



BRIDGETON LANDFILL, LLC.

**CONSTRUCTION QUALITY ASSURANCE
ACCEPTANCE REPORT**

2020 GCCS IMPROVEMENTS

BRIDGETON, ST. LOUIS COUNTY, MISSOURI

Prepared For:

**Bridgeton Landfill, LLC.
13570 St. Charles Rock Road
Bridgeton, MO 63044**

November 2020

Project No.: BT-143-20

Prepared By:

**Feezor Engineering, Inc.
3377 Hollenberg Drive
Bridgeton, MO 63044**



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Bridgeton, MO 63044

BT-143-20

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1 INTRODUCTION

1.1 Overview of Project

Bridgeton Landfill, LLC is a closed municipal solid waste facility located at 13570 St. Charles Rock Road, Bridgeton, St. Louis County, Missouri. The facility is owned and operated by Bridgeton Landfill, LLC (BL) who operate the facility pursuant to Permit No 118912 (and subsequent modifications), issued by the Missouri Department of Natural Resources (MDNR).

During the 2020 construction season, BL installed (13) thirteen additional gas extraction wells. Recovery Drilling Service (RDS) of Dudley, MA was selected as the driller for the project. Hunt Environmental Services of St. Louis, MO, Fusion Solutions Inc. of Carlinville, IL and Sharp Services STL of St. Louis, MO were chosen to provide support and piping installation during the project. Feezor Engineering Inc. (FEI) of Bridgeton, MO, provided the initial and record surveying to document the location of the installed gas extraction wells and associated GCCS piping.

FEI was also selected as the Construction Quality Assurance (CQA) consultant to observe and document the construction of the GCCS upgrades. Daniel R. Feezor, P.E. of FEI was the Construction Quality Assurance Officer (CQAO). Mr. Feezor selected Brad Vits to be the CQA technician.

2 CONSTRUCTION DOCUMENTS

2.1 Construction Drawings

FEI created a detailed set of construction drawings for this project. These drawings provided the detail to properly construct all the necessary project components. Construction drawings were also used for the proper selection of materials and provided adequate detail for the installation of the GCCS upgrades.

3 GCCS INSTALLATION

3.1 New Landfill Gas Extraction Wells Installation

Thirteen (13) new gas wells were installed throughout areas of the landfill to enhance landfill gas collection. RDS drilled the wells using a Soilmec SR-30 drill rig with a core barrel bucket. FEI observed and documented the drilling process including but not limited to logging of waste depth, temperature and composition. Daily Field Reports can be found in **Appendix A.1**.

Well piping consisted of 12" SDR-11 HDPE solid and perforated piping. The pipe sections were butt-fused together by Fusion Solutions. A low-pressure HDPE cap was installed at the bottom of each well casing and a pre-fabricated 12" flanged lid on the top of each well casing prior to installation.

The pipe was raised using a winch on the drill rig and lowered into the borehole to the appropriate depth. Granular backfill consisting of three-quarter (3/4) inch to three (3) inch diameter washed non-carbonate gravel was placed in the borehole around the perforated pipe. A single-axle dump truck transported the gravel to the well location and placed it into the borehole. The gravel was placed to a point generally about two feet above the perforated pipe. A geocomposite donut was then placed over the aggregate to prevent migration of fines into the collection aggregate. Before the bentonite was added, one (1) foot of clean soil was used as a plug. A two (2) foot bentonite seal was then placed above the soil plug. Water was added to the layers of bentonite to adequately hydrate the seal. Cover soil was then placed over the bentonite layer followed by another two (2) foot hydrated bentonite seal. A two (2) foot layer of clean soil was then placed above the upper bentonite seal. An approximate three (3) foot layer of sealant foam seal was then installed over the clean soil layer. The remainder of the borehole was then backfilled with a minimum three (3) foot soil cover plug to the existing ground surface.

Prior to final backfill at surface, a permanent metal safety grate was installed a minimum 6" below final ground surface and the remainder of the area was backfilled with clean soil materials.

The as-built well depths and well construction details are shown on the as-built well logs in **Appendix B.1**.

The gradation for the gas well collection aggregate is included in **Appendix B.2**.

A six (6) inch diameter well head was installed and connected to the gas header system via lateral piping by Fusion Solutions Inc.

3.2 Construction Quality Assurance

3.2.1 Construction Oversight

The construction technician inspected all materials for the gas collection system. This included piping, valves, fittings, and backfill material to ensure that these materials were acceptable and consistent with the construction plans. The construction technician inspected the materials to be constructed of HDPE pipe to determine if the materials meet the following requirements:

- All HDPE pipe was new, or first quality, and was furnished at lengths as indicated on the approved design plans. All HDPE piping was straight throughout its length and generally free from imperfections.
- The HDPE pipe and fittings had a minimum Standard Dimension Ratio (SDR) as noted on the design plans.

During installation of the landfill gas collection system enhancements, the construction technician documented that the construction adhered to the plans and specifications. This included:

- Pipe and appurtenances were installed true to line, grade, and location with the pipe supported and restrained against movement with all valve stems plumb.
- The pipe joints, except where flanged joints or electro-fusion couplers were specified on the approved design plans, were butt fused as recommended by the pipe manufacturer. Shavings from the preparation of pipe ends for fusion were removed from the pipe prior to installation.

During storage, the technician documented that pipes and fittings were stacked so as to prevent damage by marring, crushing or puncture. Maximum stacking height was limited to 6 feet.

The technician recorded applicable test data, areas of construction, problems and remedies, construction equipment and methodologies, survey data, and equipment calibration on the Daily Summary Reports and the Daily Inspection Reports, included herein as **Appendix A.1**.

4 SURVEY CONTROL

4.1 Construction Surveying

Feezor Engineering Inc. of Bridgeton, Missouri, provided surveying services.

4.2 Final As-built Surveying

Feezor Engineering Inc. of Bridgeton, Missouri provided the final certification survey for the as-built coordinates of the installed Gas Extraction Wells.

5 CERTIFICATION

I, Daniel R. Feezor, P.E., do hereby certify to my best knowledge and belief, that the 2020 GCCS Improvements at the Bridgeton Landfill were constructed in accordance with the construction documents.

Appendix A

FIELD INFORMATION

Sub-Appendices

A.1 Daily Summary Reports

A.2 Equipment List

Sub-Appendix A.1

Daily Summary Reports

Feezor Engineering, Inc.
406 E. Walnut St.
Chatham, IL 62629
(217) 483-3118



Daily Field Summary Report

Client: <u>Bridgeton Landfill, LLC</u>	Job No.: <u>BT-143-20</u>
Project: <u>2020 GCCS Updates</u>	Task No.: <u>CQA</u>
Location: <u>Bridgeton, MO</u>	Date: <u>10/13/2020</u>
<u>Recovery Drilling Services (RDS), Sharp Services (Sharp), Fusion Solutions Inc. (FSI)</u>	
Contractor(s): <u>Hunt Environmental Services (HES)</u>	Report No.: <u>1</u>
Weather: AM <u>M Sunny</u> PM <u>M Sunny</u>	
Temperature: AM <u>60 F</u> PM <u>80 F</u>	

Description of field activities (include labor, equipment, site conditions, sampling, etc.)

- 0630 - Daily safety briefing held via webconference.
- 0645 - I arrive onsite. HES and Sharp working to set up odor control equipment around the GEW-250.
- 0925 - RDS began drilling at GEW-250. Odor control and waste handling equipment and personnel are working to minimize odors remove excavated waste as soon as possible from the boring location. Odor control measures include the use of a vacuum box around the boring location. A temporary lid is placed over the vacuum box while the drill rig is out of the hole to dump accumulated waste. Another laborer is covering the excavated waste with a granular product and spray that reduce odors emanating from the waste. Then a skid steer transfers the excavated waste to a loader that is dumping the waste into a covered trailer that is utilized to haul the material offsite. This process will be utilized on all wells for the project.
- 1140 - GEW-250 boring is complete at a depth of 81' below ground surface. FSI begins delivering well casing materials to the work area.
- 1235 - FSI begins to install the well casing with assistance from the drill rig.
- 1255 - FSI begins to backfill the well.
- 1530 - Backfill of GEW-250 is complete. FSI begins making connections from the well to the site GCCS. I left the site.

For details concerning recovered materials, well casing dimensions and backfill, please refer to the corresponding well logs.

Copies To: Erin Fanning, Dan Feezor

FEI Representative: *Bradley Vito*

Feezor Engineering, Inc.
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Chatham, IL 62629
(217) 483-3118



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Daily Field Summary Report

Client: <u>Bridgeton Landfill, LLC</u>	Job No.: <u>BT-143-20</u>
Project: <u>2020 GCCS Updates</u>	Task No.: <u>CQA</u>
Location: <u>Bridgeton, MO</u> <u>Recovery Drilling Services (RDS), Sharp</u> <u>Services (Sharp), Fusion Solutions Inc. (FSI),</u>	Date: <u>10/14/2020</u>
Contractor(s): <u>Hunt Environmental Services (HES)</u>	Report No.: <u>2</u>
Weather: AM <u>M Sunny</u> PM <u>M Sunny</u>	
Temperature: AM <u>60 F</u> PM <u>85 F</u>	

Description of field activities (include labor, equipment, site conditions, sampling, etc.)

- 0630 - Daily safety briefing held via webconference.
- 0645 - I arrive onsite. HES and Sharp working to set up odor control equipment around the GEW-245.
- 0755 - RDS begins drilling at GEW-245. The same odor control and waste handling procedures utilized yesterday are continued today.
- 0900 - Drilling depth has reached 33'. It is determined to abandon the boring due to the amount of moisture and quantity of soil and gravel that have been excavated from the boring. An alternate location will be selected and attempted at another date. FSI begins to abandon the boring. The procedure used includes installing gravel to a depth of 10' below ground surface. Then soil is installed to 5' below ground surface. Then a 4' thick bentonite plug is installed in the boring followed by 1' of soil to return the boring to the original ground surface.
- 1009 - RDS begins drilling at GEW-244. The same odor control and waste handling procedures are utilized.
- 1500 - The target depth of 120' has been achieved at GEW-244. FSI begins delivering well casing materials to the work area.
- 1530 - FSI and RDS begins setting the well casing for GEW-244.
- 1600 - FSI begins installing the backfill in the annular space of the boring.
- 1800 - FSI begins to make connections for GEW-244 to the site GCCS. I left the site.

For details concerning recovered materials, well casing dimensions and backfill, please refer to the corresponding well logs.

Copies To: Erin Fanning, Dan Feezor

FEI Representative: *Bradley Vito*

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Daily Field Summary Report

Client: <u>Bridgeton Landfill, LLC</u>	Job No.: <u>BT-143-20</u>
Project: <u>2020 GCCS Updates</u>	Task No.: <u>CQA</u>
Location: <u>Bridgeton, MO</u> <u>Recovery Drilling Services (RDS), Sharp</u> <u>Services (Sharp), Fusion Solutions Inc. (FSI),</u>	Date: <u>10/15/2020</u>
Contractor(s): <u>Hunt Environmental Services (HES)</u>	Report No.: <u>3</u>
Weather: AM <u>Cloudy</u> PM <u>Cloudy</u>	
Temperature: AM <u>44 F</u> PM <u>65 F</u>	

Description of field activities (include labor, equipment, site conditions, sampling, etc.)

- 0630 - Daily safety briefing held via webconference.
- 0645 - I arrive onsite. HES and Sharp working to set up odor control equipment around the GEW-247.
- 0755 - RDS begins drilling at GEW-247. The same odor control and waste handling procedures utilized yesterday are continued today.
- 1018 - Drilling depth has reached 66'. It is determined to set the well at this depth due to the condition of excavated materials from the bottom of the boring.
- 1050 - FSI and RDS begin setting the well casing for GEW-247.
- 1120 - FSI begins installing the backfill in the annular space of the boring. HES and Sharp are working to set up odor control equipment around GEW-252. RDS is moving to this location.
- 1146 - RDS begins drilling at GEW-252. The same odor control and waste handling procedures are utilized.
- 1210 - FSI begins to make connections for GEW-247 to the site GCCS.
- 1406 - Drilling depth has reached 91'. It is determined to set the well at this depth due to the potential for pressure being exhibited from the boring.
- 1435 - FSI and RDS begin setting the well casing for GEW-252.
- 1500 - FSI begins installing the backfill in the annular space of the boring.
- 1620 - FSI begins to make connections for GEW-252 to the site GCCS. I left the site.

For details concerning recovered materials, well casing dimensions and backfill, please refer to the corresponding well logs.

