ADDENDUM #2
GFWTP 1916 HEAD HOUSE UPGRADES
TD&H Job Number 23-232
September 9, 2025

TO PROSPECTIVE BIDDERS: All plan holders of record. Acknowledge receipt of this Addendum by **filling out the table on Bid Form, page 2 Section 5.03.** Failure to do so may disqualify the proposal. This Addendum forms a part of the Construction Documents to the same extent as if found therein and modifies them as follows:

GENERAL NOTES, INSTRUCTIONS AND CONTRACT REQUIREMENTS

Item 1: See the attached Asbestos and Lead-in-Paint Inspection report.

SPECIFICATION CHANGES

REPLACE: Specification 011000 with the attached.

PLAN CHANGES

REPLACE the following sheets with the attached

Sheets S2.1 – ADDED flag notes to clarify Rapid Mix demolition.
Det. 3.0 DELETE reference to Halliday F1G and REPLACE with Halliday S1G.

Sheet S3.1 – EDITED Rapid Mix access hole hatching to show as open.
Sheet S3.2 – EDITED flag notes 1, 2 & 3 with correct hatch model.
– ADDED flag notes 11 & 12.
Det. 11/S6.0 – DELETE reference to Halliday F1G and REPLACE with Halliday S1G.
Det. 12/S6.0 – DELETE reference to Halliday F2G and REPLACE with Halliday S2G.
Sheet S6.1 – ADDED details 6 & 7.
Det. 5/S7.1 – DELETE reference to Halliday F1G and REPLACE with Halliday S1G

CLARIFICATIONS

Response to questions from walk-through.

QUESTION 1: If the contractor is required to take daily samples from the Receiving Chamber, can the monitoring equipment be removed entirely while the slab is repaired?

RESPONSE 1: Daily samples are required every morning regardless of the monitoring equipment in place in the Receiving Chamber. Contractor and WTP staff will need to coordinate to ensure samples are collected, whether by WTP staff or the contractor. Removal of the monitoring equipment for longer than the 8-hour period listed in Specification 011000 is permitted, but the contractor is responsible for coordinating with WTP staff for extended removal periods.

QUESTION 2: Can the equipment on the West Rapid Mix concrete pedestal be removed for the duration of the slab replacement?

RESPONSE 2: The equipment on the West Rapid Mix pedestal (Peristaltic Pump for Alum Feed) must remain supported to the wall or ceiling so it can be available for emergency

use if the other feeder is out of service. The contractor is responsible for determining adequate support for the equipment during construction.

QUESTION 3: Is the contractor allowed to place a 12–16" hole in the east foundation wall of the Headhouse for vacuum and pump line access (to be patched after construction), which will require exterior excavation below grade?

RESPONSE 3: This is a viable option. The contractor is responsible for ensuring that existing utilities are not damaged during excavation and that foundation reinforcement is not disturbed when cutting the hole in the wall. The contractor must also provide a patch detail to restore the wall to current standards and prevent groundwater leakage. This detail is subject to EOR approval. Since the WTP staff is unaware of buried items outside the building, all excavation must be done using a vacuum truck. Although the contractor can consider this as a viable option, the project should bid assuming the worst-case scenario.

QUESTION 4: Will the chlorine training mentioned during the walk-through apply to every worker on site or just the superintendent? How long does the training take, and is there any other training required?

RESPONSE 4: Informational chlorine safety training is required for all personnel working at the WTP. The training typically takes about 30 minutes. No additional training is required beyond this.

END OF ADDENDUM NO. 2

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ASBESTOS REPORT

1800 River Drive North
Great Falls, MT 59401

406.761.3010
tdhengineering.com

ASBESTOS INSPECTION SUMMARY

TD&H Engineering (TD&H) performed an asbestos inspection of the Great Falls Water Treatment Plant located at 1301 Lower River Road in Great Falls, Montana on March 7, 2025. The purpose of the pre-renovation inspection was to assess building materials suspected of containing asbestos within the Head House, basement below the Head House, structural beams and trusses, and the second floor Alum Tank Room.

The inspection was performed by Mr. Kyle Groves of TD&H, a Montana-accredited asbestos inspector, in accordance with the U.S. Environmental Protection Agency (EPA) – Asbestos Hazards and Emergency Response Act (AHERA) regulation 40 CFR 763.

None of the building materials contain detectable concentrations of asbestos.

Sincerely,

Kyle Groves
MTA-6137 Exp. 2025.11.08
Industrial Hygiene Technician
TD&H ENGINEERING

Corey League, *CHMM*
MTA-5902 Exp. 2025.11.08
Project Manager
TD&H ENGINEERING

Ashley Warner
MTA-6159 Exp. 2026.01.31
Industrial Hygiene Technician
TD&H ENGINEERING

TD&H Project No: 23-232-070

Report Issue Date: March 24, 2025

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ADDENDUM NO. 2 - 9/9/2025

1800 River Drive North
Great Falls, MT 59401

406.761.3010
tdhengineering.com

March 24, 2025

Mr. Ryan Shanybrook
City of Great Falls Water Treatment Plant
1301 Lower River Road
Great Falls, Montana 59405

RE: PRE-RENOVATION ASBESTOS AND LEAD-IN-PAINT INSPECTION

GREAT FALLS WATER TREATMENT PLANT
1301 LOWER RIVER ROAD
GREAT FALLS, MONTANA 59405
TD&H ENGINEERING JOB NO. 23-232-070

Dear Mr. Shanybrook,

In accordance with our *Agreement for Engineering Services*, TD&H Engineering (TD&H) performed a limited pre-renovation asbestos and lead paint inspection of the Great Falls Water Treatment Plant on March 7, 2025. This asbestos inspection report must be kept on site during all renovation activities. A summary of the asbestos inspection is provided in **Appendix A**. The Montana Department of Environmental Quality (MDEQ) has issued new rules in 2024, and the procedure followed by TD&H reflects these rules.

PROJECT DESCRIPTION

The building is a 25,000-square-foot, concrete foundation, multi-story facility known as the Great Falls Water Treatment Plant. The building consists of metal framing and support. The interior and exterior walls of the building are concrete, brick and mortar. Ceilings are concrete and corrugated metal. The floors are concrete. The exterior consists of concrete and stone masonry. The roof is corrugated metal sheeting.

The inspection was limited to building materials subject to the planned renovation within the Head House, the basement under the Head House, and metal framing, trusses, and support beams on the first and second levels that may be impacted by the planned renovation.

ASBESTOS INSPECTION

The Administrative Rules of Montana (ARM) 17.74.354 require an asbestos inspection be completed for all building materials prior to scheduled renovation activities to determine if

asbestos-containing materials (ACM) are present. ACM is defined as any material or product that contains more than 1% asbestos. The National Emissions Standards for Hazardous Air Pollutants [NESHAP – 40 Code of Federal Regulations (CFR) 61], the United States Occupational Safety and Health Administration (OSHA), and the ARM regulate asbestos due to the respiratory hazard that airborne asbestos fibers present. The inspection was performed by Mr. Kyle Groves of TD&H, a Montana-accredited asbestos inspector, in accordance with the United States Environmental Protection Agency (EPA) – Asbestos Hazards and Emergency Response Act (AHERA) regulation 40 CFR 763. Documentation of accreditation is provided in **Appendix B**.

Building materials were identified, categorized, numbered, and placed into homogeneous areas (HAs) for sample collection and laboratory analysis. The number of samples collected from building materials identified during the inspection is based on the following:

- *Surfacing Materials:* At least three samples for surfacing materials that are 1,000 square feet (SF) or less, at least five samples for surfacing materials that are greater than 1,000 SF but less than or equal to 5,000 SF, and at least seven samples for surfacing materials that are greater than 5,000 SF.

- *Thermal System Insulation:* Three samples from each HA of thermal system insulation, which may include but is not limited to boiler insulation, mudded fittings, and expanded vermiculite insulation.

- *Miscellaneous Materials:* Three samples from each HA of miscellaneous material, such as ceiling tile, wallboard system, cove base mastic, floor tile and mastic, concrete, roofing materials, and brick mortar.

- *Materials Less Than Regulated Quantities*: At least one sample from each HA of patching material, such as replacement floor tiles or patching plaster, and materials of less than 10 SF in total area, which are not subject to regulation by the MDEQ but may still trigger OSHA requirements.

A total of three suspect building materials were identified during the inspection. Bulk samples were collected from the building in accordance with the currently recognized standard protocol developed under AHERA. Bulk samples were placed into containers and shipped to CA Labs, LLC (CA Labs) in Baton Rouge, Louisiana, for analysis using Polarized Light Microscopy (PLM) in accordance with the EPA Method 600/R-93/116. CA Labs is accredited through the National Institute of Standards and Technology's (NIST) National Voluntary Laboratory Accreditation Program (NVLAP). The point-counting technique employed by CA Labs in the analysis of these samples has a limit of detection of approximately 0.1% by volume on samples that contained asbestos at concentrations under 1%.

All samples collected during the inspection were determined to be non-asbestos containing and were listed in the report as "None Detected." These HAs are shown in Table 1. The analytical report provided by CA Labs is provided in **Appendix C**, and sample locations are shown on Figure 1A and 1B in **Appendix D**.

Table 1 Non-Asbestos-Containing Building Materials Great Falls Water Treatment Plant, Great Falls, Montana		
Homogenous Area (HA)	**Sample Description**	**Location**
G1.1	Painted Concrete	First Floor Head House
X9.1	Silver Paint	First Floor Head House
X9.2	Paper with Foam Spray	Second Floor Alum Tank Room

LEAD-IN-PAINT INSPECTION

A lead-in-paint inspection was conducted to identify painted components that may require specialized handling to comply with OSHA requirements or special disposal under the Resource Conservation and Recovery Act (RCRA), which is administered by the EPA. The inspection was performed by an experienced technician with training as a lead inspector. The lead inspection was limited to those components within and under the Head House and structural support metal components that may be impacted by the planned renovation.

Lead-Based Paint

Lead-based paint (LBP) is of concern both as a source of direct exposure through ingestion of paint chips and as a contributor to lead in interior dust and exterior soil. Regulatory agencies which have addressed lead-based paint include the EPA, Department of Housing and Urban Development (HUD), OSHA, and the Consumer Products Safety Commission (CPSC). There is no Montana state program for lead.

HUD guidelines define lead-based paint as:

- Paint in liquid form which contains an excess of 0.06%, by weight, calculated as lead metal in total nonvolatile content of the liquid paint, or
- Paint already applied which tests equal to or greater than 1.0 milligrams per square centimeter (mg/cm^2) when using X-Ray Fluorescence technology, or 5,000 milligrams per kilogram (mg/kg) (0.5% by weight) when using atomic absorption spectroscopic analysis (AA).

Lead-Containing Paint

The term “lead-containing paint” (LCP) applies to paint that has lead concentrations at less than the HUD guidelines or EPA disposal regulations. The OSHA standard for lead in the construction industry does not recognize a minimum safe concentration of lead. If any painted surface has any detectable level of lead, it must be presumed to present an occupational exposure to lead for OSHA-regulated construction work until a negative exposure assessment or exposure monitoring establishes otherwise.

Methods

A SciAps X-550 lead paint X-ray fluoroscope (XRF) was used to test paint for lead. The XRF instrument provided a real concentration of lead based on the generated spectra and an algorithm programmed into the instrument. The XRF was standardized prior to the start of the LBP inspection against lead-based paint standards provided by the manufacturer of the XRF. Painted surfaces were placed into HAs by identical colors, substrates, and building component types.

Results
A total of five HAs tested positive for lead-based paint, and six HAs were analyzed as lead-containing. These are shown in Table 2 and HAs containing LBP are bolded in the table. Results of all painted surfaces analyzed are contained in **Appendix E**, and XRF sample locations are shown in **Appendix F**.

Table 2
HAs Testing Positive for Lead Paint
Great Falls Water Treatment Plant, Great Falls, Montana

HA	Component	Substrate	Color	Highest XRF Reading (mg/cm^2)	Location	Condition
1	**Structural Support**	**Metal**	**Red**	**3.8**	**First Level by Main Entrance/Flocculation Tanks**	**Intact**
2	**Structural Support**	**Metal**	**Red**	**5.3**	**First Level by Main Entrance/Flocculation Tanks**	**Intact**
4	**Floor**	**Concrete**	**Red**	**2.3**	**First Level Head House**	**Intact**
5	Railing	Metal	Gray	0.2	First Level Head House	Intact
6	Wheel Pedestal	Metal	Gray/Silver	0.2	First Level Head House	Intact
7	Wheel	Metal	Black	0.1	First Level Head House	Intact
8	**Wall**	**Brick and Mortar**	**Biege**	**1.7**	**First Level Head House**	**Poor**
9	**Door Trim**	**Wood**	**Biege**	**5.3**	**First Level Head House**	**Fair**
12	Floor Panel	Wood	Gray	0.5	First Level Head House	Fair
13	Floor	Concrete	Gray	0.2	Basement	Fair
16	Support	Metal	Red	0.1	Basement	Intact

RECOMMENDATIONS

The following recommendations for materials containing asbestos or lead are based on our observations and the anticipated scope of renovation.

Asbestos
Since none of the suspect materials were determined by laboratory analysis to contain asbestos, no further action is required regarding asbestos. Additional sampling may be necessary if site activities expose other suspect materials or the scope of work changes to include suspect materials not described in this report.

Lead

Work involving components covered with paint containing lead is governed by OSHA regulations. Disposal of lead, paint containing lead or building materials covered with paint containing lead is governed by EPA regulations.

EPA's Lead Renovation, Repair and Painting (RRP). EPA's Lead-Based Paint Renovation, Repair and Painting Program Rule contained in 40 CFR Part 745, Subpart E, requires workers to be trained to use lead-safe work practices and requires renovation firms to be EPA-certified; these requirements became effective April 22, 2010. The RRP rule specifically applies to child occupied facilities or pre-1978 housing per HUD regulations. Since the building involved in the renovation does not meet this definition, only the EPA and OSHA regulations described below will apply.

