



March 6, 2026

Project No. M1750.01.001

Sarah Miller

Oregon Department of Environmental Quality
700 NE Multnomah Street, Suite 600
Portland, Oregon, 97232

Re: 21st Century Towing—2026 Long-term Soil Cap Monitoring, Maintenance, and Soil Management Plan Addendum (ECSI Site #1050)

Dear Sarah Miller:

Maul Foster & Alongi, Inc. (MFA) has prepared this letter to summarize changes and additions to MFA's 2013 Long-term Soil Cap Monitoring, Maintenance and Soil Management Plan (LSCMM/SMP)¹ as a result of site redevelopment activities conducted by 21st Century Towing at the property located at 8520 N. Kerby Avenue in Portland, Oregon (Site). This letter supersedes the previous LSCMM/SMP Addendum letter prepared by MFA and is dated March 16, 2020².

The Site, a former industrial landfill, received a No Further Action determination from the Oregon Department of Environmental Quality (DEQ) on September 21, 2015.³ Before construction, the Site consisted of an open vegetated surface with a demarcation layer and soil cap. The Site was redeveloped in 2019 as a paved tow yard with associated office building, parking lot, and stormwater treatment facilities.

Redevelopment activities included grading of the surface soils, installation of two lined stormwater swales, trenching and installation of subsurface utilities, parking area paving, and a new building with vehicle maintenance bays and an office. No contaminated materials were removed from the Site. Work was performed per the plan described in the Proposed Redevelopment letter from MFA⁴ and was documented in the Construction Completion Summary.⁵ The redevelopment did not result in a functional change in the containment remedy previously implemented at the Site—contaminated soil and industrial debris remain under a site-wide cap to prevent direct contact. In addition, no interior or exterior confined spaces (e.g. large utility vaults or manholes) were constructed on the Site.

Changes to the LSCMM/SMP are presented below as they correspond to each section.

¹ MFA 2013. M. D'Andrea and T. Wall, Maul Foster & Alongi, Inc. *Tax Lot 1103 Long-Term Soil Cap Monitoring, Maintenance, and Soil Management Plan*. Prepared for Dick F. Morgan. October 29.

² MFA. 2020. E. Bakkom and J. Faust, Maul Foster & Alongi, Inc. *21st Century Towing—Long-term Soil Cap Monitoring, Maintenance and Soil Management Plan Addendum (ECSI Site #1050)*. Letter to S. Miller, Oregon Department of Environmental Quality. March 16

³ DEQ. 2015. *Conditional No Further Action Determination Letter for Schnitzer Property (Precision Equipment Tax Lot 1103) Portland, ECSI 1050*. Oregon Department of Environmental Quality. September 21.

⁴ MFA. 2018. E. Bakkom and M. D'Andrea, Maul Foster & Alongi, Inc. *21st Century Towing—Proposed Redevelopment at 8520 North Kerby Street*. Letter to S. Miller, Oregon Department of Environmental Quality. June 26.

⁵ MFA. 2020. E. Bakkom and J. Faust, Maul Foster & Alongi, Inc. *21st Century Towing—Construction Completion Summary (ECSI Site #1050)*. Letter to S. Miller, Oregon Department of Environmental Quality. March 13.

Section 2—Remedial Area

Insert new subsection.

Section 2.1 Redevelopment Soil Management

Approximately 225 cubic yards of excavated waste were relocated to a consolidation area onsite and covered with demarcation fabric before construction of the protective surfaces (see Figure 1). Redevelopment activity resulted in minor regrading of the Site and construction of new impervious surfaces that augment the clean soil cap, in the form of asphalt paving/base rock, high-density polyethylene (HDPE)-lined stormwater treatment swales, and a concrete building slab over HDPE liner with passive vent (see Figure 2). Excavations that fully penetrated the previously established soil cap were lined with demarcation fabric before placement of backfill or cover material.

Import fill was placed entirely below concrete and asphalt surfaces. The imported fill was limited to virgin crushed aggregate base from a commercial quarry.

