VOLUME II OF II
FDEP PERMIT APPLICATION
OPERATIONS & SEQUENTIAL CLOSURE PERMIT
FOR

CLASS III SOLID WASTE DISPOSAL CELL
TOMOKA FARMS ROAD LANDFILL
VOLUSIA COUNTY SOLID WASTE DIVISION

COUNTY OF VOLUSIA, FLORIDA

VOLUSIA COUNTY COUNCIL

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GEORGE RECKTENWALD	COUNTY MANAGER

Volusia County
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PUBLIC WORKS
SOLID WASTE DIVISION

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BRET LABRAM	OPERATIONS MANAGER
JENNIFER STIRK	ENVIRONMENTAL SPECIALIST III

NEEL-SCHAFFER
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Project No. NS.08607.011

AUGUST 2019
PERMIT PLAN SUBMITTAL

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Tue, 30 Jul 2019 - 12:51pm

ABBREVIATIONS

ADJ	ADJUST
ADMIN.	ADMINISTRATION
A.R.V.	AIR RELEASE VALVE
A.R.V.V.	AIR RELEASE VACUUM VALVE
ADD'L.	ADDITIONAL
APPROX.	APPROXIMATELY
ARCH.	ARCHITECT
ASPH.	ASPHALT
ASSEM.	ASSEMBLY
BL	BASELINE
BLK.	BLOCK
B.M.	BENCH MARK
B.O.	BLOW-OFF
B.V.	BALL VALVE
B.F.V.	BUTTERFLY VALVE
C.B.	CATCH BASIN
C.F.	CUBIC FEET
C.F.S.	CUBIC FEET PER SECOND
CHDPE	CORRUGATED HDPE
CIP	CAST IRON PIPE
CL	CENTERLINE
C.M.	CONCRETE MONUMENT
C.M.P.	CORRUGATED METAL PIPE
CDN	COMPOSITE DRAINAGE NET
CONC.	CONCRETE
CONN.	CONNECTION
CONST.	CONSTRUCT
CONT.	CONTINUOUS
C.Y.	CUBIC YARD
DBI	DITCH BOTTOM INLET
DBL.	DOUBLE
DHW	DESIGN HIGH WATER
DIA.	DIAMETER
DIP	DUCTILE IRON PIPE
DWG.	DRAWING
ELEC	ELECTRIC
EA.	EACH
EL.	ELEVATION
EMB.	EMBED OR EMBEDDED
EP	EDGE OF PAVEMENT
ESMT.	EASEMENT
E.W.	EACH WAY
EXIST.	EXISTING
FIN.	FINISH
FLG.	FLANGE
FM	FORCE MAIN
FT.	FEET
GA	GAUGE
GAL.	GALLONS
GEN.	GENERATOR
GR.	GRADE
GRD.	GROUND
GM	GAS MAIN
GPM	GALLONS PER MINUTE
GV	GATE VALVE
HDPE	HIGH DENSITY POLYETHYLENE
HT.	HEIGHT
HP	HIGH POINT
HORIZ.	HORIZONTAL
H.W.L.	HIGH WATER LEVEL
I.D.	INSIDE DIAMETER
IN.	INCHES
INV.	INVERT
I.P.	IRON PIPE
I.R.	IRON ROD
J.B.	JUNCTION BOX
JUNC	JUNCTION
LAT.	LATERAL
LBS.	POUNDS
LF	LINEAL FEET
L.S.	LIFT STATION
LT.	LEFT
LLDPE	LINEAR LOW DENSITY POLYETHYLENE
MAINT.	MAINTENANCE
MAX.	MAXIMUM
MATL	MATERIAL
M.E.S.	MITERED END SECTION
MFR.	MANUFACTURER
M.H.	MANHOLE
MIN.	MINIMUM
MOD.	MODIFIED
N.G.V.D.	NATIONAL GEODETIC VERTICAL DATUM
N.I.C.	NOT IN CONTRACT
NO.	NUMBER
NOM.	NOMINAL
N.T.S.	NOT TO SCALE
O.C.	ON CENTER
O.D.	OUTSIDE DIAMETER
O.E.	OR EQUAL
P.E.	PLAIN END
P/L	PROPERTY LINE
POLY.	POLYETHYLENE
PP	POWER POLE
PR	PAIR
PROP.	PROPOSED
PS	PUMP STATION
P.S.I.	POUNDS PER SQUARE INCH
PVC	POLYVINYL CHLORIDE
RP	RADIUS POINT
R	RADIUS
RCP	REINFORCED CONCRETE PIPE
RED.	REDUCER
REINF.	REINFORCEMENT
REQ.	REQUIRED
SCH.	SCHEDULE
SCFM	STANDARD CUBIC FEET PER MINUTE
S.D.	STORM DRAIN
SDR	SIDEWALL DIAMETER RATIO
S.F.	SQUARE FEET
SHT.	SHEET
SPECS.	SPECIFICATIONS
SQ.	SQUARE
SS	STAINLESS STEEL
STA.	STATION
STD.	STANDARD
T&B	TOP AND BOTTOM
TBM	TEMPORARY BENCH MARK
TDR	TERRACE DRAIN
TEMP.	TEMPORARY OR TEMPERATURE
TYP.	TYPICAL
VERT.	VERTICAL
w/	WITH

GENERAL NOTES

1. THESE PLANS ARE FOR PERMITTING PURPOSES ONLY. OTHER PLANS AND/OR DETAILS MAY BE REQUIRED FOR CONSTRUCTION.
2. EXISTING CONTOURS ARE BASED ON AERIAL PHOTOGRAMMETRIC SURVEY PERFORMED BY PICKETT AND ASSOCIATES, DATED JULY 11, 2018.
3. PROPOSED CONTOURS ARE BASED ON COUNTY'S PLANS FOR OPERATION AND FILLING SEQUENCE OF THIS LANDFILL.
4. MAXIMUM PROPOSED SIDESLOPES ARE FOUR (4) FEET HORIZONTAL TO ONE (1) FOOT VERTICAL FROM THE TOE OF THE LANDFILL AND 12.5 FEET HORIZONTAL TO ONE (1) FOOT VERTICAL FROM ELEVATION 181 NGVD TO ELEVATION 189 NGVD.
5. A MINIMUM OF 20 FEET SETBACK FOR BENCHED TERRACE IS PLANNED FOR THE LANDFILL ELEVATIONS 45, 65, 85, 105, 125, 145 AND 165 NGVD.
6. SIDESLOPES WILL BE FILLED AND GRADED WITH SOLID WASTE PRIOR TO CONSTRUCTION OF THE CLOSURE COVER.
7. SURPLUS EARTH MATERIAL OR SOLID WASTE EXCAVATED AS A RESULT OF THE PROPOSED GRADING PLAN CONSTRUCTION WILL BE PLACED IN THE CLASS III LANDFILL.
8. A PERMANENT LANDFILL ACCESS RAMP IS PLANNED WITH A GRADE OF 6% TO 9% WITH A CROSS SLOPE OF 2% TOWARD THE FILL AREA.
9. GRANULAR FILL MATERIAL FOR LEVELING COURSE AND PROTECTIVE COVER WILL BE HAULED FROM ON-SITE SOURCES BY CONTRACTOR.

SECTION & DETAIL CALL-OUT SYMBOLS

TYPICAL CROSS SECTION CALL-OUT

TYPICAL DETAIL CALL-OUT

NOTE:

IF SECTION OR DETAIL IS DRAWN ON THE SAME SHEET THAT IT IS TAKEN FROM, THE DRAWING NUMBER IS REPLACED WITH A HYPHEN. IF THE SECTION IS REFERENCED ON MULTIPLE SHEETS, THE DRAWING NUMBER SHOWN INDICATES THE FIRST SHEET THE SECTION IS TAKEN FROM.

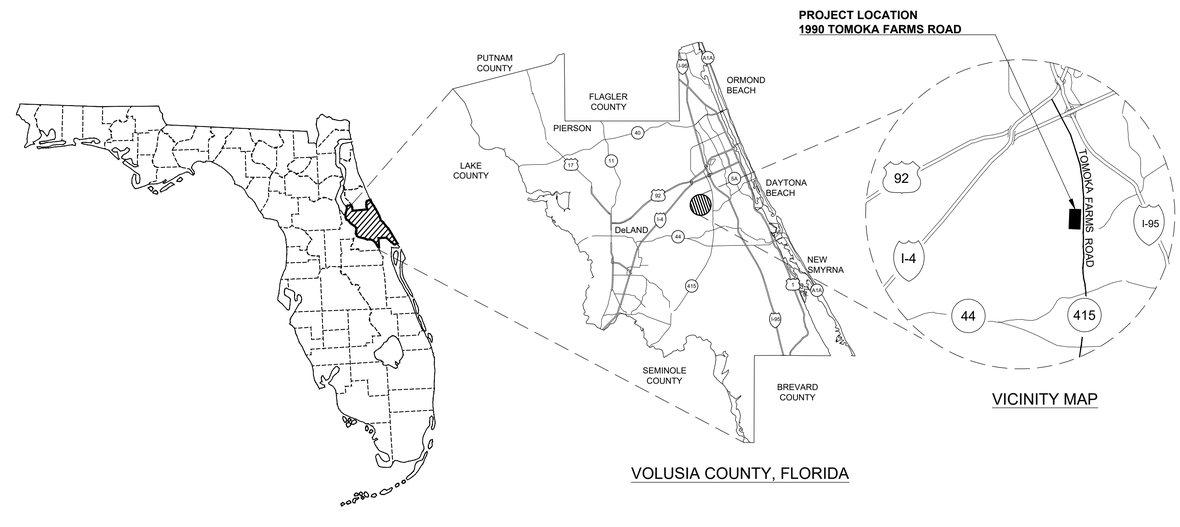
SHEET INDEX

SHT. NO.	DWG NO.	DESCRIPTION
1	G-0	COVER
2	G-1	SITE LOCATION, NOTES, LEGEND, SHEET INDEX & ABBREVIATIONS
3	G-2	OVERALL AERIAL AND TOPOGRAPHIC SURVEY
4	G-3	OVERALL SITE PLAN - CLASS III LANDFILL
5	C-1	PROPOSED GRADING PLAN
6	C-2	PROPOSED GRADING PLAN - POND EXTENSION
7	C-3	PROPOSED GRADING PLAN - NORTH
8	C-4	PROPOSED GRADING PLAN - SOUTH
9	C-5	PROPOSED OVERALL GRADING CROSS SECTION
10	C-6	PROPOSED OVERALL GRADING CROSS SECTION
11	C-7	PROPOSED STORMWATER MANAGEMENT SYSTEM PLAN
12	C-8	PROPOSED DITCH CROSS SECTIONS
13	C-9	STORMWATER STRUCTURE AND TERRACE SWALE SCHEDULES
14	C-10	PASSIVE GAS VENT PLAN
15	C-11	PROPOSED CLOSURE PHASING PLAN
16	CD-1	CLOSURE CONSTRUCTION DETAILS
17	CD-2	CLOSURE CONSTRUCTION DETAILS
18	CD-3	CLOSURE CONSTRUCTION DETAILS
19	CD-4	CLOSURE CONSTRUCTION DETAILS
20	CD-5	CLOSURE CONSTRUCTION DETAILS
21	CD-6	CLOSURE CONSTRUCTION DETAILS
22	OP-1	STAGE 1/STAGE 2 FILL SEQUENCE
23	OP-2	STAGE 3/STAGE 4 FILL SEQUENCE

LEGEND

SOLID WASTE	SOLID WASTE
	NON-LIMESTONE RIVER ROCK
	FILTER SAND
	ROUND RIVER STONE
	SOD
	TOP SOIL
	GRANULAR FILL (PROTECTIVE COVER)
	GRANULAR FILL (LEVELING LAYER)
	UNDISTURBED EARTH
	FFCRS (FABRIFORM CONCRETE REVETMENT SYSTEM)
	GEOMEMBRANE
	COMPOSITE DRAINAGE NET (CDN)
	LIMITS OF CONSTRUCTION
	GCL
	PHASING BOUNDARY
85	EXISTING CONTOUR
85	PROPOSED CONTOUR
	SLOPE BREAK
6" TDR	PROPOSED TERRACE DRAINAGE PIPING AND SIZE
	PROPOSED STORMWATER INLET AND PIPING
B-X	STORMWATER STRUCTURE IDENTIFICATION NUMBER
	PROPOSED PASSIVE GAS VENT
GV-XX	PASSIVE GAS VENT IDENTIFICATION NUMBER

PROJECT LOCATION MAP



VICINITY MAP

VOLUSIA COUNTY, FLORIDA

NO.	DATE	REVISION	BY	APV'D

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SITE LOCATION, GENERAL NOTES, LEGEND, SHEET INDEX & ABBREVIATIONS

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CLASS III SOLID WASTE DISPOSAL CELL
TOMOKA FARMS ROAD LANDFILL
VOLUSIA COUNTY, FLORIDA

SEAL:

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

DATE:	AUG. 2019
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SHEET:	2 of 23

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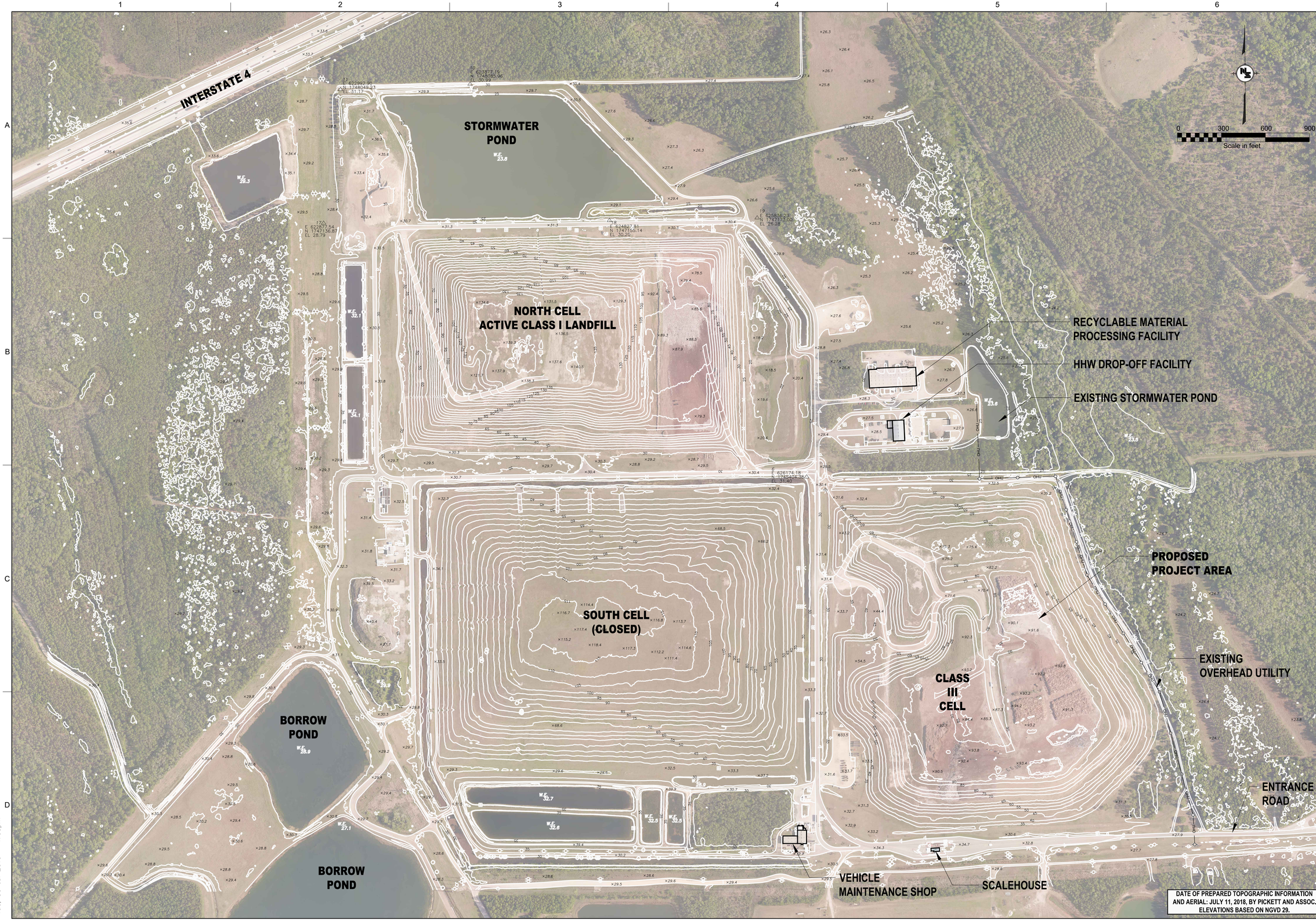

DATE OF PREPARED TOPOGRAPHIC INFORMATION AND AERIAL: JULY 11, 2018, BY PICKETT AND ASSOC. ELEVATIONS BASED ON NGVD 29.

