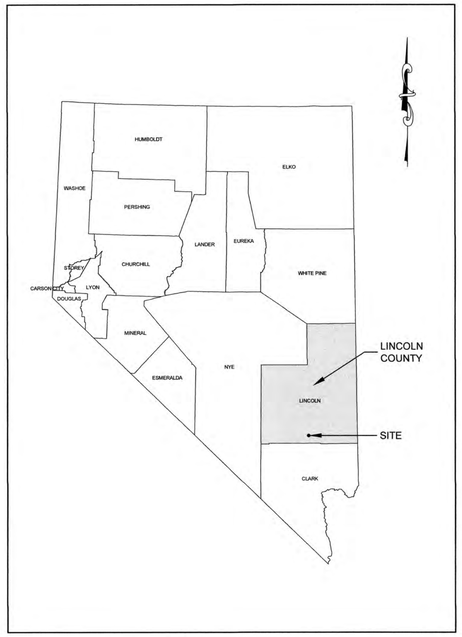
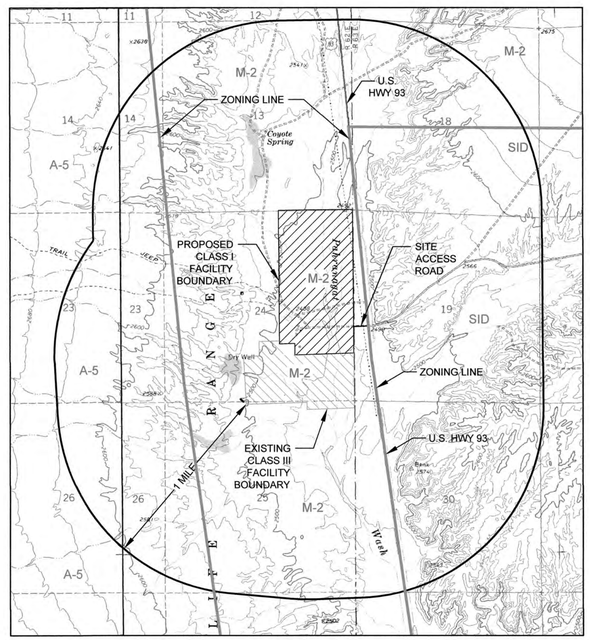
BEDROC LANDFILL AND WASTE MANAGEMENT FACILITY
DESIGN DRAWINGS
FOR A CLASS I DISPOSAL FACILITY
LINCOLN COUNTY, NEVADA



NEVADA
COUNTY LOCATION MAP
N.T.S.



GENERAL LOCATION MAP
LINCOLN COUNTY, NEVADA
SCALE - 1"=2,000'

DRAWING INDEX

SHEET	DESCRIPTION
1	COVER
2	GENERAL NOTES AND LEGEND
3	EXISTING CONDITIONS PLAN
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5	LEACHATE COLLECTION / REMOVAL PLAN
6	FINAL GRADING PLAN
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11	PHASING PLANS, PHASES V-VIII
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13	PHASING PLANS, PHASES XIII-XVI
14	PHASING PLANS, PHASES XVII-XIX
15	SITE MONITORING PLAN
16	DETAILS
17	DETAILS
18	DETAILS
19	LOCATION OF BORROW AREA
20	ADJACENT PROPERTY OWNERS
21	STORMWATER CHANNEL SECTIONS
22	STORMWATER CHANNEL SECTIONS
23	STORMWATER PROFILE

ZONING

ID	DESCRIPTION
A-5	AGRICULTURAL (40 ACRES)
M-2	HEAVY MANUFACTURING
SID	SPECIAL INDUSTRIAL

PREPARED FOR:

BEDROC LIMITED, LLC
2745 N. NELLIS BLVD.
LAS VEGAS, NEVADA 89115

OCTOBER 2013
REVISED MAY 2014

DATE	REVISIONS AND RECORD OF ISSUE	NO	BY	CK	APP
5/19/14	REVISED IN RESPONSE TO NDEP COMMENTS DATED 4/22/14		DAS	LBB	LEJ
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DESIGNED LBB
DRAWN DAS
CHECKED LBB
APPROVED LEJ
DATE 10/23/13

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BEDROC LANDFILL AND WASTE MGMT. FACILITY
LINCOLN COUNTY, NEVADA

COVER

PROJECT NO.
383.1401.01

SCALE
AS SHOWN

DRAWING NO.
1

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CONVENTIONAL SYMBOLS AND GENERAL NOTES