Section 3—Excavation Protocol

No changes to this section.

Section 4—Management of Excavated Soil

No changes to this section.

Section 5—Surface Restoration

Insert new subsection.

Section 5.1 Summary of Redevelopment

The concrete slab for the office/shop building was constructed over a 40-mil, HDPE geomembrane liner to prevent migration of methane gas into occupied areas. The geomembrane was constructed over a 6-inch-wide, passive ventilation strip drain (fabric side down) and then covered with approximately 18 inches of compacted base rock. Two methane monitoring ports were constructed over the geomembrane and below the concrete building slab. The monitoring ports are ¾-inch-diameter polyvinyl chloride pipe with 5 feet of slotted screen, as shown in the approved plans. Figure 3 shows the locations of the methane barrier, sampling ports, and the passive vent.

Future penetrations of the building slab shall be made with caution. Any activity, whether planned or accidental, that results in penetration of the geomembrane beneath the building requires consultation with an environmental engineer and notification of the DEQ.

The passive vent termination is an open bottom irrigation valve box that has been partially backfilled with clean pea gravel and is covered with a vented lid. This lid should always remain protected and unobstructed to allow any residual methane to escape from the passive vent. Signage, as indicated in the photograph to the right, will be maintained in place to clearly identify this vent.



Passive Vent Signage

Section 6—Maintenance

Replace existing subsection 6.3 and insert new subsection 6.4.

Section 6.3 Soil or Gravel

In Area 4, the demarcation layer consists of concrete rubble that was placed at the bottom of the fill, 4 to 7 feet below ground surface (see Figure 1). In Area 2 and the former Argyle Right of Way, a demarcation fabric layer is below the paved surfaces, building slab, and landscape areas. The condition of the paving and landscaped areas will be inspected annually by the Site owner to identify areas requiring maintenance and/or repair to prevent exposure of the demarcation layer. The soil cap at the north end of the Site will be inspected annually by the Site owner to identify areas where the demarcation fabric layer may be visible. If the demarcation fabric is visible, then the soil cap will be regraded and/or more fill will be added to provide the minimum thickness of 1 foot.

Section 6.4 Methane Monitoring

The function of the constructed methane mitigation barrier was assessed by obtaining ambient air readings in the breathing zone, using a handheld methane gas meter capable of measuring parts per million. Measurements were also taken from the sub-slab methane sampling ports.

MFA performed preoccupancy monitoring on May 8, 2019. Since methane was not detected inside the building, it was deemed safe for occupancy. Subsequent testing was conducted in July 2020, January 2021, and January 2022 and no methane was detected inside the building. MFA submitted a letter dated February 21, 2024, to DEQ detailing the results of the methane monitoring and recommended the suspension of the methane monitoring program at the Site.⁶ In a March 11, 2024 email, Sarah Miller with DEQ concurred with the findings and agreed that methane monitoring could be suspended.

The need for future monitoring events will be at the Site owner's discretion. Should methane be detected in the gas-monitoring probes, monitoring of interior spaces should also be conducted, and a mitigation plan be developed for the evaluation of contingency actions, which could include activating the passive vent line by installing a vent fan and riser.

If you have any questions or need further information, please contact MFA at (971) 544-2139.

Sincerely,

Maul Foster & Alongi, Inc.

Erik Bakkom, PE
Principal Engineer

Attachments

Limitations

Figures

⁶ MFA. 2024. Erik Bakkom, PE, and Emily Hess, RG. *21st Century Towing—Landfill Gas Monitoring Results (ECSI Site No. 1050)*. Letter to Sarah Miller, Oregon Department of Environmental Quality. February 21.

Limitations

The services undertaken in completing this report were performed consistent with generally accepted professional consulting principles and practices. No other warranty, express or implied, is made. These services were performed consistent with our agreement with our client. This report is solely for the use and information of our client unless otherwise noted. Any reliance on this report by a third party is at such party's sole risk.

