Environmental Consultants
and Contractors

4041 Park Oaks Boulevard
Suite 100
Tampa, FL 33610

813 621-0080
FAX 813 623-6757
www.scsengineers.com

SCS ENGINEERS

August 24, 2010
File No. 09207049.04

Ms. Susan J. Pelz, P.E.
FDEP, Southwest District Office
13051 N. Telecom Parkway
Temple Terrace, FL 33637-0926

Subject: Certification of Construction Completion
Southeast County Landfill, Hillsborough County, Florida
Landfill Gas Collection and Control System Construction Permit
Permit No.: 31375-017-SC/08
WACS No.: SWD/09/39859

Dear Susan:

SCS Engineers (SCS) is submitting two copies of the Certification of Construction Completion in accordance with Specific Condition Part B.2. and B.3 of Solid Waste Construction Permit No. 31375-017-SC/08, on behalf of Citrus County Division of Solid Waste Management. The report includes all required documents including Certificate of Construction Completion, form 62-701.999(2), record drawings, survey, and narrative required under Specific Conditions Part B.2. and B.3.

Please contact SCS at (813) 621-0080 with any questions.

Sincerely,

Daniel R. Cooper, P.E.
Project Manager
SCS ENGINEERS

C. Ed Hilton, P.E.
Vice President
SCS ENGINEERS

cc: Casey Stevens, Citrus County Division of Solid Waste Management

SCS ENGINEERS

Report of Construction
November 23, 2009 – July 6, 2010

Citrus County Central Class I Landfill Phase 1/1A & 2 Gas Collection and Control System Construction Permit No. 21375-017-SC/08

Citrus County Board of County Commissioners

P.O. Box 340
Lecanto, Florida 34460

Prepared by:

SCS ENGINEERS
4041 Park Oaks Blvd., Suite 100
Tampa, Florida 33610
(813) 621-0080
Fax: (813) 623-6757

Florida Board of Professional Engineers
Certification No. 00004892

August 24, 2010
File No. 09207049.04

Offices Nationwide
www.scsengineers.com

Report of Construction
November 23, 2009 – July 6, 2010

Citrus County Central Class I Landfill Phase 1/1A & 2 Gas Collection and Control System Construction
Permit No. 21375-017-SC/08

Prepared for:

Citrus County Board of County Commissioners
P.O. Box 340
Lecanto, Florida 34460

Prepared by:

SCS ENGINEERS
4041 Park Oaks Blvd.
Suite 100
Tampa, Florida 33610
(813) 621-0080

Florida Board of Professional Engineers
Certification No. 00004982

August 24, 2010
File No. 09207049.04

Florida Department of Environmental Protection
Twin Towers Office Bldg. • 2600 Blair Stone Road • Tallahassee, FL 32399-2400

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

DEP Application No. _____
(Filled by DEP)

Certification of Construction Completion of a Solid Waste Management Facility

DEP Construction Permit No: 21375-017-SC/08 County: Citrus

Name of Project: Phase 1/1A & 2 Gas Collection and Control System Construction

Name of Owner: Citrus County Board of County Commissioners

Name of Engineer: SCS Engineers

Type of Project: Installation of the LFG collection and control system, includes vertical extraction wells, leachate cleanout tie-ins, header and lateral piping, and blower/flare station.

Cost: Estimate $ 633,035.96 Actual $ $616,611.03

Site Design: Quantity: 350 ton/day Site Acreage: Landfill = 64 Acres

Deviations from Plans and Application Approved by DEP: The project was constructed in general conformance with the permitted plans and specifications. Deviations from the plans include well depth, header and lateral pipe routes, valve locations and above grade pipe tie-in location to header. New underground electrical service was added instead of overhead electrical. Leachate tie-ins to LCR-3, -5, -12, -13, -14, -15, -16, and -17 connections were modified to utilize electrofusion couplers instead of butt welds.

Address and Telephone No. of Site: 230 West Gulf to Lake Highway, Lecanto, Florida 34461
(352) 527-7670

Name(s) of Site Supervisor: Casey Stephens

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. 21375-017-SC/08 :Dated: November 4, 2009

Date: 3-24-10

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

Table of Contents

Section **Page**

Project Summary 1
Site Background 1
Contract Documents 1
Contact List 2
Summary of Construction 2
Vertical Extraction Wells 3
Remote Extraction Wells 3
LFG Header and Laterals 3
Pipe Slope 4
Condensate Traps and Sumps 4
Construction Records 4
Landfill Gas Extraction Well Schedule 5
Daily Field Reports 5
Construction Photographs 5
Record Drawings 5
Record Drawing Summary 7
Vendor List 8

Appendices

Appendix A As-Built LFG Extraction Well Schedule
Appendix B Daily Field Reports
Appendix C As-Built Construction Well Logs
Appendix D Construction Photographs
Appendix E Record Drawings (24”x36” Drawing Set Bound Separately)
Appendix F As-Built Survey Data Table

PROJECT SUMMARY

This report provides certification of construction for the Citrus County Central Class I Landfill, Citrus County, Phase 1/1A & 2 Gas Collection and Control System (GCCS) constructed from November 23, 2009 through July 6, 2010. This project is permitted under Construction Permit No. 21375-017-SC/08, issued by the Florida Department of Environmental Protection (FDEP).

SITE BACKGROUND

Citrus County Central Class I Landfill is an active municipal solid waste landfill that is owned by the Citrus County Board of County Commissioners and is operated by the Citrus County Division of Solid Waste Management (DSWM). It is located on S.R. 44, 3 miles east of Lecanto, Citrus County, Florida.

The landfill gas (LFG) system was an initial installation and included the following: 11 vertical extraction wells, 9 remote extraction wells, installation of 8" and 10" HDPE pipe for header, 6" and 4" HDPE solid pipe for laterals and risers and 2" HDPE pipe for air supply and condensate forcemain. The construction included two new condensate traps, a small three sided metal structure, and one blower skid system with all the appurtenances including a 35' flare on a new rock foundation with fencing around the perimeter.

Additional background information for the landfill is included in the "Application for Solid Waste Construction Permit – Landfill Gas Collection and Control System – Citrus County Central Landfill" that was prepared by SCS Engineers (SCS) dated April 22, 2009. It should be noted that the construction of this project was conducted in conjunction with the Re-closure of the 7-acre closed area onsite. A separate certification report will be submitted for that permit (No. 21375-014-SF/01), however only one set of Record Drawings containing both projects was produced.

CONTRACT DOCUMENTS

The following documents defined the design and technical aspects of the project and governed the construction:

- "7-Acre Closed Area Re-Closure and Landfill Gas System Construction Drawings", prepared by SCS dated August 25, 2009 (Sheets 17-27).
- "Bid Documents for 7-Acre Closed Area Re-Closure and Landfill Gas System, Bid No. 070-09", prepared by SCS Engineers for the Citrus County Board of County Commissioners, dated August 16, 2009.
- Construction Permit No. 21375-017-SC/08 issued by FDEP on November 4, 2009.

CONTACT LIST

The parties involved in this project are listed below:

Design Engineer, Construction Inspection: SCS Engineers 4041 Park Oaks Blvd., Suite 100 Tampa, FL 33610 (813) 621-0080	Construction Contractor: Belair Builders, Inc. 6220 Taylor Road, Suite 106 Naples, FL 34109 (239) 438-5942	Drilling Subcontractor: Shaw Environmental & Infrastructure, Inc. 16406 S.R. 224 East Findlay, OH 45840 (225) 987-6803
Surveyor, Record Documenter: BBLS Surveyors & Mappers, Inc. 1502-A Railhead Blvd. Naples, FL 34110 (239) 597-1315	Pipe Supplier: Ferguson Enterprises, Inc. (FL) 17323 Jean Street Fort Myers, FL 33912 (239) 433-0555	Electrical Subcontractor: Coastal Electrical Contractors 8515 N. Trask Street Tampa, FL 33624 (813) 876-9362 x 213
Sod & Seeding: North Lake Sod 974 Hawk Landing Fruitland Park, FL 34731 (352) 267-1609		

SUMMARY OF CONSTRUCTION

On November 23, 2009, the DSWM issued Belair Contractors (Belair) the notice to proceed with construction. Substantial completion of the project, as outlined in the Contract Documents and Application for Construction Permit, was achieved on May 5, 2010, and final completion was accepted on July 6, 2010.

The project consisted of constructing/installing the following approximate quantities:

- 11 vertical LFG extraction wells with a total drilling depth of 820 feet (ft)
- 9 remote LFG extraction wells for leachate tie-ins
- 181 ft of 10-inch diameter HDPE SDR 17 LFG header pipe
- 2,674 ft of 8-inch diameter HDPE SDR 17 LFG header pipe
- 894 ft of 6-inch diameter HDPE SDR 17 LFG lateral pipe
- 1,030 ft of 4-inch diameter HDPE SDR 17 LFG lateral pipe and risers above and below grade
- 110 ft of 2-inch diameter HDPE SDR 11 condensate/dewatering forcemain
- 1,454 ft of 2-inch diameter HDPE SDR 9 air supply pipe
- Twelve leachate collection riser tie-ins for gas extraction
- Two self-draining condensate traps

- Two condensate sumps fitted with pneumatic dewatering pumps
- One metal building for storage and housing the air compressor
- Blower skid with one blower and all appurtenances including control panel and air compressor/dryer
- New flare on concrete foundation with chain link fencing around perimeter

Vertical Extraction Wells

Vertical extraction wells were constructed with 6-inch diameter schedule 80 polyvinyl chloride (PVC) pipe in a 36-inch diameter borehole. The boreholes were terminated at no less than 15 feet above the estimated bottom of the cell. The PVC pipe was slotted, as specified in the design drawings, to within no less than 20 feet of the ground surface. FDOT No. 4 non-calcareous stone was used as backfill around the slotted pipe in all wells. A geocomposite was placed over the stone prior to placing clean soil backfill around the solid-wall pipe. A 24-inch thick hydrated bentonite plug was installed at each well 16-40 feet below the existing grade depending on the length of solid pipe. Vertical extraction wells are connected to the vacuum in the header line utilizing an adjustable wellhead. The wellhead is connected to a vacuum riser on the header line and to the vertical well directly or via remote wellhead.

During construction, the depths of seven wells were adjusted based upon drillers ability to drill once waste was severely decomposed or saturated. The as-built well locations, well schedule, and construction details are shown on the site plans included in the Record Drawings in Appendix E.

Remote Extraction Wells

Remote extraction wells were constructed with 4-inch diameter HDPE SDR 17 pipe tied in to select leachate cleanout risers. Each of the connections to the leachate cleanout risers is valved so any or all cleanout connections can be turned off should no LFG be present in the cleanout. In some cases multiple cleanout connections are run to a single wellhead connected to the vacuum in the header line. The Record Drawings in Appendix E indicate where all leachate cleanouts are connected.

LFG Header and Laterals

The LFG header and laterals were constructed using HDPE SDR 17 pipe. Lateral pipes generally were installed with a minimum 3 percent slope to allow condensate in the pipes to drain into the header. The header was installed with a slope varying from 3 percent to greater than 20 percent. The header is designed to drain condensate to engineered low spots at the condensate traps.

The base of the LFG lateral and header trench had a minimum of 6-inches of sand bedding and both the bedding and sand backfill were compacted using a vibrating compactor. Pipes were then covered with a clean soil backfill free of excavated refuse. Caution tape with print stating "gas line buried below" was buried in the backfill approximately 1 foot above top of pipes.

Pipe Slope

The header, laterals, horizontal collectors and air/condensate lines were installed with a minimum slope of 3 percent, which is the standard for LFG pipes installed within an active landfill. Pipes located outside of the landfill footprint were installed with a 1 percent minimum slope.

To confirm pipe slope, the contractor checked the pipe slope at 10-foot intervals along the entire pipeline. Also per the Contract Documents, the pipe coordinates and elevations were surveyed at the intervals required by Section 31 20 00 - 8 and 31 20 00 - 9 of the Contract Documents, which includes 50-foot intervals and at each change in pipe direction, grade break, fitting, connection, and tie-in. Complete as-built survey data tables are included within this construction certification in Appendix F.

Condensate Traps and Sumps

Two self-draining condensate traps, CT-1 and CT-2, were installed in Phases 1/1A & 2 to collect condensate from the header. These sumps will drain condensate from the gas system back into the landfill. These sumps are also equipped for the installation of a pneumatic pump should draining into the landfill become problematic or if additional liquids removal is required in the future. No pumps were installed in traps at this time.

Two condensate sumps, CS-1 and CS-2, fitted with pneumatic dewatering pumps, were installed to collect and remove condensate from the gas collection system. To operate the pumps, air supply and condensate forcemain stub-ups were installed and connected appropriately to each of the sumps. Condensate discharged from the sumps is routed into the existing leachate collection system via the 2-inch condensate discharge line as shown on Drawing 18 of the Record Drawings in Appendix E.

CONSTRUCTION RECORDS

The following construction documentation is provided as appendices:

- Appendix A As-Built LFG Extraction Well Schedule
- Appendix B Daily Field Reports
- Appendix C As-Built Construction Well Logs
- Appendix D Construction Photographs
- Appendix E Record Drawings (24”x36” Drawing Set included along with this Submittal)
- Appendix F As-Built Survey Data Table

Landfill Gas Extraction Well Schedule

A summary of the as-built well depths, length of slotted and solid-wall pipe, and thickness of stone backfill layers is provided on the as-built well schedule included in Appendix A, as well as on Sheet 22 of the Record Drawings. Additional information including removal waste composition and temperatures can be found in the as-built construction well logs in Appendix C.

Daily Field Reports

During the construction quality assurance (CQA) inspection activities, SCS maintained daily field reports detailing the construction progress and various issues that were addressed throughout the project. The reports included in Appendix B were used to prepare this certification report and the Record Drawings.

Construction Photographs

Photographs were taken by SCS on a regular basis in order to document each phase of the construction. The photographs included in Appendix D provide a general representation of the construction activities and methods.

Record Drawings

As mentioned in the Site Background section the work permitted under this project was constructed in conjunction with another solid waste project that performed the 7-Acre Closed Area Re-closure work permitted under Permit No. 21375-014-SF/01. Rather than produce two separate sets of Record Drawings one set has been produced that includes the work for both projects. Appendix E contains the entire record drawing set, however only Sheets 17 though 27 plus E-1 through E-3 apply for this permit and are discussed below.

Other than those deviation noted above in this report, the project was completed in general conformance with the Contract Documents. Due to contractor product choices and field conditions there are additional minor deviations that are indicated in the record drawings that are outlined below on a sheet by sheet basis for those sheet that are applicable the work permitted under this construction permit.

Sheet #	Changes made from permitted plans and reason for the change
Cover	Added additional sheet information for Surveyor sheets added to legend as well as Record Drawing Stamp
17	Changes to header and lateral pipe routes and high points occurred due to topographic and field operating conditions during construction. Changes to piping interconnecting risers 1, 2 & 3. Also note that 4-inch lateral from W-1 to risers 1, 2 & 3 was not installed as there is currently a low point between W-1 and the risers that must be filled in before appropriate slope for drainage can be achieved. Once achieved this pipe from W-1 to the interconnect will be installed at 3% slope. Interconnecting piping

	for risers 5, 7, & 8 as well as 12 and 12A was also changed to conserve pipe and keep all connections outside of waste rather than inside footprint as shown on permitted drawings. Above grade piping from W-7 to 8-inch header was relocated to avoid penetrating liner with stakes used in pipe supports. Tie-in of the above grade header now enters 8-inch header rather than connecting with pipe near W-8.
18	Changes to pipe routes due to topographic and field operating conditions during construction. New underground electrical connections and new electrical panel where added. Compressor shed appropriately sized based upon installed enclosure. Protective fencing around entire blower/flare and compressor is shown.
19	Detail 3 shows revisions required by field conditions where an electrofusion coupling and a fernco cap were used instead of cutting back the pipe further and butt welding. (A concrete support was preserved to support the pipe). Detail 4 Applicability was corrected since this configuration was used not only on risers 3 and 5, but on 3,5,15 and 16. Detail 6 was corrected to show shortened distance between connections, with above grade piping moved further into the landfill. Electro-fusion couplings that were used in place of butt weld is also shown. Detail 7 applicability was modified to remove risers 6, 7, 8, & 9 which did not receive this lid modification. These lids on those risers were preserved and sealed with a silicone seal and additional bolts rather than be replaced.
20	Contractor notes were revised or removed. Product numbers and suppliers were modified based on installed equipment on details 5 & 8. Detail 7 was modified to show electro-fusion coupling and modified lid rather than quick cap.
21	Detail 1 and 2 were modified to show the actual installed connections which included electro-fusion couplings instead of butt welds and modified flange caps versus quick cap. Orifice plate note was added to both details.
22	Changes in Well depths and subsequently other pipe lengths were made based upon field elevations and ability to drill in the waste in each area. New well schedule indicates as-built well conditions. Contractor notes were revised or removed
23	Details 1 through 4 notes and descriptions either edited or removed. Detail 6 Modified to show actual compressor configuration that was installed based on manufacturer provided configuration.
24	Detail 2 was modified to show the actual installed connection which include electro-fusion couplings instead of butt weld due to concrete support and modified flange caps versus quick cap. Orifice plate note was added to both details.
25	Detail notes were edited or removed to reflect actual installation.
26	Detail notes were edited or removed to reflect actual installation.
27	Detail 1 and Section A- Revised to reflect actual installed

	blower/flare components based upon contractor constructed flare whose configuration varied slightly from flare shown on permitting documents, but met all performance criteria. Contractor notes were revised or removed.
E-1	Power Plan – Revised to show CP on blower skid and additional panel M required based on manufacturer power configuration and County codes.
E-2	Riser Diagram Revised to show CP on blower skid and additional panel M required based on manufacturer power configuration and County codes.
E-3	No Change

Record Drawing Summary

The Record Drawings showing the as-built conditions were prepared by SCS and signed and sealed by Daniel R. Cooper, P.E., who is a Professional Engineer registered in Florida. The electrical record drawings were signed and sealed by the sub-consultant to SCS.

- Sheet 1 Cover Sheet
- Sheet 2 7-Acre Closed Area Reclosure – Existing Site Plan
- Sheet 3 7-Acre Closed Area Reclosure – Proposed Final Closure Site Plan
- Sheet 4 7-Acre Closed Area Reclosure – Sections – 1
- Sheet 5 7-Acre Closed Area Reclosure – Sections – 2
- Sheet 6 7-Acre Closed Area Reclosure – Sections – 3
- Sheet 7 7-Acre Closed Area Reclosure – Sections – 4
- Sheet 8 7-Acre Closed Area Reclosure – Sections – 5
- Sheet 9 7-Acre Closed Area Reclosure – Proposed Dry Retention Area Improvements
- Sheet 10 7-Acre Closed Area Reclosure – Detail
- Sheet 11 (Not Used)
- Sheet 12 80-Acre Area – Existing Site Plan
- Sheet 13 80-Acre Area – Erosion Control Improvements Site Plan
- Sheet 14 80-Acre Area – Erosion Control Improvements Details – 1
- Sheet 15 80-Acre Area – Erosion Control Improvements Details – 2
- Sheet 16 80-Acre Area – Erosion Control Improvements Details – 3
- Sheet 17 Landfill Gas System – Proposed Site Plan
- Sheet 18 Landfill Gas System – Proposed Blower/Flare Station Grading Plan
- Sheet 19 Landfill Gas System – Details – 1
- Sheet 20 Landfill Gas System – Details – 2
- Sheet 21 Landfill Gas System – Details – 3
- Sheet 22 Landfill Gas System – Details – 4
- Sheet 23 Landfill Gas System – Details – 5
- Sheet 24 Landfill Gas System – Details – 6
- Sheet 25 Landfill Gas System – Details – 7
- Sheet 26 Landfill Gas System – Details – 8

- Sheet 27 Landfill Gas System – Details – 9
- Sheet E-1 Electrical Power Plan
- Sheet E-2 Riser Diagram and Panel Schedules
- Sheet E-3 Electrical Line Diagram
- Survey BBLS – As-Built Survey Dated May 10, 2010.

VENDOR LIST

The following vendors supplied Belair Builders, Inc. with the materials used for the project:

Pipe Supplier	**Ferguson Enterprises, Inc. (FL)** 17323 Jean Street Fort Myers, FL 33912 (239) 433-0555
Silt Fencing	**Southeastern Silt & Erosion, Inc** 903 E. 17th Avenue Tampa, FL 33605 (800) 248-2099
Air Compressor and Dryer	**Grainger, Inc.** 100 Grainger Pkwy Lake Forest, IL 60045 (847) 753-5353
Aggregate Base	**Sean M. Gerrits, Inc.** P.O. Box 581 Crystal River, FL 34423 (352) 795-7170
Precast Concrete Structures	**Oldcastle Precast, Inc.** 2140 Pondella Road Cape Coral, FL 33909 (239) 574-8896
Pneumatic Leachate Pumps **Well Caps**	**QED Environmental Systems** P.O. Box 3726 Ann Arbor, MI 48106 (800) 624-2026
Blower/Flare Station and Control Panel	**LFG Specialties, LLC** Shaw Environmental & Infrastructure Group 16406 US Route 224 E Findlay, OH 45840 (419) 424-4915

APPENDIX A

AS-BUILT LFG EXTRACTION WELL SCHEDULE

7-ACRE CLOSED AREA LANDFILL RE-CLOSURE AND GCCS EXPANSION
CENTRAL LANDFILL, CITRUS COUNTY, FLORIDA

Well ID	As-Built Surveyed Northing (ft)	As-Built Surveyed Easting (ft)	As-Built Surveyed Ground Surface (ft)	Well Depth (ft)	Slotted Pipe Length (ft)	Solid Pipe Length Below Grade (ft)	Solid Pipe Length Above Grade (ft)	Thickness of Gravel Pack (ft)
EW-1	1,642,041	516,123	169	90	69	20	3	71
EW-2	1,642,018	516,437	166	90	69	20	3	71
EW-3	1,642,053	516,675	161	90	69	20	3	71
EW-4	1,642,312	516,026	146	70	49	20	3	51
EW-5	1,642,268	516,281	134	81	60	20	3	62
EW-6	1,642,287	516,504	132	50	29	20	3	31
EW-7	1,642,259	516,727	128	73	52	20	3	54
EW-8	1,642,425	516,648	128	70	49	20	3	51
EW-9	1,642,462	516,455	123	70	49	20	3	51
EW-10	1,642,502	516,259	134	70	49	20	3	51
EW-11	1,642,515	516,052	130	66	45	20	3	47
TOTAL				**820**	**588**	**220**	**33**	**611**

APPENDIX B

DAILY FIELD REPORTS

SCS ENGINEERS DAILY FIELD REPORT

Project: Citrus County Landfill **Project Number: 09207049.04**
Owner: Citrus County Florida **Contractor: Southeast Environmental Const. Inc.**

Date: 11-23-2009 **Contract Day:** **Contract Duration:**
Days Remaining:

Temperature: (AM) 68 **(PM)** 77 **Rain:** **Duration of Rain:**
Description of weather:

List of Equipment on site: (A) for active (I) for idle

1 excavators	2 dozers
skid steers	
2 off-road trucks	
	Numerous other pieces of equip and semi-trailer

Personnel on site:

Gary Silbernagel, Jeff	Mike Wimer	
No. of Superintendents	**No. of Skilled**	**No. of Laborers**

Description of Construction Activity:
Met Gary and had a conversation about his plans for today. Men are being drug tested and watched a safety video.
Two men moving silt fencing a little further out at DRA-1 on east side. A few small trees had to be removed (see photos).
Dan called for an update.
Survey stakes in place at DRA-1, and work begins with one excavator and two dozers. At 10:40 - Mike Wimer took an elevation at bottom of DRA-1 and the excavator was 12" too deep, I informed dozer operator and problem resolved by dozer flling in area and grading correctly.
I called Dan about the monitoring probe #1 on north side of administration building being inside the stakes at DRA-3 and he said to stay about two feet away and I explained the same to Gary and Mike.
Belair was having trouble getting the GPS system to work on dozers.
Survey crew installing stakes at DRA-2.
Left the site at 4:15 and men had hauled 48 loads to soil collection area.

List of Subcontractors:
BBLS Surveyors – Naples, Fl

List of Materials Delivered:

List of Quantities installed this date:

Item Description	Quantity	Accumulated Quantity

Field Representative: Jim Burzenski Date: 11/23/2009

SCS ENGINEERS DAILY FIELD REPORT

Project: Citrus County Landfill **Project Number: 09207049.04**
Owner: Citrus County Florida **Contractor: Southeast Environmental Const. Inc.**

Date: 1-15-2010 **Contract Day:** **Contract Duration:**
Days Remaining:

Temperature: (AM) 71 **(PM)** 76 **Rain:** **Duration of Rain**:
Description of weather:

List of Equipment on site: (A) for active (I) for idle

1 excavators	2 dozers
skid steers	
2 off-road trucks	
	Numerous other pieces of equip and semi-trailer

Personnel on site:

	Mike Wimer	
No. of Superintendents	**No. of Skilled**	**No. of Laborers**

Description of Construction Activity:

Site visit to procure samples of liner and soil to be sent to a lab in Austin, TX.

Mike Wimer (with Citrus County) and I cut 4 samples from three different liner rolls (all from the same lot). From two rolls a 1' sample was taken the length of the roll and from one roll a 1' and a 2' sample were removed.

I purchased a five gallon bucket at Lowe's on my trip to the landfill which I filled the soil that will be used for the sub-base.

Also observed that a crew was moving soil and then grading it where the skid will be placed.

List of Subcontractors:

List of Materials Delivered:

List of Quantities installed this date:

Item Description	Quantity	Accumulated Quantity

Field Representative: Jim Burzenski Date: 1/15/2010

SCS ENGINEERS DAILY FIELD REPORT

Project: Citrus County Landfill
Owner: Citrus County

Project Number: 09207049.04
Contractor: Belair

Date: 1/19/2010 **Contract Day:** **Contract Duration:**
Days Remaining:

Temperature: **(AM)** 49 **(PM)** 64 **Rain:** **Duration of Rain:**
Description of weather: Clear and cool

List of Equipment on site: (A) for active (I) for idle

Volvo Excavator	
Volvo Off Road Dump	
Drilling Rig	

Personnel on site:

Gary Silbernagel W/Belair	Mike, Craig	
No. of Superintendents	**No. of Skilled**	**No. of Laborers**

Description of Construction Activity: 7:00 to 5:00 and 1 hour in evening
Conversation with Gary about plans for today, gave him a new set of plans and some paperwork from Dan.
Two men w/Belair start trenching just north of skid area across the asphalt road working to the northeast towards ditch. On the north side of asphalt road excavator hit to PVC pipes (a 4" and a 6"). Site personnel said these pipes were running from the treatment plant to the large holding tank to the southeast of the new skid. Men had no as-builts that would indicate these pipes were buried here.Men continued to excavate this road crossing and installed one 20' section of 18" CMP then backfilled with soil and compacting several times.

Late in the day two men with Shaw arrive at site as well as the drilling rig and materials for well installation. Rock will not arrive until tomorrow.

List of Subcontractors:

Shaw Drilling – Stacey, Wes	Mike Wimer with County	
Mobilizing	intern Carley	

List of Materials Delivered:

List of Quantities installed this date:

Item Description	Quantity	Accumulated Quantity
18" CMP	20'	

Field Representative: Jim Burzenski Date: 1-19-2110

SCS ENGINEERS DAILY FIELD REPORT

Project: Citrus County Landfill
Owner: Citrus County

Project Number: 09207049.04
Contractor: Belair

Date: 1/20/2010 **Contract Day:** **Contract Duration:**
Days Remaining:

Temperature: (AM) 48 (PM) 66 **Rain:** **Duration of Rain:**
Description of weather: Clear and cool

List of Equipment on site: (A) for active (I) for idle

Volvo Excavator	
Volvo Off Road Dump	
Drilling Rig	

Personnel on site:

No. of Superintendents	No. of Skilled	No. of Laborers
Gary Silbernagel	Mike, Craig	

Description of Construction Activity: 7:00 – 5:30 and 1 hour in the evening
Men with Shaw begin well drilling at GV-01. Even after 10' of soil cover has been removed from this 7 acre area, there remains 10' of soil cover.
Men with Belair continue working fusing HDPE pipe with fittings and getting ready for trench work.
Per Dan's call to me yesterday, I got serial numbers off three rolls of liner and these were sent to lab in Texas.
Another conversation with Gary about saddle installation's at LC's.
Driller installs well pipe at GV-01 and moves to GV-02. Second man completes GV-01 with rock, donut, bentonite, etc.
Driller hit muck at GV-02 and continued to spin bucket for an hour, could not go deeper than 35', I called Dan, well was set at this depth.

List of Subcontractors:

Shaw Drilling – Stacey, Wes		
Mike Wimer		

List of Materials Delivered:

Rock for wells (granite)		

List of Quantities installed this date:

Item Description	Quantity	Accumulated Quantity
GV-01		
GV-02		

Field Representative: Jim Burzenski Date: 1-20-2110

SCS ENGINEERS DAILY FIELD REPORT

Project: Citrus County Landfill
Owner: Citrus County

Project Number: 09207049.04
Contractor: Belair

Date: 1/21/2010 **Contract Day:** **Contract Duration:**
Days Remaining:

Temperature: **(AM)** 58 **(PM)** 56 **Rain:** Yes **Duration of Rain:** Lt. rain at 7:00
Description of weather: Clear and cool

List of Equipment on site: (A) for active (I) for idle

Volvo Excavator	
Volvo Off Road Dump	
Drilling Rig	

Personnel on site:

Gary Silbernagel	Mike, Craig	
No. of Superintendents	**No. of Skilled**	**No. of Laborers**

Description of Construction Activity: 7:00 -
Myself, Mike Wimer and Craig and Mike w/Belair moved rolls of liner and cut two more 1' samples from two rolls. Dan took these samples back to Tamp to be sent to the lab.
Two men with Belair continue fusing pipes/fittings.
Well drilling starts at GV-06. Driller having a hard time grabbing and removing soil/sand from hole. Driller and helper left site to have bucket modified.
Four man crew that Belair hired (as sub), forming up for concrete slab pour for air compressor building.
Testing company PSI, Inc. took 8 soil samples for slab, skid and pier areas on each side of ditch. The area on the south side of ditch was just 88% compaction. I took Gary out of construction meeting and he had his men compact this area after which it passed at 96%.
Driller continued drilling GV-06 again with modified bucket. This well was drilled but after a cave in (and a possible dangerous situation) a depth of 35' was all that could be installed.
Two men with Belair worked at fusing 2" HDPE pipe that will run from skid area to existing treatment holding tank.

List of Subcontractors:

Shaw Drilling – Stacey, Wes		

List of Materials Delivered:

List of Quantities installed this date:

Item Description	**Quantity**	**Accumulated Quantity**

Field Representative: Jim Burzenski Date: 1-21-2110

SCS ENGINEERS DAILY FIELD REPORT

Project: Citrus County Landfill
Owner: Citrus County

Project Number: 09207049.04
Contractor: Belair

Date: 1/22/2010 **Contract Day:** **Contract Duration:**
Days Remaining:

Temperature: **(AM)** 48 **(PM)** 67 **Rain:** **Duration of Rain:** ¾" rain last night
Description of weather: Clear, cool and windy

List of Equipment on site: (A) for active (I) for idle

Volvo Excavator	
Volvo Off Road Dump	
Drilling Rig	

Personnel on site:

Gary Silbernagel	Mike, Craig, Mark	
No. of Superintendents	**No. of Skilled**	**No. of Laborers**

Description of Construction Activity: 6:45 – 5:30
Drilling starts at GV-04 at 6:45 and well completed per specs.
Sod being rolled in #1 area, ground very wet from last nights rain and fork lift making deep ruts.
9:30 Gary said the reclosure area was too wet to grade and prepare for liner crew.
Drilling rig moved to GV-07 @ 9:40 and well completed at 1:45.
Driller moves to GV-08 and starts drilling @ 1:40 while other 2 men complete GV-07.
*All wells were ½ soil and ½ severe waste, 10' of soil cover over entire 7 acre reclosure area.
4:15 driling rig moves to GV-09 and at approximate 10' hole is covered.

List of Subcontractors:

Shaw Drilling – Stacey, Wes		

List of Materials Delivered:

List of Quantities installed this date:

Item Description	**Quantity**	**Accumulated Quantity**

Field Representative: Jim Burzenski Date: 1-22-2110

SCS ENGINEERS DAILY FIELD REPORT

Project: Citrus County Landfill
Owner: Citrus County

Project Number: 09207049.04
Contractor: Belair

Date: 1/23/2010 **Contract Day:** **Contract Duration:**
Days Remaining:

Temperature: **(AM)** 48 **(PM)** 56 **Rain:** **Duration of Rain:**
Description of weather: Overcast, cool & windy

List of Equipment on site: (A) for active (I) for idle

Volvo Excavator	
Volvo Off Road Dump	
Drilling Rig	

Personnel on site:

Gary Silbernagel	Mike, Craig	
No. of Superintendents	**No. of Skilled**	**No. of Laborers**

Description of Construction Activity: 6:45 – 9:57 and one hour of paperwork/photo work
Drilling resumes at GV-09

3 flatbed semi trailers of sod delivered last night and men continue to install in the #1 pond to the west.

Gary w/Belair drives Stacey (the driller with Shaw) around to check out the other wells to be drilled.

Mike Wimer asked if he could make copies of my well logs. I let him but told him they were not complete and will be turned into electronic format.

GV-09 completed.

Driller will mobe to the other hill Monday morning.

List of Subcontractors:

Shaw Drilling – Stacey, Wes		

List of Materials Delivered:

List of Quantities installed this date:

Item Description	**Quantity**	**Accumulated Quantity**
GV-09		

Field Representative: Jim Burzenski Date: 1-23-2110

SCS ENGINEERS DAILY FIELD REPORT

Project: Citrus County Landfill
Owner: Citrus County

Project Number: 09207049.04
Contractor: Belair

Date: 1/25/2010 **Contract Day:** **Contract Duration:**
Days Remaining:

Temperature: **(AM)** 51 **(PM)** 49 **Rain:** **Duration of Rain:** 1" of rain last night
Description of weather: Cloudy, cool & windy

List of Equipment on site: (A) for active (I) for idle

Volvo Excavator	
Volvo Off Road Dump	
Drilling Rig	

Personnel on site:

Gary Silbernagel	Mike, Craig	
No. of Superintendents	**No. of Skilled**	**No. of Laborers**

Description of Construction Activity: 6:30 – 5:00 and one hour in the evening
Three men with Shaw mobilize drilling rig & materials from 7 acre reclosure area to EW-01.

Drilling begins at EW-01 which has severely decomposed and very wet waste at just 15' deep.

Man w/Belair using excavator and dozer to correct problems on the 7 acre area at SW & NE corners.

More sod delivered for the area north of the admin. bldg.
1
1:15-11:30 conversation with Carmen at EW-01

Saw cut made in new concrete pad for the compressor building.

Pipe for EW-01 set at 3:45. We; completed according to specifications at 5:05.

Drilling rig moves to EW-02.

List of Subcontractors:

Shaw Drilling – Stacey, Wes,		
Lee		

List of Materials Delivered:

Rock for wells		

List of Quantities installed this date:

Item Description	**Quantity**	**Accumulated Quantity**
EW-01		

Field Representative: Jim Burzenski Date: 1-25-2110

SCS ENGINEERS DAILY FIELD REPORT

Project: Citrus County Landfill
Owner: Citrus County

Project Number: 09207049.04
Contractor: Belair

Date: 1/26/2010 **Contract Day:** **Contract Duration:**
Days Remaining:

Temperature: **(AM)** 44 **(PM)** 54 **Rain:** **Duration of Rain:**
Description of weather: Clear, cool

List of Equipment on site: (A) for active (I) for idle

Volvo Excavator	
Volvo Off Road Dump	
Drilling Rig	

Personnel on site:

Gary Silbernagel		
No. of Superintendents	**No. of Skilled**	**No. of Laborers**

Description of Construction Activity: 6:30 – 10:30 and two hours at the office

Three men with Shaw ready to drill EW-02.
Drilling rig will not start and makes noise when first try to start.

Ring Power called to fix. Starter is completely burned up. Numerous phone calls were made and a part was found in Miami. Rig should be fixed late today and should resume drilling tomorrow morning.

Mike Wimer and intern

List of Subcontractors:

Shaw Drilling – Stacey, Wes,		
Lee		

List of Materials Delivered:

List of Quantities installed this date:

Item Description	**Quantity**	**Accumulated Quantity**

Field Representative: Jim Burzenski Date: 1-26-2110

SCS ENGINEERS DAILY FIELD REPORT

Project: Citrus County Landfill
Owner: Citrus County

Project Number: 09207049.04
Contractor: Belair

Date: 1/27/2010 **Contract Day:** **Contract Duration:**
Days Remaining:

Temperature: **(AM)** 48 **(PM)** 65 **Rain:** **Duration of Rain:**
Description of weather: Clear, cool

List of Equipment on site: (A) for active (I) for idle

Volvo Excavator	
Volvo Off Road Dump	
Drilling Rig	

Personnel on site:

Gary Silbernagel		
No. of Superintendents	**No. of Skilled**	**No. of Laborers**

Description of Construction Activity: 6:30 – 5:30
Man with Ring Power installs starter in drilling rig, shaw personnel also install a new cable on the rig as well.

Met with Kurt and gave him paperwork from Dan and updated him on 7 area re-closure site.

Drilling starts at EW-02 and well completed at 5:20.

Sod continues to be placed in area north of admin. bldg.

Communications with Dan about Belair schedule and time table for well drilling.

Kurt and Mike Wimer inspecting rolls of liner in boneyard for areas that need to be repaired.

Casey at EW-02 2:30 to watch well drilling and for update.

Gary has his man roll the 7 acre site before liner install.

List of Subcontractors:

Shaw Drilling – Stacey, Wes,		
Lee		

List of Materials Delivered:

Rock for wells		

List of Quantities installed this date:

Item Description	**Quantity**		**Accumulated Quantity**
EW-02	Solid	Slotted	

Field Representative: Jim Burzenski Date: 1-27-2110

SCS ENGINEERS DAILY FIELD REPORT

Page _____ of _____

Project: 7-Acre Closed Area Landfill Re-closure and Landfill Gas System Citrus County Landfill **Project number:** 09207049.04 Liner

Owner: Citrus County **Contractor:** Belair/ESI

Date: 1/27/10 WED **Contract Day:** 66 **Contract Duration** _____

Weather
Temperature: (AM) 57 **(PM)** 63 **Rain** _____ **Rainfall (inches)** _____
Description of weather: SUNNY & CLEAR

List of Active Equipment on site
LULL FORK DELIVERED

Equipment Not Used/Down:

Personnel on site:

No. of Superintendents	No. of Skilled	No. of Laborers
		6

Description of Construction Activity ON SITE 7:00 AM. LINER CREW MOBILIZED 6 TECHNITIONS TO FILL SAND BAGS. BELAIR PRE-PARING SUB GRADE AND UNCOVERING TIE-IN.

INVENTORIED LINER ON SITE. WALKED EXISTING PRIMARY MARKING REPAIRS ON EXISTING PRIMARY.

List of Subcontractors

List of Materials Delivered

Contract Issues/Conflicts
Description:

Field Representative _____ **Date** 1/28/10

SCS ENGINEERS DAILY FIELD REPORT

Project: Citrus County Landfill
Owner: Citrus County

Project Number: 09207049.04
Contractor: Belair

Date: 1/28/2010 **Contract Day:** **Contract Duration:**
Days Remaining:

Temperature: **(AM)** 47 **(PM)** 63 **Rain:** **Duration of Rain:**
Description of weather: Clear, cool

List of Equipment on site: (A) for active (I) for idle

Volvo Excavator	
Volvo Off Road Dump	
Drilling Rig	

Personnel on site:

Gary Silbernagel		
No. of Superintendents	**No. of Skilled**	**No. of Laborers**

Description of Construction Activity: 6:20 – 5:30
Drilling begins at EW-03 at 6:20 in the morning and this well is completed at 1:00.

Conversation with Kurt about liner for 7 acre area.

Dan on site mid-morning to assist Carmen (with site) with a field trip by a dozen high school students.

Driller moves to EW-04 and begins at 1:05. Driller reaches a depth to 70' at 4:45 then hole was covered with heavy metal grate, plywood, sand around perimeter and the drilling bucket on top.

Men with ESI taking rolls of liner from boneyard to the 7 acre site.

Shaw Drilling – Stacey, Wes,		
Lee		

List of Materials Delivered:

List of Quantities installed this date:

Item Description	**Quantity**	**Accumulated Quantity**

Field Representative: Jim Burzenski Date: 1-27-2110

SCS ENGINEERS DAILY FIELD REPORT

Page _____ of _____

Project: 7-Acre Closed Area Landfill Re-closure and Landfill Gas System Citrus County Landfill **Project number:** 09207049.04 Liner

Owner: Citrus County **Contractor:** Belair/ESI

Date: 1/28/10 THUR **Contract Day:** 67 **Contract Duration** _____

Weather
Temperature: (AM) 57 **(PM)** 65 **Rain** _____ **Rainfall (inches)** _____
Description of weather: SUNNY & CLEAR

List of Active Equipment on site
LULL FORKLIFT

Equipment Not Used/Down:

Personnel on site:

1	1 QC	12
No. of Superintendents	No. of Skilled	No. of Laborers

Description of Construction Activity ON SITE 7:00 AM. ESI ON SITE CONTINUING TO MAKE SAND BAGS UP FOR BALLAST ON THE LINER AS IT IS BEING REPLOYED. IDENTIFIED REPAIRS WITH COUNTY INSPECTOR AND BELAIR SUPT. MADE REPAIRS FOR DEPLOYMENT IN AM TO MARROW. BELAIR RE-WORKING SUBGRADE, PICKING UP DEBRIS AND ROLLING SUBGRADE. IDENTIFIED 43 REPAIRS. TO DATE

List of Subcontractors

List of Materials Delivered

Contract Issues/Conflicts
Description: 8 MEN 2 CREWS REPAIRING EXISTING PRIMARY LINER ON SOUTH, SOUTHEAST, AND SOUTWEST CORNERS EACH CREW WELDER, GRINDER, HEAT SEALER & GENERATOR 1 LAB TIMED REPAIRS EXCLUDES TESTING 1X2 PATCH = 20 MIN 3X5 = 49 MIN 4X6 = 63 MIN 3X2 = 33 MIN 1X3 = 25 MIN

Field Representative KAL **Date** 1/28/10

SCS ENGINEERS DAILY FIELD REPORT

Project: Citrus County Landfill
Owner: Citrus County

Project Number: 09207049.04
Contractor: Belair

Date: 1/29/2010 **Contract Day:** **Contract Duration:**
Days Remaining:

Temperature: **(AM)** 50 **(PM)** 69 **Rain:** **Duration of Rain:**
Description of weather: Smokey from local fire, cool

List of Equipment on site: (A) for active (I) for idle

Volvo Excavator	
Volvo Off Road Dump	
Drilling Rig	

Personnel on site:

Gary Silbernagel		
No. of Superintendents	**No. of Skilled**	**No. of Laborers**

Description of Construction Activity: 6:40 – 3:30
Drilling resumes at EW-04; stopped at 70' yesterday. Once drilling resumed depth is now back to 65'; small cave-in overnight. Drller reaches 70' again but after an hour of spinning/drilling he cannot get any deeper. I called Dan and he said to go ahead and make this well 70' instead of the 90' At 70' it was all muck and wet.
Went over to the 7 acre re-closure area and took a couple of photos for Dan and sent these via email to keep him updated.

Driller mobilizes to EW-11 and starts drilling. At about 61' clean sand (no waste) was the only thing coming up, and this continued until drilling was stopped at 65'. I called Ingrid and Dan and they said to go ahead and set the well pipe at this depth. The depth was 66' upon final measurement. Well completed.
*NOTE: Just before this well is completed the driller noticed that one of his cables was fraying. Driller (Stacey) had the two other Shaw men complete EW-11 and he drove to Tampa to get a new cable to be installed later today.

Men with ESI starting to lay liner on the 7 acre site.

Shaw Drilling – Stacey, Wes,
Lee

List of Materials Delivered:

List of Quantities installed this date:

Item Description	**Quantity**	**Accumulated Quantity**
EW-04	20'+3' solid 49' slotted	
EW-11	20'+3' solid 45' slotted	

Field Representative: Jim Burzenski

Date: 1-29-2110

SCS ENGINEERS DAILY FIELD REPORT

Page _____ of _____

Project: 7-Acre Closed Area Landfill Re-closure and Landfill Gas System Citrus County Landfill **Project number:** 09207049.04 Liner

Owner: Citrus County **Contractor:** Belair/ESI

Date: Fri 1/29/10 **Contract Day:** _____ **Contract Duration** _____

Weather
Temperature: (AM) 59 **(PM)** 65 **Rain** 68 **Rainfall (inches)** _____
Description of weather: SUNNY & CLEAR

List of Active Equipment on site
SKID LOADER 1/2 DAY
LULL 1/2 DAY

Equipment Not Used/Down:

Personnel on site:

1	1	12
No. of Superintendents	No. of Skilled	No. of Laborers

Description of Construction Activity ON SITE 7:00 AM. ESI CONTINUED MAKING EXTRUSION REPAIRS TO EXISTING LINER BENEATH RAMP ON EAST SIDE OF CAP. STAGING 40 MIL ROLLS FOR DEPLOYMENT AND STAGING SAND BAGS. BEGAN DEPLOYING PANEL ONE AT APPROX. 10:00 AM. DEPLOYED N TO S ON SOUTH SLOPE. DEPLOYED AND FUSION WELDED PANELS 1-28. INSTALLED APPROX 69,654.50 SF. ALSO BEGAN EXTRUSION WELDING TIE-IN TO EXISTING PRIMARY LINER ON SOUTH SIDE. WORKED TILL DARK AS INCLEMENT WEATHER IS EXPECTED IN MORNING. BEGAN MARKING DESTRUCTIVE SAMPLES FOR TESTING

List of Subcontractors

List of Materials Delivered / INSTALLED

8 ROLL 40 MIL DELIVERED		
40 MIL INSTALLED	69,654.50	69,654.50

Contract Issues/Conflicts
Description: 3 HRS 8 MEN EXISTING REPAIRS
2 CREWS 1 WELDER, 1 GRINDER, 1 HEATSEALER, 1 GEN. 1 LAB

Field Representative _____ **Date** 1/29/10

SCS ENGINEERS DAILY FIELD REPORT

Project: Citrus County Landfill
Project Number: 09207049.04
Owner: Citrus County
Contractor: Belair

Date: 1/30/2010 **Contract Day:** **Contract Duration:**
Days Remaining:

Temperature: **(AM)** 49 **(PM)** 66 **Rain:** **Duration of Rain:** Lt. rain 8:00, medium rain at 12:30

Description of weather: Cloudy, cool

List of Equipment on site: (A) for active (I) for idle

Volvo Excavator	
Volvo Off Road Dump	
Drilling Rig	

Personnel on site:

No. of Superintendents	No. of Skilled	No. of Laborers
Gary Silbernagel		

Description of Construction Activity: 6:30 – 1:30

Driller said he wanted to change out a cable, went across the street for coffee and returned. Driller decided to go ahead and drill without new cable. Drilling starts at EW-09 at 7:00 and completes drilling at 12:30. Well completed at 1:30 and men leave site.

Men with ESI worked on the 7 acre site until rain forces them to leave around 10:30.

Shaw Drilling – Stacey, Wes,		
Lee		

List of Materials Delivered:

List of Quantities installed this date:

Item Description	Quantity	Accumulated Quantity
EW-09	20'+3' solid 49' slotted	

Field Representative: Jim Burzenski Date: 1-30-2110

SCS ENGINEERS DAILY FIELD REPORT

Page _____ of _____

Project: 7-Acre Closed Area Landfill Re-closure and Landfill Gas System Citrus County Landfill **Project number:** 09207049.04 Liner

Owner: Citrus County **Contractor:** Belair/ESI

Date: 1/30/10 SAT **Contract Day:** 69 **Contract Duration** _____

Weather
Temperature: (AM) 54 **(PM)** 73 **Rain** 8 hr **Rainfall (inches)** 1.02
Description of weather: OVERCAST OCCASSIONAL SPRINKLE IN AM CONTINUOUS RAIN AT ABOUT 10:45

List of Active Equipment on site
SKID LOADER

Equipment Not Used/Down:

Personnel on site:

1	1 QC	13
No. of Superintendents	No. of Skilled	No. of Laborers

Description of Construction Activity ON SITE 7:00 AM ESI. CONTINUED TO AIR TEST AND V-BOX ESI COMPLETED DEPLOYING LINER IN SOUTH WEST CORNER WELDED PANELS 09-33 AFTER DEPLOYING OVER APPROVED SUB-GRADE. CONTINUED EXTRUSION WELDING TIE-IN AND MAKING REPAIRS AT AIRTEST AND INTERSECTIONS

INCLEMENT WEATHER STARTED AT APPROX 10:45 HIGH WINDS AND HEAVY RAINS. ESI DOUBLE BAGGED LEADING EDGE AND MADE SITE READY FOR BAD WEATHER

MARKED ADDITIONAL REPAIRS ON EXISTING PRIMARY

List of Subcontractors

List of Materials Delivered/INSTALLED
4591.16 40mL 74245.66

Contract Issues/Conflicts
Description:

Field Representative _____ **Date** 1/30/10

SCS ENGINEERS DAILY FIELD REPORT

Project: Citrus County Landfill
Project Number: 09207049.04
Owner: Citrus County
Contractor: Belair

Date: 1/31/2010 **Contract Day:** **Contract Duration:**
Days Remaining:

Temperature: **(AM)** 48 **(PM)** 50 **Rain:** **Duration of Rain:**
Description of weather: Cool and windy

List of Equipment on site: (A) for active (I) for idle

Volvo Excavator	
Volvo Off Road Dump	
Drilling Rig	

Personnel on site:

Gary Silbernagel		
No. of Superintendents	**No. of Skilled**	**No. of Laborers**

Description of Construction Activity: 6:45 – 1:30

Wet and muddy conditions. 1 1/2" of rain yesterday afternoon through last night.

Drilling starts at EW-10 within the active area berm with only 6" of mulch cover.
Driller hit something extremely hard at 30' and could not get through this depth. When bucket was pulled out of hole not only were teeth missing but the entire shank (that holds the teeth) were taken off by whatever the driller hit; probably steel.

I called Dan (at 8:30) and he agreed to start another hole approximately 12' to the south following the angle where the lateral will run to the header.

The first hole was filled with soil.

Started a new hole for EW-10 and the drilling was completed and well set at 1:00. Rig moves to EW-05 where they will start tomorrow.

Shaw Drilling – Stacey, Wes, Lee

List of Materials Delivered:

List of Quantities installed this date:

Item Description	Quantity	Accumulated Quantity
EW-10	20'+3' solid 49' slotted	

Field Representative: Jim Burzenski Date: 1-31-2110

SCS ENGINEERS DAILY FIELD REPORT

Page _____ of _____

Project: 7-Acre Closed Area Landfill Re-closure and Landfill Gas System Citrus County Landfill **Project number:** 09207049.04 Liner

Owner: Citrus County **Contractor:** Belair/ESI

Date: 1/31/10 SUN **Contract Day:** 70 **Contract Duration** _____

Weather

Temperature: (AM) 55 **(PM)** 73 **Rain** _____ **Rainfall (inches)** _____

Description of weather: OVER CAST AND COOL WARMING IN PM

List of Active Equipment on site

SKID LOADER

Equipment Not Used/Down:

Personnel on site:

1	10C	14
No. of Superintendents	No. of Skilled	No. of Laborers

Description of Construction Activity ON SITE 7:00 AM. ESI WALKING SLOPES AND INSPECTING AFTER YESTERDAYS RAIN EVENT. NUMBERING EXISTING REPAIRS ON WEST SOUTH OF RAMP. CONTINUED AIR TESTING AND DETAILING PATCHES. CONTINUED EXTRUSION WELDING TIE IN AT SOUTHWEST CORNER. ALSO BEGAN INSTALLING BOOTS ON PASSIVE LANFILL GAS VENT RISERS. COMPLETEING EXTRUSION WELDING AT TIE-IN AND V-BOXING MARKED DESTRUCTIVE SAMPLES DS3-8 ALL FUSION WELD DO TO HEAVY RAIN WATER HAS FLOWED UNDER THE LINER ON THE SOUTH. ESI PUMPING WATER FROM BENEATH LINER AT SOUTH TIE IN - WATER REMOVED ESI FIELD TESTING DS3-8 FOR SHIPMENT TO LAB

List of Subcontractors

List of Materials Delivered

Contract Issues/Conflicts

Description: _____

Field Representative KAD **Date** 1/31/10

SCS ENGINEERS DAILY FIELD REPORT

Project: Citrus County Central LF GCCS Project Number: 09207049.04
Owner: Citrus County Contractor: Shaw

Date: 2/1/10 Contract Day: _____ Contract Duration: _____
Days Remaining: _____

Weather
Temperature: (AM) 50°F (PM) _____ Rain: Y Duration of Rain: All PM
Description of weather: Cloudy

List of Equipment on site: (A) for active (I) for idle

Drill Rig (A)	~~5 Generators~~	
Trackhoe (A)	2 Generators	
Dump Truck (A)		
Fork lift (A)		

Personnel on site:

No. of Superintendents	No. of Skilled	No. of Laborers
1	4	

Description of Construction Activity

Arrived on site @ 630; ~~drill~~ initiating drilling of EW-5; Toured site on foot to determine locations of wells drilled + yet to be drilled. 1230- Began drilling EW-6, completing construction of EW-5.

Terminated EW-6 @ 50'. due to poor drilling conditions; failure to advance drill past 50' mark. for over 1 hour. DRC. approved.

List of Subcontractors

List of Materials Delivered

List of Quantities installed this date:

Item Description	Quantity	Accumulated Quantity

Field Representative: Roger Hogg Date: 2/1/10

SCS ENGINEERS DAILY FIELD REPORT

Page _____ of _____

Project: 7-Acre Closed Area Landfill Re-closure and Landfill Gas System Citrus County Landfill **Project number:** 09207049.04 Liner

Owner: Citrus County **Contractor:** Belair/ESI

Date: Mon 2/1/10 **Contract Day:** 71 **Contract Duration** _____

Weather
Temperature: (AM) _____ **(PM)** _____ **Rain** Lkt **Rainfall (inches)** 3/4
Description of weather: RAIN BEGINNING ABOUT 2:30PM RAINED ON INTO LATE EVENING

List of Active Equipment on site
SKID LOADER

Equipment Not Used/Down:

Personnel on site:

1	10	14
No. of Superintendents	No. of Skilled	No. of Laborers

Description of Construction Activity ON SITE 7:00 AM. ESI MAKING REPAIRS TO EXISTING PRIMARY LINER IN PREPARATION OF INSTALLING ADDITIONAL PANELS. CONTINUED EXTRUSION WELDING TIE-IN AND CONTINUED MAKING REPAIRS. BEGAN DEPLOYING GEOMEMBRANE AT 8:46. DEPLOYED PANELS 34 THRU 49 AND BEGAN FUSION WELDING SEAMS. HIT BY UNEXPECTED RAIN STORM AT APPROXIMATELY 3:50. HAD TO PULL WEDGES AND SAND BAG SEAMS. STORM SET IN FOR BALANCE OF DAY. CREW LEFT SITE AT 5:30.

INSTALLED 101,322.49

List of Subcontractors

List of Materials Delivered / INSTALLED

40m INSTALLED	101,322.49	175,569.00

Contract Issues/Conflicts
Description: ESI REPAIRING EXISTING PRIMARY 3 MEN 3 HOURS

Field Representative KAD **Date** 2/1/10

SCS ENGINEERS DAILY FIELD REPORT

Project:
Owner: Citrus County

Project Number: 09207049.04
Contractor: Shaw

Date: 2/2/10 Contract Day: _____ Contract Duration: _____
Days Remaining: _____

Weather
Temperature: (AM) 60° (PM) _____ Rain: LIGHT RAIN FOG Duration of Rain: _____
Description of weather: Foggy AM w/ threat of rain (Moderate, steady rain at ~ 8AM

List of Equipment on site: (A) for active (I) for idle

Dump Truck (A)	1 Generators (I)	
Track hoe (A)		
Water Truck (A)		
Drill Rig (A)		

Personnel on site:

1 (Belair)	3 (Shaw)	
No. of Superintendents	No. of Skilled	No. of Laborers

Description of Construction Activity

Arrived onsite @ 7:00 AM. Contractor already began work on EW-08; got to 16' depth. Conditions are sloppy due to yesterday's rain. Rain came down from 8:00 AM - approx. 12:00 pm (~4 hrs). Completed EW-8 @ 11:30 am. Began EW-7 @ 11:15 am. Completed EW-7 installation @ 4:00 pm. Began drilling hole for CT-1 installation at 3:30 pm Per Gary of Belair (Superintendent)

- Also, received #4 stone @ approximately 10 am.

List of Subcontractors

List of Materials Delivered

#4 Stone @ 10 am

List of Quantities installed this date:

Item Description	Quantity	Accumulated Quantity

Field Representative Roger Hoff Date 2/2/10

SCS ENGINEERS DAILY FIELD REPORT

Page _____ of _____

Project: 7-Acre Closed Area Landfill Re-closure and Landfill Gas System Citrus County Landfill **Project number:** 09207049.04 Liner

Owner: Citrus County **Contractor:** Belair/ESI

Date: TUE 2/2/10 **Contract Day:** 72 **Contract Duration** _____

Weather
Temperature: (AM) 54 **(PM)** 69 **Rain** _____ **Rainfall (inches)** 1.19
Description of weather: OVERCAST AND RAINING MOST OF DAY

List of Active Equipment on site
SKID LOADER IDLE

Equipment Not Used/Down:

Personnel on site:

No. of Superintendents	No. of Skilled	No. of Laborers

Description of Construction Activity ON SITE 7:00 AM. HEAVY RAINS FROM PREVIOUS EVENING LEFT AREA TO BE LINED UN-WORKABLE CONSTANT SHOWERS THROUGHOUT DAY ENDING IN MID AFTERNOON. NO WORK PERFORMED BY ESI. BELAIR ON SITE PUMPING WATER AND INSTALLING ADDITIONAL EROSION CONTROL

List of Subcontractors

List of Materials Delivered

Contract Issues/Conflicts
Description:

Field Representative KAQ **Date** 2/2/10

SCS ENGINEERS DAILY FIELD REPORT

Project: ~~09207049.04~~ Landfill Gas System Project Number: 09207049.04
Owner: Citrus County Contractor: Belair + Shaw

D.C (813) 404 7137

Date: 2/3/10 Contract Day: _____ Contract Duration: _____
Days Remaining: _____

Weather Partly Cloudy
Temperature: (AM) 45°F (PM) _____ Rain: N Duration of Rain: —
Description of weather: _____

List of Equipment on site: (A) for active (I) for idle

Dump Truck (A)		
2 Track hoes (A)		
Drill Rig (A)		

Personnel on site:

No. of Superintendents	No. of Skilled	No. of Laborers

Description of Construction Activity

Arrived onsite @ 7:10 am. Drill crew idle. Belair trench/piping crew preparing track-hoe for operation. Awaiting delivery of sump & trap assemblies - should arrive @ approx. 9 am. ~~Staging to excavate~~ Set sump CS-2 @ flare pad @ 1040 am. ~~Continued~~ Condensate trap assemblies arrived at 11:00 am; began installation of CT-1 at 11:30 am (digging to install depth, etc). Set bottom 11' of ~~sump~~ trap assembly in 28' hole (deep) and ~~bolted~~ plywood cover over open ends, & covered/filled with clean fill. To be trenched and fully assembled later. Done similarly for CT-2. Shaw personnel offsite @ 1:45 PM. Belair personnel trenching from CS-2 to V1/V2. 4PM - Fusing pipe fittings (elbows, joints, tees) together for later use. Dragged pipe to trench @ V1/V2 @ CS-2 to be laid tomorrow.

List of Subcontractors

Stacy + 2 (Shaw drill crew)
Mike + 1 (Belair piping crew)

List of Materials Delivered

2 x 10" Condensate traps
2 x 12" condensate sumps

List of Quantities installed this date:

Item Description	Quantity	Accumulated Quantity
11' drilled condensate trap section	2	2

Field Representative: ROGER HUGG Date: 2/3/10

SCS ENGINEERS DAILY FIELD REPORT

Page _____ of _____

Project: 7-Acre Closed Area Landfill Re-closure and Landfill Gas System Citrus County Landfill **Project number:** 09207049.04 Liner

Owner: Citrus County **Contractor:** Belair/ESI

Date: WED 2/3/10 **Contract Day:** 73 **Contract Duration** _____

Weather

Temperature: (AM) 49 **(PM)** 64 **Rain** _____ **Rainfall (inches)** _____

Description of weather: OVERCAST IN AM BECOMING SUNNY AND CLEAR IN PM

List of Active Equipment on site

SKID LOADER

Equipment Not Used/Down:

Personnel on site:

1	1QC	13 TEC
No. of Superintendents	No. of Skilled	No. of Laborers

Description of Construction Activity ON SITE 7:00AM. ESI DRYING OUT SEAMS IN PREPARATION OF WELDING. BELAIR RESTORING SUBGRADE. ESI CONTINUED AIR TESTING AND MAKING REPAIRS BY EXTRUSION WELDING. MARKED DESTRUCTIVE SAMPLES 9-16. RECEIVED DATA BACK ON SAMPLES DS1-8 FROM TRI. SAMPLE 6 HAD 3 AD BREAKS WITH POOR INCURSION GREATER THAN ALLOWED BY SPECIFICATION. TRACED AND ISOLATED FAILURE - MARKED DESTRUCT BEFORE AND AFTER. SENT DESTRUCT GA, GB AND 9-14 TO LAB FOR TESTING AFTER FIELD TESTING. BEGAN DEPLOYING GEOMEMBRANE AT 2:14. DEPLOYED PANELS 30-39. ON APPROVED SUBGRADE

List of Subcontractors

List of Materials Delivered/INSTALLED

40mL	62,349.91	237,918.7

Contract Issues/Conflicts

Description:

Field Representative KRL **Date** 2/3/10

SCS ENGINEERS DAILY FIELD REPORT

Project: Citrus County Central LF Project Number: 09207049.04
Owner: Citrus County Contractor: Belair

Date: 2/4/10 Contract Day: _____ Contract Duration: _____
Days Remaining: _____

Weather ~~Partly Cloudy~~
Temperature: (AM) 48°F (PM) _____ Rain: N Duration of Rain: N/A
Description of weather: Partly Cloudy

List of Equipment on site: (A) for active (I) for idle

Track hoe (A)		
Dump truck (A)		

Personnel on site:

1	2	Ø
No. of Superintendents	No. of Skilled	No. of Laborers

Description of Construction Activity

Arrived on site @ 7:10 am. Pipe crew had section of pipe prepared to be placed in trench. 8" tee installed on 10" line, w/ casing (16"). Pipe placed in trench. w/ 16" casing & tee (~~not~~ total 210' HDPE 10" SDR17). Belair did not have the right & size fasteners for the flanged connectors (10" dia) at CS-2 and the 10" header

List of Subcontractors

List of Materials Delivered

List of Quantities installed this date:

Item Description	Quantity	Accumulated Quantity
HDPE 10" x 10" SDR 17 Tee	x 1	1
10" HDPE SDR 17 Pipe	210'	210'
16" Steel casing	70'	95' (previously 25' installed @ road crossing)

Field Representative: Roger Hogg Date: 2/4/10

SCS ENGINEERS DAILY FIELD REPORT

Page _____ of _____

Project: 7-Acre Closed Area Landfill Re-closure and Landfill Gas System Citrus County Landfill
Project number: 09207049.04 Liner
Owner: Citrus County
Contractor: Belair/ESI

Date: 2/4/10 THURS Contract Day: _____ Contract Duration _____

Weather
Temperature: (AM) 48 (PM) 61 Rain 74 Rainfall (inches) _____
Description of weather: OVERCAST

List of Active Equipment on site
SKID LOADER

Equipment Not Used/Down:

Personnel on site:

No. of Superintendents	No. of Skilled	No. of Laborers
1	1 QC	

Description of Construction Activity ON SITE 7:00 AM. ESI PERFORMED TRIAC WELDS AND BEGAN DEPLOYING PANEL 60 AT 8:00 AM DEPLOYED PANELS 60 - 76 FOR A TOTAL SQ. FEET OF 86,340.41 FOR THE DAY. PANEL 76 BLACKED OUT THE CELL. ESI ALSO CONTINUED TO AIR TEST SEAMS AND EXTRUSION WELD REPAIRS AND TIE-IN SEAM AT EXISTING LINER MARKED ADDITIONAL DESTRUCTS AND TRACED FAILURE OF DG. INSPECTED LINER WITH ENGINEER AFTER MEETING. OBSERVED AIR GETTING UNDER LINER AT BOOTS ON EAST SIDE OF CAP. LINER RAISING UP ALMOST 2'. HAD QC OF LINER CREW PLACE SAND BAGS TO SEAL OF AIR GETTING UNDER LINER. NOTIFIED SUPT. NEEDED TO WATCH THIS.

List of Subcontractors

List of Materials Delivered / INSTALLED

40 MIL	86,340.41	325,543.42

Contract Issues/Conflicts
Description: ESI TEAM 4 TECHS. WORKED 3 HOURS / CREW. 1 WELDER, 1 GRINDER, 1 HEAT SEALER, 1 LAB, 1 GENERATOR

Field Representative KAQ Date 2/4/10

SCS ENGINEERS DAILY FIELD REPORT

Project: Citrus County Central LF
Owner: Citrus County
Project Number: 09207049.04
Contractor: Belair

Date: 2/5/10
Contract Day: _____
Contract Duration: _____
Days Remaining: _____

Weather
Temperature: (AM) 60° (PM) _____ Rain: N Duration of Rain: _____
Description of weather: _____

List of Equipment on site: (A) for active (I) for idle

Track hoe (A)		
Large Pipe fuser (A)		

Personnel on site:

1	2	
No. of Superintendents	No. of Skilled	No. of Laborers

Description of Construction Activity

Arrived @ site at 7:10 am. Contractor (Pipe crew) arrived @ 7:30 am. Began by joining sump CS-2 with 10" pipe installed yesterday. Backfilled from W-5 to 10" Tee (@ valve locations). Idle for ≈ 2 hrs (contractor left area)

List of Subcontractors

List of Materials Delivered

List of Quantities installed this date:

Item Description	Quantity	Accumulated Quantity

Field Representative: Roger Hogg
Date: 2/5/10

SCS ENGINEERS DAILY FIELD REPORT

Page _____ of _____

Project: 7-Acre Closed Area Landfill
Re-closure and Landfill Gas System
Citrus County Landfill
Project number: 09207049.04 Liner

Owner: Citrus County
Contractor: Belair/ESI

Date: 2/5/10 FRI Contract Day: 75 Contract Duration _____

Weather
Temperature: (AM) 62 (PM) 73 Rain .23 Rainfall (inches) _____
Description of weather: OVER CAST RAIN BEGAN A LITTLE BEFORE 12 PM

List of Active Equipment on site
SKID LOADER

Equipment Not Used/Down:

Personnel on site:

1	10C	12 TECH
No. of Superintendents	No. of Skilled	No. of Laborers

Description of Construction Activity ON SITE 7:00 AM. ESI CONCENTRATING ON COMPLETING TIE-IN TO EXISTING PRIMARY LINER AND FINISHING REPAIRS. COMPLETED MARKING AND FIELD TESTING DESTRUCTIVE SAMPLES. ALL FIELD SAMPLING OF DESTRUCTIVE SAMPLES PASSED PEEL AND SHEAR REQUIRED BREAK AND STRENGTH CRITERIA. COMPLETING REPAIRS NORTH TO SOUTH. RAIN BEGAN PRIOR TO LUNCH, LISTERED PATCHES TO SEAL ALL PENETRATIONS AND SAND BAGGED. COMPLETED ALL REPAIRS TO EXISTING PRIMARY LINER INCLUDING LARGE REPAIR AT OLD ENTRANCE TO LANDFILL. BEGAN BOOTS ON LARGE CONCRETE STRUCTURES

List of Subcontractors

List of Materials Delivered

Contract Issues/Conflicts
Description: ESI TEM 9 TECHS. WORKED 4 HRS COMPLETED REPAIRS TO EXISTING. LARGE REPAIR AT OLD ENTRANCE APPROX 30X 8 TOOK 4 TECHS 2 HRS. HAD 2 CREWS EACH CREW HAD WELDER, GRINER, HEATSEALER, GENERATOR, 1 LAB EXTRA LABORER DIGGING OUT HOLES TO ACCESS EXISTING LINER FOR REPAIR

Field Representative KAD Date 2/5/10

SCS ENGINEERS DAILY FIELD REPORT

Project: Citrus County Central LF CCCS
Owner: Citrus County
Project Number: 09207049.04
Contractor: Belair

Date: 2/6/10
Contract Day:
Contract Duration:
Days Remaining:

Weather
Temperature: (AM) 55°F (PM) Rain: N Duration of Rain:
Description of weather: Overcast

List of Equipment on site: (A) for active (I) for idle

Track hoe (I)		
Pipe Fuse (I)		

Personnel on site:

No. of Superintendents	No. of Skilled	No. of Laborers
0	0	

Description of Construction Activity

No @ pipe-laying activity today due to lack of appropriate parts (i.e. valves) and threat of rain.

List of Subcontractors

List of Materials Delivered

List of Quantities installed this date:

Item Description	Quantity	Accumulated Quantity

Field Representative Roger Hogg Date 2/6/10

SCS ENGINEERS DAILY FIELD REPORT

Page _____ of _____

Project: 7-Acre Closed Area Landfill
Re-closure and Landfill Gas System
Citrus County Landfill
Project number: 09207049.04 Liner

Owner: Citrus County
Contractor: Belair/ESI

Date: 2/6/10 SAT Contract Day: 76 Contract Duration _____

Weather
Temperature: (AM) 51 (PM) 63 Rain _____ Rainfall (inches) _____
Description of weather: OVERCAST LIGHT SPRINKLE CLEARING IN AFTERNOON

List of Active Equipment on site
SKID LOADER

Equipment Not Used/Down:

Personnel on site:

1	1RC	12
No. of Superintendents	No. of Skilled	No. of Laborers

Description of Construction Activity ON SITE AT 7:00 AM. ESI CONTINUED WORKING ON REPAIRS AFTER PRE-WELD TESTING. COMPLETING REPAIRS WITH 2 CREWS WORKING NORTH TO SOUTH. EACH CREW CONSITED OF TECH ON EXTRUSION GUN, GRINER, HEAT SEALER AND LABORER. COMPLETING ALL REPAIRS AND BOOTS. SPARK TESTED ALL BOOTS. BEGAN VACUM BOX TESTING REPAIR AND TIE-IN. VACUM BOX BROKE WITH OUT SPARE ON SITE. NEW VACUM BOX REQUESTED FROM OFFICE IN BATON ROUGE, LA. . AT 5:00 PM SOAT. LEFT TO MEET SOMEONE FROM OFFICE HALFWAY TO COMPLETE TESTING OF REPAIRS AND TIE-IN. OTHER LABOR BEGAN REMOVING SCRAP FROM LINER AND PERFORMING GENERAL CLEAN-UP ACTIVITIES

List of Subcontractors

List of Materials Delivered

Contract Issues/Conflicts
Description:

Field Representative KAQ Date 2/6/10

SCS ENGINEERS DAILY FIELD REPORT

Page _____ of _____

Project: 7-Acre Closed Area Landfill Re-closure and Landfill Gas System Citrus County Landfill **Project number:** 09207049.04 Liner

Owner: Citrus County **Contractor:** Belair/ESI

Date: 2/7/10 SUN **Contract Day:** 77 **Contract Duration** _____

Weather
Temperature: (AM) 42 **(PM)** 55 **Rain** _____ **Rainfall (inches)** _____
Description of weather: OVERCAST

List of Active Equipment on site
SKID LOADER

Equipment Not Used/Down:

Personnel on site:

1 SUPT	1 QC	12 TECH
No. of Superintendents	No. of Skilled	No. of Laborers

Description of Construction Activity ON SITE 7:00 AM. ESI LOADING TRAILER WITH EQUIPMENT AND CLEANING SCRAP FROM LINER. ALSO PLACING SAND BAGS AS BALLAST ON LINER. SUPT. ARRIVED WITH TWO V-BOXES AT APPROX. 9:30. SPLIT CREW AND BEGAN V-BOXING REPAIRS AND TIE IN. COMPLETED TESTING AROUND 12 PM.