LINES

	EXISTING	PROPOSED
PROPERTY LINE / FACILITY BOUNDARY		
EASEMENT		
RIGHT OF WAY	R/W	R/W
FENCE LINE	X X	X X
RAILROAD		
GUARDRAIL		
RESOURCE PROTECTION AREA		
SURVEY TIE LINE		
SURFACE WATER		
APPROXIMATE 100 YEAR FLOODPLAIN	F/P	F/P
OVERHEAD ELECTRIC	OHE	OHE
UNDERGROUND ELECTRIC	UGE UGE	UGE UGE
OVERHEAD TELEPHONE	OHT	OHT
UNDERGROUND TELEPHONE	UGT UGT	UGT UGT
FORCEMAIN	FM	FM
SANITARY SEWER	SS	SS
PROCESS SEWER	PS	PS
NATURAL GAS	G	G
POTABLE WATER	W	W
SOLID PIPE (TYPE NOTED)		
PERFORATED PIPE (TYPE NOTED)		
CULVERT (SIZE NOTED)		
PAVED ROAD		
GRAVEL/DIRT ROAD		
TREE LINE		
MAJOR TOPOGRAPHIC CONTOUR	100	100
MINOR TOPOGRAPHIC CONTOUR		
GROUNDWATER SURFACE CONTOUR (FT ABOVE MEAN SEA LEVEL)	80 GW	
BEDROCK SURFACE CONTOUR (FT ABOVE MEAN SEA LEVEL)	70 BR	
APPROXIMATE GROUNDWATER FLOW PATHWAY USED TO CALCULATE HYDRAULIC GRADIENT		
LANDFILL GAS	LFG	LFG
LANDFILL GAS CONDENSATE	LFGC	LFGC
LEACHATE COLLECTION TRENCH	LCT LCT	LCT LCT
DUAL CONTAINED LEACHATE FORCEMAIN	DCFM DCFM	DCFM DCFM
LIMITS OF WASTE		
CELL LIMITS		
WASTE MANAGEMENT BOUNDARY		
SECTION CALL-OUT	B ?	

SYMBOLS

	EXISTING	PROPOSED
GROUNDWATER MONITORING WELL	MW-X	MW-X
OBSERVATION WELL	MW-OW-X	MW-OW-X
NES WELL	NES-OW-X	NES-OW-X
PERFORMANCE WELL	MW-PW-X	MW-PW-X
SENTINEL WELL	MW-X	MW-X
EXTRACTION WELL	EW-X	EW-X
WETLANDS PIEZOMETER	PZ-X	PZ-X
PIEZOMETER	PZ-X	PZ-X
LANDFILL GAS PROBE	GP-X	GP-X
PASSIVE LFG VENT	GV-X	GV-X
LFG EXTRACTION WELL WITH PUMP	GWP-X	GWP-X
LFG EXTRACTION WELL	GW-X	GW-X
CONDENSATE TRAP WITH PUMP	CT/P-1	CT/P-1
CONDENSATE TRAP WITHOUT PUMP	CT-1	CT-1
SURFACE WATER MONITORING POINT	SMP-X	SMP-X
LEACHATE MONITORING POINT	LMP-X	LMP-X
BORE HOLE LOCATION	B-X	BH-X
CORING LOCATION	C-X	C-X
SOIL SAMPLING LOCATION	SS-X	SS-X
TEST PIT LOCATION	TP-X	
WELL LOCATION	W	
SPRINGHEAD LOCATION	S-X	
BENCHMARK	BM	
CONTROL POINT	CP	
UTILITY POLE		
SIGN		
HYDRANT		
WATER METER	WM	WM
VALVE		
PIPE FITTINGS		
LIGHT POLE		
TANK (SIZE VARIES)		
TRANSFORMER		
MANHOLE	M	M
CLEANOUT	CO	CO
VALVE LOCATION & IDENTIFICATION	V-3	V-3
STORMWATER PIPE OUTLET PROTECTION		
SPOT ELEVATION	14.70	14.70

PLAN-VIEW HATCHING

	EXISTING	PROPOSED
DEMOLITION		
ASPHALT PAVEMENT		
GRAVEL		
CONCRETE		
WETLANDS		

EROSION AND SEDIMENT CONTROL FEATURES

FROM THE VIRGINIA EROSION & SEDIMENT CONTROL HANDBOOK

SYMBOL	NO.	NAME
CE	3.02	CONSTRUCTION ENTRANCE
SF SF	3.05	SILT FENCE
PS	3.32	PERMANENT SEEDING
DV	3.12	DIVERSION BERM
TSD-1	3.15	TEMPORARY SLOPE DRAIN
IP	3.07	INLET PROTECTION
CIP	3.08	CULVERT INLET PROTECTION
OP	3.18	OUTLET PROTECTION
CD	3.20	ROCK CHECK DAM
SCC-1	3.17	STORM WATER CONVEYANCE CHANNEL
ST-1	3.13	SEDIMENT TRAP
SB-1	3.14	SEDIMENT BASIN

GENERAL NOTES:

1. EXISTING TOPOGRAPHIC DATA FOR LOTS 2-4, 6-8 AND 12-14 WERE TAKEN FROM A TOPOGRAPHIC SURVEY MAP PREPARED BY WALLACE MORRIS SURVEYING, DATED 7/16/2013.
2. THE CONTRACTOR IS REQUIRED TO PROTECT STRUCTURES AND APPURTENANCES INCLUDING BUT NOT NECESSARILY LIMITED TO WELLS, DRAINAGE STRUCTURES, PROPERTY CORNERS, ETC. THE CONTRACTOR WILL BE REQUIRED TO REPAIR ANY DAMAGES AT NO EXPENSE TO THE OWNER.
3. THE CONTRACTOR MUST CONTACT MISS UTILITY, AT 1-800-227-2600, A MINIMUM OF 48 HRS. PRIOR TO ANY EXCAVATION.
4. TOPOGRAPHIC CONTOUR INTERVAL = 2 FOOT.
5. COORDINATE SYSTEM IS NAD83 NEVADA STATE PLANES, EAST ZONE, US FOOT (NV83-EF).
6. EXISTING GROUNDWATER SURFACE ESTABLISHED FROM STATIC WATER LEVELS MEASURED ON SEPTEMBER 3, 2013.

