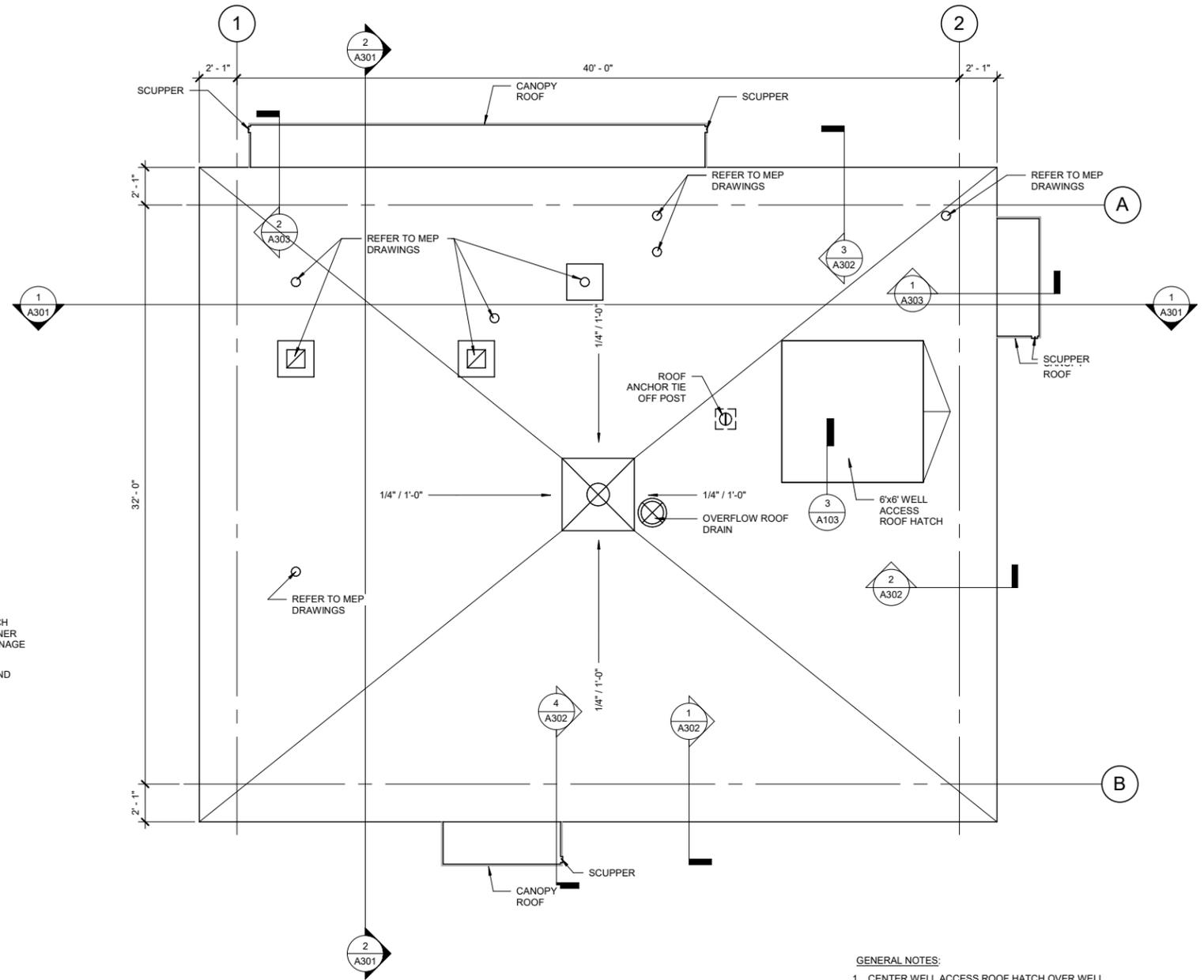
1. SEE STRUCTURAL DRAWINGS FOR ALL DETAILS RELATED TO CMU REINFORCING.
2. ALL CMU SURFACES EXPOSED TO VIEW SHALL BE BURNISHED FACED UNITS.
3. PROVIDE BULLNOSE UNITS AT CORNERS AND JAMBS.
4. PROVIDE LINTEL UNITS OVER OPENINGS.
5. PROVIDE BURNISHED SILL UNITS AT SILL CONDITIONS. ALL WALLS HAVE COVERED BASE STARTER COURSE.
6. CONSTRUCT WALLS COMMON TO PUMP ROOM SO THAT GOOD SIDE FACES THE PUMP ROOM.
7. SEE OTHER DRAWINGS FOR EQUIPMENT LOCATIONS AND HOUSE KEEPING PADS.
8. REFER TO DIVISION 9 SPECIFICATIONS FOR INTERIOR FINISHES.
9. ARROWS ON CANOPIES DENOTE 1/4" PITCH DIRECTION TOWARDS ROOF EDGE SCUPPERS



2 ROOF DRAIN DETAIL
 A103 3/4" = 1'-0"



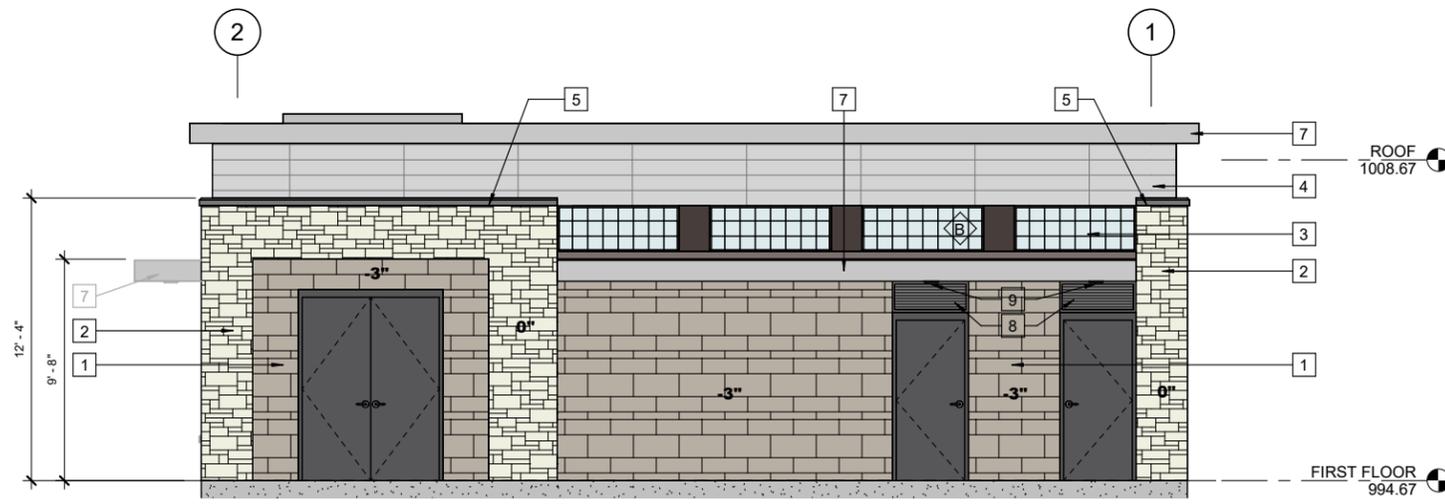
3 ROOF HATCH DETAIL
 A103 3" = 1'-0"



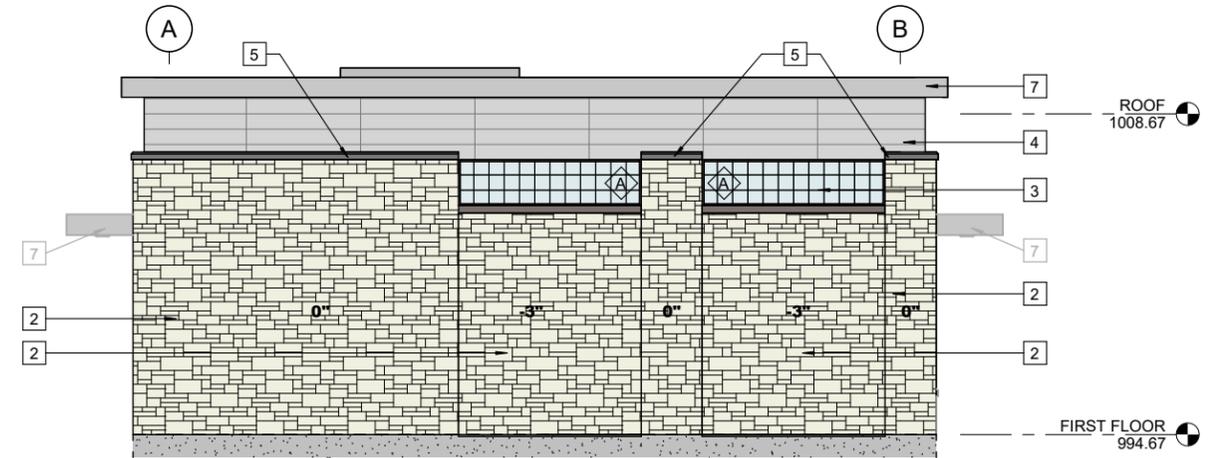
1 ROOF PLAN
 A103 1/4" = 1'-0"

- GENERAL NOTES:**
- CENTER WELL ACCESS ROOF HATCH OVER WELL LOCATION; VERIFY IN FIELD.
 - REFER TO MEP DRAWINGS FOR INTAKE, VENTS AND OTHER ROOF PENETRATIONS. PROVIDE CURBS AND SLEEVES AS REQUIRED.

NOTE: ALL DRAWING SCALES ARE FOR PLANS PRINTED ON 34"x22" SHEETS



1 EAST ELEVATION
A201 1/4" = 1'-0"



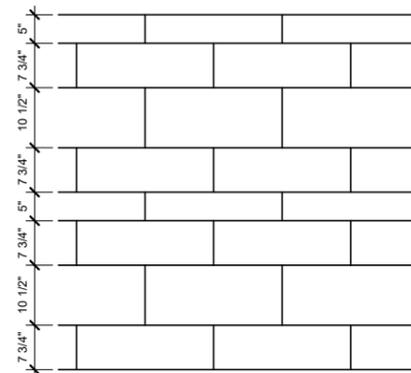
2 NORTH ELVEVATION
A201 1/4" = 1'-0"



3 WEST ELEVATION
A201 1/4" = 1'-0"



4 SOUTH ELEVATION
A201 1/4" = 1'-0"



NOTE: STONE LENGTHS VARY BETWEEN 8" AND 32", STONE HEIGHT COURSING AS SHOWN ABOVE. SEE SPECIFICATIONS FOR STONE TYPE

Exterior Stone Veneer Coursing

GENERAL NOTES:

- 1. ALL CAST STONE COPINGS PROJECT NOMINALLY 1.5" BEYOND FACE OF STONE

KEY NOTES:

- 1 STONE VENEER 1
- 2 STONE VENEER 2
- 3 TRANSLUCENT FIBERGLASS SANDWICH PANEL WALL SYSTEM
- 4 8" H x 5'-0" LONG TERRA COTTA RAIN SCREEN SYSTEM
- 5 CAST STONE COPING 1
- 6 CAST STONE COPING 2
- 7 METAL FASCIA
- 8 LOUVER REFER TO DA6
- 9 SOFFIT LIGHT CENTER ON DOOR REFER TO ELECTRICAL DRAWINGS
- 10 SALVAGED STONE SIGNAGE FROM EXISTING BUILDING. CLEAN STONE AND PAINT RECESSED LETTERING.
- 11 BUILDING ADDRESS COORDINATE WITH OWNER
- 12 SALVAGED STONE VENEER FROM EXISTING BUILDING.

NOTE: ALL DRAWING SCALES ARE FOR PLANS PRINTED ON 34"x22" SHEETS

THIS BAR IS INTENDED TO BE 1" PRINTED AT FULL SCALE 6/24/2025 12:07:50 PM

Project Owner

MADISON, WISCONSIN
UNIT WELL 12 RECONSTRUCTION
801 S. Whitney Way, Madison
WI, 53711

This drawing is an instrument of service and shall remain the property of Short Elliott Hendrickson, Inc. (SEH). This drawing, concept and ideas contained herein shall not be used, reproduced, revised, or related without the express written approval of SEH. Submission or distribution of this drawing to meet official or regulatory requirements or for purposes in connection with the project is not to be construed as publication in derogation of any of the rights of SEH. COPYRIGHT © 2024 Short Elliott Hendrickson, Inc. All Rights Reserved.

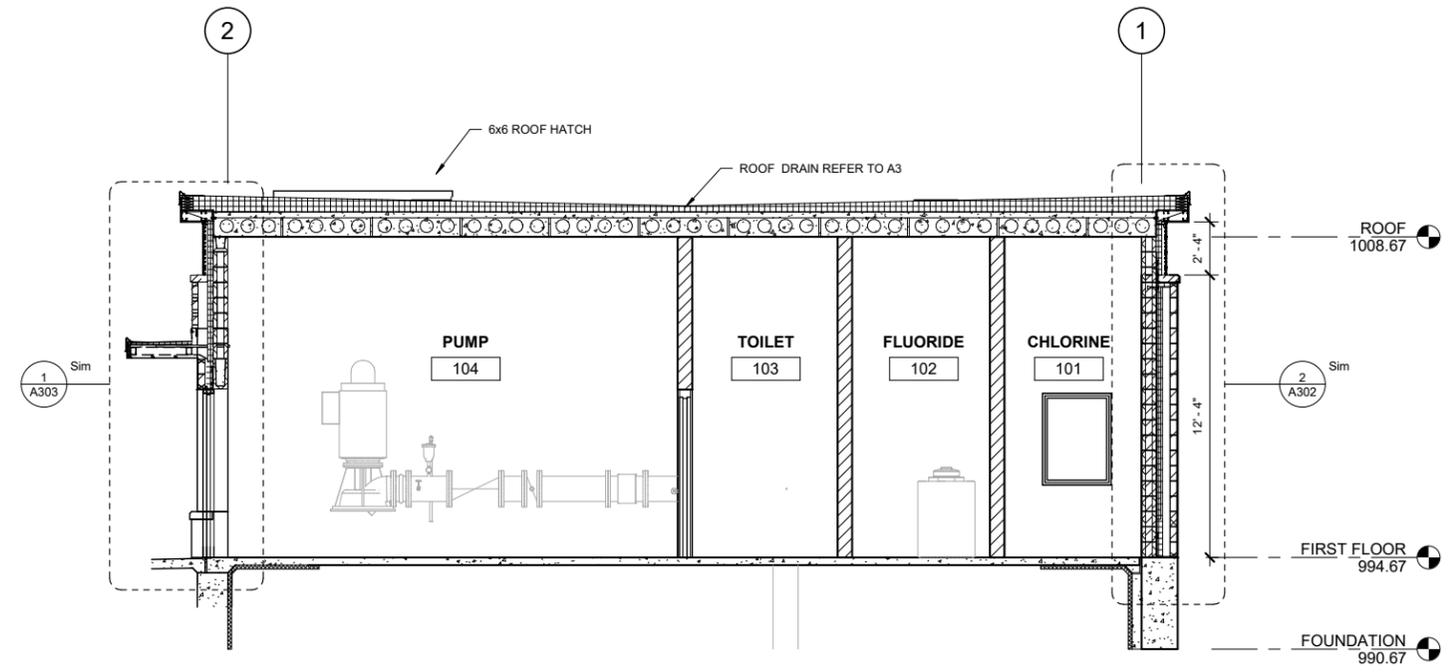
SEH Project 182222
Checked By JRL
Drawn By JRL

Project Status Issue Date
DNR SUBMITTAL 6/30/2025

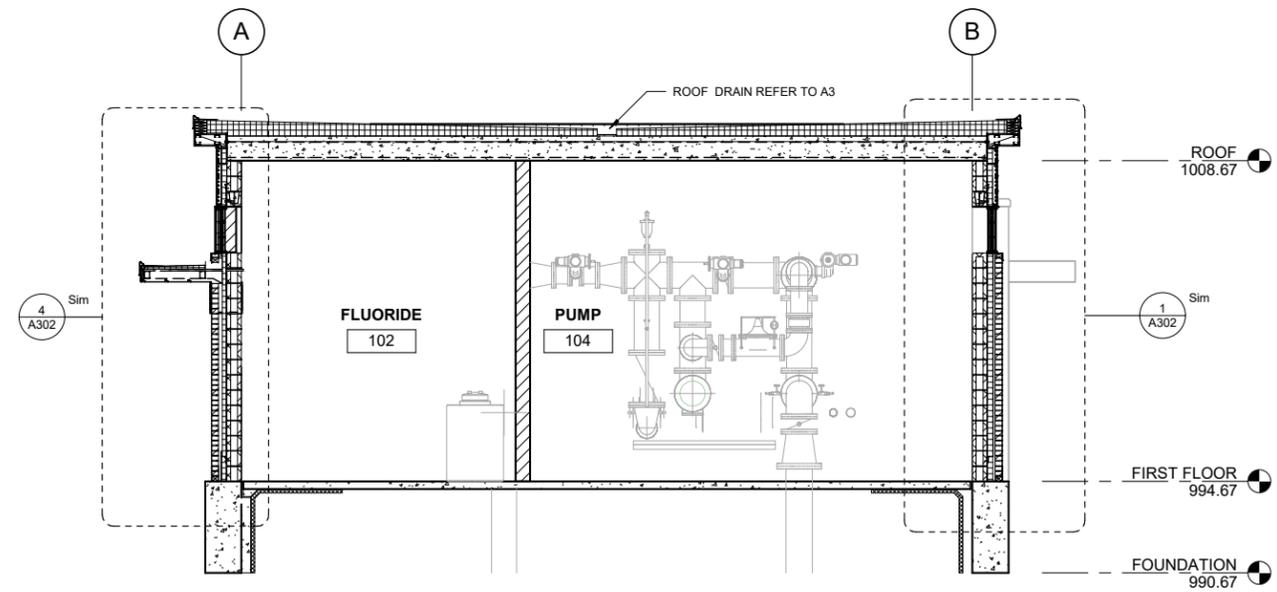
REVISION SCHEDULE
REV. # DESCRIPTION DATE

EXTERIOR ELEVATIONS

01
A201



1 BUILDING SECTION
A301 1/4" = 1'-0"



2 BUILDING SECTION
A301 1/4" = 1'-0"

MADISON, WISCONSIN
UNIT WELL 12 RECONSTRUCTION

801 S. Whitney Way, Madison
WI, 53711

This drawing is an instrument of service and shall remain the property of Short Elliott Hendrickson, Inc. (SEH). This drawing, concept and ideas contained herein shall not be used, reproduced, revised, or retained without the express written approval of SEH. Submission or distribution of this drawing to meet official or regulatory requirements or for purposes in connection with the project is not to be construed as publication in derogation of any of the rights of SEH.

SEH Project 182222
Checked By JRL
Drawn By JRL

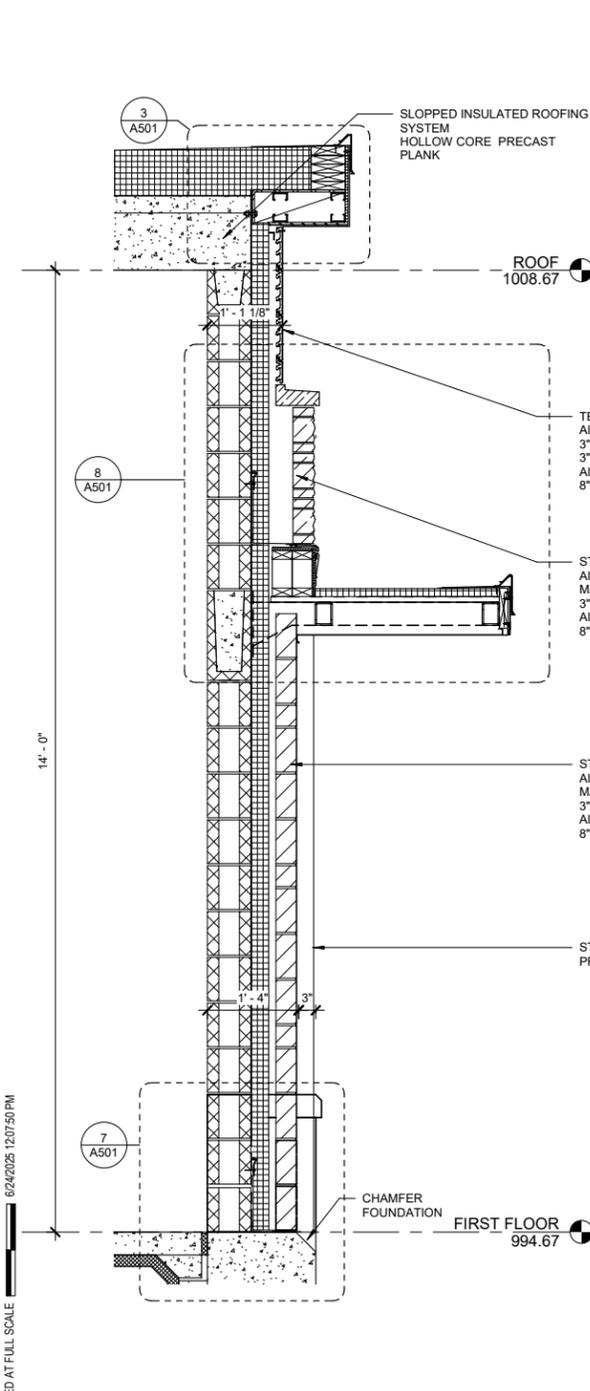
Project Status Issue Date
DNR SUBMITTAL 6/30/2025

REVISION SCHEDULE		
REV. #	DESCRIPTION	DATE

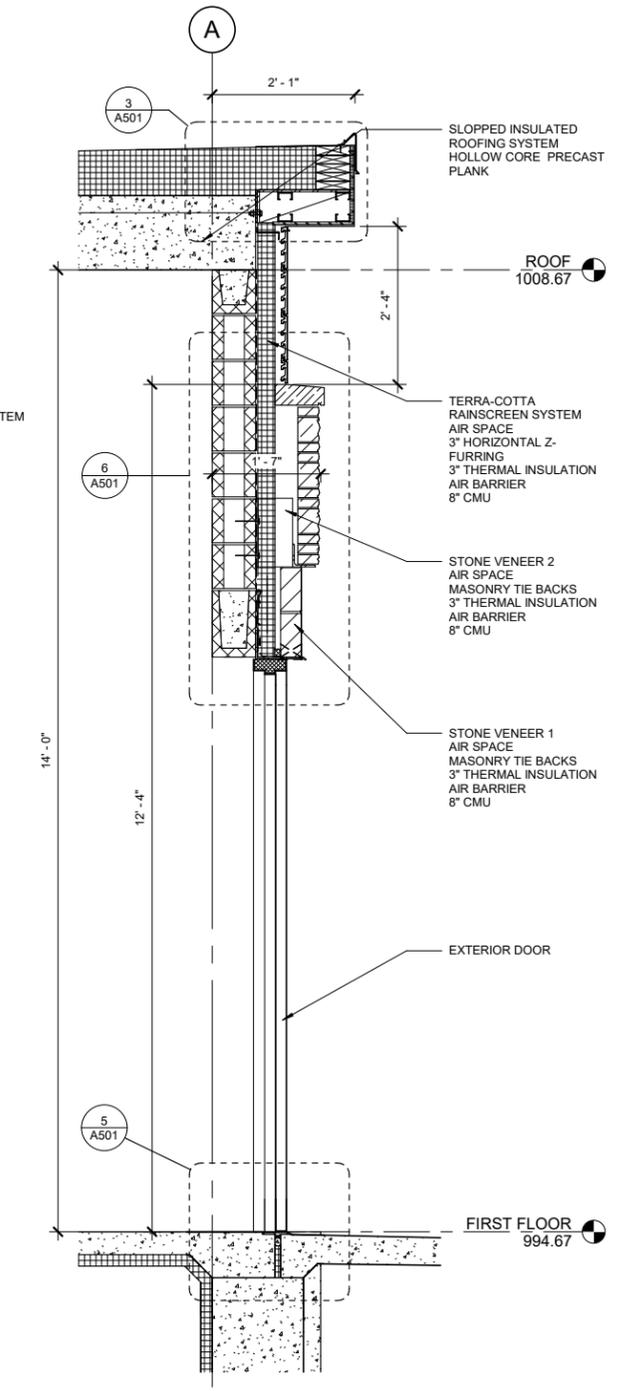
BUILDING SECTIONS

01
A301

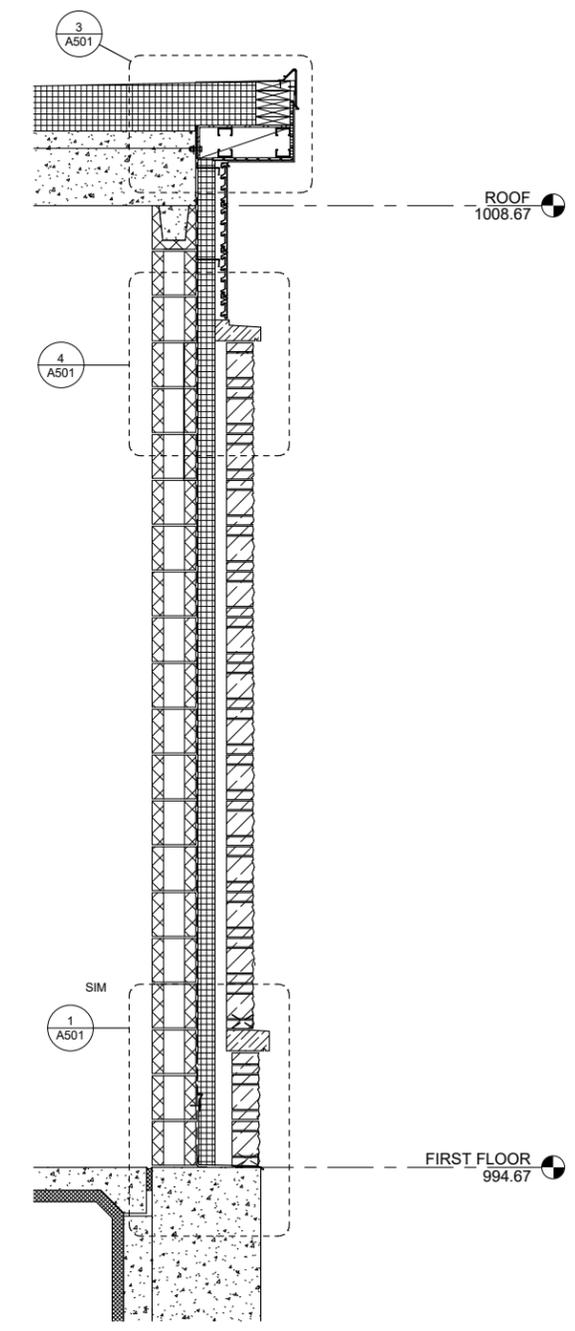
NOTE: ALL DRAWING SCALES ARE FOR
PLANS PRINTED ON 34"x22" SHEETS



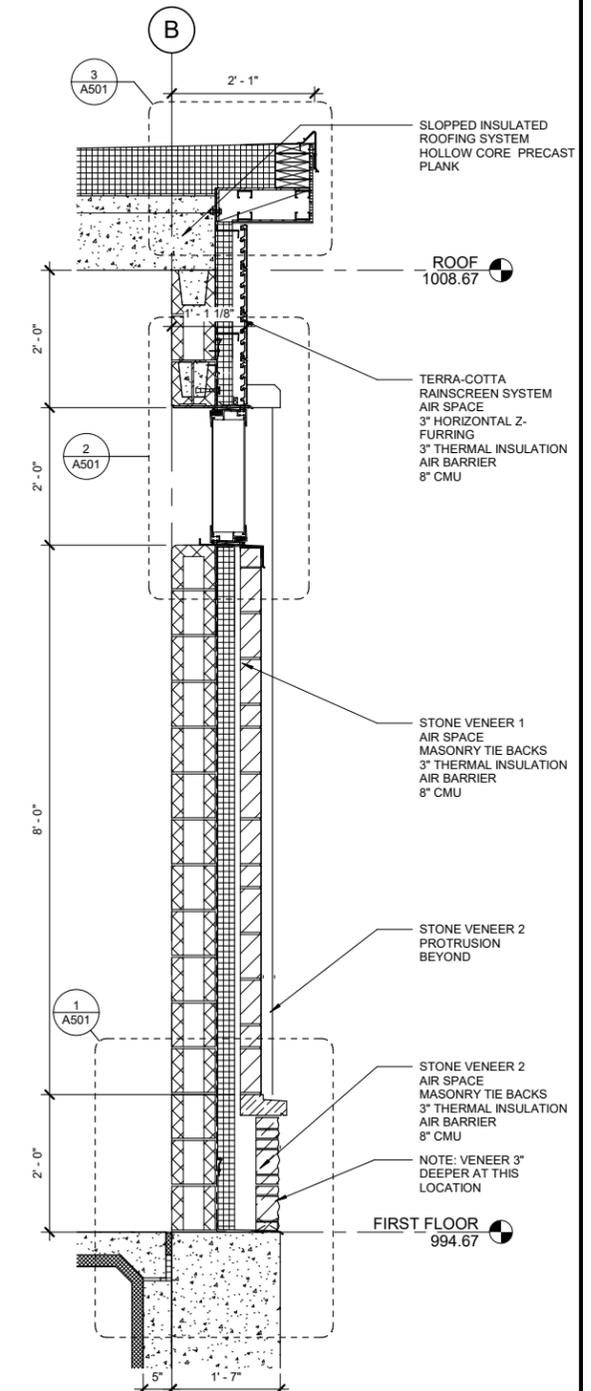
4 WALL SECTION - STONE WALL AT CANOPY
A302 3/4" = 1'-0"



3 WALL SECTION - STONE WALL AT DOOR
A302 3/4" = 1'-0"



2 WALL SECTION - STONE WALL
A302 3/4" = 1'-0"



1 SECTION THRU CLERESTORY WINDOW
A302 3/4" = 1'-0"

THIS BAR IS INTENDED TO BE 1" PRINTED AT FULL SCALE 6/24/2025 12:07:50 PM

NOTE: ALL DRAWING SCALES ARE FOR PLANS PRINTED ON 34"x22" SHEETS

MADISON, WISCONSIN
UNIT WELL 12 RECONSTRUCTION

801 S. Whitney Way, Madison
WI, 53711

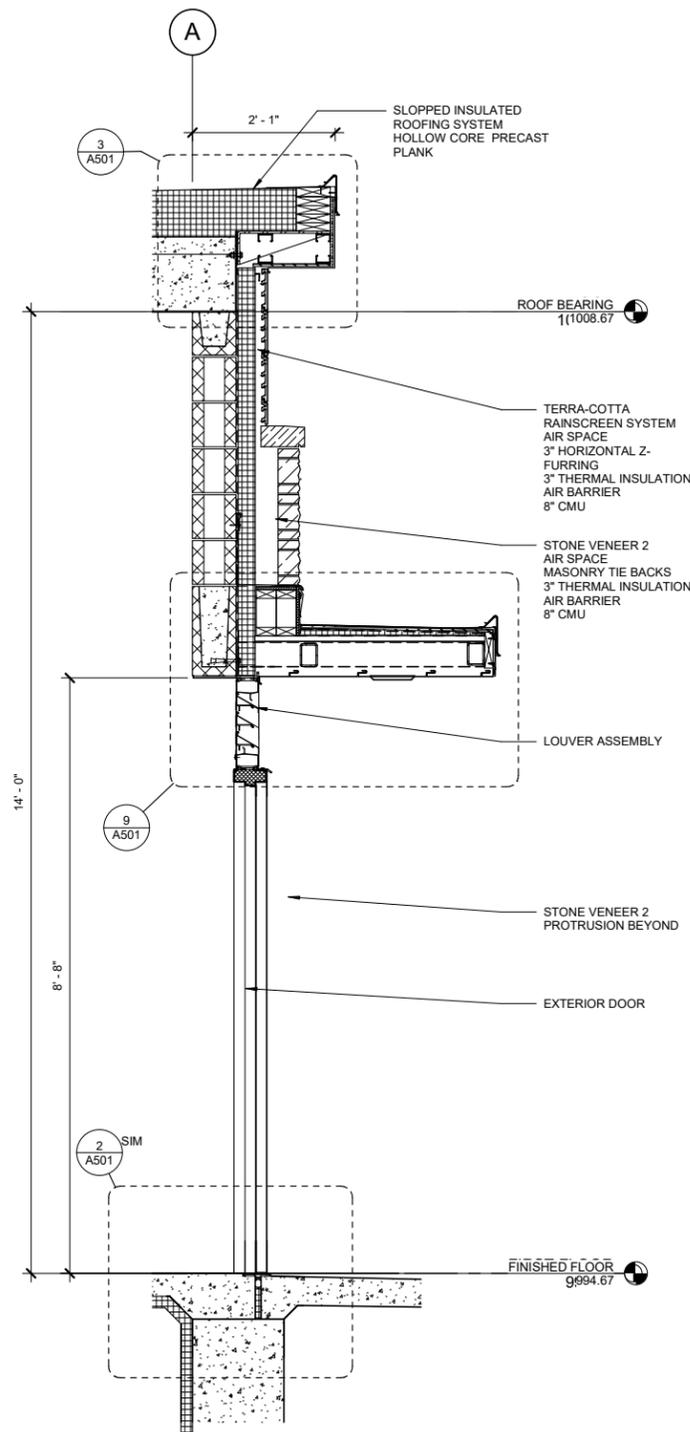
This drawing is an instrument of service and shall remain the property of Short Elliott Hendrickson, Inc. (SEH). This drawing, concept and ideas contained herein shall not be used, reproduced, revised, or related without the express written approval of SEH. Submission or distribution of this drawing to meet official or regulatory requirements or for purposes in connection with the project is not to be construed as publication in derogation of any of the rights of SEH. COPYRIGHT © 2024 Short Elliott Hendrickson, Inc. All Rights Reserved.