EPA Regulations for Disposal of Lead-Based Paint Components. When a waste stream tested using the Toxicity Characteristic Leaching Procedure (TCLP) per the Resource Conservation and Recovery Act (RCRA) TCLP Rule (40 CFR 261.24) results in a concentration of 5 milligrams per liter or greater, these materials exceed regulatory standard for hazardous waste disposal. Wasting of these materials or components will therefore require specialized handling, transport, and disposal in a landfill licensed to accept the hazardous waste (Class I landfill).

Occupational Safety and Health Administration. Some of the lead-based and lead-containing painted surfaces found in this inspection are not intact and may present a hazard to employees involved in the renovation. Refer to Table 2 for the list of lead-based and lead-containing painted surfaces. If these components are disturbed in a manner such as described below, then a hazardous condition may result and will need to be addressed according to OSHA regulations.

The OSHA standard for Lead in Construction, 29 CFR 1926, does not recognize a safe level of lead in dried paint to which workers may be exposed in an occupational setting. Consequently, any disturbance to painted surfaces which contain a measurable quantity of lead must be considered as having the potential to create a risk to workers.

The OSHA standard cites a Permissible Exposure Level (PEL) of 50 micrograms of lead per cubic meter of air ($\mu g/m^3$) and an Action Level (AL) of 30 $\mu g/m^3$. Any amount above these levels triggers several safety and health provisions, including, but not limited to:

1. A respiratory protection program
2. Personal protective clothing and equipment
3. Changing areas including segregated storage of work and non-work clothing
4. Hand-washing facilities
5. Blood testing
6. Employee training

Also, if an employee is performing any of the following tasks:

1. Manual demolition, dry scraping, or dry sanding
2. Heat gun applications
3. Power tool cleaning
4. Other industrial operations involving lead as specified in the OSHA standards, then all the above-mentioned safety items must be provided to the employees. If it is found that either the AL or the PEL is being exceeded, then other safety requirements must be met.

A negative exposure assessment (NEA) should be completed on employees that are performing the work. The NEA would ensure that good work practices may prevent employee exposure to elevated concentrations of airborne lead. The NEA should be performed on the

same employees, using the same methods and using the same tools that will be used for the duration of the project.

Recommended Response Actions. Recycling is the preferable method of dealing with metal components coated with LBP and LCP from both an environmental and economic standpoint. Most scrap metal recyclers are equipped to properly handle lead painted components. A copy of this report may be made available to the recycler and the landfill at your direction.

TCLP sampling of the waste stream may be required by High Plains Sanitary Landfill which serves the Great Falls area if LBP is present. If results are equal to or greater than 5.0 mg/L of lead, either removal of LBP or chemical fixation may be needed. If neither of these solutions is practical, the components must be disposed of in a Class I landfill.

Any work with LBP and LCP that has the potential to expose workers to airborne lead at or above the AL or PEL should be performed by a contractor using lead safe work practices.

LIMITATIONS

This asbestos and lead-in-paint inspection report was prepared based on information gathered during one site visit and interpretations of laboratory analytical results provided by CA Labs. The inspection report is intended to provide information concerning the various types of building materials that were considered suspect for containing asbestos or lead-in-paint and to inform you of which building materials tested positive.

Most building components were visible and accessible at the time of our site visit. However, additional suspect materials may be encountered during renovations activities. If work will disturb materials in addition to those included in this report, TD&H should be contacted and may need to be present during these activities.

This asbestos and lead-in-paint inspection report is intended for use by the City of Great Falls Water Treatment Plant and their clients. The scope of services performed by TD&H Engineering may not be appropriate to satisfy the needs of other users, and any use or re-use of this document, or the findings presented herein, is at the sole risk of the user.

CLOSING

We appreciate the opportunity to provide these industrial hygiene-consulting services to you and look forward to assisting you through the remainder of the project. Should you have questions or need further clarification about information contained herein, please feel free to contact us at (406) 761-3010.

Sincerely,

Kyle Groves
MTA-6137 Exp. 2025.11.08
Industrial Hygiene Technician
TD&H ENGINEERING

Corey League, *CHMM*
MTA-5902 Exp. 2025.11.08
Project Manager
TD&H ENGINEERING

Ashley Warner
MTA-6159 Exp. 2026.01.31
Industrial Hygiene Technician
TD&H ENGINEERING

APPENDICES:

	A	ASBESTOS INSPECTION SUMMARY
	B	DOCUMENTATION OF ACCREDITATION
	C	ASBESTOS LABORATORY REPORT
	D	ASBESTOS SAMPLE LOCATIONS
	E	PAINT SAMPLE RESULTS
	F	PAINT SAMPLE LOCATIONS

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APPENDIX A
ASBESTOS INSPECTION SUMMARY

1800 River Drive North
Great Falls, MT 59401

406.761.3010
tdhengineering.com

ASBESTOS INSPECTION SUMMARY

TD&H Engineering (TD&H) performed an asbestos inspection of the Great Falls Water Treatment Plant located at 1301 Lower River Road in Great Falls, Montana on March 7, 2025. The purpose of the pre-renovation inspection was to assess building materials suspected of containing asbestos within the Head House, basement below the Head House, structural beams and trusses, and the second floor Alum Tank Room.

The inspection was performed by Mr. Kyle Groves of TD&H, a Montana-accredited asbestos inspector, in accordance with the U.S. Environmental Protection Agency (EPA) – Asbestos Hazards and Emergency Response Act (AHERA) regulation 40 CFR 763.

None of the building materials contain detectable concentrations of asbestos.

Sincerely,

Kyle Groves
MTA-6137 Exp. 2025.11.08
Industrial Hygiene Technician
TD&H ENGINEERING

Corey League, *CHMM*
MTA-5902 Exp. 2025.11.08
Project Manager
TD&H ENGINEERING

Ashley Warner
MTA-6159 Exp. 2026.01.31
Industrial Hygiene Technician
TD&H ENGINEERING

TD&H Project No: 23-232-070

Report Issue Date: March 24, 2025

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APPENDIX B
DOCUMENTATION OF ACCREDITATION

KYLE A GROVES

ADDENDUM NO. 2 - 9/9/2025

has met the requirements of Montana Administrative Rule 17.74.362 and/or 17.74.363 for accreditation in the following asbestos occupation(s) through the specified expiration date(s).

MTA-6137

Asbestos Inspector	11/08/2025
Project Contractor/Supervisor	11/07/2025

MT DEQ Asbestos Control Program

KYLE A GROVES
46 S MANCHECTER RD
GREAT FALLS MT 59404

TD&H Engineering

LEAD BASED PAINT RISK ASSESSOR

Initial Certificate

Kyle Groves

has completed a Lead Risk Assessor Initial Training Course
Presented by TD&H Engineering using EPA-Accredited Curriculum from EHS Materials

Director of Training	Peter Klevberg, PE
Expiration Date	December 8, 2026
Dates of Course	7-17-23 thru 12-08-23
Test Passage	December 8, 2023
Certificate No.	120823-01

Course Location	TD&H Engineering 1800 River Drive North Great Falls, MT 59401 406.761.3010

ASHLEY WARNER

ADDENDUM NO. 2 - 9/9/2025

has met the requirements of Montana Administrative Rule 17.74.362 and/or 17.74.363 for accreditation in the following asbestos occupation(s) through the specified expiration date(s).

MTA-6159

Asbestos Inspector	01/31/2026
Project Contractor/Supervisor	01/30/2026

MT DEQ Asbestos Control Program

ASHLEY WARNER
1800 RIVER DRIVE NORTH
GREAT FALLS MT 59401

HOMER C LEAGUE

ADDENDUM NO. 2 - 9/9/2025

has met the requirements of Montana Administrative Rule 17.74.362 and/or 17.74.363 for accreditation in the following asbestos occupation(s) through the specified expiration date(s).

MTA-5902

Asbestos Inspector	11/08/2025
Project Contractor/Supervisor	11/07/2025
Project Designer	11/06/2025

MT DEQ Asbestos Control Program

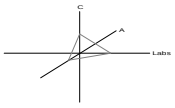
HOMER C LEAGUE
1800 RIVER DRIVE NORTH
GREAT FALLS MT 59401

APPENDIX C
ASBESTOS LABORATORY REPORT

ADDENDUM NO. 2 - 9/9/2025

CA Labs
Dedicated to Quality

CA Labs, L.L.C.
12232 Industriplex, Suite 32
Baton Rouge, LA 70809
Phone 225-751-5632
Fax 225-751-5634



NVLAP #200772-0
TDSHS #300370
CDPHE #AL-18111
LELAP #03069

Materials Characterization - Bulk Asbestos Analysis

Laboratory Analysis Report - Polarized Light

TD & H Engineering
1800 River Drive North
Great Falls, MT 59401

Attn: Corey League
Customer Project: WTP
Reference #: CBR25031999 Date: 3/17/2025

Analysis and Method

Summary of polarizing light microscopy (PLM / Stereomicroscopy bulk asbestos analysis) using the methods described in 40CFR Part 763 Appendix E to Subpart E (Interim and EPA 600 / R-93 / 116 (Improved). The sample is first viewed with the aid of stereomicroscopy. Numerous liquid slide preparations are created for analysis under the polarized microscope where identifications and quantifications are preformed. Calibrated liquid refractive oils are used as liquid mouting medium. These oils are used for identification (dispersion staining). A calibrated visual estimation is reported, should any asbestiform mineral be present. Other techniques such as acid washing are used in conjugation with refractive oils for detection of smaller quantities of asbestos. All asbestos percentages are based on calibrated visual estimation traceable to NIST standards for regulated of asbestos. Traceability to measurement and calibration is achieved by using known amounts and types of asbestos from standards where analyst and laboratory accuracy are measured. As little as 0.001% asbestos can be detected in favorable samples, while detection in unfavorable samples may approach the detection limit of 0.50% (well above the laboratory definition of trace).

Discussion

Vermiculite containing samples may have trace amounts of actinolite-tremolite, where not found be PLM should be analyzed using TEM methods and / or water separation techniques. Suspected actinolite/vermiculite presence will be indicated through the sample comment section of this report.

Fibrous talc containing samples may even contain a related asbestos fiber known as anthophyllite. Under certain conditions the same fiber may actually contain both talc and anthophyllite (a phenomenon called intergrowth). Again, TEM detection methods are recommended. CA Labs PLM report comments will denote suspected amounts of asbestiform anthophyllite with talc, where further analysis is recommended.

Some samples (floor tiles, surfacings, etc.) may contain fibers too small to be detectable by PLM analysis and should be analyzed by TEM bulk protocols.

A "trace asbestos" will be reported if the analyst observes far less than 1% asbestos. CA Labs defines "trace asbestos" as a few fibers detected by the analyst in several preparations and will indicate as such under these circumstances.

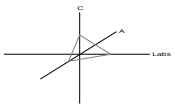
Quantification of <1% will actually be reported as <=1% (allowable variance close to 1% is high). Such results are ideal for point counting, and the technique is mandatory for friable samples (NESHAP, Nov. 1990 and clarification letter 8 May 1991) under 1% percent asbestos and the "trace asbestos". **In order to make all initial PLM reports issued from CA Labs NESHAP compliant, all <1% asbestos results (except floor tiles) will be point counted at no additional charge.**

Qualifications

CA Labs is accredited by the National Voluntary Accreditation Program (NVLAP) for selected test methods for airborne fiber analysis (TEM), and for bulk asbestos fiber analysis (PLM). All analysts have a college degree in a natural science (geology, biology, or environmental science) or are recognized by a state professional board in one these disciplines .Extensive in-house training programs are used to augment education background of the analyst. The group leader of polarized light has received supplemental McCrone Research training for asbestos identification. This report is not covered by the scope of AIHA accreditation. Analysis performed at CA Labs, LLC 12232 Industriplex, Suite 32 Baton Rouge, LA 70809.

CA Labs
Dedicated to Quality

CA Labs, L.L.C.
12232 Industriplex, Suite 32
Baton Rouge, LA 70809
Phone 225-751-5632
Fax 225-751-5634



NVLAP #200772-0
TDSHS #300370
CDPHE #AL-18111
LELAP #03069

Overview of Project Sample Material Containing Asbestos

Customer Project: WTP **CA Labs Project #:** CBR25031999

Sample #	Layer #	Analysts Physical Description of Subsample	Asbestos type / calibrated visual estimate percent	List of Affected Building Material Types

No Asbestos Detected.