Copies To: Erin Fanning, Dan Feezor

FEI Representative: *Bradley VTB*

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Daily Field Summary Report

Client: <u>Bridgeton Landfill, LLC</u>	Job No.: <u>BT-143-20</u>
Project: <u>2020 GCCS Updates</u>	Task No.: <u>CQA</u>
Location: <u>Bridgeton, MO</u>	Date: <u>10/16/2020</u>
<u>Recovery Drilling Services (RDS), Sharp Services (Sharp), Fusion Solutions Inc. (FSI),</u>	
Contractor(s): <u>Hunt Environmental Services (HES)</u>	Report No.: <u>4</u>
Weather: AM <u>P Cloudy</u> PM <u>P Cloudy</u>	
Temperature: AM <u>40 F</u> PM <u>63 F</u>	

Description of field activities (include labor, equipment, site conditions, sampling, etc.)

- 0630 - Daily safety briefing held via webconference.
- 0645 - I arrive onsite. HES and Sharp working to set up odor control equipment around the GEW-251.
- 0743 - RDS begins drilling at GEW-251. The same odor control and waste handling procedures utilized yesterday are continued today.
- 0950 - Drilling depth has reached 80'. It is determined to set the well at this depth due to the potential for pressure in the boring.
- 1015 - FSI and RDS begin setting the well casing for GEW-251.
- 1037 - FSI begins installing the backfill in the annular space of the boring. HES and Sharp are working to set up odor control equipment around GEW-246. RDS is moving to this location.
- 1130 - RDS begins drilling at GEW-246. The same odor control and waste handling procedures are utilized.
- 1201 - FSI begins to make connections for GEW-251 to the site GCCS.
- 1440 - Drilling depth has reached 93'. It is determined to set the well at this depth due to poor recovery and the condition of recovered materials from the boring.
- 1515 - FSI and RDS begin setting the well casing for GEW-246.
- 1547 - FSI begins installing the backfill in the annular space of the boring.
- 1720 - FSI begins to make connections for GEW-246 to the site GCCS. I left the site.

For details concerning recovered materials, well casing dimensions and backfill, please refer to the corresponding well logs.

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Daily Field Summary Report

Client: <u>Bridgeton Landfill, LLC</u>	Job No.: <u>BT-143-20</u>
Project: <u>2020 GCCS Updates</u>	Task No.: <u>CQA</u>
Location: <u>Bridgeton, MO</u> <u>Recovery Drilling Services (RDS), Sharp</u> <u>Services (Sharp), Fusion Solutions Inc. (FSI),</u>	Date: <u>10/17/2020</u>
Contractor(s): <u>Hunt Environmental Services (HES)</u>	Report No.: <u>5</u>
Weather: AM <u>M Cloudy</u> PM <u>M Cloudy</u>	
Temperature: AM <u>50 F</u> PM <u>70 F</u>	

Description of field activities (include labor, equipment, site conditions, sampling, etc.)

- 0630 - Daily safety briefing held via webconference.
- 0645 - I arrive onsite. HES and Sharp working to set up odor control equipment around the GEW-245.
- 0743 - RDS begins drilling at GEW-245. The same odor control and waste handling procedures utilized yesterday are continued today.
- 0930 - Drilling depth has reached 83'. It is determined to set the well at this depth due to the potential for pressure in the boring.
- 1004 - FSI and RDS begin setting the well casing for GEW-245.
- 1150 - FSI begins installing the backfill in the annular space of the boring.
- 1326 - FSI begins to make connections for GEW-245 to the site GCCS. I left the site.

For details concerning recovered materials, well casing dimensions and backfill, please refer to the corresponding well logs.

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FEI Representative: *Bradley VHS*

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Daily Field Summary Report

Client: <u>Bridgeton Landfill, LLC</u>	Job No.: <u>BT-143-20</u>
Project: <u>2020 GCCS Updates</u>	Task No.: <u>CQA</u>
Location: <u>Bridgeton, MO</u>	Date: <u>10/20/2020</u>
<u>Recovery Drilling Services (RDS), Sharp Services (Sharp), Fusion Solutions Inc. (FSI)</u>	
Contractor(s): <u>Hunt Environmental Services (HES)</u>	Report No.: <u>6</u>
Weather: AM <u>Cloudy</u> PM <u>Cloudy</u>	
Temperature: AM <u>45 F</u> PM <u>59 F</u>	

Description of field activities (include labor, equipment, site conditions, sampling, etc.)

- 0630 - Daily safety briefing held via webconference.
- 0645 - I arrive onsite. HES and Sharp working to set up odor control equipment around the GEW-248.
- 0755 - RDS begins drilling at GEW-248. The same odor control and waste handling procedures utilized yesterday are continued today.
- 0938 - Drilling depth has reached 62'. It is determined to set the well at this depth due to refusal to recover more material from the boring..
- 1052 - FSI and RDS begin setting the well casing for GEW-248.
- 1113 - FSI begins installing the backfill in the annular space of the boring.
- 1325 - FSI begins to make connections for GEW-248 to the site GCCS. I left the site.

For details concerning recovered materials, well casing dimensions and backfill, please refer to the corresponding well logs.

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Client: <u>Bridgeton Landfill, LLC</u>	Job No.: <u>BT-143-20</u>
Project: <u>2020 GCCS Updates</u>	Task No.: <u>CQA</u>
Location: <u>Bridgeton, MO</u>	Date: <u>10/21/2020</u>
<u>Recovery Drilling Services (RDS), Sharp Services (Sharp), Fusion Solutions Inc. (FSI)</u>	
Contractor(s): <u>Hunt Environmental Services (HES)</u>	Report No.: <u>7</u>
Weather: AM <u>Cloudy</u> PM <u>Cloudy</u>	
Temperature: AM <u>50 F</u> PM <u>59 F</u>	

Description of field activities (include labor, equipment, site conditions, sampling, etc.)

- 0630 - Daily safety briefing held via webconference.
- 0645 - I arrive onsite. HES and Sharp working to set up odor control equipment around the GEW-249.
- 0743 - RDS begins drilling at GEW-249. The same odor control and waste handling procedures utilized yesterday are continued today.
- 1210 - Drilling depth has reached the target depth of 120'.
- 1308 - FSI and RDS begin setting the well casing for GEW-249.
- 1403 - FSI begins installing the backfill in the annular space of the boring.
- 1527 - FSI begins to make connections for GEW-249 to the site GCCS. I left the site.

For details concerning recovered materials, well casing dimensions and backfill, please refer to the corresponding well logs.

Copies To: Erin Fanning, Dan Feezor

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Daily Field Summary Report

Client: <u>Bridgeton Landfill, LLC</u>	Job No.: <u>BT-143-20</u>
Project: <u>2020 GCCS Updates</u>	Task No.: <u>CQA</u>
Location: <u>Bridgeton, MO</u> <u>Recovery Drilling Services (RDS), Sharp</u> <u>Services (Sharp), Fusion Solutions Inc. (FSI),</u>	Date: <u>10/22/2020</u>
Contractor(s): <u>Hunt Environmental Services (HES)</u>	Report No.: <u>8</u>
Weather: AM <u>Sunny</u> PM <u>Sunny</u>	
Temperature: AM <u>60 F</u> PM <u>85 F</u>	

Description of field activities (include labor, equipment, site conditions, sampling, etc.)

- 0600 - Daily safety briefing held via webconference.
- 0615 - I arrive onsite. HES and Sharp working to set up odor control equipment around the GEW-253.
- 0644 - RDS begins drilling at GEW-253. The same odor control and waste handling procedures utilized yesterday are continued today.
- 0849 - Drilling depth has reached 74'. It is determined to set the well at this depth due to the temperatures of recovered was from the bottom of the boring.
- 0944 - FSI and RDS begin setting the well casing for GEW-253.
- 1010 - FSI begins installing the backfill in the annular space of the boring. HES and Sharp are working to set up odor control equipment around GEW-243. RDS is moving to this location.
- 1120 - RDS begins drilling at GEW-243. The same odor control and waste handling procedures are utilized.
- 1130 - FSI begins to make connections for GEW-253 to the site GCCS.
- 1352 - Drilling depth has reached 90'. It is determined to set the well at this depth due to the condition of recovered materials from the bottom of the boring.
- 1447 - FSI and RDS begin setting the well casing for GEW-243.
- 1520 - FSI begins installing the backfill in the annular space of the boring.
- 1730 - FSI begins to make connections for GEW-243 to the site GCCS. I left the site.

For details concerning recovered materials, well casing dimensions and backfill, please refer to the corresponding well logs.

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Daily Field Summary Report

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Project: <u>2020 GCCS Updates</u>	Task No.: <u>CQA</u>
Location: <u>Bridgeton, MO</u> <u>Recovery Drilling Services (RDS), Sharp</u> <u>Services (Sharp), Fusion Solutions Inc. (FSI),</u>	Date: <u>10/23/2020</u>
Contractor(s): <u>Hunt Environmental Services (HES)</u>	Report No.: <u>9</u>
Weather: AM <u>Cloudy</u> PM <u>Cloudy</u>	
Temperature: AM <u>50 F</u> PM <u>71 F F</u>	

Description of field activities (include labor, equipment, site conditions, sampling, etc.)

- 0730 - Daily safety briefing held via webconference.
- 0745 - I arrive onsite. HES and Sharp working to set up odor control equipment around the GEW-241.
- 0832 - RDS begins drilling at GEW-241. The same odor control and waste handling procedures utilized yesterday are continued today.
- 1020 - Drilling depth has reached a depth of 75'. It is decided to set the well at this depth due the condition of material recovered from the bottom of the boring.
- 1109 - FSI and RDS begin setting the well casing for GEW-241.
- 1250 - FSI begins installing the backfill in the annular space of the boring.
- 1415 - FSI begins to make connections for GEW-241 to the site GCCS. I left the site.

For details concerning recovered materials, well casing dimensions and backfill, please refer to the corresponding well logs.

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Daily Field Summary Report

Client: <u>Bridgeton Landfill, LLC</u>	Job No.: <u>BT-143-20</u>
Project: <u>2020 GCCS Updates</u>	Task No.: <u>CQA</u>
Location: <u>Bridgeton, MO</u>	Date: <u>10/24/2020</u>
<u>Recovery Drilling Services (RDS), Sharp Services (Sharp), Fusion Solutions Inc. (FSI)</u>	
Contractor(s): <u>Hunt Environmental Services (HES)</u>	Report No.: <u>10</u>
Weather: AM <u>Cloudy</u> PM <u>Cloudy</u>	
Temperature: AM <u>42 F</u> PM <u>49 F</u>	

Description of field activities (include labor, equipment, site conditions, sampling, etc.)

- 0600 - Daily safety briefing held via webconference.
- 0615 - I arrive onsite. HES and Sharp working to set up odor control equipment around the GEW-242.
- 0644 - RDS begins drilling at GEW-241. The same odor control and waste handling procedures utilized yesterday are continued today.
- 0844 - Drilling depth has reached a depth of 77'. It is decided to set the well at this depth due to the temperature of recovered materials from the bottom of the boring.
- 0936 - FSI and RDS begin setting the well casing for GEW-242.
- 1006 - FSI begins installing the backfill in the annular space of the boring.
- 1117 - FSI begins to make connections for GEW-242 to the site GCCS. This location was the last proposed gas well for this project. I left the site.

For details concerning recovered materials, well casing dimensions and backfill, please refer to the corresponding well logs.

Copies To: Erin Fanning, Dan Feezor

FEI Representative: *Bradley VHS*

Sub-Appendix A.2

Equipment List



Bridgeton Landfill LLC.

2020 GCCS Updates

Construction Equipment List

Recovery Drilling Services

1 -Soilmec SR-30 Hydraulic Drilling Rig

Sharp Services STL

1 – Bobcat Skid Steer

1 – Single Axle Dump Truck

Hunt Environmental Services

1 – Volvo Front End Loader

1 – CAT Mini-Excavator

1 – Vac Truck

1 – Vac container

Fusion Solutions Inc.