SEH Project	182222
Checked By	JRL
Drawn By	JRL
Project Status	Issue Date
DNR SUBMITTAL	6/30/2025

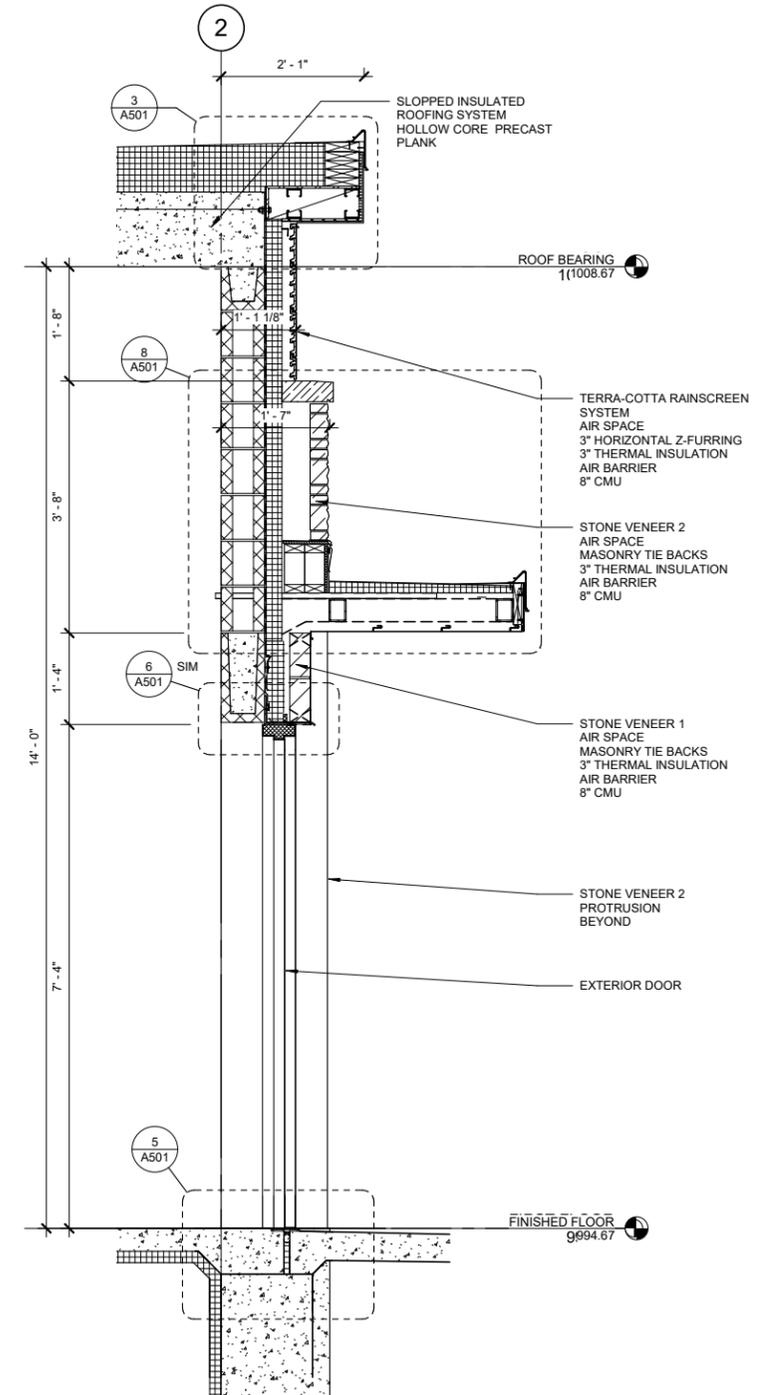
REVISION SCHEDULE		
REV. #	DESCRIPTION	DATE

WALL SECTIONS

01
A302



2 WALL SECTION
A303 3/4" = 1'-0"



1 WALL SECTION - ENTRANCE DOOR
A303 3/4" = 1'-0"

NOTE: ALL DRAWING SCALES ARE FOR PLANS PRINTED ON 34"x22" SHEETS

THIS BAR IS INTENDED TO BE 1" PRINTED AT FULL SCALE

MADISON, WISCONSIN
UNIT WELL 12 RECONSTRUCTION

801 S. Whitney Way, Madison
WI, 53711

This drawing is an instrument of service and shall remain the property of Short Elliott Hendrickson, Inc. (SEH). This drawing, concept and idea contained herein shall not be used, reproduced, revised, or retained without the express written approval of SEH. Submission or distribution of this drawing to meet official or regulatory requirements or for purposes in connection with the project is not to be construed as publication in derogation of any of the rights of SEH.

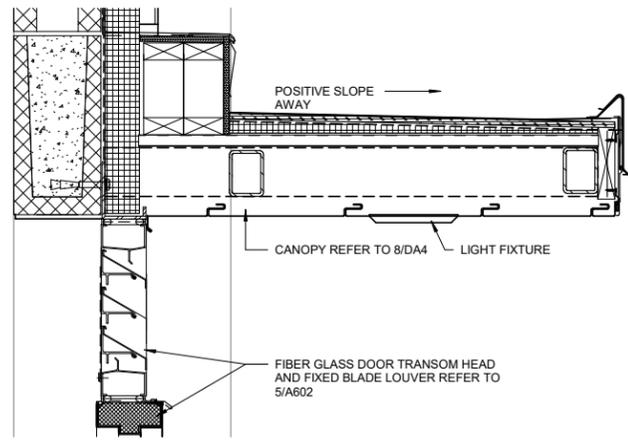
SEH Project 182222
Checked By JRL
Drawn By JRL

Project Status DNR SUBMITTAL Issue Date 6/30/2025

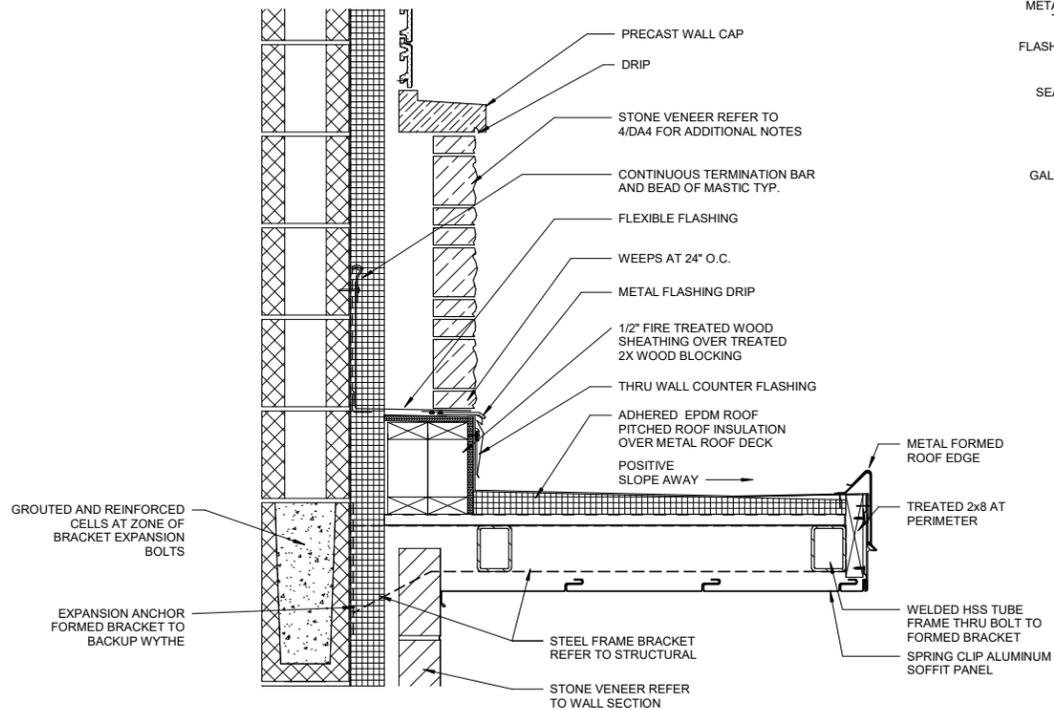
REVISION SCHEDULE		
REV. #	DESCRIPTION	DATE

WALL SECTIONS

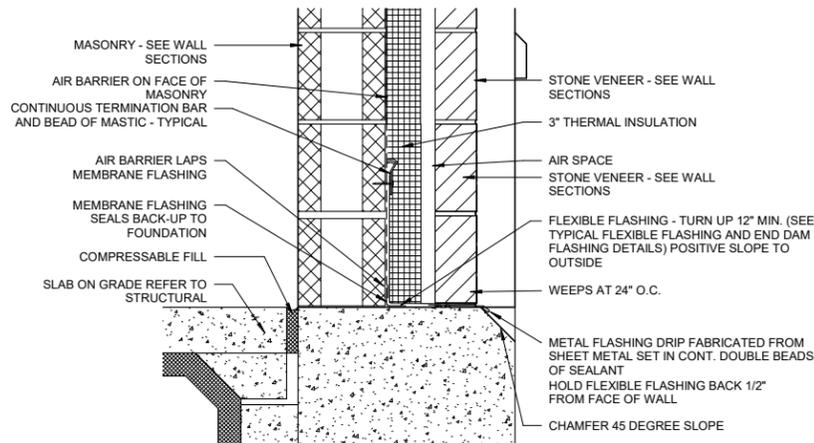
01
A303



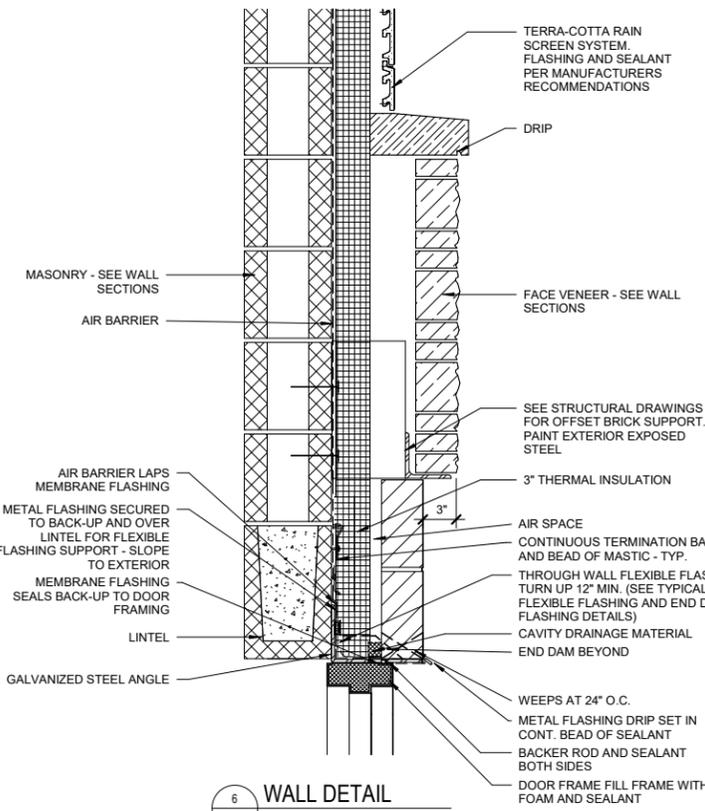
9 CANOPY AT BLADE LOUVER ASSEMBLY
 A501 1 1/2" = 1'-0"



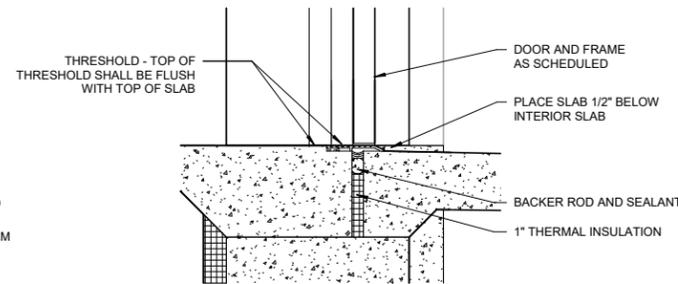
8 WALL DETAIL - CANOPY
 A501 1 1/2" = 1'-0"



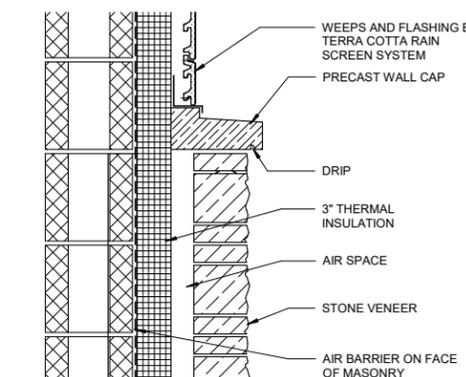
7 WALL DETAIL - BASE
 A501 1 1/2" = 1'-0"



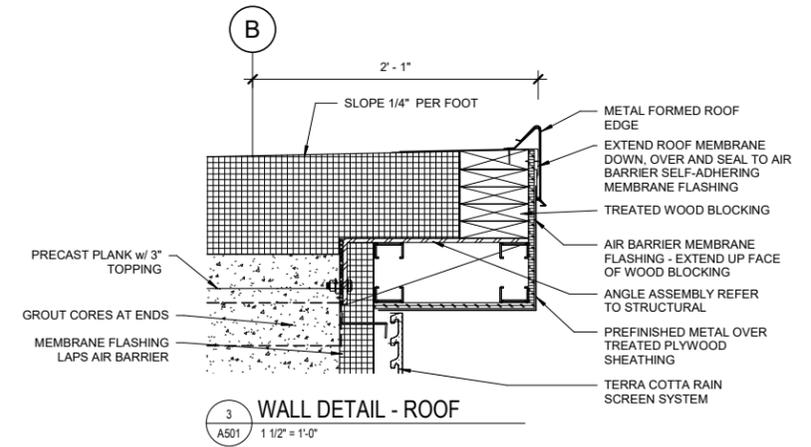
6 WALL DETAIL
 A501 1 1/2" = 1'-0"



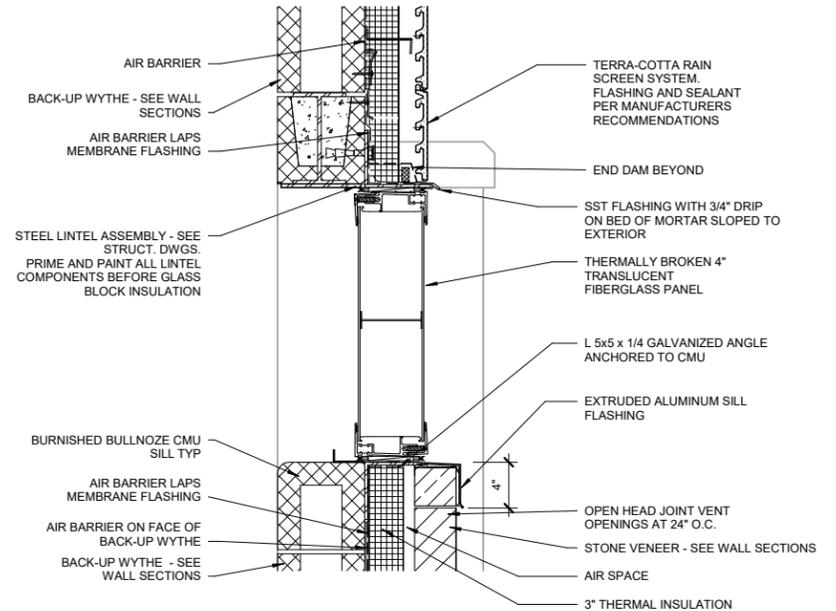
5 WALL DETAIL - DOOR BASE
 A501 1 1/2" = 1'-0"



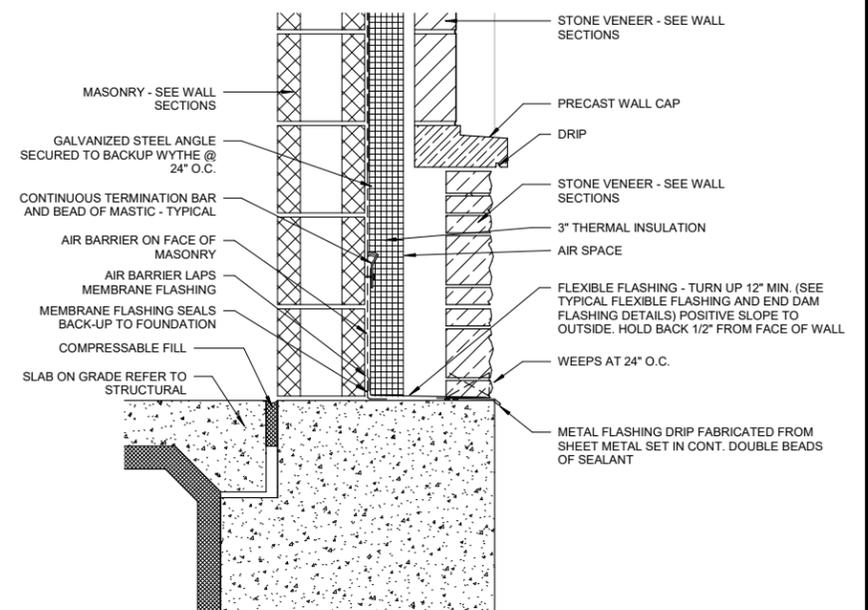
4 WALL DETAIL
 A501 1 1/2" = 1'-0"



3 WALL DETAIL - ROOF
 A501 1 1/2" = 1'-0"

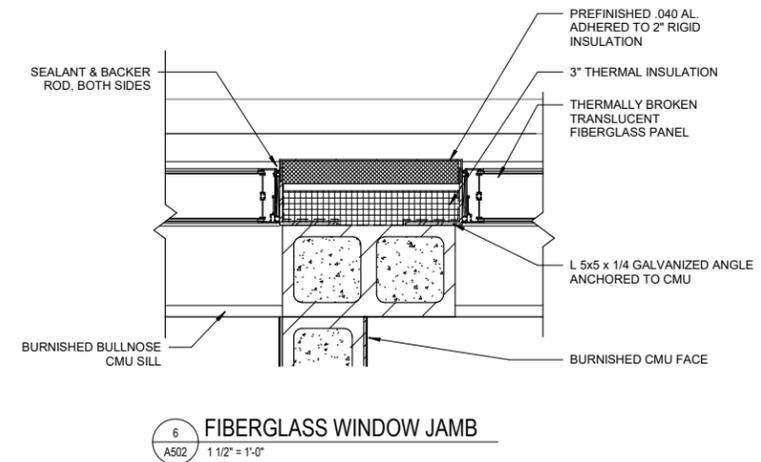
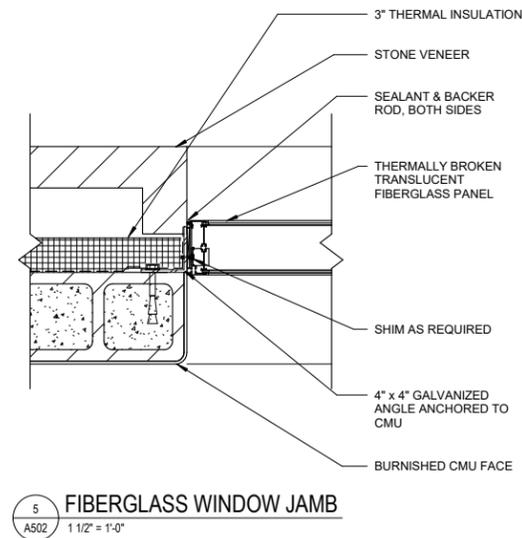
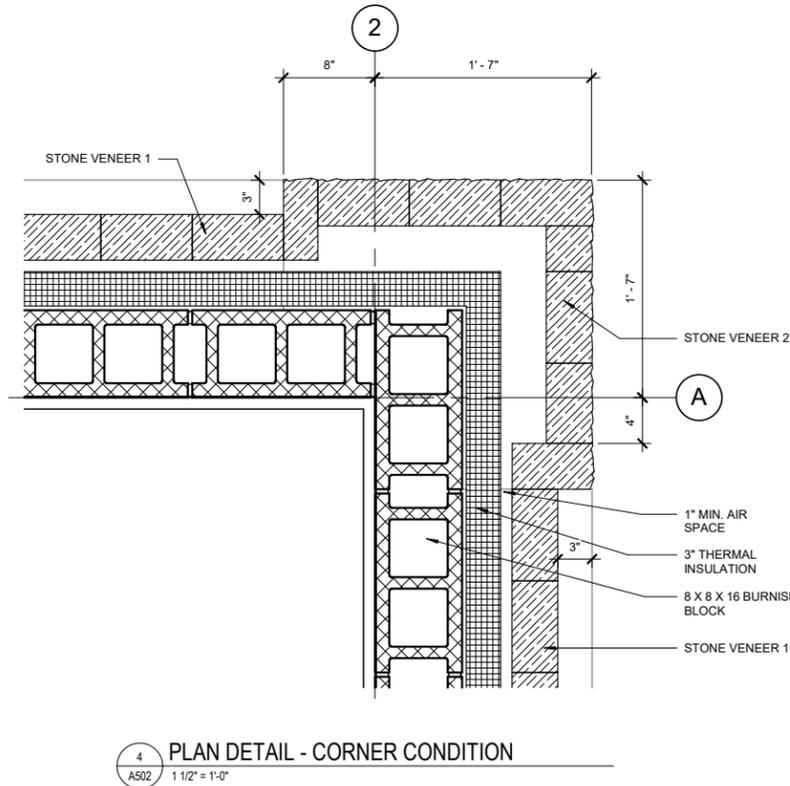
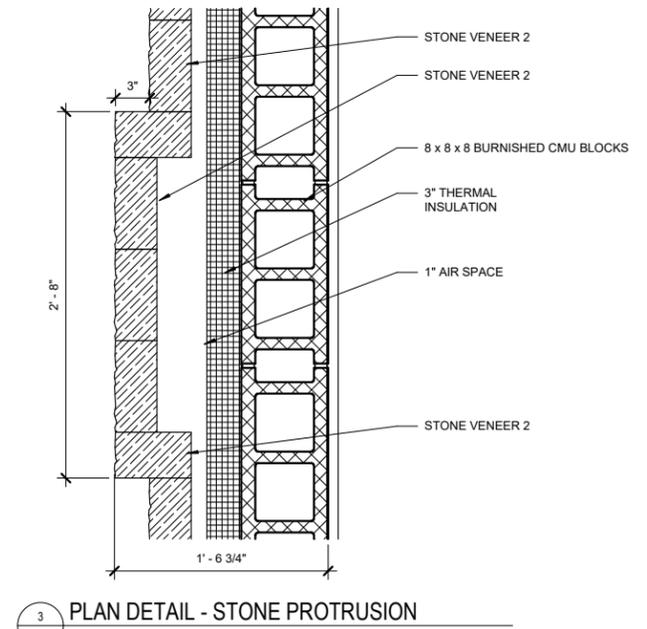
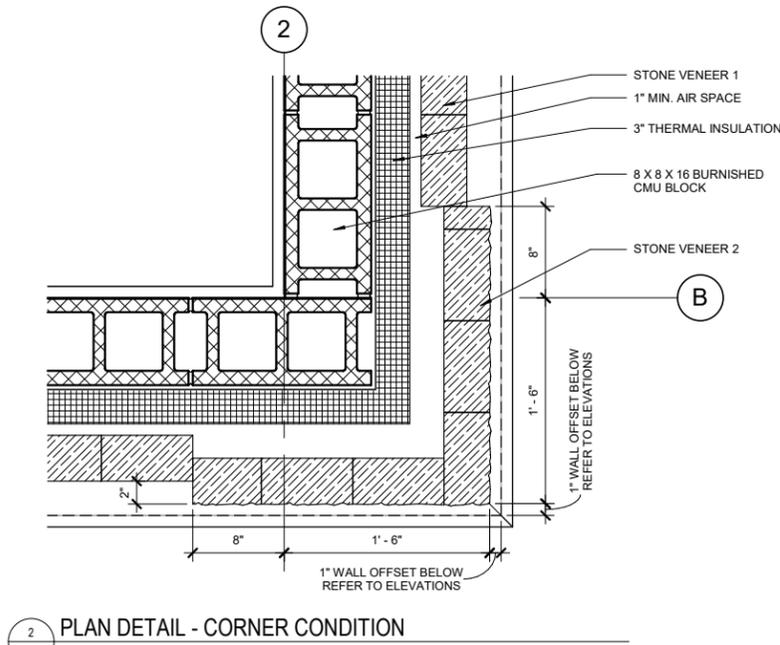
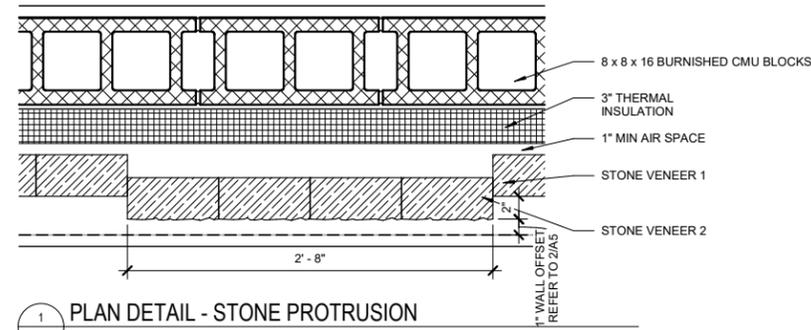


2 WALL DETAIL - GLASS BLOCK
 A501 1 1/2" = 1'-0"



1 WALL DETAIL - WALL FOUNDATION
 A501 1 1/2" = 1'-0"

NOTE: ALL DRAWING SCALES ARE FOR PLANS PRINTED ON 34"x22" SHEETS



THIS BAR IS INTENDED TO BE 1" PRINTED AT FULL SCALE

MADISON, WISCONSIN
UNIT WELL 12 RECONSTRUCTION

801 S. Whitney Way, Madison
WI, 53711

This drawing is an instrument of service and shall remain the property of Short Elliott Hendrickson, Inc. (SEH). This drawing, concepts and ideas contained herein shall not be used, reproduced, revised, or related without the express written approval of SEH. Submission or distribution of this drawing to meet official or regulatory requirements or for purposes in connection with the project is not to be construed as publication in derogation of any of the rights of SEH. COPYRIGHT © 2024 Short Elliott Hendrickson, Inc. All Rights Reserved.

SEH Project 182222
Checked By JRL
Drawn By JRL

Project Status Issue Date
DNR SUBMITTAL 6/30/2025

REVISION SCHEDULE		
REV. #	DESCRIPTION	DATE

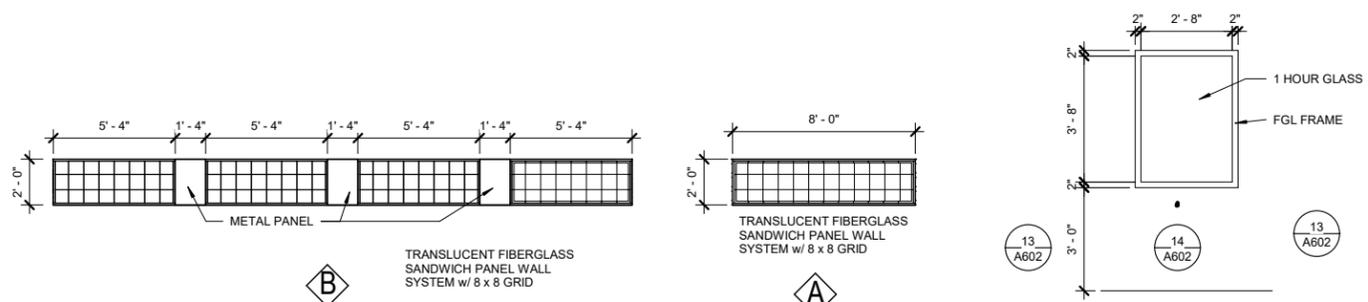
DETAILS

01
A502

NOTE: ALL DRAWING SCALES ARE FOR PLANS PRINTED ON 34"x22" SHEETS

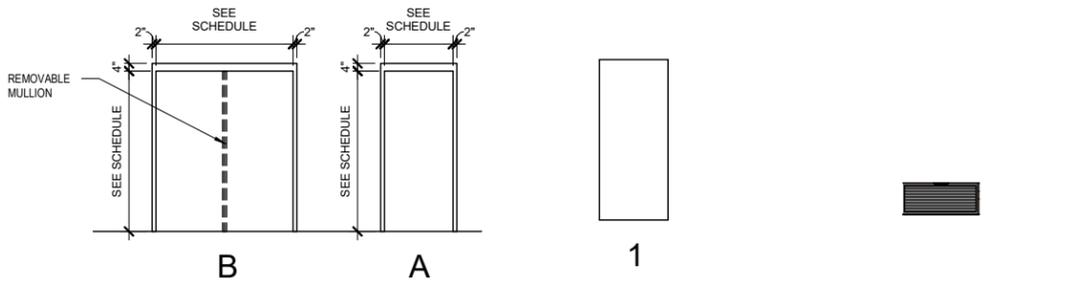
DOOR AND FRAME SCHEDULE												
DOOR NUMBER	DOOR				FIRE RATING	TYPE	MATL	FRAME			HW Set	REMARKS
	SIZE	WIDTH	HEIGHT	TYPE				JAMB	HEAD	SILL		
101A	3'-0"	7'-0"	1	FRP	-	A	FRP	13/DA6	14/DA6		1	
102A	3'-0"	7'-0"	1	FRP	-	A	FRP	13/DA6	14/DA6		1	
103A	3'-0"	7'-0"	1	HM	-	A	HM	11/DA6	12/DA6		2	
104A	6'-0"	8'-0"	1	HM	-	A	HM	13/DA6	14/DA6		4	
104B	3'-0"	7'-0"	1	HM	-	A	HM	13/DA6	14/DA6		3	
104C	3'-0"	7'-0"	1	HM	-	A	HM	13/DA6	14/DA6		3	

HM: HOLLOW METAL
FRP: FIBER REINFORCED PLASTIC



1 TRANSLUCENT PANEL ELEVATIONS
1/4" = 1'-0"

2 FIRE RATED INTERIOR WINDOW
3/8" = 1'-0"



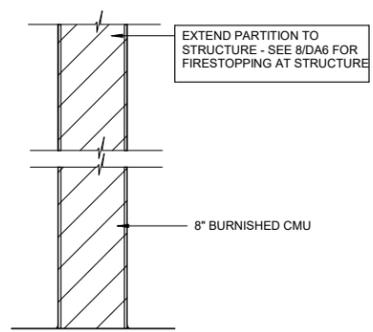
3 FRAME ELEVATIONS
1/4" = 1'-0"

4 DOOR ELEVATIONS
1/4" = 1'-0"

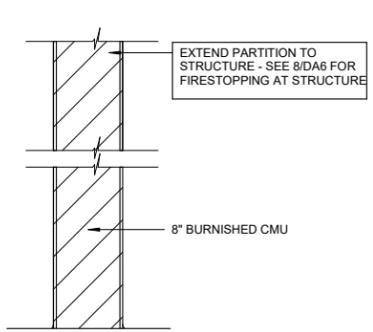
5 LOUVER ELEVATION
1/4" = 1'-0"

ROOM FINISH SCHEDULE										
ROOM NUMBER	ROOM NAME	FLOOR	BASE	WALL FINISH				CEILING		REMARKS
				NORTH	SOUTH	EAST	WEST	FINISH	MATERIAL	
101	CHLORINE	EP	-	BURN	BURN	BURN	BURN	PT	PRECAST	
102	FLUORIDE	EP	-	BURN	BURN	BURN	BURN	PT	PRECAST	
103	TOILET	EP	-	BURN	BURN	BURN	BURN	PT	PRECAST	
104	PUMP	EP	-	BURN	BURN	BURN	BURN	PT	PRECAST	

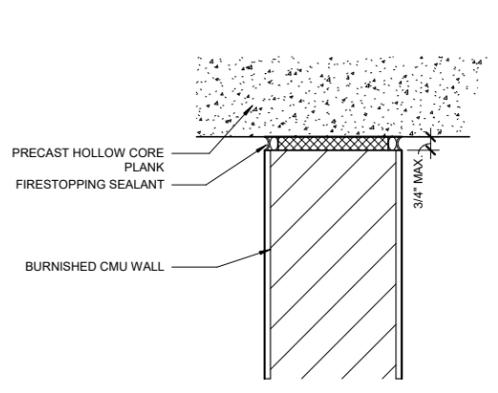
BURN: BURNISHED CMU
EP: EPOXY QUARTZ
PT: PAINTED PER SPECIFICATION



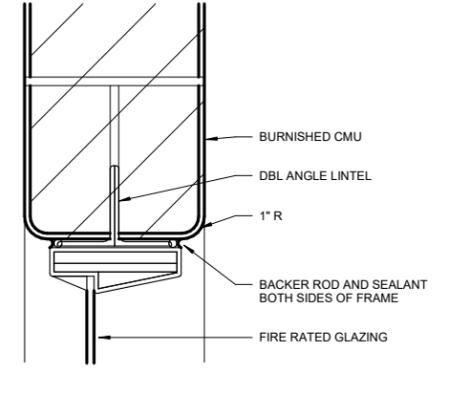
6 PARTITION TYPES M1C/S
1 1/2" = 1'-0"



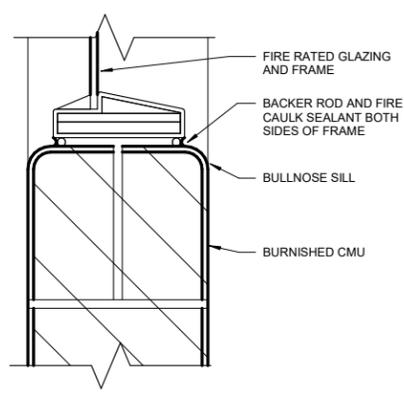
7 PARTITION TYPE M3C/S - 2 HOUR
1 1/2" = 1'-0"



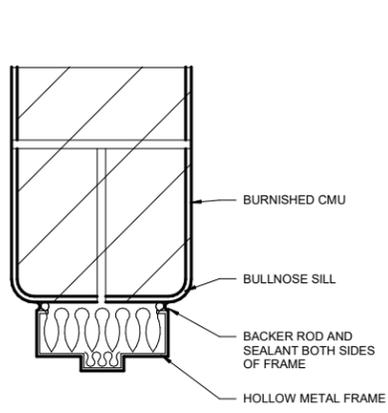
8 FIRESTOPPING AT CMU PARTITION
3" = 1'-0"



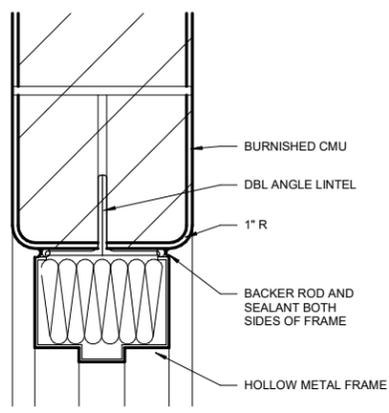
9 FIRE RATED FGL HEAD
3" = 1'-0"



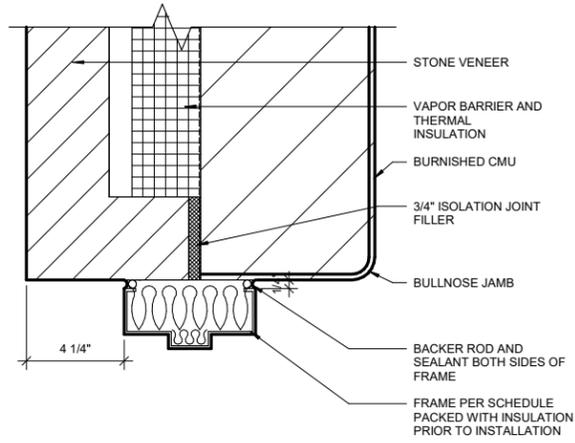
10 FIRE RATED FGL JAMB/SILL
3" = 1'-0"



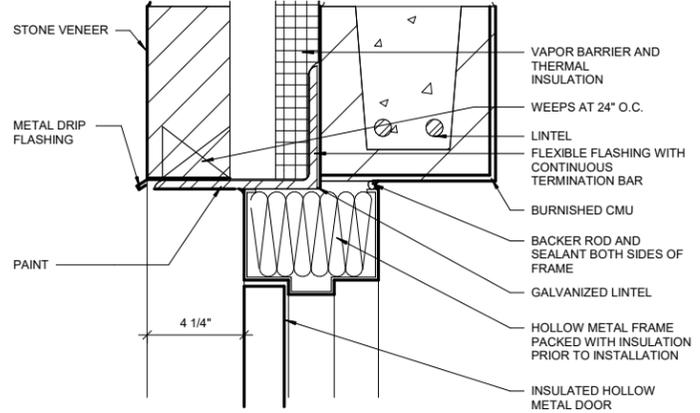
11 TYP. INTERIOR DOOR JAMB
3" = 1'-0"



12 TYP. INTERIOR DOOR HEAD
3" = 1'-0"



13 TYP. EXTERIOR DOOR JAMB
3" = 1'-0"



14 TYP. EXTERIOR DOOR HEAD
3" = 1'-0"

THIS BAR IS INTENDED TO BE 1" PRINTED AT FULL SCALE 6/24/2025 12:07:52 PM

Project Owner

MADISON, WISCONSIN
UNIT WELL 12 RECONSTRUCTION
801 S. Whitney Way, Madison
WI, 53711

This drawing is an instrument of service and shall remain the property of Short Elliott Hendrickson, Inc. (SEH). This drawing, concept and ideas contained herein shall not be used, reproduced, revised, or retained without the express written approval of SEH. Submission or distribution of this drawing to meet official or regulatory requirements or for purposes in connection with the project is not to be construed as publication in derogation of any of the rights of SEH. COPYRIGHT © 2024 Short Elliott Hendrickson, Inc. All Rights Reserved.

