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Department of Environmental Protection

Bob Martinez Center
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

DEP Form # 62-701.900(2)
Form Title Certification of Construction Completion of a Solid Waste Management Facility
Effective Date May 19, 1994

Certification of Construction Completion of a Solid Waste Management Facility

DEP Construction Permit No: SC49-0199726-017 County: Osceola

Name of Project: Landfill Gas Collection and Control Systems (GCCS) LFGTE Conveyance Pipeline

Name of Owner: Omni Waste of Osceola County, LLC

Name of Engineer: Brantley Engineering, LLC

Type of Project: Construction of a HDPE Gas Collection Conveyance Pipeline to Transfer LFG from the Disposal Cells to the LFG Energy Facility

Cost: Estimate $ 1,000,000 Actual $ 1,156,865

Site Design Quantity: NA ton/day Site Acreage: NA Acres

Deviations from Plans and Application Approved by DEP (attach additional pages as needed):

Detail 6 on Sheet 4 was revised to include a 24" valve instead of an 18" valve.

Detail 3 on Sheet 5 was revised to include only one 12" vertical cleanout.

Detail 2 on Sheet 6 was revised to include a 24" valve instead of a 28" valve.

Sheet 3A does not show and additional 24" condensate sump installed near station 3+00.

Address and Telephone No. of Site: 1501 Omni Way, St. Cloud, Florida 34773
Tel: (407) 981-3720

Name(s) of Site Supervisor: John Hartings, (407) 818-6358

Date Site inspection is requested: As soon as possible

This is to certify that, with the exception of any deviation noted above, the construction of the project has been completed in substantial accordance with the plans authorized by Construction

Permit No.: SC-49-0199726-017 Dated: 4/8/2013

Date: 11/9/15

ALLAN S. BRANTLEY LICENSE No 68030 STATE OF FLORIDA PROFESSIONAL ENGINEER A513 11-9-15

Signature of Professional Engineer

Northwest District
160 Governmental Center
Pensacola, FL 32501-5794
850-595-8360

Northeast District
7825 Baymeadows Way, Ste. B200
Jacksonville, FL 32256-7590
904-448-4300

Central District
3319 Maguire Blvd., Ste. 232
Orlando, FL 32803-3767
407-894-7555

Southwest District
3804 Coconut Palm Dr.
Tampa, FL 33619
813-744-6100

South District
2295 Victoria Ave., Ste. 364
Fort Myers, FL 33901-3881
941-332-6975

Southeast District
400 North Congress Ave.
West Palm Beach, FL 33401
561-681-6600

BRANTLEY
ENGINEERING, LLC

November 9, 2015

Mr. F. Thomas Lubozynski, P.E.
Solid Waste and Air Resource Programs Manager
Florida Department of Environmental Protection (FDEP), Central District
3319 Maguire Blvd., Suite 232
Orlando, Florida 32803-3767

Subject: **Notice of Construction Completion**
Landfill Gas Collection and Control
System (GCCS) - LFGTE Conveyance
Pipeline Construction
JED Solid Waste Management Facility
St. Cloud, Osceola County, Florida
FDEP Permit No. SC-49-0199726-017
Operational Permit No. SO-49-0199726-022

Dear Mr. Lubozynski:

Brantley Engineering, LLC is writing to provide documentation and certification for the completion of the Landfill Gas Collection and Control Systems (GCCS) LFGTE Conveyance Pipeline Construction project for the JED Solid Waste Management Facility (facility) located in Osceola County, Florida. This includes the piping network from the new blower skid equipment located at the LFG to Energy (LFGTE) facility to the interior header connection at the Cell 10 disposal area.

Please find attached the following documents:

- Construction Drawings as prepared by Golder Associates, dated January 2015.
- FDEP form #62-701.900(2) titled *Certification of Construction Completion of a Solid Waste Management Facility,* duly completed and signed.
- Asbuilt Survey of the 36" HDPE Gas Transmission Line as prepared by Peavey & Associates, dated 8/13/15 titled, "As-built Gas Collection & Control System (GCCS) LFGTE Conveyance Pipeline and Berm Construction".
- Asbuilt Survey of the 28" HDPE Gas Transmission Line as prepared by Peavey & Associates, dated 9/23/15 titled, "As-built Gas Collection & Control System (GCCS) LFGTE Conveyance 28" Pipeline Construction".

Below is a summary of construction activities and construction quality assurance activities associated with this certification report.

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Milton, Georgia 30004
Phone: 678-427-2533
Fax: 415-598-2533
abrantley@brantleyeng.com

INTRODUCTION

This certification report summarizes the Construction Quality Assurance (CQA) activities performed by Brantley Engineering, LLC during construction of the GCCS LFGTE Conveyance Pipeline Construction Project at the facility, a Class I landfill, located in Osceola County, Florida. The facility is owned by Omni Waste of Osceola County, LLC (Omni), a Progressive Waste Solutions Company (PWS). The CQA activities performed by Brantley included monitoring of:

- HDPE pipe fusion welding activities;
- pipe trench and backfill operations;
- pressure testing of the 36" HDPE piping network;
- And jet cleaning of the 36" HDPE piping network.

The CQA activities were performed to confirm that the construction materials and procedures were in compliance with Solid Waste Permit to Construct No. SC49-0199726-017-SC-MM issued by Florida Department of Environmental Protection (FDEP), Central District and in accordance with Chapter 62-701, Solid Waste Management Facilities, Florida Administrative Code (FAC).

The GCCS LFGTE Conveyance Pipeline Construction Project was constructed in accordance with the above-mentioned permit and associated permit drawings. This certification report was prepared for Michael Kaiser, Regional Engineer of PWS. The report was prepared by Allan Brantley, PE, and reviewed by Sam Nejad, PE, both of Brantley Engineering, LLC.

PROJECT DESCRIPTION

Site Location

The JED facility is located in eastern Osceola County, Florida, west of highway U.S. 441, approximately 6.5 miles south of Holopaw. The landfill facility is connected to highway U.S. 441 by a 2.86-mile paved access road, which was constructed as part of the overall project site development. The JED facility site comprises a total of approximately 2,179 acres.

General

The scope of CQA monitoring, testing, and documentation services performed by Brantley during the construction of the GCCS Conveyance Pipeline at the JED facility included review of documents, field CQA operations, and preparation of this final certification report which includes record asbuilt drawings for the GCCS Conveyance Pipeline.

Brantley provided the CQA monitoring, testing, and documentation for this project. Golder Associates provided the original design and construction drawings. Major personnel or representatives of the firms involved in the project are as follows:

Owner:	Omni Waste of Osceola County, LLC
	Mike Kaiser, Regional Engineer
	John Hartings, Landfill Manager

CQA Consultant:	Brantley Engineering, LLC.
	Allan Brantley, PE, Engineer of Record/CQA Project Manager
	Kevin Lesley, CQA Site Manager
Earthwork Contractor:	RCS Excavation, Inc., Lake Placid, FL
	A.J. Smith, Project Manager
	Mike Rowley, Site Superintendent
HDPE Pipe Installer:	Ryan Services, Inc. (RSI), Okeechobee, FL
	Ryan Casperson, Project Manager
Surveyor:	Peavey Surveying, Fort Meade, FL
	Deborah L. Peavey, PSM
Geotechnical Laboratories:	Excel Geotechnical Testing, Roswell, GA
	Nader Rad, Ph.D., P.E., Project Manager

Pipe welding and earthwork activities associated with the Landfill Gas Collection and Control Systems (GCCS) LFGTE Conveyance Pipeline Construction Project commenced on April 9, 2015 and was substantially completed on September 23, 2015.

During construction, minor deviations to the construction drawings were made and are listed below.

- Detail 6 on Sheet 4 was revised to include a 24" valve instead of an 18" valve.
- Detail 3 on Sheet 5 was revised to include only one 12" vertical cleanout.
- Detail 2 on Sheet 6 was revised to include a 24" valve instead of a 28" valve.
- Sheet 3A does not show an additional 24" condensate sump installed near station 3+00.

HDPE Pipe Installation

RSI began pipe welding operations for the 36" HDPE pipe on April 9, 2015. Approximately 2,555 LF of 36" HDPE pipe was welded into separate 350' sections. RSI began trenching activities for the 36" HDPE pipe on May 11, 2015, while installation and backfill of the pipe and sumps continued through June 3, 2015. This piping network begins at the LFGTE facility at a 36" Tee that ties into the blower equipment. Directly upstream of this tee is an in-line condensate sump servicing the LFGTE facility area (See Detail 1 on Sheet 6). From this sump, the 36" HDPE pipe continues below ground and then wyes up and above grade across the existing perimeter dry retention basin. This portion of the 36" HDPE pipe that crosses the basin is supported by a 10'x100' aluminum bridge with six wood support columns. Once the pipe crosses the bridge, it then wyes back below grade and transverses the alignment of the disposal boundary berm constructed in 2010 during expansion of the stormwater management system and relocation of the leachate holding ponds. Near the west side of the support structure a 12" cleanout is stubbed up with a blind flange at a high point (See Detail 3 on Sheet 5 and note deviation above).

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Approximately 730 LF from this high point along the berm is a low point where a condensate sump is located (See Detail 1 on Sheet 4). Continuing on approximately 600 LF along the berm is a 36" stubout and blind flange for future tie-in (See Detail 5 on Sheet 4). Continuing on approximately 200 LF from this stubout is a highpoint and another 12" cleanout. Continuing on approximately 740 LF from this cleanout is another 36" stubout and blind flange for future tie-in. Continuing on approximately 60 LF from this stubout is the inline condensate sump which reduces down to a 28" HDPE pipe on the upstream side. A 28" valve is also located at this location. A minimum required slope of 0.75 percent was maintained throughout the 36" pipe network. In addition to the 36" HDPE pipe installation, a 2" HDPE air supply line and 4" HDPE forcemain line was installed in the pipe trench adjacent to the 36" HDPE header pipe. This air line is required to operate the pneumatic pumps located in the condensate sumps as the forcemain is required is convey the condensate back to the leachate ponds near the LFGTE facility.

RSI began pipe welding operations for the 28" HDPE pipe on September 1, 2015. Approximately 1,678 LF of 28" HDPE pipe was welded into separate 400' sections and approximately 253 LF of 18" HDPE pipe was welded for the road crossing and connection to the gas collection system at Cell 10. The 28" HDPE pipe begins at the above mentioned inline condensate sump where a 24" valve is located. Only a small portion of the 28" HDPE pipe was trenched in from the condensate sump down along the perimeter berm slope towards Cell 11. A minimum required slope of 0.75 percent was maintained in this section of pipe. Towards the end of this run, the slope was increased to approximately 10 percent to allow the pipe to daylight out of the ground. At this location, the 28" HDPE pipe remains above grade at a minimum slope of 0.50 percent where it continues up towards Cell 10. This section of pipe above grade is held in place by 12" diameter, 10-foot long, wooden poles staked into the ground downslope of the pipe approximately every 15 LF. Approximately 730 LF from the tie in to the condensate sump is a 24" stubout, a 24" valve, and blind flange for future tie-in (See Detail 6 on Sheet 4 and note deviation above). Just upstream of the future tie-in is a 24" valve (See Detail 2 on Sheet 6 and note deviation above). Continuing on approximately 980 LF from this valve is a 24" condensate sump. This sump was not originally designed, but was required in the field due to a low point (Note deviation above). Due to the installation of this condensate sump, a 2" HDPE air supply line and 4" HDPE forcemain line were installed adjacent to the 28" HDPE header pipe and tie in to the air and forcemain installed for the 36" pipe network. At the end of the run near Cell 10, the 28" HDPE pipe is then reduced down to an 18" HDPE pipe where it turns forty-five degrees towards Cell 10 and is trenched in below the perimeter access road while maintaining a minimum slope of 2.5 percent. On the Cell 10 side of the road, the 18" HDPE pipe daylights out of the ground and continues up the slope approximately 120 LF where it ties into the existing interior header just downslope of an existing 18" valve. An existing 18" valve and blind flange stubout is also located on the opposite end of the tie-in for future extension of the 18" interior header towards Cell 11 (See Detail 2 on Sheet 4).

Pipe Testing

The 36" HDPE pipe network was pressure tested to detect any leaks or defective pipe joints. The hydrostatic pressure test was conducted on the 4" HDPE forcemain line. This was performed by filling the pipes with water and pressurizing it. The hydrostatic pressure of 130 psi was maintained for at least 1 hour after an initial 3 hour expansion period. No drop in the hydrostatic pressure was observed during the 1 hour period. The water used to hydrostatically test the pipe was then discharged out to the low point condensate sumps to aid in flushing and cleaning. The pneumatic pressure test was conducted on the 2" HDPE air line and the 36" HDPE pipe and associated sumps. For the 2" HDPE air line, this was performed by sealing each network and pressurized to 10 psi. The pneumatic pressure of 10 psi was maintained for at least 2 hours after an initial equalization period of 30 minutes. For the 36" HDPE pipe and sumps, the systems were sealed and pressurized to 5 psi. The pneumatic pressure of 5 psi was maintained for at lest 2 hours after

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an initial equalization period of 30 minutes. CQA personnel were present during these tests to verify testing parameters and results. Since the 28" HDPE pipe network is above grade, no pressure testing was required since any leak would be visually identified.

Pipe Cleaning

The 36" HDPE pipes were water pressure jet cleaned by FECC, Inc. of Orlando, Florida. This was performed by installing a pressurized water jet nozzle and hose into the pipe network on one end as the water jet nozzle propels itself through the system to the other end. The water used to clean the system ultimately drained to the condensate sumps (low points) along with any unwanted debris and was ultimately removed by vacuum truck. CQA personnel were present during these cleaning operations.

HDPE Pipe and Sumps

All 36", 28", and 18" pipes used in the GCCS LFGTE Conveyance Pipeline Construction Project were SDR 21 HDPE pipes. The pre-fabricated fittings were SDR 17 HDPE. The 2" air line was SDR 9 HDPE and the 4" forcemain was SDR 11 HDPE. The condensate sumps were pre-fabricated offsite constructed using SDR 11 HDPE pipe and flat stock. The stubouts on the sumps was SDR 17 HDPE. The MQC certificates for the HDPE pipes were reviewed by the CQA personnel and were found to be in compliance with the requirements of the CQA Documents.

HDPE pipe sections were joined using butt-fusion welding techniques. CQA personnel monitored the butt-fusion welding techniques to ensure that industry-accepted procedures were used during construction. Fusion joints were inspected for evidence of excess or insufficient bead size, contamination, offset, or any other evidence of inadequate joining. CQA personnel also verified the diameter of the different pipes used in this system and monitored the cleaning of all pipes just prior to welding and installation and after placement of pipes.

The areas around the 36" pipes and condensate sumps were compacted and tested to ensure conformance to the required compaction criteria of 95% maximum dry density by ASTM-D698. Backfill was placed in 8 to 12- inch horizontal lifts. All tests met the required compaction criteria of 95% maximum dry density by ASTM-D698. In addition, corresponding drive cylinders (ASTM-D2937) were taken at a minimum frequency of 1 test per 25 nuclear density tests. The test results for this compaction were included with submission of the Environmental Resource Permit (ERP) for the GCCS LFGTE Conveyance Pipeline Construction project as submitted by Kimley-Horn. Since the 28" HDPE pipe was place above grade, no testing was required.

Prior to installation of the condensate sumps, well points were placed to help dewater the surrounding area. The sumps were placed on a 6" thick #57 stone bedding. Once set in place, concrete was placed around the base for anti-flotation.