Glossary of abbreviations (non-asbestos fibers and non-fibrous minerals):

ca - carbonate	pe - perlite	fg - fiberglass	pa - palygorskite (clay)
gypsum - gypsum	qu - quartz	mw - mineral wool	
bi - binder		wo - wollastinite	
or - organic		ta - talc	
ma - matrix		sy - synthetic	
mi - mica		ce - cellulose	
ve - vermiculite		br - brucite	
ot - other		ka - kaolin (clay)	

ADDENDUM NO. 2 - 9/9/2025

CA Labs
Dedicated to Quality

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Baton Rouge, LA 70809
Phone 225-751-5632
Fax 225-751-5634

NVLAP #200772-0
TDSHS #300370
CDPHE #AL-18111
LELAP #03069

Polarized Light Asbestiform Materials Characterization

Customer Info: **Attn:** Corey League
TD & H Engineering
1800 River Drive North
Great Falls, MT 59401

Phone # 406-761-3010
Fax # 406-727-2872

Customer Project: WTP

Turnaround Time: 5 day

CA Labs Project #: CBR25031999

Date: 3/17/2025
Samples Received: 3/11/2025
Date Of Sampling: 3/7/2025
Purchase Order #: 23-232

Sample #	Comment	Layer #	Analysts Physical Description of Subsample	Homogeneous (Y/N)	Asbestos type / calibrated visual estimate percent	Non-asbestos fiber type / percent	Non-fibrous type / percent
G1.1A		*G1.1A-1*	*Gray Surfaced Gray Concrete*	*N*	***None Detected***		100% qu, bi, ma, ca
G1.1B		*G1.1B-1*	*Gray and Tan Surfaced Gray Concrete*	*N*	***None Detected***		100% qu, bi, ma, ca
G1.1C		*G1.1C-1*	*Tan Surfaced Gray Concrete*	*N*	***None Detected***		100% qu, bi, ma, ca
X9.1A		*X9.1A-1*	*Silver Surfacing*	*Y*	***None Detected***		100% qu, bi
X9.1B		*X9.1B-1*	*Silver Surfacing*	*Y*	***None Detected***		100% qu, bi
X9.1C		*X9.1C-1*	*Silver Surfacing*	*Y*	***None Detected***		100% qu, bi
X9.2A		*X9.2A-1*	*Black Surfaced Yellow Foam Insulation*	*N*	***None Detected***		100% qu, bi, ot

Analysis Method: Interim (40CFR Part 763 Appendix E to Subpart E) / Improved (EPA-600 / R-93/116)
Preparation Method: HCL acid washing for carbonate based samples, chemical reduction for organically bound components, oil immersion for identification of asbestos types by dispersion attaining / becke line method.

ca - carbonate	mi - mica	fg - fiberglass	ce - cellulose
gypsum - gypsum	ve - vermiculite	mw - mineral wool	br - brucite
bi - binder	ot -other	wo - wollastinite	ka - kaolin (clay)
or - organic	pe - perlite	ta - talc	pa - palygorskite (clay)
ma - matrix	qu - quartz	sy - synthetic	

Approved Signatories:

Corinne Barr
Analyst

Senior Analyst
Alicia Stretz

Laboratory Director
Chris Williams

1. Fire Damage significant fiber damage - reported percentages reflect unaltered fibers
2. Fire Damage no significant fiber damages effecting fibrous percentages
3. Actinolite in association with Vermiculite
4. Layer not analyzed - attached to previous positive layer and contamination is suspected
5. Not enough sample to analyze
6. Anthophyllite in association with Fibrous Talc
7. Contamination suspected from other building materials
8. Favorable scenario for water separation on vermiculite for possible analysis by another method
9. < 1% Result point counted positive
10. TEM analysis suggested

ADDENDUM NO. 2 - 9/9/2025

CA Labs
Dedicated to Quality

CA Labs, L.L.C.
12232 Industriplex, Suite 32
Baton Rouge, LA 70809
Phone 225-751-5632
Fax 225-751-5634

NVLAP #200772-0
TDSHS #300370
CDPHE #AL-18111
LELAP #03069

Polarized Light Asbestiform Materials Characterization

Customer Info: **Attn:** Corey League
TD & H Engineering
1800 River Drive North
Great Falls, MT 59401

Phone # 406-761-3010
Fax # 406-727-2872

Customer Project: WTP

Turnaround Time: 5 day

CA Labs Project #: CBR25031999

Date: 3/17/2025
Samples Received: 3/11/2025
Date Of Sampling: 3/7/2025
Purchase Order #: 23-232

Sample #	Comment	Layer #	Analysts Physical Description of Subsample	Homogeneous (Y/N)	Asbestos type / calibrated visual estimate percent	Non-asbestos fiber type / percent	Non-fibrous type / percent
X9.2B		*X9.2B-1*	*Black Surfaced Yellow Foam Insulation*	*N*	***None Detected***		100% qu, bi, ot
X9.2C		*X9.2 C-1*	*Black Surfaced Yellow Foam Insulation*	*N*	***None Detected***		100% qu, bi, ot

Analysis Method: Interim (40CFR Part 763 Appendix E to Subpart E) / Improved (EPA-600 / R-93/116)
Preparation Method: HCL acid washing for carbonate based samples, chemical reduction for organically bound components, oil immersion for identification of asbestos types by dispersion attaining / becke line method.

ca - carbonate	mi - mica	fg - fiberglass	ce - cellulose
gypsum - gypsum	ve - vermiculite	mw - mineral wool	br - brucite
bi - binder	ot -other	wo - wollastinite	ka - kaolin (clay)
or - organic	pe - perlite	ta - talc	pa - palygorskite (clay)
ma - matrix	qu - quartz	sy - synthetic	

Approved Signatories:

Corinne Barr
Analyst

Senior Analyst
Alicia Stretz

Laboratory Director
Chris Williams

1. Fire Damage significant fiber damage - reported percentages reflect unaltered fibers
2. Fire Damage no significant fiber damages effecting fibrous percentages
3. Actinolite in association with Vermiculite
4. Layer not analyzed - attached to previous positive layer and contamination is suspected
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6. Anthophyllite in association with Fibrous Talc
7. Contamination suspected from other building materials
8. Favorable scenario for water separation on vermiculite for possible analysis by another method
9. < 1% Result point counted positive
10. TEM analysis suggested

COR 250319 99

ADDENDUM NO. 2 - 9/9/2025

Shipping: $30.00

CHAIN-OF-CUSTODY RECORD

WTP
Project or Site Name

23-232
TD&H Project Number

Kyle A. Groves
Sampler Name (Printed)

Corey League
Project Manager, Report to

TD&H Engineering

1800 River Drive North
Great Falls, MT 59401
Ph: 406-761-3010
Fax: 406-727-2872

e-mail: Corey.League@tdhengineering.com
Kyle.groves@tdhengineering.com
peter.klevberg@tdhengineering.com

CA Laboratories, LLC
Laboratory

Attn:
12232 Industriplex Blvd, Suite 32
Address
Baton Rouge LA 70809
City **Sta Zip**
225-751-5632
Phone: **Fax:**

Date Collected	Sample No.	Sample Location Description	Comp or Grab	Sample Matrix	No. of Containers	Analyses Required: PLM				Turn Around	Notes	Lab No.
3/7/2025	G1.1.A	Head House	Grab	Concrete w/paint	1	x				5 Day		
3/7/2025	G1.1.B	Head House	Grab	Concrete w/paint	1	x				5 Day		
3/7/2025	G1.1.C	Head House	Grab	Concrete w/paint	1	x				5 Day		
3/7/2025	X9.1.A	Head House	Grab	Silver Paint	1	x				5 Day		
3/7/2025	X9.1.B	Head House	Grab	Silver Paint	1	x				5 Day		
3/7/2025	X9.1.C	Head House	Grab	Silver Paint	1	x				5 Day		
3/7/2025	X9.2.A	Tank area above head house	Grab	Paper and foam spray	1	x				5 Day		
3/7/2025	X9.2.B	Tank area above head house	Grab	Paper and foam spray	1	x				5 Day		
3/7/2025	X9.2.C	Tank area above head house	Grab	Paper and foam spray	1	x				5 Day		

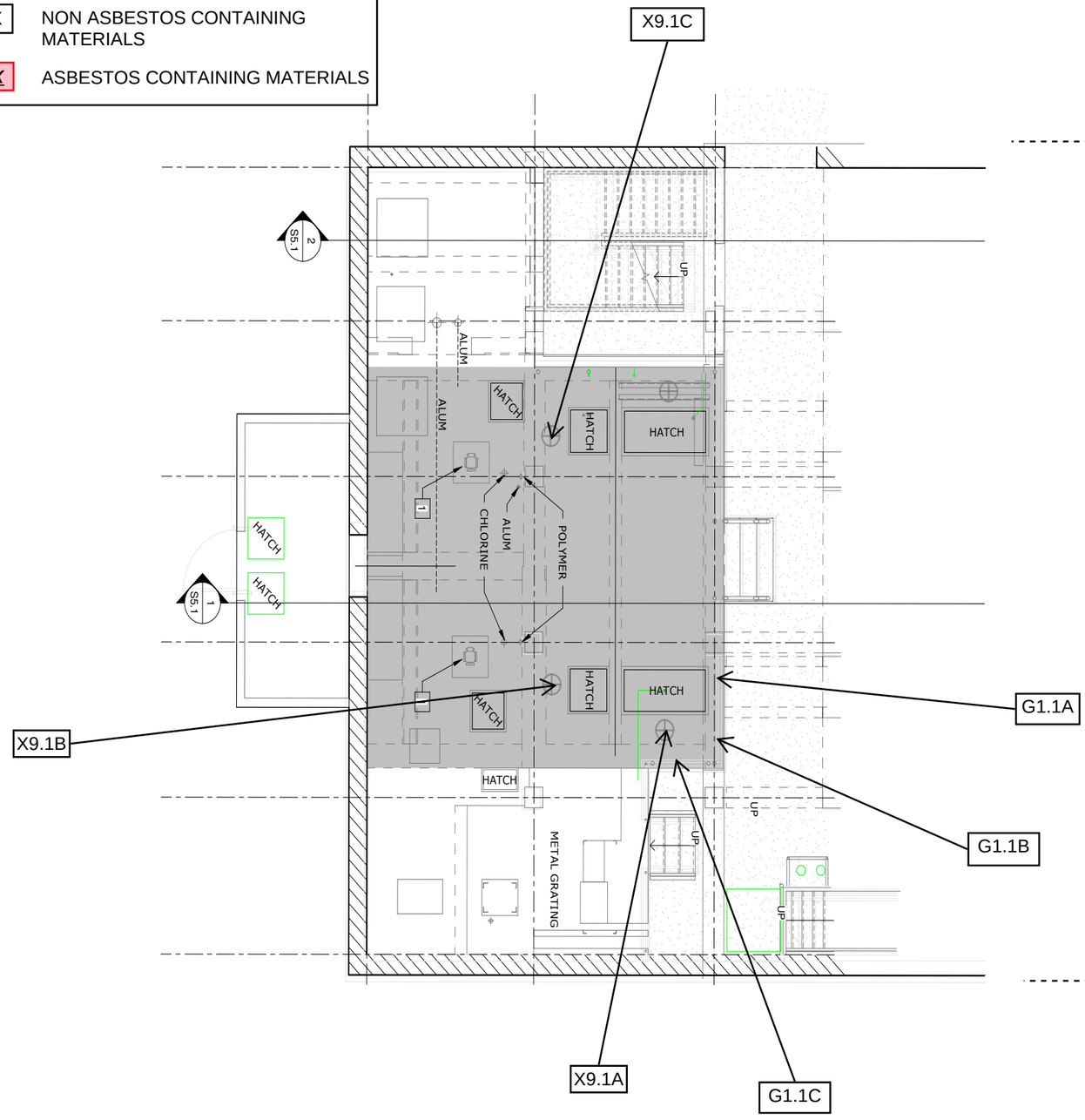
Relinquished by: Kyle A. Groves	Date & Time: 03/10/25 1500	Received by:
Relinquished by:	Date & Time: 3/11/25 10:45	Received by:
Relinquished by:	Date & Time:	Received by:

APPENDIX D
ASBESTOS SAMPLE LOCATIONS

ADDENDUM NO. 2 - 9/9/2025

NOT FOR CONSTRUCTION

LEGEND	
0.0X	NON ASBESTOS CONTAINING MATERIALS
0.0X	ASBESTOS CONTAINING MATERIALS



LEVEL 1
1/4" = 1'-0"