1 – McElroy 1218 Butt-Fusion Machine

1 – McElroy 618 Bulldog Fusion Machine

1 – Polaris Ranger UTV

1 – Takeuchi T12 Skid Steer

1 – Takeuchi TL50 Mini-Excavator

1 – Water Truck

Appendix B

INSTALLATION INFORMATION

Sub-Appendices

- B.1** As-built Well Logs
- B.2** Gas Well Aggregate Gradation

Sub-Appendix B.1

As-Built Well Logs



Client: **Bridgeton Landfill LLC**
 Project Location: **Bridgeton, MO**
 Project Name: **2020 GCCS CQA**
 FEI Project Number: **BT-143**
 FEI Inspector: **Brad Vits**
 Drilling Contractor: **Recovery Drilling (RDS)**
 Driller: **Stan Garrison**

Drilling Method: **36" Core Barrel/Bucket**
 Well Casing Material: **12" SDR-11 HDPE**
 Easting: **516,733.4**
 Northing: **1,067,108.8**
 GS Elevation: **490.00**
 Drill Date(s): **10/23/2020**
 Drilled Depth: **76 feet**

Gas Well ID: **GEW-241**

Depth in Feet	Temperature (°F)	Waste/Soil Description	Well Completion Details
+2			Top of Flange (Elev. 491.5)
0			Ground Surface (Elev. 490.0)
		100% soil / Dry / None	5 ft x 5 ft Safety Grate
5	68.0	100% soil / Dry / None	Elev. Top of Foam Seal : (2' bgs)
		100% soil / Dry / None	Elev. Top of Upper Soil : (5' bgs)
10	86.0	Top of Waste = 10 feet	Elev. Top of Upper Bentonite Seal : (7' bgs)
		60% plastic, 30% soil, 10% wood / Dry / Moderate	Elev. Top of Middle Soil : (9' bgs)
15	93.0	70% plastic, 20% cardboard, 10% soil / Dry / Moderate	Elev. Top of Lower Bentonite Seal : (14' bgs)
		80% plastic, 10% textile, 10% soil / Dry / Moderate	Elev. Top of Lowest Soil : (16' bgs)
20	96.0	70% plastic, 20% metal, 10% wood / Dry / Moderate	Elev. Top of Rock Pack / "Donut" : (17' bgs)
25	109.0	60% plastic, 20% metal, 10% wood, 10% soil / Dry / Moderate	Elev. Top of Perforated Pipe : (19' bgs)
30	121.0	60% plastic, 30% soil, 10% wood / Dry / Moderate	
35	133.0	50% plastic, 20% soil, 20% wood, 10% metal / Dry / Moderate	
40	140.0	50% plastic, 30% soil, 10% wood, 10% metal / Damp / Much	
45	135.0	30% plastic, 50% indiscernible black/brown soil like material, 10% wood, 10% metal / Wet / Severe	Elev. Top of Free Liquid : (42.5' bgs)
50	138.0	70% indiscernible black/brown soil like material, 30% plastic / Saturated / Severe	
55	140.0	70% indiscernible black/brown soil like material, 10% plastic, 20% metal / Saturated / Severe	
60	140.0		
65	141.0		

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Client: **Bridgeton Landfill LLC**
 Project Location: **Bridgeton, MO**
 Project Name: **2020 GCCS CQA**
 FEI Project Number: **BT-143**
 FEI Inspector: **Brad Vits**
 Drilling Contractor: **Recovery Drilling (RDS)**
 Driller: **Stan Garrison**

Drilling Method: **36" Core Barrel/Bucket**
 Well Casing Material: **12" SDR-11 HDPE**
 Easting: **516,733.4**
 Northing: **1,067,108.8**
 GS Elevation: **490.00**
 Drill Date(s): **10/23/2020**
 Drilled Depth: **76 feet**

Gas Well ID: **GEW-241**

Depth in Feet	Temperature (°F)	Waste/Soil Description	Well Completion Details
70	146.0	100% indiscernible black/brown soil like material / Saturated / Severe	<p>(continued from previous page)</p> <p>Elev. Bottom of Perf. Pipe Cap : (72' bgs).....</p> <p>Bottom of Hole = 76 ft Elev = 414.0'</p>
75 76	158.0	100% indiscernible black/brown soil like material / Saturated / Severe	
80			



Client: **Bridgeton Landfill LLC**
 Project Location: **Bridgeton, MO**
 Project Name: **2020 GCCS CQA**
 FEI Project Number: **BT-143**
 FEI Inspector: **Brad Vits**
 Drilling Contractor: **Recovery Drilling (RDS)**
 Driller: **Stan Garrison**

Drilling Method: **36" Core Barrel/Bucket**
 Well Casing Material: **12" SDR-11 HDPE**
 Easting: **516,547.4**
 Northing: **1,067,031.6**
 GS Elevation: **492.3**
 Drill Date(s): **10/24/2020**
 Drilled Depth: **77 feet**

Gas Well ID: **GEW-242**

Depth in Feet	Temperature (°F)	Waste/Soil Description	Well Completion Details
+2			Top of Flange (Elev. 494.0)
0			Ground Surface (Elev. 492.3)
		100% soil / Dry / None	5 ft x 5 ft Safety Grate
			Elev. Top of Foam Seal : (2' bgs)
5	62.0		Elev. Top of Upper Soil : (5' bgs)
		100% soil / Dry / None	Elev. Top of Upper Bentonite Seal : (7' bgs)
10	75.0		Elev. Top of Middle Soil : (9' bgs)
		100% soil / Dry / None	
15	81.0		
		100% soil / Dry / None	
20	86.0		
		100% soil / Dry / None	
25	88.0		
		100% soil / Dry / None	
30	92.0		
		100% soil / Dry / None	
35	103.0		
		100% soil / Dry / None	
40	114.0		Elev. Top of Lower Bentonite Seal : (38' bgs)
		100% soil / Dry / None	Elev. Top of Lowest Soil : (40' bgs)
			Elev. Top of Rock Pack / "Donut" : (41' bgs)
		100% soil / Dry / None	Elev. Top of Perforated Pipe : (43' bgs)
45	115.0		
		100% soil / Dry / None	
50	123.0	Top of Waste = 49 feet 90% soil, 10% plastic / Dry / Moderate	
		20% soil, 65% plastic, 5% wood, 5% carpet, 5% brick / Dry / Moderate	Elev. Top of Free Liquid : (52.9" bgs)
55	146.0		
		40% soil, 50% plastic, 10% wood / Dry / Moderate	
60	164.0		
		50% soil, 50% plastic / Dry / Much	
65	190.0		

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Client: **Bridgeton Landfill LLC**
 Project Location: **Bridgeton, MO**
 Project Name: **2020 GCCS CQA**
 FEI Project Number: **BT-143**
 FEI Inspector: **Brad Vits**
 Drilling Contractor: **Recovery Drilling (RDS)**
 Driller: **Stan Garrison**

Drilling Method: **36" Core Barrel/Bucket**
 Well Casing Material: **12" SDR-11 HDPE**
 Easting: **516,547.4**
 Northing: **1,067,031.6**
 GS Elevation: **492.3**
 Drill Date(s): **10/24/2020**
 Drilled Depth: **77 feet**

Gas Well ID: **GEW-242**

Depth in Feet	Temperature (°F)	Waste/Soil Description	Well Completion Details
70	202.0	70% indiscernible black/brown soil like material, 20% plastic, 10% wood / Dry / Much	<p>(continued from previous page)</p> <p>Elev. Bottom of Perf. Pipe Cap : (75' bgs).....</p> <p>Bottom of Hole = 77 ft Elev = 415.3'</p>
75	208.0	70% indiscernible black/brown soil like material, 30% plastic / Wet / Severe	
77	208.0	70% indiscernible black/brown soil like material, 30% plastic / Wet / Severe	
80			



Client: **Bridgeton Landfill LLC**
 Project Location: **Bridgeton, MO**
 Project Name: **2020 GCCS CQA**
 FEI Project Number: **BT-143**
 FEI Inspector: **Brad Vits**
 Drilling Contractor: **Recovery Drilling (RDS)**
 Driller: **Stan Garrison**

Drilling Method: **36" Core Barrel/Bucket**
 Well Casing Material: **12" SDR-11 HDPE**
 Easting: **515,828.1**
 Northing: **1,066,579.6**
 GS Elevation: **488.76**
 Drill Date(s): **10/22/2020**
 Drilled Depth: **90 feet**

Gas Well ID: **GEW-243**

Depth in Feet	Temperature (°F)	Waste/Soil Description	Well Completion Details
+3			Top of Flange (Elev. 491.1)
0			Ground Surface (Elev. 488.8) 5 ft x 5 ft Safety Grate Elev. Top of Foam Seal : (2' bgs)
5	82.0	100% soil / Dry / None	Elev. Top of Upper Soil : (5' bgs)
10	86.0	80% soil, 20% gravel/ Wet / None	Elev. Top of Upper Bentonite Seal : (7' bgs)
15	90.0	80% soil, 20% gravel/ Wet / None	Elev. Top of Middle Soil : (9' bgs)
20	100.0	Top of Waste = 16 feet 50% plastic, 50% soil / Wet / Much	Elev. Top of Lower Bentonite Seal : (14' bgs)
25	128.0	50% plastic, 50% soil / Wet / Much	Elev. Top of Lowest Soil : (16' bgs)
30	130.0	50% plastic, 50% soil / Wet / Much	Elev. Top of Rock Pack / "Donut" : (17' bgs)
35	124.0	50% plastic, 50% soil / Wet / Much	Elev. Top of Perforated Pipe : (19' bgs)
40	172.0	70% plastic, 30% soil / Wet / Much	Elev. Top of Free Liquid : (31.4' bgs)
45	183.0	20% plastic, 50% indiscernible black/brown soil like material, 20% metal, 10% wood / Saturated / Severe	
50	193.0	60% indiscernible black/brown soil like material, 40% plastic / Saturated / Severe	
55	180.0	60% indiscernible black/brown soil like material, 30% plastic, 10% wood / Saturated / Severe	
60	186.0	50% indiscernible black/brown soil like material, 10% textile, 40% plastic / Saturated / Severe	
65	198.0	80% indiscernible black/brown soil like material, 20% plastic / Saturated / Severe	
		50% indiscernible black/brown soil like material, 10% gravel, 40% plastic / Saturated / Severe	

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Client: **Bridgeton Landfill LLC**
 Project Location: **Bridgeton, MO**
 Project Name: **2020 GCCS CQA**
 FEI Project Number: **BT-143**
 FEI Inspector: **Brad Vits**
 Drilling Contractor: **Recovery Drilling (RDS)**
 Driller: **Stan Garrison**

Drilling Method: **36" Core Barrel/Bucket**
 Well Casing Material: **12" SDR-11 HDPE**
 Easting: **515,828.1**
 Northing: **1,066,579.6**
 GS Elevation: **488.76**
 Drill Date(s): **10/22/2020**
 Drilled Depth: **90 feet**

Gas Well ID: **GEW-243**

Depth in Feet	Temperature (°F)	Waste/Soil Description	Well Completion Details
70	183.0	100% indiscernible black/brown soil like material / Saturated / Severe	<p>(continued from previous page)</p> <p>Elev. Bottom of Perf. Pipe Cap : (88' bgs).....</p> <p>Bottom of Hole = 90 ft Elev = 398.8'</p>
75	188.0	70% indiscernible black/brown soil like material, 20% plastic, 10% textile / Saturated / Severe	
80	200.0	70% indiscernible black/brown soil like material, 20% plastic, 10% metal / Saturated / Severe	
85	198.0	100% indiscernible black/brown soil like material / Saturated / Severe	
90	204.0	100% indiscernible black/brown soil like material / Saturated / Severe	
95			



Client: **Bridgeton Landfill LLC**
 Project Location: **Bridgeton, MO**
 Project Name: **2020 GCCS CQA**
 FEI Project Number: **BT-143**
 FEI Inspector: **Brad Vits**
 Drilling Contractor: **Recovery Drilling (RDS)**
 Driller: **Stan Garrison**

Drilling Method: **36" Core Barrel/ Bucket**
 Well Casing Material: **12" SDR-11 HDPE**
 Easting: **515,750.6**
 Northing: **1,066,662.3**
 GS Elevation: **487.73**
 Drill Date(s): **10/14/2020**
 Drilled Depth: **120 feet**

Gas Well ID: **GEW-244**

Depth in Feet	Temperature (°F)	Waste/Soil Description	Well Completion Details
+2			Top of Flange (Elev. 490.2)
0			Ground Surface (Elev. 487.7)
		100% soil / Dry / None	5 ft x 5 ft Safety Grate
5	78.0		Elev. Top of Foam Seal : (2' bgs)
		100% soil / Dry / None	Elev. Top of Upper Soil : (5' bgs)
10	80.0		Elev. Top of Upper Bentonite Seal : (7' bgs)
		50% soil, 50% gravel / Dry / None	Elev. Top of Middle Soil : (9' bgs)
15	84.0		Elev. Top of Lower Bentonite Seal : (14' bgs)
		50% soil, 50% gravel / Dry / None	Elev. Top of Lowest Soil : (16' bgs)
20	96.0	Top of Waste = 20'	Elev. Top of Rock Pack / "Donut" : (17' bgs)
		70% plastic, 20% soil, 10% textile / Saturated / Moderate	Elev. Top of Perforated Pipe : (19' bgs)
25	115.0		Elev. Top of Free Liquid : (25.4' bgs)
		40% plastic, 60% soil / Saturated / Much	
30	125.0		
		60% plastic, 40% soil / Saturated / Much	
35	116.0		
		60% plastic, 40% soil / Saturated / Much	
40	161.0		
		20% plastic, 80% indiscernible black/brown soil like material / Saturated / Much	
45	138.0		
		20% plastic, 80% indiscernible black/brown soil like material / Saturated / Much	
50	169.0		
		50% plastic, 50% indiscernible black/brown soil like material / Saturated / Severe	
55	186.0		
		50% plastic, 50% indiscernible black/brown soil like material / Saturated / Severe	
60	140.0		
		30% plastic, 70% indiscernible black/brown soil like material / Saturated / Severe	
65	154.0		