SEH Project 182222
Checked By JRL
Drawn By JRL

Project Status Issue Date
DNR SUBMITTAL 6/30/2025

REVISION SCHEDULE
REV. # DESCRIPTION DATE

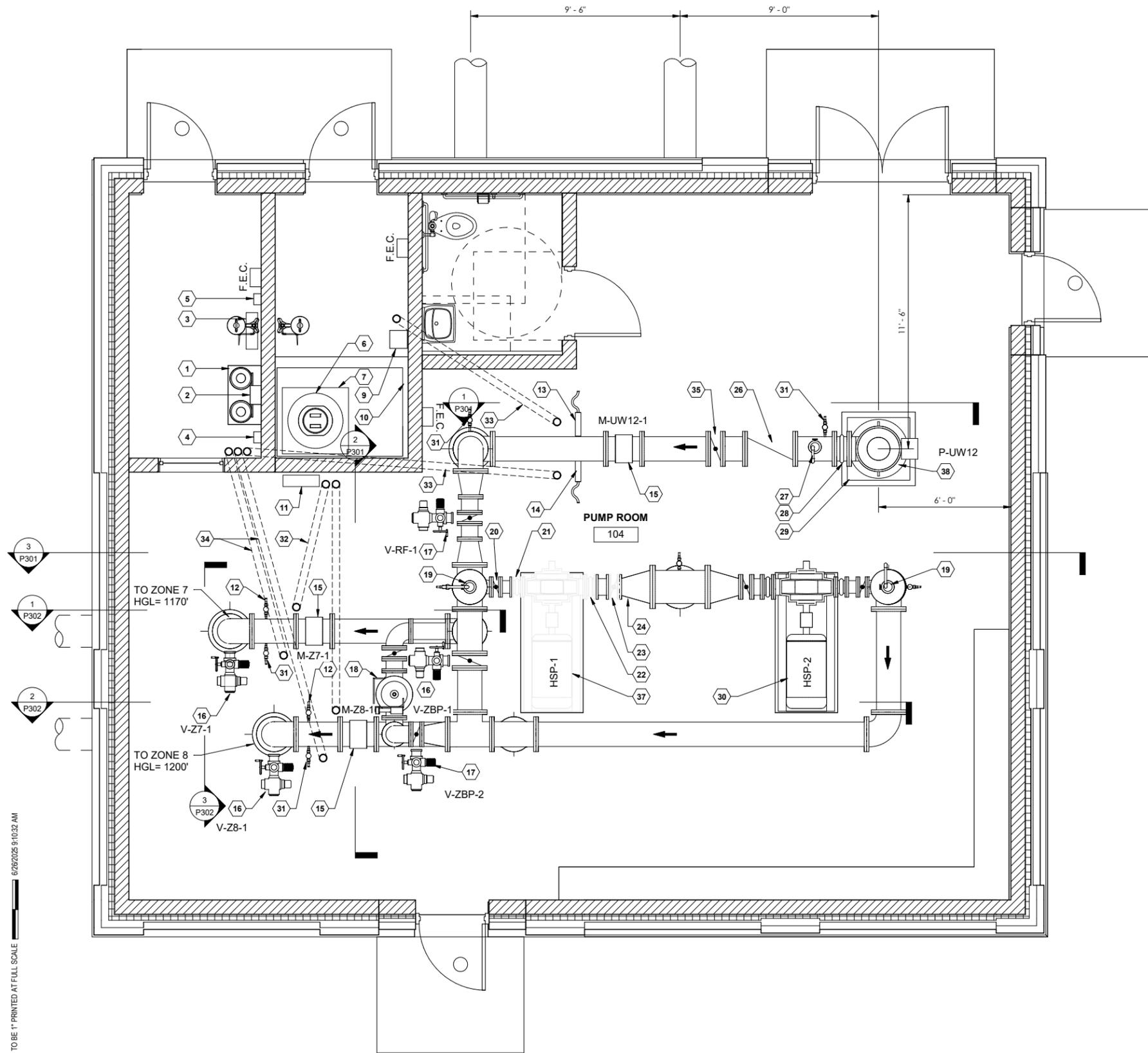
SCHEDULES AND DETAILS

01
A601

KEYNOTES:

- 1 DUAL CYLINDER PLATFORM WITH INDICATOR
- 2 GAS CHLORINE FEED SYSTEM - SEE DETAIL E/DP1
- 3 EMERGENCY CHLORINE SHUTOFF PANEL
- 4 CHLORINE GAS DETECTOR
- 5 LOSS OF VACCUM DETECTOR
- 6 165 GALON FLUORIDE TANK
- 7 36" x 36" SCALE PLATFORM
- 8 DIGITAL SCALE INDICATOR
- 9 FLUORIDE METERING PUMP - SEE DETAIL F/DP1
- 10 16" HIGH CHEMICAL CONTAINMENT WALL
- 11 CHLORINE ANALYZER - ROTATE PIPING AS REQUIRED
- 12 TAP PIPE FOR 1/2" CHLORINE ANALYZER SUPPLY - INSTALL 1/2" BALL VALVE - ROUTE PIPE TO CHLORINE ANALYZER
- 13 FLUORIDE INJECTION POINT - SEE DETAIL D/DP1
- 14 CHLORINE INJECTION POINT - SEE DETAIL D/DP1
- 15 12" MAGNETIC FLOW METER (FURNISHED BY OWNER)
- 16 12" BUTTERFLY VALVE W/ELECTRIC ACTUATOR
- 17 8" BUTTERFLY VALVE W/ELECTRIC ACTUATOR
- 18 8" PRESSURE SUSTAINING/PRESSURE REDUCING VALVE (V-PSV/PRV - 1)
- 19 AIR RELEASE VALVE - ROUTE VENT TO NEARBY HUB DRAIN SEE DETAIL A/DP1
- 20 6" BUTTERFLY VALVE
- 21 6" EXPANSION JOINT
- 22 8" EXPANSION JOINT
- 23 8" BUTTERFLY VALVE
- 24 16x8 ECCENTRIC REDUCER
- 25 12" BUTTERFLY VALVE
- 26 12" CHECK VALVE
- 27 AIR/VACUUM VALVE - ROUTE VENT TO NEARBY FLOOR DRAIN - SEE DETAIL A/DP1
- 28 12" EXPANSION JOINT
- 29 VERTICAL TURBINE WELL, PUMP, MOTOR AND PUMP BASE - SEE DP3 FOR DETAILS
- 30 HIGH SERVICE PUMP
- 31 SAMPLE TAP - SEE DETAIL B/DP2
- 32 4" CONDUIT WITH LONG SWEEP BENDS UNDER FLOOR FOR CHLORINE ANALYZER TUBING
- 33 4" CONDUIT WITH LONG SWEEP BENDS UNDER FLOOR FOR CHEMICAL FEED TUBING
- 34 4" CONDUIT WITH LONG SWEEP BENDS UNDER FLOOR FOR ALTERNATE CHLORINE FEED
- 35 12" BUTTERFLY VALVE W/HANDWHEEL
- 36 EMERGENCY SHOWER, TYP.
- 37 EXISTING HIGH SERVICE PUMP SALVAGED FROM EXISTING WELLHOUSE
- 38 EXISTING UW 12 DEEP WELL TO REMAIN, PROTECT FROM DAMAGE DURING CONSTRUCTION, SEE PUMP BASE DETAIL.
 -CONTRACTOR TO FIELD VERIFY LOCATION

NOTE:
 ENCASE BELOW FLOOR PIPING ACCORDING TO DETAIL K/DP1

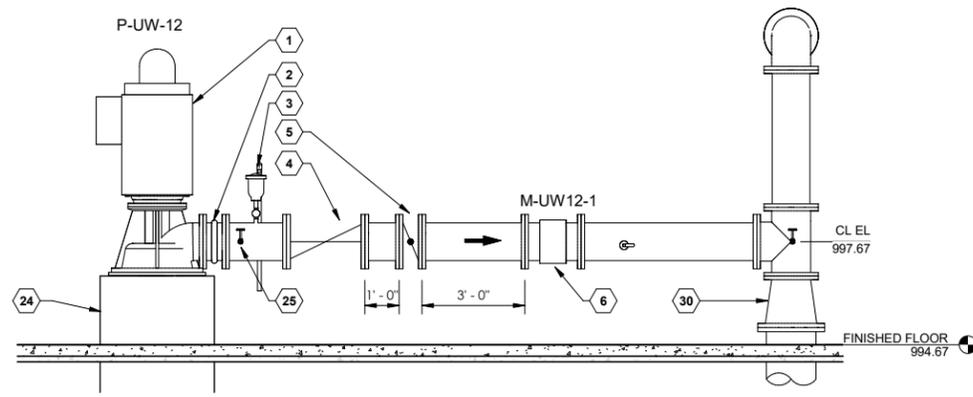


THIS BAR IS INTENDED TO BE 1" PRINTED AT FULL SCALE 6/26/2025 9:10:32 AM

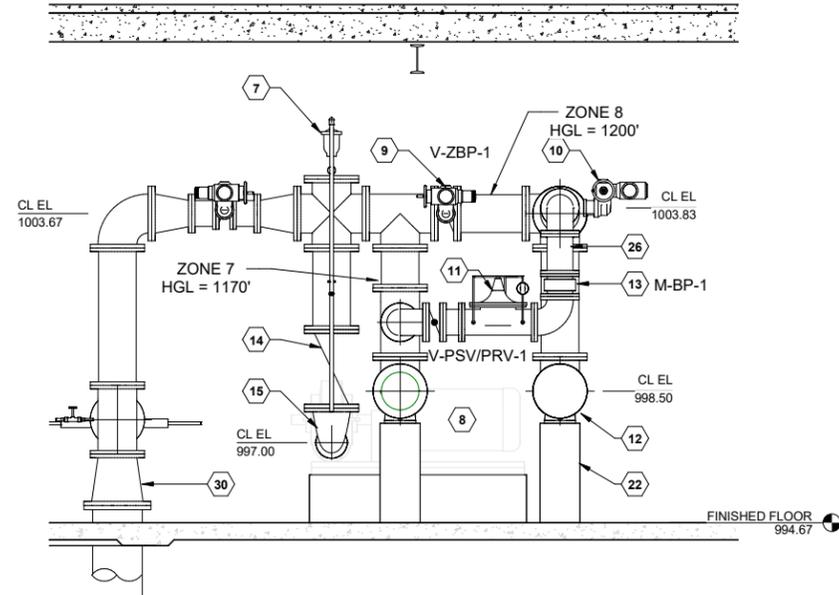
KEYNOTES:

- 1 HIGH SERVICE WELL - SEE DETAILS DP3
- 2 12" EXPANSION JOINT
- 3 AIR/VACUUM VALVE - ROUTE VENT TO NEARBY FLOOR DRAIN - SEE DETAIL A/DP1
- 4 12" CHECK VALVE (CV-RW-1)
- 5 12" BUTTERFLY VALVE W/HANDWHEEL
- 6 12" MAGNETIC FLOW METER (FURNISHED BY OWNER)
- 7 AIR RELEASE VALVE - ROUTE VENT TO NEARBY FLOOR DRAIN - SEE DETAIL A/DP1
- 8 HIGH SERVICE PUMP (TYP OF 3)
- 9 12" BUTTERFLY VALVE W/ELECTRIC ACTUATOR
- 10 8" BUTTERFLY VALVE W/ELECTRIC ACTUATOR
- 11 8" PRESSURE SUSTAINING/PRESSURE REDUCING VALVE (V-PSV/PRV-1)
- 12 12" BASE ELBOW AND PEDISTAL
- 13 8" MAGNETIC FLOW METER (FURNISHED BY OWNER)(M-BP-1)
- 14 12" SWING CHECK VALVE
- 15 12x6 REDUCING ELBOW
- 16 6" BUTTERFLY VALVE
- 17 6" EXPANSION JOINT
- 18 8" EXPANSION JOINT
- 19 8" BUTTERFLY VALVE
- 20 16x8 ECCENTRIC REDUCER
- 21 TAP BLIND FLANGE FOR AHU RETURN WATER - SEE MECHANICAL
- 22 BASE BEND PEDISTAL - SEE DETAIL B/DP1
- 23 THRUST BLOCK AND PIPE ENCASEMENT - SEE DETAIL K/DP1, C/DP2
- 24 CONCRETE PUMP BASE - SEE DETAIL B/DP3
- 25 SAMPLE TAP - SEE DETAIL B/DP2
- 26 8" PIPING AND FITTINGS
- 27 16x16 TEE
- 28 16" FROM RESERVOIR
- 29 TAP TEE FOR PRESSURE GAUGE AND SAMPLE TAP - SEE DETAIL D/DP2
- 30 12" x 16" CONCENTRIC REDUCER

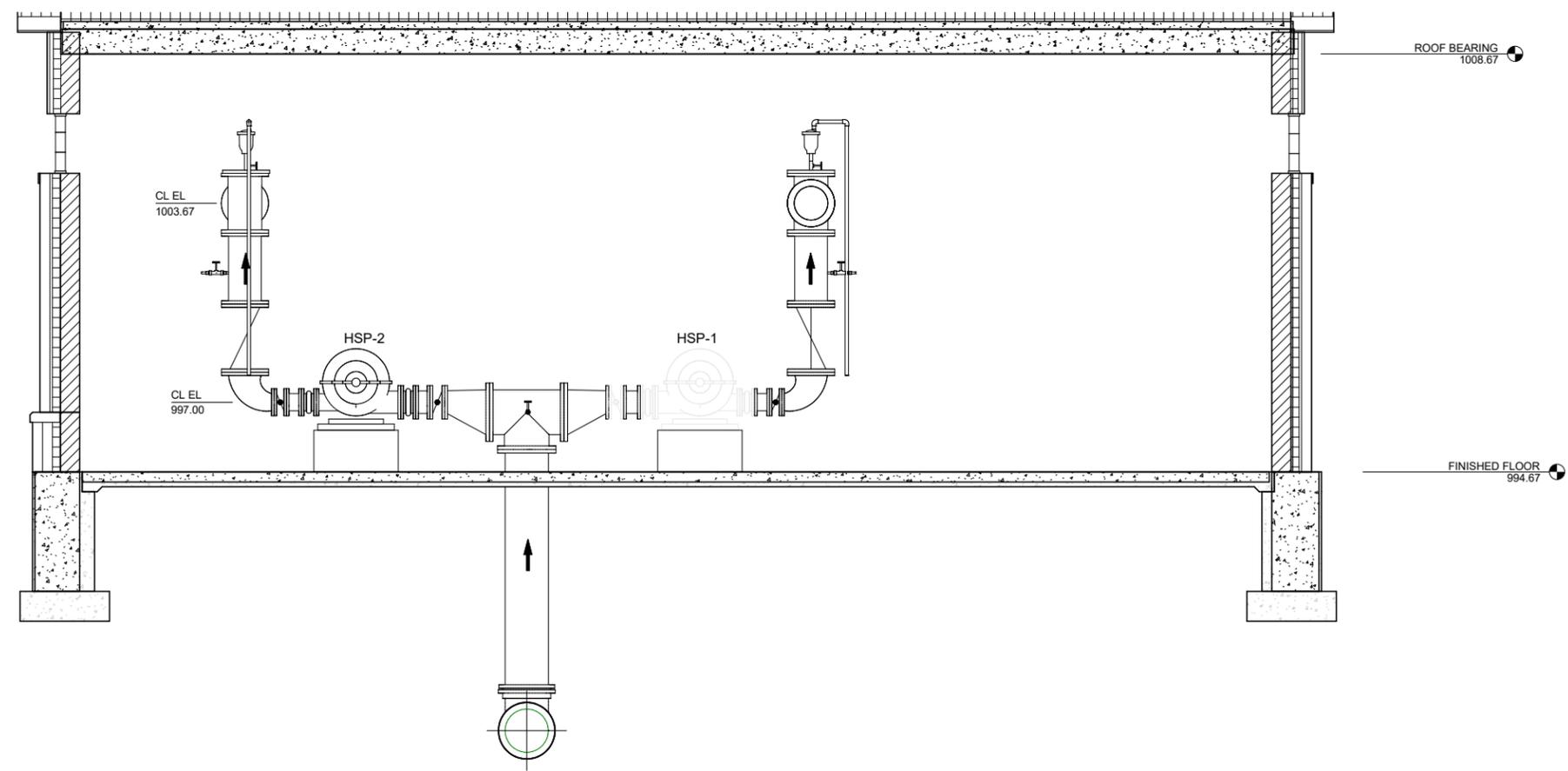
NOTE:
ENCASE BELOW FLOOR PIPING ACCORDING TO DETAIL K/DP1



1 SECTION
P301 0 4' 8' 12'



2 SECTION
P301 0 4' 8' 12'



3 SECTION
P301 0 4' 8' 12'

THIS BAR IS INTENDED TO BE 1" PRINTED AT FULL SCALE

MADISON, WISCONSIN
UNIT WELL 12 RECONSTRUCTION

801 S. Whitney Way
Madison WI, 53711

This drawing is an instrument of service and shall remain the property of Short Elliott Hendrickson, Inc. (SEH). This drawing, concept and ideas contained herein shall not be used, reproduced, revised, or retained without the express written approval of SEH.

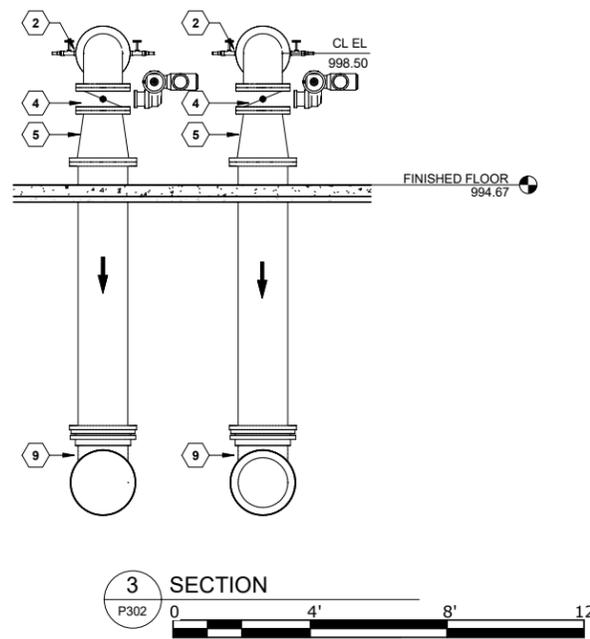
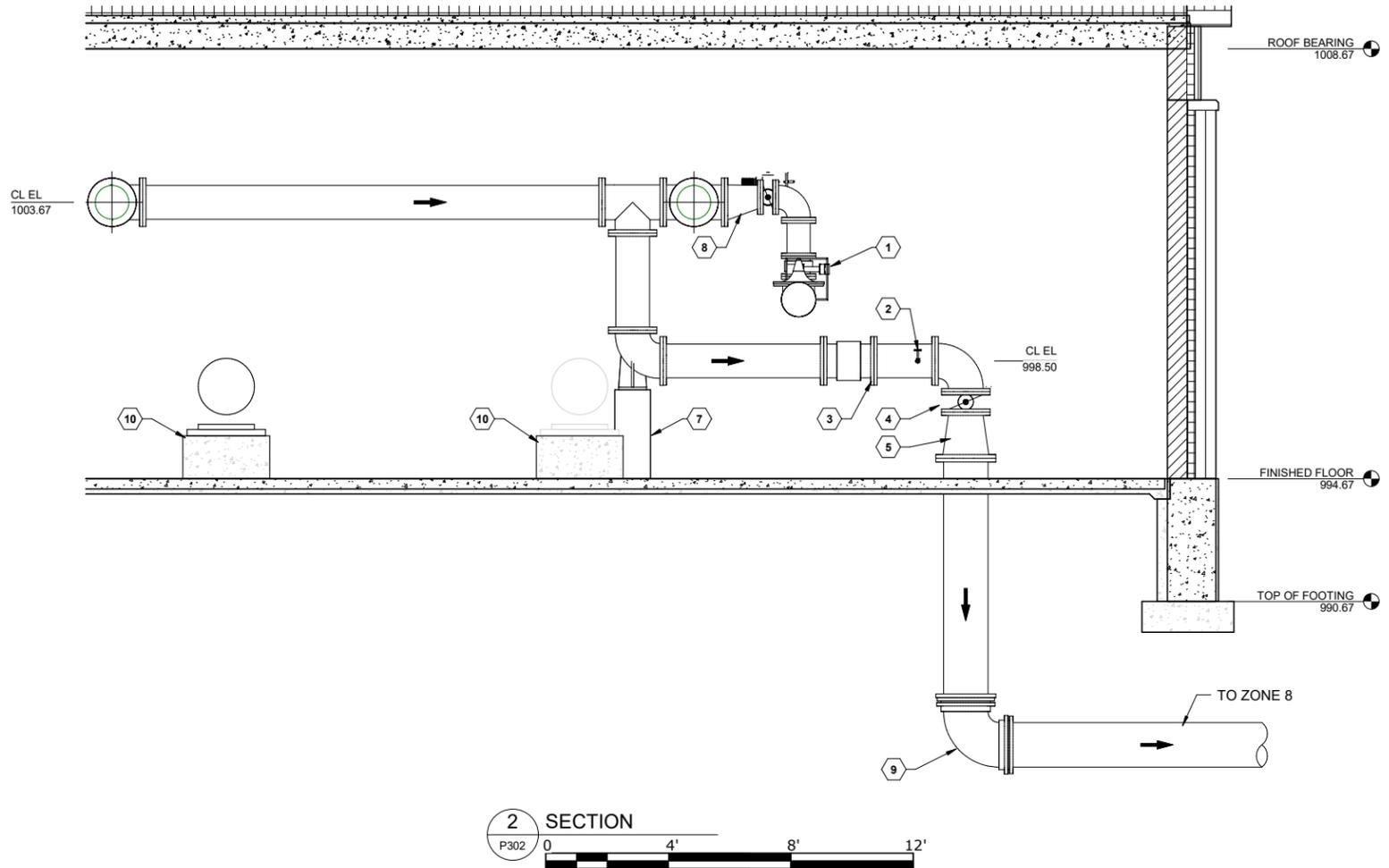
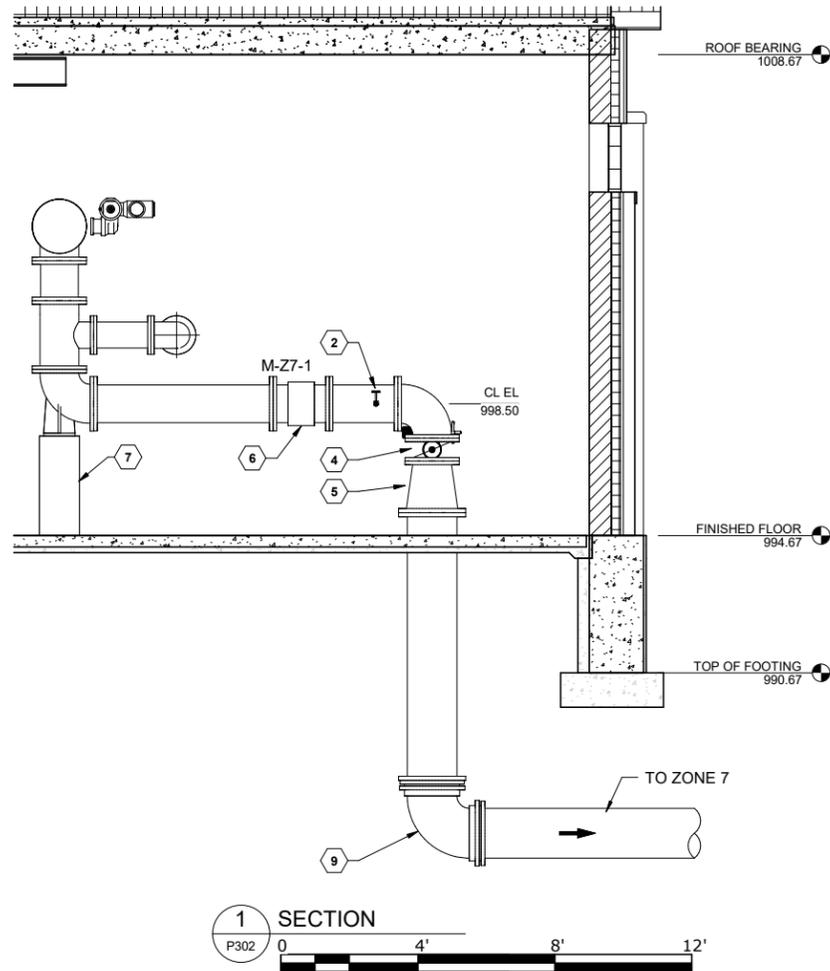
SEH Project MADWI 182222
Checked By IS
Drawn By DD

Project Status Issue Date
DNR SUBMITTAL 6/30/2025

REVISION SCHEDULE
REV. # DESCRIPTION DATE

WELLHOUSE SECTIONS

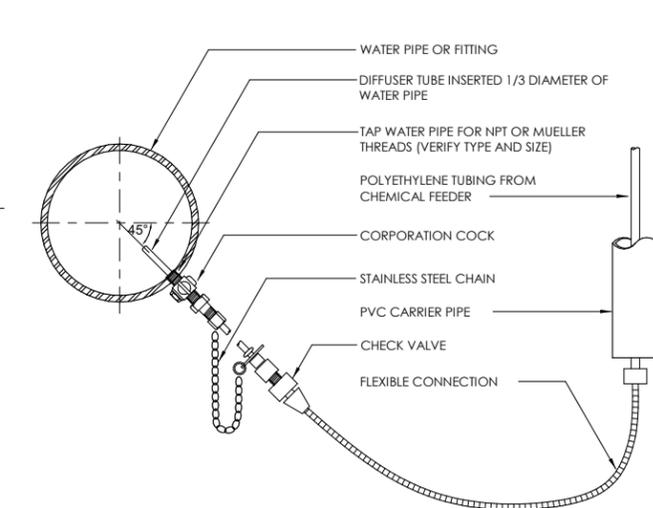
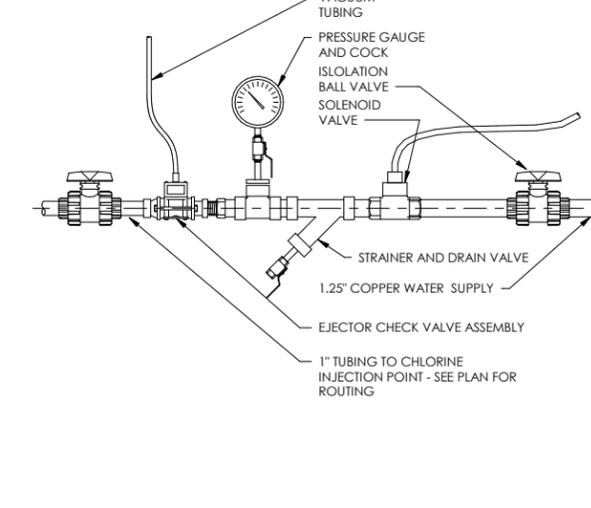
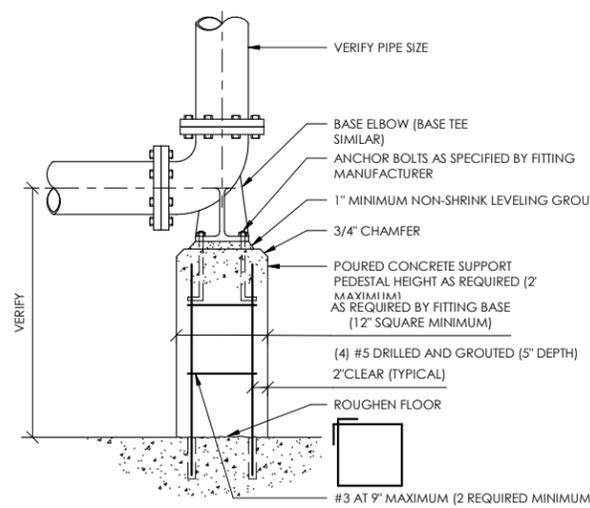
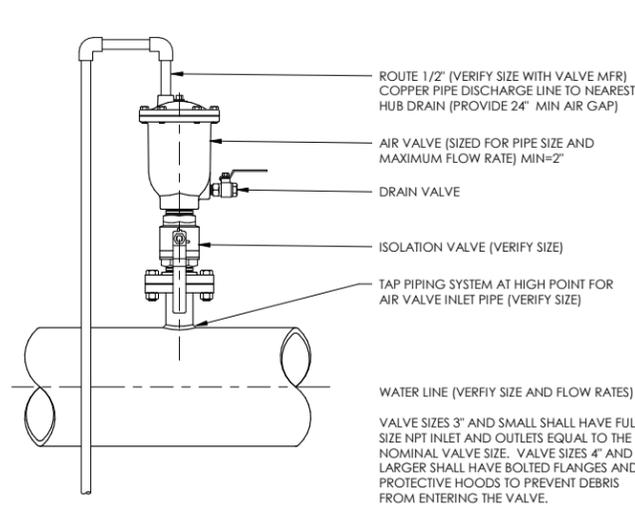
01
P301



KEYNOTES:

- 1 8" PSV VALVE
- 2 TAP PIPE FOR 1/2" CHLORINE ANALYZER SUPPLY - INSTALL 1/2" BALL VALVE
- 3 12" MAGNETIC FLOW METER (FURNISHED BY OWNER)
- 4 12" ACTUATED BUTTERFLY VALVE
- 5 16x12 CONCENTRIC REDUCER
- 6 12" MAGNETIC FLOW METER PROVIDED BY OWNER
- 7 BASE BEND PEDISTAL - SEE DETAIL B/DP1
- 8 12x8 ECCENTRIC REDUCER
- 9 THRUST BLOCK AND PIPE ENCASEMENT - SEE DETAIL K/DP1, C/DP2
- 10 PUMP BASE - SEE DETAIL G/DP1