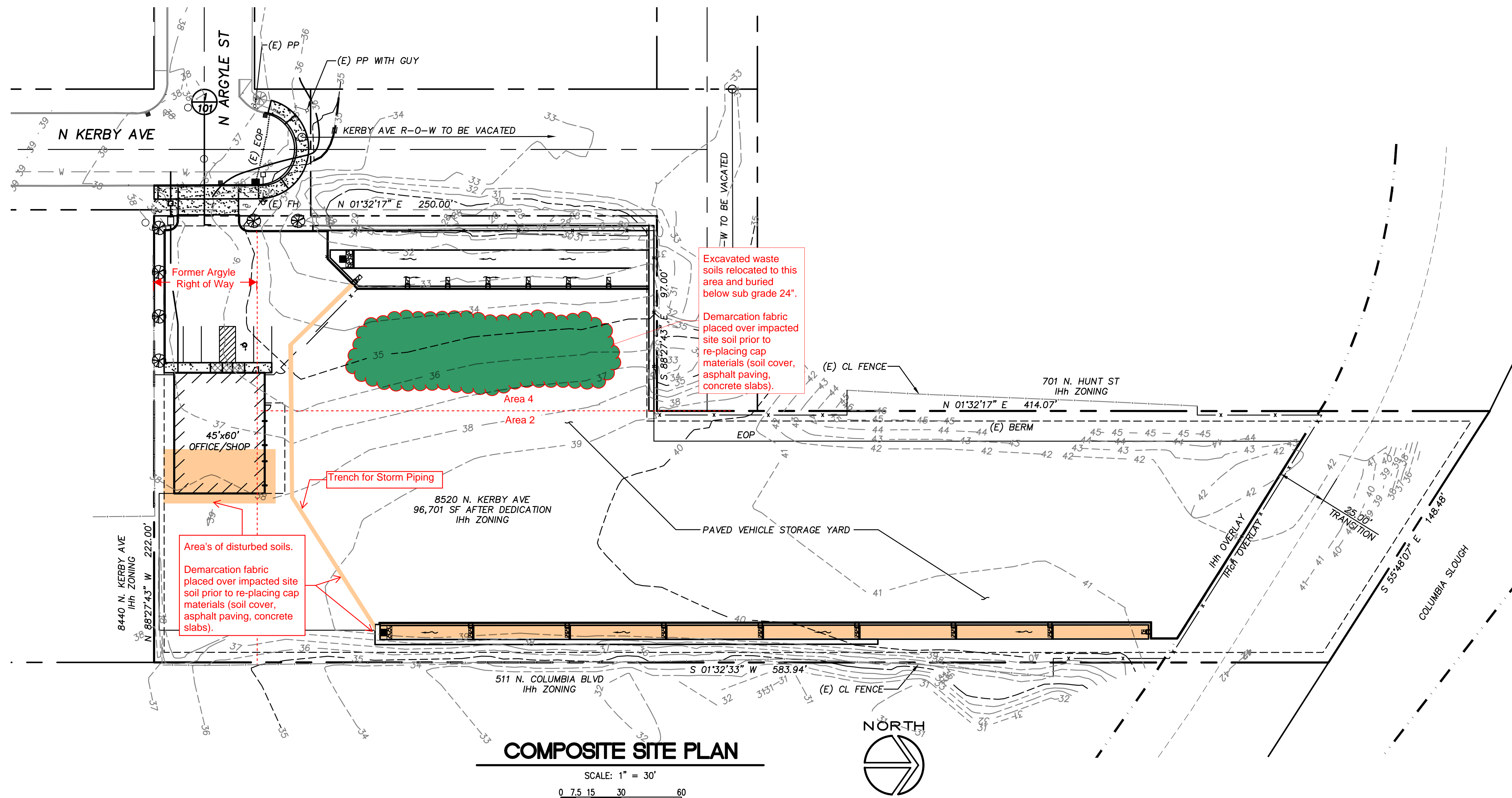
Opinions and recommendations contained in this report apply to conditions existing when services were performed and are intended only for the client, purposes, locations, time frames, and project parameters indicated. We are not responsible for the impacts of any changes in environmental standards, practices, or regulations subsequent to performance of services. We do not warrant the accuracy of information supplied by others, or the use of segregated portions of this report.

