December 3, 2013

Mr. Charlene Fitch, P.E.
Missouri Department of Natural Resources
Solid Waste Management Program
1738 East Elm Street
Jefferson City, Missouri 65101

Dear Ms Fitch:

Re: Landfill Gas Corrective Action Plan Supplemental Update
GCCS Construction Design Details
Bridgeton Landfill, Bridgeton, Missouri
Permit No. 0118912

This letter is being submitted to inform the Missouri Department of Natural Resources (MDNR) of the landfill gas enhancements proposed for the southern portion of the South Quarry at the Bridgeton Landfill (BL). This letter supplements the September 24, 2014 conditional approval of MDNR to install the proposed gas collection and control system (GCCS) modifications as submitted in BL's September 3, 2014 update.

This included a new 18" landfill gas header, replace four (4) existing Gas Extraction Wells (GEWs) and install one (1) new GEW on the south side of the South Quarry. Construction design details of these improvements are attached herewith. These locations are shown on Drawing 09, and a detailed in the Well Schedule table on Drawing 10.

<u>GEW Well Construction</u>

Well drilling is beginning today with the installation of GEW-122 (replacement for GEW-81). The required Asbestos Waste Disturbance notice has been filed and approval received from Saint Louis County Health, see Attachment A.

Drilling procedures will be similar to the previous drilling protocol used on the South Quarry, since the reaction has been present. A vacuum box around the borehole will be used to mitigate odors from venting gases and exhausted through a carbon canister. Portable odor vapor neutralizers will be used at the borehole location. The new southern perimeter fence odor vapor neutralizer will also be operated during all drilling and excavation activities.

During the drilling process, waste temperatures will a monitored and recorded every 10 feet of drilling depth; and driller and CQA will make visual observations of any excessive and potentially unsafe gas pressures that are being encountered. The well boring depths will be field adjusted to limit waste temperatures below 200F and minimize high pressure gas and liquid flows into the newly completed wells. This is being done to increase drilling and well

installation safety, and maximize the potential methane concentrations in the collected landfill gas.

As part of continued evaluation of and enhancement to the GCCS, BL has identified a total of 32 additional well locations it intends to install new/replacement GEWs. These wells will be installed over the next 120 days, and will progress as access and weather permits. The majority of these new wells will replace the failing PVC wells, however well abandonments will be evaluated and determined on a well by well basis, after the new well(s) are installed and online.

As is shown in the attached design details, Drawing 10, BL is using a new well casing material comprised of polypropylene resin reinforced with a unique Fibercore™, see Attachment B. The Polystar PP-RCT pipe is rated for vacuum pressure use at 248°F and states a capability of having long term strength at 230°F. The imbedded middle layer of fiber in our landfill gas well application is intended to provide pipe rigidity and reduction of well failures at the landfill surface that the site has experienced with the existing PVC and steel well casings in the South Quarry. The well casing selection criteria for this project included, gas temperatures up to 200F, corrosion resistance, and the pipe joining construction method and ability for BL maintenance technicians to cut and/or extend the well casings as the landfill settles. This pipe is fused with the same equipment as the HDPE well and header piping, making ongoing wellhead maintenance much safer and manageable, as compared to the steel casings the site has used as of recent; while the polypropylene resin provides excellent corrosion resistance over the steel well casing.

GCCS Header Construction

The construction of a new 18” landfill gas header line around the south perimeter of the South Quarry will be located as shown on Drawing 1, installed on-grade. The termini points were selected based on the available header vacuum at these locations. The installation will significantly increase the available vacuum on the south side of the South Quarry. The additional vacuum will be connected to multiple extraction points on the south side of the South Quarry, thus enhancing the landfill gas extraction efficiency at these locations.

To facilitate construction, BL currently plans to initiate installation of the new 18” landfill gas header in two phases. Construction Phase A and B are shown on Drawing 2 and 3, respectively. The SE Lift Station and Grit Chamber as shown on Drawing 6, will be constructed as part of Phase A. Phase A construction is planned to begin in December 2014, and Phase B to follow in January 2015. This schedule will be based on weather, along with contractor and material availability.

The BL considers the proposed enhancements listed above, as part of the standard operating procedures at the landfill. These procedures include continued monitoring and evaluation of systems at the BL, consistent with the procedures set forth in the landfill's draft Operations, Maintenance and Monitoring Plan, and ongoing assessment of enhancement projects, consistent with the Landfill Gas Corrective Action Plans, as updated. Bridgeton Landfill will continue to use the results of its assessment and maintenance work to update MDNR and ensure proper functioning of the gas extraction system.

If you need additional information, please contact me at (314) 744-8165.

Sincerely,

Bridgeton Landfill, LLC.

Brian J. Power

Brain J. Power
Environmental Manager

Encl: Attachment A
Attachment B
Drawing Set- 11 sheets

Attachment A

Asbestos Waste Disturbance Notice

Charlie A. Dooley
County Executive

Saint Louis
COUNTY
HEALTH

Dolores J. Gunn, MD
Director

December 2, 2014

Mr. James A. Getting, Environmental Manager
Bridgeton Landfill
13570 St. Charles Rock Road
Bridgeton, MO 63044

Re: Gas System & Leachate Management Modifications – Asbestos Notification

Dear Mr. Getting,

The Saint Louis County health Department Air Pollution Control Program (APCP) received a request on December 1, 2014 to waive the 45 day notification period relative to the disturbance of potentially asbestos containing material (ACM) during the modifications being made to the gas collection system and the leachate management system as describe in the notification. The well installation will commence on December 3, 2014 and complete by March 31, 2015. Should the dates change at any time, please notify APCP at (314) 615-8924.

APCP waives the 45 day notification period. The project may commence on December 3, 2014 with the following conditions:

1. Bridgeton Landfill is required to have on site a Missouri Asbestos Building Inspector observing all waste disturbances. This individual's Missouri certificate must be provided to APCP prior to commencement of waste disturbance.
2. If any waste is determined to be suspect ACM by the on-site asbestos inspector, Bridgeton Landfill shall notify APCP immediately.
3. Any waste determined by the on-site asbestos inspector to be suspect ACM shall be removed and redeposit in a landfill that meets the requirements of 40 CFR 61.154 "Standard for Active Waste Disposal Sites" by a Missouri Certified Asbestos Abatement Contractor.
4. Bridgeton Landfill shall notify APCP when the project has been completed.

Should you have any questions or concerns about the waiver approval, please feel free to contact me at (314) 615-89234 or via e-mail at kdonegan@stlouisco.com.

Respectfully,

Kathrina M. Donegan
Supervisor
Air Pollution Control Program

cc: Laura Yates, Saint Louis County Health Department Solid Waste Program

Bridgeton Landfill LLC

November 26, 2014

Kathrina Donegan
St. Louis County Air Pollution Control Program
111 South Meramec Avenue, 2nd Floor
Clayton, MO 63105

Re: Notification of Waste Disturbance
Bridgeton Landfill – FIPS #189-0312

Dear Ms. Donegan:

In accordance with 40 CFR 61.154(j), Bridgeton Landfill, LLC is providing notification of waste disturbance activities which may encounter asbestos-containing refuse at the Bridgeton Landfill facility located in Bridgeton, Missouri.

As you are aware, the facility has completed significant construction activities to improve landfill gas collection as well as mitigate odors. This work is being completed in tandem with the MDNR Compliance Action Plan. Many of these construction projects have resulted in disturbance of waste. Below is a summary of work remaining to be completed in December 2014 thru March 2015 in the South Quarry of the landfill site that may result in waste disturbance activities. The exact date and duration of the above mentioned tasks will depend on weather conditions:

- Installation of leachate and gas conveyance lines is on-going. The majority of the piping is above grade or above the waste so disturbance of waste is unlikely however at tie-in locations, installation of the perimeter sumps and where trenching is needed there may be a potential that waste is encountered. These ongoing activities will continue through March 2015.

- Installation of approximately thirty additional and/or replacement gas extractions (GEWs) with an approximate thirty-six inches (36") in diameter borehole and installation depth no greater than approximately 140 feet. Where replacement GEWs are installed, the existing GEW will be abandoned at grade and at some locations waste may be encountered during this abandonment. Installation of the GEWs is expected to begin December 3, 2014 and be completed by mid-March 2015, weather permitting.

As such, the Bridgeton Landfill facility would like to begin installation of additional gas extraction wells December 3, 2014. We are aware 40 CFR 60.154(j) requires the landfill to notify the Administrator in writing at least 45 days prior to disturbing asbestos containing waste; however, due to on-going issues associated with site odor and subsurface gas migration mitigation, we request that a waiver be granted in order to expedite this process. Upon approval of the waiver Bridgeton Landfill facility will utilize a third-party driller for

the installation of the additional and replacement gas extraction wells. It is anticipated that this project will take approximately 120 days to complete. The exact date and duration of the installation will depend on weather conditions.

There is a potential that the refuse to be disturbed may include asbestos-containing waste material. Considering this, refuse excavation will be observed by a certified Missouri asbestos inspector trained to identify suspected asbestos-containing material. (Credentials attached)

Should suspected asbestos-containing refuse be encountered, the suspected refuse will be temporarily stored in a separate storage container located on the landfill and maintained in a moist state to minimize/prevent emissions of suspect material. An asbestos contractor will be contracted for proper management of the suspected material. Disturbed refuse that has been identified as suspected asbestos-containing material will be disposed of off-site at the Roxana Landfill under the supervision of the certified asbestos contractor.

Should you have any questions, please contact me at (314) 706-4558.

Sincerely,

Bridgeton Landfill, LLC.

James Getting

James A. Getting
Environmental Manager

c: Department of Natural Resources, St Louis Regional Office

Expiration Date **9/23/2015** Certificate Number: 7011091114MOIR14116

Training Date **9/11/2014**

Missouri State Certificate for Asbestos Related Occupations

issued by Department of Natural Resources
P.O. Box 176
Jefferson City, MO 65102
Phone (573) 751-4817

Bradley J. Vits

has successfully completed the requirements for certification as a INSPECTOR. This Missouri State Certification is subject to review and the director may deny, suspend or revoke the certification per RSMo chapter 643.230.

9/24/2014
Date

Director of Air Pollution Control Program

Attachment B

Polystar PP-RCT Pipe

ISCO PP-RCT

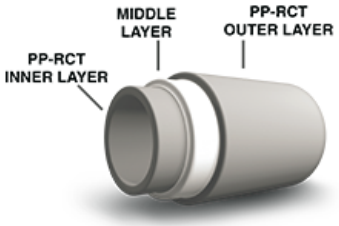
INTRODUCING POLYPROPYLENE PIPING SYSTEMS

ISCO Industries is proud to add polypropylene piping systems to our list of products and services. Only offering the highest quality products to our customers, ISCO has teamed with Orion to offer the Polystar PP-RCT polypropylene product line as the exclusive industrial stocking distributor in North America.

A CUT ABOVE THE COMPETITION

ISCO Industries is proud to add polypropylene piping systems to our list of products and services.

ISCO PP-RCT offers quality products and services to our customers, and our polypropylene product systems are the most advanced of their kind. ISCO PP-RCT supplies solutions using polypropylene pipe made from the most commercially progressive resin on the market today resulting in the highest pressure and temperature ranges. The result is the best performing product available.



ISCO PP-RCT pipe and fittings are made using a unique random copolymer polypropylene high-crystalinnity resin. An encapsulated layer provides additional strength and reduces thermal expansion by up to 70 percent. This mix of materials produces higher temperature and pressure ratings than the standard commercially available PPR products.

PRESSURE v. TEMPERATURE													
POLYSTAR CT-WHITE	1/2" (20 mm)	3/4" (25 mm)	1" (32 mm)	1 1/4" (40 mm)	1 1/2" (50 mm)	2" (63 mm)	2 1/2" (75 mm)	3" (90 mm)	3 1/2" (110 mm)	4" (125 mm)	6" (160 mm)	8" (200 mm)	10" (250 mm)
	DR 7.4	DR 7.4	DR 9	DR 11	DR 11	DR 11	DR 11	DR 11	DR 11	DR 11	DR 17	DR 17	DR 17
Temperature	PSI												
73°F (23°C)*	350	350	280	220	220	220	220	220	220	220	139	139	139
140°F (60°C)*	183	183	145	115	115	115	115	115	115	115	71	71	71
180°F (82°C)*	120	120	100	78	78	78	78	78	78	78	50	50	50
210°F (99°C)**	77	77	58	43	43	43	43	43	43	43	22	22	22

Drawing Set

South Slope Header Improvements

PERMIT DRAWINGS
PROPOSED SOUTH SLOPE HEADER SYSTEM
FOR
BRIDGETON LANDFILL, LLC

NOVEMBER 2014

PREPARED FOR:

BRIDGETON LANDFILL, LLC
13570 ST. CHARLES ROCK ROAD
BRIDGETON, MISSOURI 63044

LOCATION MAP

N

SOURCE:

Engineering for a Better World
FEEZOR
ENGINEERING, INC.