DID NOT RECEIVE PEEL AND SHEAR INFO FROM TRI.
COMPLETED ALL VACUM TESTING OF REPAIRS AND TIE-IN.
COMPLETED CLEANING OF LINER

List of Subcontractors

List of Materials Delivered

Contract Issues/Conflicts
Description:

Field Representative KAD **Date** 2/7/10

SCS ENGINEERS DAILY FIELD REPORT

Page _____ of _____

Project: 7-Acre Closed Area Landfill Re-closure and Landfill Gas System Citrus County Landfill **Project number:** 09207049.04 Liner

Owner: Citrus County **Contractor:** Belair/ESI

Date: 2/8/10 Mon **Contract Day:** 78 **Contract Duration** _____

Weather
Temperature: (AM) 38 **(PM)** 65 **Rain** _____ **Rainfall (inches)** _____
Description of weather: SUNNY & CLEAR

List of Active Equipment on site
SKID LOADER

Equipment Not Used/Down:

Personnel on site:

1	1 QC	3 TECH
No. of Superintendents	No. of Skilled	No. of Laborers

Description of Construction Activity ON SITE 7:00 AM. RECIEVED EMAIL THAT DESTRUCTIVE SAMPLE 18 FAILED V PEEL TEST WITH AN AVG BREAK OF 7590. TRACED BAD SEAM AND ISOLATED BEFORE AND AFTER DESTRUCTIVE SAMPLES AT P51/53. CAPPED 55 LINEAR FEET FIELD TESTED SAMPLES AND SENT OFF TO LAB FOR TESTING. VACUM BOXED REPAIR & LINER CREW DEPARTED AT 11:45 TO CHECK OUT OF MOTEL. PICKED UP TRAILER AT APPROX 1 PM AND DEMOBILIZED

BELAIR BEGAN INSTALLING PROTECTIVE COVER OVER LINER AT SW CORNER WITH TRACK HOE, DG AND SKID STEER. COVERED APPROX 26,000 SF

List of Subcontractors

List of Materials Delivered

Contract Issues/Conflicts
Description:

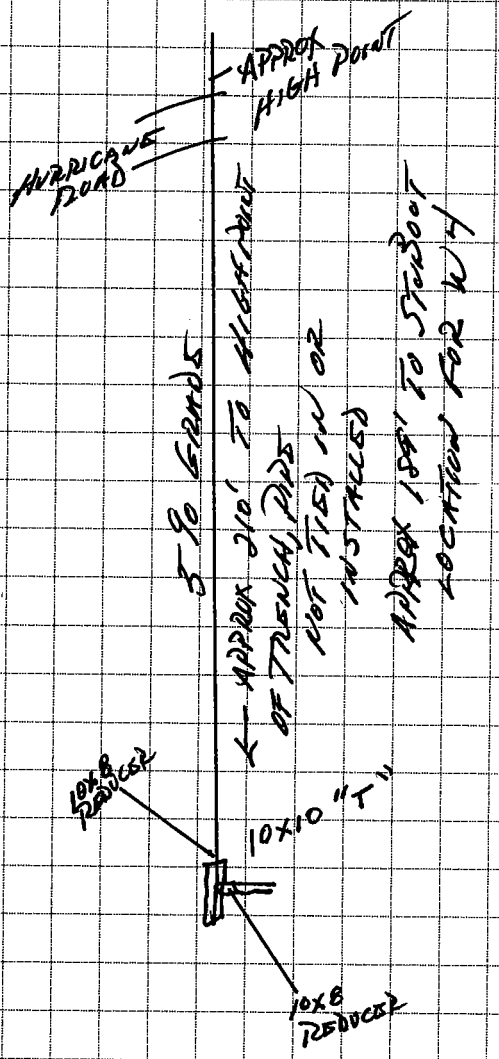
Field Representative _____ **Date** 2/8/10

SCS ENGINEERS

SHEET 1 OF 1

CLIENT	PROJECT	JOB NO.
CITRUS CO.	LANDFILL GAS	04207049.04

SUBJECT	BY	DATE
AS-BUILT EXCAVATION OF 8" HDPE HEADER TRENCH FROM 10X10 "T" TO HW NORTH	KH	2/8/10
	CHECKED	DATE



EXCAVATION OF HEADER TRENCH ONLY
NO BEDDING OR PIPE PLACED

SCS ENGINEERS DAILY FIELD REPORT

Page _____ of _____

Project: 7-Acre Closed Area Landfill Re-closure and Landfill Gas System Citrus County Landfill **Project number:** 09207049.04 Liner

Owner: Citrus County **Contractor:** Belair/ PIPE CREW

Date: 2/9/10 TUE **Contract Day:** 79 **Contract Duration** 130

Weather
Temperature: (AM) 42 **(PM)** 65 **Rain** 8 HR **Rainfall (inches)** 1.36 "
Description of weather: OVERCAST RAIN BEGINNING AT APPROX. 9:45

List of Active Equipment on site
160 TRACK HOE
DC DOZER
10 TON OFF ROAD TRUCKS

Equipment Not Used/Down:

Personnel on site:

No. of Superintendents	No. of Skilled	No. of Laborers
1	2	

Description of Construction Activity ON SITE 9:00 AM. BELAIR CONTINUED EXCAVATION OF PIPE TRENCH FROM 10X10 TEE TO W4. CONTRACTOR INSTALLED 8" BEDDING MATERIAL IN BOTTOM OF TRENCH, ACHIEVED 6" COMPACTED WITH PLATE TAMPER AND CURVED EXCAVATOR BUCKET IN SHALLOW AREAS OF TRENCH. INSTALLED 8" PIPE OVER COMPACTED BEDDING MATERIAL. ATTACHED VALVE TO 10" T AT ADAPTER. ATTACHED 8" FLANGE AT VALVE. MARKED 8" PIPE IN 10' INCREMENTS. SURVEY FALL WITH GPS AND DATA LOGGER AT 10' INTERVALS BEGAN BACK FILLING OVER PIPE AND COMPACTING SAND GENERAL FILL BACKFILLED WITH MSW OVER SAND AND PIPE AFTER INSTALLING RISERS FOR SURVEY AT 50' INTERVALS, COMPLETE AND BACKFILLED A TOTAL OF 184 FOR LAST 2 DAY. TODAYS EXCAVATION 54 LF OF TRENCH

List of Subcontractors PLACED VISQUEEN OVER SMALL AREA OF OPEN TRENCH AND BARRICADED WITH CAUTION TAPE

List of Materials Delivered / INSTALLED
8" HDPE INSTALLED BACKFILLED 184'

Contract Issues/Conflicts
Description: COUNTY INSPECTED SITE. CONCERNED ABOUT GETTING MSW COVERED AND PIPE IN TRENCH AND CLOSING TRENCH WITH INCLEMENT WEATHER IN THE FORCAST. INFORMED ENGINEER OF COUNTY CONCERNS. CAUTIONED CONTRACTOR CONCERNING PLACEMENT OF PROPER BACKFILL REQUIREMENTS FOR PIPE BEDDING MATERIAL

Field Representative KAQ **Date** 2/9/10

SCS ENGINEERS DAILY FIELD REPORT

Page _____ of _____

Project: 7-Acre Closed Area Landfill Re-closure and Landfill Gas System Citrus County Landfill **Project number:** 09207049.04 Liner

Owner: Citrus County **Contractor:** Belair/ PIPE CREW

Date: 2/10/10 WED **Contract Day:** 80 **Contract Duration** _____

Weather
Temperature: (AM) 37 **(PM)** 59 **Rain** _____ **Rainfall (inches)** _____
Description of weather: WINDY SUNNY & CLEAR

List of Active Equipment on site
160 TRACK HOE
D6 DOZER
10 TON OFF ROAD TRUCK

Equipment Not Used/Down:

Personnel on site:

1	10?	
No. of Superintendents	No. of Skilled	No. of Laborers

Description of Construction Activity ON SITE 7:00 AM. COMPLETED TIE IN TO W4 BACKFILLED TRENCH WITH BEDDING MATERIAL OVER 8" GAS LINE AND THEN WITH MSW TO GRADE. REGRADED SIDE SLOPES. LEFT VALVE AREA UNCOVERED NEAR T AND NORTHEAST END OF LINE ABOUT 20 FT PAST W4. COVERED WITH PLASTIC AND ISOLATED WITH BARRIER TAPE.
INSTALLED 2" LEACHATE LINE TO TWO LEACHATE COLLECTION RISERS ON RE-LINED CELL. INSTALLED VALVE OUTSIDE OF FENCE NEAR SCALE HOUSE. TOTAL OF 486' OF 2" INSTALLED THIS DAY.

COMPLETED 8" TO W4 TOTAL TO HIGH POINT APPROX 222' INSTALLED APPROX 33 TODAY

List of Subcontractors

List of Materials Delivered /INSTALLED
TOTAL FROM T TO HP 8" 222' INSTALLED APPROX 33 TODAY
2"

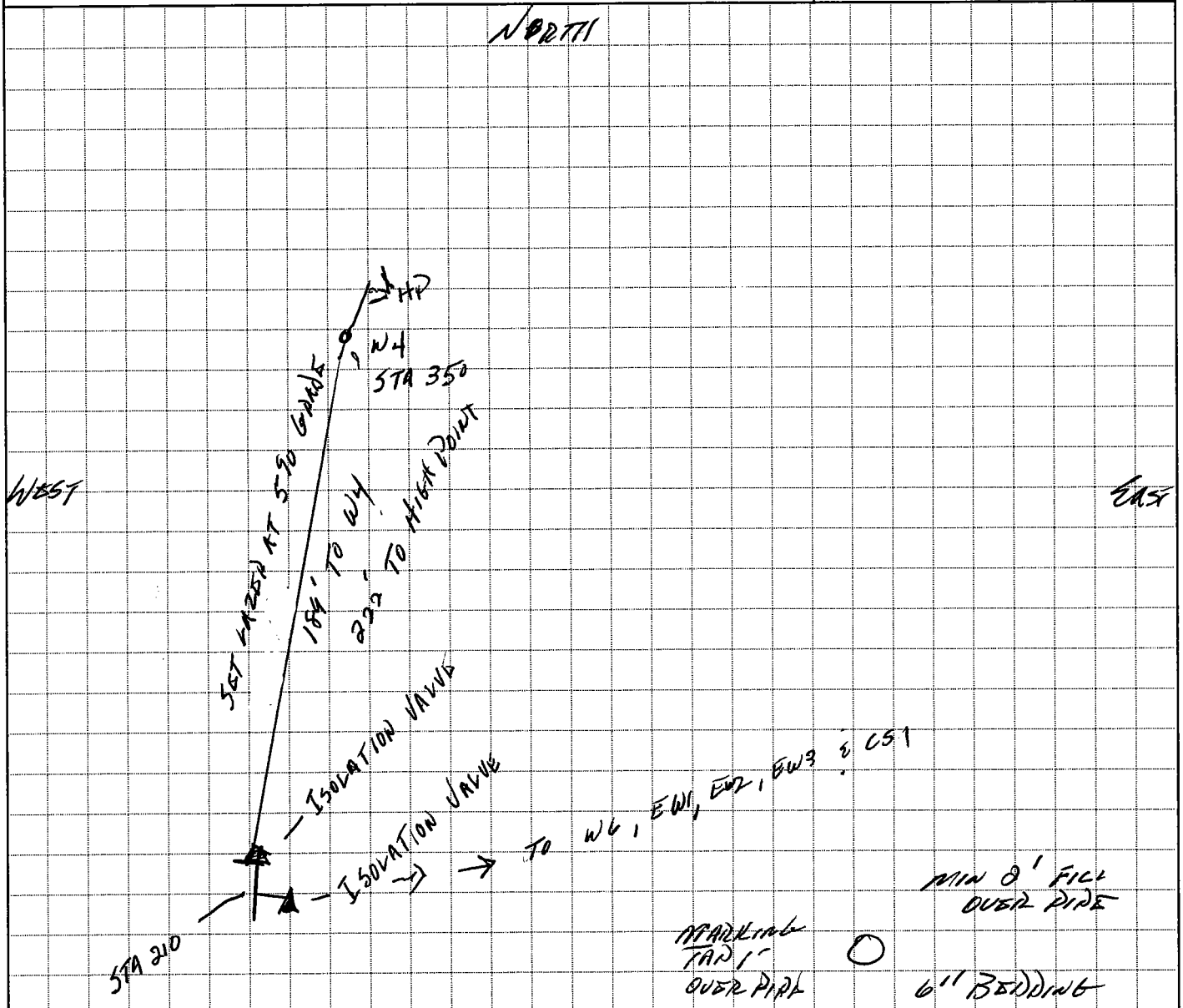
Contract Issues/Conflicts
Description:

Field Representative KAR **Date** 2/10/10

SCS ENGINEERS

SHEET_____OF_____

CLIENT	PROJECT	JOB NO.
CITRUS CO.	LANDFILL GAS SYSTEM	09207049.04
SUBJECT AS BUILT LINE FROM 10X10T TO HP NORTH	BY	DATE 3/9-2/10/10
	CHECKED	DATE



SCS ENGINEERS DAILY FIELD REPORT

Page _____ of _____

Project: 7-Acre Closed Area Landfill Re-closure and Landfill Gas System Citrus County Landfill **Project number:** 09207049.04

Owner: Citrus County **Contractor:** Belair/. PIPE CREW

Date: 2/11/10 THUR **Contract Day:** 81 **Contract Duration** 130

Weather
Temperature: (AM) 32 (PM) 54 **Rain** _____ **Rainfall (inches)** _____
Description of weather: COOL SUNNY & CLEAR

List of Active Equipment on site
160 TRACK HOE
330 TRACH HOE
10 TON OFF ROAD TRUCK
D6 DOZER

Equipment Not Used/Down:
2 OFF ROAD TRUCK (INTERMITENTLY)

Personnel on site:
1 SUPT — No. of Superintendents
2 OP — No. of Skilled
1 LAB — No. of Laborers

Description of Construction Activity ON SITE 2:00 AM. BELAIR D6 SCRAPED TOP SOIL TO BEGIN 8" LFG LINE EXCAVATION FROM HIGH POINT AT CREST OF LANDFILL TO EW2, EW1, W6 AND TERMINATING AT 10X10 T SOUTH WEST OF BEGINNING POINT OF TRENCH. EXCAVATING TRENCH WITH 330 HOE USING LAZER LEVEL SET AT -4'0. PLACING BEDDING MAT. WITH 160 HOE - LABOR RAKING MATERIAL, 330 COMPACTING BEDDING WITH SMOOTH SIDE OF BUCKET. 160 HOE LOADING OUT MSW INTO OFF ROAD TRUCK FOR TRANSPORT TO WORKING FACE. STUBBED 8X6 REDUCER FOR LINE TO EW2. INSTALLED 2" AIRLINE IN COMMON TRENCH. BACKFILLED AND COMPACTED BEDDING MATERIAL OVER PIPE SURVEYED AT 10' INTERVALS PLACES SURVEY RISER AT 50' INTERVALS PLACED METALIC MARKING TAPE 12" OVER PIPE. HAULED ALL WASTE TO WORKING FACE BY 4 PM. REGRADED AREA OVER PIPE

List of Subcontractors

List of Materials Delivered
8" HDPE FROM HIGH POINT TOWARDS 10X10 T 392'
2" SDR 9 GREEN STRIPE 392'

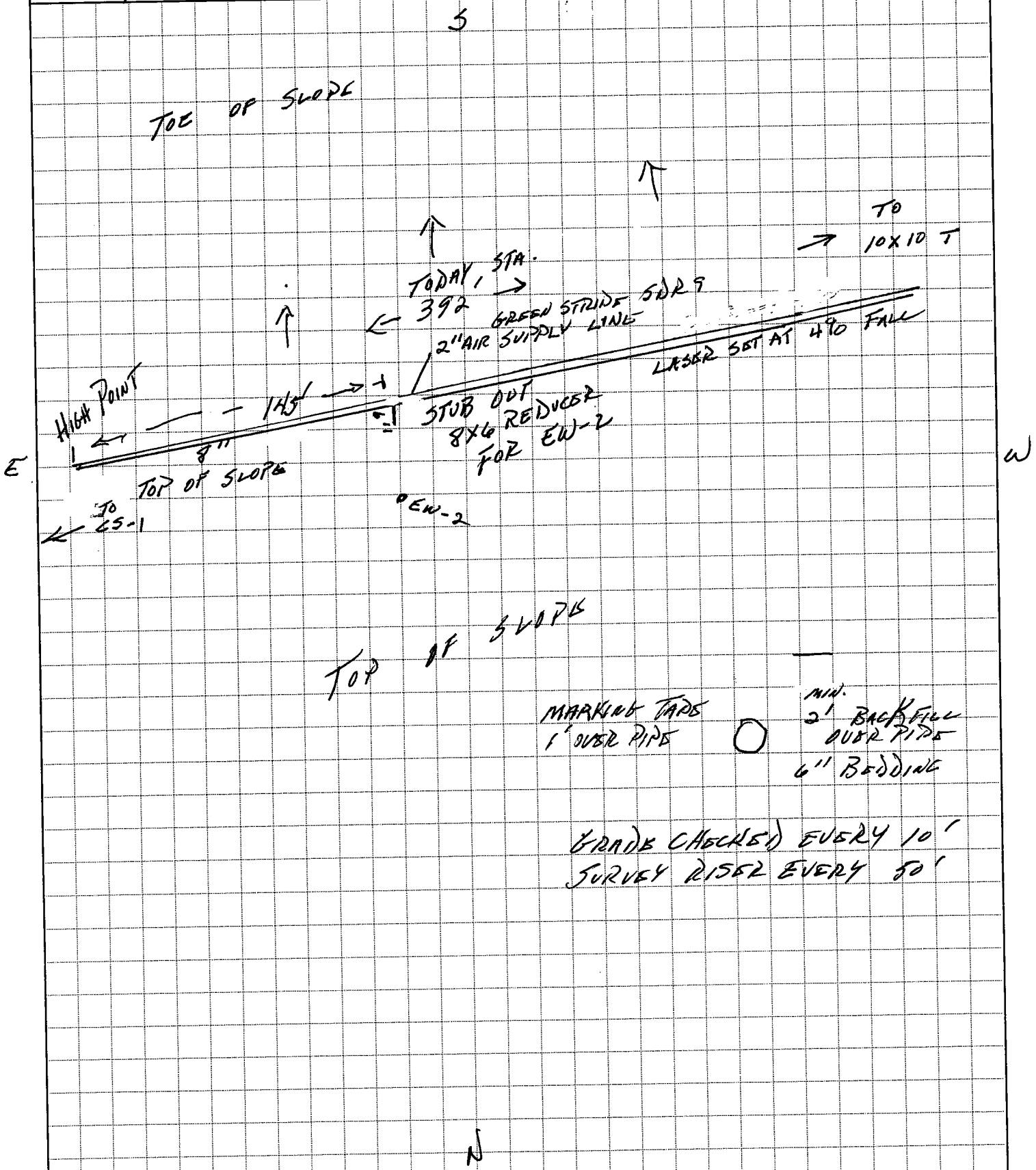
Contract Issues/Conflicts
Description:

Field Representative KAQ Date 2/11/10

SCS ENGINEERS

SHEET_____ OF_____

CLIENT	PROJECT	JOB NO.
CITRUS CO	LANDFILL GAS SYSTEM	92070409.04
SUBJECT	BY	DATE
AS-BUILT LINE FROM CS-1, EW-3, EW-2		2/11/10
EW-1, W6 TERMINATING AT 10X10 T	CHECKED	DATE



RAIN

SCS ENGINEERS DAILY FIELD REPORT

Page _____ of _____

Project: 7-Acre Closed Area Landfill Re-closure and Landfill Gas System Citrus County Landfill **Project number:** 09207049.04

Owner: Citrus County **Contractor:** Belair / PIPE CREW

Date: FRI 2/12/10 **Contract Day:** 82 **Contract Duration** 130

Weather
Temperature: (AM) 43 (PM) 48 **Rain** 8 hr **Rainfall (inches)** 1.06
Description of weather: LIGHT SPRINKLE BEG. AT 2:00 AM

List of Active Equipment on site

160 TRACK HOE	1
2 330 TRACK HOE	1 ACTIVE
2 DC DOZER	1 ACTIVE
2 CAT OFF ROAD TRUCKS	2

Equipment Not Used/Down:

Personnel on site:

No. of Superintendents	No. of Skilled	No. of Laborers

Description of Construction Activity ON SITE 7:00 AM. IN PREPARATION OF PREDICTED RAIN EVENT, PIPE CREW INSPECTING AND PLACING ADDITIONAL EROSION CONTROL IN AREAS THAT WERE DISTURBED EARLIER THIS WEEK. PIPE CREW LEFT AFTER SECURING EQUIPMENT.

OBSERVED PLACEMENT OF SAND. EXCAVATING WITH 330 TRACK HOE. LOADING OUT TWO OFFROAD TRUCKS. HAULING ON CONSTRUCTED HAUL ROAD IN EXCESS OF 4' OVER LINER SPREADING WITH DC DOZER. LABOR MONITORING SPREADING OF MATERIAL.
BELAIR CALLED IT A DAY RIGHT AFTER LUNCH

List of Subcontractors

List of Materials Delivered

Contract Issues/Conflicts
Description:

Field Representative RMC Date 2/12/10

SCS ENGINEERS DAILY FIELD REPORT

Page _____ of _____

Project: 7-Acre Closed Area Landfill Re-closure and Landfill Gas System Citrus County Landfill **Project number:** 09207049.04 Pipe Crew

Owner: Citrus County **Contractor:** Belair

Date: SAT 2/13/10 **Contract Day:** 83 **Contract Duration** 130

Weather
Temperature: (AM) 54 **(PM)** 39 **Rain** _____ **Rainfall (inches)** _____
Description of weather: SUNNY & CLEAR

List of Active Equipment on site
ALL EQUIPMENT IDLE

Equipment Not Used/Down:

Personnel on site:

No. of Superintendents	No. of Skilled	No. of Laborers

Description of Construction Activity NO WORK PLANNED OR PERFORMED

List of Subcontractors

List of Materials Delivered

Contract Issues/Conflicts
Description:

Field Representative _____ **Date** 2/13/10

SCS ENGINEERS DAILY FIELD REPORT

Page _____ of _____

Project: 7-Acre Closed Area Landfill Re-closure and Landfill Gas System Citrus County Landfill **Project number:** 09207049.04 Pipe Crew

Owner: Citrus County **Contractor:** Belair

Date: SUN 2/14/10 **Contract Day:** 84 **Contract Duration** 130

Weather
Temperature: (AM) 34 **(PM)** 56 **Rain** _____ **Rainfall (inches)** _____
Description of weather: SUNNY & CLEAR

List of Active Equipment on site ALL EQUIPMENT **Equipment Not Used/Down:** IDLE

Personnel on site:

No. of Superintendents	No. of Skilled	No. of Laborers

Description of Construction Activity NO WORK PLANNED OR PERFORMED

List of Subcontractors

List of Materials Delivered

Contract Issues/Conflicts
Description:

Field Representative _____ **Date** 2/14/10

SCS ENGINEERS DAILY FIELD REPORT

Page _____ of _____

Project: 7-Acre Closed Area Landfill Re-closure and Landfill Gas System Citrus County Landfill **Project number:** 09207049.04 Pipe Crew

Owner: Citrus County **Contractor:** Belair

Date: 2/15/10 Mon **Contract Day:** 85 **Contract Duration** 130

Weather
Temperature: (AM) 37 **(PM)** 69 **Rain** _____ **Rainfall (inches)** _____
Description of weather: SUNNY BECOMING OVERCAST FEW RAIN DROPS IN MID AFTERNOON

List of Active Equipment on site
D6 DOZER
330 TRACK HOE
160 TRACK HOE
D6 DOZER

Equipment Not Used/Down:

Personnel on site:

1 SUPT	2	1
No. of Superintendents	No. of Skilled	No. of Laborers

Description of Construction Activity ON SITE 7:00 AM BELAIR EXCAVATING BURIED SW END OF THURSDAYS PIPE INSTALLATION TO EXTEND 8" AND 2" AIR LINE TO 10x10 T. DIRECT LOADING OFF ROAD TRUCK WITH 330 TRACK HOE. HOE DEVELOPED FUEL PROBLEM AFTER APPROX EXCAVATING 60' OF TRENCH. RATHER THAN OPEN MORE TRENCH BELAIR MOVED LABORER AND OPERATOR TO PROTECTIVE COVER OPERATION LEAVING SUPT AND OPERATOR TO FUSE 8" HDPE HEADER IN TRENCH AT STA 392. ALSO AT PIPE YARD INSTALLED 8x6 REDUCER WITH 10' STUB TO ATTACH TO EW1 AND 8x4" REDUCER FOR WG. WELDED 8" HEADER ATTACHING AT STA. 392, STUBOUT FOR EW1 AT 60', 84' BEYOND 15 STUB OUT FOR WG. INSTALLED COMPACTED BEDDING MATERIAL BENEATH 8" HEADER AND STUB OUT. INSTALLED 2' OF SANDY FILL OVER 8" AND 2", PIPE IN 6" LIFTS COMPACTING. TAPE AT 18" AS SURVEYED + AND INSTALLED RISERS. ROUGHLY REGRADED SLOPE HAULED IN SW. 50 YDS

List of Subcontractors

List of Materials Delivered / INSTALLED
8" HDPE 60', FROM STOPPING POINT AT 392 TO EW1 TOTAL FOR RUN 452'
2" SDR9 60'

Contract Issues/Conflicts
Description:

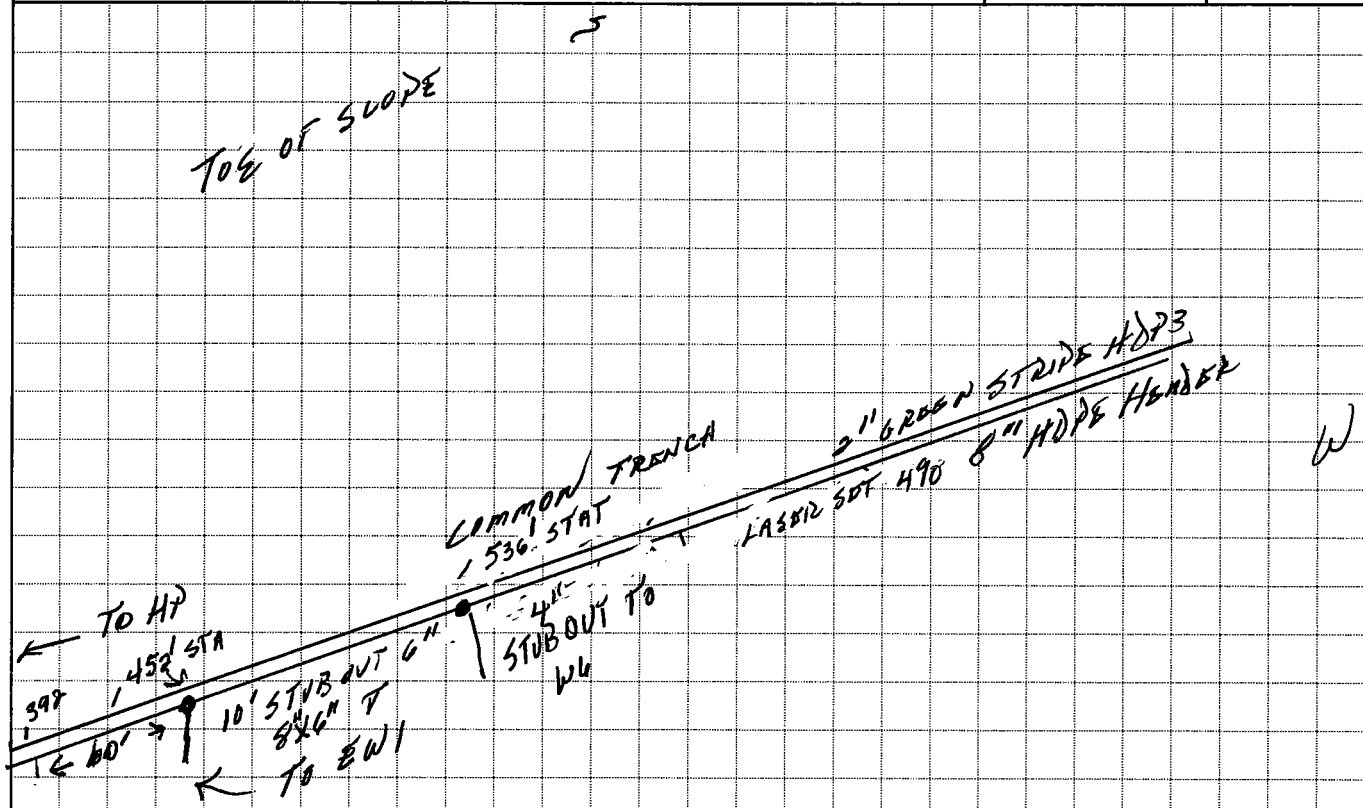
Field Representative _____ **Date** 2/15/10

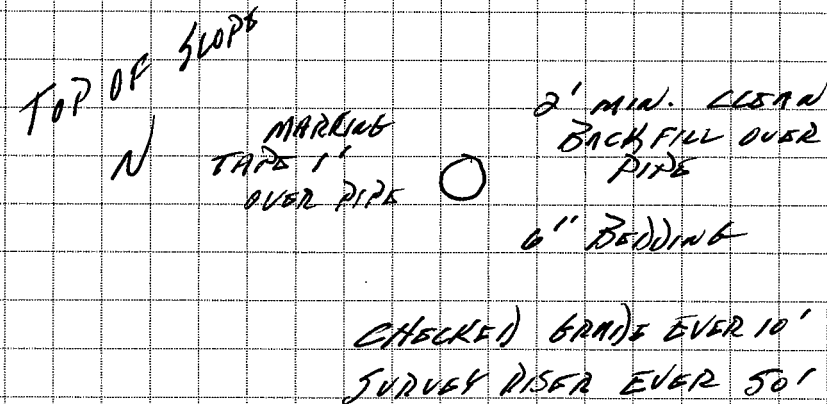
SCS ENGINEERS

SHEET_____OF_____

CLIENT	PROJECT	JOB NO.
CITRUS CO	L.F. GAS SYSTEM	930704 9.04

SUBJECT	BY	DATE
AS BUILT LINE FROM CS-1, BW3, EW2, BW1, WG		2015/10
TERMINATING AT 10X10 T	CHECKED	DATE





CHECKED GRADE EVERY 10'
SURVEY RISER EVERY 50'

SCS ENGINEERS DAILY FIELD REPORT

Page _____ of _____

Project: 7-Acre Closed Area Landfill Re-closure and Landfill Gas System Citrus County Landfill **Project number:** 09207049.04 Pipe Crew

Owner: Citrus County **Contractor:** Belair

Date: 2/16/10 **Contract Day:** 86 **Contract Duration** 130

Weather
Temperature: (AM) 40 **(PM)** 52 **Rain** _____ **Rainfall (inches)** _____
Description of weather: SUNNY & CLEAR

List of Active Equipment on site
1 OFF ROAD TRUCK
160 TRACK HOE
330 TRACK HOE
D6 DOZER

Equipment Not Used/Down:

Personnel on site:

1	2	1
No. of Superintendents	No. of Skilled	No. of Laborers

Description of Construction Activity ON SITE 7:00 AM. BELAIR PIPE CREW CONTINUED EXCAVATING HEADER AND AIR SUPPLY LINE COMMON TRENCH FROM STUBOUT AT EW1 TO 10X10 T. EXCAVATING WITH 330 TRACK HOE AND LOADING OUT MSW MATERIAL WITH HOE INTO OFF-ROAD TRUCK FOR TRANSPORT TO WORKING FACE. OFF ROAD TRUCK HAULING BEDDING MATERIAL AND SAND FOR TRENCH BACKFILL, PLACED AND COMPACTED BEDDING MATERIAL COMPLETED 8" HEADER AND 2" AIR SUPPLY LINE FROM STUBOUT AT WL TO ISOLATION VALVE AT 10X10 T INSTALLED ISOLATION VALVE THIS DAY COMPLETING 709' RUN FROM HIGH POINT TO 10X10 T OF 8" HEADER AND 2" AIR LINE. IN AFTERNOON BEGAN INSTALLING 8" AND 2" EAST OF HIGH POINT INSTALLED AND BACKFILLED 175' TO STUBOUT Y FOR EW3. TOTALS TODAY 175 + 173 = 348' OF 8" AND 2" IN THE GROUND - BEDDED, COMPACTED, TAPED, SURVEYED AND BACKFILLED. DOZER REGRADING DISRUPTED AREAS. ALL BEDDING AND BACKFILL COMPACTED WITH PLATE TAMPER OR HOE BUCKET.

List of Subcontractors

List of Materials ~~Delivered~~ INSTALLED 8" HDPE EAST HIGH POINT 175' TO "Y" FOR EW3, 8" HDPE 173' TODAY TOTAL RUN FROM HP TO 10X10 709', 2" SDR 9 GREEN STRIPE 178' TOTAL RUN TO "T" 709 MUST INSTALL TO COMPRESSOR 2" INSTALLED TO Y

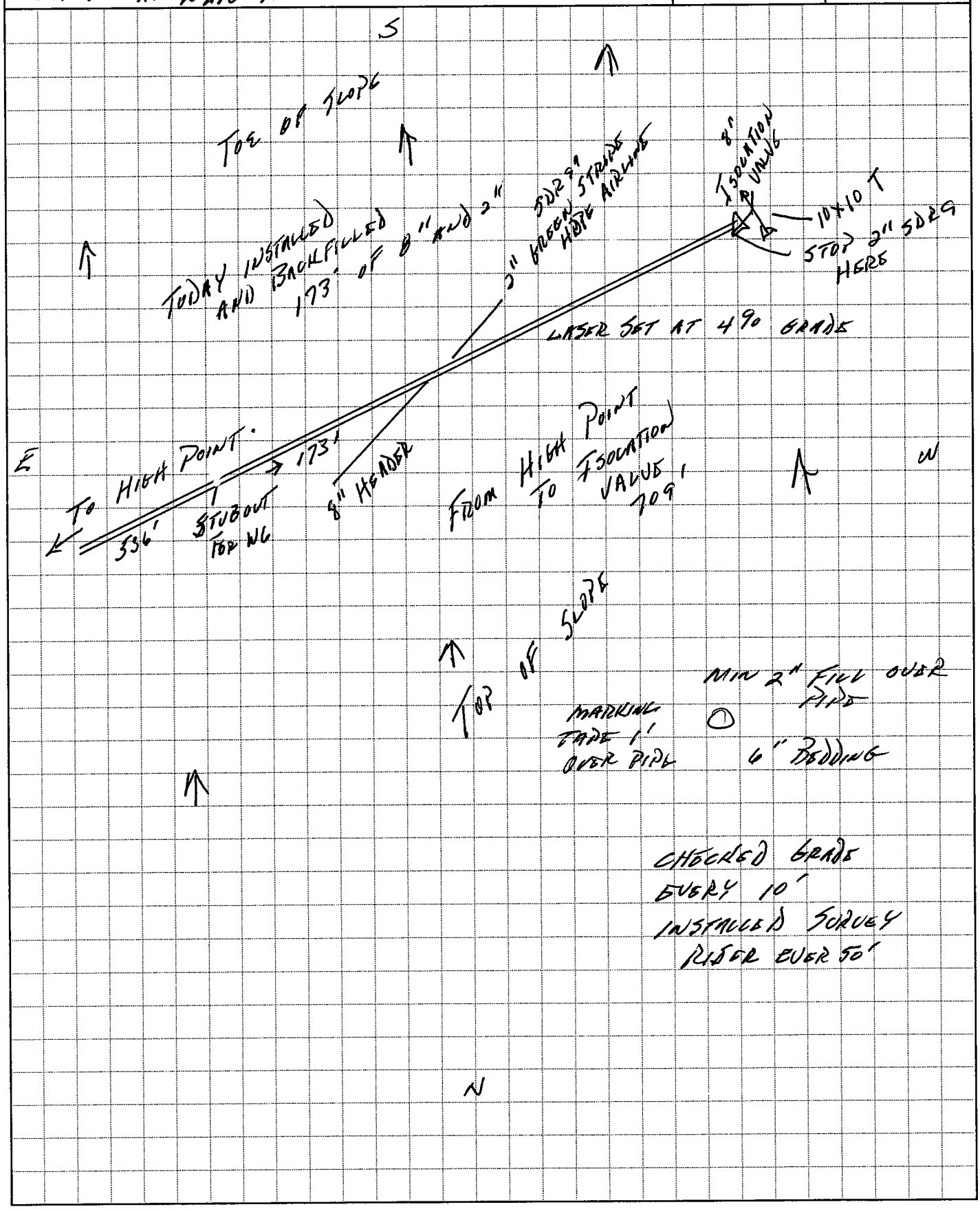
Contract Issues/Conflicts
Description: HAD ISSUE WITH PURGED WATER AT HIGH POINT OVER EXCAVATED TRENCH PLACED APPROX 18" OF GRANITE GRAVEL/STONE BENEATH PIPE THEN BEDDING MATERIAL TO CUSHION PIPE FROM #2 STONE

Field Representative _____ **Date** 2/16/10

SCS ENGINEERS

SHEET 1 OF 2

CLIENT	PROJECT	JOB NO.
Citrus Co.	LANDFILL GAS	09207049.04
SUBJECT AS-BUILT HEADER FROM WG TO ISOLATION VALVE AT 10x10 T	BY	DATE 2/16/10
	CHECKED	DATE



SCS ENGINEERS

SHEET 2 OF 2

CLIENT	PROJECT	JOB NO.
CITRUS Co.	LANDFILL GAS	030704 9.04

SUBJECT	BY	DATE
AS-BUILT FROM HIGH POINT TO Y INTERSECTION AT EW-3	KJ	3/16/10
	CHECKED	DATE

NORTH

TODAY INSTALLED AND BACKFILLED 175' 8" AND 3"

STUB OUT TO EW-3

3" HEADER 1 COMMON TRENCH

HIGH POINT

1 ± 175' TO Y →

6x8 AREA OF PURGED WATER

2" GREEN STRIPE SDR 9 HDPE AIR LINE

WEST

EAST

LASER SET AT 4% GRADE

MIN 3" BACKFILL OVER PIPE

MARKING TAPE 1' OVER PIPE

6" BEDDING BENEATH PIPE

CHECKED GRADE EVERY 10'

INSTALLED SURVEY RISER EVER 50'

SOUTH

SCS ENGINEERS DAILY FIELD REPORT

Page _____ of _____

Project: 7-Acre Closed Area Landfill Re-closure and Landfill Gas System Citrus County Landfill **Project number:** 09207049.04 Pipe Crew

Owner: Citrus County **Contractor:** Belair

Date: 2/17/10 **Contract Day:** 87 **Contract Duration** 130

Weather
Temperature: (AM) 37 **(PM)** 55 **Rain** _____ **Rainfall (inches)** _____
Description of weather: SUNNY & CLEAR

List of Active Equipment on site
D6 DOZER
160 EXCAVATOR
330 EXCAVATOR
1 OFF ROAD TRUCK

Equipment Not Used/Down:

Personnel on site:

1	2	1
No. of Superintendents	No. of Skilled	No. of Laborers

Description of Construction Activity ON SITE AT 7:00AM. BELAIR CONTINUED EXCAVATION FROM "Y" TERMINATING AT EW 3 TO SUMP AT CS1. EXCAVATING WITH 330 EXCAVATOR. LOADING WASTE INTO OFF-ROAD TRUCK FOR TRANSPORT TO WORKING FACE. BACKFILLING WITH 160 & 330 EXCAVATOR. BEDDING & PLACED A MIN. OF 6" BENEATH 8" HEADER AND 2" SDR 9 AIR LINE ALL IN COMMON TRENCH. PLACED MIN OF 2' CLEAN BACK FILL AND COMPACTED OVER PIPE AFTER CONFIRMING FALL OF PIPE EVERY 10' AND SETTING SURVEY RISER EVERY 50'. PLACED MARKING TAPE A 1' OVER PIPE AND CONTINUED BACKFILLING AND COMPACTING FILL. ALSO INSTALLED LATERAL LINE AT "Y" TO EW-3 REDUCED 8" TO 6" TO 4" AT EW-3. ENDED DOWNHILL RUN AT 480 FROM HIGH POINT. HAD TO CUT BERM AT 300' FROM HP ON SLOPE. ALSO INSTALLED STUB OUT TO LEACHATE CLEAN OUT NOTED AT 219' FROM EW3 Y. RUN TO EW-3

List of Subcontractors RISERS WERE SET AT 20' INTERVALS, WAS LESS THAN 100' RUN. D6 REGRADING SLOPES.

List of Materials Delivered / Installed
8" TODAY 305' TOWARDS CS1 55' OF HDPE 6" TO EW3
2" HDPE SDR 9 TODAY 305 FROM HP TO CS1 TOTAL RUN = 480' TO DATE

Contract Issues/Conflicts
Description: WHEN CONFIRMING FALL OF PIPE FOUND FALL OF BOTOM 200' OF HEADER DID NOT MEET MIN. REQUIREMENTS. PULLED PIPE AND RE GRADED TO ACHIEVE 3+ % OF FALL. LASER SET AT 490. CONFIRMED AND BACKFILLED

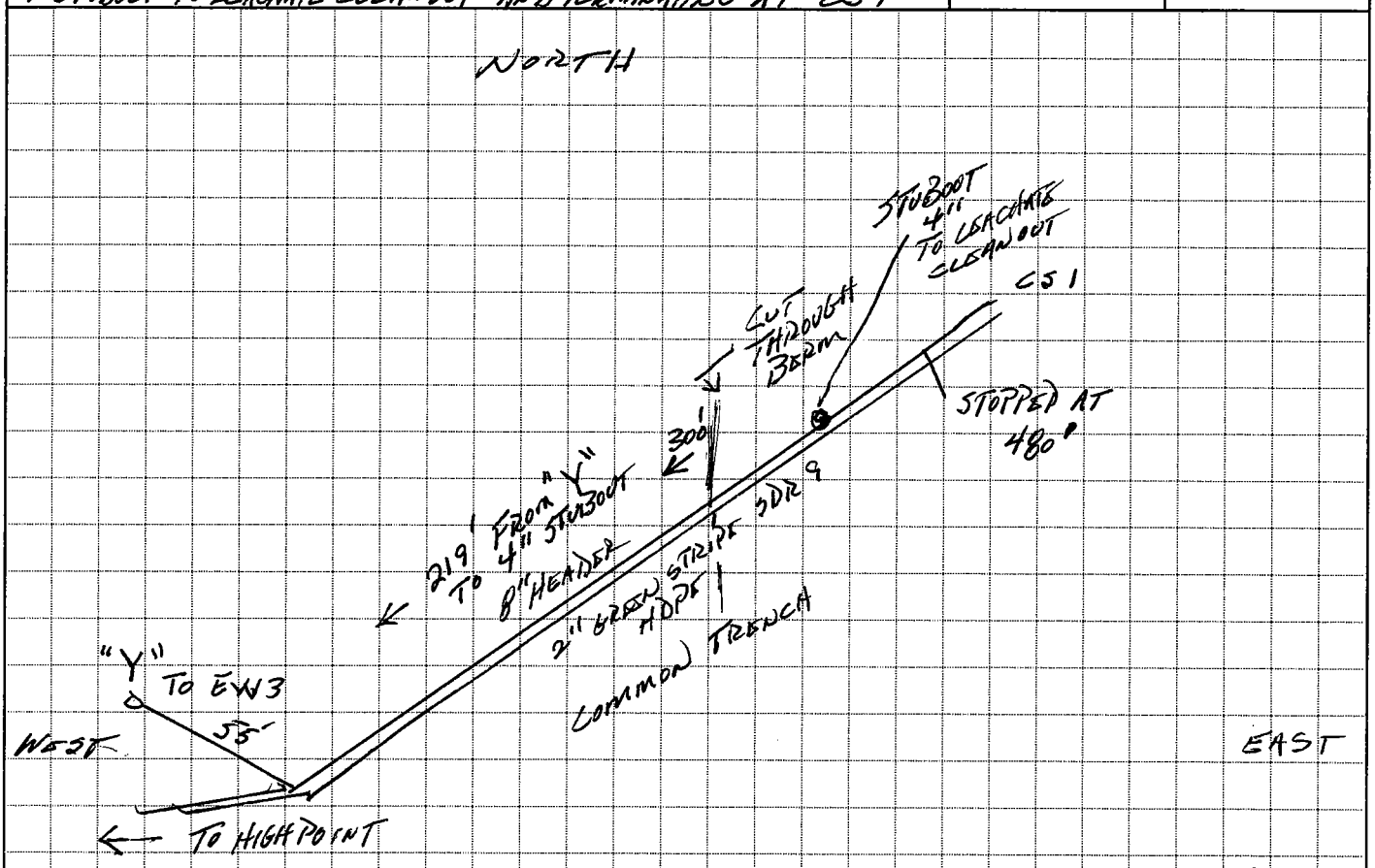
Field Representative _____ **Date** 2/17/10

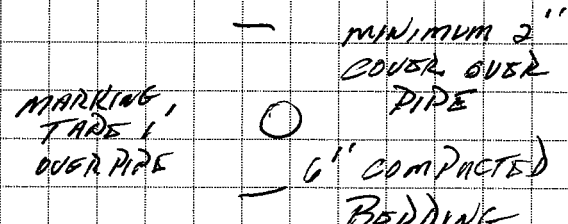
SCS ENGINEERS

SHEET_____OF_____

CLIENT	PROJECT	JOB NO.
CITRUS COUNTY	LANDFILL GAS	09207049.04

SUBJECT	BY	DATE
AS BUILT HEADER LINE FROM HIGH POINT TO EW3 "Y", 4" STUBOUT TO LEACHATE CLEANOUT AND TERMINATING AT CS1		2/17/10
	CHECKED	DATE





SOUTH

SCS ENGINEERS DAILY FIELD REPORT

Page _____ of _____

Project: 7-Acre Closed Area Landfill Re-closure and Landfill Gas System Citrus County Landfill **Project number:** 09207049.04 Pipe Crew

Owner: Citrus County **Contractor:** Belair

Date: 2/18/209 THUR **Contract Day:** 88 **Contract Duration** 130

Weather
Temperature: (AM) 39 **(PM)** 61 **Rain** _____ **Rainfall (inches)** _____
Description of weather: SUNNY & CLEAR

List of Active Equipment on site
160 EXCAVATOR
330 EXCAVATOR
D6 DOZER
OFFROAD TRUCK

Equipment Not Used/Down:

Personnel on site:
1 No. of Superintendents
2 OP No. of Skilled
1 No. of Laborers

Description of Construction Activity ON SITE AT 7:00 AM. BELAIR BEGAN EXCAVATING LATERAL FROM 8" HEADER TO EW2, THEN MOVED SOUTH WEST TO EW1 AND THEN TO TIE IN FROM 8" HEADER TO LCR 14. EXCAVATED WITH 160 & 330. LOADED OUT OFF ROAD TRUCKS WITH MSW FOR TRANSPORT TO THE WORKING FACE. TRUCKS ALSO BROUGHT IN BEDDING AND BACKFILL MATERIAL FOR LATERAL TRENCHES. BELAIR PLACED 6"+" OF COMPACTED BEDDING BENEATH PIPES AND SURVEYED PIPES AT 10' INTERVALS TO CHECK GRADE. INSTALLED SURVEY RISERS AT INTERVALS OF 50', 20' & 10' DEPENDING ON LENGTH OF LATERALS. BACKFILLED A MIN. OF 2' OVER PIPES, PLACED MARKING TAPE, AND COMPACTED. LATERAL TO EW3 55', LATERAL TO EW2 112' AND LATERAL TO LCR 14 . COMPLETED BACKFILL AND REGRADED SLOPES WITH D6, ALSO BEGAN INSTALLING 2" AIR LINE THROUGH CMP TO BLOWER FLARE. IN ADDITION INSTALLED CMP AT LOWER ROAD CROSSING

List of Subcontractors

List of Materials Delivered/INSTALLED
6" HDPE LATERALS 45' + 112' = 157' TODAY + 55' = 212' INCLUDING EW3
W6 TO R14 155' 4" HDPE

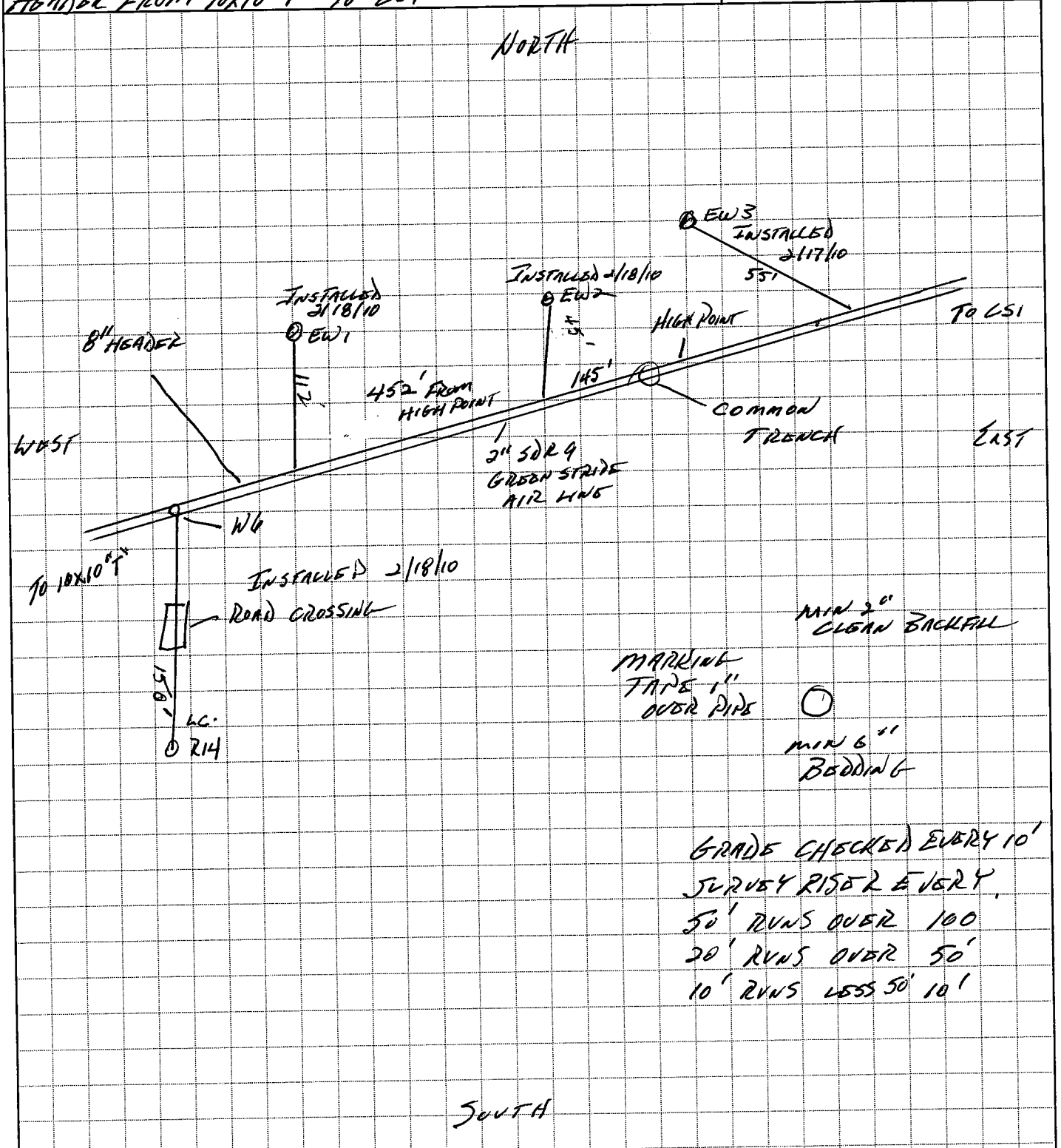
Contract Issues/Conflicts
Description: HELD PROGRESS MEETING WITH CONTRACTOR AND COUNTY. COUNTY WOULD LIKE SMALL DEBRIS (FLAGS) PICKED UP IN AREAS OF EXCAVATION. BELAIR PUT A LABORER PICK UP TRASH ON SOUTH SLOPE FOUND WHERE DOZER HAD DAMAGED 4" STUBOUT TO LCR 14. ENGINEER APPROVED USE OF ELECTRO FUSION COUPLING WITH APPROVED SUBMITTAL FOR REPAIR

Field Representative KAQ **Date** 2/18/10

SCS ENGINEERS

SHEET_____OF_____

CLIENT	PROJECT	JOB NO.
CITRUS CO.	LANDFILL GAS	
SUBJECT: AS-BUILT LATERAL TIE-INS FROM 8" HEADER FROM 10X10 "T" TO CS1	BY RP	DATE 2/18/10
	CHECKED	DATE



SCS ENGINEERS DAILY FIELD REPORT

Page _____ of _____

Project: 7-Acre Closed Area Landfill Re-closure and Landfill Gas System Citrus County Landfill **Project number:** 09207049.04 Pipe Crew

Owner: Citrus County **Contractor:** Belair

Date: 2/19/10 F21 **Contract Day:** 89 **Contract Duration** _____

Weather
Temperature: (AM) 43 **(PM)** 63 **Rain** _____ **Rainfall (inches)** _____
Description of weather: SUNNY & CLEAR

List of Active Equipment on site
160 EXCAVATOR
330 EXCAVATOR
D6 DOZER
2 OFF ROAD TRUCK

Equipment Not Used/Down:
LOADER

Personnel on site:

1	2	1
No. of Superintendents	No. of Skilled	No. of Laborers

Description of Construction Activity ON SITE 7:00 AM. BELAIR BEGAN EXCAVATION OF HEADER TRENCH FROM HIGH POINT NORTH OF W4 PROGRESSING NORTH TO EW4, W3 & W2. INSTALLED CMP ROAD CROSSING JUST NORTH OF W4. EXCAVATED TRENCH SOUTH TO NORTH USING LAZER SET ON 490 FAC. INSTALLED MINIMUM OF 6" BEDDING MATERIAL AND COMPACTED. INSTALLED 8" HEADER WITH STUB OUTS FOR EW4, EW3, AND EW2. BACKFILLED WITH MIN. 2' CLEAN BACK FILL OVER HEADER AFTER INSTALLING SURVEY RISERS AND CONFIRMING FAC. INSTALLED MARKER TAPE AND COMPLETED FILL OF TRENCH WITH MSW AND CAPPED WITH 6" CLEAN MATERIAL. EXCAVATED HEADER WITH 330 AND LOADED OUT MSW INTO OFF ROAD TRUCKS FOR TRANSPORT TO WORKING FACE. MOVED PIPE WITH 160 AND RE GRADED WITH D6. MOVED PIPE WITH 160 AND LOADER.

List of Subcontractors

List of Materials Delivered/INSTALLED
8" HDPE FROM HP TOWARDS CT2 250 TODAY

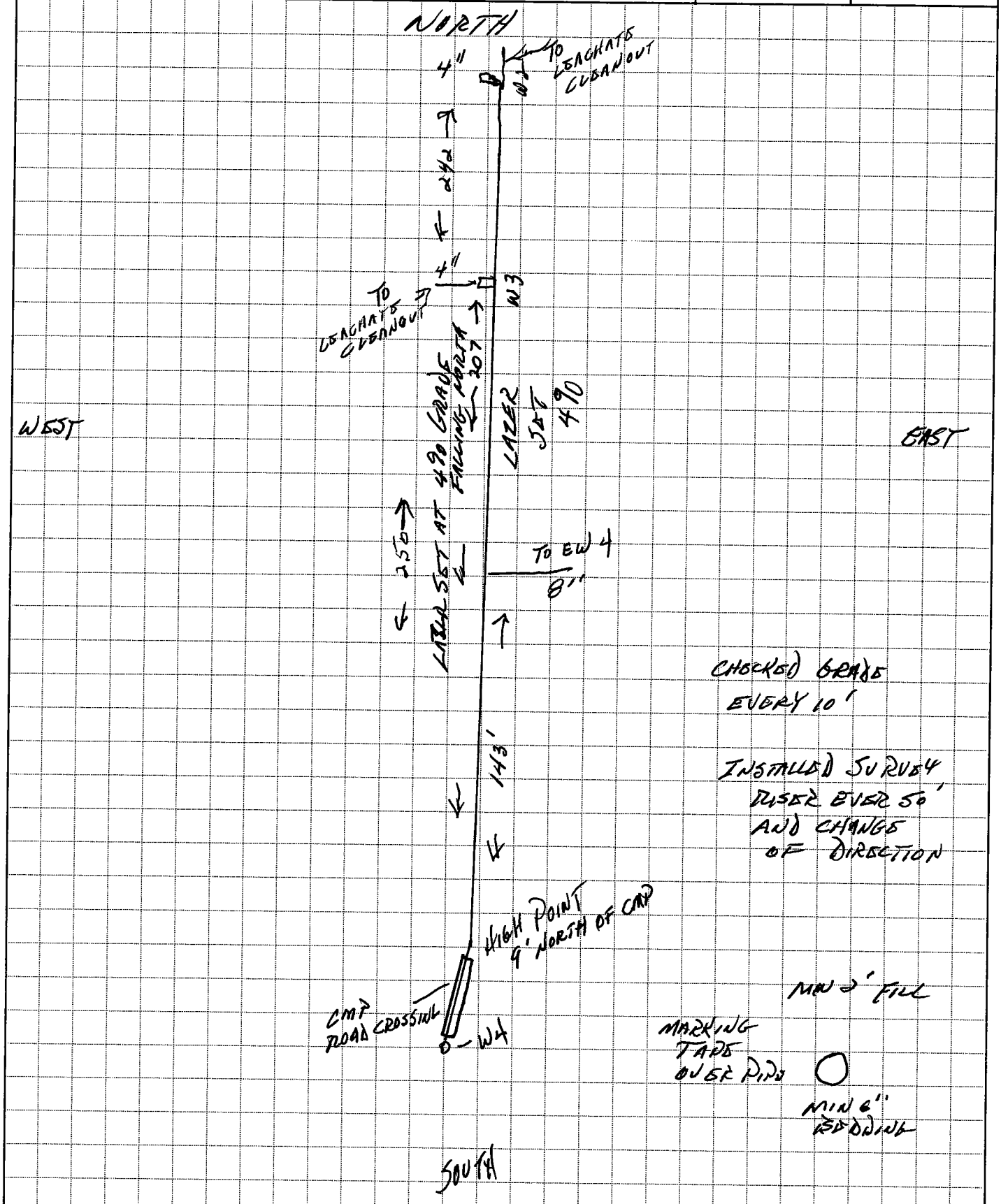
Contract Issues/Conflicts
Description: HAD PROBLEMS WITH CONTRACTORS GPS DOWNLOAD. CONFIRMED GRADE AT 10' INCREMENTS FOR GRADE

Field Representative _____ **Date** 2/19/10

SCS ENGINEERS

SHEET _____ OF _____

CLIENT	PROJECT	JOB NO
CITRUS COUNTY	LANDFILL GAS	04207045.04
SUBJECT	BY	DATE
AS-BUILT STON 8" HDR FROM EW4, W3, W2	KT	2/8/10
	CHECKED	DATE



SCS ENGINEERS DAILY FIELD REPORT

Page _____ of _____

Project: 7-Acre Closed Area Landfill Re-closure and Landfill Gas System Citrus County Landfill **Project number:** 09207049.04 Pipe Crew

Owner: Citrus County **Contractor:** Belair

Date: 2/20/10 SAT **Contract Day:** 90 **Contract Duration** _____

Weather
Temperature: (AM) 48 **(PM)** 69 **Rain** _____ **Rainfall (inches)** _____
Description of weather: SUNNY AND CLEAR

List of Active Equipment on site ALL EQUIPMENT IDLE **Equipment Not Used/Down:**

Personnel on site:

No. of Superintendents	No. of Skilled	No. of Laborers

Description of Construction Activity NO WORK PLANNED OR PERFORMED

List of Subcontractors

List of Materials Delivered

Contract Issues/Conflicts
Description:

Field Representative _____ **Date** 2/20/10

SCS ENGINEERS DAILY FIELD REPORT

Page _____ of _____

Project: 7-Acre Closed Area Landfill Re-closure and Landfill Gas System Citrus County Landfill **Project number:** 09207049.04 Pipe Crew

Owner: Citrus County **Contractor:** Belair

Date: 2/21/10 Sun **Contract Day:** _____ **Contract Duration** _____

Weather
Temperature: (AM) 46 **(PM)** 75 **Rain** _____ **Rainfall (inches)** _____
Description of weather: SUNNY & CLEAR

ALL DAY

List of Active Equipment on site **Equipment Not Used/Down:**

Personnel on site:

No. of Superintendents	No. of Skilled	No. of Laborers

Description of Construction Activity NO WORK PLANNED OR PERFORMED

List of Subcontractors

List of Materials Delivered

Contract Issues/Conflicts
Description:

Field Representative _____ **Date** 2/21/20

SCS ENGINEERS DAILY FIELD REPORT

Page _____ of _____

Project: 7-Acre Closed Area Landfill Re-closure and Landfill Gas System — Citrus County Landfill
Project number: 09207049.04 Pipe Crew
Owner: Citrus County
Contractor: Belair
Date: 2/22/10 Mon **Contract Day:** 90 **Contract Duration** _____

Weather
Temperature: (AM) 57 **(PM)** 74 **Rain** 4hr **Rainfall (inches)** .57
Description of weather: IN AM SUNNY & CLEAR WEATHER THREATPING ALL DAY SPRINKLES AT 5PM

List of Active Equipment on site
160 EXCAVATOR
330 EXCAVATOR
OFF ROAD TRUCK
LOADER

Equipment Not Used/Down:
D6 DOZER

Personnel on site:
1 No. of Superintendents
2 No. of Skilled
1 No. of Laborers

Description of Construction Activity ON SITE 7:00. BELAIR UNLOCKED EWII OF 8" HEADER SOUTH OF W2 AND FUSED ON ADDITIONAL PIPE AND STUBOUTS FOR EW11 AND STUBOUT W1. ALSO PIPE WAS EXTENDED TO TIE-INTO CT2. BELAIR THEN EXTENDED STUBOUT TO EW11 TO REACH TIE IN TO EW11 FOR WOW HEAD. EXCAVATED WITH 330 EXCAVATOR DIRECT LOADING INTO 1 OFF ROAD TRUCK FOR TRANSPORT TO WORKING FACE. INSTALLED BACKFILL AND COMPACTED INSTALLED 8" HEADER WITH STUBOUTS. MARKED IN 10' INTERVALS AND CONFIRMED FALL WITH GPS. BACKFILLED WITH CLEAN SAND WHILE SETTING SURVEY RISERS AT 50' INTERVALS. PLACED MARKING TAPE AND BACKFILLED WITH MSW AND THEN 6"s OF DAILY COVER. SPREAD COVER WITH D6. COMPLETED PULL OF 2" THROUGH PIPING SOUTH OF 10X10 "T's" BOLTED ON 10" HDPE TO CS2.

List of Subcontractors

List of Materials Delivered/INSTALLED
8" HDPE 154' TODAY
6" HDPE TO EW11 125'
2" SDR 9 TO BLOWER 210' TODAY

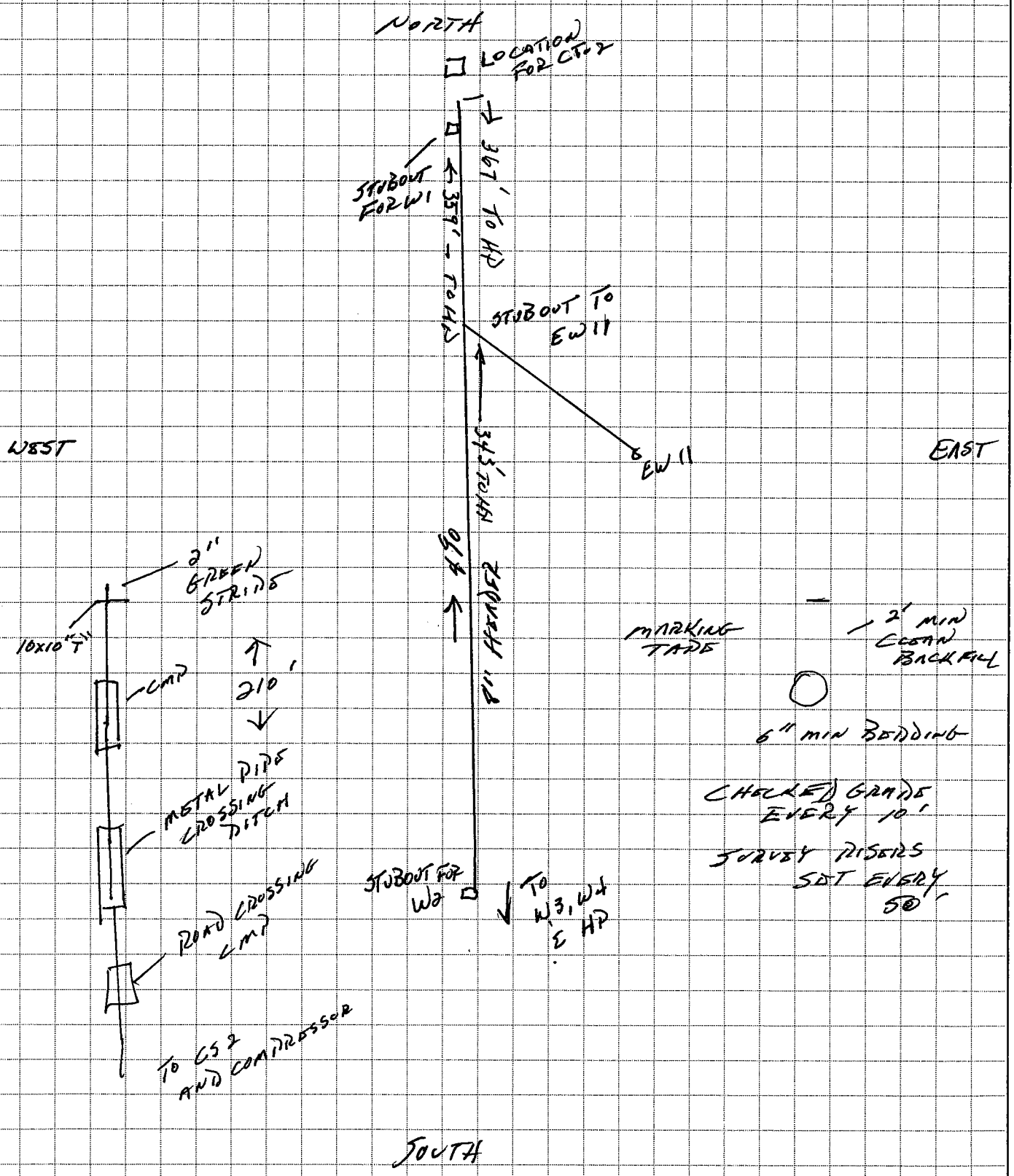
Contract Issues/Conflicts
Description: COUNTY CHECKING FALL AS DUPLICATION OF CONTRACTORS GRADES

Field Representative KA **Date** 2/22/10

SCS ENGINEERS

SHEET_____OF_____

CLIENT	PROJECT	JOB NO.	
Citrus Co.	L.F. GAS	09207049.04	
SUBJECT		BY	DATE
AS-BUILT 8" HEADER EXTENTION OF EW4, W3, W2		KJ	2/22/10
TO INCLUDE EW11, W1 AND TERMINATING AT OT2		CHECKED	DATE



SCS ENGINEERS DAILY FIELD REPORT

Page _____ of _____

Project: 7-Acre Closed Area Landfill Re-closure and Landfill Gas System Citrus County Landfill **Project number:** 09207049.04 Pipe Crew

Owner: Citrus County **Contractor:** Belair

Date: 2/23/10 TUE **Contract Day:** 91 **Contract Duration** _____

Weather

Temperature: (AM) _____ **(PM)** _____ **Rain** _____ **Rainfall (inches)** _____

Description of weather: OVERCAST IN AM AND FOGGY. CLEARING IN LATE MORNING

List of Active Equipment on site

160 EXCAVATOR
330 EXCAVATOR
D6 DOZER
OFF ROAD TRUCK

Equipment Not Used/Down:

Personnel on site:

1	8 OP	2
No. of Superintendents	No. of Skilled	No. of Laborers

Description of Construction Activity ON SITE AT 7:00 AM. BELAIR BEGAN EXCAVATING PIPE TRENCH FROM STUBOUT AT 8" HDPE HEADER TO EW4. LAZER SET AT 490. BELAIR EXCAVATING LOW POINT TO HIGH POINT. FROM 8" EW4 RUN TO EW10R, EW10, EW5, EW9R, EW9 EW6 EW8R, EW8 AND EW7. MOVED HP BETWEEN EW4 AND EW10R 100' WEST. MOVED TRENCH NORTH TO SHORTEN HEADER TO EW5. PLACED MIN 6" BEDDING BENEATH ALL PIPE. CHECKED FALL AT 10' INTERVALS MARKED AND SET SURVEY RISER AT 50' INTERVALS. BACKFILLED WITH MIN. OF 2" COVER. SURVEYOR OF RECORD SHOT 50' INTERVALS ALLOWING RISERS TO BE REMOVED AS AREA IS IN HEAVY TRAFFIC ZONE.

List of Subcontractors

BBLS SURVEYING - AS BUILTING PIPE RUNS

List of Materials Delivered

Contract Issues/Conflicts

Description: CALLED ENGINEER CONCERNING LOCATION OF HP BETWEEN EW4 & EW5. AT PRESENT RISE TO HP FROM EW4 PIPE WOULD DAYLIGHT 2' ABOVE GROUND 50' FROM DESIGN HP. FIGURED FALL FROM 100' WEST OF DESIGN LOCATION OF HP AND FOUND THERE WAS ENOUGH FALL TO SAFELY MOVE HP WEST FALL TO CSI WAS SURVEYED AT APPROX. 27' FOR 540' OF TRENCH WELL OVER 39 NEEDED BY DESIGN

Field Representative _____ **Date** 2/23/10

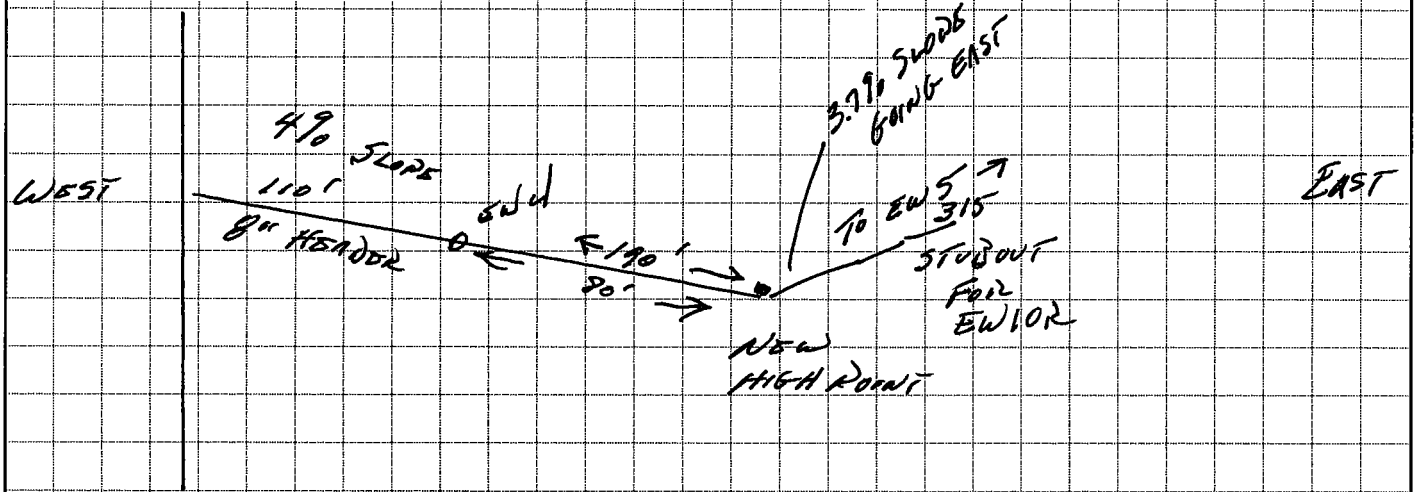
SCS ENGINEERS

SHEET_____OF_____

CLIENT	PROJECT	JOB NO.
CITRUS COUNTY	LANDFILL GAS	09207049.04

SUBJECT	BY	DATE
AS BUILT LATERAL 8" HDPE TO EW4, EW10R, EW5 EW9R TO CTI AND ASSOCIATED PIPING	KW	2/23/10
	CHECKED	DATE

NORTH



MARKER TAPE

2' MIN CLEAN FILL

6" MIN BEDDING

SURVEYED BY BBLS
EVERY 50' INTERVAL
SLOPE CHECKED
EVERY 10' INTERVAL

SOUTH

SCS ENGINEERS DAILY FIELD REPORT

Page _____ of _____

Project: 7-Acre Closed Area Landfill Re-closure and Landfill Gas System Citrus County Landfill **Project number:** 09207049.04 Pipe Crew

Owner: Citrus County **Contractor:** Belair

Date: 2/24/10 Wed **Contract Day:** 98 **Contract Duration** _____

Weather
Temperature: (AM) _____ **(PM)** _____ **Rain** _____ **Rainfall (inches)** _____
Description of weather: SUNNY & CLEAR BEGAN LIGHT RAIN AT 2:45.