Figures



MAUL
FOSTER
ALONGI

FILE: 17-24_COP.DWG 2 7/31/2018 5:02:09 PM - TIM



NO.	DATE	DESCRIPTION	APPD.
REVISIONS			
FINAL MAP DATA			

DESIGNED BY	DATE APPROVED
CAD BY	SECTION ENGR
CHECKED BY	BES REVIEWER
	PBOT REVIEWER



APPROVALS:

BES CHIEF ENGINEER	REG. PROF. ENGR. 16301PE
PBOT PRINCIPAL ENGINEER	REG. PROF. ENGR. 75155PE
PBOT CITY ENGINEER	REG. PROF. ENGR. 51538PE

BUREAU OF ENVIRONMENTAL SERVICES

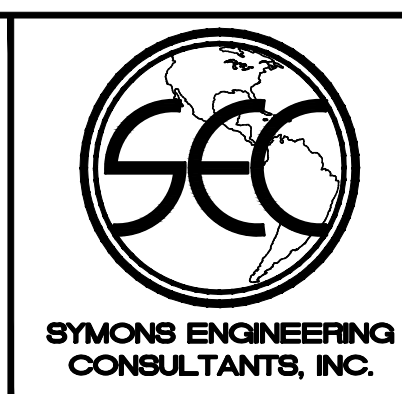
NICK FISH
WILLIAM F. RYAN, P.E.

COMMISSIONER
CHIEF ENGINEER

BUREAU OF TRANSPORTATION

DAN SALTZMAN
STEVE TOWNSEN, P.E.

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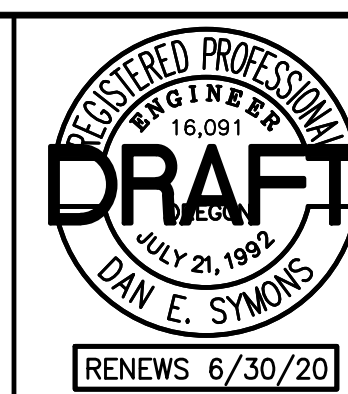


Figure 1
Waste Soil Site Plan

GENERAL STRUCTURAL NOTES

- ALL CONSTRUCTION SHALL CONFORM TO THE 2014 OREGON STRUCTURAL SPECIALTY CODE.
- THESE DRAWINGS REPRESENT THE DESIGN CONCEPTS OF THIS PROJECT AND ARE NOT INTENDED TO SERVE AS COMPLETE SHOP DRAWINGS. CERTAIN ITEMS MAY NOT BE FULLY DETAILED BUT SHALL BE CONSTRUCTED IN ACCORDANCE WITH ACCEPTED PRACTICES THAT CONFORM TO THE APPLICABLE CODES.
- THE CONTRACTOR SHALL MAINTAIN APPROVED DRAWINGS AND PERMITS ONSITE AT ALL TIMES.
- ANY REVISION TO THE APPROVED PLANS REQUIRES APPROVAL BY THE APPROPRIATE AGENCY AND THE PROJECT ENGINEER IN WRITING PRIOR TO IMPLEMENTATION.
- THE CONTRACTOR SHALL GIVE THE APPROPRIATE INSPECTION AGENCY TWO (2) WORKING DAYS NOTICE WHEN REQUESTING INSPECTIONS.
- SITE CONSTRUCTION PRACTICES SHALL BE IN ACCORDANCE WITH OSHA REGULATIONS. CONTRACTOR SHALL MAINTAIN ONSITE, LEGIBLE MSDS (MATERIAL SAFETY DATA SHEETS) FOR ALL HAZARDOUS MATERIALS USED ON THE PROJECT.
- RECYCLE WASTE BUILDING MATERIALS WHEREVER POSSIBLE.
- ALL SOIL AND DEBRIS BELOW DEMARCATION FABRIC SHALL BE MANAGED IN COMPLIANCE WITH THE "LONG TERM SOIL CAP MONITORING, MAINTENANCE, AND SOIL MANAGEMENT PLAN".