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Client: **Bridgeton Landfill LLC**
 Project Location: **Bridgeton, MO**
 Project Name: **2020 GCCS CQA**
 FEI Project Number: **BT-143**
 FEI Inspector: **Brad Vits**
 Drilling Contractor: **Recovery Drilling (RDS)**
 Driller: **Stan Garrison**

Drilling Method: **36" Core Barrel/Bucket**
 Well Casing Material: **12" SDR-11 HDPE**
 Easting: **515,750.6**
 Northing: **1,066,662.3**
 GS Elevation: **487.73**
 Drill Date(s): **10/14/2020**
 Drilled Depth: **120 feet**

Gas Well ID: **GEW-244**

Depth in Feet	Temperature (°F)	Waste/Soil Description	Well Completion Details
70	160.0	30% plastic, 70% indiscernible black/brown soil like material / Saturated / Severe	<p>(continued from previous page)</p> <p>Elev. Bottom of Perf. Pipe Cap : (118' bgs)</p> <p>Bottom of Hole = 120 ft Elev = 367.73'</p>
75	164.0	30% plastic, 70% indiscernible black/brown soil like material / Saturated / Severe	
80	190.0	30% plastic, 70% indiscernible black/brown soil like material / Saturated / Severe	
85	170.0	30% plastic, 70% indiscernible black/brown soil like material / Saturated / Severe	
90	187.0	100% indiscernible black/brown soil like material / Saturated / Severe	
95	185.0	100% indiscernible black/brown soil like material / Saturated / Severe	
100	192.0	100% indiscernible black/brown soil like material / Saturated / Severe	
105	204.0	100% indiscernible black/brown soil like material / Saturated / Severe	
110	200.0	100% indiscernible black/brown soil like material / Saturated / Severe	
115	178.0	100% indiscernible black/brown soil like material / Saturated / Severe	
120	193.0	100% indiscernible black/brown soil like material / Saturated / Severe	
125			



Client: **Bridgeton Landfill LLC**
 Project Location: **Bridgeton, MO**
 Project Name: **2020 GCCS CQA**
 FEI Project Number: **BT-143**
 FEI Inspector: **Brad Vits**
 Drilling Contractor: **Recovery Drilling (RDS)**
 Driller: **Stan Garrison**

Drilling Method: **36" Core Barrel/ Bucket**
 Well Casing Material: **12" SDR-11 HDPE**
 Easting: **515,639.7**
 Northing: **1,066,708.0**
 GS Elevation: **482.80**
 Drill Date(s): **10/17/2020**
 Drilled Depth: **83 feet**

Gas Well ID: **GEW-245**

Depth in Feet	Temperature (°F)	Waste/Soil Description	Well Completion Details
+2			Top of Flange (Elev. 484.2)
0			Ground Surface (Elev. 482.8)
		100% soil / Dry / None	5 ft x 5 ft Safety Grate
5	71.0		Elev. Top of Foam Seal : (2' bgs)
		100% soil / Dry / None	Elev. Top of Upper Soil : (5' bgs)
10	81.0		Elev. Top of Upper Bentonite Seal : (7' bgs)
		100% soil / Dry / None	Elev. Top of Middle Soil : (9' bgs)
15	90.0		
		100% soil / Dry / None	
20	86.0		Elev. Top of Lower Bentonite Seal : (19' bgs)
		100% soil / Dry / None	Elev. Top of Lowest Soil : (21' bgs)
		100% soil / Dry / None	Elev. Top of Rock Pack / "Donut" : (22' bgs)
25	105.0		Elev. Top of Perforated Pipe : (24' bgs)
		100% soil / Dry / None	
		Top of Waste = 27 feet	
30	106.0	50% soil, 40% plastic, 10% wood / Normal / Much	Elev. Top of Free Liquid : (31.3' bgs)
		50% soil, 45% plastic, 5% metal / Normal / Much	
35	134.0		
		40% soil, 50% plastic, 5% metal, 5% cardboard / Normal / Much	
40	150.0		
		35% soil, 50% plastic, 5% metal, 10% wood / Damp / Much	
45	166.0		
		50% soil, 40% plastic, 10% wood / Damp / Much	
50	174.0		
		50% indiscernible black/brown soil like material, 50% plastic / Damp / Much	
55	181.0		
		50% indiscernible black/brown soil like material, 50% plastic / Damp / Severe	
60	192.0		
		65% indiscernible black/brown soil like material, 30% plastic, 5% metal / Damp / Severe	
65	194.0		

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Client: **Bridgeton Landfill LLC**
 Project Location: **Bridgeton, MO**
 Project Name: **2020 GCCS CQA**
 FEI Project Number: **BT-143**
 FEI Inspector: **Brad Vits**
 Drilling Contractor: **Recovery Drilling (RDS)**
 Driller: **Stan Garrison**

Drilling Method: **36" Core Barrel/ Bucket**
 Well Casing Material: **12" SDR-11 HDPE**
 Easting: **515,639.7**
 Northing: **1,066,708.0**
 GS Elevation: **482.80**
 Drill Date(s): **10/17/2020**
 Drilled Depth: **83 feet**

Gas Well ID: **GEW-245**

Depth in Feet	Temperature (°F)	Waste/Soil Description	Well Completion Details
70	200.0	70% indiscernible black/brown soil like material, 30% plastic / Damp / Severe	<p>(continued from previous page)</p> <p>Elev. Bottom of Perf. Pipe Cap : (78' bgs)</p> <p>Bottom of Hole = 83 ft Elev = 399.8'</p>
75	191.0	70% indiscernible black/brown soil like material, 30% plastic / Damp / Severe	
80	184.0	70% indiscernible black/brown soil like material, 30% plastic / Damp / Severe	
83	193.0	80% indiscernible black/brown soil like material, 20% plastic / Damp / Severe	
85			
90			



Client: **Bridgeton Landfill LLC**
 Project Location: **Bridgeton, MO**
 Project Name: **2020 GCCS CQA**
 FEI Project Number: **BT-143**
 FEI Inspector: **Brad Vits**
 Drilling Contractor: **Recovery Drilling (RDS)**
 Driller: **Stan Garrison**

Drilling Method: **36" Core Barrel/Bucket**
 Well Casing Material: **12" SDR-11 HDPE**
 Easting: **515,910.2**
 Northing: **1,067,547.6**
 GS Elevation: **473.44**
 Drill Date(s): **10/16/2020**
 Drilled Depth: **93 feet**

Gas Well ID: **GEW-246**

Depth in Feet	Temperature (°F)	Waste/Soil Description	Well Completion Details
+2			Top of Flange (Elev. 475.8)
0			Ground Surface (Elev. 473.4) 5 ft x 5 ft Safety Grate
5	84.0	100% soil / Dry / None	Elev. Top of Foam Seal : (2' bgs)
10	84.0	100% soil / Dry / None	Elev. Top of Upper Soil : (5' bgs)
15	85.0	100% soil / Dry / None	Elev. Top of Upper Bentonite Seal : (7' bgs)
20	90.0	100% soil / Dry / None Top of Waste = 18 feet	Elev. Top of Middle Soil : (9' bgs)
25	98.0	60% soil, 20% plastic, 20% textile / Dry / Moderate	Elev. Top of Lower Bentonite Seal : (13' bgs)
30	124.0	60% plastic, 30% soil, 10% textile / Dry / Moderate	Elev. Top of Lowest Soil : (15' bgs)
35	135.0	20% soil, 60% plastic, 10% textile, 10% cardboard / Dry / Moderate	Elev. Top of Rock Pack / "Donut" : (16' bgs)
40	160.0	60% plastic, 40% soil / Dry / Moderate	Elev. Top of Perforated Pipe : (19' bgs)
45	164.0	20% carpet, 50% plastic, 20% soil, 10% cardboard / Dry / Moderate	
50	181.0	30% metal, 50% plastic, 20% soil / Dry / Moderate	
55	185.0	40% soil, 50% plastic, 10% textile / Dry / Moderate	
60	191.0	20% soil, 50% plastic, 10% metal, 20% carpet / Dry / Moderate	
65	195.0	60% plastic, 30% soil, 10% wood / Dry / Much	
		30% plastic, 70% indiscernible black/brown soil like material / Normal / Much	

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Client: **Bridgeton Landfill LLC**
 Project Location: **Bridgeton, MO**
 Project Name: **2020 GCCS CQA**
 FEI Project Number: **BT-143**
 FEI Inspector: **Brad Vits**
 Drilling Contractor: **Recovery Drilling (RDS)**
 Driller: **Stan Garrison**

Drilling Method: **36" Core Barrel/Bucket**
 Well Casing Material: **12" SDR-11 HDPE**
 Easting: **515,910.2**
 Northing: **1,067,547.6**
 GS Elevation: **473.44**
 Drill Date(s): **10/16/2020**
 Drilled Depth: **93 feet**

Gas Well ID: **GEW-246**

Depth in Feet	Temperature (°F)	Waste/Soil Description	Well Completion Details
70	200.0	40% plastic, 60% indiscernible black/brown soil like material / Damp / Much	<p>(continued from previous page)</p> <p>Elev. Bottom of Perf. Pipe Cap : (88' bgs)</p> <p>Bottom of Hole = 93 ft Elev = 380.4'</p>
75	200.0	30% plastic, 70% indiscernible black/brown soil like material / Damp / Severe	
80	171.0	20% gravel, 80% indiscernible black/brown soil like material / Damp to Wet / Severe	
85	199.0	90% indiscernible black/brown soil like material, 10% plastic / Wet / Severe	
90	201.0	60% indiscernible black/brown soil like material, 10% plastic, 30% gravel / Wet / Severe	
93	201.0	100% indiscernible black/brown soil like material / Wet / Severe	
95			
100			



Client: **Bridgeton Landfill LLC**
 Project Location: **Bridgeton, MO**
 Project Name: **2020 GCCS CQA**
 FEI Project Number: **BT-143**
 FEI Inspector: **Brad Vits**
 Drilling Contractor: **Recovery Drilling (RDS)**
 Driller: **Stan Garrison**

Drilling Method: **36" Core Barrel/ Bucket**
 Well Casing Material: **12" SDR-11 HDPE**
 Easting: **516,528.6**
 Northing: **1,067,493.8**
 GS Elevation: **483.36**
 Drill Date(s): **10/15/2020**
 Drilled Depth: **66 feet**

Gas Well ID: **GEW-247**

Depth in Feet	Temperature (°F)	Waste/Soil Description	Well Completion Details
+3			Top of Flange (Elev. 486.6)
0			Ground Surface (Elev. 483.4) 5 ft x 5 ft Safety Grate Elev. Top of Foam Seal : (2' bgs)
5	76.0	100% soil / Dry / None	Elev. Top of Upper Soil : (5' bgs)
10	87.0	90% soil, 10% gravel / Saturated / None	Elev. Top of Upper Bentonite Seal : (7' bgs) Elev. Top of Middle Soil : (9' bgs)
15	75.0	100% soil / Saturated / None	Elev. Top of Lower Bentonite Seal : (13' bgs)
20	104.0	100% soil / Saturated / None Top of Waste = 17 feet 20% soil, 70% plastic, 5% brick, 5% metal / Saturated / Much	Elev. Top of Lowest Soil : (15' bgs) Elev. Top of Rock Pack / "Donut" : (16' bgs)
25	98.0	80% plastic, 20% soil / Saturated / Much	Elev. Top of Perforated Pipe : (18' bgs)
30	132.0	50% indiscernible black/brown soil like material, 15% cardboard, 35% plastic / Saturated / Much	
35	121.0	10% soil, 40% indiscernible black/brown soil like material, 50% plastic / Saturated / Much	Elev. Top of Free Liquid : (34.9' bgs)
40	161.0	50% plastic, 50% indiscernible black/brown soil like material / Saturated / Much	
45	197.0	45% plastic, 5% metal, 50% indiscernible black/brown soil like material / Saturated / Much	
50	178.0	50% indiscernible black/brown soil like material, 50% plastic / Saturated / Much	
55	200.0	50% indiscernible black/brown soil like material, 30% plastic, 10% cardboard, 10% wood / Saturated / Much	
60	201.0	100% indiscernible black/brown soil like material / Saturated / Much	Elev. Bottom of Perf. Pipe Cap : (60' bgs)
65	180.0	100% indiscernible black/brown soil like material / Saturated / Much	
66			Bottom of Hole = 66 ft Elev = 417.36'