List of Active Equipment on site
160 EXCAVATOR
330 EXCAVATOR
D6 DOZER
OFF ROAD TRUCK

Equipment Not Used/Down:

Personnel on site:
1 No. of Superintendents
2 OP No. of Skilled
1 No. of Laborers

Description of Construction Activity ON SITE 7:00 AM. BELAIR CONTINUED EXCAVATION OF 8" HEADER TRENCH BETWEEN EW10R EAST TOWARD CT-1. EXCAVATED TRENCH WITH 330 EXCAVATOR. INSTALLED STUBOUTS FOR EW5, EW9R, EW6 AND EW8R. COMPLETED 6" RUN TO EW6. PLACED MINIMUM OF 6" BEDDING MATERIAL BENEATH PIPE CHECKED SLOPE AT 10' INTERVALS AND SURVEYED 8" HEADER AT 50' INTERVALS AND 6" RUN TO EW6 AT 10' INTERVAL. BACKFILLED WITH MIN. OF 2' COVER OVER PIPE AND PLACED TAPE AND COMPACTED. HAULED EXCAVATED MSW TO WORKING FACE. D6 DOZER GRADED AREA AFTER BACKFILLING. STOPPED APPROX. 30' WEST OF CT1. SLOPE SET AT 3.7%

List of Subcontractors
BBLS SURVEYING – AS BUILTING PIPE RUNS

List of Materials Delivered/Installed
8" HEADER 325'
6" LATERAL 33'

Contract Issues/Conflicts
Description: ESI ON SITE COMPLETED 3 REPAIRS AND TWO BOOTS FOR GROUND RODS AT LEACHATE COLLECTION

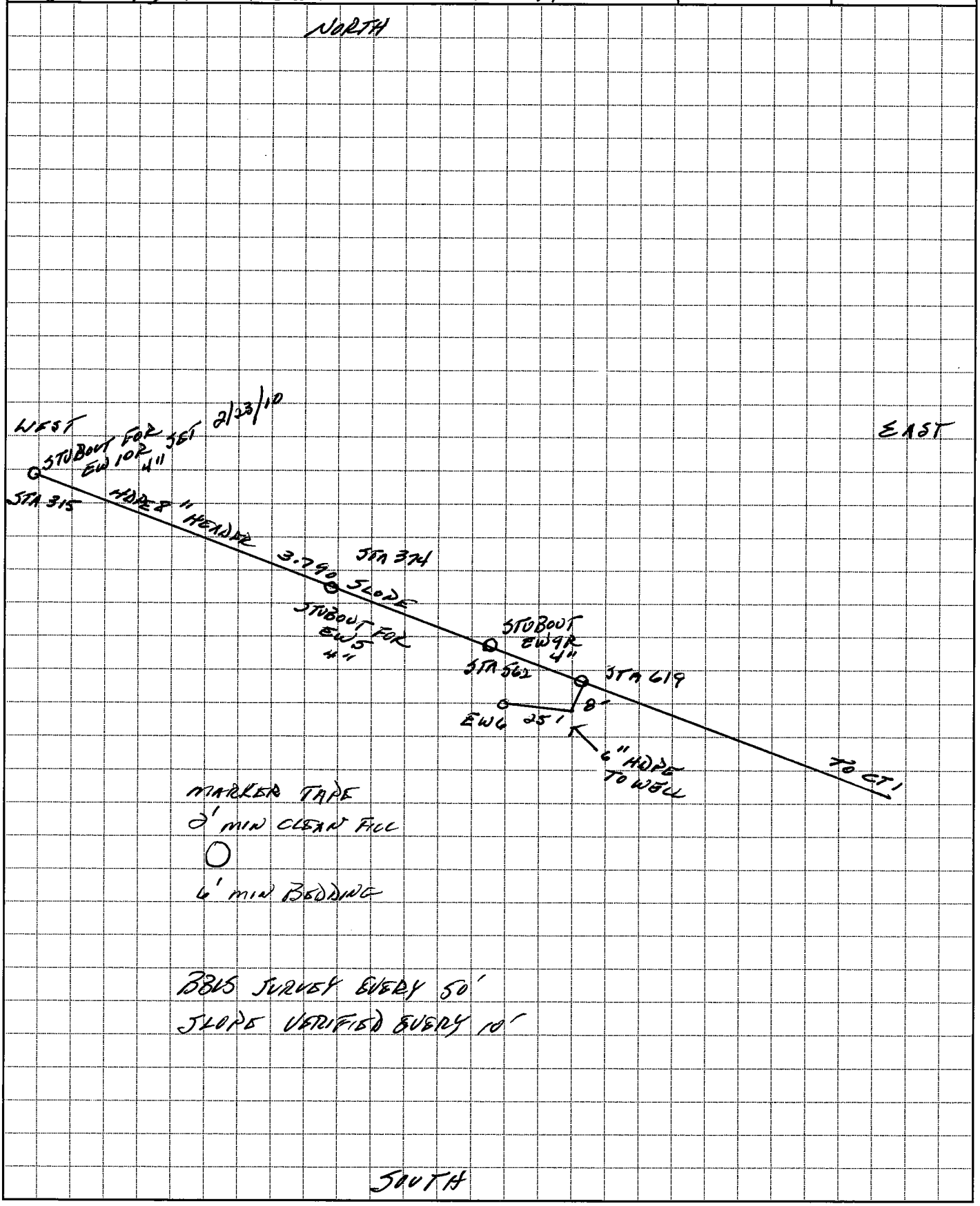
Field Representative _____ **Date** _____

SCS ENGINEERS

SHEET _____ OF _____

CLIENT	PROJECT	JOB NO.
CITRUS COUNTY	LANDFILL GAS	09209044.04

SUBJECT	BY	DATE
AS-BUILT 8" HEADER AND ASSOCIATED STUBOUTS FROM EW10R EAST TO CT1	LY	2/24/10
	CHECKED	DATE



SCS ENGINEERS DAILY FIELD REPORT

Page _____ of _____

Project: 7-Acre Closed Area Landfill Re-closure and Landfill Gas System Citrus County Landfill **Project number:** 09207049.04 Pipe Crew

Owner: Citrus County **Contractor:** Belair

Date: 2/25/10 THR **Contract Day:** 93 **Contract Duration** _____

Weather
Temperature: (AM) 33 **(PM)** 55 **Rain** _____ **Rainfall (inches)** _____
Description of weather: SUNNY AND CLEAR

List of Active Equipment on site
330 EXCAVATOR
160 EXCAVATOR
D6 DOZER
OFF ROAD TRUCK

Equipment Not Used/Down:

Personnel on site:

1	2	1
No. of Superintendents	No. of Skilled	No. of Laborers

Description of Construction Activity ON SITE 7:00 AM. BELAIR EXCAVATING PIPE TRENCH WITH 330 EXCAVATOR FROM STUBOUT FOR EW 9R AT 8" HDPE HEADER TO EW 9. LINE TO EW 9 IS 6" HDPE. CORDINATED WITH COUNTY THE DEPTH OF FILL SO AS TO FABRICATE 6" RISER TO ATTACH TO REMOTE. MADE CONNECTION AT EW 9 AND STUBED UP 15' OF 6" HDPE FOR REMOTE CONNECTION. MOVED OVER TO WEST SLOPE AND EXCAVATED PIPE TRENCHES FOR LATERALS TO W2, W3 AND W4. INSTALLED MIN. OF 6" COMPACTED BEDDING MATERIAL IN ALL TRENCHES. PLACED PIPE, MARKED PIPE IN 10' INTERVALS AND CONFIRMED 90 OF SLOPE. BACKFILLED WITH MIN. OF 2' CLEAN FILL AND COMPACTED. PLACED MARKER TAPE, AND SURVEYED AT 50' INTERVALS BY BBLS. D6 GRADED OVER PIPE RUNS AND RE-ESTABLISHED SLOPE.

List of Subcontractors
BBLS SURVEYING - AS BUILT OF PIPE RUNS

List of Materials Delivered / INSTALLED
6" HDPE 160
4" HDPE 320

Contract Issues/Conflicts
Description: HELD PROGRESS MEETING WITH CONTRACTOR AND COUNTY. BELAIR PLACED ADDITIONAL FILL AT ASPHALT CUT BY LEACHATE TREATMENT FACILITY

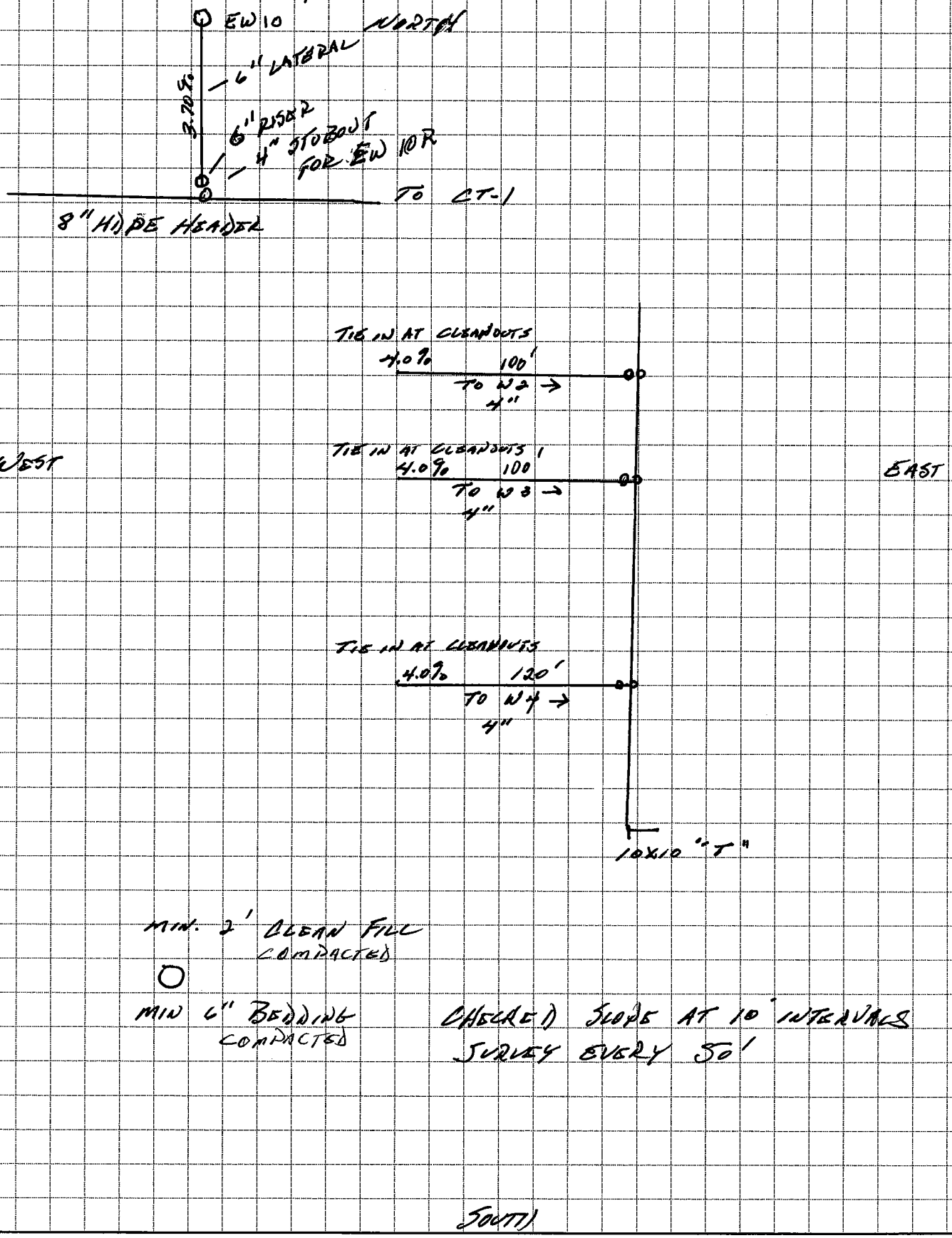
Field Representative KAR **Date** 2/25/10

SCS ENGINEERS

SHEET_____OF_____

CLIENT	PROJECT	JOB NO.
CITRUS COUNTY	LANDFILL GAS	09207049.04

SUBJECT	BY	DATE
AS-BUILT LATERAL TO EW10 FROM EW10R	KD	2/25/10
LATERALS TO W2, W3 & W4	CHECKED	DATE



SCS ENGINEERS DAILY FIELD REPORT

Page _____ of _____

Project: 7-Acre Closed Area Landfill Re-closure and Landfill Gas System Citrus County Landfill **Project number:** 09207049.04 Pipe Crew

Owner: Citrus County **Contractor:** Belair

Date: 2/26/10 FRI **Contract Day:** 94 **Contract Duration** _____

Weather
Temperature: (AM) 37 **(PM)** 60 **Rain** _____ **Rainfall (inches)** _____
Description of weather: SUNNY & CLEAR

List of Active Equipment on site
160 EXCAVATOR
330 EXCAVATOR
D6 DOZER
SKID LOADER

Equipment Not Used/Down:
OFF ROAD TRUCK

Personnel on site:

1	2	2
No. of Superintendents	No. of Skilled	No. of Laborers

Description of Construction Activity ON SITE 7:00 AM. BELAIR BEGAN EXCAVATING LATERAL LINE FROM STUBOUT AT EW10R, FROM HEADER TO EW10 WELL, WITH 160 EXCAVATOR. LOADING OFF ROAD TRUCK FOR TRANSPORT OF MSW TO WORKING FACE. PLACED MIN. OF 6" OF BEDDING IN TRENCH PLACED PIPE WITH LAZER SET AT 3.7% FALL TO EW10. BACKFILLED WITH MIN. 2' OF CLEAN FILL OVER PIPE AFTER ATTACHING LATERAL AT FLANGE ON EW10. COMPLETE FILLING TRENCH AND SPREAD COVER WITH D6. MOVED OVER TO EAST TOE OF SLOPE AND EXCAVATED PIT TO INSTALL GS-1. NOTE FOUND TWO 10" ADS N12 PIPES RUNNING SOUTH TO NORTH IN SWALE. HAD TO MOVE JUMP APPROX 6' TO EAST TO AVOID STORM WATER PIPE. MADE 8" CONECTION TO HEADER THAT RUNS WEST TO HIGH POINT

List of Subcontractors
BELS SURVEYING

List of Materials Delivered/INSTALLED
6" HDPE 222'
GS1
RECEIVED 6" SCH 80 PIPE USE AS BOLLARDS

Contract Issues/Conflicts
Description:

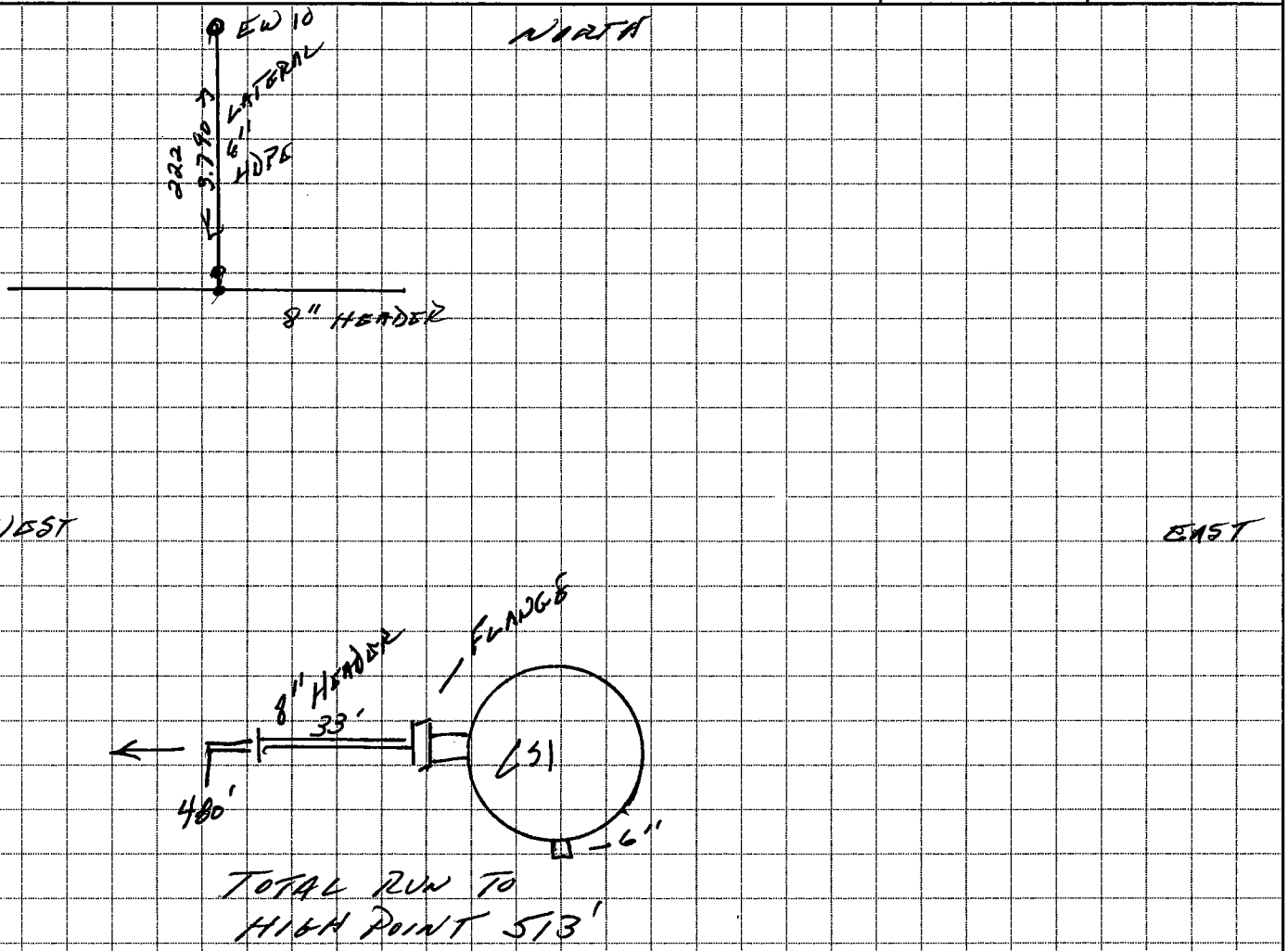
Field Representative KMQ **Date** _____

SCS ENGINEERS

SHEET_____OF_____

CLIENT	PROJECT	JOB NO.
CITRUS COUNTY	LANDFILL GAS	22C7049.04

SUBJECT	BY	DATE
AS BUILT 8" HEADER AT EW-102 6" TO EW10 LATERAL	KD	2/26/10
	CHECKED	DATE



SCS ENGINEERS DAILY FIELD REPORT

Page _____ of _____

Project: 7-Acre Closed Area Landfill Re-closure and Landfill Gas System Citrus County Landfill **Project number:** 09207049.04 Pipe Crew

Owner: Citrus County **Contractor:** Belair

Date: 2/27/10 SAT **Contract Day:** 95 **Contract Duration** 130

Weather
Temperature: (AM) 43 **(PM)** 52 **Rain** 3 hr **Rainfall (inches)** .250
Description of weather: OVERCAST WITH RAIN

List of Active Equipment on site ALL IDLE

Equipment Not Used/Down:

Personnel on site:

No. of Superintendents **No. of Skilled** **No. of Laborers**

Description of Construction Activity NO WORK PLANNED OR PERFORMED

List of Subcontractors

List of Materials Delivered

Contract Issues/Conflicts
Description:

Field Representative KMR **Date** 2/27/10

SCS ENGINEERS DAILY FIELD REPORT

Page _____ of _____

Project: 7-Acre Closed Area Landfill Re-closure and Landfill Gas System Citrus County Landfill **Project number:** 09207049.04 Pipe Crew

Owner: Citrus County **Contractor:** Belair

Date: 2/28/10 Sun **Contract Day:** 96 **Contract Duration** _____

Weather
Temperature: (AM) 46 **(PM)** 75 **Rain** — **Rainfall (inches)** ~
Description of weather: SUNNY & CLEAR

List of Active Equipment on site ALL IDLE

Equipment Not Used/Down:

Personnel on site:

No. of Superintendents **No. of Skilled** **No. of Laborers**

Description of Construction Activity NO WORK PLANNED OR PERFORMED

List of Subcontractors

List of Materials Delivered

Contract Issues/Conflicts
Description:

Field Representative KHL **Date** 2/28/10

SCS ENGINEERS DAILY FIELD REPORT

Page _____ of _____

Project: 7-Acre Closed Area Landfill Re-closure and Landfill Gas System Citrus County Landfill **Project number:** 09207049.04 Pipe Crew

Owner: Citrus County **Contractor:** Belair

Date: 3/1/10 MON **Contract Day:** 97 **Contract Duration** _____

Weather

Temperature: (AM) 45 **(PM)** 69 **Rain** _____ **Rainfall (inches)** _____

Description of weather: SUNNY & CLEAR

List of Active Equipment on site

330 EXCAVATOR

160 EXCAVATOR

Equipment Not Used/Down:

Personnel on site:

1	2	1
No. of Superintendents	No. of Skilled	No. of Laborers

Description of Construction Activity ON SITE 7:00 AM. BELAIR EXCAVATING TRENCH FROM CS-1 TO LCRS-17 WITH 160 EXCAVATOR. TRENCH FOR 4" PIPE WAS LOCATED OUTSIDE OF LINER LIMITS, SO MSW WAS NOT ENCOUNTERED. COMPLETED CONECTION AT SUMP WITH 6x4 REDUCER. RAN 4" LINE TO STUBOUT FOR W2. BACKFILLED SOUTHERN PORTION OF 4" LINE, NORTHERN END 40' DAYLIGHTED ABOVE GROUND TO ACHIEVE 1.5% SLOPE. INSTALLED 12" CMP AT ROAD CROSSING AND INSTALLED PIPE IN CORRAGATED METAL PIPE. CHECKED SLOPE AT 10' INTERVALS. INSTALLED RISERS AT 50' INTERVALS. MOVED TO THE WEST AND BEGAN EXCAVATING AT STUBOUT FOR GW-8R. COMPLETED CONNECTION TO GW8 AND 110' OF PIPE 100' 8" AND 10' 6" HDPE. DID NOT COMPLETE TIE IN AT HEADER. MOVED OVER TO W2 AND RAN PIPE FOR W2.

List of Subcontractors

List of Materials Delivered/INSTALLED

4" HDPE 198 + 22 = 220'

8" SUBSTITUTED FOR 6" = 100'

6" 10'

Contract Issues/Conflicts

Description:

Field Representative KAQ **Date** 3/1/10

SCS ENGINEERS DAILY FIELD REPORT

Page _____ of _____

Project: 7-Acre Closed Area Landfill Re-closure and Landfill Gas System Citrus County Landfill **Project number:** 09207049.04 Pipe Crew

Owner: Citrus County **Contractor:** Belair

Date: 3/1/10 MON **Contract Day:** 97 **Contract Duration** _____

Weather
Temperature: (AM) 45 **(PM)** 69 **Rain** _____ **Rainfall (inches)** _____
Description of weather: SUNNY & CLEAR

List of Active Equipment on site
330 EXCAVATOR
160 EXCAVATOR

Equipment Not Used/Down:

Personnel on site:

1	2	1
No. of Superintendents	No. of Skilled	No. of Laborers

Description of Construction Activity ON SITE 7:00 AM. BELAIR EXCAVATING TRENCH FROM CS-1 TO LCRS-17 WITH 160 EXCAVATOR. TRENCH FOR 4" PIPE WAS LOCATED OUTSIDE OF LINER LIMITS, SO MSW WAS NOT ENCOUNTERED. COMPLETED CONECTION AT SUMP WITH 6x4 REDUCER. RAN 4" LINE TO STUBOUT FOR W2. BACKFILLED SOUTHERN PORTION OF 4" LINE, NORTHERN END 40' DAYLIGHTED ABOVE GROUND TO ACHIEVE 1.5% SLOPE. INSTALLED 12" CMP AT ROAD CROSSING AND INSTALLED PIPE IN CORRAGATED METAL PIPE. CHECKED SLOPE AT 10' INTERVALS. INSTALLED RISERS AT 50' INTERVALS. MOVED TO THE WEST AND BEGAN EXCAVATING AT STUBOUT FOR EW-6R. COMPLETED CONNECTION TO EW8 AND 110' OF PIPE 100' 8" AND 10' 6" HDPE. DID NOT COMPLETE TIE IN AT HEADER. MOVED OVER TO W2 AND RAN PIPE FOR W2.

List of Subcontractors

List of Materials Delivered/INSTALLED
4" HDPE 198 + 22 = 220'
8" SUBSTITUTED FOR 6" = 100'
6" 10'

Contract Issues/Conflicts
Description:

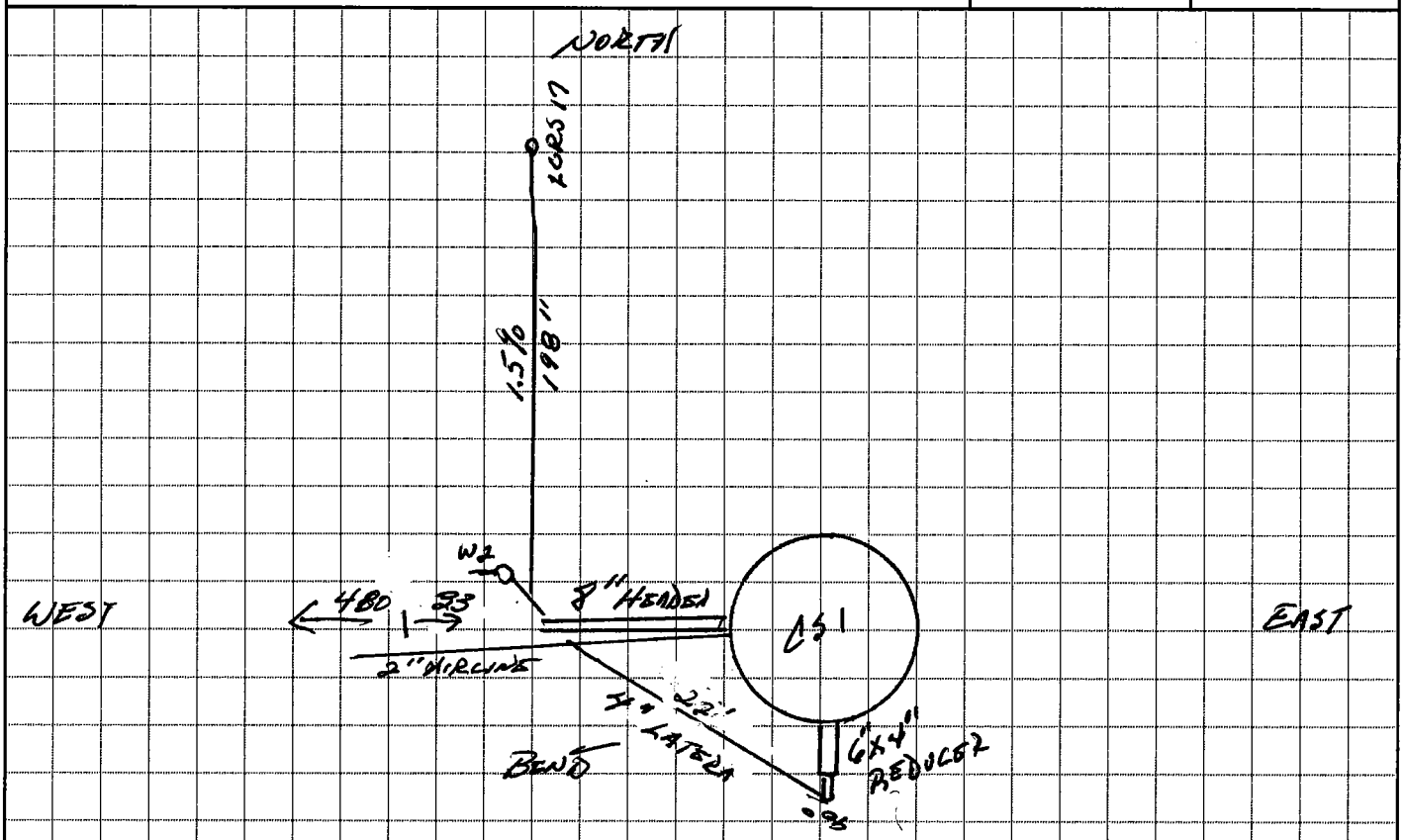
Field Representative KAQ **Date** 3/1/10

SCS ENGINEERS

SHEET_____OF_____

CLIENT	PROJECT	JOB NO
CITRUS COUNTY	LANDFILL GAS	09307049.04

SUBJECT	BY	DATE
AS-BUILT 4" LINE FROM CS-1 TO LCRS 17	KV	3/1/10
	CHECKED	DATE



SCS ENGINEERS DAILY FIELD REPORT

Page _____ of _____

Project: 7-Acre Closed Area Landfill Re-closure and Landfill Gas System — Citrus County Landfill
Project number: 09207049.04 Pipe Crew
Owner: Citrus County
Contractor: Belair

Date: 3/2/10 TUE **Contract Day:** 98 **Contract Duration** _____

Weather
Temperature: (AM) 51 **(PM)** 69 **Rain** 4HR **Rainfall (inches)** .30
Description of weather: RAIN IN EARLY AM. HAD PASSED BY 2:00AM OVERCAST BEGAN SPRINKLING AT 4:00PM

List of Active Equipment on site
160 EXCAVATOR
330 EXCAVATOR
D6 DOZER
OFF ROAD TRUCK

Equipment Not Used/Down:

Personnel on site:
1 No. of Superintendents
2 OP No. of Skilled
1 No. of Laborers

Description of Construction Activity BELAIR STARTED AT 8:00 AM DUE TO INCLEMENT WEATHER, BEGAN EXCAVATING CT-1 WITH 330 EXCAVATOR. DIRECT LOADING OFF ROAD TRUCK WITH MSW AND TRANSPORTING MATERIAL TO WORKING FACE. INSTALLED SUMP BY BOLTING TOP PORTION OF SUMP TO BOTTOM. COATED FLANGE AND BOLTS WITH ASPHALTIC COMPOUND AND WRAPED WITH PLASTIC AND TAPED. BUTT FUSED CONNECTION AT 8" STUBOUT AND 8" HEADER. RUN FROM STUBOUT TO HEADER WAS APPROX. 55'. ALSO STUBED OUT 4" FOR WELL HEAD AT EW 8R. HAD CONTRACTOR MARK AND SHOOT 55' AT 5' INTERVALS TO INSURE RADIUS WAS NOT OVER RECOMMENDED BEND ALLOWANCE. SEALED SUMP AT FLANGE WITH 4 GL 50/16 BAGS OF BENTONITE CLAY. BACK FILLED TWO FOOT OVER PIPE. COVERED TRENCH WITH PLASTIC. SO AS TO COMPLETE BACKFILL WITH MSW FROM EXCAVATION OF TRENCH TO EW-1

List of Subcontractors

List of Materials Delivered / INSTALLED
CT-1
8" HDPE 55'

Contract Issues/Conflicts
Description: CONCERNED ABOUT RADIUS OR UPWARD RUN TO HEADER CONNECTION. SPOKE WITH ISCO ENG. CONCERNING MAX. RECOMMENDED BEND IN PIPE. ISCO EXPLAINS WE WERE IN TOLERENCE.

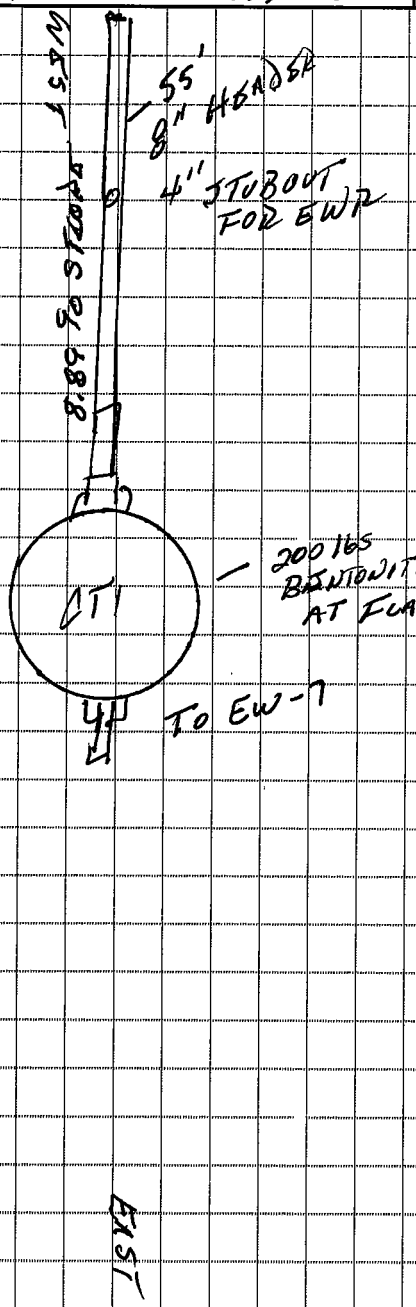
Field Representative KAG **Date** 3/2/10

SCS ENGINEERS

SHEET_____OF_____

CLIENT	PROJECT	JOB NO.
CITRUS COUNTY	LANDFILL GAS	09202049.04

SUBJECT	BY	DATE
AS BUILT TIE IN FROM CT-1 TO 8" HEADER AND 4" EW8R STUBOUT FROM HEADER	KJ	3/2/10
	CHECKED	DATE



SCS ENGINEERS DAILY FIELD REPORT

Page _____ of _____

Project: 7-Acre Closed Area Landfill Re-closure and Landfill Gas System Citrus County Landfill **Project number:** 09207049.04 Pipe Crew

Owner: Citrus County **Contractor:** Belair

Date: 3/3/10 (Wed) **Contract Day:** 99 **Contract Duration** _____

Weather
Temperature: (AM) 45 **(PM)** 56 **Rain** 10 min **Rainfall (inches)** 2.10
Description of weather: OVERCAST IN AM LIGHT SPRINKLE AT 8:45

List of Active Equipment on site
160 EXCAVATOR
330 EXCAVATOR
D6 DOZER
OFF ROAD TRUCK

Equipment Not ~~Used/Down~~:
CAT LOADER

Personnel on site:

1	2	1
No. of Superintendents	No. of Skilled	No. of Laborers

Description of Construction Activity ON SITE 7:00 AM - BELAIR BEGAN EXCAVATING HEADER TRENCH FROM CTI TO EW7, PLACING MSW IN AREA EXCAVATED FOR CTI, EXCAVATING PIPE TRENCH TO EW7 WITH LAZER SET AT 3.79%. BACKFILLED WITH MIN. 6" BEDDING MATERIAL INSTALLED 8" PIPE, RUN WAS 135'. BACKFILLED 2' CLEAN SOIL OVER PIPE AND COMPACTED, BACKFILLED OVER 8' FILL WITH MSW AND THEN PLACED CLEAN COVER AND REGRADED. INSTALLED 4" LINE FROM W5 TO LCRS 13

List of Subcontractors

List of Materials Delivered
8" HDPE CTI-EW7 135'

Contract Issues/Conflicts
Description:

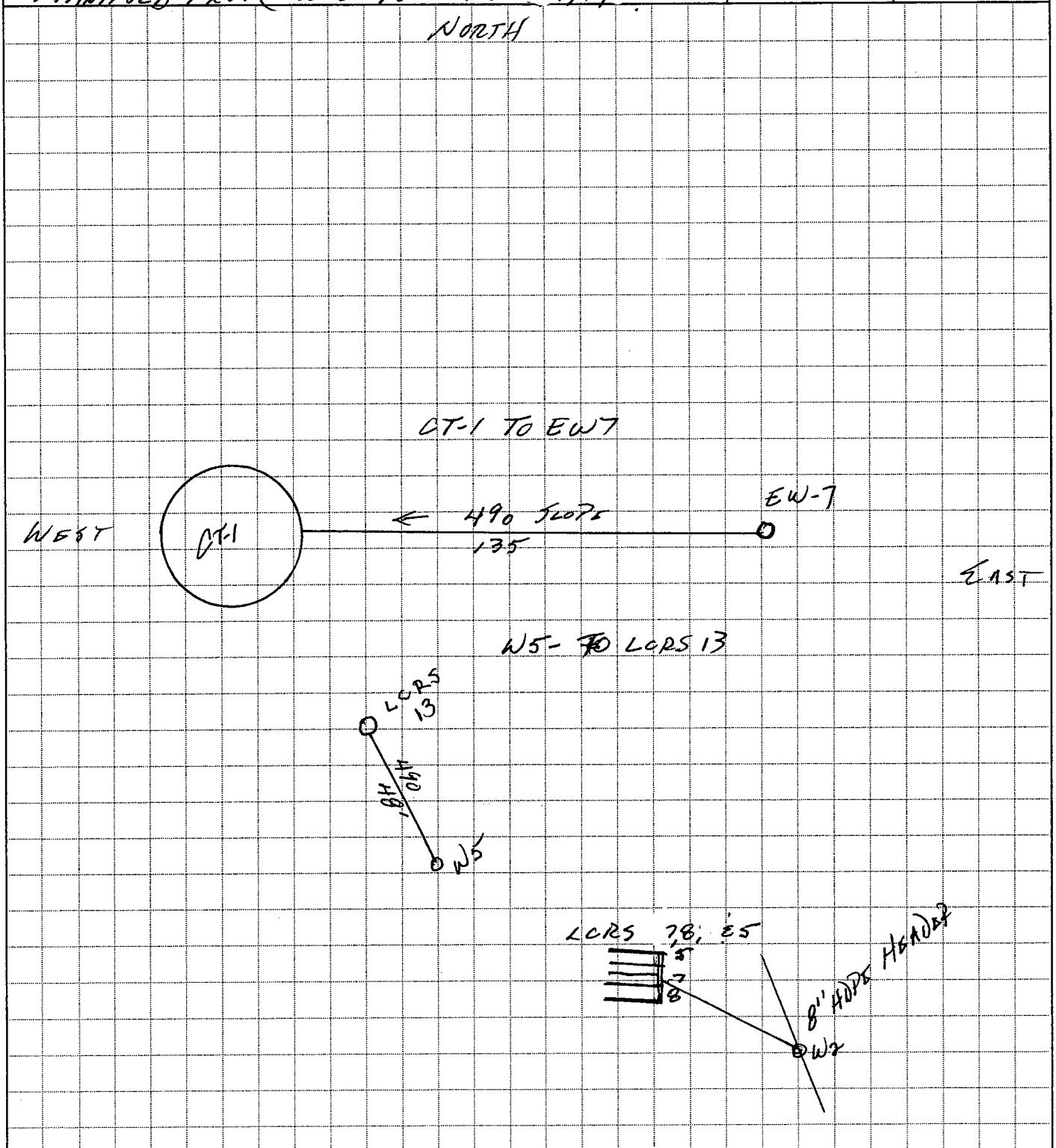
Field Representative _____ **Date** _____

SCS ENGINEERS

SHEET_____OF_____

CLIENT	PROJECT	JOB NO.
CITRUS COUNTY	LANDFILL GAS	052070449.04

SUBJECT	BY	DATE
AS-BUILT CT1 TO EW-7, W-5 TO LCRS 13	KD	3/3/10
MANIFOLD FROM W-2 TO LCRS 7, 8, & 5	CHECKED	DATE



SCS ENGINEERS DAILY FIELD REPORT

Page _____ of _____

Project: 7-Acre Closed Area Landfill Re-closure and Landfill Gas System Citrus County Landfill **Project number:** 09207049.04 Pipe Crew

Owner: Citrus County **Contractor:** Belair

Date: 3/4/10 THUR **Contract Day:** 100 **Contract Duration** 130

Weather
Temperature: (AM) 39 **(PM)** 57 **Rain** _____ **Rainfall (inches)** _____
Description of weather: SUNNY AND CLEAR

List of Active Equipment on site
160 EXCAVATOR
D6 DOZER
OFF ROAD TRUCK
330 EXCAVATOR

Equipment Not Used/Down:

Personnel on site:

1	2	2
No. of Superintendents	No. of Skilled	No. of Laborers

Description of Construction Activity BELAIR ON SITE AT 7:00 AM. BEGAN EXCAVATING MSW SURROUNDING BOTTOM SECTION OF CT2. LOADED MSW WITH 330 EXCAVATOR INTO OFF ROAD TRUCK FOR TRANSPORT TO WORKING FACE. SET TOP OF TRAP AND BOLTED FLANGE. MADE CONNECTION TO W1 ON NORTH FROM CONDENSATE TRAP TO STUBOUT. RUN WAS 22' OF 8" HDPE WELDED AT "T" COATED BOOTS AT CT WITH ASPHALTIC COMPOUND AND WRAPPED WITH PLASTIC. PLACED 200 LBS BENTONITE TO SEAL TRAP. BACKFILLED WITH CLEAN MATERIAL AND COMPACTED AFTER SURVEYING PIPE RUN. INSTALLED MARKING TAPE. SLOPE 4+90 MOVED OVER TO EW7 AND FUSED A 8X6 REDUCER AND ATTACHED RISER FOR WELL HEAD. SPENT AFTERNOON BUILDING PIPE RACKS FOR RUN TO

List of Subcontractors W1 - RENAMED W-7

List of Materials Delivered/INSTALLED
HDPE 8" CT2 - W1 = 22'

Contract Issues/Conflicts
Description: APPEARS THERE WILL BE A DESCREPANCY IN THE OD OF THE CAPS FOR THE LEACHATE RISERS 6 - 9

HELD PROGRESS MEETING WITH COUNTY AND CONTRACTOR

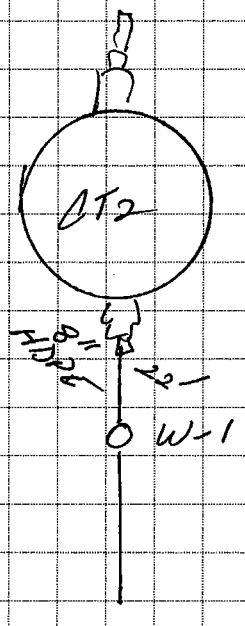
Field Representative KAD **Date** 3/4/10

SCS ENGINEERS

SHEET_____ OF_____

CLIENT	PROJECT	JOB NO.
CITRUS CO	LANDFILL GAS	092070449.04

SUBJECT	BY	DATE
AS-BUILT W-1 TO CT2	KP	3/4/10
	CHECKED	DATE



SCS ENGINEERS DAILY FIELD REPORT

Page _____ of _____

Project: 7-Acre Closed Area Landfill Re-closure and Landfill Gas System Citrus County Landfill **Project number:** 09207049.04 Pipe Crew

Owner: Citrus County **Contractor:** Belair

Date: 3/5/10 FRI **Contract Day:** 101 **Contract Duration** 130

Weather

Temperature: (AM) 42 **(PM)** 62 **Rain** _____ **Rainfall (inches)** _____

Description of weather: SUNNY & CLEAR

List of Active Equipment on site

160 EXCAVATOR
330 EXCAVATOR
D6 DOZER
OFF ROAD TRUCK

Equipment Not Used/Down:

Personnel on site:

No. of Superintendents	No. of Skilled	No. of Laborers
1	2	2

Description of Construction Activity ON SITE 7:00 AM, BELAIR COMPLETED INSTALLING PIPE SUPPORTS FROM STUBOUT AT 8" HEADERLINE TO OLD W1 NOW W7 AT LCRS 15. AFTER COMPLETING SUPPORTS, MOVED OVER TO W6 ON SOUTHSIDE. STUBOUT FOR W6 WAS DAMAGED BY DOZER DURING REGRADING. USED AN ELECTRIC FUSION COUPLER TO FUSE 4" STUBOUT TO HEADER. PERFORMED GENERAL CLEAN-UP AND INVENTORIED MATERIALS. PIPE CREW LEFT BY 12:00 PM. SOD GROUP WORKED PLACING SOD ON CAP TILL 2:30

List of Subcontractors

List of Materials Delivered

Contract Issues/Conflicts

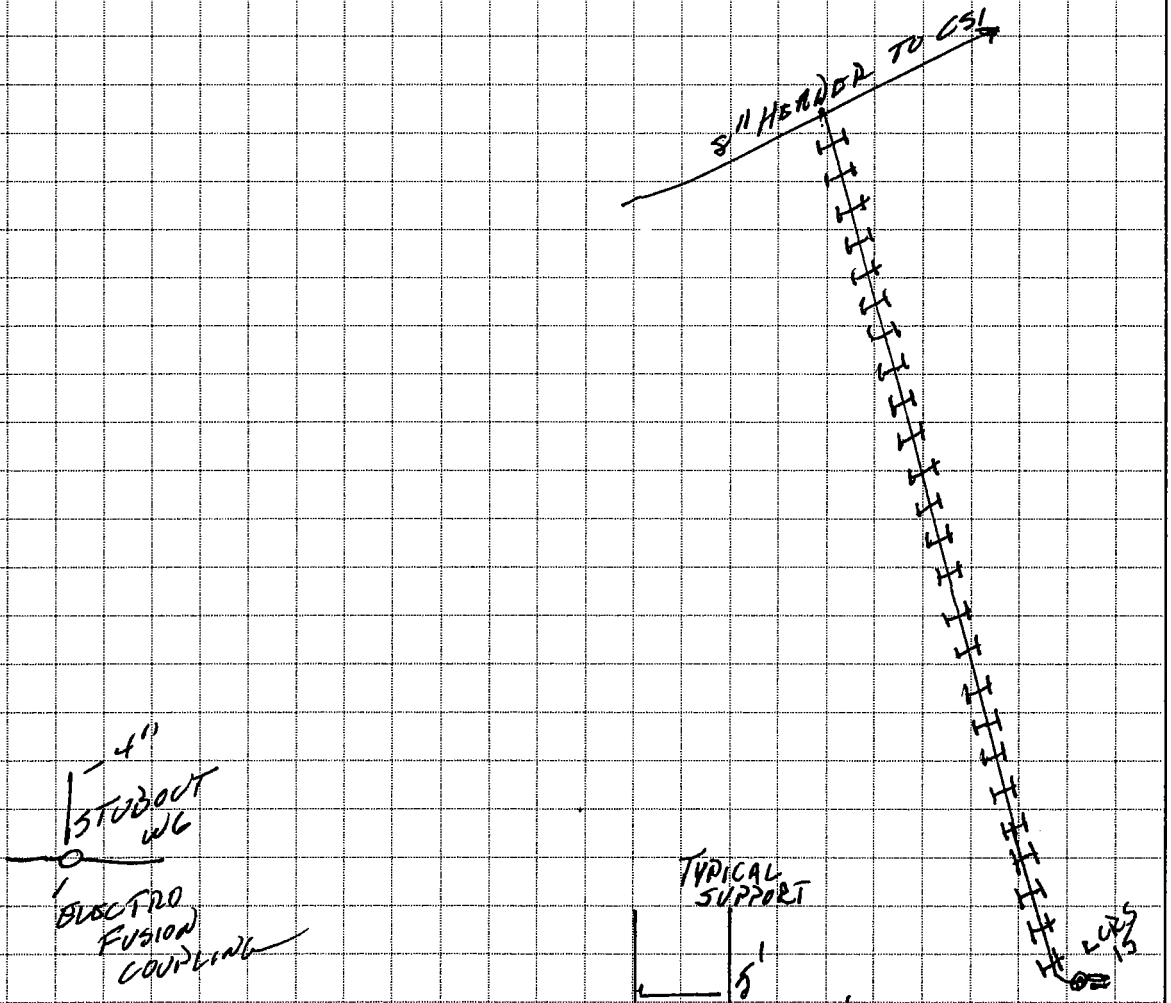
Description:

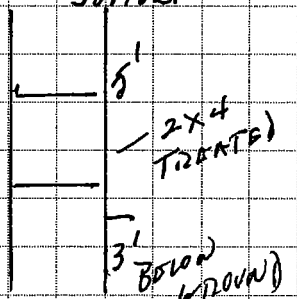
Field Representative _____ **Date** 3/5/10

SCS ENGINEERS

SHEET_____OF_____

CLIENT	PROJECT	JOB NO.	
CITRUS COUNTY		9207049.04	
SUBJECT		BY	DATE
AS BUILT PIPE SUPPORTS FROM 8" HEADER		RJ	3/15/10
TO CS1 - STUBOUT TO LCRS15, AND STUBOUT TO		CHECKED	DATE





SCS ENGINEERS DAILY FIELD REPORT

Page _____ of _____

Project: 7-Acre Closed Area Landfill Re-closure and Landfill Gas System Citrus County Landfill **Project number:** 09207049.04 Pipe Crew

Owner: Citrus County **Contractor:** Belair

Date: 3/6/10 SAT **Contract Day:** 102 **Contract Duration** 130

Weather
Temperature: (AM) 39 **(PM)** 64 **Rain** _____ **Rainfall (inches)** _____
Description of weather: SUNNY & CLEAR

List of Active Equipment on site **Equipment Not Used/Down:**

ALL EQUIPMENT IDLE

Personnel on site:

No. of Superintendents	No. of Skilled	No. of Laborers

Description of Construction Activity NO WORK PLANNED OR PERFORMED

List of Subcontractors

List of Materials Delivered

Contract Issues/Conflicts
Description:

Field Representative _____ **Date** 3/7/10

SCS ENGINEERS DAILY FIELD REPORT

Page _____ of _____

Project: 7-Acre Closed Area Landfill Re-closure and Landfill Gas System Citrus County Landfill **Project number:** 09207049.04 Pipe Crew

Owner: Citrus County **Contractor:** Belair

Date: 3/7/10 Sun **Contract Day:** 103 **Contract Duration** 130

Weather
Temperature: (AM) 40 **(PM)** 68 **Rain** _____ **Rainfall (inches)** _____
Description of weather: SUNNY & CLEAR

List of Active Equipment on site
ALL IDLE

Equipment Not Used/Down:

Personnel on site:

No. of Superintendents	No. of Skilled	No. of Laborers

Description of Construction Activity NO WORK PLANNED OR PERFORMED

List of Subcontractors

List of Materials Delivered

Contract Issues/Conflicts
Description:

Field Representative KAL **Date** 3/7/10

SCS ENGINEERS DAILY FIELD REPORT

Page _____ of _____

Project: 7-Acre Closed Area Landfill Re-closure and Landfill Gas System Citrus County Landfill **Project number:** 09207049.04 Pipe Crew

Owner: Citrus County **Contractor:** Belair

Date: 3/8/10 MON **Contract Day:** 104 **Contract Duration** _____

Weather
Temperature: (AM) 40 **(PM)** 72 **Rain** — **Rainfall (inches)** —
Description of weather: SUNNY & CLEAR

List of Active Equipment on site
CAT LOADER A
160 EXCAVATOR A
SKID LOADER A

Equipment Not Used/Down:
330 EXCAVATOR I

Personnel on site:

1	1	2
No. of Superintendents	No. of Skilled	No. of Laborers

Description of Construction Activity ON SITE 7:00 AM BELAIR BEGAN PLUMBING PIPE SUPPORTS ON EAST SOUTH OF CS-1, CREW PULLED TO HELP EXCAVATE 450' OF TRENCH ON CAP FOR POWER TO ELECTRICAL PANELS NEAR CONCRETE RISERS. FIRST TRENCHED TO APPROX. 16" AND THEN HAND DUG TO 18" PLUS. CREW THEN MOVED TO AREA NEAR CS-2 AND EXCAVATED TRENCH FOR 2" HDPE BELOW GRADE CONDENSATE DISCHARGE LINE. APPROX 75' OF TRENCH FROM CS-2 TO OUTFALL AT LEACHATE TANK.

List of Subcontractors

List of Materials Delivered

Contract Issues/Conflicts
Description:

Field Representative KMQ **Date** 3/8/10

SCS ENGINEERS DAILY FIELD REPORT

Page _____ of _____

Project: 7-Acre Closed Area Landfill
Re-closure and Landfill Gas System
Citrus County Landfill
Owner: Citrus County

Project number: 09207049.04 Pipe Crew

Contractor: Belair

Date: 3/9/10 TUE **Contract Day:** 105 **Contract Duration** _____

Weather
Temperature: (AM) 49 **(PM)** 69 **Rain** _____ **Rainfall (inches)** _____
Description of weather: SUNNY & CLEAR

List of Active Equipment on site

160 EXCAVATOR A
330 EXCAVATOR 1
SKID LOADER

Equipment Not Used/Down:

Personnel on site:

1 No. of Superintendents
_____ No. of Skilled
2 No. of Laborers

Description of Construction Activity ON SITE 7:00 AM. PIPE CREW BACKFILLED AROUND EW-9 SO COUNTY COULD CONTINUE WITH PLACEMENT OF MSW. AFTER BACKFILLING BELAIR MOVED OVER TO AREA BY CS-2 WHERE TRENCH WAS EXCAVATED YESTERDAY. SPENT MORNING HAND EXCAVATING BALANCE OF TRENCH WITH SHOVELS AND FABRICATING 2" FOR PIPE RUN BETWEEN CONDENSATE TANK AND CS-2. INSTALLED TWO VALVES AND A BACK FLOW PREVENTER. TOTAL RUN OF PIPE WAS 111.34 HORZ. AND 22.19 VERTICAL. STILL NEED TO INSTALL 35. PIPE CLAMPS TO SECURE VERTICAL TO WALL, AND ATTACH 2" TO TOP OF SUMP. BELAIR BACKFILLED OVER 2" LINE IN TRENCH

List of Subcontractors

List of Materials Delivered
2" HDPE SDR 11 — 111.34 HORZ. AND 22.19 VERTICAL

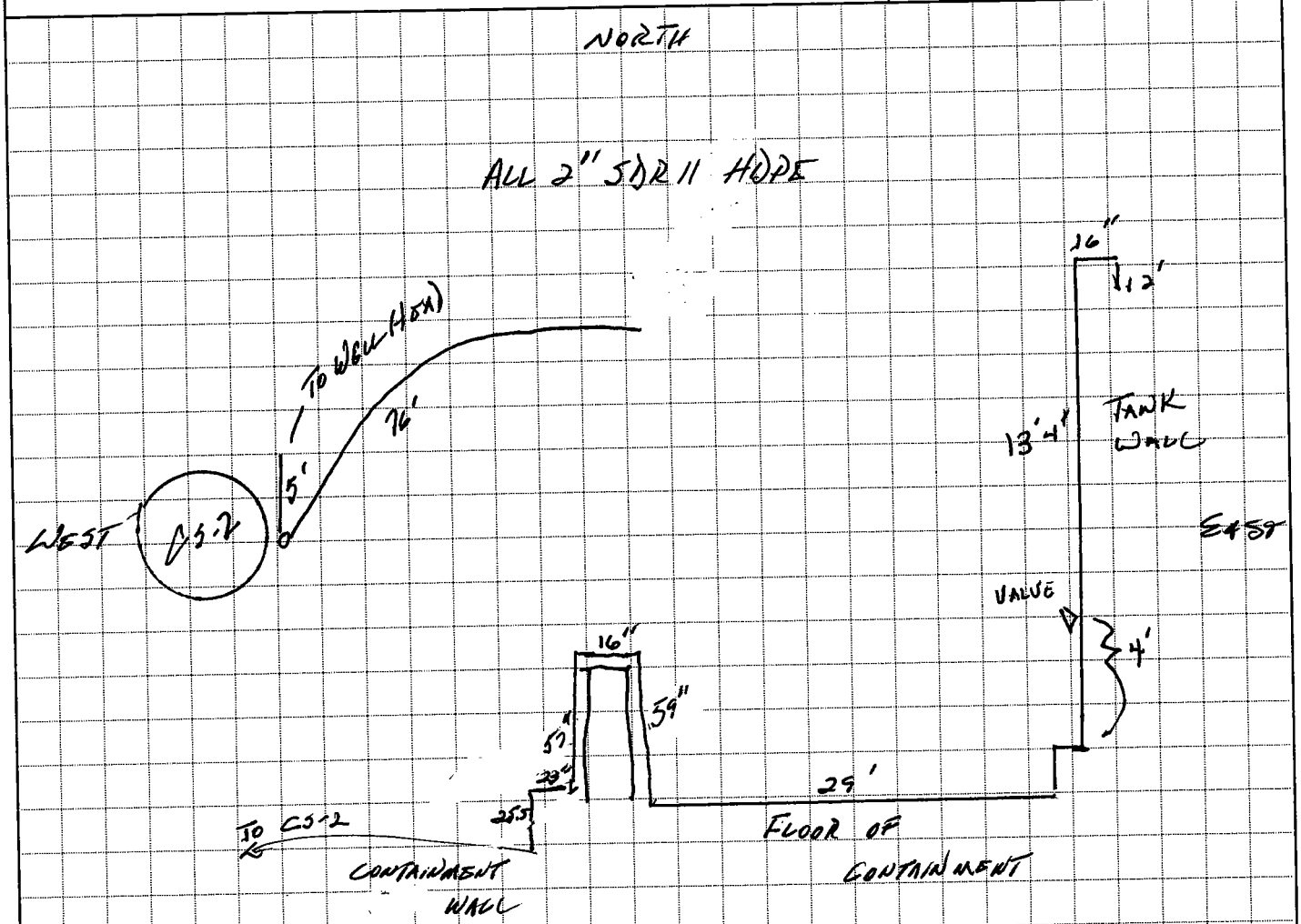
Contract Issues/Conflicts
Description:

Field Representative _____ **Date** 3/9/10

SCS ENGINEERS

SHEET_____OF_____

CLIENT	PROJECT	JOB NO.	
CITRUS CO.	LANDFILL GAS		
SUBJECT AS-BUILT FROM CS-2 TO LEACHATE TANK		BY KD	DATE 3/9/10
		CHECKED	DATE



SCS ENGINEERS DAILY FIELD REPORT

Page _____ of _____

Project: 7-Acre Closed Area Landfill Re-closure and Landfill Gas System Citrus County Landfill **Project number:** 09207049.04 Pipe Crew

Owner: Citrus County **Contractor:** Belair

Date: 3/10/10 WED **Contract Day:** 106 **Contract Duration** _____

Weather
Temperature: (AM) 50 **(PM)** 70 **Rain** <.10 IN **Rainfall (inches)** <.01 TRACE
Description of weather: SUNNY & CLOUDY SPRINKLE IN EVENING

List of Active Equipment on site
160 EXCAVATOR

Equipment Not Used/Down:

Personnel on site:
1 **No. of Superintendents** _____ **No. of Skilled** 2 **No. of Laborers**

Description of Construction Activity ON SITE 7:00AM. BELAIR PIPE GROUP CONTINUED INSTALLATION OF PIPE RACK FROM 8" HEADER LOADING TO ES-1 TO LATERAL CONNECTING TO LCR-15. COMPLETED PLACING 4" HDPE LINE IN PIPE SUPPORT RACK. "T" OFF FROM 4" PIPE RUN WITH 2" SDR 11 AND TO VALVE AT LCR 15. NEXT EXTENDED 2" SDR 9 AIR LINE AT ES-1

RECEIVED ADDITIONAL ELECTRO FUSION COUPLINGS TO CONTINUE MAKING CONECTIONS OF LATERALS AT LCRS.

BIG T ON SITE CUT DOWN FIRST CONCRETE RISER ON EAST SIDE OF CAP. ESC WORKING ON CONTROL PANNEL AT EAST RISER

List of Subcontractors
BIG T CONCRETE
CSC ELECTRICAL

List of Materials Delivered

Contract Issues/Conflicts
Description:

Field Representative KAD **Date** 3/10/10

SCS ENGINEERS DAILY FIELD REPORT

Page _____ of _____

Project: 7-Acre Closed Area Landfill Re-closure and Landfill Gas System Citrus County Landfill **Project number:** 09207049.04 Pipe Crew

Owner: Citrus County **Contractor:** Belair

Date: 3/11/10 THUR **Contract Day:** 107 **Contract Duration** _____

Weather
Temperature: (AM) 63 **(PM)** 69 **Rain** SHR **Rainfall (inches)** 4.45
Description of weather: RAIN BEG ABOUT 8:00 AM CONTINUED MOST OF DAY ON AND OFF

List of Active Equipment on site
ALL EQUIPMENT IDLE

Equipment Not Used/Down:

Personnel on site:
1 (No. of Superintendents) 2 (No. of Skilled) _____ (No. of Laborers)

Description of Construction Activity ON SITE 7:00 AM, BELAIR PREPARING FOR INCLEMENT WEATHER. INSTALLED WELL HEADS EXTRACTION WELLS # 1, 2, 3. AND ADDITIONAL WELL HEADS AT W 2, 3, 4, 5 AND 6. HAD INTERMITENT SHOWERS, HEAVY AT TIMES ALL MORNING. AFTER PROGRESS MEETING SURVEYED PROGRESS WITH ENGINEER AND COUNTY ENGINEER DECIDED NOT TO REPLACE CAPS AT 3 in 18" RISERS AT R10, 11, 13 AS THEY WILL BE MODIFIED DURING SLIP LINING OF CRUSHED LEACHATE RISERS

HEAVY RAINS HIT AT BETWEEN 12:30 AND 1:00 CAUSING HEAVY RUNOFFS AND LOSS OF COVER ON CAP. PHOTO DOCUMENTED

List of Subcontractors

List of Materials Delivered

Contract Issues/Conflicts
Description: HELD PROGRESS MEETING WITH CONTRACTOR AND COUNTY

Field Representative KAQ **Date** 3/11/10

SCS ENGINEERS DAILY FIELD REPORT

Page _____ of _____

Project: 7-Acre Closed Area Landfill Re-closure and Landfill Gas System Citrus County Landfill **Project number:** 09207049.04 Pipe Crew

Owner: Citrus County **Contractor:** Belair

Date: 3/12/10 **Contract Day:** 108 **Contract Duration** _____

Weather
Temperature: (AM) 62 **(PM)** 66 **Rain** 5 1/2 **Rainfall (inches)** .82
Description of weather: OVERCAST AND RAIN

List of Active Equipment on site
ALL IDLE

Equipment Not Used/Down:

Personnel on site:
1 SUPT

No. of Superintendents **No. of Skilled** **No. of Laborers**

Description of Construction Activity ON SITE 7:00 AM. BELAIR DID NOT HAVE CREW ON SITE. MET WITH COUNTY AND SUPT. FOR BELAIR AND ASSESSED DAMAGE FROM STORM. NOTE: THERE WAS HEAVY EROSION ON NORTH SIDE OF CAP. COVER MATERIAL WAS WASHED DOWN EXPOSING LINER. COVER SOILS SILTED IN DR A'S 1 AND 2. ALSO OBSERVED GAS BUBBLES BEGINNING TO APPEAR CAUSING LINER TO RAISE. LINER WILL HAVE TO BE CUT - EVACUATED AND REPAIRED. IN ADDITION OBSERVED DEBRIS MIXED INTO COVER SOIL.

List of Subcontractors

List of Materials Delivered

Contract Issues/Conflicts
Description:

Field Representative KAL **Date** 3/12/10

SCS ENGINEERS DAILY FIELD REPORT

Page _____ of _____

Project: 7-Acre Closed Area Landfill Re-closure and Landfill Gas System Citrus County Landfill **Project number:** 09207049.04 Pipe Crew

Owner: Citrus County **Contractor:** Belair

Date: 3/13/10 SAT **Contract Day:** 109 **Contract Duration** _____

Weather
Temperature: (AM) 56 **(PM)** 69 **Rain** _____ **Rainfall (inches)** _____
Description of weather: SUNNY & CLEAR

List of Active Equipment on site **Equipment Not Used/Down:**

ACL FDLS

Personnel on site:

No. of Superintendents	No. of Skilled	No. of Laborers

Description of Construction Activity NO WORK PLANNED OR PERFORMED

List of Subcontractors

List of Materials Delivered

Contract Issues/Conflicts
Description:

Field Representative KAR **Date** 3/13/10

SCS ENGINEERS DAILY FIELD REPORT

Page _____ of _____

Project: 7-Acre Closed Area Landfill Re-closure and Landfill Gas System Citrus County Landfill **Project number:** 09207049.04 Pipe Crew

Owner: Citrus County **Contractor:** Belair

Date: 3/14/10 SUN **Contract Day:** 110 **Contract Duration** _____

Weather
Temperature: (AM) 53 **(PM)** 68 **Rain** _____ **Rainfall (inches)** _____
Description of weather: SUNNY & CLEAR

List of Active Equipment on site | **Equipment Not Used/Down:**

Personnel on site:

No. of Superintendents | **No. of Skilled** | **No. of Laborers**

Description of Construction Activity NO WORK PLANNED OR PERFORMED

List of Subcontractors

List of Materials Delivered

Contract Issues/Conflicts
Description:

Field Representative _____ **Date** 3/14/10

SCS ENGINEERS DAILY FIELD REPORT

Page _____ of _____

Project: 7-Acre Closed Area Landfill Re-closure and Landfill Gas System Citrus County Landfill **Project number:** 09207049.04 Pipe Crew

Owner: Citrus County **Contractor:** Belair

Date: 3/15/10 Mon **Contract Day:** 111 **Contract Duration** _____

Weather
Temperature: (AM) 41 **(PM)** 68 **Rain** _____ **Rainfall (inches)** _____
Description of weather: SUNNY & CLEAR WINDY

List of Active Equipment on site
160 EXCAVATOR
LOADER
SKID LOADER

Equipment Not Used/Down:
330 EXCAVATOR

Personnel on site:

No. of Superintendents	No. of Skilled	No. of Laborers
	2	

Description of Construction Activity ON SITE 7:00 AM. BELAIR ONLY HAD TWO PERSONEL ON SITE. GNG DIRECTING SOD CREW AND OBSERVING CUTTING OF WESTERN CONCRETE RISER ON CAP. ALSO BEGAN CLEANING OUT DRA 2 WITH 330 EXCAVATOR AND SKID LOADER
THE OTHER EMPLOYEE INSTALLED PIPING AND SAVE TIME VALVES AT LERCHATE CLEANOUTS 14, 13, 12A AND 12B PIPE CREW USING LOADER TO MOVE MATERIALS AND EQUIPMENT. ALSO CONSTRUCTED MANIFOLDS FOR CLEANOUTS 16 SII. AN ADDITION INSTALLED BLIND FLANGE ADAPTERS WITH ELECTRO FUSION COUPLERS TO CLEANOUT 16, 14, 13, 12A, 12B

List of Subcontractors
NORTH CARE SOD
BIT T CONCRETE

List of Materials Delivered

Contract Issues/Conflicts
Description:

Field Representative KAR **Date** 3/15/10

SCS ENGINEERS DAILY FIELD REPORT

Page _____ of _____

Project: 7-Acre Closed Area Landfill Re-closure and Landfill Gas System Citrus County Landfill **Project number:** 09207049.04 Pipe Crew

Owner: Citrus County **Contractor:** Belair

Date: 3/16/10 **Contract Day:** 112 **Contract Duration** _____

Weather

Temperature: (AM) 52°F **(PM)** 70°F **Rain** N **Rainfall (inches)** N/A

Description of weather: SUNNY WITH SOME CLOUDS

List of Active Equipment on site

160 EXCAVATOR
LOADER
SKID LOADER

Equipment Not Used/Down:

330 EXCAVATOR

Personnel on site:

1	1	
No. of Superintendents	No. of Skilled	No. of Laborers

Description of Construction Activity

Arrived onsite @ 8:30 am. Met with Kurt & Mike (County) to catch up on ~~what has happen~~ site progress. Mike (Belair) on site, raised EW-9 which ~~was~~ in the active fill area. At approximately 10 am Ferguson Plastics personnel arrived to ~~begin~~ saddle ~~fusing~~ fusing to Leachate cleanout risers 2, 3, 4, 5, 7, 8, & 13 & 14. ~~Did not h~~ Subcontractor to finish Saddle fusions @ remaining LCRs tomorrow.

Contractor excavated Tee @ V-1 & V-2 to ~~install~~ drain moisture to install valve extenders.

List of Subcontractors

Ferguson Plastics

List of Materials Delivered

Contract Issues/Conflicts

Description: No hired wellheads installed to this point. did not have static + differential pressure monitoring ports installed. Lid on CS-1 ~~is~~ lacked monitoring port described in detail sheet.

Field Representative R. Hogg **Date** 3/16/10

SCS ENGINEERS DAILY FIELD REPORT

Page _____ of _____

Project: 7-Acre Closed Area Landfill Re-closure and Landfill Gas System Citrus County Landfill **Project number:** 09207049.04 Pipe Crew

Owner: Citrus County **Contractor:** Belair

Date: 3/17/10 **Contract Day:** 113 **Contract Duration** _____

Weather
Temperature: (AM) 52°F **(PM)** 60°F **Rain** N **Rainfall (inches)** N/A
Description of weather: Cloudy & Cold

List of Active Equipment on site
160 Excavator
Loader
~~Skid Loader~~

Equipment Not Used/Down:
Skid loader
330 Excavator

Personnel on site:
1 **No. of Superintendents**
2 **No. of Skilled**
No. of Laborers

Description of Construction Activity
Arrived on site @ 8:30 am Contractor already installing valve extenders to V-1 and V-2. Subcontractor onsite to saddle fuse remaining LCRs. Tied in LCR 14, 13. Started 12A & 12B but did not have proper 6"x4" HDPE angled coupling to complete tie-in. Will Resume tomorrow. LCRS covered, remained open overnight.
Met with DHP, concern over CT-2 being open was discussed. Also over LCR's Left to vent. Discovered that some ~~LCR~~ Remote LCR wellheads were on in reverse (wellhead valve body installed on lateral instead of Riser.
Left site @ 5:30 pm

List of Subcontractors
Ferguson Plastics

List of Materials Delivered
2 x 20' 24" Dia. Corrugated HDPE Pipe

Contract Issues/Conflicts
Description:

Field Representative [signature] K. Hogg **Date** 3/17/10

SCS ENGINEERS DAILY FIELD REPORT

Page _____ of _____

Project: 7-Acre Closed Area Landfill Re-closure and Landfill Gas System Citrus County Landfill **Project number:** 09207049.04 Pipe Crew

Owner: Citrus County **Contractor:** Belair

Date: 3/18/10 **Contract Day:** 114 **Contract Duration** _____

Weather
Temperature: (AM) 53°F **(PM)** 60°F **Rain** Drizzle **Rainfall (inches)** _____
Description of weather: Cold, Cloudy w/ slight drizzle

List of Active Equipment on site
loader
160 excavator

Equipment Not Used/Down:
Skid loader (not used)
330 excavator (not used)

Personnel on site:

1	2	—
No. of Superintendents	No. of Skilled	No. of Laborers

Description of Construction Activity
Arrived on site @ 8:30 am. Contractor on site continuing LCR tie ins ~~#~~ R10 to F11 ~~&~~ 12A & 12B from yesterday not completed. ~~Kevin~~ Walked the site with Dan (SCS) & Gary (Belair). Discussed: putting lid on CT-2; re-covering the now-open remote wellheads EW-9R, 10R, 8R; Regrade lateral from EW10 to EW-10R due to bellying/erosion of bedding underneath pipe.
LCR tie-ins completed: ~~&~~W-2 tied into R-5, R-7 & R-8.

Note: 12A & 12B tie-ins not done - waiting on 22° pipe angle
Left site @ 6:15 pm

List of Subcontractors
~~None~~ N/A

List of Materials Delivered
N/A

Contract Issues/Conflicts
Description: See above

Field Representative (MRH) **Date** 3/18/10

SCS ENGINEERS DAILY FIELD REPORT

Project: Citrus County Landfill
Owner: Citrus County

Project Number: 09207049.04
Contractor: Belair

Date: 3-19-10

Contract Day: 115

Contract Duration:
Days Remaining:

Temperature: (AM) 45 (PM) 74 **Rain:** **Duration of Rain:**
Description of weather: Cool, clear

List of Equipment on site: (A) for active (I) for idle

Personnel on site:

Gary Silbernagel W/Belair	Mike, Mark	
No. of Superintendents	No. of Skilled	No. of Laborers

Description of Construction Activity: 7:30 - 4:20

Spoke w/ Gary about progress, his work completion schedule.
Mike & Mark fusing 4" Line into saddle on leachate riser 2, just east of paved road & the last L.R. to the north. Mike & Mark having problem making fuse to L.R.; left too little HDPE pipe between valve & saddle! Must do over.
Mike w/Belair tightening ferncos on wells & CS-1, CS-2 caps for air pressure test.
Conversation w/ Gary about ports on wellheads, flex hose @ 90°, need to talk w/ Dan.
Air test attempted but need temp. gauge, introduce air at a lateral (now Monday)
Conversation w/Casey about project at 4:10.

List of Subcontractors:

~~Shaw Drilling - Stacey, Wes~~
~~Mobilizing~~
Mike w/Belair said he installed 1/4" orifice plates in wellheads.

List of Materials Delivered:

List of Quantities installed this date:

Item Description	Quantity	Accumulated Quantity

Field Representative: Jim Burzenski

Date: 3-19-10

SCS ENGINEERS DAILY FIELD REPORT

Project: Citrus County
Owner:

Project Number: 09207049.04
Contractor: Belair

Date: 3-22-10 Monday Contract Day: _____ Contract Duration: _____
Days Remaining: _____

Weather Cool, Overcast, Lt. rain
Temperature: (AM) 54 (PM) 61 Rain: _____ Duration of Rain: 3/4" yesterday
Description of weather: _____

List of Equipment on site: (A) for active (I) for idle

Personnel on site:

Gary — No. of Superintendents
Mike, Mark — No. of Skilled
_____ — No. of Laborers

Description of Construction Activity Mike w/ County In 7:30 — 4:30
Mike preparing for air test. Air test started at 9:10 w/ introduction of air at 4" riser by EW.
Test includes header, laterals, risers between CS-1 & CS-2.

Men completing concrete cuts on structures in 7acre area.
Note: Concrete cuts uneven, need to form top level & pour so lids fit correctly.
Conversation w/ Mike w/Belair about CT's. Was 6" PVC installed below B/F
Informed him that the trap would not work without the 6". JT called NO!
Dan & let him know.
Making fusion
Installing more wellheads at 90°. Leachate tie-ins @ 12a & 12b.

List of Subcontractors

List of Materials Delivered

List of Quantities installed this date:

	Item Description	Air test		Quantity	Accumulated Quantity
Start	4.5 psi	65°	9:10		
10	4.5 "	61	9:20		
20	4.5 "	60	9:30		
30	4.5 "	59	9:40		
40	4.5 "	59	9:50		
50	4.5 "	59	10:00		
60	4.5 "	59	10:10		

Field Representative Jim Burgunder Date 3-22-10

SCS ENGINEERS DAILY FIELD REPORT

Project: Citrus County
Owner:

Project Number: 09207049.04
Contractor: Belair

Date: 3-23-10

Contract Day:

Contract Duration:
Days Remaining:

Weather Cool, Cloudy
Temperature: (AM) 50 (PM) 70 Rain: Duration of Rain:
Description of weather:

List of Equipment on site: (A) for active (I) for idle

Volvo	Loader - A		
Northax	Excavator - A		
CaT	Skid steer - I		
CaT	Dozer - I		

Personnel on site:

Gary — No. of Superintendents
Mike, Mark — No. of Skilled
Allen & 2 laborers — No. of Laborers

Description of Construction Activity Mike w/ County 7:30 — 5:30

- Bollards (6") installed at road crossings, and a few others.
- Air compressor placed on concrete pad & unwrapped
- Men securing 2" condensate line running to TANK by skid.
- Mike preparing for next air test
- Conversation w/ Dan @ 8:00 for update
- Men backfilling around CS-2 & measuring area for rock fence.
- Three air tests passed; see below for documentation.
- Air test completed on 2" air line.

List of Subcontractors

List of Materials Delivered

List of Quantities installed this date:

Item Description	Quantity	Accumulated Quantity
#1 Start 12:45 4.5 psi 70°F		
12:55 " 68°F	Air test CS-2 through V-1 to CT-1 to CT-2	
12:05 " 67°F		
12:15 " 66°	Air test LC to 12a & 12b passed 1:35 125' 4" PE	
12:25 " 66	#2 4.4 psi 67° → 65°F 2:35	
12:35 " 66		
12:45 " 66	CT-1 to EW-1 175' 4.6 psi - 66° 65 64°	2245 3245
	#3	

Field Representative Jim Burgenske Date 3-23-10

#4 2" air line @ 100 psi 80° → 70° 1 Hour 3:55 - 4:55.