SUMMARY AND CERTIFICATION

Based on our monitoring of the construction and installation activities involved with this project and the field and laboratory testing conducted throughout the project, it is our professional opinion that the on and Control Systems (GCCS) LFGTE Conveyance Pipeline Construction project was performed in general accordance to the project requirements and according to the design drawings and technical specifications. In addition, photographs of key activities throughout the project have been provided in the attached Photographic Log. Daily field monitoring reports documenting construction and installation activities are also included.

On behalf of Omni Waste of Osceola County, LLC (Omni), Brantley Engineering, LLC is requesting that a site inspection for construction completion be scheduled at your earliest convenience. Please contact Mr. Mike Kaiser to schedule a date and time for the inspection.

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abrantley@brantleyeng.com

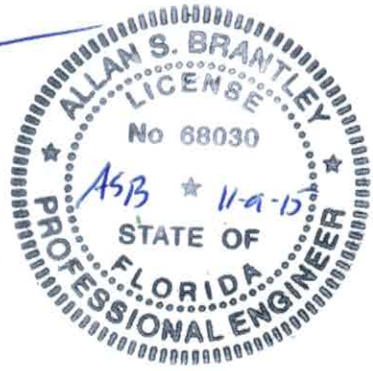
If you have any questions or need additional information regarding this certification, please contact me at (678)-427-2533 or Mike Kaiser with PWS at (904)-673-0446.

Sincerely,
Brantley Engineering, LLC

Allan S. Brantley, Florida PE#68030
President

Cc: Mike Kaiser – PWI

Attachments



BRANTLEY ENGINEERING, LLC
A Woman-Owned Small Business

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Photographs

Butt Fusion Welding of 36” HDPE Pipe

Butt Fusion Welding of 36” HDPE Pipe

Excavation of Trench for 36” Pipe Placement

Survey of Slope for Pipe Placement

Placement of 36” HDPE Pipe in Trench

Placement of 36” HDPE Pipe in Trench

Backfill Around 36” HDPE Pipe

Compaction Around 36” HDPE Pipe with Jumping Jack Compactor

Compaction Around 36” HDPE Pipe with Vibratory Whacker Packer

“T” Tie-in to LFGTE Blower Station

Aluminum Bridge at Retention Basin Crossing

Aluminum Bridge at Completion and Compaction of Finished Grade

Well Point to Dewater in Condensate Sump Locations

Pre-fabricated Condensate Sumps

Placement of 36” Condensate Sump

Placement of Concrete for Anti-Flotation

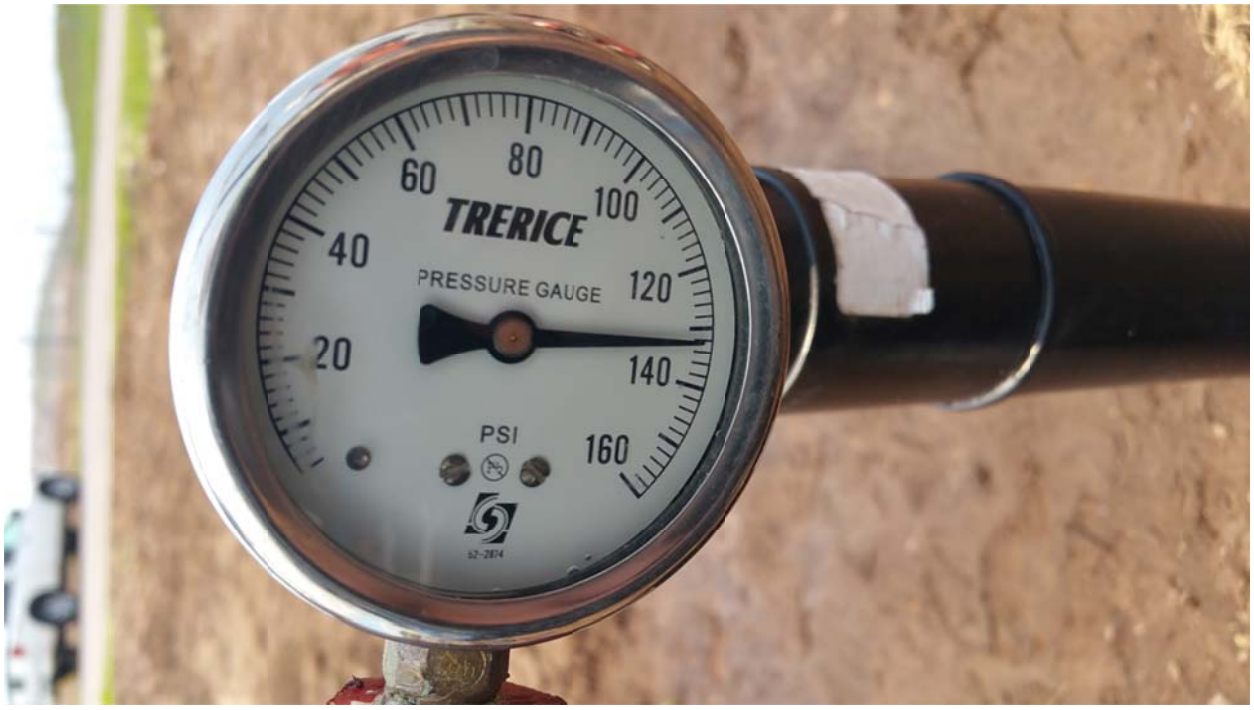
Connection of 36” HDPE Pipe to Condensate Sump

Completed Condensate Sump with Air and Forcemin

Wooden Pipe Support for 28” HDPE Pipe On Backside of Perimeter Berm

Pneumatic Pressure Test of 36” Pipe Network (Note Pneumatic Pressure test of Air Line to Far Right)

Pneumatic Pressure Test of Air Line (Maintain 10 psi)



Hydrostatic Pressure Test of 4” HDPE Forcemain (Maintain 130 psi)

Release of Hydrostatic Pressure in 4”HDPE Forcemain

Water Pressure Jet Cleaning of HDPE Pipe Network

Spray Nozzle of Water Pressure Jet Cleaning

28” HDPE Pile Support on Slope

28” HDPE Condensate Sump

Perimeter Road Crossing of 18” HDPE

18” HDPE Up the Slope to Tie In to Existing Header

18” HDPE Tie In To Existing Header

Brantley Engineering, LLC

CQA Daily Field Monitoring Summary

Project Number: 2015-101	Owner: Omni Waste of Osceola County, LLC
Report Number: 1	Contractor: RCS Excavation
Project Name: LFGTE Conveyance Pipeline	Installer: RSI
Location: St. Cloud, Florida	Date: 8/13/15 Thr.

Weather Description

Sky Cover:	Partly Cloudy	Amt. of Precip:	.5"	Wind:	5-10	(mph)
Temp: Low (F):	70 at 7:00	a.m.		High (F)	92 at 3:00	p.m.

CQA's On Site: Kevin Lesley

Major Construction Equipment: 1 - 329 Cat Excavator, 1 - Cat Mini-Excavator, 1 - 544K Deere Front End Loader, 1 - McElroy Fusion Machine

Contractor(s) Construction Progress:

RCS is on site with small crew placing caution tape around air line and forcemain and 14"gas line trench at energy plant before backfill and compaction procedures begin. Crew is using walk behind jumping jack compactor for compaction of lifts during backfill. RCS dug trench with shovels from air tank at Northeast corner of building towards the Northwest for condensation drain pipe. RSI followed behind placing the condensate pipe in the trench while verifying the slope utilizing a laser level. Peavey & RCS took GPS shots today of several areas of pipe work including 14" gas pipe. Materials were delivered on flatbed truck including 2 sections of 30" manifolds with six (6) 12" flanges prewelded in place. RSI has also been fusing 30" pipe to 45° elbows for transition from 30" pipe to blower pad. Crew cut out @ 2:45 pm due to excessive heavy rain.

CQA (s) Monitoring Activities and Test Results:

Monitored and observed placement and backfill of pipes. Monitored pipe fusion and removal of pipe shavings and any unwanted debris in the system.

CQA Specialist: Kevin Lesley

Brantley Engineering, LLC

CQA Daily Field Monitoring Summary

Project Number: 2015-101	Owner: Omni Waste of Osceola County, LLC
Report Number: 2	Contractor: RCS Excavation
Project Name: LFGTE Conveyance Pipeline	Installer: RSI
Location: St. Cloud, Florida	Date: 8/14/15 Fri.

Weather Description

Sky Cover:	Partly Cloudy	Amt. of Precip:	0"	Wind:	5-10	(mph)
Temp: Low (F):	72 at 7:00	a.m.		High (F)	94 at 3:00	p.m.

CQA's On Site: Kevin Lesley

Major Construction Equipment: 1 - 329 Cat Excavator, 1 - Cat Mini-Excavator, 1 - 544K Deere Front End Loader, 1 - McElroy Fusion Machine

Contractor(s) Construction Progress:

RSI began excavating at 14" pipe where 8" T steps down to 6" elbow using Mini-Excavator and man on the ground with shovels to expose stub out for run from 14" pipe to 12" CS3 sump. RSI set up laser level for trench work. Riley Group was on site to raise lid on holding tank next to filtration tanks. Riley group was unable to install lid extension next to filtration tanks at this time due to site conditions.
RSI fused 8" inline valve to section of 6" SDR 17 pipe with 12" sump as per Plans.
CS3 Sump, Valve & 6" SDR 17 line has been placed and fused to existing 14" pipe which runs horizontal with filtration tanks. Peavy back on site today shooting GCCS Berm and has shot today's section of installed 6"pipe and 12" sump. RSI with help from RCS crew continued trench excavation for 2" condensation drain lines from Energy Plant to the 36" CS3 Condensate Sump. Trench has been excavated to just outside of proposed fence. 2"pipe has been placed in trench and stubbed out @ Tie in points off of Energy Plant.
Concrete truck brought and placed 2 yards of material for base of 12" CS3 Condensate Sump. Trench to sump from 14" line has been backfilled and compacted in lifts. RSI has fused together 3 40'

CQA (s) Monitoring Activities and Test Results:

Monitored and observed excavation and placement of pipes. Monitored pipe fusion and removal of pipe shavings and any unwanted debris in the system.

CQA Specialist: Kevin Lesley

Brantley Engineering, LLC

CQA Daily Field Monitoring Summary

Project Number: 2015-101	Owner: Omni Waste of Osceola County, LLC
Report Number: 1	Contractor: RCS Excavation
Project Name: LFGTE Conveyance Pipeline	Installer: RSI
Location: St. Cloud, Florida	Date: 9/9/15 Wed.

Weather Description

Sky Cover:	Partly Cloudy	Amt. of Precip:	0"	Wind:	5-10	(mph)
Temp: Low (F):	80 at 7:00	a.m.		High (F)	92 at 3:00	p.m.

CQA's On Site: Kevin Lesley

Major Construction Equipment: (RSI) 1 - Kobelco 350 Excavator, 2 - McElroy Fusion Machines: (RCS) 1 - Mini-Excavator, 1 - 330-Excavator, 1 - Lull Forklift.

Contractor(s) Construction Progress:

RCS is on site to begin installing the 28" SDR21 gas pipe from CS1 up towards the existing landfill for gas system tie in. RSI welded reducer from 36"-28" then 28"-24" which RCS bolted to the west end of CS1 before installing the 24" valve inline West of CS1.
After lunch RSI used a tripod laser level and measure wheel to determine amount of fall for the 28" pipe trench excavation.

CQA (s) Monitoring Activities and Test Results:

Monitored pipe fusion activities including removal of pipe shavings and any unwanted debris in the system. Walked the trench line with RSI to stake out elevations every 100'. Met with Mike Kaiser to discuss location of the existing storm water outfall structures relative to the 28" GCCS header pipe.

CQA Specialist: Kevin Lesley

Brantley Engineering, LLC

CQA Daily Field Monitoring Summary

Project Number: 2015-101	Owner: Omni Waste of Osceola County, LLC
Report Number: 2	Contractor: RCS Excavation
Project Name: LFGTE Conveyance Pipeline	Installer: RSI
Location: St. Cloud, Florida	Date: 9/10/15 Thr.

Weather Description

Sky Cover:	Partly Cloudy	Amt. of Precip:	0"	Wind:	5-10	(mph)
Temp: Low (F):	78 at 7:00	a.m.		High (F)	94 at 3:00	p.m.

CQA's On Site: Kevin Lesley

Major Construction Equipment: (RSI) 1 - Kobelco 350 Excavator, 2 - McElroy Fusion Machines: (RCS) 1 - Mini-Excavator, 1 - 330-Excavator, 1 - Lull Forklift.

Contractor(s) Construction Progress:

RCS continues to strap down header assembly at energy plant filtration tanks. RCS prepared to backfill this header assembly once straps were installed. The pipe fusion machine was down this morning. Surveyor Peavy was due on site today to locate the force main before trenching operations can resume for the 28" pipe. Surveyor arrived onsite and shot the force main and staked out for RCS. RSI got with Mike Kaiser and went over the revised plan for installation of the 28" GCCS pipe from CS1 Condensate Sump to the
tie in point.

CQA (s) Monitoring Activities and Test Results:

Observed placement and backfill of the header assembly. Monitored and observed trenching operations to ensure location relative to the staked force main.

CQA Specialist: Kevin Lesley

Brantley Engineering, LLC

CQA Daily Field Monitoring Summary

Project Number: 2015-101	Owner: Omni Waste of Osceola County, LLC
Report Number: 3	Contractor: RCS Excavation
Project Name: LFGTE Conveyance Pipeline	Installer: RSI
Location: St. Cloud, Florida	Date: 9/11/15 Fri.

Weather Description

Sky Cover:	Partly Cloudy	Amt. of Precip:	0"	Wind:	5-10	(mph)
Temp: Low (F):	75 at 7:00	a.m.		High (F)	92 at 3:00	p.m.

CQA's On Site: Kevin Lesley

Major Construction Equipment: (RSI) 1 - Kobelco 350 Excavator, 2 - McElroy Fusion Machines: (RCS) 1 - Mini-Excavator, 1 - 330-Excavator, 1 - Lull Forklift.

Contractor(s) Construction Progress:

RCS resumed back filling the header manifold pipe at energy plant tanks using mini excavator and crew of 2 with shovels and wacker packer for compaction. RCS has dozer grading outer slope of berm from CS1 condensate sump back towards the West end of berm down to the North slope of Cell 11 perimeter berm access road. Spoke with RSI as the latest schedule is to start excavating on Monday for installation of the 28" pipe.

CQA (s) Monitoring Activities and Test Results:

Observed backfill and compaction of the header manifold pipe. Observed grading operations for the 28" pipe.

CQA Specialist: Kevin Lesley

Brantley Engineering, LLC

CQA Daily Field Monitoring Summary

Project Number: 2015-101	Owner: Omni Waste of Osceola County, LLC
Report Number: 4	Contractor: RCS Excavation
Project Name: LFGTE Conveyance Pipeline	Installer: RSI
Location: St. Cloud, Florida	Date: 9/14/15 Mon.

Weather Description

Sky Cover:	Partly Cloudy	Amt. of Precip:	0"	Wind:	5-10	(mph)
Temp: Low (F):	77 at 7:00	a.m.		High (F)	82 at 3:00	p.m.