Main Entrance

REV	DATE	REVISION

TD&H Engineering
tdhengineering.com

DRAWN BY:
DESIGNED BY:
QUALITY CHECK:
DATE:
JOB NO. 23-232-070
FIELDBOOK

GREAT FALLS WATER TREATMENT PLANT ASBESTOS SAMPLE LOCATIONS

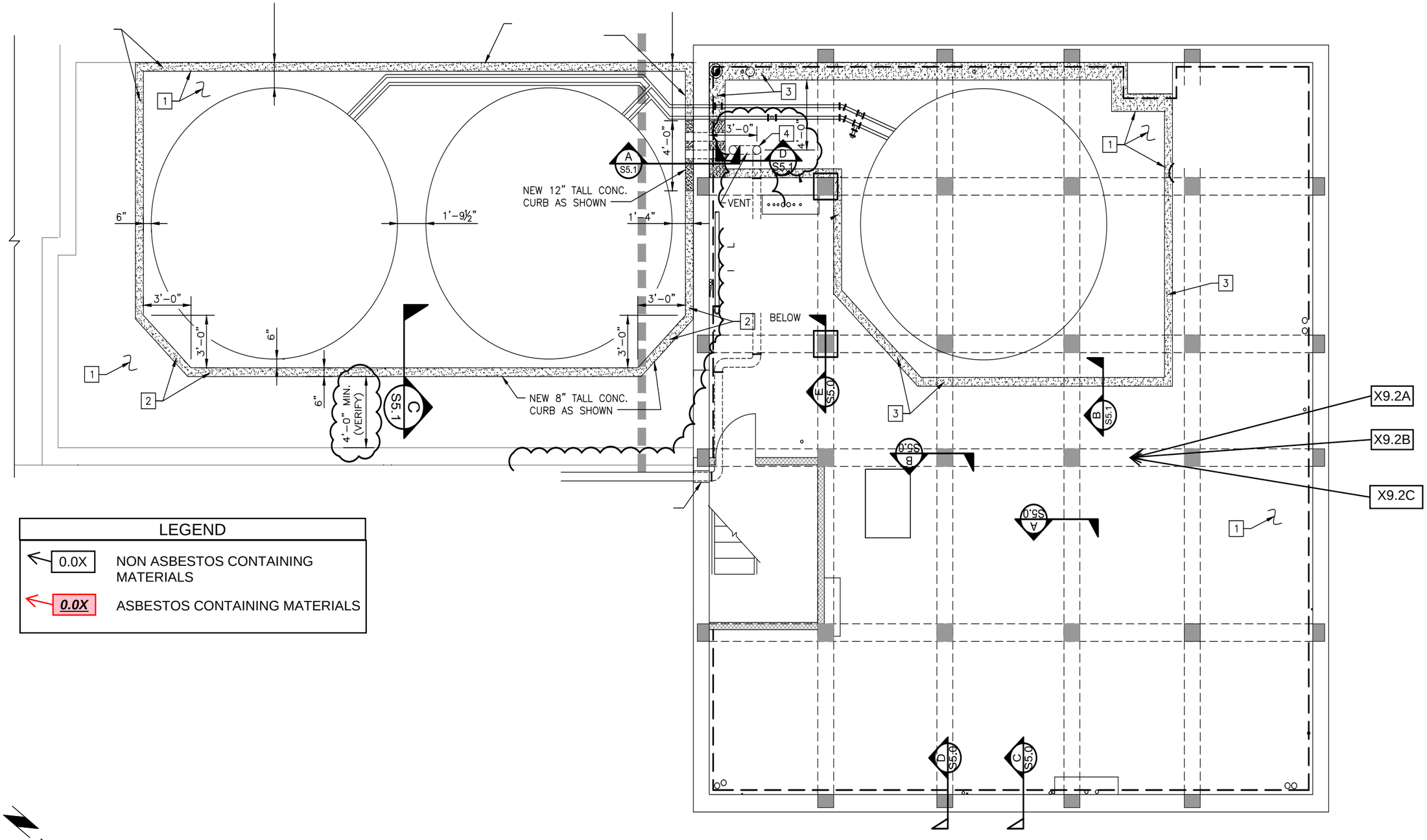
GREAT FALLS, MONTANA

DRAWING3.DWG

SHEET FIGURE 1A

Drawing3.dwg, 10/5/2017 1:09:22 PM, KBP

ADDENDUM NO. 2 - 9/9/2025



LEGEND	
0.0X	NON ASBESTOS CONTAINING MATERIALS
0.0X	ASBESTOS CONTAINING MATERIALS

SECOND FLOOR ALUM ROOM

NOT FOR CONSTRUCTION

REV	DATE	REVISION

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GREAT FALLS WATER TREATMENT PLANT ASBESTOS SAMPLE LOCATIONS

GREAT FALLS, MONTANA

DRAWING3.DWG

SHEET FIGURE 1B

Drawing3.dwg, 10/5/2017 1:09:22 PM, KBP

APPENDIX E
PAINT SAMPLE RESULTS

ADDENDUM NO. 2 - 9/9/2025

LBP Room by Room Summary

Project: Great Falls Water Treatment Plant Lead Paint Inspection
Project #: 23-232-070
Date: 3/7/2025
Technician: Kyle Groves

Lead Free Paint
Lead-Containing Paint
Lead-Based Paint

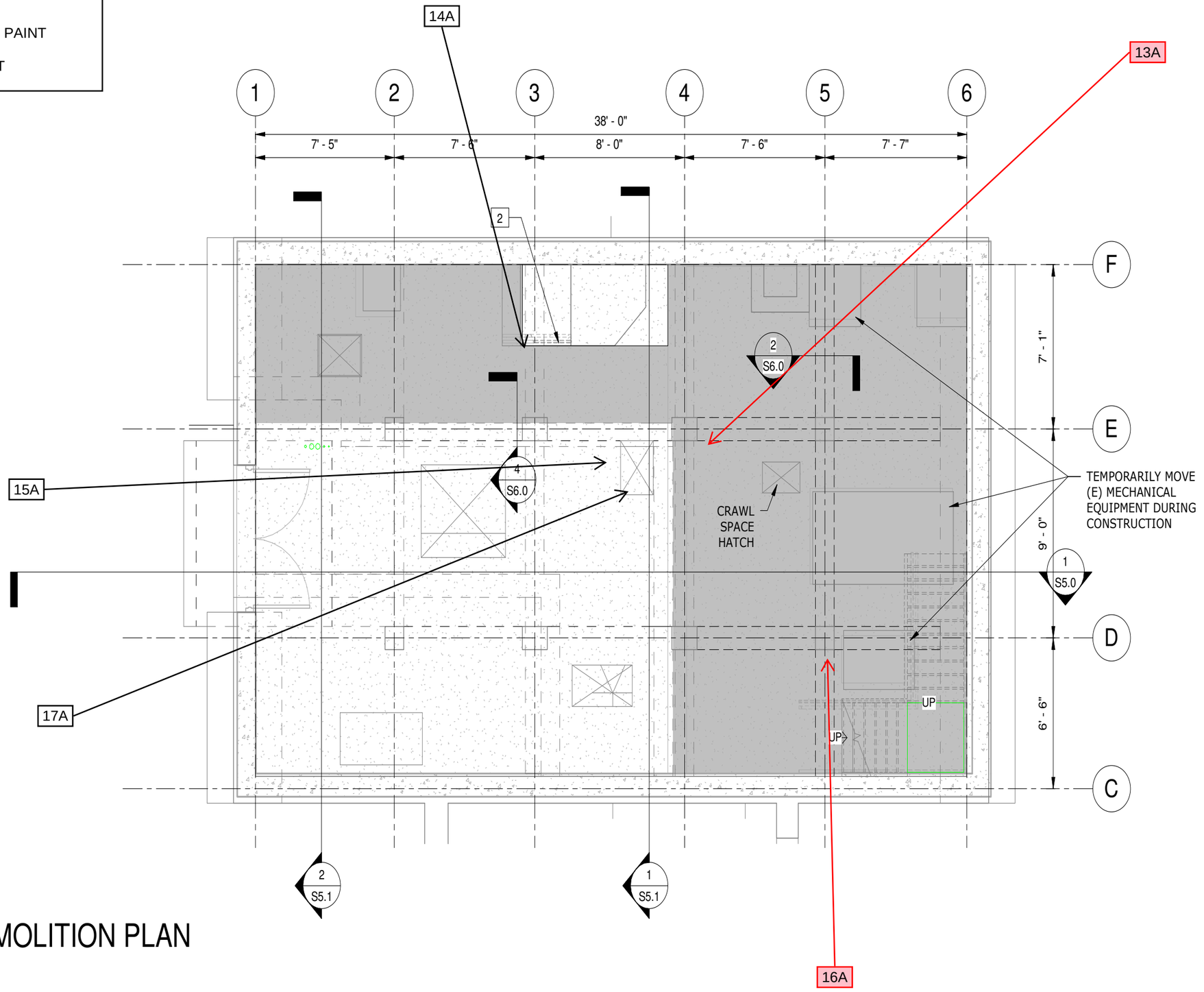
Test #	Component	Substrate	Color	Basement	First Level Head House	First Level Main Entrance/Floc Tank Room	Second Floor/Alum Tank Room			
1	Structural Support	Metal	Red			X A=3.8				
2	Structural Support	Metal	Red			X A=5.3				
3	Floor	Concrete	Gray		X A=0.0					
4	Floor	Concrete	Red		X A=2.3					
5	Railing	Metal	Gray		X A=0.2					
6	Wheel Pedestal	Metal	Gray/Silver		X A=0.2					
7	Wheel	Metal	Black		X A=0.1					
8	Wall	Brick and Mortar	Biege		X A=1.7					
9	Door Trim	Wood	beige		X A=5.3					
10	Column	Metal	White		X A=0.0					
11	Wall	Brick and Mortar	Yellow		X A=0.0					
12	Floor Panel	Wood	Gray		X A=0.5					
13	Floor	Concrete	Gray	X A=0.2						
14	Hand Rail	Metal	Silver	X A=0.0						
15	Ceiling	Concrete	White	X A=0.0						
16	Support	Metal	Red	X A=0.1						
17	Equipment	Metal	Light Green	X A=0.0						
18	Structural Support Beam	Metal	Red				X A=0.0			

APPENDIX F
PAINT SAMPLE LOCATIONS

ADDENDUM NO. 2 - 9/9/2025

NOT FOR CONSTRUCTION

LEGEND	
00X	LEAD FREE PAINT
00X	LEAD-CONTAINING PAINT
00X	LEAD-BASED PAINT



BASEMENT DEMOLITION PLAN

1/4" = 1'-0"

REV	DATE	REVISION

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DATE:
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GREAT FALLS WATER TREATMENT PLANT LEAD IN PAINT SAMPLE LOCATIONS

GREAT FALLS, MONTANA

DRAWING3.DWG

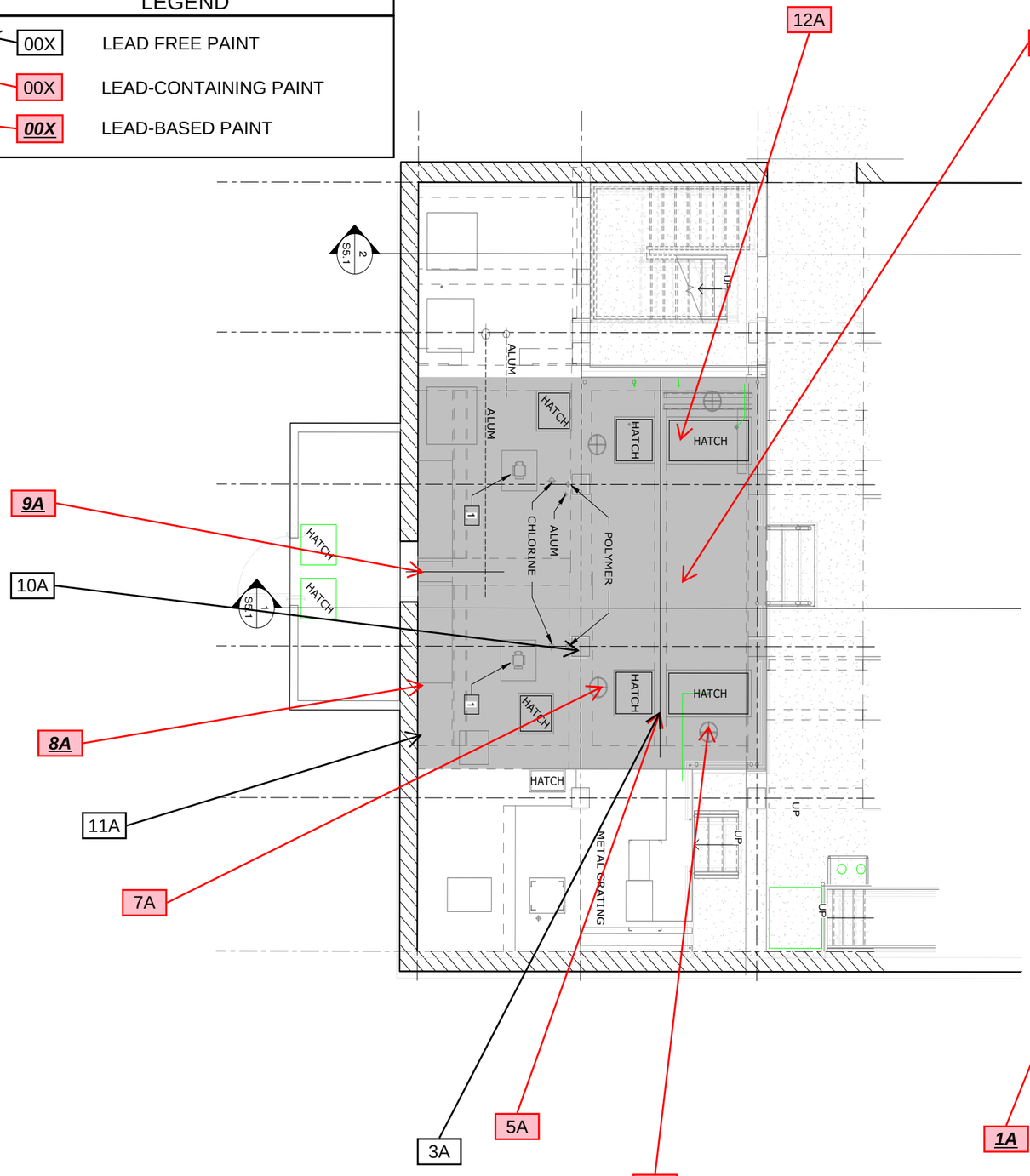
SHEET FIGURE 2A

Drawing3.dwg, 10/5/2017 1:09:22 PM, KBP

ADDENDUM NO. 2 - 9/9/2025

NOT FOR CONSTRUCTION

LEGEND	
00X	LEAD FREE PAINT
00X	LEAD-CONTAINING PAINT
00X	LEAD-BASED PAINT



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

REVISION | DATE | REV

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JOB NO. 23-232-070
FIELDBOOK