SCS ENGINEERS DAILY FIELD REPORT

Project: Citrus County
Owner:

Project Number: 09207049.04
Contractor: Belair

Date: 3-24-10

Contract Day:

Contract Duration:
Days Remaining:

Weather Cool, clear
Temperature: (AM) 53 (PM) 76 Rain: Duration of Rain:
Description of weather:

List of Equipment on site: (A) for active (I) for idle

Volvo Loader -A		
Northrax Excavator -A		
CAT Skid steer -A		
CAT Dozer -A		

Personnel on site:

Gary (No. of Superintendents) Mike, Mark (No. of Skilled) Allen & 2 laborers (No. of Laborers)

Description of Construction Activity Mike w/ County 7:45

- Fusing 2" valves for discharge to leachate beside concrete structures
- New lid delivered & installed on concrete structure (East one)
- Inspected Ponds 1 & 2 + sent 2 video's TO Dan
- Gary asked if the 2" line on the face needed to be pressure tested, and Dan replied via email that it has been in operation for more than a month w/no visible leaks; no air test needed.
- 2" Line welded on saddle at Leachate riser 40' SW of CS-1.
- First pump installed in CS-1 but more work needed TO Connect discharge
- Second (& final) pump installed in ~~CS-1~~ CS-2.
- Men grading around west side of DRA-2
- Men plumbing pipes on Tops of concrete structures

List of Subcontractors

List of Materials Delivered

List of Quantities installed this date:

Item Description	Quantity	Accumulated Quantity

Field Representative Jim Bergenske Date 3-24-10

SCS ENGINEERS DAILY FIELD REPORT

Project: Citrus County
Owner:

Project Number: 09207049.04
Contractor: Belair

Date: 3-25-10

Contract Day:

Contract Duration:
Days Remaining:

Weather Cool
Temperature: (AM) 57 (PM) 71 Rain: Duration of Rain:
Description of weather:

List of Equipment on site: (A) for active (I) for idle

Personnel on site:

Gary	Mark, Allen	2 laborers
No. of Superintendents	No. of Skilled	No. of Laborers

Description of Construction Activity Mike w/ County 7:40
Mike w/ Belair heads back to MN. with trailer.

Men grading around perimeter of #2 pond.

Isolation valves V-1, V-2 coated w/undercoating, wrapped w/plastic & taped.

Progress meeting, Dan

List of Subcontractors
CEC Electrical @ Concrete structures

List of Materials Delivered

List of Quantities installed this date:

Item Description	Quantity	Accumulated Quantity

Field Representative Jim Burgemaster Date 3-25-10

SCS ENGINEERS DAILY FIELD REPORT

Project: Citrus County Landfill
Project Number: 09207049.04
Owner: Citrus County
Contractor: Belair
Date: 3-30-10
Contract Day:
Contract Duration:
Days Remaining:
Temperature: (AM) 58 (PM) 75 **Rain:** **Duration of Rain:**
Description of weather:
List of Equipment on site: (A) for active (I) for idle

Volvo Loader	(A)	
CaT Skid Steer	(A)	
CaT Dozer	(A)	
CaT Excavator	(I)	

Personnel on site:
Gary Silbernagel W/Belair — **No. of Superintendents**
Mark, Allen — **No. of Skilled**
Ulysses, Ramone — **No. of Laborers**

Description of Construction Activity: Mike Wimer w/ County Arrived at site and observed small bubble in liner (10' diameter) on 7 acre reclosure near the NE corner; this was also recorded by Mike Wimer last week.

Men installing concrete valut over 2" HDPE forcemain line on east side of fence approx 90' S.W. of scalehouse.

Mike Wimer showed me a photo he took yesterday of an 18" CMP that has a severe dent. This CMP for road Crossing is on the south side access road & has 2 HDPE pipes running through it; 10" & 2". Needs to be replaced.

List of Subcontractors:

List of Materials Delivered:

List of Quantities installed this date:

Item Description	Quantity	Accumulated Quantity

Field Representative: Jim Bujnicki **Date:** 3-30-10

SCS ENGINEERS DAILY FIELD REPORT

Project: Citrus County Landfill
Owner: Citrus County

Project Number: 09207049.04
Contractor: Belair

Date: 4-2-10 **Contract Day:** **Contract Duration:**
Days Remaining:

Temperature: (AM) 56 (PM) 74 **Rain:** **Duration of Rain:**
Description of weather:

List of Equipment on site: (A) for active (I) for idle

Deere 330C LC Excavator	

Personnel on site:

Gary Silbernagel W/Belair	Mark, Allen	Ulysses, Ramone
No. of Superintendents	No. of Skilled	No. of Laborers

Description of Construction Activity:

Men continue work on small items:

Connections to leachate risers

Laying sod

Plugs in lids of leachate risers

List of Subcontractors:

~~Shaw Drilling – Stacey, Wes~~
~~Mobilizing~~

List of Materials Delivered:

List of Quantities installed this date:

Item Description	Quantity	Accumulated Quantity

Field Representative: Jim Burzenski

Date: 4-2-10

SCS ENGINEERS DAILY FIELD REPORT

Project: Citrus County Landfill
Project Number: 09207049.04
Owner: Citrus County
Contractor: Belair
Date: 4-7-10
Contract Day:
Contract Duration:
Days Remaining:
Temperature: (AM) 64 (PM) 79 **Rain:** **Duration of Rain:**
Description of weather: Clear
List of Equipment on site: (A) for active (I) for idle

Deere Excavator	
Cat Front loader	

Personnel on site:
Gary Silbernagel W/Belair — No. of Superintendents
Mark, Allen — No. of Skilled
Ulysses, Ramone — No. of Laborers

Description of Construction Activity: Mike w/ County
Conversation w/ Gary about todays activities and what he wanted to accomplish the next couple of weeks.
Men start excavating CT-2. the blind flange that needs to be taken apart is located 6' below surface. Flange was unbolted & 6" HDPE pipe with 18" Lid inserted into lower section of trap. then flange is bolted back together (with longer bolts), undercoating brushed on per specs., the plastic wrapped around area then backfilled.
Conversation w/ Casey about project.
CT-1 then excavated like CT-2 above but reached a depth of 12'. Repair of both traps completed.

List of Subcontractors:

List of Materials Delivered:

List of Quantities installed this date:

Item Description	Quantity	Accumulated Quantity

Field Representative: Jim Burgunder. **Date:** 4-7-10

SCS ENGINEERS DAILY FIELD REPORT

Project: Citrus County Landfill
Project Number: 09207049.04
Owner: Citrus County
Contractor: Belair
Date: 4-9-10
Contract Day:
Contract Duration:
Days Remaining:
Temperature: (AM) 58 (PM) 75 **Rain:** **Duration of Rain:**
Description of weather:
List of Equipment on site: (A) for active (I) for idle

Personnel on site:

Gary Silbernagel W/Belair	Allen	
No. of Superintendents	No. of Skilled	No. of Laborers

Description of Construction Activity: Mike w/ County SKid arrives on site at 7:30. Flat bed semi w/ skid drives to location where SKid will be located. Crane operator lifts SKid off truck & places on prepared layer of rock. Gary & Allen raise flare vertically & bolt to base. Light installed in top of flare before raised.

SKid in place but several connections need to be made & electrical.

List of Subcontractors:

List of Materials Delivered:
Rental of crane from Sim's SKid

List of Quantities installed this date:

Item Description	Quantity	Accumulated Quantity

Field Representative: Jim Bugenski **Date:** 4-9-10

SCS ENGINEERS DAILY FIELD REPORT

Project: Citrus County Landfill
Project Number: 09207049.04
Owner: Citrus County
Contractor: Belair
Date: 4-12-10
Contract Day:
Contract Duration:
Days Remaining:
Temperature: (AM) 58 (PM) 77 **Rain:** **Duration of Rain:**
Description of weather:
List of Equipment on site: (A) for active (I) for idle

Personnel on site:
Gary Silbernagel W/Belair

No. of Superintendents	No. of Skilled	No. of Laborers

Description of Construction Activity:
Arrived on site and spoke w/ Mike Wimer about project.
Drove site and started punch out list.
Met Gary at flat + discussed connections, drains, sump, metal bldg. + timing
Left site couple hours later.

List of Subcontractors:

List of Materials Delivered:

List of Quantities installed this date:

Item Description	Quantity	Accumulated Quantity

Field Representative: Jim Bagnecki
Date: 4-12-10

APPENDIX C

AS-BUILT CONSTRUCTION WELL LOGS

SCS Engineers

Site Name:	Citrus County	Well Number:	EW-01
Project #:	09207049.04	Coordinates:	
Start Date:	1-25-10	Surface Elevation:	166.00
Completed:	1-25-10	Top of Casing Elevation:	169.00
Contractor:	Belair	Boring Diameter:	36"
Inspector:	Jim Burzenski	Pipe Material Diameter	6" Sch. 80 PVC
Driller:	Shaw Drilling	Total Depth Drilled:	90'
		Completion:	✓

1' Cover			
Good mixture of MSW			
25%om	Little D	88°	5
Plastics, household, papers			
25%om	Moderate D	91°	10
Metal tubing, papers, good MSW			
50%om	Moderate D	101°	15
MSW already black			
visible liquid			
	Severe D	109°	20
Black MSW			
email w/photo to Dan			
Very wet	Severe D	118°	25
Black MSW, hard to distinguish			
Very wet	Severe D	109°	30
Plastics showing, clay/soil			
Very wet	Severe D	126°	35
Black MSW			
visible fluid	Severe D	111°	40
Consistently black & severely decomposed			
Wet		110°	45
Carmen from site at well			
Same as above		108°	50

DONUT

COMPLETION LOG	
RISER STICK UP	3'
RISER BELOW	20'
SLOTTED PIPE	69'
BACKFILL	16'
HYDRATE	✓
BENTONITE #1	2'
BACKFILL	1'
DONUT	✓
GRAVEL PACK	71'
Stone	
Structural fill	
Bentonite fill	
MATERIALS LIST	
TOP CAP	✓
SOLID PIPE	20' + 3'
SLOTTED PIPE	69'
BOTTOM CAP	✓
BENTONITE	12 bags
BACKFILL	16' + 1'
STONE	71'

LEGEND:
D = Decomposition and is shown as: little, some, moderate, much or severe

C = Compaction and is listed as loose, moderate or tight

NOTES:

Well became wet at just 15' and continued at all depths

SCS Engineers

Site Name: Citrus County
Project #: 09202049.04
Start Date: 1-25-10
Completed: 1-25-10

Well Number: EW-01
Coordinates:
Surface Elevation: 166.00
Top of Casing Elevation: 169.00

Contractor: Belair
Inspector: Jim Burzenski
Driller: Shaw Drilling

Boring Diameter: 36"
Pipe Material Diameter 6" Sch. 80 PVC
Total Depth Drilled: 90'
Completion:

Plastics visible with Severe waste			
Still visible fluid	107°		55
Same as above			
Wet	Severe D	106°	60
Black msw w/soil			
Wet	Severe D	114°	65
Consistent severe waste			
Wet	Severe D	117°	70
plastics showing & black			
Still wet	Severe D	119°	75
Very Severe msw			
Wet	Severe D	111°	80
Black msw			
Wet	Severe D	112°	85
Can only distinguish plastics			
Wet	Severe D	104°	90
			95
			100

SCS Engineers

Site Name: Citrus County
Project #: 09202049.04
Start Date: 1-28-10
Completed: 1-28-10

Well Number: FW-02
Coordinates:
Surface Elevation: 166.00
Top of Casing Elevation: 169.00

Contractor: Belair
Inspector: Jim Burzenski
Driller: Shaw Drilling

Boring Diameter: 36"
Pipe Material Diameter 6" Sch. 80 PVC
Total Depth Drilled: 90'
Completion: Y

18" Cover

1592m Little D 68°
Good MSW, yard waste

2092m Little D 80°
Good combination MSW
usual plastics

2092m Some D 104°
Carpet, household plastics

3592m Moderate D 98°
Good MSW, visible gas

4592m Moderate D 101°
Good waste usual plastics

4592m Moderate D 109°
Getting black, MSW
usual plastics

4592m Moderate D 111°
Black, visible gas

4592m Severe D 109°
Black, Severe MSW

5092m Severe D 108°
Very Black/Gray

5092m Severe D 106°

Donut

COMPLETION LOG	
RISER STICK UP	3'
RISER BELOW	20'
SLOTTED PIPE	69'
BACKFILL	16'
HYDRATE	✓
BENTONITE #1	2'
BACKFILL	1'
DONUT	✓
GRAVEL PACK	71'
Stone	
Structural fill	
Bentonite fill	
MATERIALS LIST	
TOP CAP	✓
SOLID PIPE	20' + 3'
SLOTTED PIPE	69'
BOTTOM CAP	✓
BENTONITE	12 bags
BACKFILL	16' + 1'
STONE	71'

LEGEND:
D = Decomposition and is shown as: little, some, moderate, much or severe

C = Compaction and is listed as loose, moderate or tight

NOTES:

SCS Engineers

Site Name: Citrus County
Project #: 09207049.04
Start Date: 1-28-10
Completed: 1-28-10

Well Number: EW-02
Coordinates:
Surface Elevation: 166.00
Top of Casing Elevation: 169.00

Contractor: Belair
Inspector: Jim Burzenski
Driller: Shaw Drilling

Boring Diameter: 36"
Pipe Material Diameter 6" Sch. 80 PVC
Total Depth Drilled: 90'
Completion: Y

Plastics visible, everything else black.

50%+ Severe-D 111'

Black/Gray MSW

Visible Liquid Severe-D 116'

50%+ Severe-D 109'

Casey (site manager) at well to watch drilling.

Severe-D 120'

Everything decomposed except plastics.

Severe-D 117'

Muck like, carpet, plastics

50%m 121'

Gray/Black, Carpet but good producing waste

Severe-D 116'

Plastics, carpet, waste became more distinguishable, less muck.

50% Severe-D 118'

90'

SCS Engineers

Site Name: Citrus County
Well Number: EW-03
Project #: 09207049.04
Coordinates:
Start Date: 1-28-10
Surface Elevation: 158.00
Completed: 1-28-10
Top of Casing Elevation: 161.00

Contractor: Belair
Boring Diameter: 36"
Inspector: Jim Burzenski
Pipe Material Diameter 6" Sch. 80 PVC
Driller: Shaw Drilling
Total Depth Drilled: 90'
Completion: Y

2' soil/clay Cover
Cloth, plastics

20%m Little-D 79°
Good MSW, rags, household

25%m Some-D 85°
Usual MSW, wiring, plastics

30%m Some-D 91°
Plastics, household, consistent

30%m Moderate-D 99°
Household, yard, carpet

30%m Moderate-D 108°
MSW, nothing unusual

30%m Moderated 108°
Cloth, plastics, soil from cover

30%m Moderate-D 104°
Good combination of MSW

30%m Moderate-D 109°
Carpet, cloth, household

30%m Moderate-D 112°
Good combination of MSW

30%m Moderate D 118°

donut

COMPLETION LOG	
RISER STICK UP	3'
RISER BELOW	20'
SLOTTED PIPE	69'
BACKFILL	16'
HYDRATE	✓
BENTONITE #1	2'
BACKFILL	1'
DONUT	✓
GRAVEL PACK	71'
Stone	
Structural fill	
Bentonite fill	
MATERIALS LIST	
TOP CAP	✓
SOLID PIPE	20' + 3'
SLOTTED PIPE	69'
BOTTOM CAP	✓
BENTONITE	12 bags
BACKFILL	16' + 1'
STONE	71'

LEGEND:
D = Decomposition and is shown as: little, some, moderate, much or severe

C = Compaction and is listed as loose, moderate or tight

NOTES:

SCS Engineers

Site Name: Citrus County — Well Number: EW-03
Project #: 09207049.04 — Coordinates:
Start Date: 1-28-10 — Surface Elevation: 158.00
Completed: 1-28-10 — Top of Casing Elevation: 161.00

Contractor: Belair — Boring Diameter: 36"
Inspector: Jim Burzenski — Pipe Material Diameter 6" Sch. 80 PVC
Driller: Shaw Drilling — Total Depth Drilled: 90'
Completion: Y

Insulation, yard waste

30%om Moderate-D 115° — 55
Soil w/good waste

30%om Moderate-D 122° — 60
Plastics, yard, soil

30%om Moderate-D 119° — 65
Soil, plastics

30%om Severe-D 117° — 70
plastics, black bags of waste

30%om Moderate/Severe D 109° — 75
Soil, grayish waste

35%om Severe-D 107° — 80
Mostly plastics showing

35%om Severe-D 111° — 85
Plastics, Cloth, yard waste

35%om Severe-D 125° — 90

90'

95

100

SCS Engineers

Site Name:	Citrus County	Well Number:	EW-04
Project #:	09207049.04	Coordinates:	
Start Date:	1-28-10	Surface Elevation:	146.00
Completed:	1-29-10	Top of Casing Elevation:	149.00
Contractor:	Belair	Boring Diameter:	36"
Inspector:	Jim Burzenski	Pipe Material Diameter	6" Sch. 80 PVC
Driller:	Shaw Drilling	Total Depth Drilled:	70' (not 90'
		Completion:	Y

3' of Cover (near active area)

Usual MSW w/soil

20%om Little-D 72° 5

Decent MSW, plastics, papers

WASTE NOT TOO OLD?

20%om Some-D 84° 10

Good MSW

25%om Some-D 95° 15

plastics, plywood, yard

25%om Some-D 99° 20

Usual MSW, carpet

25%om Some-D 100° 25

1/2 soil w/ waste

25%om Some-D 102° 30

Cloth, carpet, plastics

good visible gas

30%om Moderate-D 111° 35

Plastics, usual waste household

35%om Moderate-D 112° 40

More wet, more severe

35%om Severe-D 115° 45

plastics, carpet, yard waste

40%om Severe-D 118° 50

DONUT

COMPLETION LOG	
RISER STICK UP	3'
RISER BELOW	20'
SLOTTED PIPE	49'
BACKFILL	16'
HYDRATE	✓
BENTONITE #1	2'
BACKFILL	1'
DONUT	✓
GRAVEL PACK	51'
Stone	
Structural fill	
Bentonite fill	
MATERIALS LIST	
TOP CAP	✓
SOLID PIPE	20' + 3'
SLOTTED PIPE	49'
BOTTOM CAP	✓
BENTONITE	12 bags
BACKFILL	16' + 1"
STONE	51'

LEGEND:

D = Decomposition and is shown as: little, some, moderate, much or severe

C = Compaction and is listed as loose, moderate or tight

NOTES:

SCS Engineers

Site Name: Citrus County
Project #: 09207049.04
Start Date: 1-28-10
Completed: 1-29-10

Well Number: EW-04
Coordinates:
Surface Elevation: 146.00
Top of Casing Elevation: 149.00

Contractor: Belair
Inspector: Jim Burzenski
Driller: Shaw Drilling

Boring Diameter: 36"
Pipe Material Diameter 6" Sch. 80 PVC
Total Depth Drilled: 70' (not 90')
Completion:

plastics, nothing unusual

35% om Severe-D 114°

Soil/ waste

45% w Severe-D 101°

Getting very black, plastics, wood

50% wet Severe-D 115°

Black → only plastics showing

50% wet Severe-D 120°

→ Caved in to 65' overnight

Driller pushed/spun for 1 HR & 20 min. & could not get past 70'. I called Dan, well shortened To 70'

→ 90' Did not make depth

SCS Engineers

Site Name:	Citrus County Landfill	Well Number:	EW-05
Project #:	09207049.04	Coordinates:	
Start Date:	2-1-10	Surface Elevation:	208'
Completed:	2-1-10	Top of Casing Elevation:	211'
Contractor:	Belair	Boring Diameter:	36"
Inspector:	Roger Hogg	Pipe Material Diameter	6" Sch. 80 PVC
Driller:	Shaw Drilling	Total Depth Drilled:	81'
Data entered by	Jim Burzenski	Completion:	Y

Sand - Cover soil

Metals, plastics, some wood

15% moisture content

5

Plastics, metal, some wood

15%m 77.5°

10

Dusty, plastics & wood

15%m

15

plastics some metals

Some decomposition.

25%m 83.5

20

DONUT

"

25

25%m

102°

30

Moderate decomposition

Cover soil

35

106°

40

Dark, plastics, metals, cover material

45

15%m Cover material, plastics metal, 70% plastic

Carpet, plastic 15% m. 108°

50

COMPLETION LOG	
RISER STICK UP	3'
RISER BELOW	20'
SLOTTED PIPE	60'
BACKFILL	16'
HYDRATE	Y
BENTONITE #1	2'
BACKFILL	1'
DONUT	Y
GRAVEL PACK	62'
Stone	
Structural fill	
Bentonite fill	
MATERIALS LIST	
TOP CAP	Y
SOLID PIPE	3' + 20'
SLOTTED PIPE	60'
BOTTOM CAP	Y
BENTONITE	12 bags
BACKFILL	1' + 16'
STONE	62'

LEGEND:

D = Decomposition and is shown as: little, some, moderate, much or severe

C = Compaction and is listed as loose, moderate or tight

NOTES: m = Moisture

SCS Engineers

Site Name: Citrus County Landfill Well Number: EW-05
Project #: 09207049.04 Coordinates:
Start Date: 2-1-10 Surface Elevation: 208.00'
Completed: 2-1-10 Top of Casing Elevation: 211.00'

Contractor: Belair Boring Diameter: 36"
Inspector: Roger Hogg Pipe Material Diameter 6" Sch. 80 PVC
Driller: Shaw Drilling Total Depth Drilled: 81'
Data entered by Jim Burzenski Completion: Y

20% m Plastics, Cover material

Carpet, 25% m

35% m Moderate D
Noticably wet, water is black
Plastics 102'

35% m Highly decomposed
very black, not able to identify
individual waste components

35% m wet
much decomposition, black
105.5'

Cardboard, heavy decomposition

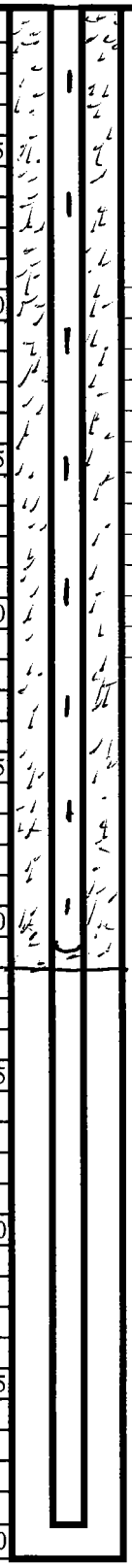
40% m very black

Cover material mixed in
w/ waste. Plastics, metal

25% m – 40% m 107.5'

NOTES:

81'



SCS Engineers

Site Name:	Citrus County Landfill	Well Number:	FW-6
Project #:	09207049.04	Coordinates:	
Start Date:	2-1-10	Surface Elevation:	208.00'
Completed:	2-1-10	Top of Casing Elevation:	211.00'
Contractor:	Belair	Boring Diameter:	36"
Inspector:	Roger Hogg	Pipe Material Diameter	6" Sch. 80 PVC
Driller:	Shaw Drilling	Total Depth Drilled:	50' (not 76')
Data entered by	Jim Burzenski	Completion:	Y

Assorted waste, plastic, wood, trash, garbage & cover material paper

15% m

5

"

80'

10

very little decomposition

very dry, assorted waste

15% m

15

Little decomposition

assorted waste

some plastics

20% m darker 93.5'

20

DONUT

Little decomposition, plastics

Cover material, paper

20% m

25

Soil, mulch, assorted plastics

plywood, Cardboard, Little D

20% m 102.5'

30

Carpet, plastics Some decomposition

wires, plastic

25% - 30% m

35

Some decomposition, darker waste

very dark waste, plastics

30% m Soil w/ msw 111.5

40

Some decomposition, very black waste

35% m Lots of plastic

45

Highly decomposed

waste black, sloppy/slurry

50% m

50

Driller drilled for an hour see note.

COMPLETION LOG	
RISER STICK UP	3'
RISER BELOW	20'
SLOTTED PIPE	29'
BACKFILL	16'
HYDRATE	Y
BENTONITE #1	2'
BACKFILL	1'
DONUT	Y
GRAVEL PACK	31'
Stone	
Structural fill	
Bentonite fill	
MATERIALS LIST	
TOP CAP	Y
SOLID PIPE	3' + 20'
SLOTTED PIPE	29'
BOTTOM CAP	Y
BENTONITE	12 bags
BACKFILL	1' + 16'
STONE	31'

LEGEND:

D = Decomposition and is shown as: little, some, moderate, much or severe

C = Compaction and is listed as loose, moderate or tight

NOTES: M = Moisture

Drilling terminated at 50' after one hour at this depth. Roger called D. Cooper for approval.

SCS Engineers

Site Name:	Citrus County Landfill	Well Number:	EW-7
Project #:	09207049.04	Coordinates:	
Start Date:	2-2-10	Surface Elevation:	128.00
Completed:	2-2-10	Top of Casing Elevation:	131.00
Contractor:	Belair	Boring Diameter:	36"
Inspector:	Roger Hogg	Pipe Material Diameter	6" Sch. 80 PVC
Driller:	Shaw Drilling	Total Depth Drilled:	73'
Data entered by	Jim Burzenski	Completion:	Y

Very Little decomposition, looks like recently placed MSW,

15%m

5

Very little decomp. recently placed plastics, papers, wood, etc.

15%m 88'

10

Little decomp. paper frayed plastics + wires, cardboard

15%m

15

Some decomposition if any. paper, plastics + cardboard some wood

20%m 90'

20

DONUT

↓

25

Some decomposition, wood, plastics, some soil, assorted MSW + textiles.

20%m 96'

30

Some decomposition, alot of plastics, wood, assorted MSW newspapers

25%m

35

Some decomposition, plastics, assorted MSW, carpet sponges

20%m 102'

40

Some decomposition, some soil cover, plastics, wires,

30%m moderate decomposition

45

Waste is black, moderate decomp Very decomposed waste, hard to distinguish.

35%m 103'

50

COMPLETION LOG	
RISER STICK UP	3'
RISER BELOW	20'
SLOTTED PIPE	52'
BACKFILL	16'
HYDRATE	Y
BENTONITE #1	2'
BACKFILL	1'
DONUT	Y
GRAVEL PACK	54'
	c
Stone	
Structural fill	
Bentonite fill	
MATERIALS LIST	
TOP CAP	Y
SOLID PIPE	3' + 20'
SLOTTED PIPE	52'
BOTTOM CAP	Y
BENTONITE	12 bags
BACKFILL	1' + 16'
STONE	54'

LEGEND:

D = Decomposition and is shown as: little, some, moderate, much or severe

C = Compaction and is listed as loose, moderate or tight

NOTES: m = moisture

SCS Engineers

Site Name: Citrus County Landfill | Well Number: EW-7
Project #: 09207049.04 | Coordinates:
Start Date: 2-2-10 | Surface Elevation: 128.00
Completed: 2-2-10 | Top of Casing Elevation: 131.00

Contractor: Belair | Boring Diameter: 36"
Inspector: Roger Hogg | Pipe Material Diameter 6" Sch. 80 PVC
Driller: Shaw Drilling | Total Depth Drilled: 73'
Data entered by Jim Burzenski | Completion: Y

Severe decomposition
Some plastic still visible
40%m Waste material black
A lot of plastics & textiles
Some carpet, wet but not alot
35%m of decomposition 116'
Cardboard, some decomp. metals,
plastics, carpet visible
paper still intact
25%m soil cover material
Severe decomposition, msw black
Heavy paper, Cardboard, plastics
25%m 101'
@ 73' some cover material
30%m bedding

55
60
65
70
75
80
85
90
95
100

NOTES:

73'

SCS Engineers

Site Name:	Citrus County Landfill	Well Number:	EW-8
Project #:	09207049.04	Coordinates:	
Start Date:	2-2-10	Surface Elevation:	128.00
Completed:	2-2-10	Top of Casing Elevation:	131.00
Contractor:	Belair	Boring Diameter:	36"
Inspector:	Roger Hogg	Pipe Material Diameter	6" Sch. 80 PVC
Driller:	Shaw Drilling	Total Depth Drilled:	70'
Data entered by	Jim Burzenski	Completion:	Y

Contractor had already started work

MSW was fine
Little decomp.
20%m

10

Paper, assorted waste
plastics

15

Some decomposition
Waste is dark, plastics
with some undecomposed plastics
92'
20%m

20

DONUT

Little decomposition, lots of plastic
metal, wires, etc.

25%m

25

Some decomposition apparent
Waste darker, mostly plastics
30%m 102'

30

Moderate decomposition,
plastics apparent
35%m

35

Assorted waste
plastics, metal, waste
not very decomposed
30%m 96'

40

Cover material, mixed
assorted waste, plastics.

45

Moderate decomposition,
plastics, metals, waste
30%m very dark. 104'

50

COMPLETION LOG	
RISER STICK UP	3'
RISER BELOW	20'
SLOTTED PIPE	49'
BACKFILL	16'
HYDRATE	Y
BENTONITE #1	2'
BACKFILL	1'
DONUT	Y
GRAVEL PACK	51'
Stone	
Structural fill	
Bentonite fill	
MATERIALS LIST	
TOP CAP	Y
SOLID PIPE	3'+20'
SLOTTED PIPE	49'
BOTTOM CAP	Y
BENTONITE	12 bags
BACKFILL	1'+16'
STONE	51'

LEGEND:
D = Decomposition and is shown as: little, some, moderate, much or severe

C = Compaction and is listed as loose, moderate or tight

NOTES: m = moisture

SCS Engineers

Site Name: Citrus County Landfill — Well Number: EW-8
Project #: 09207049.04 — Coordinates:
Start Date: 2-2-10 — Surface Elevation: 128.00
Completed: 2-2-10 — Top of Casing Elevation: 131.00

Contractor: Belair — Boring Diameter: 36"
Inspector: Roger Hogg — Pipe Material Diameter 6" Sch. 80 PVC
Driller: Shaw Drilling — Total Depth Drilled: 70'
Data entered by Jim Burzenski — Completion: Y

Moderate decomposition, decomposed organics, waste is very black, some plastics
30 ppm

Waste is dark, moderate decomp. Large quantities of metals & plastics
35 ppm 107'

Much decomposition, very dark waste, some metals & plastics
40 ppm

Severe decomposition, very dark, decomposed waste is like mud, some metals, plastic
50 ppm 109'

NOTES:

SCS Engineers

Site Name:	Citrus County	Well Number:	EW-09
Project #:	09207049.04	Coordinates:	
Start Date:	1-30-10	Surface Elevation:	128.00
Completed:	1-30-10	Top of Casing Elevation:	131.00
Contractor:	Belair	Boring Diameter:	36"
Inspector:	Jim Burzenski	Pipe Material Diameter	6" Sch. 80 PVC
Driller:	Shaw Drilling	Total Depth Drilled:	70'
		Completion:	Y

18" of cover

Little-D 84° 5

Plastics, papers
Loose

20%m Some-D 90° 10

Normal msw, plastics, rags

20%m Some-D 95° 15

Getting darker + more decomposed

25%m moderate-D 100° 20

Usual msw and further decomposition, yard waste

25%m Moderate-D 101° 25

this well became wet very quick

45%m Severe-D 105° 30

Plastics, All waste black
Hit something hard, took 15 mins.

50% visible liquid Severe-D 106° 35

Usual msw, bike tire, papers

45%m Severe-D 108° 40

less wet, less decomposed
good msw

35%m Moderate-D 109° 45

Yard waste, plastics, papers

40%m Moderate-D 109° 50

DONUT

COMPLETION LOG	
RISER STICK UP	3'
RISER BELOW	20'
SLOTTED PIPE	49'
BACKFILL	16'
HYDRATE	✓
BENTONITE #1	2'
BACKFILL	1'
DONUT	✓
GRAVEL PACK	51'
Stone	
Structural fill	
Bentonite fill	
MATERIALS LIST	
TOP CAP	✓
SOLID PIPE	20' + 3'
SLOTTED PIPE	49'
BOTTOM CAP	✓
BENTONITE	12 bags
BACKFILL	16' + 1'
STONE	51'

LEGEND:
D = Decomposition and is shown as: little, some, moderate, much or severe

C = Compaction and is listed as loose, moderate or tight

NOTES:

SCS Engineers

Site Name: Citrus County
Project #: 09207049.04
Start Date: 1-30-10
Completed: 1-30-10

Well Number: EW-09
Coordinates:
Surface Elevation: 128.00
Top of Casing Elevation: 131.00

Contractor: Belair
Inspector: Jim Burzenski
Driller: Shaw Drilling

Boring Diameter: 36"
Pipe Material Diameter 6" Sch. 80 PVC
Total Depth Drilled: 70'
Completion: Y

Good MSW, papers, yard

30% om Moderate-D 111°

Small C&D, yard, carpet

30% om Severe-D 111°

Cardboard, fiberglass screening

35% om Severe-D 114°

Usual plastics, cloth MSW
Strong fumes, visible gas

40% om Severe-D 114°

55 60 65 70 75 80 85 90 95 100

70'

SCS Engineers

Site Name: Citrus County
Project #: 09202049.04
Start Date: 1-31-10
Completed: 1-31-10

Well Number: Elev-10
Coordinates:
Surface Elevation: 128.00
Top of Casing Elevation: 131.00

Contractor: Belair
Inspector: Jim Burzenski
Driller: Shaw Drilling

Boring Diameter: 36"
Pipe Material Diameter 6" Sch. 80 PVC
Total Depth Drilled: 30' then redrilled
Completion:

In active area
6" mulch cover

15% om Little/No-D 74°
Plywood, papers, plastics

15% om Little-D 90°
Good MSW w/ 1/4 soil

20% om Some-D 102°
1/4 soil/mulch and MSW

25% om Some-D 103°
Consistent MSW.

25% Some-D 105°

See note:

1" rain last night 48°F

COMPLETION LOG	
RISER STICK UP	
RISER BELOW	
SLOTTED PIPE	
BACKFILL	
HYDRATE	
BENTONITE #1	
BACKFILL	
DONUT	
GRAVEL PACK	
Stone	
Structural fill	
Bentonite fill	
MATERIALS LIST	
TOP CAP	
SOLID PIPE	
SLOTTED PIPE	
BOTTOM CAP	
BENTONITE	
BACKFILL	
STONE	

30'

LEGEND:
D = Decomposition and is shown as: little, some, moderate, much or severe

C = Compaction and is listed as loose, moderate or tight

NOTES:

Hit something extremely hard. Broke of 3 shanks.

I called Dan Cooper, moving well 12' to the South & starting over.

SCS Engineers

Site Name: Citrus County	Well Number: EW-10
Project #: 09207049.04	Coordinates:
Start Date: 1-31-10	Surface Elevation: 128.00
Completed: 1-31-10	Top of Casing Elevation: 131.00
Contractor: Belair	Boring Diameter: 36"
Inspector: Jim Burzenski	Pipe Material Diameter 6" Sch. 80 PVC
Driller: Shaw Drilling	Total Depth Drilled: 70'
	Completion: Y

Redrill 1' of soil/mulch cover

Good fairly new waste

20%om Little-D 84° 5

Plastics, papers, yard

20%om Little D 90° 10

Yard waste w/ soil

Loose

20%om Some-D 94° 15

Plywood, plastics, cardboard

25%om Some-D 99° 20

Usual MSW

25%om Some-D 99° 25

Very Consistent

Loose

20%om Some-D 95° 30

Carpet, plastics

20%om Some-D 99° 35

Good MSW: wood, paper, plastic

20%om Some-D 98° 40

Stiff fairly new MSW

20%om Some-D 99° 45

20%om Some-D 101° 50

DONUT

COMPLETION LOG	
RISER STICK UP	3'
RISER BELOW	20'
SLOTTED PIPE	49'
BACKFILL	16'
HYDRATE	✓
BENTONITE #1	2'
BACKFILL	1'
DONUT	✓
GRAVEL PACK	51'
Stone	
Structural fill	
Bentonite fill	
MATERIALS LIST	
TOP CAP	✓
SOLID PIPE	20' + 3'
SLOTTED PIPE	49'
BOTTOM CAP	✓
BENTONITE	12 bags
BACKFILL	16' + 1'
STONE	51'

LEGEND:

D = Decomposition and is shown as: little, some, moderate, much or severe

C = Compaction and is listed as loose, moderate or tight

NOTES:

SCS Engineers

Site Name: Citrus County
Project #: 09207049.04
Start Date: 1-31-10
Completed: 1-31-10

Well Number: EW-10
Coordinates:
Surface Elevation: 128.00
Top of Casing Elevation: 131.00

Contractor: Belair
Inspector: Jim Burzenski
Driller: Shaw Drilling

Boring Diameter: 36"
Pipe Material Diameter 6" Sch. 80 PVC
Total Depth Drilled: 70'
Completion: Y

Waste more decomposed, usual MSW.

25%m Moderate-D 103° 55

Nothing unusual, good MSW

25%m Moderate-D&C 102° 60

Medium compaction

25%m Moderate-D 104° 65

MSW was consistent at all depths

30%m Moderate-D 107° 70

75

80

85

90

95

100

SCS Engineers

Site Name: Citrus County
Project #: 09207049.04
Start Date: 1-29-10
Completed: 1-29-10

Well Number: EW-11
Coordinates:
Surface Elevation: 130.00
Top of Casing Elevation: 133.00

Contractor: Belair
Inspector: Jim Burzenski
Driller: Shaw Drilling

Boring Diameter: 36"
Pipe Material Diameter 6" Sch. 80 PVC
Total Depth Drilled: 66' (not 72')
Completion: Y

3' of soil/mulch cover

20%m Little-D 92° 5
Appears to be fairly new waste

20%m Little-D 90° 10
Good mixture of household MSW

20%m Some-D 95° 15
Waste still fairly new
Loose

20%m Some-D 99° 20
Consistent household waste

20%m Some-D 101° 25
Still pretty fluffy, good MSW

20%m Some-D 102° 30
Waste becoming older, good MSW

25%m Moderate-D 105° 35
Still rather dry at this depth

25%m Moderate-D 109° 40
Good MSW w/ 20% soil

25%m Moderate-D 111° 45
Plastics, yard, MSW

25%m Moderate-D 114° 50

DONUT

COMPLETION LOG	
RISER STICK UP	3'
RISER BELOW	20'
SLOTTED PIPE	45'
BACKFILL	16'
HYDRATE	✓
BENTONITE #1	2'
BACKFILL	1'
DONUT	✓
GRAVEL PACK	47'
Stone	
Structural fill	
Bentonite fill	
MATERIALS LIST	
TOP CAP	✓
SOLID PIPE	3' + 20'
SLOTTED PIPE	45'
BOTTOM CAP	✓
BENTONITE	12 BAGS
BACKFILL	1' + 16'
STONE	47'

LEGEND:
D = Decomposition and is shown as: little, some, moderate, much or severe

C = Compaction and is listed as loose, moderate or tight

NOTES:
Stopped at 66', called Dan + Ingrid → clean sand last 5' of drilling. less visible gas.

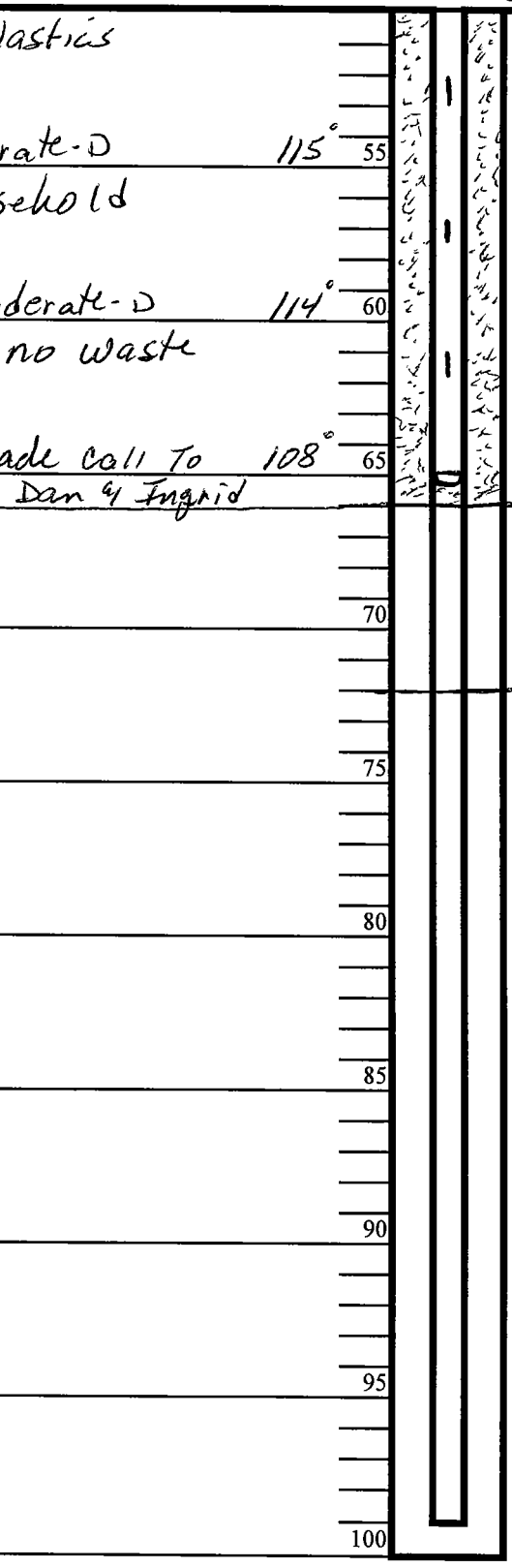
SCS Engineers

Site Name: Citrus County
Project #: 09207049.04
Start Date: 1-29-10
Completed: 1-29-10

Well Number: EW-11
Coordinates:
Surface Elevation: 130.00
Top of Casing Elevation: 133.00

Contractor: Belair
Inspector: Jim Burzenski
Driller: Shaw Drilling

Boring Diameter: 36"
Pipe Material Diameter 6" Sch. 80 PVC
Total Depth Drilled: 66'
Completion: Y



Carpet, yard, plastics

252om Moderate-D 115°

Usual household

Moderate-D 114°

Soil/Sand no waste

↓

Made call To 108°
Dan & Ingrid

66' See Note on page 1.

72' Did not reach

APPENDIX D

CONSTRUCTION PHOTOGRAPHS

Photograph Number 1

Date: November 23, 2009 **Site:** Phase I / IA & 2 GCCS Construction, Citrus County, Florida
Description: Pre-construction condition on south side of Phase 1/1A and 2 Landfill.

Photograph Number 2

Date: November 23, 2009 **Site:** Phase I / IA & 2 GCCS Construction, Citrus County, Florida
Description: Pre-construction condition DRA-3 after survey.

Photograph Number 3

Date: November 23, 2009 **Site:** Phase I / IA & 2 GCCS Construction, Citrus County, Florida
Description: Pre-construction condition DRA-2 after survey.

Photograph Number 4

Date: November 23, 2009 **Site:** Phase I / IA & 2 GCCS Construction, Citrus County, Florida
Description: Installation of erosion control fencing.

Photograph Number 5

Date: November 23, 2009 **Site:** Phase I / IA & 2 GCCS Construction, Citrus County, Florida
Description: Erosion control fencing on west side of 7-acre landfill.

Photograph Number 6

Date: November 23, 2009 **Site:** Phase I / IA & 2 GCCS Construction, Citrus County, Florida
Description: Erosion control fencing along north side of property line.

Photograph Number 7

Date: November 23, 2009 **Site:** Phase I / IA & 2 GCCS Construction, Citrus County, Florida
Description: Rough grading of DRA-1.

Photograph Number 8

Date: November 23, 2009 **Site:** Phase I / IA & 2 GCCS Construction, Citrus County, Florida
Description: Rough grading in DRA-1.

Photograph Number 9

Date: January 19, 2010 **Site:** Phase I / IA & 2 GCCS Construction, Citrus County, Florida
Description: Excavation for road crossing near CS-2.

Photograph Number 10

Date: January 19, 2010 **Site:** Phase I / IA & 2 GCCS Construction, Citrus County, Florida
Description: Excavation of the proposed site of CS-2.

Photograph Number 11

Date: January 19, 2010 **Site:** Phase I / IA & 2 GCCS Construction, Citrus County, Florida
Description: Excavation of the proposed site of CS-2.

Photograph Number 12

Date: January 19, 2010 **Site:** Phase I / IA & 2 GCCS Construction, Citrus County, Florida
Description: Backfilling over CMP for road crossing near CS-2.

Photograph Number 13

Date: January 21, 2010 **Site:** Phase I / IA & 2 GCCS Construction, Citrus County, Florida
Description: Grading of blower flare pad area.

Photograph Number 14

Date: January 21, 2010 **Site:** Phase I / IA & 2 GCCS Construction, Citrus County, Florida
Description: Pouring of concrete pad for compressor building slab.

Photograph Number 15

Date: January 21, 2010 **Site:** Phase I / IA & 2 GCCS Construction, Citrus County, Florida
Description: Pouring of concrete pad for ditch crossing.

Photograph Number 16

Date: January 25, 2010 **Site:** Phase I / IA & 2 GCCS Construction, Citrus County, Florida
Description: Waste removal from EW-01 during drilling.

Photograph Number 17

Date: January 25, 2010 **Site:** Phase I / IA & 2 GCCS Construction, Citrus County, Florida
Description: Placement of aggregate around gas extraction well.

Photograph Number 18

Date: January 25, 2010 **Site:** Phase I / IA & 2 GCCS Construction, Citrus County, Florida
Description: Installation of geotextile donut over aggregate in gas extraction well.

Photograph Number 19

Date: January 29, 2010 **Site:** Phase I / IA & 2 GCCS Construction, Citrus County, Florida
Description: Addition of water to hydrate bentonite seal on extraction well.

Photograph Number 20

Date: February 5, 2010 **Site:** Phase I / IA & 2 GCCS Construction, Citrus County, Florida
Description: Completed vertical gas extraction well.

Photograph Number 21

Date: February 5, 2010 **Site:** Phase I / IA & 2 GCCS Construction, Citrus County, Florida
Description: CS-2 placed in ground, before the construction of the flare station.

Photograph Number 22

Date: February 8, 2010 **Site:** Phase I / IA & 2 GCCS Construction, Citrus County, Florida
Description: Tee at V-1 and V-2 with flanges before valves were added.

Photograph Number 23

Date: February 9, 2010 **Site:** Phase I / IA & 2 GCCS Construction, Citrus County, Florida
Description: Valve V-1 placed. Awaiting coating and film cover.

Photograph Number 24

Date: February 10, 2010 **Site:** Phase I / IA & 2 GCCS Construction, Citrus County, Florida
Description: LFG riser installed into 8" header.

Photograph Number 25

Date: February 10, 2010 **Site:** Phase I / IA & 2 GCCS Construction, Citrus County, Florida
Description: Backfilling trench over LFG header (note: warning tape over pipe).

Photograph Number 26

Date: February 11, 2010 **Site:** Phase I / IA & 2 GCCS Construction, Citrus County, Florida
Description: Installation of 8" header pipe along south slope.

Photograph Number 27

Date: February 11, 2010 **Site:** Phase I / IA & 2 GCCS Construction, Citrus County, Florida
Description: Fusion of 8" header pipe along south slope.

Photograph Number 28

Date: February 15, 2010 **Site:** Phase I / IA & 2 GCCS Construction, Citrus County, Florida
Description: 8" tee to 6" lateral pipe to EW-1 ready for backfilling.

Photograph Number 29

Date: February 16, 2010 **Site:** Phase I / IA & 2 GCCS Construction, Citrus County, Florida
Description: Valve V-2 placed. Awaiting coating and film cover.

Photograph Number 30

Date: February 16, 2010 **Site:** Phase I / IA & 2 GCCS Construction, Citrus County, Florida
Description: Wye to EW-3 installed in header line.

Photograph Number 31

Date: February 17, 2010 **Site:** Phase I / IA & 2 GCCS Construction, Citrus County, Florida
Description: Installation of 8" header from high point to CS-1.

Photograph Number 32

Date: February 25, 2010 **Site:** Phase I / IA & 2 GCCS Construction, Citrus County, Florida
Description: Installation of downslope lateral to EW-10.

Photograph Number 33

Date: February 25, 2010 **Site:** Phase I / IA & 2 GCCS Construction, Citrus County, Florida
Description: Lateral line to leachate cleanout tie-ins.

Photograph Number 34

Date: February 26, 2010 **Site:** Phase I / IA & 2 GCCS Construction, Citrus County, Florida
Description: CS-1 placed in ground awaiting connections.

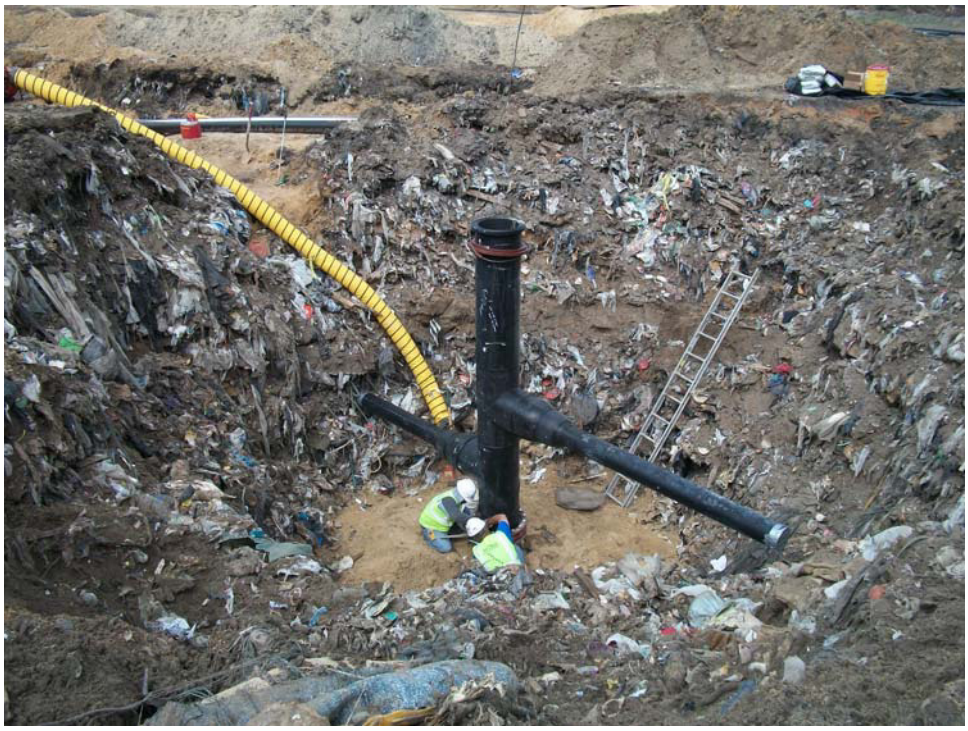
Photograph Number 35

Date: March 1, 2010 **Site:** Phase I / IA & 2 GCCS Construction, Citrus County, Florida
Description: Installation of CS-1.

Photograph Number 36

Date: March 1, 2010 **Site:** Phase I / IA & 2 GCCS Construction, Citrus County, Florida
Description: Placement of header pipe from CS-1 to north.

Photograph Number 37



Date: March 2, 2010 **Site:** Phase I / IA & 2 GCCS Construction, Citrus County, Florida
Description: Installation of CT-1.

Photograph Number 38

Date: March 3, 2010 **Site:** Phase I / IA & 2 GCCS Construction, Citrus County, Florida
Description: Installation of lateral to EW-10.

Photograph Number 39

Date: March 3, 2010 **Site:** Phase I / IA & 2 GCCS Construction, Citrus County, Florida
Description: Flanged connections at CS-1 are covered in plastic.

Photograph Number 40

Date: March 4, 2010 **Site:** Phase I / IA & 2 GCCS Construction, Citrus County, Florida
Description: Installation of CT-2.

Photograph Number 41

Date: March 17, 2010 **Site:** Phase I / IA & 2 GCCS Construction, Citrus County, Florida
Description: CS-2 installed and awaiting backfill.

Photograph Number 42

Date: March 17, 2010 **Site:** Phase I / IA & 2 GCCS Construction, Citrus County, Florida
Description: Valve extensions installed on V-1 and V-2 before backfilling.

Photograph Number 43

Date: March 17, 2010 **Site:** Phase I / IA & 2 GCCS Construction, Citrus County, Florida
Description: Above grade 4" lateral installed along east side.

Photograph Number 44

Date: March 17, 2010 **Site:** Phase I / IA & 2 GCCS Construction, Citrus County, Florida
Description: EW-7 with lateral riser, awaiting completion with wellhead.

Photograph Number 45

Date: March 19, 2010 **Site:** Phase I / IA & 2 GCCS Construction, Citrus County, Florida
Description: Welding timesaver valve onto leachate cleanout.

Photograph Number 46

Date: March 22, 2010 **Site:** Phase I / IA & 2 GCCS Construction, Citrus County, Florida
Description: Pressure test rig mounted onto system for testing.

Photograph Number 47

Date: March 24, 2010 **Site:** Phase I / IA & 2 GCCS Construction, Citrus County, Florida
Description: CS-2 fitted with condensate discharge line and pneumatic pump. The proposed area for the blower skid installation has been prepared.

Photograph Number 48

Date: March 24, 2010 **Site:** Phase I / IA & 2 GCCS Construction, Citrus County, Florida
Description: CS-1 fitted with condensate discharge line and pneumatic pump.

Photograph Number 49

Date: March 25, 2010 **Site:** Phase I / IA & 2 GCCS Construction, Citrus County, Florida
Description: Placement of new leachate cleanout tie-in with 50 foot vacuum pipe.

Photograph Number 50

Date: April 2, 2010 **Site:** Phase I / IA & 2 GCCS Construction, Citrus County, Florida
Description: Completed CS-1 with protective bollards.

Photograph Number 51

Date: April 2, 2010 **Site:** Phase I / IA & 2 GCCS Construction, Citrus County, Florida
Description: Tie-in to leachate cleanout riser R-15 (W-8). Also shows condensate discharge line from CS-1into the cleanout riser.

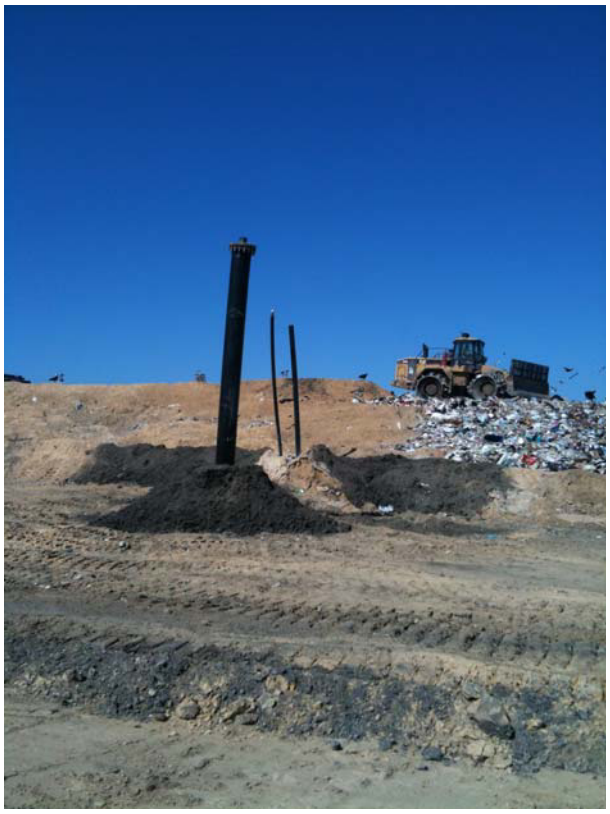
Photograph Number 52

Date: April 9, 2010 **Site:** Phase I / IA & 2 GCCS Construction, Citrus County, Florida
Description: Blower flare skid being placed by crane.

Photograph Number 53

Date: April 9, 2010 **Site:** Phase I / IA & 2 GCCS Construction, Citrus County, Florida
Description: Raising of flare and securing in place.

Photograph Number 54



Date: April 9, 2010 **Site:** Phase I / IA & 2 GCCS Construction, Citrus County, Florida
Description: CT-1 and EW-8R pipes extended for filling of next lift.

Photograph Number 55

Date: April 15, 2010 **Site:** Phase I / IA & 2 GCCS Construction, Citrus County, Florida
Description: New compressor and air dryer being installed in compressor shed.

Photograph Number 56

Date: April 15, 2010 **Site:** Phase I / IA & 2 GCCS Construction, Citrus County, Florida
Description: CS-2 connected to condensate knockout pot on flare skid.

Photograph Number 57

Date: April 15, 2010 **Site:** Phase I / IA & 2 GCCS Construction, Citrus County, Florida
Description: Overflow swale for DRA-5 on South perimeter road.

Photograph Number 58

Date: April 19, 2010 **Site:** Phase I / IA & 2 GCCS Construction, Citrus County, Florida
Description: Bottom of valve extension on V-1 encapsulated in plastic sheeting.

Photograph Number 59

Date: April 19, 2010 **Site:** Phase I / IA & 2 GCCS Construction, Citrus County, Florida
Description: Installation of new electrical service panels at blower/flare station.

Photograph Number 60

Date: April 20, 2010 **Site:** Phase I / IA & 2 GCCS Construction, Citrus County, Florida
Description: Backfilling around V-1 and V-2.

Photograph Number 61

Date: April 22, 2010 **Site:** Phase I / IA & 2 GCCS Construction, Citrus County, Florida
Description: Protective bollards installed around V-1 and V-2.

Photograph Number 62

Date: April 23, 2010 **Site:** Phase I / IA & 2 GCCS Construction, Citrus County, Florida
Description: Corrugated steel casing being installed at road crossing in southwest corner of Phase 1/1A.

Photograph Number 63

Date: April 28, 2010 **Site:** Phase I / IA & 2 GCCS Construction, Citrus County, Florida
Description: Blower flare area completed with fencing.

APPENDIX E

RECORD DRAWINGS

(24”x36” Drawing Set
Bound Separately)

CITRUS COUNTY
SOLID WASTE MANAGEMENT DIVISION

CENTRAL LANDFILL
7-ACRE CLOSED AREA RE-CLOSURE
AND LANDFILL GAS SYSTEM
CONSTRUCTION DRAWINGS

CITRUS COUNTY, FLORIDA

AUGUST 2009

BOARD OF COUNTY COMMISSIONERS

John Thrumston, Chairman, District 4
Gary Bartell, 1st Vice Chairman, District 2
Dennis Damato, 2nd Vice Chairman, District 1
Joe Meek, Commissioner, District 3
Winn Webb, Commissioner, District 5

COUNTY ADMINISTRATOR

BRAD THORPE

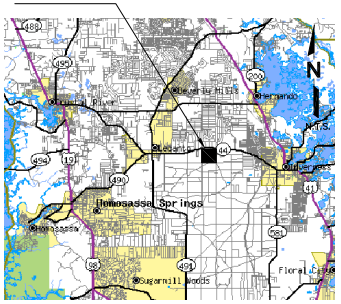
PUBLIC WORKS DEPARTMENT

Glenn W. McCracken, Director

SOLID WASTE MANAGEMENT DIRECTOR

Susan J. Metcalfe, P.G.

PROJECT LOCATION



LOCATION MAP

DESIGNATION LETTER INDICATES SECTION, NUMBER INDICATES DETAIL OR ELEVATION
INDICATES DIRECTION OF CUTTING PLANE
SHEET NUMBER WHERE SECTION IS TAKEN
SHEET NUMBER WHERE SECTION IS SHOWN

SECTION AND DETAIL DESIGNATION

SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT
CONSULTING ENGINEERS
4041 PARK OAKS BLVD., SUITE 100
TAMPA, FLORIDA 33610
PH (813) 621-0080 FAX NO. (813) 623-6757
WWW.SCSENGINEERS.COM
FLORIDA CERTIFICATE OF AUTHORIZATION NO. 00004892

SCS PROJECT NO. 09207049.04

DRAWING INDEX

DRAWING NO.		DRAWING TITLE
1	-	COVER SHEET
2	-	7-ACRE CLOSED AREA RECLOSURE - EXISTING SITE PLAN
3	-	7-ACRE CLOSED AREA RECLOSURE - PROPOSED FINAL CLOSURE SITE PLAN
4	-	7-ACRE CLOSED AREA RECLOSURE - SECTIONS - 1
5	-	7-ACRE CLOSED AREA RECLOSURE - SECTIONS - 2
6	-	7-ACRE CLOSED AREA RECLOSURE - SECTIONS - 3
7	-	7-ACRE CLOSED AREA RECLOSURE - SECTIONS - 4
8	-	7-ACRE CLOSED AREA RECLOSURE - SECTIONS - 5
9	-	7-ACRE CLOSED AREA RECLOSURE - PROPOSED DRY RETENTION AREA IMPROVEMENTS
10	-	7-ACRE CLOSED AREA RECLOSURE - DETAILS
11	-	(NOT USED)
12	-	80-ACRE AREA - EXISTING SITE PLAN
13	-	80-ACRE AREA - EROSION CONTROL IMPROVEMENTS SITE PLAN
14	-	80-ACRE AREA - EROSION CONTROL IMPROVEMENTS DETAILS - 1
15	-	80-ACRE AREA - EROSION CONTROL IMPROVEMENTS DETAILS - 2
16	-	80-ACRE AREA - EROSION CONTROL IMPROVEMENTS DETAILS - 3
17	-	LANDFILL GAS SYSTEM - PROPOSED SITE PLAN
18	-	LANDFILL GAS SYSTEM - PROPOSED BLOWER/FLARE STATION GRADING PLAN
19	-	LANDFILL GAS SYSTEM - DETAILS - 1
20	-	LANDFILL GAS SYSTEM - DETAILS - 2
21	-	LANDFILL GAS SYSTEM - DETAILS - 3
22	-	LANDFILL GAS SYSTEM - DETAILS - 4
23	-	LANDFILL GAS SYSTEM - DETAILS - 5
24	-	LANDFILL GAS SYSTEM - DETAILS - 6
25	-	LANDFILL GAS SYSTEM - DETAILS - 7
26	-	LANDFILL GAS SYSTEM - DETAILS - 8
27	-	LANDFILL GAS SYSTEM - DETAILS - 9
E-1	-	ELECTRICAL POWER PLAN
E-2	-	RISER DIAGRAM PANEL SCHEDULES
E-3	-	ELECTRICAL LINE DIAGRAM
BBLS SURVEYORS & MAPPERS INC. - RECORD SURVEY (DATED 5/10/10)		
1	-	COVER
2	-	7 ACRE RECLOSURE - SITE PLAN
3	-	7 ACRE RECLOSURE - CROSS SECTION 1
4	-	7 ACRE RECLOSURE - CROSS SECTION 2
5	-	7 ACRE RECLOSURE - CROSS SECTION 3
6	-	7 ACRE RECLOSURE - CROSS SECTION 4
7	-	DRY DETENTION AREAS 1 & 3 - POND ASBUILTS
8	-	LANDFILL GAS SYSTEM - COLLECTION LINE "A" (PLAN)
9	-	LANDFILL GAS SYSTEM - COLLECTION LINE "B" (PLAN)
10	-	LANDFILL GAS SYSTEM - COLLECTION LINE "C" (PLAN)
11	-	LANDFILL GAS SYSTEM - COLLECTION LINES "D" THROUGH "I" (PLAN)
12	-	LANDFILL GAS SYSTEM - COLLECTION LINES "J" THROUGH "R" (PLAN)
13	-	LANDFILL GAS SYSTEM - CROSS SECTION A
14	-	LANDFILL GAS SYSTEM - CROSS SECTION B
15	-	LANDFILL GAS SYSTEM - CROSS SECTION C
16	-	LANDFILL GAS SYSTEM - CROSS SECTIONS D - I
17	-	LANDFILL GAS SYSTEM - CROSS SECTIONS J - O
18	-	LANDFILL GAS SYSTEM - CROSS SECTIONS P - R
19	-	REVETMENT SPILLWAYS
20	-	MISCELLANEOUS DETAILS

RECORD DRAWING SET

THIS RECORD DRAWING HAS BEEN PREPARED BASED ON INFORMATION PROVIDED BY OTHERS. THE ENGINEER HAS NOT VERIFIED THE ACCURACY OF THIS INFORMATION AND SHALL NOT BE RESPONSIBLE FOR ANY ERRORS OR OMISSIONS WHICH MAY BE INCORPORATED HEREIN AS A RESULT.

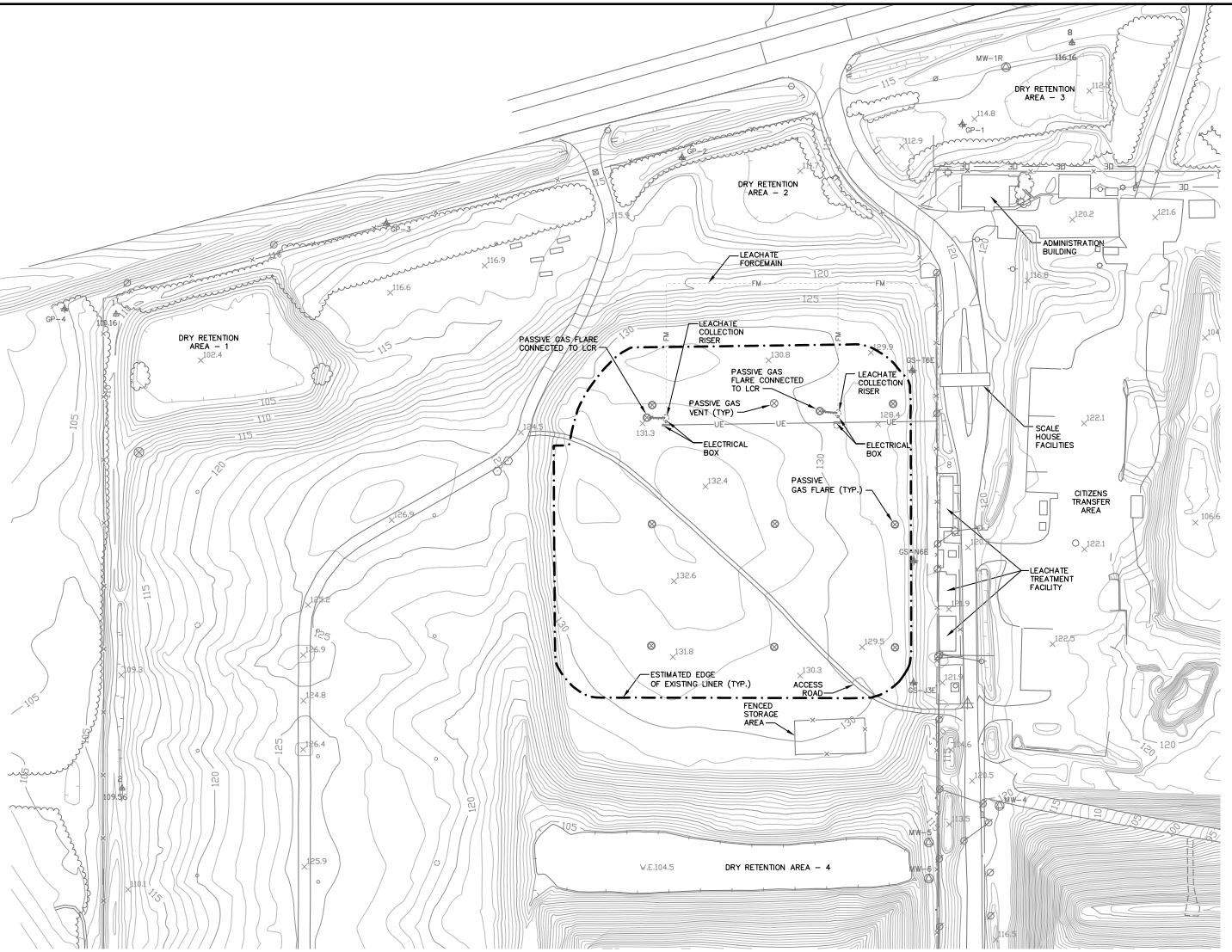
SCS ENGINEERS Date: JULY 2010

RECORD DRAWING SET

DATE: JULY 15, 2010

DANIEL R. COOPER, P.E.
LICENSE NO. 66440

G:\PROJECT\Citrus\09207049.04\RecordDrawings\07490COVER.dwg Aug 24, 2010 - 9:8am By: cass



N

80 40 0 80
SCALE IN FEET

SURVEY SOURCE NOTE:

TOPOGRAPHIC SURVEY INFORMATION SHOWN WAS DEVELOPED BY PHOTOGRAMMETRIC METHODS AND PERFORMED BY KUCERA SOUTH, LAKELAND, FLORIDA. AERIAL PHOTO DATE: 10/11/07

LEGEND

- HORIZONTAL/VERTICAL TARGET
- UTILITY POLE
- UTILITY POLE W/ LIGHT
- NON UTILITY POLE
- GUY POLE
- MANHOLE
- CB SQUARE
- CB ROUND
- HYDRANT
- PASSIVE GAS VENT
- PASSIVE GAS FLARE
- SIGN
- SPOT ELEVATION
- FENCE
- TREE GROUP CANOPY
- BRUSH
- TREE/BUSH
- CULVERT
- INDEX CONTOUR
- INTERMEDIATE CONTOUR
- INDEX DEPRESSION
- INTERMEDIATE DEPRESSION
- FM — APPROXIMATE LOCATION OF LEACHATE FORCEMAIN (TO BE VERIFIED BY CONTRACTOR)
- STRUCTURE
- ESTIMATED EDGE OF EXISTING LINER
- UE — APPROXIMATE LOCATION OF UNDERGROUND ELECTRIC LINE (TO BE VERIFIED BY CONTRACTOR)
- GP-1 — EXISTING LFG MONITORING PROBE
- MW-9 — EXISTING GROUNDWATER MONITORING WELL

RECORD DRAWING
DATE: JULY 15, 2010

REV	DATE	DESCRIPTION	BY
1	7/15/10	REVISED FOR THE RECORD	DRC

DANIEL R. COOPER, P.E.
LICENSE NO. 66440

DRAWING TITLE: 7-ACRE CLOSED AREA RE-CLOSURE EXISTING SITE PLAN

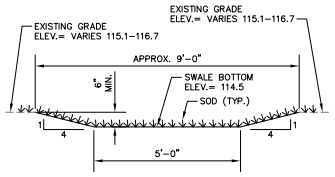
PROJECT TITLE: 7-ACRE CLOSED AREA RE-CLOSURE AND LANDFILL GAS SYSTEM CONSTRUCTION DRAWINGS

CLIENT: CITRUS COUNTY SOLID WASTE MANAGEMENT DIVISION LECANTO, FLORIDA

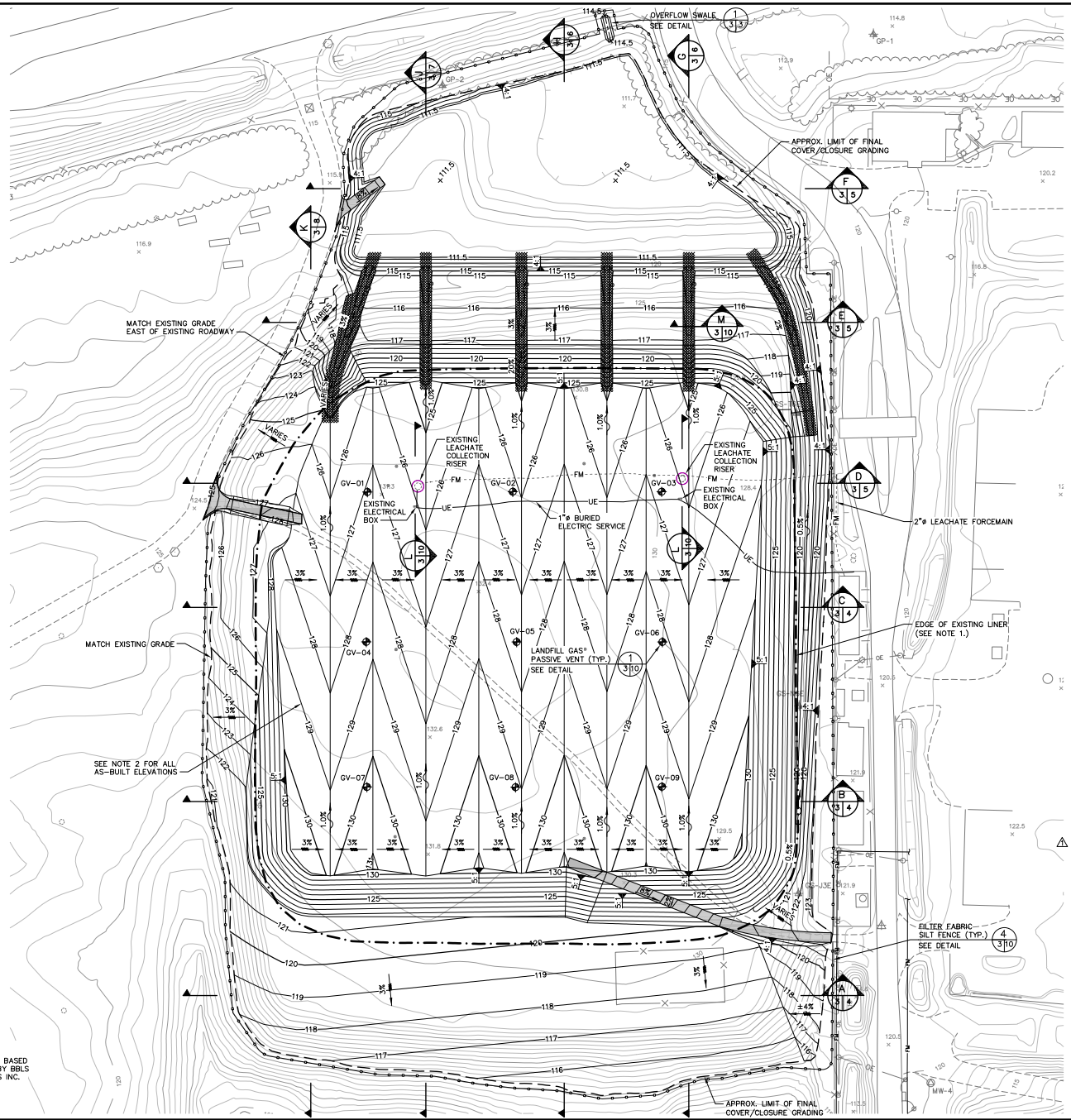
SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT
CONSULTING ENGINEERS
400 PARK OAKS BLVD., SUITE 110, TAMPA, FL 33610
PHONE: 813-621-0080 FAX: 813-623-0259
FLORIDA CERTIFICATE OF AUTHORIZATION NO. 00000000

PROJ. NO. 01207049.04 | DWN. BY: SDA/CTN | Q/A R/W BY: CEH
DSN. BY: DRC | CHK. BY: DRC | APP. BY: RJD

CADD FILE: 074904RC–EXIST
DATE: AUGUST 2009
SCALE: AS SHOWN
DRAWING NO. 2 of 27



OVERFLOW SWALE DETAIL (1/3|3)
SCALE: 1" = 2'–0"



NOTES:

1. EXISTING LINER LOCATION BASED ON CONTRACTOR SURVEY PROVIDED BY BBLS SURVEYORS & MAPPERS INC., PERFORMED JANUARY 05, 2010 AND JANUARY 13, 2010.
2. SEE ATTACHED BBLS SURVEYORS & MAPPERS INC. SHEET 2 OF 20 (DATED 5/10/10) FOR ALL AS–BUILT ELEVATIONS, LOCATIONS, AND SLOPES.