NO	DATE	REVISIONS AND RECORD OF ISSUE	BY	CK	APP
0	10/23/13	ISSUED FOR DEP REVIEW	DAS	LBB	LEJ

STATE OF NEVADA PROFESSIONAL ENGINEER LEONARD E. JOYCE JR. CIVIL No. 13878 3/9/14

DESIGNED LBB
DRAWN DAS
CHECKED LBB
APPROVED LEJ
DATE 10/23/13

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BEDROC LANDFILL AND WASTE MGMT. FACILITY
LINCOLN COUNTY, NEVADA

GENERAL NOTES AND LEGEND

PROJECT NO. 383.1401.01

SCALE AS SHOWN

DRAWING NO. 2

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STATE OF NEVADA
LEONARDO E. JOYCE, JR.
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No. 13871
PROFESSIONAL ENGINEER
5/19/14

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DATE 10/23/13

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BEDROC LANDFILL AND WASTE MGMT. FACILITY
LINCOLN COUNTY, NEVADA

EXISTING CONDITIONS PLAN

PROJECT NO.
383.1401.01

SCALE
AS SHOWN

DRAWING NO.
3

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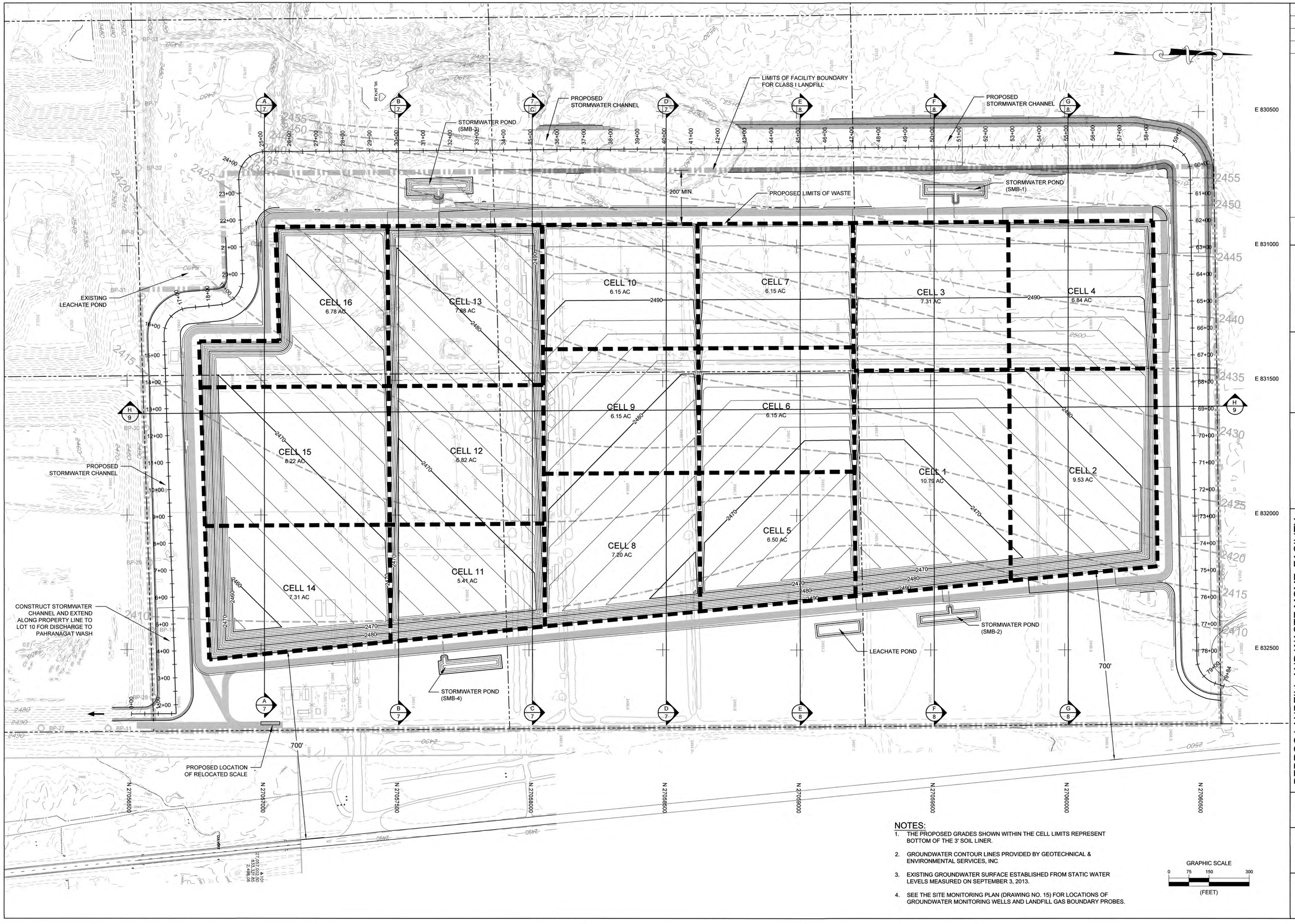

NOTES:

1. THE PROPOSED GRADES SHOWN WITHIN THE CELL LIMITS REPRESENT BOTTOM OF THE 3' SOIL LINER.
2. GROUNDWATER CONTOUR LINES PROVIDED BY GEOTECHNICAL & ENVIRONMENTAL SERVICES, INC.
3. EXISTING GROUNDWATER SURFACE ESTABLISHED FROM STATIC WATER LEVELS MEASURED ON SEPTEMBER 3, 2013.
4. SEE THE SITE MONITORING PLAN (DRAWING NO. 15) FOR LOCATIONS OF GROUNDWATER MONITORING WELLS AND LANDFILL GAS BOUNDARY PROBES.