3405 HOLLENBERG DRIVE
BRIDGETON, MO 63044
TEL. (314) 736-5794

INDEX OF DRAWINGS

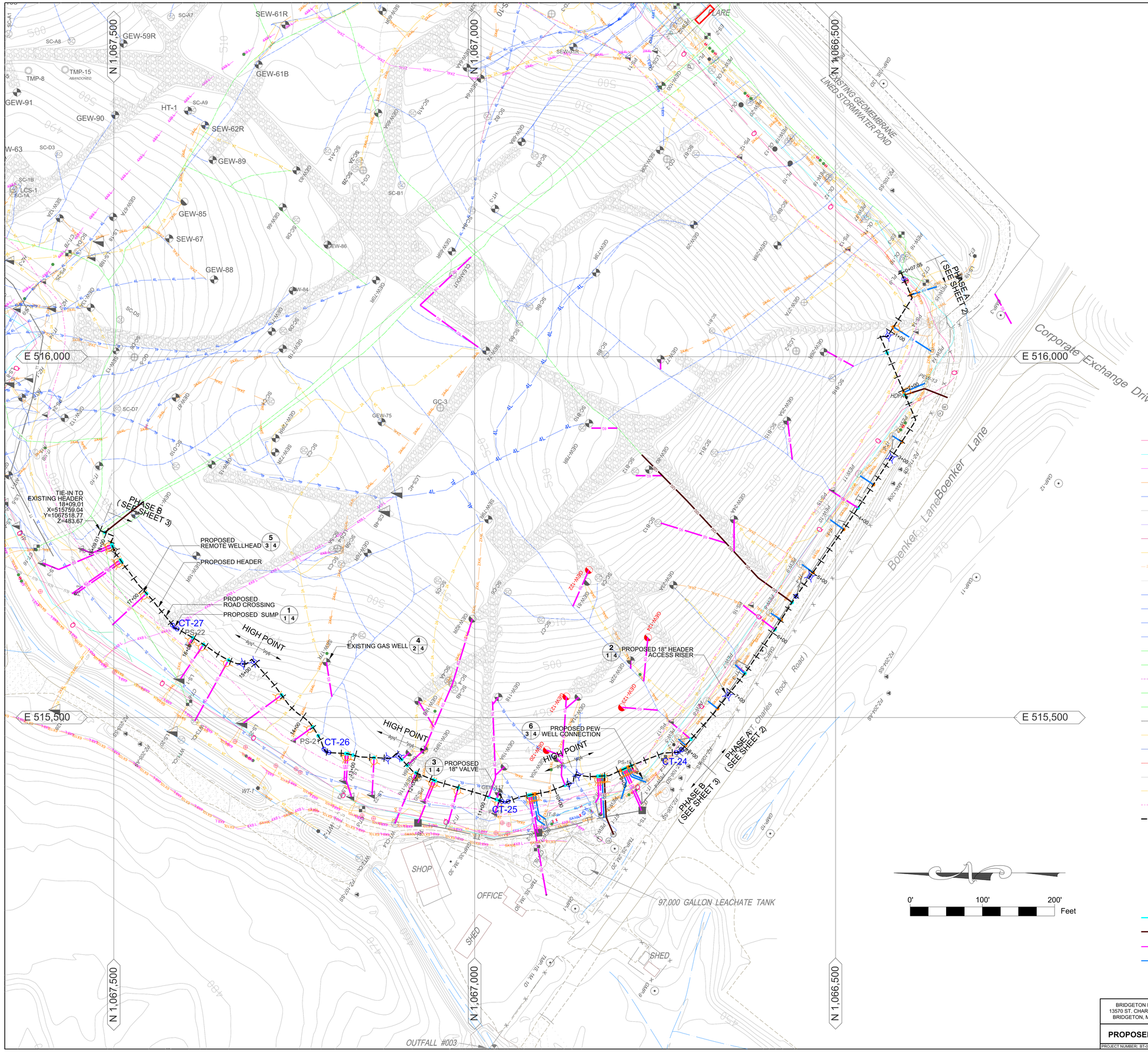
SOUTH SLOPE HEADER SYSTEM	
001	PROPOSED GAS MANAGEMENT SYSTEM - PLAN
002	PHASE A - PLAN AND PROFILE
003	PHASE B - PLAN AND PROFILE
004	GAS MANAGEMENT SYSTEM DETAILS
SOUTHEAST LIFT STATION	
005	PROPOSED SE LIFT STATION INSTALLATION - PLAN
006	PROPOSED SE LIFT STATION INSTALLATION - PLAN - VIEW A & B
007	SE LIFT STATION DETAILS #1
008	SE LIFT STATION DETAILS #2
GAS WELL INSTALLATION	
009	PROPOSED WELL LOCATION AND GRADING - PLAN
010	GAS WELL DETAILS

NOT RELEASED FOR CONSTRUCTION

CHANGES TO THIS PLAN/DRAWING SET REQUIRE WRITTEN APPROVAL BY FEI.

Daniel R. Feezor, P.E.

MO No: PE-030292 Date



LEGEND

- SOLID WASTE BOUNDARY
- EXISTING TOPO
- GAS MONITORING PROBE
- PIEZOMETER MONITORING WELL
- GAS EXTRACTION WELL
- DUAL GAS EXTRACTION WELL
- SURFACE EXTRACTION WELL
- PERIMETER GAS EXTRACTION WELL
- GRIT CHAMBER
- LIFT STATION
- CONDENSATE SUMP
- LEACHATE COLLECTION SUMP
- HORIZONTAL COLLECTION SUMP
- PERIMETER SUMP
- LEACHATE COLLECTION SUMP
- SURFACE COLLECTOR
- TEMPERATURE MONITORING PROBE
- SUBSURFACE RCP WELLS
- TRENCH SUMP
- INTERCEPTION TRENCH RISER
- PERIMETER LEACHATE SUMP
- WELL HEAD RISER
- WELL BORE BOOT
- TRENCH SUMP
- OVER LINER TIE IN POINT
- GAS INTERCEPTOR WELL
- CLEAN OUT
- POWER PANEL
- QUARRY WALL
- LEACHATE COLLECTION PIPING
- DUAL CONTAINED LCS FORCEMAIN (SIZE VARIES)
- DUAL CONTAINED PERIMETER FORCEMAIN (SIZE VARIES)
- LEACHATE COLLECTION PIPING (SIZE VARIES)
- BUBBLE SUCKER
- TOE DRAIN
- 4" PERFORATED TRENCH DRAIN
- AIR LINE
- AIR LINE (PRESSURIZED BELOW GROUND)
- BURIED LFG COLLECTION PIPING
- 2" ABOVE GROUND LFG COLLECTION LATERAL PIPING
- 4" ABOVE GROUND LFG COLLECTION LATERAL PIPING
- 6" ABOVE GROUND LFG COLLECTION LATERAL PIPING
- 8" ABOVE GROUND LFG COLLECTION LATERAL PIPING
- 6" ABOVE GROUND LFG COLLECTION HEADER PIPING
- 8" ABOVE GROUND LFG COLLECTION HEADER PIPING
- 10" STEEL GROUND LFG COLLECTION PIPING
- 12" ABOVE GROUND LFG COLLECTION HEADER PIPING
- 18" ABOVE GROUND LFG COLLECTION HEADER PIPING
- UNDERGROUND ELECTRIC LINE
- NATURAL GAS LINE
- WATERMAIN
- UNDERGROUND ELECTRIC LINE
- INTERCEPTION TRENCH
- ARTESIAN LINE
- PERIMETER TOE DRAIN
- PROPOSED PERIMETER HEADER
- PROPOSED PERIMETER HEADER STATIONING
- PROPOSED PERIMETER HEADER HIGH POINT
- PROPOSED SUMP
- PROPOSED BRANCH SADDLE CONNECTION TO PERIMETER HEADER
- PROPOSED PEW UPSLOPE WELL HEAD
- PROPOSED TEE TO NEW 18" HEADER
- PROPOSED 18" HEADER
- PROPOSED 12" HEADER
- PROPOSED 6" LATERAL
- PROPOSED PEW 4" LATERAL
- PROPOSED 18" VALVE
- PROPOSED 18" HEADER ACCESS RISER

BRIDGETON LANDFILL, LLC
13570 ST. CHARLES ROCK ROAD
BRIDGETON, MISSOURI 63044

BRIDGETON LANDFILL
PROPOSED SOUTH SLOPE HEADER SYSTEM
PERMIT DRAWINGS

FEEZOR ENGINEERING, INC.

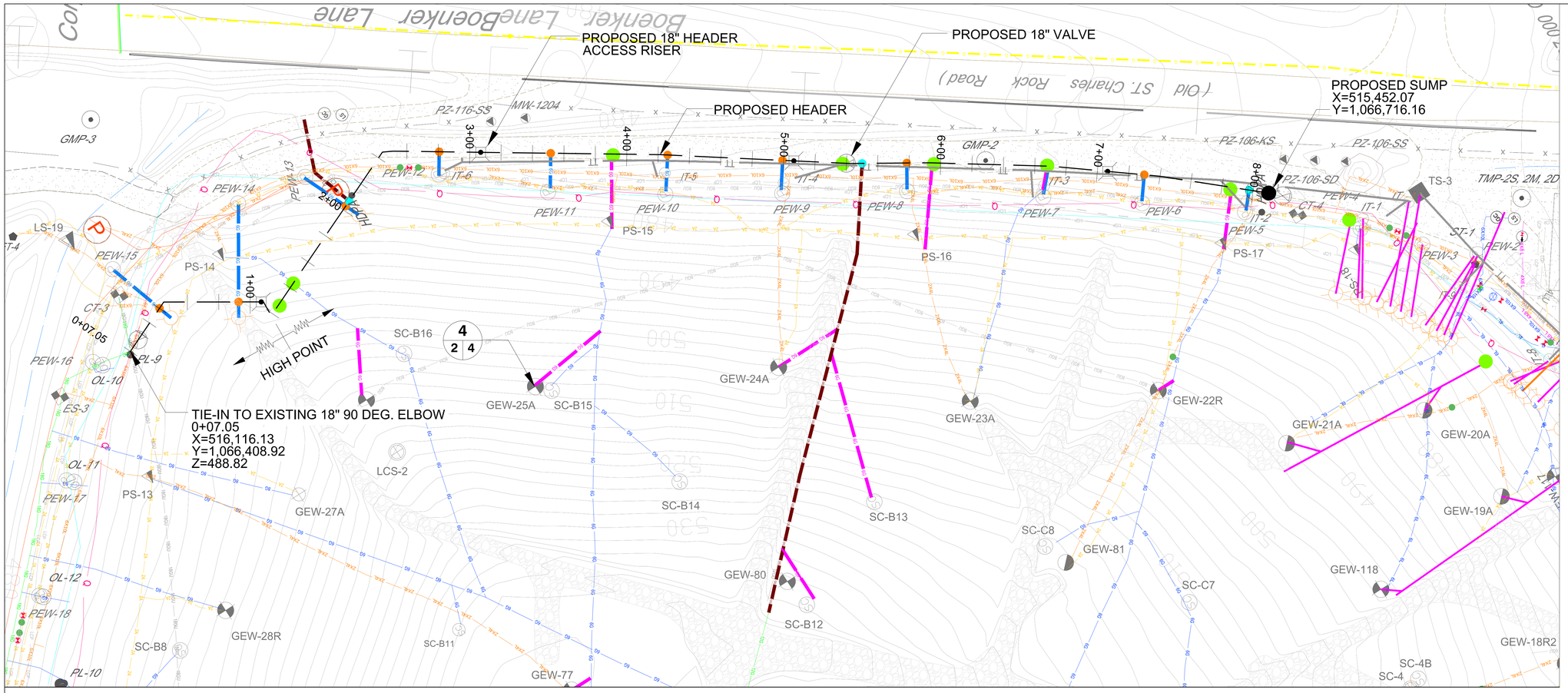
NOVEMBER 2014
DESIGNED BY: AMR
APPROVED BY: DRF

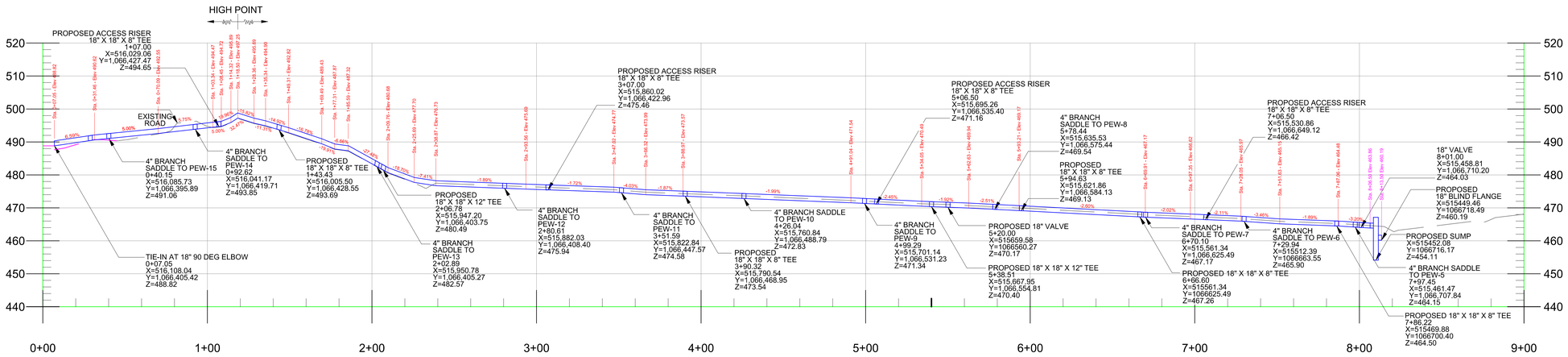
DRAWING NO.: 001

PROPOSED GAS MANAGEMENT SYSTEM PLAN

PROJECT NUMBER: BT-039 | FILE PATH: C:\Users\PaulDickson\Dropbox\Bridgeton\BT-039\Drawing\Bridgeton Site Plan 2014 Q1 v CADworx\Title Block 42x30 XREF v TEMPLATE.dwg