LEGEND

- EXISTING ELEVATIONAL CONTOURS (FEET) – 10/11/07 SURVEY
- FINAL COVER/CLOSURE ELEVATIONAL CONTOURS (FEET) (SEE NOTE 2.)
- SHEET FLOW DRAINAGE DIRECTION
- CONCENTRATED DRAINAGE FLOW DIRECTION
- GV-2 NEW PASSIVE GAS VENT
- EDGE OF EXISTING LINER (SEE NOTE 1.)
- LIMIT OF FINAL COVER/CLOSURE GRADING (APPROXIMATE)
- STABILIZED ACCESS ROAD
- TURF REINFORCEMENT
- FM LOCATION OF NEW LEACHATE FORCEMAIN
- UE LOCATION OF NEW UNDERGROUND ELECTRIC LIINE
- SILT FENCE
- MW-5 EXISTING GROUNDWATER MONITORING WELL
- GP-1 EXISTING LFG MONITORING PROBE

RECORD DRAWING
DATE: JULY 15, 2010

SURVEY SOURCE NOTES:

1. TOPOGRAPHIC SURVEY INFORMATION SHOWN WAS DEVELOPED BY PHOTOGRAMMETRIC METHODS AND PERFORMED BY KUCERA SOUTH, LAKELAND, FLORIDA. AERIAL PHOTO DATE: 10/11/07
2. AS–BUILT INFORMATION BASED ON SURVEY PROVIDED BY BBLS SURVEYORS & MAPPERS INC. DATED 5/10/10.

REV	DATE	DESCRIPTION	BY
1	01/20/10	REVISED PER DOST LINER SURVEY	DRC
2	7/15/10	REVISED FOR THE RECORD	DRC

DANIEL R. COOPER, P.E. LICENSE NO. 66440

DRAWING TITLE: 7-ACRE CLOSED AREA RE-CLOSURE PROPOSED FINAL CLOSURE SITE PLAN

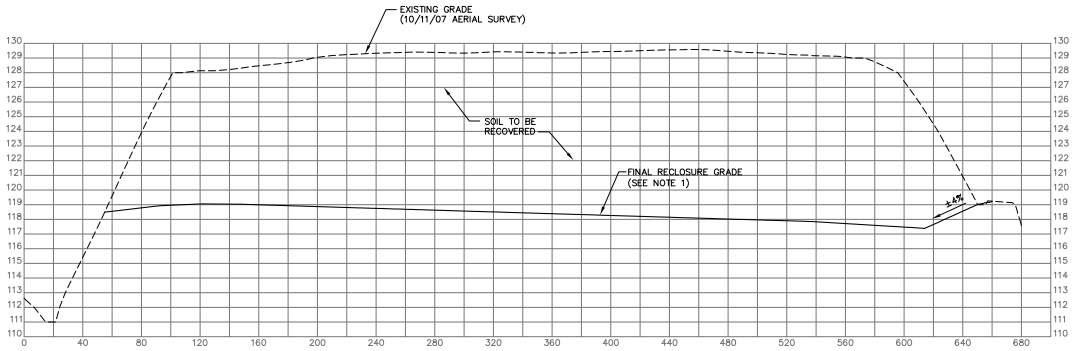
PROJECT TITLE: 7-ACRE CLOSED AREA RE-CLOSURE AND LANDFILL GAS SYSTEM CONSTRUCTION DRAWINGS

CLIENT: CITRUS COUNTY SOLID WASTE MANAGEMENT DIVISION LECANTO, FLORIDA

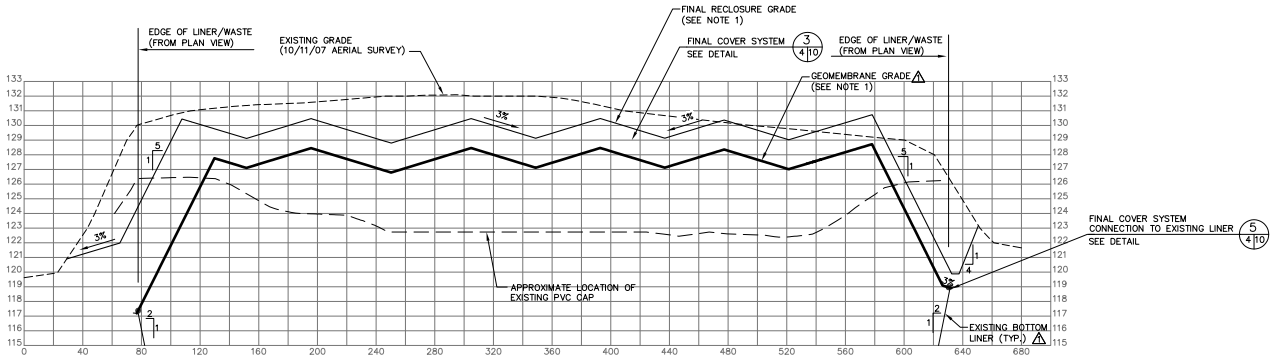
SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT
CONSULTING ENGINEERS
3920 SW 13th STREET, GAINESVILLE, FL 32608
813 621-0690 FAX 813 623-0912
FLORIDA CERTIFICATE OF AUTHORIZATION NO. 00000662

PROJ. NO.	07D049.04	DWN. BY:	SDA
DSN. BY:	DRC	CHK. BY:	DRC
		QA/QA BY:	JEH
		APP. BY:	RJD

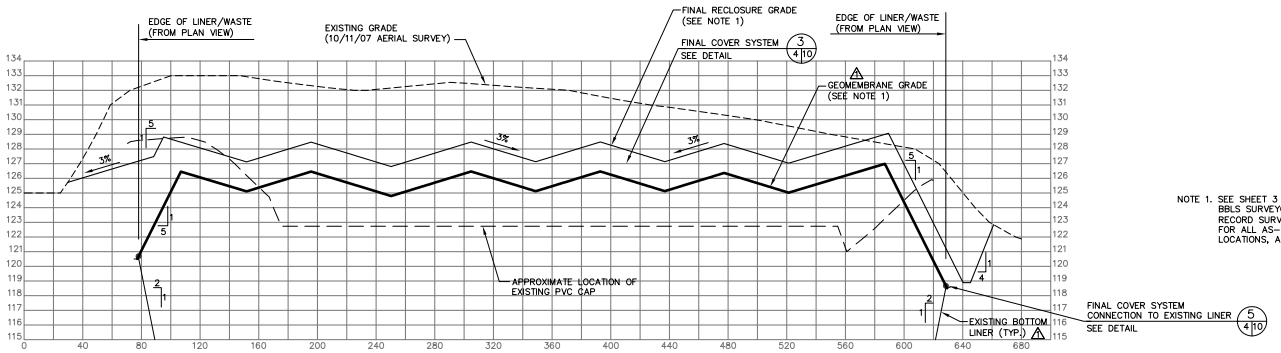
CADD FILE: 074904RC–GRADING
DATE: AUGUST 2009
SCALE: AS SHOWN
DRAWING NO. 3 of 27



SECTION A
SCALE: 1" = 40' HORIZ. 3|4
1" = 4' VERT.



SECTION B
SCALE: 1" = 40' HORIZ. 3|4
1" = 4' VERT.



SECTION C
SCALE: 1" = 40' HORIZ. 3|4
1" = 4' VERT.

NOTE 1. SEE SHEET 3 OF 20 OF ATTACHED BBLS SURVEYORS & MAPPERS INC. RECORD SURVEY DATED 5/10/10 FOR ALL AS-BUILT, ELEVATIONS, LOCATIONS, AND SLOPES.

RECORD DRAWING
DATE: JULY 15, 2010

REV	DATE	DESCRIPTION	BY
2	01/20/10	REVISED PER POST LINER SURVEY	DRC
1	7/15/10	REVISED FOR THE RECORD	DRC

DANIEL R. COOPER, P.E.
LICENSE NO. 66440

DRAWING TITLE
7-ACRE CLOSED AREA RE-CLOSURE
SECTIONS - 1

PROJECT TITLE
7-ACRE CLOSED AREA RE-CLOSURE
AND LANDFILL GAS SYSTEM
CONSTRUCTION DRAWINGS

CLIENT
CITRUS COUNTY
SOLID WASTE MANAGEMENT DIVISION
LECANTO, FLORIDA

SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT
CONSULTING ENGINEERS
8100 NW 33rd STREET, SUITE 203, GAINESVILLE, FL 32606
(352) 331-1976 FAX (352) 331-2476
FLORIDA CERTIFICATE OF AUTHORIZATION NO. 00000662

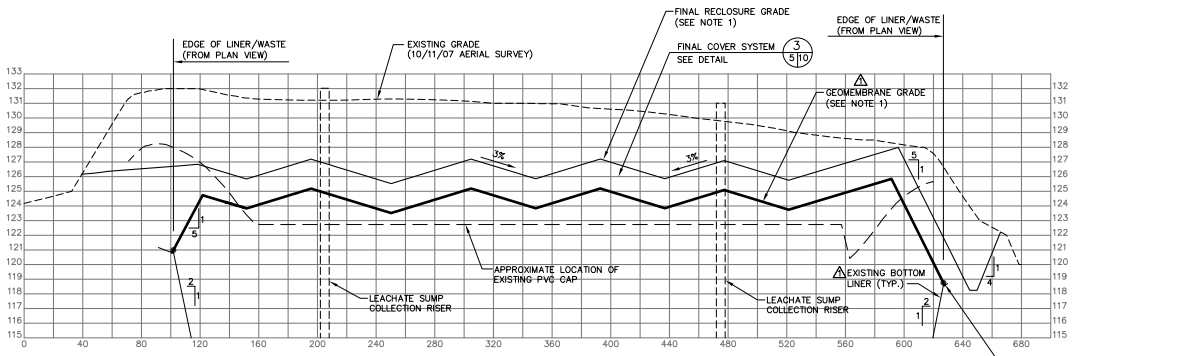
DWN. BY:	G/A RVW BY:
CHK. BY: DRC	APP. BY: R.JD
PROJ. NO. 07049.04	
DSN. BY: DRC	

CADD FILE:
074904RC-SECTION

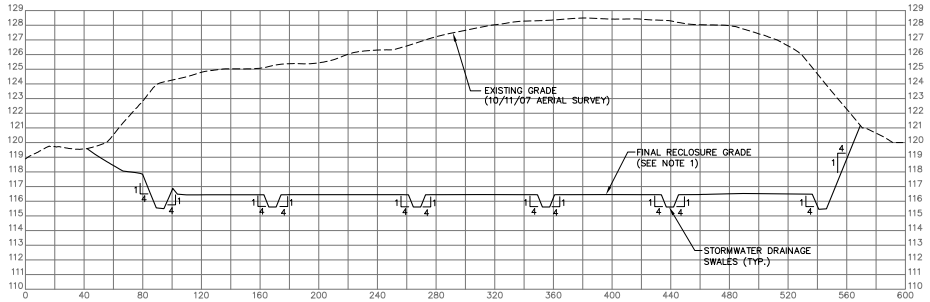
DATE:
AUGUST 2009

SCALE:
AS SHOWN

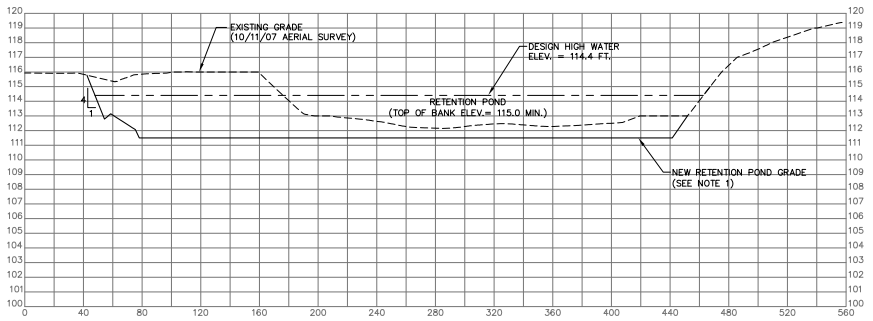
DRAWING NO.
4 of 27



SECTION D
SCALE: 1" = 40' HORIZ. 3 5
1" = 4' VERT.



SECTION E
SCALE: 1" = 40' HORIZ. 3 5
1" = 4' VERT.



SECTION F
SCALE: 1" = 40' HORIZ. 3 5
1" = 4' VERT.

NOTE 1. SEE SHEET 4 OF 20 OF ATTACHED BBLS SURVEYORS & MAPPERS INC. RECORD SURVEY DATED 5/10/10 FOR ALL AS-BUILT, ELEVATIONS, LOCATIONS, AND SLOPES.

RECORD DRAWING
DATE: JULY 15, 2010

REV	DATE	DESCRIPTION	BY
1	01/20/10	REVISED PER POST LINER SURVEY	DRC
2	7/15/10	REVISED FOR THE RECORD	DRC

DANIEL R. COOPER, P.E.
LICENSE NO. 66440

DRAWING TITLE
7-ACRE CLOSED AREA RE-CLOSURE
SECTIONS - 2

PROJECT TITLE
7-ACRE CLOSED AREA RE-CLOSURE
AND LANDFILL GAS SYSTEM
CONSTRUCTION DRAWINGS

CLIENT
CITRUS COUNTY
SOLID WASTE MANAGEMENT DIVISION
LECANTO, FLORIDA

SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT
CONSULTING ENGINEERS
4041 MACDILL AVE. SUITE 540, TAMPA, FL 33607
813 281-0900 FAX 813 281-0902
FLORIDA CERTIFICATE OF AUTHORIZATION NO. 00000662

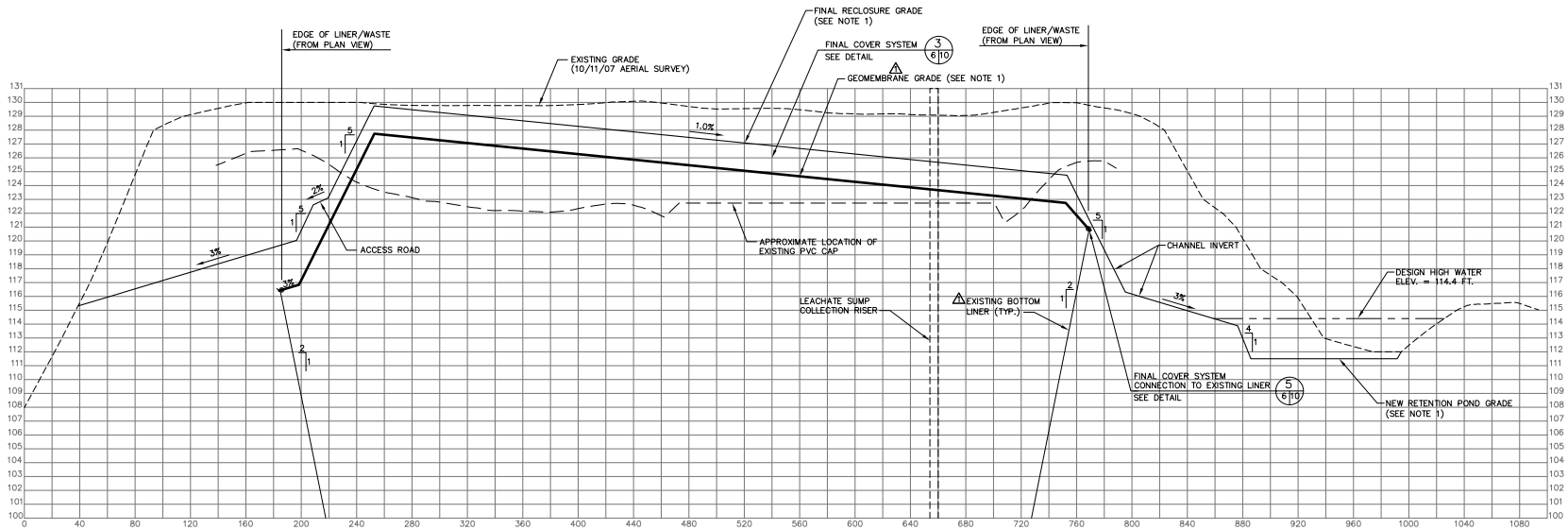
PROJ. NO.	07204904.04
DSN. BY:	DRC
DWN. BY:	CTN
CHK. BY:	DRC
QA/A RVW BY:	TCH
APP. BY:	R.JD

CADD FILE:
074904RC-SECTION

DATE:
AUGUST 2009

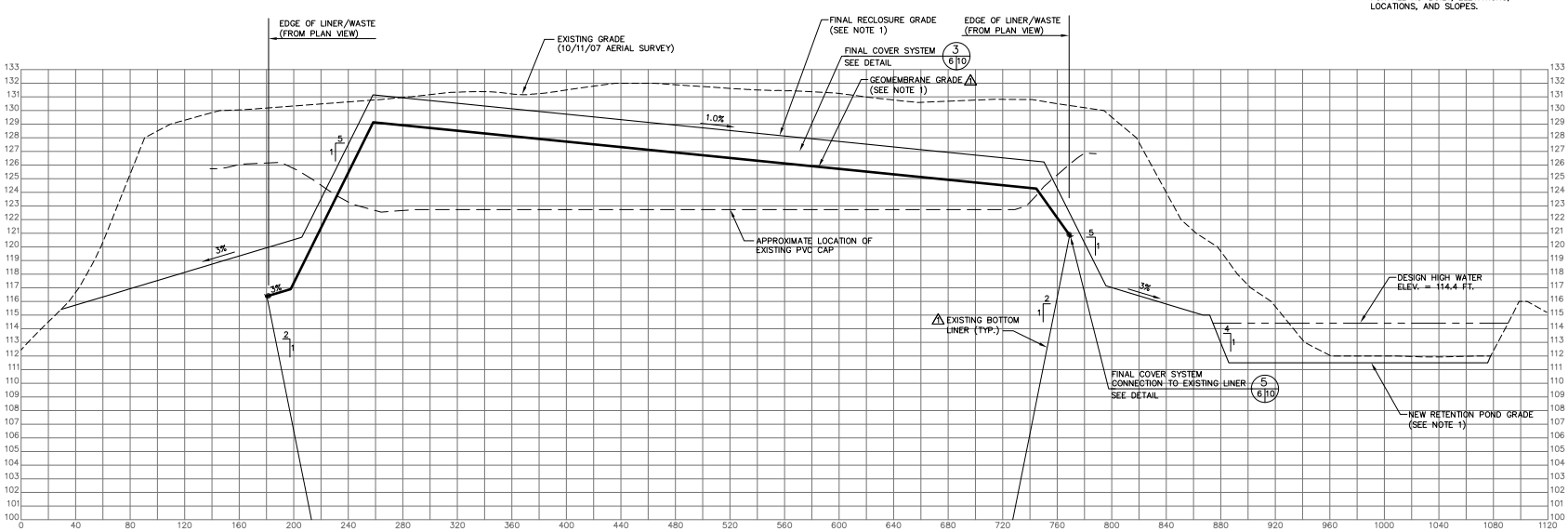
SCALE:
AS SHOWN

DRAWING NO.
5 of 27



SECTION G 3|6
SCALE: 1" = 40' HORIZ.
1" = 4' VERT.

NOTE 1. SEE SHEET 5 OF 20 OF ATTACHED BBLS SURVEYORS & MAPPERS INC. RECORD SURVEY DATED 5/10/10 FOR ALL AS-BUILT, ELEVATIONS, LOCATIONS, AND SLOPES.



SECTION H 3|6
SCALE: 1" = 40' HORIZ.
1" = 4' VERT.

RECORD DRAWING
DATE: JULY 15, 2010

REV	DATE	DESCRIPTION	BY
1	01/20/10	REVISED PER POST LINER SURVEY	DRC
2	7/15/10	REVISED FOR THE RECORD	DRC

DANIEL R. COOPER, P.E. LICENSE NO. 66440

DRAWING TITLE: 7-ACRE CLOSED AREA RE-CLOSURE SECTIONS - 3

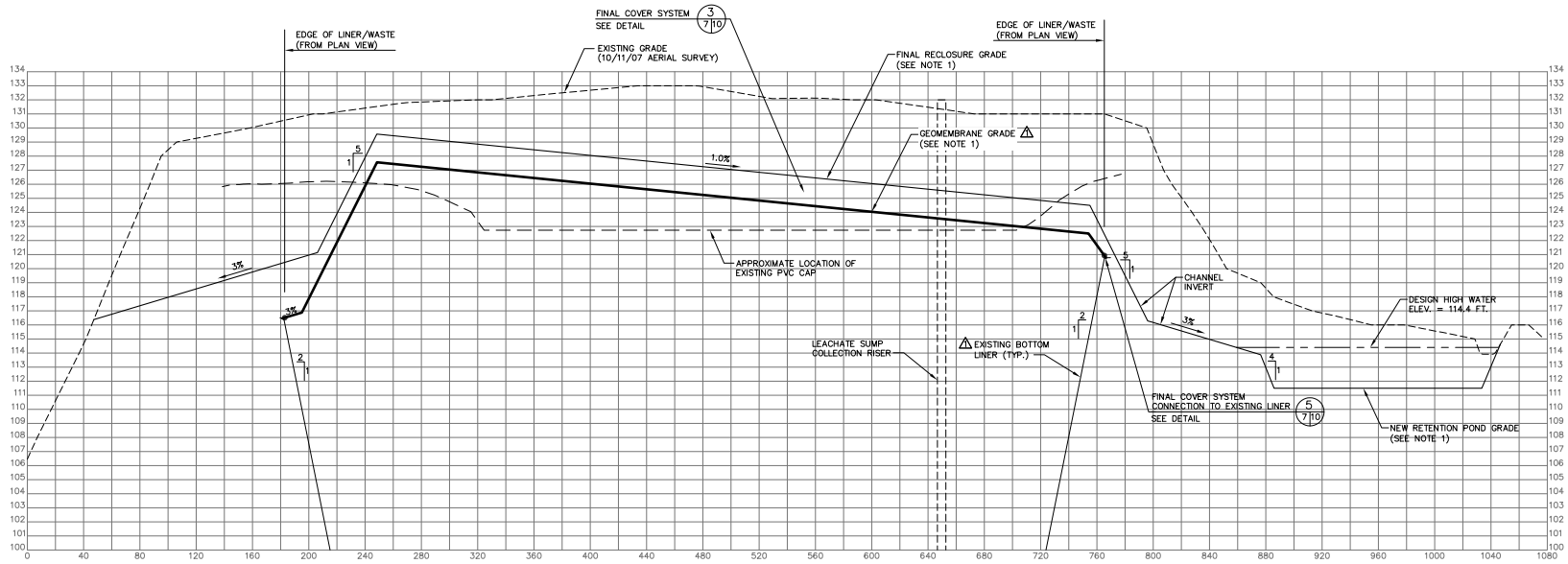
PROJECT TITLE: 7-ACRE CLOSED AREA RE-CLOSURE AND LANDFILL GAS SYSTEM CONSTRUCTION DRAWINGS

CLIENT: CITRUS COUNTY SOLID WASTE MANAGEMENT DIVISION LECANTO, FLORIDA

SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT CONSULTING ENGINEERS
4041 Park Oaks Blvd., Suite 200, Tampa, FL 33610
813 621-0080 FAX 813 621-0470
FLORIDA CERTIFICATE OF AUTHORIZATION NO. 00000662

PROJ. NO.	07204904.04
DSN. BY:	DRC
DWN. BY:	CTN
CHK. BY:	DRC
QA/A RVW BY:	RJD
APP. BY:	RJD

CADD FILE: 074904RC-SECTION
DATE: AUGUST 2009
SCALE: AS SHOWN
DRAWING NO. 6 of 27



SECTION J 3 7
SCALE: 1" = 40' HORIZ.
1" = 4' VERT.

NOTE 1. SEE SHEET 6 OF 20 OF ATTACHED BBLS SURVEYORS & MAPPERS INC. RECORD SURVEY DATED 5/10/10 FOR ALL AS-BUILT, ELEVATIONS, LOCATIONS, AND SLOPES.

RECORD DRAWING
DATE: JULY 15, 2010

REV	DATE	DESCRIPTION	BY
1	01/20/10	REVISED PER POST LINER SURVEY	DRC
2	7/15/10	REVISED FOR THE RECORD	DRC

DANIEL R. COOPER, P.E.
LICENSE NO. 66440

DRAWING TITLE
7-ACRE CLOSED AREA RE-CLOSURE
SECTIONS - 4

PROJECT TITLE
7-ACRE CLOSED AREA RE-CLOSURE
AND LANDFILL GAS SYSTEM
CONSTRUCTION DRAWINGS

CLIENT
CITRUS COUNTY
SOLID WASTE MANAGEMENT DIVISION
LECANTO, FLORIDA

SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT
CONSULTING ENGINEERS
400 N. ASHLEY DRIVE, SUITE 900, TAMPA, FL 33602
813 621-0080 FAX 813 514-0470
FLORIDA CERTIFICATE OF AUTHORIZATION NO. 00000662

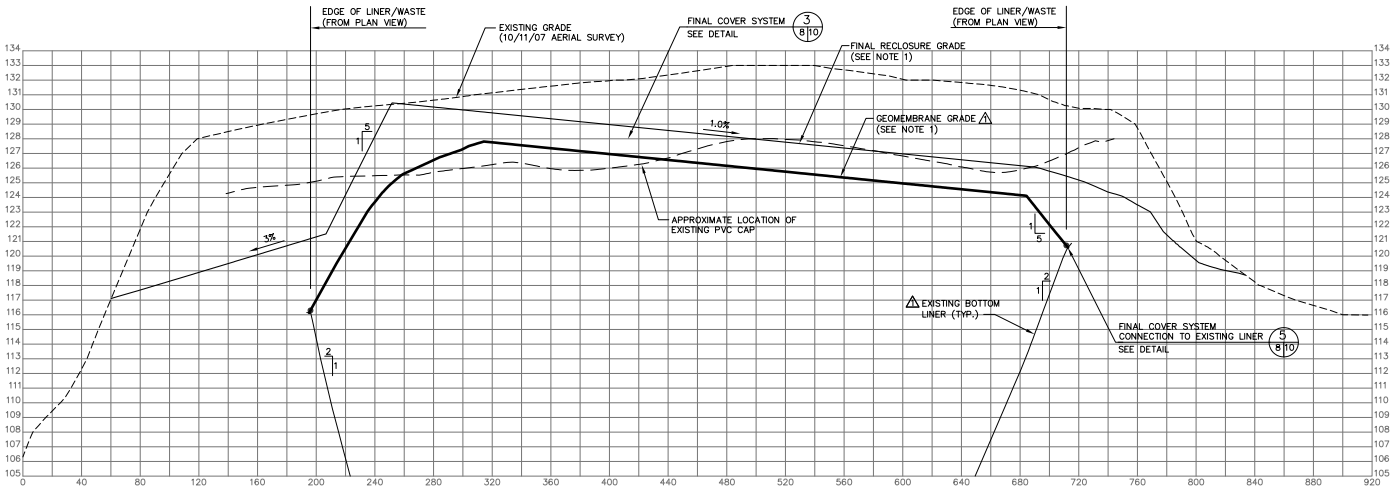
PROJ. NO.	27204949.04
DSN. BY:	DRC
DWN. BY:	CJV/CTN
CHK. BY:	DRC
QA/A RVW BY:	PEH
APP. BY:	RJD

CADD FILE:
074904RC-SECTION

DATE:
AUGUST 2009

SCALE:
AS SHOWN

DRAWING NO.
7 of 27



SECTION K 3/8
SCALE: 1" = 40' HORIZ.
1" = 4' VERT.

NOTE 1. SEE SHEET 6 OF 20 OF ATTACHED BBLS SURVEYORS & MAPPERS INC. RECORD SURVEY DATED 5/10/10 FOR ALL AS-BUILT, ELEVATIONS, LOCATIONS, AND SLOPES.

RECORD DRAWING
DATE: JULY 15, 2010

REV	DATE	DESCRIPTION	BY
1	01/20/10	REVISED PER POST LINER SURVEY	DRC
2	7/15/10	REVISED FOR THE RECORD	DRC

DANIEL R. COOPER, P.E.
LICENSE NO. 66440

DRAWING TITLE
7-ACRE CLOSED AREA RE-CLOSURE SECTIONS - 5

PROJECT TITLE
7-ACRE CLOSED AREA RE-CLOSURE AND LANDFILL GAS SYSTEM CONSTRUCTION DRAWINGS

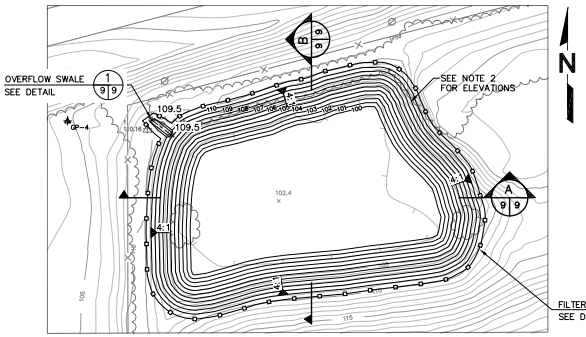
CLIENT
CITRUS COUNTY
SOLID WASTE MANAGEMENT DIVISION
LECANTO, FLORIDA

SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT
CONSULTING ENGINEERS
400 N. ASHLEY DRIVE, SUITE 1100, TAMPA, FL 33602
813 621-0080 FAX 813 514-0470
FLORIDA CERTIFICATE OF AUTHORIZATION NO. 00000662

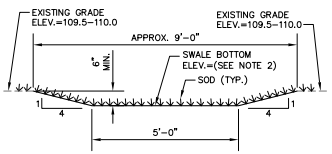
PROJ. NO.	01704904.04
DSN. BY:	DRC
DWN. BY:	CTN
CHK. BY:	DRC
QA/A RVW BY:	PCH
APP. BY:	R.JD

CADD FILE: 074904RC-SECTION
DATE: AUGUST 2009
SCALE: AS SHOWN
DRAWING NO. 8 of 27

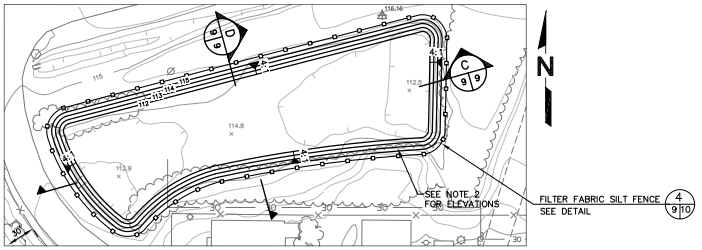
C:\SCS\Projects\Projects2004\01704904.04\Drawings\Channel\LAYOUTS\RC_SECTION.dwg Jul 15, 2010 - 10:37am Lionel Alonso Xrefnode=0 Byr=ACAD



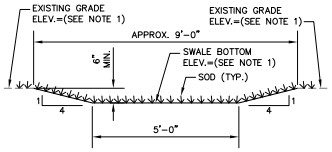
DRA-1 PLAN
SCALE: 1" = 60'



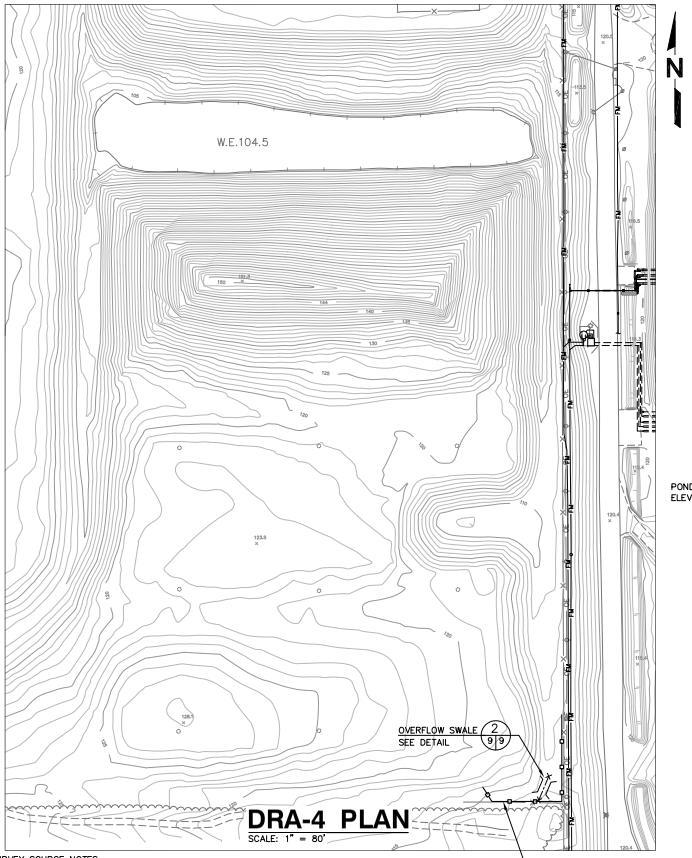
OVERFLOW SWALE DETAIL (1)
SCALE: 1" = 2'-0"



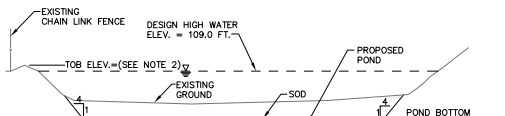
DRA-3 PLAN
SCALE: 1" = 60'



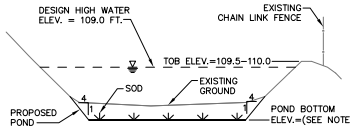
OVERFLOW SWALE DETAIL (2)
SCALE: 1" = 2'-0"



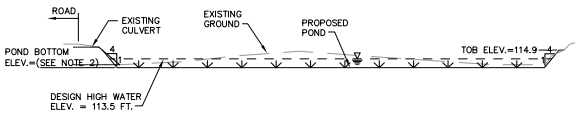
DRA-4 PLAN
SCALE: 1" = 80'



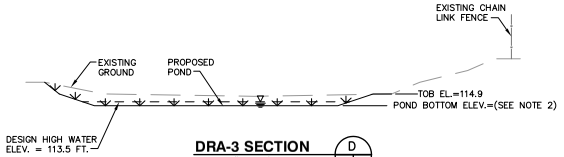
DRA-1 SECTION (A)
SCALE: 1" = 50' HORIZ.
1" = 10' VERT.



DRA-1 SECTION (B)
SCALE: 1" = 50' HORIZ.
1" = 10' VERT.



DRA-3 SECTION (C)
SCALE: 1" = 50' HORIZ.
1" = 10' VERT.



DRA-3 SECTION (D)
SCALE: 1" = 20' HORIZ.
1" = 5' VERT.

SURVEY SOURCE NOTES:

1. TOPOGRAPHIC SURVEY INFORMATION SHOWN WAS DEVELOPED BY PHOTOGRAMMETRIC METHODS AND PERFORMED BY KUCERA SOUTH, LAKELAND, FLORIDA. AERIAL PHOTO DATE: 10/11/07
2. AS-BUILT INFORMATION BASED ON SURVEY PROVIDED BY BBLS SURVEYORS & MAPPERS INC. DATED 5/10/10.

NOTES:

1. SEE SHEET 20 OF 20 OF ATTACHED BBLS SURVEYORS & MAPPERS INC. RECORD SURVEY DATED 5/10/10 FOR ALL AS-BUILT, ELEVATIONS, LOCATIONS, AND SLOPES.
2. SEE SHEET 7 OF 20 OF ATTACHED BBLS SURVEYORS & MAPPERS INC. RECORD SURVEY DATED 5/10/10 FOR ALL AS-BUILT, ELEVATIONS, LOCATIONS, AND SLOPES.

RECORD DRAWING
DATE: JULY 15, 2010

REV	DATE	DESCRIPTION	BY
1	7/15/10	REVISED FOR THE RECORD	DRC

DANIEL R. COOPER, P.E.
LICENSE NO. 66440

DRAWING TITLE: 7-ACRE CLOSED AREA RE-CLOSURE - PROPOSED DRY RETENTION AREA IMPROVEMENTS

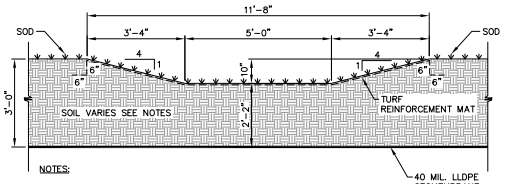
PROJECT TITLE: 7-ACRE CLOSED AREA RE-CLOSURE AND LANDFILL GAS SYSTEM CONSTRUCTION DRAWINGS

CLIENT: CITRUS COUNTY
SOLID WASTE MANAGEMENT DIVISION
LECANTO, FLORIDA

SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT
CONSULTING ENGINEERS
4041 MACDILL AVE., SUITE 540, TAMPA, FL 33607
813 626-0900 FAX 813 554-6870
FLORIDA CERTIFICATE OF AUTHORIZATION NO. 00000000

PROJ. NO.	07Z049.04
DSN. BY:	DRC
DWN. BY:	DRC/CTN
CHK. BY:	DRC
APP. BY:	R.JD

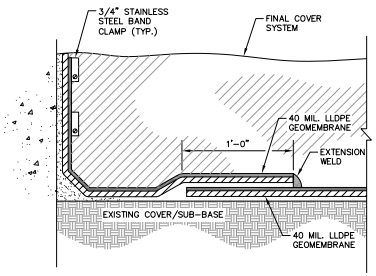
CADD FILE: 074904RC-DRASITE
DATE: AUGUST 2009
SCALE: AS SHOWN
DRAWING NO. 9 of 27



NOTES:

1. FINAL COVER SYSTEM PLACED ON TOP OF GEOMEMBRANE FROM BOTTOM LINER TIE-IN TO TOP OF LANDFILL.
2. GENERAL FILL MATERIAL USED BELOW LINER TIE-IN AND AREAS OUTSIDE OF LANDFILL AREA.

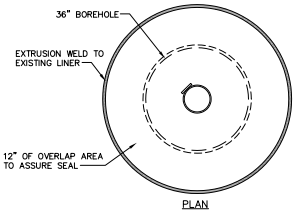
TYPICAL CHANNEL SECTION (M 3|10)
SCALE: 1" = 2'



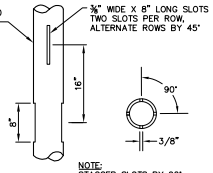
GEOMEMBRANE/CONCRETE INTERFACE DETAIL (6 10|10)
NOT TO SCALE

VENT SCHEDULE

VENT ID	Northing	Easting	Approx. Ground Surface (ft)	Approx. Depth of Refuse (ft)	Boring Depth (ft)	Slotted Pipe Length (ft)	Solid Pipe Length Below Grade (ft)	Solid Pipe Length Above Grade (ft)	Thickness of Gravel Pack (ft)
GV-1	1,643,552	515,236	125	57	42	22	19	7	24
GV-2	1,643,553	515,387	125	57	35	16	19	7	18
GV-3	1,643,553	515,538	124	56	41	22	13	7	24
GV-4	1,643,398	515,235	127	59	43	23	19	7	25
GV-5	1,643,397	515,389	126	58	42	22	20	6	24
GV-6	1,643,398	515,540	126	58	43	11	19	7	13
GV-7	1,643,248	515,235	129	61	45	25	19	7	27
GV-8	1,643,248	515,389	128	60	44	24	19	7	26
GV-9	1,643,250	515,539	129	61	44	24	19	7	26
TOTALS					379	189	166	---	207

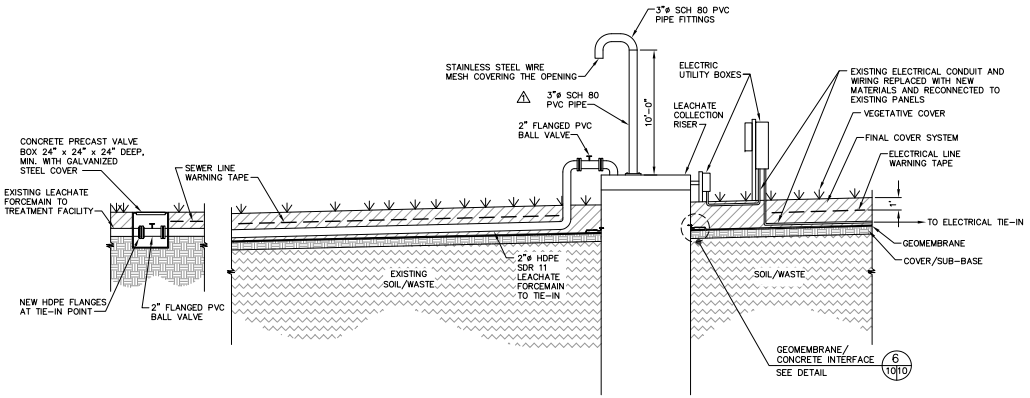


BOOT WELD DETAIL (A 10|10)
NOT TO SCALE

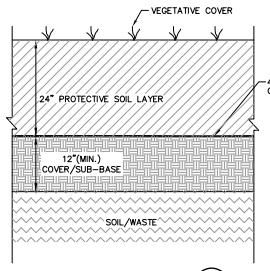


NOTE:
STAGGER SLOTS BY 90° FOR ADJACENT ROWS.

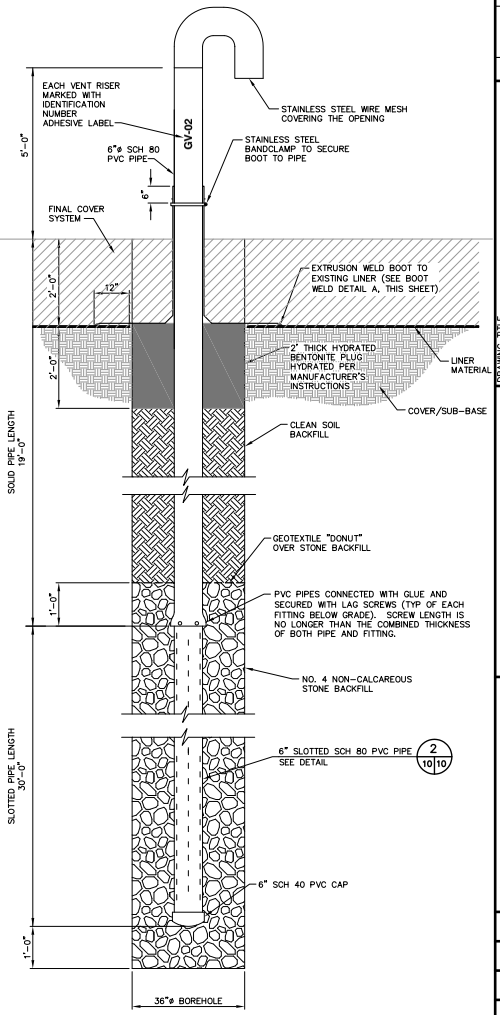
SLOTTED PIPE DETAIL (2 10|10)
NOT TO SCALE



LEACHATE COLLECTION RISER SECTION (L 3|10)
NOT TO SCALE

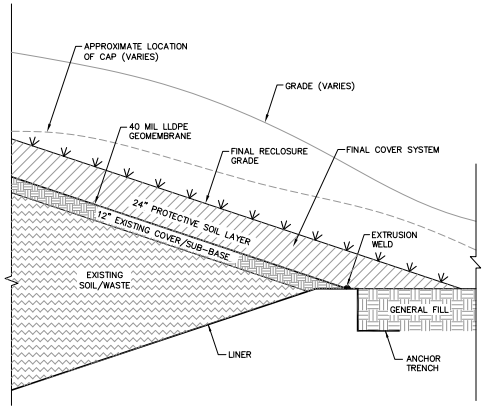


FINAL COVER SYSTEM (3 10)
NOT TO SCALE
4,5,6,7,8

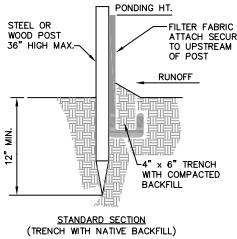


LFG PASSIVE VENT DETAIL (1 3|10)
NOT TO SCALE

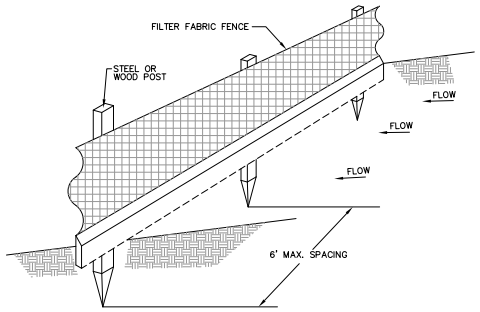
RECORD DRAWING
DATE: JULY 15, 2010



FINAL COVER SYSTEM CONNECTION TO EXISTING LINER (5 10)
NOT TO SCALE
4,5,6,7,8



STANDARD SECTION
(TRENCH WITH NATIVE BACKFILL)



PERSPECTIVE VIEW

NOTES:

1. SILT FENCE AND ALL EROSION CONTROL FEATURES INSTALLED BY CONTRACTOR PRIOR TO ANY OTHER WORK BEING CONDUCTED ON SITE.
2. INSPECTED AND REPAIRED FENCE AFTER EACH STORM EVENT AND REMOVED SEDIMENT WHEN NECESSARY.
3. REMOVED SEDIMENT DEPOSITED IN AN AREA DESIGNATED BY THE COUNTY.
4. SILT FENCE PLACED ON SLOPE CONTOURS TO MAXIMIZE PONDING EFFICIENCY.

FILTER FABRIC SILT FENCE DETAIL (4 10)
NOT TO SCALE
3,9,11

REV	DATE	DESCRIPTION	BY
1	2/11/10	REVISION TO LCRS EXHAUST	DRC
2	7/15/10	REVISED FOR THE RECORD	DRC

DANIEL R. COOPER, P.E. LICENSE NO. 66440

DRAWING TITLE: 7-ACRE CLOSED AREA RE-CLOSURE DETAILS

PROJECT TITLE: 7-ACRE CLOSED AREA RE-CLOSURE AND LANDFILL GAS SYSTEM CONSTRUCTION DRAWINGS

CLIENT: CITRUS COUNTY SOLID WASTE MANAGEMENT DIVISION LECANTO, FLORIDA

SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT
CONSULTING ENGINEERS
3900 KELLER ROAD, SUITE 110, CLEARWATER, FL 33762
813 854-5900 FAX 813 854-5970
FLORIDA CERTIFICATE OF AUTHORIZATION NO. 00000662

DWN. BY:	CHK. BY:	APP. BY:
G/A RW	BCH	RJD
JV/CTN	DRC	

PROJ. NO. 27D7049.04
DSN. BY: DRC

CADD FILE: 074904RC-DETAILS
DATE: AUGUST 2009
SCALE: AS SHOWN
DRAWING NO. 10 of 27

G:\SWD\CAD\Drawings\27D0000\04.04\Closure\Drawings\074904RC-DETAILS.dwg, Jun 24, 2009 - 10:07am, Lance Kinne, 074904_4 By: smith

LEGEND

- LEACHATE COLLECTION PIPE SIDESLOPE RISER
- LC LEACHATE RISER
- R-5 LEACHATE COLLECTION/CLEANOUT RISER PIPE LABEL
- 6" LEACHATE COLLECTION/CLEANOUT PIPE SIZE
- MW-2 GROUNDWATER MONITORING WELL
- GP-1 GAS MONITORING PROBE
- PROPERTY/COMPLIANCE BOUNDARY (APPROXIMATE LOCATION)

RECORD DRAWING

DATE: JULY 15, 2010

SURVEY SOURCE NOTES:

1. TOPOGRAPHIC SURVEY INFORMATION SHOWN WAS DEVELOPED BY PHOTOGRAMMETRIC METHODS AND PERFORMED BY KUCERA SOUTH, LAKELAND, FLORIDA. AERIAL PHOTO DATE: 4/12/08
2. AS-BUILT INFORMATION BASED ON SURVEY PROVIDED BY BBLS SURVEYORS & MAPPERS INC. DATED 5/10/10.

REV	DATE	DESCRIPTION	BY
1	7/15/10	REVISED FOR THE RECORD	DRC

DANIEL R. COOPER, P.E. LICENSE NO. 66440

DRAWING TITLE: 80-ACRE AREA EXISTING SITE PLAN

PROJECT TITLE: 7-ACRE CLOSED AREA RE-CLOSURE AND LANDFILL GAS SYSTEM CONSTRUCTION DRAWINGS

CLIENT: CITRUS COUNTY SOLID WASTE MANAGEMENT DIVISION LECANTO, FLORIDA

SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT
CONSULTING ENGINEERS
400 PARK OAKS BLVD., SUITE 110, TAMPA, FL 33610
(813) 246-8488 FAX (813) 246-8489
FLORIDA CERTIFICATE OF AUTHORIZATION NO. 00004892

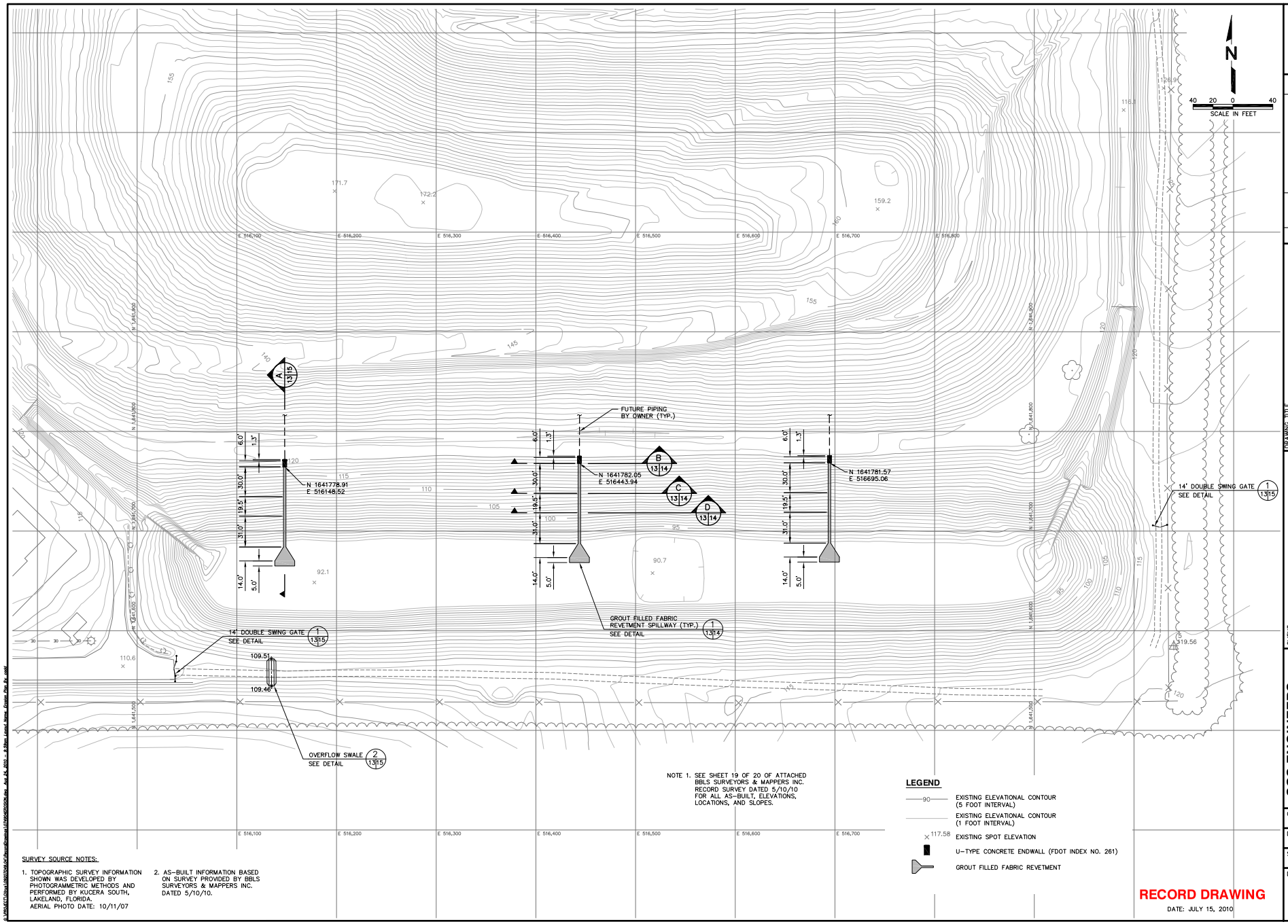
PROJ. NO.	DWN. BY:	Q/A R/W BY:
09207049.04	CTN	CEH
DSN. BY:	CHK. BY:	APP. BY:
DHB/MM	DHB	RJD

CADD FILE: 074904EXISTSITE

DATE: AUGUST 2009

SCALE: AS SHOWN

DRAWING NO. 12 of 27



NOTE 1. SEE SHEET 19 OF 20 OF ATTACHED BBLS SURVEYORS & MAPPERS INC. RECORD SURVEY DATED 5/10/10 FOR ALL AS-BUILT, ELEVATIONS, LOCATIONS, AND SLOPES.

LEGEND

- 90 — EXISTING ELEVATIONAL CONTOUR (5 FOOT INTERVAL)
- EXISTING ELEVATIONAL CONTOUR (1 FOOT INTERVAL)
- ×117.58 EXISTING SPOT ELEVATION
- U-TYPE CONCRETE ENDWALL (FDOT INDEX NO. 261)
- GROUT FILLED FABRIC REVETMENT

SURVEY SOURCE NOTES:

1. TOPOGRAPHIC SURVEY INFORMATION SHOWN WAS DEVELOPED BY PHOTOGRAMMETRIC METHODS AND PERFORMED BY KUCERA SOUTH, LAKELAND, FLORIDA. AERIAL PHOTO DATE: 10/11/07
2. AS-BUILT INFORMATION BASED ON SURVEY PROVIDED BY BBLS SURVEYORS & MAPPERS INC. DATED 5/10/10.

RECORD DRAWING
DATE: JULY 15, 2010

REV	DATE	DESCRIPTION	BY
1	7/15/10	REVISED FOR THE RECORD	DRC

DANIEL R. COOPER, P.E.
LICENSE NO. 66440

DRAWING TITLE
80-ACRE AREA - EROSION CONTROL IMPROVEMENTS SITE PLAN

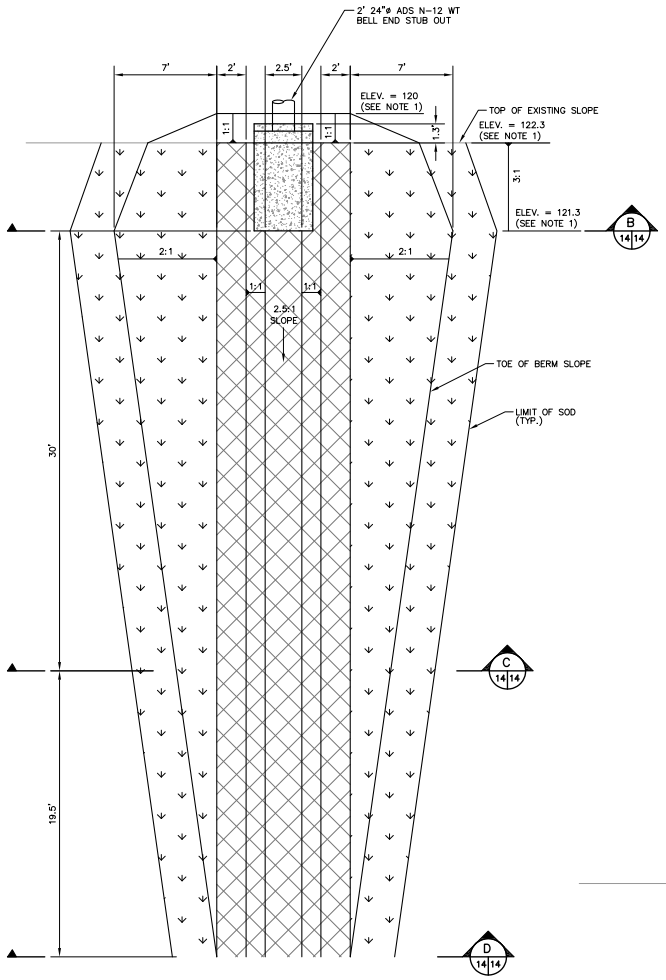
PROJECT TITLE
7-ACRE CLOSED AREA RE-CLOSURE AND LANDFILL GAS SYSTEM CONSTRUCTION DRAWINGS

CLIENT
CITRUS COUNTY
SOLID WASTE MANAGEMENT DIVISION
LECANTO, FLORIDA

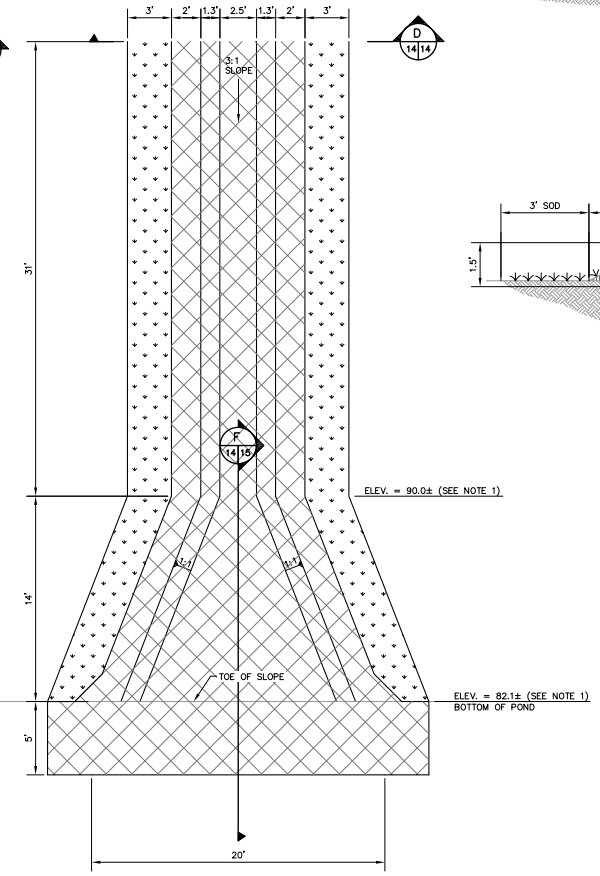
SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT
CONSULTING ENGINEERS
4041 PARK OAKS BLVD., SUITE 100, TAMPA, FL 33610
813 627-3690 FAX 813 885-8497
FLORIDA CERTIFICATE OF AUTHORIZATION NO. 00000696

PROJECT NO. 09207049.04 | DWN. BY: SDA/CTN | QA REV. BY: CEH
CHK. BY: JAB | APP. BY: RJD

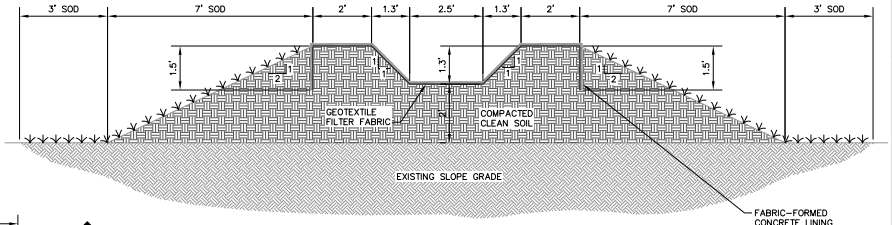
CADD FILE: 074904EROSION
DATE: AUGUST 2009
SCALE: AS SHOWN
DRAWING NO. 13 of 27



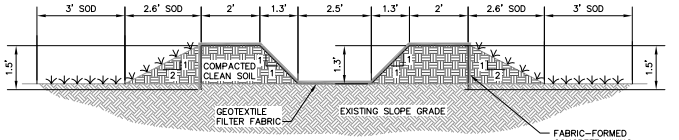
U-TYPE CONCRETE ENDWALL, TRAPEZOIDAL CHANNEL, BERM AND EXTENSION OF GEOTEXTILE FILTER FABRIC AND UNIFORM SECTION LINING DETAIL 1 | 13|14
SCALE: 1" = 4'



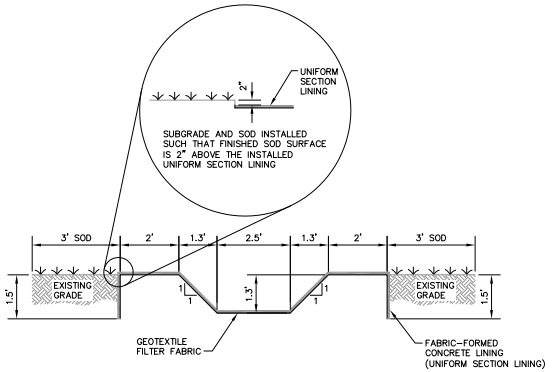
U-TYPE CONCRETE ENDWALL, TRAPEZOIDAL CHANNEL, BERM AND EXTENSION OF GEOTEXTILE FILTER FABRIC AND UNIFORM SECTION LINING DETAIL 1 | 13|14
SCALE: 1" = 4'



TYPICAL TRAPEZOIDAL CHANNEL SECTION AT SOUTH DRA B | 14 | 13,14
SCALE: 1" = 2'



TYPICAL TRAPEZOIDAL CHANNEL SECTION AT SOUTH DRA C | 14 | 13,14
SCALE: 1" = 2'



TYPICAL TRAPEZOIDAL CHANNEL SECTION AT SOUTH DRA D | 14 | 13,14
SCALE: 1" = 2'

LEGEND

UNIFORM SECTION MAT

SOD

NOTE:

1. SEE SHEET 19 OF 20 OF ATTACHED BBLS SURVEYORS & MAPPERS INC. RECORD SURVEY DATE 5-10-10 FOR ALL AS-BUILT ELEVATIONS, LOCATIONS AND SLOPES.

RECORD DRAWING

DATE: JULY 15, 2010

REV	DATE	DESCRIPTION	BY
1	7/15/10	REVISED FOR THE RECORD	DRC

DANIEL R. COOPER, P.E. LICENSE NO. 66440

DRAWING TITLE: 80-ACRE AREA - EROSION CONTROL IMPROVEMENTS DETAILS - 1

PROJECT TITLE: 7-ACRE CLOSED AREA RE-CLOSURE AND LANDFILL GAS SYSTEM CONSTRUCTION DRAWINGS

CLIENT: CITRUS COUNTY SOILD WASTE MANAGEMENT DIVISION LECANTO, FLORIDA

SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT
CONSULTING ENGINEERS
4041 MACAU TRAIL, SUITE 180, MADISON, WI 53704
608 826-3600 FAX 826-3941
FLORIDA CERTIFICATE OF AUTHORIZATION NO. 00000662

DWN. BY: DJV/CTN
CHK. BY: JAB
APP. BY: R.JD
QA/A RVW BY: PCH

PROJ. NO.: 07204904.04
DSN. BY: DHB

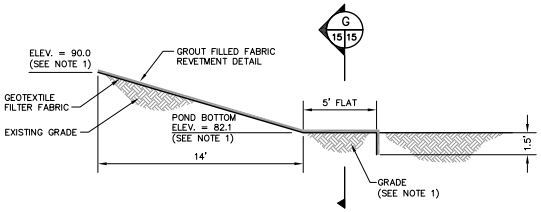
CADD FILE: 074904ERODTLS1

DATE: AUGUST 2009

SCALE: AS SHOWN

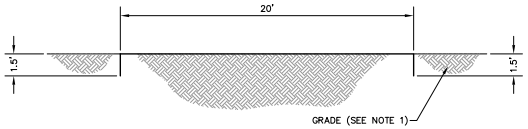
DRAWING NO.

14 of 27



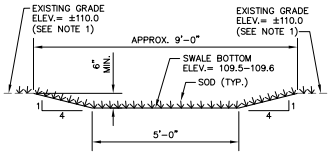
FLARE OUT, 5' FLAT AREA, AND 1.5' ANCHOR TRENCH SECTION F 14 15

SCALE: 1" = 4'



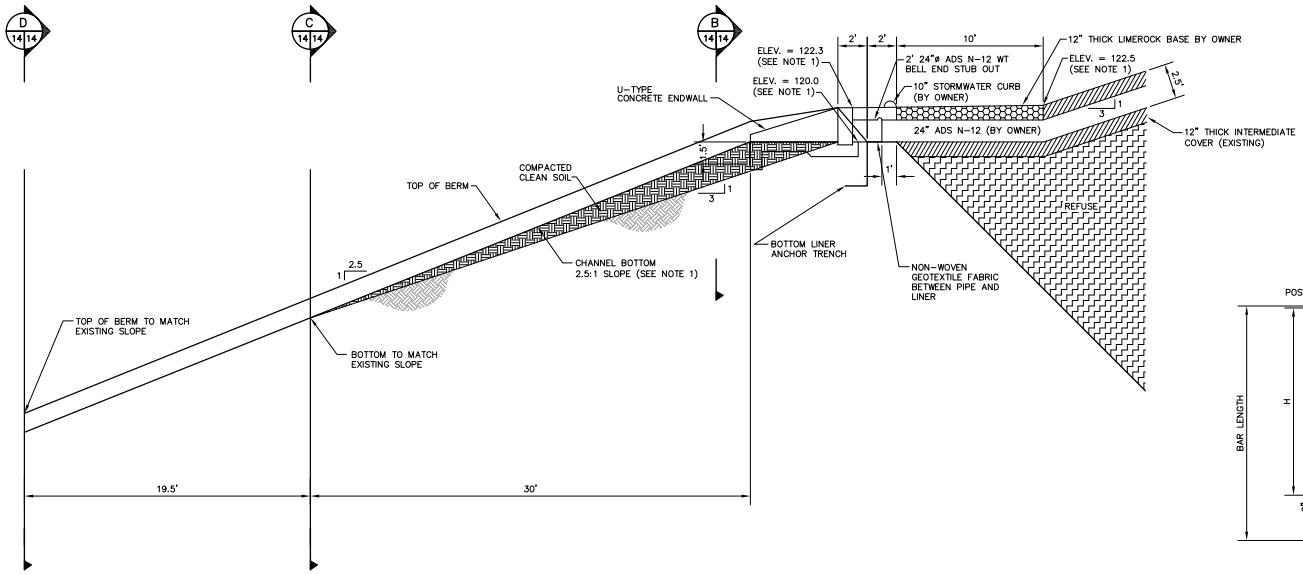
5' FLAT AREA AND 1.5' ANCHOR TRENCH SECTION G 15 15

SCALE: 1" = 4'



OVERFLOW SWALE DETAIL 2 13 15

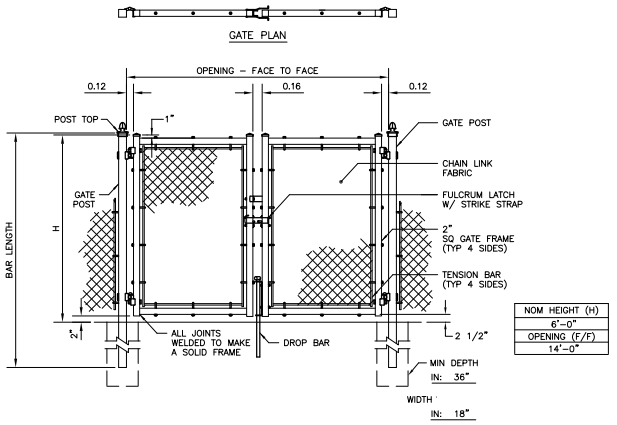
SCALE: 1" = 2'



PERIMETER ROAD, CURB, AND U-TYPE CONCRETE ENDWALL SECTION A 13 15

SCALE: 1" = 4'

NOTE 1. SEE SHEET 19 OF 20 OF ATTACHED BBLS SURVEYORS & MAPPERS INC. RECORD SURVEY DATED 5/10/10 FOR ALL AS-BUILT, ELEVATIONS, LOCATIONS, AND SLOPES.