GREAT FALLS WATER TREATMENT PLANT LEAD IN PAINT SAMPLE LOCATIONS

GREAT FALLS, MONTANA

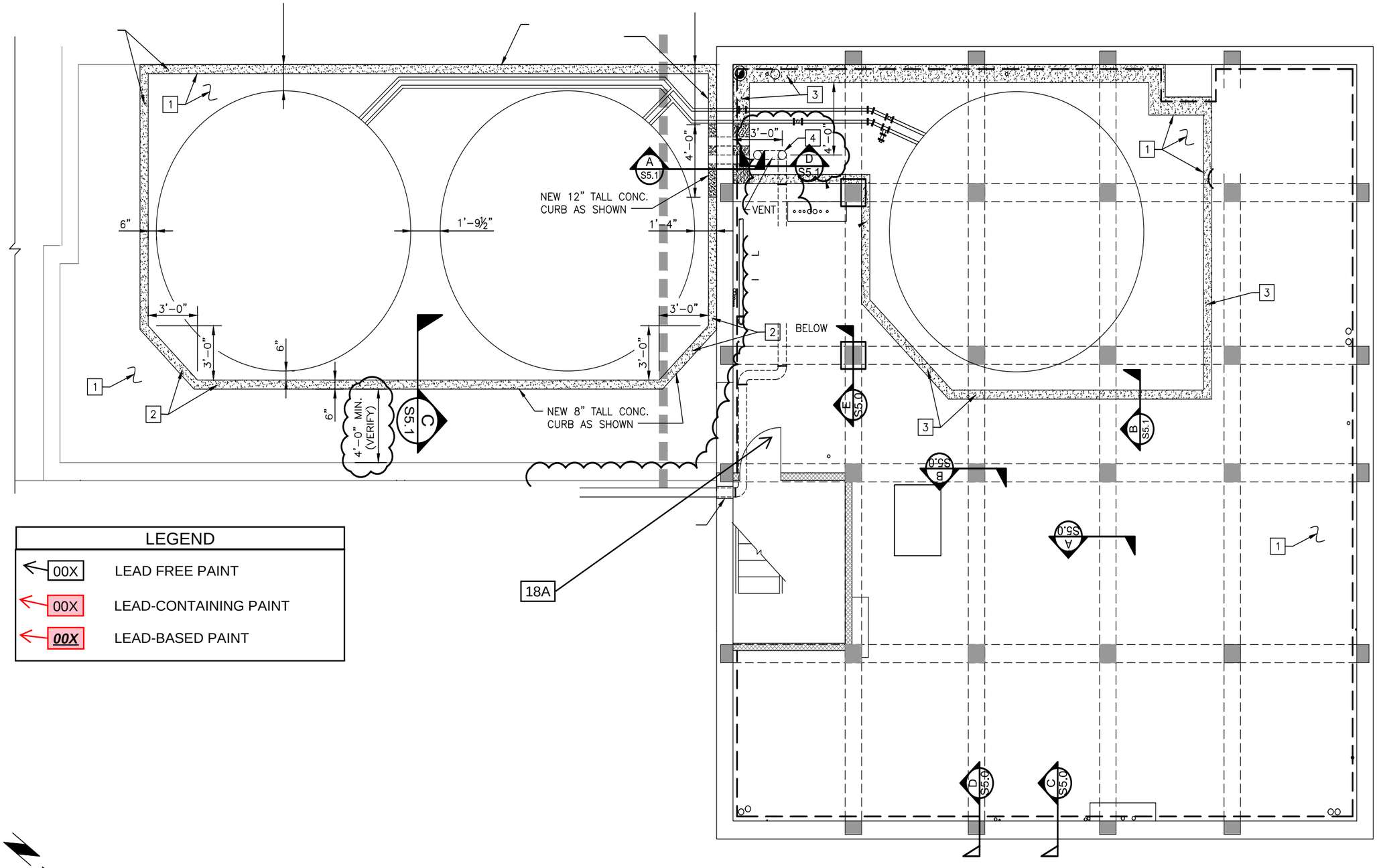
DRAWING3.DWG

SHEET FIGURE 2B

Drawing3.dwg, 10/5/2017 1:09:22 PM, KBP

ADDENDUM NO. 2 - 9/9/2025

NOT FOR CONSTRUCTION



LEGEND	
00X	LEAD FREE PAINT
00X	LEAD-CONTAINING PAINT
00X	LEAD-BASED PAINT

SECOND FLOOR ALUM ROOM

REV	DATE	REVISION

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DESIGNED BY:
QUALITY CHECK:
DATE:
JOB NO. 23-232-070
FIELDBOOK

GREAT FALLS WATER TREATMENT PLANT LEAD PAINT SAMPLE LOCATIONS

GREAT FALLS, MONTANA

DRAWING3.DWG

SHEET FIGURE 2C

Drawing3.dwg, 10/5/2017 1:09:22 PM, KBP

SPECIFICATION 011000

SECTION 011000 - SUMMARY

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Project information.
2. Work covered by Contract Documents.
3. Phased construction.
4. Contractor's use of site and premises.
5. Coordination with occupants.
6. Work restrictions.

1.2 PROJECT INFORMATION

A. Project Identification: Great Falls Water Treatment Plant Headhouse Repairs.

1. Project Location: 1301 Lower River Rd, Great Falls, MT 59405.

B. Owner: City of Great Falls.

1. Owner's Representative: Ryan Shaneybrook (406-771-1258).

1.3 WORK COVERED BY CONTRACT DOCUMENTS

A. The Work of Project is defined by the Contract Documents and includes, but is not limited to, the following:

1. Repairs to the basement, main floor, roof trusses and other work indicated in the Contract Documents.

1.4 PHASED CONSTRUCTION

A. Construct the work in phases, with each phase substantially complete as indicated below.

1. Phase 1:

a. Work Items

1) Demolish and Replace Receiving Chamber lid with stainless framing and stainless plates.
2) Demolish and Replace Rapid Mix and Settled Water Flume with new concrete lids.

3) Demolish and Replace East operating floor with new stainless framing and stainless or fiberglass grating.
4) Remove and Replace all handrail with new stainless.

b. Commencement of Construction:

1) Notice to Proceed: Contractor shall begin work after receiving the Notice to Proceed.
2) Start Date: Work of this phase shall commence by October 2025.

c. Substantial Completion:

1) By May 2026.

2. Phase 2:

a. Work Items

1) Remove and Reinstall heating system
2) Install new heat pump
3) Demolish and Replace basement floor.

b. Commencement of Construction

1) Start Date: Work of this phase shall commence by May 2026.

c. Substantial Completion:

1) By August 2026

B. Before commencing Work of each phase, submit an updated copy of Contractor's construction schedule, showing the sequence, commencement and completion dates for all phases of the Work.

1.5 CONTRACTOR'S USE OF SITE AND PREMISES

A. Restricted Use of Site: Each Contractor shall have limited use of Project site for construction operations as indicated on Drawings by the Contract limits and as indicated by requirements of this Section.

B. Limits on Use of Site: Limit use of Project site to Work in areas indicated. Do not disturb portions of Project site beyond areas in which the Work is indicated.

1. Limits on Use of Site: Confine construction operations to Main operating floor, basement beneath the operating floor BUT NOT THE CHLORINE ROOM, 2nd floor chemical room and filter room.
2. Driveways, Walkways and Entrances: Keep driveways loading areas, and entrances serving premises clear and available to Owner, Owner's employees, and emergency vehicles at all times. Do not use these areas for parking or for storage of materials.

a. Schedule deliveries to minimize use of driveways and entrances by construction operations.
b. Schedule deliveries to minimize space and time requirements for storage of materials and equipment on-site.

C. Condition of Existing Building: Maintain portions of existing building affected by construction operations in a weathertight condition throughout construction period. Repair damage caused by construction operations.

1.6 COORDINATION WITH OCCUPANTS

A. Partial Owner Occupancy: Owner will occupy the premises during entire construction period, with the exception of areas under construction. Cooperate with Owner during construction operations to minimize conflicts and facilitate Owner usage. Perform the Work so as not to interfere with Owner's operations. Maintain existing exits unless otherwise indicated.

1. Maintain access to existing walkways, corridors, and other adjacent occupied or used facilities. Do not close or obstruct walkways, corridors, or other occupied or used facilities without written permission from Owner and authorities having jurisdiction.
2. Provide not less than 72 hours' notice to Owner of activities that will affect Owner's operations.

1.7 WORK RESTRICTIONS

A. Comply with restrictions on construction operations.

1. Receiving Chamber

a. Can be drained for maximum of 8 hours during winter months only (October-April).

1) If the chamber is drained, a 24-hour recovery period is required to prevent stress on the distribution system. As a result, the chamber can only be drained every other day.
2) If the contractor chooses to use pumps to accelerate draining, the discharge water may be directed to a nearby manhole located on the west side of the headhouse or drained into the existing 1916 filters.

b. Existing monitoring equipment located on the west end of the chamber may be removed for up to 8 hours. The contractor must notify WTP staff prior to removal so staff can record their data.

2. Rapid Mix Chambers

a. Plant can be run utilizing one Rapid Mix while the other is drained during winter months only (October-April).

b. During demolition and reconstruction of the slab over the West Rapid Mix Chamber, a temporary door shall be installed in the West window location as shown on the plans to provide access for alum handling. The temporary door shall be:

1) Weather-tight
2) Lockable
3) Constructed of exterior-grade materials
4) Installed with a continuous perimeter seal

3. Settled Water Flume

a. Flume can be emptied during winter months only (October-April)

4. Basement

a. Boilers can be disconnected during the summer months only (May-September)

B. Noise, Vibration, Dust, and Odors: Coordinate operations that may result in high levels of noise and vibration, dust, odors, or other disruption to Owner occupancy with Owner.

1. Notify Owner not less than two days in advance of proposed disruptive operations.

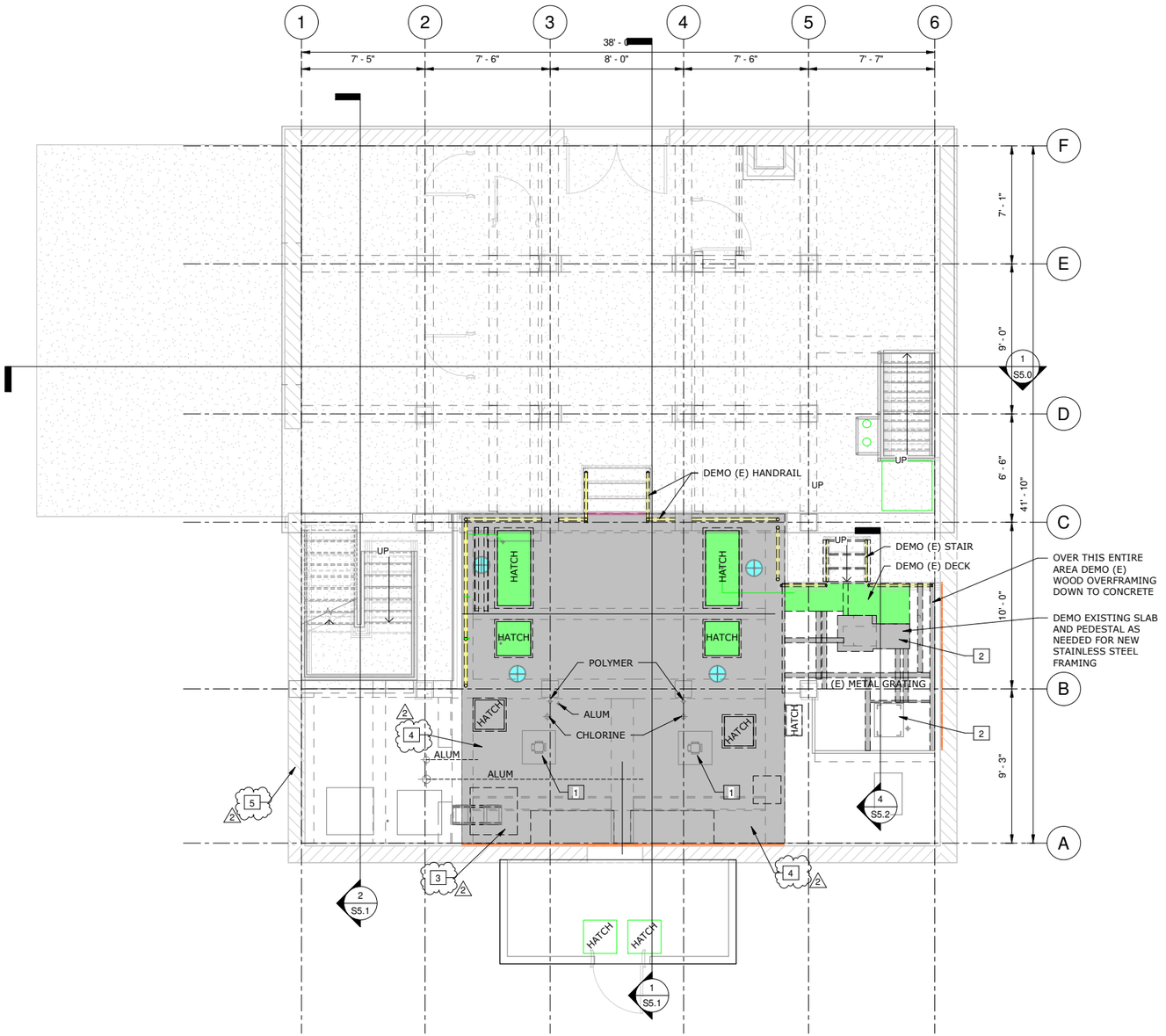
C. As the site management deems necessary, any activity causing or threatening the ability of the site to safely control the process, meet safe work requirements of the project, or meet regulatory requirements and standards for the site, will be terminated until a mitigating plan can be enacted to allow for improved management of the work activity.

PART 2 - PRODUCTS (Not Used)
PART 3 - EXECUTION (Not Used)

END OF SECTION

PLAN SHEETS

ADDENDUM NO. 2 - 9/9/2025



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

FLAG NOTES

1. RAPID MIXER - TEMPORARILY REMOVE AND INSTALL AFTER CONSTRUCTION TO MEET MANUFACTURER REQUIREMENTS
2. CARBON EQUIPMENT - TEMPORARILY REMOVE AND INSTALL AFTER CONSTRUCTION TO MEET MANUFACTURER REQUIREMENTS
3. PIPE EMBEDDED IN CONCRETE PEDESTAL. DURING DEMO, CUT AND CAP PIPE BELOW THE SLAB.
4. AFTER DRAINING THE RAPID MIX TANKS FOR DEMO, PLUG THE HOLE IN THE BOTTOM OF THE TANK FLOOR AND USE EXTERNAL PUMPS TO MANAGE ANY ADDITIONAL WATER INFLOW.
5. INSTALL TEMPORARY DOOR IN EXISTING WINDOW, SEE 011000 SPEC FOR TEMP DOOR REQUIREMENTS.

GENERAL NOTES

1. VERIFY ALL DIMENSIONS IN FIELD
2. TEMPORARILY SUPPORT AND MOVE (AS REQUIRED) ALL EXISTING CONDUIT, PIPING EQUIPMENT DURING CONSTRUCTION. COORDINATE WITH OWNER ESSENTIAL EQUIPMENT THAT MUST REMAIN IN PLACE. (E) GATE VALVE TO REMAIN AND BE PROTECTED.