Client: **Bridgeton Landfill LLC**
 Project Location: **Bridgeton, MO**
 Project Name: **2020 GCCS CQA**
 FEI Project Number: **BT-143**
 FEI Inspector: **Brad Vits**
 Drilling Contractor: **Recovery Drilling (RDS)**
 Driller: **Stan Garrison**

Drilling Method: **36" Core Barrel/ Bucket**
 Well Casing Material: **12" SDR-11 HDPE**
 Easting: **516,531.8**
 Northing: **1,067,382.5**
 GS Elevation: **488.80**
 Drill Date(s): **10/20/2020**
 Drilled Depth: **62 feet**

Gas Well ID: **GEW-248**

Depth in Feet	Temperature (°F)	Waste/Soil Description	Well Completion Details
+2			Top of Flange (Elev. 490.7)
0			Ground Surface (Elev. 488.8)
		100% soil / Dry / None	5 ft x 5 ft Safety Grate
5	73.0		Elev. Top of Foam Seal : (2' bgs)
		100% soil / Dry / None	Elev. Top of Upper Soil : (5' bgs)
10	94.0		Elev. Top of Upper Bentonite Seal : (7' bgs)
		100% soil / Dry / None	Elev. Top of Middle Soil : (9' bgs)
15	93.0	Top of Waste = 15 feet	Elev. Top of Lower Bentonite Seal : (14' bgs)
		50% soil, 15% paper, 20% plastics, 15% textiles / Dry / Little	Elev. Top of Lowest Soil : (16' bgs)
20	108.0		Elev. Top of Rock Pack / "Donut" : (17' bgs)
		15% soil, 60% plastic, 15% paper, 10% wood / Dry / Little	Elev. Top of Perforated Pipe : (19' bgs)
25	147.0		
		60% soil, 20% plastic, 10% paper, 10% cardboard / Dry / Some	
30	157.0		
		70% soil, 15% plastic, 15% paper / Dry / Little	
35	176.0		
		55% soil, 20% plastic, 20% paper, 5% cardboard / Dry / Some	
40	188.0		Elev. Top of Free Liquid : (41.7' bgs)
		65% soil, 25% plastic, 10% paper / Dry / Some	
45	176.0		
		70% soil, 20% plastic, 10% paper / Dry / Moderate	
50	198.0		
		50% soil, 25% plastic, 25% wood / Dry / Moderate	
55	167.0		
		50% soil, 30% plastic, 20% wood / Dry / Moderate	
60	200.0		Elev. Bottom of Perf. Pipe Cap : (60' bgs)
62		50% soil, 50% indiscernible black/brown soil like material / Dry / Severe	
			Bottom of Hole = 62 ft Elev = 426.8'



Client: **Bridgeton Landfill LLC**
 Project Location: **Bridgeton, MO**
 Project Name: **2020 GCCS CQA**
 FEI Project Number: **BT-143**
 FEI Inspector: **Brad Vits**
 Drilling Contractor: **Recovery Drilling (RDS)**
 Driller: **Stan Garrison**

Drilling Method: **36" Core Barrel/Bucket**
 Well Casing Material: **12" SDR-11 HDPE**
 Easting: **516,794.7**
 Northing: **1,067,255.1**
 GS Elevation: **494.50**
 Drill Date(s): **10/21/2020**
 Drilled Depth: **120 feet**

Gas Well ID: **GEW-249**

Depth in Feet	Temperature (°F)	Waste/Soil Description	Well Completion Details
+5			Top of Flange (Elev. 499.2)
0			Ground Surface (Elev. 494.5)
		100% soil / Dry / None	5 ft x 5 ft Safety Grate
5	73.0	Top of Waste = 6'	Elev. Top of Foam Seal : (2' bgs)
		25% soil, 60% plastic, 5% metal, 10% textile / Dry / Moderate	Elev. Top of Upper Soil : (5' bgs)
10	91.0	70% plastic, 10% wood, 20% soil / Dry / Moderate	Elev. Top of Upper Bentonite Seal : (7' bgs)
			Elev. Top of Middle Soil : (9' bgs)
15	101.0	60% plastic, 5% cardboard, 5% soil, 30% textile / Dry / Moderate	Elev. Top of Lower Bentonite Seal : (14' bgs)
			Elev. Top of Lowest Soil : (16' bgs)
20	115.0	80% plastic, 10% metal, 10% soil / Dry / Moderate	Elev. Top of Rock Pack / "Donut" : (17' bgs)
			Elev. Top of Perforated Pipe : (19' bgs)
25	145.0	90% plastic, 5% textile, 5% wood / Dry / Moderate	
30	158.0	65% plastic, 30% soil, 5% metal / Dry / Moderate	
35	171.0	65% plastic, 20% soil, 5% metal, 10% wood / Dry / Moderate	
40	175.0	60% plastic, 30% soil, 10% wood / Dry / Moderate	
45	175.0	70% plastic, 20% soil, 10% wood / Dry / Moderate	
50	181.0	50% plastic, 30% soil, 20% textile / Dry / Moderate	
55	176.0	25% soil, 60% plastic, 10% gravel, 5% wood / Dry / Much	Elev. Top of Free Liquid : (53.8' bgs)
60	173.0	20% soil, 50% plastic, 30% indiscernible black/brown soil like material / Damp / Much	

(continued on next page)



Client: **Bridgeton Landfill LLC**
 Project Location: **Bridgeton, MO**
 Project Name: **2020 GCCS CQA**
 FEI Project Number: **BT-143**
 FEI Inspector: **Brad Vits**
 Drilling Contractor: **Recovery Drilling (RDS)**
 Driller: **Stan Garrison**

Drilling Method: **36" Core Barrel/ Bucket**
 Well Casing Material: **12" SDR-11 HDPE**
 Easting: **516,794.7**
 Northing: **1,067,255.1**
 GS Elevation: **494.50**
 Drill Date(s): **10/21/2020**
 Drilled Depth: **120 feet**

Gas Well ID: **GEW-249**

Depth in Feet	Temperature (°F)	Waste/Soil Description	Well Completion Details
65	167.0		<p>(continued from previous page)</p> <p>Elev. Bottom of Perf. Pipe Cap : (118' bgs).....</p> <p>Bottom of Hole = 120 ft Elev = 374.5'</p>
		50% plastic, 50% indiscernible black/brown soil like material / Damp / Much	
70	167.0		
		50% plastic, 50% indiscernible black/brown soil like material / Wet / Severe	
75	160.0		
		40% plastic, 60% indiscernible black/brown soil like material / Wet / Severe	
80	160.0		
		30% plastic, 70% indiscernible black/brown soil like material / Wet / Severe	
85	160.0		
		30% plastic, 70% indiscernible black/brown soil like material / Wet / Severe	
90	160.0		
		30% plastic, 70% indiscernible black/brown soil like material / Wet / Severe	
95	166.0		
		50% plastic, 50% indiscernible black/brown soil like material / Wet / Severe	
100	160.0		
		40% plastic, 50% indiscernible black/brown soil like material, 10% metal / Wet / Severe	
105	151.0		
		50% plastic, 45% indiscernible black/brown soil like material, 5% metal / Wet / Severe	
110	154.0		
		35% plastic, 50% indiscernible black/brown soil like material, 15 wood / Wet / Severe	
115	152.0		
		20% plastic, 80% indiscernible black/brown soil like material / Wet / Severe	
120	132.0		
125			



Client: **Bridgeton Landfill LLC**
 Project Location: **Bridgeton, MO**
 Project Name: **2020 GCCS CQA**
 FEI Project Number: **BT-143**
 FEI Inspector: **Brad Vits**
 Drilling Contractor: **Recovery Drilling (RDS)**
 Driller: **Stan Garrison**

Drilling Method: **36" Core Barrel/Bucket**
 Well Casing Material: **12" SDR-11 HDPE**
 Easting: **515,458.9**
 Northing: **1,067,116.0**
 GS Elevation: **468.64**
 Drill Date(s): **10/13/2020**
 Drilled Depth: **81 feet**

Gas Well ID: **GEW-250**

Depth in Feet	Temperature (°F)	Waste/Soil Description	Well Completion Details
+3			Top of Flange (Elev. 471.9)
0			Ground Surface (Elev. 468.6) 5 ft x 5 ft Safety Grate
5	75.0	100% Soil fill / Dry / None Top of Waste = 6 feet	Elev. Top of Foam Seal : (4' bgs)
10	86.0	20% soil, 50% plastics, 30% textiles / Dry / Moderate	Elev. Top of Upper Bentonite Seal : (7' bgs)
15	97.0	10% soil, 50% plastic, 20% canvas, 20% metal / Dry / Moderate	Elev. Top of Middle Soil : (9' bgs)
20	112.0	70% plastic, 10% wood, 20% soil / Dry / Moderate	Elev. Top of Lower Bentonite Seal : (13' bgs)
25	144.0	20% soil, 15% wood, 60% plastic / Dry / Moderate	Elev. Top of Lowest Soil : (15' bgs)
30	156.0	20% soil, 70% plastic, 10% wood / Dry / Moderate	Elev. Top of Rock Pack / "Donut" : (16' bgs)
35	166.0	60% plastic, 15% soil, 5% canvas, 10% wood, 5% rubber, 5% carpet / Dry / Moderate	Elev. Top of Perforated Pipe : (19' bgs)
40	192.0	50% plastic, 30% soil, 20% wood / Dry / Moderate	Elev. Top of Free Liquid : (36.6' bgs)
45	168.0	40% soil, 50% plastic, 10% wood / Dry / Moderate	
50	201.0	65% soil, 20% wood, 15% plastic / Dry / Moderate	
55	180.0	60% soil, 20% wood, 20% plastic / Damp / Moderate	
60	156.0	50% soil, 30% wood, 15% plastic, 5% textiles / Damp / Moderate	
65	203.0	60% soil, 30% plastic, 10% wood / Wet / Much	

(continued on next page)



Client: **Bridgeton Landfill LLC**
 Project Location: **Bridgeton, MO**
 Project Name: **2020 GCCS CQA**
 FEI Project Number: **BT-143**
 FEI Inspector: **Brad Vits**
 Drilling Contractor: **Recovery Drilling (RDS)**
 Driller: **Stan Garrison**

Drilling Method: **36" Core Barrel/Bucket**
 Well Casing Material: **12" SDR-11 HDPE**
 Easting: **515,458.9**
 Northing: **1,067,116.0**
 GS Elevation: **468.64**
 Drill Date(s): **10/13/2020**
 Drilled Depth: **81 feet**

Gas Well ID: **GEW-250**

Depth in Feet	Temperature (°F)	Waste/Soil Description	Well Completion Details
70	204.0	60% soil, 35% plastic, 5% wood / Wet / Much	<p>(continued from previous page)</p> <p>Elev. Bottom of Perf. Pipe Cap : (79' bgs)</p>
75	186.0	60% soil, 40% plastic / Wet / Much	
80	200.0	30% soil, 20% plastic, 50% indiscernible black/brown soil like material / Wet / Much to Severe	
81		100% indiscernible black/brown soil like material / Wet / Severe	
85			<p>Bottom of Hole = 81 ft Elev = 387.6'</p>



Client: **Bridgeton Landfill LLC**
 Project Location: **Bridgeton, MO**
 Project Name: **2020 GCCS CQA**
 FEI Project Number: **BT-143**
 FEI Inspector: **Brad Vits**
 Drilling Contractor: **Recovery Drilling (RDS)**
 Driller: **Stan Garrison**

Drilling Method: **36" Core Barrel/ Bucket**
 Well Casing Material: **12" SDR-11 HDPE**
 Easting: **516,129.0**
 Northing: **1,067,450.7**
 GS Elevation: **474.47**
 Drill Date(s): **10/16/2020**
 Drilled Depth: **80 feet**

Gas Well ID: **GEW-251**

Depth in Feet	Temperature (°F)	Waste/Soil Description	Well Completion Details
+2			Top of Flange (Elev. 476.0)
0			Ground Surface (Elev. 474.5) 5 ft x 5 ft Safety Grate
5	75.0	90% soil, 10% gravel / Dry / None	Elev. Top of Foam Seal : (4' bgs)
10	85.0	100% soil / Dry / None	Elev. Top of Upper Bentonite Seal : (7' bgs) Elev. Top of Middle Soil : (9' bgs)
15	105.0	50% soil, 5% gravel, 45% cinder block / Dry / None	Elev. Top of Lower Bentonite Seal : (13' bgs)
20	111.0	100% soil / Dry / None Top of Waste = 17 feet	Elev. Top of Lowest Soil : (15' bgs) Elev. Top of Rock Pack / "Donut" : (16' bgs)
25	126.0	50% soil, 50% plastic / Dry / Much	Elev. Top of Perforated Pipe : (18' bgs)
30	140.0	50% soil, 5% gravel, 40% plastic, 5% shingles / Dry / Much	
35	175.0	40% soil, 5% gravel, 50% plastic, 5% shingles / Dry / Much	
40	172.0	60% plastic, 5% textiles, 5% gravel, 25% soil, 5% metal / Dry / Much	
45	196.0	40% plastic, 10% gravel, 50% indiscernible black/brown soil like material / Dry / Severe	Elev. Top of Free Liquid : (36.3' bgs)
50	193.0	40% plastic, 20% soil, 10% metal, 30% indiscernible black/brown soil like material / Damp / Severe	
55	194.0	30% plastic, 60% indiscernible black/brown soil like material, 10% wood / Damp / Severe	
60	194.0	40% plastic, 60% indiscernible black/brown soil like material / Damp / Severe	
65	202.0	30% plastic, 70% indiscernible black/brown soil like material / Damp / Severe	
		60% indiscernible black/brown soil like material, 30% plastic, 10% gravel / Damp / Severe	