CONCRETE NOTES

- CONCRETE MATERIALS AND PLACEMENT SHALL BE IN ACCORDANCE W/ AMERICAN CONCRETE INSTITUTE PUBLICATION 318-11. PROTECT UNCURED CONCRETE FROM ANY TYPE OF WEATHER DAMAGE
- CONCRETE STRENGTH:
 - STRENGTH FOR CONCRETE FOOTINGS:**
2,500 PSI, 28 DAY COMPRESSIVE STRENGTH; MIN. CEMENT REQUIREMENTS IN ACCORDANCE W/ ACI 301, TABLE 3.8.5.16 EXCEPT NOT LESS THAN 470 LBS OF CEMENT PER CUBIC YARD, MAX. WATER CEMENT RATIO = 0.50, 6" MAX. SLUMP, 3/4" MAX. AGGREGATE
 - STRENGTH FOR CONCRETE SLAB:**
4,000 PSI, 28 DAY COMPRESSIVE STRENGTH; MIN. CEMENT REQUIREMENTS IN ACCORDANCE W/ ACI 301, TABLE 3.8.5.16 EXCEPT NOT LESS THAN 517 LBS OF CEMENT PER CUBIC YARD, MAX. WATER CEMENT RATIO = 0.42, 4" MAX. SLUMP, 1 1/2" MAX. AGGREGATE
 - SUBMIT CONCRETE MIX PROPORTIONS IN ACCORDANCE W/ ACI 301 PRIOR TO POURING CONCRETE.
- ANCHOR BOLTS SHALL BE SET W/ 1/16" TOLERANCE.
- THE CONTRACTOR SHALL COORDINATE FRAMING DIMENSIONS, ANCHORAGE AND EMBED LOCATIONS W/ THESE PLANS PRIOR TO ORDERING CONCRETE. EPOXY OR EXPANSION REPLACEMENT ANCHOR INSTALLATION REQUIRES APPROVAL IN ADVANCE OF POUR. SPECIAL INSPECTION WILL BE REQUIRED IN THE EVENT OF SUCH REPLACEMENT ANCHORS.
- SILL ANCHORS SHALL BE PLACED NO MORE THAN 12", NOR LESS THAN 6", FROM THE END OF EACH SILL PLATE, MIN. (2) BOLTS PER PLATE
- DEFORMED REINFORCING BARS SHALL CONFORM TO ASTM A 615 GRADE 60. REINFORCING BARS SHALL BE LAPPED 36 BAR DIAMETERS OR A MIN. OF 24" UNLESS SHOWN OTHERWISE
- CONCRETE REINFORCEMENT COVER SHALL BE:

CONCRETE AGAINST EARTH	3"
FORMED CONCRETE AGAINST EARTH	2"
EXTERIOR FACES OF EXPOSED WALLS	1 1/2"
INTERIOR FACES OF UNEXPOSED WALLS	3/4"
TO TOP OF SLABS ON GRADE	3/4"
- GROUT SHALL BE NON-SHRINK PREMIX W/ 7-DAY COMPRESSIVE STRENGTH OF 5,000 PSI
- OBTAIN OWNER'S DIRECTION FOR: APPLICATION OF FLOOR TREATMENT; WET CURE OR USE WATERPROOF SHEET MATERIALS FOR CURING OF ALL SLABS
- JOINT FILLER TO BE "METZGER/McGUIRE MM80" OR APPROVED EQUAL
- FINISHES: INTERIOR SLABS - STEEL TROWEL FINISH. TOLERANCE: CLASS A, 1/8" IN 10 FEET
EXTERIOR SLABS - BROOM FINISH
- SAW CUT CONTROL JOINTS AS SOON AS SLAB WILL SUPPORT EQUIPMENT BUT IN NO CASE LATER THAN 12 HOURS MAX. AFTER POURING THE SLAB. SOFT CUT SAWS RECOMMENDED
- COORDINATE CURING MATERIALS W/ OWNER SELECTED FLOOR FINISHES