THIS BAR IS INTENDED TO BE 1" PRINTED AT FULL SCALE

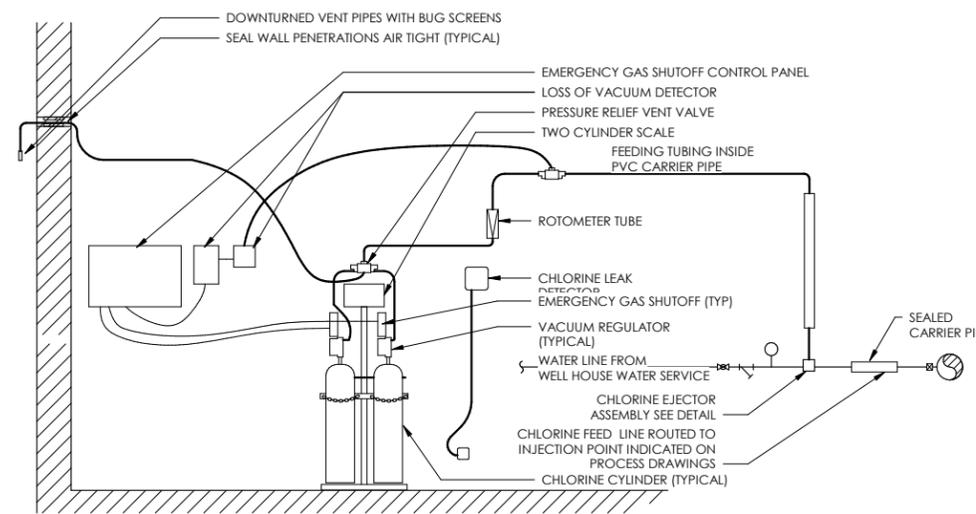


A AIR RELEASE VALVE DETAIL
P501

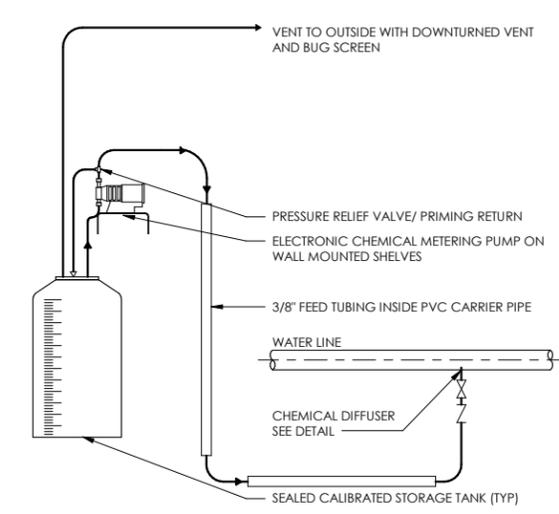
B BASE BEND CONCRETE PEDISTAL DETAIL
P501

C CHLORINE EJECTOR DETAIL
P501

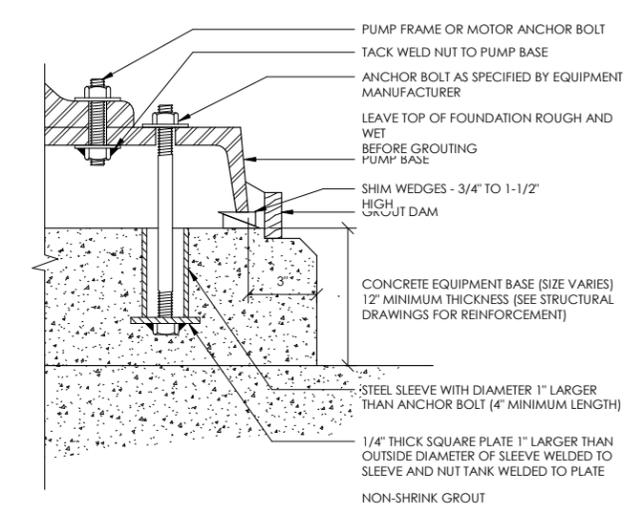
D CHEMICAL FEED DIFFUSER DETAIL
P501



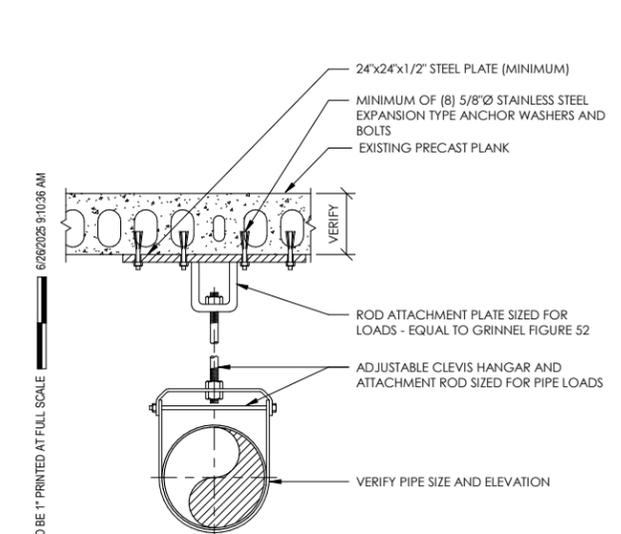
E CHLORINE FEED SYSTEM DETAIL
P501



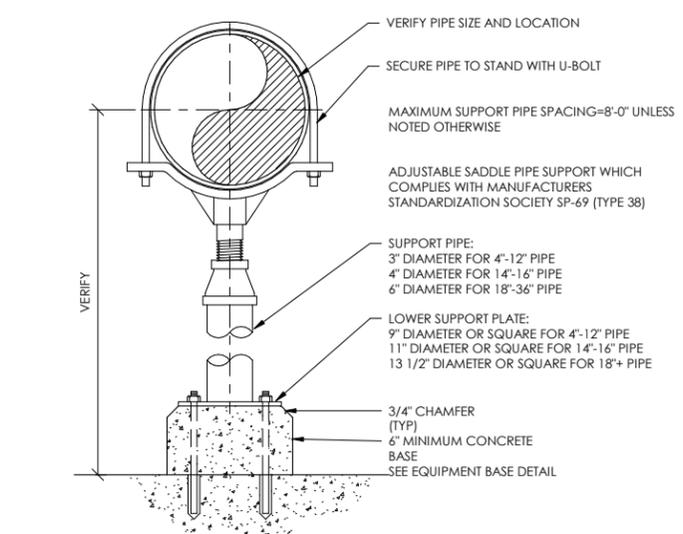
F FLUORIDE CHEMICAL SYSTEM DETAIL
P501



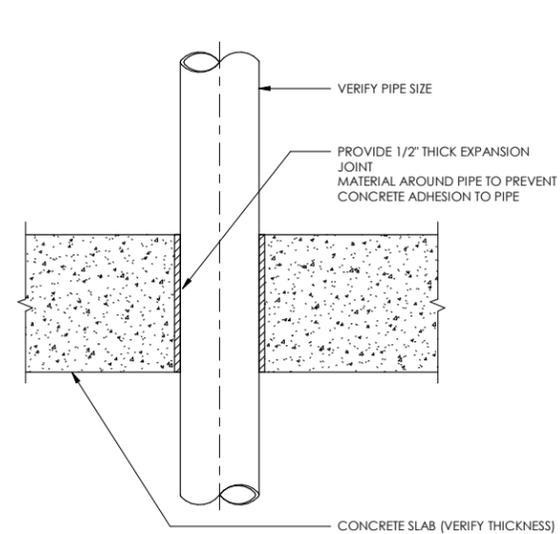
G PUMP BASE DETAIL
P501



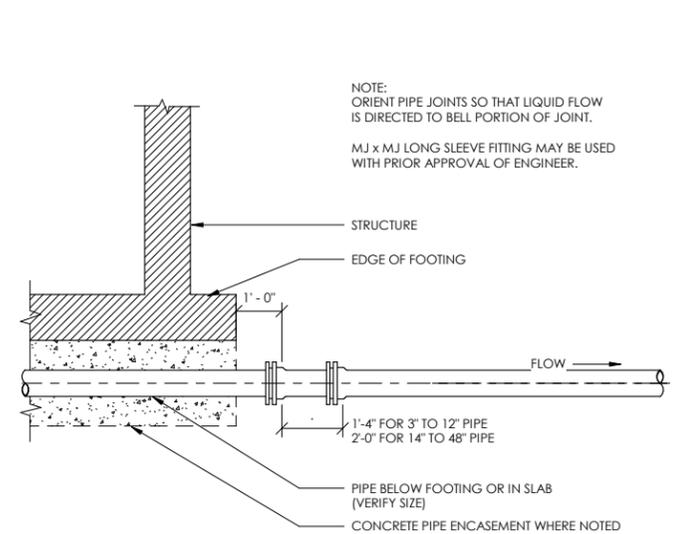
H PIPE SUPPORT FROM CEILING DETAIL
P501



I PIPE SUPPORT FROM FLOOR DETAIL
P501



J PIPE THRU FLOOR DETAIL
P501



K PIPE ENCASEMENT DETAIL
P501

THIS BAR IS INTENDED TO BE 1\"/>

Project Owner

MADISON, WISCONSIN
UNIT WELL 12 RECONSTRUCTION
801 S. Whitney Way
Madison, WI, 53711

This drawing is an instrument of service and shall remain the property of Short Elliott Hendrickson, Inc. (SEH). This drawing, concept and ideas contained herein shall not be used, reproduced, revised, or retained without the express written approval of SEH.
COPYRIGHT © 2024
Short Elliott Hendrickson, Inc.
All Rights Reserved.

Submission or distribution of this drawing to meet official or regulatory requirements or for purposes in connection with the project is not to be construed as publication in derogation of any of the rights of SEH.

SEH Project MADWU 182222
Checked By IS
Drawn By DD

Project Status Issue Date
DNR SUBMITTAL 6/30/2025

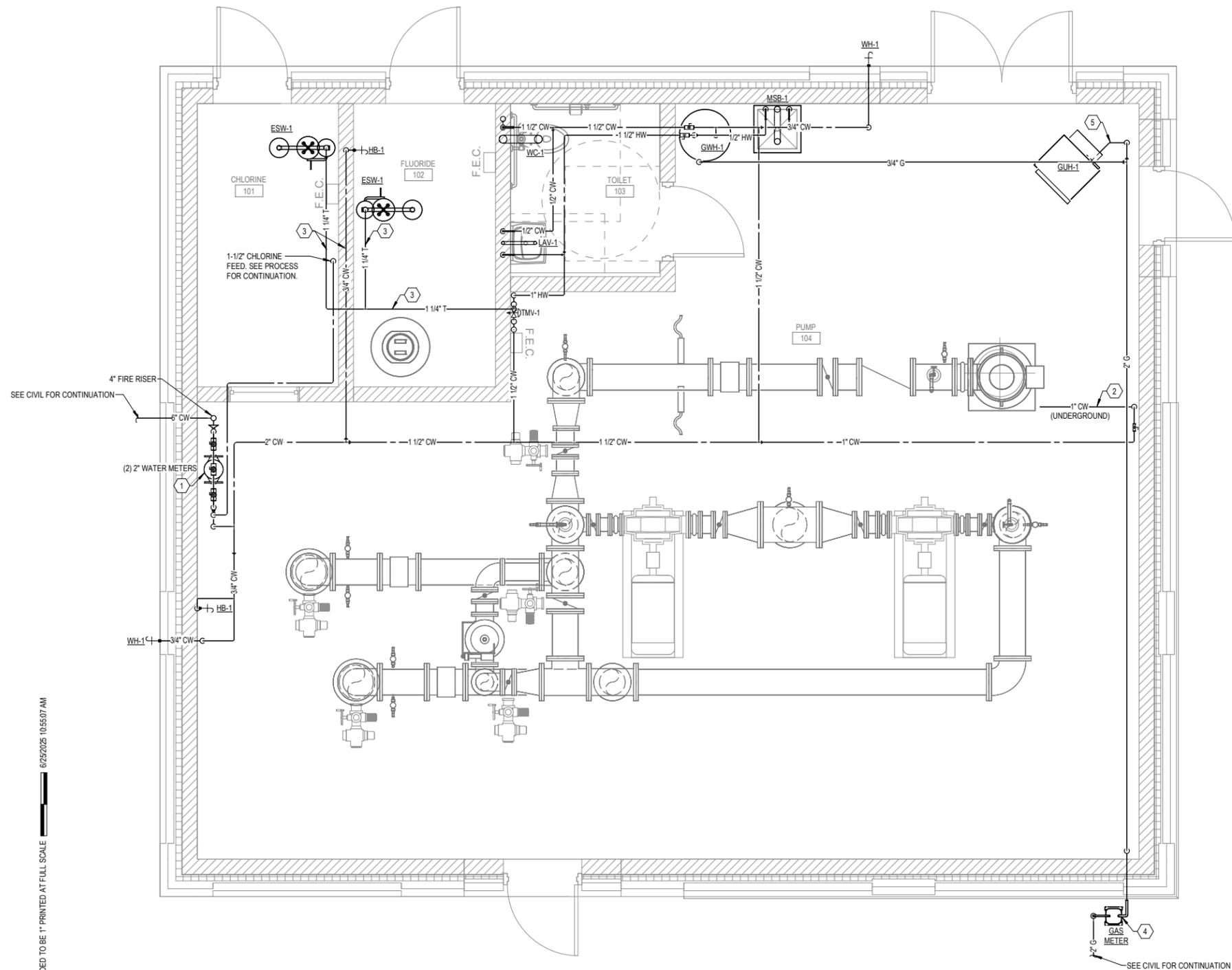
REVISION SCHEDULE		
REV. #	DESCRIPTION	DATE

WELLHOUSE PROCESS DETAILS

KEYNOTES:

1. WATER METERS PROVIDED BY OWNER.
2. TRANSITION TO 1" SCHEDULE 80 CPVC AND ROUTE UNDERFLOOR TO WELL PRE-LUBE SYSTEM.
3. ALL PIPING, HANGERS AND SUPPORTS IN CHEMICAL ROOMS TO BE CPVC OR EQUIVALENT.
4. EXISTING GAS METER AND GAS SERVICE BY GAS COMPANY. METER TO HAVE 60 CFH CAPACITY AT 2 PSIG.
5. 3/4" GAS CONNECTION TO GUH-1 WITH DRIP LEG, PRESSURE REGULATOR, SHUT-OFF VALVE, AND UNION.

Project Owner



THIS BAR IS INTENDED TO BE 1" PRINTED AT FULL SCALE 6/25/2025 10:55:07 AM

1 DOMESTIC WATER AND GAS PLAN
M102 3/8" = 1'-0"



**MADISON, WISCONSIN
UNIT WELL 12 RECONSTRUCTION**

801 S. Whitney Way
Madison WI, 53711

This drawing is an instrument of service and shall remain the property of Short Elliott Hendrickson, Inc. (SEH). This drawing, concepts and ideas contained herein shall not be used, reproduced, revised, or retained without the express written approval of SEH.
Submission or distribution of this drawing to meet official or regulatory requirements or for purposes in connection with the project is not to be construed as publication in derogation of any of the rights of SEH.
COPYRIGHT © 2024
Short Elliott Hendrickson, Inc.
All Rights Reserved.

SEH Project MADWU 182222
Checked By CAH
Drawn By KML

Project Status Issue Date
DNR SUBMITTAL 6/30/2025

REVISION SCHEDULE		
REV. #	DESCRIPTION	DATE

DOMESTIC WATER AND GAS
PLAN

**01
M102**

KEYNOTES:
 1. MAINTAIN MINIMUM SEPARATION TO WELL OF 24".

Project Owner

MADISON, WISCONSIN
UNIT WELL 12 RECONSTRUCTION

801 S. Whitney Way
 Madison WI, 53711

This drawing is an instrument of service and shall remain the property of Short Elliott Hendrickson, Inc. (SEH). This drawing, concept and ideas contained herein shall not be used, reproduced, revised, or related without the express written approval of SEH.
 Submission or distribution of this drawing to meet official or regulatory requirements or for purposes in connection with the project is not to be construed as publication in derogation of any of the rights of SEH.
 COPYRIGHT © 2024
 Short Elliott Hendrickson, Inc.
 All Rights Reserved.

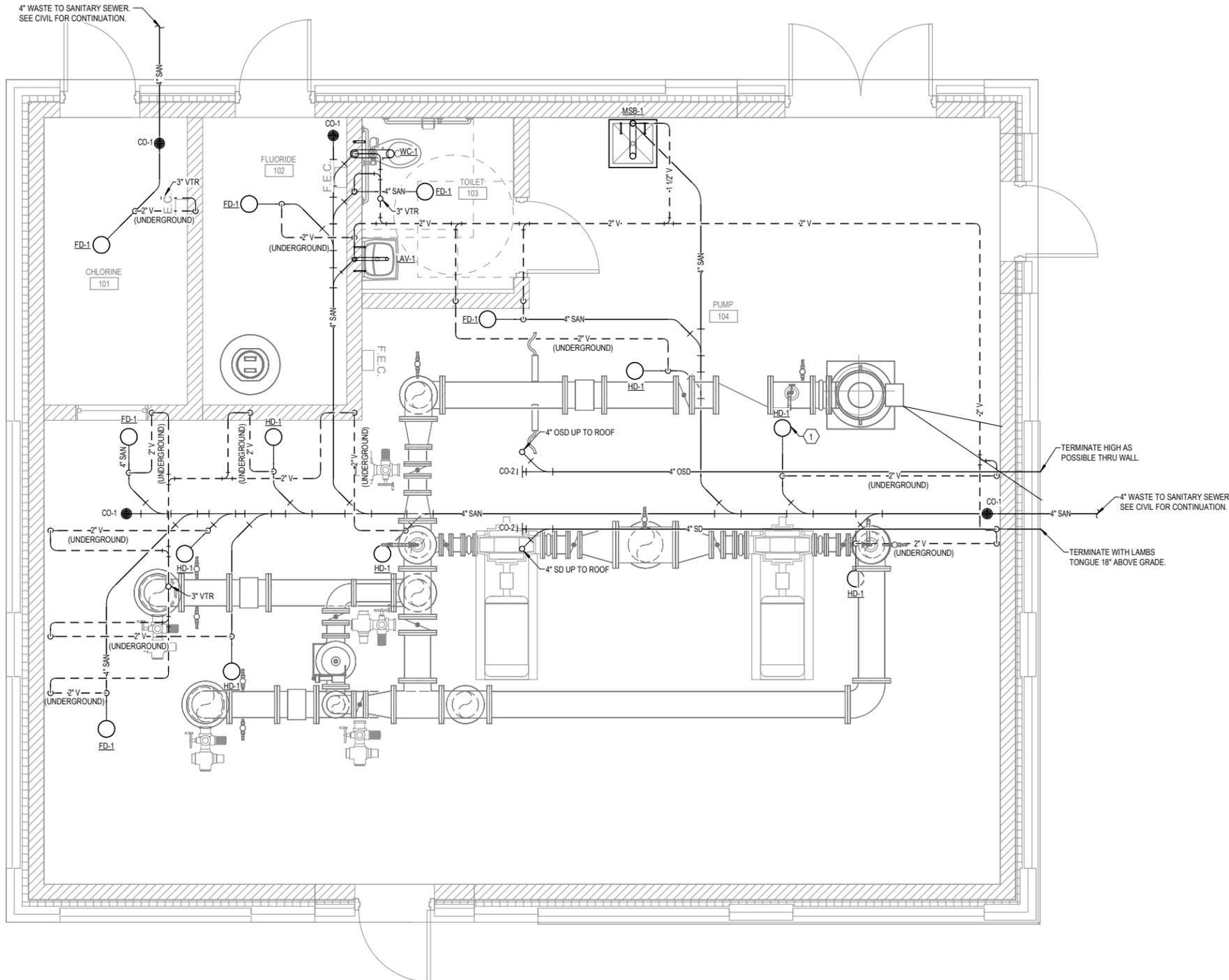
SEH Project MADWU 182222
 Checked By CAH
 Drawn By KML

Project Status Issue Date
 DNR SUBMITTAL 6/30/2025

REVISION SCHEDULE
 REV. # DESCRIPTION DATE

SANITARY WASTE AND VENT PLAN

01
 M103



THIS BAR IS INTENDED TO BE 1" PRINTED AT FULL SCALE 6/25/2025 10:55:10 AM

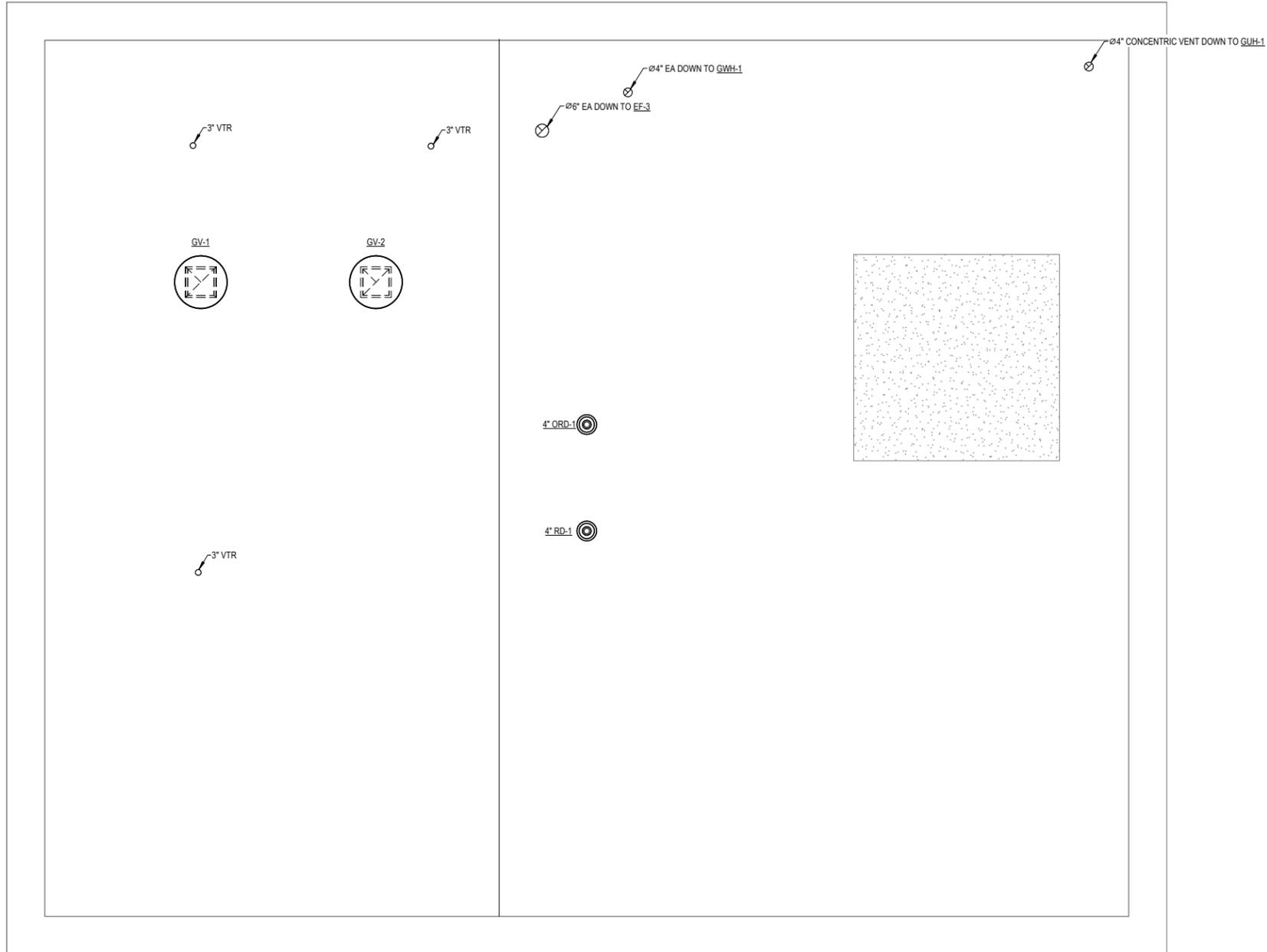
1 SANITARY WASTE AND VENT PLAN
 M103 3/8" = 1'-0"



PROJECT NORTH

KEYNOTES:

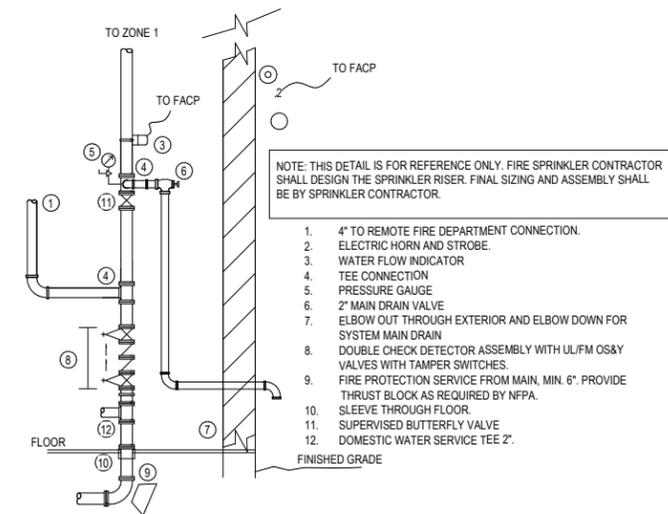
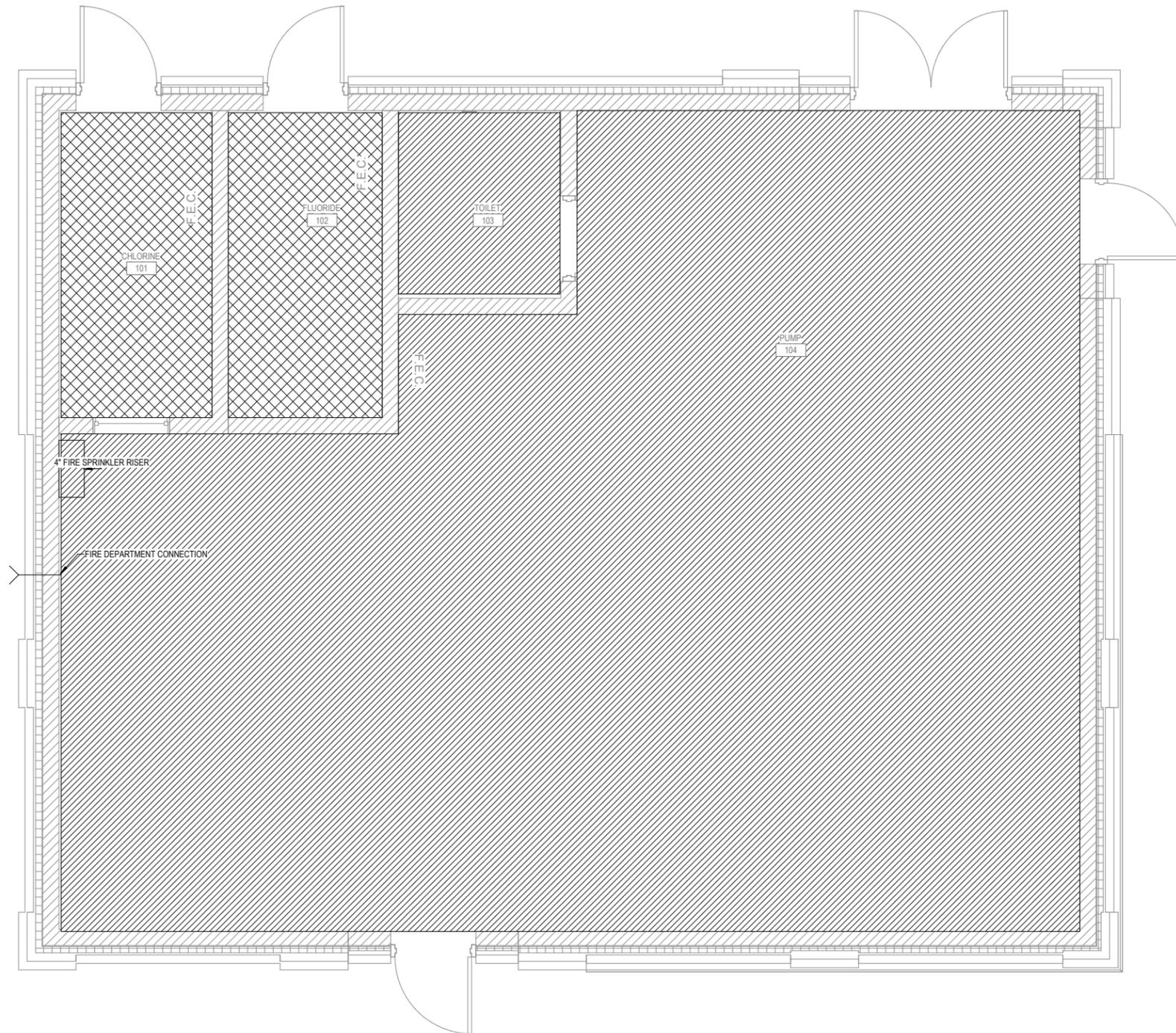
1.



THIS BAR IS INTENDED TO BE 1" PRINTED AT FULL SCALE 6/25/2025 10:55:11 AM

GENERAL NOTES:

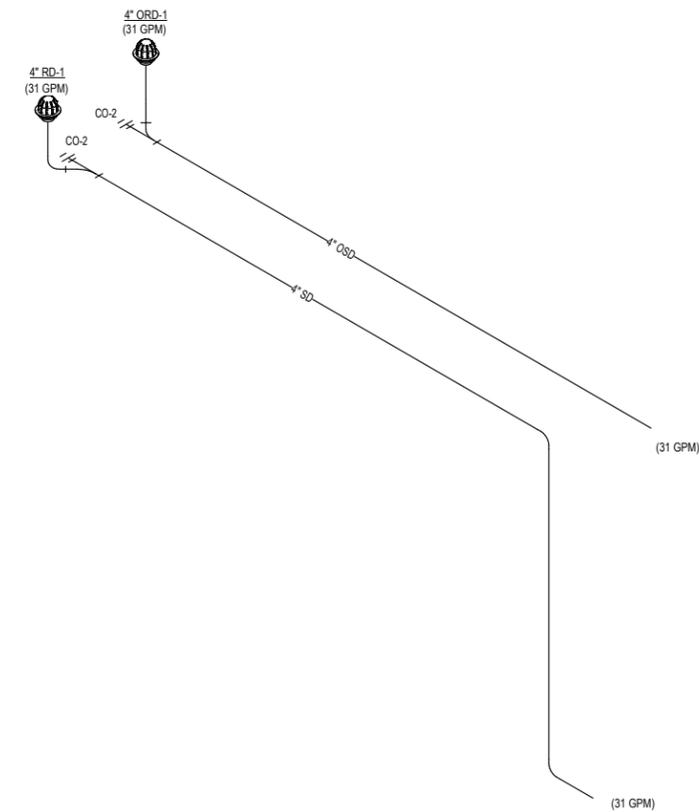
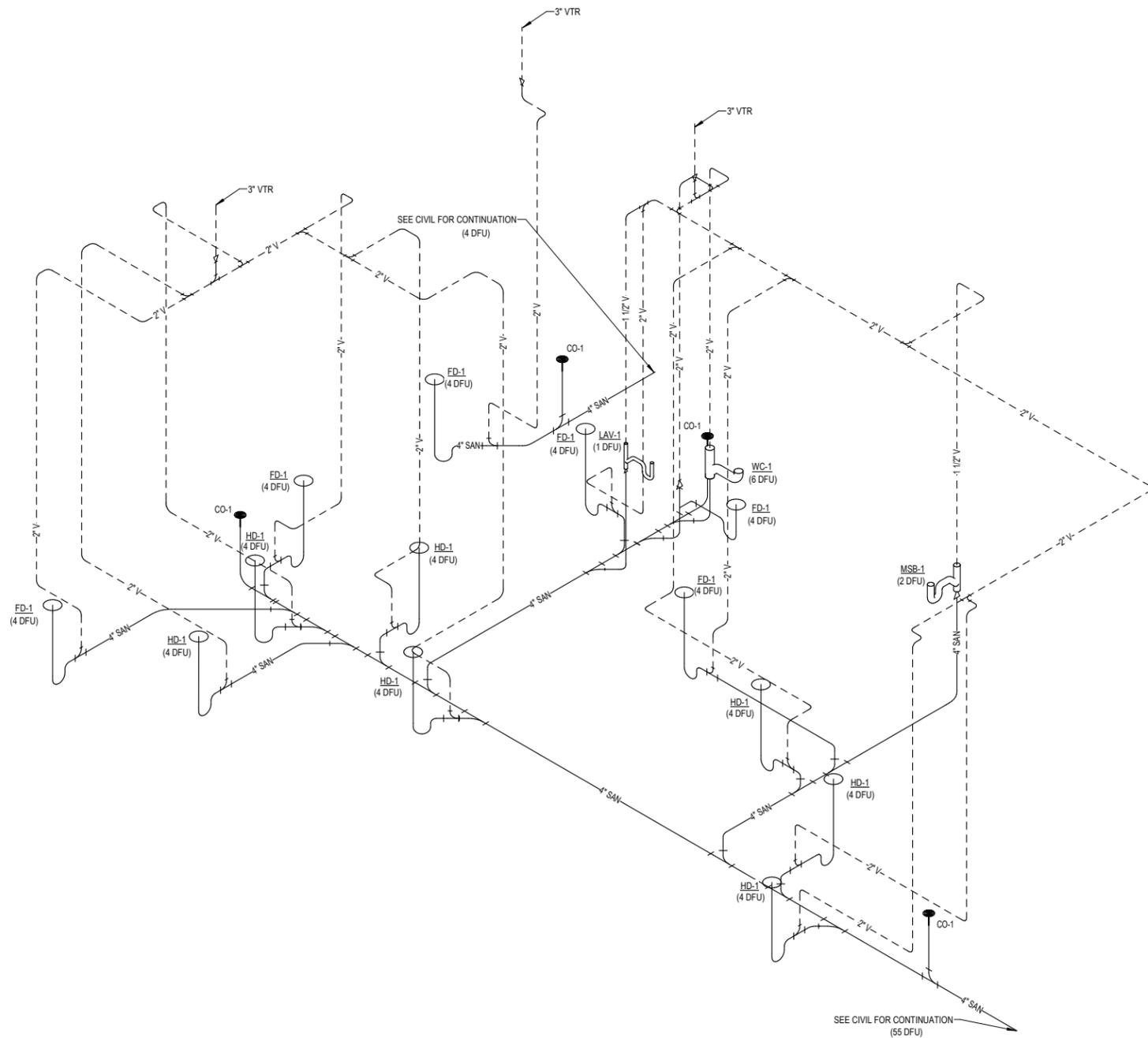
1. FIRE SPRINKLER PIPING LAYOUT AND SIZING SHALL BE DETERMINED BY HYDRAULIC CALCULATION IN ACCORDANCE WITH NFPA 13 PER SPECIFICATION 21 00 00. FINAL HYDRAULIC CALCULATIONS SHALL BE BASED ON ACTUAL FLOW TEST DATA TO BE PERFORMED BY CONTRACTOR.
2. SPRINKLER SYSTEM SHALL BE DESIGNED AS REQUIRED BY NFPA 13 FOR THE OCCUPANCIES IDENTIFIED. CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE ACTUAL NUMBER OF SPRINKLERS AND SPACING REQUIREMENTS TO PROTECT THE AREA IN ACCORDANCE WITH NFPA 13 FOR THE OCCUPANCY HAZARD CLASSIFICATION.
3. RISER TO SERVE THE ZONE SHALL BE COORDINATED WITH THE CONSTRUCTION; DO NOT OBSTRUCT CORRIDORS, DOORWAYS, ETC. INSTALL RISERS AS CLOSE AS PRACTICAL TO ROOM CORNERS, WALLS, ETC. RISER LOCATION SHOWN MAY BE REVISED BY THE CONTRACTOR AS REQUIRED.
4. THE ARCHITECTURAL BACKGROUND PROVIDED ON THIS SHEET IS FOR GENERAL REFERENCE ONLY. CONTRACTOR SHALL VERIFY ALL BACKGROUNDS WITH THE ARCHITECTURAL SHEETS. REFER TO ARCHITECTURAL DRAWINGS FOR ELEVATED WALKWAYS, STAIRWAYS, BRIDGES, ETC.
5. COORDINATE SPRINKLER INSTALLATION IN AREAS WITHOUT CEILINGS. PROVIDE ADDITIONAL SPRINKLERS AS REQUIRED TO AVOID OBSTRUCTIONS TO DISCHARGE FORMED BY DUCT WORK, LIGHT FIXTURES, STRUCTURE, WATER TREATMENT EQUIPMENT, MECHANICAL EQUIPMENT, ETC.
6. PROVIDE SPRINKLER GUARDS ON ALL SPRINKLERS LESS THAN 7'-0" AFF.
7. PROVIDE INSPECTORS TEST CONNECTION AT REMOTE POINT FOR EACH ZONE. ROUTE TEST AND DRAIN PIPES TO GRADE. PIPE SHALL TERMINATE WITH SMOOTHER BORE CORROSION RESISTANT OUTLET.
8. COORDINATE LOCATION OF FIRE DEPARTMENT CONNECTION WITH CITY OF SOUTH ST. PAUL FIRE DEPARTMENT.
9. PROVIDE BALL DRIP VALVE AT BASE OF FIRE DEPARTMENT CONNECTION.
10. INSTALL HIGH TEMPERATURE SPRINKLERS IN CLOSE PROXIMITY TO UNIT HEATERS PER NFPA 13.
11. SPRINKLER HEADS IN CHEM ROOMS SHALL BE WAX COATED AGAINST CORROSION. ALL PIPING SHALL BE FIELD PAINTED IN ACCORDANCE WITH DIVISION 9.
12. SPRINKLER MAINS SHALL BE MINIMUM SCHEDULE 10 STEEL PIPE. BRANCH PIPING SHALL BE MINIMUM SCHEDULE 40 STEEL PIPE. NO THIN WALLED PIPING WILL BE ACCEPTED. REFER TO 21 13 13 FOR DETAILS.
13. ALL PIPING PENETRATIONS SHALL BE SEALED WITH FIRE STOP.
14. AREAS WITH LAY-IN OR GYPSUM CEILINGS SHALL HAVE RECESSED OR SEMI-RECESSED SPRINKLER HEADS.
15. AREAS WITHOUT CEILINGS SHALL HAVE UPRIGHT OR PENDANT TYPE SPRINKLER HEADS.
16. ALL CHEMICAL ROOM SPACES SHALL HAVE WAX COATED UPRIGHT OR PENDANT TYPE SPRINKLER HEADS.