Client: **Bridgeton Landfill LLC**
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 Project Name: **2020 GCCS CQA**
 FEI Project Number: **BT-143**
 FEI Inspector: **Brad Vits**
 Drilling Contractor: **Recovery Drilling (RDS)**
 Driller: **Stan Garrison**

Drilling Method: **36" Core Barrel/ Bucket**
 Well Casing Material: **12" SDR-11 HDPE**
 Easting: **516,129.0**
 Northing: **1,067,450.7**
 GS Elevation: **474.47**
 Drill Date(s): **10/16/2020**
 Drilled Depth: **80 feet**

Gas Well ID: **GEW-251**

Depth in Feet	Temperature (°F)	Waste/Soil Description	Well Completion Details
70	203.0	60% indiscernible black/brown soil like material, 30% plastic, 10% gravel / Damp / Severe	<p>Elev. Bottom of Perf. Pipe Cap : (76' bgs)</p> <p>Bottom of Hole = 80 ft Elev = 394.5'</p>
75	200.0	80% indiscernible black/brown soil like material, 20% plastic / Dry / Severe	
80	206.0	90% indiscernible black/brown soil like material, 10% plastic / Dry / Severe	
85			



Client: **Bridgeton Landfill LLC**
 Project Location: **Bridgeton, MO**
 Project Name: **2020 GCCS CQA**
 FEI Project Number: **BT-143**
 FEI Inspector: **Brad Vits**
 Drilling Contractor: **Recovery Drilling (RDS)**
 Driller: **Stan Garrison**

Drilling Method: **36" Core Barrel/ Bucket**
 Well Casing Material: **12" SDR-11 HDPE**
 Easting: **516,530.2**
 Northing: **1,067,186.1**
 GS Elevation: **493.01**
 Drill Date(s): **10/15/2020**
 Drilled Depth: **91 feet**

Gas Well ID: **GEW-252**

Depth in Feet	Temperature (°F)	Waste/Soil Description	Well Completion Details
+3			Top of Flange (Elev. 495.6)
0			Ground Surface (Elev. 493.0)
		100% soil / Dry / None	5 ft x 5 ft Safety Grate
5	74.0		Elev. Top of Foam Seal : (2' bgs)
		100% soil / Dry / None	Elev. Top of Upper Soil : (5' bgs)
10	80.0		Elev. Top of Upper Bentonite Seal : (7' bgs)
		100% soil / Dry / None	Elev. Top of Middle Soil : (9' bgs)
15	84.0		
		100% soil / Dry / None	
20	91.0		Elev. Top of Lower Bentonite Seal : (18' bgs)
		100% soil / Dry / None	Elev. Top of Lowest Soil : (20' bgs)
25	96.0		Elev. Top of Rock Pack / "Donut" : (21' bgs)
		100% soil / Dry / None	Elev. Top of Perforated Pipe : (23' bgs)
		Top of Waste = 26 feet	
30	105.0	20% soil, 75% plastic, 5% wood / Dry / Moderate	
		80% plastic, 10% wood, 10% cardboard / Dry / Moderate	
35	131.0		
		50% plastic, 10% cardboard, 40% soil / Dry / Moderate	
40	141.0		
		40% soil, 40% plastic, 20% wood / Dry / Moderate	
45	158.0		
		30% soil, 60% plastic, 10% cardboard / Dry / Moderate	
50	166.0		
		60% plastic, 15% textile, 25% soil / Dry / Moderate	
55	190.0		Elev. Top of Free Liquid : (54.5' bgs)
		50% plastic, 40% soil, 10% wood / Dry / Much	
60	189.0		
		50% plastic, 50% indiscernible black/brown soil like material / Dry / Much	
65	198.0		

(continued on next page)



Client: **Bridgeton Landfill LLC**
 Project Location: **Bridgeton, MO**
 Project Name: **2020 GCCS CQA**
 FEI Project Number: **BT-143**
 FEI Inspector: **Brad Vits**
 Drilling Contractor: **Recovery Drilling (RDS)**
 Driller: **Stan Garrison**

Drilling Method: **36" Core Barrel/ Bucket**
 Well Casing Material: **12" SDR-11 HDPE**
 Easting: **516,530.2**
 Northing: **1,067,186.1**
 GS Elevation: **493.01**
 Drill Date(s): **10/15/2020**
 Drilled Depth: **91 feet**

Gas Well ID: **GEW-252**

Depth in Feet	Temperature (°F)	Waste/Soil Description	Well Completion Details
70	198.0	30% plastic, 50% indiscernible black/brown soil like material, 20 soil / Dry / Much	<p>(continued from previous page)</p> <p>Elev. Bottom of Perf. Pipe Cap : (85' bgs)</p> <p>Bottom of Hole = 91 ft Elev = 402.0'</p>
75	195.0	30% plastic, 70% indiscernible black/brown soil like material / Dry / Much	
80	201.0	40% plastic, 60% indiscernible black/brown soil like material / Dry / Much	
85	201.0	5% textile, 70% indiscernible black/brown soil like material, 25% plastic / Dry / Much	
90	201.0	100% indiscernible black/brown soil like material / Dry / Moderate	
91			
95			



Client: **Bridgeton Landfill LLC**
 Project Location: **Bridgeton, MO**
 Project Name: **2020 GCCS CQA**
 FEI Project Number: **BT-143**
 FEI Inspector: **Brad Vits**
 Drilling Contractor: **Recovery Drilling (RDS)**
 Driller: **Stan Garrison**

Drilling Method: **36" Core Barrel/Bucket**
 Well Casing Material: **12" SDR-11 HDPE**
 Easting: **515,828.9**
 Northing: **1,066,997.9**
 GS Elevation: **495.92**
 Drill Date(s): **10/22/2020**
 Drilled Depth: **74 feet**

Gas Well ID: **GEW-253**

Depth in Feet	Temperature (°F)	Waste/Soil Description	Well Completion Details
+2			Top of Flange (Elev. 497.7)
0			Ground Surface (Elev. 495.9)
		100% soil / Dry / None	5 ft x 5 ft Safety Grate
5	78.0		Elev. Top of Foam Seal : (2' bgs)
		100% soil / Dry / None	Elev. Top of Upper Soil : (5' bgs)
10	91.0		Elev. Top of Upper Bentonite Seal : (7' bgs)
		100% soil / Dry / None	Elev. Top of Middle Soil : (9' bgs)
15	99.0		Elev. Top of Lower Bentonite Seal : (14' bgs)
		100% soil / Dry / None Top of Waste = 17 feet	Elev. Top of Lowest Soil : (16' bgs)
20	108.0	30% soil, 50% plastic, 20% wood / Dry / Some	Elev. Top of Rock Pack / "Donut" : (17' bgs)
		30% soil, 60% plastic, 10% textile / Dry / Some	Elev. Top of Perforated Pipe : (19' bgs)
25	113.0		
		10% soil, 70% plastic, 15% textile, 5% metal / Dry / Some	
30	138.0		
		70% plastic, 20% soil, 10% textile / Dry / Moderate	
35	151.0		
		20% soil, 60% plastic, 20% textile / Dry / Moderate	
40	169.0		
		30% soil, 60% plastic, 10% metal / Dry / Moderate	
45	187.0		
		30% soil, 70% plastic / Dry / Moderate	
50	196.0		Elev. Top of Free Liquid : (50.2' bgs)
		50% soil, 50% plastic / Dry / Much	
55	108.0		
		40% plastic, 10% metal, 50% indiscernible black/brown soil like material / Dry / Much	
60	201.0		
		50% plastic, 50% indiscernible black/brown soil like material / Dry / Much	
65	201.0		

(continued on next page)



Client: **Bridgeton Landfill LLC**
 Project Location: **Bridgeton, MO**
 Project Name: **2020 GCCS CQA**
 FEI Project Number: **BT-143**
 FEI Inspector: **Brad Vits**
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 Driller: **Stan Garrison**

Drilling Method: **36" Core Barrel/Bucket**
 Well Casing Material: **12" SDR-11 HDPE**
 Easting: **515,828.9**
 Northing: **1,066,997.9**
 GS Elevation: **495.92**
 Drill Date(s): **10/22/2020**
 Drilled Depth: **74 feet**

Gas Well ID: **GEW-253**

Depth in Feet	Temperature (°F)	Waste/Soil Description	Well Completion Details
70	206.0	40% plastic, 40% indiscernible black/brown soil like material, 20% metal / Dry / Severe	
74	210.0	40% plastic, 50% indiscernible black/brown soil like material, 10% metal / Dry / Severe	
75 80			<p style="text-align: right;">Bottom of Hole = 74 ft Elev = 421.9'</p>

Sub-Appendix B.2

Gas Well Aggregate Gradation

Winter Brothers Material Company

13098 Gravois Road
Saint Louis, MO 63127
(314) 843-1400
FAX (314) 843-1400

13977 Tesson Ferry
Saint Louis, MO 63128
(314) 849-5096
FAX (314) 849-5258

"Producers of Meramec Sand & Gravel for over 70 years"

Source- Meramec River
Aggregate Type- Bulk Meramec Large B Gravel
Sieve- Gradation by Weight

Sieve Analysis- ASTM C 33 / D 448 / AASHTO M 43 No. 2

We are not responsible for segregation during the transport of any fine or coarse aggregate

U.S. Standard Sieve Size	Cumulative Percent		Specification Percent Passing
	% Retained	% passing	
3"	0	100	100
2 1/2"	4.8	95.2	90-100
2"	36.6	63.4	35-70
1 1/2"	87.8	12.2	0-15
3/4"	99.5	0.5	0-5

SPECIFIC GRAVITY AND ABSORTION OF FINE AGGREGATE - ASTM C 128

Fineness Modulus = 2.28	Absortion, % 2.21	Apparent Specific Gravity = 2.65
Effective Grain Size = 38mm	Bulk Specific Gravity = 2.52	Bulk Specific Gravity, SSD = 2.51
Uniformity Coefficient = 1.37	W.C.F. (Loose) = 76.8	W.C.F. (Dry Rodded) = ----

APPENDIX C

CONSTRUCTION CERTIFICATION DRAWINGS (REDUCED SET)