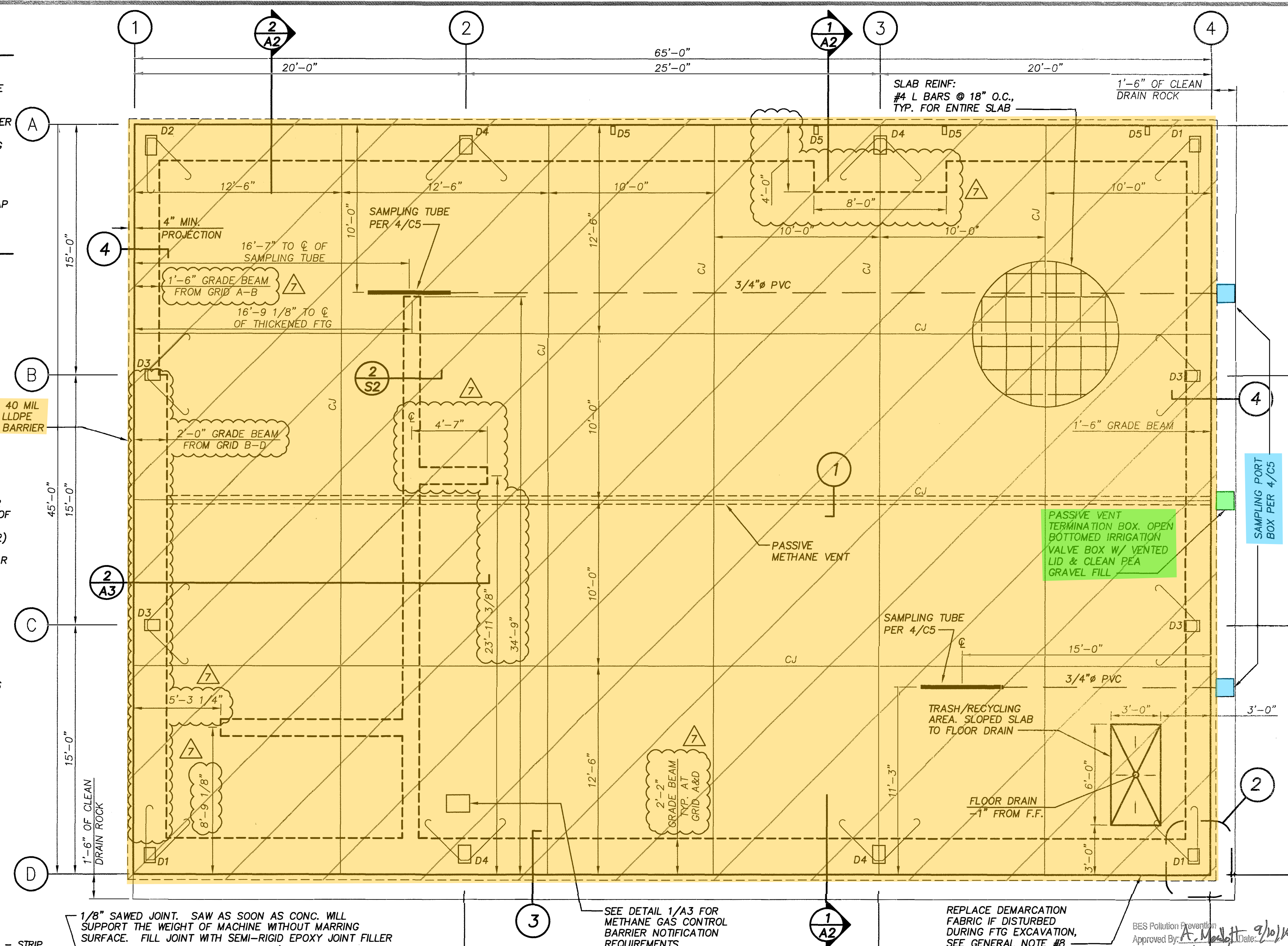