REVISION | DATE





PHASE A - PROFILE A - A'

NOTE:

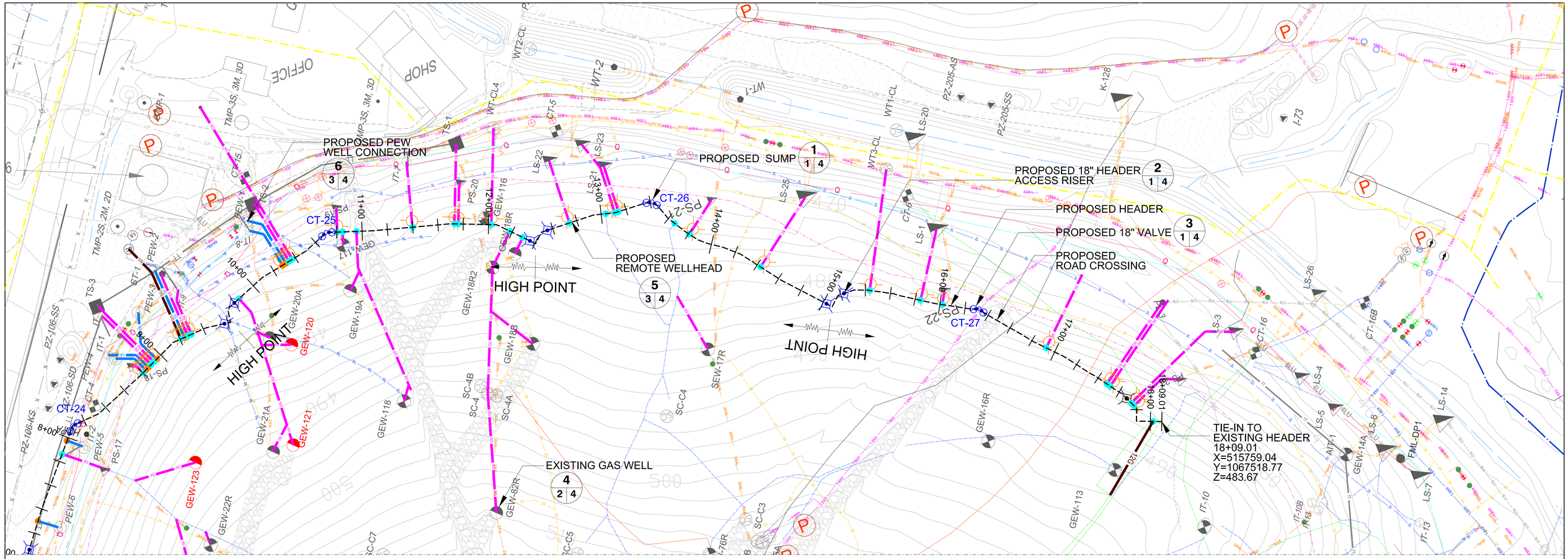
1. ELEVATIONS ARE PROVIDED AT INVERT OF PIPE. MAINTAIN POSITIVE SLOPE INTO PROPOSED 18" HEADER.

0' 50' 100' Feet
HORIZONTAL SCALE

0' 25' 50' Feet
VERTICAL SCALE

BRIDGETON LANDFILL, LLC 13570 ST. CHARLES ROCK ROAD BRIDGETON, MISSOURI 63044	BRIDGETON LANDFILL PROPOSED SOUTH SLOPE HEADER SYSTEM PERMIT DRAWINGS	Engineering for a Better World FEEZOR ENGINEERING, INC.	NOVEMBER 2014 DESIGNED BY: AMR APPROVED BY: DRF
PHASE A - PLAN AND PROFILE			REVISION / DATE
PROJECT NUMBER: BT-039	FILE PATH: C:\Users\PaulDropbox\Bridgeton\BT-039\Drawings\Phase\Access Site Plan 2014-Q1 - CAD\xref\Title Block 42x36 XREF - TEMPLATE.dwg		

DRAWING NO.: 002

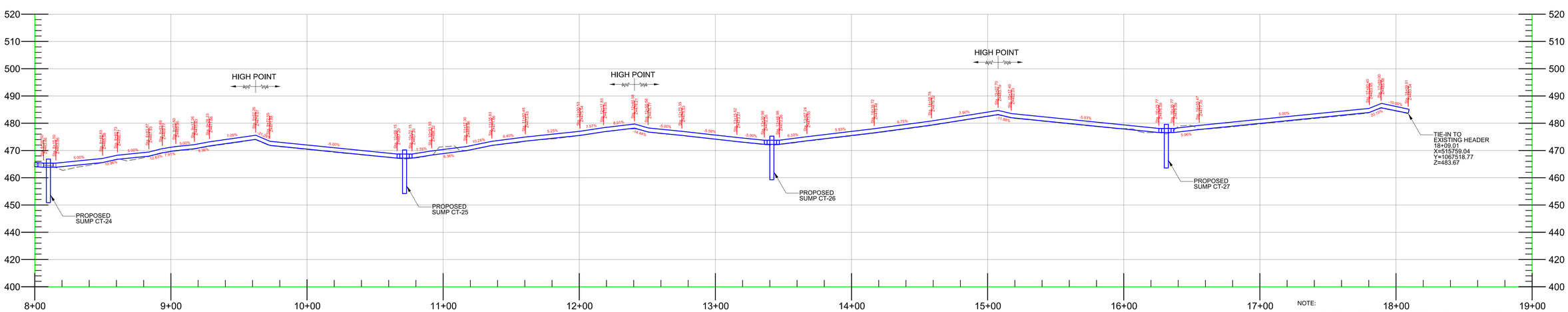


LEGEND

SOLID WASTE BOUNDARY	HORIZONTAL COLLECTION SUMP	OVER LINER TIE IN POINT	AIR LINE	UNDERGROUND ELECTRIC LINE	PROPOSED BRANCH SADDLE CONNECTION TO PERIMETER HEADER
EXISTING TOPO	PERIMETER SUMP	GAS INTERCEPTOR WELL	AIR LINE (PRESSURIZED BELOW GROUND)	NATURAL GAS LINE	PROPOSED PEW UPSLOPE WELL HEAD
GAS MONITORING PROBE	LEACHATE COLLECTION SUMP	CLEAN OUT	BURIED LFG COLLECTION PIPING	WATERMAIN	PROPOSED TEE TO NEW 18" HEADER
PIEZOMETER MONITORING WELL	SURFACE COLLECTOR	POWER PANEL	2" ABOVE GROUND LFG COLLECTION LATERAL PIPING	UNDERGROUND ELECTRIC LINE	PROPOSED 12" HEADER
GAS EXTRACTION WELL	TEMPERATURE MONITORING PROBE	QUARRY WALL	4" ABOVE GROUND LFG COLLECTION LATERAL PIPING	INTERCEPTION TRENCH	PROPOSED 6" LATERAL
DUAL GAS EXTRACTION WELL	SUBSURFACE RCP WELLS	LEACHATE COLLECTION PIPING	6" ABOVE GROUND LFG COLLECTION LATERAL PIPING	ARTESIAN LINE	PROPOSED PEW 4" LATERAL
SURFACE EXTRACTION WELL	TRENCH SUMP	DUAL CONTAINED LCS FORCEMAIN (SIZE VARIES)	8" ABOVE GROUND LFG COLLECTION LATERAL PIPING	PERIMETER TOE DRAIN	PROPOSED 18" VALVE
PERIMETER GAS EXTRACTION WELL	INTERCEPTION TRENCH RISER	DUAL CONTAINED PERIMETER FORCEMAIN (SIZE VARIES)	6" ABOVE GROUND LFG COLLECTION HEADER PIPING	PROPOSED PERIMETER HEADER	PROPOSED 18" HEADER ACCESS RISER
GRIT CHAMBER	PERIMETER LEACHATE SUMP	LEACHATE COLLECTION PIPING (SIZE VARIES)	8" ABOVE GROUND LFG COLLECTION HEADER PIPING	12+00 PROPOSED PERIMETER HEADER STATIONING	
LIFT STATION	WELL HEAD RISER	BUBBLE SUCKER	10" STEEL GROUND LFG COLLECTION PIPING	HIGH POINT PROPOSED PERIMETER HEADER HIGH POINT	
CONDENSATE SUMP	WELL BORE BOOT	TOE DRAIN	12" ABOVE GROUND LFG COLLECTION HEADER PIPING	PROPOSED SUMP	
LEACHATE COLLECTION SUMP	TRENCH SUMP	4" PERFORATED TRENCH DRAIN	18" ABOVE GROUND LFG COLLECTION HEADER PIPING		

0' 50' 100' Feet

1" = 30'



0' 50' 100' Feet

HORIZONTAL SCALE

0' 25' 50' Feet

VERTICAL SCALE

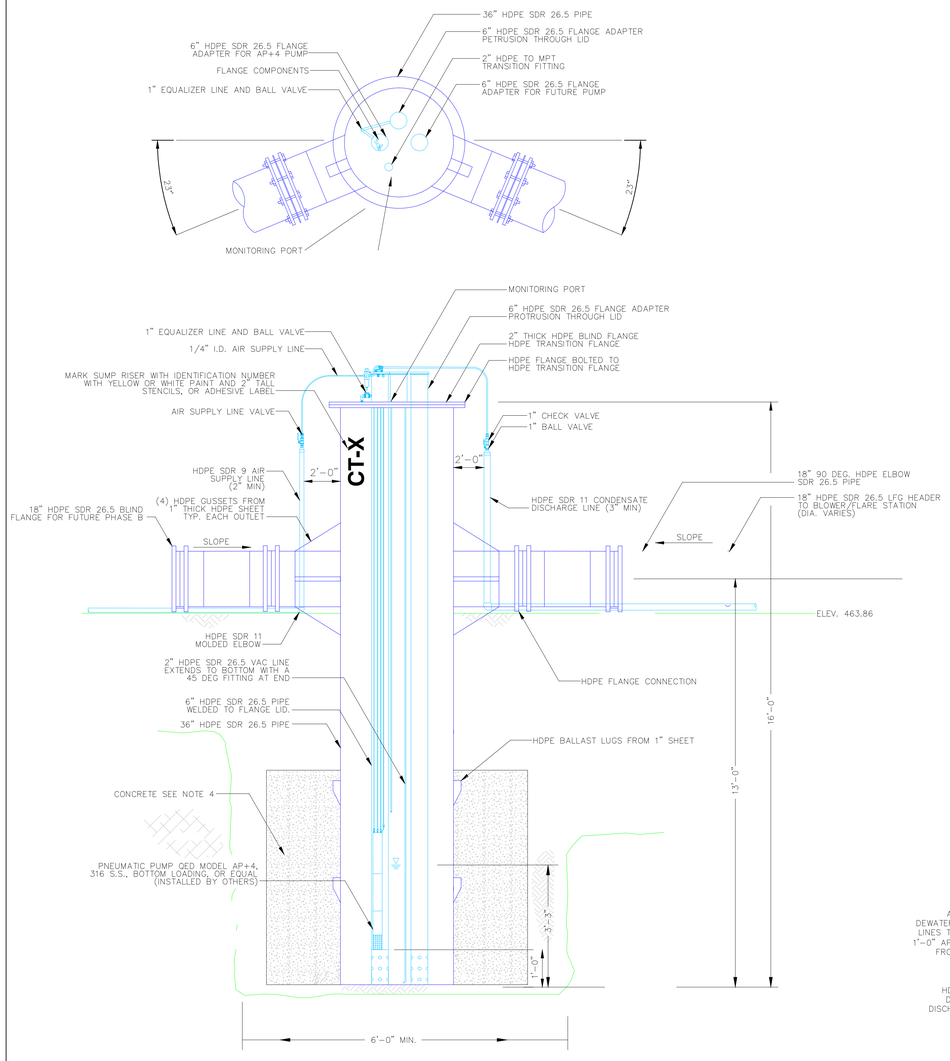
PHASE B - PROFILE 8+00 - 18+09

NOTE:

1. ELEVATIONS ARE PROVIDED AT INVERT OF PIPE. MAINTAIN POSITIVE SLOPE INTO PROPOSED 18" HEADER.

BRIDGETON LANDFILL, LLC 13570 ST. CHARLES ROCK ROAD BRIDGETON, MISSOURI 63044	BRIDGETON LANDFILL PROPOSED SOUTH SLOPE HEADER SYSTEM PERMIT DRAWINGS	Engineering for a Better World FEEZOR ENGINEERING, INC.	NOVEMBER 2014 DESIGNED BY: AMR APPROVED BY: DRF
PHASE B PLAN AND PROFILE			REVISION / DATE
PROJECT NUMBER: BT-039	FILE PATH: C:\Users\Paul\Dropbox\Bridgeton\BT-023\drawings\Infrastructure Site Plan 2014 CF - CAD\cad\Title Block 42x30 XREF - TEMPLATE.dwg		

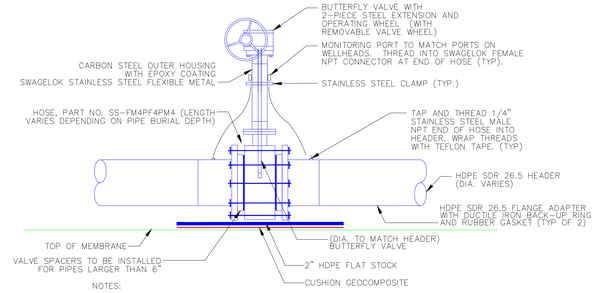
DRAWING NO.: 003



NOTES:.