3 FIRE PROTECTION RISER
 NOT TO SCALE

AREA	HAZARD CLASS	MINIMUM DENSITY (GPM/SQ FT)	MINIMUM SPRINKLER HYDRAULIC DESIGN AREA (SQ FT)	HOSE STREAM DEMAND (GPM)	DURATION (MIN)	NOTES
	ORDINARY GROUP 1	0.15	1110	250	90	
	ORDINARY GROUP 2	0.20	150	250	90	

THIS BAR IS INTENDED TO BE 1" PRINTED AT FULL SCALE



THIS BAR IS INTENDED TO BE 1" PRINTED AT FULL SCALE 6/25/2025 10:55:13 AM

1 SANITARY WASTE AND VENT RISER
 M202 NOT TO SCALE

2 STORM WATER RISER
 M202 NOT TO SCALE

THIS BAR IS INTENDED TO BE 1" PRINTED AT FULL SCALE 6/25/2025 10:55:13 AM

AIR HANDLING AND CONDENSING UNIT SCHEDULE																	
EQUIPMENT NUMBER	MANUFACTURER	MODEL NUMBER	SERVES	NOMINAL TONS	CFM	FILTER	ESP (IN. W.G.)	IEER	COOLING		REFRIGERANT PIPING SIZE		MOTOR HP	ELECTRICAL		WEIGHT (LBS)	NOTES
									TOTAL MBH	SENS MBH	LIQUID	SUCTION		MICA	VIPH/CY		
AHU-1	TRANE	TWE240K4BAA	PUMP ROOM	20	7000	MERV 13	1.5	13.2	242	180	5/8"	1-3/8"	5	13	460 / 60 / 3	904	1, 2, 3, 4, 5
ACCU-1		TTA240K4CAA		-	-	-	-	-	-	-	-	-	54	460 / 60 / 3	802		

NOTES:

- HORIZONTAL ORIENTATION INDOOR UNIT
- WALL MOUNTED DIGITAL PROGRAMMABLE THERMOSTAT
- R-454B REFRIGERANT
- HAIL GUARD
- OUTDOOR UNIT MOUNTED ON CONCRETE PAD

DEHUMIDIFIERS SCHEDULE									
EQUIPMENT NUMBER	MANUFACTURER	MODEL NUMBER	CFM	MOISTURE REMOVAL (LB/DAY)	ELECTRICAL		NOTES		
					AMPS	VIPH/CY			
D-1	QUEST	H-E DRY 195	540	192	12	115/60/1	1, 2		

NOTES:

- MERV 8 FILTER
- UNIT MOUNTED HUMIDISTAT

ELECTRIC HEATER SCHEDULE											
EQUIPMENT NUMBER	MANUFACTURER	MODEL NUMBER	SERVES	FAN			ELECTRIC HEATER		ELECTRICAL		NOTES
				CFM	HP	RPM	KW	AIR TEMP. RISE (F)	VIPH/CY	FLA	
EUH-1	QMARK	QWD	CHLORINE ROOM	2400	-	-	15	21	460/3/60	20	1, 2, 3, 4
EUH-2	QMARK	QWD	FLUORIDE ROOM	700	-	-	15	23	460/3/60	6	1, 2, 3, 4
EW-1	QMARK	CWH120ZDSAF	TOILET	65	-	-	1.5	-	208/1/60	7.3	5, 6
-	-	-	-	-	-	-	-	-	-	-	-

NOTES:

- FACTORY DISCONNECT
- FACTORY WALL MOUNTED THERMOSTAT
- SWIVEL BRACKET
- WASHDOWN CONSTRUCTION
- RECESS WALL MOUNT
- INTEGRAL THERMOSTAT

FAN SCHEDULE													
EQUIPMENT NUMBER	MANUFACTURER	MODEL NUMBER	TYPE	SERVES	CFM	E.S.P. (IN. W.G.)	SONES	MOTOR				NOTES	
								WATTS	HP	RPM	VIPH/CY		
EF-1	GREENHECK	SQ-100-A	INLINE	CHLORINE ROOM	900	0.25	7.1	-	1/4	1283	115/60/1	1, 2, 3, 4	
EF-2	GREENHECK	SQ-65-D	INLINE	FLUORIDE ROOM	100	0.25	3.5	-	1/30	1534	115/60/1	1, 2, 3, 4	
EF-3	GREENHECK	SP-A190	CEILING	TOILET	140	0.25	1.5	33	-	1254	115/60/1	4, 5	

NOTES:

- FACTORY MOUNTED AND WIRED DISCONNECT
- CORROSION RESISTANT CONSTRUCTION
- HERESITE COATED
- SPEED CONTROLLER
- ROOF CURB AND ROOF CAP

DIFFUSERS, REGISTERS, GRILLES									
S = SUPPLY GR = RETURN GE = EXHAUST						REMARKS			
TAG	MANUFACTURER	MODEL No.	TYPE	DAMPER	MOUNTING POSITION		FACE IN INCHES		
SG-1	TITUS	300FL	SUPPLY	NO	SIDEWALL	SEE PLAN	RECTANGULAR REGISTER, STEEL, WHITE ENAMEL, DOUBLE DEFLECTION 3/4" ADJUSTABLE LOUVERS, FRONT BLADES TO BE HORIZONTAL.		

NOTES:

- NECK SIZE SHALL MATCH DUCT CONNECTION SIZE
- VERIFY MOUNTING TYPE WITH CEILING TYPE
- DAMPER SHALL BE MOUNTED IN DUCT TAKE-OFF

GAS FIRED UNIT HEATER SCHEDULE													
EQUIPMENT NUMBER	MANUFACTURER	MODEL NUMBER	SERVES	CFM	INPUT (BTU)	OUTPUT (BTU)	GAS CFH	GAS INLET PRESSURE	ELECTRICAL		NOTES		
									HP	VIPH/CY			
GUH-1	REZTOR	LDAS60	PUMP ROOM	769	60	49.8	60	2 PSIG	3/100	115/60/1	ALL		

NOTES:

- WALL MOUNTED THERMOSTAT
- FACTORY MOUNTED AND WIRED DISCONNECT
- GAS PRESSURE REGULATOR
- POWER VENTED, SEPARATED COMBUSTION
- STAINLESS STEEL HEAT EXCHANGER AND BURNER
- MANUFACTURER'S ROOF CONCENTRIC VENT KIT

GRAVITY VENTS														
UNIT NO.	LOCATION	SERVING	MODEL NO.	TYPE	CFM	S.P. (IN. W.G.)	WIDTH (INCHES)	LENGTH (INCHES)	WIDTH (INCHES)	LENGTH (INCHES)	CURB HEIGHT (INCHES)	OVERALL HEIGHT (INCHES)	ACCESSORIES	REMARKS
GV-1	ROOF	CHLORINE ROOM	FGR-1414	EXHAUST	900	0.06	14	14	16-1/2	16-1/2		8	22 ROOF CURB	
GV-2	ROOF	FLUORIDE ROOM	FGR-1212	EXHAUST	100	0.02	12	12	14-1/2	14-1/2		8	22 ROOF CURB	

NOTES:

-

LOUVER SCHEDULE													
EQUIPMENT NUMBER	MANUFACTURER	MODEL NUMBER	SERVES	CFM	WIDTH (IN)	HEIGHT (IN)	NET FREE AREA (FT²)	VELOCITY (FPM)	MATERIAL	SCREEN	NOTES		
WL-1	RUSKIN	ELF6375DX	CHLORINE ROOM	900	36	16	2	450	ALUMINUM	INSECT	1		
WL-2	RUSKIN	ELF6375DX	FLUORIDE ROOM	100	36	16	2	50	ALUMINUM	INSECT	1		

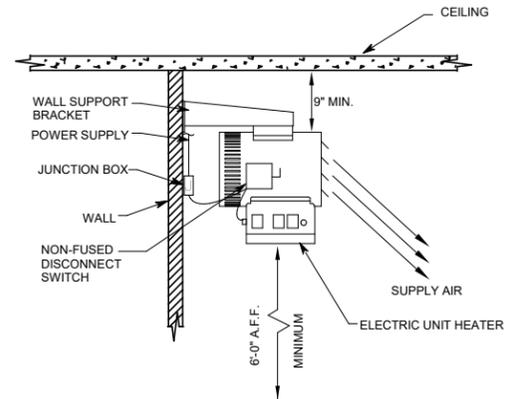
NOTES:

- KYNAR FINISH. COLOR SELECTED BY ARCHITECT.

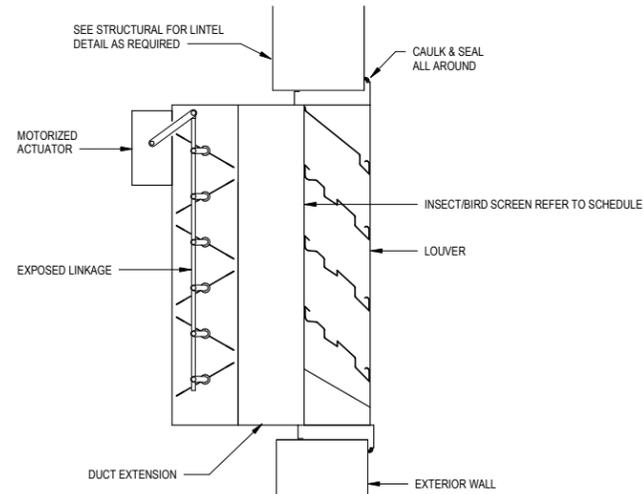
MOTORIZED DAMPER SCHEDULE											
EQUIPMENT TAG	MANUFACTURER	MODEL NUMBER	ROOM NUMBER	SERVING	WIDTH	HEIGHT	CFM	POSITION	NOTES		
MD-1	RUSKIN	CD50	CHLORINE ROOM	EF-1	14	14	900	N.C.	1, 2, 3		
MD-2	RUSKIN	CD50	CHLORINE ROOM	WL-1	36	16	900	N.C.	1, 2, 3		
MD-3	RUSKIN	CD50	FLUORIDE ROOM	EF-2	9	9	100	N.C.	1, 2, 3		
MD-4	RUSKIN	CD50	FLUORIDE ROOM	WL-2	36	16	100	N.C.	1, 2, 4		

NOTES:

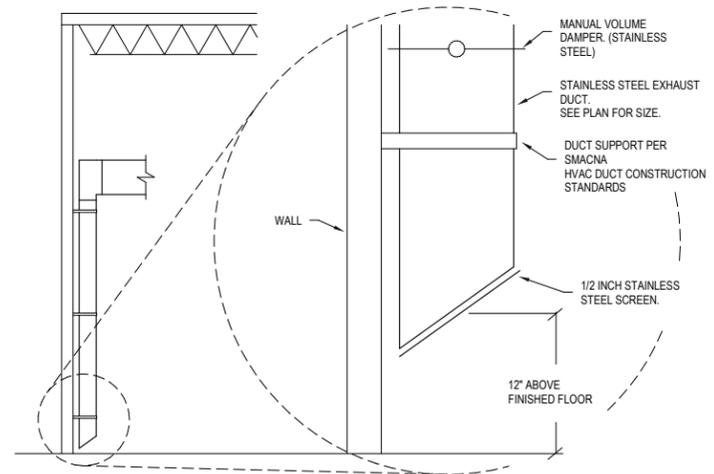
- ALUMINUM, LOW LEAKAGE, OPPOSED BLADE TYPE.
- 120 V NEMA 4X ACTUATOR, POWER OPEN - SPRING RETURN.
- PROVIDE BAKED ENAMEL COATING FOR CORROSION PROTECTION.



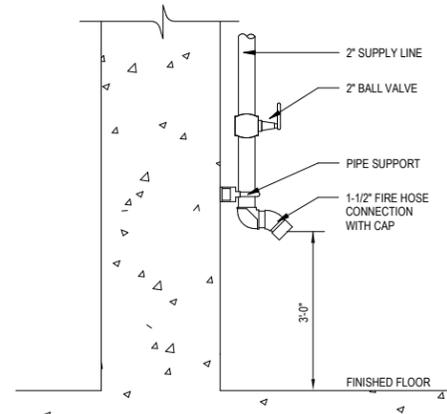
1 WASHDOWN ELECTRIC UNIT HEATER
 M303 NOT TO SCALE



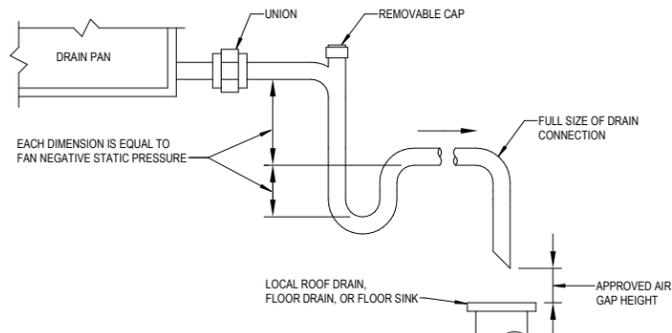
2 LOUVER WITH MOTORIZED DAMPER
 M303 NOT TO SCALE



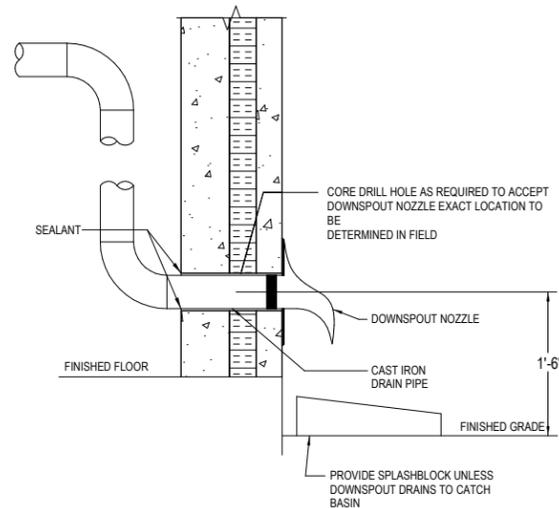
3 EXHAUST DUCT DETAIL
 M303 NOT TO SCALE



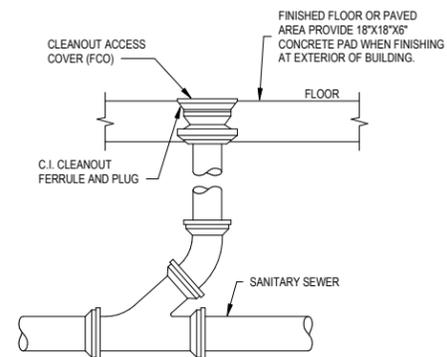
4 1-1/2" HOSE CONNECTION DETAIL
 M303 NOT TO SCALE



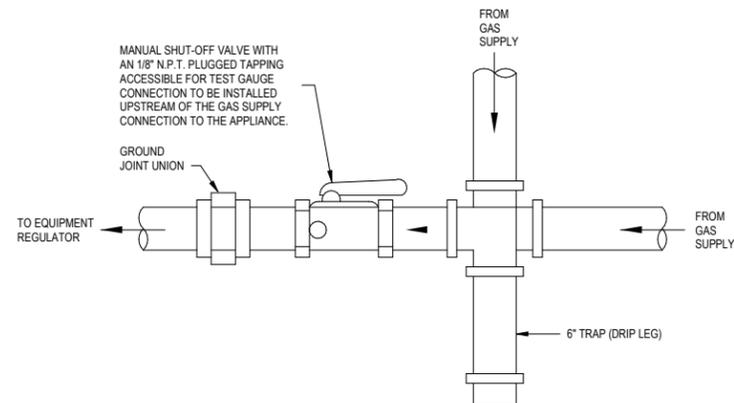
5 CONDENSATE DRAIN
 M303 NOT TO SCALE



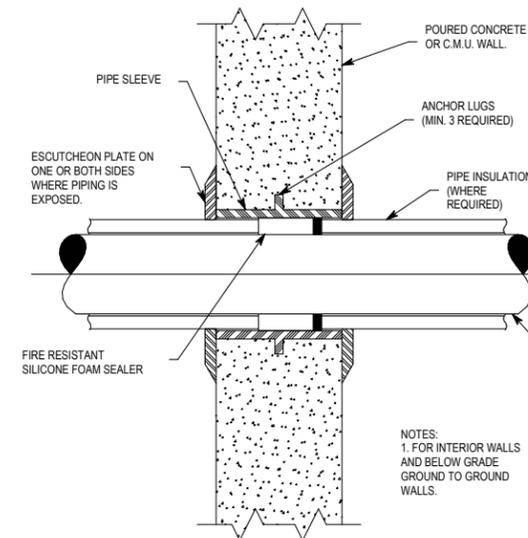
6 OVERFLOW STORM DRAIN TERMINATION
 M303 NOT TO SCALE



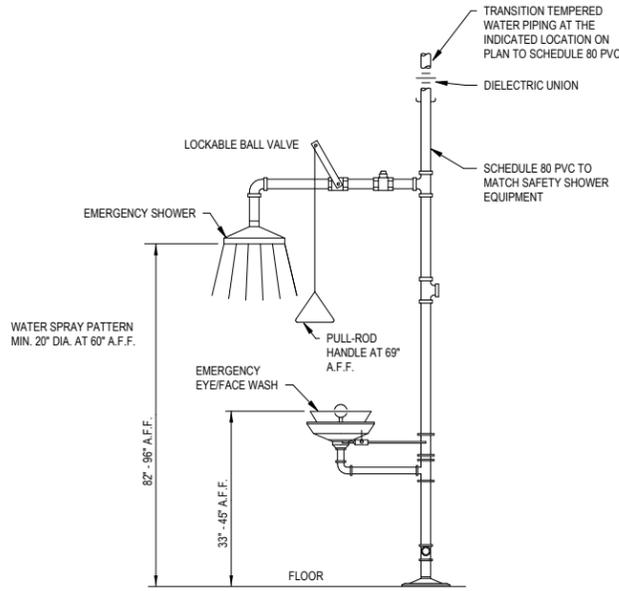
7 CLEANOUT
 M303 NOT TO SCALE



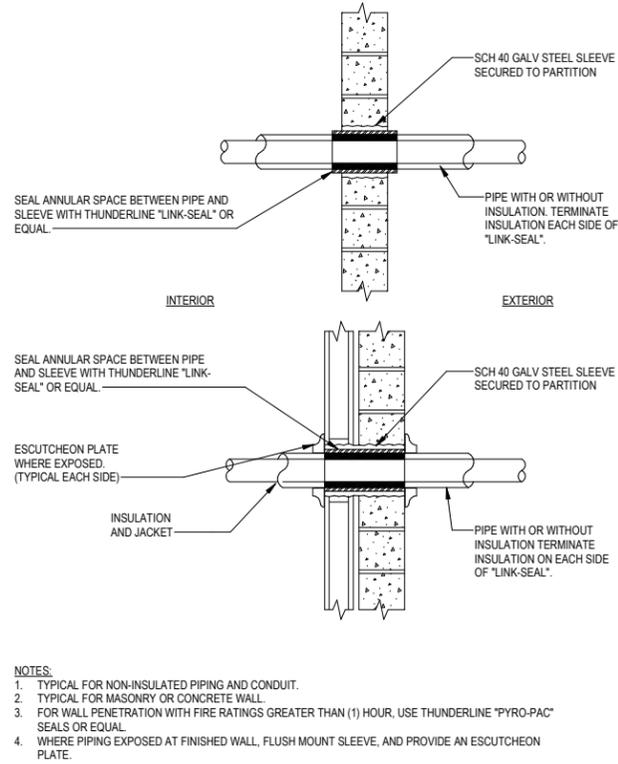
8 GAS CONNECTION TO EQUIPMENT
 M303 NOT TO SCALE



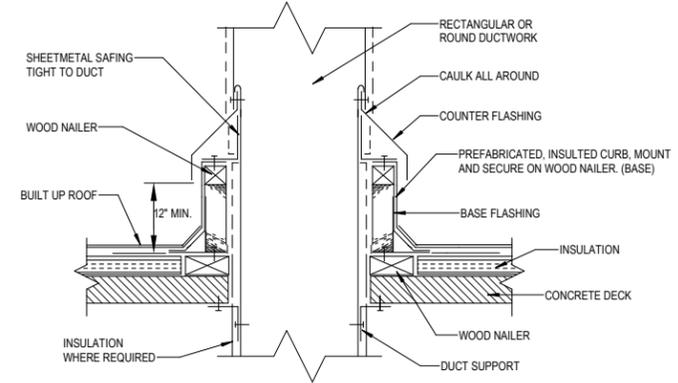
9 PIPE SLEEVE THROUGH WALL
 M303 NOT TO SCALE



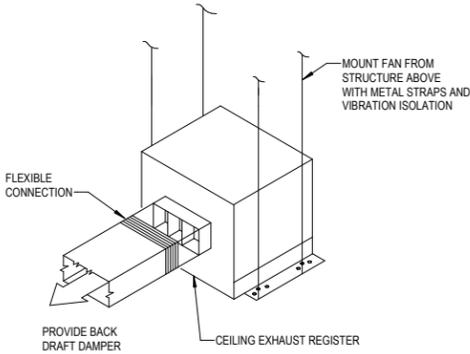
1 SAFETY SHOWER AND EYE WASH
 M304 NOT TO SCALE



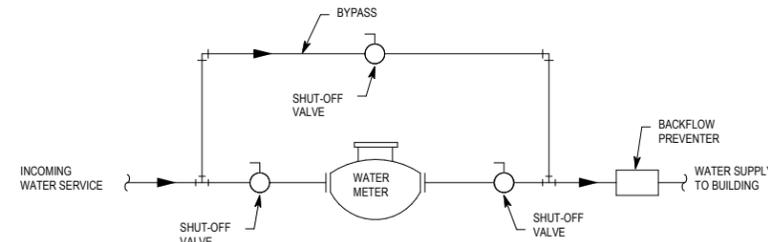
2 PIPE PENETRATION THRU EXTERIOR WALLS
 M304 NOT TO SCALE



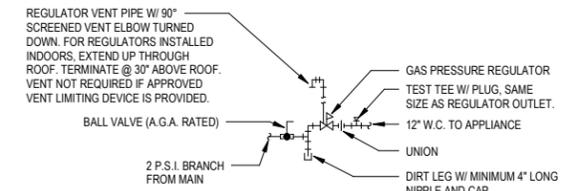
3 DUCT PENETRATION THROUGH ROOF
 M304 NOT TO SCALE



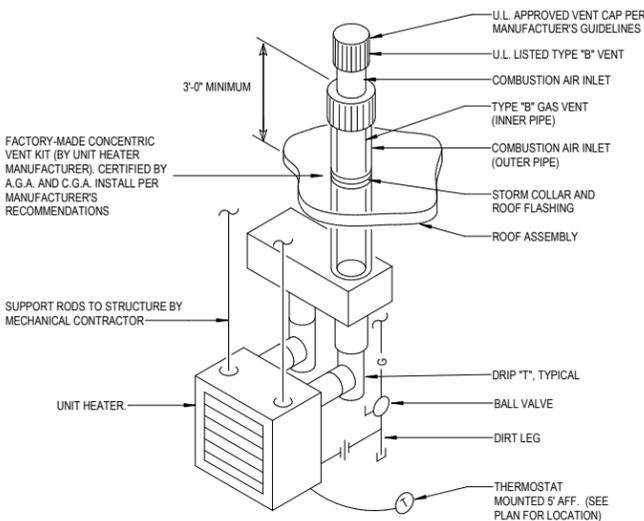
4 CEILING EXHAUST FAN
 M304 NOT TO SCALE



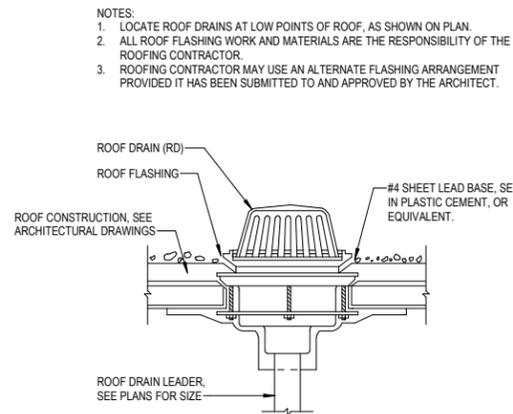
5 WATER METER INSTALLATION
 M304 NOT TO SCALE



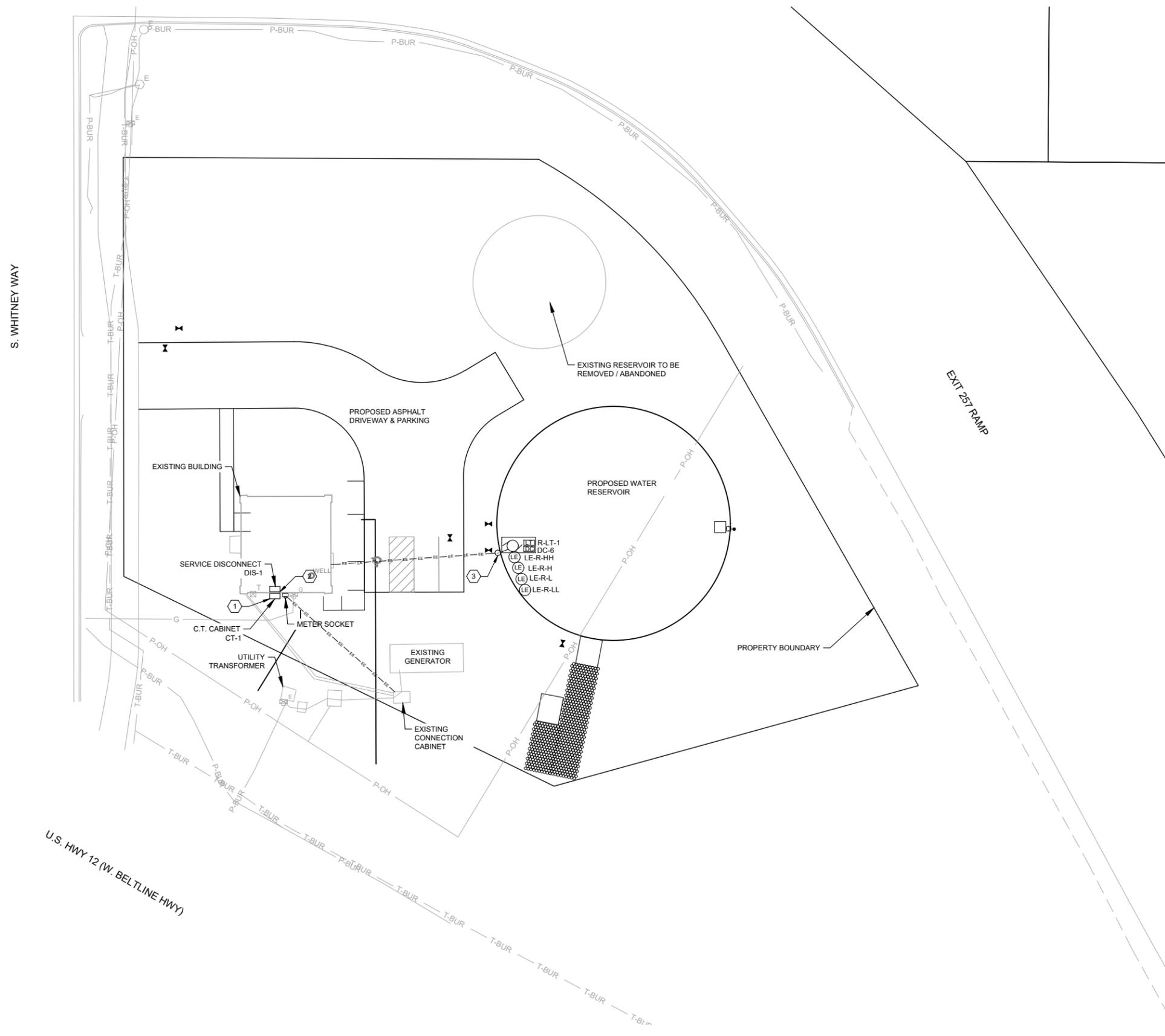
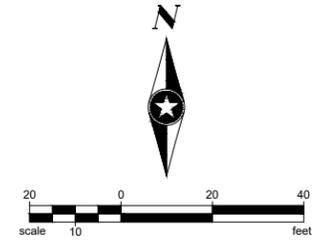
6 GAS PRESSURE REGULATOR ASSEMBLY
 M304 NOT TO SCALE



7 GAS FIRED UNIT HEATER
 M304 NOT TO SCALE



8 ROOF DRAIN
 M304 NOT TO SCALE



SITE POWER GENERAL NOTES

- A. ALL CONDUIT SHOWN IS APPROXIMATE. IT IS THE ELECTRICAL CONTRACTOR'S RESPONSIBILITY TO COORDINATE WITH ALL OTHER TRADES AND UTILITIES TO AVOID CONFLICTS WITH NEW WORK AND EXISTING CONDITIONS PRIOR TO INSTALLATION.
- B. ALL HANDHOLE LOCATIONS AND QUANTITIES ARE APPROXIMATE. ELECTRICAL CONTRACTOR SHALL VERIFY EXACT HANDHOLE LOCATIONS PRIOR TO INSTALLATION. ELECTRICAL CONTRACTOR SHALL DETERMINE IF ADDITIONAL HANDHOLES ARE REQUIRED DUE TO SITE CONDITIONS OR PULLING REQUIREMENTS. PROVIDE AND INSTALL IF ADDITIONAL HANDHOLES ARE INDEED REQUIRED.
- C. COORDINATE ALL ELECTRICAL SERVICE REQUIREMENTS INCLUDING, BUT NOT LIMITED TO, UTILITY TRANSFORMER, PRIMARY AND SECONDARY CONDUIT AND WIRING, AND METERING WITH ELECTRICAL UTILITY. SEE SPECIFICATION SECTION 26 00 00 FOR MORE INFORMATION.
- D. SEE ONE-LINE DIAGRAMS FOR CONDUIT/WIRE REQUIREMENTS. SEE SHEETS E501 AND E502.
- E. SEE DETAIL 5/E801 FOR DIRECT BURIED CONDUIT DETAILS.

KEYNOTES

- 1. UTILITY TO PROVIDE CONNECTIONS BETWEEN EXISTING CONNECTION CABINET AND NEW C.T. CABINET CT-1.
- 2. PROVIDE CONNECTION BETWEEN C.T. CABINET CT-1 AND SERVICE DISCONNECT DIS-1.
- 3. EMBED CONDUIT IN TANK PLASTER COATING AND RUN UP TANK. SEE PROCESS SHEETS XXX FOR REFERENCE.