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OVERALL AERIAL AND TOPOGRAPHIC SURVEY OF CLASS III DISPOSAL CELL

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CLASS III SOLID WASTE DISPOSAL CELL
TOMOKA FARMS ROAD LANDFILL
VOLUSIA COUNTY, FLORIDA

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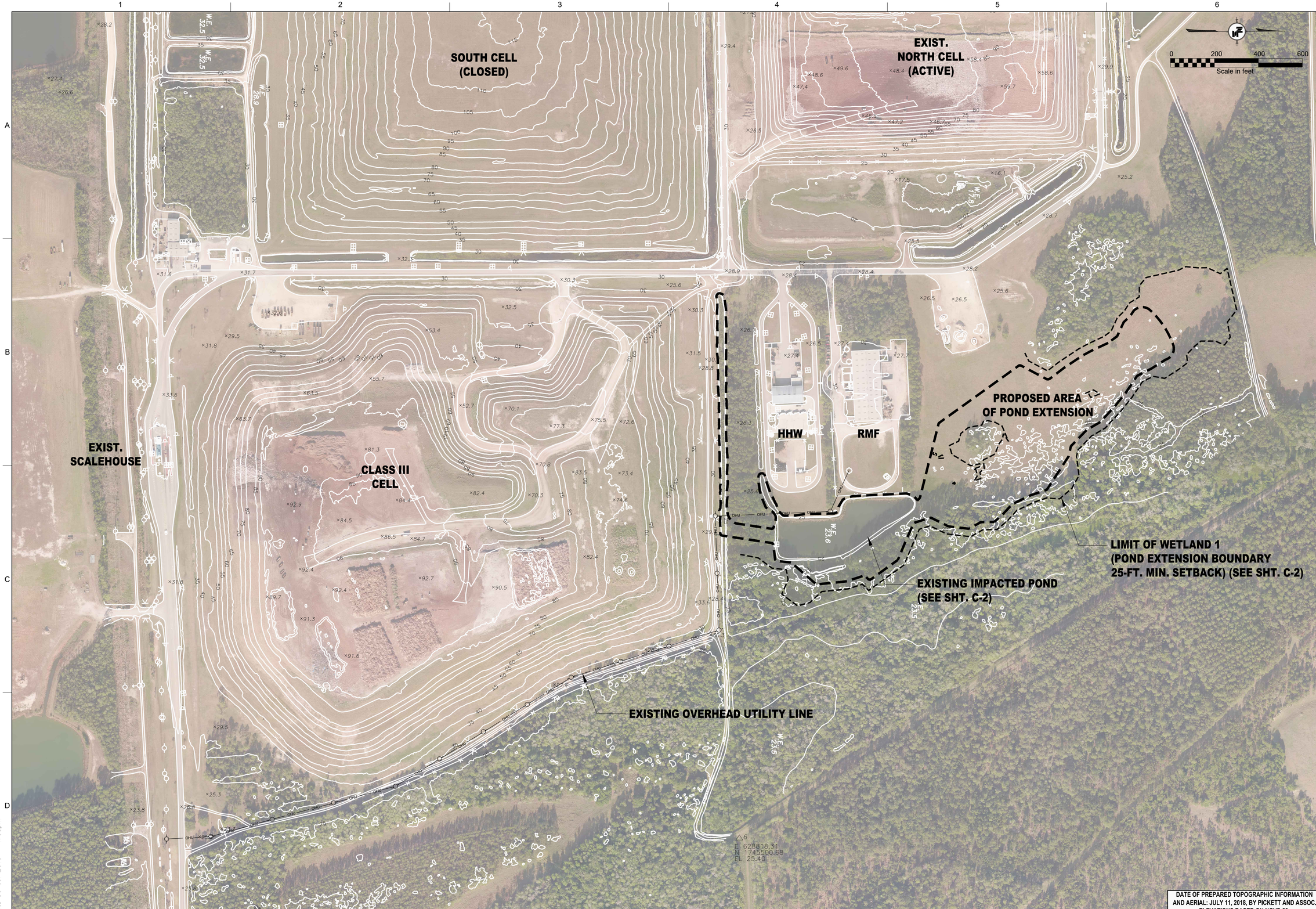

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OVERALL SITE PLAN

OPERATIONS & SEQUENTIAL CLOSURE PERMIT
CLASS III SOLID WASTE DISPOSAL CELL
TOMOKA FARMS ROAD LANDFILL
VOLUSIA COUNTY, FLORIDA

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PROPOSED GRADING PLAN
CLASS III DISPOSAL CELL

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CLASS III SOLID WASTE DISPOSAL CELL
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VOLUSIA COUNTY, FLORIDA

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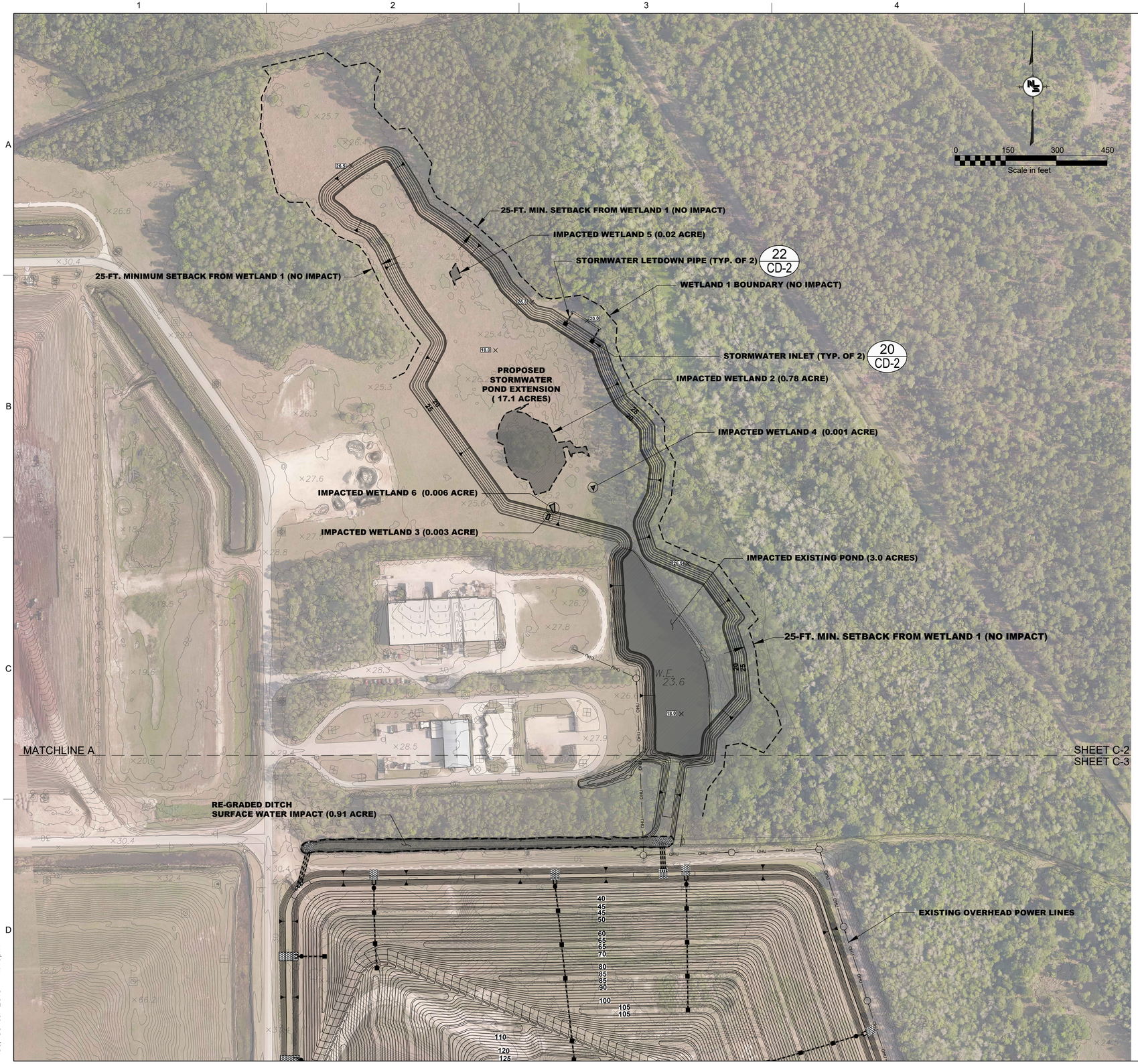

NOTE: WETLAND BOUNDARY INFORMATION FROM SLIGER & ASSOCIATES, INC., DATED MARCH 3, 2019.

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PROPOSED GRADING PLAN - POND EXTENSION
CLASS III DISPOSAL CELL

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VOLUSIA COUNTY, FLORIDA

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PROPOSED GRADING PLAN - NORTH
CLASS III DISPOSAL CELL

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CLASS III SOLID WASTE DISPOSAL CELL
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VOLUSIA COUNTY, FLORIDA

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PROPOSED GRADING PLAN - SOUTH
CLASS III DISPOSAL CELL

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CLASS III SOLID WASTE DISPOSAL CELL
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VOLUSIA COUNTY, FLORIDA

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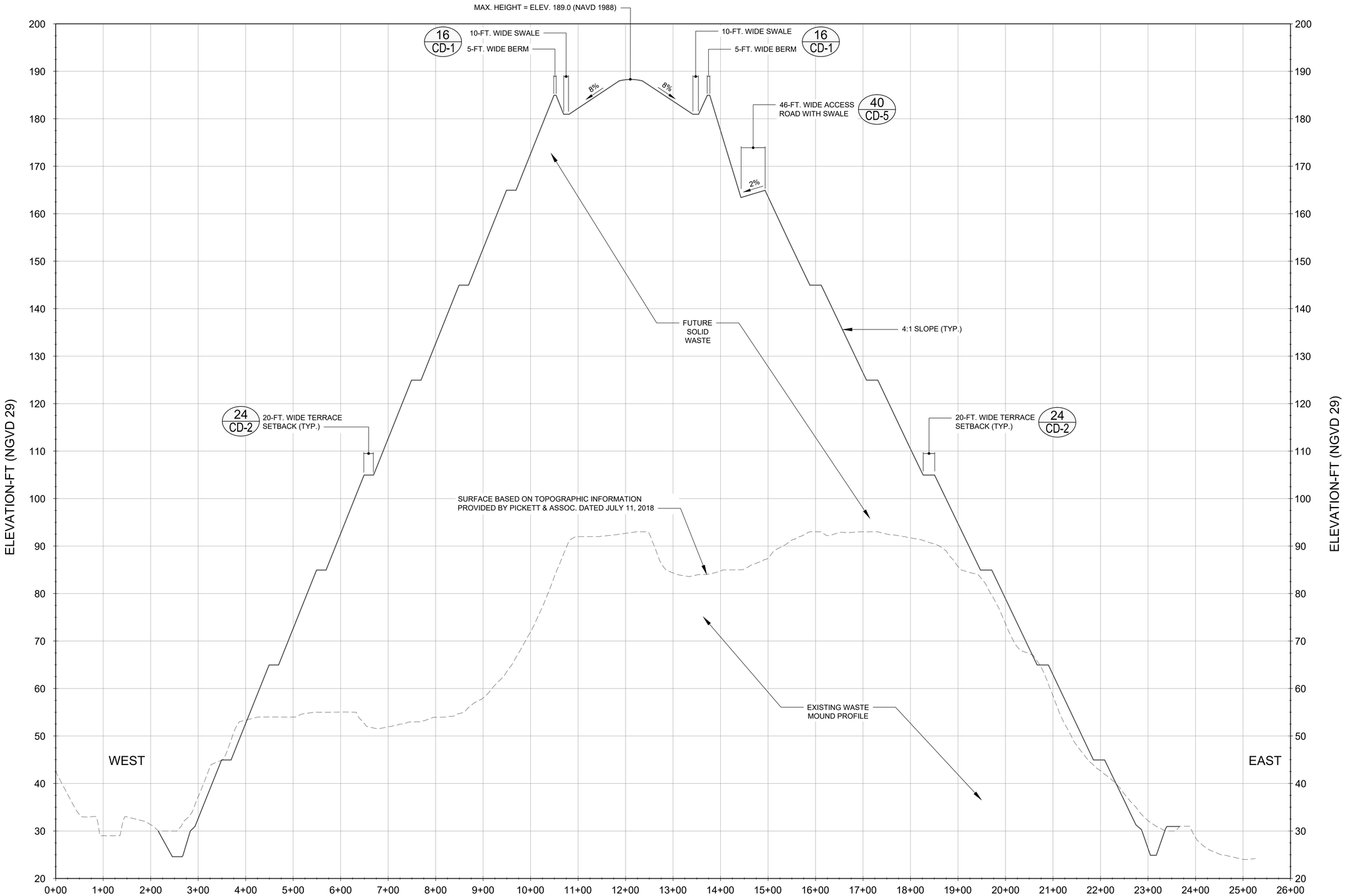

EAST - WEST SECTION

0 100 200 300
Horizontal Scale in feet

0 10 20 30
Vertical Scale in feet

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PROPOSED GRADING CROSS SECTION
CLASS III DISPOSAL CELL

OPERATIONS & SEQUENTIAL CLOSURE PERMIT
CLASS III SOLID WASTE DISPOSAL CELL
TOMOKA FARMS ROAD LANDFILL
VOLUSIA COUNTY, FLORIDA

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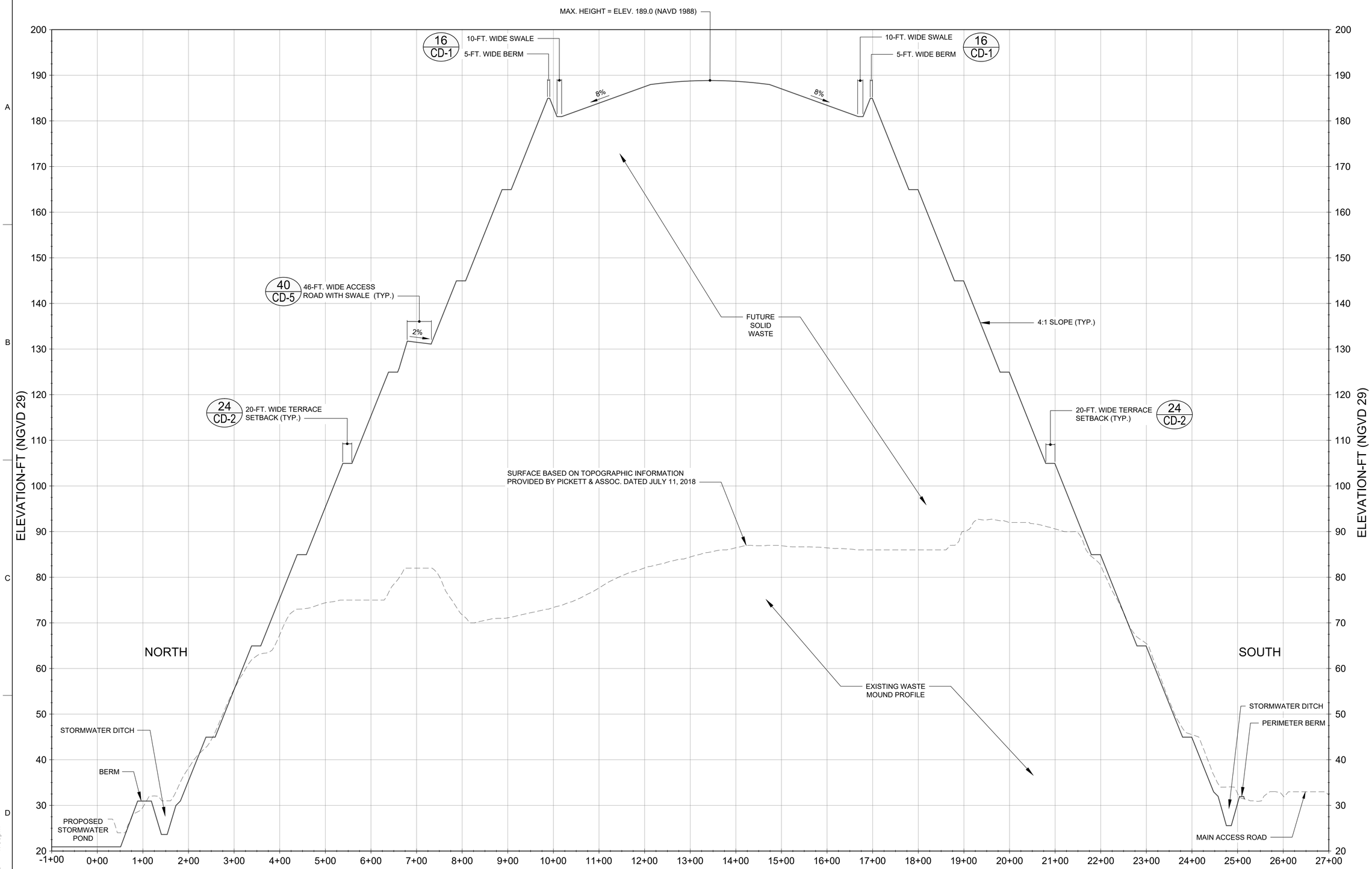