1. 6"ø HDPE SDR 26.5 PIPE EXTRUSION WELDED TO FLANGE LID. 1'-0" OF PIPE TO PROTRUDE THROUGH TOP OF FLANGE. EXTRUSION WELD PIPE TO BOTH SIDES OF BLIND FLANGE. CENTER OF PIPE LOCATED 2" OFF CENTER OF BLIND FLANGE.
2. CONTRACTOR SHALL VERIFY CONDENSATE SUMP CONFIGURATION IN FIELD. ADJUSTMENTS SHALL BE APPROVED BY ENGINEER PRIOR TO INSTALLATION.
3. ENGINEER SHALL APPROVE DEPTH BASED ON GROUND SURFACE ELEVATION PRIOR TO INSTALLATION.
4. CONTRACTOR TO PLACE A MINIMUM OF 10 CUBIC YARDS OF CONCRETE WITH A MINIMUM DENSITY OF 140 LB/CU FT. AROUND CONDENSATE SUMP.

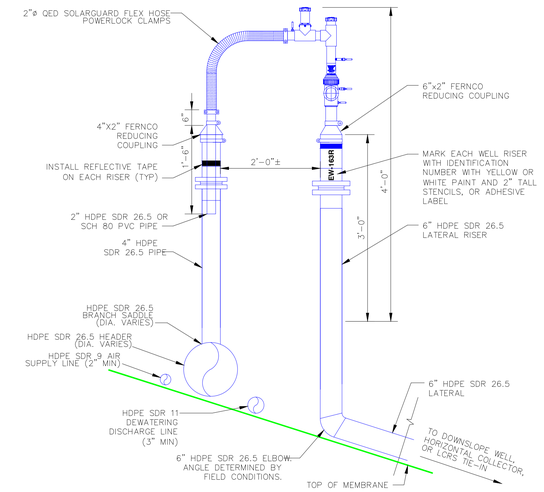
CONDENSATE SUMP DETAIL 1 / 1 4



NOTES:

1. NUTS, BOLTS, AND WASHERS SHALL BE HOT-DIP GALVANIZED. STAINLESS STEEL BOLTS AND NUTS WILL NOT BE PERMITTED.
2. THOROUGHLY COAT ENTIRE SURFACE OF BOLTS, WASHERS, NUTS AND BACKUP RINGS WITH POLYCOAT RUBBERIZED PRIMER, OR EQUAL, AFTER TIGHTENING BOLTS. COATING SHALL HAVE NO "HOLIDAYS", OR GAPS IN ITS APPLICATION.
3. WRAP FLANGE IN PLASTIC WRAP PRIOR TO BACKFILLING.

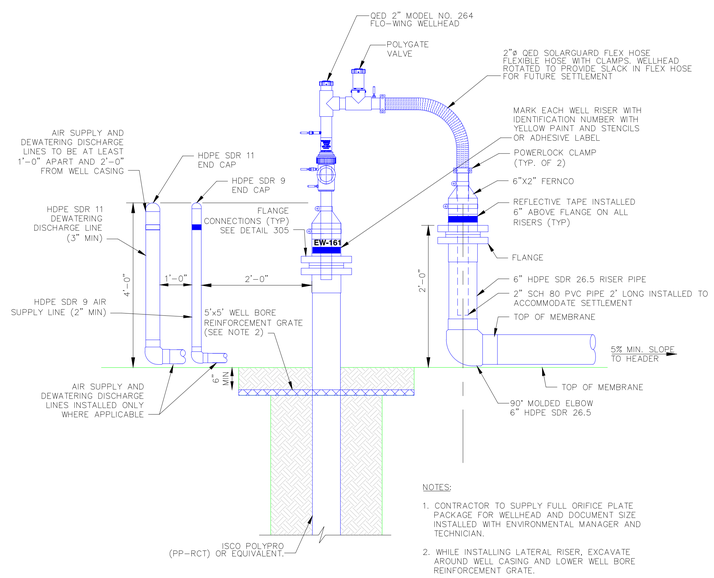
HEADER ISOLATION VALVE DETAIL 3 / 1 4



NOTES:

1. MOLDED TEES SHALL BE USED FOR HEADER TIE INS 12"ø AND SMALLER
2. HDPE BRANCH SADDLES SHALL BE USED FOR TIE INS TO HEADER 14" AND LARGER

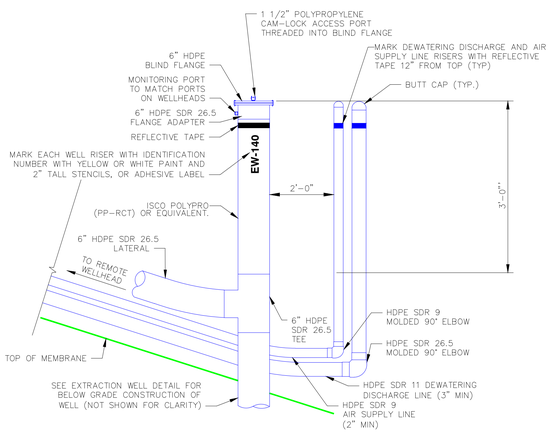
REMOTE WELLHEAD DETAIL 5 / 3 4



NOTES:

1. CONTRACTOR TO SUPPLY FULL ORIFICE PLATE PACKAGE FOR WELLHEAD AND DOCUMENT SIZE INSTALLED WITH ENVIRONMENTAL MANAGER AND TECHNICIAN.
2. WHILE INSTALLING LATERAL RISER, EXCAVATE AROUND WELL CASING AND LOWER WELL BORE REINFORCEMENT GRATE.
3. CQA INSPECTOR SHALL DOCUMENT FINAL DEPTH OF WELL BORE REINFORCEMENT GRATE FOR EACH WELL.

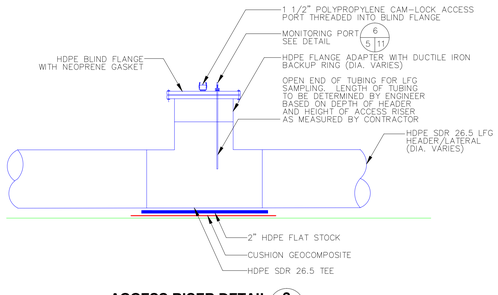
EXISTING WELLHEAD DETAIL 4 / 2 4



NOTES:

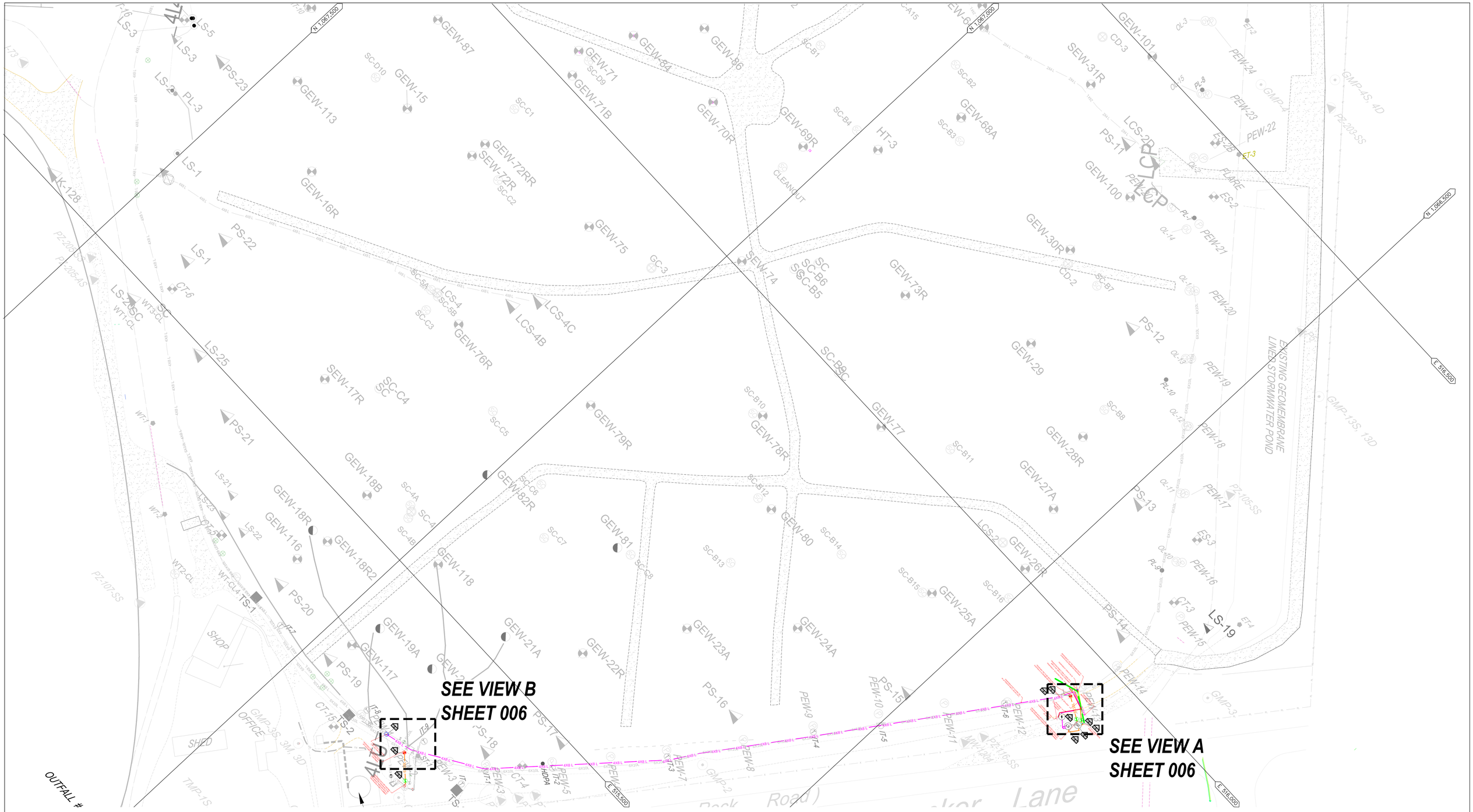
1. AIR SUPPLY AND DEWATERING DISCHARGE LINES TO BE INSTALLED IF NECESSARY AND DIRECTED BY THE ENGINEER.

DOWNSLOPE EXTRACTION WELL DETAIL 6 / 3 4



ACCESS RISER DETAIL 2 / 1 4

BRIDGETON LANDFILL, LLC 13570 ST. CHARLES ROCK ROAD BRIDGETON, MISSOURI 63044	BRIDGETON LANDFILL PROPOSED SOUTH SLOPE HEADER SYSTEM PERMIT DRAWINGS	Engineering for a Better World FEEZOR ENGINEERING, INC.	NOVEMBER 2014 DESIGNED BY: AMR APPROVED BY: DRF	DRAWING NO.:
GAS MANAGEMENT SYSTEM DETAILS				004
PROJECT NUMBER: BT-039	FILE PATH:		REVISION / DATE	



LEGEND

GMP-4	GAS MONITORING PROBE
PZ-204-AS	PIEZOMETER MONITORING WELL
GEW-38	GAS EXTRACTION WELL
GEW-85	DUAL GAS EXTRACTION WELL
SEW-63	SURFACE EXTRACTION WELL
PEW-20	PERIMETER GAS EXTRACTION WELL
CT-1	CONDENSATE SUMP
LS-1 / LS-6	LEACHATE COLLECTION SUMP
HT-1	HORIZONTAL COLLECTION SUMP
PS-15	PERIMETER SUMP
LCS-2D	LEACHATE COLLECTION SUMP
SC-B1	SURFACE COLLECTOR
TMP-9	TEMPERATURE MONITORING PROBE
GC-3	SUBSURFACE RCP WELLS
ET-2	TRENCH SUMP
IT-7	INTERCEPTION TRENCH RISER
R-7	PERIMETER LEACHATE SUMP
WB-1	WELL BORE BOOT
TS-1	TRENCH SUMP
OL-10	OVER LINER TIE IN POINT
GW-4	GAS INTERCEPTOR WELL

6X10L	PROPOSED 6" SDR 11 X 10" SDR 17 ARTESIAN MANIFOLD/LIFT STATION INFLUENT
4X8 L	PROPOSED 4" SDR11 x 8" SDR 17 LIFT STATION EFFLUENT
	EXISTING ARTESIAN WELL DISCHARGE PIPING (SIZE VARIES)
12G	PROPOSED 12" HDPE SDR 11 GAS EXTRACTION PIPING
2A	PROPOSED 2" HDPE SDR 9 AIR SUPPLY PIPING
2X4 L	PROPOSED 2" SDR 11 X 4" SDR 17 CONDENSATE FORCEMAIN
	PROPOSED 3" RED HDPE SDR 11 POWER SUPPLY CONDUIT
6L	PROPOSED 6" SDR-11 HDPE ARTESIAN MANIFOLD
2X4 L	PROPOSED 2"X4" PUMP LINE FROM LIFT STATION TO GRIT CHAMBER 2" JET LINE
6X10L	EXISTING 6" SDR 11 X 10" SDR 17 PERIMETER FORCEMAIN
4X8 L	EXISTING 4" SDR 11 X 18" SDR 17 LCS FORCEMAIN
6X10L	EXISTING 6" SDR 11 X 10" SDR 17 ARTESIAN MANIFOLD
	CHECK VALVE (SIZE VARIES)
	6" ELECTRIC ACTUATED VALVE
	MANUAL ISOLATION VALVE (SIZE VARIES)
	CLEAN-OUT (SIZE VARIES)
	6"X10" FUTURE TEE W/ 10" REDCAP AND 6" MANUAL VALVE
	PROPOSED 18" CONDENSATE SUMP
	4" FLOW METER
GC	GRIT CHAMBER
LS	LIFT STATION

0 40 80 Feet

NOTES:

1. ALL DUAL-CONTAINED FORCEMAIN PIPING IS TO BE PRESSURE TESTED BY CONTRACTOR PRIOR TO PROJECT COMPLETION PRESSURE TESTING WILL CONSIST OF A 1 HOUR TEST OF BOTH THE CARRIER AND CONTAINMENT PIPE AT THE BELOW LIST PRESSURES. PRESSURE MUST BE MAINTAINED FOR THE ENTIRE TEST PERIOD WITH NO MORE THAT A 10% DROP IN PRESSURE ALLOWED.
   CARRIER – 60 PSI
   CONTAINMENT – 10 PSI.
2. CONTRACTOR SHALL COORDINATE ALL WORK WITH LANDFILL MANAGER, AS SO NOT TO INTERFERE WITH DAILY OPERATIONS.
3. CONTRACTOR SHALL PROVIDE ACCESS FOR FIELD SURVEYS TO RECORD AS-BUILT CONDITIONS OF ALL INSTALLED INFRASTRUCTURE.
4. CONTRACTOR SHALL PERFORM WORK IN A MANNER TO PREVENT DAMAGE TO EXISTING SITE COMPONENTS AND EVOH LINER SYSTEM. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DAMAGE CAUSED DURING CONSTRUCTION ACTIVITIES.