GRAPHIC SCALE
0 75 150 300
(FEET)

NO	BY	CK	APP
3	DAS	LBB	LEJ
2	DAS	LBB	LEJ
1	DAS	LBB	LEJ
0	DAS	LBB	LEJ

DATE	REVISIONS AND RECORD OF ISSUE
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PROFESSIONAL ENGINEER STATE OF NEVADA LEONARD E. JOYCE, JR. CIVIL No. 13876 5/19/14

DESIGNED LBB
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CHECKED LBB
APPROVED LEJ
DATE 10/23/13

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BEDROC LANDFILL AND WASTE MGMT. FACILITY
LINCOLN COUNTY, NEVADA

BASE GRADING PLAN

PROJECT NO.
383.1401.01

SCALE
AS SHOWN

DRAWING NO.
4

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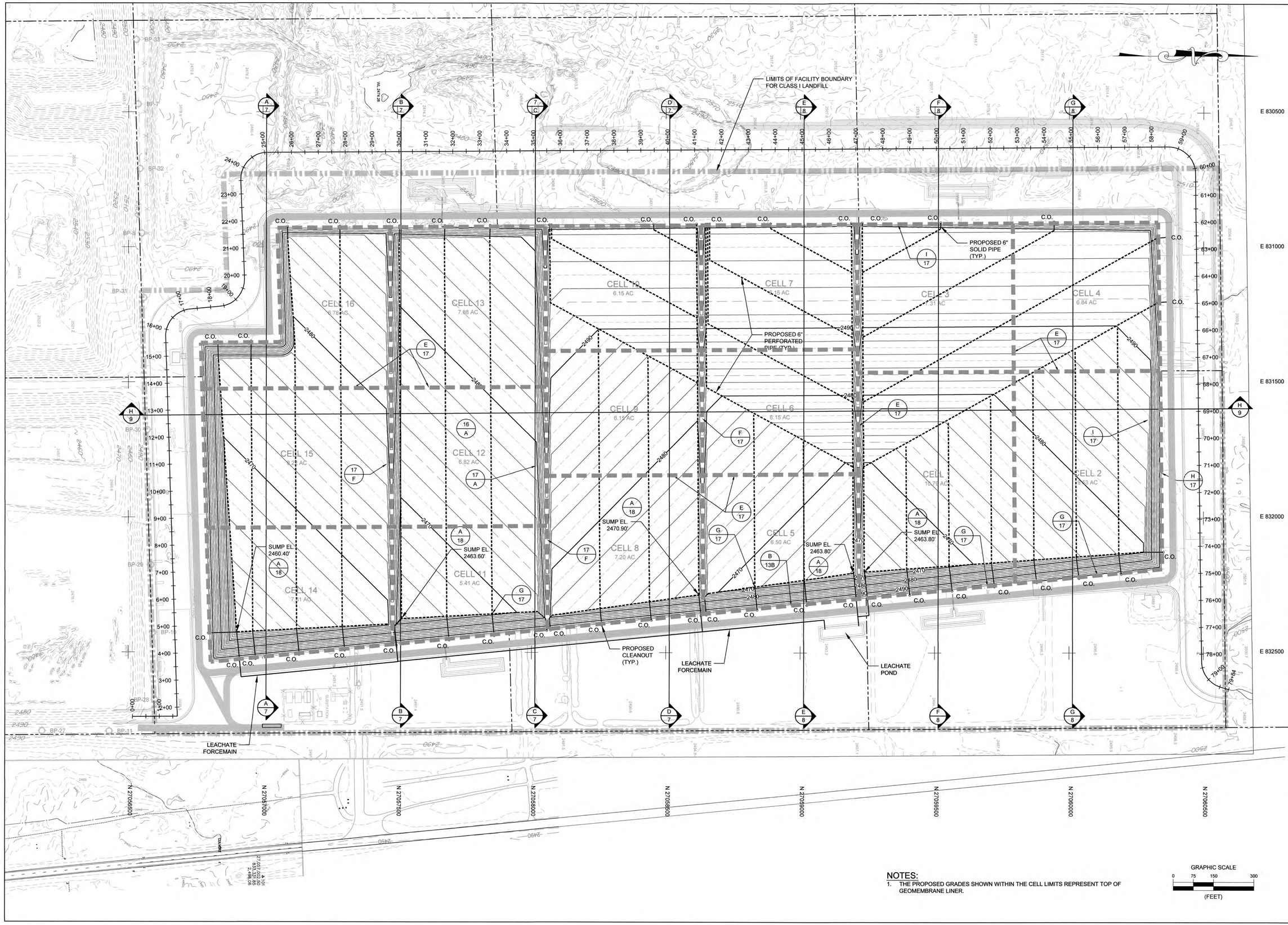

NOTES:

1. THE PROPOSED GRADES SHOWN WITHIN THE CELL LIMITS REPRESENT TOP OF GEOMEMBRANE LINER.

NO	BY	CK	APP
2	DAS	LBB	LEJ
1	DAS	LBB	LEJ
0	DAS	LBB	LEJ

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5/19/14	REVISED IN RESPONSE TO NDEP COMMENTS DATED 4/22/14
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STATE OF NEVADA
LEONARD E. JOYCE, JR.
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No. 13876
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5/19/14