DOUBLE SWING GATE DETAIL 1 13 15

NOT TO SCALE

RECORD DRAWING

DATE: JULY 15, 2010

REV	DATE	DESCRIPTION	BY
1	7/15/10	REVISED FOR THE RECORD	DRC

DANIEL R. COOPER, P.E. LICENSE NO. 66440

DRAWING TITLE: 80-ACRE AREA - EROSION CONTROL IMPROVEMENTS DETAIL - 2

PROJECT TITLE: 7-ACRE CLOSED AREA RE-CLOSURE AND LANDFILL GAS SYSTEM CONSTRUCTION DRAWINGS

CLIENT: CITRUS COUNTY SOLID WASTE MANAGEMENT DIVISION LECANTO, FLORIDA

SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT
CONSULTING ENGINEERS
3920 SW 53rd Terrace, Suite 100, Gainesville, FL 32608
813 621-0690 FAX 813 514-0470
FLORIDA CERTIFICATE OF AUTHORIZATION NO. 00000662

DWN: EFV | CHK: DJV/CTN | QA/QA REV: DRC | APP: BY: RJD

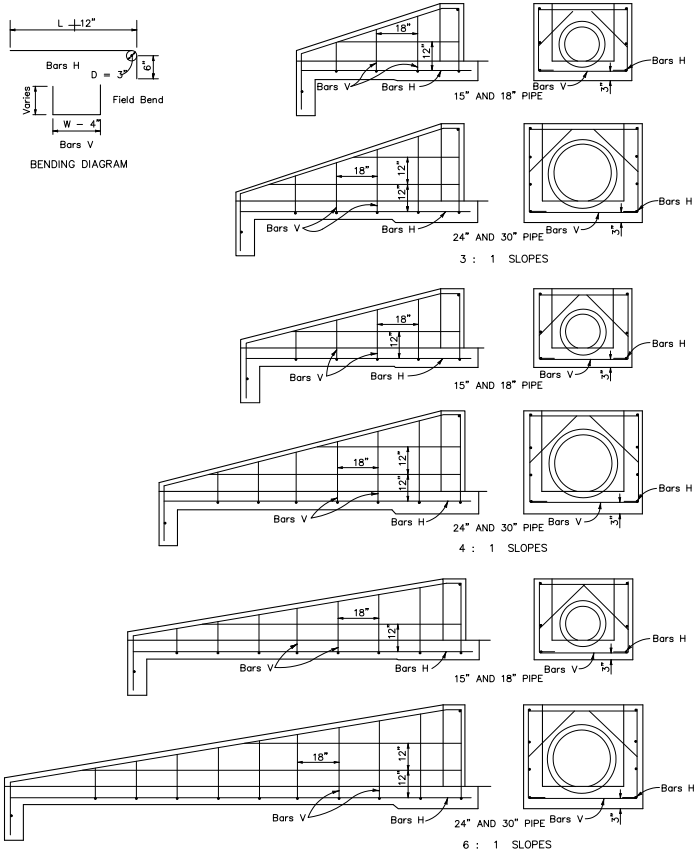
PROJ. NO. 07270049.04 | DSN: BY: DHB | CHK: BY: JAB

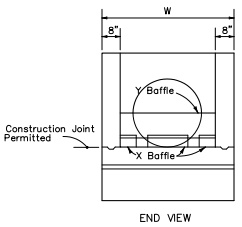
CADD FILE: 074904ERODTLS2

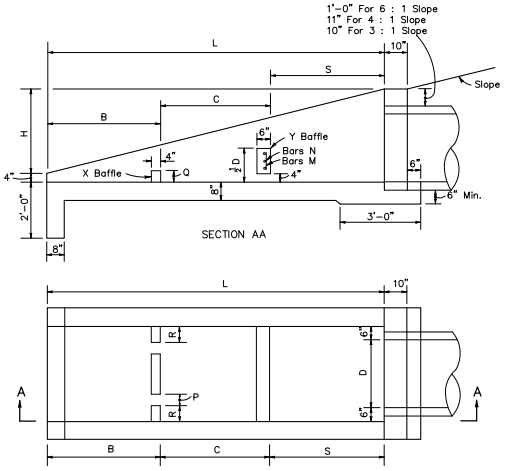
DATE: AUGUST 2009

SCALE: AS SHOWN

DRAWING NO. 15 of 27







DIMENSIONS AND QUANTITIES FOR ONE U-ENDWALL

Rate Of Slope	Pipe Size D	Pipe Size Area Sq. Ft.	L	H	W	Baffle Locations (When Required) S	Baffle Locations (When Required) B	Baffle Locations (When Required) C	Concrete Class ~ Cu. Yd.	Reinf. Steel Lbs.	
3 : 1	15"	1.23	5'-3"	1'-9"	3'-7"	1'-9"	1'-9"	1'-9"	1.19	51	
	18"	1.77	6'-0"	2'-0"	3'-10"	2'-0"	2'-0"	2'-0"	1.42	56	
	24"	3.14	7'-6"	2'-6"	4'-4"	2'-6"	2'-6"	2'-6"	1.94	77	← TYPE INSTALLED
	30"	4.91	9'-0"	3'-0"	4'-10"	3'-0"	3'-0"	3'-0"	2.54	96	
4 : 1	15"	1.23	7'-4"	1'-10"	3'-7"	2'-6"	2'-6"	2'-4"	1.54	64	
	18"	1.77	8'-4"	2'-1"	3'-10"	2'-10"	2'-10"	2'-8"	1.84	71	
	24"	3.14	10'-4"	2'-7"	4'-4"	3'-6"	3'-6"	3'-4"	2.53	92	
	30"	4.91	12'-4"	3'-1"	4'-10"	4'-2"	4'-2"	4'-0"	3.34	124	
6 : 1	15"	1.23	11'-6"	1'-11"	3'-7"	3'-10"	3'-10"	3'-10"	2.19	89	
	18"	1.77	13'-0"	2'-2"	3'-10"	4'-4"	4'-4"	4'-4"	2.63	103	
	24"	3.14	16'-0"	2'-8"	4'-4"	5'-4"	5'-4"	5'-4"	3.59	143	
	30"	4.91	19'-0"	3'-2"	4'-10"	6'-4"	6'-4"	6'-4"	4.81	180	

DIMENSIONS AND QUANTITIES FOR BAFFLES

Pipe Size D	X Baffle P Width	X Baffle Q Height	X Baffle R Length	Y Baffle Reinf. Steel Bar M	Y Baffle Reinf. Steel Bar N	Concrete Class ~ Cu. Yd.	Reinf. Steel Lbs.
15"	4"	4"	4"	2-# 4	1-# 4	0.10	4
18"	4"	4"	5"	3-# 4	2-# 4		8
24"	5"	5"	6"	4-# 4	3-# 4		12
30"	5"	5"	7"	4-# 4	4-# 4		16

ENDWALLS WITH AND WITHOUT BAFFLES FOR 3 : 1, 4 : 1 AND 6 : 1 SLOPES

U-TYPE CONCRETE ENDWALLS
BAFFLES AND GRATE OPTIONAL
15" TO 30" PIPE
FDOT INDEX NO. 261

RECORD DRAWING
DATE: JULY 15, 2010

REV	DATE	DESCRIPTION	BY
1	7/15/10	REVISED FOR THE RECORD	DRC

DANIEL R. COOPER, P.E. LICENSE NO. 66440

DRAWING TITLE: 80-ACRE AREA - EROSION CONTROL IMPROVEMENTS DETAILS - 3

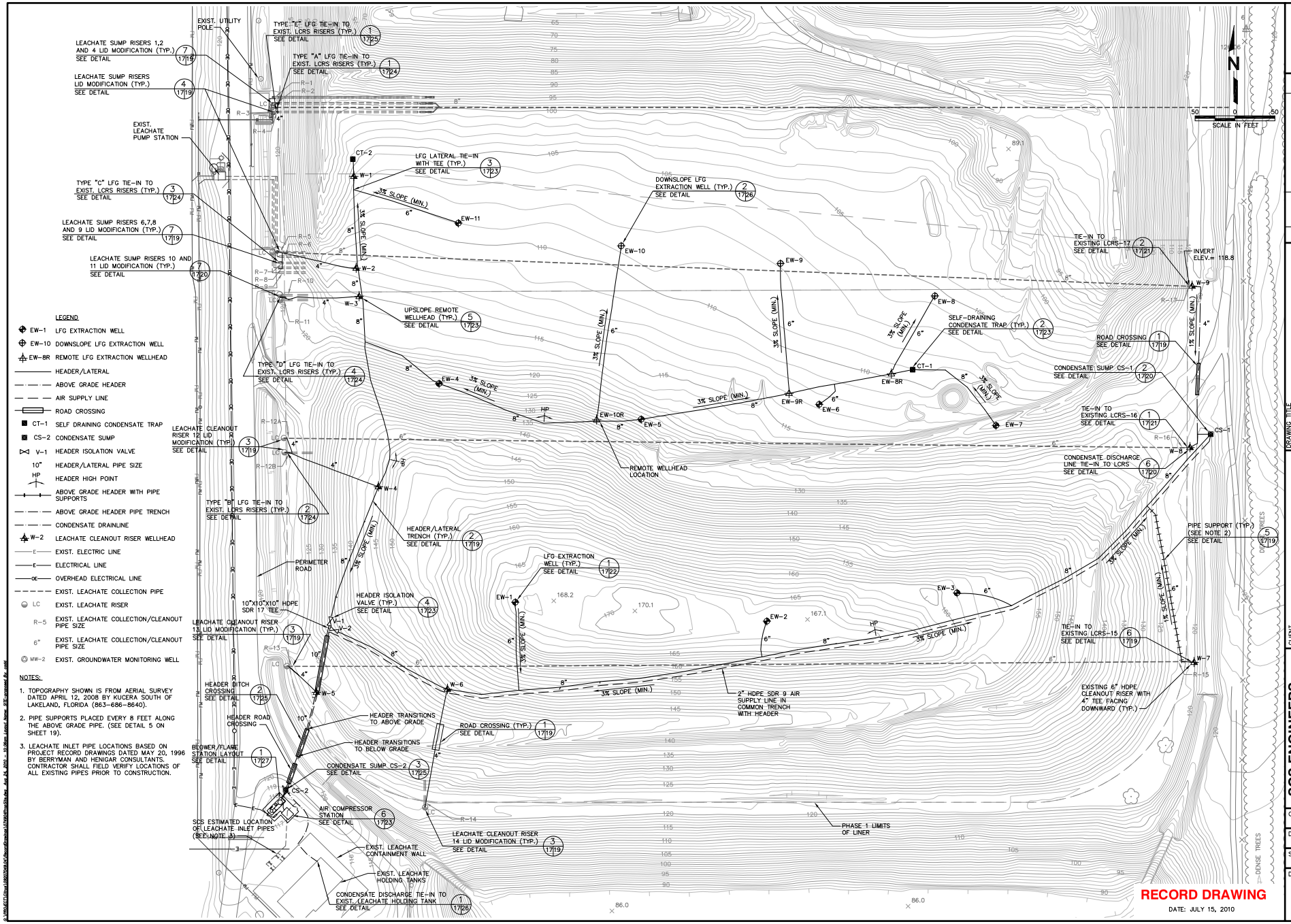
PROJECT TITLE: 7-ACRE CLOSED AREA RE-CLOSURE AND LANDFILL GAS SYSTEM CONSTRUCTION DRAWINGS

CLIENT: CITRUS COUNTY
SOILD WASTE MANAGEMENT DIVISION
LECANTO, FLORIDA

SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT
CONSULTING ENGINEERS
4041 NW 37th PLACE, SUITE 100, GAINESVILLE, FL 32606
(352) 335-0900 FAX (352) 335-0078
FLORIDA CERTIFICATE OF AUTHORIZATION NO. 00000662

PROJ. NO. 07P2049.04
DSN. BY: DHB
DWN. BY: CJV/CTN
CHK. BY: JAB
QA/QC BY: TEH
APP. BY: R.JD

CADD FILE: 074904ERODTLS3
DATE: AUGUST 2009
SCALE: AS SHOWN
DRAWING NO. 16 of 27



LEGEND

- EW-1 LFG EXTRACTION WELL
- EW-10 DOWNSLOPE LFG EXTRACTION WELL
- EW-8R REMOTE LFG EXTRACTION WELLHEAD
- HEADER/LATERAL
- ABOVE GRADE HEADER
- AIR SUPPLY LINE
- ROAD CROSSING
- CT-1 SELF DRAINING CONDENSATE TRAP
- CS-2 CONDENSATE SUMP
- V-1 HEADER ISOLATION VALVE
- 10" HEADER/LATERAL PIPE SIZE
- HP HEADER HIGH POINT
- ABOVE GRADE HEADER WITH PIPE SUPPORTS
- ABOVE GRADE HEADER PIPE TRENCH
- CONDENSATE DRAINLINE
- W-2 LEACHATE CLEANOUT RISER WELLHEAD
- EXIST. ELECTRIC LINE
- EXIST. ELECTRICAL LINE
- EXIST. OVERHEAD ELECTRICAL LINE
- EXIST. LEACHATE COLLECTION PIPE
- LC EXIST. LEACHATE RISER
- R-5 EXIST. LEACHATE COLLECTION/CLEANOUT PIPE SIZE
- 6" EXIST. LEACHATE COLLECTION/CLEANOUT PIPE SIZE
- MW-2 EXIST. GROUNDWATER MONITORING WELL

NOTES:

1. TOPOGRAPHY SHOWN IS FROM AERIAL SURVEY DATED APRIL 12, 2008 BY KUCERA SOUTH OF LAKELAND, FLORIDA (863-686-8640).
2. PIPE SUPPORTS PLACED EVERY 8 FEET ALONG THE ABOVE GRADE PIPE. (SEE DETAIL 5 ON SHEET 19).
3. LEACHATE INLET PIPE LOCATIONS BASED ON PROJECT RECORD DRAWINGS DATED MAY 20, 1996 BY BERRYMAN AND HENIGAR CONSULTANTS. CONTRACTOR SHALL FIELD VERIFY LOCATIONS OF ALL EXISTING PIPES PRIOR TO CONSTRUCTION.

REV	DATE	DESCRIPTION	BY
1	7/15/10	REVISED FOR THE RECORD	DRC

DANIEL R. COOPER, P.E. LICENSE NO. 66440

DRAWING TITLE: LANDFILL GAS SYSTEM PROPOSED SITE PLAN

PROJECT TITLE: 7-ACRE CLOSED AREA RE-CLOSURE AND LANDFILL GAS SYSTEM CONSTRUCTION DRAWINGS

CLIENT: CITRUS COUNTY SOLID WASTE MANAGEMENT DIVISION LECANTO, FLORIDA

SCS ENGINEERS
STEARNS, CONROAD AND SCHMIDT
CONSULTING ENGINEERS
8100 NW 33RD STREET, SUITE 203, DORAL, FL 33166
813 621-0690 FAX 813 621-0470
FLORIDA CERTIFICATE OF AUTHORIZATION NO. 00000662

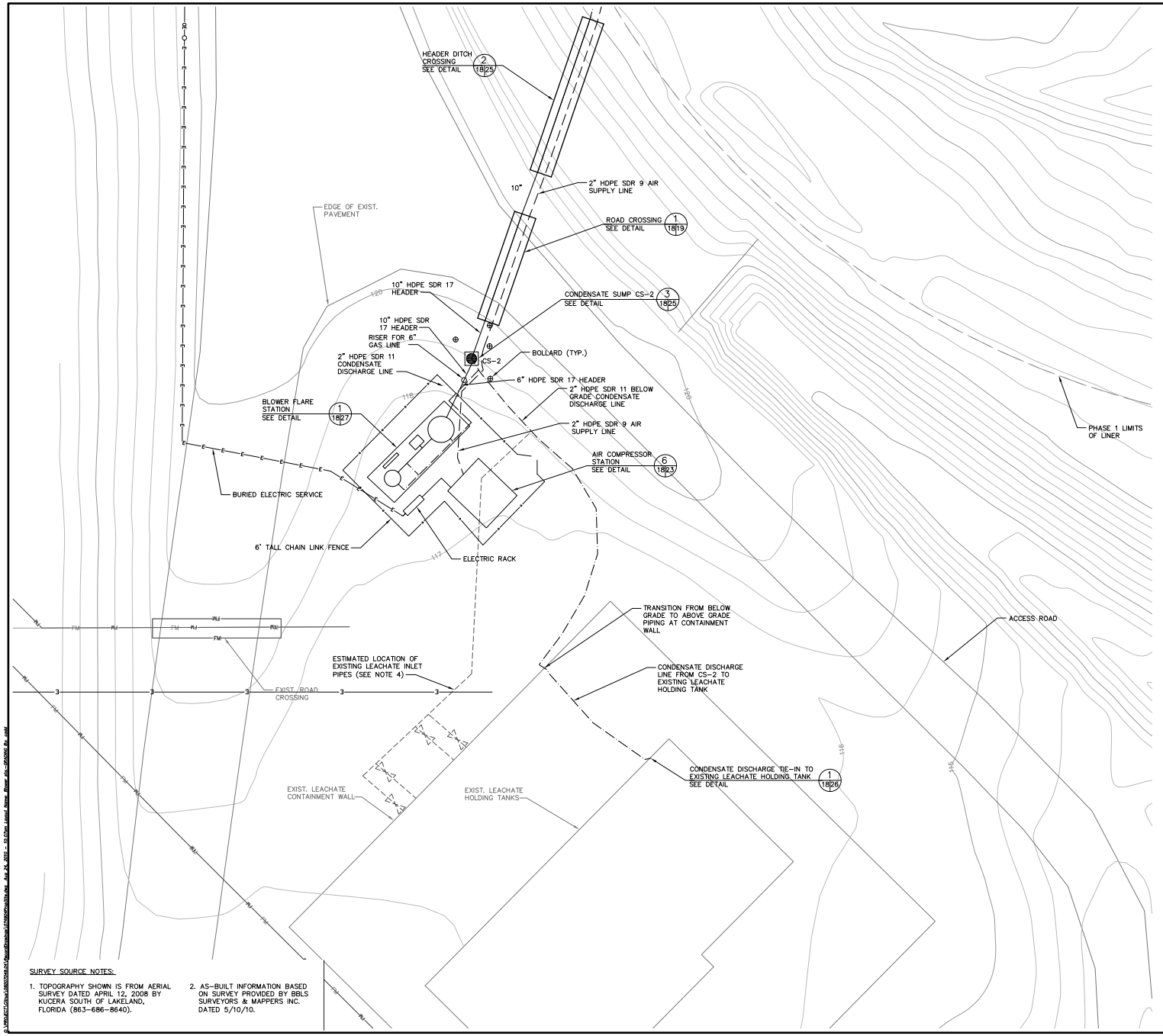
PROJ. NO.	07204904
DSN. BY:	DHB
DWN. BY:	CTN
CHK. BY:	JAB
APP. BY:	RJD
Q/A REV. BY:	CEH

CADD FILE: 074904PropSite

DATE: AUGUST 2009

SCALE: AS SHOWN

DRAWING NO. 17 of 27



SURVEY SOURCE NOTES:

1. TOPOGRAPHY SHOWN IS FROM AERIAL SURVEY DATED APRIL 12, 2008 BY KUCERA SOUTH OF LAKELAND, FLORIDA (863-686-8640).
2. AS-BUILT INFORMATION BASED ON SURVEY PROVIDED BY BBLS SURVEYORS & MAPPERS INC. DATED 5/10/10.

RECORD DRAWING

DATE: JULY 15, 2010

REV	DATE	DESCRIPTION	BY
1	7/15/10	REVISED FOR THE RECORD	DRC
2			
3			
4			
5			

DANIEL R. COOPER, P.E. LICENSE NO. 66440

DRAWING TITLE: LANDFILL GAS SYSTEM - PROPOSED BLOWER/FLARE STATION GRADING PLAN

PROJECT TITLE: 7-ACRE CLOSED AREA RE-CLOSURE AND LANDFILL GAS SYSTEM CONSTRUCTION DRAWINGS

CLIENT: CITRUS COUNTY SOLID WASTE MANAGEMENT DIVISION LECANTO, FLORIDA

SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT
CONSULTING ENGINEERS
400 N. ASHLEY DRIVE, SUITE 900, TAMPA, FL 33602
813 876-0900 FAX 813 276-0932
FLORIDA CERTIFICATE OF AUTHORIZATION NO. 00000000

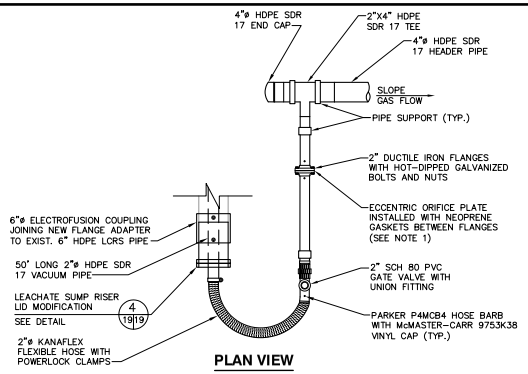
PROJ. NO. 01207049.04
DSN. BY: DHB
DWN. BY: CJV/CTN
CHK. BY: JAB
QA/A RVW BY: PEH
APP. BY: RJD

CADD FILE: 074904PropSite

DATE: AUGUST 2009

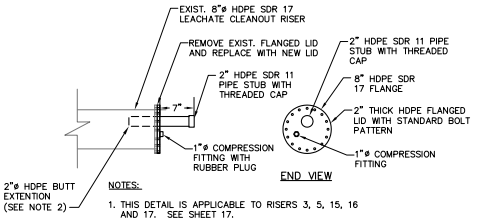
SCALE: AS SHOWN

DRAWING NO. 18 of 27



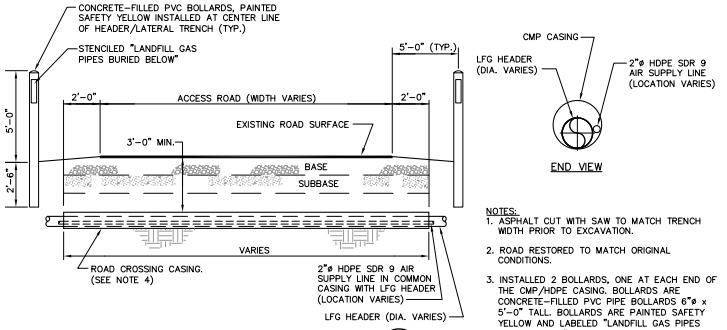
PLAN VIEW

NOTE:
1. ORIFICE PLATE TO FIT INSIDE UNION. WELLHEAD PROVIDED WITH 0.25", 0.50", 0.75", 1.00", 1.25", AND 1.50" ORIFICE PLATES.



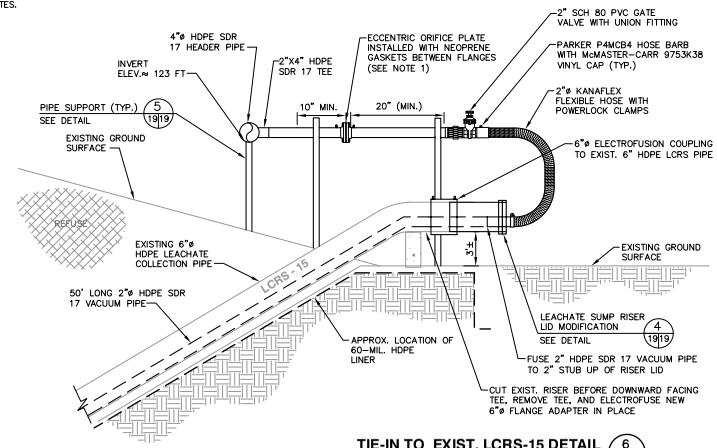
NOTES:
1. THIS DETAIL IS APPLICABLE TO RISERS 3, 5, 15, 16 AND 17. SEE SHEET 17.
2. EXTENSION FOR RISERS 15, 16 AND 17 ONLY.

LEACHATE SUMP RISER LID MODIFICATION DETAIL 4 19
NOT TO SCALE 17,19

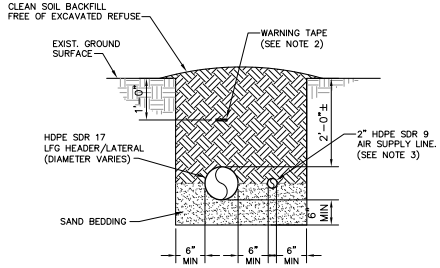


NOTES:
1. ASPHALT CUT WITH SAW TO MATCH TRENCH WIDTH PRIOR TO EXCAVATION.
2. ROAD RESTORED TO MATCH ORIGINAL CONDITIONS.
3. INSTALLED 2 BOLLARDS, ONE AT EACH END OF THE CMP/HDPE CASING. BOLLARDS ARE CONCRETE-FILLED PVC PIPE BOLLARDS 6"ø x 5'-0" TALL. BOLLARDS ARE PAINTED SAFETY YELLOW AND LABELED "LANDFILL GAS PIPES BURIED BELOW".
4. CMP CASING INNER DIAMETER IS MINIMUM 5" LARGER THAN THE CUMULATIVE DIAMETER OF THE LFG HEADER/LATERAL AND AIR SUPPLY LINE PIPES. INSTALLED AIR SUPPLY LINE AND HEADER/LATERAL IN ROAD CASING WHERE INDICATED ON PLANS.

ROAD CROSSING DETAIL 1 17,18 19
NOT TO SCALE

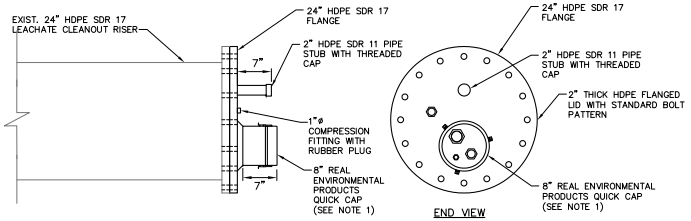


TIE-IN TO EXIST. LCRS-15 DETAIL 6 17 19
NOT TO SCALE



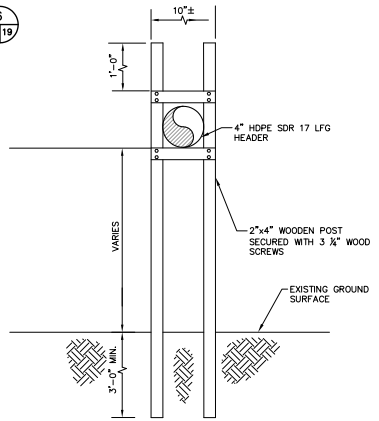
NOTES:
1. LFG HEADERS/LATERALS ARE SDR 17 WITH THE DIAMETERS SHOWN ON THE PLANS, AND INSTALLED WITH MINIMUM 3% SLOPE.
2. WARNING TAPE FOR HEADER/LATERALS IS 3" WIDE AND IMPRINTED WITH "GAS LINE BURIED BELOW".
3. 2" HDPE SDR 9 AIR SUPPLY LINE INSTALLED IN SAME TRENCH AS HEADER/LATERAL AS SHOWN ON SHEET 17.

HEADER/LATERAL TRENCH DETAIL 2 17 19
NOT TO SCALE

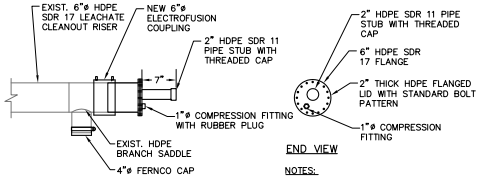


LEACHATE SUMP RISERS 1,2 AND 4 LID MODIFICATION DETAIL 7 17 19
NOT TO SCALE

NOTE:
1. THIS DETAIL APPLIES TO RISERS 1, 2 AND 4. SEE SHEET 17.



PIPE SUPPORT 5 17,19 19
NOT TO SCALE



NOTES:
1. THIS DETAIL APPLIES TO RISERS 12, 13 AND 14. SEE SHEET 17.

LEACHATE CLEANOUT RISERS 12, 13 AND 14 LID MODIFICATION DETAIL 3 17 19
NOT TO SCALE

RECORD DRAWING
DATE: JULY 15, 2010

REV	DATE	DESCRIPTION	BY
1	7/15/10	REVISED FOR THE RECORD	DRC

DANIEL R. COOPER, P.E. LICENSE NO. 66440

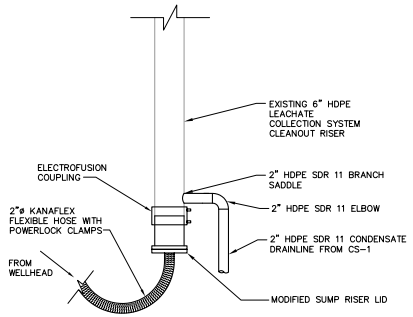
DRAWING TITLE: LANDFILL GAS SYSTEM DETAILS - 1
PROJECT TITLE: 7-ACRE CLOSED AREA RE-CLOSURE AND LANDFILL GAS SYSTEM CONSTRUCTION DRAWINGS

CLIENT: CITRUS COUNTY SOLID WASTE MANAGEMENT DIVISION LECANTO, FLORIDA

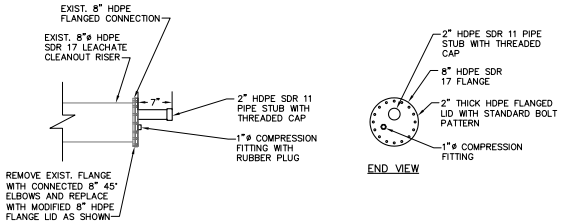
SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT
CONSULTING ENGINEERS
3920 SW 53rd TERRACE, SUITE 100, GAINESVILLE, FL 32608
813 621-0690 FAX 813 623-0772
FLORIDA CERTIFICATE OF AUTHORIZATION NO. 00000662

DWN. BY:	CTN
CHK. BY:	JAB
APP. BY:	DHB
QA/QC BY:	RJD
PROJ. NO.:	07204904.04
DSN. BY:	DHB

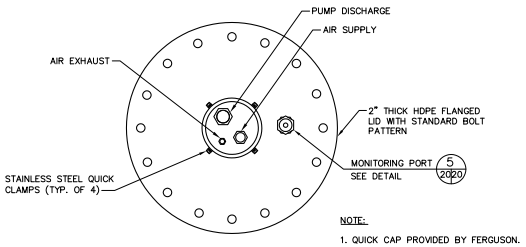
CADD FILE: 074904LFG-DETAILS1
DATE: AUGUST 2009
SCALE: AS SHOWN
DRAWING NO. 19 of 27



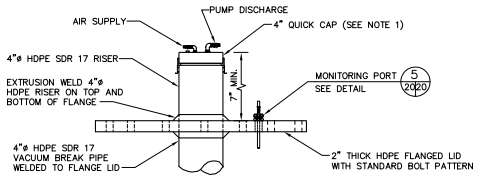
CONDENSATE DISCHARGE LINE TIE-IN TO LCRS (6 / 17 20)
NOT TO SCALE



LEACHATE CLEANOUT RISERS 10 AND 11 LID MODIFICATION DETAIL (7 / 17 20)
NOT TO SCALE

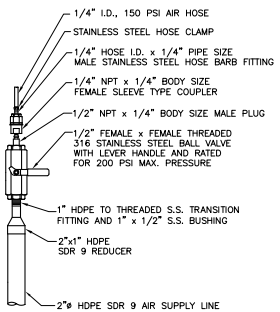


PLAN VIEW

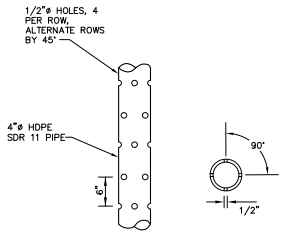


PROFILE VIEW

FLANGED LID WITH QUICK RELEASE CAP DETAIL (8 / 20)
NOT TO SCALE
20.25

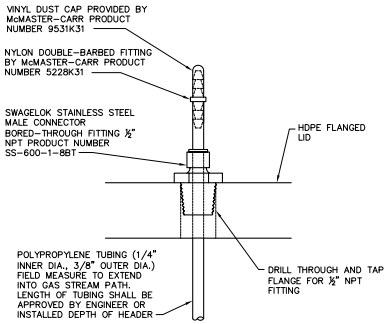


AIR SUPPLY LINE VALVE DETAIL (3 / 20)
NOT TO SCALE
20.25

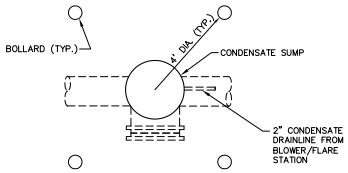


NOTE: STAGGER SLOTS BY 45° FOR ADJACENT ROWS

PERFORATED PIPE DETAIL (4 / 20)
NOT TO SCALE
20.25

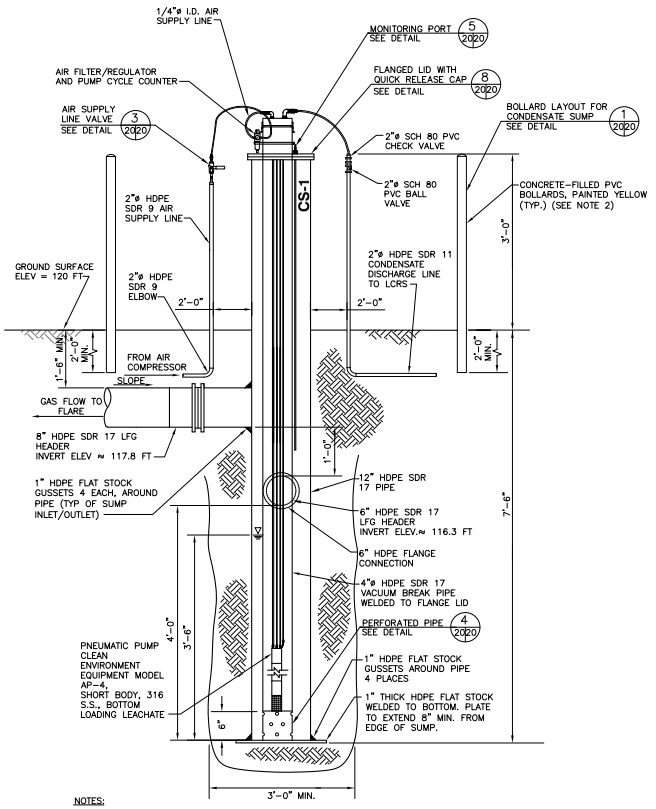


MONITORING PORT DETAIL (TYP.) (5 / 20)
NOT TO SCALE
20,23,25



NOTES:
1. RESOD OR SEED AND MULCH ALL DISTURBED AREAS AROUND CONDENSATE SUMP.
2. LOCATION OF UNDERGROUND HEADER LINE IS NOT CRITICAL TO BOLLARD LOCATION, BUT MUST BE AVOIDED DURING BOLLARD INSTALLATION.

BOLLARD LAYOUT FOR CONDENSATE SUMP (1 / 20 20)
NOT TO SCALE



NOTES:
1. 4"ø HDPE SDR 17 VACUUM BREAK PIPE EXTRUSION WELDED TO FLANGE LID. 4" 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. INSTALLED 4 BOLLARDS AROUND SUMP, EACH BOLLARD 3'-0" TALL AND SPACED 4'-0" AWAY FROM SUMP. BOLLARDS PAINTED SAFETY YELLOW.
3. THOROUGHLY COATED ENTIRE SURFACE OF BOLTS, WASHERS, NUTS AND BACKUP RINGS WITH POLYCOAT RUBBERIZED PRIMER, OR EQUAL, AFTER TIGHTENING BOLTS. WRAPPED FLANGE IN PLASTIC WRAP PRIOR TO BACKFILLING.
4. AIR EXHAUST FROM PUMP EXITS INTO SUMP.
5. SUMP IS SHOP FABRICATED WITH TWO 6"ø STUBS FOR THE HEADER, ONE 10"ø STUB FOR FUTURE TIE-IN AND ONE 2"ø STUB FOR THE CONDENSATE DRAINLINE TIE-IN.

CONDENSATE SUMP CS-1 DETAIL (2 / 17 20)
NOT TO SCALE

RECORD DRAWING
DATE: JULY 15, 2010

REV	DATE	DESCRIPTION	BY
	7/15/10	REVISED FOR THE RECORD	DRC

DANIEL R. COOPER, P.E. LICENSE NO. 66440

DRAWING TITLE: LANDFILL GAS SYSTEM DETAILS - 2

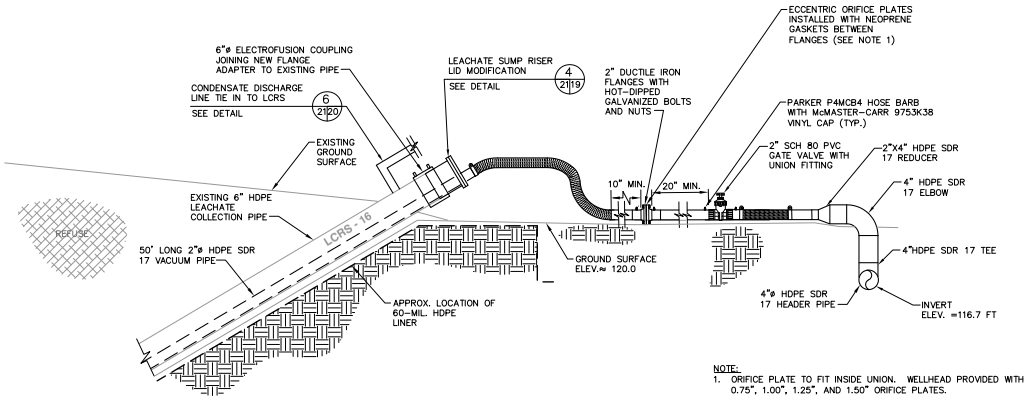
PROJECT TITLE: 7-ACRE CLOSED AREA RE-CLOSURE AND LANDFILL GAS SYSTEM CONSTRUCTION DRAWINGS

CLIENT: CITRUS COUNTY SOLID WASTE MANAGEMENT DIVISION LECANTO, FLORIDA

SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT
CONSULTING ENGINEERS
4041 PARK OAKS BLVD., SUITE 100, TAMPA, FL 33610
PHONE: 813-621-0690 FAX: 813-621-0691
FLORIDA CERTIFICATE OF AUTHORIZATION NO. 00004892

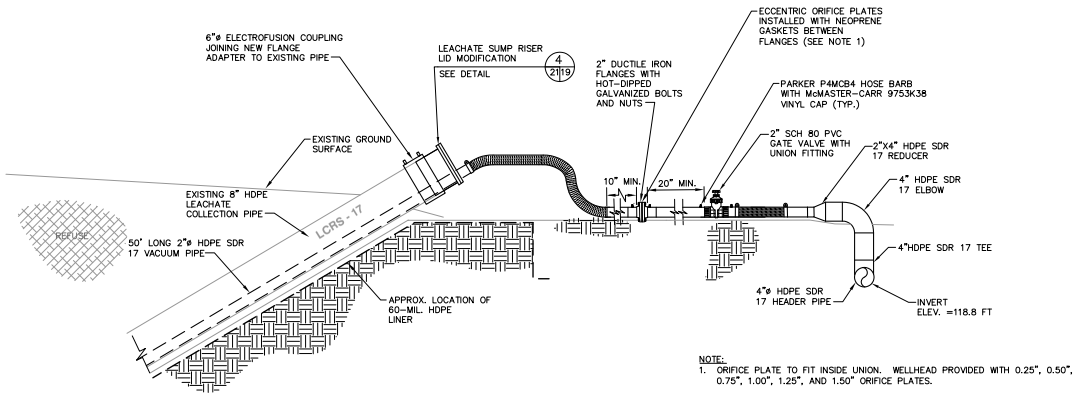
PROJ. NO.	DWN. BY:	Q/A RVW BY:
09207049.04	CTN	CEH
DSN. BY:	CHK. BY:	APP. BY:
DHB	JAB	RJD

CADD FILE: 074904LFG-DETAILS1
DATE: AUGUST 2009
SCALE: AS SHOWN
DRAWING NO. 20 of 27



NOTE:
1. ORIFICE PLATE TO FIT INSIDE UNION. WELLHEAD PROVIDED WITH 0.25", 0.50", 0.75", 1.00", 1.25", AND 1.50" ORIFICE PLATES.

TIE-IN TO EXISTING LCRS-16 DETAIL 1 17|21
NOT TO SCALE



NOTE:
1. ORIFICE PLATE TO FIT INSIDE UNION. WELLHEAD PROVIDED WITH 0.25", 0.50", 0.75", 1.00", 1.25", AND 1.50" ORIFICE PLATES.

TIE-IN TO EXISTING LCRS-17 DETAIL 2 17|21
NOT TO SCALE

RECORD DRAWING
DATE: JULY 15, 2010

DANIEL R. COOPER, P.E. LICENSE NO. 66440

REV	DATE	DESCRIPTION	BY
1	7/15/10	REVISED FOR THE RECORD	DRC

DRAWING TITLE: LANDFILL GAS SYSTEM DETAILS - 3

PROJECT TITLE: 7-ACRE CLOSED AREA RE-CLOSURE AND LANDFILL GAS SYSTEM CONSTRUCTION DRAWINGS

CLIENT: CITRUS COUNTY SOLID WASTE MANAGEMENT DIVISION LECANTO, FLORIDA

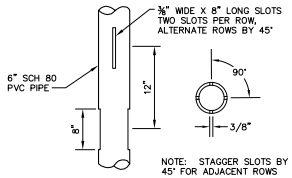
SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT
CONSULTING ENGINEERS
4041 PARK OAKS BLVD., SUITE 100, TAMPA, FL 33610
813-884-8445 FAX 813-884-8446
FLORIDA CERTIFICATE OF AUTHORIZATION NO. 00004892

PROJ. NO. 092007049.04
DSN. BY: DHB
DWN. BY: CTN
CHK. BY: JAB
Q/A REVIEW BY: CEH
APP. BY: RJD

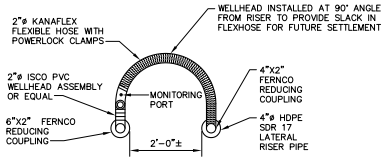
CADD FILE: 074904LFG-DETAILS1
DATE: AUGUST 2009
SCALE: AS SHOWN
DRAWING NO. 21 of 27

WELL SCHEDULE

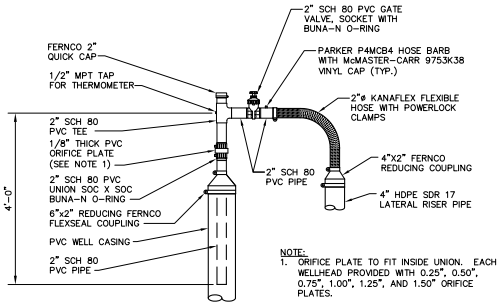
Well ID	Northing	Easting	Approx. Ground Suface (ft)	Well Depth (ft)	Slotted Pipe Length (ft)	Solid Pipe Length Below Grade (ft)	Solid Pipe Length Above Grade (ft)	Thickness of Gravel Pack (ft)
EW-1	1642040.2547	516123.2548	168.96	90	69	20	3	71
EW-2	1642016.7838	516438.5007	165.80	90	69	20	3	71
EW-3	1642052.2389	516676.6033	161.42	90	69	20	3	71
EW-4	1642311.7659	516027.0821	145.72	70	49	20	3	51
EW-5	1642266.9005	516281.9773	144.25	81	60	20	3	62
EW-6	1642286.3512	516504.7318	131.58	50	29	20	3	31
EW-7	1642258.4506	516726.3181	128.10	73	52	20	3	54
EW-8	1642424.2030	516648.8517	127.51	70	49	20	3	51
EW-9	1642464.8657	516255.9805	122.87	70	49	20	3	51
EW-10	1642487.7537	516255.9805	133.99	70	49	20	3	51
EW-11	1642515.4595	516052.1385	129.80	66	45	20	3	47
				820	639	220	---	611



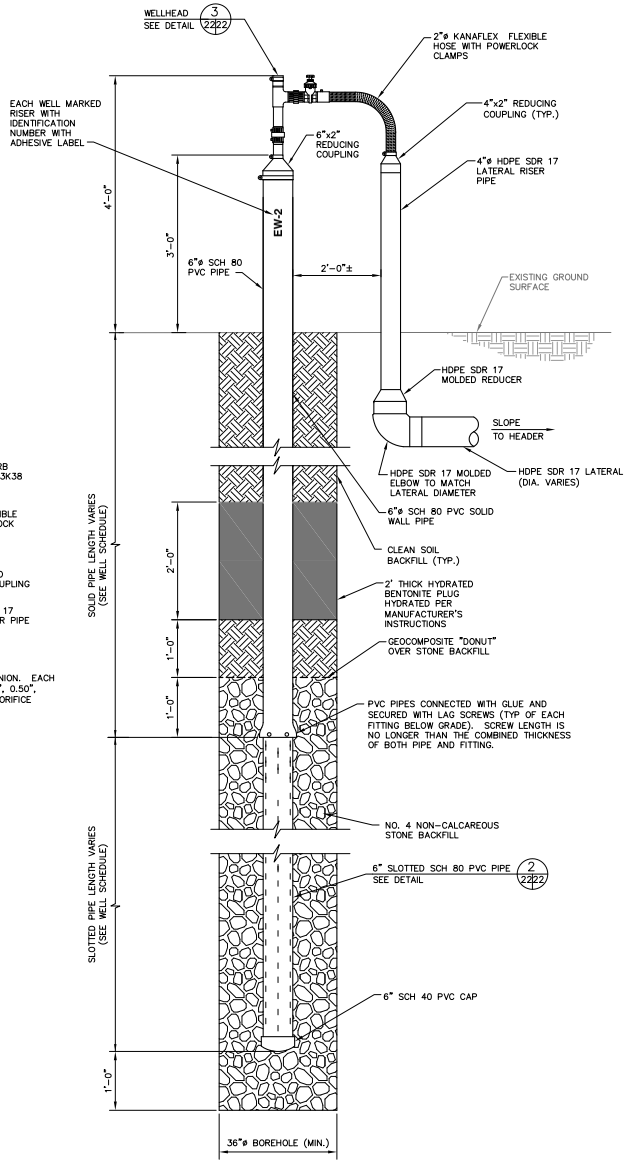
SLOTTED PIPE DETAIL (2 / 22|22) — NOT TO SCALE



PLAN VIEW FOR LFG EXTRACTION WELL



WELLHEAD DETAIL (3 / 22) — NOT TO SCALE
22,23,28



LFG EXTRACTION WELL DETAIL (1 / 17|22) — NOT TO SCALE

RECORD DRAWING
DATE: JULY 15, 2010

REV	DATE	DESCRIPTION	BY	DRC
1	7/15/10	REVISED FOR THE RECORD		

DANIEL R. COOPER, P.E.
LICENSE NO. 66440

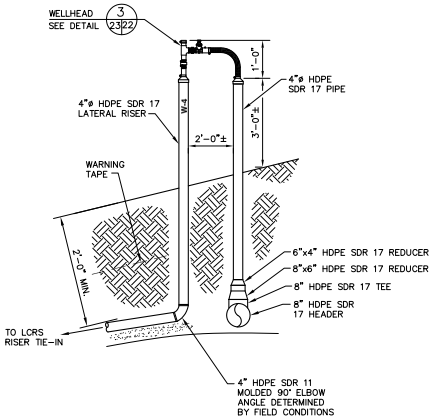
DRAWING TITLE: LANDFILL GAS SYSTEM DETAILS - 4
PROJECT TITLE: 7-ACRE CLOSED AREA RE-CLOSURE AND LANDFILL GAS SYSTEM CONSTRUCTION DRAWINGS

CLIENT: CITRUS COUNTY SOLID WASTE MANAGEMENT DIVISION LECANTO, FLORIDA

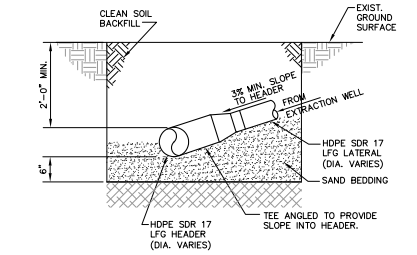
SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT CONSULTING ENGINEERS
4041 MACDILL AVE. SUITE 540, TAMPA, FL 33607
813 286-1600 FAX 813 286-1616
FLORIDA CERTIFICATE OF AUTHORIZATION NO. 00000662

PROJ. NO. 07Z7049.04
DSN. BY: CTN
DRF. BY: JAB
CHK. BY: DHB
QA/QC BY: RJD
APP. BY:

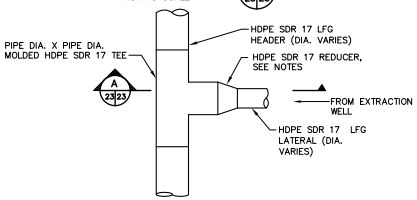
CADD FILE: 074904LFG-DETAILS2
DATE: AUGUST 2009
SCALE: AS SHOWN
DRAWING NO. 22 of 27



UPSLOPE REMOTE WELLHEAD DETAIL 5 | 17|23
NOT TO SCALE



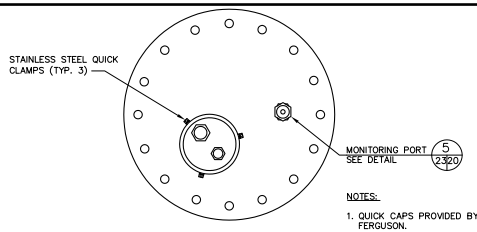
SECTION VIEW A 23|23
NOT TO SCALE



LFG LATERAL TIE-IN WITH TEE DETAIL 3 | 17|23
NOT TO SCALE

NOTES:

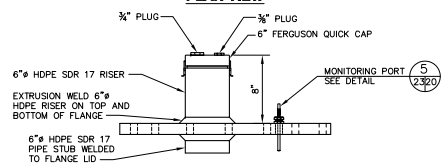
1. CONSECUTIVE SIZE REDUCERS USED TO TRANSITION FROM THE MOLDED TEE TO THE LFG LATERAL. FOR EXAMPLE, TO TRANSITION FROM A 10" TEE, A 10"x8" REDUCER AND 8"x6" REDUCER SHALL BE INSTALLED.
2. MOLDED HDPE TEES INSTALLED FOR ALL TIE-INS OF LATERALS TO HEADER SMALLER THAN 12"ø. TEE ANGLED TO MAINTAIN SLOPE INTO THE HEADER AS SHOWN IN SECTION VIEW.
3. 1' MIN. OF SAND PLACED BELOW EACH TEE. THE SAND IS INSTALLED SO IT EXTENDS 3' MIN. IN EACH DIRECTION OF THE TEE. SAND WAS SLIGHTLY MOISTENED AND HAND-TAMPED PROVIDING SUPPORT TO ALL POINTS OF THE TEE. CLEAN, GRADED SOIL WAS HAND-TAMPED ABOVE TEE (1' MIN.) BEING CAREFUL TO EIMINATE VOIDS.



NOTES:

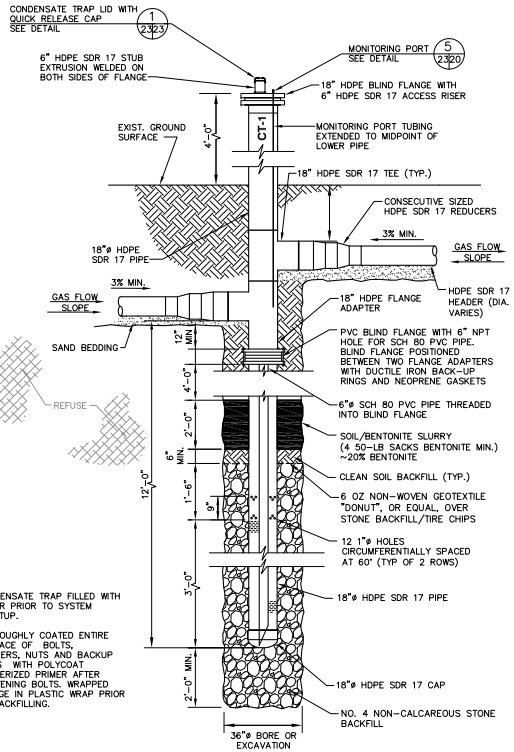
1. QUICK CAPS PROVIDED BY FERGUSON.

PLAN VIEW



PROFILE VIEW

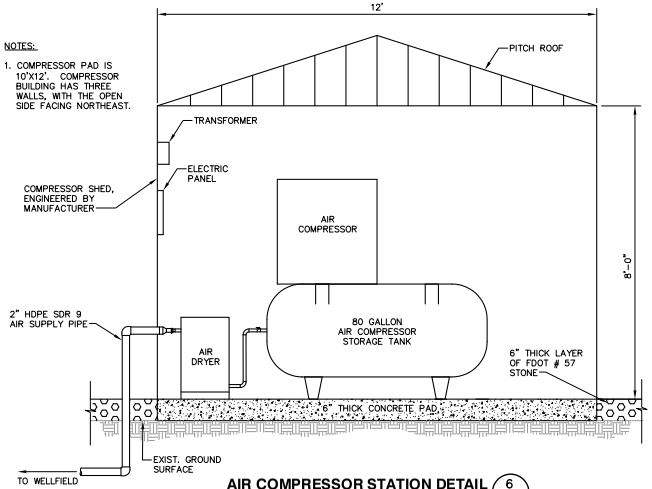
CONDENSATE TRAP LID WITH QUICK RELEASE CAP DETAIL 1 | 23|23
NOT TO SCALE



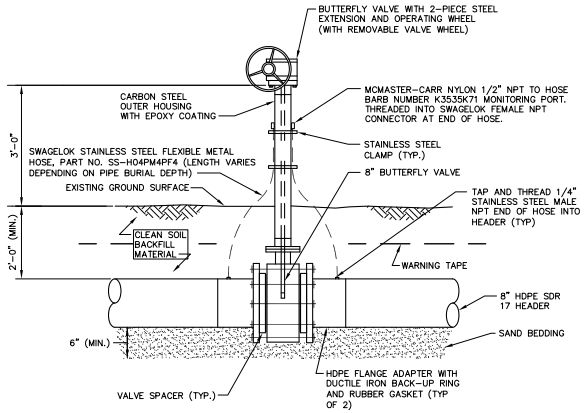
NOTES:

1. CONDENSATE TRAP FILLED WITH WATER PRIOR TO SYSTEM STARTUP.
2. THOROUGHLY COATED ENTIRE SURFACE OF BOLTS, WASHERS, NUTS AND BACKUP RINGS WITH POLYCOAT RUBBERIZED PRIMER AFTER TIGHTENING BOLTS. WRAPPED FLANGE IN PLASTIC WRAP PRIOR TO BACKFILLING.

SELF-DRAINING CONDENSATE TRAP DETAIL 2 | 17|23
NOT TO SCALE



AIR COMPRESSOR STATION DETAIL 6 | 17,18|23
NOT TO SCALE



NOTES:

1. THOROUGHLY COATED ENTIRE SURFACE OF BOLTS, WASHERS, NUTS AND BACKUP RINGS WITH POLYCOAT RUBBERIZED PRIMER, AFTER TIGHTENING BOLTS. COATING HAS NO "HOLIDAYS", OR GAPS IN ITS APPLICATION.
2. WRAPPED FLANGE IN PLASTIC WRAP PRIOR TO BACKFILLING.

HEADER ISOLATION VALVE DETAIL 4 | 17|23
NOT TO SCALE

RECORD DRAWING
DATE: JULY 15, 2010

REV	DATE	DESCRIPTION	BY
1	7/15/10	REVISED FOR THE RECORD	DRC

DANIEL R. COOPER, P.E. LICENSE NO. 68440

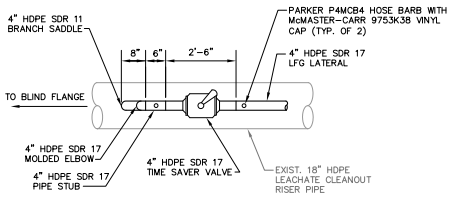
DRAWING TITLE: LANDFILL GAS SYSTEM DETAILS - 5
PROJECT TITLE: 7-ACRE CLOSED AREA RE-CLOSURE AND LANDFILL GAS SYSTEM CONSTRUCTION DRAWINGS

CLIENT: CITRUS COUNTY SOLID WASTE MANAGEMENT DIVISION LECANTO, FLORIDA

SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT
CONSULTING ENGINEERS
4041 Park Oaks Blvd, Suite 200, Tampa, FL 33610
813 621-0080 FAX 813 621-0475
FLORIDA CERTIFICATE OF AUTHORIZATION NO. 00000662

DWN. BY:	G/A RW
CHK. BY:	CTN
APP. BY:	JAB
PROJ. NO.	074904.04
DSN. BY:	DHB
APP. BY:	RJD

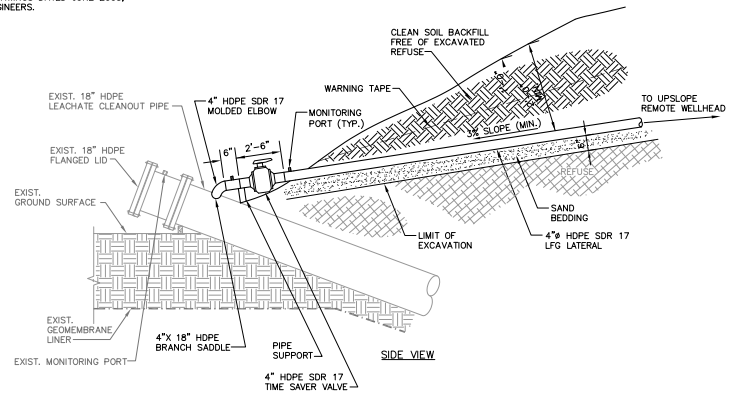
CADD FILE: 074904LFG-DETAILS2
DATE: AUGUST 2009
SCALE: AS SHOWN
DRAWING NO. 23 of 27



PLAN VIEW

NOTES:

1. THIS DETAIL SHALL BE USED FOR TIE-INS TO R-7 AND R-8.
2. AS-BUILT INFORMATION FOR EXIST. LEACHATE COLLECTION PIPE WAS OBTAINED FROM PHASE 2 EXPANSION RECORD DRAWINGS DATED JUNE 2005, PREPARED BY SCS ENGINEERS.

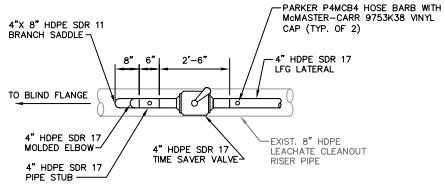


SIDE VIEW

TYPE "C" LFG TIE-IN TO EXIST. LCRS RISERS DETAIL

NOT TO SCALE

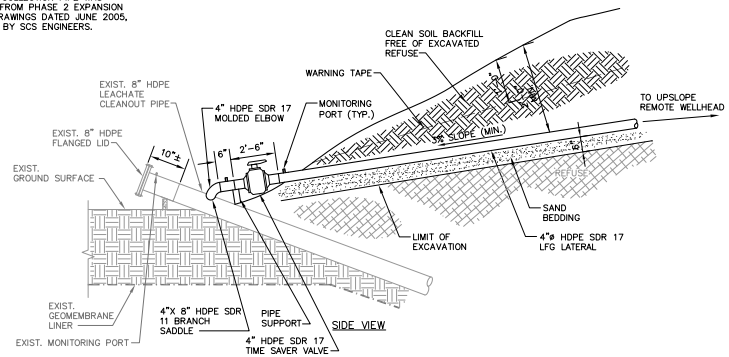
3 / 17|24



PLAN VIEW

NOTES:

1. THIS DETAIL USED FOR TIE-INS TO LCRS RISERS R-3 AND R-5.
2. AS-BUILT INFORMATION FOR EXIST. LEACHATE COLLECTION PIPE WAS OBTAINED FROM PHASE 2 EXPANSION RECORD DRAWINGS DATED JUNE 2005, PREPARED BY SCS ENGINEERS.

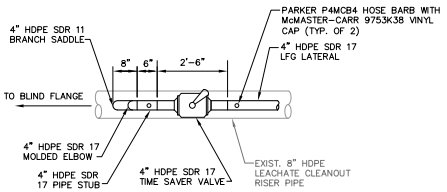


SIDE VIEW

TYPE "A" LFG TIE-IN TO EXIST. LCRS RISERS DETAIL

NOT TO SCALE

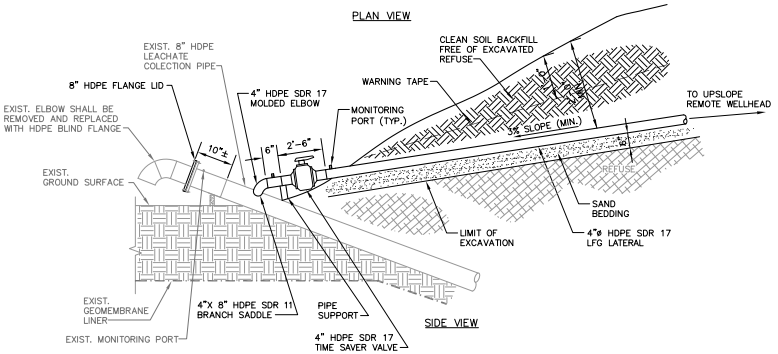
1 / 17|24



PLAN VIEW

NOTES:

1. THIS DETAIL SHALL BE USED FOR TIE-INS TO LCRS RISERS R-10 AND R-11.
2. AS-BUILT INFORMATION FOR EXIST. LEACHATE COLLECTION PIPE WAS OBTAINED FROM PHASE 2 EXPANSION RECORD DRAWINGS DATED JUNE 2005, PREPARED BY SCS ENGINEERS.

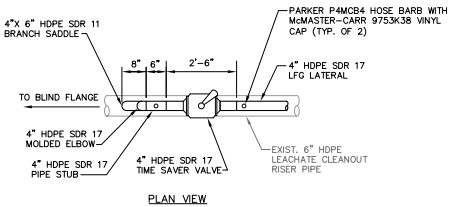


SIDE VIEW

TYPE "D" LFG TIE-IN TO EXIST. LCRS RISERS DETAIL

NOT TO SCALE

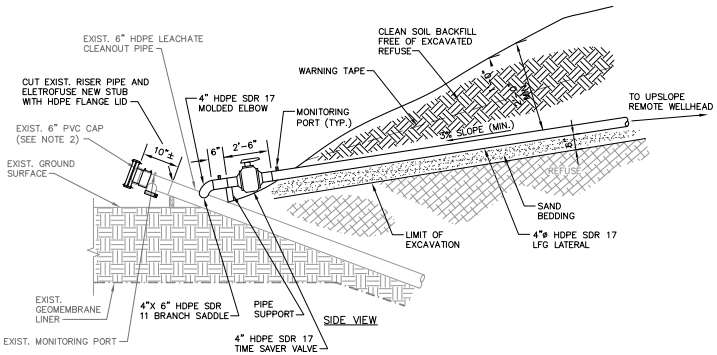
4 / 17|24



PLAN VIEW

NOTES:

1. THIS DETAIL USED FOR TIE-INS TO LCRS RISERS R-12A, R-12B, R-13 AND R-14.
2. AS-BUILT INFORMATION FOR EXIST. LEACHATE COLLECTION PIPE WAS OBTAINED FROM PHASE 2 EXPANSION RECORD DRAWINGS DATED JUNE 2005, PREPARED BY SCS ENGINEERS.
3. EXIST. CAP SHALL BE CUT AND NEW PIPE STUB WITH HDPE SDR 11 FLANGE ADAPTER WITH LID WAS THEN ELECTROFUSED ONTO EXIST. PIPE.



SIDE VIEW

TYPE "B" LFG TIE-IN TO EXIST. LCRS RISERS DETAIL

NOT TO SCALE

2 / 17|24

RECORD DRAWING

DATE: JULY 15, 2010

REV	DATE	DESCRIPTION	BY
	7/15/10	REVISED FOR THE RECORD	DRC

DANIEL R. COOPER, P.E.
LICENSE NO. 66440

DRAWING TITLE: LANDFILL GAS SYSTEM DETAILS - 6

PROJECT TITLE: 7-ACRE CLOSED AREA RE-CLOSURE AND LANDFILL GAS SYSTEM CONSTRUCTION DRAWINGS

CLIENT: CITRUS COUNTY
SOLID WASTE MANAGEMENT DIVISION
LECANTO, FLORIDA

SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT
CONSULTING ENGINEERS
4041 PARK OAKS BLVD., SUITE 100, TAMPA, FL 33610
PHONE: (813) 621-0690 FAX: (813) 621-0691
FLORIDA CERTIFICATE OF AUTHORIZATION NO. 00000662

PROJ. NO.	0920074049.04
DSN. BY:	CTN
DWN. BY:	CEH
CHK. BY:	JAB
APP. BY:	RJD
QA/QC BY:	DHB

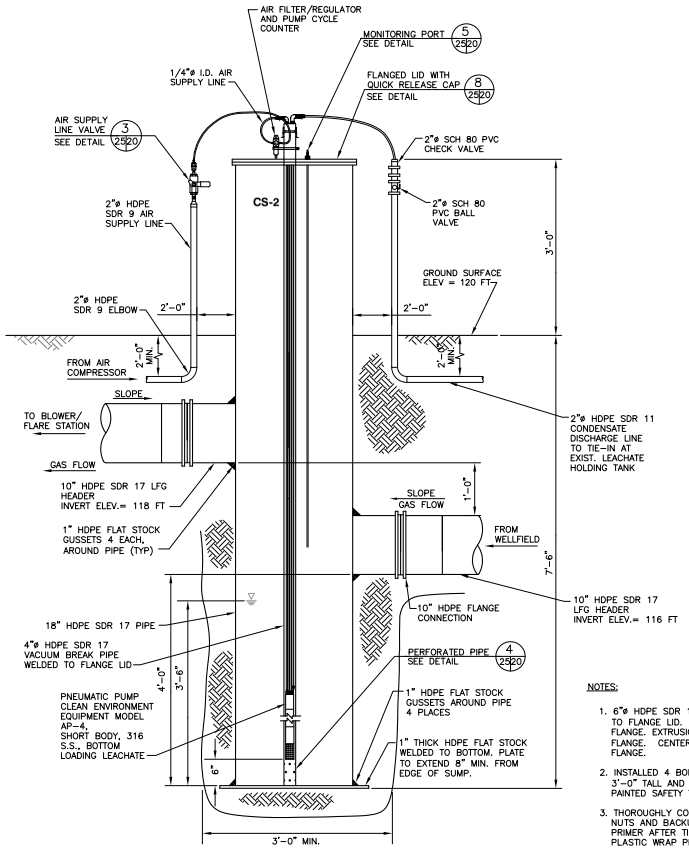
CADD FILE: 074904LFG-DETAILS2

DATE: AUGUST 2009

SCALE: AS SHOWN

DRAWING NO.

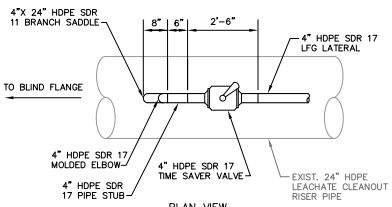
24 of 27

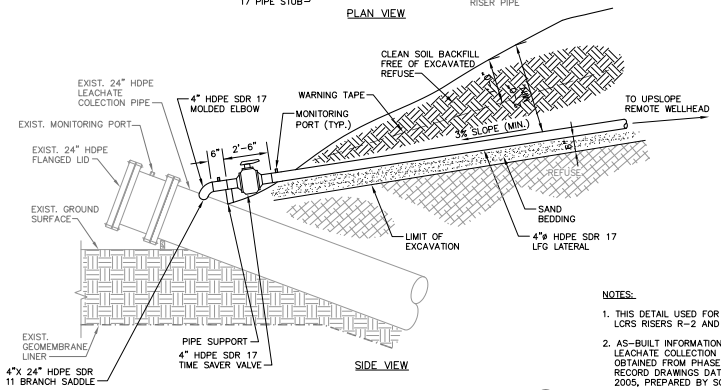


NOTES:

1. 6"ø HDPE SDR 17 VACUUM BREAK PIPE EXTRUSION WELDED TO FLANGE LID. 4" OF PIPE PROTRUDES THROUGH TOP OF FLANGE. EXTRUSION WELDED PIPE TO BOTH SIDES OF BLIND FLANGE. CENTER OF PIPE LOCATED 2" OFF CENTER OF BLIND FLANGE.
2. INSTALLED 4 BOLLARDS AROUND SUMP, EACH BOLLARD IS 3'-0" TALL AND SPACED 4'-0" AWAY FROM SUMP. BOLLARDS PAINTED SAFETY YELLOW.
3. THOROUGHLY COAT ENTIRE SURFACE OF BOLTS, WASHERS, NUTS AND BACKUP RINGS WITH POLYCOAT RUBBERIZED PRIMER AFTER TIGHTENING BOLTS. WRAPPED FLANGE IN PLASTIC WRAP PRIOR TO BACKFILLING.
4. AIR EXHAUST FROM PUMP EXITS INTO SUMP.

CONDENSATE SUMP CS-2 DETAIL 3 / 17,18 / 25
NOT TO SCALE

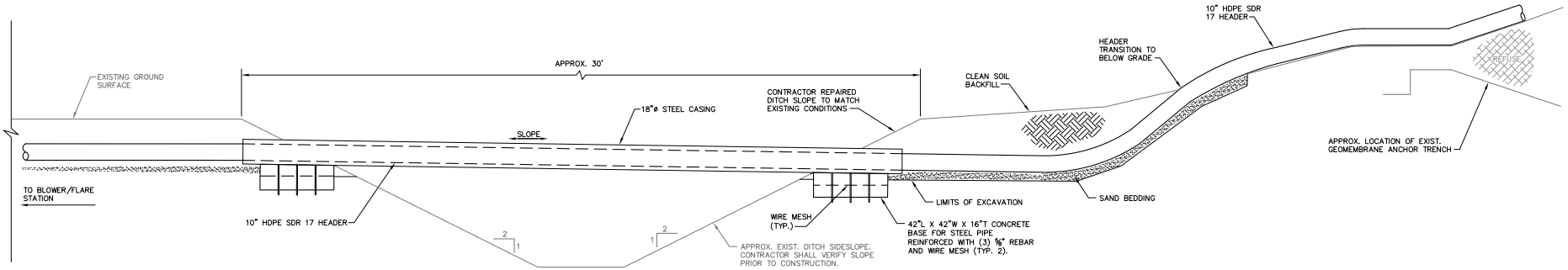




NOTES:

1. THIS DETAIL USED FOR TIE-INS TO LCRS RISERS R-2 AND R-4.
2. AS-BUILT INFORMATION FOR EXIST. LEACHATE COLLECTION PIPE WAS OBTAINED FROM PHASE 2 EXPANSION RECORD DRAWINGS DATED JUNE 2005, PREPARED BY SCS ENGINEERS.

TYPE "E" LFG TIE-IN TO EXISTING LCRS RISERS DETAIL 1 / 17 / 25
NOT TO SCALE



HEADER DITCH CROSSING DETAIL 2 / 17,18 / 25
NOT TO SCALE

RECORD DRAWING
DATE: JULY 15, 2010

REV	DATE	DESCRIPTION	BY
1	7/15/10	REVISED FOR THE RECORD	DRC

DANIEL R. COOPER, P.E. LICENSE NO. 66440

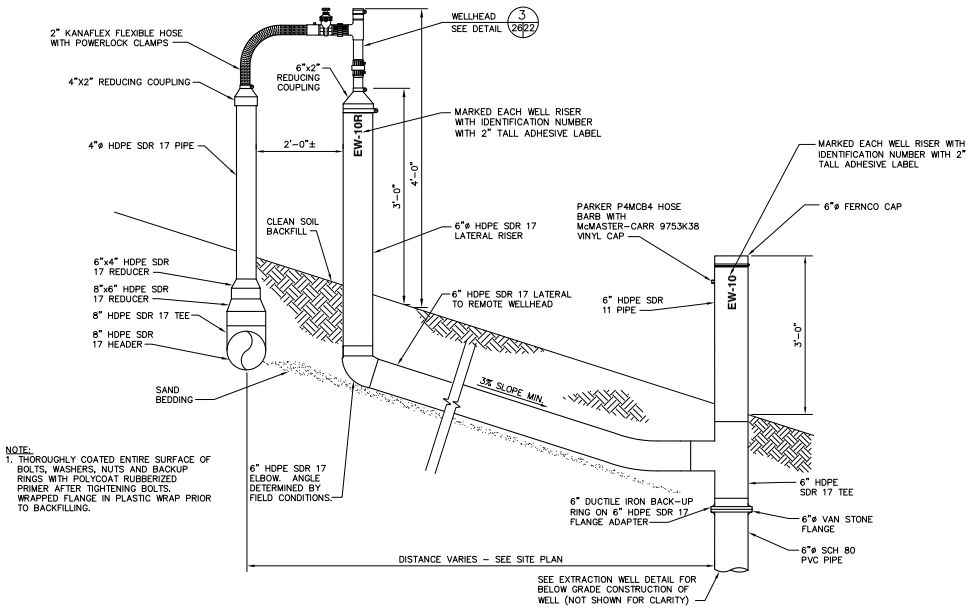
DRAWING TITLE: LANDFILL GAS SYSTEM DETAILS - 7
PROJECT TITLE: 7-ACRE CLOSED AREA RE-CLOSURE AND LANDFILL GAS SYSTEM CONSTRUCTION DRAWINGS

CLIENT: CITRUS COUNTY
SOLID WASTE MANAGEMENT DIVISION
LECANTO, FLORIDA

SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT
CONSULTING ENGINEERS
4041 MACDAY BLVD, SUITE 100, TAMPA, FL 33619
813 626-5900 FAX 813 626-6787
FLORIDA CERTIFICATE OF AUTHORIZATION NO. 00000000

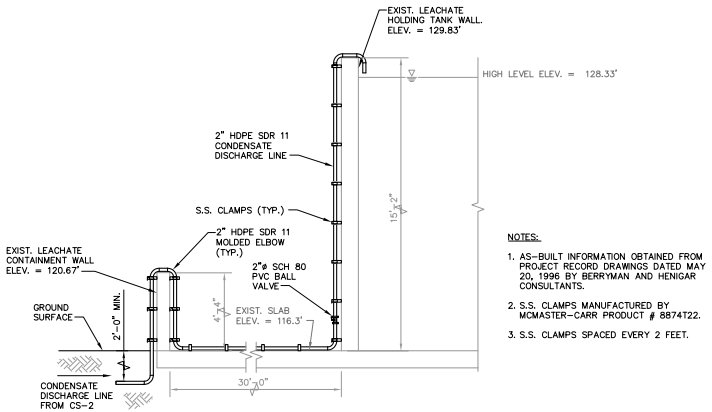
PROJ. NO.	01704904.04
DSN. BY	DHB
DWN. BY	CTN
CHK. BY	JAB
QA/QC BY	BEH
APP. BY	RJD

CADD FILE: 074904LFG-DETAILS2
DATE: AUGUST 2009
SCALE: AS SHOWN
DRAWING NO. 25 of 27



NOTE:
1. THOROUGHLY COATED ENTIRE SURFACE OF BOLTS, WASHERS, NUTS AND BACKUP RINGS WITH POLYCOAT RUBBERIZED PRIMER AFTER TIGHTENING BOLTS. WRAPPED FLANGE IN PLASTIC WRAP PRIOR TO BACKFILLING.

DOWNSLOPE LFG EXTRACTION WELL 2 17 26
NOT TO SCALE



NOTES:
1. AS-BUILT INFORMATION OBTAINED FROM PROJECT RECORD DRAWINGS DATED MAY 20, 1996 BY BERRYMAN AND HENIGAR CONSULTANTS.
2. S.S. CLAMPS MANUFACTURED BY MCMASTER-CARR PRODUCT # 8874T22.
3. S.S. CLAMPS SPACED EVERY 2 FEET.

CONDENSATE DISCHARGE TIE-IN TO EXIST. LEACHATE HOLDING TANK 1 17,18 26
NOT TO SCALE

RECORD DRAWING
DATE: JULY 15, 2010

REV	DATE	DESCRIPTION	BY
1	7/15/10	REVISED FOR THE RECORD	DRC

DANIEL R. COOPER, P.E. LICENSE NO. 68440

DRAWING TITLE: LANDFILL GAS SYSTEM DETAILS - 8
PROJECT TITLE: 7-ACRE CLOSED AREA RE-CLOSURE AND LANDFILL GAS SYSTEM CONSTRUCTION DRAWINGS

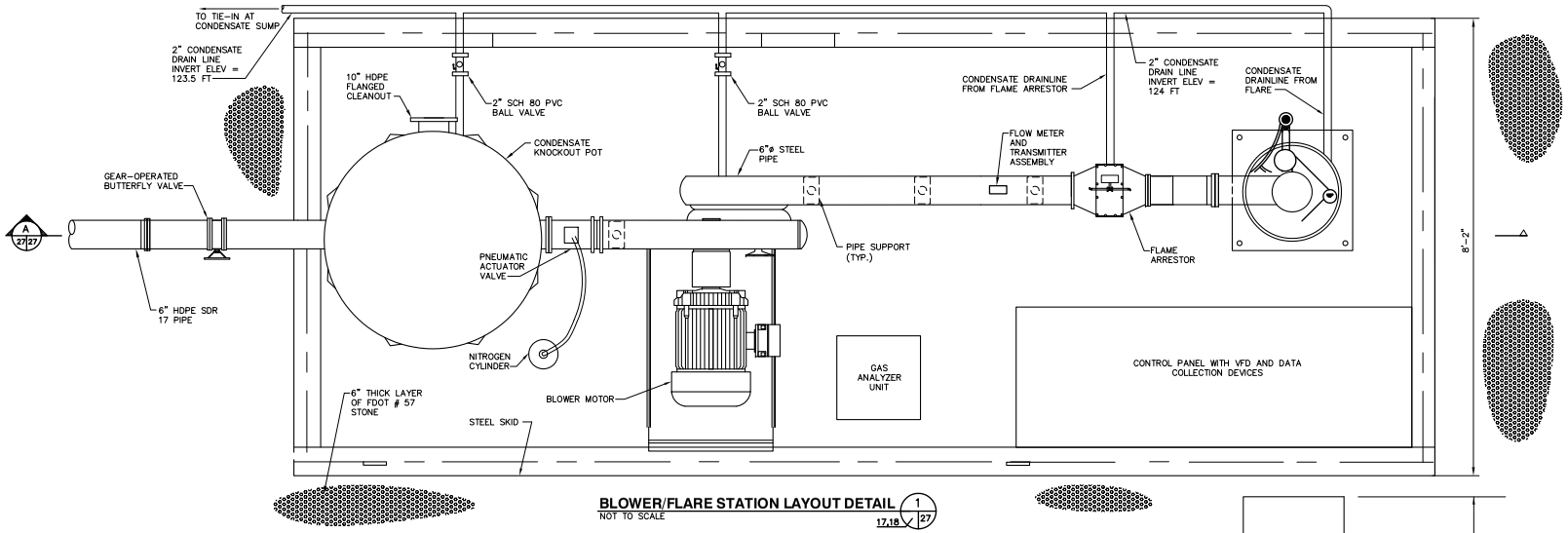
CLIENT: CITRUS COUNTY SOLID WASTE MANAGEMENT DIVISION LECANTO, FLORIDA

SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT
CONSULTING ENGINEERS
400 NORTH ASHLEY DRIVE, SUITE 1100, TAMPA, FL 33602
813 621-0080 FAX 813 514-0072
FLORIDA CERTIFICATE OF AUTHORIZATION NO. 00000000

PROJ. NO. 27074049.04
DSN. BY: DHB
DWN. BY: CTN
CHK. BY: JAB
QA/A RVW BY: BEH
APP. BY: RJD

CADD FILE: 074904LFG-DETAILS2
DATE: AUGUST 2009
SCALE: AS SHOWN
DRAWING NO. 26 of 27

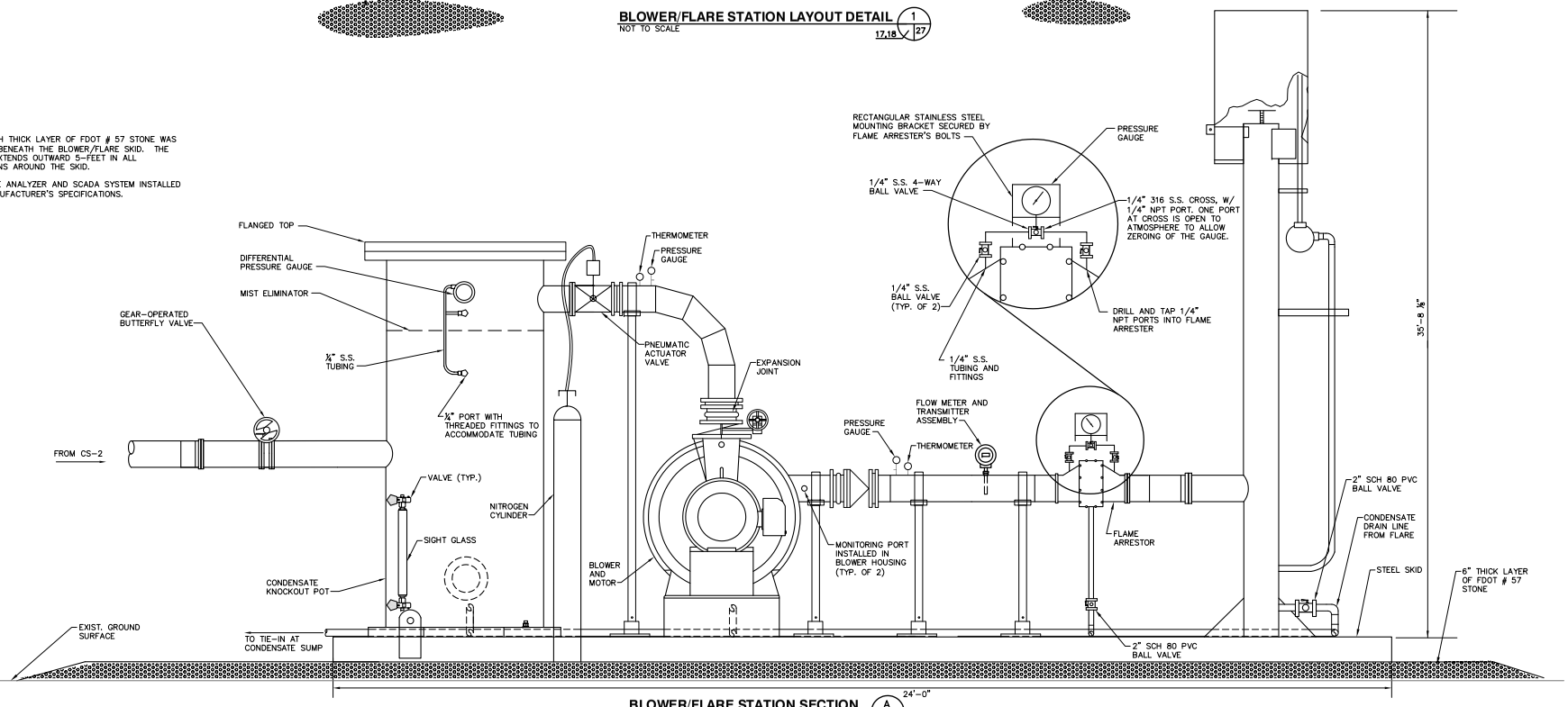
C:\Projects\Projects\27074049.04\Drawings\Final\LFGDETAILS2.dwg Mon, Aug 24, 2009 - 10:09am Jarrod Morse Detail 2 @ 1.dwg



BLOWER/FLARE STATION LAYOUT DETAIL 1 | 17,18 | 27
NOT TO SCALE

NOTES:

1. A 6-INCH THICK LAYER OF FDOT # 57 STONE WAS PLACED BENEATH THE BLOWER/FLARE SKID. THE STONE EXTENDS OUTWARD 5-FEET IN ALL DIRECTIONS AROUND THE SKID.
2. METHANE ANALYZER AND SCADA SYSTEM INSTALLED PER MANUFACTURER'S SPECIFICATIONS.