BRIDGETON LANDFILL, LLC
13570 ST. CHARLES ROCK ROAD
BRIDGETON, MISSOURI 63044

BRIDGETON LANDFILL
PROPOSED SOUTH SLOPE
HEADER SYSTEM
PERMIT DRAWINGS

PROPOSED SE LIFT STATION INSTALLATION - PLAN

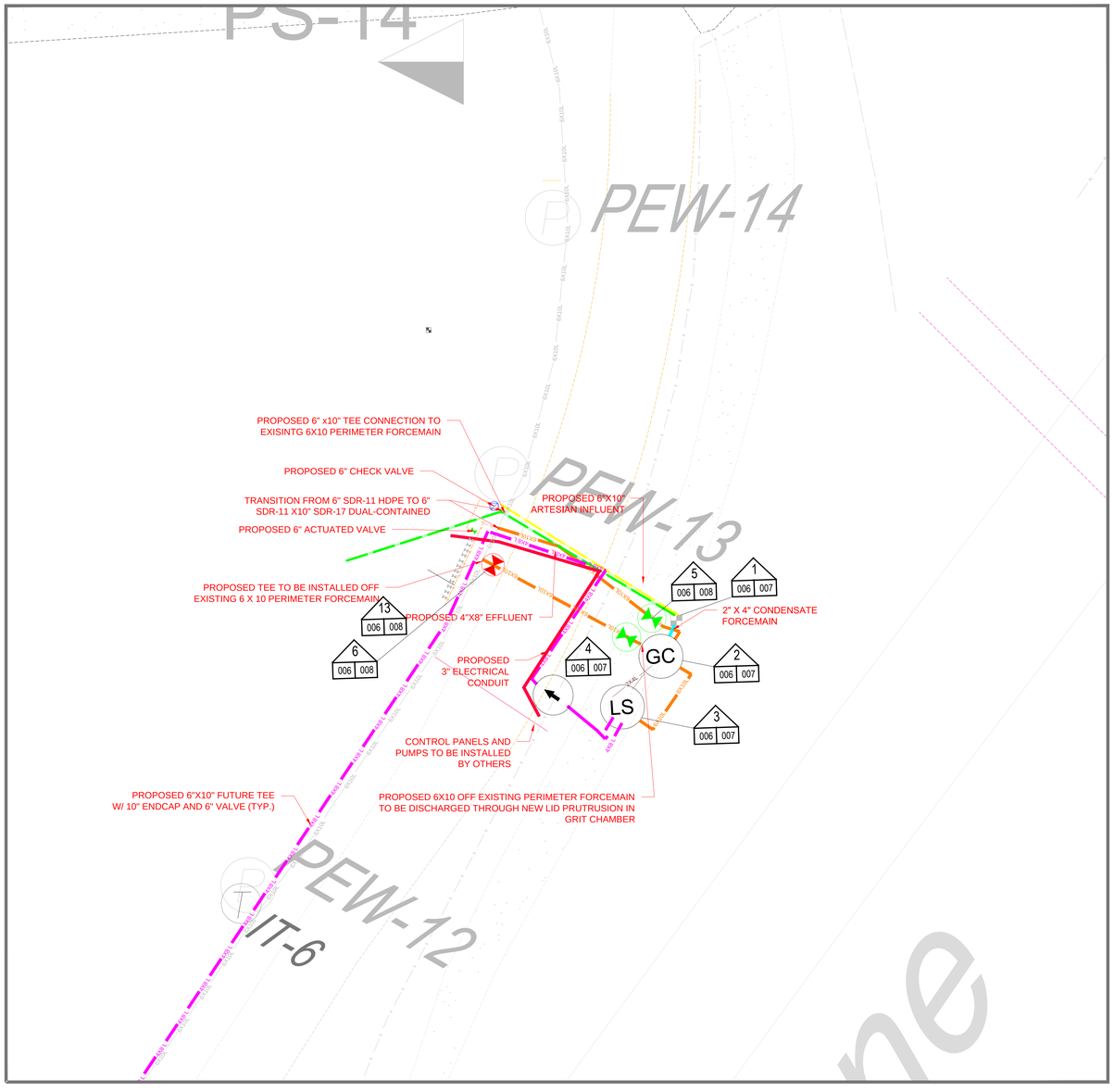
FEEZOR ENGINEERING, INC.
Engineering for a Better World

NOVEMBER 2014
DESIGNED BY: AMR
APPROVED BY: DRF

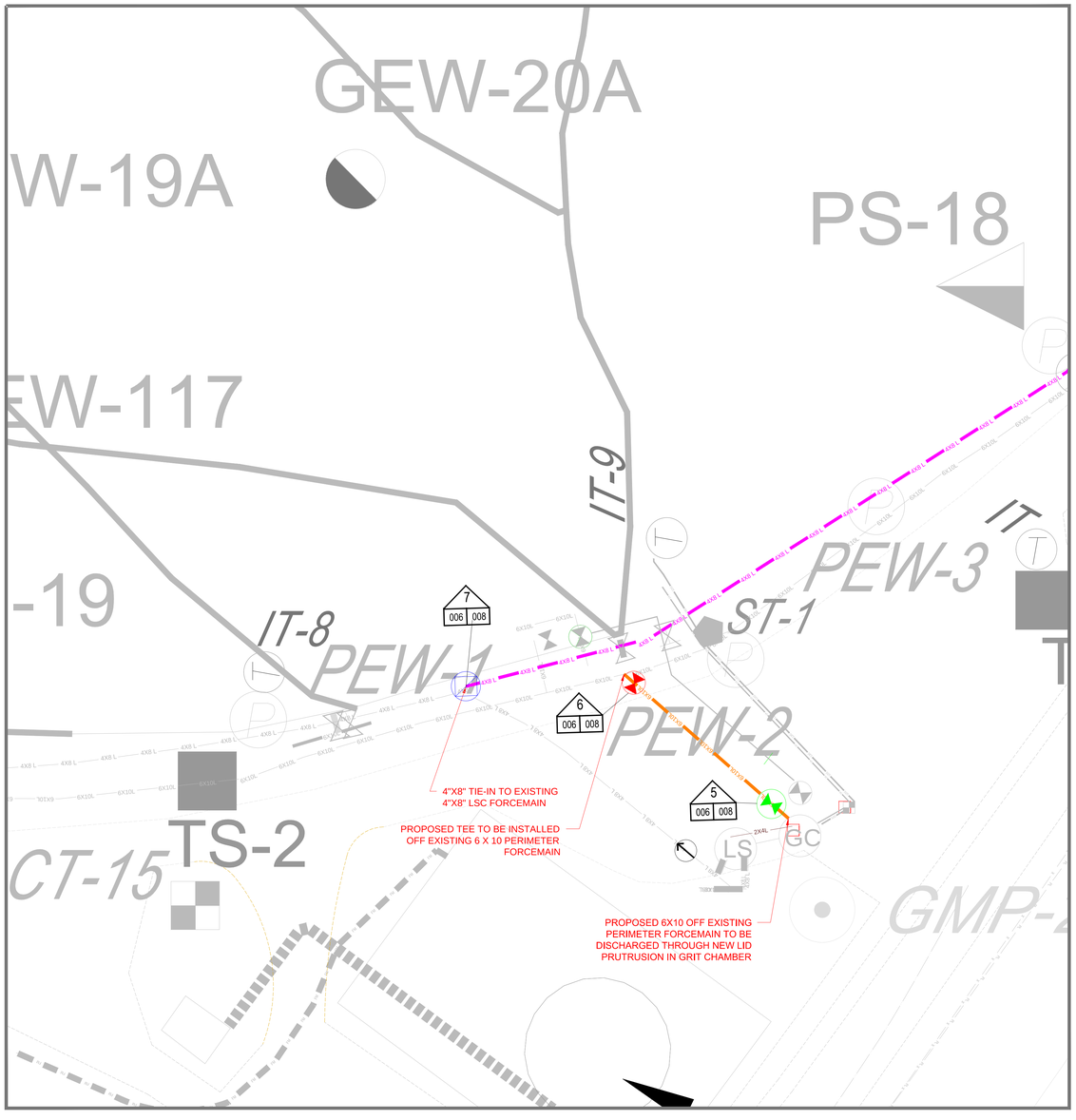
DRAWING NO.: **005**

PROJECT NUMBER: BT-039 | FILE PATH: C:\AutoCAD_Vol2\acad\FY15\5 Crush Stone Feeder Gasp\005\005 Permit Drawing\BT-039-PD-005-005 SE LIFT STATION.dwg

REVISION	DATE



VIEW A - SE LIFT STATION



VIEW B - EXISTING SYSTEM TIE-IN

0 10 20 Feet

0 10 20 Feet

LEGEND

GMP-4	GAS MONITORING PROBE
PZ-3W-45	PIEZOMETER MONITORING WELL
GEW-38	GAS EXTRACTION WELL
GEW-85	DUAL GAS EXTRACTION WELL
SEW-63	SURFACE EXTRACTION WELL
PEW-20	PERIMETER GAS EXTRACTION WELL
CT-1	CONDENSATE SUMP
LS-1 LS-6	LEACHATE COLLECTION SUMP
HT-1	HORIZONTAL COLLECTION SUMP
PS-15	PERIMETER SUMP
LCS-2D	LEACHATE COLLECTION SUMP
SC-81	SURFACE COLLECTOR
TMP-9	TEMPERATURE MONITORING PROBE
GC-3	SUBSURFACE RCP WELLS
RT-1	TRENCH SUMP
IR-7	INTERCEPTION TRENCH RISER
PL-1	PERIMETER LEACHATE SUMP
BB-1	WELL BORE BOOT
TS-1	TRENCH SUMP
OL-N	OVER LINER TIE IN POINT
GW-4	GAS INTERCEPTOR WELL

6X10L	PROPOSED 6" SDR 11 X 10" SDR 17 ARTESIAN MANIFOLD/LIFT STATION INFLUENT
4X8 L	PROPOSED 4" SDR11 x 8" SDR 17 LIFT STATION EFFLUENT
	EXISTING ARTESIAN WELL DISCHARGE PIPING (SIZE VARIES)
12G	PROPOSED 12" HDPE SDR 11 GAS EXTRACTION PIPING
2A	PROPOSED 2" HDPE SDR 9 AIR SUPPLY PIPING
2X4 L	PROPOSED 2" SDR 11 X 4" SDR 17 CONDENSATE FORCEMAIN
	PROPOSED 3" RED HDPE SDR 11 POWER SUPPLY CONDUIT
6L	PROPOSED 6" SDR-11 HDPE ARTESIAN MANIFOLD
2X4 L	PROPOSED 2"X4" PUMP LINE FROM LIFT STATION TO GRIT CHAMBER 2" JET LINE
6X10L	EXISTING 6" SDR 11 X 10" SDR 17 PERIMETER FORCEMAIN
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6X10L	EXISTING 6" SDR 11 X 10" SDR 17 ARTESIAN MANIFOLD
	CHECK VALVE (SIZE VARIES)
	6" ELECTRIC ACTUATED VALVE
	MANUAL ISOLATION VALVE (SIZE VARIES)
	CLEAN-OUT (SIZE VARIES)
	6"X10" FUTURE TEE W/ 10" REDCAP AND 6" MANUAL VALVE
	PROPOSED 18" CONDENSATE SUMP
	4" FLOW METER
GC	GRIT CHAMBER
LS	LIFT STATION