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BEDROC LANDFILL AND WASTE MGMT. FACILITY
LINCOLN COUNTY, NEVADA

LEACHATE MANAGEMENT PLAN

PROJECT NO.
383.1401.01

SCALE
AS SHOWN

DRAWING NO.
5

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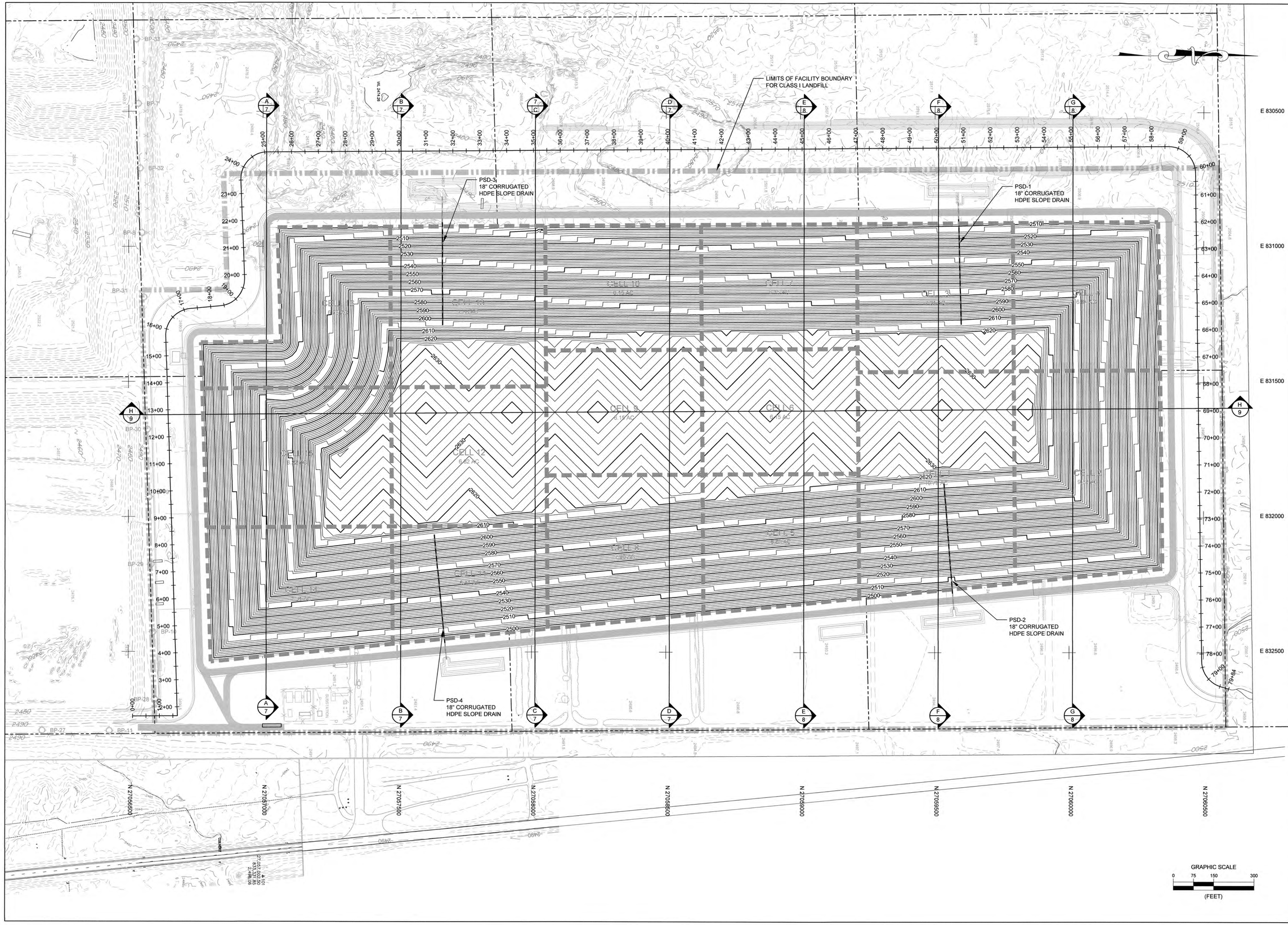

NO	BY	CK	APP
2	DAS	LBB	LEJ
1	DAS	LBB	LEJ
0	DAS	LBB	LEJ

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STATE OF NEVADA
LEONARD E. JOYCE, JR.
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5/19/14

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APPROVED LEJ
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BEDROC LANDFILL AND WASTE MGMT. FACILITY
LINCOLN COUNTY, NEVADA