CQA's On Site: Kevin Lesley

Major Construction Equipment: (RSI) 1 - Kobelco 350 Excavator, 2 - McElroy Fusion Machines: (RCS) 1 - Mini-Excavator, 1 - 330-Excavator, 1 - Lull Forklift.

Contractor(s) Construction Progress:

RCS resumed working on header pipe adjacent to filtration tanks at energy plant while RSI began excavating trench for 28" pipe from CS1 to the West using excavator and laser level for the required amount of fall. Excavating began around 9:50 am and by 4:00 pm, the crew moved the 650' run of 28" pipe to the trench location. The first 450' section was then placed in the excavated from CS1 to the high point just East of Cell 11. The remaining 150' section of pipe will remain above ground. The crew then installed the 24" inline valve off of the CS1 reducer.

CQA (s) Monitoring Activities and Test Results:

Monitored and observed excavation of the trench for the 28" pipe. Monitored and observed placement of the 28" pipe and 24" inline valve.

CQA Specialist: Kevin Lesley

Brantley Engineering, LLC

CQA Daily Field Monitoring Summary

Project Number: 2015-101	Owner: Omni Waste of Osceola County, LLC
Report Number: 5	Contractor: RCS Excavation
Project Name: LFGTE Conveyance Pipeline	Installer: RSI
Location: St. Cloud, Florida	Date: 9/15/15 Tue.

Weather Description

Sky Cover:	Partly Cloudy	Amt. of Precip:	0"	Wind:	5-10	(mph)
Temp: Low (F):	78 at 7:00	a.m.		High (F)	86 at 3:00	p.m.

CQA's On Site: Kevin Lesley

Major Construction Equipment: (RSI) 1 - Kobelco 350 Excavator, 2 - McElroy Fusion Machines: (RCS) 1 - Mini-Excavator, 1 - 330-Excavator, 1 - Lull Forklift.

Contractor(s) Construction Progress:

FECC arrived onsite for jet vac operations. RCS removed the lids from the sumps for these operations. At 7:45 am, the jet vac was set up at the high point clean out. RCS & the FECC crew decided to go in from the sump location towards the high point so when the hose retracts they can vacuum out sump at same time. The jet hose deployed into CS1 at 8:35 am and at 8:54 am the nozzle made it to high point at the East sump. Vacuum of CS1 began at 9:04 am. At 10:50 am, vacuum was finished at CS1. Meanwhile, RCS continued operations with installation of the 2nd 24" valve just inside of Cell 11 at the future tie in ~650' West of CS1. RCS also refilled the FECC truck tanks with their water truck.
At 11:05 am, the jet vac was set up at CS2 and started the jet at 11:10 am. As of 12:50 pm, the FECC crew have stopped and started the jet line 3 times and appear to be having problems with equipment as the jet keeps losing pressure. FECC repaired the pressure issue as the jet made it to the high point at 1:10 pm.
RCS refilled the FECC truck tanks again with the water truck. CS2 to the high point required 3 truckloads of water. At 1:48 pm, the FECC crew began running the jet line South from CS2 to the high point near the Energy Plant Pipe crossing bridge. The jet line passed the high point at 2:08pm. Vacuum of CS2 began at 2:22 pm. The FECC crew departed the site at 3:20 pm. RCS began pumping out the header for tomorrow's jet vac to complete cleaning of the system.

CQA (s) Monitoring Activities and Test Results:

Monitored and observed jet vac operations.

CQA Specialist: Kevin Lesley

Brantley Engineering, LLC

CQA Daily Field Monitoring Summary

Project Number: 2015-101	Owner: Omni Waste of Osceola County, LLC
Report Number: 6	Contractor: RCS Excavation
Project Name: LFGTE Conveyance Pipeline	Installer: RSI
Location: St. Cloud, Florida	Date: 9/16/15 Wed.

Weather Description

Sky Cover:	Partly Cloudy	Amt. of Precip:	0"	Wind:	5-10	(mph)
Temp: Low (F):	74 at 7:00	a.m.		High (F)	87 at 3:00	p.m.

CQA's On Site: Kevin Lesley

Major Construction Equipment: (RSI) 1 - Kobelco 350 Excavator, 2 - McElroy Fusion Machines: (RCS) 1 - Mini-Excavator, 1 - 330-Excavator, 1 - Lull Forklift.

Contractor(s) Construction Progress:

FECC was on site 7:45 am. At 8:10 am, FECC set up to clean out the in-ground tank next to the filtration tanks. At 8:38 am, vacuuming was completed. FECC completed the following throughout the day: 9:11 am -9:20 am , Vac 12" CS4, 9:30 am -9:35 am, Vac 12" CS2, 9:42 am -9:44 am, Vac 12" CS3, 9:45 am -9:48 am, Vac 12" CS1, 10:05 am -11:30 am, cleaned 2 small square concrete vats in ground next to big tank behind shop, 11:45 am -12:30 pm, clean & vac Shop tank & retaining area. FECC departed the site at 12:45 pm.
The damaged electric panel door for Cell 11 was swapped out today as well.
RCS is working on the final lift for backfill of the 28" GCCS pipe including the "Caution Gas Line" tape as per Specs. The trench includes the air & force main lines from 36" Sumps CS1, CS2 & CS3 to the 2nd 24" Valve along the header. Trench backfill was compacted in lifts as per the specifications.

CQA (s) Monitoring Activities and Test Results:

Monitored and observed jet vac operations. Monitored and observed trench backfill operations.

CQA Specialist: Kevin Lesley

Brantley Engineering, LLC

CQA Daily Field Monitoring Summary

Project Number: 2015-101	Owner: Omni Waste of Osceola County, LLC
Report Number: 7	Contractor: RCS Excavation
Project Name: LFGTE Conveyance Pipeline	Installer: RSI
Location: St. Cloud, Florida	Date: 9/28/15 Mon.

Weather Description

Sky Cover:	Partly Cloudy	Amt. of Precip:	0"	Wind:	5-10	(mph)
Temp: Low (F):	74 at 7:00	a.m.		High (F)	90 at 3:00	p.m.

CQA's On Site: Kevin Lesley

Major Construction Equipment: (RSI) 1 - Kobelco 350 Excavator, 2 - McElroy Fusion Machines: (RCS) 1 - Mini-Excavator, 1 - 330-Excavator, 1 - Lull Forklift.

Contractor(s) Construction Progress:

All GCCS piping, sumps, and connections have been completed. Contractor cleaning up work areas and working on grassing of disturbed areas.

CQA (s) Monitoring Activities and Test Results:

Brantley Engineering on site to do final inspection of GCCS system from Cell 10 to the new Energy plant East of site. Walked and sketched entire GCCS pipe layout from end to end for reference comparison to surveyed As Built.

CQA Specialist: Kevin Lesley

Brantley Engineering, LLC

CQA Daily Field Monitoring Summary

Project Number: 2015-101	Owner: Omni Waste of Osceola County, LLC
Report Number: 8	Contractor: RCS Excavation
Project Name: LFGTE Conveyance Pipeline	Installer: RSI
Location: St. Cloud, Florida	Date: 9/29/15 Tue.

Weather Description

Sky Cover:	Partly Cloudy/Rain	Amt. of Precip:	.2"	Wind:	5-10	(mph)
Temp: Low (F):	75 at 7:00	a.m.		High (F)	90 at 3:00	p.m.

CQA's On Site: Kevin Lesley

Major Construction Equipment: (RSI) 1 - Kobelco 350 Excavator, 2 - McElroy Fusion Machines: (RCS) 1 - Mini-Excavator, 1 - 330-Excavator, 1 - Lull Forklift.

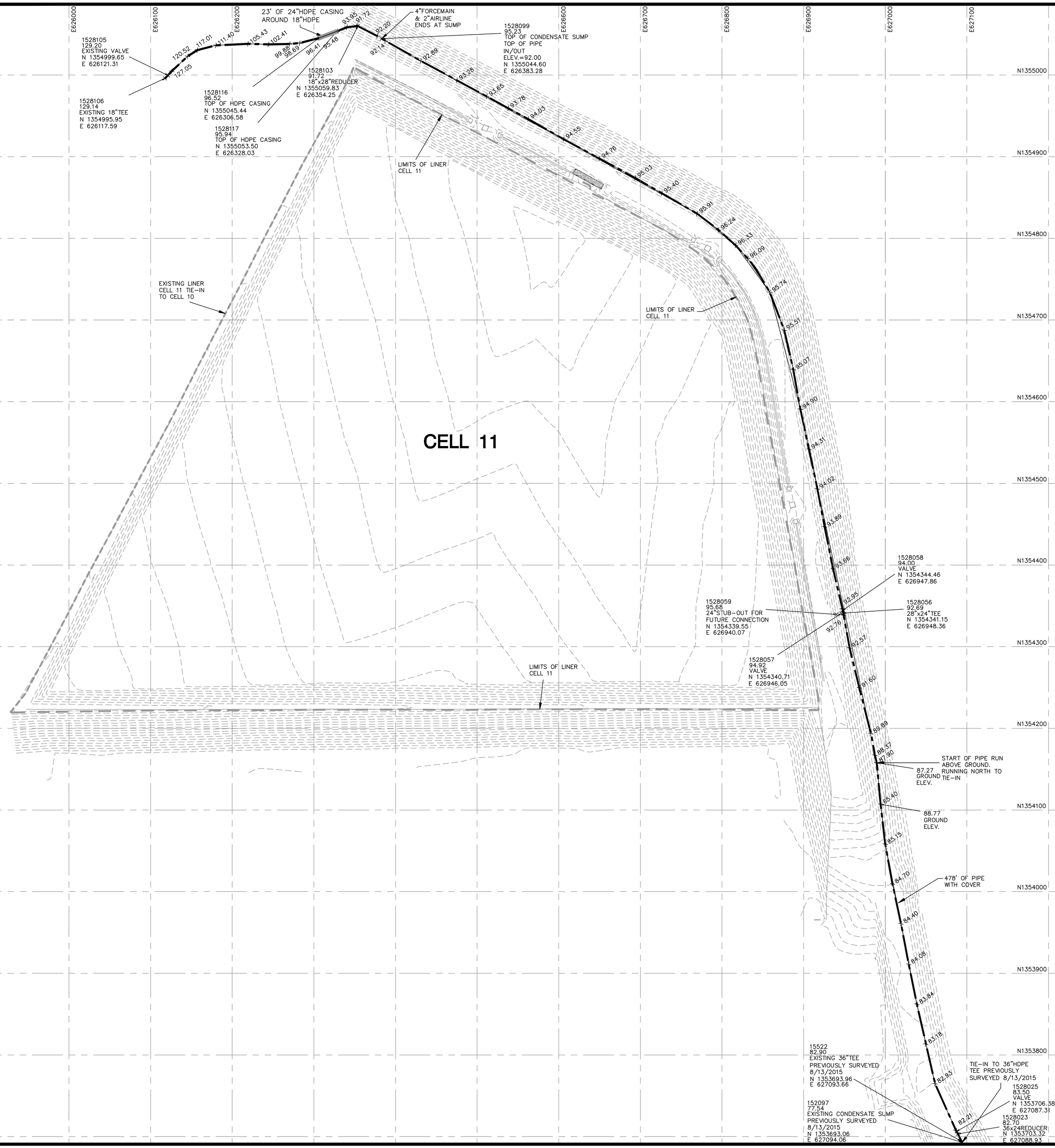
Contractor(s) Construction Progress:

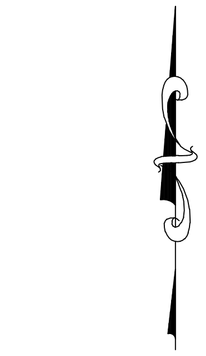
All GCCS piping, sumps, and connections have been completed. Contractor cleaning up work areas and working on grassing of disturbed areas.

CQA (s) Monitoring Activities and Test Results:

Brantley Engineering completed final inspection of the GCCS system.

CQA Specialist: Kevin Lesley





GRAPHIC SCALE

60 0 30 60 120

1 inch = 60 ft.

LEGEND:

NO. NUMBER
ELEV. ELEVATION
x 85.05 ELEVATION TAKEN ON TOP OF PIPE
AS-BUILT GAS 36" HDPE TRANSMISSION LINE
AS-BUILT CONTOUR
GRID LINE
WOOD UTILITY POLE
GUY ANCHOR

SURVEYOR'S NOTES:

1.) North and coordinate basis is the East Zone of the Florida State Plane Coordinate System, and are based on NGS Control Station Numbers AJ7660(J496) and verified Pickett & Associates Targets 1 and 2 from Topographic Survey dated 12/13/01 as provided. The published values used for this survey are NAD 83 2007 adjustment

2.) Underground improvements, encroachments, foundations and/or utilities were not located as a part of this survey.

3.) This map is intended to be displayed at a scale of 1"=40' or smaller.

4.) Environmental concerns, if existent, were not assessed as part of this survey.

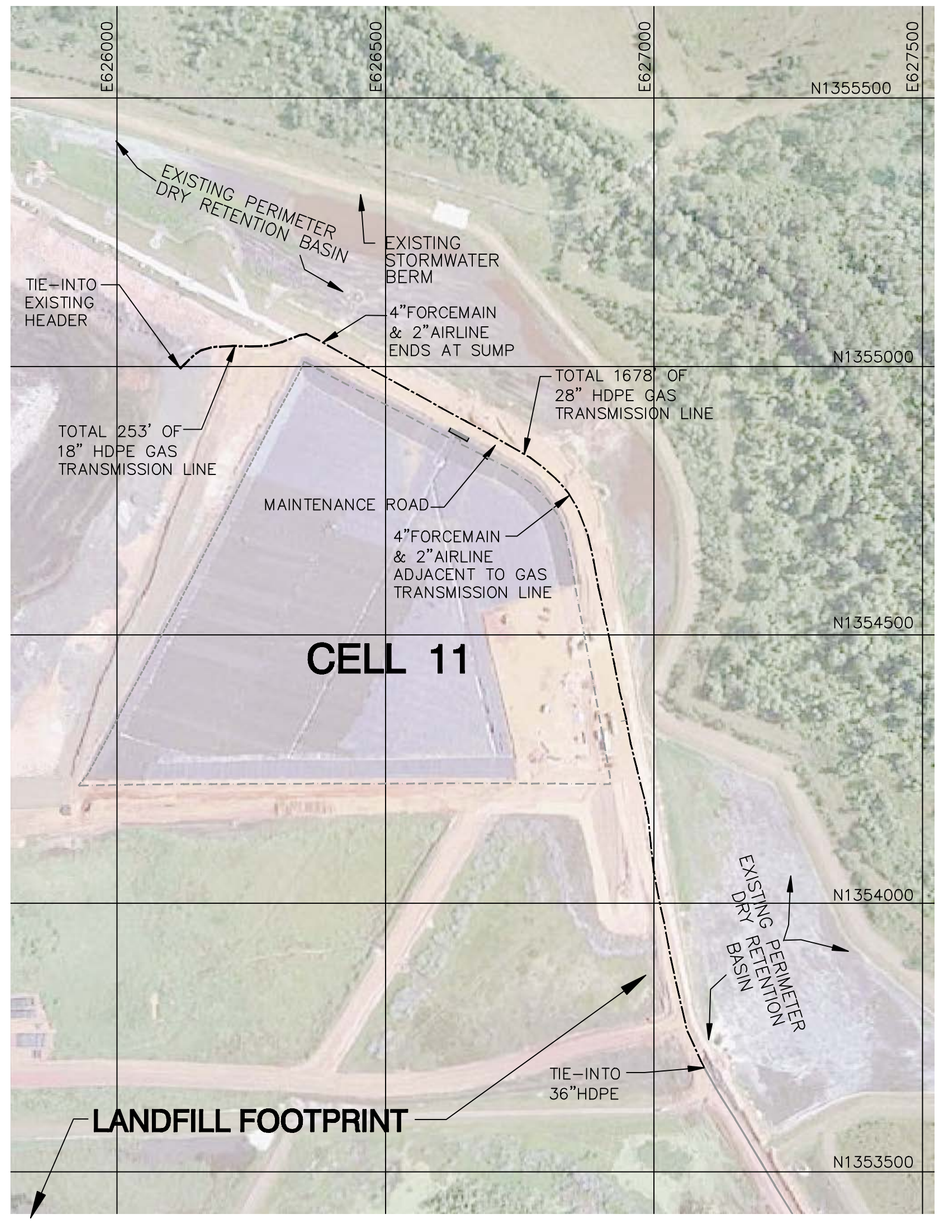
5.) Vertical information depicted on this report are GPS derived elevations based on the National Geodetic Vertical Datum of 1929 (NGVD29) utilizing site control as provided PK13 with an elevation of 92.92 (91.83NAVD88) and OC1406 with an elevation of 80.91 (79.82NAVD88) and converted to North American Vertical Datum 1988 (NAVD88) using vertcon..