NORTH - SOUTH SECTION

0 100 200 300
Horizontal Scale in feet

0 10 20 30
Vertical Scale in feet

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PROPOSED GRADING CROSS SECTION
CLASS III DISPOSAL CELL

OPERATIONS & SEQUENTIAL CLOSURE PERMIT
CLASS III SOLID WASTE DISPOSAL CELL
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VOLUSIA COUNTY, FLORIDA

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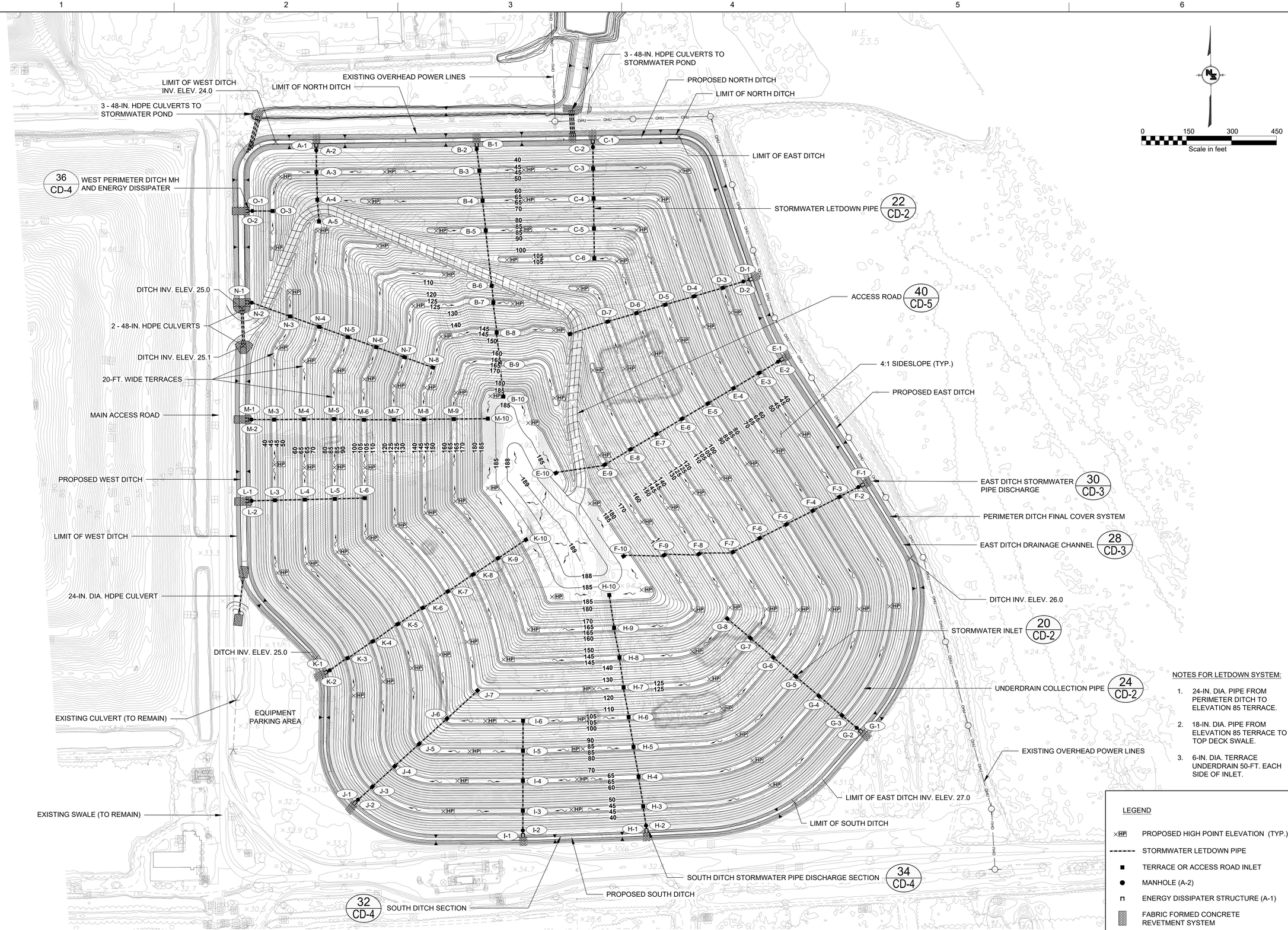

NOTES FOR LETDOWN SYSTEM:

1. 24-IN. DIA. PIPE FROM PERIMETER DITCH TO ELEVATION 85 TERRACE.
2. 18-IN. DIA. PIPE FROM ELEVATION 85 TERRACE TO TOP DECK SWALE.
3. 6-IN. DIA. TERRACE UNDERDRAIN 50-FT. EACH SIDE OF INLET.

LEGEND

- ×HP PROPOSED HIGH POINT ELEVATION (TYP.)
- STORMWATER LETDOWN PIPE
- TERRACE OR ACCESS ROAD INLET
- MANHOLE (A-2)
- ENERGY DISSIPATER STRUCTURE (A-1)
- FABRIC FORMED CONCRETE REVETMENT SYSTEM

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PROPOSED STORMWATER MANAGEMENT SYSTEM PLAN
CLASS III DISPOSAL CELL

OPERATIONS & SEQUENTIAL CLOSURE PERMIT
CLASS III SOLID WASTE DISPOSAL CELL
TOMOKA FARMS ROAD LANDFILL
VOLUSIA COUNTY, FLORIDA

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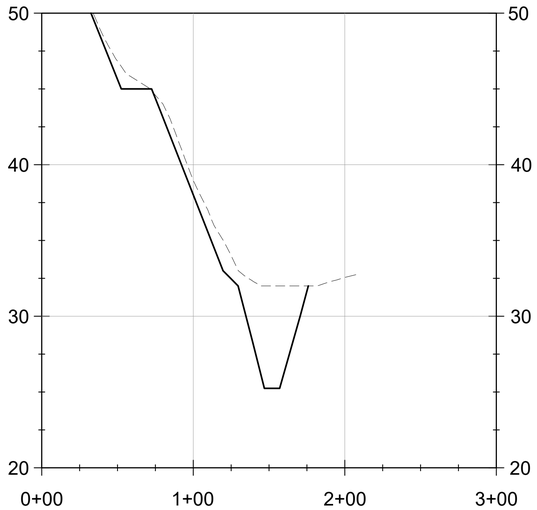

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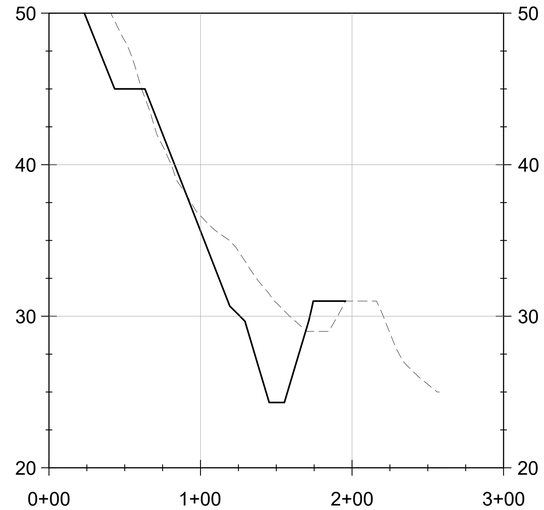

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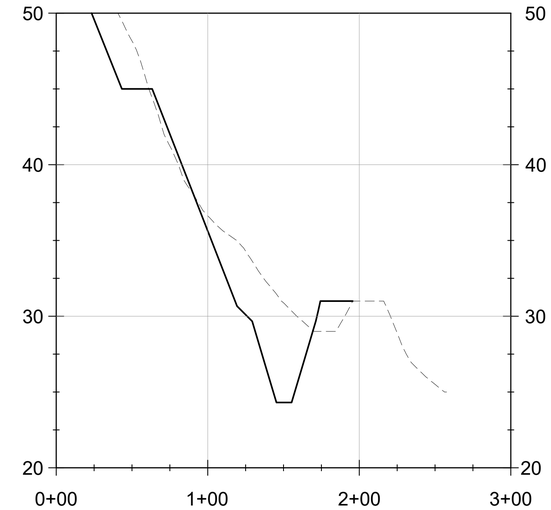

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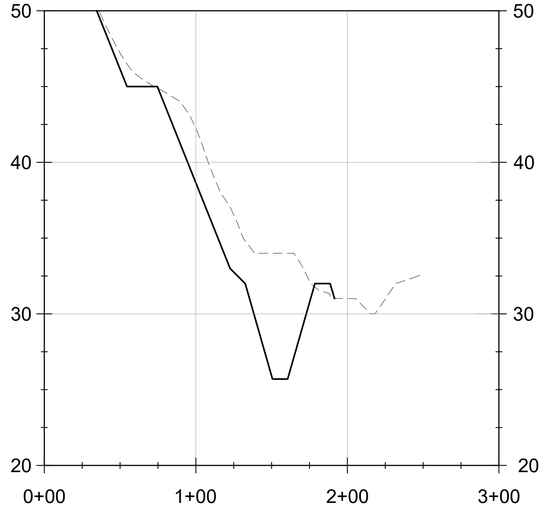

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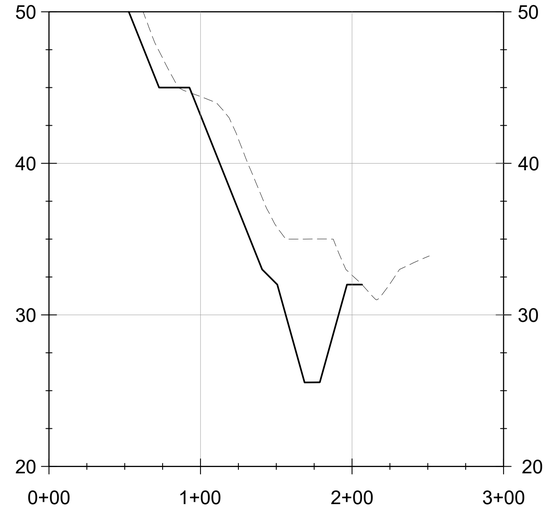

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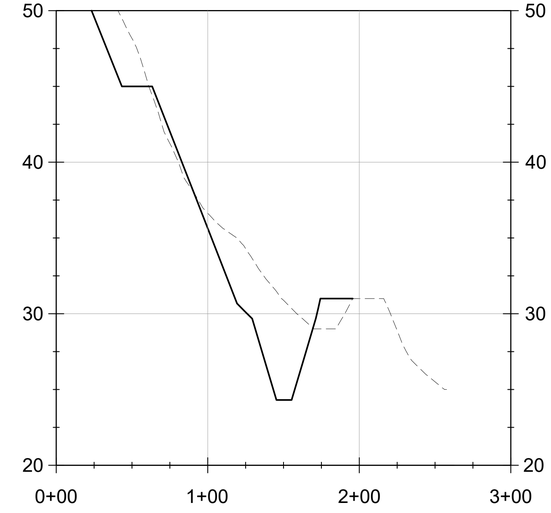

SECTION F

0 50 100 150
Horizontal Scale in feet

0 5 10 15
Vertical Scale in feet

NO.	DATE	REVISION	BY	APV'D
DES.	MSB	DRN. MAR.	CKD.	APV'D.

NEEL-SCHAFFER
Solutions you can build upon
2301 Lucien Way, Suite 300
Maitland, Florida 32751
PH: (407) 647-6623
CA8556

PROPOSED DITCH CROSS SECTIONS

OPERATIONS & SEQUENTIAL CLOSURE PERMIT
CLASS III SOLID WASTE DISPOSAL CELL
TOMOKA FARMS ROAD LANDFILL
VOLUSIA COUNTY, FLORIDA

SEAL:

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

DATE:	AUG. 2019
PROJ:	NS.08607.011
DWG:	C-8
SHEET:	12 of 23

O:\NS.08607.011-Class III Landfill Design & Permit-2018\Deliverables-February 2019\NS.08607.011-Class III\C8.dwg
Tue, 30 Jul 2019 - 1:07pm

STORMWATER STRUCTURE TABLE

STRUCTURE NUMBER	STRUCTURE TYPE	GRATE MODEL / INDEX NUMBER	GRATE ELEV. (FT. NAVD)	INVERT IN (FT. NAVD)	INVERT OUT (FT. NAVD)	PIPE LENGTH (FT.)	PIPE DIA. (IN.)	BASIN (AC)	STRUCTURE LOCATION EASTING	STRUCTURE LOCATION NORTHING
A-1	U-ENDWALL	FDOT INDEX 261		24.50						
						16	24			
A-2	4 ft DIA. MH	FDOT INDEX 200	31.30	24.60	24.60				626,557	1,745,295
						72	18			
A-3	HDPE INLET	4-FT DIA. HDPE	42.50	38.00	38.00			0.906	626,557	1,745,224
						158	18			
A-4	HDPE INLET	4-FT DIA. HDPE	62.50	58.00	58.00			1.229	626,559	1,745,067
B-1	U-ENDWALL	FDOT INDEX 261		24.50						
						16	24			
B-2	4 ft DIA. MH	FDOT INDEX 200	31.30	24.60	24.60				627,093	1,745,294
						69	24			
B-3	HDPE INLET	4-FT DIA. HDPE	42.50	38.00	38.00			1.048	627,100	1,745,227
						103	24			
B-4	HDPE INLET	4-FT DIA. HDPE	62.50	58.00	58.00			1.278	627,111	1,745,127
						103	18			
B-5	HDPE INLET	4-FT DIA. HDPE	82.50	78.00	78.00			0.751	627,122	1,745,027
						182	18			
B-6	HDPE INLET	4-FT DIA. HDPE	113.00	108.50	108.50			0.678	627,141	1,744,849
						63	18			
B-7	HDPE INLET	4-FT DIA. HDPE	122.50	118.00	118.00			0.736	627,147	1,744,787
						102	18			
B-8	HDPE INLET	4-FT DIA. HDPE	142.50	138.00	138.00			0.799	627,158	1,744,688
						103	18			
B-9	HDPE INLET	4-FT DIA. HDPE	162.50	158.00	158.00			0.905	627,169	1,744,588
						117	18			
B-10	HDPE INLET	4-FT DIA. HDPE	180.00	175.50	175.50			0.271	627,181	1,744,473
C-1	U-ENDWALL	FDOT INDEX 261		24.10						
						16	24			
C-2	4 ft DIA. MH	FDOT INDEX 200	30.90	24.20	24.20				627,480	1,745,307
						76	18			
C-3	HDPE INLET	4-FT DIA. HDPE	42.50	38.00	38.00			1.161	627,480	1,745,232
						101	18			
C-4	HDPE INLET	4-FT DIA. HDPE	62.50	58.00	58.00			1.001	627,482	1,745,133
						101	18			
C-5	HDPE INLET	4-FT DIA. HDPE	82.50	78.00	78.00			0.843	627,484	1,745,034
						102	18			
C-6	HDPE INLET	4-FT DIA. HDPE	102.50	98.00	98.00			0.887	627,484	1,744,934
D-1	U-ENDWALL	FDOT INDEX 261		24.90						
						16	24			
D-2	4 ft DIA. MH	FDOT INDEX 200	31.70	25.00	25.00				627,970	1,744,853
						61	24			
D-3	HDPE INLET	4-FT DIA. HDPE	42.50	38.00	38.00			1.123	627,913	1,744,836
						102	18			
D-4	HDPE INLET	4-FT DIA. HDPE	62.50	58.00	58.00			0.990	627,817	1,744,808
						102	18			
D-5	HDPE INLET	4-FT DIA. HDPE	82.50	78.00	78.00			0.860	627,721	1,744,779
						102	18			
D-6	HDPE INLET	4-FT DIA. HDPE	102.50	98.00	98.00			0.725	627,625	1,744,751
						102	18			
D-7	HDPE INLET	4-FT DIA. HDPE	122.50	118.00	118.00			0.782	627,529	1,744,723
						132	18			
D-8	HDPE INLET	4-FT DIA. HDPE	142.00	137.50	137.50			1.273	627,404	1,744,685
E-1	U-ENDWALL	FDOT INDEX 261		25.30						
						16	24			
E-2	4 ft DIA. MH	FDOT INDEX 200	32.10	25.40	25.40				628,098	1,744,589
						72	24			
E-3	HDPE INLET	4-FT DIA. HDPE	42.50	38.00	38.00			1.083	628,037	1,744,553
						102	24			
E-4	HDPE INLET	4-FT DIA. HDPE	62.50	58.00	58.00			1.087	627,951	1,744,502
						102	24			
E-5	HDPE INLET	4-FT DIA. HDPE	82.50	78.00	78.00			1.091	627,865	1,744,451
						102	18			
E-6	HDPE INLET	4-FT DIA. HDPE	102.50	98.00	98.00			1.095	627,779	1,744,400
						102	18			
E-7	HDPE INLET	4-FT DIA. HDPE	122.50	118.00	118.00			1.099	627,693	1,744,349
						102	18			
E-8	HDPE INLET	4-FT DIA. HDPE	142.50	138.00	138.00			1.305	627,607	1,744,298
						101	18			
E-9	HDPE INLET	4-FT DIA. HDPE	154.00	149.50	149.50			0.631	627,521	1,744,247
						167	18			
E-10	HDPE INLET	4-FT DIA. HDPE	180.00	175.50	175.50			0.701	627,358	1,744,221
F-1	U-ENDWALL	FDOT INDEX 261		25.80						
						16	24			
F-2	4 ft DIA. MH	FDOT INDEX 200	32.60	25.90	25.90				628,367	1,744,171
						73	24			
F-3	HDPE INLET	4-FT DIA. HDPE	42.50	38.00	38.00			1.464	628,303	1,744,138
						102	24			
F-4	HDPE INLET	4-FT DIA. HDPE	62.50	58.00	58.00			1.364	628,214	1,744,092
						101	24			
F-5	HDPE INLET	4-FT DIA. HDPE	82.50	78.00	78.00			1.254	628,126	1,744,046