FINAL GRADING PLAN

PROJECT NO.
383.1401.01

SCALE
AS SHOWN

DRAWING NO.
6

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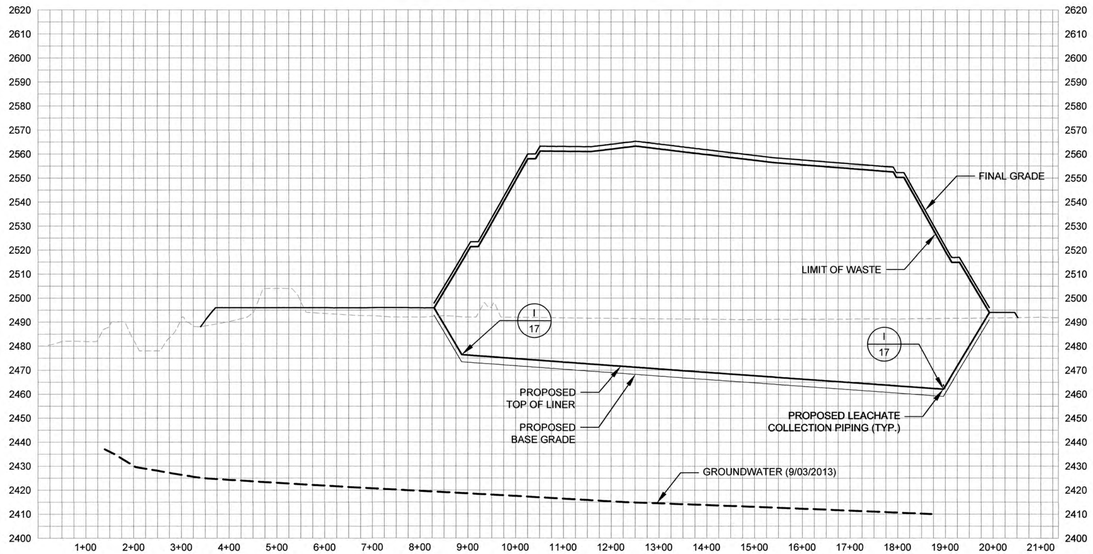
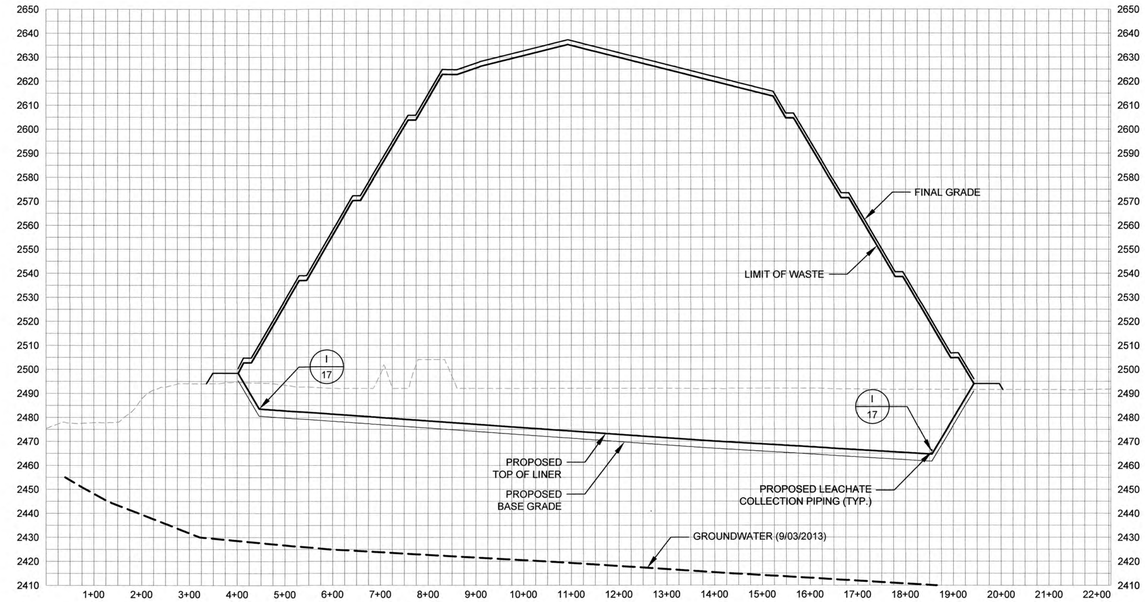


Section A-A



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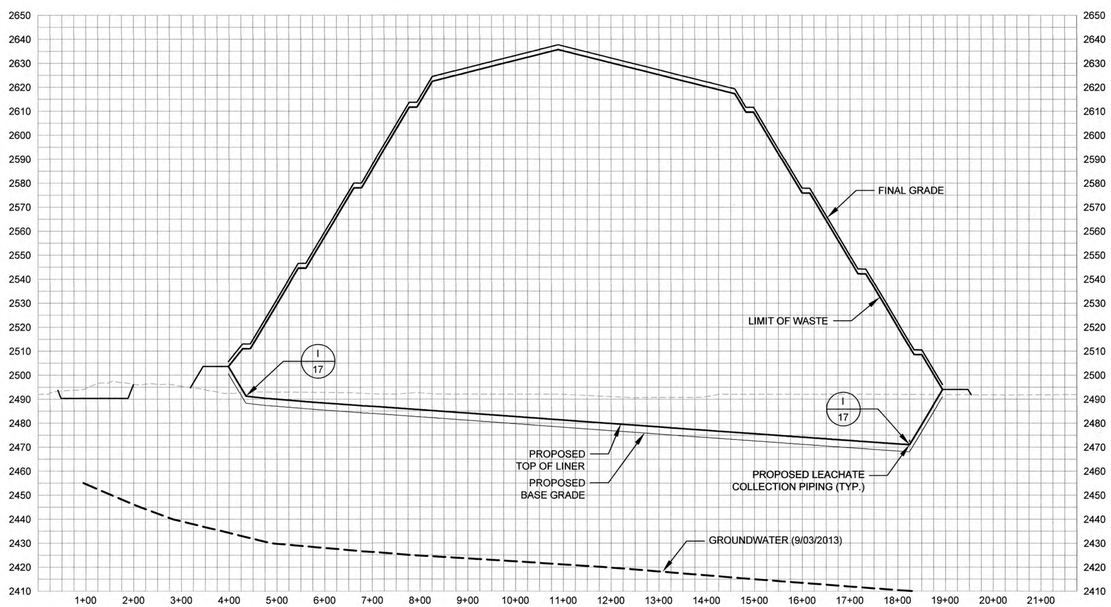