6.) Symbols shown hereon are not to scale.

7.) This is not a boundary survey.

8.) This survey was prepared to show the horizontal and vertical location of newly installed 28" gas collection and control system (GCCS) LFGTE conveyance pipeline.

VICINITY MAP



NO.	DATE	REVISION

THIS SURVEY IS NOT VALID WITHOUT THE SIGNATURE AND THE ORIGINAL RAISED SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER.

Drawn By: DLP | Party Chief: SP | Field Book: 51 | FILE NAME: 1009 ASB-28INPIPE.dwg

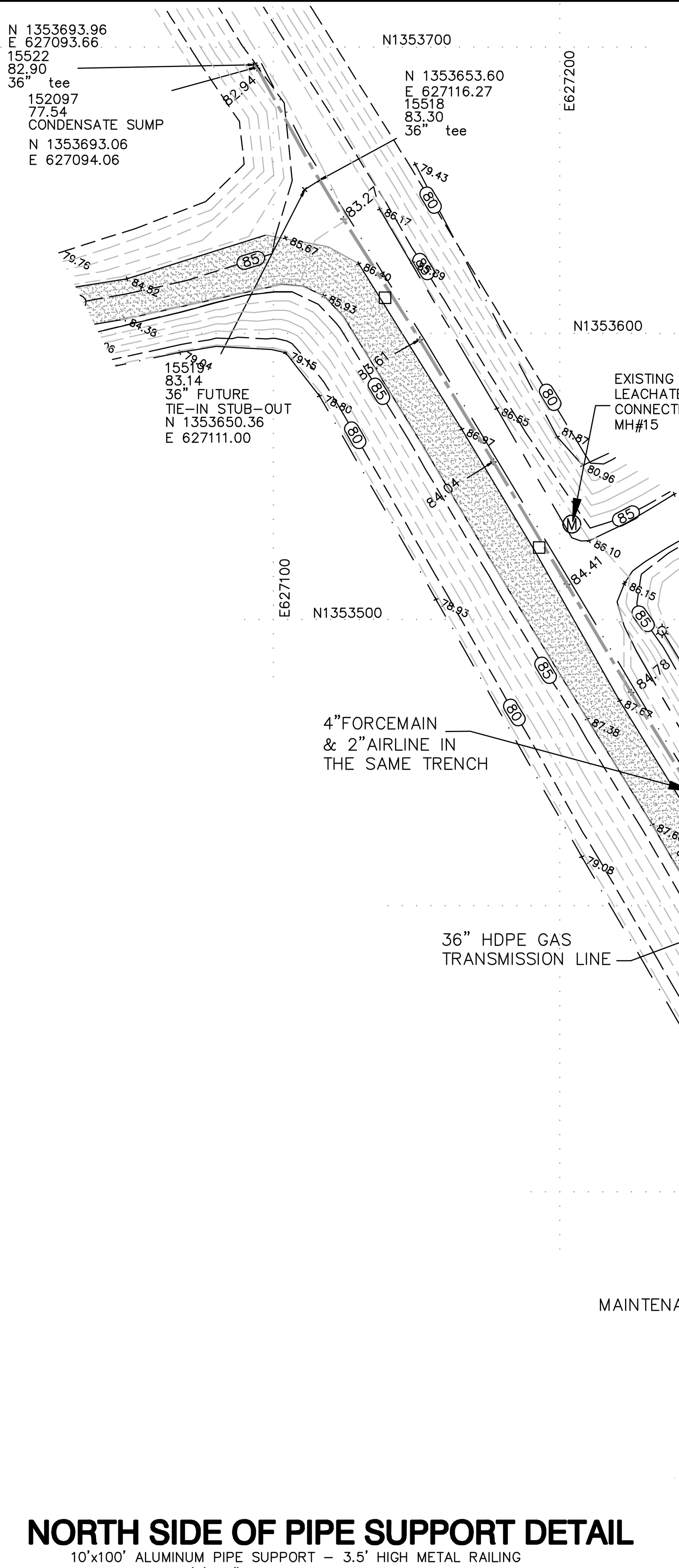
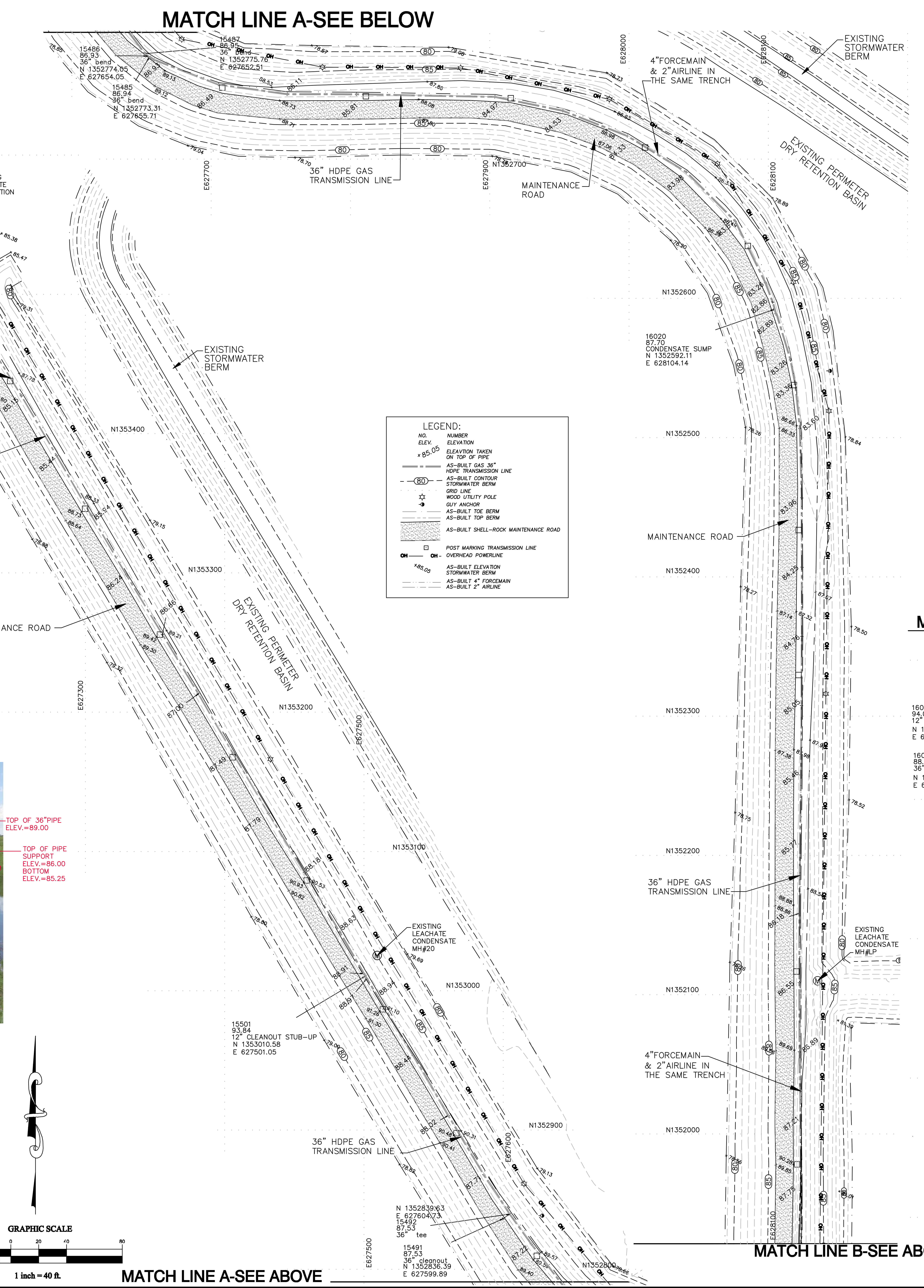
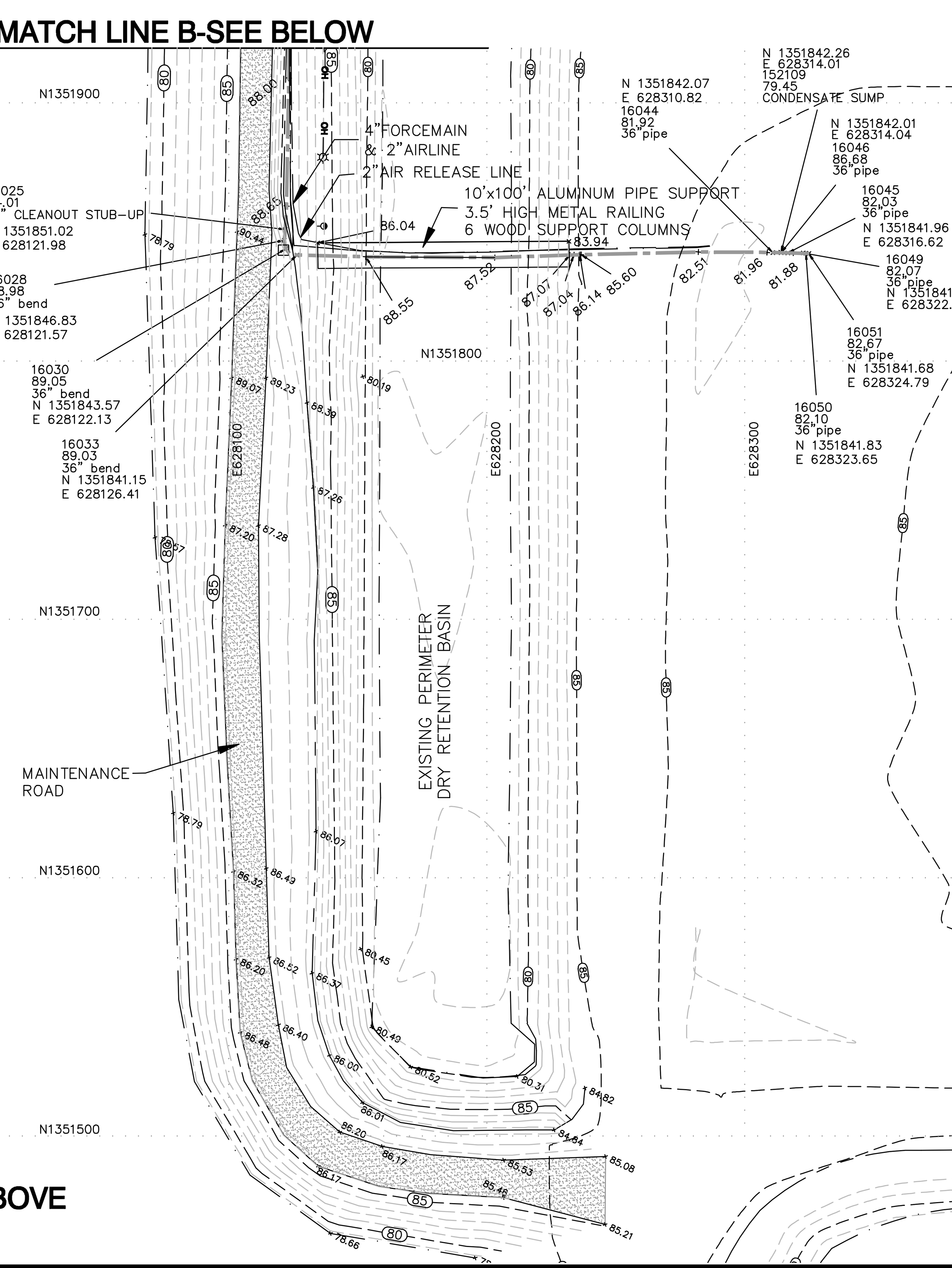
Peavey & Associates
SURVEYING & MAPPING PA
9399 N LAKE BUFFUM RD
CRYSTAL RIVER, FLORIDA 34461
PHONE:863-738-4960
FLORIDA BUSINESS NO.7779

CLIENT:
Omni Waste of Osceola County, LLC
Waste Services, Inc.
1501 Omni Way
St. Cloud, Fl 34773

As-built-Landfill Gas Collection & Control System (GCCS) LFGTE Conveyance 28" Pipeline Construction JED SOILD WASTE MANAGEMENT FACILITY