Drawing 000	Title Page
Drawing 001	2020 GCCS Plan View
Drawing 002	Details

AS-BUILT RECORD DRAWINGS FOR THE

BRIDGETON LANDFILL

2020 Q3 GCCS INSTALLATION

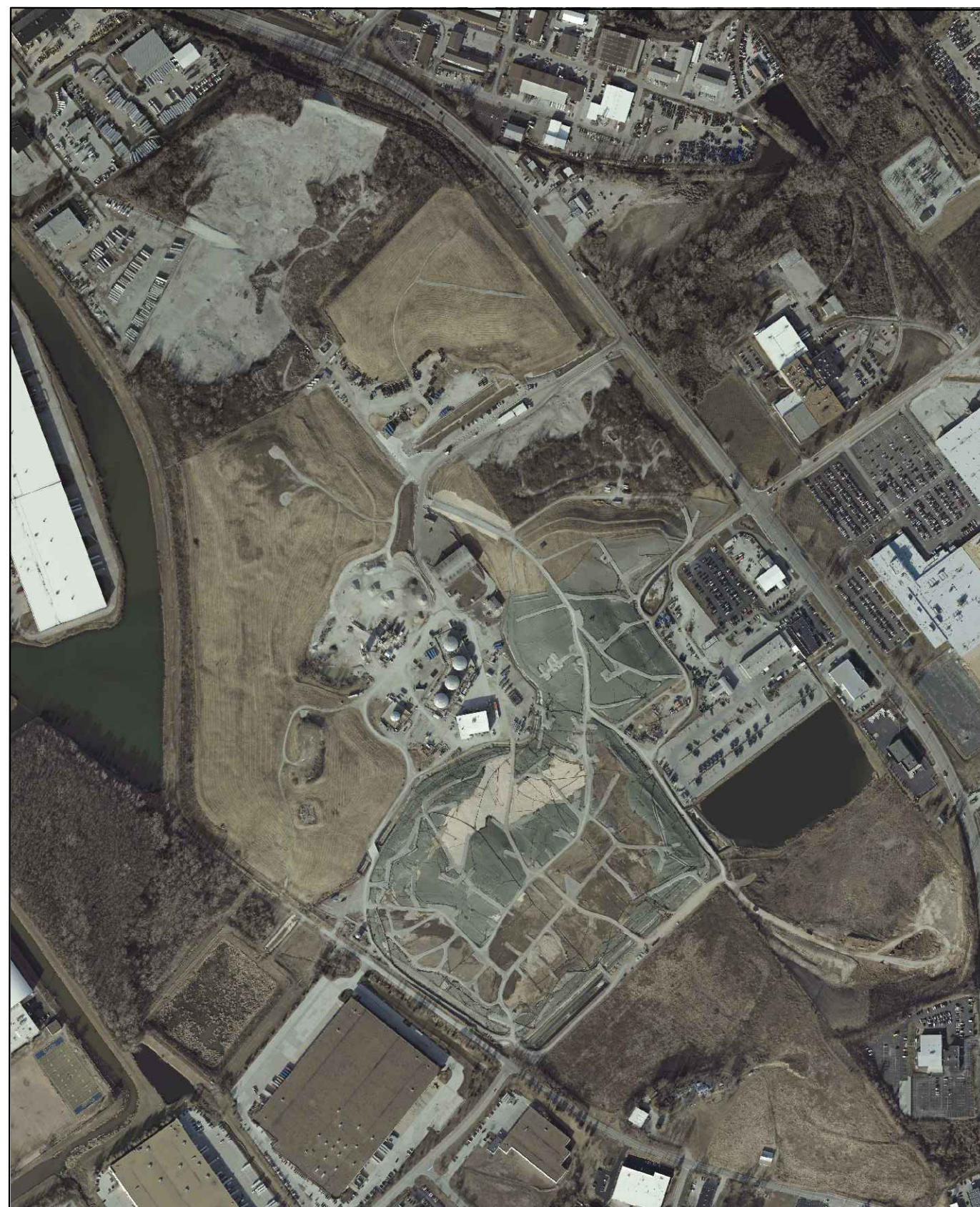
OCTOBER 2020
PREPARED FOR:

Bridgeton Landfill, LLC

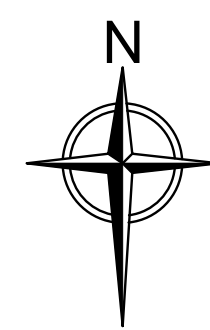
13570 ST. CHARLES ROCK ROAD
BRIDGETON, MISSOURI 63044



3377 HOLLENBERG DRIVE
BRIDGETON, MO 63044
TEL. (217) 483-3118

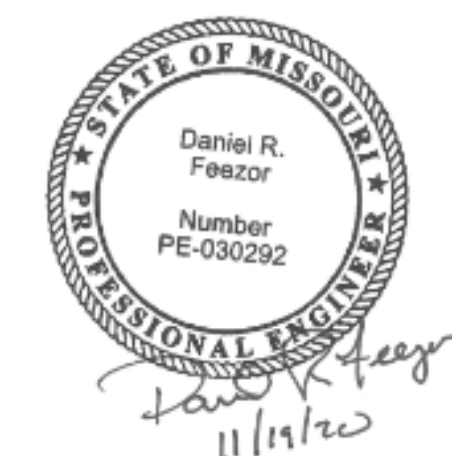


LOCATION MAP



INDEX OF DRAWINGS

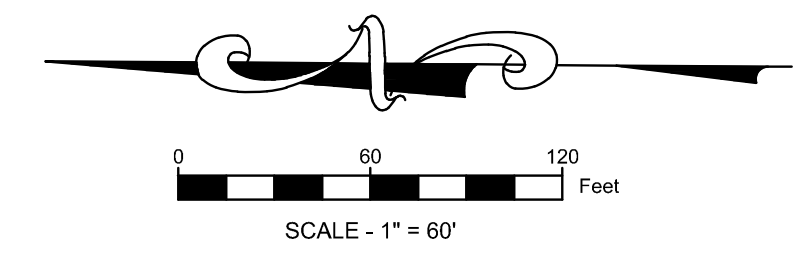
	TITLE PAGE
001	2020 GCCS PLAN VIEW
002	DETAILS





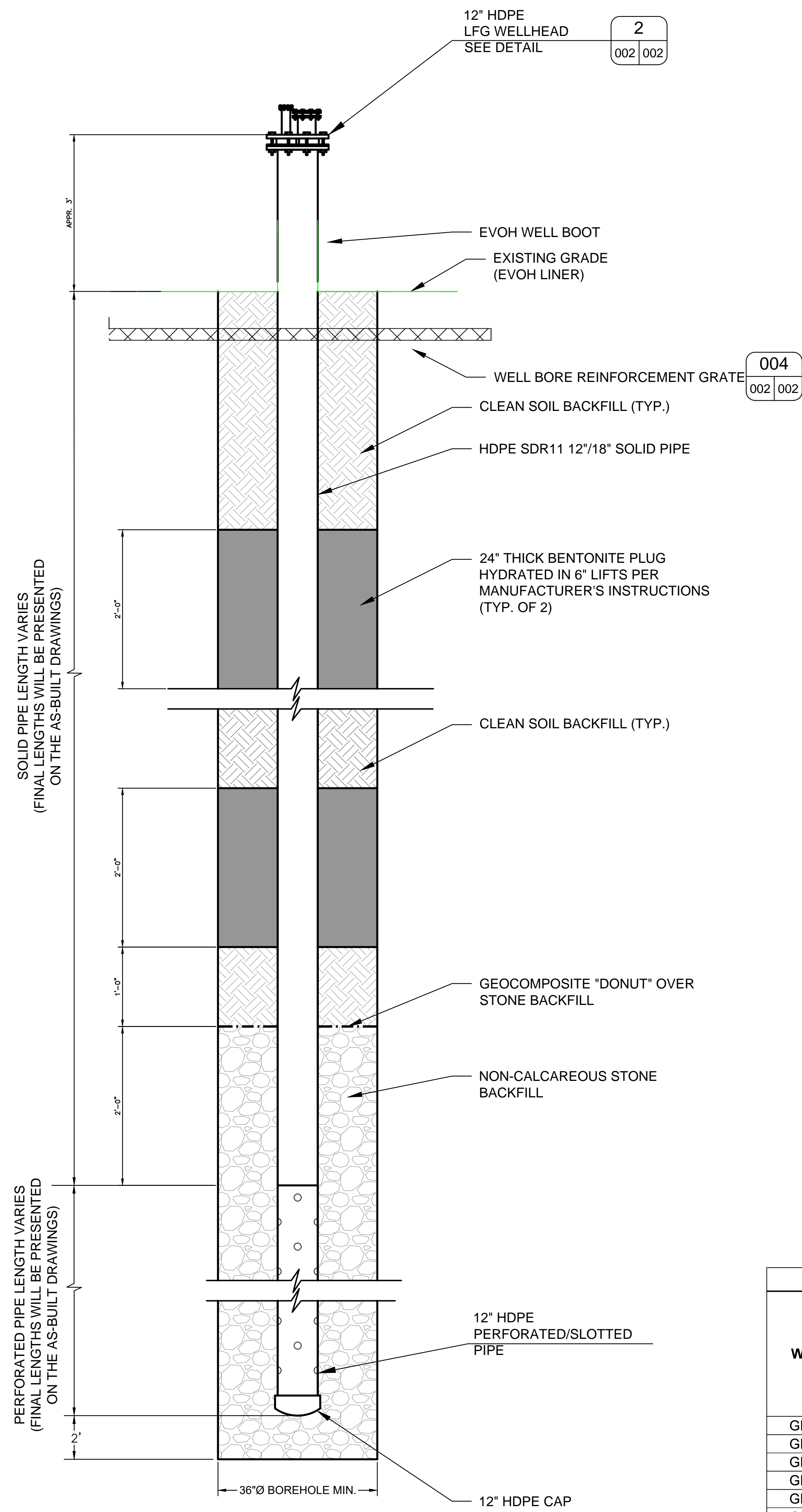
LEGEND

	SOLID WASTE BOUNDARY
	QUARRY WALL
	GAS EXTRACTION WELL
	PERIMETER GAS EXTRACTION WELL
	SURFACE EXTRACTION WELL
	CONDENSATE SUMP
	PERIMETER GAS EXTRACTION WELL
	GAS INTERCEPTOR WELL
	GAS INTERCEPTOR WELL/HEAT EXTRACTION POINT
	GAS EXTRACTION WELL WITH 4" STINGER
	INSTALLED 2020 Q3 GAS EXTRACTION WELL
	INSTALLED HDPE LFG LATERAL (SIZE VARIES)
	INSTALLED 2" HDPE AIRLINE
	INSTALLED 2"x4" HDPE FORCEMAIN

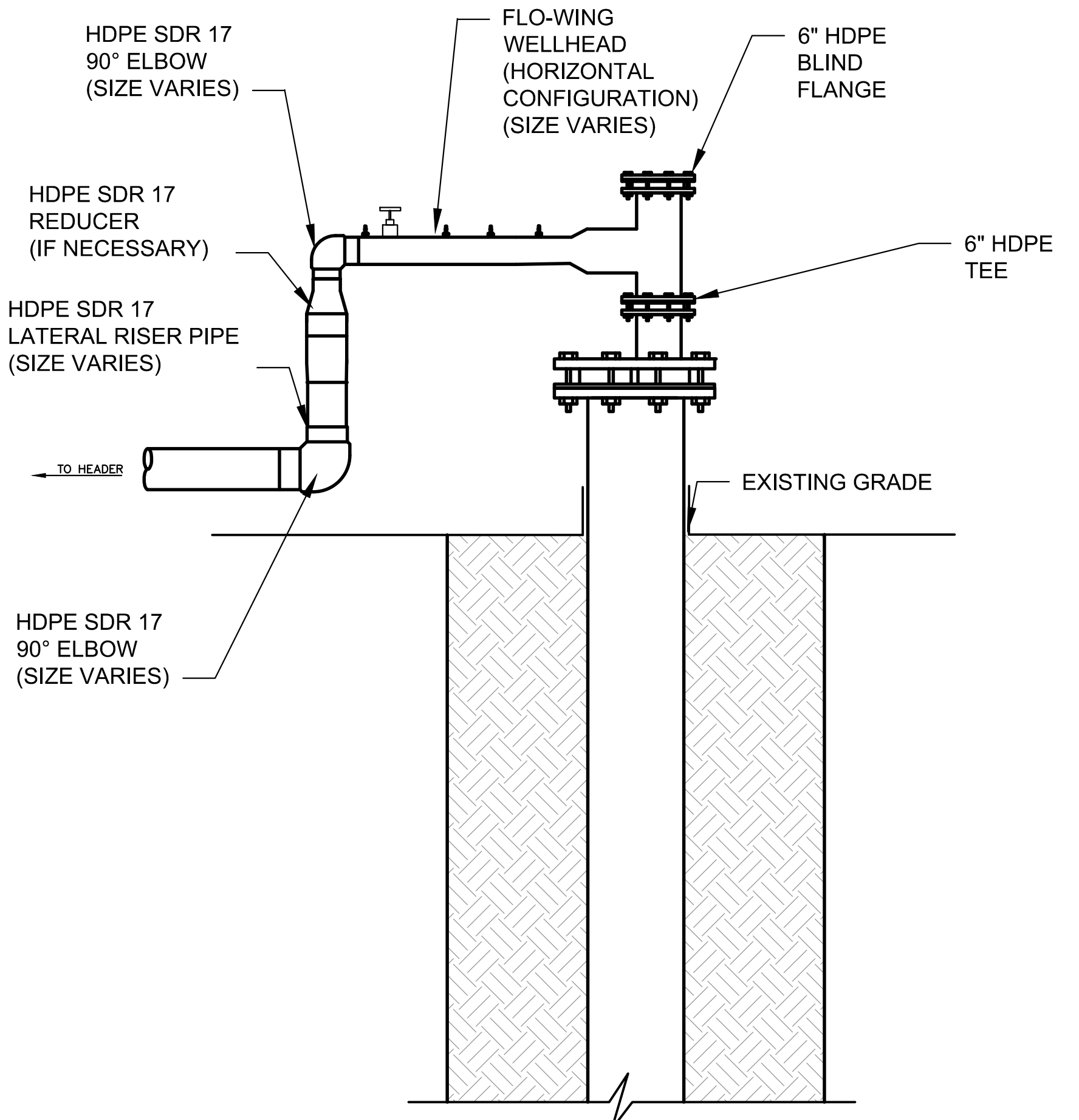


NOTES:
 AERIAL TOPOGRAPHY PROVIDED BY COOPER AERIAL SURVEYS CO. AND IS DATED DECEMBER 10, 2019

 Daniel R. Feztor PE-030292	PREPARED BY: DANIEL RICHARD FEZTOR	PROJECT: BRIDGETON LANDFILL 2020 Q3 GCCS INSTALLATION AS-BUILT RECORD DRAWINGS BRIDGETON, ST. LOUIS COUNTY, MO	PREPARED FOR: BRIDGETON LANDFILL, L.L.C. 13570 ST. CHARLES ROCK ROAD BRIDGETON, MISSOURI 63044	NOVEMBER 2020 DESIGNED BY: AMR APPROVED BY: DRF	DRAWING # 001
	 FEZTOR ENGINEERING, INC. 3377 Hollenberg Dr, Bridgeton, MO 63044, Ph: 217-483-3119 Missouri State Certificate Of Authority # 1-200912211	DRAWING TITLE: 2020 GCCS PLAN VIEW	REVISIONS: DATE DSN APV	PROJECT NUMBER: BT-14320 FILE PATH: C:\Users\amr\Desktop\Bridgeton\2020Q3\2020Q3GCCS\2020Q3GCCS\2020Q3GCCS_PlanView.dwg	REVISIONS: DATE DSN APV