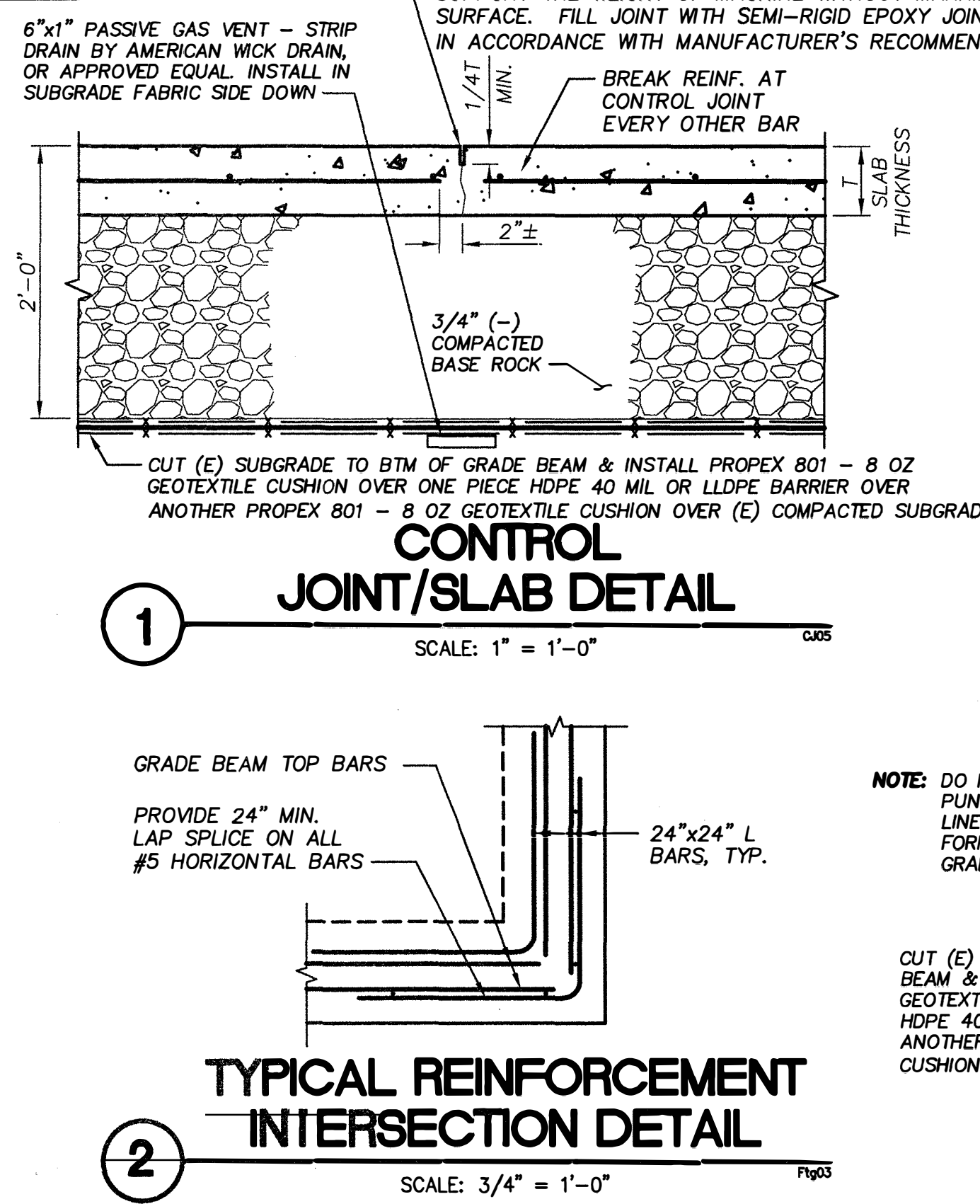
ANCHOR BOLT SCHEDULE