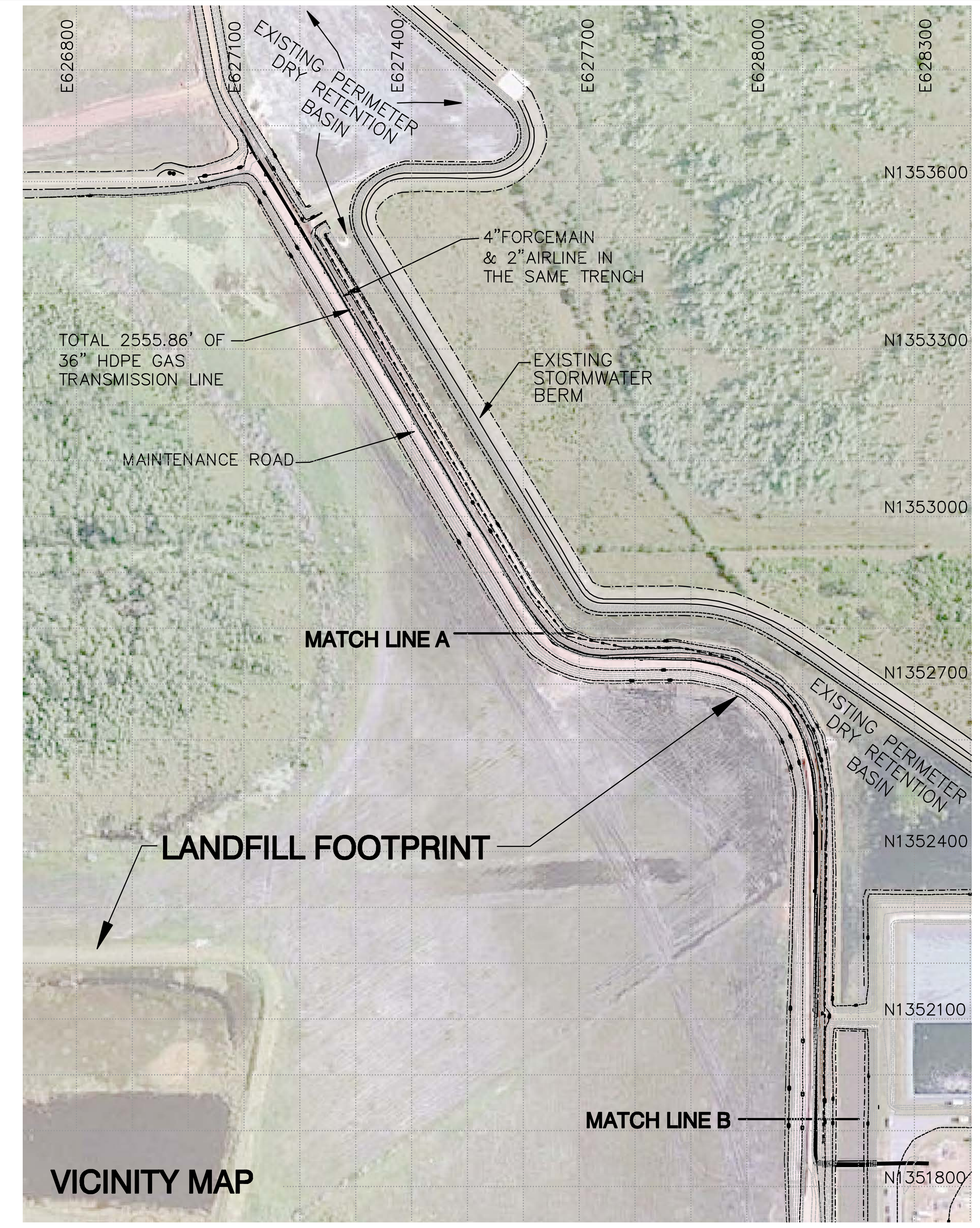
DEBORAH L. PEAVEY, P.S.M.
FLORIDA REGISTRATION NUMBER 6345
FLORIDA BUSINESS NUMBER 7779
4/23/2015
SURVEY DATE

SCALE	DRAWING NO.
1"=60'	294
PROJECT NO.	SHEET
301	1

NORTH SIDE OF PIPE SUPPORT DETAIL

10'x100' ALUMINUM PIPE SUPPORT – 3.5' HIGH METAL RAILING – (6) 10"WOOD SUPPORT COLUMNS



SURVEYOR's NOTES:

1.) North and coordinate basis is the East Zone of the Florida State Plane Coordinate System, and are based on NGS Control Station Numbers AJ7660(J496) and verified Pickett & Associates Targets 1 and 2 from Topographic Survey dated 12/13/01 as provided. The published values used for this survey are NAD 83 2007 adjustment

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6.) Symbols shown hereon are not to scale.

7.) This is not a boundary survey.

8.) This survey was prepared to show the horizontal and vertical location of newly installed 36" gas collection and control system (GCCS) LFGTE conveyance pipeline.

NO.	DATE	REVISION

THIS SURVEY IS NOT VALID WITHOUT THE SIGNATURE AND ORIGINAL RAISED SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER.

Drawn By: DLP
Party Chief: SP
Field Book: 51
FILE NAME: ASB-36INPIPE BERM.dwg

Peavey & Associates
SURVEYING & MAPPING PA
9399 N LAKE BUFFUM RD
FORT MEADE, FL 33841
PHONE: 863-738-4960
FLORIDA BUSINESS NO.7779

CLIENT:
Omni Waste of Osceola County, LLC
Waste Services, Inc.
1501 Omni Way
St. Cloud, Fl 34773

As-built-Landfill Gas Collection & Control System (GCCS) LFGTE Conveyance Pipeline & Berm Construction JED SOILD WASTE MANAGEMENT FACILITY

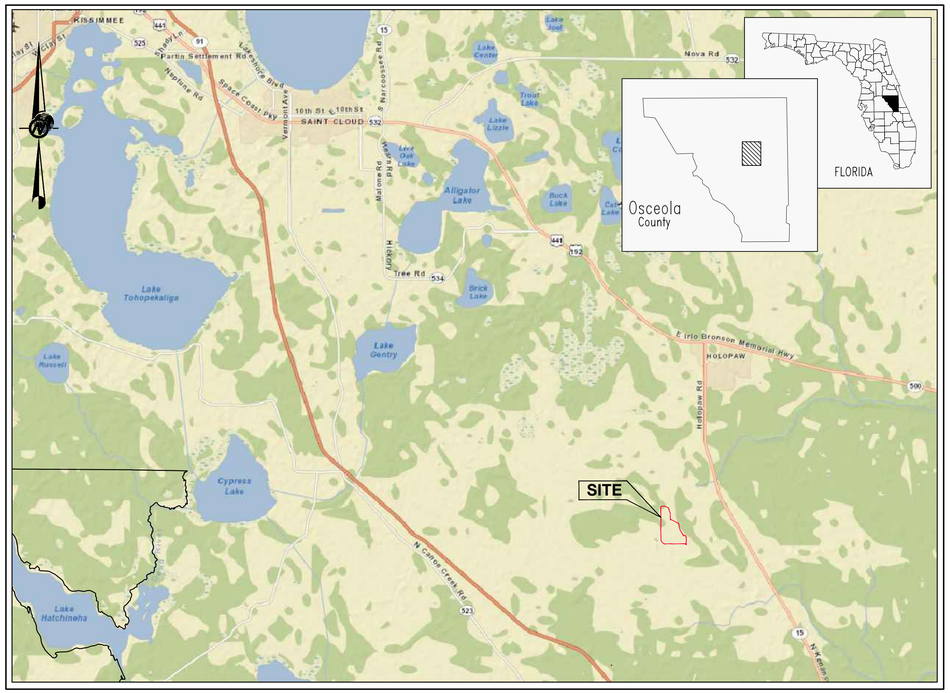
DEBORAH L. PEAVEY, P.S.M.
FLORIDA REGISTRATION NUMBER 6365
FLORIDA BUSINESS NUMBER 7779

8/13/2015
SURVEY DATE

SCALE	DRAWING NO.
1"=40'	293
PROJECT NO.	SHEET
301	1

J.E.D. SOLID WASTE MANAGEMENT FACILITY
LANDFILL GAS COLLECTION AND CONTROL SYSTEM (GCCS) LFGTE CONVEYANCE PIPELINE CONSTRUCTION

ST. CLOUD, OSCEOLA COUNTY, FLORIDA



SITE LOCATION MAP

LIST OF DRAWINGS		
SHEET	TITLE	REVISION
1	TITLE SHEET	
2	EXISTING CONDITIONS	
3A	PROPOSED PIPE LAYOUT PLAN (1 OF 2)	
3B	PROPOSED PIPE LAYOUT PLAN (2 OF 2)	
3C	PROPOSED BERM CONTROL POINTS	
4	GCCS DETAILS (1 OF 3)	
5	GCCS DETAILS (2 OF 3)	
6	GCCS DETAILS (3 OF 3)	

Prepared for:

OMNI WASTE OF OSCEOLA COUNTY, LLC

Progressive Waste Solutions

1501 OMNI WAY
ST. CLOUD, FLORIDA 34773
TEL: 407-891-3720 FAX: 407-891-3730

Prepared by:

Golder Associates
Jacksonville, Florida

January 2015

Golder Associates
9428 Baymeadows Way, Suite 400
Jacksonville, Florida 32256
Tel: 904/363-3430 Fax: 904/363-3445
COA No. 1670

J.E.D. SOLID WASTE MANAGEMENT FACILITY
OSCEOLA COUNTY
FLORIDA

TITLE SHEET/LIST OF DRAWINGS

Kevin S. Brown, P.E.
Florida Registration No. 57819

SHEET 1

PROJECT No.: 083-82734 FILE No.: 08382734-M001 CADD: BCL DATE: 01/05/15

Drawing file: 08382734-M001.dwg Jan 26, 2015 - 1:00pm

LEGEND

GW–1	EXIST. LFG EXTRACTION WELL
	EXIST. HEADER/LATERAL
	HORIZONTAL GAS COLLECTOR
	CELL LIMIT
	ACTIVE GCCS

NOTES

1) AS-BUILT SURVEY TAKEN FROM JOHNSTON'S SURVEYING, INC. AND PEAVEY & ASSOCIATES SURVEYING AND MAPPING, PA.

2) NORTHING AND EASTING COORDINATES SHOWN REPRESENT FLORIDA STATE PLANE EAST ZONE NORTH AMERICAN DATUM OF 1983 (NAD83).THE ELEVATIONS SHOWN REPRESENT NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD29)(FEET).

3) TOPOGRAPHIC INFORMATION SHOWN ON THIS DRAWING WAS PROVIDED BY BASE MAPPING CO. LTD BASED ON AN AERIAL PHOTOGRAPH TAKEN ON MAY 16, 2014.

REV	DATE	DES	REVISION DESCRIPTION	CADD	CHK	RVW
0						

PROJECT

J.E.D. SOLID WASTE MANAGEMENT FACILITY
ST. CLOUD, OSCEOLA COUNTY, FLORIDA

TITLE

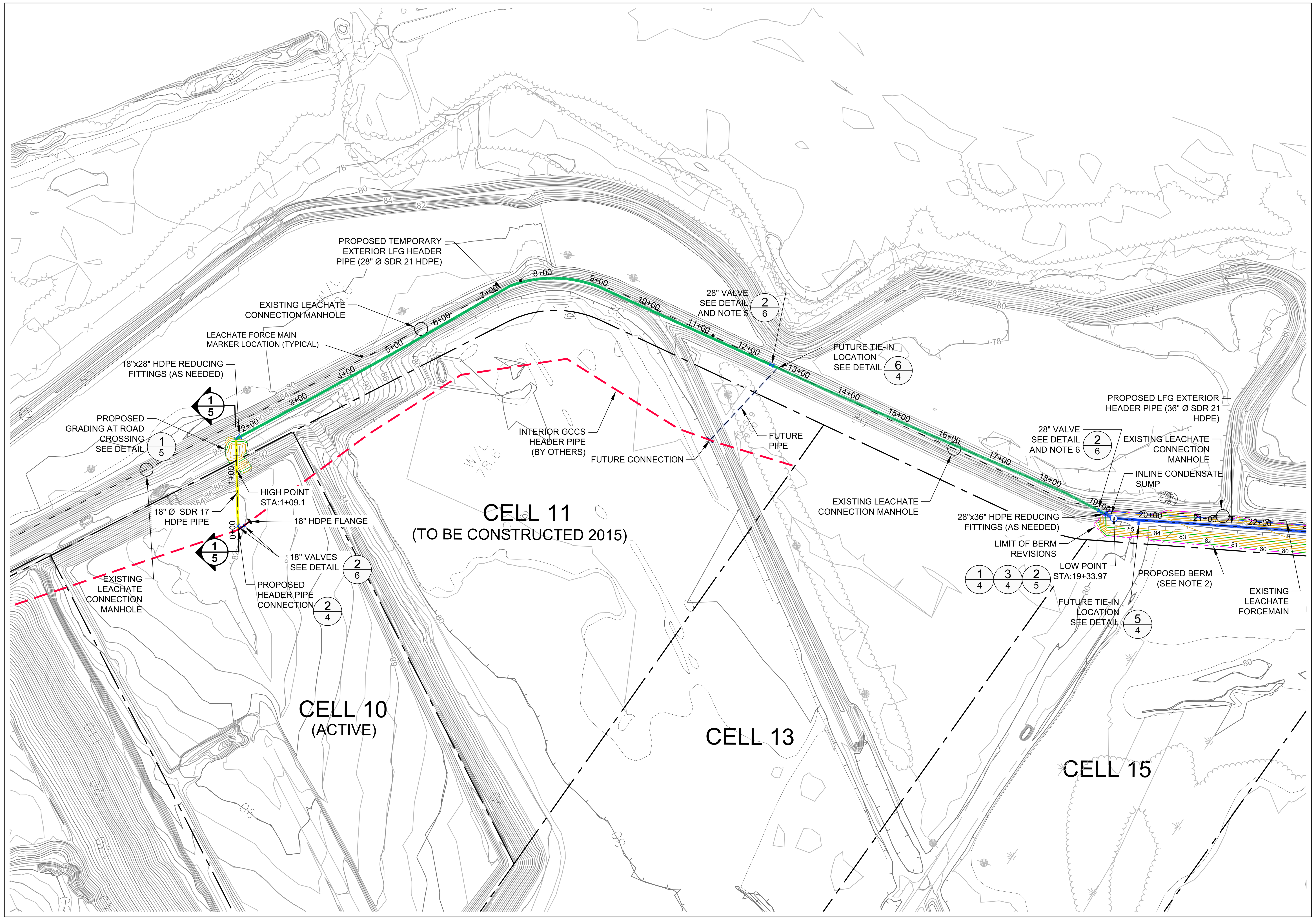
EXISTING CONDITIONS

Golder Associates

PROJECT No.		083-82734.37
DESIGN	DEG	11/21/14
CADD	BCL	11/25/14
CHECK	.	.
REVIEW	.	.

FILE No. 08382734-M002
SCALE AS SHOWN

SHEET 2



NOTES

1) CONDENSATE SUMPS WILL BE LOCATED AT ALL LOW POINTS. CLEANOUT/RISERS WILL BE LOCATED AT ALL HIGH POINTS ALONG LFGTE CONVEYANCE PIPE WITH SAMPLE PORTS.
2) EXISTING LANDFILL PERIMETER BERM TO BE MODIFIED IN SUPPORT OF PROPOSED PIPELINE. SEE DETAIL 5/5.
3) TERMINATE 2"Ø AIR LINE AND 4"Ø FORCEMAIN AT STATION 19+24 (APPROXIMATELY 10 FT. FROM SUMP) WITH BUTT CAPS.
4) 28"Ø ABOVE GROUND PIPE TO BE BRACED WITH ONE OF THE FOLLOWING METHODS (OR APPROVED EQUIVALENT): REBAR, SOIL, OR STRAPS (ANCHORED TO CONCRETE BLOCKS).
5) 28" VALVE TO BE INSTALLED 10 FEET FROM 28" x 28" x 18" TEE.
6) 28" VALVE TO BE INSTALLED 10 FEET FROM INLINE CONDENSATE SUMP.