Project Owner

MADISON, WISCONSIN
UNIT WELL 12 RECONSTRUCTION
 801 S. Whitney Way
 Madison, WI 53711

This drawing is an instrument of service and shall remain the property of Short Elliot Hendrickson, Inc. (SEH). This drawing, concepts and ideas contained herein shall not be used, reproduced, revised, or retained without the express written approval of SEH.
 Submission or distribution of this drawing to meet official or regulatory requirements or for purposes in connection with the project is not to be construed as publication or derogation of any of the rights of SEH.
 COPYRIGHT © 2024
 Short Elliot Hendrickson, Inc.
 All Rights Reserved

SEH Project MADWU 182222
 Checked By JAM
 Drawn By DDH

Project Status Issue Date
 DNR SUBMITTAL 6/30/2025

Save: 6/30/2025 3:41 PM Path: 6/30/2025 3:45 PM X:\KOMM\MADWU\1822225-final\sgm\51-drawings\5-Elect\E101 - Electrical Site Plan.dwg

1
ELECTRICAL - SITE PLAN
 SCALE: 1"=20'

ELECTRICAL SITE PLAN

E101

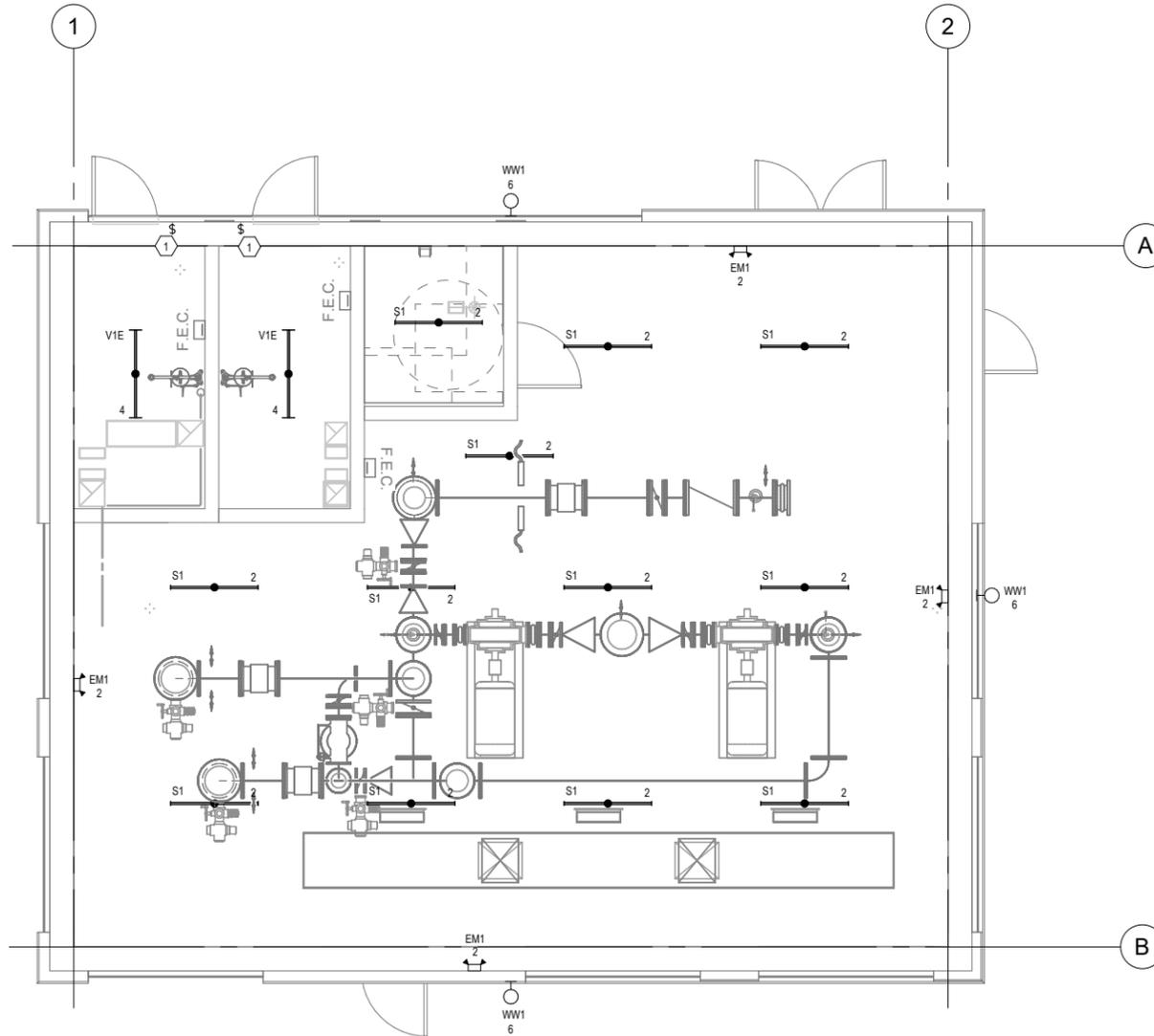
LIGHTING GENERAL NOTES

- A. ALL RECESSED LIGHTING FIXTURES IN LAY-IN CEILING GRIDS SHALL BE INSTALLED WITH A 6'-0" LONG FLEXIBLE METAL CONDUIT.
- B. ALL MOUNTING HEIGHTS ARE FOR LIGHTING FIXTURES ARE TO THE BOTTOM OF THE FIXTURE UNLESS OTHERWISE NOTED.
- C. REFER TO SPECIFICATION SECTION 26 05 19 FOR MINIMUM CONDUCTOR SIZE ADJUSTMENTS FOR VOLTAGE DROP.
- D. CIRCUIT NUMBERS SHOWN AT LIGHT FIXTURE LOCATIONS CORRESPOND TO PANELBOARD BREAKERS. SEE PANELBOARD SCHEDULES ON SHEET E701.
- E. ALL EMERGENCY LIGHT FIXTURES SHALL BE FED FROM AN UNSWITCHED LEG OF ROOM LIGHTING CIRCUIT.
- F. WIRE FOR CIRCUIT CONDUCTORS NOT SHOWN. PROVIDE PROPER NUMBER OF CONDUCTORS TO ACHIEVE CIRCUIT AND SWITCHING CONNECTIONS SHOWN.
- G. SEE LIGHT FIXTURE SCHEDULE ON THIS SHEET.

KEYNOTES ◻

- 1. INTER-LOCK EXHAUST FAN WITH ROOM LIGHTING. REFER TO SCHEMATIC 4/E601 FOR ADDITIONAL INFORMATION.

LIGHTING FIXTURE SCHEDULE								
TYPE	DESCRIPTION	MOUNTING	VOLT	WATT	MFR	CATALOG SERIES	NOTE	Count
EM1	EMERGENCY LIGHT, THERMOPLASTIC (2) 1.0W LED HEADS (DAMP LOCATION)	WALL	120 V	2 W	LITHONIA	EL2C SD		4
S1	4' LED STRIP, FROSTED ROUND DROP LENS (ELEC RM/ GENERAL AREAS)	Fixture may be surface mounted (with or without ZSPRG hanger), pendant or stem mounted with appropriate mounting options. Six-point aligner locks in place for easy continuous row mounting.	120 V	30 W		HZL1D L48 3000LM FST MVOLT 40K 80CRI WH		12
V1E	4' LED VAPORPROOF WEM BATT, ACRYLIC LINEAL RIBBED FROSTED LENS	Surface/Suspended	120 V	18 W	LITHONIA	FEM L48 3000LM IMAFI MD MVOLT 40K 80CRI E10WCP		2
WW1	EXTERIOR LED W/ 90 DEG CUTOFF, PHOTOCELL (MAN DOORS/ 7.5' OR 8' MOUNTING)	WALL	120 V	28 W	HOLOPHANE	HLWPC2 P10 40K AS TFTM BZSDP PE		3



1 LIGHTING PLAN
E201 1/4" = 1'-0"



THIS BAR IS INTENDED TO BE 1" PRINTED AT FULL SCALE 6/30/2025 3:46:18 PM

**MADISON, WISCONSIN
UNIT WELL 12 RECONSTRUCTION**

801 S. Whitney Way
Madison WI, 53711

This drawing is an instrument of service and shall remain the property of Short Elliott Hendrickson, Inc. (SEH). This drawing, concepts and ideas contained herein shall not be used, reproduced, revised, or retained without the express written approval of SEH. Submission or distribution of this drawing to meet official or regulatory requirements or for purposes in connection with the project is not to be construed as publication in derogation of any of the rights of SEH. COPYRIGHT © 2024 Short Elliott Hendrickson, Inc. All Rights Reserved.

SEH Project 182222
Checked By JAM
Drawn By NDS

Project Status Issue Date
DNR SUBMITTAL 06/30/2025

REVISION SCHEDULE
REV. # DESCRIPTION DATE

LIGHTING PLAN

**01
E201**

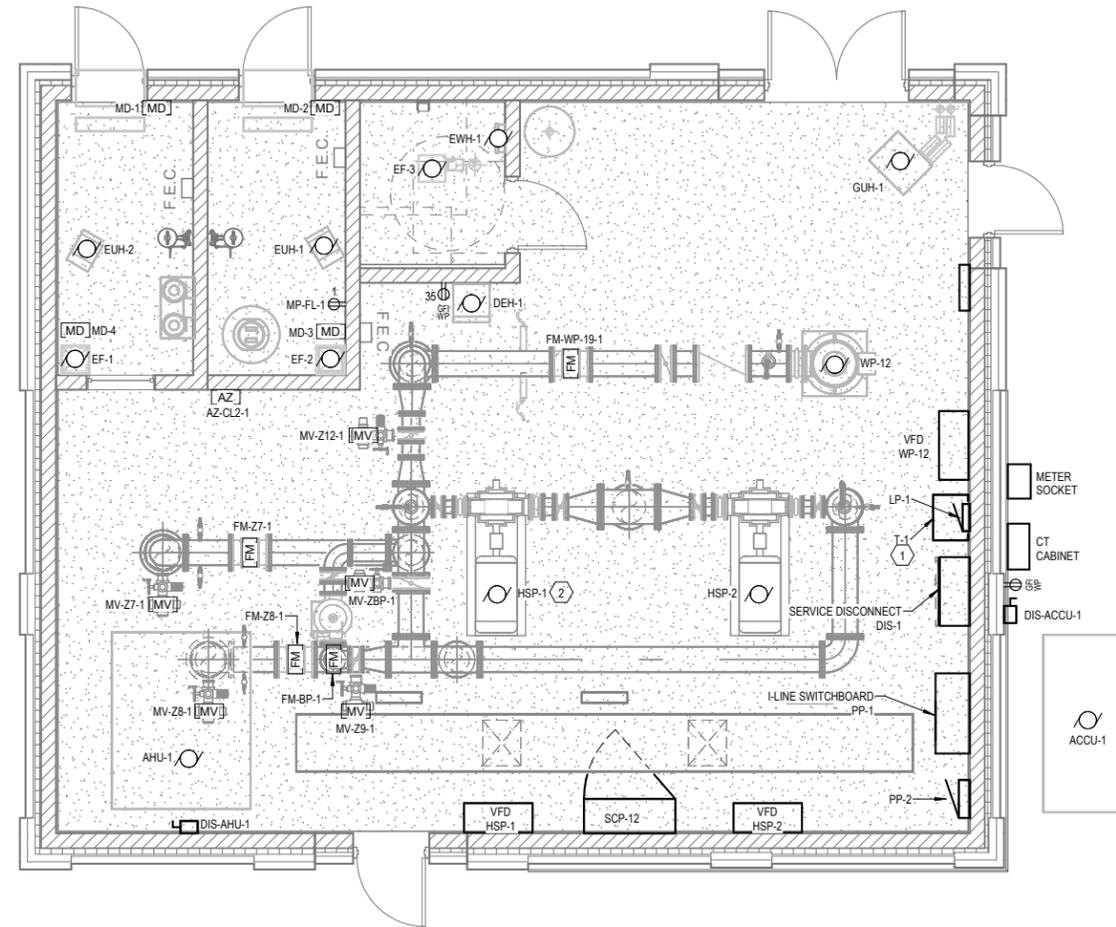
WW1

POWER GENERAL NOTES

- A. PROVIDE HOUSE KEEPING PADS FOR ALL FLOOR AND GRADE MOUNTED ELECTRICAL EQUIPMENT. MINIMUM REQUIREMENTS: 4" HIGH, 4" WIDER AND LONGER THAN EQUIPMENT TO BE PLACED ON IT, 4% AIR ENTRAINED, POLYFIBER REINFORCED CONCRETE.
- B. REFER TO SPECIFICATION SECTION 26 05 19 FOR MINIMUM CONDUCTOR SIZE ADJUSTMENTS FOR VOLTAGE DROP.
- C. CIRCUIT NUMBERS SHOWN AT GENERAL RECEPTACLE, ELECTRICAL EQUIPMENT, AND MECHANICAL EQUIPMENT LOCATIONS CORRESPOND TO PANELBOARD BREAKERS. SEE PANELBOARD SCHEDULES ON SHEET E701.
- D. SEE ONE-LINE DIAGRAMS FOR CONDUIT AND WIRING REQUIREMENTS. SEE SHEETS E501 AND E502.
- E. SEE PANELBOARD SCHEDULES ON SHEET E701 FOR CONDUIT AND WIRING REQUIREMENTS.
- F. SEE MECHANICAL PLANS AND SCHEDULES FOR ALL HVAC AND PLUMBING POWER REQUIREMENTS AND DETAILS.

KEYNOTES

- 1. WALL MOUNT TRANSFORMER ABOVE LP-1.
- 2. SALVAGED PUMP.



THIS BAR IS INTENDED TO BE 1" PRINTED AT FULL SCALE 6/30/2025 3:46:20 PM

1
E301 **POWER PLAN**
1/4" = 1'-0"



Project Owner

MADISON, WISCONSIN
UNIT WELL 12 RECONSTRUCTION
801 S. Whitney Way
Madison, WI, 53711

This drawing is an instrument of service and shall remain the property of Short Elliott Hendrickson, Inc. (SEH). This drawing, concepts and ideas contained herein shall not be used, reproduced, revised, or retained without the express written approval of SEH. Submission or distribution of this drawing to meet official or regulatory requirements or for purposes in connection with the project is not to be construed as publication in derogation of any of the rights of SEH.

SEH Project 182222
Checked By JAM
Drawn By NDS

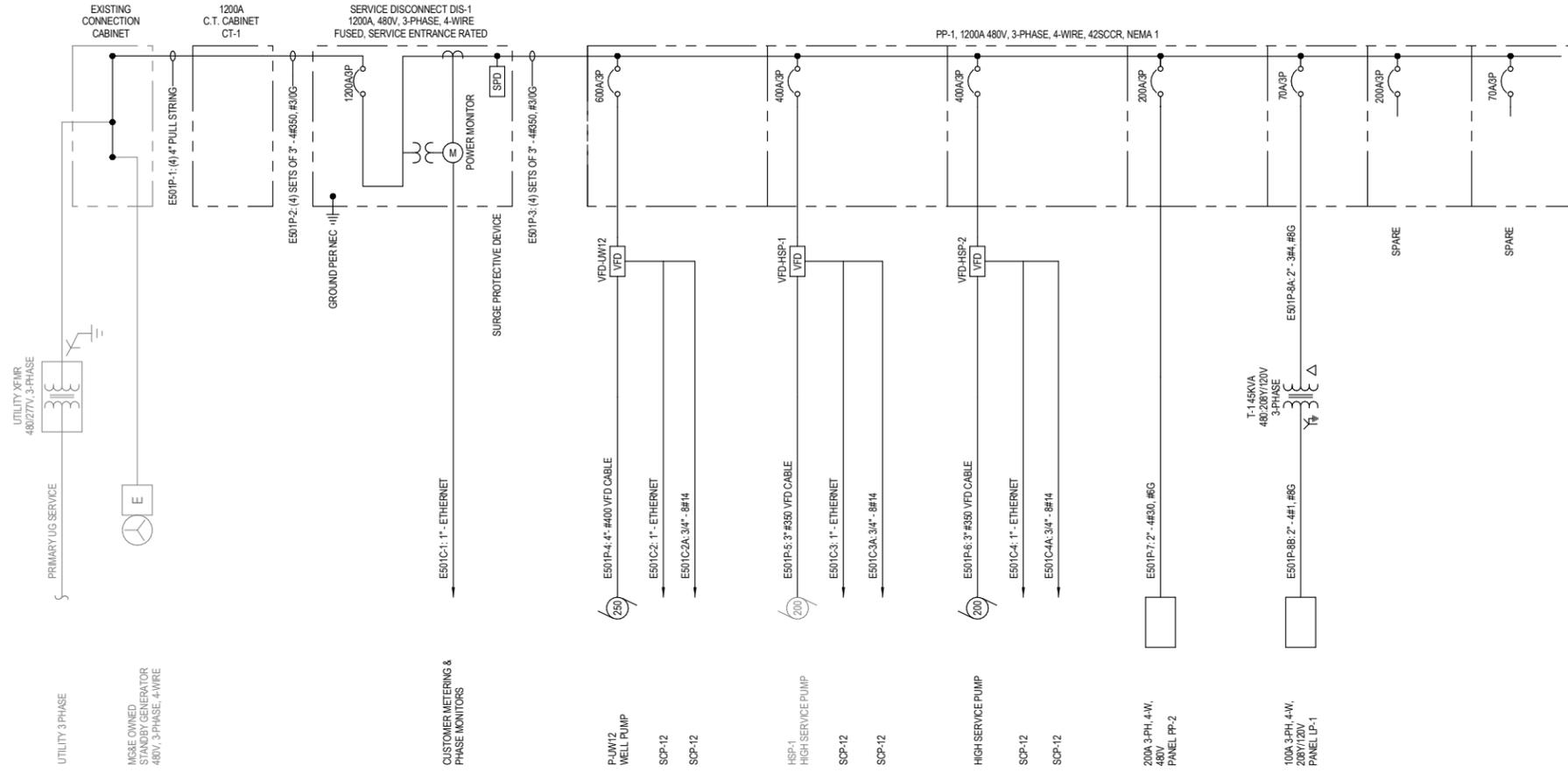
Project Status Issue Date
DNR SUBMITTAL 06/30/2025

REVISION SCHEDULE		
REV. #	DESCRIPTION	DATE

POWER AND INSTRUMENTATION PLAN

01
E301

1
E501 **POWER 1-LINE**
NOT TO SCALE



- KEYNOTES
1. A
 2. B



Project Owner

MADISON, WISCONSIN
UNIT WELL 12 RECONSTRUCTION

801 S. Whitney Way
Madison WI, 53711

This drawing is an instrument of service and shall remain the property of Short Elliott Hendrickson, Inc. (SEH). This drawing, concepts and ideas contained herein shall not be used, reproduced, revised, or retained without the express written approval of SEH.

Submission or distribution of this drawing to meet official or regulatory requirements or for purposes in connection with the project is not to be construed as publication in derogation of any of the rights of SEH.

SEH Project 182222
Checked By JAM
Drawn By NDS

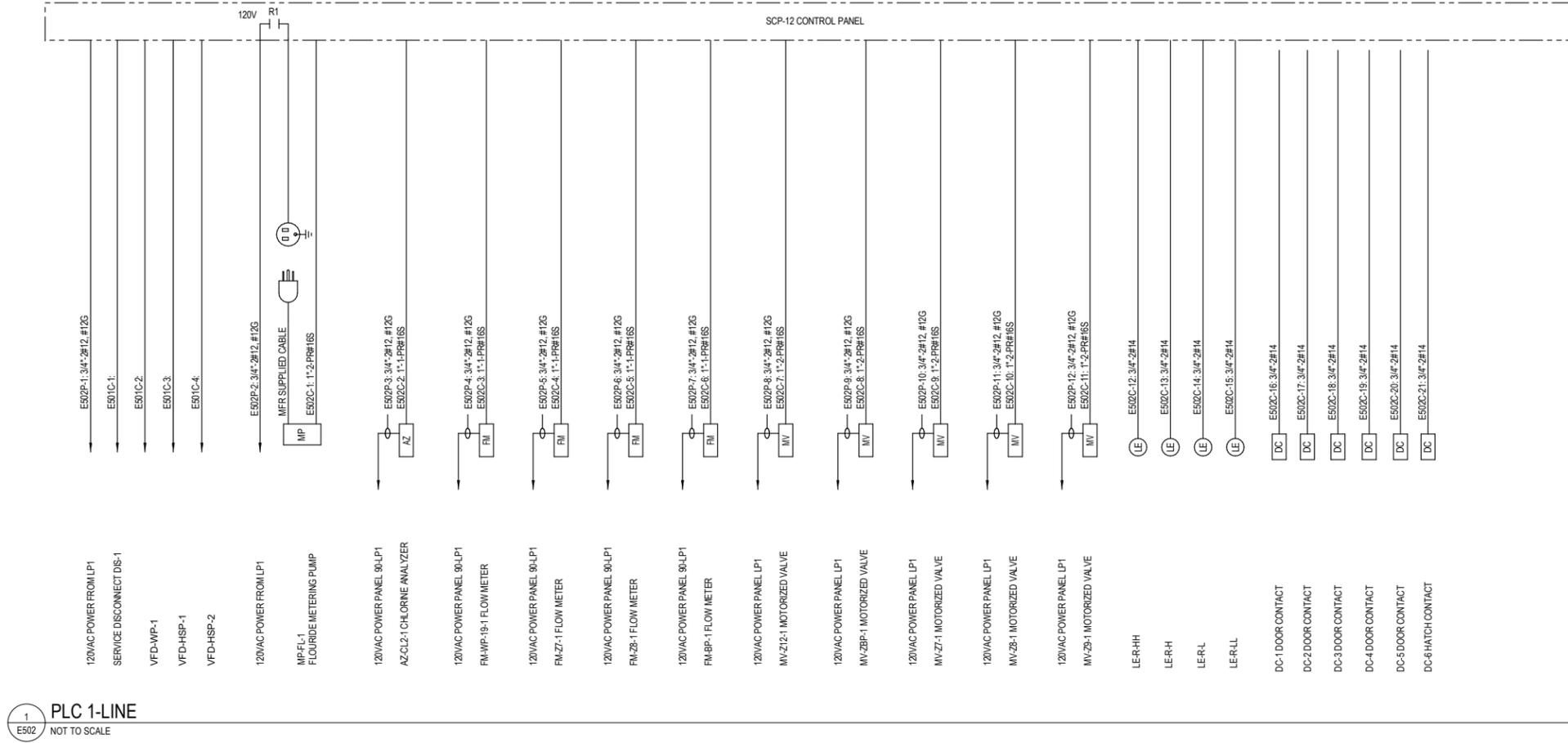
Project Status Issue Date
DNR SUBMITTAL 06/30/2025

REVISION SCHEDULE

REV. #	DESCRIPTION	DATE

ONE-LINE DIAGRAM
01
E501

COPYRIGHT © 2024
Short Elliott Hendrickson, Inc.
All Rights Reserved



Project Owner

MADISON, WISCONSIN
UNIT WELL 12 RECONSTRUCTION

801 S. Whitney Way
Madison WI, 53711

This drawing is an instrument of service and shall remain the property of Short Elliott Hendrickson, Inc. (SEH). This drawing, concepts and ideas contained herein shall not be used, reproduced, revised, or retained without the express written approval of SEH.
Submission or distribution of this drawing to meet official or regulatory requirements or for purposes in connection with the project is not to be construed as publication in derogation of any of the rights of SEH.

SEH Project 182222
Checked By JAM
Drawn By NDS

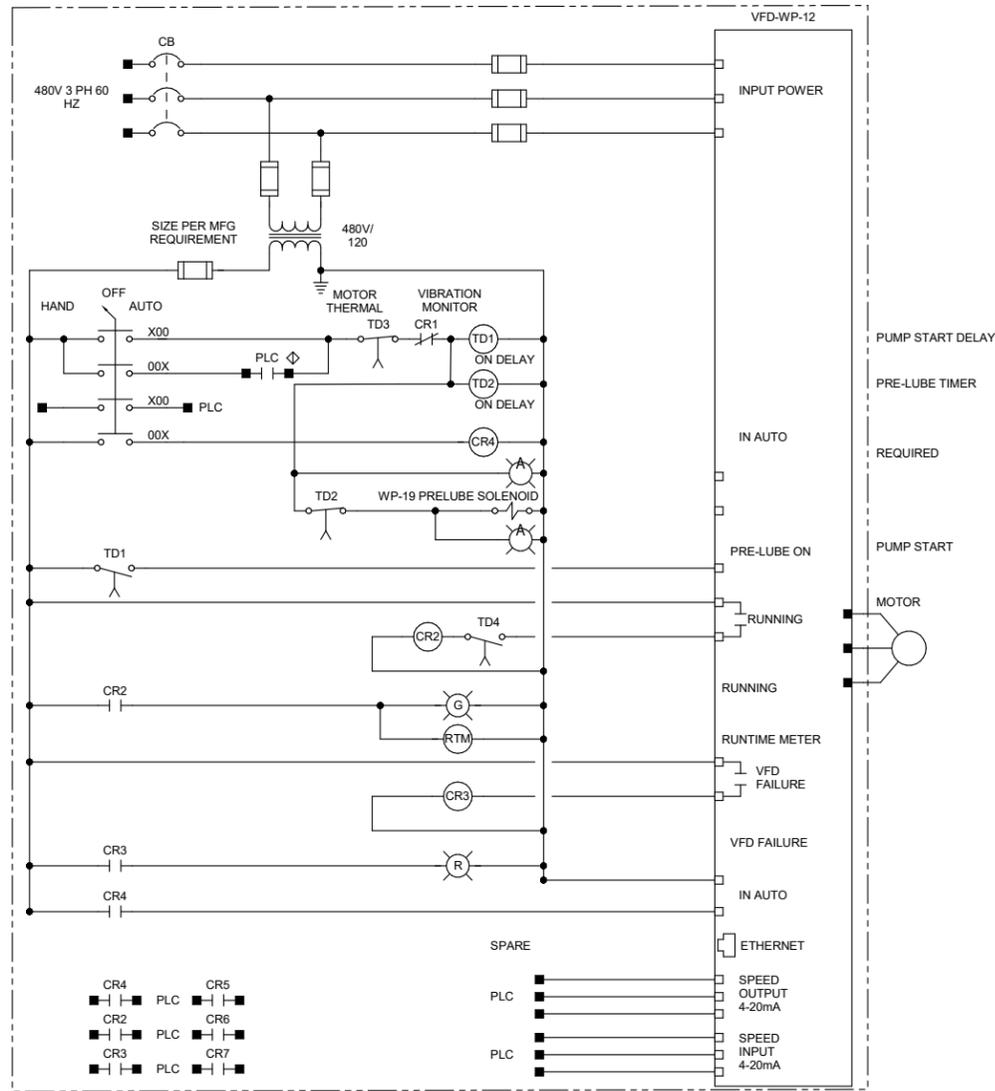
Project Status Issue Date
DNR SUBMITTAL 06/30/2025

REVISION SCHEDULE		
REV. #	DESCRIPTION	DATE

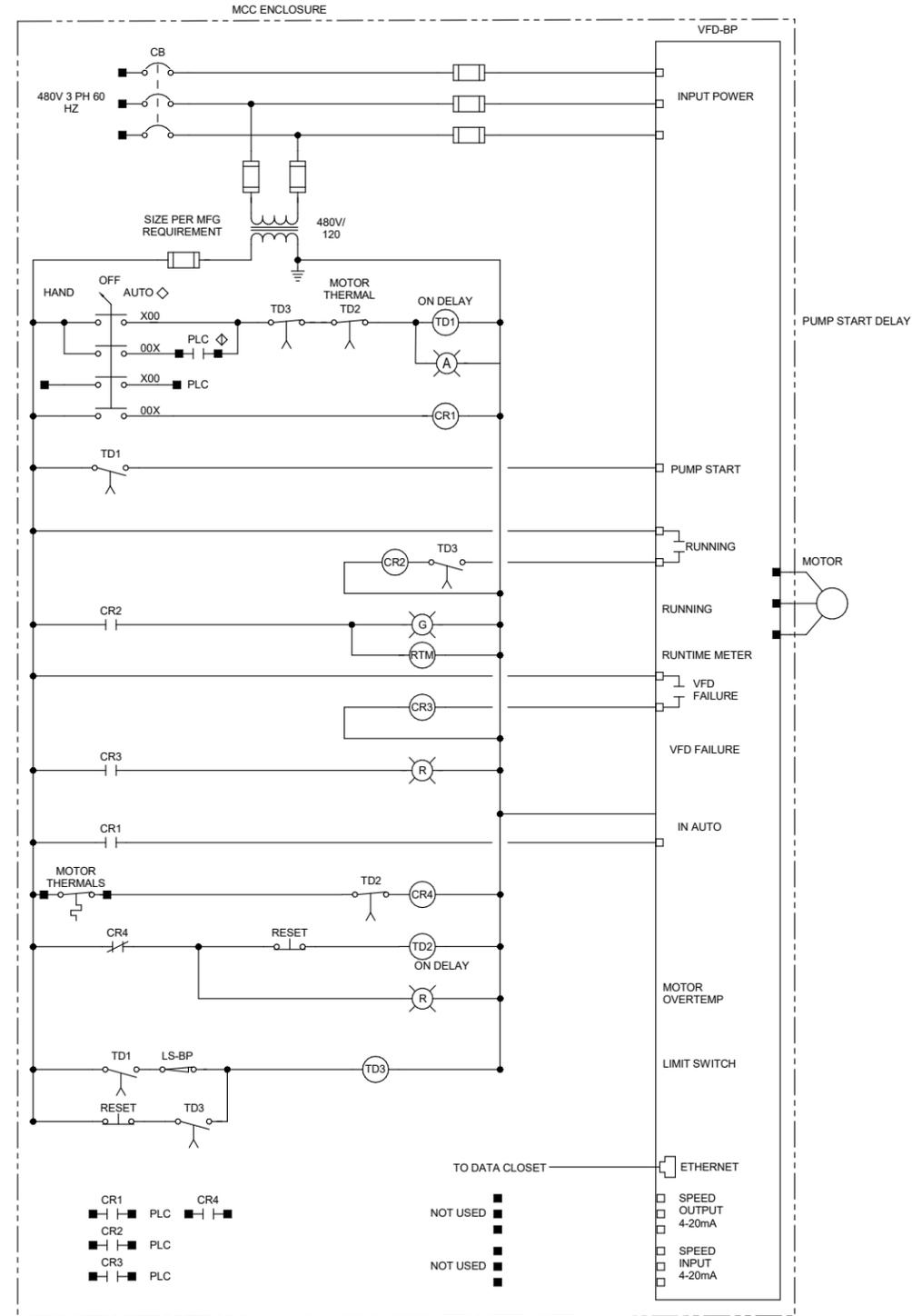
ONE-LINE DIAGRAM

01
E502

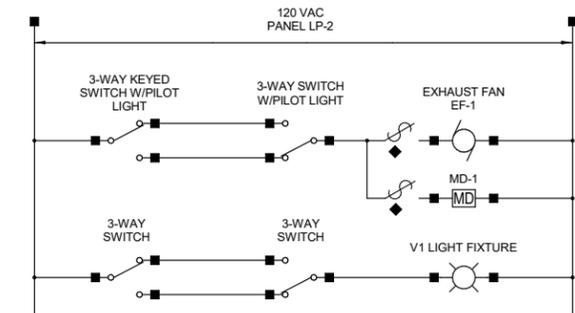
COPYRIGHT © 2024
Short Elliott Hendrickson, Inc.
All Rights Reserved



1 WELL PUMP SCHEMATIC
E601 NOT TO SCALE

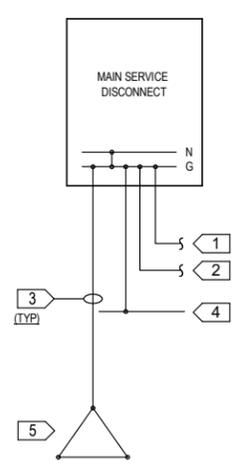


2 BOOSTER PUMP SCHEMATIC
E601 NOT TO SCALE



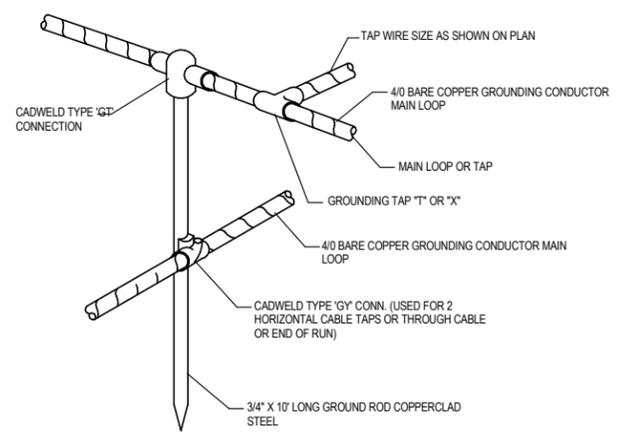
4 CHEM ROOM EXHAUST FAN/LIGHTING INTER-LOCK
E601 NOT TO SCALE

SCHEMATIC SYMBOLS - LOCATIONS AND CONNECTIONS	
◆	DEVICE AT MOTOR
◇	DEVICE AT PLC
◊	DEVICE AT MFR CP
•	CONNECTION POINT
■	EXTERNAL CONNECTION POINT

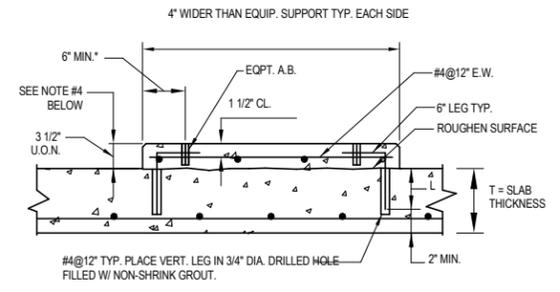


- KEYNOTES:**
- BONDING CONDUCTOR TO EXTERIOR ELECTRICAL PANELS, EXTERIOR ANTENNAS, EXTERIOR EXPOSED PIPE AND BUILDING STEEL.
 - CONNECTION TO METAL WATER PIPE, (IF AVAILABLE).
 - SIZE GROUNDING CONDUCTORS PER NEC.
 - UFER GROUND - 20' MINIMUM CONCRETE-ENCASED ELECTRODE PER NEC 250.52 (WHEN SHOWN ON PLANS)
 - GROUND ROD ARRAY, CONSISTING OF THREE (3) GROUND RODS AT LEAST 10' APART AND CONNECTED BY #2/0 AWG BARE COPPER CONDUCTOR.