BLOWER/FLARE STATION SECTION A | 27|27
NOT TO SCALE

RECORD DRAWING
DATE: JULY 15, 2010

REV	DATE	DESCRIPTION	BY
1	7/15/10	REVISED FOR THE RECORD	DRC

DANIEL R. COOPER, P.E.
LICENSE NO. 66440

DRAWING TITLE: LANDFILL GAS SYSTEM DETAILS - 9

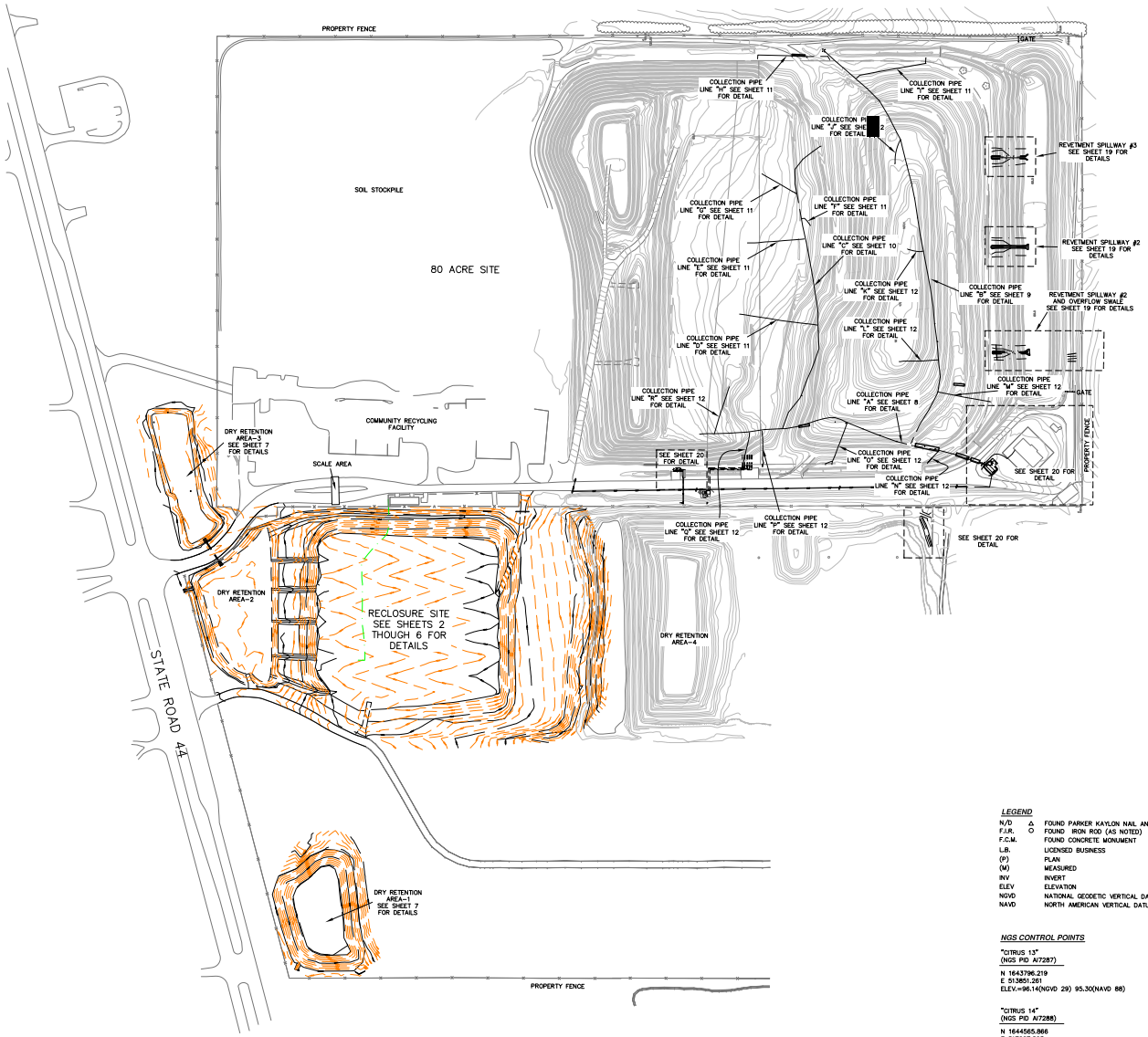
PROJECT TITLE: 7-ACRE CLOSED AREA RE-CLOSURE AND LANDFILL GAS SYSTEM CONSTRUCTION DRAWINGS

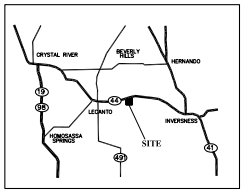
CLIENT: CITRUS COUNTY SOLID WASTE MANAGEMENT DIVISION LECANTO, FLORIDA

SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT
CONSULTING ENGINEERS
3900 SW 47TH AVENUE, SUITE 100, GAINESVILLE, FL 32608
813 621-0690 FAX 813 514-0470
FLORIDA CERTIFICATE OF AUTHORIZATION NO. 00000000

PROJ. NO.	27204904.04
DSN. BY	DHB
DWG. BY	CTN
CHK. BY	JAB
QA/QA BY	
APP. BY	R.JD

CADD FILE: 074904LFG-DETAILS2
DATE: AUGUST 2009
SCALE: AS SHOWN
DRAWING NO. 27 of 27





SITE LOCATION MAP
NOT TO SCALE

SCALE: 1" = 150'
0' 150' 300'

COUNTY PROJECT NAME

CITRUS COUNTY
SOLID WASTE MANAGEMENT DIVISION

CENTRAL LANDFILL
7-ACRE CLOSED AREA RE-CLOSURE
AND LANDFILL GAS SYSTEM

COUNTY PROJECT NUMBER

?

DESIGN ENGINEER

STEARNS, CONRAD AND SCHMIDT
CONSULTING ENGINEERS
4041 PARK OAKS BLVD., SUITE 100
TAMPA, FLORIDA 33610
PH-813-621-0080

CONTRACTOR

BELAIR EXCAVATING
6220 TAYLOR ROAD, SUITE 1063
NAPLES, FLORIDA 33610
PH-239-513-2131

EXISTING LEACHNATE COLLECTION/ CLEANOUT LOCATION

STA.	NORTHING	EASTING	ELEVATION
R-1	NOT FIELD VERIFIED		
R-2	1642665.39	515823.96	122.59
R-3	1642659.51	515823.23	121.24
R-4	1642655.03	515823.94	121.24
R-5	1642479.30	515826.23	121.42
R-6	1642473.41	515826.51	122.00
R-7	1642466.73	515826.57	122.00
R-8	1642458.10	515826.67	122.15
R-9	1642452.52	515826.52	122.54
R-10	1642423.28	515828.19	122.35
R-11	1642422.30	515828.52	123.15
R-12A	1642246.22	515833.65	121.23
R-12B	1642228.28	515834.41	121.43
R-13	1641960.50	515837.41	121.64
R-14	1641783.61	516010.55	121.03
R-15	1641965.39	516972.55	121.39
R-16	1642234.34	516967.81	120.92
R-17	1642436.58	516970.90	121.67

LEGEND

N/D	△	FOUND PARKER KAYLON NAIL AND DISK
F.I.R.	○	FOUND IRON ROD (AS NOTED)
F.C.M.		FOUND CONCRETE MONUMENT
L.B.		LICENSED BUSINESS
(P)		PLAN
(M)		MEASURED
INV		INVERT
ELEV		ELEVATION
NGVD		NATIONAL GEODETIC VERTICAL DATUM (1929)
NAVD		NORTH AMERICAN VERTICAL DATUM (1988)

NGS CONTROL POINTS

"CITRUS 13"
(NGS PID AI7287)

N 1643796.219
E 513851.261
ELEV.=96.14(NGVD 29) 95.30(NAVD 88)

"CITRUS 14"
(NGS PID AI7288)

N 1644585.866
E 517007.863
ELEV.=135.93(NGVD 29) 135.09(NAVD 88)

NOTES

1) COORDINATES SHOWN HEREON ARE STATE PLANE COORDINATES FOR THE FLORIDA WEST ZONE PER NATIONAL GEODETIC SURVEY CONTROL POINTS "CITRUS 13" AND CITRUS 14".

2) ELEVATION SHOWN HEREON ARE BASED ON THE NATIONAL GEODETIC VERTICAL DATUM OF 1929 PER NATIONAL GEODETIC SURVEY CONTROL POINTS "CITRUS 13" AND CITRUS 14".

3) DIMENSIONS SHOWN HEREON ARE IN FEET AND DECIMALS THEREOF.

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

5) THERE ARE EXISTING ABOVE GROUND AND UNDERGROUND UTILITIES THAT HAVE NOT BEEN LOCATED OR SHOWN FOR THE PURPOSE OF THIS SURVEY.

6) SEE SHEET 2 OF 4 THROUGH 4 OF 4 FOR CROSS SECTIONS.

CERTIFICATION:

TO: STEARNS, CONRAD AND SCHMIDT CONSULTING ENGINEERS

I HEREBY CERTIFY THAT THIS AS-BUILT SURVEY OF THE HEREON DESCRIBED PROPERTY WAS SURVEYED UNDER MY RESPONSIBLE CHARGE ON 06/1/10 AND MEETS THE MINIMUM TECHNICAL STANDARDS SET FORTH BY THE FLORIDA BOARD OF PROFESSIONAL LAND SURVEYORS IN CHAPTER 61G17-6, F.A.C., PURSUANT TO SECTION 472.027 FLORIDA STATUTES.

STEPHEN E. BERRY, STATE OF FLORIDA, (L.S. #5296) DATE
BBLS SURVEYORS & MAPPERS INC. (L.B. #6753)

COVER
SHEET 1 OF 20

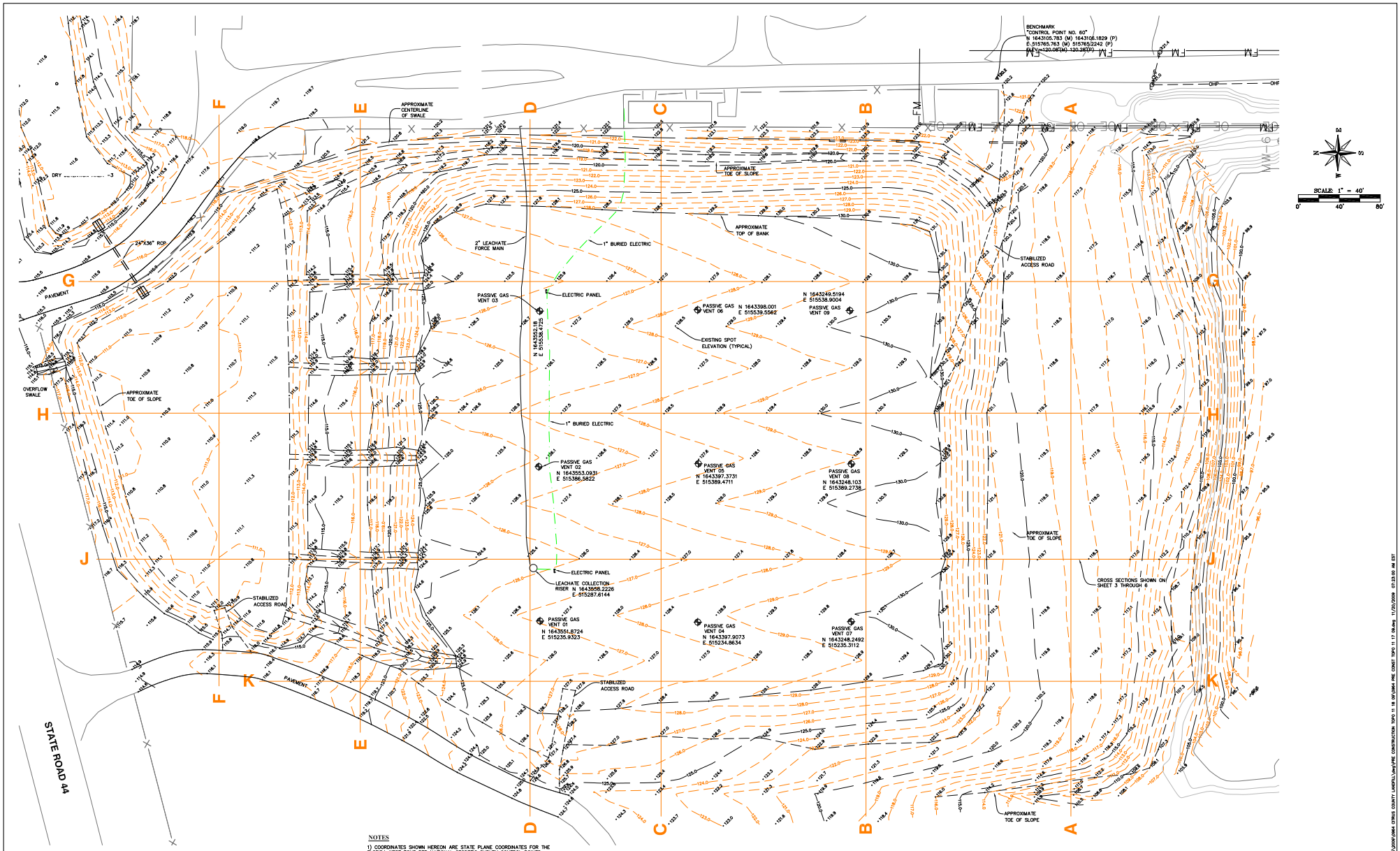
DATE:	05/10/10
FIELD BOOK AND PAGE:	
DRAWN BY:	SEB-BUD
APPROVED:	SEB
SCALE:	1" = 150'

RECORD SURVEY

CITRUS COUNTY CENTRAL LANDFILL
7 ACRE RECLOSURE AND LANDFILL GAS SYSTEM
CITRUS COUNTY, FLORIDA

BBLS SURVEYORS & MAPPERS INC.
1502-A RAILHEAD BLVD.
NAPLES, FLORIDA 34110
PHONE(239) 597-1315

Z:\PROJECTS\2009\0964 CITRUS COUNTY LANDFILL\dwg\PRE CONSTRUCTION TOPO 11 17 09.dwg 11/20/2009 07:20:00 AM EST



LEGEND

N/D	△	FOUND PARKER KAYLON NAIL AND DISK
F.I.R.	○	FOUND IRON ROD (AS NOTED)
F.C.M.		FOUND CONCRETE MONUMENT
L.B.		LICENSED BUSINESS
(P)		PLAN
(M)		MEASURED
INV.		INVERT
ELEV.		ELEVATION
NGVD		NATIONAL GEODETIC VERTICAL DATUM (1929)
NAVD		NORTH AMERICAN VERTICAL DATUM (1988)

NOTES

1) COORDINATES SHOWN HEREON ARE STATE PLANE COORDINATES FOR THE FLORIDA WEST ZONE PER NATIONAL GEODETIC SURVEY CONTROL POINTS "CITRUS 13" AND CITRUS 14".

2) ELEVATION SHOWN HEREON ARE BASED ON THE NATIONAL GEODETIC VERTICAL DATUM OF 1929 PER NATIONAL GEODETIC SURVEY CONTROL POINTS "CITRUS 13" AND CITRUS 14".

3) DIMENSIONS SHOWN HEREON ARE IN FEET AND DECIMALS THEREOF.

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

5) THERE ARE EXISTING ABOVE GROUND AND UNDERGROUND UTILITIES THAT HAVE NOT BEEN LOCATED OR SHOWN FOR THE PURPOSE OF THIS SURVEY.

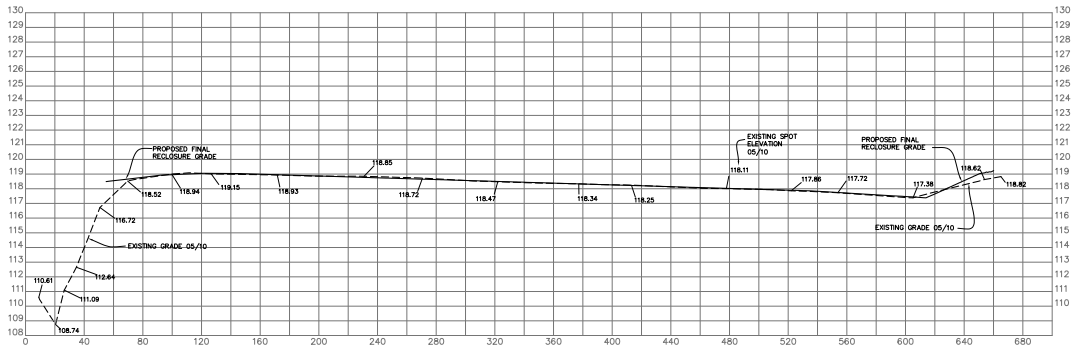
6) SEE SHEETS 3 THROUGH 6 FOR CROSS SECTIONS.

DATE:	05/10/10
FIELD BOOK AND PAGE:	
DRAWN BY:	SED
APPROVED:	SED
SCALE:	1" = 40'

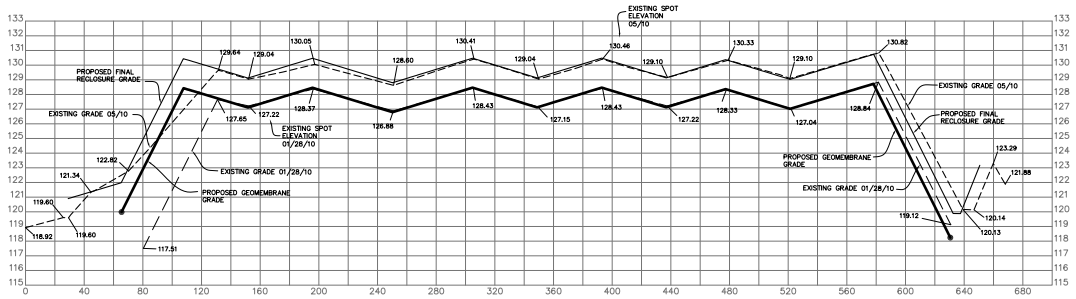
RECORD SURVEY

CITRUS COUNTY CENTRAL LANDFILL
7 ACRE RECLOSURE AND LANDFILL GAS SYSTEM
CITRUS COUNTY, FLORIDA

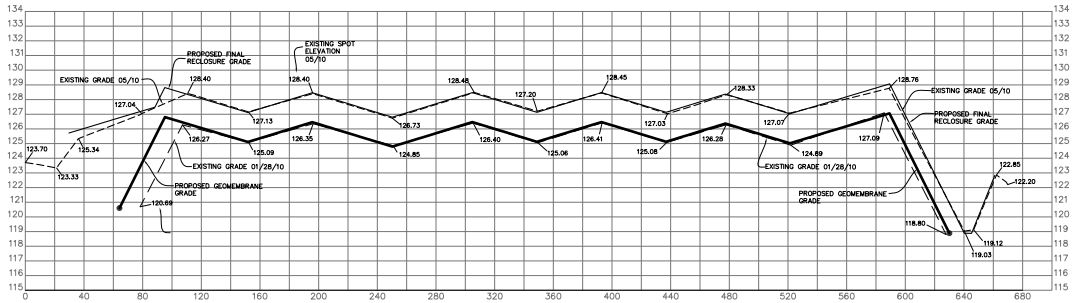
BBLS SURVEYORS & MAPPERS INC.
1502-A RAILHEAD BLVD.
NAPLES, FLORIDA 34110
PHONE(239) 597-1315



SECTION - A
SCALE: 1" = 40' HORIZ.
1" = 4' VERT



SECTION - B
SCALE: 1" = 40' HORIZ.
1" = 4' VERT.



SECTION - C
SCALE: 1" = 40' HORIZ.
1" = 4' VERT.

NOTES

1) COORDINATES SHOWN HEREON ARE STATE PLANE COORDINATES FOR THE FLORIDA WEST ZONE PER NATIONAL GEODETIC SURVEY CONTROL POINTS "CITRUS 13" AND CITRUS 14".

2) ELEVATION SHOWN HEREON ARE BASED ON THE NATIONAL GEODETIC VERTICAL DATUM OF 1929 PER NATIONAL GEODETIC SURVEY CONTROL POINTS "CITRUS 13" AND CITRUS 14".

3) DIMENSIONS SHOWN HEREON ARE IN FEET AND DECIMALS THEREOF.

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

5) THERE ARE EXISTING ABOVE GROUND AND UNDERGROUND UTILITIES THAT HAVE NOT BEEN LOCATED OR SHOWN FOR THE PURPOSE OF THIS SURVEY.

6) SEE SHEET 2 FOR LOCATION OF CROSS SECTIONS.

—— — — —— EXISTING CROSS SECTION 01/28/10

— — — — — — — — EXISTING CROSS SECTION 05/10

CROSS SECTION 1
SHEET 3 OF 20

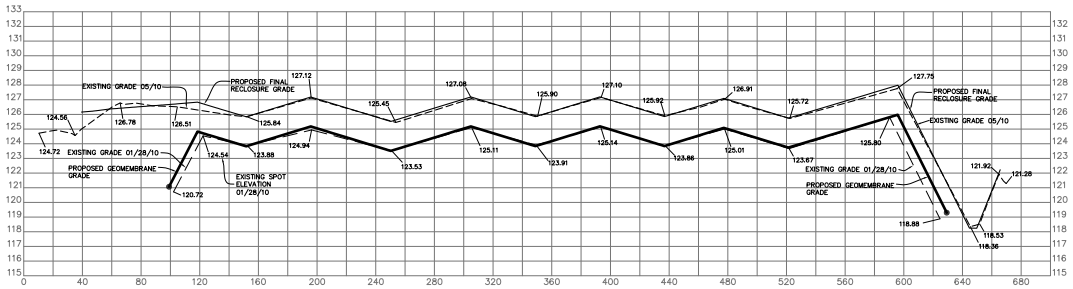
DATE:	05/10/10
FIELD BOOK AND PAGE	359/PG25 55-57
DRAWN BY:	SEB
APPROVED:	SEB
SCALE:	1" = 40'

RECORD SURVEY

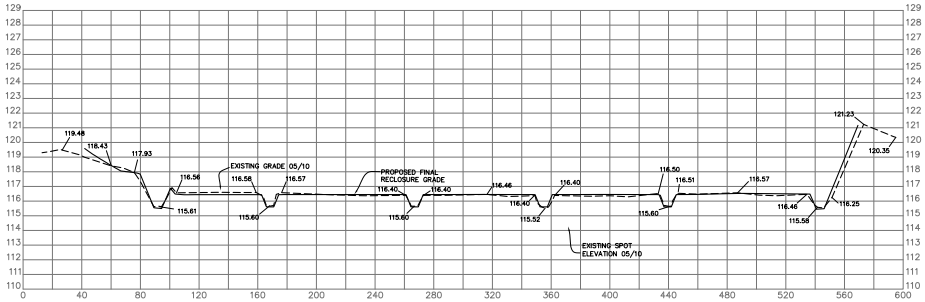
CITRUS COUNTY CENTRAL LANDFILL
7 ACRE RECLOSURE AND LANDFILL GAS SYSTEM
CITRUS COUNTY, FLORIDA

BBLS SURVEYORS & MAPPERS INC.
1502-A RAILHEAD BLVD.
NAPLES, FLORIDA 34110
PHONE (239) 597-1315

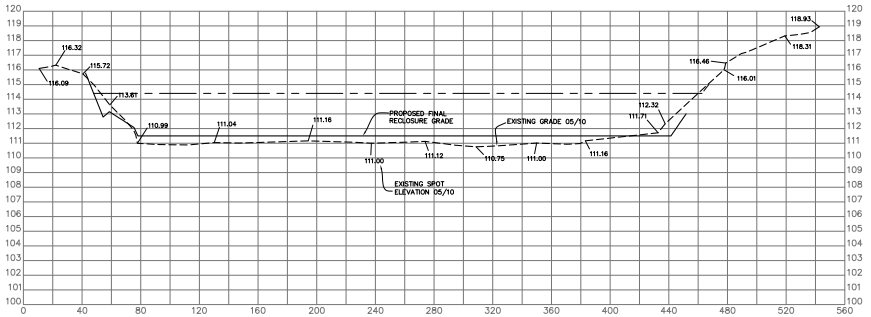
Z:\PROJECTS\2009\2009-1 CITRUS COUNTY LANDFILL\dwg\PRE CONSTRUCTION TOPO 11 18 09\2009-1 PRE CONST TOPO 11 17 09.dwg 11/20/2009 07:23:50 AM EST



SECTION - D
SCALE: 1" = 40' HORIZ.
1" = 4' VERT.



SECTION - E
SCALE: 1" = 40' HORIZ.
1" = 4' VERT.



SECTION - F
SCALE: 1" = 40' HORIZ.
1" = 4' VERT.

NOTES

1) COORDINATES SHOWN HEREON ARE STATE PLANE COORDINATES FOR THE FLORIDA WEST ZONE PER NATIONAL GEODETIC SURVEY CONTROL POINTS "CITRUS 13" AND CITRUS 14".

2) ELEVATION SHOWN HEREON ARE BASED ON THE NATIONAL GEODETIC VERTICAL DATUM OF 1929 PER NATIONAL GEODETIC SURVEY CONTROL POINTS "CITRUS 13" AND CITRUS 14".

3) DIMENSIONS SHOWN HEREON ARE IN FEET AND DECIMALS THEREOF.

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

5) THERE ARE EXISTING ABOVE GROUND AND UNDERGROUND UTILITIES THAT HAVE NOT BEEN LOCATED OR SHOWN FOR THE PURPOSE OF THIS SURVEY.

6) SEE SHEET 2 FOR LOCATION OF CROSS SECTIONS.

—— — — —— EXISTING CROSS SECTION 01/28/10
– – – – – – – – EXISTING CROSS SECTION 05/10

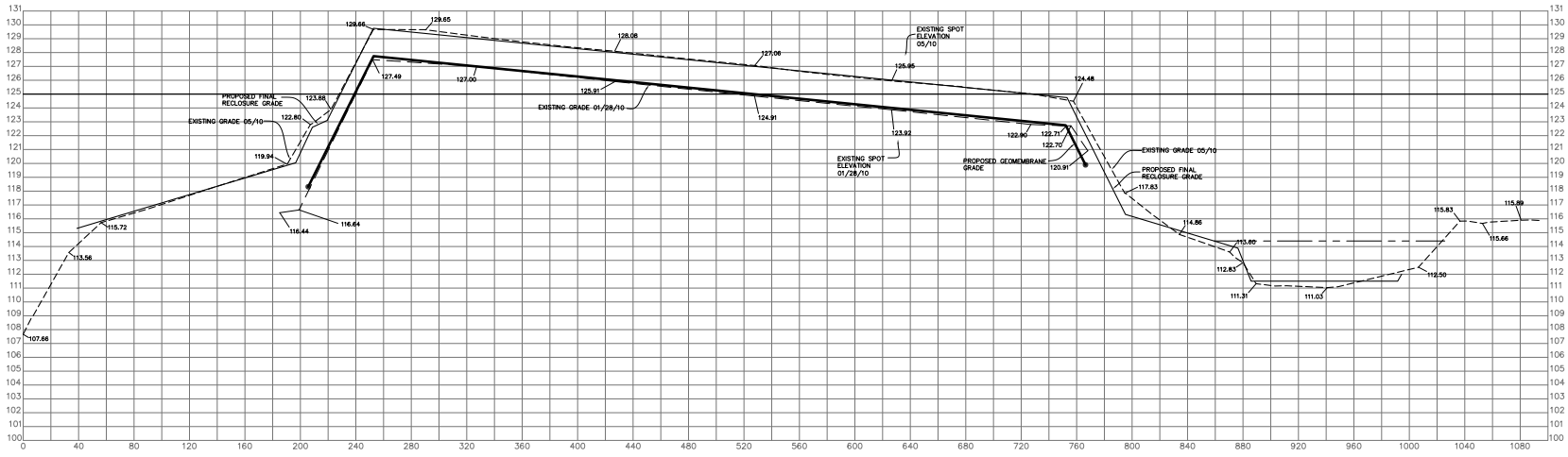
DATE:	05/10/10
FIELD BOOK AND PAGE	359/PG25 55-57
DRAWN BY:	SEB
APPROVED:	SEB
SCALE:	1" = 40'

RECORD SURVEY

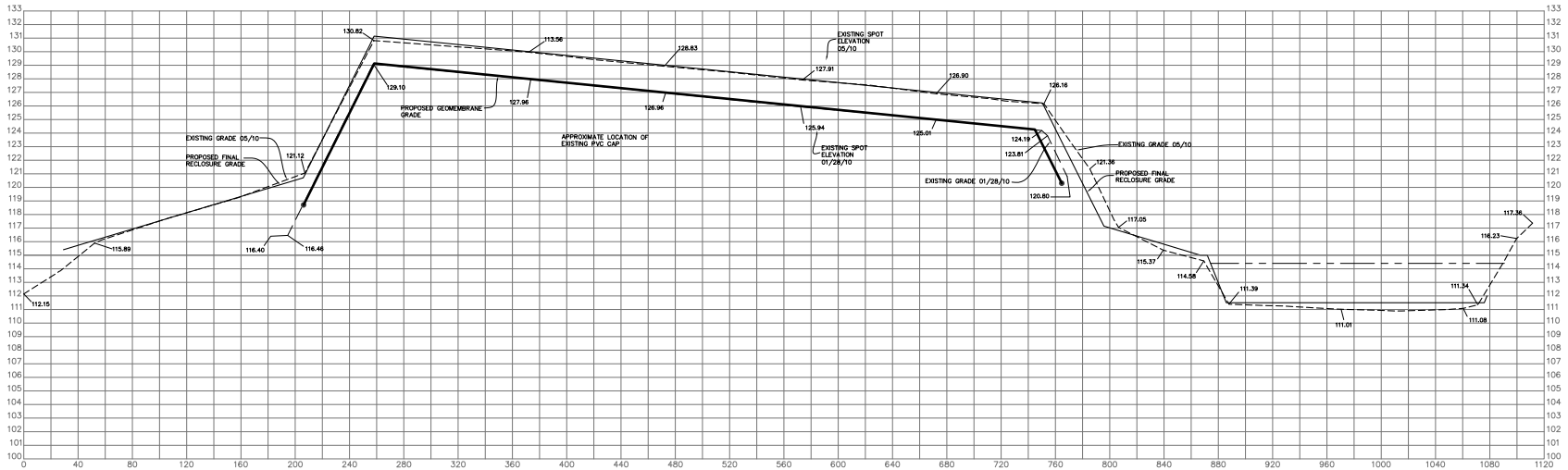
CITRUS COUNTY CENTRAL LANDFILL
7 ACRE RECLOSURE AND LANDFILL GAS SYSTEM
CITRUS COUNTY, FLORIDA

BBLS SURVEYORS & MAPPERS INC.
1502-A RAILHEAD BLVD.
NAPLES, FLORIDA 34110
PHONE (239) 597-1315

P:\PROJECTS\2009\09084 CITRUS COUNTY LANDFILL\dwg\PRE CONSTRUCTION TOPO 11 18 09\09084 PRE CONST TOPO 11 17 09.dwg 11/20/2009 07:23:00 AM EST



SECTION - G
SCALE: 1" = 40' HORIZ.
1" = 4' VERT.



SECTION - H
SCALE: 1" = 40' HORIZ.
1" = 4' VERT.

NOTES

1) COORDINATES SHOWN HEREON ARE STATE PLANE COORDINATES FOR THE FLORIDA WEST ZONE PER NATIONAL GEODETIC SURVEY CONTROL POINTS "CITRUS 13" AND CITRUS 14".

2) ELEVATION SHOWN HEREON ARE BASED ON THE NATIONAL GEODETIC VERTICAL DATUM OF 1929 PER NATIONAL GEODETIC SURVEY CONTROL POINTS "CITRUS 13" AND CITRUS 14".

3) DIMENSIONS SHOWN HEREON ARE IN FEET AND DECIMALS THEREOF.

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

5) THERE ARE EXISTING ABOVE GROUND AND UNDERGROUND UTILITIES THAT HAVE NOT BEEN LOCATED OR SHOWN FOR THE PURPOSE OF THIS SURVEY.

6) SEE SHEET 2 FOR LOCATION OF CROSS SECTIONS.

—— — — —— EXISTING CROSS SECTION 01/28/10

– – – – – – – – EXISTING CROSS SECTION 05/10

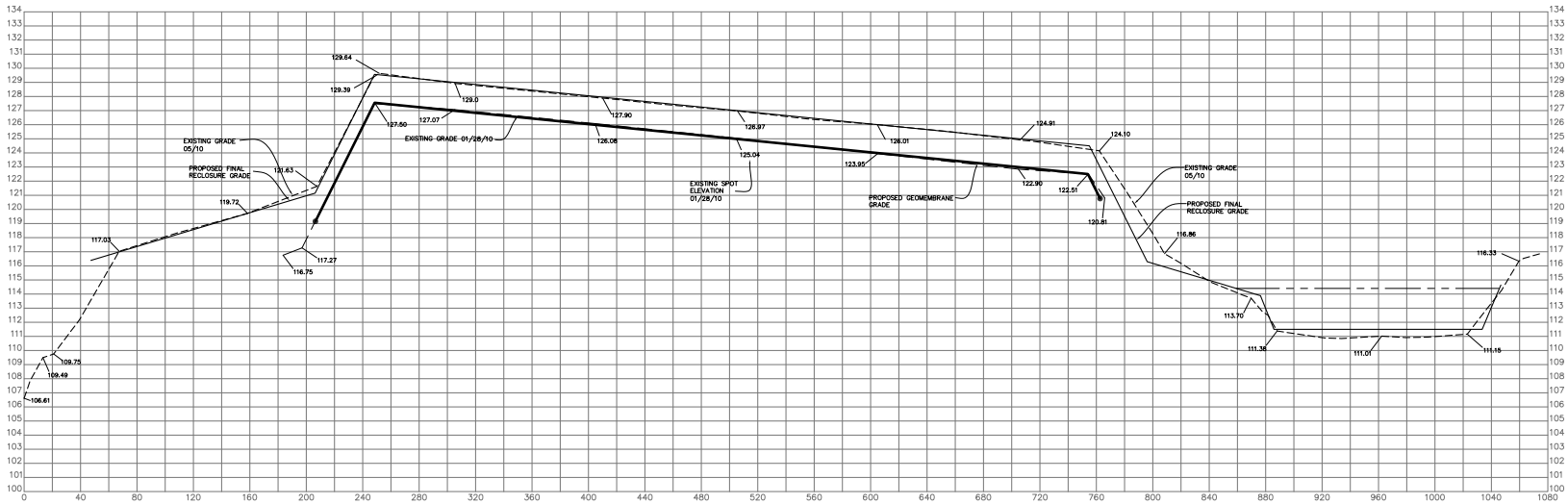
CROSS SECTION 3
SHEET 5 OF 20

DATE:	05/10/10
FIELD BOOK AND PAGE	359/PG25 55-57
DRAWN BY:	SEB
APPROVED:	SEB
SCALE:	1" = 40'

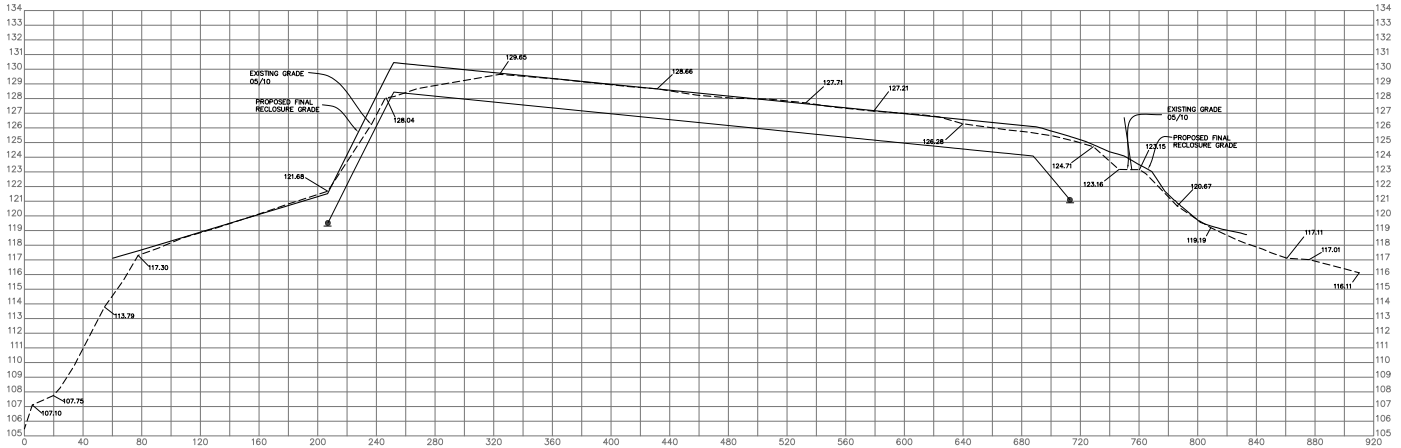
RECORD SURVEY
CITRUS COUNTY CENTRAL LANDFILL
7 ACRE RECLOSURE AND LANDFILL GAS SYSTEM
CITRUS COUNTY, FLORIDA

BBLS SURVEYORS & MAPPERS INC.
1502-A RAILHEAD BLVD.
NAPLES, FLORIDA 34110
PHONE (239) 597-1315

Z:\PROJECTS\2009\2009-1 CITRUS COUNTY LANDFILL\dwg\PRE CONSTRUCTION TOPO 11 19 09\2009 PRE CONST TOPO 11 17 09.dwg 11/20/2009 07:53:00 AM EST



SECTION - J
SCALE: 1" = 40' HORIZ.
1" = 4' VERT.



SECTION - K
SCALE: 1" = 40' HORIZ.
1" = 4' VERT.

NOTES

1) COORDINATES SHOWN HEREON ARE STATE PLANE COORDINATES FOR THE FLORIDA WEST ZONE PER NATIONAL GEODETIC SURVEY CONTROL POINTS "CITRUS 13" AND CITRUS 14".

2) ELEVATION SHOWN HEREON ARE BASED ON THE NATIONAL GEODETIC VERTICAL DATUM OF 1929 PER NATIONAL GEODETIC SURVEY CONTROL POINTS "CITRUS 13" AND CITRUS 14".

3) DIMENSIONS SHOWN HEREON ARE IN FEET AND DECIMALS THEREOF.

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

5) THERE ARE EXISTING ABOVE GROUND AND UNDERGROUND UTILITIES THAT HAVE NOT BEEN LOCATED OR SHOWN FOR THE PURPOSE OF THIS SURVEY.

6) SEE SHEET 2 FOR LOCATION OF CROSS SECTIONS.

—— — — —— EXISTING CROSS SECTION 01/28/10
– – – – – – – – EXISTING CROSS SECTION 05/10

CROSS SECTION 4
SHEET 6 OF 20

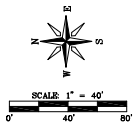
DATE:	05/10/10
FIELD BOOK AND PAGE	359/PG28 55-57
DRAWN BY:	SEB
APPROVED:	SEB
SCALE:	1" = 40'

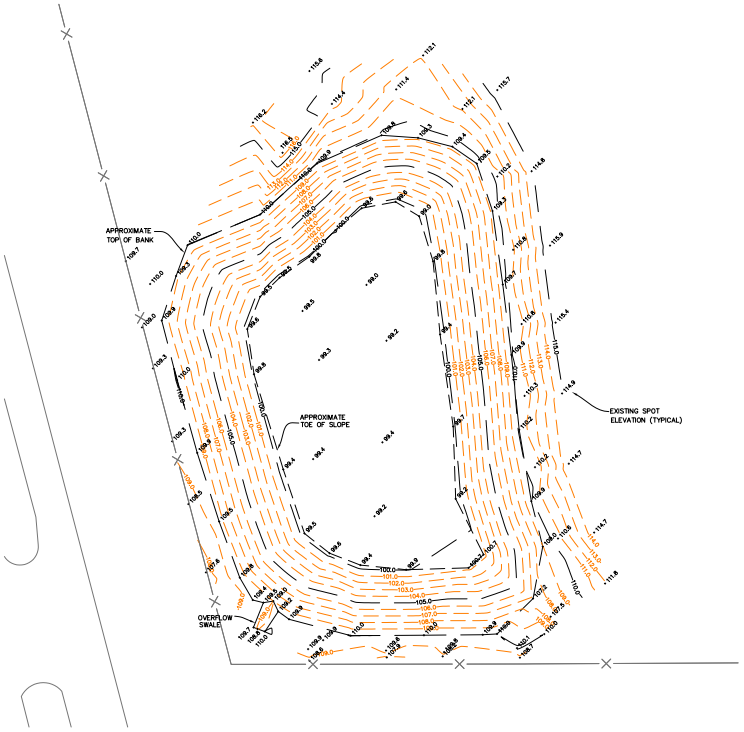
RECORD SURVEY

CITRUS COUNTY CENTRAL LANDFILL
7 ACRE RECLOSURE AND LANDFILL GAS SYSTEM
CITRUS COUNTY, FLORIDA

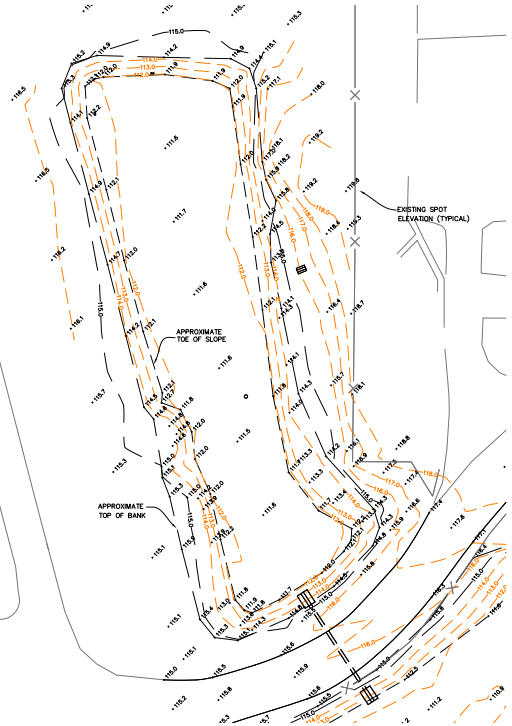
BBLS SURVEYORS & MAPPERS INC.
1502-A RAILHEAD BLVD.
NAPLES, FLORIDA 34110
PHONE (239) 597-1315

Z:\PROJECTS\2009\2009-1 CITRUS COUNTY LANDFILL\dwg\PRE CONSTRUCTION TOPO 11 18 09\2009-1 PRE CONST TOPO 11 17 09.dwg 11/20/2009 07:23:00 AM EST





DRA-1



DRA-3

NOTES

1) COORDINATES SHOWN HEREON ARE STATE PLANE COORDINATES FOR THE FLORIDA WEST ZONE PER NATIONAL GEODETIC SURVEY CONTROL POINTS "CITRUS 13" AND CITRUS 14".

2) ELEVATION SHOWN HEREON ARE BASED ON THE NATIONAL GEODETIC VERTICAL DATUM OF 1929 PER NATIONAL GEODETIC SURVEY CONTROL POINTS "CITRUS 13" AND CITRUS 14".

3) DIMENSIONS SHOWN HEREON ARE IN FEET AND DECIMALS THEREOF.

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

5) THERE ARE EXISTING ABOVE GROUND AND UNDERGROUND UTILITIES THAT HAVE NOT BEEN LOCATED OR SHOWN FOR THE PURPOSE OF THIS SURVEY.

6) SEE SHEET 2 OF 4 THROUGH 4 OF 4 FOR CROSS SECTIONS.

LEGEND

N/D	Δ	FOUND PARKER KAYLON NAIL AND DISK
F.I.R.	O	FOUND IRON ROD (AS NOTED)
F.C.M.		FOUND CONCRETE MONUMENT
L.B.		LICENSED BUSINESS
(P)		PLAN
(M)		MEASURED
INV		INVERT
ELEV		ELEVATION
NGVD		NATIONAL GEODETIC VERTICAL DATUM (1929)
NAVD		NORTH AMERICAN VERTICAL DATUM (1988)

POND ASBUILTS
SHEET 7 OF 20

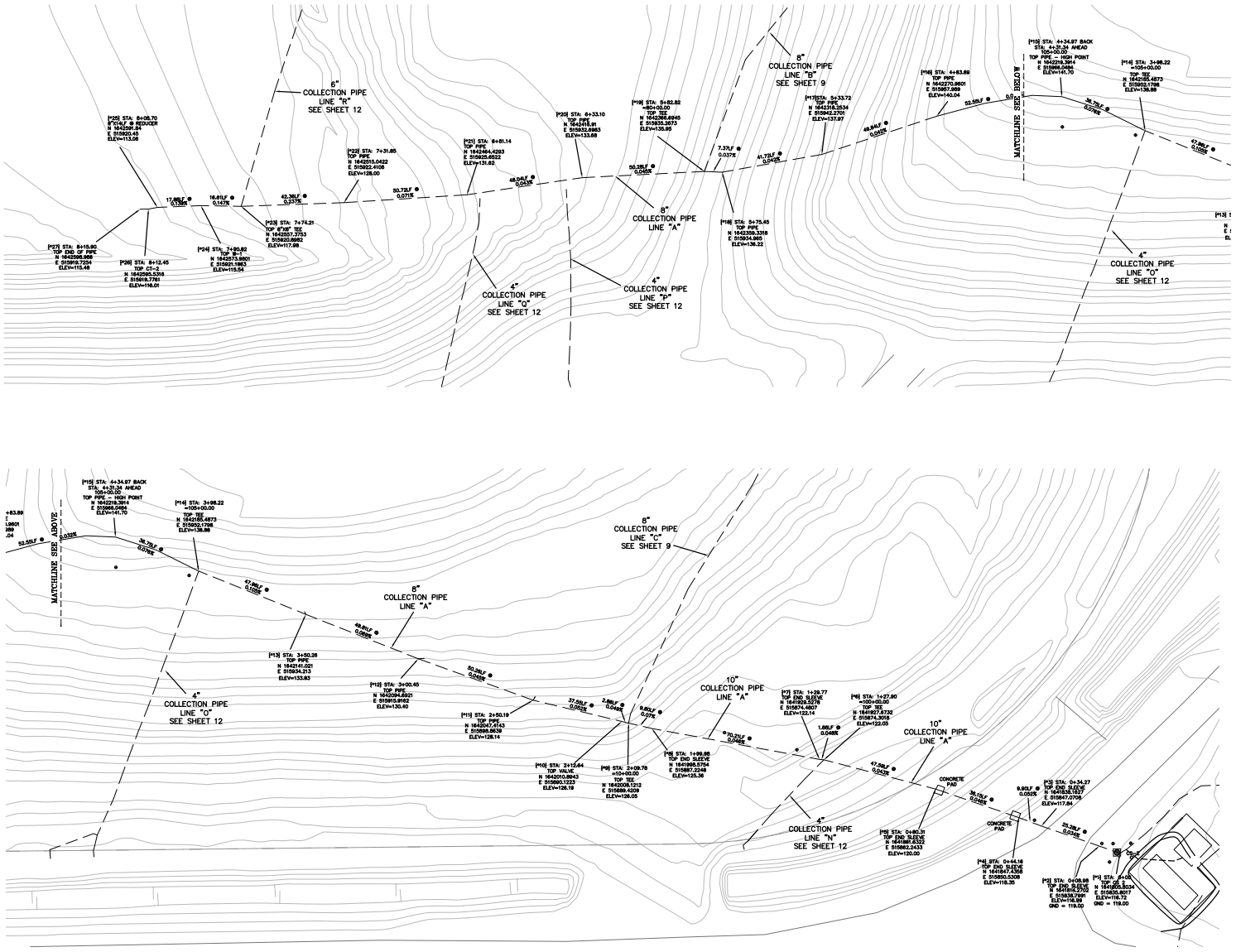
DATE:	05/10/10
FIELD BOOK AND PAGE:	
DRAWN BY:	SEB
APPROVED:	SEB
SCALE:	1" = 40'

RECORD SURVEY

CITRUS COUNTY CENTRAL LANDFILL
7 ACRE RECLOSURE AND LANDFILL GAS SYSTEM
CITRUS COUNTY, FLORIDA

BBLS SURVEYORS & MAPPERS INC.
1502-A RAILHEAD BLVD.
NAPLES, FLORIDA 34110
PHONE(239) 597-1315

Z:\PROJECTS\2009\2009-04 CITRUS COUNTY LANDFILL\dwg\PRE CONSTRUCTION TOPO 11 17 09.dwg 11/20/2009 07:23:00 AM EST



NOTES

1) COORDINATES SHOWN HEREON ARE STATE PLANE COORDINATES FOR THE FLORIDA WEST ZONE PER NATIONAL GEODETIC SURVEY CONTROL POINTS "CITRUS 13" AND CITRUS 14".

2) ELEVATION SHOWN HEREON ARE BASED ON THE NATIONAL GEODETIC VERTICAL DATUM OF 1929 PER NATIONAL GEODETIC SURVEY CONTROL POINTS "CITRUS 13" AND CITRUS 14".

3) DIMENSIONS SHOWN HEREON ARE IN FEET AND DECIMALS THEREOF.

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

5) THERE ARE EXISTING ABOVE GROUND AND UNDERGROUND UTILITIES THAT HAVE NOT BEEN LOCATED OR SHOWN FOR THE PURPOSE OF THIS SURVEY.

DATE:	05/10/10
FIELD BOOK AND PAGE:	
DRAWN BY:	SEB
APPROVED:	SEB
SCALE:	1" = 20'

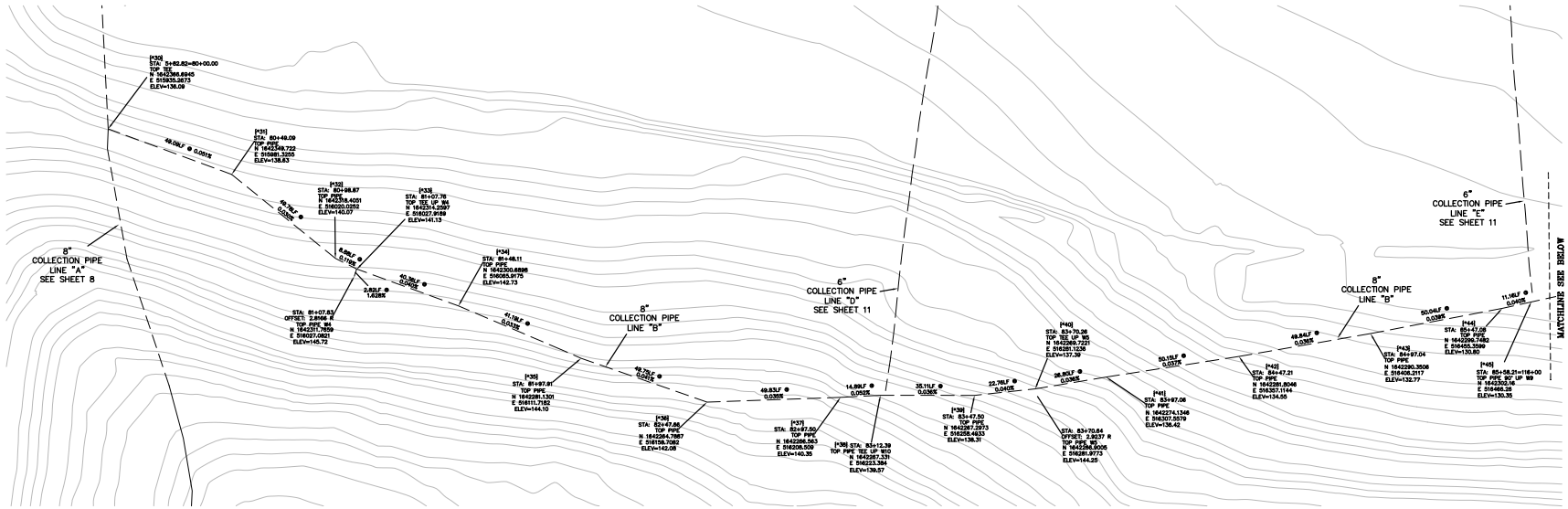
RECORD SURVEY

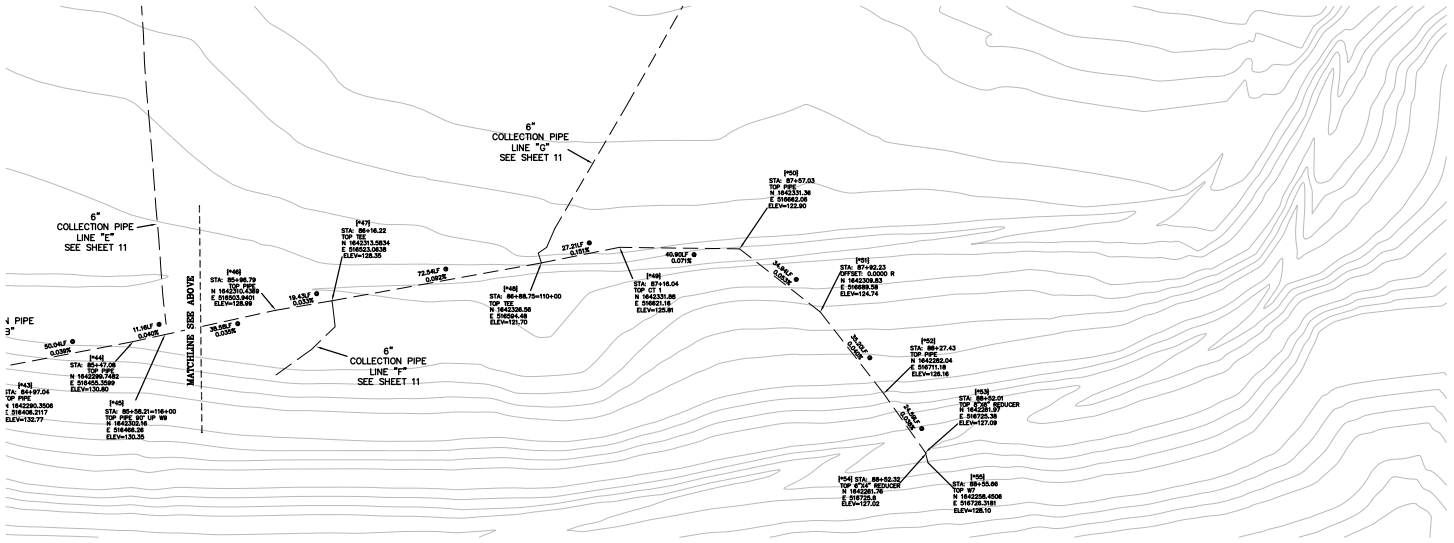
CITRUS COUNTY CENTRAL LANDFILL
7 ACRE RECLOSURE AND LANDFILL GAS SYSTEM
CITRUS COUNTY, FLORIDA

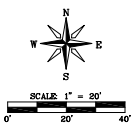
BBLS SURVEYORS & MAPPERS INC.
1502-A RAILHEAD BLVD.
NAPLES, FLORIDA 34110
PHONE(239) 597-1315

COLLECTION LINE "A"
SHEET 8 OF 20

Z:\PROJECTS\2009\0904 CITRUS COUNTY LANDFILL\dwg\PRE CONST TOPO 11 17 09.dwg 11/20/2009 07:20:00 AM EST







NOTES

1) COORDINATES SHOWN HEREON ARE STATE PLANE COORDINATES FOR THE FLORIDA WEST ZONE PER NATIONAL GEODETIC SURVEY CONTROL POINTS "CITRUS 13" AND CITRUS 14".

2) ELEVATION SHOWN HEREON ARE BASED ON THE NATIONAL GEODETIC VERTICAL DATUM OF 1929 PER NATIONAL GEODETIC SURVEY CONTROL POINTS "CITRUS 13" AND CITRUS 14".

3) DIMENSIONS SHOWN HEREON ARE IN FEET AND DECIMALS THEREOF.

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

5) THERE ARE EXISTING ABOVE GROUND AND UNDERGROUND UTILITIES THAT HAVE NOT BEEN LOCATED OR SHOWN FOR THE PURPOSE OF THIS SURVEY.

COLLECTION LINE "B"
SHEET 9 OF 20

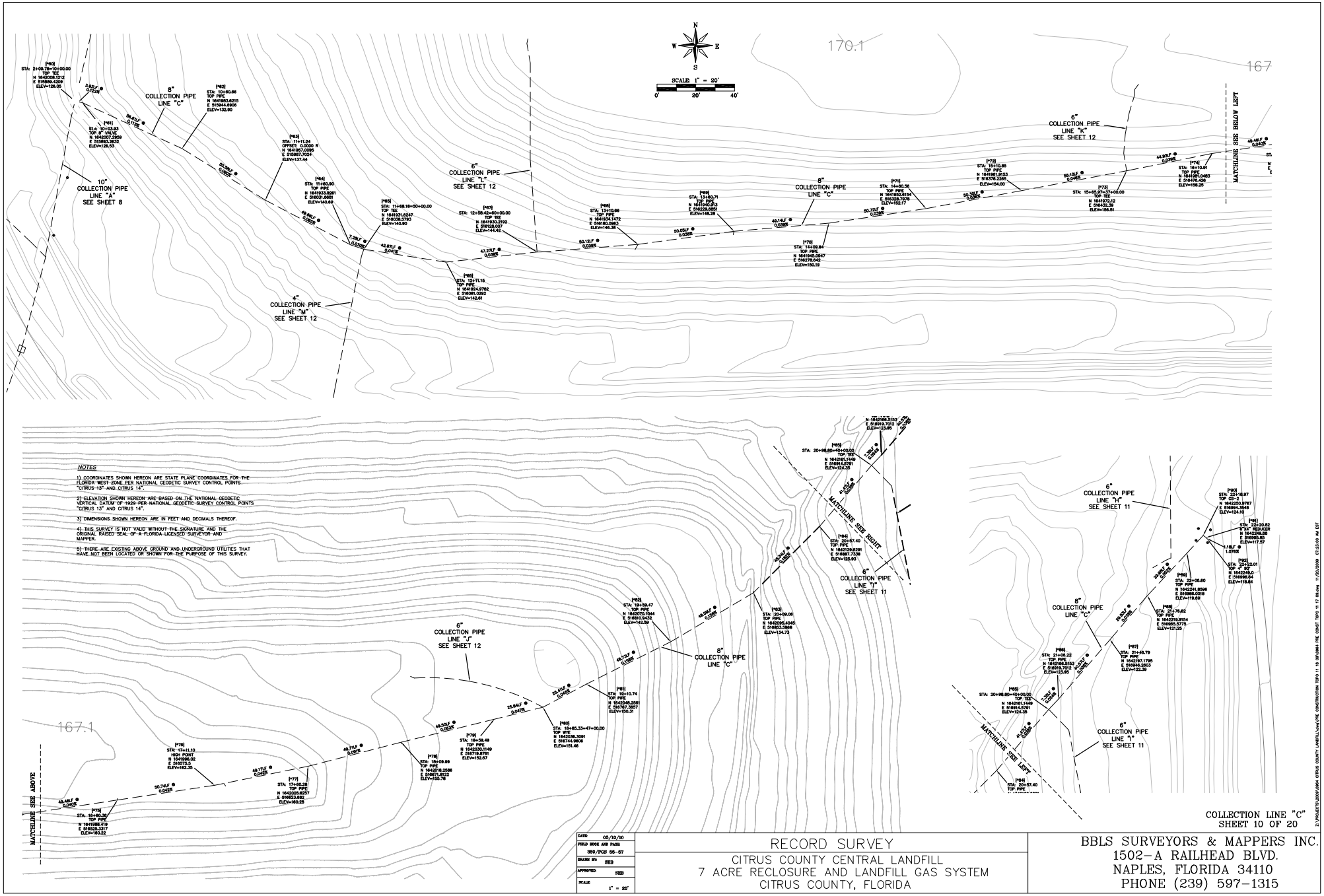
DATE:	05/10/10
FIELD BOOK AND PAGE	359/PG9 55-57
DRAWN BY:	SEB
APPROVED:	SEB
SCALE:	1" = 20'

RECORD SURVEY

CITRUS COUNTY CENTRAL LANDFILL
7 ACRE RECLOSURE AND LANDFILL GAS SYSTEM
CITRUS COUNTY, FLORIDA

BBLS SURVEYORS & MAPPERS INC.
1502-A RAILHEAD BLVD.
NAPLES, FLORIDA 34110
PHONE (239) 597-1315

Z:\PROJECTS\2009\2009-1 CITRUS COUNTY LANDFILL\dwg\PHE CONSTRUCTION TOPO 11 18 09\2009-1 PHE CONST TOPO 11 17 09.dwg 11/20/2009 07:23:00 AM EST



NOTES

1) COORDINATES SHOWN HEREON ARE STATE PLANE COORDINATES FOR THE FLORIDA WEST ZONE PER NATIONAL GEODETIC SURVEY CONTROL POINTS "CITRUS 13" AND CITRUS 14".

2) ELEVATION SHOWN HEREON ARE BASED ON THE NATIONAL GEODETIC VERTICAL DATUM OF 1929 PER NATIONAL GEODETIC SURVEY CONTROL POINTS "CITRUS 13" AND CITRUS 14".

3) DIMENSIONS SHOWN HEREON ARE IN FEET AND DECIMALS THEREOF.

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

5) THERE ARE EXISTING ABOVE GROUND AND UNDERGROUND UTILITIES THAT HAVE NOT BEEN LOCATED OR SHOWN FOR THE PURPOSE OF THIS SURVEY.

COLLECTION LINE "C"
SHEET 10 OF 20

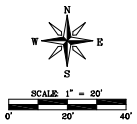
DATE	05/10/10
FIELD BOOK AND PAGE	359/PGS 55-57
DRAWN BY	SEB
APPROVED	SEB
SCALE	1" = 20'

RECORD SURVEY

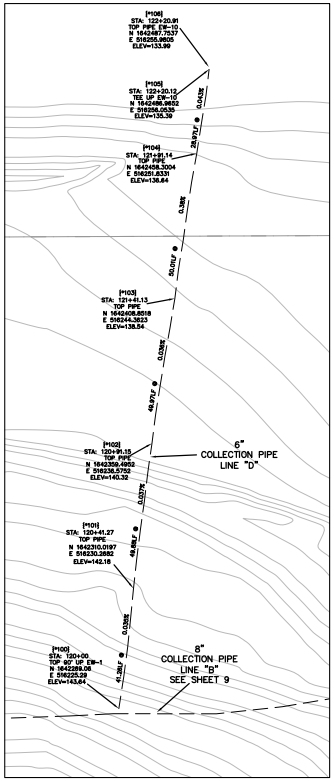
CITRUS COUNTY CENTRAL LANDFILL
7 ACRE RECLOSURE AND LANDFILL GAS SYSTEM
CITRUS COUNTY, FLORIDA

BBLS SURVEYORS & MAPPERS INC.
1502-A RAILHEAD BLVD.
NAPLES, FLORIDA 34110
PHONE (239) 597-1315

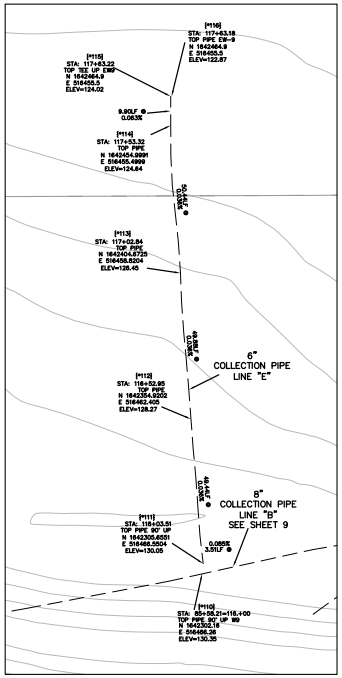
Z:\PROJECTS\2009\2009-1 CITRUS COUNTY LANDFILL\dwg\PRE CONSTRUCTION TOPO 11 17 09.DWG PRE CONST TOPO 11 17 09.dwg 11/20/2009 07:23:00 AM EST



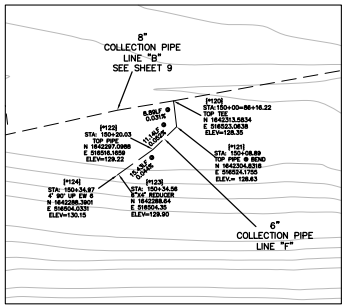
COLLECTION LINE "D"



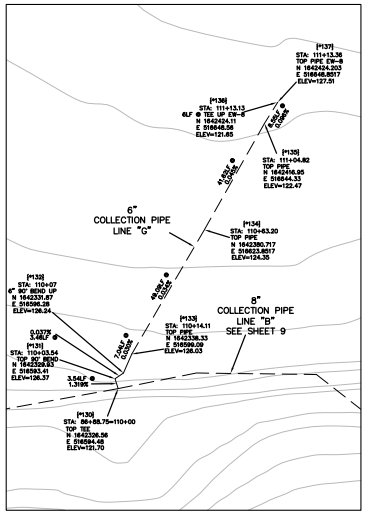
COLLECTION LINE "E"



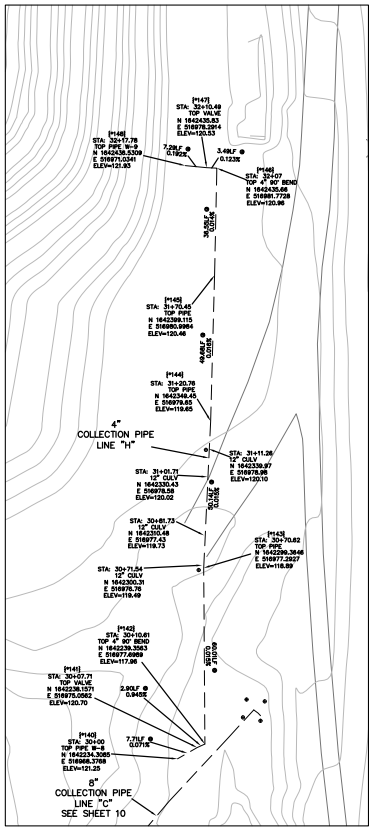
COLLECTION LINE "F"



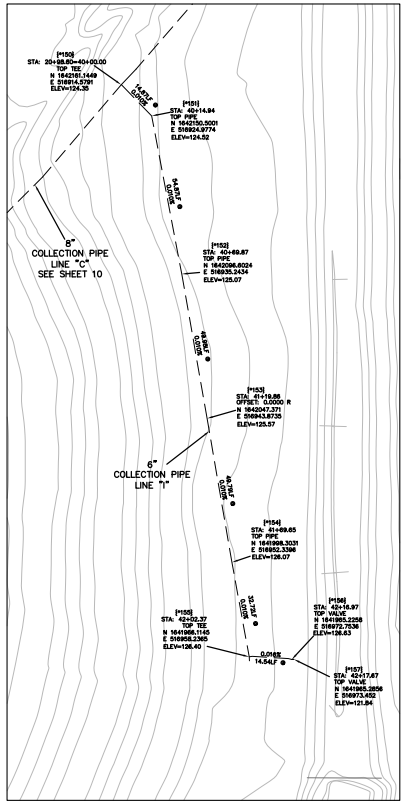
COLLECTION LINE "G"



COLLECTION LINE "H"



COLLECTION LINE "I"



Z:\PROJECTS\2009\2009-1 CITRUS COUNTY LANDFILL\dwg\PRE CONSTRUCTION TOPO 11 15 09\2009 PRE CONST TOPO 11 17 09.dwg 11/20/2009 07:23:00 AM EST

NOTES

1) COORDINATES SHOWN HEREON ARE STATE PLANE COORDINATES FOR THE FLORIDA WEST ZONE PER NATIONAL GEODETIC SURVEY CONTROL POINTS "CITRUS 13" AND CITRUS 14".

2) ELEVATION SHOWN HEREON ARE BASED ON THE NATIONAL GEODETIC VERTICAL DATUM OF 1929 PER NATIONAL GEODETIC SURVEY CONTROL POINTS "CITRUS 13" AND CITRUS 14".

3) DIMENSIONS SHOWN HEREON ARE IN FEET AND DECIMALS THEREOF.

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

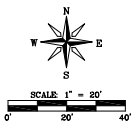
5) THERE ARE EXISTING ABOVE GROUND AND UNDERGROUND UTILITIES THAT HAVE NOT BEEN LOCATED OR SHOWN FOR THE PURPOSE OF THIS SURVEY.

COLLECTION LINES "D" THROUGH "I"
SHEET 11 OF 20

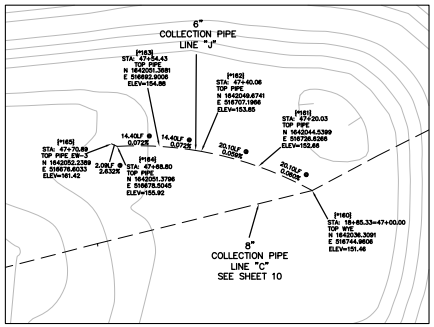
DATE:	05/10/10
FIELD BOOK AND PAGE	359/PGS 55-57
DRAWN BY:	SEB
APPROVED:	SEB
SCALE	1" = 40'

RECORD SURVEY
CITRUS COUNTY CENTRAL LANDFILL
7 ACRE RECLOSURE AND LANDFILL GAS SYSTEM
CITRUS COUNTY, FLORIDA

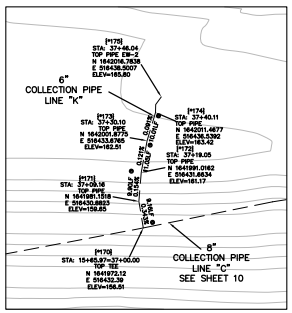
BBLS SURVEYORS & MAPPERS INC.
1502-A RAILHEAD BLVD.
NAPLES, FLORIDA 34110
PHONE (239) 597-1315



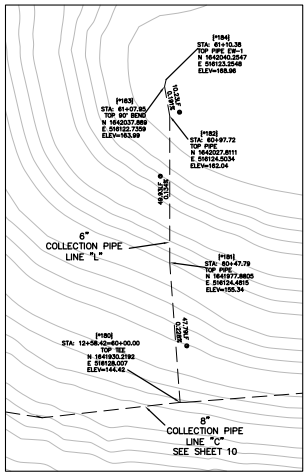
COLLECTION LINE "J"



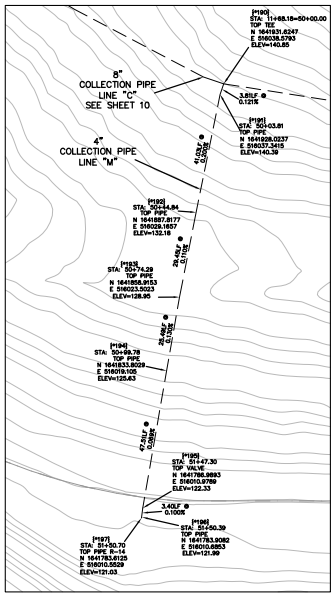
COLLECTION LINE "K"



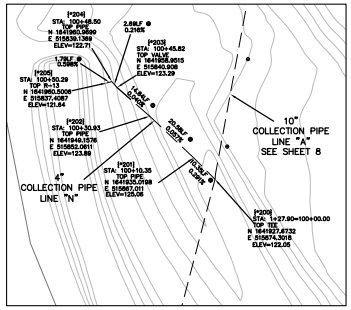
COLLECTION LINE "L"



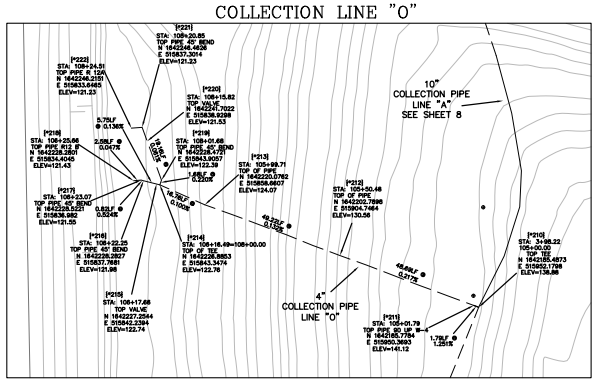
COLLECTION LINE "M"



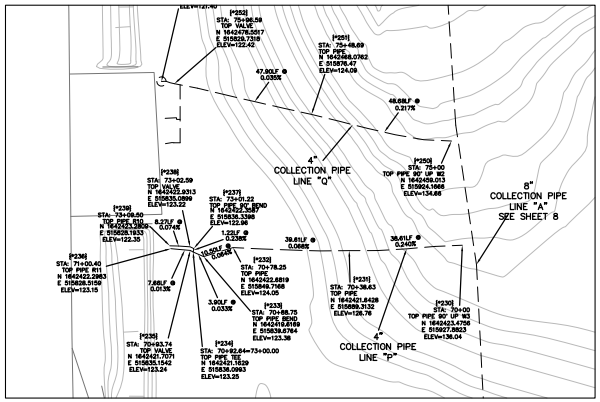
COLLECTION LINE "N"



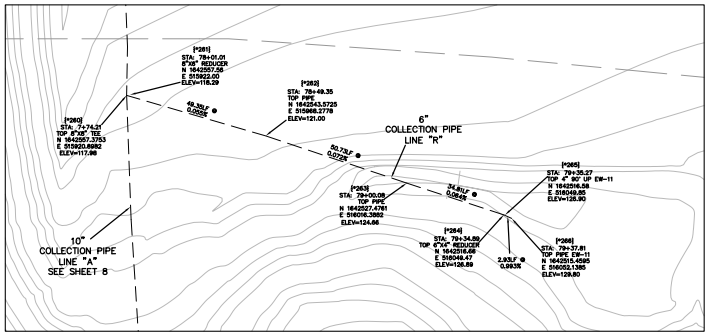
COLLECTION LINE "O"



COLLECTION LINES "P & Q"



COLLECTION LINE "R"



COLLECTION LINES "J" THROUGH "R"
SHEET 12 OF 20

NOTES

1) COORDINATES SHOWN HEREON ARE STATE PLANE COORDINATES FOR THE FLORIDA WEST ZONE PER NATIONAL GEODETIC SURVEY CONTROL POINTS "CITRUS 13" AND CITRUS 14".