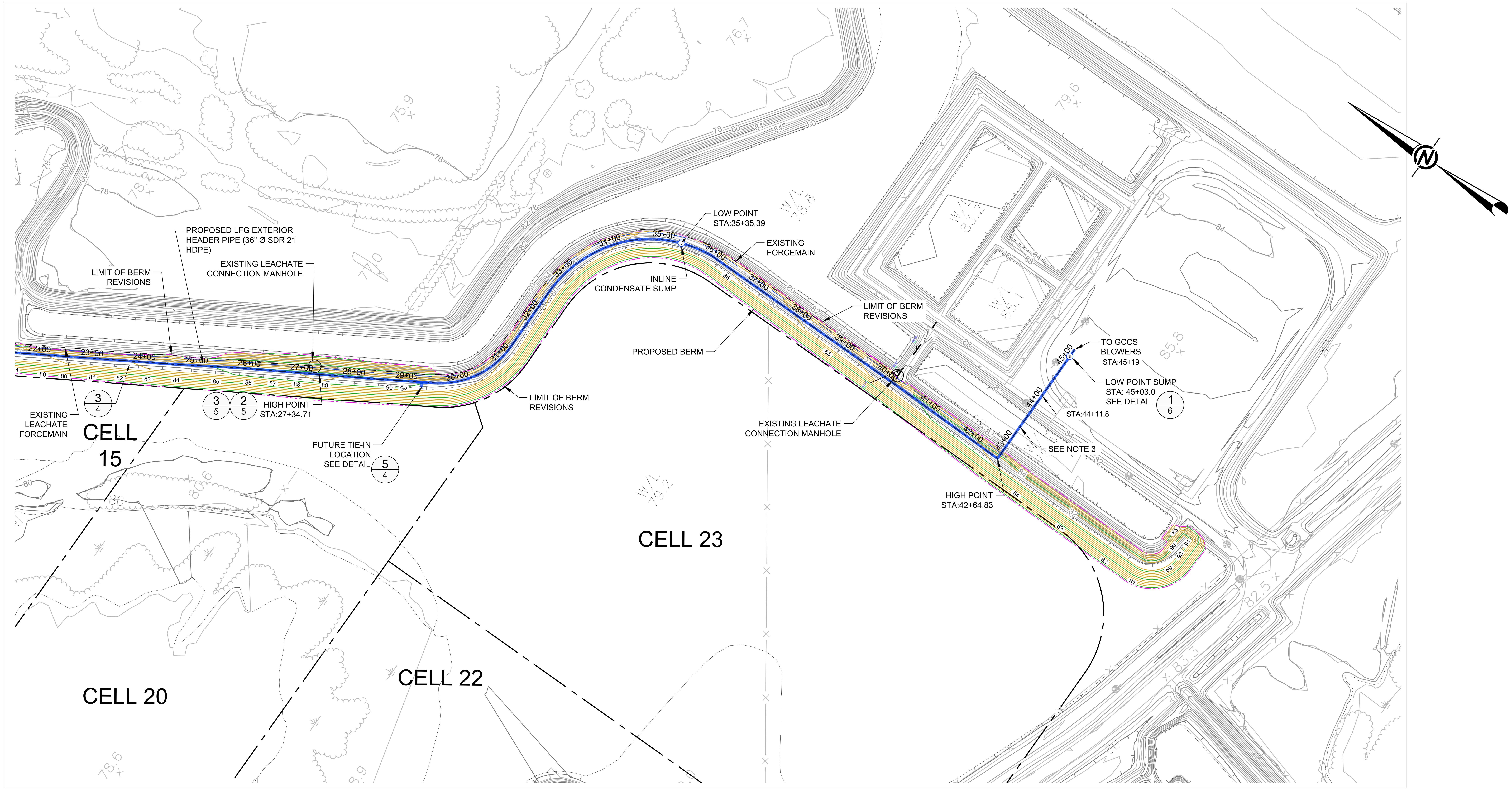
100 0 100 200
SCALE FEET

REV	DATE	DES	REVISION DESCRIPTION	CADD	CHK	RVW

PROJECT
J.E.D. SOLID WASTE MANAGEMENT FACILITY
ST. CLOUD, OSCEOLA COUNTY, FLORIDA

TITLE
PROPOSED PIPE LAYOUT PLAN (1 OF 2)

Golder Associates			
PROJECT No.	083-82734.37	FILE No.	08382734-M003
DESIGN	DEG	11/21/14	SCALE: AS SHOWN
CADD	BCL	11/25/14	
CHECK	.	.	**SHEET 3A**
REVIEW	.	.	



100 0 100 200
SCALE FEET

NOTES

1) CONDENSATE SUMPS WILL BE LOCATED AT ALL LOW POINTS. CLEANOUT/RISERS WILL BE LOCATED AT ALL HIGH POINTS ALONG LFGTE CONVEYANCE PIPE WITH SAMPLE PORTS.

2) EXISTING LANDFILL PERIMETER BERM TO BE MODIFIED IN SUPPORT OF PROPOSED PIPELINE. SEE DETAIL 5/5

3) POND CROSSING STRUCTURE TO BE COMPLETED BY OTHERS. PIPE TO BE INSTALLED UNRESTRAINED ON STRUCTURE.

REV	DATE	DES	REVISION DESCRIPTION	CADD	CHK	RVW
0						

PROJECT
J.E.D. SOLID WASTE MANAGEMENT FACILITY
ST. CLOUD, OSCEOLA COUNTY, FLORIDA

TITLE
PROPOSED PIPE LAYOUT PLAN (2 OF 2)

Golder Associates

PROJECT No.		083-82734.37	FILE No.	08382734-M003
DESIGN	DEG	11/21/14	SCALE	AS SHOWN
CADD	BCL	11/25/14	**SHEET 3B**	
CHECK	.	.		
REVIEW	.	.		

CONTROL POINT TABLE			
POINT NO.	NORTHING (FT)	EASTING (FT)	ELEVATION (FT.)
101	1353710.64	627092.09	85.38
102	1353686.29	627105.90	85.30
103	1353643.56	627131.51	85.43
104	1353605.50	627165.05	81.82
105	1353558.09	627183.38	85.32
106	1353516.32	627210.91	85.14
107	1353472.57	627235.36	85.31
108	1353429.42	627260.98	85.25
109	1353386.76	627286.71	85.19
110	1353344.08	627312.77	85.13
111	1353303.20	627340.56	84.98
112	1353261.60	627369.63	84.81
113	1353217.58	627392.97	85.14
114	1353180.35	627427.73	82.19
115	1353140.27	627459.23	80.53
116	1353099.46	627488.53	79.38
117	1353056.87	627514.83	79.40
118	1353013.96	627540.43	79.48
119	1352970.19	627564.63	79.67
120	1352925.92	627587.16	80.46
121	1352883.47	627613.56	80.02
122	1352837.61	627634.47	82.00
123	1352797.14	627654.92	85.48
124	1352772.06	627692.40	85.73
125	1352760.54	627735.88	85.67
126	1352757.46	627783.23	85.58
127	1352759.98	627833.40	85.37
128	1352760.42	627883.37	85.20
129	1352754.67	627936.76	85.26
130	1352737.62	627987.00	85.31
131	1352710.72	628033.43	85.33
132	1352674.37	628072.46	85.39
133	1352631.90	628104.46	85.50
134	1352581.60	628122.85	85.63
135	1352528.80	628134.49	85.60
136	1352478.52	628137.47	85.58
137	1352428.51	628137.91	85.60
138	1352378.50	628137.56	85.62
139	1352328.50	628137.12	85.59
140	1352278.50	628136.93	85.54
141	1352228.26	628136.86	85.55
142	1352178.50	628136.76	85.55
143	1352128.51	628138.69	85.60
144	1352103.23	628131.18	85.93
145	1352078.06	628136.19	86.07
146	1352028.12	628136.12	86.15
147	1351978.11	628136.14	86.15
148	1351928.25	628136.09	86.15
149	1351878.17	628135.93	86.13
150	1351849.26	628135.84	86.12
151	1351799.67	628133.11	86.04
152	1351749.67	628132.94	86.09
153	1351699.67	628132.83	86.13
154	1351649.67	628133.09	86.04
155	1351599.67	628133.20	86.01
156	1351549.67	628133.09	86.04
157	1351520.12	628137.81	85.69
158	1351507.33	628158.05	85.85
159	1351520.16	628202.46	81.16

CONTROL POINT TABLE			
POINT NO.	NORTHING (FT)	EASTING (FT)	ELEVATION (FT.)
201	1353709.01	627089.04	86.49
202	1353684.46	627102.60	86.56
203	1353641.44	627127.80	86.85
204	1353597.22	627151.54	87.10
205	1353554.67	627178.04	87.43
206	1353512.15	627204.15	87.72
207	1353468.37	627228.47	88.00
208	1353424.81	627253.03	88.30
209	1353381.43	627277.97	88.59
210	1353338.26	627303.11	88.89
211	1353296.05	627330.01	89.22
212	1353254.15	627357.44	89.56
213	1353210.23	627381.32	89.82
214	1353167.66	627407.57	90.13
215	1353125.01	627433.73	90.44
216	1353082.05	627459.19	90.75
217	1353039.07	627484.70	91.06
218	1352996.05	627510.20	91.19
219	1352953.03	627535.72	90.87
220	1352910.12	627561.32	90.55
221	1352867.44	627587.38	90.25
222	1352824.97	627613.96	89.95
223	1352787.87	627646.41	89.67
224	1352761.95	627687.61	89.40
225	1352750.25	627734.47	89.13
226	1352747.87	627783.45	88.77
227	1352750.52	627833.51	88.52
228	1352751.32	627883.54	88.22
229	1352746.79	627935.20	87.93
230	1352731.17	627984.45	87.62
231	1352705.88	628029.82	87.33
232	1352671.16	628068.86	87.00
233	1352629.81	628101.30	86.74
234	1352580.82	628120.04	86.60
235	1352528.43	628129.75	86.96
236	1352478.47	628130.95	87.32
237	1352428.42	628130.77	87.64
238	1352378.48	628129.39	87.96
239	1352328.44	628127.85	88.25
240	1352278.41	628127.09	88.59
241	1352228.51	628126.76	88.92
242	1352178.51	628125.68	89.24
243	1352128.46	628126.42	89.59
244	1352103.47	628120.08	89.63
245	1352078.36	628124.57	89.90
246	1352028.34	628123.87	90.23
247	1351978.38	628122.88	90.57
248	1351928.41	628121.81	90.91
249	1351878.43	628120.71	91.24
250	1351849.46	628121.54	91.36

CONTROL POINT TABLE			
POINT NO.	NORTHING (FT)	EASTING (FT)	ELEVATION (FT.)
301	1353702.65	627078.56	86.24
302	1353679.77	627094.88	86.38
303	1353637.11	627120.95	86.69
304	1353594.48	627147.08	87.00
305	1353551.86	627173.23	87.32
306	1353509.24	627199.38	87.63
307	1353466.40	627225.18	87.94
308	1353423.65	627251.10	88.25
309	1353380.84	627276.92	88.57
310	1353338.05	627302.78	88.88
311	1353295.26	627328.64	89.19
312	1353252.46	627354.50	89.50
313	1353210.04	627380.97	89.82
314	1353167.69	627407.55	90.13
315	1353125.07	627433.69	90.44
316	1353081.05	627457.47	90.71
317	1353039.06	627484.70	91.06
318	1352996.05	627510.20	91.19
319	1352953.05	627535.70	90.87
320	1352910.10	627561.30	90.56
321	1352867.44	627587.39	90.25
322	1352824.79	627613.47	89.94
323	1352785.85	627644.52	89.62
324	1352758.05	627685.85	89.31
325	1352743.95	627733.82	89.00
326	1352742.68	627783.54	88.69
327	1352743.10	627833.54	88.38
328	1352743.52	627883.54	88.06
329	1352737.19	627932.97	87.73
330	1352722.49	627980.59	87.44
331	1352697.74	628023.94	87.13
332	1352664.24	628060.89	86.81
333	1352623.42	628089.60	86.50
334	1352577.46	628109.05	86.38
335	1352528.42	628118.11	86.72
336	1352478.42	628118.33	87.07
337	1352428.42	628118.55	87.41
338	1352378.42	628118.77	87.75
339	1352328.42	628118.99	88.09
340	1352278.42	628119.22	88.44
341	1352228.42	628119.44	88.78
342	1352178.42	628119.66	89.12
343	1352128.42	628119.88	89.47
344	1352103.42	628119.99	89.64
345	1352078.42	628119.75	89.81
346	1352028.43	628119.23	90.15
347	1351978.43	628118.71	90.49
348	1351928.43	628118.20	90.84
349	1351878.43	628117.68	91.18
350	1351849.52	628117.38	91.28
351	1351799.67	628117.38	91.28
352	1351749.67	628117.38	91.28
353	1351699.67	628117.38	91.28
354	1351649.67	628117.38	91.28
355	1351599.67	628117.38	91.28
356	1351549.67	628117.38	91.28
357	1351509.62	628124.63	91.28
358	1351491.03	628157.74	91.28
359	1351489.77	628202.51	91.27

CONTROL POINT TABLE			
POINT NO.	NORTHING (FT)	EASTING (FT)	ELEVATION (FT.)
401	1353696.40	627068.32	86.00
402	1353672.48	627082.94	86.10
403	1353629.81	627109.01	86.41
404	1353587.15	627135.15	86.72
405	1353544.54	627161.29	87.04
406	1353501.60	627187.64	87.35
407	1353459.19	627213.22	87.66
408	1353416.39	627239.08	87.97
409	1353373.60	627264.94	88.29
410	1353330.81	627290.80	88.60
411	1353288.02	627316.66	88.91
412	1353245.22	627342.52	89.22
413	1353202.60	627369.11	89.54
414	1353160.25	627395.69	89.85
415	1353117.93	627421.65	90.16
416	1353074.93	627447.15	90.47
417	1353031.92	627472.65	90.78
418	1352988.91	627498.16	90.91
419	1352945.91	627523.66	90.59
420	1352902.79	627549.36	90.28
421	1352860.14	627575.44	89.97
422	1352817.48	627601.53	89.66
423	1352775.55	627635.04	89.34
424	1352745.39	627679.89	89.03
425	1352730.06	627731.72	88.72
426	1352728.68	627783.66	88.41
427	1352729.10	627833.66	88.10
428	1352729.52	627883.66	87.78
429	1352724.29	627930.18	87.47
430	1352709.69	627974.92	87.16
431	1352686.34	628015.79	86.85
432	1352655.10	628050.46	86.53
433	1352616.70	628077.50	86.22
434	1352573.40	628095.65	86.10
435	1352528.36	628104.11	86.44
436	1352478.36	628104.33	86.79
437	1352428.36	628104.55	87.13
438	1352378.36	628104.77	87.47
439	1352328.36	628104.99	87.81
440	1352278.36	628105.22	88.16
441	1352228.36	628105.44	88.50
442	1352178.36	628105.66	88.84
443	1352128.36	628105.88	89.19
444	1352103.53	628105.81	89.30
445	1352078.57	628105.75	89.53
446	1352028.57	628105.23	89.87
447	1351978.57	628104.72	90.21
448	1351928.58	628104.20	90.56
449	1351878.58	628103.68	90.90
450	1351849.67	628103.38	91.00
451	1351799.67	628103.38	91.00
452	1351749.67	628103.38	91.00
453	1351699.67	628103.38	91.00
454	1351649.67	628103.38	91.00
455	1351599.67	628103.38	91.00
456	1351549.67	628103.38	91.00
457	1351501.65	628113.11	91.00
458	1351477.12	628157.48	91.00
459	1351475.78	628202.03	90.99