BRIDGETON LANDFILL, LLC
13570 ST. CHARLES ROCK ROAD
BRIDGETON, MISSOURI 63044

BRIDGETON LANDFILL
PROPOSED SOUTH SLOPE
HEADER SYSTEM
PERMIT DRAWINGS

FEEZOR ENGINEERING, INC.
Engineering for a Better World

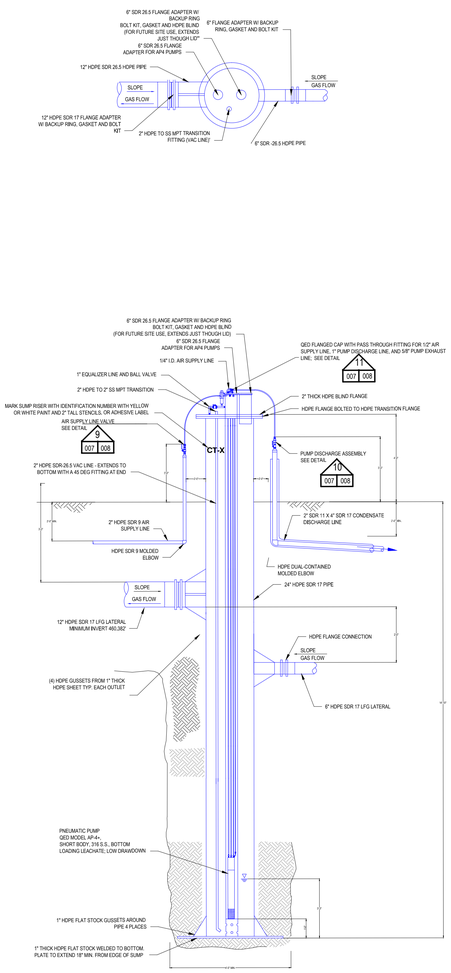
NOVEMBER 2014
DESIGNED BY: AMR
APPROVED BY: DRF

DRAWING NO.: 006

PROPOSED SE LIFT STATION
INSTALLATION - PLAN - VIEW A & B

PROJECT NUMBER: BT-039 | FILE PATH: C:\Users\Ben\Microsoft\O365\Sync\Feezor Engineering\BT-039 South Slope Header Design\DWG\Permit Drawings\BT-039 PD-006 SE LIFT STATION.dwg

REVISION	DATE



1 | 006 | 012 OUT-OF WASTE CONDENSATE SUMP
NTS

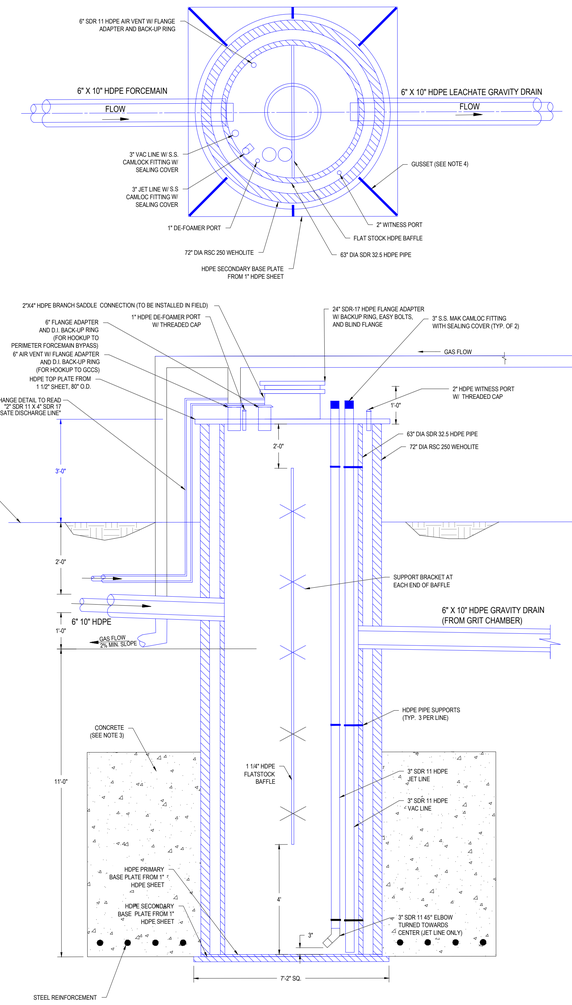
NOTES:

1. 4"Ø HDPE SDR 17 VACUUM BREAK PIPE EXTRUSION WELDED TO FLANGE I.D. 1'-0" OF PIPE TO PROTRUDE THROUGH TOP OF FLANGE. CENTER OF PIPE LOCATED 2" OFF CENTER OF BLIND FLANGE.

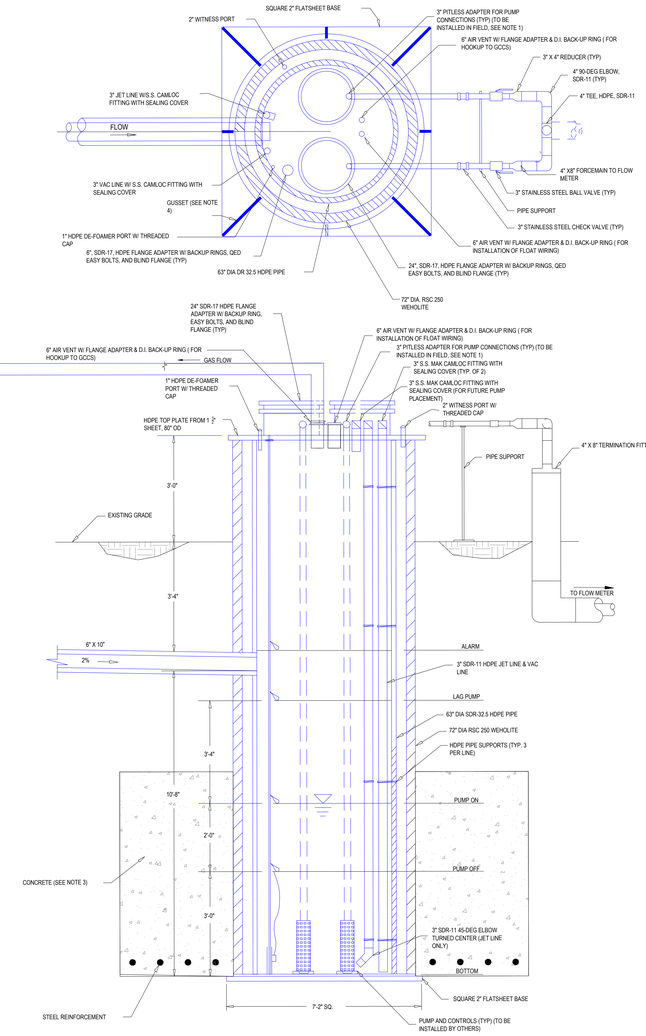
2. THOROUGHLY COAT ENTIRE SURFACE OF BOLTS, WASHERS, NUTS AND BACKUP RINGS WITH POLYCOAT RUBBERIZED PRIMER, OR EQUAL, AFTER TIGHTENING BOLTS. WRAP FLANGE IN PLASTIC WRAP PRIOR TO BACKFILLING.

3. CONTRACTOR SHALL VERIFY CONDENSATE SUMP CONFIGURATION AND NECESSARY ELEVATIONS IN FIELD. ADJUSTMENTS SHALL BE APPROVED BY ENGINEER PRIOR TO INSTALLATION.

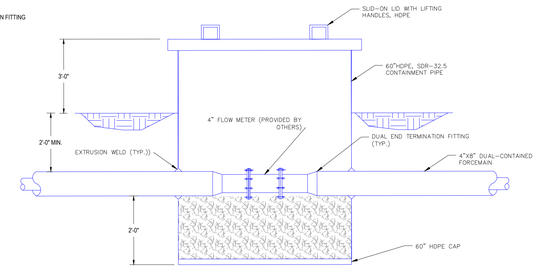
4. DETAIL PROVIDED BY REPUBLIC SERVICES, INC.



2 | 006 | 012 SOUTHEAST GRIT CHAMBER
NTS



3 | 006 | 012 SOUTHEAST ARTESIAN LIFT STATION
NTS



4 | 006 | 012 FLOW METER IN HDPE VAULT W/ LID
NTS

NOTES:

1. OTHERS TO INSTALL STAINLESS STEEL PITLESS ADAPTERS IN PUMP RISERS AND MAKE CONNECTIONS TO 4" X 8" FORCEMAIN.

2. CONTRACTOR TO NOTIFY OWNER IF GROUNDWATER IS ENCOUNTERED DURING EXCAVATION OF THE SOUTHEAST LIFT STATION

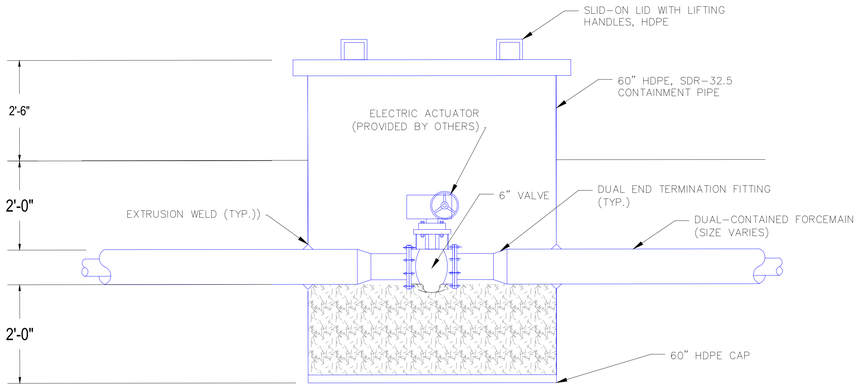
3. CONTRACTOR TO PLACE A MINIMUM OF 10 CU. YD. OF CONCRETE WITH A MINIMUM DENSITY OF 140 LB/CU. FT. AROUND LIFT STATION AND GRIT CHAMBER.

4. CONTRACTOR TO INSTALL 8 HDPE GUSSETS AROUND THE BASE OF THE LIFT STATION.

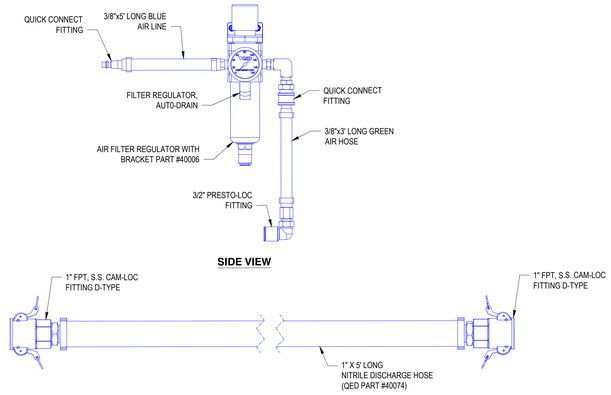
5. ORIGINAL DESIGN FOR LIFT STATION AND GRIT CHAMBER STRUCTURES WAS PROVIDED BY WEAVER BOOS CONSULTANTS FOR A SEPARATE PROJECT FOR THE BRIDGETON LANDFILL. REPUBLIC SERVICES HAS CHOSEN TO REUSE THE STRUCTURE DESIGNS FOR THE SOUTHEAST LIFT STATION PROJECT.

6. EXCAVATION SHALL BE IN ACCORDANCE WITH 29 CFR, STANDARD 1926, SUBPART P - EXCAVATIONS

BRIDGETON LANDFILL, LLC 13570 ST. CHARLES ROCK ROAD BRIDGETON, MISSOURI 63044	BRIDGETON LANDFILL PROPOSED SOUTH SLOPE HEADER SYSTEM PERMIT DRAWINGS	Engineering for a Better World FEEZOR ENGINEERING, INC.	NOVEMBER 2014 APPROVED BY: DRF	DRAWING NO.:
SE LIFT STATION DETAILS # 1				007
PROJECT NUMBER: BT-039	FILE PATH:		REVISION / DATE	



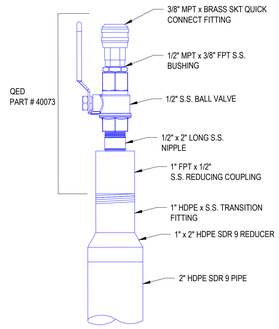
5 | 006 008 ELECTRIC ACTUATED VALVE IN VAULT W/ LID (BURIED)
NTS



8 | 007 008 CONDENSATE SUMP PUMP AIR REGULATOR/DISCHARGE LINE
NTS

NOTES:

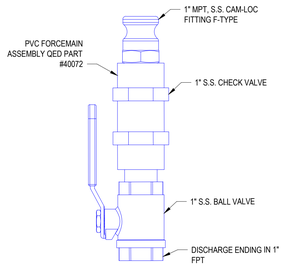
1. DETAIL PROVIDED BY REPUBLIC SERVICES, INC.



9 | 007 008 AIR SUPPLY LINE ASSEMBLY
NTS

NOTES:

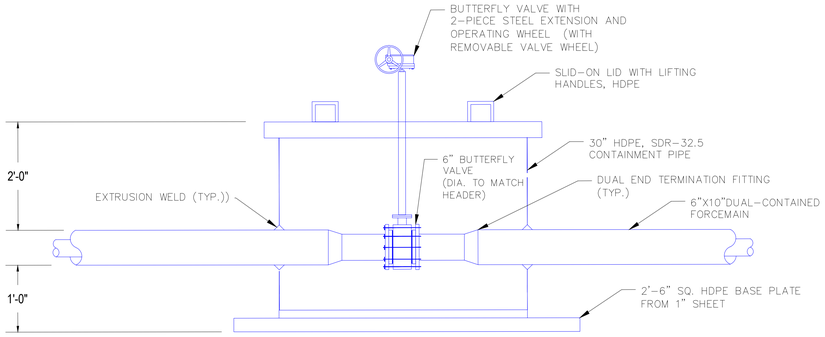
1. DETAIL PROVIDED BY REPUBLIC SERVICES, INC.