LEGEND

- SLAB, DECK AND BEAM DEMOLITION AREA
- DEMOLISH (E) GATE VALVES
- LBP - BEIGE PAINT ON BRICK & MORTAR WALL (1.7mg/cm²) SPECIFICATION 02 82 00 LEAD REMEDIATION
- LCP - GRAY PAINTED RAILING (0.2mg/cm²) SEE SPECIFICATION 02 82 00 LEAD REMEDIATION FOR REQUIRED PROCEDURES
- LCP - GRAY PAINT ON WOOD (1.7mg/cm²) SPECIFICATION 02 82 00 LEAD REMEDIATION
- LBP - RED PAINT ON TOP CONCRETE STAIR VERTICAL (2.3mg/cm²) SPECIFICATION 02 82 00 LEAD REMEDIATION
- LCP - BLACK PAINTED METAL WHEEL (0.1mg/cm²) - GRAY/SILVER PAINTED WHEEN PEDISTAL (0.2mg/cm²) SPECIFICATION 02 82 00 LEAD REMEDIATION

MONTANA REGISTERED PROFESSIONAL ENGINEER
ROONEY R. BLAKE
NO. 19168PE

TD&H Engineering
406.761.3010 • tdhengineering.com
1600 RIVER DR. NO. • GREAT FALLS, MONTANA 59401

REV	DATE	REVISION
2	9/09/25	Addendum 2

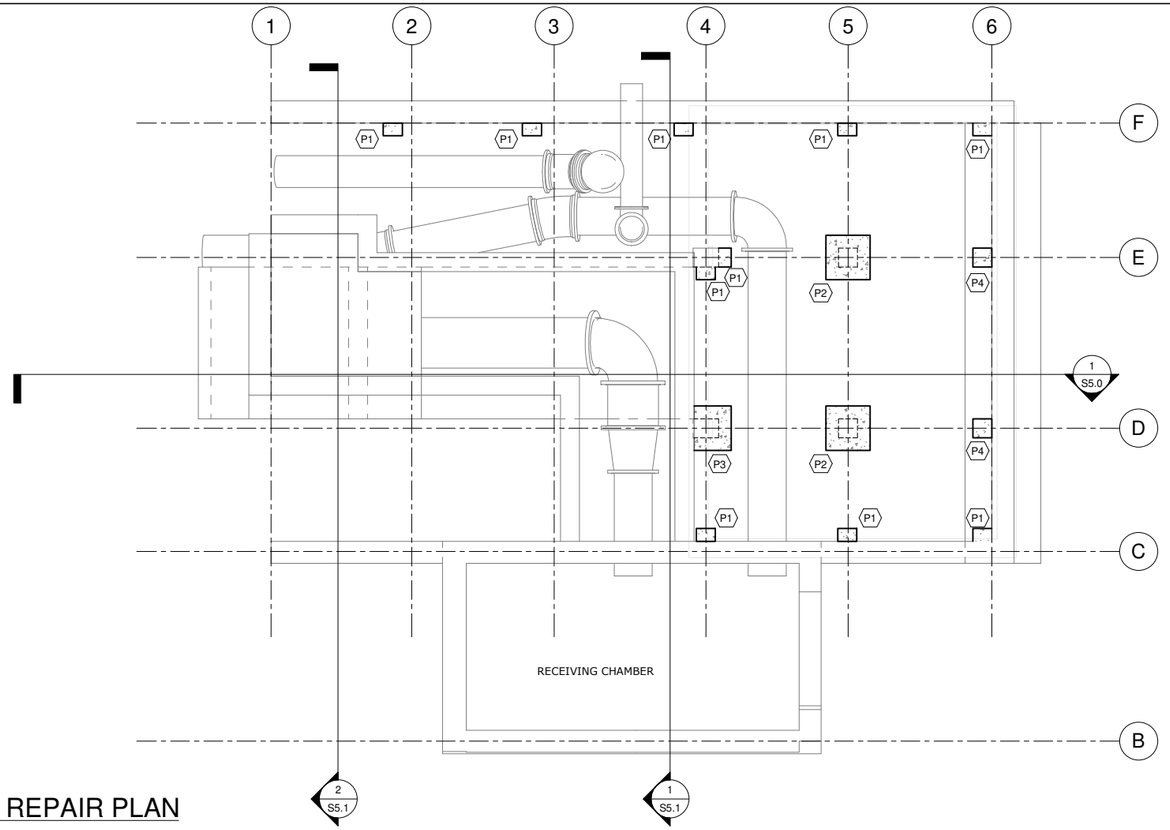
DRAWN BY: RLT
DESIGNED BY: JTA
QUALITY CHECK: RRB
DATE: 8/3/2025
JOB NO: 23-232
FIELDBOOK:

GREAT FALLS WATER TREATMENT PLANT O.F. 1332.7
GREAT FALLS, MT

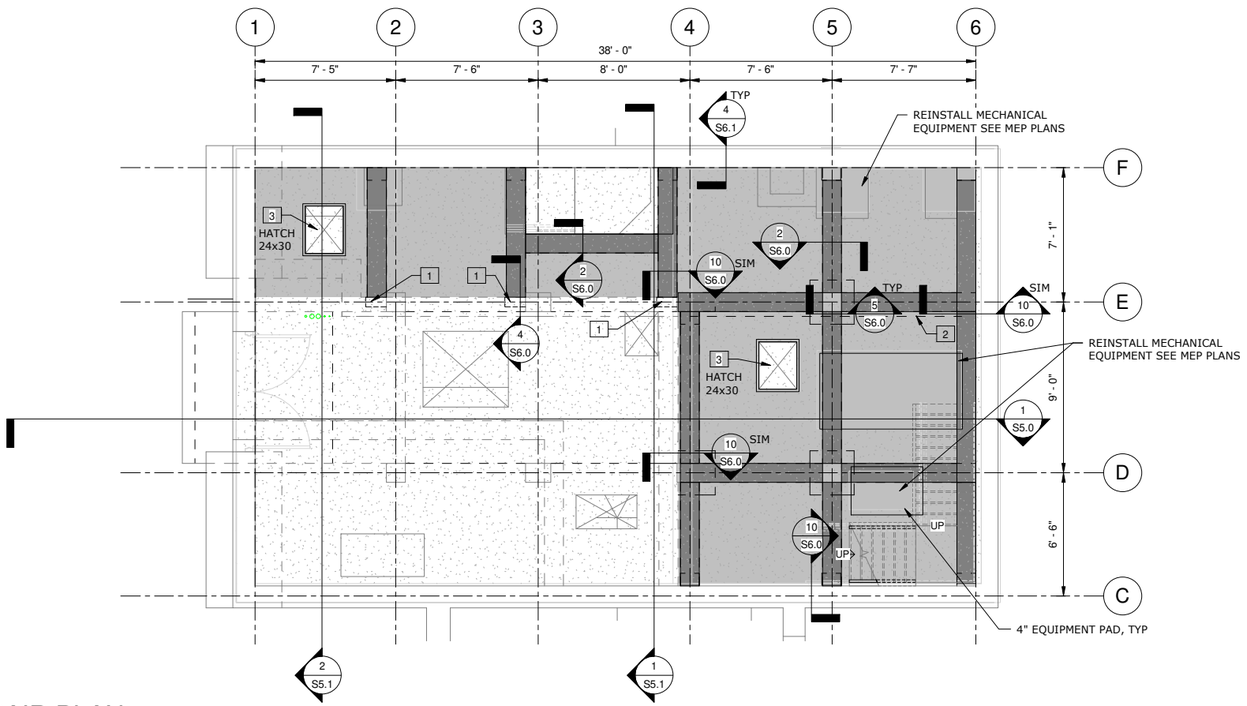
1916 HEAD HOUSE UPGRADES
LEVEL 1 DEMOLITION PLAN

SHEET S2.1

ADDENDUM NO. 2 - 9/9/2025



1 CRAWLSPACE REPAIR PLAN
1/4" = 1'-0"



2 BASEMENT REPAIR PLAN
1/4" = 1'-0"

FLAG NOTES

1. BEAM POCKET IN (E) WALL, SEE DETAIL 4/S6.0
2. MOVE DRAIN LINE AND CONDUIT, SEE MEP FOR MORE INFO
3. NEW HALLIDAY S1G STAINLESS STEEL HATCH, SEE DETAIL 11/S6.0

GENERAL NOTES

1. VERIFY ALL DIMENSIONS IN FIELD
2. REMOVE AND REINSTALL EQUIPMENT ACCORDING TO MEP PLANS.
3. TEMPORARILY SUPPORT AND MOVE (AS REQUIRED) ANY EXISTING CONDUIT AND PIPING SUPPORTED BY THE FLOOR.

LEGEND

- P# — NEW CONCRETE PEDESTAL, SEE SCHEDULE 1/S6.0
- NEW CONCRETE SLAB AND BEAM PLACEMENT AREA PLACED WITH BEAM
- NEW CONCRETE BEAM PLACEMENT PLACED WITH SLAB

MONTANA
ROONEY R. BLAKE
NO. 19168PE
REGISTERED PROFESSIONAL ENGINEER

REV	DATE	REVISION
2	9/09/25	Addendum 2

TD&H Engineering
406.761.3010 • tdhengineering.com
1800 RIVER DR. NO. • GREAT FALLS, MONTANA 59401

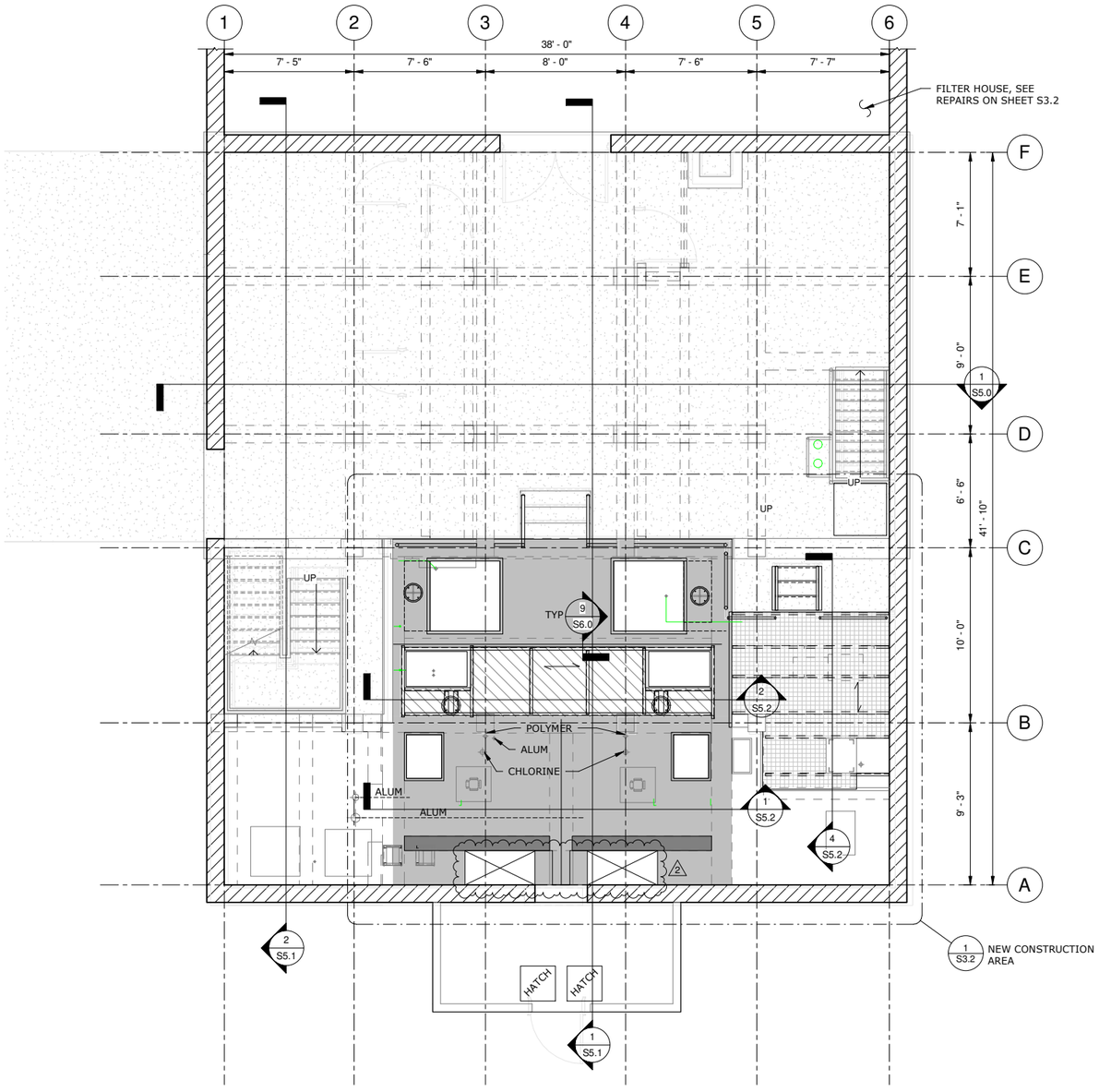
DRAWN BY:	RLT
DESIGNED BY:	JTA
QUALITY CHECK:	RRB
DATE:	8/3/2025
JOB NO:	23-232
FIELDBOOK:	

GREAT FALLS WATER TREATMENT PLANT O.F. 1332.7
GREAT FALLS, MT

1916 HEAD HOUSE UPGRADES
BASEMENT AND FOUNDATION REPAIR PLAN

SHEET S3.0

ADDENDUM NO. 2 - 9/9/2025



GENERAL NOTES

1. VERIFY ALL DIMENSIONS IN FIELD
2. REATTACH AND CONNECT UP ALL EQUIPMENT INTO PREVIOUS LOCATIONS ACCORDING TO MANUFACTURER AND OWNER REQUIREMENTS SO THE PLANT CAN RUN AS IT DID PRIOR TO CONSTRUCTION.