CONTROL POINT TABLE			
POINT NO.	NORTHING (FT)	EASTING (FT)	ELEVATION (FT.)
501	1353685.51	627050.51	79.04
502	1353662.52	627066.65	79.74
503	1353619.45	627092.05	79.79
504	1353575.18	627115.63	79.09
505	1353532.11	627141.04	79.12
506	1353489.01	627166.40	79.12
507	1353445.93	627191.29	79.12
508	1353402.67	627216.38	79.13
509	1353359.40	627241.44	79.13
510	1353316.12	627266.50	79.13
511	1353272.83	627291.54	79.12
512	1353229.53	627316.56	79.11
513	1353185.96	627342.60	79.10
514	1353143.11	627368.39	79.10
515	1353101.01	627393.12	79.10
516	1353057.53	627417.82	79.10
517	1353014.04	627442.51	79.10
518	1352970.85	627467.70	79.10
519	1352928.32	627494.01	79.10
520	1352885.32	627520.79	79.12
521	1352843.17	627547.70	79.13
522	1352801.00	627574.57	79.13
523	1352753.01	627614.28	79.13
524	1352718.53	627667.20	79.13
525	1352701.52	627727.84	79.12
526	1352700.80	627783.89	79.12
527	1352702.16	627833.89	79.12
528	1352703.52	627883.88	79.12
529	1352699.80	627924.87	79.12
530	1352687.64	627965.15	79.12
531	1352667.49	628002.31	79.12
532	1352640.44	628033.72	79.12
533	1352606.36	628058.87	79.12
534	1352567.33	628075.60	79.12
535	1352528.26	628082.13	79.11
536	1352478.25	628081.22	79.08
537	1352428.25	628080.42	79.08
538	1352378.25	628079.61	79.08
539	1352328.24	628078.80	79.08
540	1352278.24	628078.02	79.09
541	1352228.23	628077.21	79.09
542	1352178.23	628076.57	79.15
543	1352128.23	628076.12	79.27
544	1352103.35	628075.60	89.36
545	1352078.89	628075.10	79.31
546	1352028.90	628073.52	79.30
547	1351978.91	628072.00	79.31
548	1351928.93	628070.42	79.30
549	1351878.94	628068.88	79.30
550	1351850.03	628068.25	79.29
551	1351799.67	628068.25	79.29
552	1351749.67	628068.24	79.29
553	1351699.67	628068.22	79.28
554	1351649.67	628068.17	79.26
555	1351599.67	628068.17	79.26
556	1351549.67	628068.16	79.26
557	1351478.90	628086.06	79.25
558	1351441.78	628156.82	79.25
559	1351440.59	628201.78	79.25

80 0 80 160
SCALE FEET

REV	DATE	DES	REVISION DESCRIPTION	CADD	CHK	RVW
0						

PROJECT
J.E.D. SOLID WASTE MANAGEMENT FACILITY
ST. CLOUD, OSCEOLA COUNTY, FLORIDA

TITLE

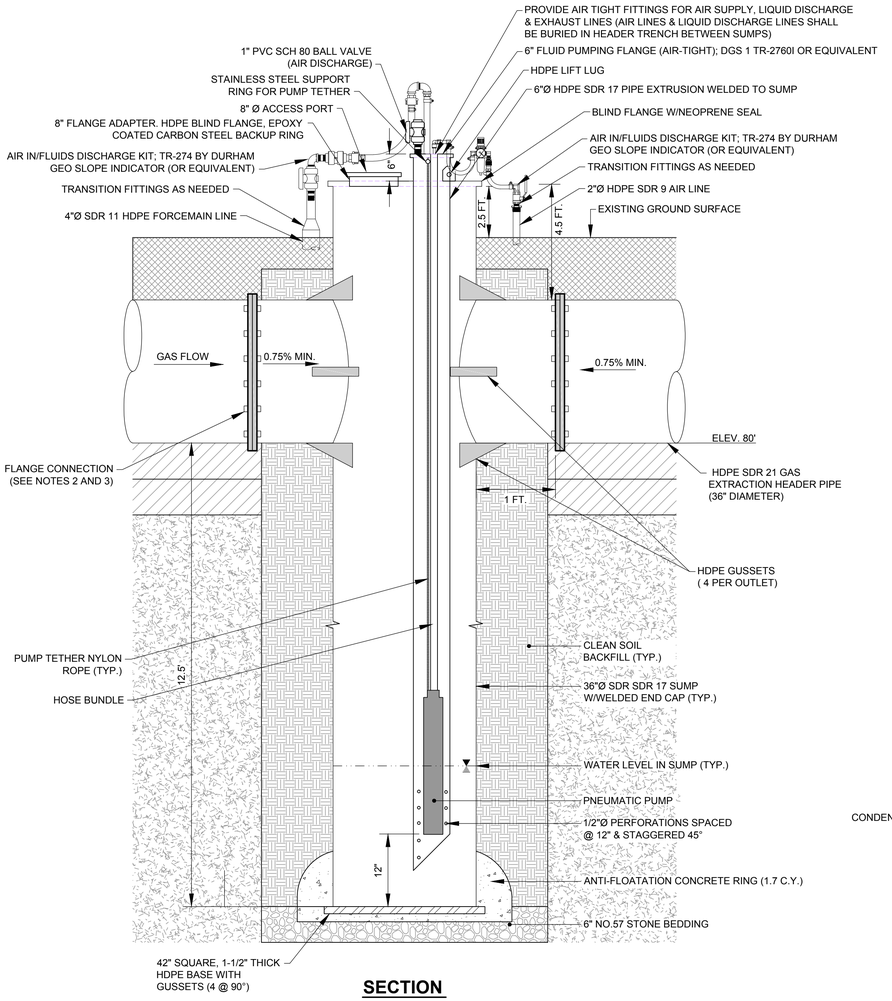
PROPOSED BERM CONTROL POINTS

Golder Associates

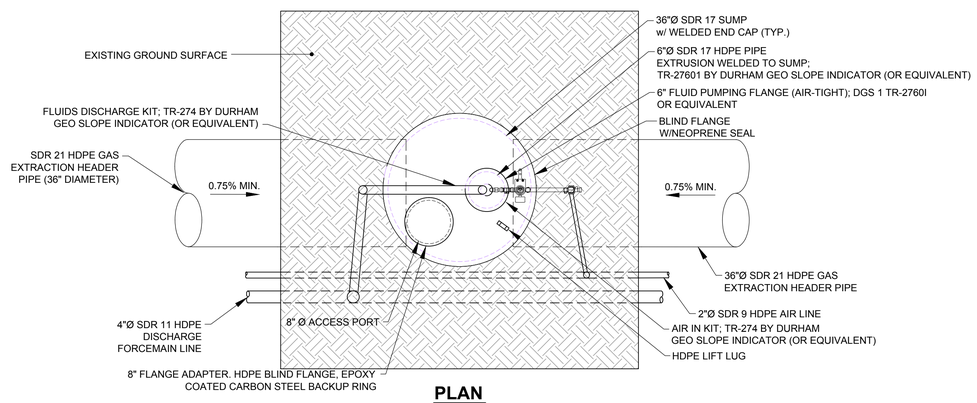
PROJECT No.	083-82734.37	
DESIGN	DEG	11/21/14
CADD	BCL	11/25/14
CHECK	.	.
REVIEW	.	.

FILE No. 08382734-M005
SCALE AS SHOWN

SHEET 3C



SECTION

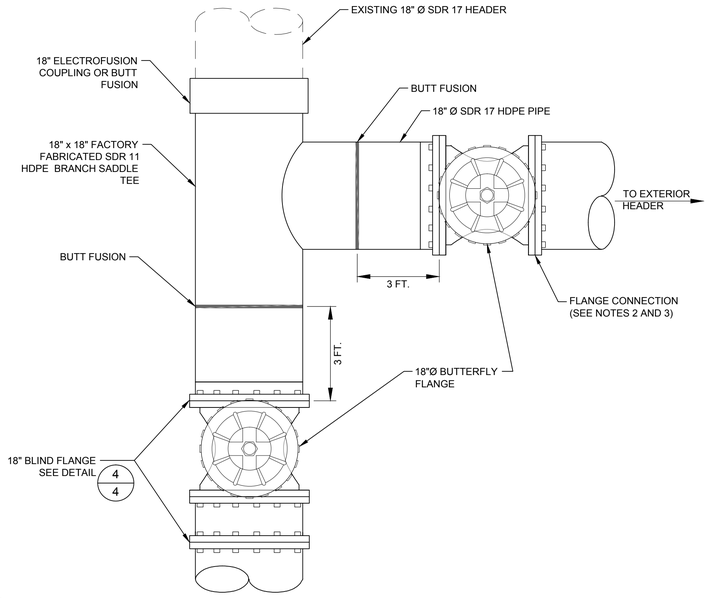


PLAN

1/4 INLINE CONDENSATE SUMP DETAIL

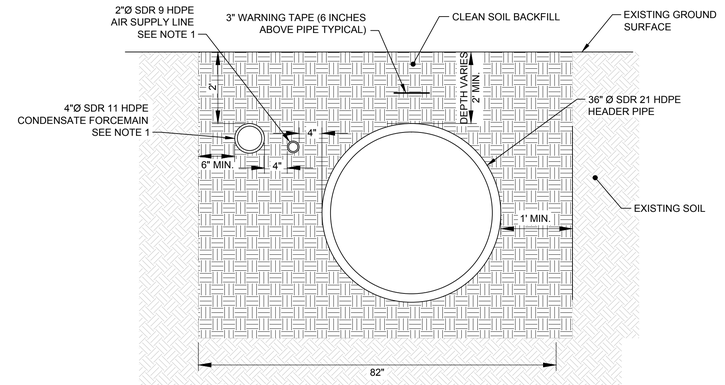
NTS

NOTE: TERMINATE 2"Ø AIR LINE AND 4"Ø FORCEMAIN WITH BUTT CAPS AT STA. 19+24 (APPROXIMATELY 10 FEET FROM SUMP).



2/4 TIE-IN TO EXISTING 18" HEADER PIPE

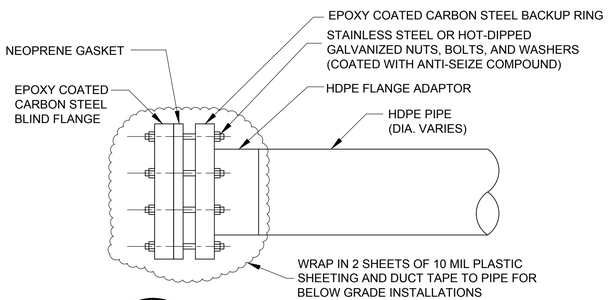
NTS



3/4 PIPE TRENCH DETAIL

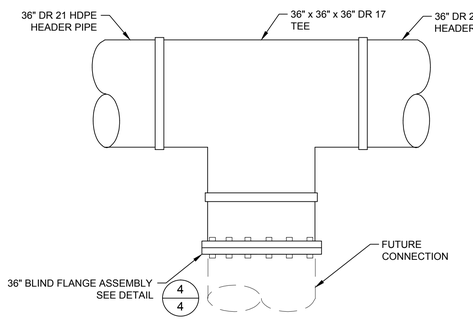
NTS

NOTE: AIR SUPPLY AND FORCEMAIN PIPE SHALL BE INSTALLED ON SAME SIDE OF HEADER PIPE.



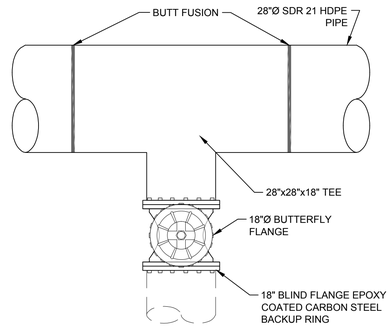
4/4 BLIND FLANGE DETAIL

NTS



5/4 36" HDPE DR 17 TEE

NTS



6/4 28" FUTURE TIE-IN DETAIL

NTS

NOTES

1. AIR LINE AND CONDENSATE FORCEMAIN TO BE INSTALLED NO DEEPER THAN 2 FT. B.G.S. IN HEADER TRENCH.
2. ALL BELOW GROUND FLANGE CONNECTIONS TO BE WRAPPED IN 2 SHEETS OF 10-MIL PLASTIC SHEETING AND DUCT TAPED TO PIPE.
3. FLANGE CONNECTIONS TO BE WITH EPOXY COATED CARBON STEEL BACKUP RING AND STAINLESS STEEL OR HOT DIPPED GALVANIZED STEEL NUTS, BOLTS, AND WASHERS. ALL THREADS TO BE COATED WITH ANTI-SEIZE COMPOUND.

REV	DATE	DES	REVISION DESCRIPTION	CADD	CHK	RVW
1						

PROJECT

J.E.D. SOLID WASTE MANAGEMENT FACILITY
ST. CLOUD, OSCEOLA COUNTY, FLORIDA

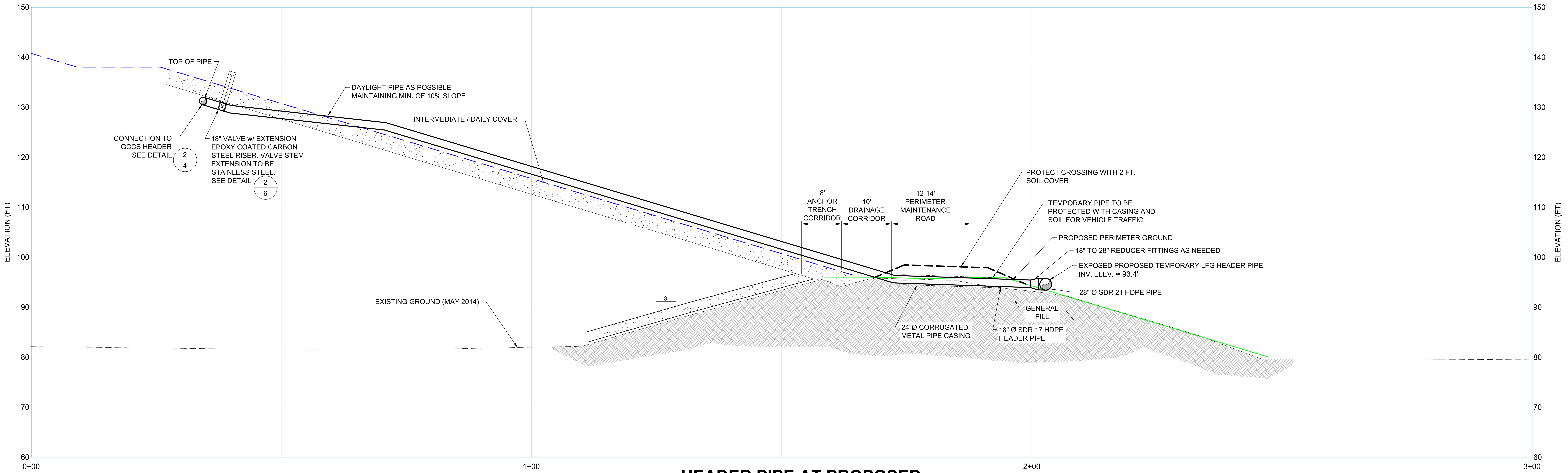
TITLE

GCCS DETAILS (1 OF 3)

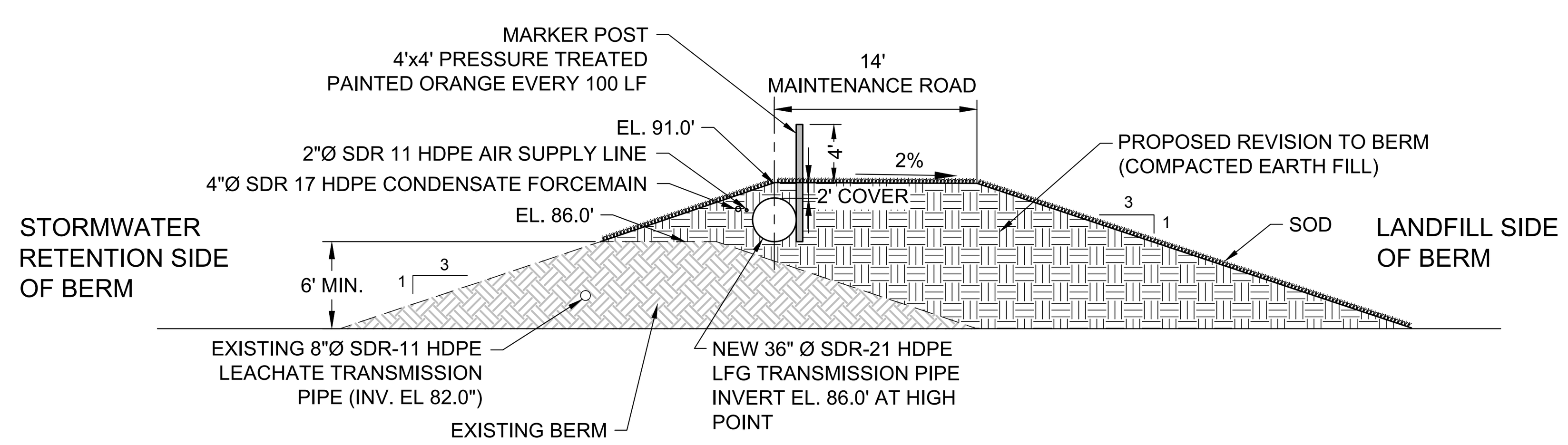
Golder Associates

PROJECT No.	083-82734.37		FILE No.	08382734-M004	
DESIGN	DEG	11/21/14	SCALE	AS SHOWN	
CADD	BCL	11/25/14			
CHECK	.	.			
REVIEW	.	.			