STORMWATER STRUCTURE TABLE

STRUCTURE NUMBER	STRUCTURE TYPE	GRATE MODEL / INDEX NUMBER	GRATE ELEV. (FT. NAVD))	INVERT IN (FT. NAVD)	INVERT OUT (FT. NAVD)	PIPE LENGTH (FT.)	PIPE DIA. (IN.)	BASIN (AC)	STRUCTURE LOCATION EASTING	STRUCTURE LOCATION NORTHING
						#REF!	0			
F-6	HDPE INLET	4-FT DIA. HDPE	102.50	98.00	98.00			0.000	628,037	1,744,000
						102	0			
F-7	HDPE INLET	4-FT DIA. HDPE	122.50	118.00	118.00			8.179	627,948	1,743,954
						119	0			
F-8	HDPE INLET	4-FT DIA. HDPE	142.50	138.00	138.00			8.179	627,831	1,743,950
						116	0			
F-9	HDPE INLET	4-FT DIA. HDPE	162.50	158.00	158.00			4.709	627,717	1,743,945
						133	0			
F-10	HDPE INLET	4-FT DIA. HDPE	180.00	175.50	175.50			0.000	627,585	1,743,940
G-1	U-ENDWALL	FDOT INDEX 261		26.70						
						16	0			
G-2	4 ft DIA. MH	FDOT INDEX 200	33.50	26.80	26.80				628,361	1,743,367
						64	0			
G-3	HDPE INLET	4-FT DIA. HDPE	42.50	38.00	38.00			20.748	628,313	1,743,408
						103	0			
G-4	HDPE INLET	4-FT DIA. HDPE	62.50	58.00	58.00			15.854	628,235	1,743,473
						101	0			
G-5	HDPE INLET	4-FT DIA. HDPE	82.50	78.00	78.00			12.979	628,159	1,743,537
						103	0			
G-6	HDPE INLET	4-FT DIA. HDPE	102.50	98.00	98.00			10.382	628,082	1,743,602
						101	0			
G-7	HDPE INLET	4-FT DIA. HDPE	122.50	118.00	118.00			7.563	628,007	1,743,666
						103	0			
G-8	HDPE INLET	4-FT DIA. HDPE	142.50	138.00	138.00			4.503	627,930	1,743,731
H-1	U-ENDWALL	FDOT INDEX 261		27.70						
						16	0			
H-2	4 ft DIA. MH	FDOT INDEX 200	34.50	27.80	27.80				627,658	1,743,040
						67	0			
H-3	HDPE INLET	4-FT DIA. HDPE	42.50	38.00	38.00			14.905	627,648	1,743,105
						101	0			
H-4	HDPE INLET	4-FT DIA. HDPE	62.50	58.00	58.00			14.905	627,632	1,743,203
						102	0			
H-5	HDPE INLET	4-FT DIA. HDPE	82.50	78.00	78.00			10.461	627,616	1,743,302
						103	0			
H-6	HDPE INLET	4-FT DIA. HDPE	102.50	98.00	98.00			6.628	627,599	1,743,402
						103	0			
H-7	HDPE INLET	4-FT DIA. HDPE	122.50	118.00	118.00			3.398	627,583	1,743,502
						102	0			
H-8	HDPE INLET	4-FT DIA. HDPE	142.50	138.00	138.00			0.000	627,567	1,743,601
						103	0			
H-9	HDPE INLET	4-FT DIA. HDPE	162.50	158.00	158.00			22.034	627,551	1,743,701
						113	0			
H-10	HDPE INLET	4-FT DIA. HDPE	180.00	175.50	175.50			22.034	627,534	1,743,811
I-1	U-ENDWALL	FDOT INDEX 261		27.80						
						16	0			
I-2	4 ft DIA. MH	FDOT INDEX 200	34.60	27.90	27.90				627,245	1,743,029
						62	0			
I-3	HDPE INLET	4-FT DIA. HDPE	42.50	38.00	38.00			10.650	627,246	1,743,090
						102	0			
I-4	HDPE INLET	4-FT DIA. HDPE	62.50	58.00	58.00			7.873	627,246	1,743,190
						103	0			
I-5	HDPE INLET	4-FT DIA. HDPE	82.50	78.00	78.00			4.876	627,247	1,743,291
						100	0			
I-6	HDPE INLET	4-FT DIA. HDPE	102.50	98.00	98.00			0.000	627,247	1,743,389
J-1	U-ENDWALL	FDOT INDEX 261		27.20						
						16	0			
J-2	4 ft DIA. MH	FDOT INDEX 200	34.00	27.30	27.30				626,700	1,743,131
						62	0			
J-3	HDPE INLET	4-FT DIA. HDPE	42.50	38.00	38.00			22.679	626,747	1,743,170
						100	0			
J-4	HDPE INLET	4-FT DIA. HDPE	62.50	58.00	58.00			18.500	626,818	1,743,237
						112	0			
J-5	HDPE INLET	4-FT DIA. HDPE	82.50	78.00	78.00			14.305	626,899	1,743,311
						135	0			
J-6	HDPE INLET	4-FT DIA. HDPE	102.50	98.00	98.00			10.096	626,998	1,743,401
						138	0			
J-7	HDPE INLET	4-FT DIA. HDPE	122.50	118.00	118.00			5.097	627,098	1,743,494
K-1	U-ENDWALL	FDOT INDEX 261		26.60						
						16	0			
K-2	4 ft DIA. MH	FDOT INDEX 200	33.40	26.70	26.70				626,601	1,743,559
						72	0			
K-3	HDPE INLET	4-FT DIA. HDPE	42.50	38.00	38.00			33.785	626,659	1,743,601
						103	0			
K-4	HDPE INLET	4-FT DIA. HDPE	62.50	58.00	58.00			33.785	626,745	1,743,655
						102	0			
K-5	HDPE INLET	4-FT DIA. HDPE	82.50	78.00	78.00			28.179	626,828	1,743,711
						102	0			
K-6	HDPE INLET	4-FT DIA. HDPE	102.50	98.00	98.00			22.954	626,912	1,743,766

STORMWATER STRUCTURE TABLE

STRUCTURE NUMBER	STRUCTURE TYPE	GRATE MODEL / INDEX NUMBER	GRATE ELEV. (FT. NAVD))	INVERT IN (FT. NAVD)	INVERT OUT (FT. NAVD)	PIPE LENGTH (FT.)	PIPE DIA. (IN.)	BASIN (AC)	STRUCTURE LOCATION EASTING	STRUCTURE LOCATION NORTHING
						#REF!	0			
K-7	HDPE INLET	4-FT DIA. HDPE	42.50	38.00	38.00			0.000	626,996	1,743,822
						104	0			
K-8	HDPE INLET	4-FT DIA. HDPE	62.50	58.00	58.00			0.000	627,081	1,743,878
						101	0			
K-9	HDPE INLET	4-FT DIA. HDPE	82.50	78.00	78.00			0.000	627,163	1,743,933
						113	0			
K-10	HDPE INLET	4-FT DIA. HDPE	102.50	98.00	98.00			0.000	627,256	1,743,994
L-1	U-ENDWALL	FDOT INDEX 261		25.70						
						16	0			
L-2	4 ft DIA. MH	FDOT INDEX 200	32.50	25.80	25.80				626,355	1,744,125
						64	0			
L-3	HDPE INLET	4-FT DIA. HDPE	42.50	38.00	38.00			0.000	626,418	1,744,127
						101	0			
L-4	HDPE INLET	4-FT DIA. HDPE	62.50	58.00	58.00			0.000	626,517	1,744,129
						103	0			
L-5	HDPE INLET	4-FT DIA. HDPE	82.50	78.00	78.00			0.000	626,618	1,744,131
						102	0			
L-6	HDPE INLET	4-FT DIA. HDPE	102.50	98.00	98.00			0.000	626,718	1,744,134
M-1	U-ENDWALL	FDOT INDEX 261		25.50						
						16	0			
M-2	4 ft DIA. MH	FDOT INDEX 200	32.30	25.60	25.60				626,351	1,744,396
						66	0			
M-3	HDPE INLET	4-FT DIA. HDPE	42.50	38.00	38.00			0.000	626,416	1,744,396
						101	0			
M-4	HDPE INLET	4-FT DIA. HDPE	62.50	58.00	58.00			0.000	626,515	1,744,396
						101	0			
M-5	HDPE INLET	4-FT DIA. HDPE	82.50	78.00	78.00			0.000	626,614	1,744,396
						103	0			
M-6	HDPE INLET	4-FT DIA. HDPE	102.50	98.00	98.00			0.000	626,715	1,744,396
						104	0			
M-7	HDPE INLET	4-FT DIA. HDPE	122.50	118.00	118.00			0.000	626,817	1,744,396
						96	0			
M-8	HDPE INLET	4-FT DIA. HDPE	142.50	138.00	138.00			0.000	626,911	1,744,397
						112	0			
M-9	HDPE INLET	4-FT DIA. HDPE	102.50	98.00	98.00			0.000	627,016	1,744,398
						112	0			
M-10	HDPE INLET	4-FT DIA. HDPE	122.50	118.00	118.00			0.000	627,126	1,744,399
N-1	U-ENDWALL	FDOT INDEX 261		25.00						
						16	0			
N-2	4 ft DIA. MH	FDOT INDEX 200	31.80	25.10	25.10				626,341	1,744,786
						138	0			
N-3	HDPE INLET	4-FT DIA. HDPE	42.50	38.00	38.00			0.000	626,470	1,744,738
						102	0			
N-4	HDPE INLET	4-FT DIA. HDPE	42.50	38.00	38.00			0.000	626,566	1,744,704
						101	0			
N-5	HDPE INLET	4-FT DIA. HDPE	42.50	38.00	38.00			0.000	626,661	1,744,670
						102	0			
N-6	HDPE INLET	4-FT DIA. HDPE	42.50	38.00	38.00			0.000	626,757	1,744,637
						100	0			
N-7	HDPE INLET	4-FT DIA. HDPE	42.50	38.00	38.00			0.000	626,851	1,744,603
						101	0			
N-8	HDPE INLET	4-FT DIA. HDPE	42.50	38.00	38.00			0.000	626,946	1,744,570
O-1	U-ENDWALL	FDOT INDEX 261		24.40						
						16	0			
O-2	4 ft DIA. MH	FDOT INDEX 200	31.20	24.50	24.50				626,342	1,745,092
						69	0			
O-3	HDPE INLET	4-FT DIA. HDPE	42.50	38.00	38.00			0.000	626,410	1,745,092

NO.	DATE	REVISION	BY	APV'D
DES.	MSB	DRN. MAR.	CKD.	APV'D.

NEEL-SCHAFFER
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2301 Lucien Way, Suite 300
Maitland, Florida 32751
PH: (407) 647-6623
CA8556

STORMWATER STRUCTURE AND TERRACE SWALE SCHEDULES

OPERATIONS & SEQUENTIAL CLOSURE PERMIT
CLASS III SOLID WASTE DISPOSAL CELL
TOMOKA FARMS ROAD LANDFILL
VOLUSIA COUNTY, FLORIDA

SEAL:

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

DATE:	AUG. 2019
PROJ:	NS.08607.011
DWG:	C-9
SHEET:	13 of 23

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Tue, 30 Jul 2019 - 1:09pm

NO.	DATE	REVISION	BY	APV'D
DES.	MSB	DRN. MAR.	CKD.	APV'D.

NEEL-SCHAFFER
Solutions you can build upon

2301 Lucien Way, Suite 300
Maitland, Florida 32751
PH: (407) 647-6823
CA8556

PROPOSED PASSIVE GAS VENT PLAN
CLASS III DISPOSAL CELL

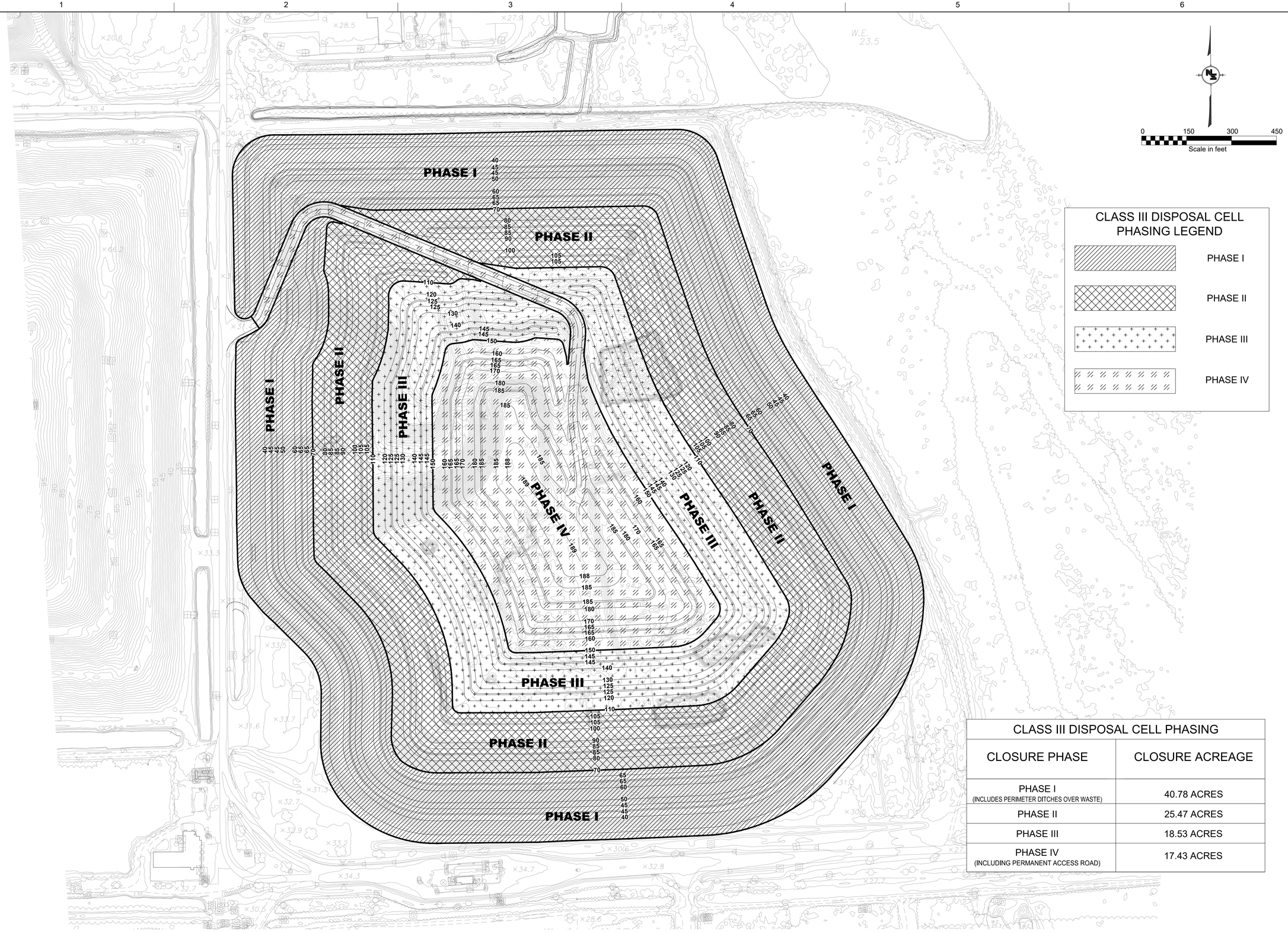
OPERATIONS & SEQUENTIAL CLOSURE PERMIT
CLASS III SOLID WASTE DISPOSAL CELL
TOMOKA FARMS ROAD LANDFILL
VOLUSIA COUNTY, FLORIDA

SEAL:

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

DATE:	AUG. 2019
PROJ:	NS.08607.011
DWG:	C-10
SHEET:	14 of 23

O:\NS.08607.011-Class III Landfill Design & Permit-2018\Deliverables-February 2019\NS.08607.011-Class III\C10.dwg
Tue, 30 Jul 2019 - 1:09pm



CLASS III DISPOSAL CELL PHASING

CLOSURE PHASE	CLOSURE ACREAGE
PHASE I (INCLUDES PERIMETER DITCHES OVER WASTE)	40.78 ACRES
PHASE II	25.47 ACRES
PHASE III	18.53 ACRES
PHASE IV (INCLUDING PERMANENT ACCESS ROAD)	17.43 ACRES

NO.	DATE	REVISION	BY	AP'VD
DES.	MSB	DRN. MAR	CKD.	AP'VD.

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PH: (407) 647-6823
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PROPOSED CLOSURE PHASING PLAN
CLASS III DISPOSAL CELL

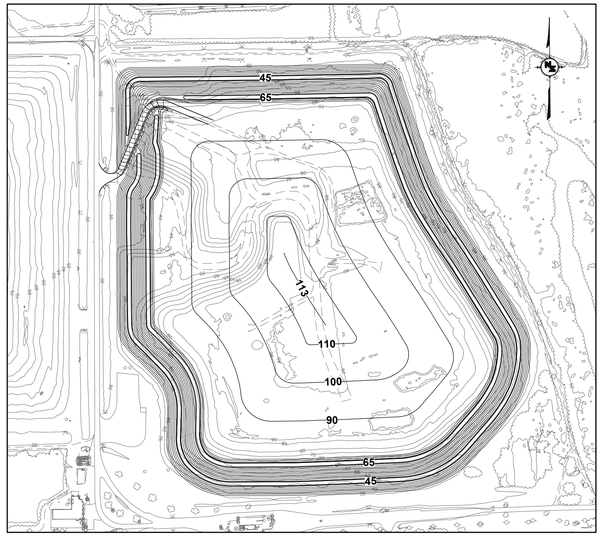
OPERATIONS & SEQUENTIAL CLOSURE PERMIT
CLASS III SOLID WASTE DISPOSAL CELL
TOMOKA FARMS ROAD LANDFILL
VOLUSIA COUNTY, FLORIDA

SEAL:

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

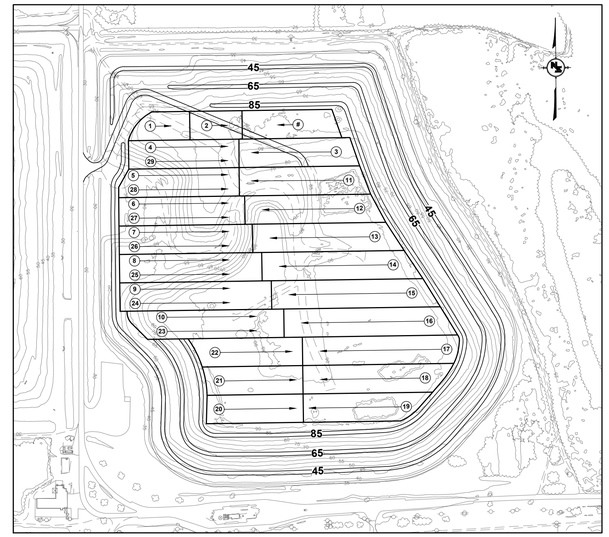
DATE:	AUG. 2019
PROJ:	NS.08607.011
DWG:	C-11
SHEET:	15 of 23

O:\NS.08607.011-Class III Landfill Design & Permit-2018\Deliverables-February 2019\NS.08607.011-Class III\C11.dwg
Tue, 30 Jul 2019 - 1:10pm



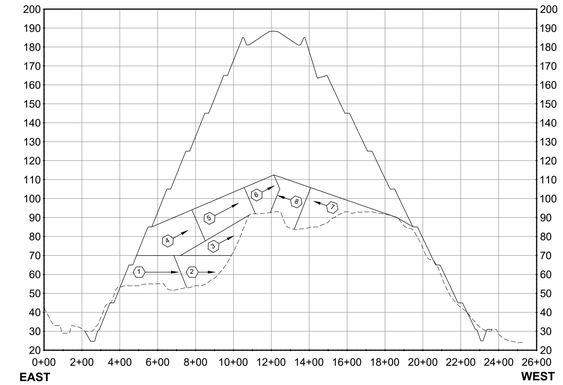
STAGE 1 FILL PLAN

SCALE: 1"= 400'



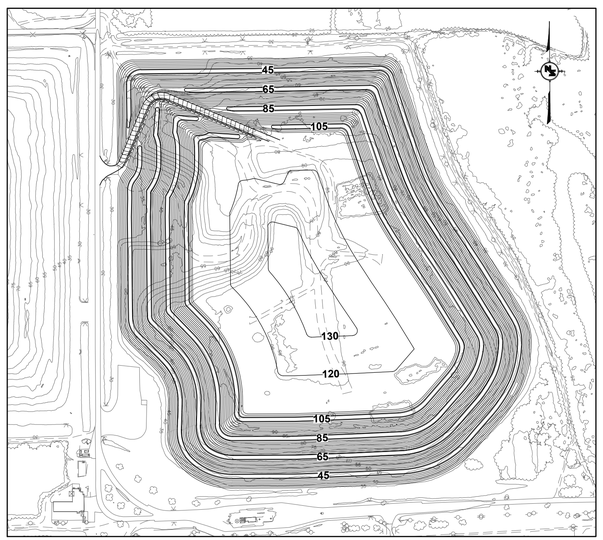
STAGE 1 ROW DEVELOPMENT FILL SEQUENCE

SCALE: 1"= 400'



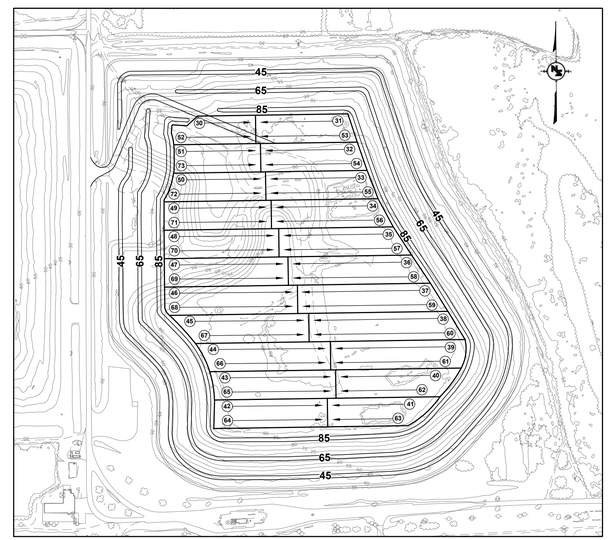
STAGE 1 LIFT DEVELOPMENT SEQUENCE PROFILE

SCALE: HORIZ. 1" = 400'
VERT. 1" = 40'



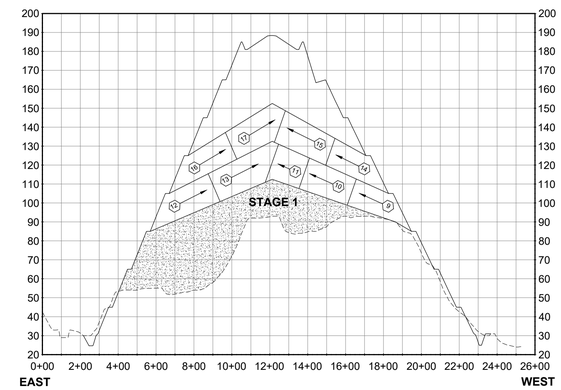
STAGE 2 FILL PLAN

SCALE: 1"= 400'



STAGE 2 ROW DEVELOPMENT FILL SEQUENCE

SCALE: 1"= 400'



STAGE 2 LIFT DEVELOPMENT SEQUENCE PROFILE

SCALE: HORIZ. 1" = 400'
VERT. 1" = 40'

GENERAL NOTES FOR CLASS III LANDFILL FILLING SEQUENCE

1. " →⊗ ", DENOTES DIRECTION AND SEQUENCE OF ROW DEVELOPMENT.
2. " →⊗ ", INDICATES SEQUENCE OF LIFT DEVELOPMENT.
3. TYPICAL ROW WIDTH IS 150 FEET UNLESS OTHERWISE SHOWN OR NOTED. TYPICAL ROW LENGTH IS 300 FEET. GREATER LENGTHS ARE SHOWN IN ROW FILL SEQUENCE.
4. ROW DEVELOPMENT SHALL PROCEED IN ACCORDANCE WITH FILL SEQUENCE.
5. THE SIDE SLOPES OF ROWS SHALL NOT BE STEEPER THAN 3 HORIZONTAL TO 1 VERTICAL.
6. TYPICAL LIFT HEIGHT SHALL BE 20 FEET BUT MAY BE DEEPER DEPENDING ON FIELD CONDITIONS.
7. TEMPORARY ACCESS ROADS SHALL BE CONSTRUCTED ON TOP OF THE LANDFILL AS LANDFILLING PROCEEDS. MAXIMUM GRADE ON TEMPORARY ROADS SHALL BE 10%.
8. TEMPORARY BERMS SHALL BE CONSTRUCTED ON TOP OF THE LANDFILL TO KEEP STORM WATER FROM WORKING AREA.
9. WEEKLY AND INTERMEDIATE COVER SHALL BE PLACED ON THE COMPLETED CELL FOR EACH LIFT.
10. TEMPORARY BERMS SHALL BE CONSTRUCTED AT OUTSIDE EDGE OF LANDFILL WHEN TERRACE ELEVATIONS ARE REACHED. TEMPORARY PIPE TO BE USED TO CONVEY STORMWATER THROUGH THE BERMS TO ESTABLISHED TERRACE SWALES AT SPECIFIC LOCATIONS.
11. INTERMEDIATE COVER SHALL BE PLACED ON ALL AREAS THAT WILL NOT RECEIVE ADDITIONAL SOLID WASTE WITHIN 180 DAYS. REMOVE AND CONSERVE INTERMEDIATE COVER AS FILLING PROCEEDS OVER PRIOR ROWS.
12. ALL ELEVATIONS ARE REFERENCED TO NATIONAL VERTICAL GEODETIC DATUM (NGVD 29 - FROM PICKETT & ASSOC).
13. INSTALL TRASH FENCING AS NECESSARY TO CONTROL BLOWING SOLID WASTE.
14. REPAIR AND MAINTAIN, AS NECESSARY, THE SIDE SLOPES WITH FINAL COVER, MAIN ACCESS ROAD, ACCESS RAMPS, TERRACE DRAINAGE SWALES, AND OUTSIDE TEMPORARY BERMS.
15. REPAIR AND MAINTAIN PRIMARY STORMWATER SYSTEM INCLUDING CHANNELS AND DISCHARGE STRUCTURES AS NEEDED.

STAGE 1 / STAGE 2 FILL SEQUENCE NOTES

1. GENERAL FILLING SEQUENCE FOR LIFTS IS FROM OUTSIDE TO INSIDE. GENERAL FILLING FOR ROWS IS FROM EXTERIOR TO INTERIOR IN A CLOCKWISE DIRECTION.
2. BEGIN STAGE 1 FILLING NW CORNER TO ALLOW EXTENSION OF ACCESS ROAD, THEN FILL WEST VALLEY AREA.
3. PROCEED WITH STAGE 1 FILLING IN CLOCKWISE SEQUENCE TO ESTABLISH ROWS 11 THROUGH 29.
4. EXTEND ACCESS ROAD TO ELEVATION 105.
5. PROCEED WITH STAGE 2 FILLING TO ESTABLISH ROWS 30 THROUGH 52 TO ELEVATION 105 TERRACE.
6. CONTINUE FILLING ROWS 53 THROUGH 73 IN A CLOCKWISE DIRECTION TO ESTABLISH ELEVATION 125.

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STAGE 1 / STAGE 2
FILL SEQUENCE
CLASS III DISPOSAL CELL

OPERATIONS & SEQUENTIAL CLOSURE PERMIT
CLASS III SOLID WASTE DISPOSAL CELL
TOMOKA FARMS ROAD LANDFILL
VOLUSIA COUNTY, FLORIDA

SEAL:

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

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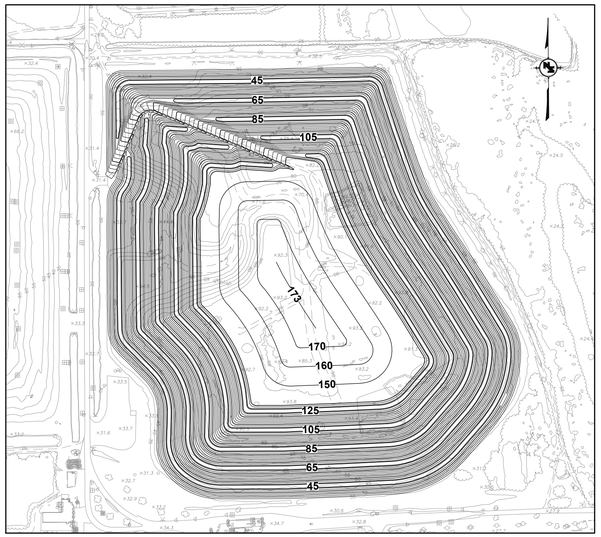
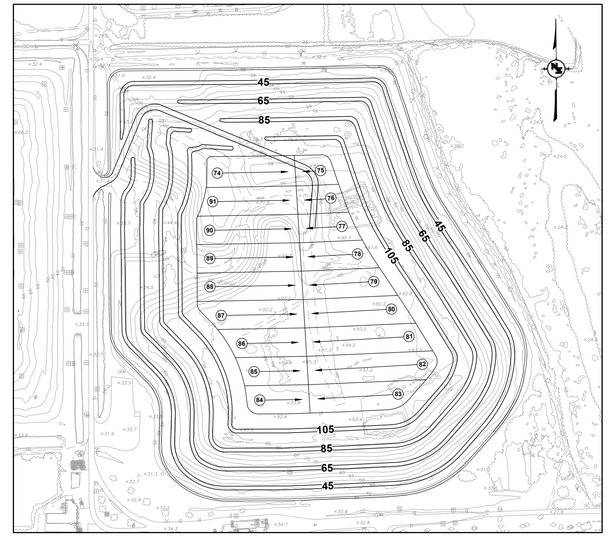


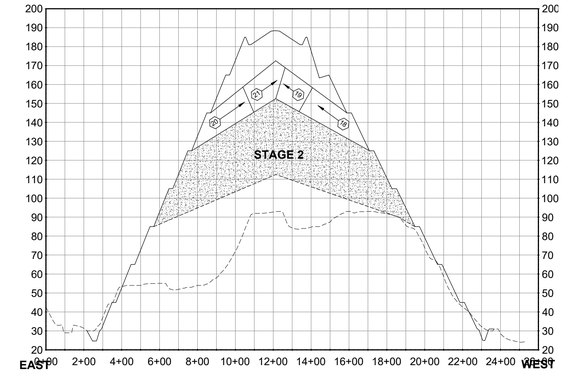
STAGE 3 FILL PLAN

SCALE: 1"= 400'



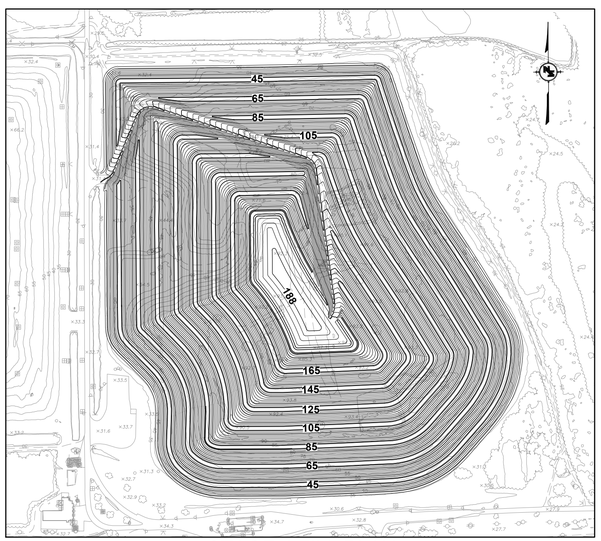
STAGE 3 ROW DEVELOPMENT FILL SEQUENCE

SCALE: 1"= 400'



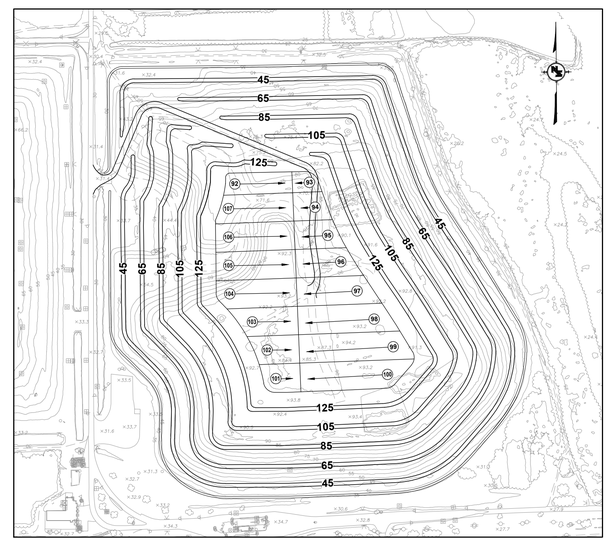
STAGE 3 LIFT DEVELOPMENT SEQUENCE PROFILE

SCALE: HORIZ. 1" = 400'
VERT. 1" = 40'



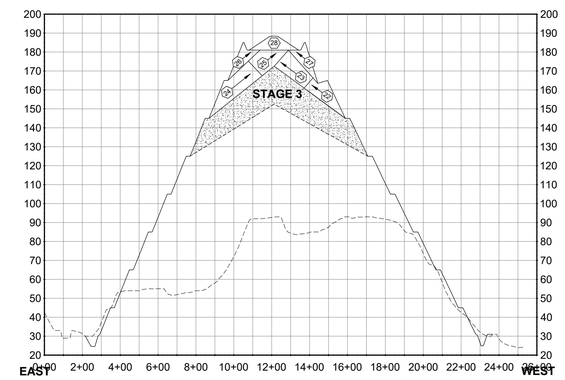
STAGE 4 FILL PLAN

SCALE: 1"= 400'



STAGE 4 ROW DEVELOPMENT FILL SEQUENCE

SCALE: 1"= 400'



STAGE 4 LIFT DEVELOPMENT SEQUENCE PROFILE

SCALE: HORIZ. 1" = 400'
VERT. 1" = 40'

GENERAL NOTES FOR CLASS III LANDFILL FILLING SEQUENCE

1. " → ", DENOTES DIRECTION AND SEQUENCE OF ROW DEVELOPMENT.
2. " → ", INDICATES SEQUENCE OF LIFT DEVELOPMENT.
3. TYPICAL ROW WIDTH IS 150 FEET UNLESS OTHERWISE SHOWN OR NOTED. TYPICAL ROW LENGTH IS 300 FEET. GREATER LENGTHS ARE SHOWN IN ROW FILL SEQUENCE.
4. ROW DEVELOPMENT SHALL PROCEED IN ACCORDANCE WITH FILL SEQUENCE.
5. THE SIDE SLOPES OF ROWS SHALL NOT BE STEEPER THAN 3 HORIZONTAL TO 1 VERTICAL.
6. TYPICAL LIFT HEIGHT SHALL BE 20 FEET BUT MAY BE DEEPER DEPENDING ON FIELD CONDITIONS.
7. TEMPORARY ACCESS ROADS SHALL BE CONSTRUCTED ON TOP OF THE LANDFILL AS LANDFILLING PROCEEDS. MAXIMUM GRADE ON TEMPORARY ROADS SHALL BE 10%.
8. TEMPORARY BERMS SHALL BE CONSTRUCTED ON TOP OF THE LANDFILL TO KEEP STORM WATER FROM WORKING AREA.
9. WEEKLY AND INTERMEDIATE COVER SHALL BE PLACED ON THE COMPLETED CELL FOR EACH LIFT.
10. TEMPORARY BERMS SHALL BE CONSTRUCTED AT OUTSIDE EDGE OF LANDFILL WHEN TERRACE ELEVATIONS ARE REACHED. TEMPORARY PIPE TO BE USED TO CONVEY STORMWATER THROUGH THE BERMS TO ESTABLISHED TERRACE SWALES AT SPECIFIC LOCATIONS.
11. INTERMEDIATE COVER SHALL BE PLACED ON ALL AREAS THAT WILL NOT RECEIVE ADDITIONAL SOLID WASTE WITHIN 180 DAYS. REMOVE AND CONSERVE INTERMEDIATE COVER AS FILLING PROCEEDS OVER PRIOR ROWS.
12. ALL ELEVATIONS ARE REFERENCED TO NATIONAL VERTICAL GEODETIC DATUM (NGVD 29 - PICKETT & ASSOC.).
13. INSTALL TRASH FENCING AS NECESSARY TO CONTROL BLOWING SOLID WASTE.
14. REPAIR AND MAINTAIN, AS NECESSARY, THE SIDE SLOPES WITH FINAL COVER, MAIN ACCESS ROAD, ACCESS RAMPS, TERRACE DRAINAGE SWALES, AND OUTSIDE TEMPORARY BERMS.
15. REPAIR AND MAINTAIN PRIMARY STORMWATER SYSTEM INCLUDING CHANNELS AND DISCHARGE STRUCTURES AS NEEDED.

STAGE 3 / STAGE 4 FILL SEQUENCE NOTES

1. GENERAL FILLING SEQUENCE FOR LIFTS IS FROM OUTSIDE TO INSIDE. GENERAL FILLING FOR ROWS IS FROM EXTERIOR TO INTERIOR IN A CLOCKWISE DIRECTION.
2. BEGIN STAGE 3 FILLING NW CORNER; FILL ROWS 74 - 77, RAISING ACCESS ROAD. CONTINUE FILLING ROWS 78 THROUGH 91 IN A CLOCKWISE DIRECTION.
3. ESTABLISH 145 TERRACE AROUND ENTIRE PERIMETER.
4. CONTINUE FILLING ROWS 92 THROUGH 107 TO REACH 165 TERRACE.
5. FILL LIFTS 26, 27 AND 28 TO ACHIEVE FINAL TOP ELEVATIONS AT CENTER RIDGE OF LANDFILL.

NO.	DATE	REVISION	BY	APV'D
DES.	MSB	DRN. MAR.	CKD.	APV'D.

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STAGE 3 / STAGE 4
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CLASS III DISPOSAL CELL

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CLASS III SOLID WASTE DISPOSAL CELL
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VOLUSIA COUNTY, FLORIDA

SEAL:

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

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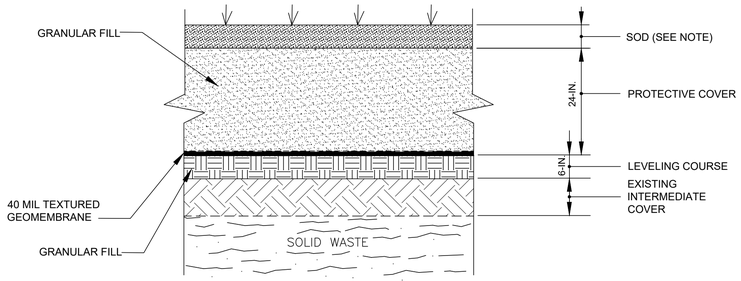
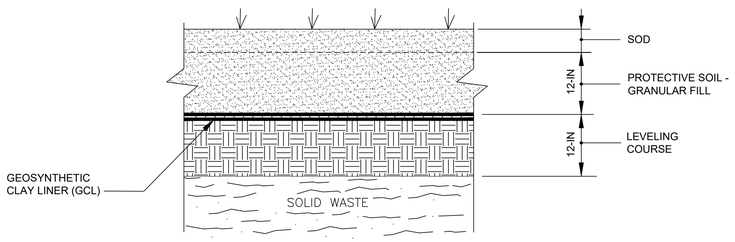


FINAL COVER SYSTEM (NON-DITCH AREAS) 2

NTS

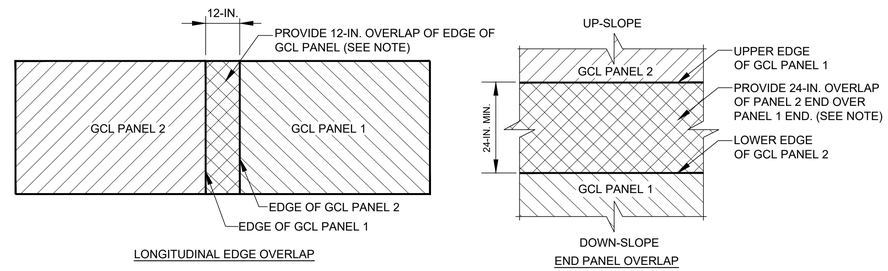
NOTES:

1. TOP 6-IN. GRANULAR FILL REQUIRED TO SUPPORT VEGETATIVE COVER.
2. CDN IS USED ABOVE THE GEOMEMBRANE IN TERRACE SWALES.



PERIMETER DITCH FINAL COVER SYSTEM (NORTH, EAST AND SOUTH DITCHES) 4

NTS

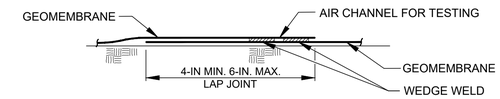


GCL OVERLAP IN PERIMETER DITCHES 6

NTS

NOTE:

PLACE GRANULAR BENTONITE BETWEEN PANELS AT PANEL OVERLAPS. APPLY A CONTINUOUS BEAD OF GRANULAR BENTONITE AT A MIN. RATE OF 1/4 LB. PER L.F.

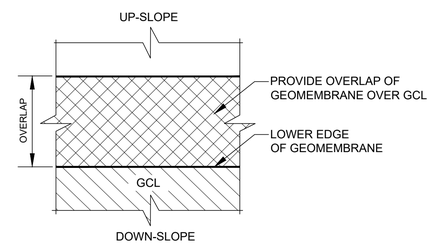


GEOMEMBRANE DOUBLE WEDGE WELD 10

NTS

NOTES:

1. ALL WELDS SHALL BE CONTINUOUS AND WATERTIGHT.
2. REMOVE UN-BONDED TOP EDGE IF AIR CHANNEL TEST FAILS AND VACUUM BOX TEST IS USED.



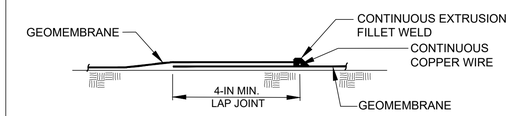
END PANEL OVERLAP

GEOMEMBRANE OVERLAP ON GCL AT STORMWATER DITCH 8

NTS

NOTE:

GEOMEMBRANE OVERLAP AT GEOMEMBRANE - GCL INTERFACE AS SHOWN ON DITCH SECTIONS

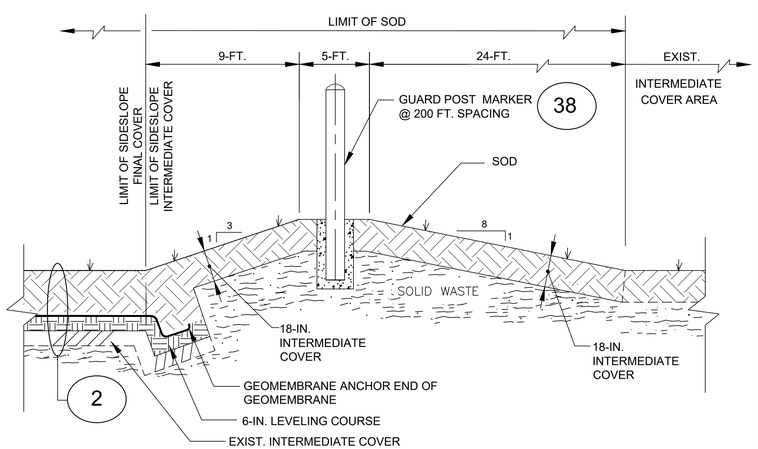


GEOMEMBRANE LINING EXTRUSION WELD 12

NTS

NOTES:

1. ALL WELDS SHALL BE CONTINUOUS AND WATERTIGHT.
2. SPARK TEST ALL EXTRUSION FILLET WELDS AND LINER PENETRATION WHERE LINER IS WELDED TO PIPE WALL.

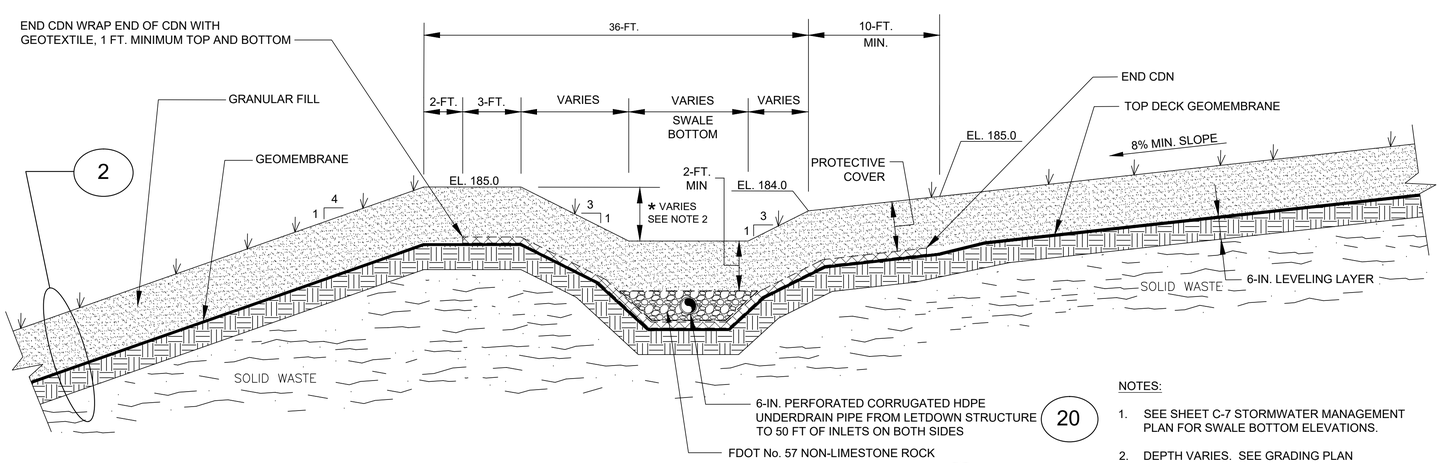


TYPICAL SEPARATOR BERM ON SIDESLOPES 14

NTS

NOTE:

THE SEPARATOR BERM TO BE CONSTRUCTED AT ALL SIDESLOPE INTERFACES BETWEEN THE CLOSURE AREAS & AREAS OF INTERMEDIATE COVER.



TOP DECK BARRIER LAYER DESIGN DETAIL 16

(NON-LETDOWN LOCATION)

NTS

NOTES:

1. SEE SHEET C-7 STORMWATER MANAGEMENT PLAN FOR SWALE BOTTOM ELEVATIONS.
2. DEPTH VARIES. SEE GRADING PLAN ELEVATIONS.

NO.	DATE	REVISION	BY	APVD
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VOLUSIA COUNTY, FLORIDA

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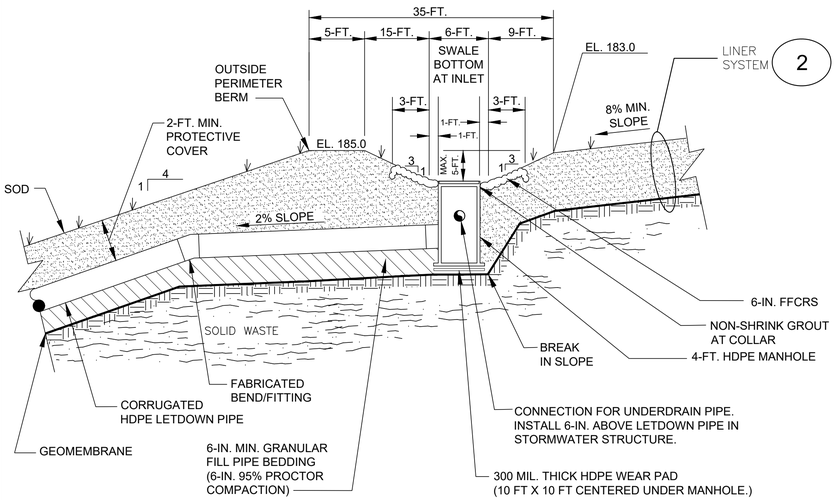
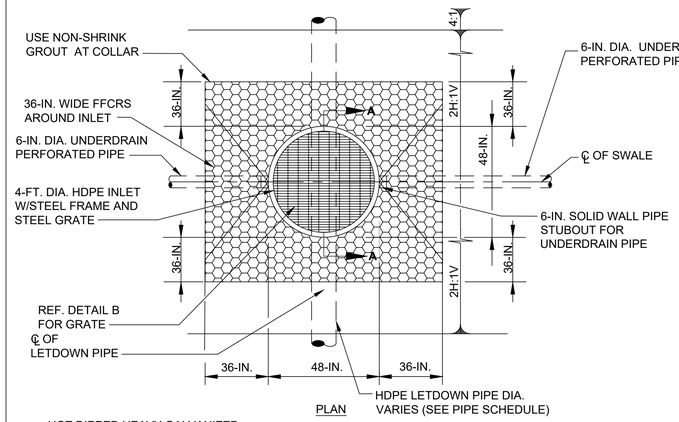
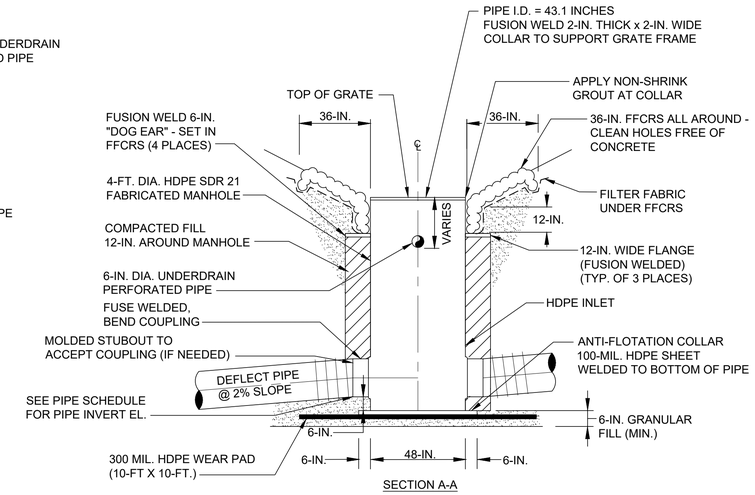


SWALE AT INLET - TOP OF SIDESLOPE (18)

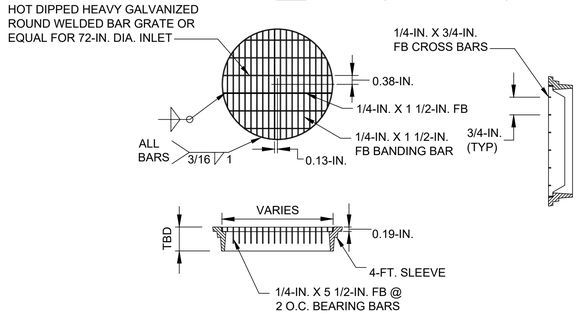
NTS



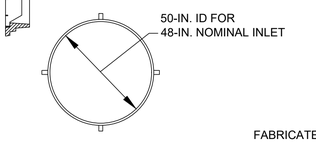
PLAN



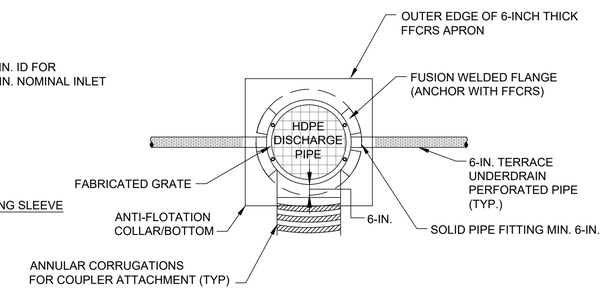
SECTION A-A



DETAIL B GRATE



HOT DIPPED GALVANIZED STEEL RING SLEEVE



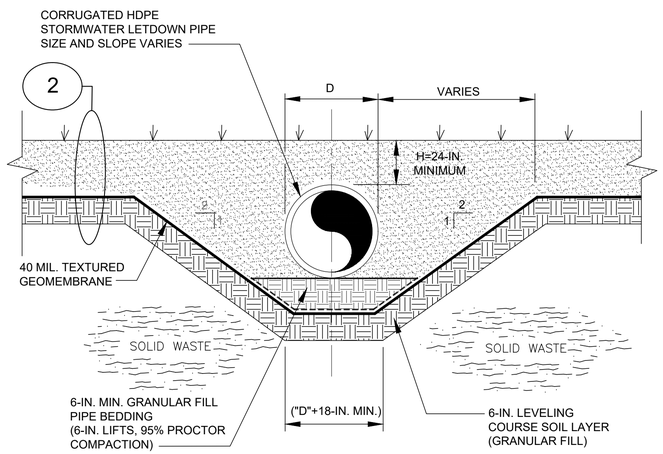
HDPE/CONCRETE CONNECTION

NOTES:

1. GRATE MATERIAL: A36, CARBON, HOT DIPPED GALVANIZED AFTER FABRICATION.
2. FRAME MATERIAL: A36, CARBON, HOT DIPPED GALVANIZED AFTER FABRICATION.
3. LOADING: H-15 WHEEL LOADS.
4. FLOW AREA 900 SQ. INCH MINIMUM.
5. GRATE SHALL BE FASTENED TO INLET BARREL AND BE REMOVABLE. SPLIT GRATE CAN BE USED.
6. SUBMIT SHOP DRAWINGS PRIOR TO FABRICATION.
7. FFCRS, SLEEVE & REMOVABLE GRATE ARE ALL FLUSH WITH EACH OTHER.
8. PROVIDE DETAIL FOR FFCRS AND GROUTING AGAINST FABRICATED MANHOLE.

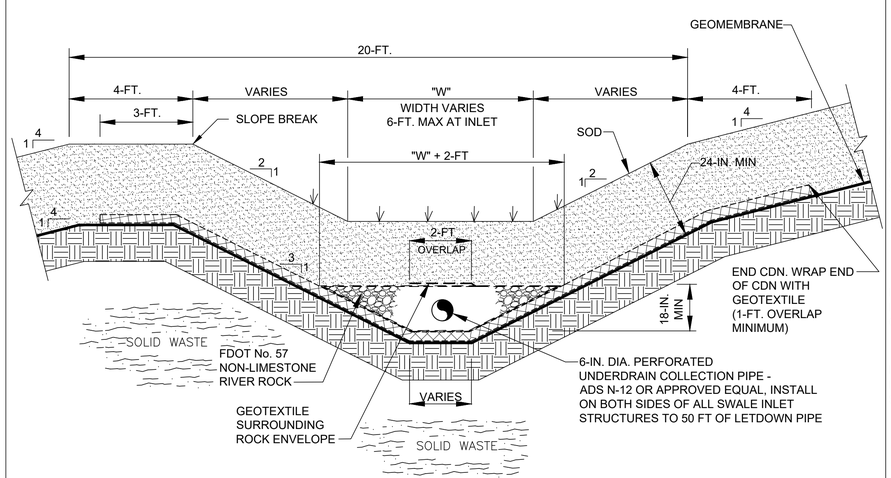
STORMWATER INLET STRUCTURE DETAILS (20)

NTS



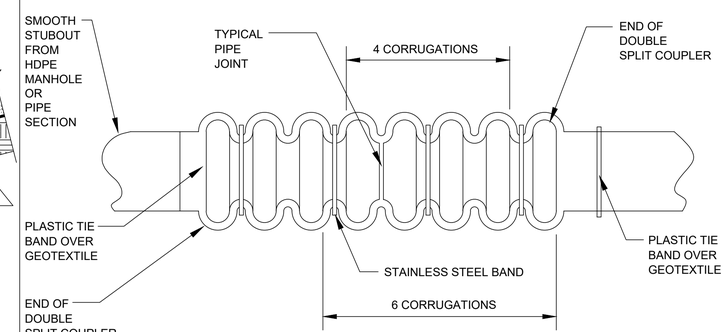
STORMWATER LETDOWN PIPE DETAIL (22)

NTS



UNDERDRAIN COLLECTION PIPE DETAIL (24)

NTS



SPLIT COUPLER DETAIL (LETDOWN PIPES) (26)

NTS

NOTES:

1. INSTALL GEOTEXTILE OVER SPLIT COUPLER UNDER STAINLESS STEEL BANDS SECURE ENDS WITH PLASTIC TIES.
2. GEOTEXTILE CAN ALSO BE SECURED BY LYSTERING FABRIC TO ITSELF. DO NOT LYSTER GEOTEXTILE TO HDPE PIPE.

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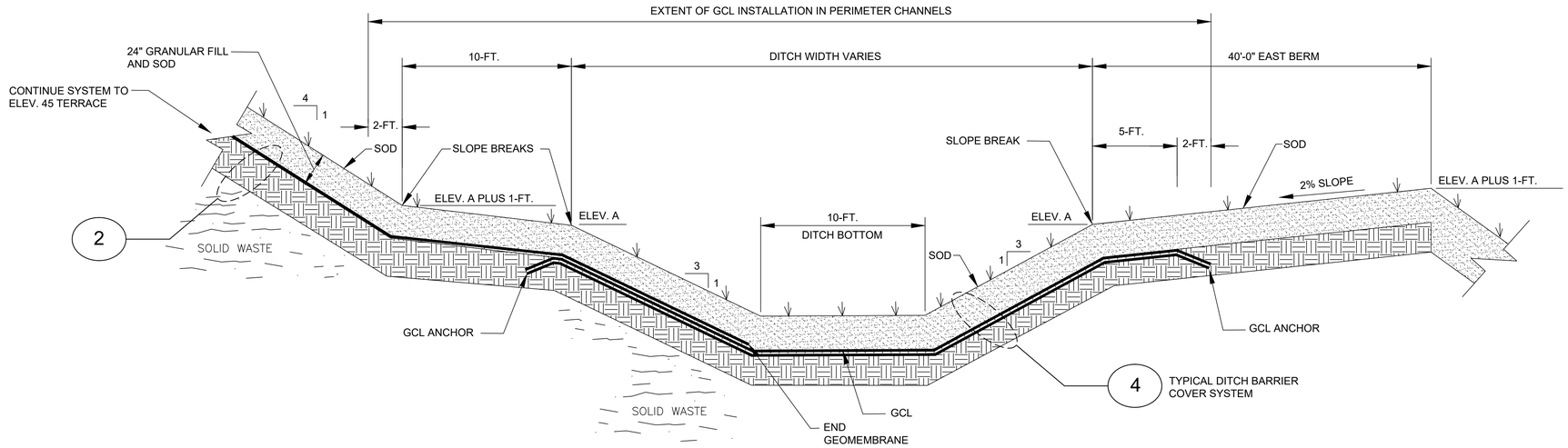
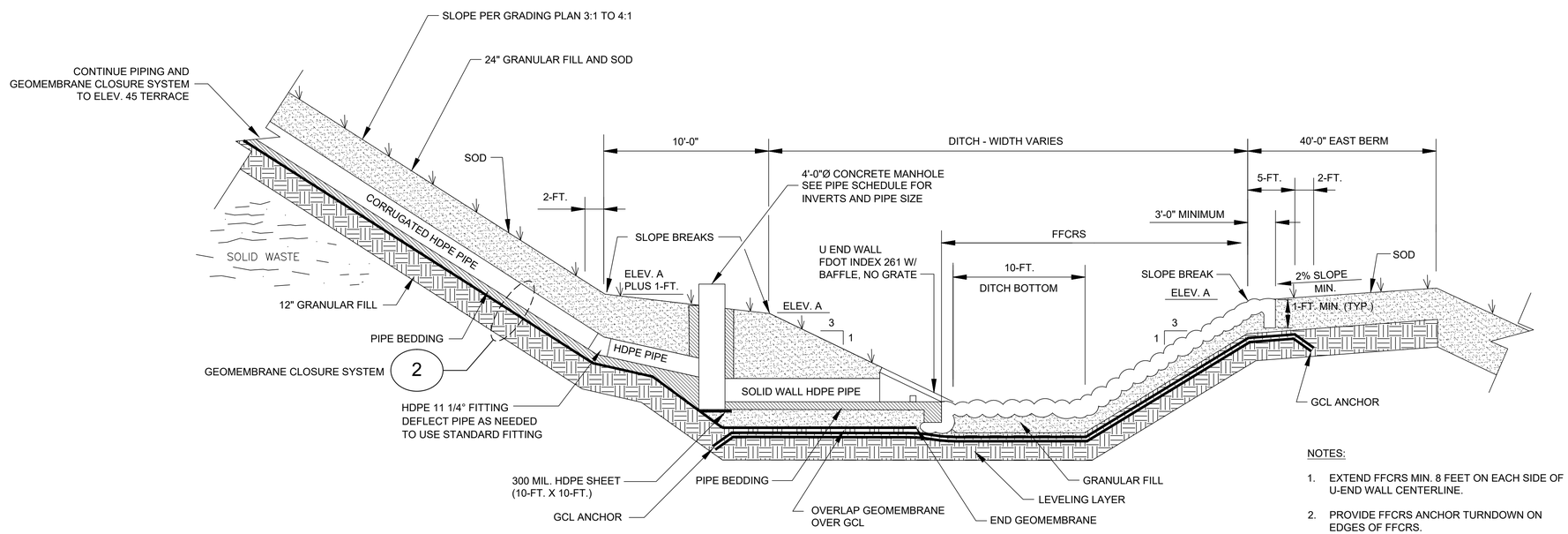


EAST DITCH - TYPICAL DRAINAGE CHANNEL AND BERM INSTALLATION SECTION (28)

NTS



NOTES:

1. EXTEND FFCRS MIN. 8 FEET ON EACH SIDE OF U-END WALL CENTERLINE.
2. PROVIDE FFCRS ANCHOR TURNDOWN ON EDGES OF FFCRS.
3. PLAN SIMILAR TO DETAIL 36.

EAST DITCH - TYPICAL STORMWATER PIPE DISCHARGE SECTION (30)

NTS

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CLOSURE CONSTRUCTION DETAILS

OPERATIONS & SEQUENTIAL CLOSURE PERMIT
CLASS III SOLID WASTE DISPOSAL CELL
TOMOKA FARMS ROAD LANDFILL
VOLUSIA COUNTY, FLORIDA

SEAL:

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

DATE:	AUG. 2019
PROJ:	NS.08607.011
DWG:	CD-3
SHEET:	18 of 23

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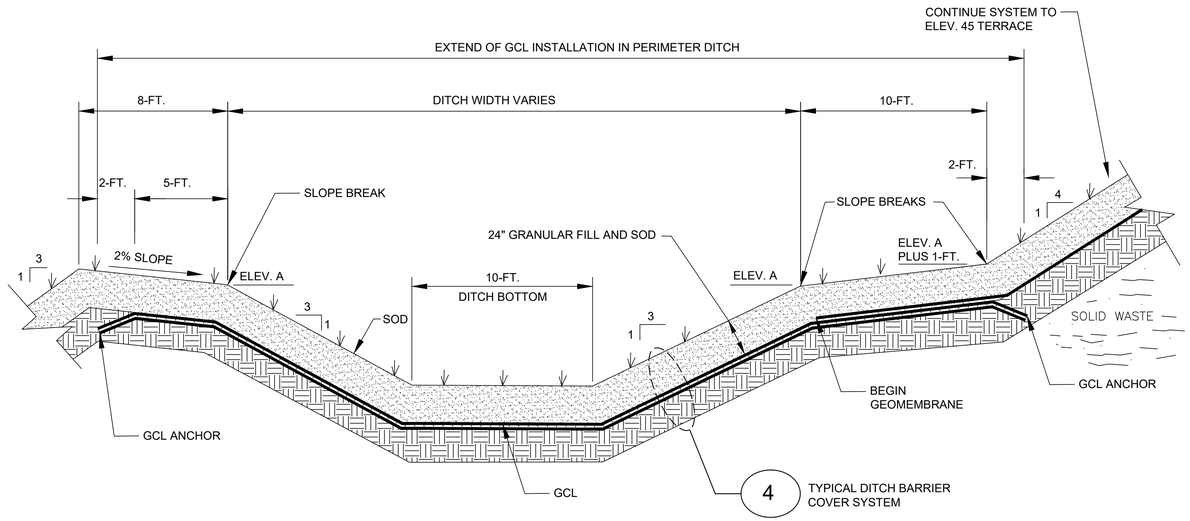
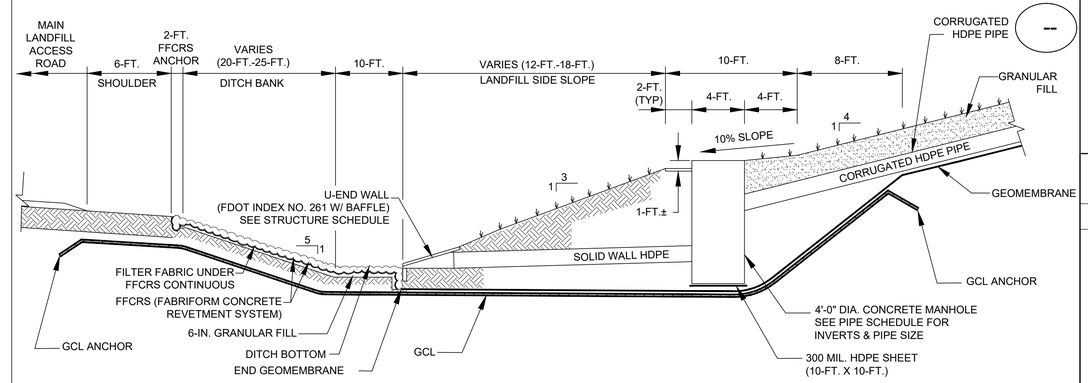


SOUTH PERIMETER DITCH TYPICAL DRAINAGE DITCH AND BARRIER INSTALLATION SECTION

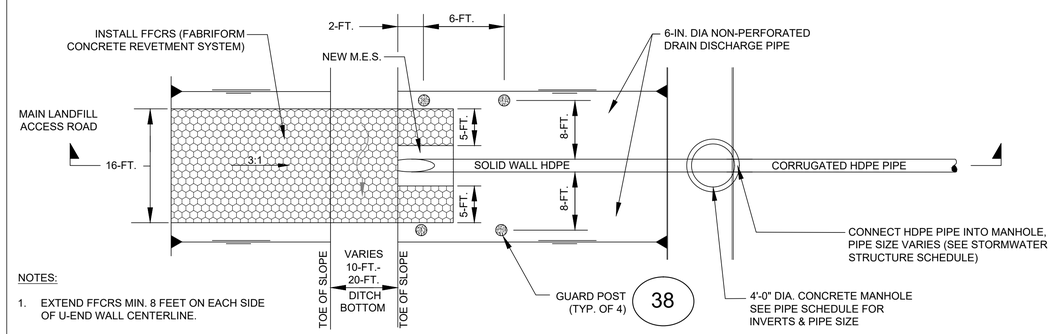
NTS

32



TYPICAL PIPE DISCHARGE LONGITUDINAL SECTION

NTS



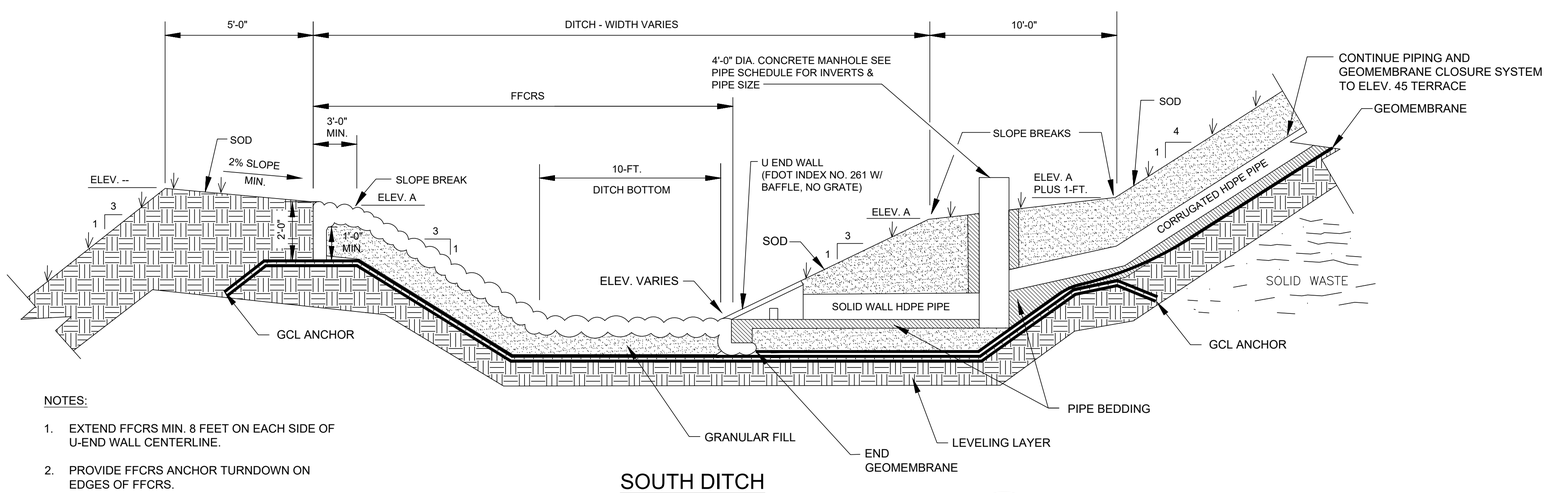
NOTES:

1. EXTEND FFCRS MIN. 8 FEET ON EACH SIDE OF U-END WALL CENTERLINE.
2. PROVIDE FFCRS ANCHOR TURNDOWN ON EDGES OF FFCRS.

WEST PERIMETER DITCH MANHOLE & ENERGY DISSIPATOR TYPICAL PIPE DISCHARGE DETAIL

NTS

36



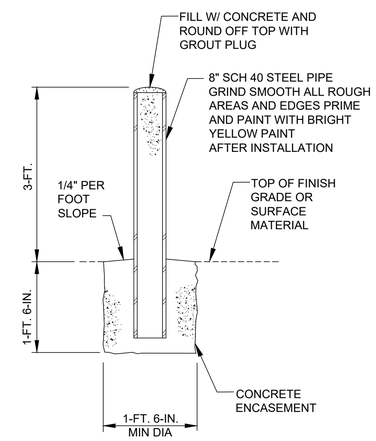
NOTES:

1. EXTEND FFCRS MIN. 8 FEET ON EACH SIDE OF U-END WALL CENTERLINE.
2. PROVIDE FFCRS ANCHOR TURNDOWN ON EDGES OF FFCRS.
3. PLAN SIMILAR TO DETAIL 36.

SOUTH DITCH TYPICAL STORMWATER PIPE DISCHARGE SECTION

NTS

34



GUARD POST

NTS

38

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VOLUSIA COUNTY, FLORIDA

SEAL:

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0 1"

DATE:	AUG. 2019
PROJ:	NS.08607.011
DWG:	CD-4
SHEET:	19 of 23

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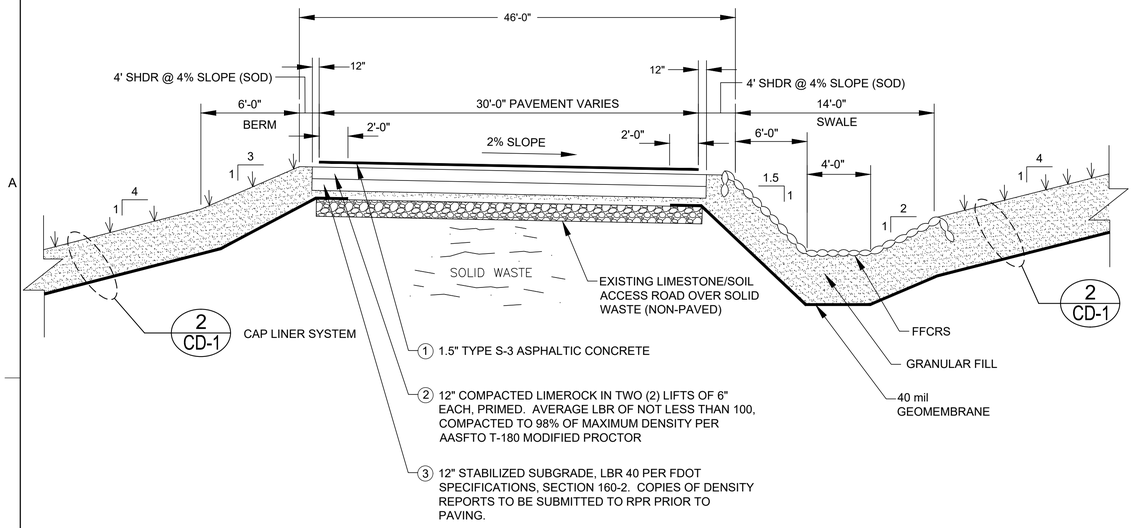
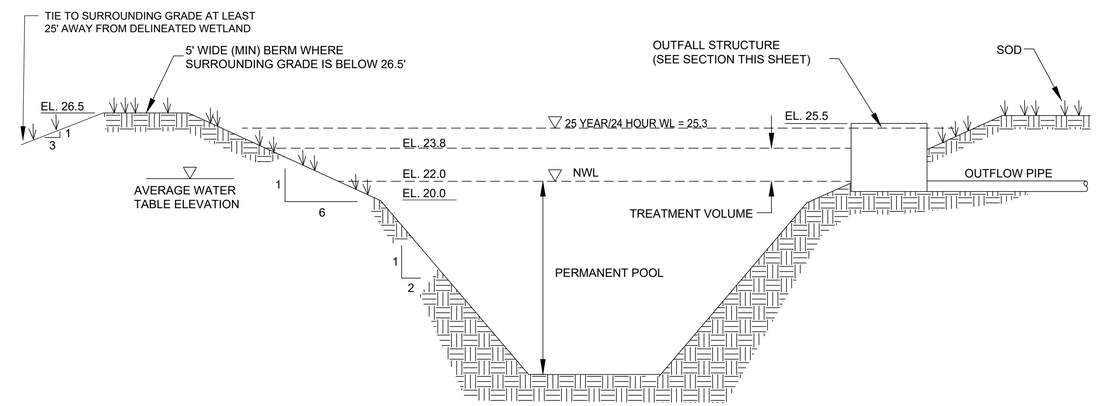


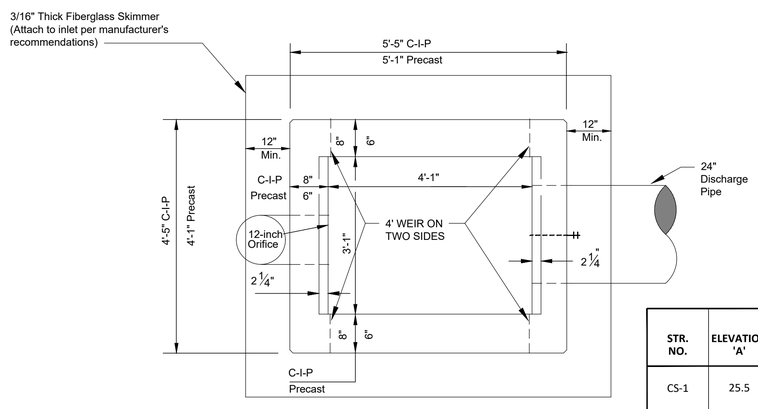
TYPICAL ACCESS ROAD SECTION 40

NTS



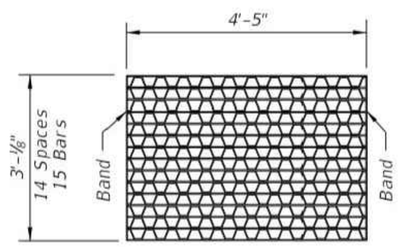
TYPICAL STORMWATER POND SECTION 42

NTS



PLAN

STR. NO.	ELEVATION 'A'	ELEVATION 'B'	ELEVATION 'C'	ELEVATION 'D'
CS-1	25.5	23.8	22.0	21.0
CS-2	25.5	23.8	22.0	21.0



TYPE D

Straight Bars 2" x 1/4"

Reticuline Bars 1 1/4" x 3/16"

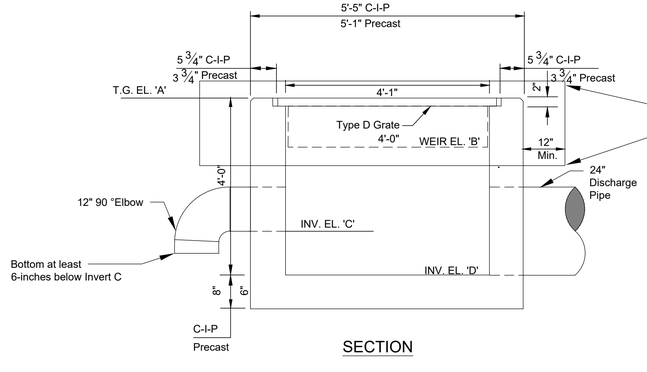
Bands 2" x 1/4"

Approx. Weight 190 Lbs.

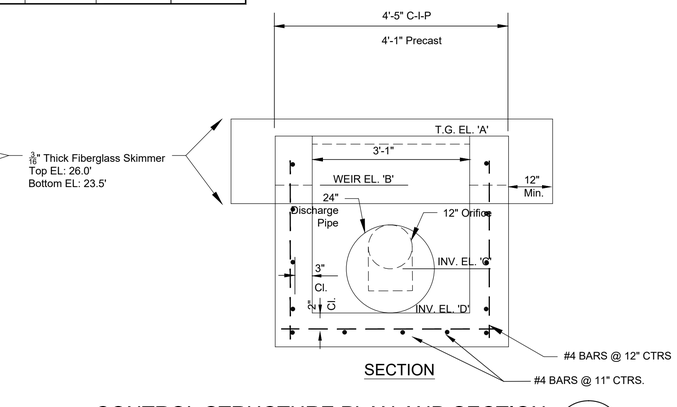
OPERATION AND MAINTENANCE PLAN

1. INSPECT ALL SWALES, DITCHES, PIPES AND PONDS AT LEAST ONCE PER MONTH.
2. REMOVE ALL TRASH, DEBRIS AND BLOCKAGES WHEN DISCOVERED.
3. INSPECT AND CLEAR, AS NOTED ABOVE, BEFORE AND AFTER A SIGNIFICANT STORM EVENT.
4. MOW SWALES AND DRY POND BANKS AS NEEDED.
5. REPAIR ANY EROSION OR DEPOSITS TO ORIGINAL DESIGN GRADES AS NEEDED.

FDOT INDEX 232 TYPE D DITCH BOTTOM INLET



SECTION



SECTION

CONTROL STRUCTURE PLAN AND SECTION 43

NTS

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VOLUSIA COUNTY, FLORIDA

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0 1"

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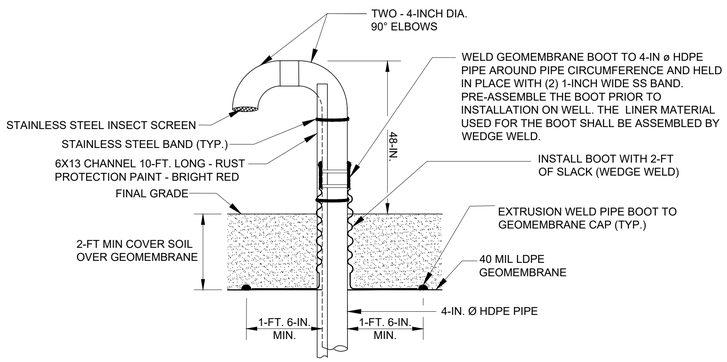
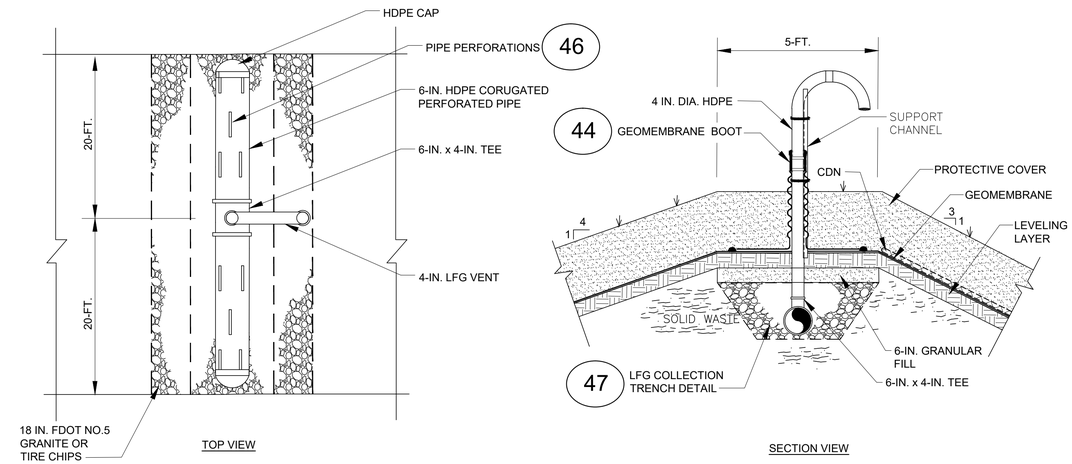


GEOMEMBRANE BOOT DETAIL FOR LFG VENT (44)

NTS

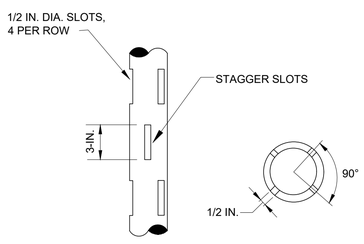


NOTES:

1. SEE SHEET C-9 FOR VENT LOCATION.
2. WRAP ROCK WITH 10 OZ./S.Y. GEOTEXTILE, OVERLAP END OF EACH LAYER OF GEOTEXTILE.

LANDFILL GAS VENT DETAIL (45)

NTS

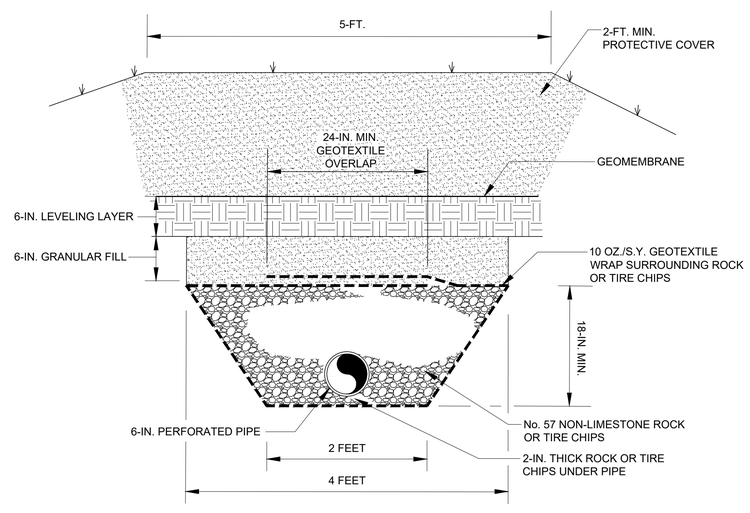


NOTES:

1. SDR-11 HDPE SOLID WALL PIPE, PE4710.
2. 1/2-IN. WIDE BY 3-IN. LONG SLOTS STAGGERED BY 45° ALTERNATE ROWS.
3. SLOTS TO BE FABRICATED AT MANUFACTURER'S LOCATION.
4. NO FIELD DRILLING OF PERFORATIONS ALLOWED.

GAS VENT COLLECTION PIPE PERFORATION DETAIL (46)

NTS



NOTES:

1. TIRE SHRED SPECIFICATIONS ARE PROVIDED IN SECTION 02580 OF THE TECHNICAL SPECIFICATIONS.
2. IDENTIFY THE USE OF NO. 57 NON-LIMESTONE ROCK OR SHREDDED TIRE CHIPS IN BID.

LFG COLLECTION TRENCH DETAIL (47)

NTS

NO.	DATE	REVISION	BY	APV'D

DES. MSB DRN. MAR. CKD. APV'D.

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DWG:	CD-6
SHEET:	21 of 23

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