

ARDAMAN & ASSOCIATES, INC. PROGRESS MEETING REPORT FOR PINEY POINT GYPSUM STACK SYSTEM CLOSURE		File No.: 05-110A	Page 1 of 4
		Meeting Date: <u>7/20/06</u>	
		Report No: <u>70</u>	Report Date: <u>7/27/06</u>
Project Name:	CLOSURE CONSTRUCTION - OGS SLOPES, TOP CAPS & RELIEF DITCH, SCP-S AND PHASE II - NGS SLOPES		Project Address: 13300 U.S. Highway 41 North Palmetto, Florida 34221 Manatee County
<u>ATTENDEES:</u> Ardaman: Rob Werner, Rajendra Shrestha, John Cameron, Tony Deatherage FDEP: CDM: Dean Carter, Mike Cruz, George Curry, Steve Solters, Jean Wilson Moretrench: Steve Voytko, Mike Panny, Paul Davis, Ralph Remmert Comanco: Paul Moore Compass: Jeremy Giles			

COPY TO: FDEP: Phil Coram, Sam Zamani, John Coates
 Ardaman: Nadim Fuleihan, Rob Werner, Tom Leto, John Cameron, Tony Deatherage
 CDM: Steve Solters, Dean Carter, Michael Edgar, Michael Cruz, Dick Slovarp
 Moretrench: Al Schuman, Steve Voytko, Mike Panny, Nick Haddon, Ralph Remmert
 Comanco: Tom Topp, Paul Moore
 Compass: Tim Morrow, Jeremy Giles, Tom McSweeney

Next Meeting is Scheduled for Thursday, July 27, 2006
Site Tour at 10:00 am followed by
Construction/Engineering & CDM Operations Meetings

1.0 REVIEW MINUTES OF PREVIOUS MEETING

8.0 Technical Items - Miscellaneous: last bullet regarding liner inspection was for the Phase I Slope Closure, not Phase II. Also, the panel cited should be 214, not 214+00 as recorded.

2.0 SAFETY

An incident report regarding damage to the NGS-S liner (by the 6-inch PVC irrigation header) was forwarded by CDM by email on 7/13/06 to FDEP and Ardaman; a revised report was forwarded on 7/17/06.

3.0 SUMMARY OF WORK PERFORMED

Moretrench:

- Continued work on Phase II Slope Closure - completed finish grading the south and east crest roads, continued building the south perimeter road, and started finish grading the south ditch.
- Installed the 8-inch and 24-inch valves on Phase I structure #'s 1 and 2 outlet pipes, and the 24-inch outlet pipe from the valve to the seepage ditch. Also started work on retrofitting rip-rap structure depressions in the OGS north ditch.
- Well Water usage - none since last report.
- Equipment: 3 D-6 dozers, 1 compactor, 1 excavator, one 6-inch hydraulic pump - 5 personnel. Demobilized 2 D-6 dozers, 1 D-8 dozer, 1 excavator, 1 water wagon and 1 loader since last report.

Comanco:

- Continued liner anchor trench compaction in the Phase I Slope Closure stormwater ditches.
- Started liner deployment and detail work in the SCP-S Pond Water Sump, beginning on the west partition dike and proceeding eastward; as of 7/18/06 liner deployed totaled 62,984 sf of 80-mil textured liner and 12,015 sf of 80-mil smooth liner.
- Started preparation work to retrofit rip-rap structure depressions in the OGS north ditch
- Equipment: 1 excavator, 2 3-inch pumps, 1 loader, 1 track crawler dump, 1 4x4 Honda 350 w/trailer, 2 pick-up trucks, 1 QC trailer, 5 generators - 21 personnel

ARDAMAN & ASSOCIATES, INC. PROGRESS MEETING REPORT FOR PINEY POINT GYPSUM STACK SYSTEM CLOSURE	File No.: 05-110A	Page 2 of 4
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Compass:

- Continued irrigation on the OGS-S slopes and watering for dust control.
- Continued hauling and placing fill on the SCP-S Process Water Sump east dike; a yardage report was not available at the meeting; also continued installation of inlet structure #1 and outlet pipe, and finish grading the pond bottom.
- Re-seeded the Relief Ditch north gypsum slope and started amending the NGS-S slopes (subcontractor Tate Environmental). Also started remedial work on the OGS Cap slopes.
- Well Water usage - 15,000 gallons since last report.
- Equipment: 2 dump trucks, 1 water wagon, 2 D-6 dozers, 2 excavators, 1 compactor, 1 Case dozer, 1 motor grader - 8 operators.

CDM

- Continued receiving soil fill material from L.A. Enterprises for construction of the Phase II Slope Closure perimeter dike (23,477 loose cy total as of 7/19/06). Also received 187 cy for the Phase I OGS north ditch.
- Received 10 6-inch fabricated wyes for the Phase II Slope Closure seepage collection drain.
- Received 1 18-inch 68-degree elbow and 1 18-inch steel blind for SCP-S PWS.

4.0 PROJECTED WORK FOR NEXT WEEK

Moretrench:

- Continue work on Phase II Slope Closure - constructing and grading the stormwater pond and perimeter dikes, and finish grading the south ditch.
- Continue work to retrofit rip-rap structure depressions in the Phase I stormwater ditches.

Comanco:

- Continue liner anchor trench compaction in the Phase I Slope Closure stormwater ditches.
- Continue liner deployment and detail work in the SCP-S Pond Water Sump.
- Continue work to retrofit rip-rap structure depressions in the Phase I stormwater ditches.
- Resume modifications to the NGS-N spray evaporation system (still waiting on more pads and polypropylene ties).

Compass:

- Continue irrigating OGS grassed slopes and watering for dust control.
- Continue grading the SCP-S Process Water Sump dikes and bottom, installing inlet structure #1, and hauling fill to the east dike.
- Continue dolomiting and start grassing the NGS-S slopes (subcontractor Tate Environmental). Also continue remedial work on the OGS Cap slopes.

5.0 SURVEY NOTES

- A final composite as-built drawing by Moretrench/Edgemon for the Phase I Slope Closure stormwater ditches was submitted by CDM to Ardaman on 7/13/06.
- Compass/Edgemon surveyed the SCP-S Process Water Sump grades on 6/28/06, and the south and west borrow dikes on 6/29/06; Ardaman also requested take-up quantities. CDM has reviewed a draft of the survey, and is awaiting a corrected copy.
- Ardaman requested an as-built survey of the NGS-S south and east crest roads, which have been re-graded by Moretrench, for the record. Moretrench is awaiting a copy of the survey from Edgemon.
- Compass/Edgemon performed as-built survey updates of the SCP-S Process Water Sump liner subgrade as the work progressed. As of 7/19/06, the dikes and pond bottom have been as-built west of north dike station 103+00 and south dike station 119+00.

6.0 PROJECT SCHEDULE

- No workdays were lost to weather this reporting period.

ARDAMAN & ASSOCIATES, INC. PROGRESS MEETING REPORT FOR PINEY POINT GYPSUM STACK SYSTEM CLOSURE	File No.: 05-110A	Page 3 of 4
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- The project schedule will be updated by CDM and distributed by email on 7/25/06. The updated schedule will reflect activities that may be impacted if work by Moretrench is discontinued on the Phase II seepage collection drain until the end of the rainy season.
- As noted in 3.0 Summary of Work Performed, work has been started by Moretrench and Comanco to retrofit rip-rap structure liner depressions in the Phase I Slope Closure stormwater ditches.
- Weekend work schedule: Moretrench and Compass will work on Saturday.

7.0 SHOP DRAWINGS and SUBMITTALS

All shop drawings and submittals should be submitted to Rob Werner (Ardaman) for approval, with transmittals only copied to John Cameron (Ardaman) and Steve Solters (CDM).

- An official submittal/proposal by CDM for the gravel erosion protection yet to be installed along the inboard slope of the access road at the toe of the OGS-S slope cover is forthcoming pending internal review. See 10.0 Comments by FDEP for more.

8.0 TECHNICAL ITEMS/CLARIFICATIONS AND QUALITY ASSURANCE

Updated drawing sets, dated 9/28/05, were distributed at the 9/29/05 meeting for the NGS-S Cap and NGS-N Relief Ditch and the Phase I Slope Closure. Revised Phase I Slope Closure drawing Nos. C-2, C-5, C-6, D-6, D-9, D-10, D-11), dated 2/15/06 (various revision nos.) were distributed at the 2/16/06 construction meeting to reflect changes related to lowering the OGS south stormwater ditch seepage collection drain. Electronic (ACAD) are available for download from Ardaman's ftp web site. Current drawings, dated 12/16/05, were distributed at the 12/16/05 meeting for Slope Cover Construction - OGS Ponds. Current drawings (including all detail drawings for structures, drains, etc.), dated 12/22/05 (various revision nos.), for the Phase II Slope Closure were delivered to CDM at the site on 12/23/05. Current drawings (including all detail drawings for structures, drains, etc.), dated 1/11/06 (various revision nos.), for the SCP-South Compartment Closure were distributed on 1/12/06, along with CD's containing ACAD files for all current for the SCP-South and Phase II slope Closure drawings. Revised SCP-South Compartment Closure Drawing No. D-6, dated 2/15/06 (Rev. 1), was distributed at the 2/16/06 construction meeting to reflect changes related to the lowered the OGS south seepage collection drain - an electronic version (ACAD) was emailed to CDM and Moretrench on 2/28/06. Regarding finish grades for the SCP-S Process Water Sump, a drawing was provided by Ardaman at the 7/6/06 construction meeting (and attached to meeting minutes) indicating optional design grades for the pond bottom area, which were adopted by CDM/Compass. Drawing Nos. C-1, C-3, C-4, D-1 and L-1 will be updated for the record to indicate the revised grading plan.

Regarding specifications for the OGS Slopes, Top Cap Areas and NGS-N Relief Ditch, pertinent NGS-S Reservoir, Phase II OGS Compartment Closure and ITN specification documents shall be used. Pertinent specification sections from the Phase II and ITN sources, along with specifications for HDPE panel drains and concrete erosion control mats, were issued in a preliminary specification document (Sections 24, 25, 26, 27, 28, 29 and 30, all revision 0, dated 7/6/05) on 7/7/05. Additional supplemental specifications for "Woven Geotextile" and "General Earthwork Using Soil" (Sections 31 and 32, both revision 1, dated 1/4/06) were distributed at the meeting on 1/5/06.

- Preliminary drawings and CD's were distributed at the 9/15/05 meeting for the NGS-S Soil Slope Cover Construction, C-1 through C-5 for Contractor's use in estimating take-off quantities.
- Preliminary drawings for the proposed NCP capacity upgrade project were revised; CAD files were emailed to CDM on 7/19/06 and 4 sets of hard copies were distributed at the construction meeting. Preliminary technical specifications (revision P1) were emailed to CDM on 7/14/06.
- Drawings were distributed by Ardaman at the meeting for additional panel drains required in the following areas: OGS Slope Pond, OGS-N Cap, OGS west and south ditches, and the NGS-S east ditch. CDM was requested to provide a proposal for the extra work. (Copies of these figures are attached to the electronic version of the meeting minutes.)

Quality Control Activities

- Ardaman had 6 technicians on site this reporting period.
- Phase 1 slope closure in-place gypsum/soil density tests - no change - 943 tests passing, none failing, none pending.
- Phase 2 slope closure in-place gypsum/soil density tests - 81 tests passing, 1 failing (station 108+50 toe road), none pending.
- SCP south compartment in-place gypsum/soil density tests - 115 tests passing, none failing, none pending.

ARDAMAN & ASSOCIATES, INC. PROGRESS MEETING REPORT FOR PINEY POINT GYPSUM STACK SYSTEM CLOSURE	File No.: 05-110A	Page 4 of 4
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- OGS-S slope cover in-place soil fill density tests - no change - 59 passing, none failing, none pending.
- SCP-S Process Water Sump liner seam destructive testing (DT's) - 7 marked, 6 pending.
- Phase I stormwater ditch liner anchor trench density tests - 62 passing, 1 failing, none pending.
- SCP-S PWS 80-mil smooth liner conformance testing: a summary of testing status report (Table 1a), was updated on 7/19/06 (revision 3 - Final) and was distributed at the meeting - all rolls (46) are conditionally approved for installation.
- SCP-S PWS 80-mil textured liner conformance testing: a summary of testing status report (Table 1b), was updated on 7/19/06 (revision 3 - Final) and was distributed at the meeting - all rolls (31) are conditionally approved for installation.
- Phase II Slope Closure 80-mil textured liner conformance testing: a summary of testing status report (Table 2) for 5 additional rolls, was updated on 7/19/06 (revision 3 - Final) and was distributed at the meeting - all rolls are conditionally approved for installation.
- Phase II Slope Closure 60-mil textured liner conformance testing: a summary of testing status report (Table 3), was updated on 7/19/06 (revision 3 - Final) and was distributed at the meeting - all rolls (48) are conditionally approved for installation.

Miscellaneous

- Rainfall: CDM reported 0.36 inches from 7/12/06 through 7/18/06.
- Regarding status of the Gulfstream II borrow pit, Compass indicated at the 7/13/06 construction meeting that Gulfstream has submitted the application package to Manatee County Planning and Environmental Departments.
- Ardaman and Associates performed a preliminary inspection of the NGS-S liner shortly after the incident and followed up on Saturday, July 8, 2006 with a thorough inspection during which three hundred thirty-three damaged areas were identified. On Wednesday, July 12, 2006, Ardaman's engineer inspected the damaged areas and developed a preliminary inventory map to assess the extent of the damage and general scope of necessary repair work. Based on visual observations and field micrometer measurements, it was determined that the core of the liner sheet was affected at most of the damage locations. At some locations, the damage appears minor (e.g., only partial scraping of the texturing) such that repairs will likely not be required. Nonetheless, the total number of repairs is expected to exceed 250. Further, the damage to about 12 to 15 panels on the slope at the northern end of the east dike is so extensive that the panels will need to be replaced. Ardaman will complete a more detailed mapping of the defect locations, make final assignment of locations not requiring repair, and provide instructions regarding repairs and panel replacement next week.
- **Acceptances**
- On 7/14/06, subgrade for liner installation, the SCP-S Process Water Sump west (partition dike) and north and south dikes and pond bottom, west of north dike station 101+30 and south dike station 120+70.
- On 7/19/06, subgrade for liner installation, the SCP-S Process Water Sump north and south dikes and pond bottom, west of north dike station 103+00 and south dike station 119+00.

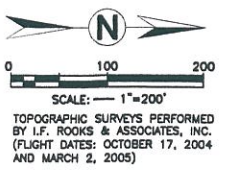
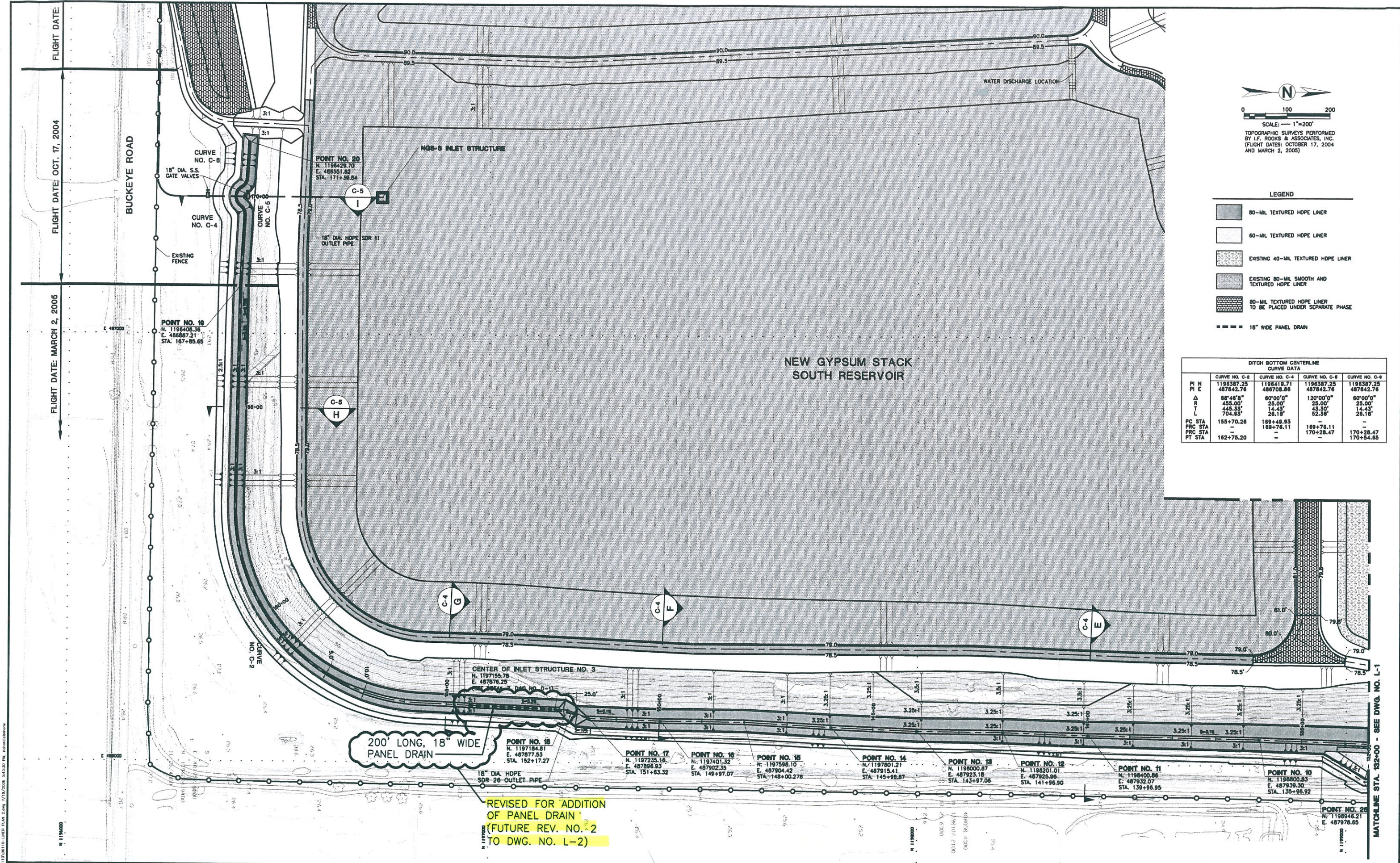
9.0 COMMENTS by PROGRAM MANAGER

- Change order requests related to Phase I closure gypsum quantity adjustments and Phase I south seepage collection drain lowering are in progress - CDM is presently reviewing a package received from Moretrench, and will forward a request to FDEP next week.

10.0 COMMENTS by FDEP

FDEP was not represented at the meeting.

- CDM was requested at the 7/13/06 construction meeting to submit an official proposal as soon as possible, for the gravel erosion protection yet to be installed along the inboard slope of the access road at the toe of the OGS-S slope cover.



- LEGEND
- 80-MIL TEXTURED HDPE LINER
 - 60-MIL TEXTURED HDPE LINER
 - EXISTING 40-MIL TEXTURED HDPE LINER
 - EXISTING 80-MIL SMOOTH AND TEXTURED HDPE LINER
 - 80-MIL TEXTURED HDPE LINER TO BE PLACED UNDER SEPARATE PHASE
 - 18" WIDE PANEL DRAIN

DITCH BOTTOM CENTERLINE CURVE DATA				
	CURVE NO. C-2	CURVE NO. C-4	CURVE NO. C-5	CURVE NO. C-6
PI	1196387.25	1196419.71	1196387.25	1196387.25
N	487842.76	487808.86	487842.76	487842.76
PI E				
Δ	88°46'8"	60°00'0"	120°00'0"	60°00'0"
R	455.00'	25.00'	25.00'	25.00'
T	445.33'	14.45'	43.30'	14.43'
L	704.83'	26.18'	52.58'	26.18'
PC STA	155+70.26	169+49.93	169+76.11	-
PRC STA	-	169+76.11	170+28.47	170+28.47
PT STA	162+75.20	-	-	170+54.65

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REVISION	DATE	DESCRIPTION	APPR'D	REVISION	DATE	DESCRIPTION	APPR'D
1	12/22/05	GENERAL REVISIONS		1	12/22/05	GENERAL REVISIONS	
0	12/18/05	ISSUED FOR CONSTRUCTION		0	12/18/05	ISSUED FOR CONSTRUCTION	

DESIGNED BY	DTC	11/10/05	CHECKED BY	RJW	11/28/05
DRAWN BY	RDC	11/10/05	CHECKED BY		
FILE NO.	05-110		SCALE	1"=100'	
APPROVED BY:					

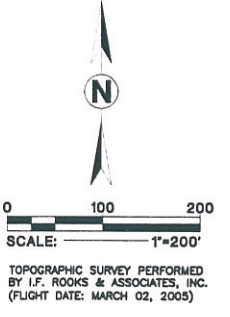
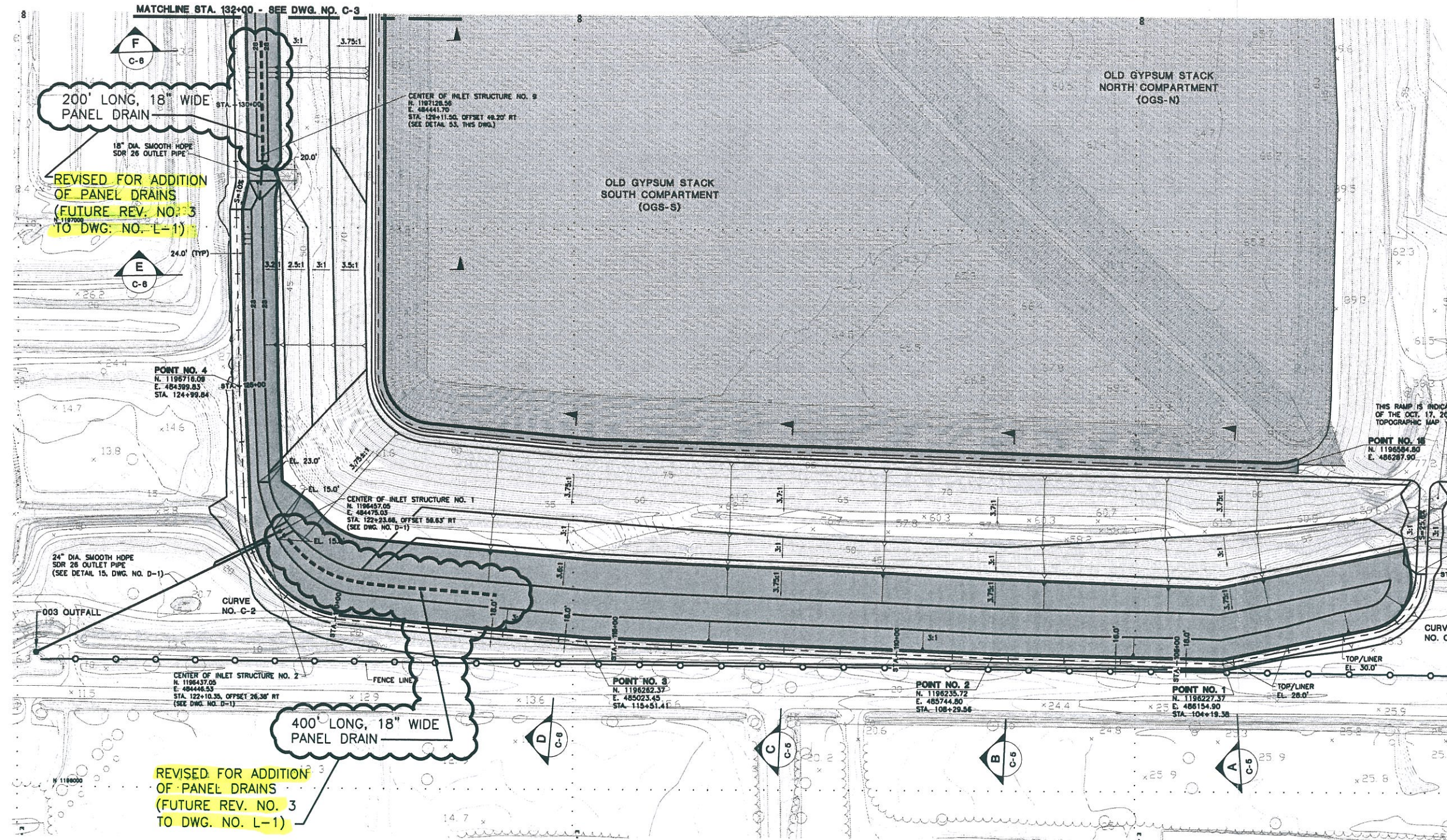
Ardaman & Associates, Inc.
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Florida
Department of Environmental Protection
and Louis J. Timchak, Jr. - Receiver

**GYPSUM STACK SYSTEM CLOSURE
SLOPE CLOSURE PHASE I**
PINEY POINT FACILITY
MANATEE COUNTY, FLORIDA

LINER PLAN
STA. 132+00 TO STA. 171+40

DRAWING NO.
L-2



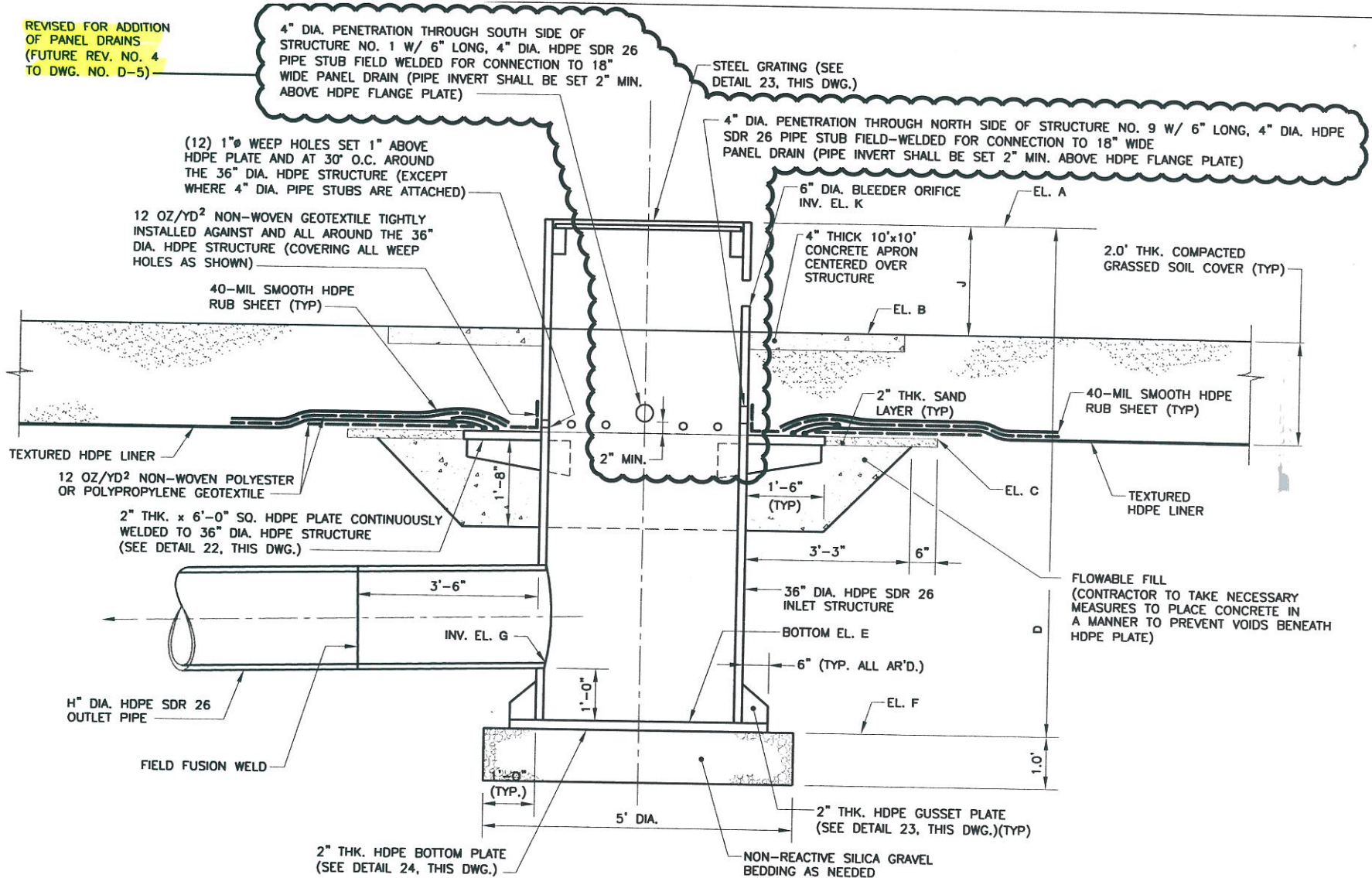
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PT	486506.41	484417.58
Δ	77°41'29"	82°49'26"
R	109.00'	194.77'
T	87.78'	142.48'
L	147.80'	281.55'
PC STA	100+00.00	119+87.89
PT STA	101+47.80	122+69.24

LEGEND	
	80-MIL TEXTURED HDPE LINER
	EXISTING 80-MIL SMOOTH AND TEXTURED HDPE LINER
	18" WIDE PANEL DRAIN

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REVISED FOR ADDITION
OF PANEL DRAINS
(FUTURE REV. NO. 4
TO DWG. NO. D-5)



19

CROSS SECTION FOR INLET STRUCTURE NOS. 1 & 9

NTS

HDPE INLET STRUCTURE DIMENSION DATA

INLET STRUCTURE		DIMENSION			ELEVATION (FEET, NGVD)						HDP LINER
		FEET		INCHES							
NO.	LOCATION	D	J	H	A	B	C	E	F	G	
1	LINED STORMWATER DITCH NEAR STA. 122+00	4.87	0.5	8	17.5	17.0	15.0	12.8	12.63	13.8	80
9	LINED STORMWATER DITCH NEAR STA. 144+00	5.67	0.5	18	29.5	29.0	27.0	24.0	23.83	25.0	80



TOPOGRAPHIC SURVEY
BY I.F. ROOKS & ASSO
(FLIGHT DATE: MARCH 0

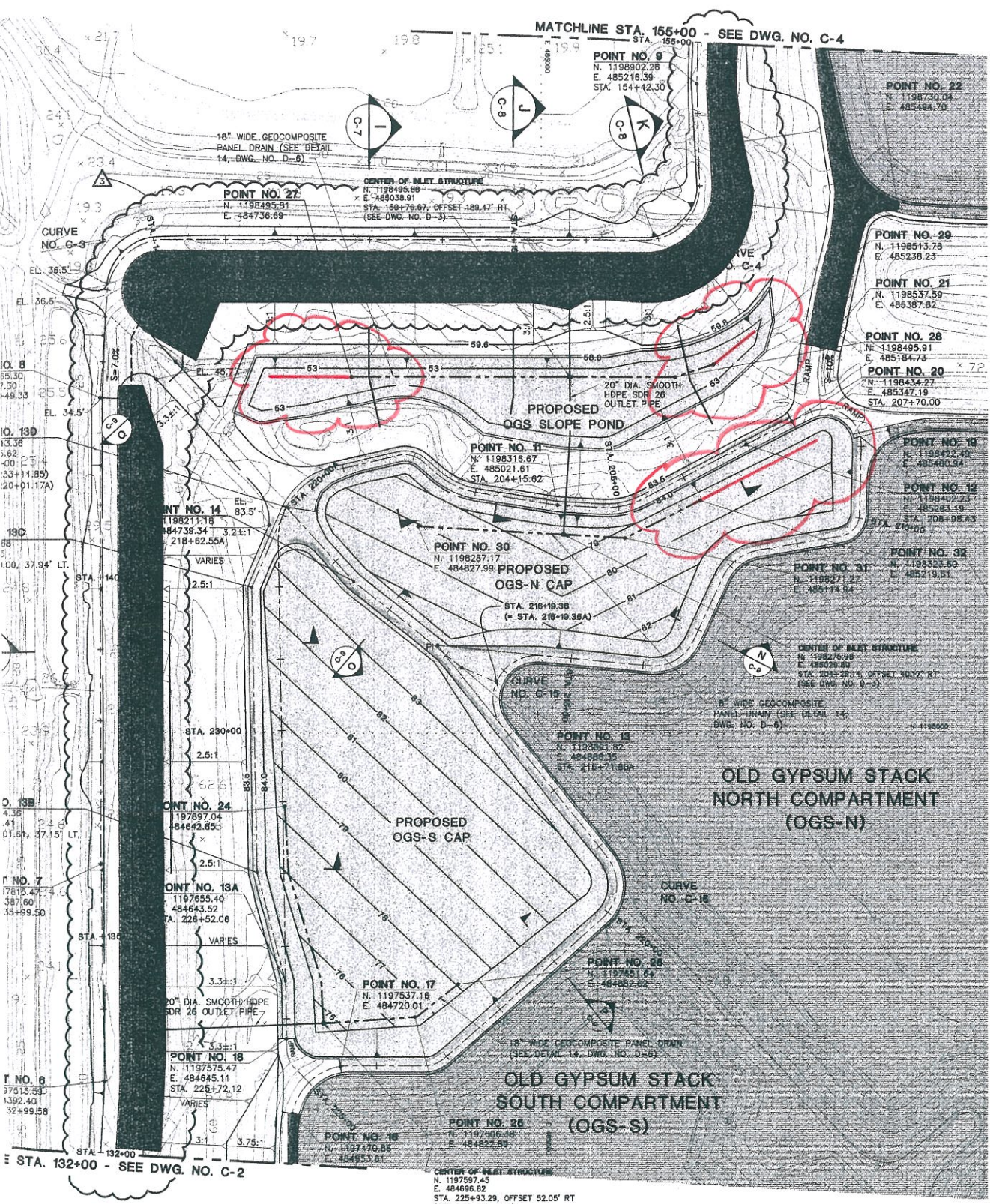
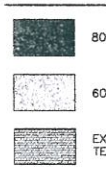
TOE ROAD CENTERLINE	
PI N	1198585.20
PI E	484402.72
Δ	76°24'57"
R	82.00'
T	58.24'
L	109.36'
PC STA	143+99.33
PT STA	145+08.70

CREST ROAD CEI	
PI N	1198345.89
PI E	484633.18
Δ	77°22'49"
R	100.00'
T	80.09'
L	135.05'
PC STA	232+90.89
PT STA	200+85.70

CREST ROAD CEI	
PI N	1198311.63
PI E	485112.61
Δ	31°14'07"
R	112.00'
T	31.82'
L	61.06'
PC STA	204+76.05
PT STA	205+37.09

CREST ROAD CEI	
PI N	1198249.15
PI E	485264.79
Δ	55°37'57"
R	68.75'
T	36.27'
L	66.75'
PC STA	211+54.25
PT STA	212+21.00

CREST F	
PI N	1197780.31
PI E	485126.21
Δ	86°59'37"
R	62.00'
T	58.83'
L	94.14'
PC STA	219+18.36
PT STA	220+12.50



PROPOSED PANEL DRAIN EXTENSIONS