LEGEND

- NEW ELEVATED SLAB AND BEAM PLACEMENT AREA
- INSTALL (E) GATE VALVES
- NEW CONCRETE BEAM PLACEMENT
- DECK SPAN

1 LEVEL 1 REPAIR PLAN - OPERATING FLOOR

1/4" = 1'-0"

ROONEY R. BLAKE
NO. 19168PE
REGISTERED PROFESSIONAL ENGINEER

REV	DATE	REVISION
2	9/09/25	Addendum 2

TD&H Engineering
406.761.3010 • tdhengineering.com
1800 RIVER DR. NO. • GREAT FALLS, MONTANA 59401

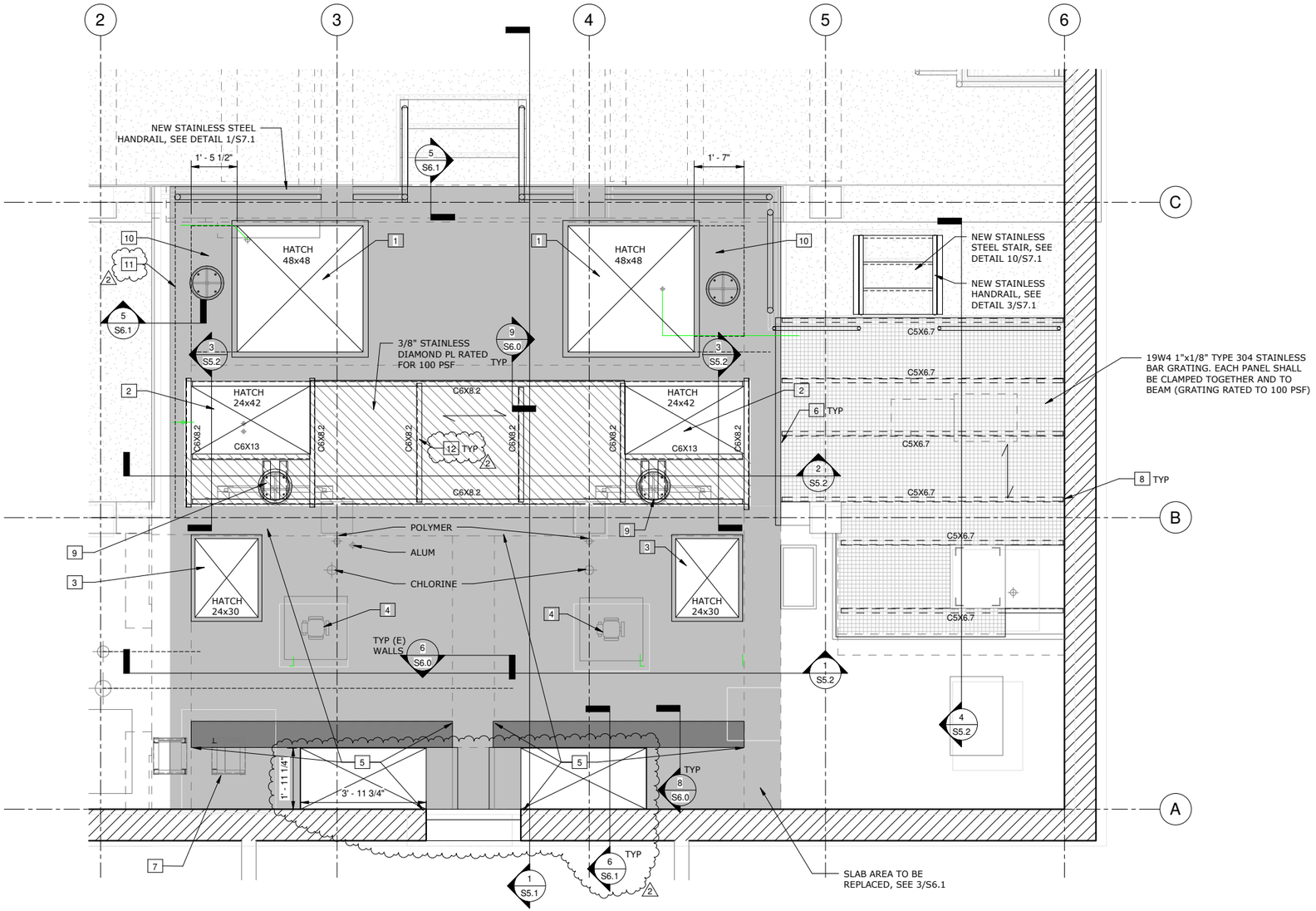
DRAWN BY:	RLT
DESIGNED BY:	JTA
QUALITY CHECK:	RRB
DATE:	8/3/2025
JOB NO:	23-232
FIELDBOOK:	

GREAT FALLS WATER TREATMENT PLANT O.F. 1332.7
GREAT FALLS, MT

1916 HEAD HOUSE UPGRADES
LEVEL 1 REPAIR PLAN - OPERATING FLOOR

SHEET **S3.1**

ADDENDUM NO. 2 - 9/9/2025



FLAG NOTES

1. NEW HALLIDAY S2G STAINLESS STEEL HATCH, SEE DETAIL 12/S6.0
2. NEW HALLIDAY S1G STAINLESS STEEL HATCH, SEE DETAIL 5/S7.1
3. NEW HALLIDAY S1G STAINLESS STEEL HATCH, SEE DETAIL 11/S6.0
4. REATTACH RAPID MIXER MOTOR AND BLADE ACCORDING TO MANUFACTURER REQUIREMENTS
5. PATCH ALL RAPID MIX INSIDE TANK WALLS PER NOTES ON SHEET S1.1
6. CONNECTION AT CONCRETE WALL PER DETAIL 6/S7.1
7. SUPPORT EXISTING MECHANICAL EQUIPMENT WITH NEW STEEL FRAME, SEE DETAIL 1/S7.2
8. CONNECTION AT BRICK WALL PER DETAIL 9/S7.1
9. GATE SUPPORT, SEE DETAIL 4/S7.1
10. GATE SUPPORT SPANNING ENTIRE WIDTH OF CHAMBER, SEE DETAIL 2/S6.1
11. SAWCUT EXISTING CONCRETE SLAB 2" FROM EXISTING STAIRWELL STUD WALL.
12. FLOOR PLATE ATTACHMENT PER DETAIL 7/S6.1

GENERAL NOTES

1. VERIFY ALL DIMENSIONS IN FIELD
2. REATTACH AND CONNECT UP ALL EQUIPMENT INTO PREVIOUS LOCATIONS ACCORDING TO MANUFACTURER AND OWNER REQUIREMENTS SO THE PLANT CAN RUN AS IT DID PRIOR TO CONSTRUCTION. SEE S8.1 FOR WTP FLOW DIAGRAM

LEGEND

- NEW ELEVATED SLAB AND BEAM PLACEMENT AREA
- INSTALL (E) GATE VALVES
- NEW CONCRETE BEAM PLACEMENT
- DECK SPAN

1 ENLARGED LEVEL 1 REPAIR PLAN - OPERATING FLOOR

1/2" = 1'-0"

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QUALITY CHECK:	RRB
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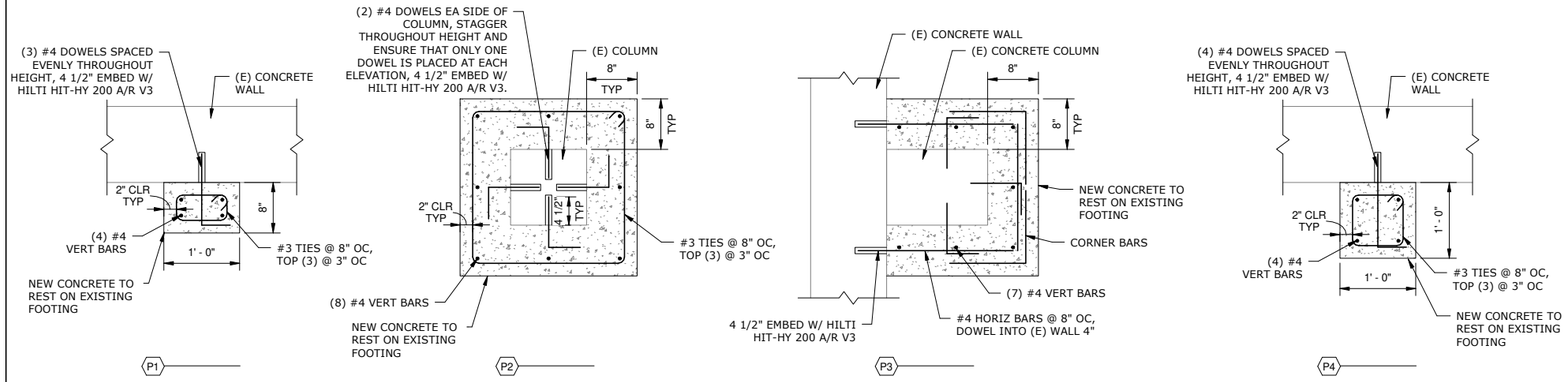
JOB NO:	23-232
FIELDBOOK:	

GREAT FALLS WATER TREATMENT PLANT O.F. 1332.7
GREAT FALLS, MT

1916 HEAD HOUSE UPGRADES
ENLARGED LEVEL 1 REPAIR PLAN - OPERATING FLOOR

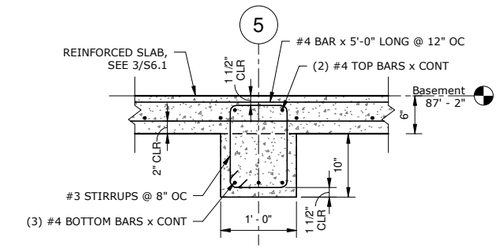
SHEET S3.2

ADDENDUM NO. 2 - 9/9/2025

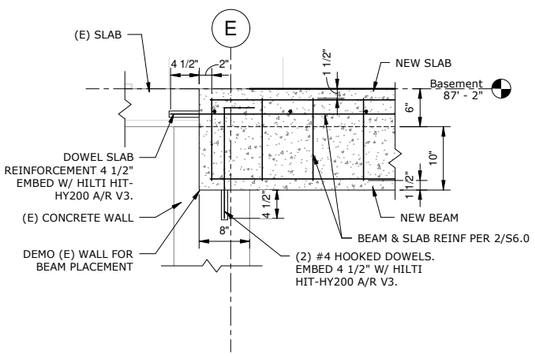


1 PEDESTAL SCHEDULE
1" = 1'-0"

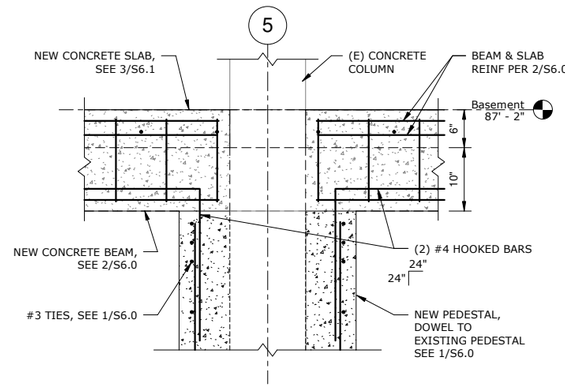
NOTE: PEDESTALS TO BE PLACED ON TOP OF EXISTING CONCRETE FOOTINGS



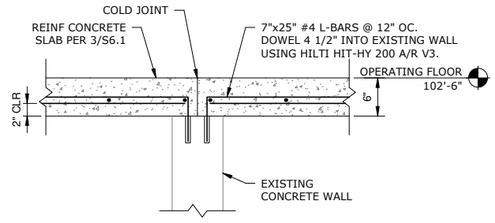
2 CONCRETE BEAM SECTION
1" = 1'-0"



4 BEAM POCKET DETAIL
1" = 1'-0"

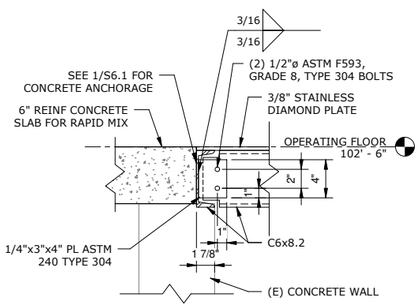


5 CONCRETE BEAM INTERSECTION AT (E) COLUMN
1" = 1'-0"

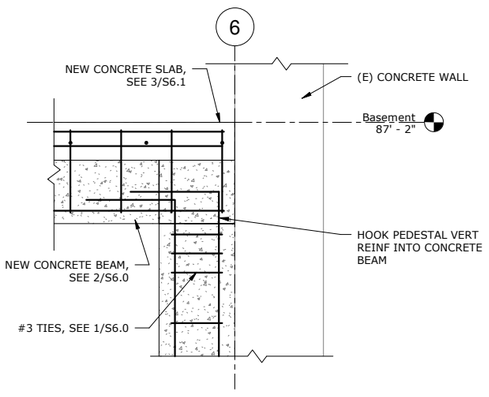


6 CONCRETE SLAB AT (E) WALL
1" = 1'-0"

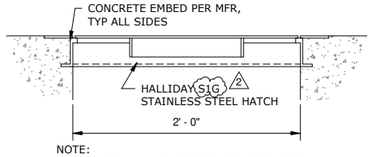
8 RAPID MIX CONCRETE BEAM SECTION
1" = 1'-0"



9 CONNECTION DETAIL - STEEL REPAIR
1 1/2" = 1'-0"

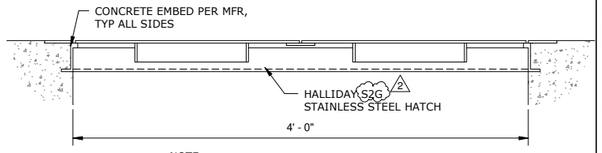


10 NEW CONCRETE BEAM TO PEDESTAL P1
1" = 1'-0"



NOTE:
INSTALL PER MANUFACTURER REQUIREMENTS.

11 SINGLE DOOR HATCH (CONCRETE SUPPORT)
1 1/2" = 1'-0"



NOTE:
INSTALL PER MANUFACTURER REQUIREMENTS.