2) ELEVATION SHOWN HEREON ARE BASED ON THE NATIONAL GEODETIC VERTICAL DATUM OF 1929 PER NATIONAL GEODETIC SURVEY CONTROL POINTS "CITRUS 13" AND CITRUS 14".

3) DIMENSIONS SHOWN HEREON ARE IN FEET AND DECIMALS THEREOF.

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

5) THERE ARE EXISTING ABOVE GROUND AND UNDERGROUND UTILITIES THAT HAVE NOT BEEN LOCATED OR SHOWN FOR THE PURPOSE OF THIS SURVEY.

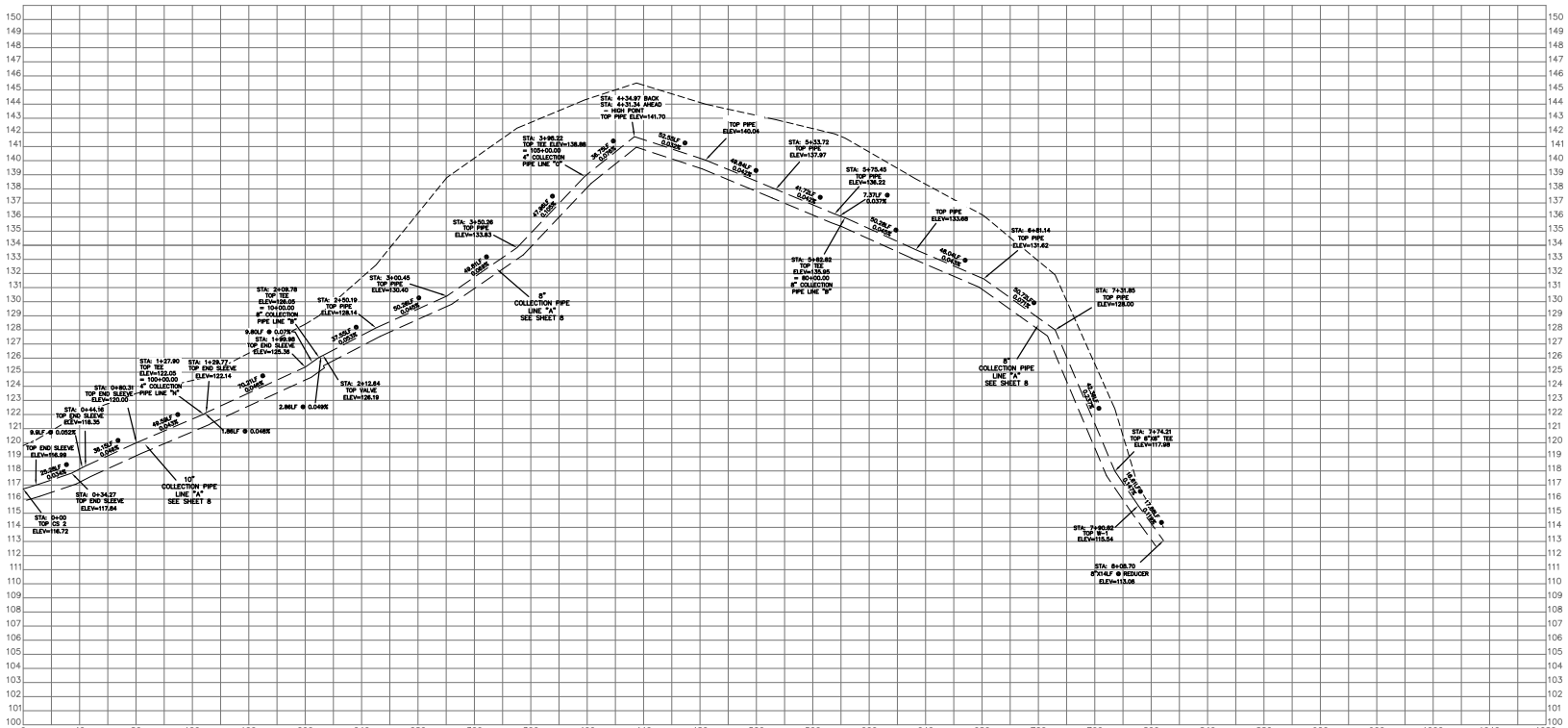
DATE	05/10/10
FIELD BOOK AND PAGE	359/PG3 55-57
DRAWN BY:	SEB
APPROVED	SEB
SCALE	1" = 20'

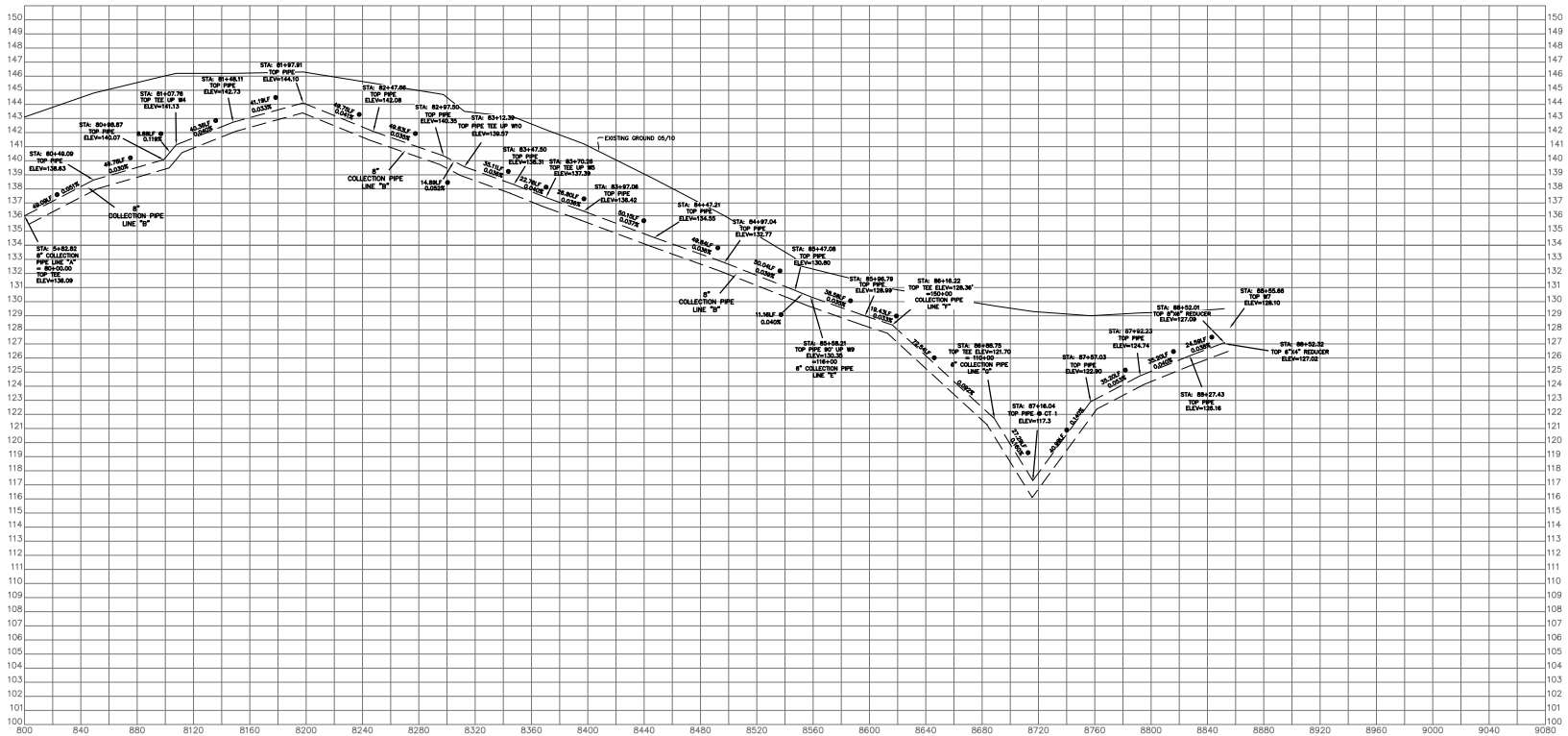
RECORD SURVEY

CITRUS COUNTY CENTRAL LANDFILL
7 ACRE RECLOSURE AND LANDFILL GAS SYSTEM
CITRUS COUNTY, FLORIDA

BBLS SURVEYORS & MAPPERS INC.
1502-A RAILHEAD BLVD.
NAPLES, FLORIDA 34110
PHONE (239) 597-1315

C:\PROJECTS\CAD\2004 CITRUS COUNTY LANDFILL\dwg\PIPE CONSTRUCTION TOPO 11 17.dwg, 11/20/2009 07:23:00 AM EST


STA: 0+00
TOP ICS 2
ELEV=116.72
STA: 0+34.27
TOP END SLEEVE
ELEV=117.64
STA: 0+44.16
TOP END SLEEVE
ELEV=118.35
STA: 0+82.31
TOP END SLEEVE
ELEV=120.00
STA: 1+27.60
TOP TEE
ELEV=123.05
= 100+00.00
4" COLLECTION
PIPE LINE "H"
STA: 1+28.77
TOP END SLEEVE
ELEV=122.14
STA: 1+99.98
TOP END SLEEVE
ELEV=125.36
STA: 2+08.78
TOP TEE
ELEV=128.65
= 104+00.00
8" COLLECTION
PIPE LINE "K"
STA: 2+12.64
TOP VALVE
ELEV=128.19
STA: 2+90.19
TOP PIPE
ELEV=128.14
STA: 3+00.45
TOP PIPE
ELEV=130.40
STA: 3+50.36
TOP PIPE
ELEV=133.83
STA: 3+98.22
TOP TEE ELEV=136.88
= 105+00.00
4" COLLECTION
PIPE LINE "G"
STA: 4+34.97 BACK
STA: 4+35.34 AHEAD
HIGH POINT
TOP PIPE ELEV=141.70
TOP PIPE
ELEV=140.04
STA: 5+33.72
TOP PIPE
ELEV=137.97
STA: 5+75.45
TOP PIPE
ELEV=136.22
STA: 5+82.82
TOP TEE
ELEV=135.95
= 80+00.00
8" COLLECTION
PIPE LINE "B"
TOP PIPE
ELEV=133.68
STA: 6+81.14
TOP PIPE
ELEV=131.62
STA: 7+31.85
TOP PIPE
ELEV=128.00
STA: 7+74.31
TOP 8"X8" TEE
ELEV=117.09
STA: 7+90.92
TOP 8"x1
ELEV=115.54
STA: 8+08.70
8"X4" REDUCER
ELEV=113.06
10" COLLECTION PIPE LINE "A" SEE SHEET 8
8" COLLECTION PIPE LINE "A" SEE SHEET 8
8" COLLECTION PIPE LINE "A" SEE SHEET 8
4" LATERAL
4" LATERAL
4" LATERAL
4" LATERAL
9.8LF @ 0.052%
28.19LF @ 0.052%
20.0LF @ 0.052%
49.84LF @ 0.052%
1.86LF @ 0.048%
2.86LF @ 0.049%
76.01LF @ 0.048%
9.80LF @ 0.078%
37.14LF @ 0.078%
49.84LF @ 0.078%
47.24LF @ 0.078%
49.84LF @ 0.078%
49.84LF @ 0.078%
49.84



COLLECTION LINE B

SCALE: 1" = 40' HORIZ.
1" = 4' VERT.

NOTES

1) COORDINATES SHOWN HEREON ARE STATE PLANE COORDINATES FOR THE FLORIDA WEST ZONE PER NATIONAL GEODETIC SURVEY CONTROL POINTS "CITRUS 13" AND CITRUS 14".

2) ELEVATION SHOWN HEREON ARE BASED ON THE NATIONAL GEODETIC VERTICAL DATUM OF 1929 PER NATIONAL GEODETIC SURVEY CONTROL POINTS "CITRUS 13" AND CITRUS 14".

3) DIMENSIONS SHOWN HEREON ARE IN FEET AND DECIMALS THEREOF.

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

5) THERE ARE EXISTING ABOVE GROUND AND UNDERGROUND UTILITIES THAT HAVE NOT BEEN LOCATED OR SHOWN FOR THE PURPOSE OF THIS SURVEY.

– – – – – – – – EXISTING GROUND 05/10

CROSS SECTION B
SHEET 14 OF 20

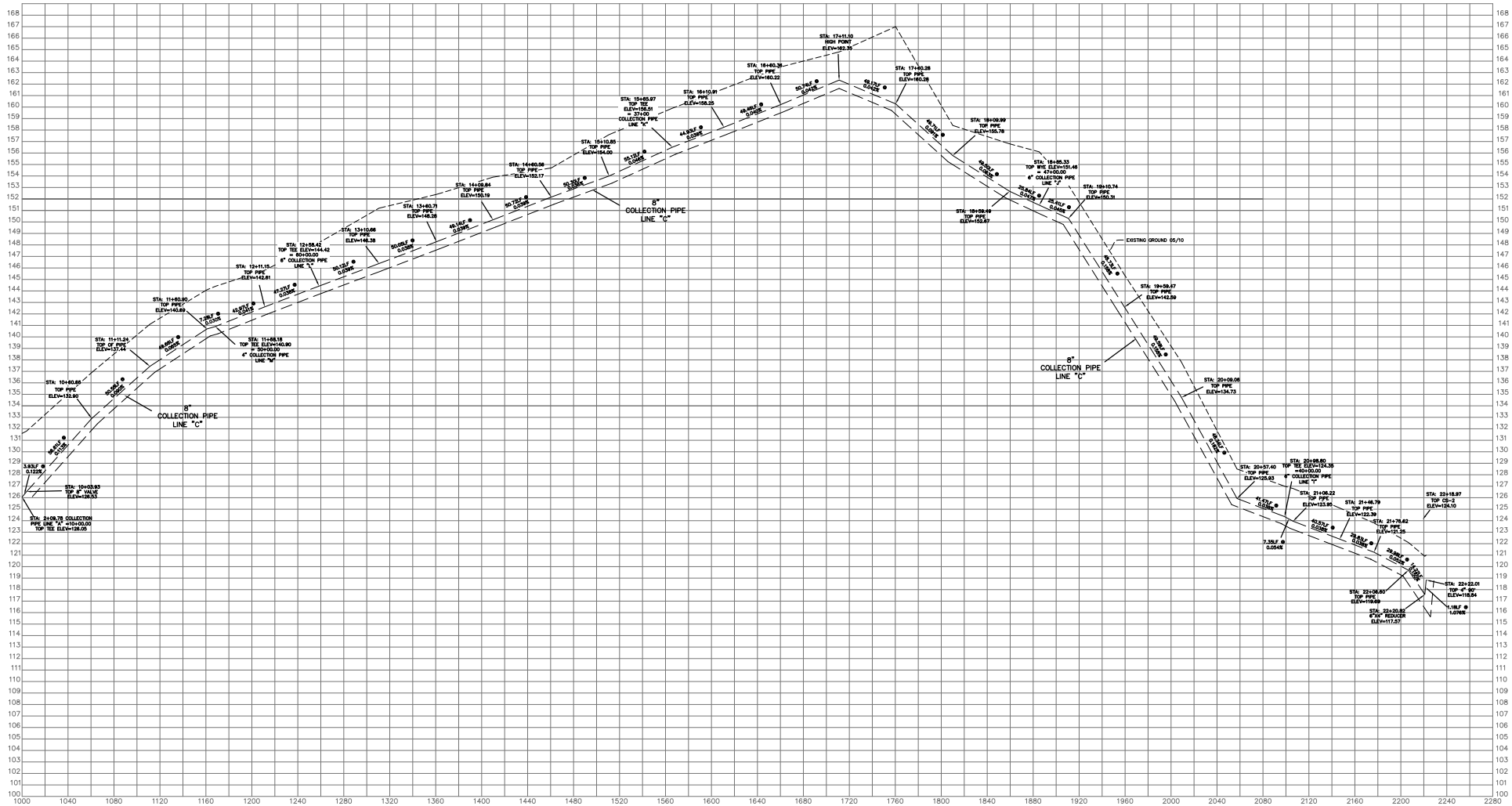
DATE:	05/10/10
FIELD BOOK AND PAGE	359/PGS 55-57
DRAWN BY:	SEB
APPROVED:	SEB
SCALE:	1" = 40'

RECORD SURVEY

CITRUS COUNTY CENTRAL LANDFILL
7 ACRE RECLOSURE AND LANDFILL GAS SYSTEM
CITRUS COUNTY, FLORIDA

BBLS SURVEYORS & MAPPERS INC.
1502-A RAILHEAD BLVD.
NAPLES, FLORIDA 34110
PHONE (239) 597-1315

Z:\PROJECTS\2009\2009-1 CITRUS COUNTY LANDFILL\dwg\PRE CONSTRUCTION TOPO 11 18 09\2009 PRE CONST TOPO 11 17 09.dwg 11/20/2009 07:53:00 AM EST



COLLECTION LINE C

SCALE: 1" = 40' HORIZ.
1" = 4' VERT.

CROSS SECTION C
SHEET 15 OF 20

NOTES

1) COORDINATES SHOWN HEREON ARE STATE PLANE COORDINATES FOR THE FLORIDA WEST ZONE PER NATIONAL GEODETIC SURVEY CONTROL POINTS "CITRUS 13" AND CITRUS 14".

2) ELEVATION SHOWN HEREON ARE BASED ON THE NATIONAL GEODETIC VERTICAL DATUM OF 1929 PER NATIONAL GEODETIC SURVEY CONTROL POINTS "CITRUS 13" AND CITRUS 14".

3) DIMENSIONS SHOWN HEREON ARE IN FEET AND DECIMALS THEREOF.

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

5) THERE ARE EXISTING ABOVE GROUND AND UNDERGROUND UTILITIES THAT HAVE NOT BEEN LOCATED OR SHOWN FOR THE PURPOSE OF THIS SURVEY.

– – – – – – – – EXISTING GROUND 05/10

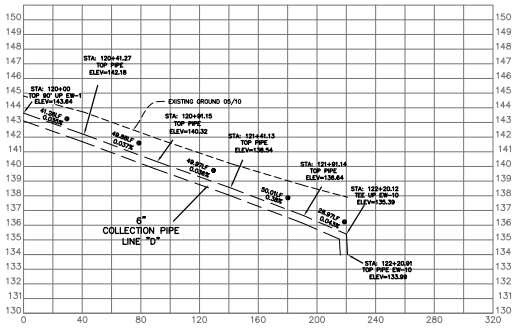
DATE	05/10/10
FIELD BOOK AND PAGE	359/PGS 55-57
DRAWN BY:	SEB
APPROVED	SEB
SCALE	1" = 40'

RECORD SURVEY

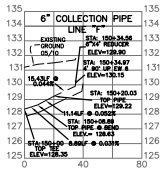
CITRUS COUNTY CENTRAL LANDFILL
7 ACRE RECLOSURE AND LANDFILL GAS SYSTEM
CITRUS COUNTY, FLORIDA

BBLS SURVEYORS & MAPPERS INC.
1502-A RAILHEAD BLVD.
NAPLES, FLORIDA 34110
PHONE (239) 597-1315

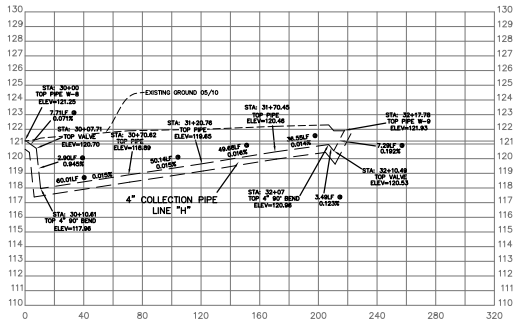
Z:\PROJECTS\2009\2009-1 CITRUS COUNTY LANDFILL\dwg\PRE CONSTRUCTION TOPO 11 17 09.dwg 11/20/2009 07:23:00 AM EST



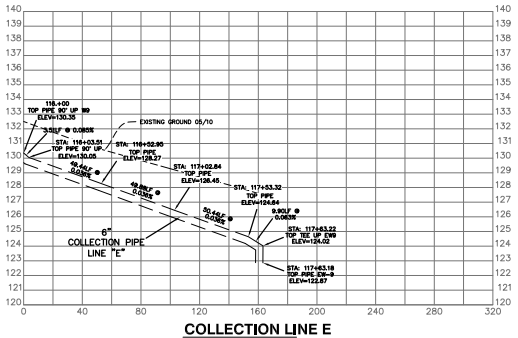
COLLECTION LINE D
SCALE: 1" = 40' HORIZ.
1" = 4' VERT.



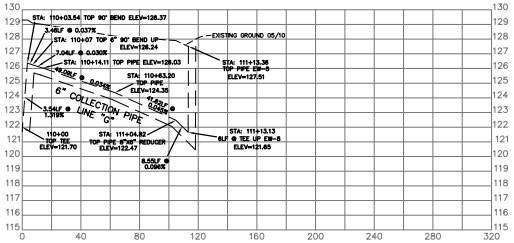
COLLECTION LINE F
SCALE: 1" = 40' HORIZ.
1" = 4' VERT.



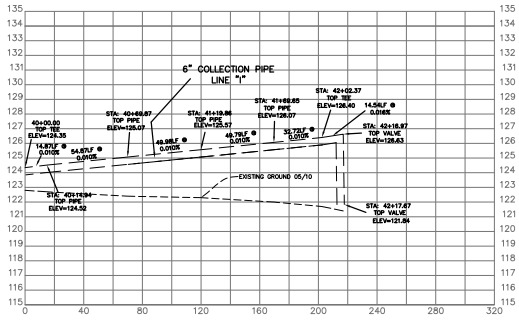
COLLECTION LINE H
SCALE: 1" = 40' HORIZ.
1" = 4' VERT.



COLLECTION LINE E
SCALE: 1" = 40' HORIZ.
1" = 4' VERT.



COLLECTION LINE G
SCALE: 1" = 40' HORIZ.
1" = 4' VERT.



COLLECTION LINE I
SCALE: 1" = 40' HORIZ.
1" = 4' VERT.

NOTES

1) COORDINATES SHOWN HEREON ARE STATE PLANE COORDINATES FOR THE FLORIDA WEST ZONE PER NATIONAL GEODETIC SURVEY CONTROL POINTS "CITRUS 13" AND CITRUS 14".

2) ELEVATION SHOWN HEREON ARE BASED ON THE NATIONAL GEODETIC VERTICAL DATUM OF 1929 PER NATIONAL GEODETIC SURVEY CONTROL POINTS "CITRUS 13" AND CITRUS 14".

3) DIMENSIONS SHOWN HEREON ARE IN FEET AND DECIMALS THEREOF.

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

5) THERE ARE EXISTING ABOVE GROUND AND UNDERGROUND UTILITIES THAT HAVE NOT BEEN LOCATED OR SHOWN FOR THE PURPOSE OF THIS SURVEY.

– – – – – – – – EXISTING GROUND 05/10

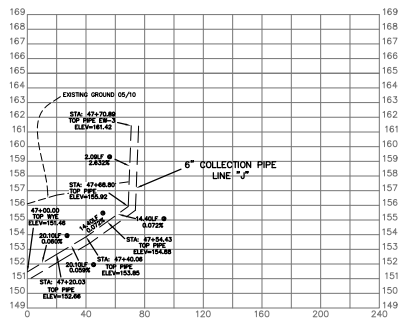
CROSS SECTIONS D–I
SHEET 16 OF 20

DATE:	05/10/10
FIELD BOOK AND PAGE	359/PG3 55-57
DRAWN BY:	SEB
APPROVED:	SEB
SCALE:	1" = 40'

RECORD SURVEY
CITRUS COUNTY CENTRAL LANDFILL
7 ACRE RECLOSURE AND LANDFILL GAS SYSTEM
CITRUS COUNTY, FLORIDA

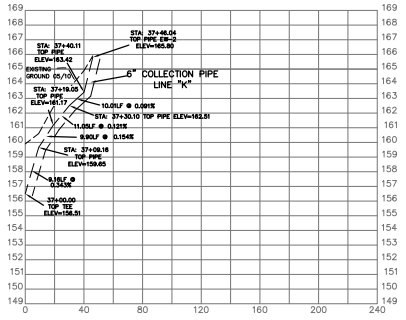
BBLS SURVEYORS & MAPPERS INC.
1502–A RAILHEAD BLVD.
NAPLES, FLORIDA 34110
PHONE (239) 597–1315

Z:\PROJECTS\2009\2009-1 CITRUS COUNTY LANDFILL\dwg\PRE CONSTRUCTION TOPO 11 17 09.dwg, 11/20/2009 07:23:00 AM EST



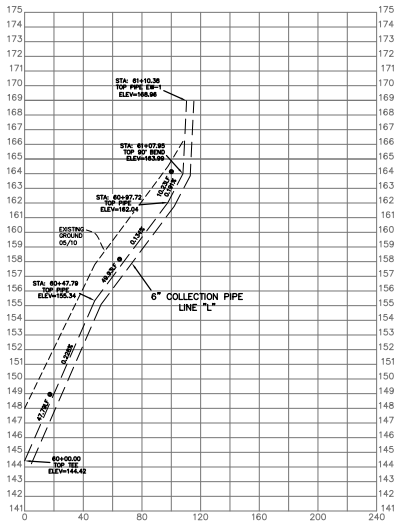
COLLECTION LINE J

SCALE: 1" = 40' HORIZ.
1" = 4' VERT.



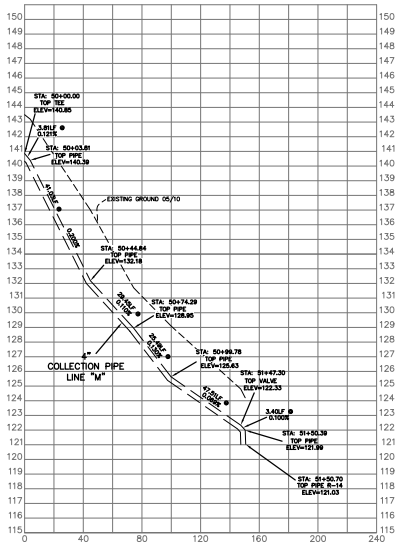
COLLECTION LINE K

SCALE: 1" = 40' HORIZ.
1" = 4' VERT.



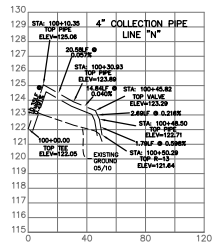
COLLECTION LINE L

SCALE: 1" = 40' HORIZ.
1" = 4' VERT.



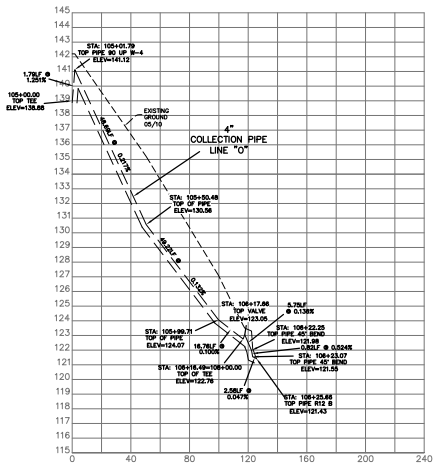
COLLECTION LINE M

SCALE: 1" = 40' HORIZ.
1" = 4' VERT.



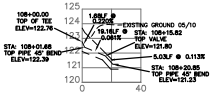
COLLECTION LINE N

SCALE: 1" = 40' HORIZ.
1" = 4' VERT.



COLLECTION LINE O

SCALE: 1" = 40' HORIZ.
1" = 4' VERT.



COLLECTION LINE O-1

SCALE: 1" = 40' HORIZ.
1" = 4' VERT.

NOTES

1) COORDINATES SHOWN HEREON ARE STATE PLANE COORDINATES FOR THE FLORIDA WEST ZONE PER NATIONAL GEODETIC SURVEY CONTROL POINTS "CITRUS 13" AND CITRUS 14".

2) ELEVATION SHOWN HEREON ARE BASED ON THE NATIONAL GEODETIC VERTICAL DATUM OF 1929 PER NATIONAL GEODETIC SURVEY CONTROL POINTS "CITRUS 13" AND CITRUS 14".

3) DIMENSIONS SHOWN HEREON ARE IN FEET AND DECIMALS THEREOF.

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

5) THERE ARE EXISTING ABOVE GROUND AND UNDERGROUND UTILITIES THAT HAVE NOT BEEN LOCATED OR SHOWN FOR THE PURPOSE OF THIS SURVEY.

---------- EXISTING GROUND 05/10

CROSS SECTIONS J–O
SHEET 17 OF 20

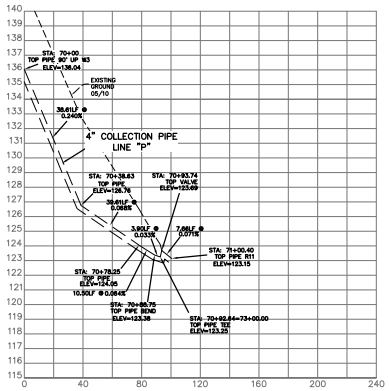
DATE:	05/10/10
FIELD BOOK AND PAGE	359/PG3 55-57
DRAWN BY:	SEB
APPROVED	SEB
SCALE	1" = 40'

RECORD SURVEY

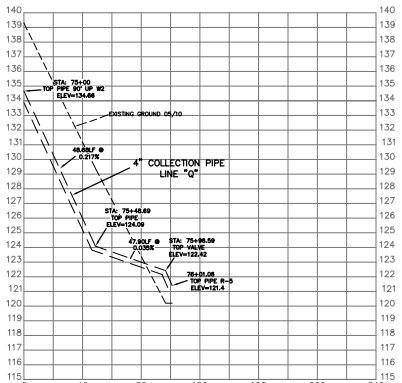
CITRUS COUNTY CENTRAL LANDFILL
7 ACRE RECLOSURE AND LANDFILL GAS SYSTEM
CITRUS COUNTY, FLORIDA

BBLS SURVEYORS & MAPPERS INC.
1502–A RAILHEAD BLVD.
NAPLES, FLORIDA 34110
PHONE (239) 597–1315

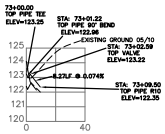
Z:\PROJECTS\2009\2084 CITRUS COUNTY LANDFILL\dwg\PRE CONSTRUCTION TOPO 11 17 09.dwg 11/20/2009 07:53:00 AM EST



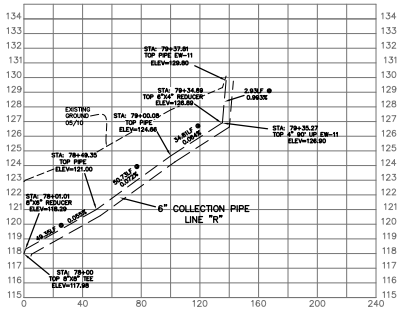
COLLECTION LINE P
SCALE: 1" = 40' HORIZ.
1" = 4' VERT.



COLLECTION LINE Q
SCALE: 1" = 40' HORIZ.
1" = 4' VERT.



COLLECTION LINE P-1
SCALE: 1" = 40' HORIZ.
1" = 4' VERT.



COLLECTION LINE R
SCALE: 1" = 40' HORIZ.
1" = 4' VERT.

NOTES

1) COORDINATES SHOWN HEREON ARE STATE PLANE COORDINATES FOR THE FLORIDA WEST ZONE PER NATIONAL GEODETIC SURVEY CONTROL POINTS "CITRUS 13" AND CITRUS 14".

2) ELEVATION SHOWN HEREON ARE BASED ON THE NATIONAL GEODETIC VERTICAL DATUM OF 1929 PER NATIONAL GEODETIC SURVEY CONTROL POINTS "CITRUS 13" AND CITRUS 14".

3) DIMENSIONS SHOWN HEREON ARE IN FEET AND DECIMALS THEREOF.

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

5) THERE ARE EXISTING ABOVE GROUND AND UNDERGROUND UTILITIES THAT HAVE NOT BEEN LOCATED OR SHOWN FOR THE PURPOSE OF THIS SURVEY.

– – – – – – – – – EXISTING CROSS SECTION 05/10

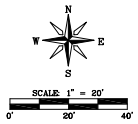
CROSS SECTIONS P–R
SHEET 18 OF 20

DATE	05/10/10
FIELD BOOK AND PAGE	359/PG3 55-57
DRAWN BY	SEB
APPROVED	SEB
SCALE	1" = 40'

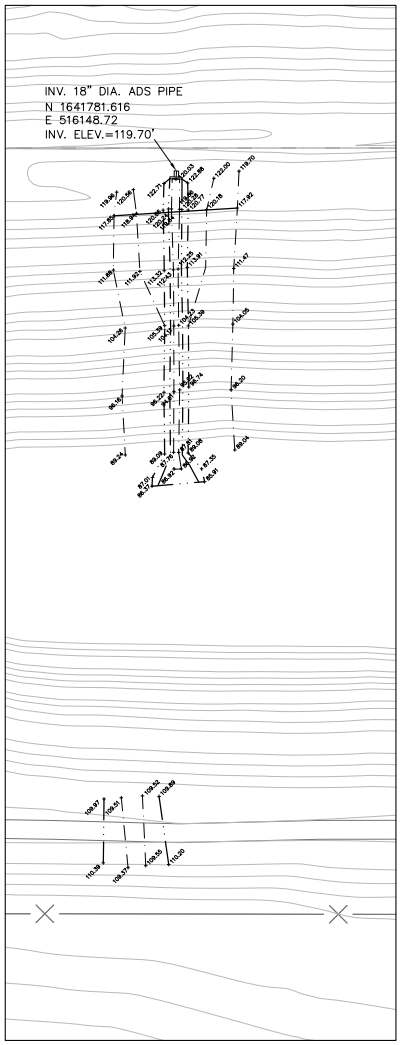
RECORD SURVEY
CITRUS COUNTY CENTRAL LANDFILL
7 ACRE RECLOSURE AND LANDFILL GAS SYSTEM
CITRUS COUNTY, FLORIDA

BBLS SURVEYORS & MAPPERS INC.
1502–A RAILHEAD BLVD.
NAPLES, FLORIDA 34110
PHONE (239) 597–1315

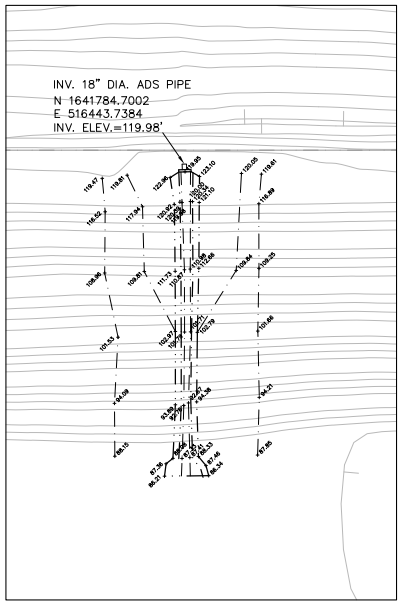
Z:\PROJECTS\2009\2009-1 CITRUS COUNTY LANDFILL\dwg\PRE CONSTRUCTION TOPO 11 18 09\2009-1 PRE CONST TOPO 11 17 09.dwg 11/20/2009 07:23:50 AM EST



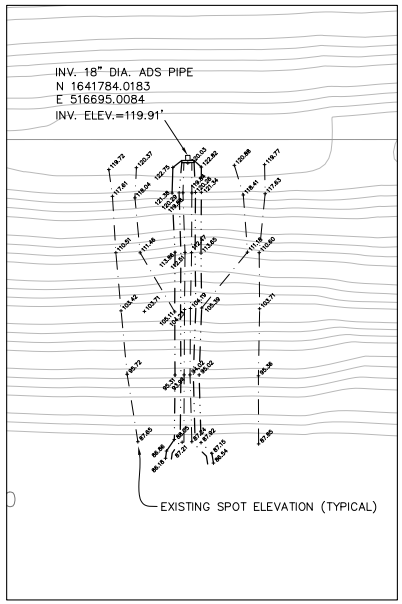
REVETMENT SPILLWAY #1
AND OVERFLOW SWALE



REVETMENT SPILLWAY #2



REVETMENT SPILLWAY #3



NOTES

1) COORDINATES SHOWN HEREON ARE STATE PLANE COORDINATES FOR THE FLORIDA WEST ZONE PER NATIONAL GEODETIC SURVEY CONTROL POINTS "CITRUS 13" AND CITRUS 14".

2) ELEVATION SHOWN HEREON ARE BASED ON THE NATIONAL GEODETIC VERTICAL DATUM OF 1929 PER NATIONAL GEODETIC SURVEY CONTROL POINTS "CITRUS 13" AND CITRUS 14".

3) DIMENSIONS SHOWN HEREON ARE IN FEET AND DECIMALS THEREOF.

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

5) THERE ARE EXISTING ABOVE GROUND AND UNDERGROUND UTILITIES THAT HAVE NOT BEEN LOCATED OR SHOWN FOR THE PURPOSE OF THIS SURVEY.

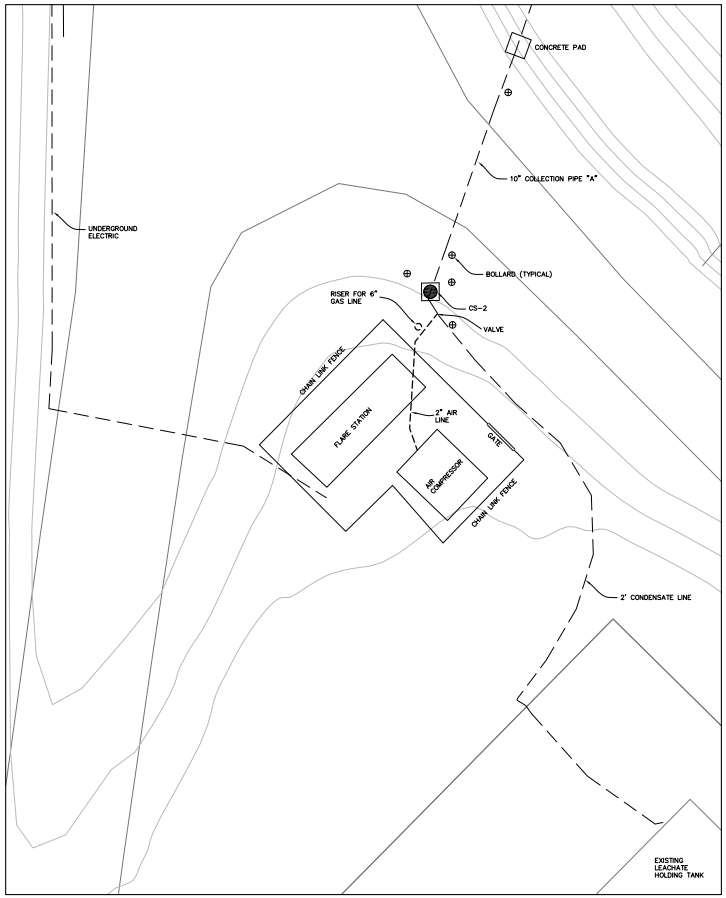
REVETMENT SPILLWAY
SHEET 19 OF 20

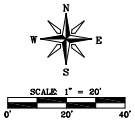
DATE	05/10/10
FIELD BOOK AND PAGE	359/PG3 55-57
DRAWN BY:	SEB
APPROVED	SEB
SCALE	1" = 20'

RECORD SURVEY
CITRUS COUNTY CENTRAL LANDFILL
7 ACRE RECLOSURE AND LANDFILL GAS SYSTEM
CITRUS COUNTY, FLORIDA

BBLS SURVEYORS & MAPPERS INC.
1502-A RAILHEAD BLVD.
NAPLES, FLORIDA 34110
PHONE (239) 597-1315

Z:\PROJECTS\2009\2009-1 CITRUS COUNTY LANDFILL\dwg\PRE CONSTRUCTION TOPO 11 19 09\2009 PRE CONST TOPO 11 17 09.dwg 11/20/2009 07:23:50 AM EST





NOTES

1) COORDINATES SHOWN HEREON ARE STATE PLANE COORDINATES FOR THE FLORIDA WEST ZONE PER NATIONAL GEODETIC SURVEY CONTROL POINTS "CITRUS 13" AND CITRUS 14".

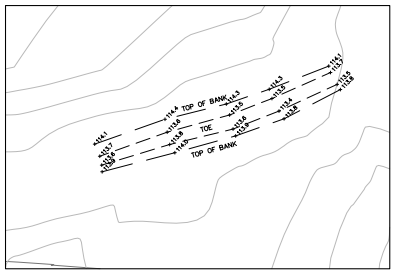
2) ELEVATION SHOWN HEREON ARE BASED ON THE NATIONAL GEODETIC VERTICAL DATUM OF 1929 PER NATIONAL GEODETIC SURVEY CONTROL POINTS "CITRUS 13" AND CITRUS 14".

3) DIMENSIONS SHOWN HEREON ARE IN FEET AND DECIMALS THEREOF.

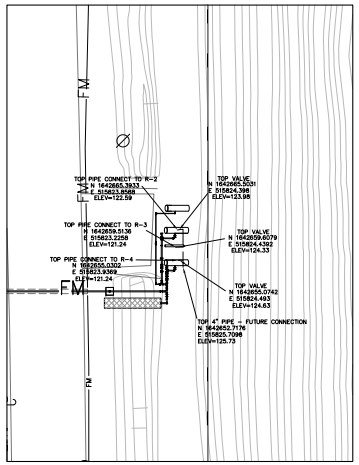
4) THIS SURVEY IS NOT VALID WITHOUT THE SIGNATURE AND THE ORIGINAL RAISED SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER.

5) THERE ARE EXISTING ABOVE GROUND AND UNDERGROUND UTILITIES THAT HAVE NOT BEEN LOCATED OR SHOWN FOR THE PURPOSE OF THIS SURVEY.

DETAIL – OVERFLOW SWALE SCALE: 1" = 20'



DETAIL– FUTURE TIE SCALE: 1" = 20'



MISCELLANEOUS DETAILS
SHEET 20 OF 20

DATE	05/10/10
FIELD BOOK AND PAGE	359/PG2 55-57
DRAWN BY:	SEB
APPROVED	SEB
SCALE	1" = 20'

RECORD SURVEY
CITRUS COUNTY CENTRAL LANDFILL
7 ACRE RECLOSURE AND LANDFILL GAS SYSTEM
CITRUS COUNTY, FLORIDA

BBLS SURVEYORS & MAPPERS INC.
1502-A RAILHEAD BLVD.
NAPLES, FLORIDA 34110
PHONE (239) 597-1315

Z:\PROJECTS\2009\2009-1 CITRUS COUNTY LANDFILL\dwg\PIPE CONSTRUCTION TOPO 11 18 09\2009_PIPE CONST TOPO 11 17 09.dwg 11/20/2009 07:53:00 AM EST

APPENDIX F

AS-BUILT SURVEY DATA TABLE

	LFG HEADER COLLECTION LINE "A"									
POINT NO.	STATION	DIST BETWEEN PNTS.	GRID COORDINATES NORTHING	GRID COORDINATES EASTING	TOP PIPE ELEV	GROUND ELEV	HEADER DEPTH	HEADER SLOPE %	CONSTRUCTION NOTES	PIPE INFO
1	0+00		1641805.80	515835.80	116.72	119.8	3.08		TOP OF CS-2	
		8.98								
2	0+08.98		1641814.27	515383.80	116.99	120.2	3.21			10" HEADER
		25.28						3.4		
3	0+34.27		1641838.16	515847.07	117.84	121.7	3.86		END SLEEVE	10" HEADER
		9.90						5.2		
4	0+44.16		1641847.44	515850.53	118.35	122.2	3.85		END SLEEVE	10" HEADER
		36.15						4.6		
5	0+80.31		1641881.63	515862.24	120.00	123.5	3.50		END SLEEVE	10" HEADER
		47.59						4.3		
6	1+27.90		1641927.67	515874.30	122.05	124.6	2.55		LATERAL TO LINE "N"	10" x 4" TEE
		1.86						4.8		
7	1+29.77		16418929.53	515874.48	122.14	124.8	2.66		END SLEEVE	10" HEADER
		70.21						4.6		
8	1+99.98		1641998.58	515887.22	125.36	128.4	3.04		END SLEEVE	10" HEADER
		9.80						7.0		
9	2+09.78		1642008.12	515889.42	126.05	129.0	2.95		LATERAL TO LINE "C"	10" x 8" TEE
		2.86						4.9		
10	2+12.64		1642010.89	515890.12	126.19	129.3	3.11			8" VALVE
		37.55						5.2		
11	2+50.19		1642047.41	515898.86	128.14	132.6	4.46			8" HEADER
		50.26						4.5		
12	3+00.45		1642094.69	515915.92	130.40	138.8	8.40			8" HEADER
		49.81						6.9		
13	3+50.26		1642141.02	515934.21	133.83	142.3	8.47			8" HEADER
		47.96						10.5		
14	3+98.22		1642185.49	515952.18	138.88	144.3	5.42		LATERAL TO LINE "O"	8" x 4" TEE
		36.75						7.6		
15	4+34.97		1642219.39	515966.05	141.70	145.5	3.80		HIGH POINT	8" HEADER
		52.55						3.2		
16	4+83.89		1642270.96	515957.99	140.04	144.0	3.96			8" HEADER
		49.84						4.2		
17	5+33.72		1642318.25	515942.27	137.97	142.9	4.93			8" HEADER
		41.42						4.2		
18	5+75.45		1642359.33	515934.97	136.22	141.9	5.68			8" HEADER
		7.37						3.7		
19	5+82.82		1642366.69	515935.26	135.95	141.6	5.65		LATERAL TO LINE "B"	8" X 8" TEE
		50.28						4.5		
20	6+33.10		1642416.91	515932.70	133.68	138.7	5.02			8" HEADER
		48.04						4.3		
21	6+81.14		1642464.43	515925.65	131.62	136.1	4.48			8" HEADER
		50.72						7.1		
22	7+31.85		1642515.04	515922.41	128.00	131.9	3.90			8" HEADER
		42.36						23.7		
23	7+74.21		1642557.38	515920.90	117.98	122.4	4.42		LATERAL TO LINE "R"	8" X 8" TEE
		16.61						14.7		
24	7+90.82		1642573.98	515921.19	115.54	116.9	1.36			TOP W-1
		17.88						13.9		
25	8+08.70		1642591.84	515920.45	113.06	114.0	0.94			REDUCER
26	8+12.45	3.75								TOP CT-2

	LFG HEADER COLLECTION LINE "A"									
POINT NO.	STATION	DIST BETWEEN PNTS.	GRID COORDINATES NORTHING	GRID COORDINATES EASTING	TOP PIPE ELEV	GROUND ELEV	HEADER DEPTH	HEADER SLOPE %	CONSTRUCTION NOTES	PIPE INFO
25	8+08.70		1642591.84	515920.45	113.06	114.0	0.94			REDUCER
		3.75								
26	8+12.45		1642595.53	515919.78	116.01					TOP CT-2

	LFG HEADER COLLECTION LINE "B"									
POINT NO.	STATION	DIST BETWEEN PNTS.	GRID COORDINATES NORTHING	GRID COORDINATES EASTING	TOP PIPE ELEV	GROUND ELEV	HEADER DEPTH	HEADER SLOPE %	CONSTRUCTION NOTES	PIPE INFO
30	80+00		1642366.69	515935.27	136.09	143.1	7.01			8" TEE
		49.09						5.1		
31	80+49.09		1642349.72	515981.33	138.63	144.8	6.14			8" HEADER
		49.78						3.0		
32	80+98.87		1642318.41	516020.03	140.07	146.0	5.93			8" HEADER
		8.88						11.9		
33	81+07.76		1642314.26	516027.92	141.13	146.2	5.07			TEE UP W4
		40.36						4.0		
34	81+48.11		1642300.69	516065.92	142.73	146.2	3.47			8" HEADER
		41.19						3.3		
35	81+97.91		1642281.13	516111.72	144.10	146.3	2.20		HIGH POINT	8" HEADER
		49.75						4.1		
36	82+47.66		1642264.79	516158.71	142.08	145.5	3.42			8" HEADER
		49.83						3.5		
37	82+97.50		1642266.56	516208.51	140.35	144.7	4.35			8" HEADER
		14.89						5.2		
38	83+12.39		1642267.33	516223.38	139.57	143.5	3.93		LATERAL TO LINE "D"	TEE UP W10
		35.11						3.6		
39	83+47.50		1642267.30	516258.49	138.31	143.1	4.79			8" HEADER
		22.76						4.0		
40	83+70.26		1642269.72	516281.12	137.39	142.2	4.81			TEE UP W5
		26.80						3.6		
41	83+97.06		1642274.13	516307.56	136.42	141.2	4.78			8" HEADER
		50.15						3.7		
42	84+47.21		1642281.80	516357.11	134.35	138.7	4.35			8" HEADER
		49.84						3.6		
43	84+97.04		1642290.35	516406.21	132.77	136.1	3.33			8" HEADER
		50.04						3.9		
44	85+47.08		1642299.75	516455.36	130.80	133.1	2.30			8" HEADER
		11.16						4.0		
45	85+58.21		1642302.16	516466.26	130.35	132.6	2.55		LATERAL TO LINE "E"	TEE UP W9
		38.58						3.5		
46	85+96.79		1642310.44	516503.94	128.99	131.4	2.41			8" HEADER
		19.43						3.3		
47	86+16.22		1642313.58	516523.06	128.35	130.9	2.55			8" x 6" TEE
		72.54						9.2		
48	86+88.75		1642326.56	516594.48	121.70	129.7	8.0		LATERAL TO LINE "G"	8" X 6" TEE
		27.21						16.1		
49	87+16.04		1642331.88	516621.16	125.81	129.3	12.0		TOP CT 1 (ELEV = 125.81)	TOP PIPE @ CT 1
		40.90						13.6		
50	87+57.03		1642331.36	516662.06	122.90	129.0	6.1			8" HEADER
		34.94						5.3		
51	87+92.23		1642309.83	516689.58	124.74	129.2	4.46			8" HEADER
		35.20						4.0		
52	88+27.43		1642282.04	516711.18	126.16	129.3	4.56			8" HEADER
		24.59						3.8		
53	88+52.01		1642261.97	516725.38	127.09	129.5	2.41			8" x 6" REDUCER
		0.31								
54	86+52.32		1642261.76	516725.80	127.02	129.7	2.68			6" x 4" REDUCER
55	88+55.66	3.34								TOP W7

	LFG HEADER COLLECTION LINE "C"									
POINT NO.	STATION	DIST BETWEEN PNTS.	GRID COORDINATES NORTHING	GRID COORDINATES EASTING	TOP PIPE ELEV	GROUND ELEV	HEADER DEPTH	HEADER SLOPE %	CONSTRUCTION NOTES	PIPE INFO
60	10+00		1642008.12	515889.42	126.05	131.6	5.55			8" TEE
		3.93						12.2		
61	10+03.93		1642007.30	515893.26	126.53	131.8	5.27			8" HEADER
		56.61						11.3		
62	10+60.66		1641983.62	516944.69	132.90	136.9	4.00			8" HEADER
		50.58						9.0		
63	11+11.24		1641957.01	515987.70	137.44	141.1	3.66			8" HEADER
		49.66						6.5		
64	11+60.90		1641933.93	516031.67	140.69	144.1	3.41			8" HEADER
		7.28						3.0		
65	11+68.18		1641931.62	516038.58	140.90	144.4	3.50		LATERAL TO LINE "M"	8" x 4" TEE
		42.97						4.1		
66	12+11.15		1641924.98	516081.03	142.61	145.8	3.19			8" HEADER
		47.27						3.8		
67	12+58.42		1641930.22	516128.01	144.42	148.2	3.78		LATERAL TO LINE "L"	8" x 6" TEE
		50.12						3.9		
68	13+10.66		1641934.15	516180.10	146.38	151.2	4.82			8" HEADER
		50.05						3.8		
69	13+60.71		1641940.91	516229.69	148.28	152.4	4.12			8" HEADER
		49.14						3.9		
70	14+09.84		1641945.09	516278.64	150.19	153.9	3.71			8" HEADER
		50.72						3.9		
71	14+60.56		1641952.62	516328.80	152.17	154.7	2.53			8" HEADER
		50.30						3.6		
72	15+10.85		1641961.92	516378.23	154.00	157.6	3.60			8" HEADER
		55.12						4.6		
73	15+65.97		1641972.12	516432.39	156.51	159.9	3.39		LATERAL TO LINE "K"	8" x 6" TEE
		44.93						3.9		
74	16+10.91		1641981.0483	516476.426	158.25	161.6	3.35			8" HEADER
		49.46						4.0		
75	16+60.36		1641988.42	516525.33	160.22	163.5	3.28			8" HEADER
		50.74						4.2	HIGH POINT	
76	17+11.10		1641996.02	516575.50	162.35	164.8	2.45			8" HEADER
		49.17						4.2		
77	17+60.28		1642005.83	516623.68	160.28	167.0	6.72			8" HEADER
		49.71						9.1		
78	18+09.99		1642018.26	516671.81	155.78	158.4	2.62			8" HEADER
		40.50						6.3		
79	18+59.49		1642030.11	516719.88	152.67	156.8	4.13			8" HEADER
		25.84						4.7		
80	18+85.33		1642036.31	516744.96	151.46	156.1	4.64		LATERAL TO LINE "J"	8" x 6" TEE
		25.41						4.5		
81	19+10.74		1642048.26	516767.39	150.31	153.2	2.89			8" HEADER
		48.73						15.8		
82	19+59.47		1642070.10	516810.94	142.59	145.4	2.81			8" HEADER
		49.59						15.8		
83	20+09.06		1642095.40	516853.60	134.73	137.8	3.07			8" HEADER
		48.34						18.2		
84	20+57.40		1642129.63	516887.73	125.93	128.5	2.57			8" HEADER
85	20+98.80	41.47						3.8	LATERAL TO LINE "I"	8" x 6" TEE

	LFG HEADER COLLECTION LINE "C"									
POINT NO.	STATION	DIST BETWEEN PNTS.	GRID COORDINATES NORTHING	GRID COORDINATES EASTING	TOP PIPE ELEV	GROUND ELEV	HEADER DEPTH	HEADER SLOPE %	CONSTRUCTION NOTES	PIPE INFO
85	20+98.80		1642161.14	516914.58	124.35	127.0	2.65		LATERAL TO LINE "I"	8" x 6" TEE
		7.35						5.4		
86	21+06.22		1642166.52	516919.70	123.95	126.8	2.85			8" HEADER
		40.57						3.8		
87	21+46.79		1642197.18	516946.26	122.39	125.1	2.71			8" HEADER
		29.83						3.8		
88	21+76.62		1642219.92	516965.58	121.25	123.8	2.55			8" HEADER
		29.98						5.2		
89	22+06.60		1642241.86	516986.00	119.69	122.1	2.41			8" HEADER
		12.37						15.0		
90	22+18.97		1642250.98	516994.35	124.1	120.9	3.20			TOP CS-2 = 124.1
		1.85								
91	22+82		1642249.90	516995.85	117.57	121.0	3.43			6" x 4" REDUCER
		1.19								
92	22+22.01		1642249.0	516996.64	118.84	121.0	2.16			4" 90 BEND

	LATERAL LINE "D"									
POINT NO.	STATION	DIST BETWEEN PNTS.	GRID COORDINATES NORTHING	GRID COORDINATES EASTING	TOP PIPE ELEV	GROUND ELEV	HEADER DEPTH	HEADER SLOPE %	CONSTRUCTION NOTES	PIPE INFO
100	120+00		1642269.06	516225.29	143.64	144.8	1.2			90 UP TO EW-1
		41.26						3.5		
101	120+41.27		1642310.02	516230.27	142.18	143.7	1.5			6" LATERAL
		49.88						3.7		
102	120+91.15		1642359.50	516236.58	140.32	141.9	1.6			6" LATERAL
		49.97						3.6		
103	121+41.13		1642408.85	516244.36	138.54	140.2	1.7			6" LATERAL
		50.01						3.8		
104	121+91.14		1642458.30	516251.83	136.64	138.7	2.1			6" LATERAL
		28.97						4.3		
105	122+20.12		1642486.97	516256.05	135.39	137.9	2.5			TEE UP EW-10
		0.79								
106	122+20.91		1642487.75	516255.98	133.99	137.9	4.5			EW-10

	LATERAL LINE "E"									
POINT NO.	STATION	DIST BETWEEN PNTS.	GRID COORDINATES NORTHING	GRID COORDINATES EASTING	TOP PIPE ELEV	GROUND ELEV	HEADER DEPTH	HEADER SLOPE %	CONSTRUCTION NOTES	PIPE INFO
110	116+00		1642302.16	516466.26	130.35	132.6	2.3			90 UP W-9
		3.51						8.5		
111	116+03.51		1642305.66	516466.55	130.05	132.5	2.5			6" LATERAL
		49.44						3.6		
112	116+52.95		1642354.92	516462.41	128.27	130.7	2.4			6" LATERAL
		49.88						3.6		
113	117+02.84		1642404.67	516458.82	126.45	129.3	2.9			6" LATERAL
		50.44						3.6		
114	117+53.32		1642454.99	516455.50	124.64	127.9	3.3			6" LATERAL
		9.90						6.3		
115	117+63.18		1642464.90	516455.50	124.02	127.6	3.6			TEE UP EW-9
		0.03								
116	117+63.18		1642464.93	516455.50	122.87	127.6	4.7			EW-9

	LATERAL LINE "F"									
POINT NO.	STATION	DIST BETWEEN PNTS.	GRID COORDINATES NORTHING	GRID COORDINATES EASTING	TOP PIPE ELEV	GROUND ELEV	HEADER DEPTH	HEADER SLOPE %	CONSTRUCTION NOTES	PIPE INFO
120	150+00		1642313.58	516523.06	128.35	131.2	2.9			6" TEE
		8.89						3.1		
121	150+08.89		1642304.83	516524.18	128.63	131.4	2.8			6" LATERAL
		11.14						5.2		
122	150+20.03		1642297.10	516516.17	129.22	131.5	2.3			6" LATERAL
		15.43						4.4		
123	150+34.56		1642288.64	516504.35	129.90	131.7	1.8			6" x 4" REDUCER
		0.41								
124	150+34.97		1642288.39	516504.03	130.15	131.8	1.7			90 UP EW-6

	LATERAL LINE "G"									
POINT NO.	STATION	DIST BETWEEN PNTS.	GRID COORDINATES NORTHING	GRID COORDINATES EASTING	TOP PIPE ELEV	GROUND ELEV	HEADER DEPTH	HEADER SLOPE %	CONSTRUCTION NOTES	PIPE INFO
130	110+00		1642326.56	516594.70	121.70	129.3	7.6			6" TEE
		3.54						131.9		
131	110+03.54		1642329.93	516593.41	126.37	129.3	2.9			6" 90° BEND
		3.46						3.7		
132	110+07		1642331.87	516596.28	126.24	129.1	2.9			6" LATERAL
		7.04						3.0		
133	110+14.11		1642338.33	516599.09	126.03	129.0	3.0			6" LATERAL
		49.09						3.4		
134	110+63.20		1642380.72	516623.85	124.35	128.2	3.9			6" LATERAL
		41.62						4.5		
135	111+04.82		1642416.95	516644.33	122.47	127.9	5.4			6" LATERAL
		8.55						9.6		
136	111+13.13		1642424.11	516648.56	121.65	127.5	5.8			90 UP EW-8
		0.23								
137	111+13.36		1642424.20	516648.85	127.51					TOP EW-8

	LATERAL LINE "H"									
POINT NO.	STATION	DIST BETWEEN PNTS.	GRID COORDINATES NORTHING	GRID COORDINATES EASTING	TOP PIPE ELEV	GROUND ELEV	HEADER DEPTH	HEADER SLOPE %	CONSTRUCTION NOTES	PIPE INFO
140	30+00		1642234.31	516968.38	121.25	121.2	0.0			TOP 4" PIPE W-8
		7.71						7.1		
141	30+07.71		1642238.16	516975.06	120.70	121.3	0.6			4" VALVE
		2.90						94.5		
142	30+10.61		1642239.36	516977.70	117.96	121.4	3.4			4" 90° BEND
		60.01						1.5		
143	30+70.62		1642299.36	516977.29	118.89	121.9	3.0			4" LATERAL
		50.14						1.5		
144	31+20.76		1642349.45	516979.65	119.65	122.0	2.4			4" LATERAL
		49.68						1.6		
145	31+70.45		1642399.12	516980.99	120.46	122.2	1.8			4" LATERAL
		36.55						1.4		
146	32+07		1642435.66	516981.77	120.96	122.3	1.3			4" 90° BEND
		3.49						12.3		
147	32+10.49		1642435.83	516978.29	120.53	121.9	1.4			4" VALVE
		7.29						19.2		
148	32+17.78		1642436.53	516971.03	121.93					TOP 4" PIPE W-9

	LATERAL LINE "I"									
POINT NO.	STATION	DIST BETWEEN PNTS.	GRID COORDINATES NORTHING	GRID COORDINATES EASTING	TOP PIPE ELEV	GROUND ELEV	HEADER HEIGHT	HEADER SLOPE %	CONSTRUCTION NOTES	PIPE INFO
150	40+00		1642161.14	516914.58	124.35	122.8	1.6			6" TEE
		14.87						1.0		
151	40+14.94		1642150.50	516924.98	124.52	122.7	1.8			6" LATERAL
		54.87						1.0		
152	40+69.87		1622096.60	516935.24	125.07	122.4	2.7			6" LATERAL
		49.98						1.0		
153	41+19.86		1642047.37	516943.87	125.57	122.3	3.3			6" LATERAL
		49.79						1.0		
154	41+69.65		1641998.30	516952.34	126.07	122.0	4.1			6" LATERAL
		32.72						1.0		
155	42+02.37		1641966.11	516958.24	126.40	121.7	4.7			6" TEE
		14.54						1.6		
156	42+16.97		1641965.22	516972.75	126.63	121.4	5.2			6" VALVE
		0.70								
157	42+17.67		1641965.29	516973.45	121.84					VALVE

	LATERAL LINE "J"									
POINT NO.	STATION	DIST BETWEEN PNTS.	GRID COORDINATES NORTHING	GRID COORDINATES EASTING	TOP PIPE ELEV	GROUND ELEV	HEADER DEPTH	HEADER SLOPE %	CONSTRUCTION NOTES	PIPE INFO
160	47+00		1642036.31	516744.96	151.46	156.1	4.6			90 UP TO EW-1
		20.10						6.0		
161	47+20.03		1642044.54	516726.63	152.66	156.7	4.0			6" LATERAL
		20.10						5.9		
162	47+40.06		1642049.67	516707.20	153.85	157.0	3.2			6" LATERAL
		14.40						7.2		
163	47+54.43		1642051.37	516692.90	154.88	157.4	2.5			6" LATERAL
		14.40						7.2		
164	47+68.80		1642051.38	516678.50	155.92	157.6	1.7			6" LATERAL
		2.09						263.2		
165	47+70.89		1642052.24	516676.60	161.42					TOP PIPE EW-3

	LATERAL LINE "K"									
POINT NO.	STATION	DIST BETWEEN PNTS.	GRID COORDINATES NORTHING	GRID COORDINATES EASTING	TOP PIPE ELEV	GROUND ELEV	HEADER DEPTH	HEADER SLOPE %	CONSTRUCTION NOTES	PIPE INFO
170	37+00		1641972.12	516432.39	156.51	159.9	3.4			6" TEE
		9.16						34.3		
171	37+09.16		1641981.15	516430.88	159.65	160.6	1.0			6" LATERAL
		9.90						15.4		
172	37+19.05		1641991.02	516431.66	161.17	162.4	1.2			6" LATERAL
		11.05						12.1		
173	37+30.10		1642001.88	516433.68	162.51	163.7	1.2			6" LATERAL
		10.01						9.1		
174	37+40.11		1642011.47	516436.54	163.42	164.9	1.5			6" LATERAL
		5.93								
175	37+46.04		1642016.78	516438.50	165.80	165.9	0.1			EW-2

	LATERAL LINE "L"									
POINT NO.	STATION	DIST BETWEEN PNTS.	GRID COORDINATES NORTHING	GRID COORDINATES EASTING	TOP PIPE ELEV	GROUND ELEV	HEADER DEPTH	HEADER SLOPE %	CONSTRUCTION NOTES	PIPE INFO
180	60+00		1641930.22	516128.00	144.42	148.0	3.6			6" TEE
		47.79						22.8		
181	60+47.79		1641977.88	516124.48	155.34	157.8	2.5			6" LATERAL
		49.93						13.4		
182	60+97.72		1642027.81	516124.50	162.04	164.5	2.5			6" LATERAL
		10.23						19.1		
183	61+07.95		1642037.89	516122.74	163.99	166.2	2.2			6" 90° BEND
		2.43								
184	61+10.38		1642040.25	516123.25	168.96					TOP EW-1

	LATERAL LINE "M"									
POINT NO.	STATION	DIST BETWEEN PNTS.	GRID COORDINATES NORTHING	GRID COORDINATES EASTING	TOP PIPE ELEV	GROUND ELEV	HEADER DEPTH	HEADER SLOPE %	CONSTRUCTION NOTES	PIPE INFO
190	50+00		1641931.62	516038.58	140.85	143.5	2.7			4" TEE
		3.81						12.1		
191	50+03.81		1641928.02	516037.34	140.39	143.2	2.8			4" LATERAL
		41.03						20.0		
192	50+44.84		1641887.82	516029.17	132.18	137.0	4.8			4" LATERAL
		29.45						11.0		
193	50+74.29		1641858.92	516023.50	128.95	131.7	2.8			4" LATERAL
		25.49						13.0		
194	50+99.78		1641833.80	516019.10	125.63	129.1	3.5			4" LATERAL
		47.45						6.9		
195	51+47.30		1641786.99	516010.98	122.33	124.8	2.5			4" VALVE
		3.40						10.0		
196	51+50.39		1641783.91	516010.69	121.99	124.2	2.2			4" LATERAL
		0.31								
197	51+50.70		1641783.61	516010.55	121.03					TOP R-14

	LATERAL LINE "N"									
POINT NO.	STATION	DIST BETWEEN PNTS.	GRID COORDINATES NORTHING	EASTING	TOP PIPE ELEV	GROUND ELEV	HEADER HEIGHT	HEADER SLOPE %	CONSTRUCTION NOTES	PIPE INFO
200	100+00		1641927.67	515874.30	122.05	123.4	−1.3			4" TEE
		10.35						29.1		
201	100+10.35		1641935.02	515867.01	125.06	123.0	2.1			4" LATERAL
		20.58						5.7		
202	100+30.93		1641949.16	515852.06	123.89	122.3	1.6			4" LATERAL
		14.84						4.0		
203	100+45.82		1641958.95	515840.91	123.29	121.9	1.4			4" VALVE
		2.69						21.6		
204	100+48.50		1641960.97	515839.14	122.71	121.7	1.0			4" LATERAL
		1.79						59.8		
205	100+50.29		1641960.50	515837.41	121.64	121.2	0.4			TOP R−13

	LATERAL LINE "O"									
POINT NO.	STATION	DIST BETWEEN PNTS.	GRID COORDINATES NORTHING	EASTING	TOP PIPE ELEV	GROUND ELEV	HEADER DEPTH	HEADER SLOPE %	CONSTRUCTION NOTES	PIPE INFO
210	105+00		1642185.49	515952.18	138.88	142.2	3.3			4" TEE
		1.79						125.1		
211	105+01.79		1642185.78	515950.37	141.12	142.2	1.1			90° UP W-4
		48.69						21.7		
212	105+50.48		1642202.79	515904.75	130.56	135.2	4.6			4" LATERAL
		49.22						13.2		
213	105+99.71		1642220.08	515858.66	124.07	127.1	3.0			4" LATERAL
		16.76						10.0		
214	106+16.49		1642226.89	515843.35	122.76	123.7	0.9			4" TEE
		1.17						13.6		
215	106+17.66		1642227.25	515842.24	122.74	123.5	0.8			4" VALVE
		4.59						13.6		
216	106+22.25		1642228.28	515837.77	121.98	123.3	1.3			4" 45° BEND
		0.82						52.4		
217	106+23.07		1642228.52	515836.98	121.55	122.1	0.5			4" 45° BEND
		2.58						4.7		
218	106+25.66		1642228.28	515834.40	121.43	121.4	0.0			TOP 4" PIPE R12B

	LATERAL LINE "P"									
POINT NO.	STATION	DIST BETWEEN PNTS.	GRID COORDINATES NORTHING	GRID COORDINATES EASTING	TOP PIPE ELEV	GROUND ELEV	HEADER DEPTH	HEADER SLOPE %	CONSTRUCTION NOTES	PIPE INFO
230	70+00		1642423.48	515927.88	136.04	141.6	5.6			90 UP TO W3
		36.61						24.0		
231	70+38.63		1642421.64	515889.31	126.76	132.8	6.0			4" LATERAL
		39.61						6.8		
232	70+78.25		1642422.68	515849.72	124.05	126.5	2.4			4" LATERAL
		10.50						6.4		
233	70+88.75		1642419.62	515839.68	123.38	124.7	1.3			4" LATERAL
		3.90						3.3		
234	70+92.64		1642421.16	515836.10	123.25	124.1	0.9			4" TEE
		1.10						1.3		
235	70+93.74		1642421.71	515835.15	123.24	123.5	0.3			4" VALVE
		6.66						1.3		
236	71+00.40		1642422.30	515828.52	123.15					TOP OF PIPE R11
		LATERAL LINE "P-1"								
234	73+00		1642421.16	515836.10	123.25	124.1	0.9			4" TEE
		1.22						23.8		
237	73+01.22		1642422.36	515836.34	122.96	123.4	0.4			4" 90° BEND
		1.37						7.4		
238	73+02.59		1642422.93	515835.09	122.86	122.7	-0.2			4" VALVE
		6.91						7.4		
239	73+09.50		1642423.28	151828.19	122.35	122.0	-0.4			TOP OF PIPE R10

	LATERAL LINE "Q"									
POINT NO.	STATION	DIST BETWEEN PNTS.	GRID COORDINATES NORTHING	GRID COORDINATES EASTING	TOP PIPE ELEV	GROUND ELEV	HEADER DEPTH	HEADER SLOPE %	CONSTRUCTION NOTES	PIPE INFO
250	75+00		1642459.01	515924.17	134.66	139.3	4.6			90 UP TO W2
		48.68						21.7		
251	75+48.69		1642468.08	515876.47	124.09	129.4	5.3			4" LATERAL
		47.90						3.5		
252	75+96.59		1642478.55	515829.73	122.42	120.2	-2.2			4" VALVE
		4.47								
253	76+01.06		1642479.30	515825.32	121.4	120.2	-1.2			TOP PIPE R-5

	LATERAL LINE "R"									
POINT NO.	STATION	DIST BETWEEN PNTS.	GRID COORDINATES NORTHING	EASTING	TOP PIPE ELEV	GROUND ELEV	HEADER DEPTH	HEADER SLOPE %	CONSTRUCTION NOTES	PIPE INFO
260	78+00		1642557.38	515920.90	117.98	122.9	4.9			8"x8" TEE
		1.01						30.7		
261	78+01.01		1642557.56	515922.00	118.29	123.0	4.7			8"x6" REDUCER
		49.35						5.5		
262	78+49.35		1642543.57	515968.28	121.00	124.9	3.9			6" LATERAL
		50.73						7.2		
263	79+00.08		1642527.48	516016.39	124.66	127.8	3.1			6" LATERAL
		34.81						6.4		
264	79+34.89		1642516.66	516049.47	126.89	129.3	2.4			6" x 4" REDUCER
		0.38						99.3		
265	79+35.27		1642516.58	516049.85	127.27	129.3	2.0			4" 90 UP EW-6
		2.54						99.3		
266	79+37.81		1642515.46	516052.14	129.80	130.1	0.3			TOP EW-11