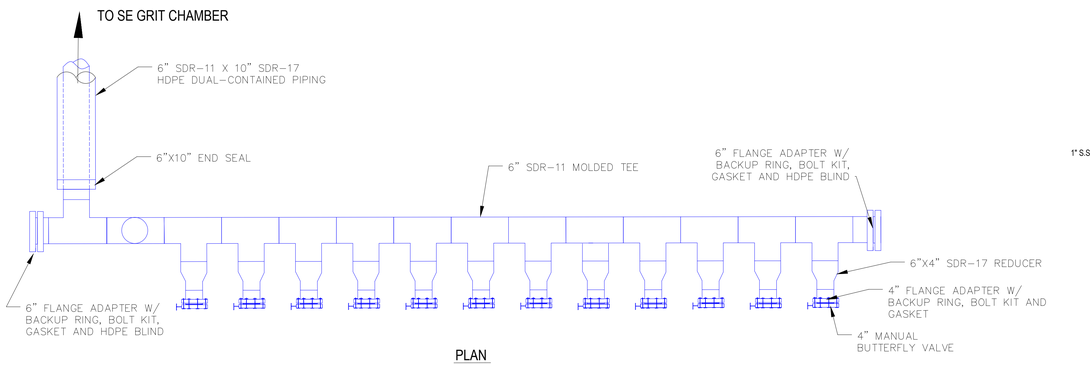
10 | 007 008 PUMP DISCHARGE ASSEMBLY
NTS

NOTES:

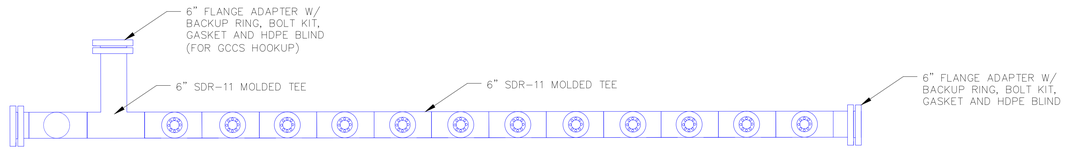
1. DETAIL PROVIDED BY REPUBLIC SERVICES, INC.



6 | 006 008 MANUAL VALVE IN VAULT W/ LID (ABOVE GROUND)
NTS

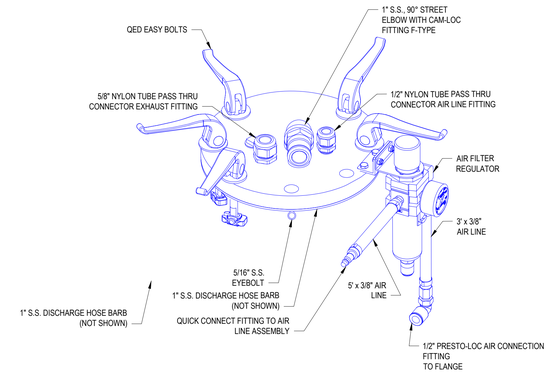


PLAN



PROFILE

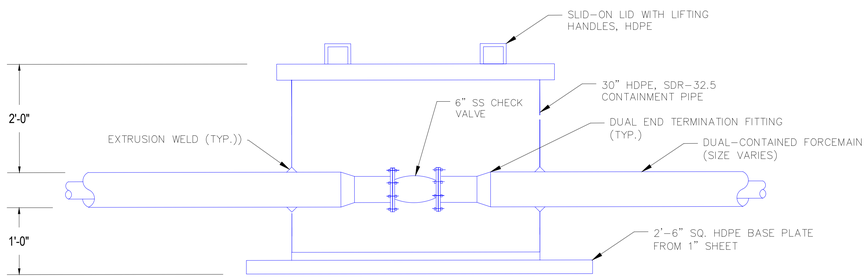
13 | 006 008 6" ARTESIAN MANIFOLD
NTS



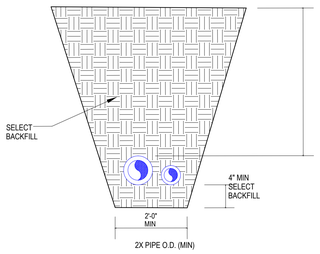
11 | 007 008 FLANGE COMPONENTS
NTS

NOTES:

1. DETAIL PROVIDED BY REPUBLIC SERVICES, INC.

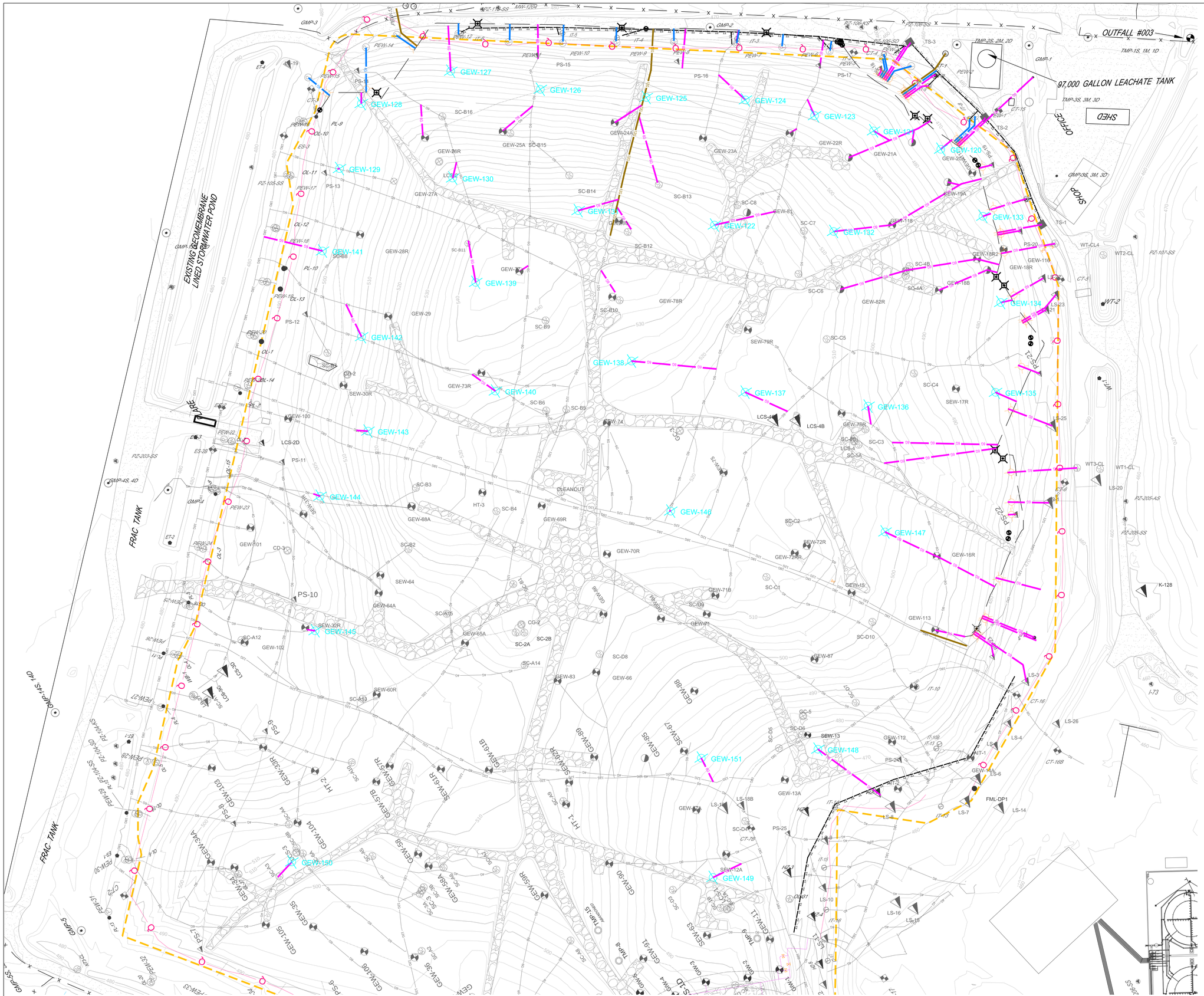


7 | 006 008 CHECK VALVE IN VAULT W/ LID (ABOVE GROUND)
NTS



12 | 006 008 PIPE TRENCH (TYP.)
SCALE: NOT TO SCALE

BRIDGETON LANDFILL, LLC 13570 ST. CHARLES ROCK ROAD BRIDGETON, MISSOURI 63044	BRIDGETON LANDFILL PROPOSED SOUTH SLOPE HEADER SYSTEM PERMIT DRAWINGS	Engineering for a Better World FEEZOR ENGINEERING, INC.	NOVEMBER 2014 DESIGNED BY: AMR APPROVED BY: DRF	DRAWING NO.: 008
SE LIFT STATION DETAILS # 2				
PROJECT NUMBER: BT-039	FILE PATH: C:\Users\Brad Vitz\Desktop\BT-039 (South Slope header Design)\NEW Permit\Drawings\BT-039-PD-008 SE LIFT STATION.dwg		REVISION	DATE



LEGEND

	SOLID WASTE BOUNDARY
490	EXISTING TOPO
GMP-4	GAS MONITORING PROBE
PZ-304AS	PIEZOMETER MONITORING WELL
GEW-38	GAS EXTRACTION WELL
GEW-85	DUAL GAS EXTRACTION WELL
SEW-63	SURFACE EXTRACTION WELL
PEW-20	PERIMETER GAS EXTRACTION WELL
	GRIT CHAMBER
	LIFT STATION
CT-1	CONDENSATE SUMP
LS-1 / LS-6	LEACHATE COLLECTION SUMP
NT-1	HORIZONTAL COLLECTION SUMP
PS-15	PERIMETER SUMP
LCS-2D	LEACHATE COLLECTION SUMP
SC-B1	SURFACE COLLECTOR
TP-9	TEMPERATURE MONITORING PROBE
CG-3	SUBSURFACE RCP WELLS
ET-2	TRENCH SUMP
IT-7	INTERCEPTION TRENCH RISER
PL-7	PERIMETER LEACHATE SUMP
	WELL HEAD RISER
WB-1	WELL BORE BOOT
TS-1	TRENCH SUMP
OL-17	OVER LINER TIE IN POINT
GW-4	GAS INTERCEPTOR WELL
	CLEAN OUT
	2' CONTOUR
470	10' CONTOUR
Q Q	QUARRY WALL
	PERMIT BOUNDARY
6GU 6GU 6GU 6GU	BURIED LFG COLLECTION PIPING
2G 2G 2G 2G 2G	2" ABOVE GROUND LFG COLLECTION LATERAL PIPING
4G 4G 4G	4" ABOVE GROUND LFG COLLECTION LATERAL PIPING
6G 6G 6G	6" ABOVE GROUND LFG COLLECTION LATERAL PIPING
8G 8G 8G	8" ABOVE GROUND LFG COLLECTION LATERAL PIPING
6G 6G 6G	6" ABOVE GROUND LFG COLLECTION HEADER PIPING
8G 8G 8G	8" ABOVE GROUND LFG COLLECTION HEADER PIPING
	10" STEEL GROUND LFG COLLECTION PIPING
12G 12G	12" ABOVE GROUND LFG COLLECTION HEADER PIPING
18G 18G	18" ABOVE GROUND LFG COLLECTION HEADER PIPING
	PROPOSED PERIMETER HEADER
12G 12G	PROPOSED 12" HEADER
6G 6G 6G	PROPOSED 6" LATERAL
4G 4G 4G	PROPOSED PEW 4" LATERAL
GEW-127	PROPOSED GAS EXTRACTION WELL

BRIDGETON LANDFILL, LLC
13570 ST. CHARLES ROCK ROAD
BRIDGETON, MISSOURI 63044

BRIDGETON LANDFILL
PROPOSED SOUTH SLOPE
HEADER SYSTEM
PERMIT DRAWINGS

Engineering for a Better World
FEEZOR ENGINEERING, INC.