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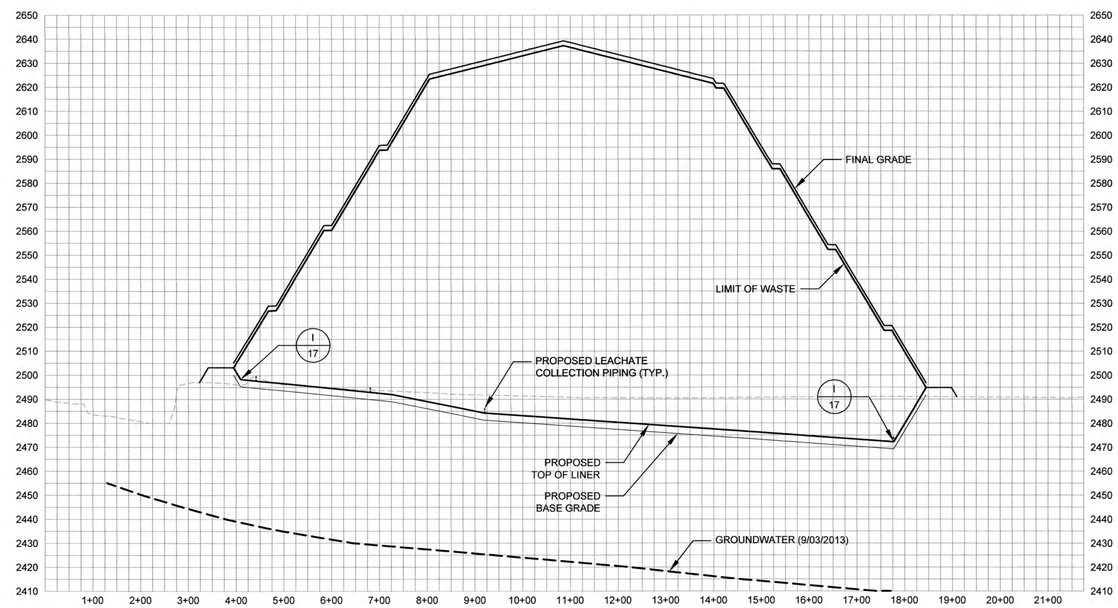

SECTION D-D

DATE	REVISIONS AND RECORD OF ISSUE	NO	BY	CK	APP
5/19/14	REVISED IN RESPONSE TO NDEP COMMENTS DATED 4/22/14	1	DAS	LBB	LEJ
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STATE OF NEVADA
LEONARD E. JOYCE, JR.
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PROFESSIONAL ENGINEER
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5/19/14

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BEDROC LANDFILL AND WASTE MGMT. FACILITY
LINCOLN COUNTY, NEVADA

SECTIONS A-A TO D-D

PROJECT NO.
383.1401.01

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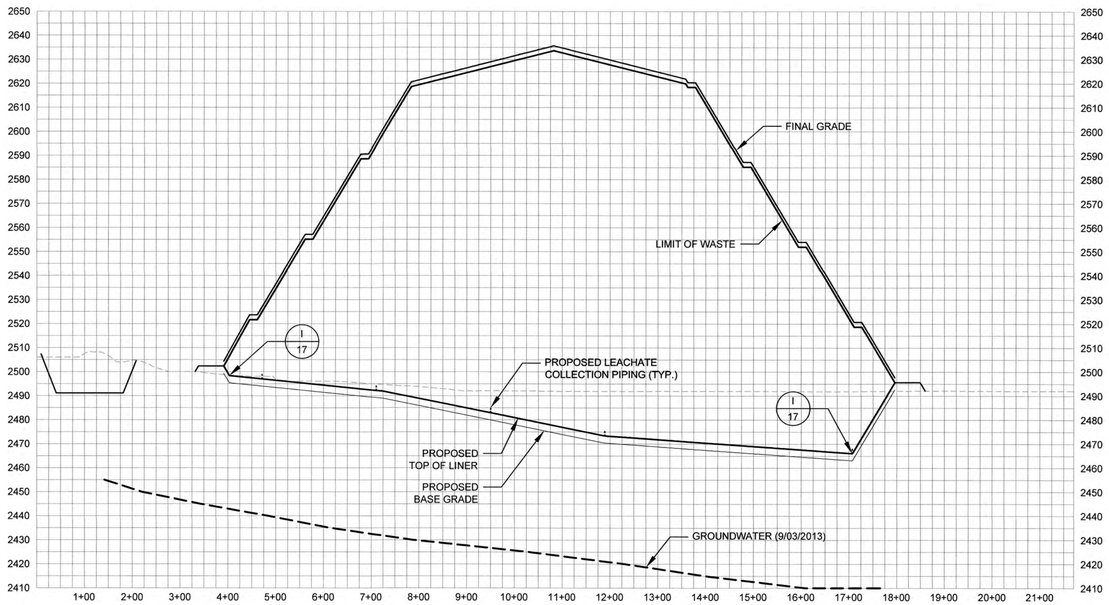
DRAWING NO.
7