1
E801 GROUNDING DETAIL
NOT TO SCALE

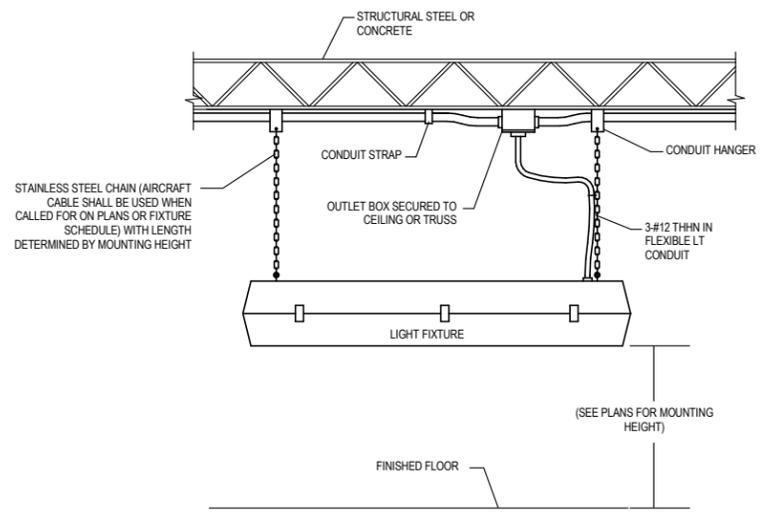


2
E801 GROUND ROD DETAIL
NOT TO SCALE

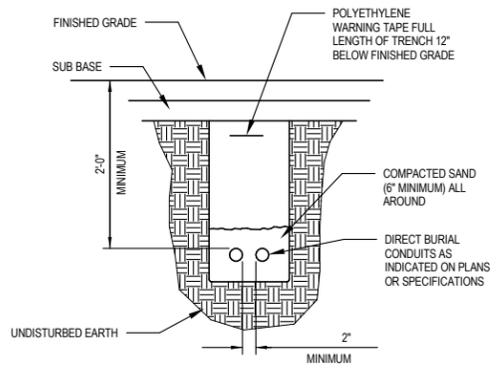


- KEYNOTES:**
- NOT USED.
- PAD NOTES:**
- ABOVE PAD DETAILS APPLY FOR SUPPORT OF ALL EQUIPMENT UNLESS INDICATED OTHERWISE ON THE DRAWINGS.
 - BEFORE EQUIPMENT SUPPORT PADS ARE POURED, THE PAD SIZES SHALL BE REVIEWED AND APPROVED.
 - 6\"/>
 - PROVIDE AN ADDITIONAL LAYER OF #4@12\"/>
 - L = T-2\", BUT L NEED NOT EXCEED 6\"/>

3
E801 EQUIPMENT PAD INTERIOR
NOT TO SCALE



4
E801 SUSPENDED FIXTURE DETAIL
NOT TO SCALE



- NOTES:**
- BACKFILL OF SELECT COMMON FILL COMPACTED IN LIFTS OF 6\"/>

5
E801 DIRECT BURIED CONDUIT DETAIL
NOT TO SCALE

KEYNOTES

- NOT USED.

MADISON, WISCONSIN
UNIT WELL 12 RECONSTRUCTION
 801 S. Whitney Way
 Madison WI, 53711

This drawing is an instrument of service and shall remain the property of Short Elliott Hendrickson, Inc. (SEH). This drawing, concepts and ideas contained herein shall not be used, reproduced, revised, or retained without the express written approval of SEH.

Submission or distribution of this drawing to meet official or regulatory requirements or for purposes in connection with the project is not to be construed as publication in derogation of any of the rights of SEH.

COPYRIGHT © 2024
Short Elliott Hendrickson, Inc.
All Rights Reserved.

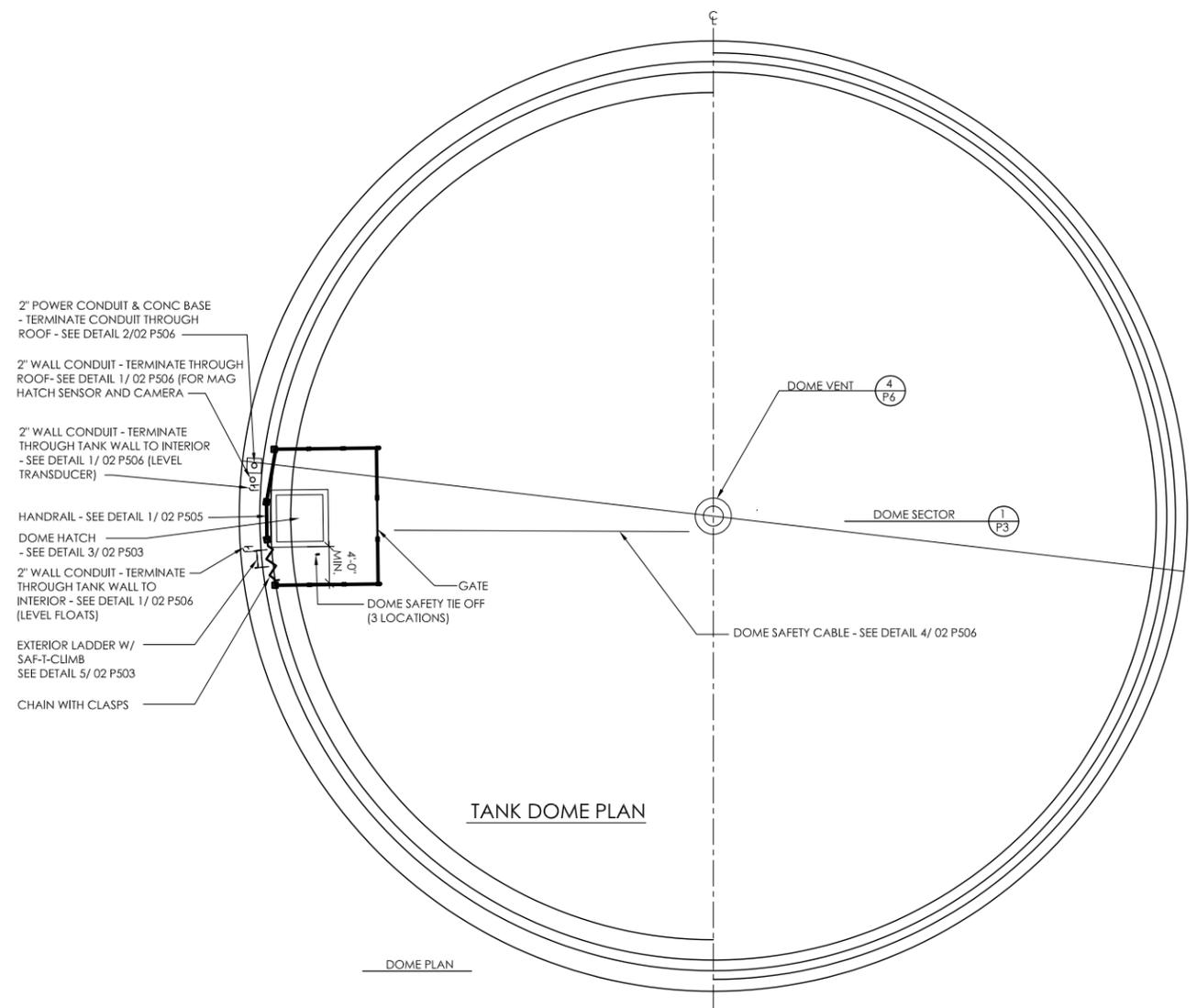
SEH Project 182222
 Checked By JAM
 Drawn By NDS

Project Status Issue Date
 DNR SUBMITTAL 06/30/2025

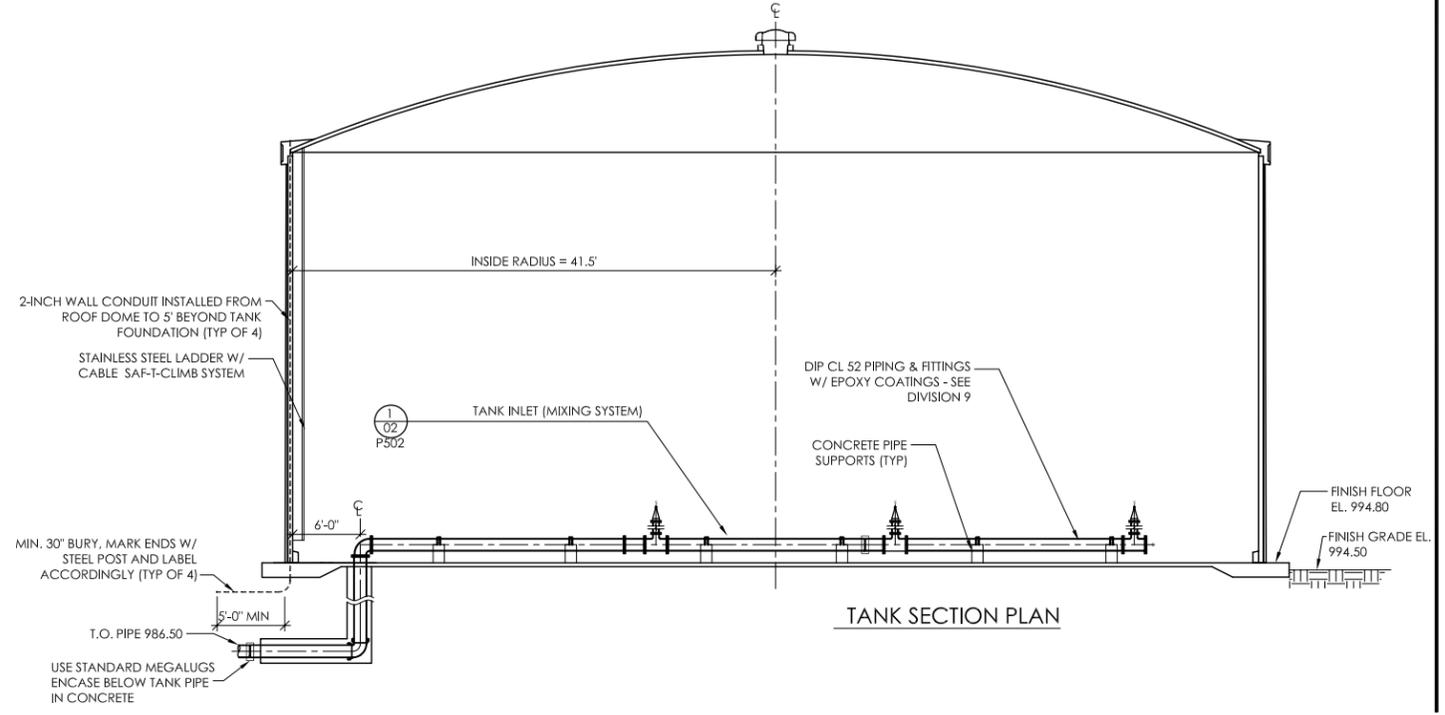
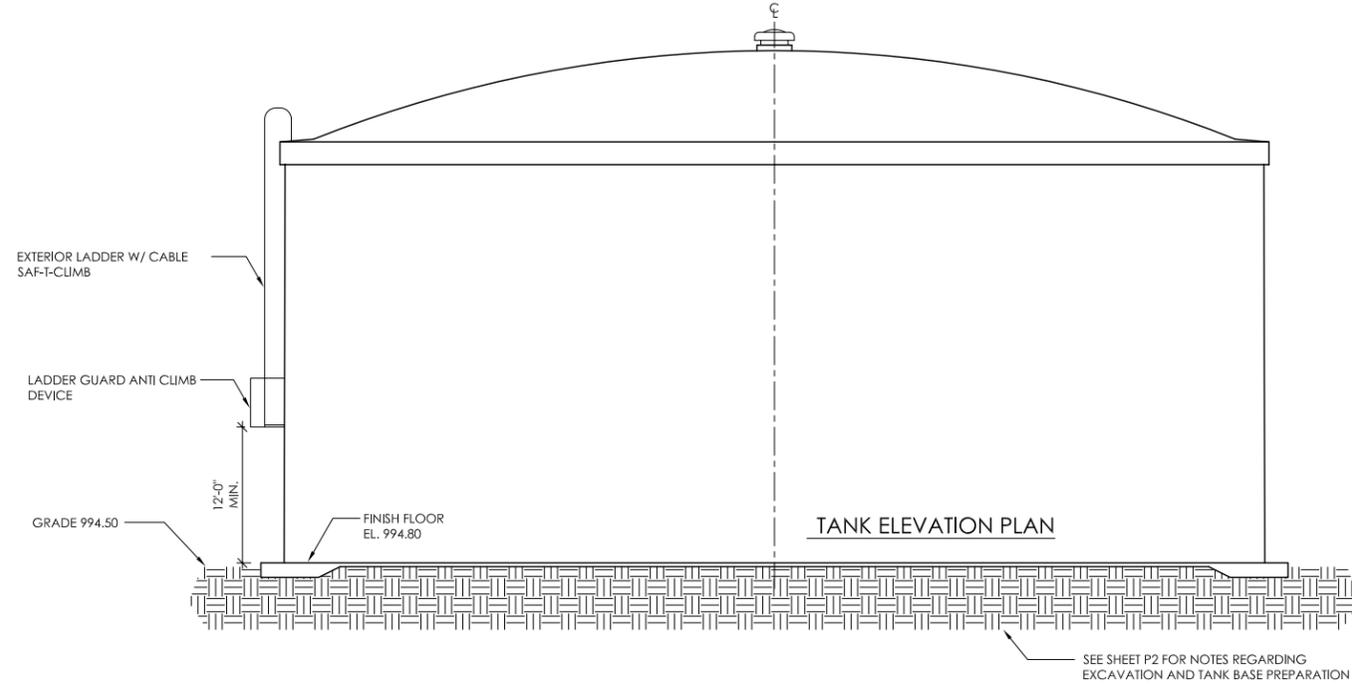
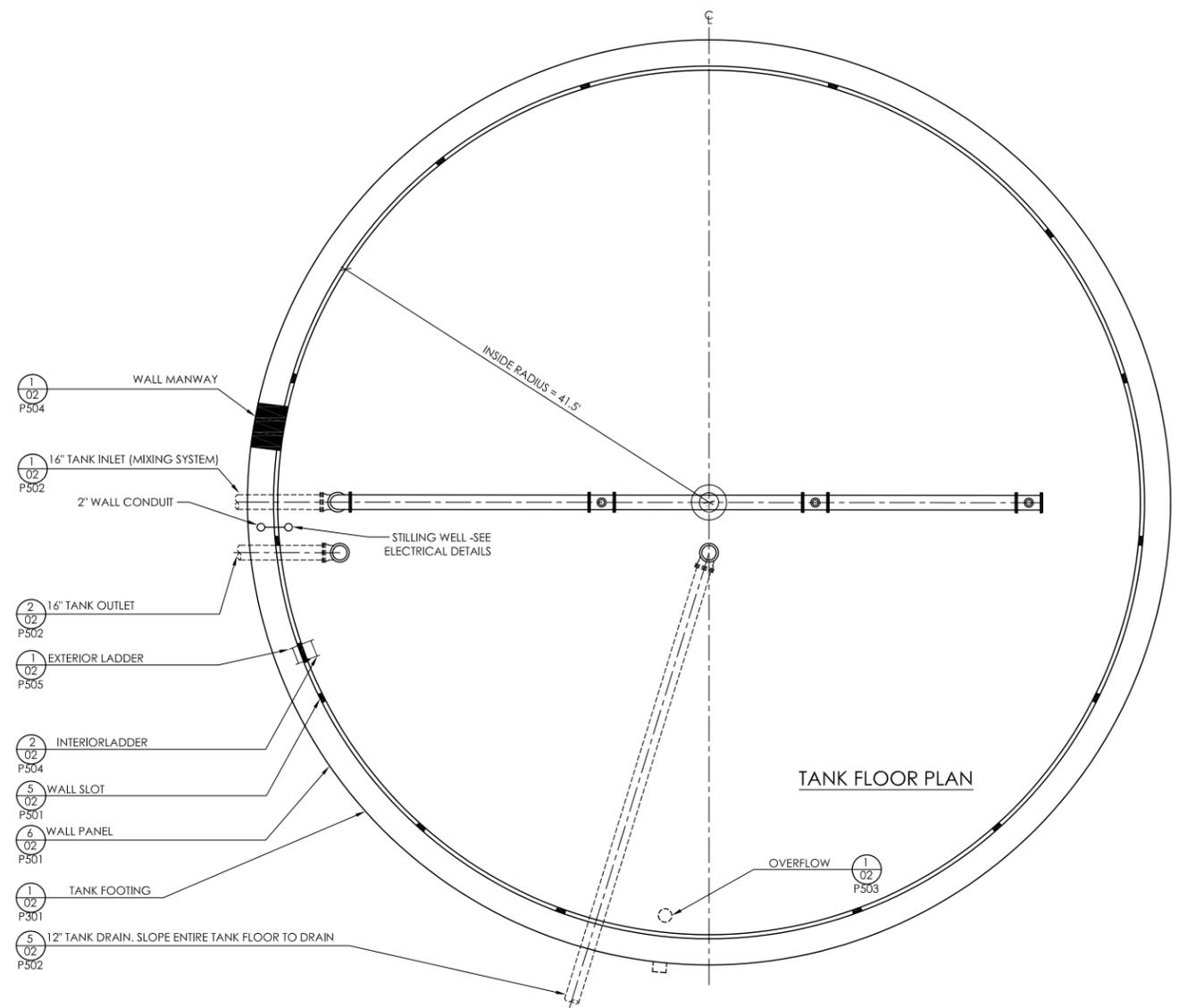
REVISION SCHEDULE		
REV. #	DESCRIPTION	DATE

ELECTRICAL DETAILS

01
E801



- NOTES:
1. FINAL LOCATION OF ALL PIPING AND APPURTENANCES TO BE DETERMINED BY THE ENGINEER.
 2. THE EXTERIOR DOME CONCRETE SURFACES SHALL RECEIVE ONE COAT OF TAMOSEAL AND ONE COAT OF TAMMSCOAT SMOOTH. THE EXPOSED EXTERIOR WALL CONCRETE SURFACES SHALL RECEIVE TWO COATS OF TAMMSCOAT SMOOTH. COLOR SHALL BE SELECTED BY OWNER - SEE SHEET A1 FOR COLOR ASSIGNMENTS
 3. ALL PIPING TO BE COATED PER DIVISION 9.



Project Owner

Madison Water Utility
UNIT WELL 12 RECONSTRUCTION
 801 S. Whitney Way
 Madison WI 53711

This drawing is an instrument of service and shall remain the property of Short Elett Handrikson, Inc. (SEH). This drawing, concepts and ideas contained herein shall not be used, reproduced, copied, or related without the express written approval of SEH.

SEH Project MADWU 182222
 Checked By IS
 Drawn By DD

Project Status Issue Date
 DNR SUBMITTAL 6/30/2025

REV.#	DESCRIPTION	DATE

WATER STORAGE TANK
 PLAN & SECTION

Project Owner

Madison Water Utility
UNIT WELL 12 RECONSTRUCTION
 801 S. Whitney Way
 Madison WI 53711

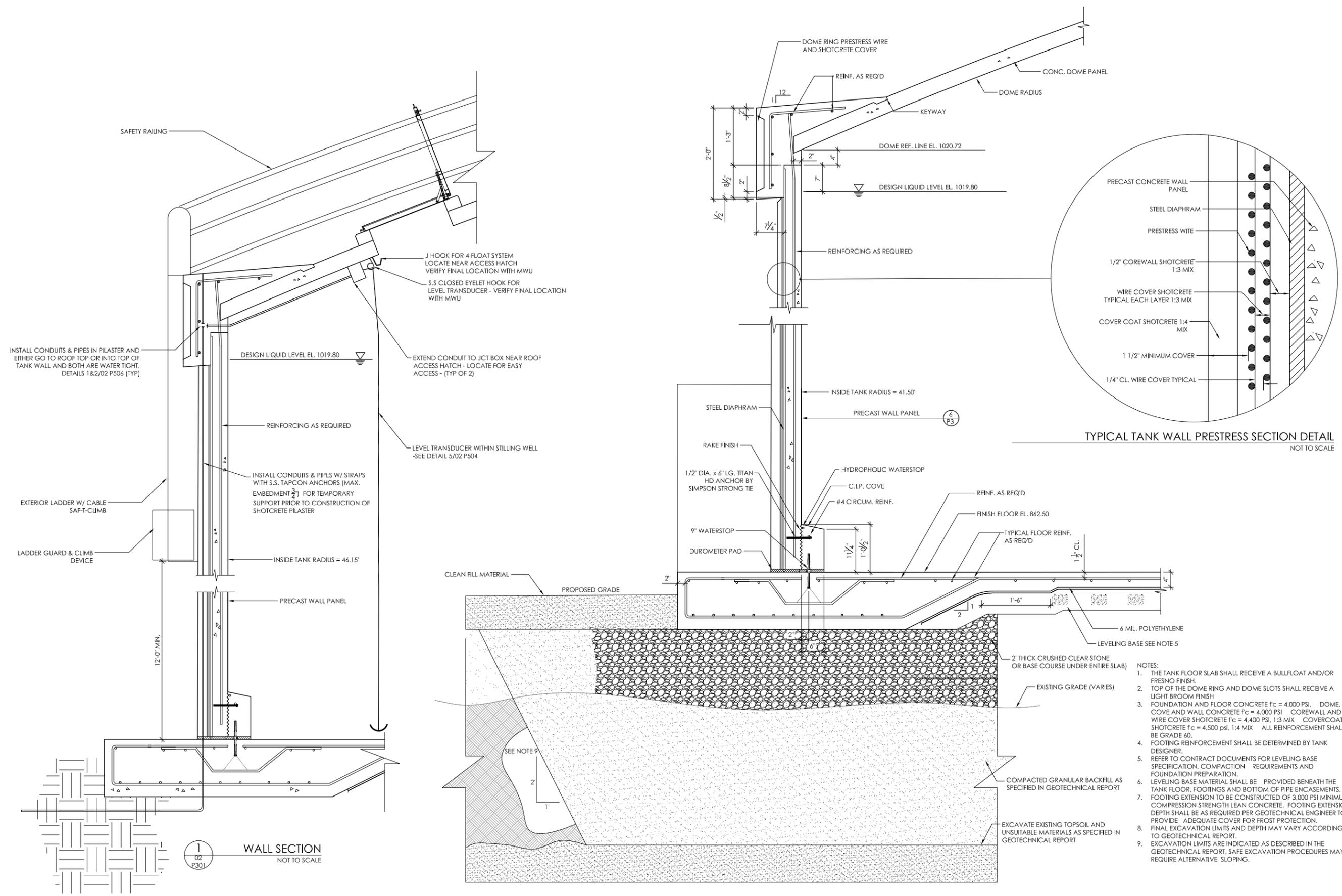
This drawing is an instrument of service and shall remain the property of Shortt Emett Hendrickson, Inc. (SEH). This drawing, concepts and ideas contained herein shall not be used, reproduced, copied, or related without the express written approval of SEH.

SEH Project MADWU 182222
 Checked By IS
 Drawn By DD

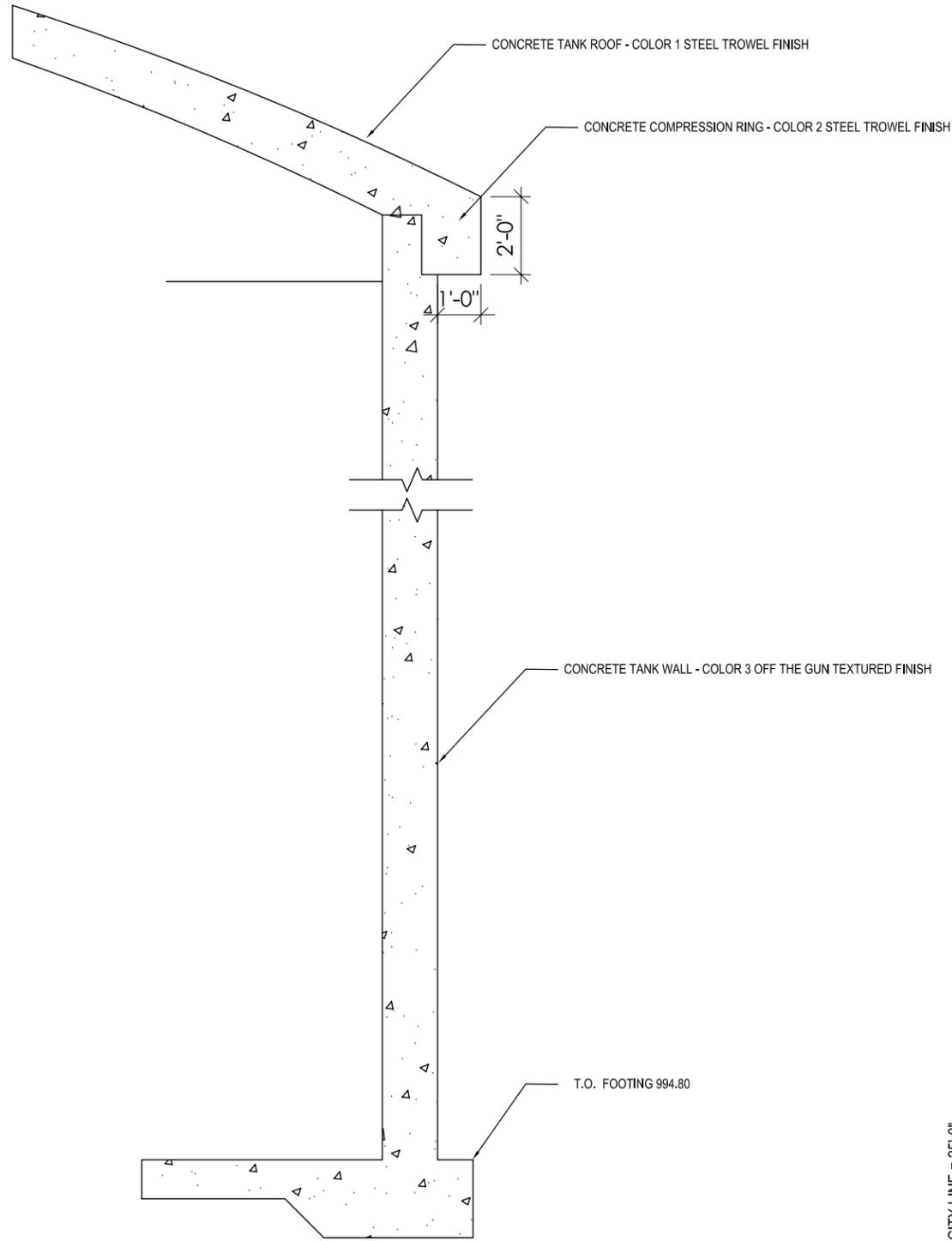
Project Status Issue Date
 DNR SUBMITTAL 6/30/2025

REVISION SCHEDULE		
REV.#	DESCRIPTION	DATE

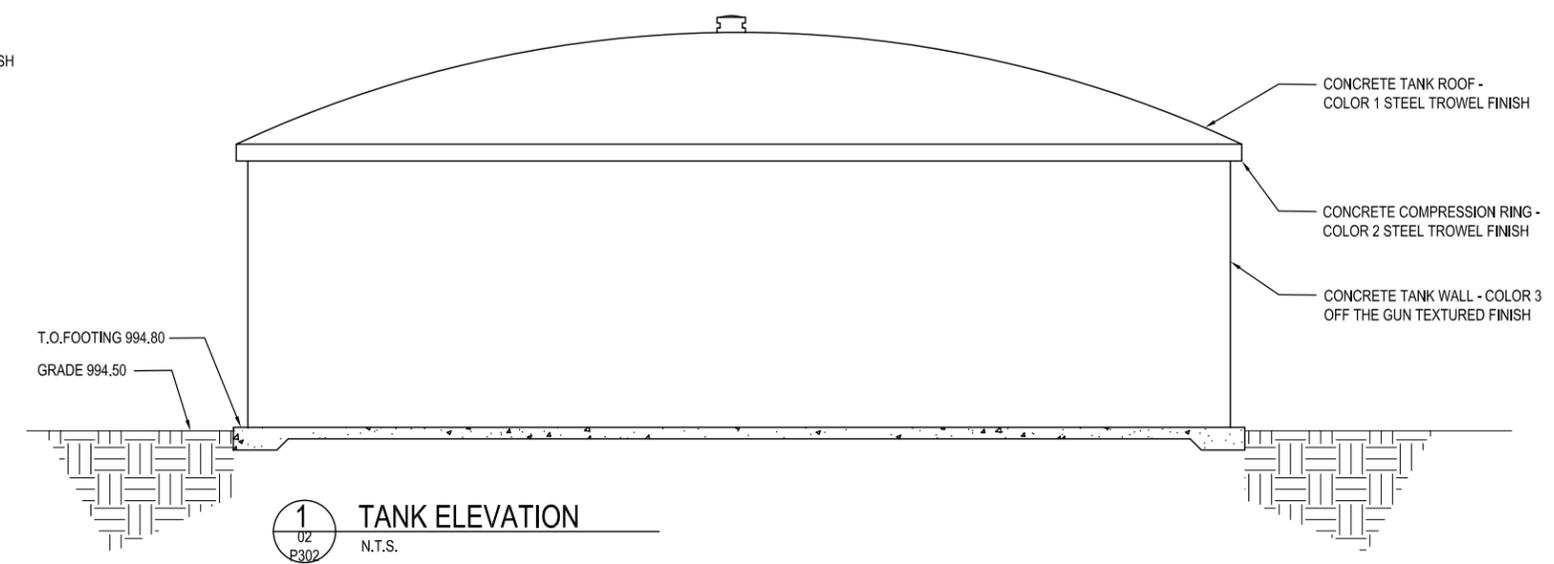
WATER STORAGE TANK SECTION



- NOTES:
1. THE TANK FLOOR SLAB SHALL RECEIVE A BULLFLOAT AND/OR FRESNO FINISH.
 2. TOP OF THE DOME RING AND DOME SLOTS SHALL RECEIVE A LIGHT BROOM FINISH
 3. FOUNDATION AND FLOOR CONCRETE $f_c = 4,000$ PSI. DOME, COVE AND WALL CONCRETE $f_c = 4,000$ PSI. COREWALL AND WIRE COVER SHOTCRETE $f_c = 4,400$ PSI. 1:3 MIX. COVERCOAT SHOTCRETE $f_c = 4,500$ psi. 1:4 MIX. ALL REINFORCEMENT SHALL BE GRADE 60.
 4. FOOTING REINFORCEMENT SHALL BE DETERMINED BY TANK DESIGNER.
 5. REFER TO CONTRACT DOCUMENTS FOR LEVELING BASE SPECIFICATION, COMPACTION REQUIREMENTS AND FOUNDATION PREPARATION.
 6. LEVELING BASE MATERIAL SHALL BE PROVIDED BENEATH THE TANK FLOOR, FOOTINGS AND BOTTOM OF PIPE ENCASEMENTS.
 7. FOOTING EXTENSION TO BE CONSTRUCTED OF 3,000 PSI MINIMUM COMPRESSION STRENGTH LEAN CONCRETE. FOOTING EXTENSION DEPTH SHALL BE AS REQUIRED PER GEOTECHNICAL ENGINEER TO PROVIDE ADEQUATE COVER FOR FROST PROTECTION.
 8. FINAL EXCAVATION LIMITS AND DEPTH MAY VARY ACCORDING TO GEOTECHNICAL REPORT.
 9. EXCAVATION LIMITS ARE INDICATED AS DESCRIBED IN THE GEOTECHNICAL REPORT. SAFE EXCAVATION PROCEDURES MAY REQUIRE ALTERNATIVE SLOPING.