NO.	QTY. BOLTS PER COLUMN BASE	BOLT SIZE	EMBED DEPTH	NOTES
D1	4	3/4"Ø	8"	HAIR PIN REQ'D PER 3/S2
D2	4	3/4"Ø	8"	HAIR PIN REQ'D PER 3/S2
D3	4	3/4"Ø	8"	HAIR PIN REQ'D PER 3/S2
D4	4	3/4"Ø	8"	HAIR PIN REQ'D PER 3/S2
D5	2	1/2"Ø	2 1/2"	WEDGE ANCHOR

-USE A307 HEADED BOLT OR A36 THREADED ROD W/ END NUT AT BOTTOM OF ROD
-SEE METAL BUILDING DRAWINGS FOR METAL BUILDING ANCHOR BOLT LAYOUT
-MIN. EMBEDMENT DEPTH EXCLUDES HEAD

SPECIAL INSPECTION OF CONC. CONSTRUCTION

VERIFICATION AND INSPECTION	TABLE 1705.3 2014 OSSC REQUIRED VERIFICATION AND INSPECTION OF CONCRETE CONSTRUCTION	
	CONTINUOUS	PERIODIC
1. INSPECTION OF REINFORCING STEEL, INCLUDING PRESTRESSING TENDONS, & PLACEMENT	-	X
2. INSPECTION OF REINFORCING STEEL WELDING IN ACCORDANCE W/ TABLE 1705.2.2, ITEM 2b.	-	-
3. INSPECTION OF ANCHORS CAST IN CONCRETE WHERE ALLOWABLE LOADS HAVE BEEN INCREASED OR WHERE STRENGTH DESIGN IS USED.	-	X
4. INSPECTION OF ANCHORS POST-INSTALLED IN HARDENED CONCRETE.	-	X
5. VERIFYING USE OF REQUIRED DESIGN MIX.	-	X
6. AT THE TIME FRESH CONCRETE IS SAMPLED TO FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE.	X	-
7. INSPECTION OF CONCRETE & SHOTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES.	X	-
8. INSPECTION FOR MAINTENANCE OF SPECIFIED CURING TEMPERATURE & TECHNIQUES.	-	X
9. INSPECTION OF PRESTRESSED CONCRETE: a. APPLICATION OF PRESTRESSING FORCES. b. GROUTING OF BONDED PRESTRESSING TENDONS IN THE SEISMIC-FORCE-RESISTING SYSTEM.	X	-
10. ERECTION OF PRECAST CONCRETE MEMBERS.	-	X
11. VERIFICATION OF IN-SITU CONCRETE STRENGTH, PRIOR TO STRESSING OF TENDONS IN POSTTENSIONED CONCRETE & PRIOR TO REMOVAL OF SHORES & FORMS FROM BEAMS & STRUCTURAL SLABS	-	X
12. INSPECT FORMWORK FOR SHAPE, LOCATION & DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED	-	X



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CLIENT
PHI CONSTRUCTION, INC.
4817 SE 61ST AVE
PORTLAND, OR 97206
503-788-9799

PROJECT
21st CENTURY TOWING

SITE ADDRESS
**8520 N. KERBY AVE
PORTLAND, OR 97217**

SHEET NAME
FOUNDATION PLAN & DETAILS

REVISION

2	3/15/18	ISSUED FOR OWNER COORD.
3	3/22/18	ISSUED FOR PERMIT
4	4/6/18	REVISED FOR SOIL MANAGEMENT
5	6/15/18	REVISED FOR SOIL MANAGEMENT & PR COMMENTS
6	7/18/18	REVISED FOR SOIL MANAGEMENT
7	8/28/18	REVISED FOR SOIL MANAGEMENT

ISSUE DATE **AUGUST 28, 2018**
DRAWING FILE **17-24_1LDWG**
PROJECT NUMBER **17-24**

Figure 3
Methane Barrier, Vent, and Sampling Port Locations