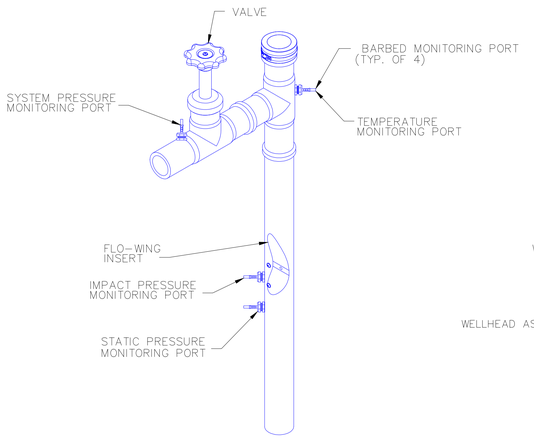
NOVEMBER 2014
DESIGNED BY: BJV
APPROVED BY: DRF
BJV 12/01/2014

DRAWING NO.: 009

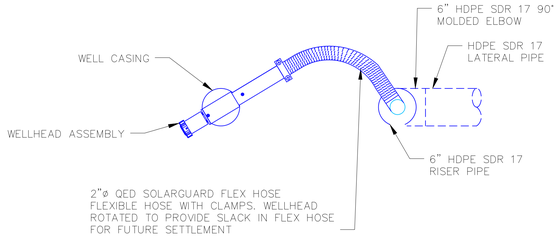
GAS WELL INSTALLATION - PLAN

PROJECT NUMBER: BT-039 | FILE PATH:

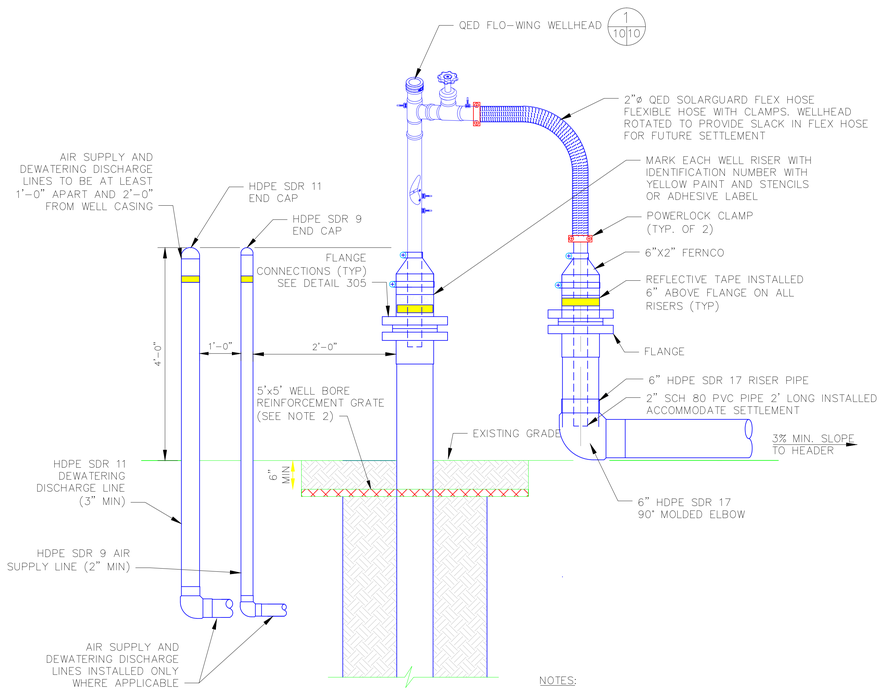
REVISION. | DATE.



FLO-WING WELLHEAD 1 / 10|10
NOT TO SCALE



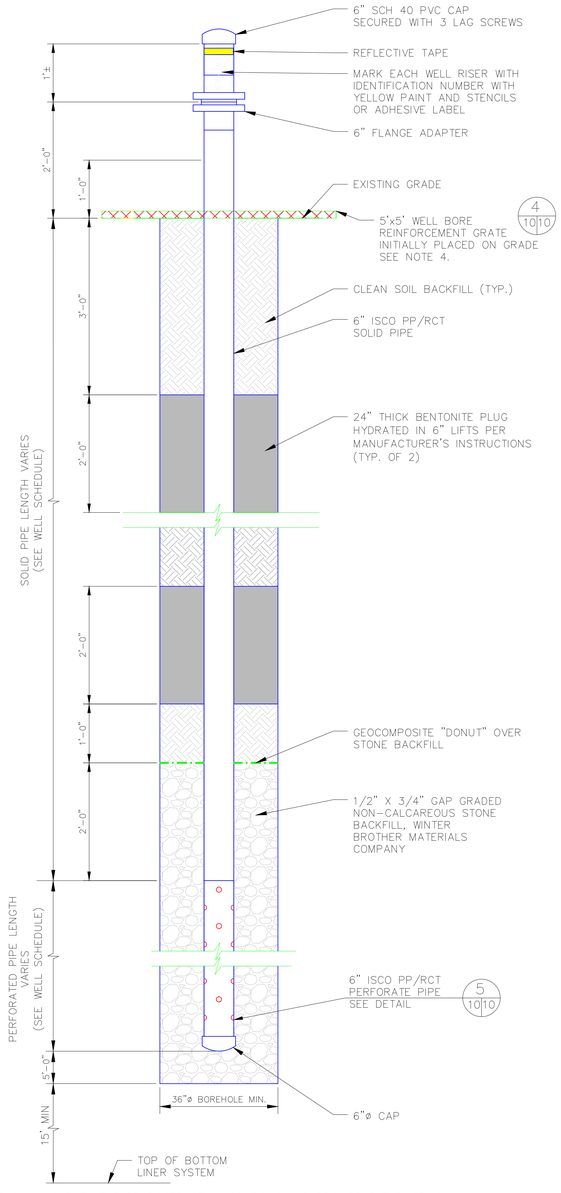
PLAN VIEW



WELLHEAD DETAIL 2 / 10|10
NOT TO SCALE

NOTES:

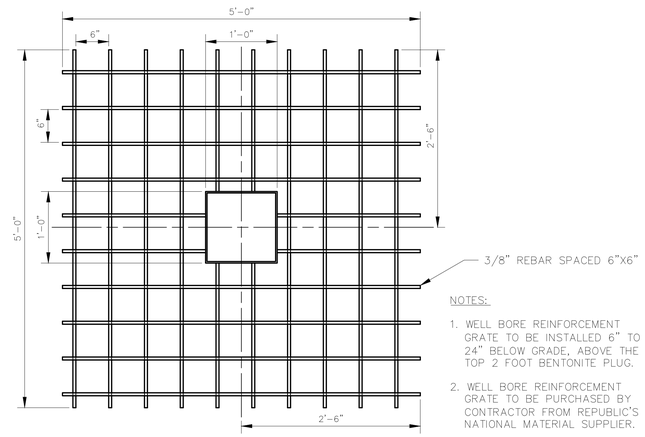
1. CONTRACTOR TO SUPPLY FULL ORIFICE PLATE PACKAGE FOR WELLHEAD AND DOCUMENT SIZE INSTALLED WITH ENVIRONMENTAL MANAGER AND TECHNICIAN.
2. WHILE INSTALLING LATERAL RISER, EXCAVATE AROUND WELL CASING AND LOWER WELL BORE REINFORCEMENT GRATE.
3. CQA INSPECTOR SHALL DOCUMENT FINAL DEPTH OF WELL BORE REINFORCEMENT GRATE FOR EACH WELL.



NOTES:

1. CONTRACTOR SHALL SURVEY THE PROPOSED WELL LOCATIONS AND PROVIDE THE EXISTING GROUND SURFACE ELEVATION AT EACH LOCATION TO THE ENGINEER PRIOR TO THE COMMENCEMENT OF WELL DRILLING.
2. ENGINEER SHALL ADJUST WELL SCHEDULE AS NECESSARY BASED ON THE PRE-CONSTRUCTION SURVEY.
3. ALL SIGNATURES REQUIRED ON THE FINAL WELL SCHEDULE PRIOR TO COMMENCEMENT OF DRILLING.
4. WELL BORE REINFORCEMENT GRATE SHALL BE 100% WELDED AND CONFIGURED WITH 3/8" REBAR WITH 6"X6" SPACING. GRATE SHALL HAVE A 12"X12" SQUARE CENTER SPACED CUTOUT FOR WELL CASING. WELL BORE GRATE SHALL BE PURCHASED FROM REPUBLIC'S NATIONAL MATERIAL SUPPLIER ONLY.
5. INSTALL WELL BORE REINFORCEMENT GRATE ON GRADE AROUND WELL IMMEDIATELY AFTER COMPLETING WELL. DURING INSTALLATION OF LATERAL RISER, GRATE SHALL BE BURIED.
6. THE GAS WELL DEPTH, MATERIAL OF CONSTRUCTION, PERFORATION PATTERN AND BACKFILL MATERIAL WERE SPECIFIED BY REPUBLIC SERVICES, INC.

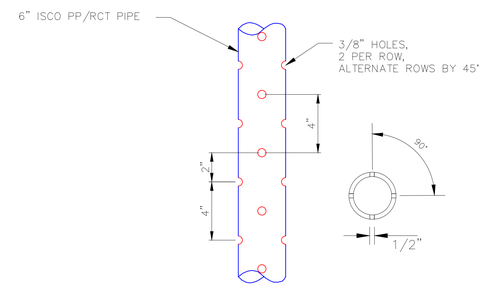
LFG EXTRACTION WELL DETAIL 3 / 9|10
NOT TO SCALE



NOTES:

1. WELL BORE REINFORCEMENT GRATE TO BE INSTALLED 6" TO 24" BELOW GRADE, ABOVE THE TOP 2 FOOT BENTONITE PLUG.
2. WELL BORE REINFORCEMENT GRATE TO BE PURCHASED BY CONTRACTOR FROM REPUBLIC'S NATIONAL MATERIAL SUPPLIER.

WELL BORE REINFORCEMENT GRATE 4 / 10|10
NOT TO SCALE



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.
4. THE MATERIAL OF CONSTRUCTION AND PERFORATION PATTERN WERE SPECIFIED BY REPUBLICS SERVICES, INC.

PERFORATED PIPE DETAIL 5 / 10|10
NOT TO SCALE

WELL SCHEDULE

WELL ID	Northing	Easting	November 30, 2014 Survey	Bottom of Boring	Quarry Bottom 1979 Topo	Db Boring Depth	Solid Pipe Above Grade	Solid Pipe Below Grade	Dp Perforated Pipe (5' from bottom of well)	Thickness of Gravel Pack
			(Feet MSL)	(Feet MSL)	(Feet MSL)	(Feet)	(Feet)	(Feet)	(Feet)	(Feet)
GEW-120	1,066,915.4	515,415.4	470.3	385.3	320.0	85	3	20	60	67
GEW-121	1,066,843.8	515,479.6	479.6	394.6	351.5	85	3	20	60	67
GEW-122	1,066,834.3	515,735.2	513.2	413.2	270.0	100	3	20	75	82
GEW-123	1,066,782.0	515,537.0	485.6	400.6	307.6	85	3	20	60	67
GEW-124	1,066,711.9	515,605.6	487.4	402.4	296.5	85	3	20	60	67
GEW-125	1,066,634.9	515,719.1	492.8	434.5	429.5	58	3	20	33	40
GEW-126	1,066,546.2	515,836.2	494.0	427.8	422.8	66	3	20	41	48
GEW-127	1,066,458.2	515,926.9	489.9	450.9	445.9	39	3	20	14	21
GEW-128	1,066,428.9	516,055.0	495.7	447.9	442.9	48	3	20	23	30
GEW-129	1,066,488.2	516,129.0	497.6	412.6	396.8	85	3	20	60	67
GEW-130	1,066,583.9	516,004.4	521.7	421.7	250.0	100	3	20	75	82
GEW-131	1,066,715.6	515,882.8	520.5	420.5	251.3	100	3	20	75	82
GEW-132	1,066,930.9	515,601.4	496.8	396.8	269.7	100	3	20	75	82
GEW-133	1,067,024.9	515,416.5	469.3	384.3	327.3	85	3	20	60	67
GEW-134	1,067,138.5	515,460.2	474.3	389.3	344.0	85	3	20	60	67
GEW-135	1,067,239.0	515,533.4	478.3	393.3	360.0	85	3	20	60	67
GEW-136	1,067,159.7	515,692.0	496.6	396.6	256.5	100	3	20	75	82
GEW-137	1,067,051.5	515,824.5	508.5	408.5	250.0	100	3	20	75	82
GEW-138	1,066,930.4	515,933.4	513.3	413.3	250.0	100	3	20	75	82
GEW-139	1,066,722.4	516,055.7	532.1	432.1	250.0	100	3	20	75	82
GEW-140	1,066,863.5	516,114.1	515.9	415.9	250.0	100	3	20	75	82
GEW-141	1,066,571.3	516,210.4	497.6	419.4	414.4	78	3	20	53	60
GEW-142	1,066,700.2	516,229.1	504.7	404.7	250.0	100	3	20	75	82
GEW-143	1,066,814.7	516,292.2	505.0	405.0	250.0	100	3	20	75	82
GEW-144	1,066,854.7	516,396.7	497.4	397.4	250.0	100	3	20	75	82
GEW-145	1,067,007.4	516,502.9	489.1	389.1	250.0	100	3	20	75	82
GEW-146	1,067,134.2	516,000.0	513.9	413.9	250.0	100	3	20	75	82
GEW-147	1,067,318.7	515,766.3	491.7	391.7	270.4	100	3	20	75	82
GEW-148	1,067,521.1	516,006.8	471.4	371.4	338.6	100	3	20	75	82
GEW-149	1,067,591.8	516,224.7	479.3	379.3	279.2	100	3	20	75	82
GEW-150	1,067,258.7	516,702.8	501.3	401.3	258.0	100	3	20	75	82
GEW-151	1,067,444.2	516,149.1	485.5	385.5	300.7	100	3	20	75	82

NOTES:

1. "Quarry Bottom" elevation taken from 1979 topography provided by Aquaterra.
2. Boring depths determined by Republic Services, inc. personnel.

BRIDGETON LANDFILL, LLC
13570 ST. CHARLES ROCK ROAD
BRIDGETON, MISSOURI 63044

BRIDGETON LANDFILL
PROPOSED SOUTH SLOPE
HEADER SYSTEM
PERMIT DRAWINGS

Engineering for a Better World
FEEZOR ENGINEERING, INC.

GAS WELL DETAILS

NOVEMBER 2014	
DESIGNED BY: AR/BV	
APPROVED BY: DRF	
BJV	12/01/2014
BJV	12/02/2014
REVISION	DATE

DRAWING NO.: 010

PROJECT NUMBER: BT-039 | FILE PATH: