

CLOSURE CONSTRUCTION DRAWINGS FOR LAKE COUNTY CENTRAL (ASTATULA) SOLID WASTE MANAGEMENT FACILITY PHASE III LANDFILL

JULY 2022

DRAWING TITLE	DRAWING NO.
COVER SHEET.....	G0
SYMBOLS AND LEGEND.....	G1
AERIAL PHOTOGRAPH.....	G2
EXISTING GRADES.....	C0
CLOSURE LINER GRADING PLAN	C1
PROTECTIVE COVER GRADING PLAN.....	C2
STORMWATER MANAGEMENT PLAN.....	C3
PROFILES.....	C4
DETAILS (1 OF 5).....	C5
DETAILS (2 OF 5).....	C6
DETAILS (3 OF 5).....	C7
DETAILS (4 OF 5).....	C8
DETAILS (5 OF 5).....	C9



BOARD OF COUNTY COMMISSIONERS

DOUGLAS SHIELDS
SEAN PARKS, CHAIR
KIRBY SMITH
LESLIE CAMPIONE
JOSH BLAKE

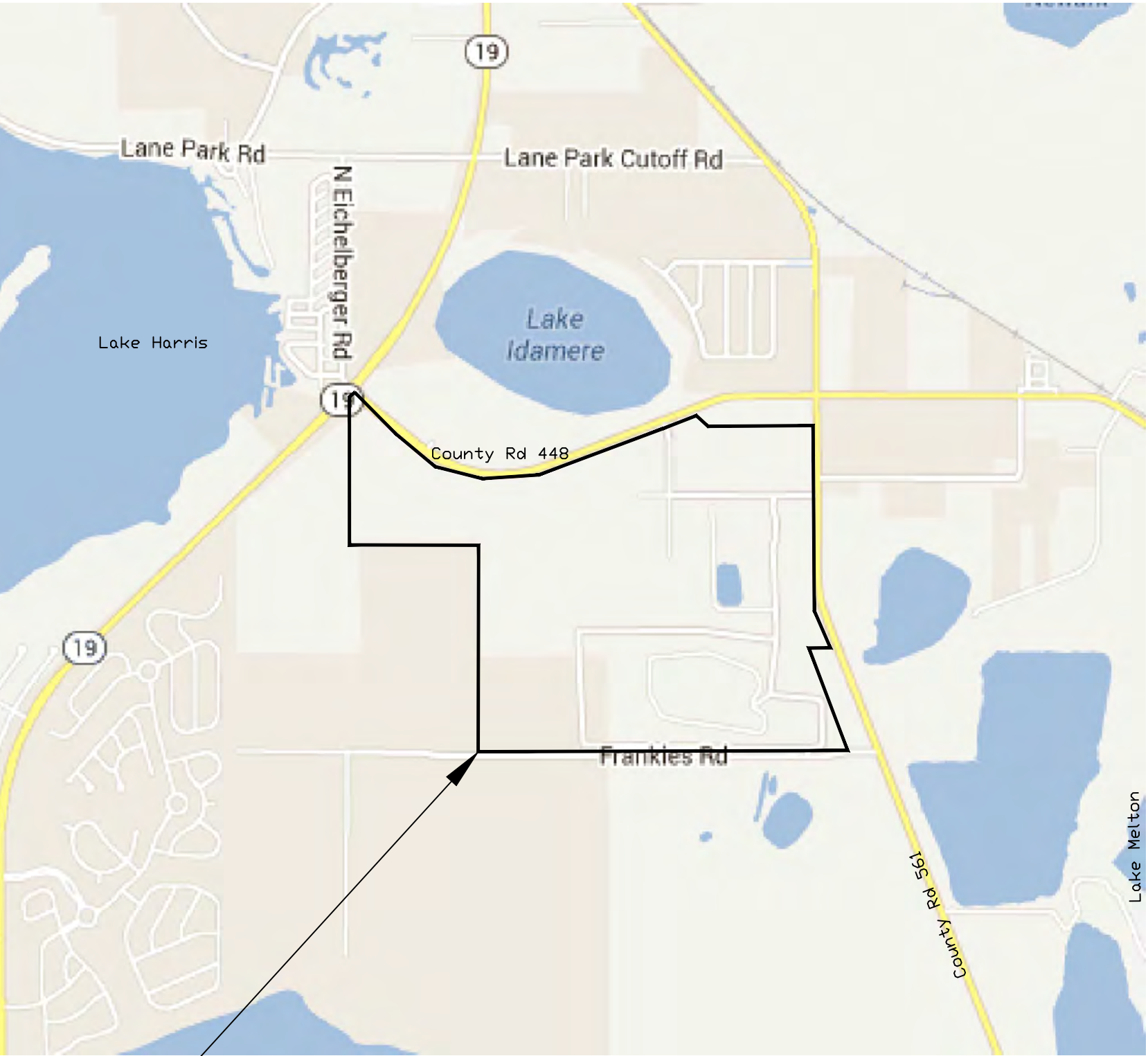
DISTRICT 1
DISTRICT 2
DISTRICT 3
DISTRICT 4
DISTRICT 5

**SOLID WASTE MANAGEMENT
DEPARTMENT DIRECTOR**

BRAD RUSS

COUNTY MANAGER

JENNIFER BARKER



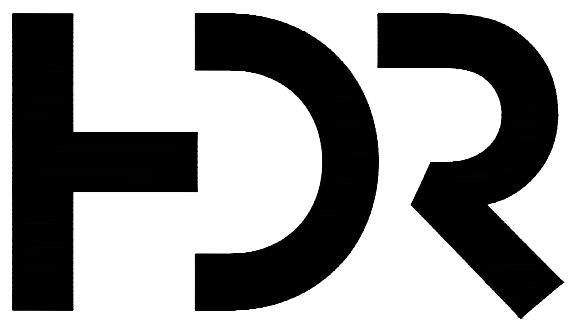
LAKE COUNTY CENTRAL
SOLID WASTE MANAGEMENT
FACILITY

VICINITY MAP

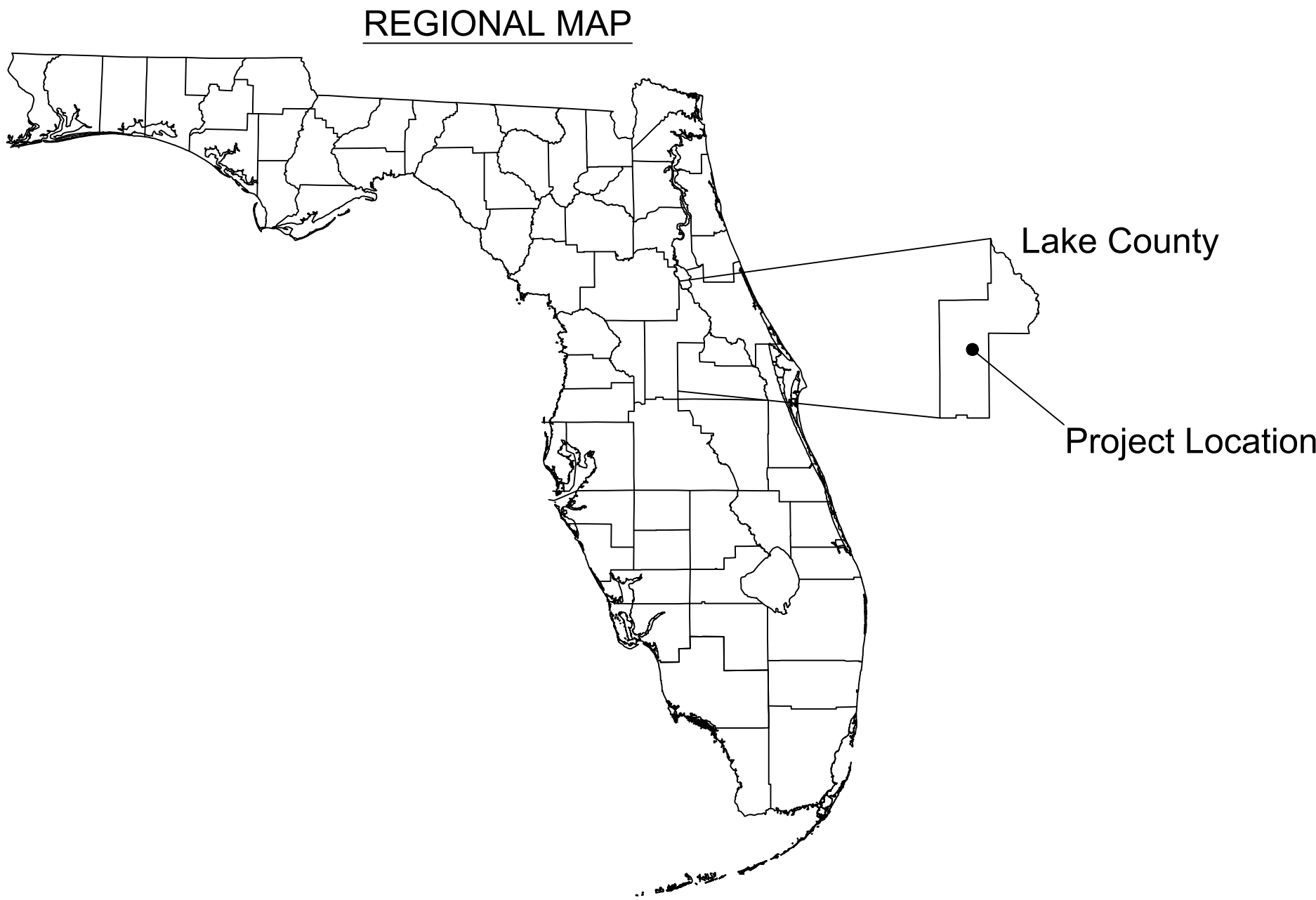
**LAKE COUNTY
BOARD OF COUNTY COMMISSIONERS
315 W MAIN ST. #3813
TAVARES, FL 32778
(352) 343-9800
COUNTY TASK ORDER NO. 22-907-5
S2LI PROJECT NO. 22-966**



531 Versailles Drive, Suite 202
Maitland, Florida 32751
PH: (407) 475-9163 - FAX: (407) 475-9169
Certification of Authorization #7831



HDR ENGINEERING, INC.
76 SOUTH LAURA STREET, SUITE 1600
JACKSONVILLE, FLORIDA 32202-4321
904-598-8900
COA# 4213



COVER PAGE
PHASE II LANDFILL
CENTRAL LANDFILL
LAKE COUNTY, FLORIDA


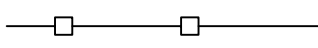








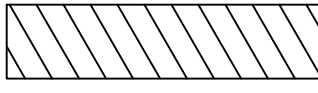


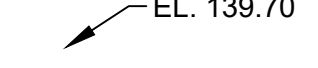
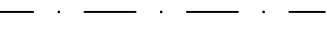




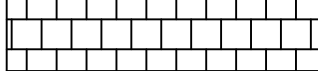
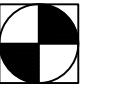


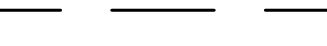

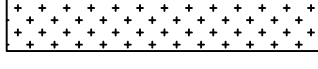


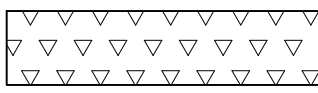


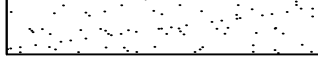



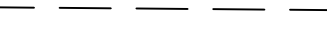


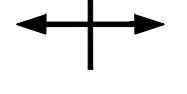

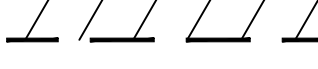



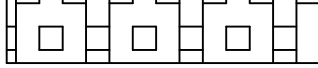

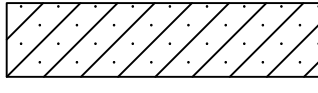



















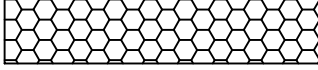



531 Versailles Drive, Suite 202
Maitland, Florida 32751
(407) 475-9163 FAX 475-9169
Certification of Authorization # 7831

DRAWING NO.
G0

Signature
Robert E. Mosley, P.E.
Florida Registration #40176
Date

REV	DATE	BY	CHKD	REMARKS



LEGEND					
EXISTING		PROPOSED		PROPOSED	
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	LIMEROCK ROAD		SILT FENCE		GATE VALVE
	PAVED ROAD		LEACHATE COLLECTION LATERAL		CULVERT
	UNPAVED ROAD		CONTOUR		PRIMARY LEACHATE COLLECTION HEADER
	CONTOUR		BENTONITE GROUT		SECONDARY LEACHATE COLLECTION HEADER
	GENERAL BACKFILL SOILS		INVERT ELEVATION OF LATERAL		LEACHATE FORCEMAIN
	STRUCTURE		FDOT NO. 57 STONE		PLUG VALVE
	TREE		COMPACTED SUBGRADE		GAS MONITORING PROBE
	PROPERTY BOUNDARY		GENERAL BACKFILL SOILS		CELL BOUNDARY LINES
	EDGE OF WATER		DITCH		PUMP STATION
	LEACHATE FORCEMAIN		PROTECTIVE SOIL		CONDENSATE SUMP
	DITCH		DRAINAGE SAND		STUB-OUT WITH BLIND FLANGE
	LINER CONTAINMENT BERM		GEOMEMBRANE LINER		HDPE AIRLINE
	MANHOLE		COMPOSITE DRAINAGE NET (CDN)		HEADER PIPE HIGH POINT
	CLEANOUT		GEOSYNTHETIC CLAY LINER		
	WASTE		GEOTEXTILE		
	UTILITY POLE		STORMWATER CONTROL FLAP		
	GROUNDWATER MONITORING WELL		ROAD		
	GAS MONITORING PROBE		CLEANOUT		
	PUMP STATION		STAKING POINT		
	WASTE LIMIT		TOE OF SLOPE		
	TOE DRAIN		TOP OF BERM		
	CULVERT		CELL BOTTOM		
	CONCRETE		LINER CONTAINMENT BERM		
	PRIMARY LEACHATE COLLECTION HEADER		SOIL BERM		
	SECONDARY LEACHATE COLLECTION HEADER		LIMITS OF CONSTRUCTION		
			SPOT ELEVATION		
			UTILITY POLE		
			SILT FABRIC		
			GFFR		
			LINER LIMIT		
			GROUNDWATER MONITORING WELL		
			TOE DRAIN		

- GENERAL NOTES:
- PATTERN AND LINE SCALES MAY BE SLIGHTLY DIFFERENT ON INDIVIDUAL DRAWINGS.
 - ALL ELEVATIONS HAVE BEEN REFERENCED TO THE NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD 29). NORTHING-EASTING COORDINATES SET IN FLORIDA STATE PLANE: EAST ZONE.
 - THIS IS A GENERAL LEGEND. PATTERNS AND SYMBOLS SHOWN ON THIS SHEET ARE NOT NECESSARILY USED IN THE DRAWING SET.
 - DURING CONSTRUCTION, THE CONTRACTOR'S MATERIAL HAULING TRUCKS AND OTHER VEHICULAR TRAFFIC SHALL OBEY ON-SITE SPEED LIMITS AND TRAFFIC SIGNS, NOT STOP OR PARK ALONG THE MAIN ENTRANCE ROAD, AND NOT INTERFERE WITH SOLID WASTE OPERATION AND/OR CONSTRUCTION TRAFFIC INCLUDING SOLID WASTE DELIVERY AND OPERATION VEHICLES TO AND FROM SITE OPERATIONS.
 - CONTRACTOR MAY BYPASS SCALES WHEN BRINGING CONSTRUCTION MATERIALS ON SITE. HOWEVER, THE CONTRACTOR MUST HAVE A REPRESENTATIVE ON-SITE AT ALL TIMES TO RECEIVE DELIVERIES. COUNTY STAFF SHALL NOT ACCEPT OR TAKE RESPONSIBILITY FOR CONTRACTOR DELIVERIES.
 - NO USABLE DIRT OR BORROW MAY BE REMOVED FROM SITE. ALL CONTRACTOR -GENERATED CONSTRUCTION WASTE SHALL BE REMOVED FROM THE SITE AND TAKEN TO AN APPROPRIATE DISPOSAL FACILITY.
 - SOLID WASTE IN LANDFILLS DECOMPOSES, MOVES, SETTLES AND COMPACTS WITH TIME. THE ELEVATIONS SHOWN FROM THE MOST RECENT TOPOGRAPHIC AERIAL SURVEY MAY NOT REPRESENT ACTUAL SITE CONDITIONS AT THE TIME OF CONSTRUCTION.
 - THE GENERAL LOCATION OF CONTRACTOR'S STAGING AREA IS SHOWN ON THE SITE AERIAL (DRAWING G-2). THE OWNER AND CONTRACTOR WILL COORDINATE ON FINAL BOUNDARIES OF CONTRACTOR'S STAGING AREA AT THE PRE-CONSTRUCTION MEETING. THE STAGING AREA SHALL BE RESTORED PRIOR TO SUBSTANTIAL COMPLETION OF THE PROJECT. THE RESTORATION SHALL INCLUDE CLEANING OF ALL STORMWATER INLETS, PIPES AND DITCHES AND RESTORATION OF ALL AFFECTED ROADWAYS AND VEGETATION.
 - DAMAGE TO THE EXISTING STORMWATER SYSTEM OR ANY OTHER SITE FEATURES SHALL BE REPAIRED AS QUICKLY AS POSSIBLE AT NO COST TO, AND TO THE SATISFACTION OF, THE OWNER.



SYMBOLS AND LEGEND
PHASE II LANDFILL
CENTRAL LANDFILL
LAKE COUNTY, FLORIDA

531 Versailles Drive, Suite 202
Maitland, Florida 32751
(407) 475-9163 FAX 475-9169
Certification of Authorization # 7831



DRAWING NO.
G1

Signature
Robert E. Mackey, P.E.
Florida Registration # 40178
Date

REV/		DATE		DRAWN		CHKD		BY		REMARKS	
	No										



Signature _____ Date _____
Robert E. Mackey, P.E.
Florida Registration # 40176

REV.		DRAWN		CHKD		BY		REMARKS	
No.	DATE	No.	DATE	No.	DATE	No.	DATE		



AERIAL PHOTOGRAPH (2020)
PHASE II LANDFILL
CENTRAL LANDFILL
LAKE COUNTY, FLORIDA



531 Versailles Drive, Suite 202
Maitland, Florida 32751
(407) 475-9163 FAX 475-9169
Certification of Authorization # 7831

DRAWING NO.
G2

A

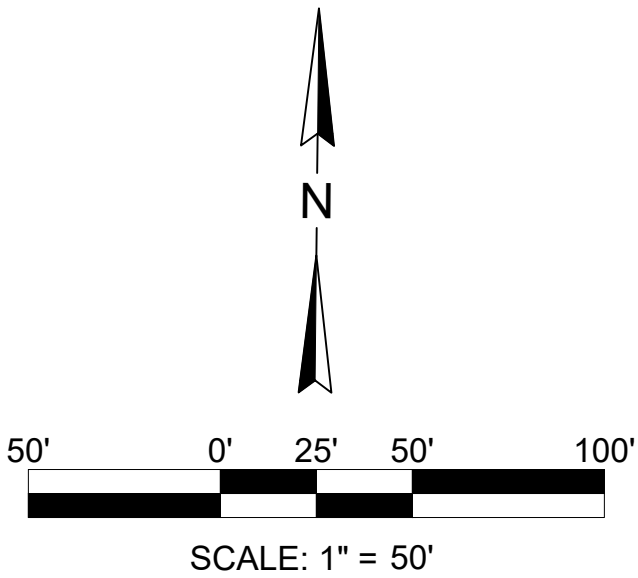
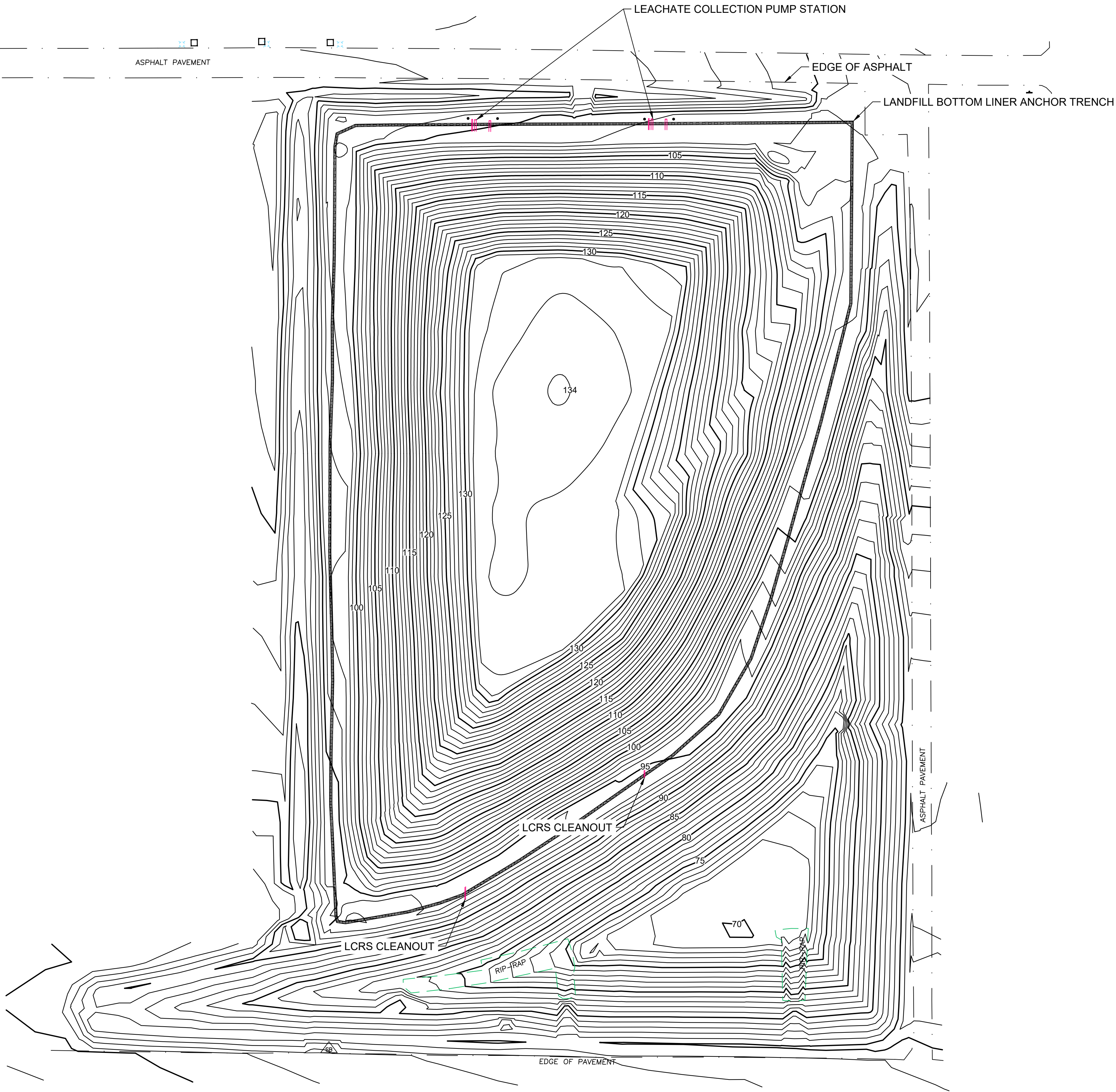
B

C

D

E

F



1

2

3


4

Signature	Date
Robert E. Mosley, P.E.	
Florida Registration #40776	

REV	DATE	DRAWN	CHKD	BY	REMARKS



EXISTING GRADES (2021)
PHASE II LANDFILL
CENTRAL LANDFILL
LAKE COUNTY, FLORIDA



531 Versailles Drive, Suite 202
Maitland, Florida 32751
(407) 475-9163 FAX 475-9169
Certification of Authorization # 7831

DRAWING NO.
C0

A B C D E F

LEGEND

- ✓ 97.31 ANCHOR TRENCH ELEVATION
✗ 97.09 EDGE OF LINER ELEVATION

Passive Gas Vent System Schedule						
Passive Vent No.	Northing	Easting	Well Elevation, ft. NGVD	Well Depth, ft	Perforated Pipe Length, ft	Solid Wall Pipe Length, ft
PV1	1609488.5	418335.0	134	12	9.5	2.5
PV2	1609484.7	418450.4	134	12	9.5	2.5
PV3	1609525.8	418600.7	107	12	9.5	2.5
PV4	1609345.0	418375.9	136	12	9.5	2.5
PV5	1609206.0	418368.5	134	12	9.5	2.5

NOTE: TABLE DOES NOT INCLUDE ABOVE GROUND PIPE. WELL ELEVATION REPRESENTS GROUND SURFACE ELEVATION.



Signature
Robert E. Mosley, P.E.
Florida Registration #40176
Date

REMARKS			
REV	DATE	DRAWN	CHKD
No		BY	BY
1			
2			
3			
4			



CLOSURE LINER BEDDING GRADING PLAN
PHASE II LANDFILL
CENTRAL LANDFILL
LAKE COUNTY, FLORIDA

531 Versailles Drive, Suite 202
Maitland, Florida 32751
(407) 475-9163 FAX 475-9169
Certification of Authorization # 7831
S2Li

DRAWING NO.
C1

\\file-server\data\working_files\Drawings Files\Lake County\22-9868 Phase II Closure Design\Production Drawings\C1 Liner Grading.dwg Jun 28, 2022 - 3:46 pm

A

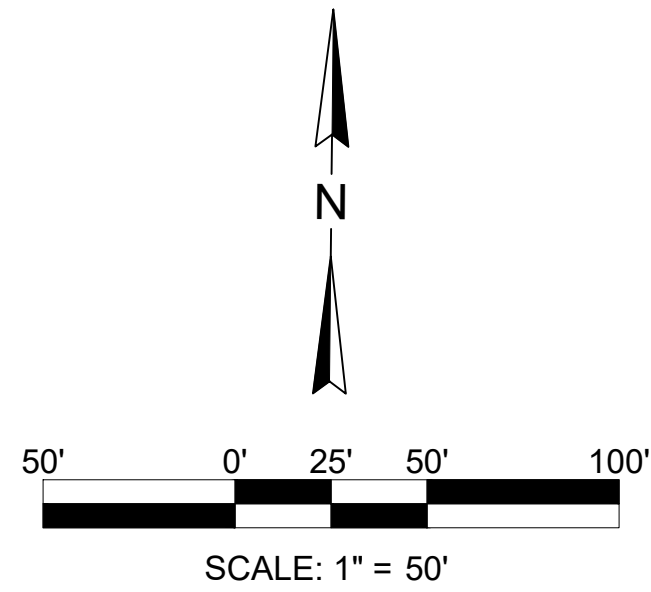
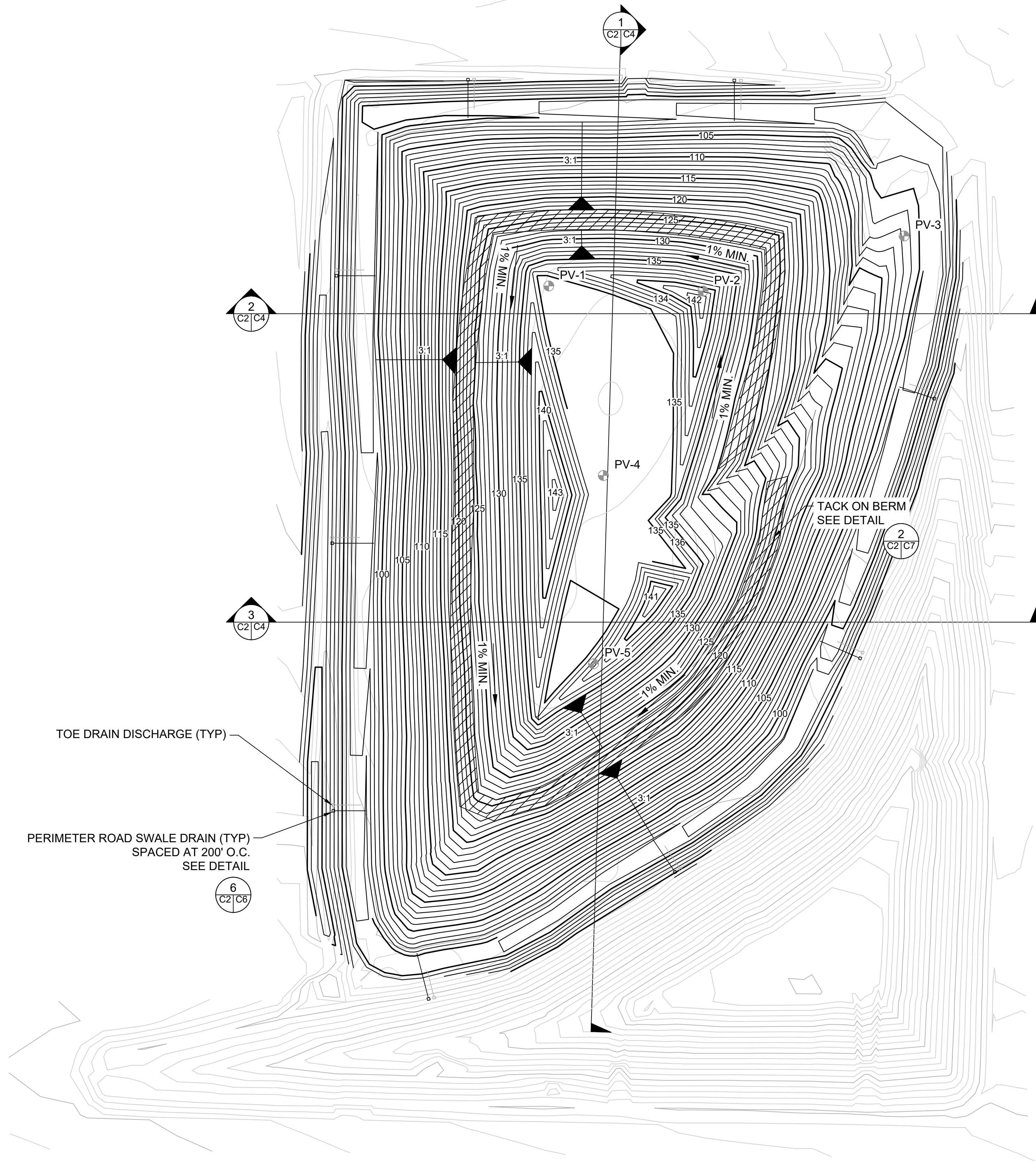
B

C

D

E

F



REV		DATE	DRAWN BY	CHKD BY	REMARKS



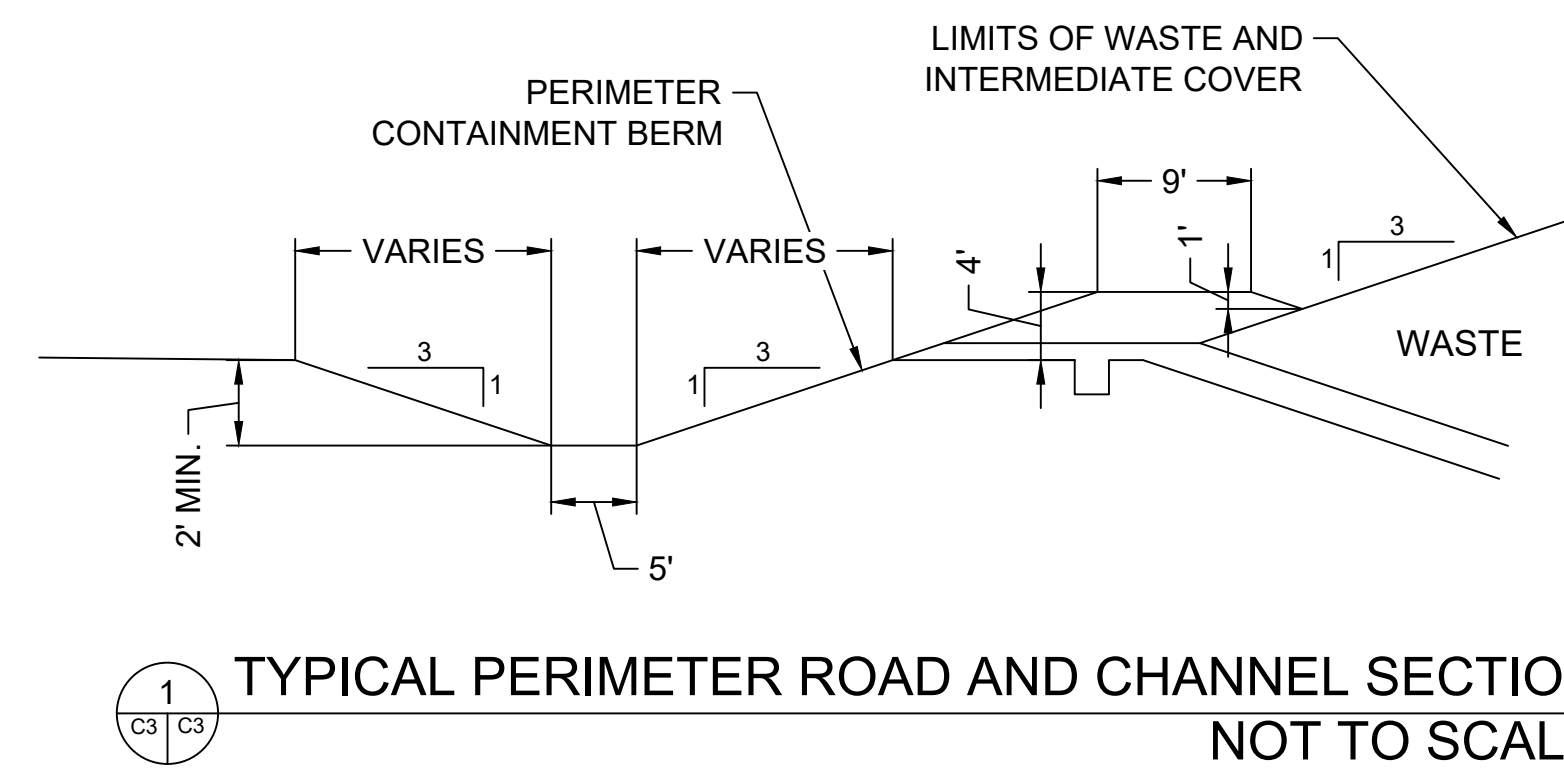
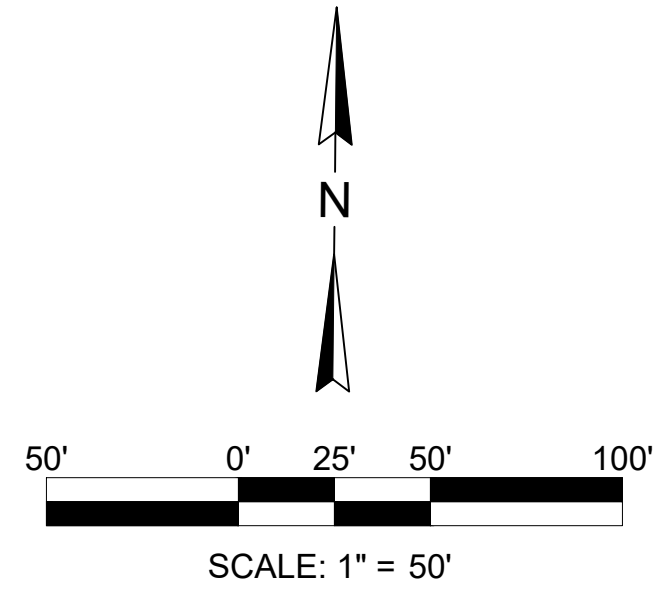
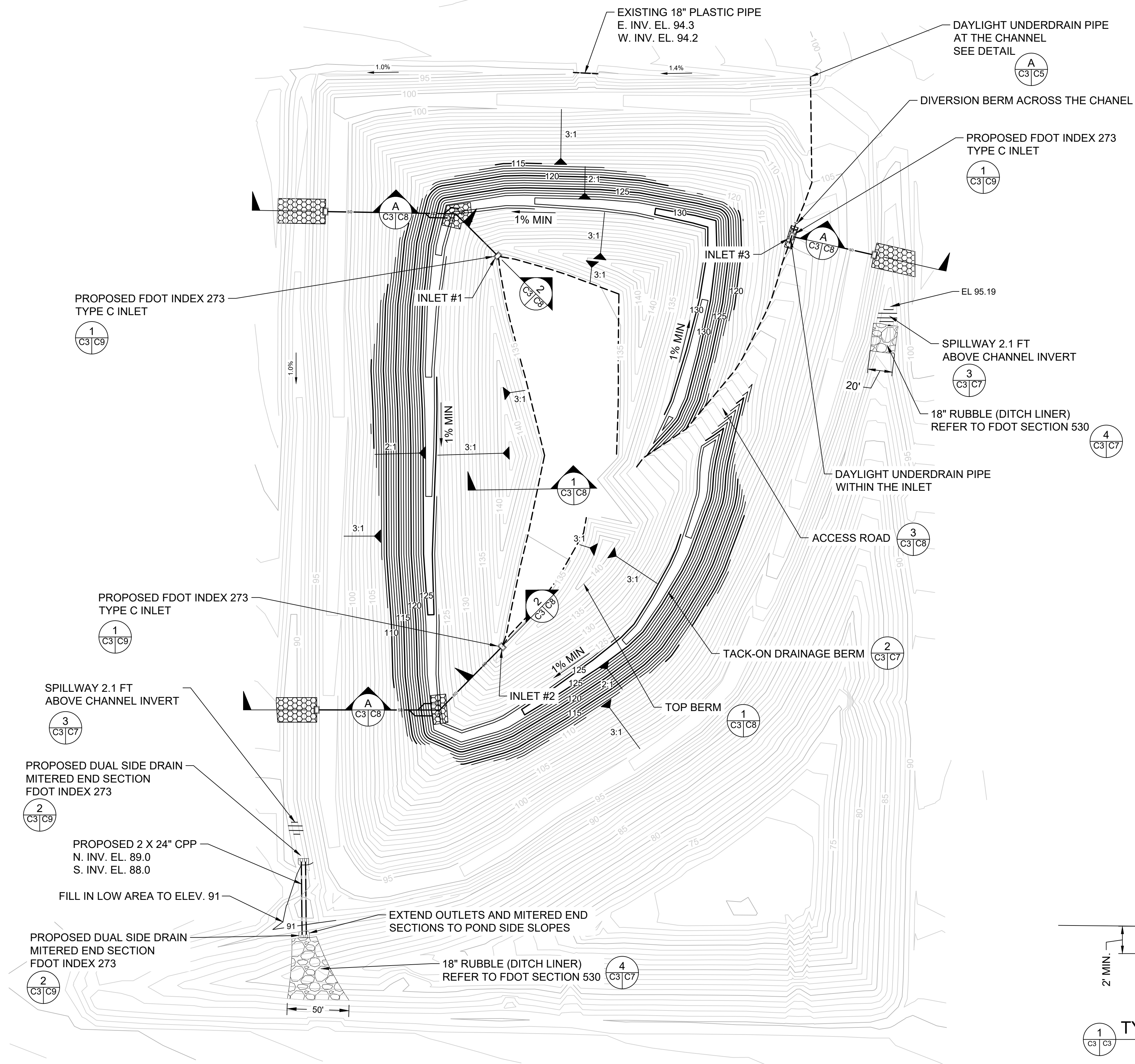
PROTECTIVE COVER GRADING PLAN
PHASE II LANDFILL
CENTRAL LANDFILL
LAKE COUNTY, FLORIDA



531 Versailles Drive, Suite 202
Maitland, Florida 32751
(407) 475-9163 FAX 475-9169
Certification of Authorization # 7831

DRAWING NO.
C2

Signature
Robert E. Mosley, P.E.
Florida Registration # 40176
Date



Signature

Robert E. Mackey, P.E.
Florida Registration #40776

Date

REV.	DATE	BY	CHKD.	REMARKS
1				
2				
3				
4				

LAKE COUNTY, FL
REAL FLORIDA - REAL CLOSURE

STORMWATER MANAGEMENT PLAN
PHASE III CELL CLOSURE
CENTRAL LANDFILL
LAKE COUNTY, FLORIDA

531 Versailles Drive, Suite 202
Maitland, Florida 32751
(407) 475-9163 FAX 475-9169
Certification of Authorization # 7831

DRAWING NO.
C3

A

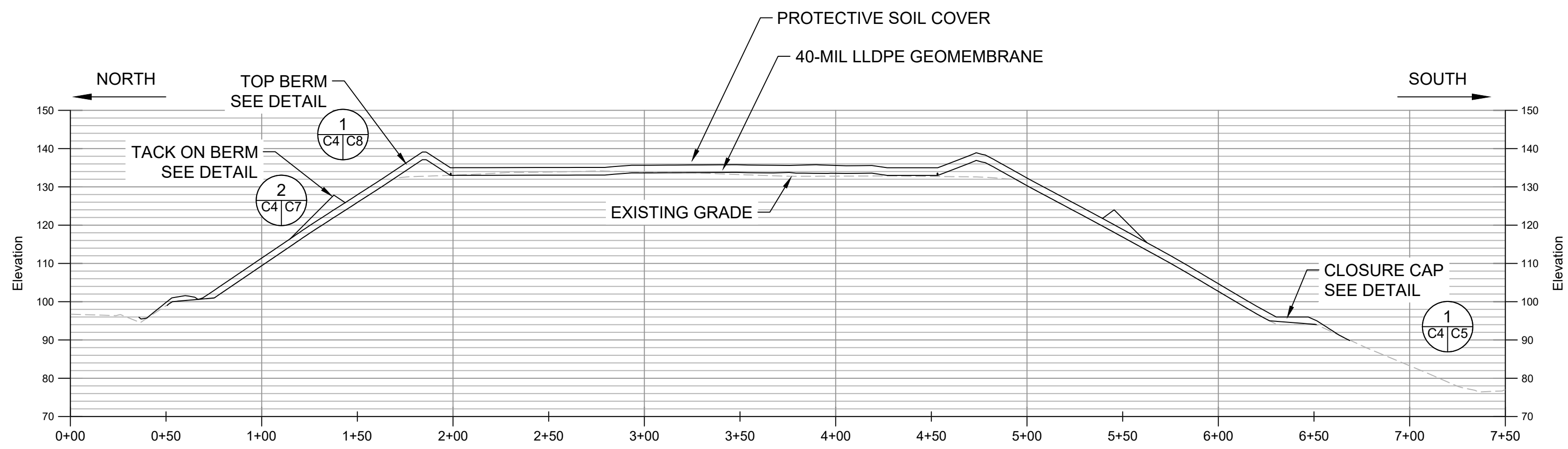
B

C

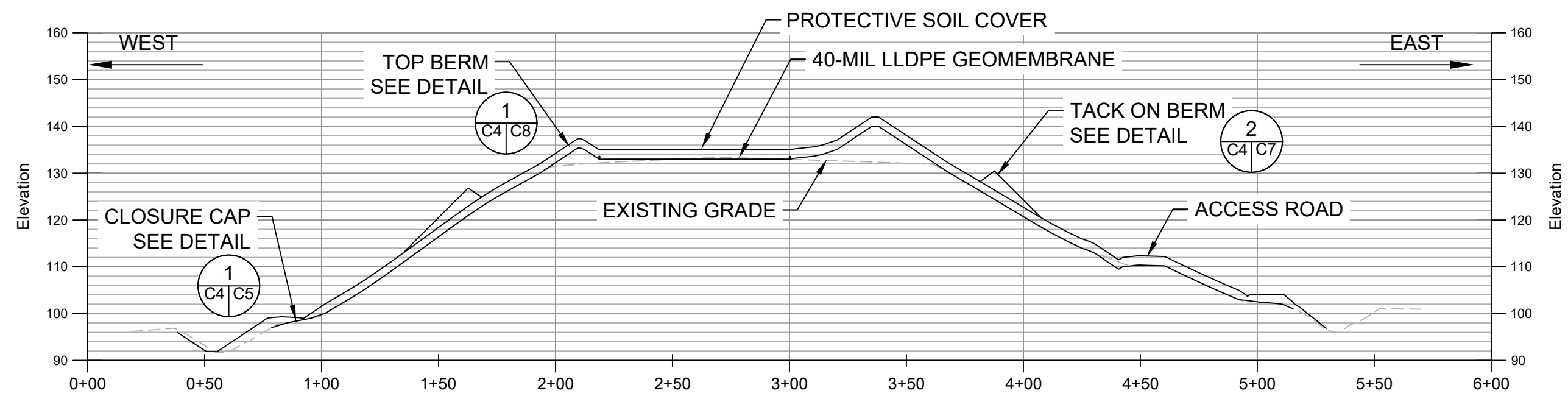
D

E

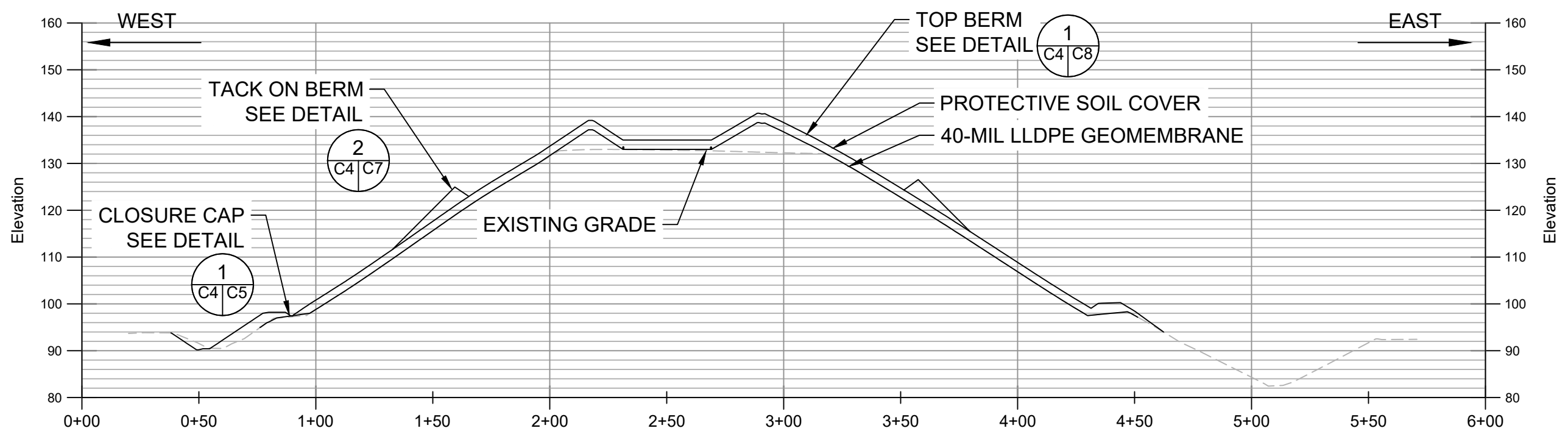
F



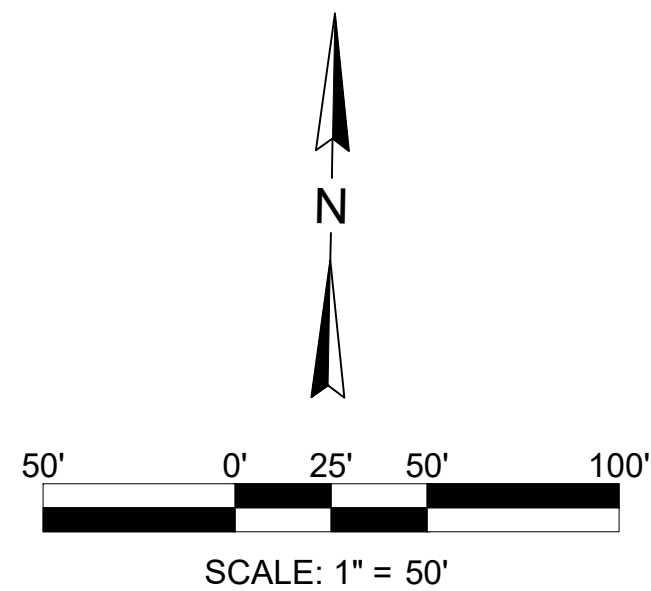
1 NORTH-SOUTH PROFILE VIEW
SCALE:
1" = 50' HORIZONTAL
1" = 25' VERTICAL



2 EAST-WEST PROFILE VIEW
SCALE:
1" = 50' HORIZONTAL
1" = 25' VERTICAL



3 EAST-WEST PROFILE VIEW
SCALE:
1" = 50' HORIZONTAL
1" = 25' VERTICAL



REV		DATE	DRAWN BY	CHKD BY	REMARKS

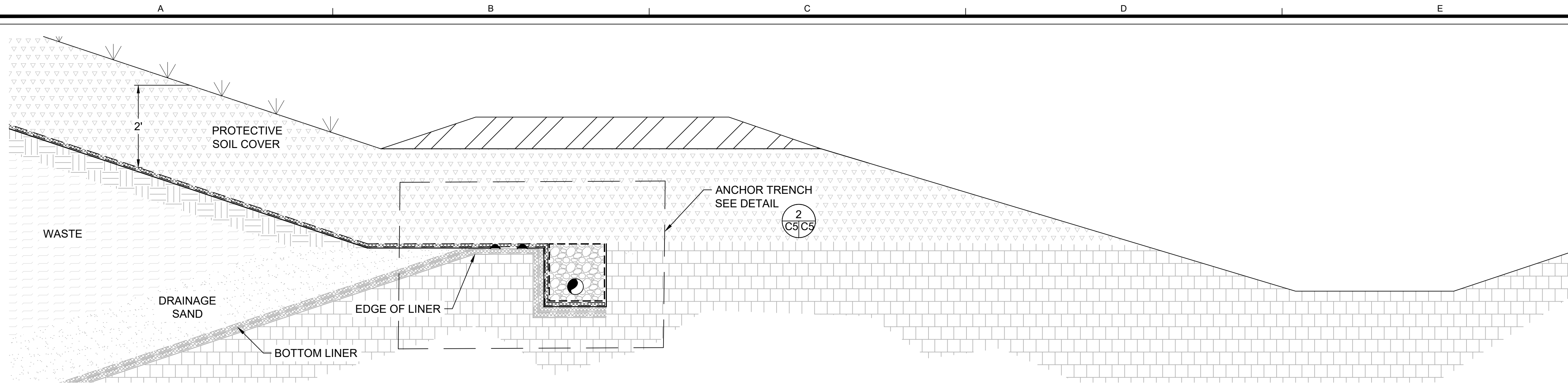


PROFILES
PHASE II LANDFILL
CENTRAL LANDFILL
LAKE COUNTY, FLORIDA

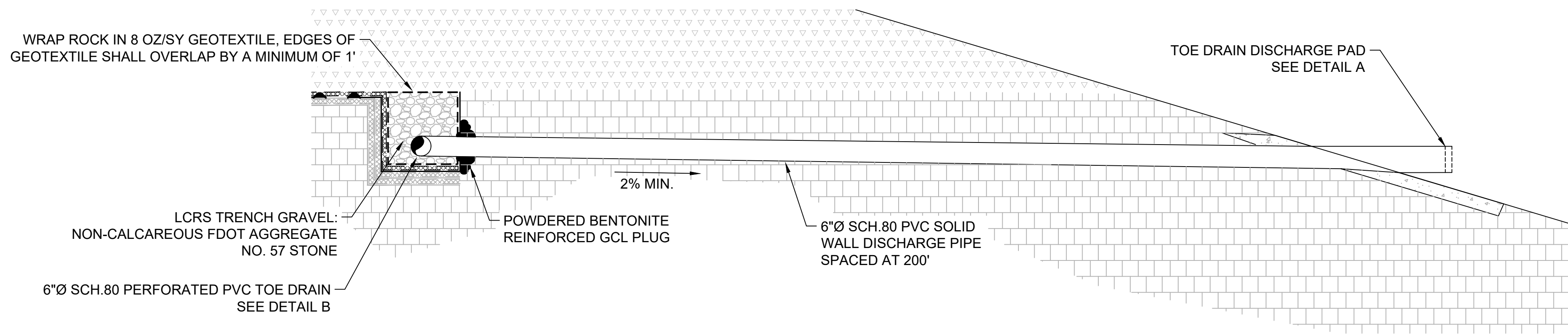
531 Versailles Drive, Suite 202
Maitland, Florida 32751
(407) 475-9163 FAX 475-9169
Certification of Authorization # 7831



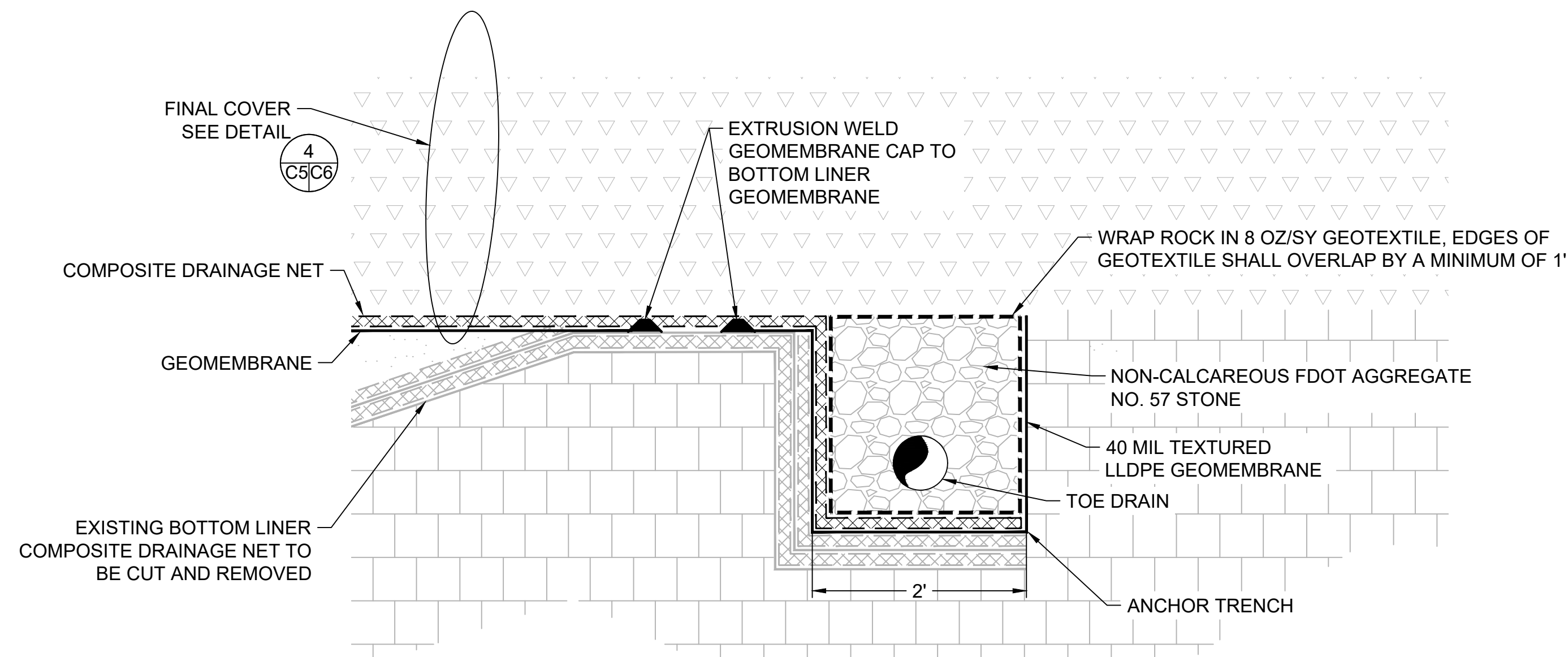
DRAWING NO.
C4



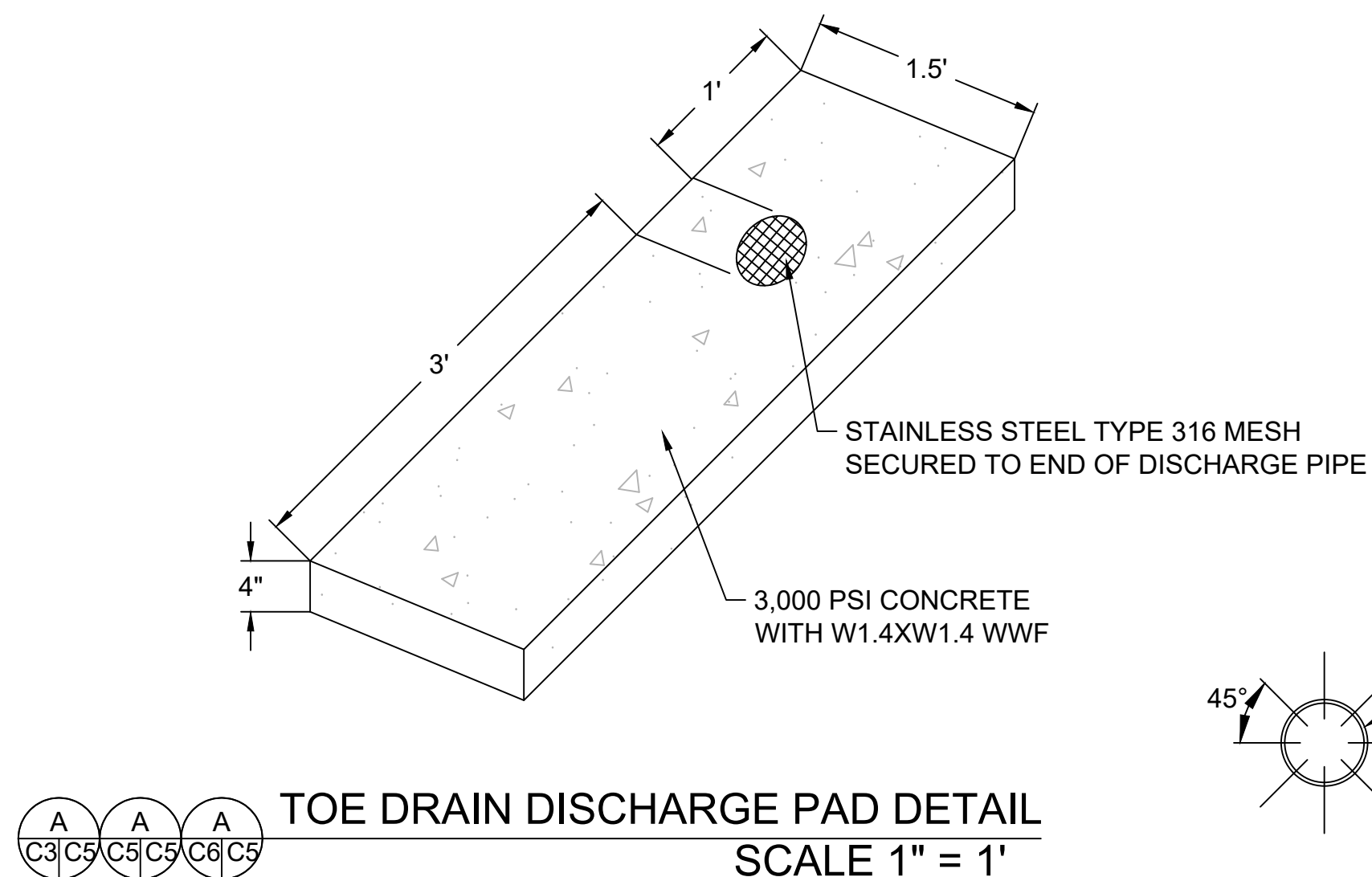
1 C4/C5 CLOSURE CAP DETAIL
SCALE 1" = 2'



3 C1/C5 TOE DRAIN DISCHARGE DETAIL
SCALE 1" = 2'

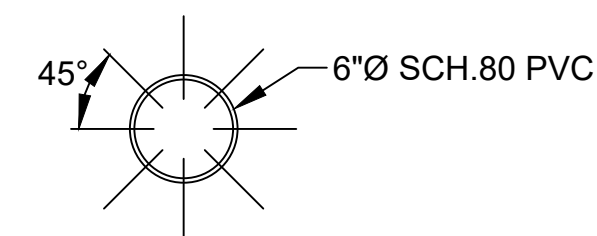


2 C1/C5 2 C5/C5 2 C6/C5 ANCHOR TRENCH DETAIL
SCALE 1" = 1'



A C3/C5 A C5/C5 A C6/C5 TOE DRAIN DISCHARGE PAD DETAIL
SCALE 1" = 1'

NOTE: SS MESH SHALL BE SECURED TO THE END OF THE DISCHARGE PIPE WITH A SS WORM GEAR CLAMP PRIOR TO PLACEMENT OF CONCRETE. SS MESH IS NOT NEEDED FOR THE DISCHARGE PAD FOR THE PERIMETER ROAD.



B C5/C5 6"Ø PERFORATED TOE DRAIN PIPE DETAIL
SCALE 1" = 1'



DETAILS (1 OF 5)
PHASE II LANDFILL
CENTRAL LANDFILL
LAKE COUNTY, FLORIDA

531 Versailles Drive, Suite 202
Maitland, Florida 32751
(407) 475-9163 FAX 475-9169
Certification of Authorization # 7831

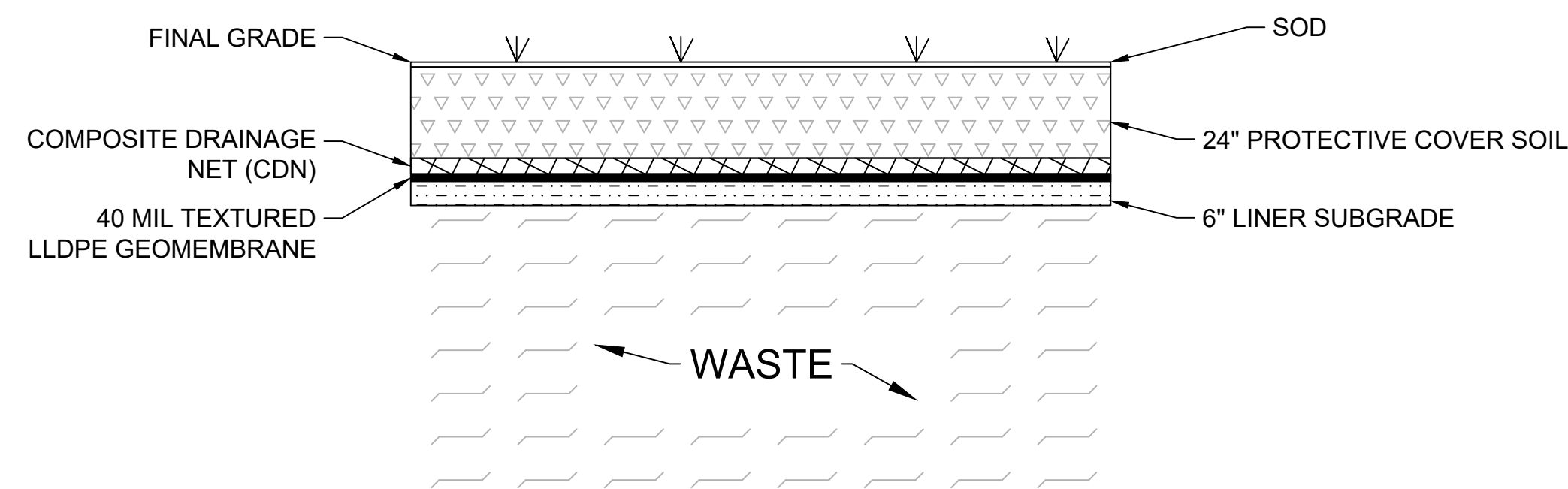
\$21i

DRAWING NO.
C5

Signature
Robert E. Mackey, P.E.
Florida Registration # 40176

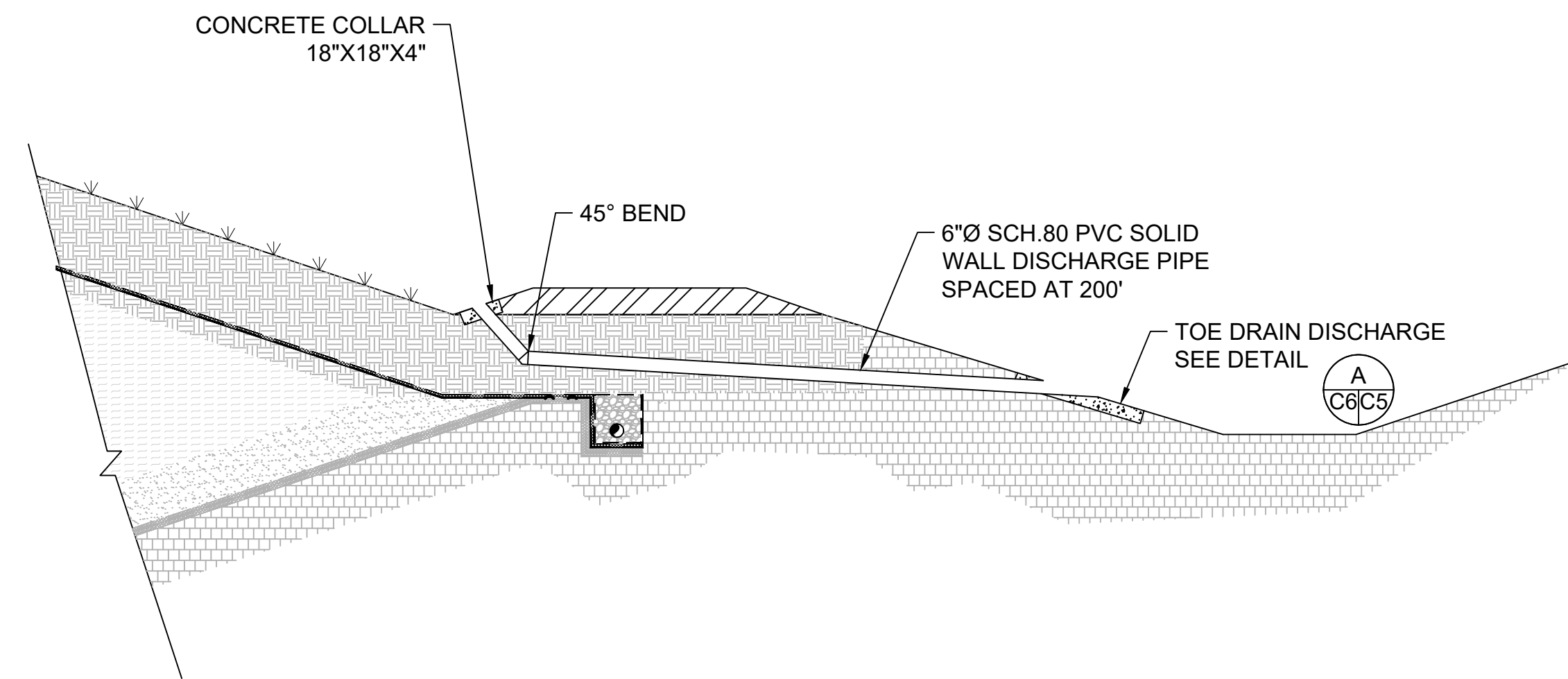
REV.	DATE	BY	CHKD	DATE	REMARKS

\\file-server\data\working files\lake county\22-886 Phase II Closure Design\Production Drawings\C5-Details.dwg Jun 28, 2022 - 4:57 pm



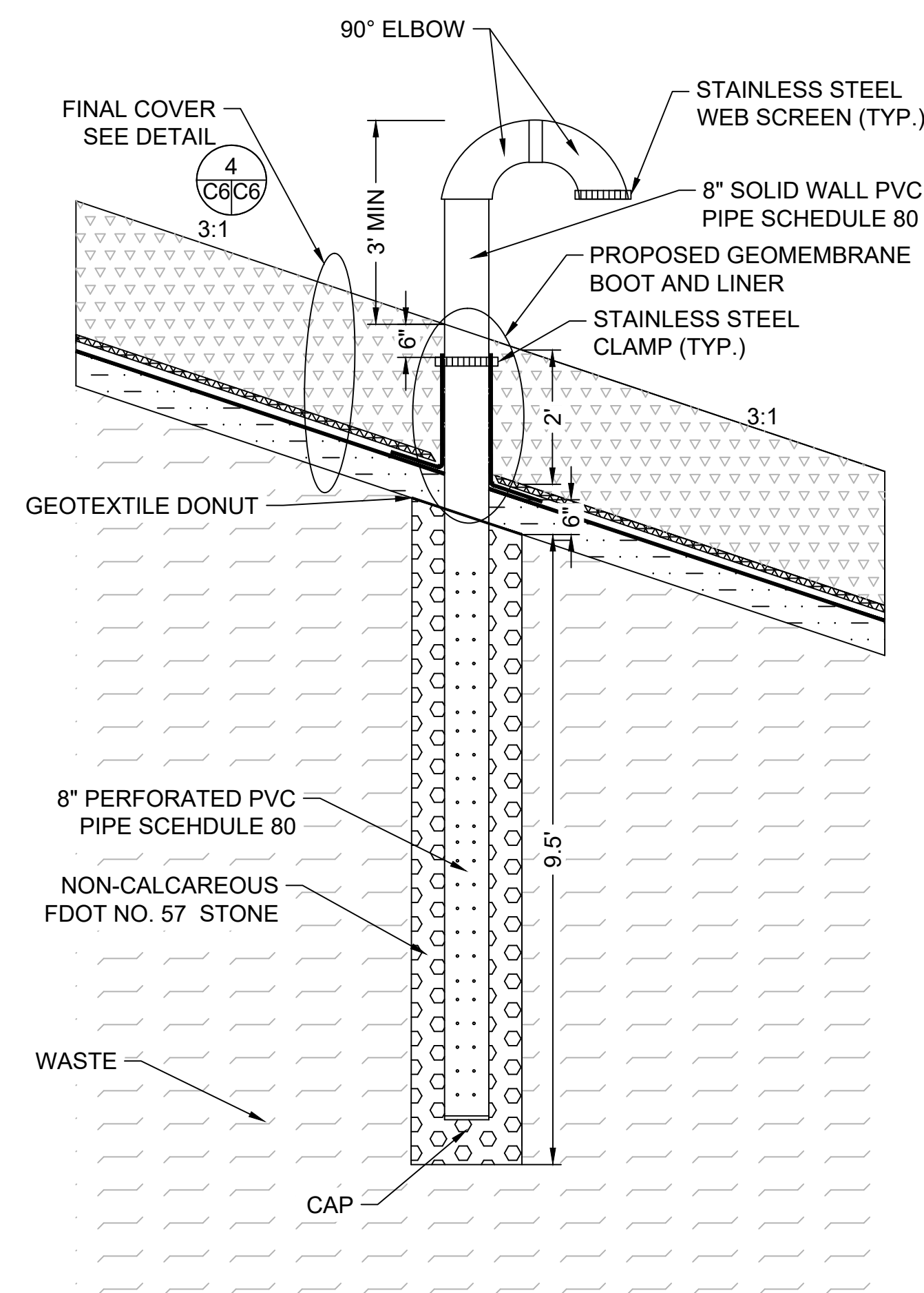
4
C5C6 4
C6C6 4
C8C6

FINAL CAP SECTION (ON TOP AND SIDE SLOPE)
SCALE: 1" = 3'



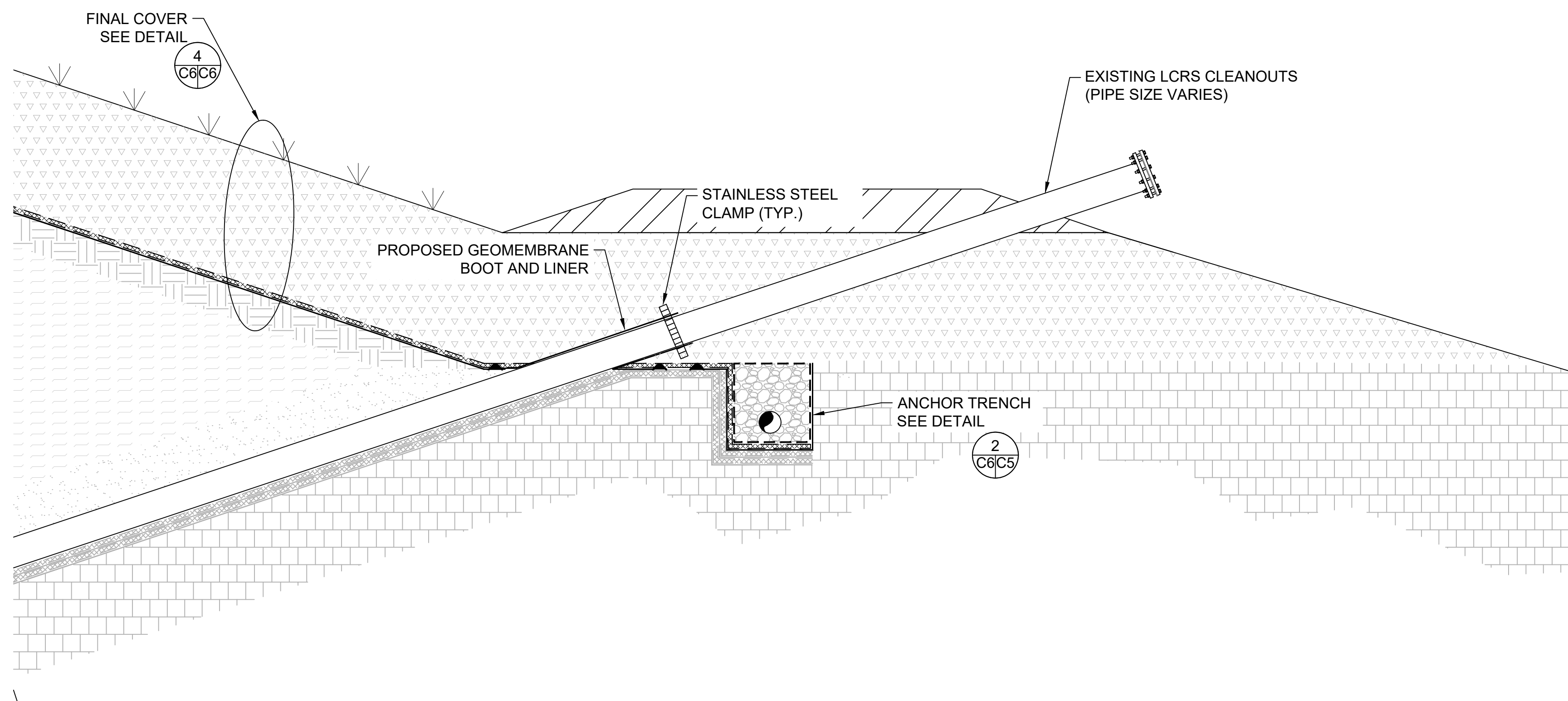
6
C2C6

PERIMETER ROAD SWALE DRAIN
SCALE: 1" = 5'



5
C1C6

PASSIVE GAS VENT DETAIL
SCALE: 1" = 2'



7
C1C6

LEACHATE PIPE CLEANOUT GEOMEMBRANE BOOT
SCALE: 1" = 2'

Signature _____ Date _____
Robert E. Mackey, P.E.
Florida Registration # 40176

REV.	DATE	BY	CHKD	BY	REMARKS



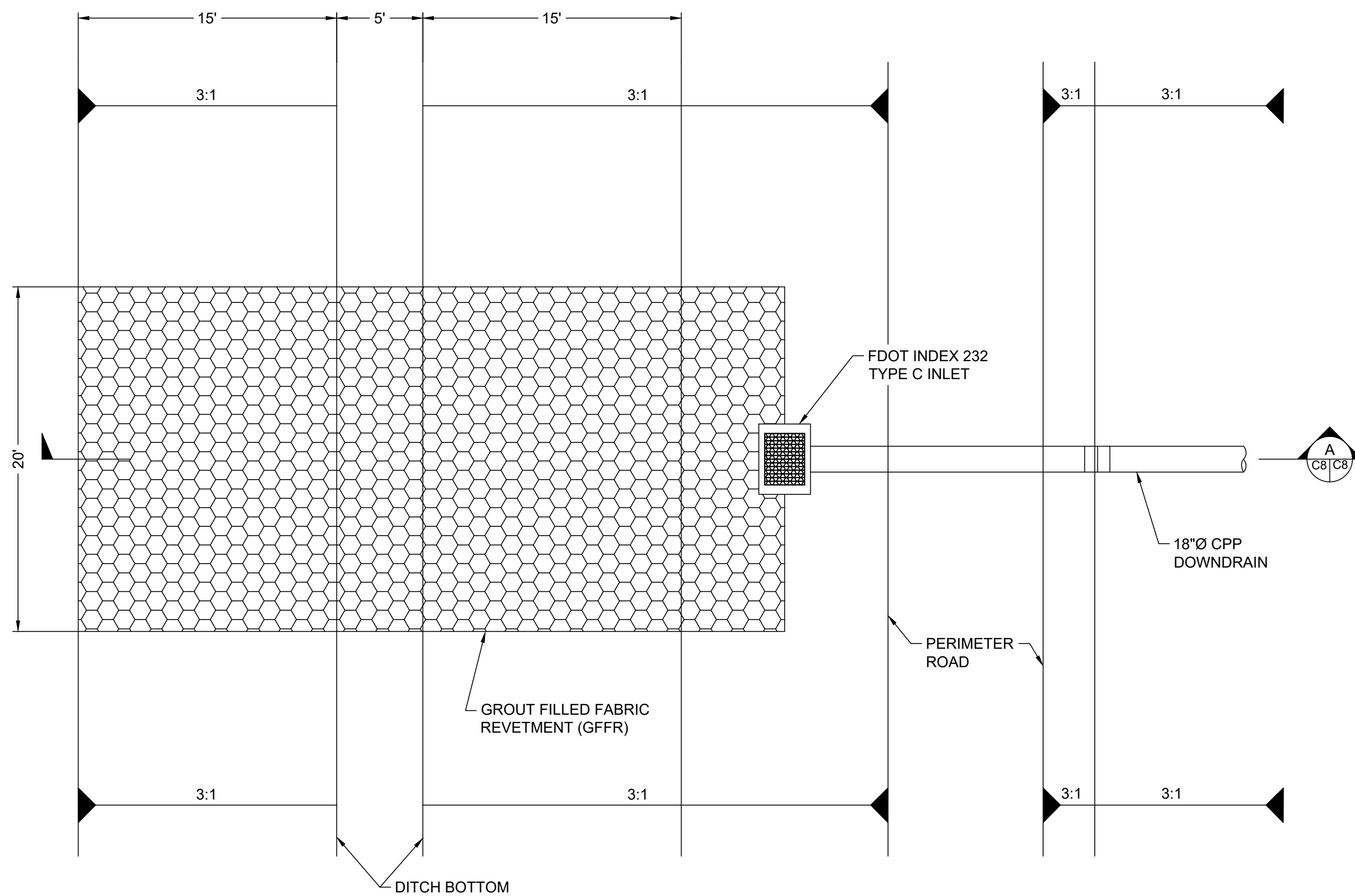
DETAILS (2 OF 5)
PHASE II LANDFILL
CENTRAL LANDFILL
LAKE COUNTY, FLORIDA

531 Versailles Drive, Suite 202
Maitland, Florida 32751
(407) 475-9163 FAX 475-9169
Certification of Authorization # 7831

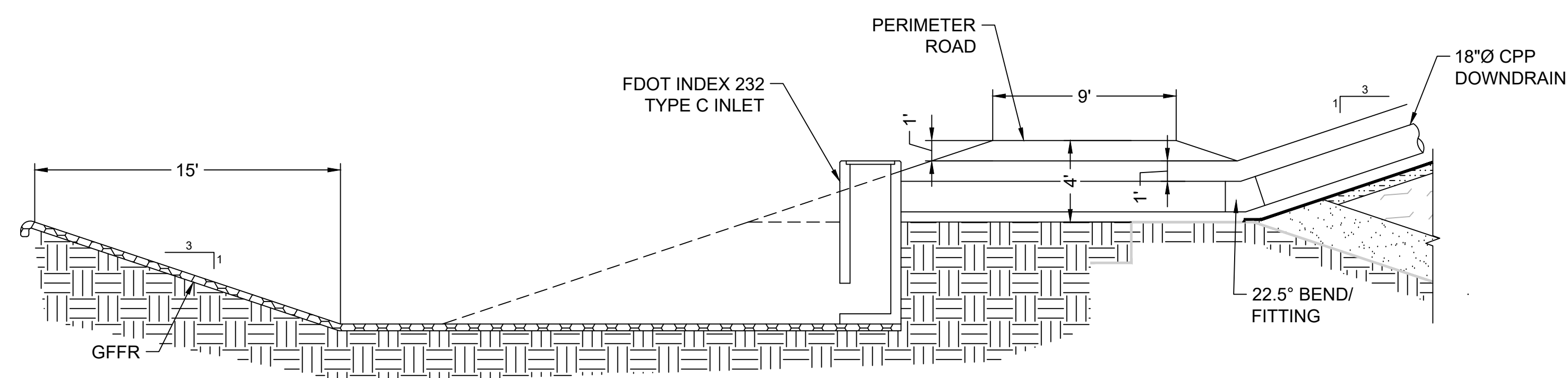
S2Li

DRAWING NO.
C6

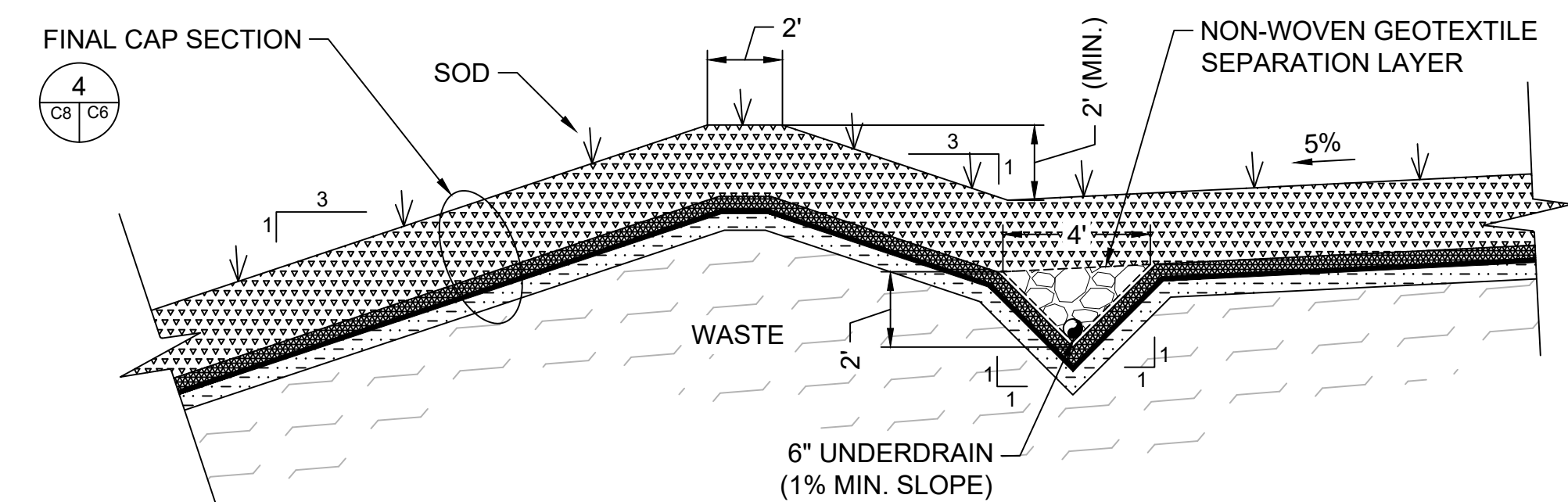
\\file-server\data\working files\lake county\22-886 Phase II Closure Design\Production Drawings\C6-Details.dwg Jun 28, 2022 - 4:58 pm



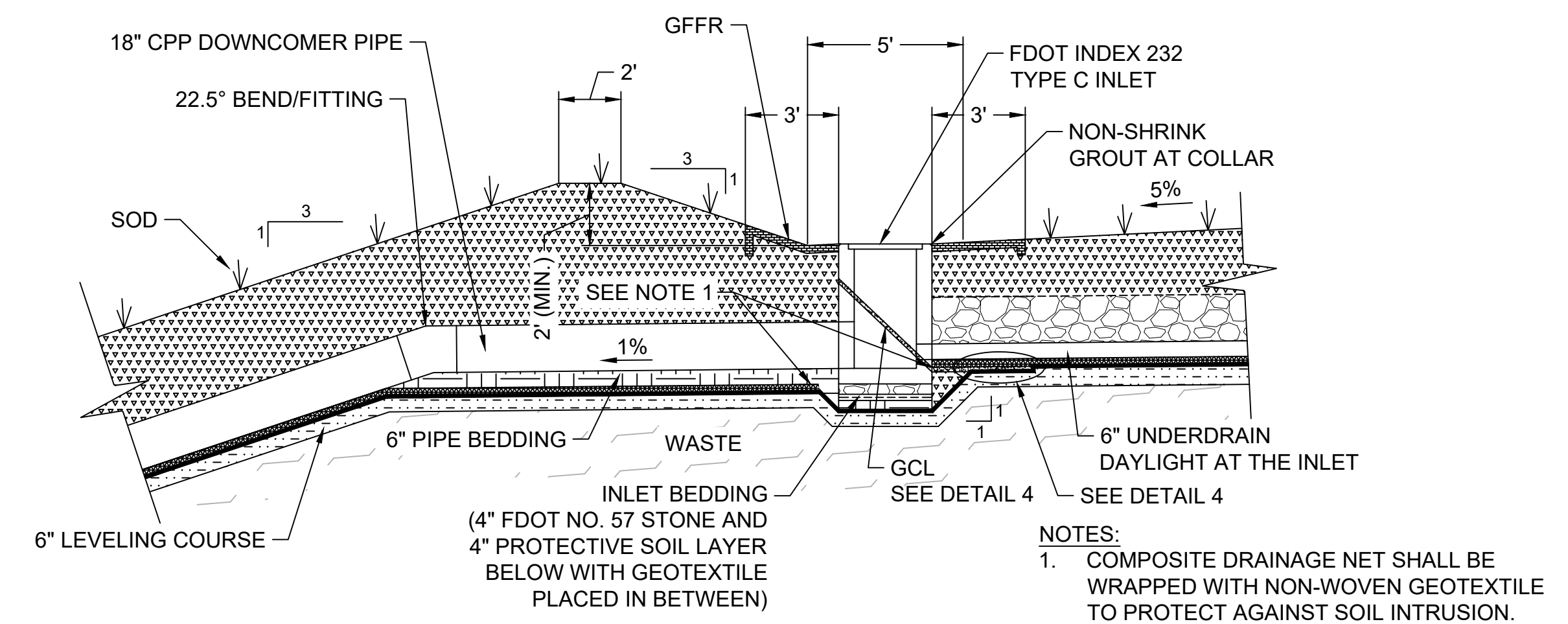
DOWNDRAIN DISCHARGE STRUCTURE (PLAN)
NOT TO SCALE



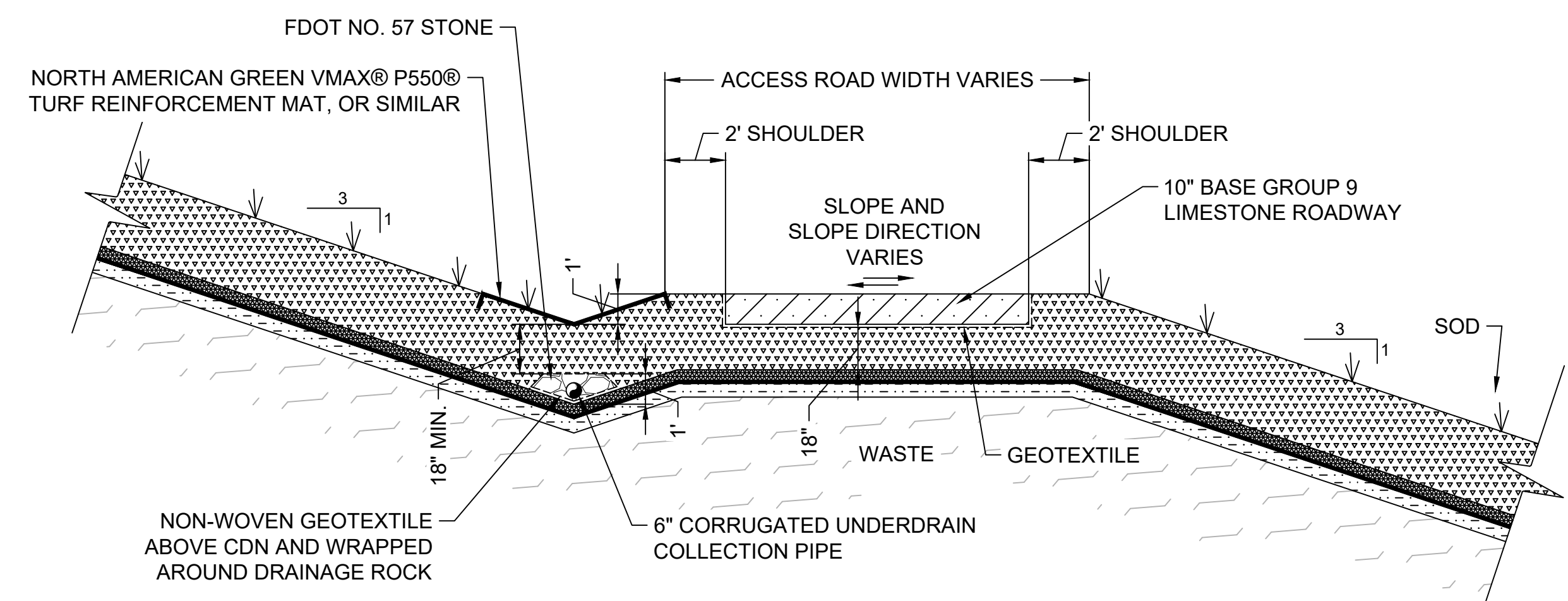
DOWNDRAIN DISCHARGE STRUCTURE (SECTION)
NOT TO SCALE



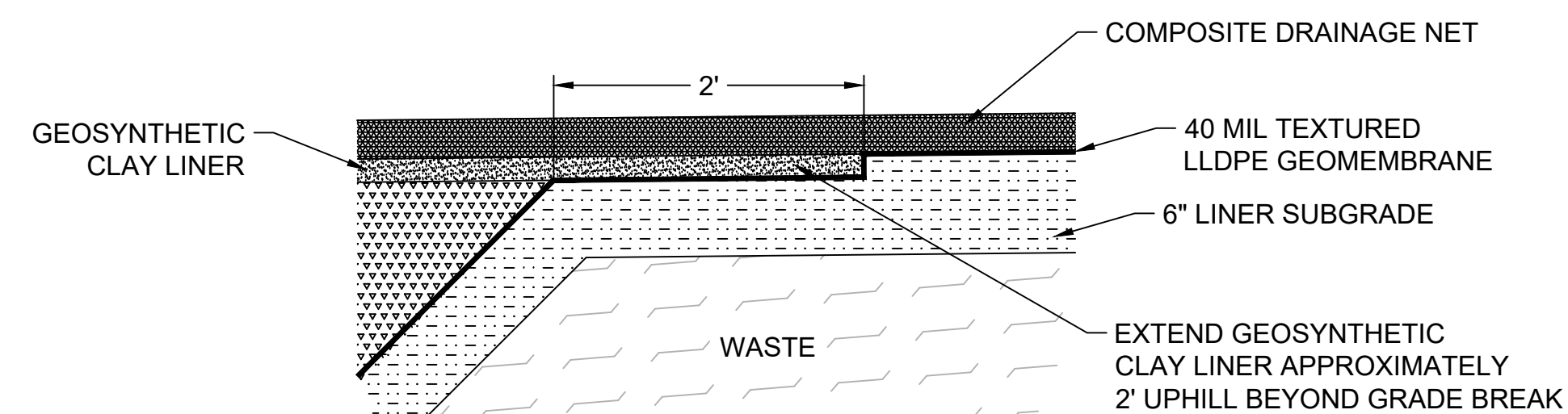
TOP BERM
NOT TO SCALE



TOP BERM AT INLET-SECTION
NOT TO SCALE



TYPICAL ACCESS ROAD OVER SIDESLOPE
NOT TO SCALE



BLOW-UP OF CAP AT BERM GRADE BREAK
NOT TO SCALE



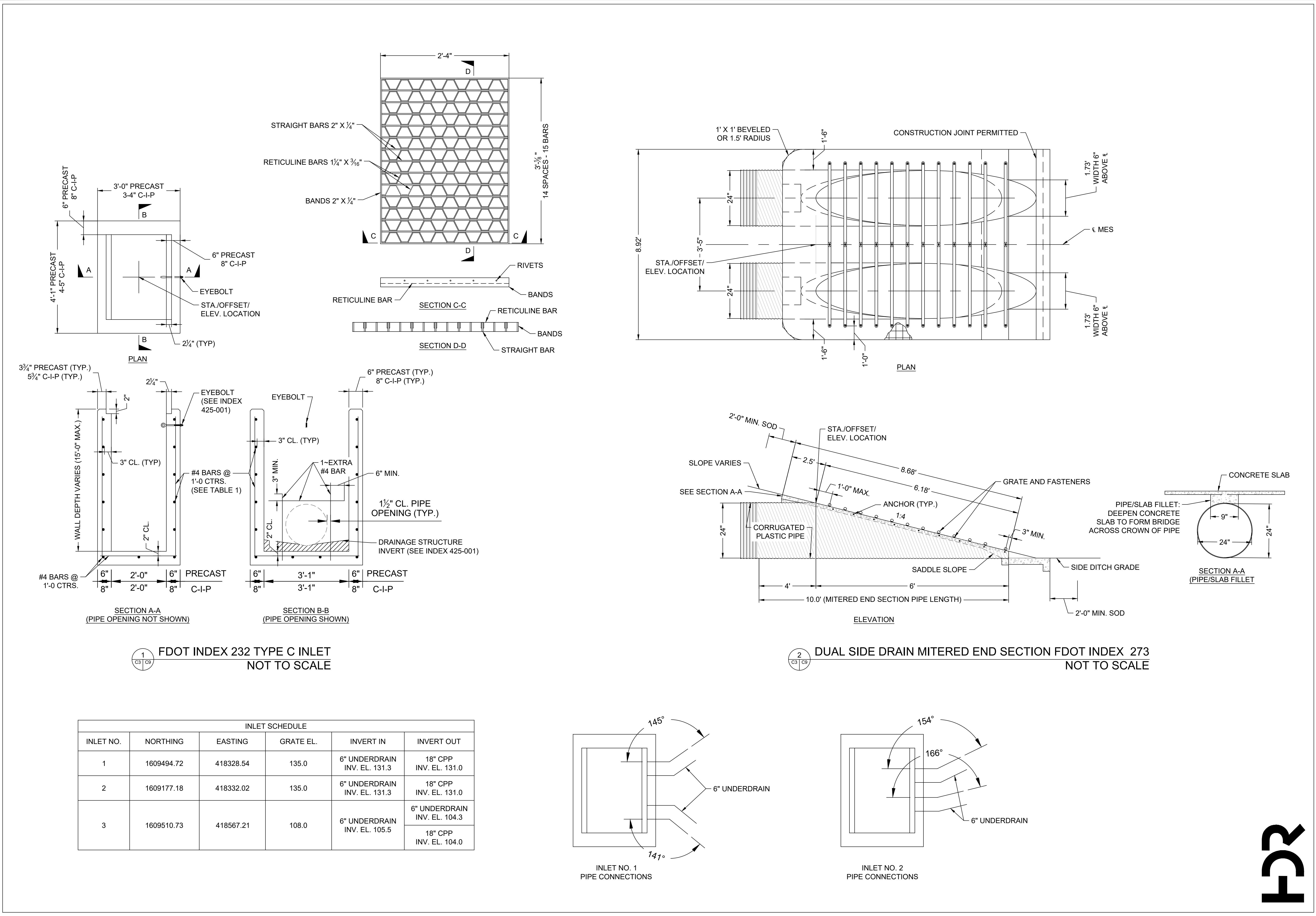
DETAILS (4 OF 5)
PHASE III CELL CLOSURE
CENTRAL LANDFILL
LAKE COUNTY, FLORIDA

531 Versailles Drive, Suite 202
Maitland, Florida 32751
(407) 475-9163 FAX 475-9169
Certification of Authorization # 7831

S2Li

DRAWING NO.
C8

HCR



REMARKS

1

2

3

4

DATE

BY

CHD

NO

REV

Signature

Robert E. Mackey, P.E.

Florida Registration #40776

LAKE COUNTY, FL

REAL FLORIDA • REAL CLOSE

DETAILS (5 OF 5)

PHASE III CELL CLOSURE

CENTRAL LANDFILL

LAKE COUNTY, FLORIDA

531 Versailles Drive, Suite 202

Maitland, Florida 32751

(407) 975-9163 FAX 475-9169

Certification of Authorization # 7831

DRAWING NO.

C9

Signature

Robert E. Mackey, P.E.

Florida Registration #40776