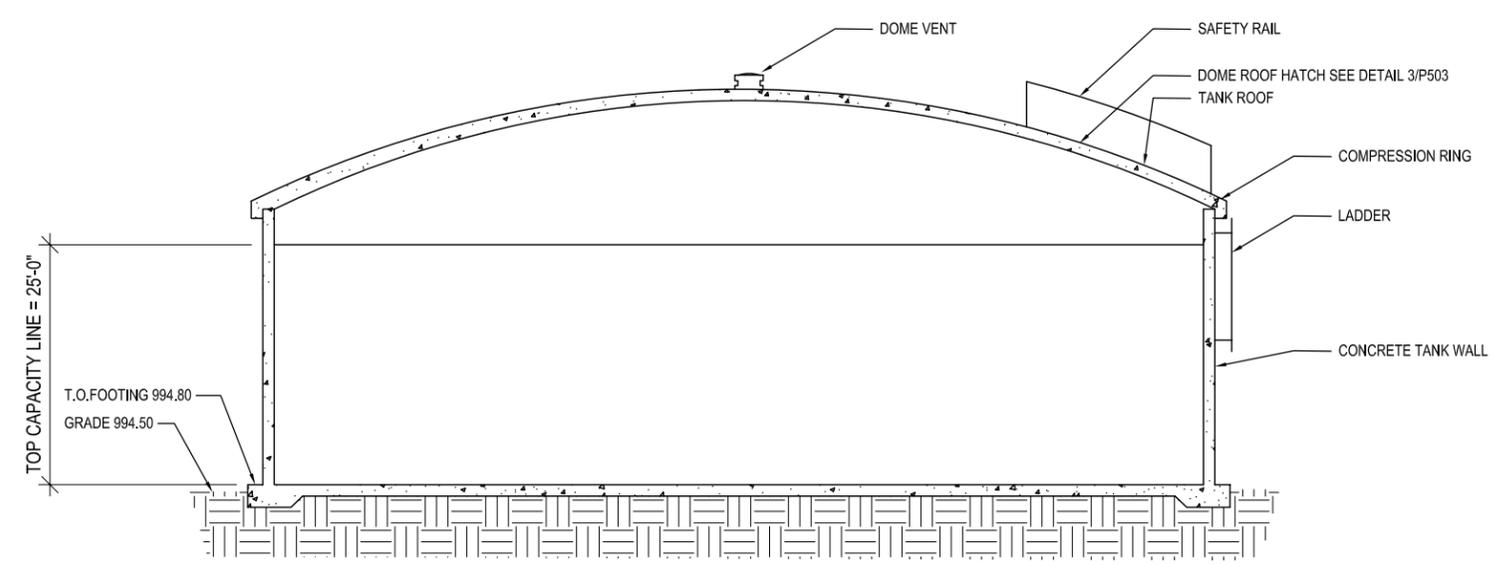


3
TANK WALL SECTION
U2
P302
N.T.S.



1
TANK ELEVATION
U2
P302
N.T.S.

- ELEVATION NOTES:
1. PAINT APPURTENANCES TO MATCH ADJACENT COLOR OF TANK SO AS TO BLEND INTO COLOR SCHEME OF TANK
- SECTION NOTES:
1. SEE OTHER DRAWINGS FOR TANK APPURTENANCES. COORDINATE LOCATION OF APPURTENANCES WITH ENGINEER AND UTILITY OWNER. ATTEMPT TO CONCEAL APPURTENANCES FROM STREET VIEWS TO MINIMIZE VISUAL IMPACT.



2
TANK SECTION
U2
P302
N.T.S.

Project Owner

Madison Water Utility
UNIT WELL 12 RECONSTRUCTION
801 S. Whitney Way
Madison WI 53711

This drawing is an instrument of service and shall remain the property of Short Ebert Handtke, Inc. (SEH). This drawing, concepts and ideas contained herein shall not be used, reproduced, copied, or related without the express written approval of SEH. Submission or distribution of this drawing to meet official or regulatory requirements or for purposes in connection with the project is not to be construed as publication in derogation of any of the rights of SEH.

COPYRIGHT © 2022
Short Ebert Handtke, Inc.
All Rights Reserved.

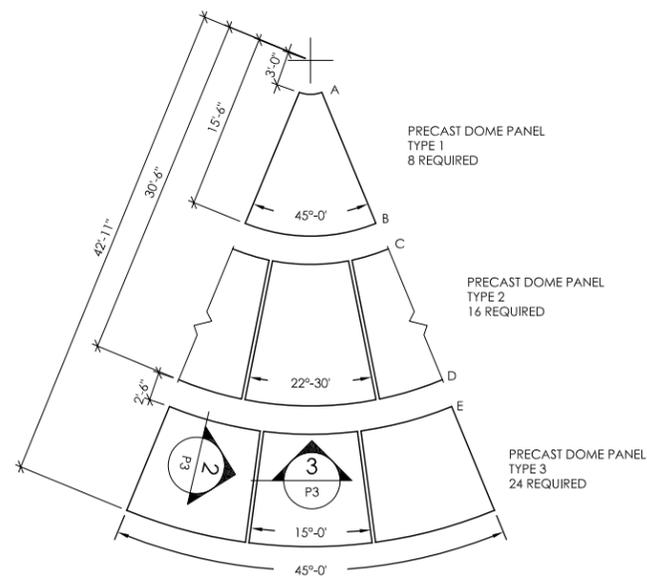
SEH Project MADWU 182222
Checked By IS
Drawn By DD

Project Status Issue Date
DNR SUBMITTAL 6/30/2025

REVISION SCHEDULE

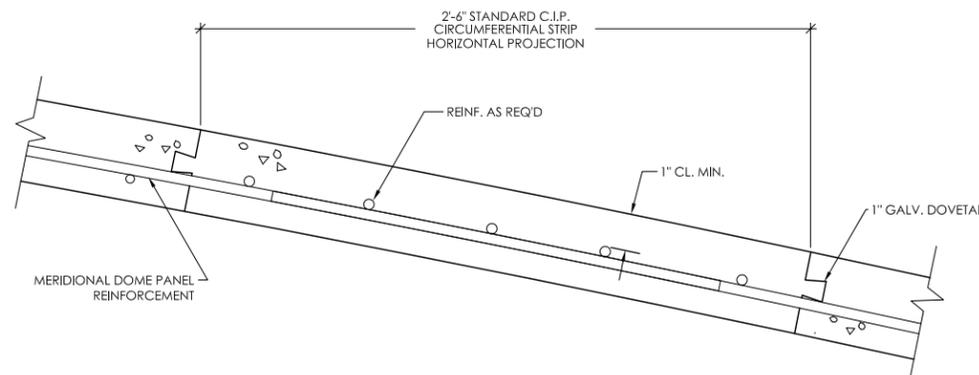
REV.#	DESCRIPTION	DATE
-------	-------------	------

WATER STORAGE TANK
ELEVATIONS, SECTIONS

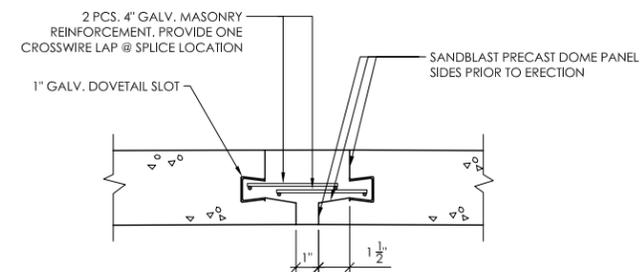


NOTES:
 1. SPLICE CIRCUMFERENTIAL JOINT REINFORCING BETWEEN RADIAL JOINTS.
 2. RADIAL DIMENSIONS ARE HORIZONTAL PROJECTIONS.
 3. DOME PANELS, DOME RING AND DOME SLOTS SHALL RECEIVE A LIGHT BROOM FINISH.

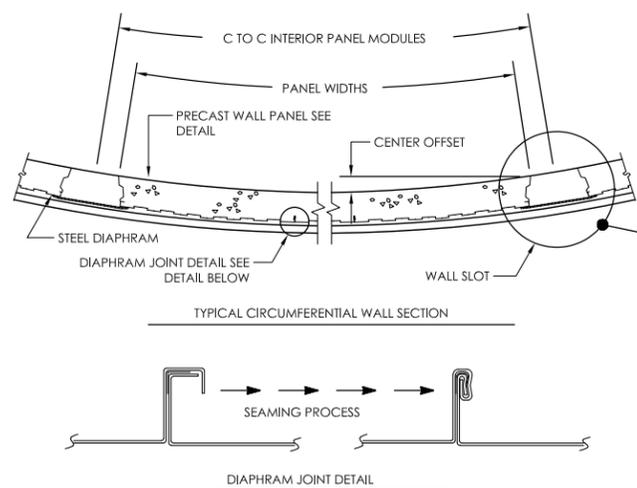
1
02
P501
DOME SECTOR
NOT TO SCALE



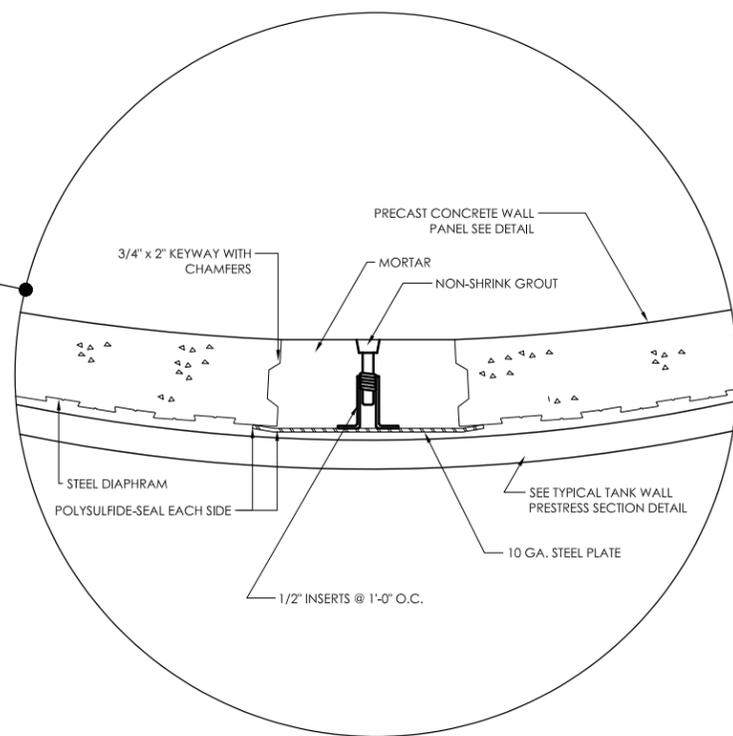
2
02
P501
CIRCUMFERENTIAL DOME JOINT REINFORCING
NOT TO SCALE



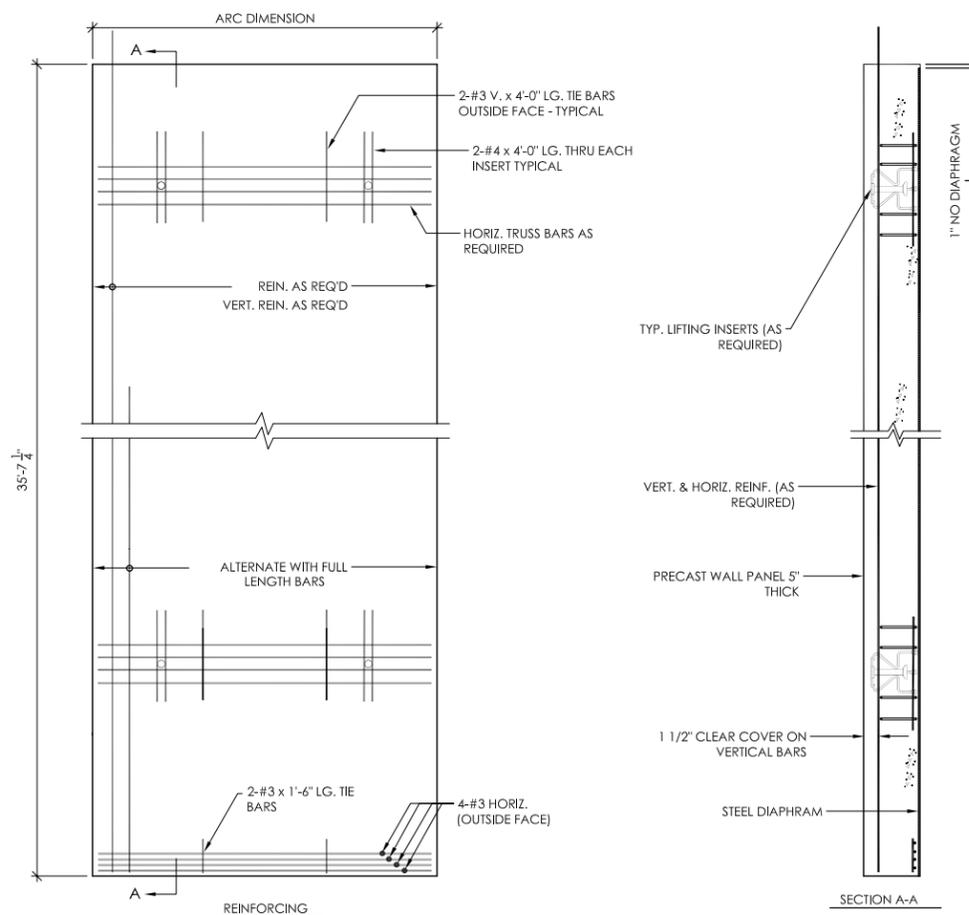
3
02
P501
RADIAL DOME JOINT REINFORCEMENT
NOT TO SCALE



4
P3
WALL PANEL AND JOINT
NOT TO SCALE



5
02
P501
WALL SLOT DETAIL
NOT TO SCALE



6
02
P501
PRECAST WALL PANEL
NOT TO SCALE

NOTE:
 1. WALL PANELS SHALL RECEIVE A HORIZONTAL RAKE FINISH FOR THE BOTTOM 1'-0" OF THE PANEL AND A HORIZONTAL LIGHT BROOM FINISH FOR THE REST OF THE PANEL.

Project Owner

Madison Water Utility
UNIT WELL 12 RECONSTRUCTION
 801 S. Whitney Way
 Madison WI 53711

This drawing is an instrument of service and shall remain the property of Shortt Emett Handrickson, Inc. (SEH). This drawing, concepts and ideas contained herein shall not be used, reproduced, copied, or related without the express written approval of SEH. Submission or distribution of this drawing to meet official or regulatory requirements or for purposes in connection with the project is not to be construed as publication in derogation of any of the rights of SEH.

SEH Project MADWU 182222
 Checked By IS
 Drawn By DD

Project Status Issue Date
 DNR SUBMITTAL 6/30/2025

REV.#	DESCRIPTION	DATE

WATER STORAGE TANK
 STRUCTURAL DETAILS

Project Owner

Madison Water Utility
UNIT WELL 12 RECONSTRUCTION
 801 S. Whitney Way
 Madison WI 53711

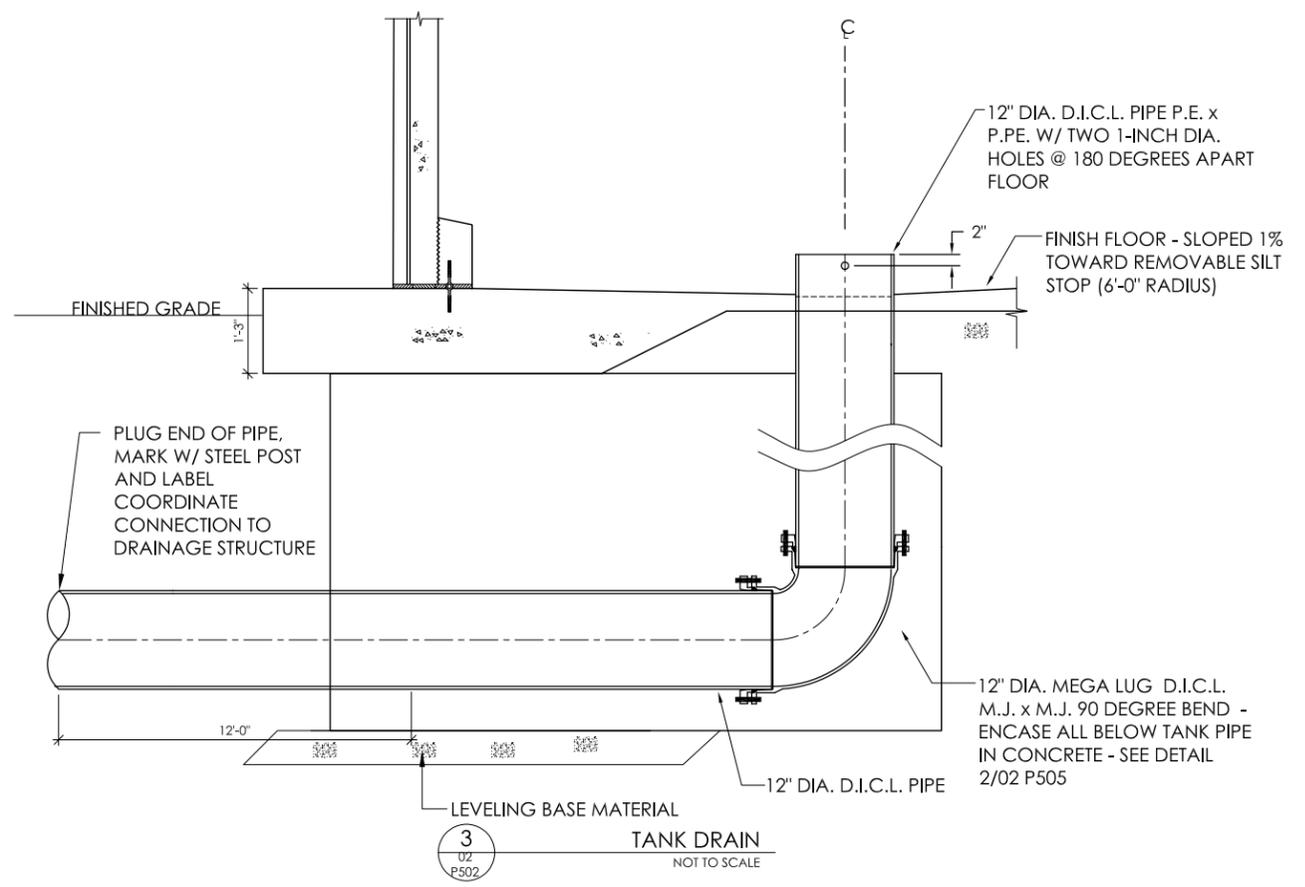
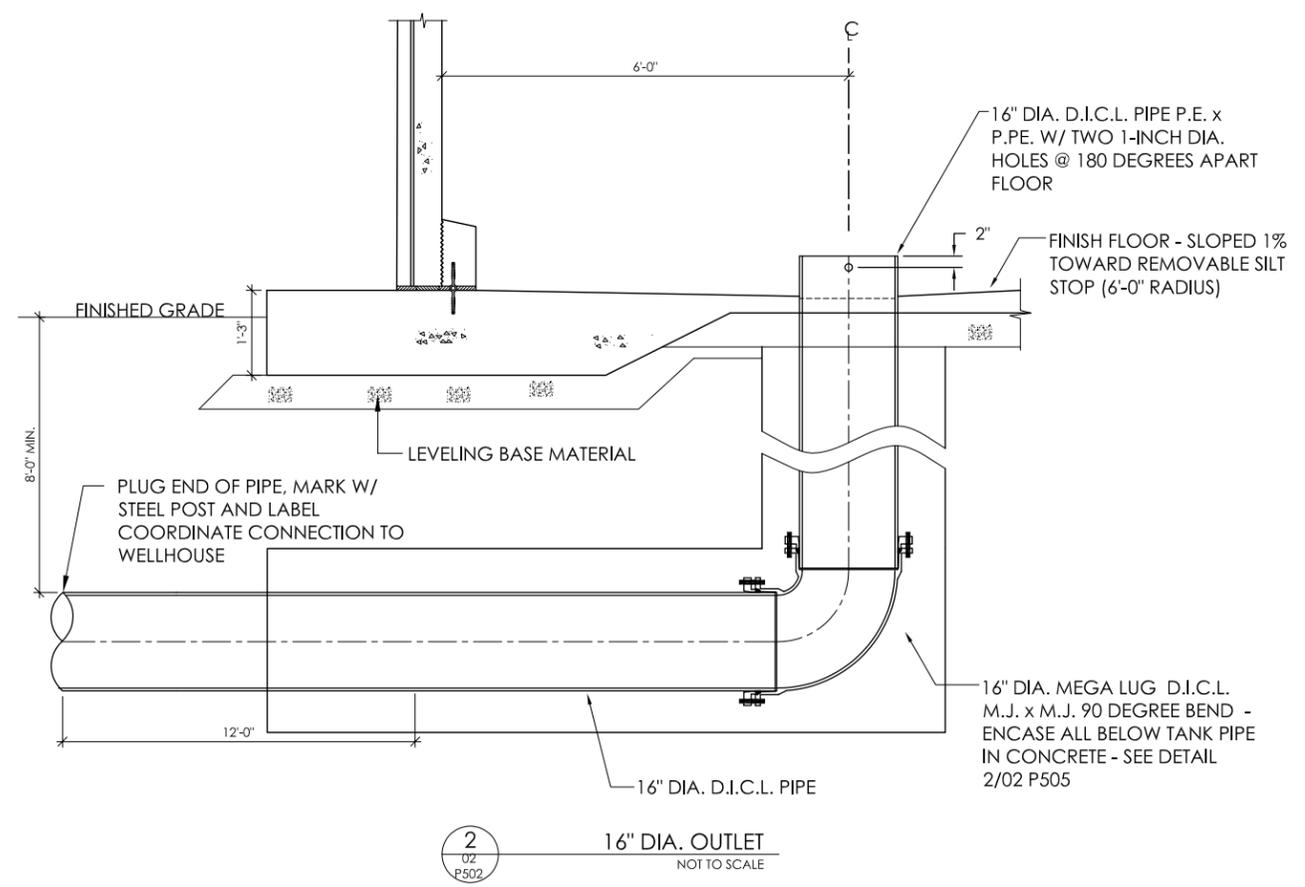
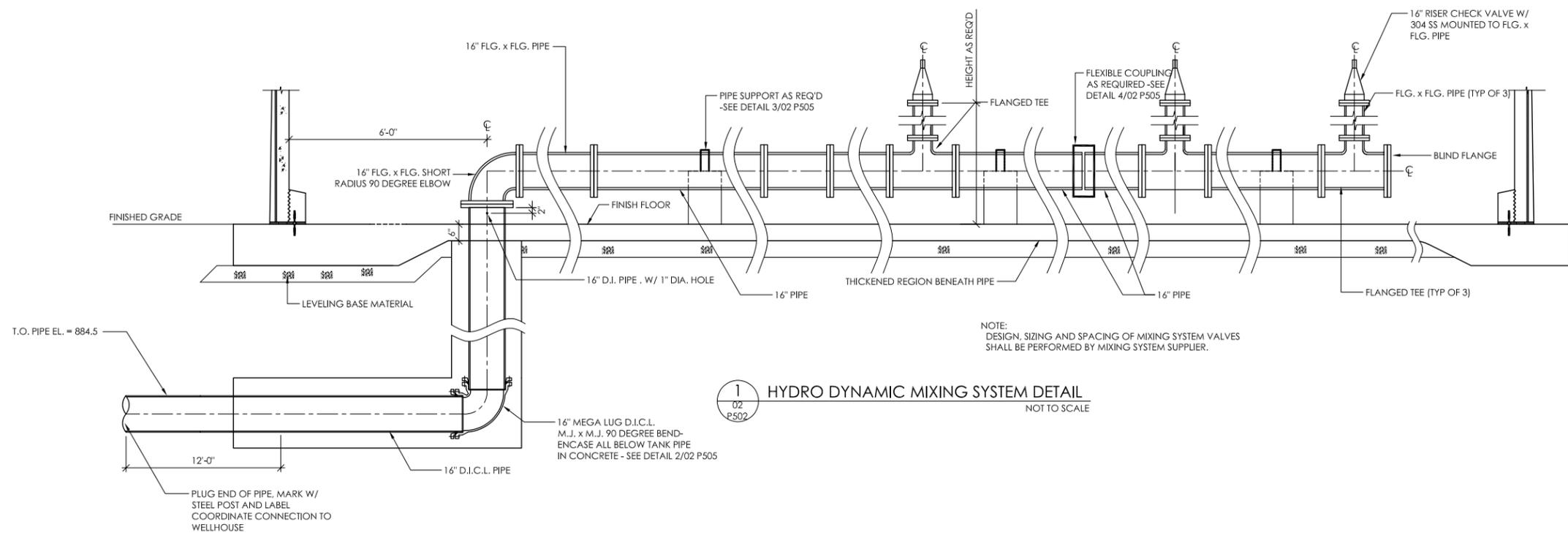
This drawing is an instrument of service and shall remain the property of Shortt Ebert Handrickson, Inc. (SEH). This drawing, concepts and ideas contained herein shall not be used, reproduced, copied, or related without the express written approval of SEH. Submission or distribution of this drawing to meet official or regulatory requirements or for purposes in connection with the project is not to be construed as publication in derogation of any of the rights of SEH.

SEH Project MADWU 182222
 Checked By IS
 Drawn By DD

Project Status Issue Date
 DNR SUBMITTAL 6/30/2025

REVISION SCHEDULE		
REV.#	DESCRIPTION	DATE

WATER STORAGE TANK
 INLET, OUTLET, & MIXING
 SYSTEM DETAILS



Project Owner

Madison Water Utility
WATER STORAGE TANK RECONSTRUCTION
 801 S. Whitney Way
 Madison WI 53711

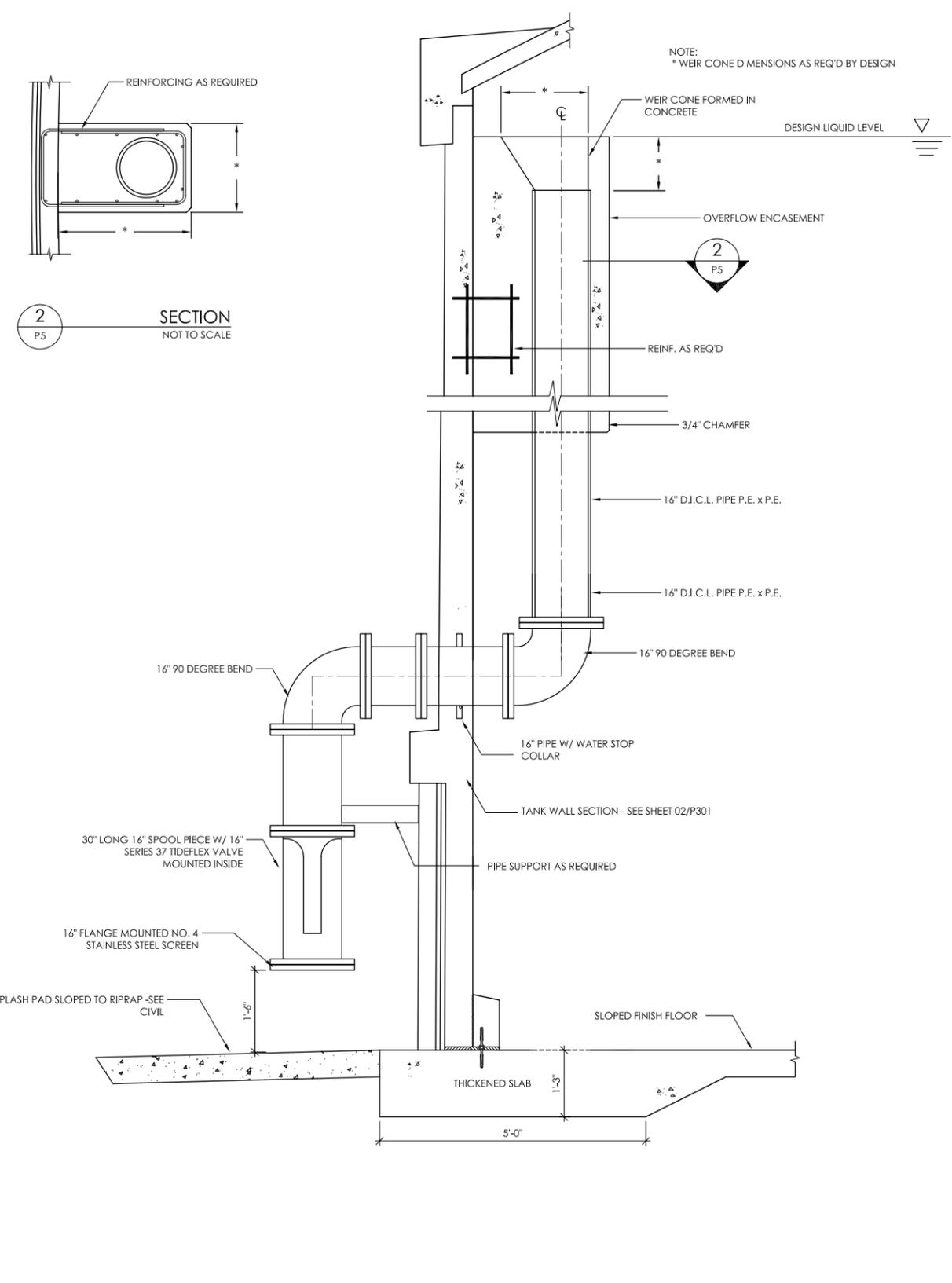
This drawing is an instrument of service and shall remain the property of Shortt Ebert Henderson, Inc. (SEH). This drawing, concepts and ideas contained herein shall not be used, reproduced, copied, or related without the express written approval of SEH.
 Submission or distribution of this drawing to meet official or regulatory requirements or for purposes in connection with the project is not to be construed as publication in derogation of any of the rights of SEH.

SEH Project Checked By Drawn By
 RHW/01/08/2022 IS DD

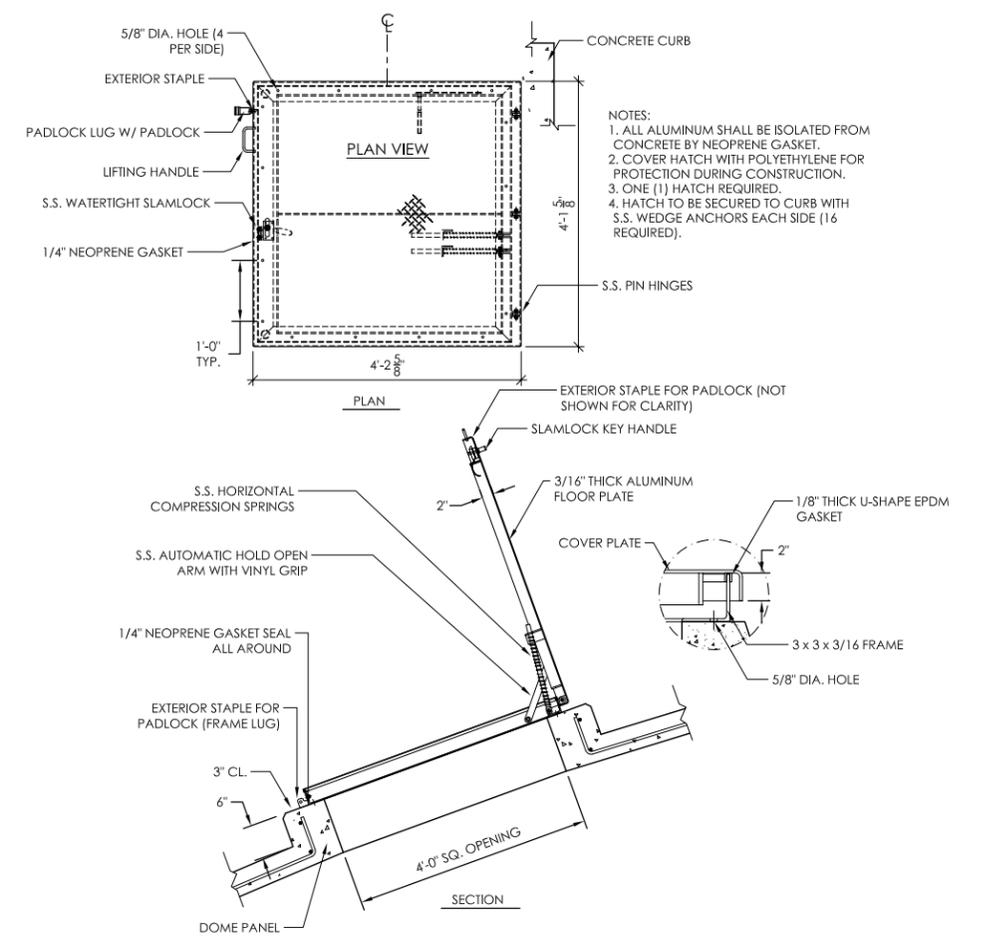
Project Status Issue Date
 DNR SUBMITTAL 6/30/2025

REVISION SCHEDULE
 REV.# DESCRIPTION DATE

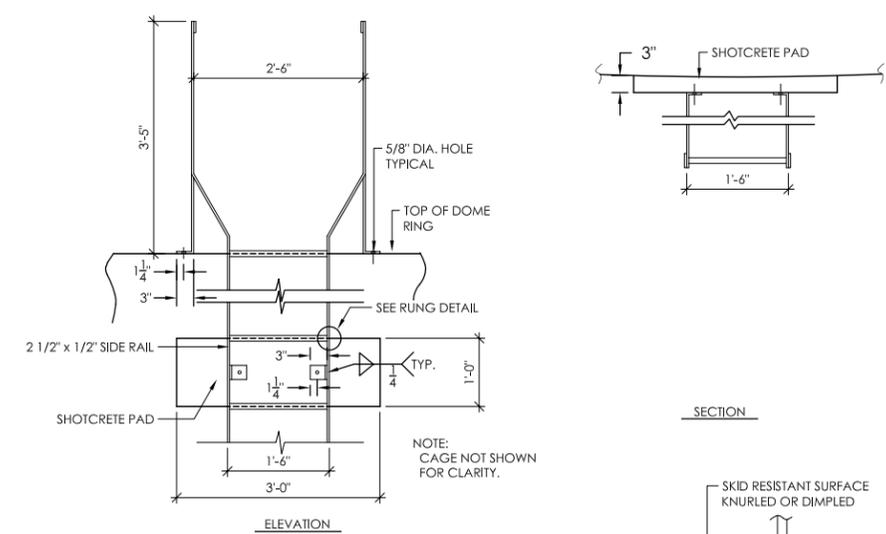
WATER STORAGE TANK
 ACCESSORY DETAILS



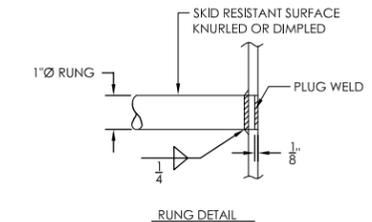
2
 P503 SECTION
 NOT TO SCALE



3
 02 P503 DOME HATCH
 NOT TO SCALE



5
 02 P503 EXTERIOR LADDER
 NOT TO SCALE



- NOTES:
- LADDER SHALL BE 6061-T6 ALUMINUM.
 - ALL ALUMINUM SURFACES IN CONTACT WITH CONCRETE SHALL RECEIVE A PVC SHIM.
 - LADDERS SHALL BE CONNECT TO TANK USING STAINLESS STEEL WEDGE ANCHORS.
 - LADDER SHALL BEGIN AT 12'-0" ABOVE GRADE.
 - LADDER SHALL BE EQUIPPED W/ LADDER GUARD & CABLE STYLE FALL ARREST SYSTEM

NOTE:
 CAGE NOT SHOWN FOR CLARITY.