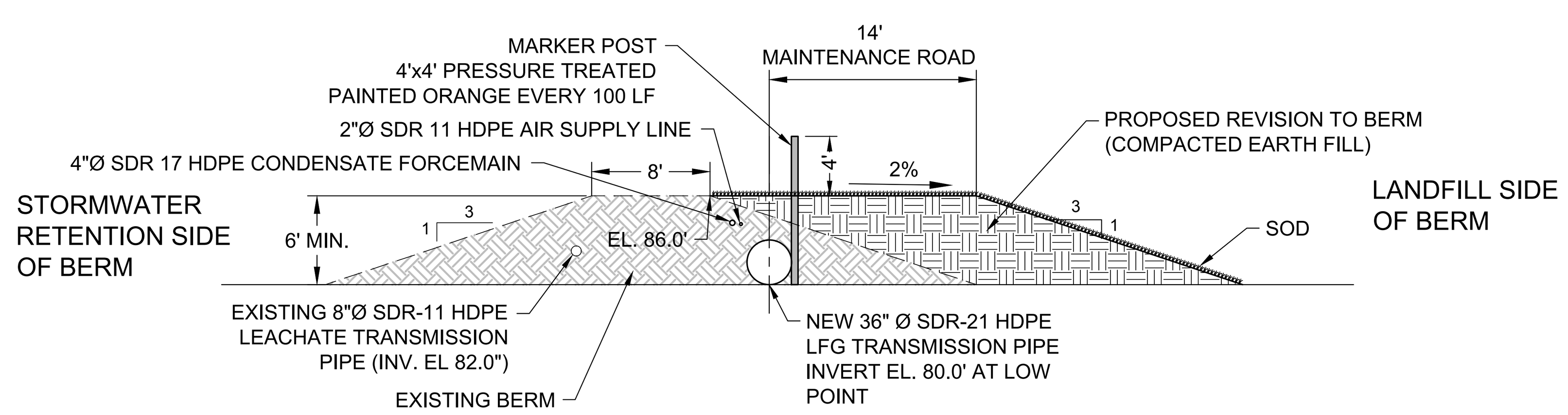
SHEET 4



1/5 HEADER PIPE AT PROPOSED PIPE CONNECTION

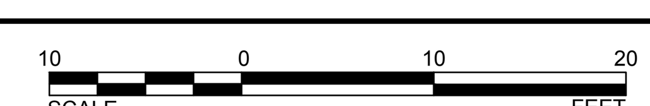


HIGH POINT

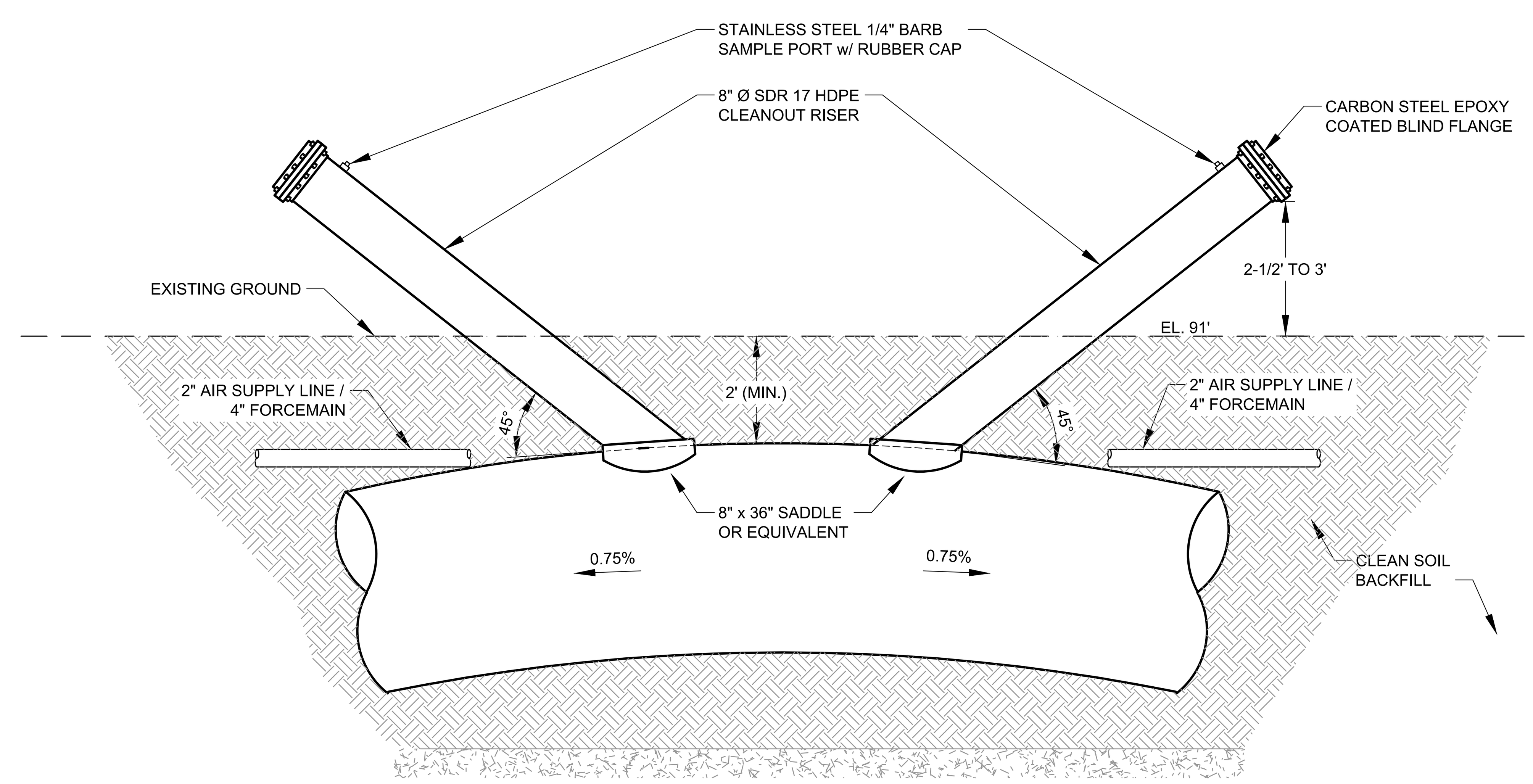


LOW POINT

2/5 CROSS SECTIONS AT HIGH POINT & LOW POINT



NOTE: AIR-SUPPLY AND FORCEMAIN LINES ARE NOT SHOWN FOR CLARITY.



3/5 CLEANOUTS AND SAMPLE PORTS AT HIGH POINT

NTS

REV	DATE	DES	REVISION DESCRIPTION	CADD	CHK	RVW
0						

PROJECT

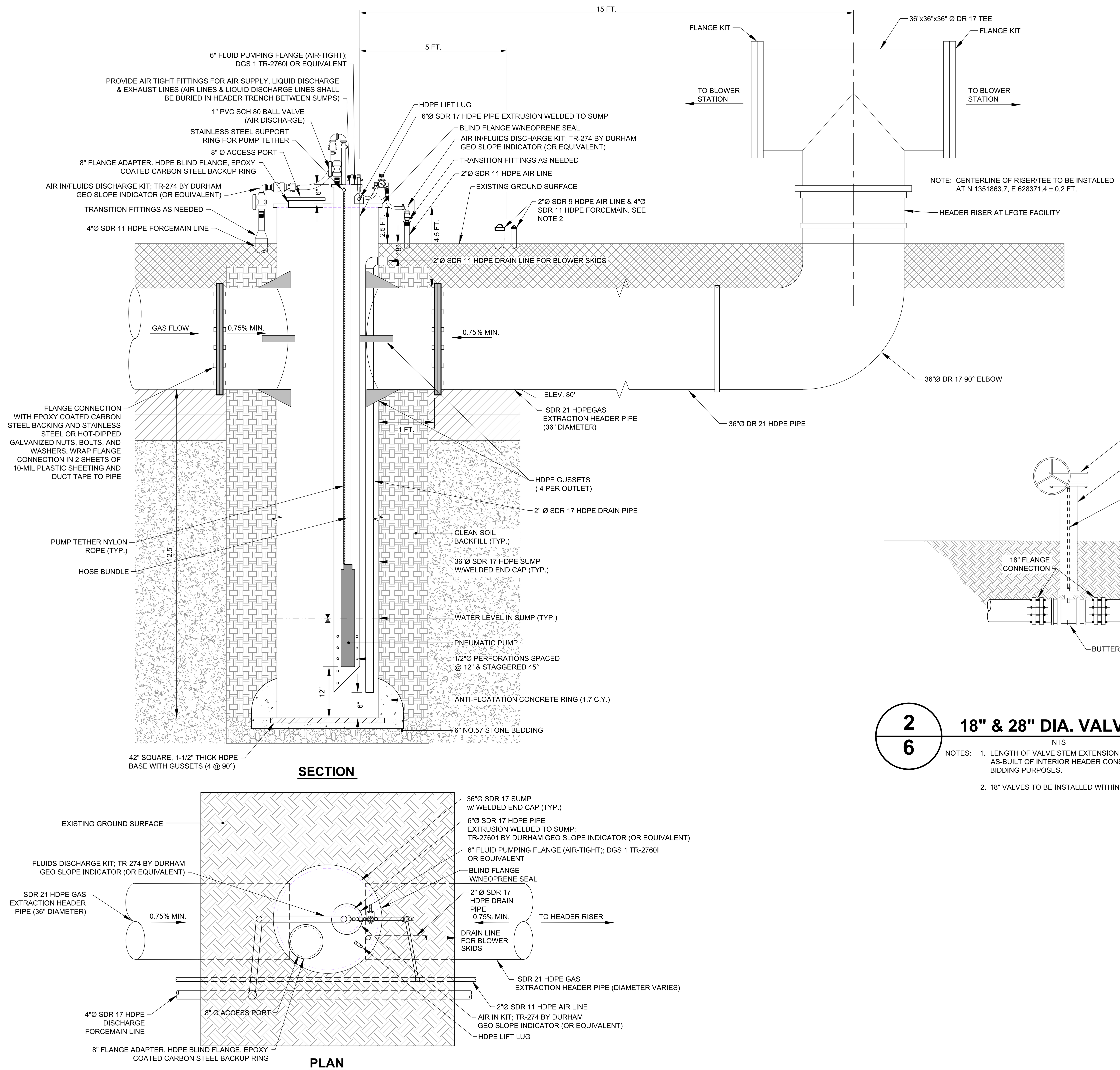
J.E.D. SOLID WASTE MANAGEMENT FACILITY
ST. CLOUD, OSCEOLA COUNTY, FLORIDA

TITLE

GCCS DETAILS (2 OF 3)

Golder Associates

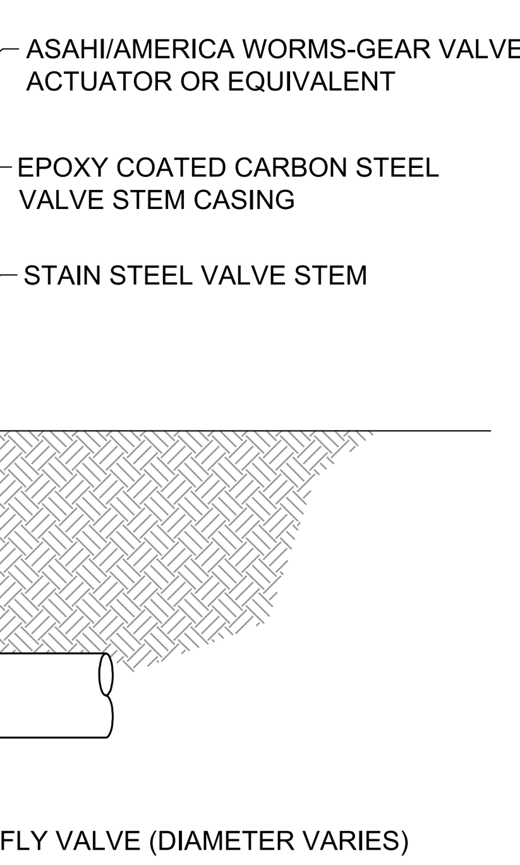
PROJECT No.		083-82734.37	FILE No. 08382734-M004
DESIGN	DEG	11/21/14	SCALE AS SHOWN
CADD	BCL	11/25/14	SHEET 5
CHECK	.	.	
REVIEW	.	.	



1/6 INLINE CONDENSATE SUMP AT LFGTE FACILITY DETAIL

NTS

NOTE: CENTERLINE OF SUMP TO BE INSTALLED ___ FT. FROM CENTERLINE OF HEADER RISER



2/6 18" & 28" DIA. VALVE DETAIL

NTS

NOTES:
1. LENGTH OF VALVE STEM EXTENSION TO BE DETERMINED FROM AS-BUILT OF INTERIOR HEADER CONSTRUCTION. ASSUME 5 FEET FOR BIDDING PURPOSES.
2. 18" VALVES TO BE INSTALLED WITHIN 3 FEET OF 18" x 18" X 18" TEE.

NOTES

1. ALL BELOW GROUND FLANGE CONNECTIONS TO BE WRAPPED IN 2 SHEETS OF 10-MIL PLASTIC SHEETING AND DUCT TAPED TO PIPE.
2. 2" AIRLINE AND 4" FORCEMAIN TO BE TERMINATED 2 FEET ABOVE GROUND WITH BUTT CAPS.

REV	DATE	DES	REVISION DESCRIPTION	CADD	CHK	RVW

PROJECT
J.E.D. SOLID WASTE MANAGEMENT FACILITY
ST. CLOUD, OSCEOLA COUNTY, FLORIDA

TITLE
GCCS DETAILS (3 OF 3)

Golder Associates

PROJECT No.		083-82734.37	FILE No.	08382734-M004
DESIGN	DEG	11/21/14	SCALE	AS SHOWN
CADD	BCL	11/25/14	SHEET 6	
CHECK	.	.		
REVIEW	.	.		