12 DOUBLE DOOR HATCH (CONCRETE SUPPORT)
1 1/2" = 1'-0"

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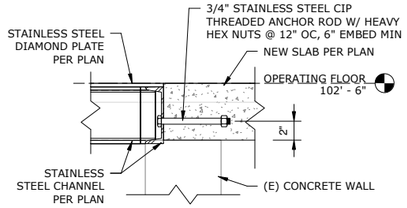
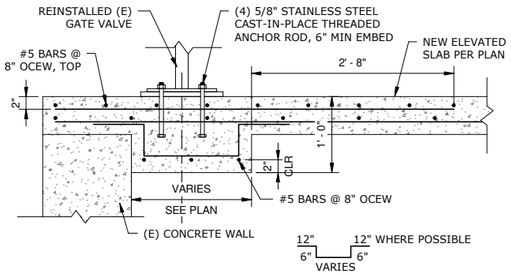
CONCRETE DETAILS

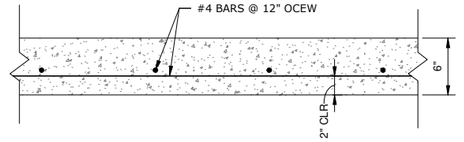
SHEET S6.0



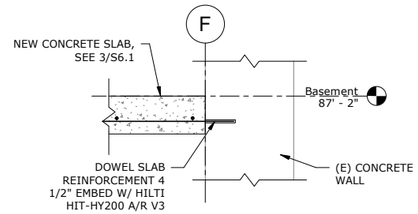
1 CHANNEL TO CONCRETE CXN
1 1/2" = 1'-0"



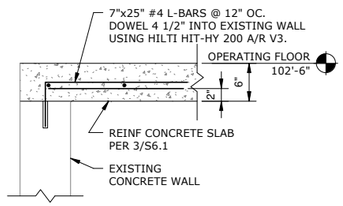
2 THICKENED SLAB GATE SUPPORT
1" = 1'-0"



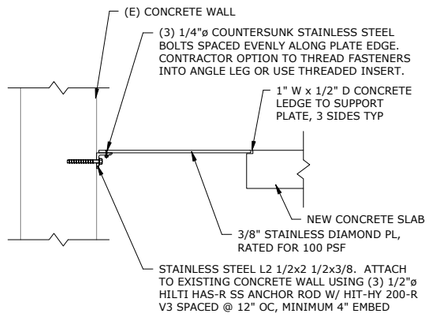
3 CONCRETE SLAB SECTION
1 1/2" = 1'-0"



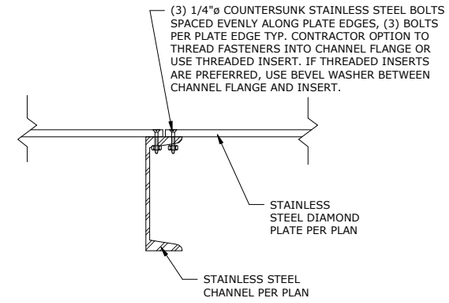
4 NEW SLAB TO (E) WALL
1" = 1'-0"



5 CONCRETE SLAB EDGE AT (E) WALL
1" = 1'-0"



6 ACCESS HOLE COVER AT RAPID MIX CHAMBER
1" = 1'-0"



7 FLOOR PLATE ATTACHMENT AT RECEIVING CHAMBER
3" = 1'-0"

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CONCRETE DETAILS

SHEET S6.1

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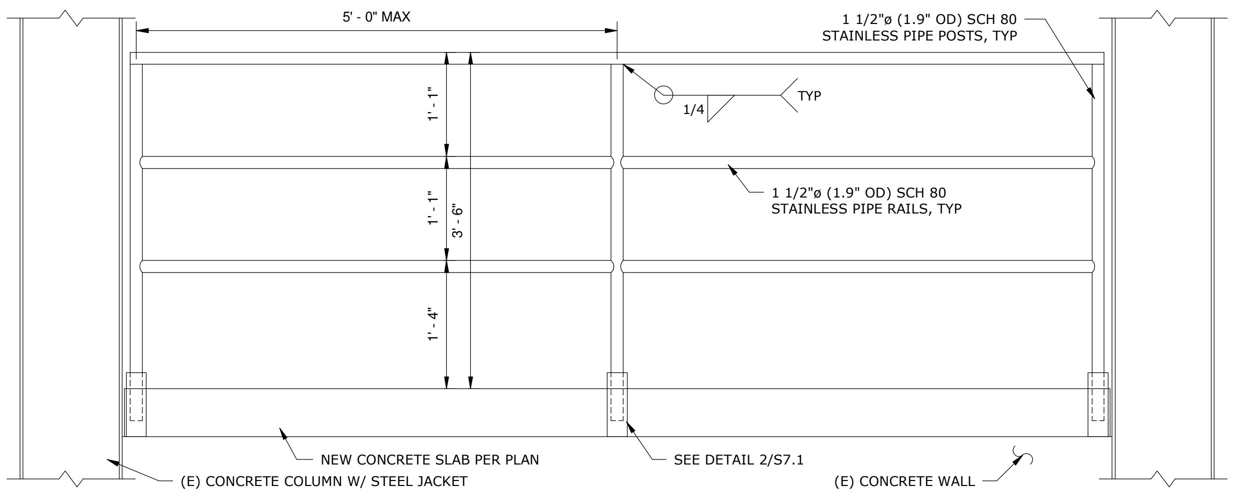
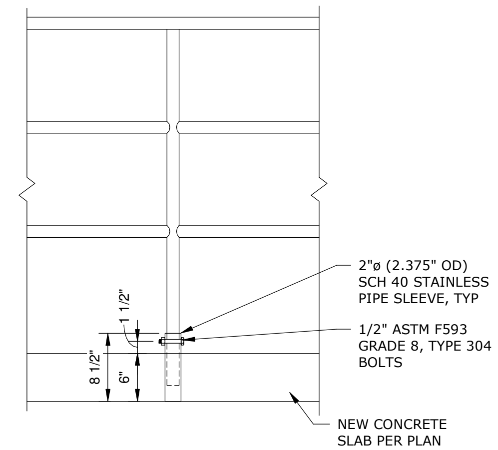
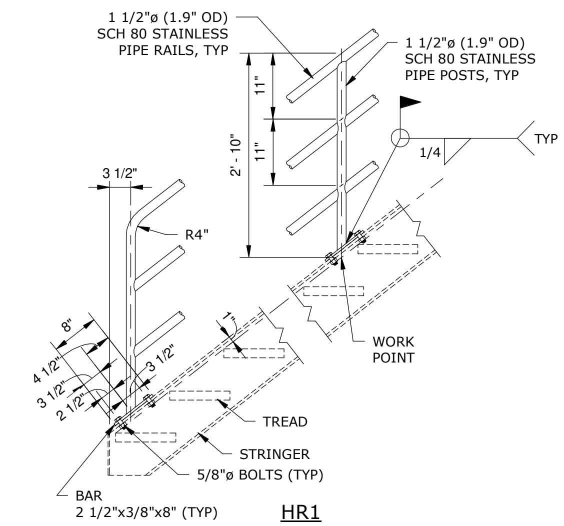


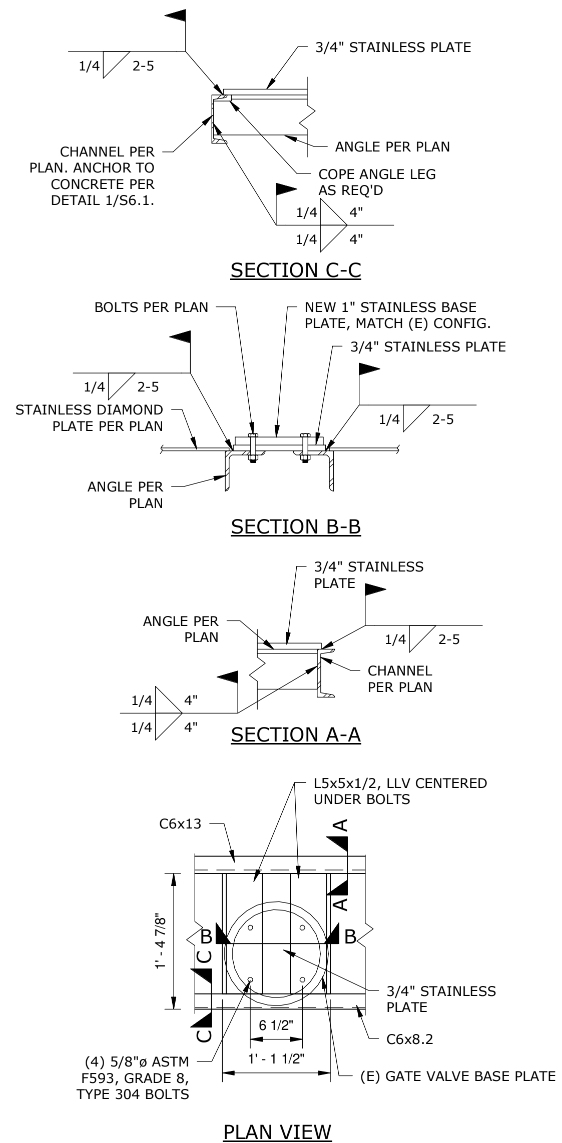
1 STANDARD RAILING DETAIL
1" = 1'-0"



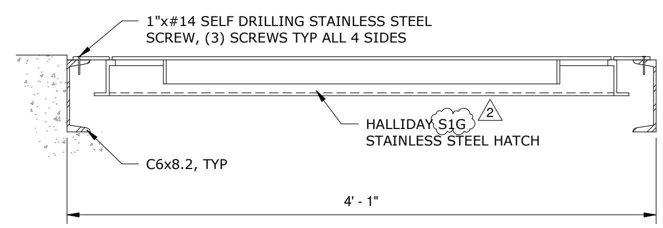
2 TYPICAL HANDRAIL CONNECTION DETAIL
NTS



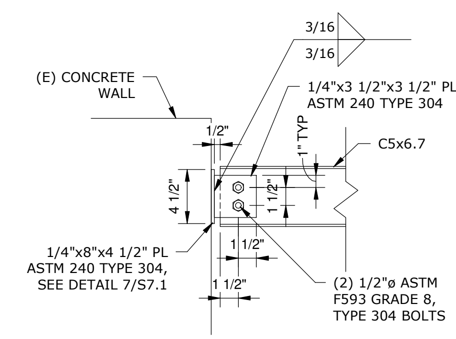
3 TYPICAL REMOVABLE HANDRAIL DETAIL
NTS



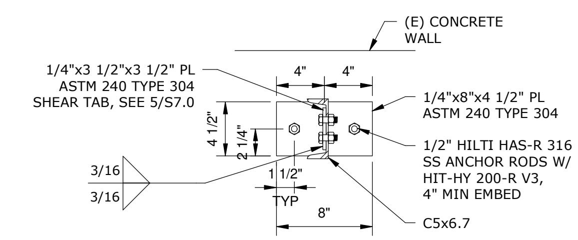
4 GATE SUPPORT DETAIL
1" = 1'-0"



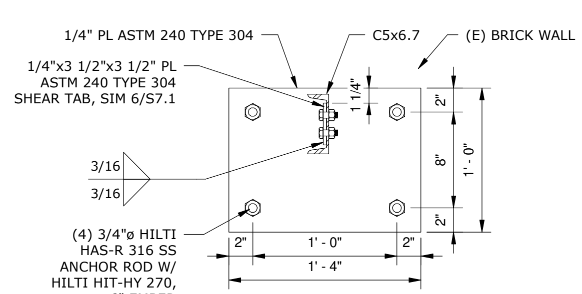
5 SINGLE DOOR HATCH (STEEL SUPPORT)
NTS



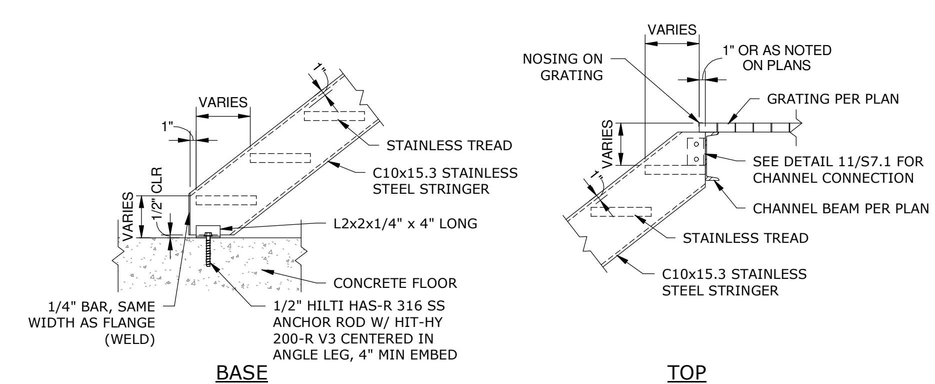
6 CHANNEL CXN AT CONCRETE WALL
1 1/2" = 1'-0"



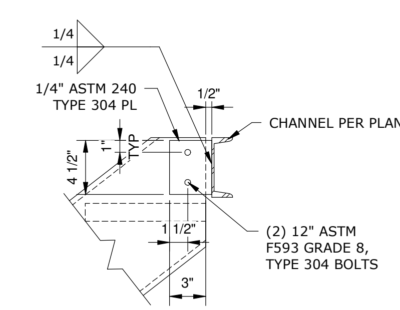
7 ANCHOR PLATE AT CONCRETE WALL
1 1/2" = 1'-0"



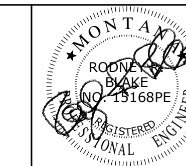
9 ANCHOR PLATE AT BRICK WALL
1 1/2" = 1'-0"



10 TYPICAL STAIR LANDING DETAILS
NTS



11 TOP STAIR LANDING
NTS



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SHEET S7.1