SOUTH QUARRY LFG EXTRACTION WELL DETAIL 1
NOT TO SCALE 001 002

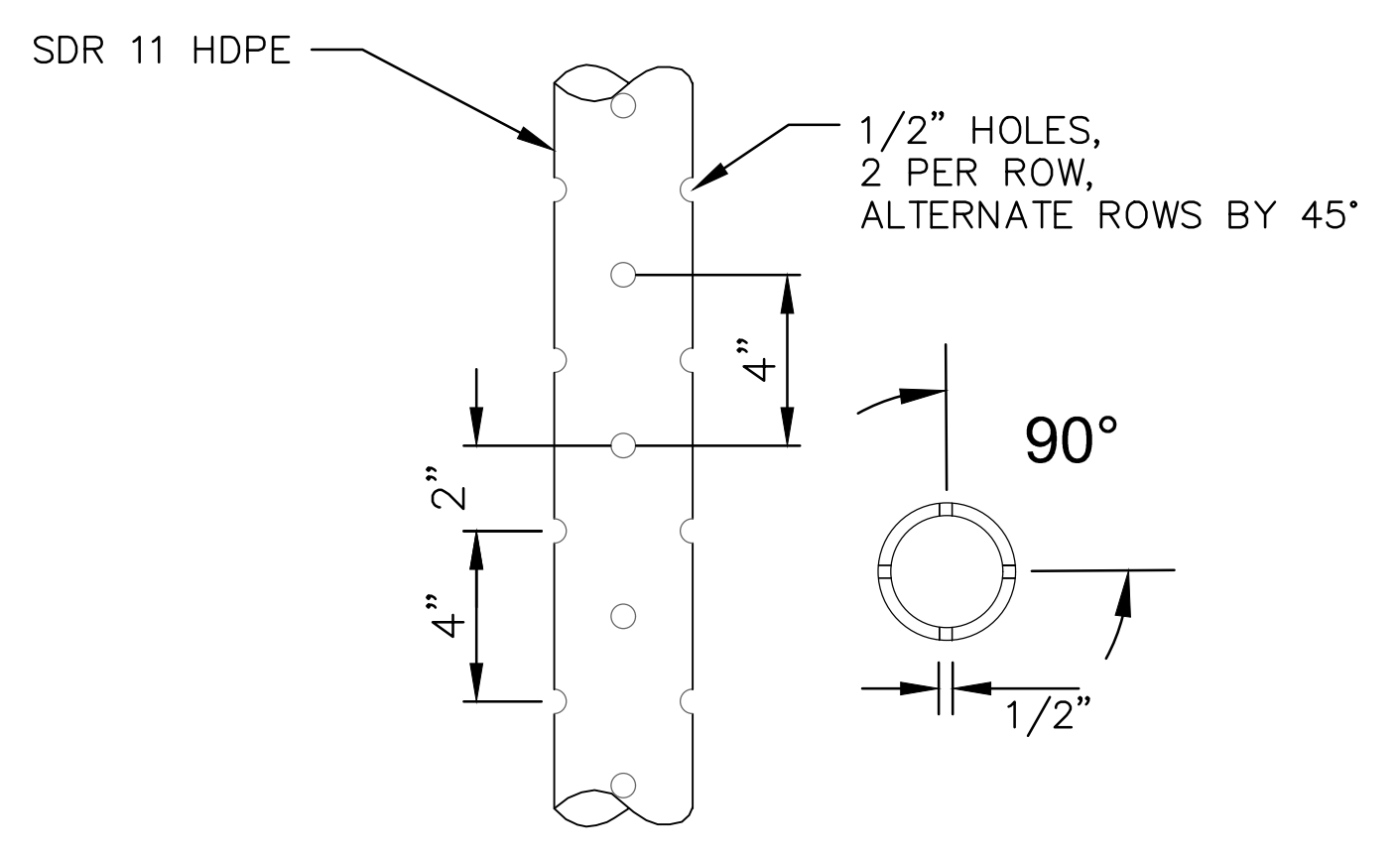


GEW WELLHEAD DETAIL 2
NOT TO SCALE 002 002

NOTES:
1. CONTRACTOR WILL INSTALL BRIDGETON LANDFILL TYPICAL WELLHEAD.

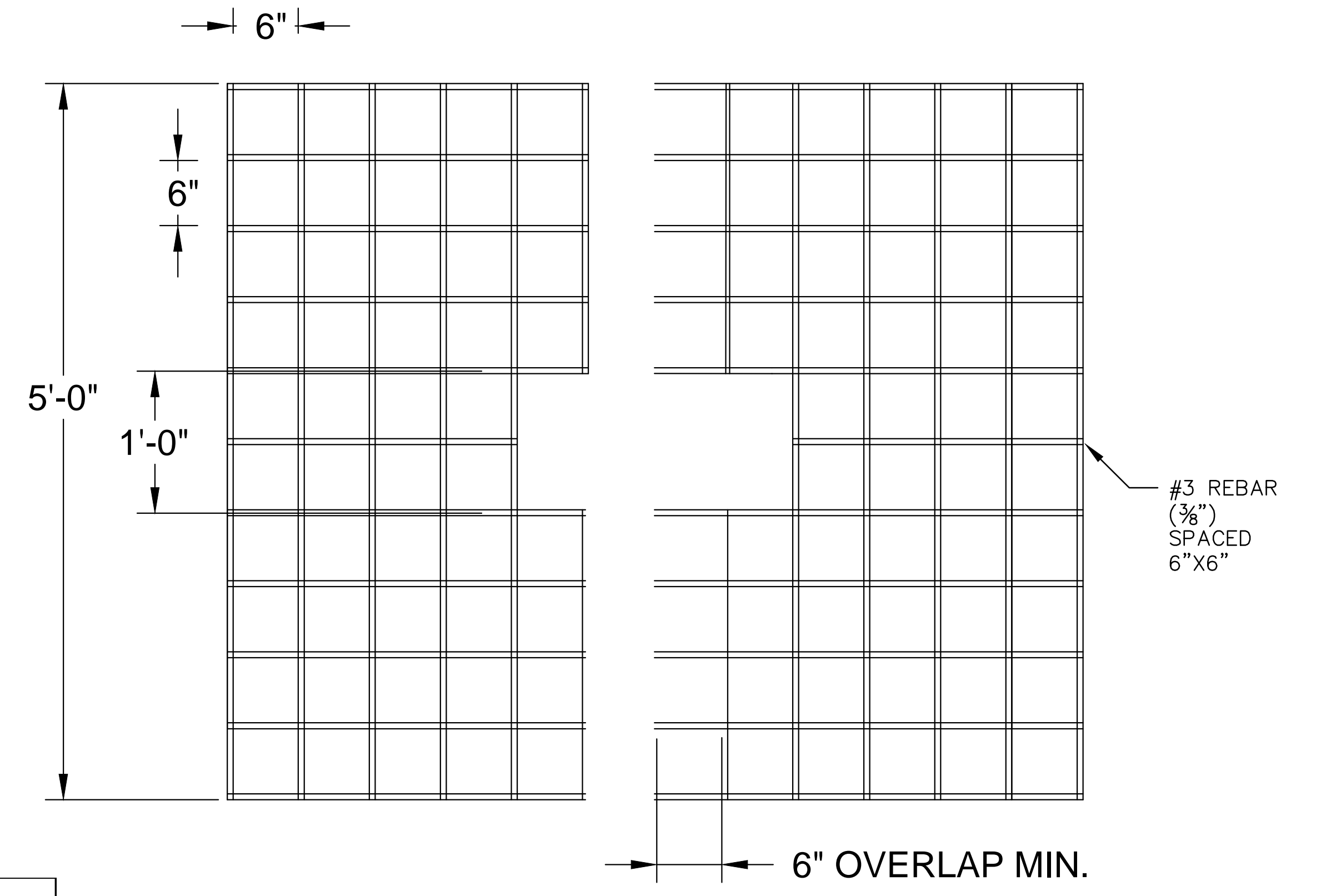
2020 Q3 WELL SCHEDULE										
WELL ID	Northing	Easting	Ground Elevation	Bottom of Boring	Quarry Bottom 1979	Db	Solid Pipe	Solid Pipe	Dp	Thickness of
			(As-Built Survey)		Topo					
			(Feet MSL)	(Feet MSL)	(Feet MSL)	(Feet)	(Feet)	(Feet)	(Feet)	(Feet)
GEW-241	1,067,108.8	516,733.4	490.0	414.0	359.2	76	2	19	55	59
GEW-242	1,067,032.0	516,547.4	492.3	415.3	240.0	77	2	43	32	36
GEW-243	1,066,580.0	515,828.1	488.7	398.7	276.9	90	2	19	69	73
GEW-244	1,066,662.0	515,750.6	487.7	367.7	275.0	120	3	19	99	103
GEW-245	1,066,708.0	515,639.7	482.8	399.8	354.4	83	2	24	57	61
GEW-246	1,067,552.0	515,915.6	473.4	380.4	246.6	93	2	19	72	76
GEW-247	1,067,494.0	516,528.6	483.4	417.4	240.0	66	3	18	46	50
GEW-248	1,067,383.0	516,531.8	488.8	426.8	240.0	62	2	19	41	45
GEW-249	1,067,255.0	516,794.7	494.5	374.5	240.0	120	3	19	99	103
GEW-250	1,067,116.0	515,458.9	468.6	387.6	340.0	81	3	19	60	64
GEW-251	1,067,451.0	516,129.0	474.4	394.4	240.0	80	2	18	60	64
GEW-252	1,067,186.0	516,530.2	493.0	402.0	240.0	91	3	23	66	70
GEW-253	1,066,998.0	515,828.9	495.9	421.9	240.0	74	2	19	53	57

Notes:
"Quarry Bottom" elevation taken from 1979 topography obtained from Aquaterra



NOTES:
1. PERFORATIONS SPACED 90° APART HORIZONTALLY.
2. PERFORATIONS SPACED 4" APART VERTICALLY.
3. 90° AND 270° ROWS STAGGERED 2" BELOW 0° AND 180° ROWS.

3 PERFORATED PIPE DETAIL
001 002 NOT TO SCALE



4 WELL BORE REINFORCEMENT GRATE
001 002 NOT TO SCALE

NOTES:
1. WELL BORE REINFORCEMENT GRATE INSTALLED APPR. 6" BELOW GRADE.

NOTES:
AERIAL TOPOGRAPHY PROVIDED BY COOPER AERIAL SURVEYS CO. AND IS DATED DECEMBER 10, 2019

	FEEZOR ENGINEERING, INC. 3377 Holtenberg Dr., Bridgeton, MO 63044, Ph: 217-483-3119 Missouri State Certificate Of Authority #: E-200912211	PROJECT BRIDGETON LANDFILL 2020 Q3 GCOS INSTALLATION AS-BUILT RECORD DRAWINGS BRIDGETON, ST. LOUIS COUNTY, MO DRAWING TITLE DETAILS 1	PREPARED FOR BRIDGETON LANDFILL, L.L.C. 13570 ST. CHARLES ROCK ROAD BRIDGETON, MISSOURI 63044	NOVEMBER 2020 DESIGNED BY: AMR APPROVED BY: DRF REVISIONS: DATE DSN APV. 002
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PROJECT NUMBER: BT-14320 | FILE PATH: C:\Users\Feezor\Engineering\Bridgeton\10-14-19\2017 Gas Well\2020 Q3 AS-Built\Appendix C - Drawings