L:\Western Elite\dwg\Northern Site Expansion\Current Working Drawings\Print Sheets\9 Section H-H.dwg Layout=7 Sections A-A to D-D



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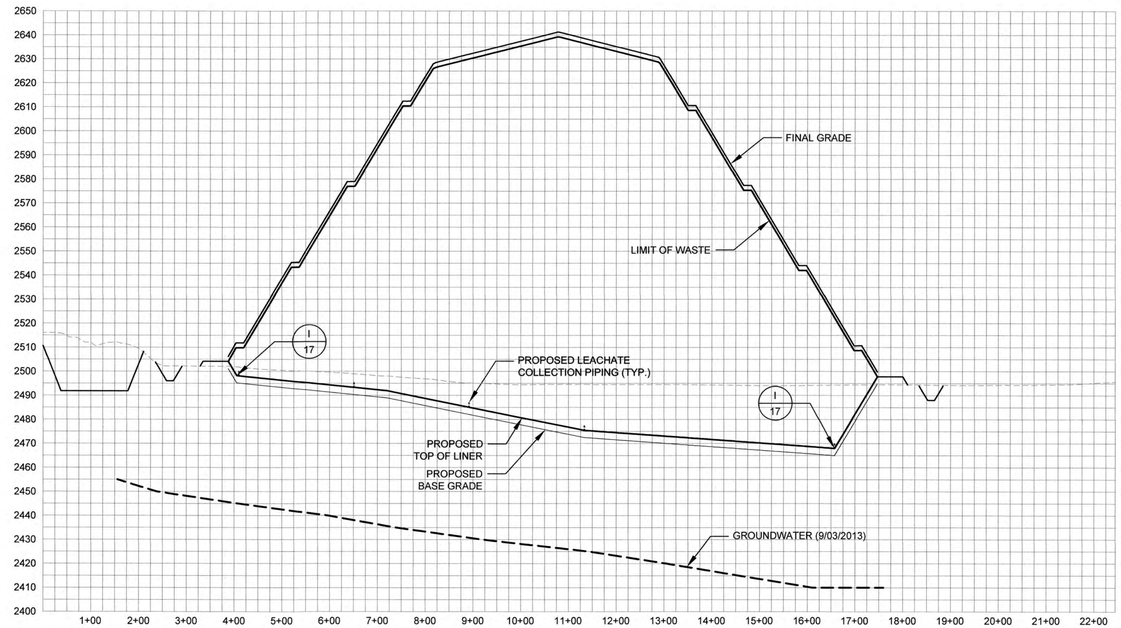

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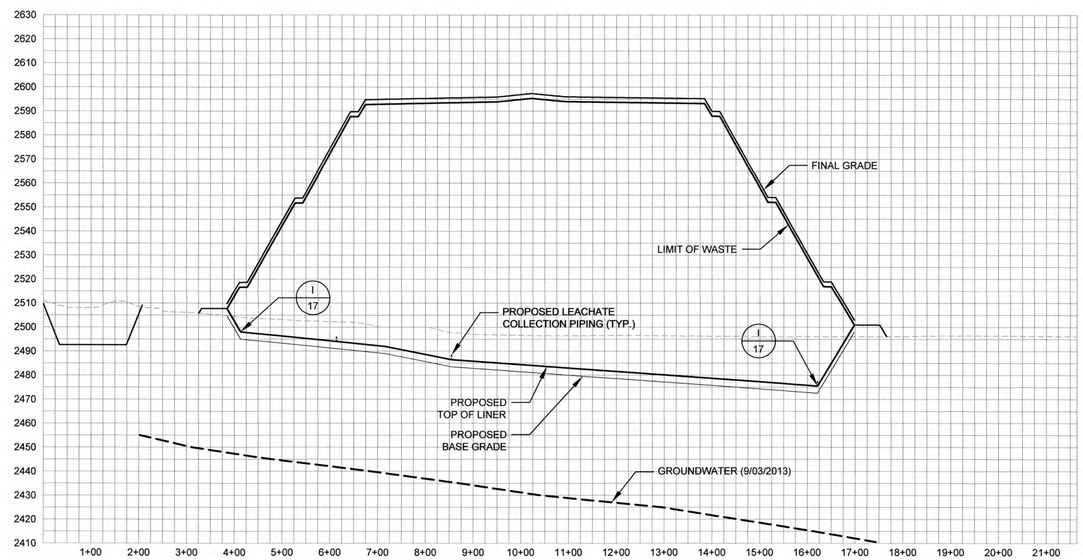

SECTION G-G

NO.	BY	CK	APP
1	DAS	LBB	LEJ
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STATE OF NEVADA
LEONARD E. JOYCE JR.
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No. 13917
CIVIL
5/19/14

DESIGNED	LBB
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APPROVED	LEJ
DATE	10/23/13

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BEDROC LANDFILL AND WASTE MGMT. FACILITY
LINCOLN COUNTY, NEVADA

SECTIONS E-E TO G-G

PROJECT NO.
383.1401.01

SCALE
AS SHOWN

DRAWING NO.
8

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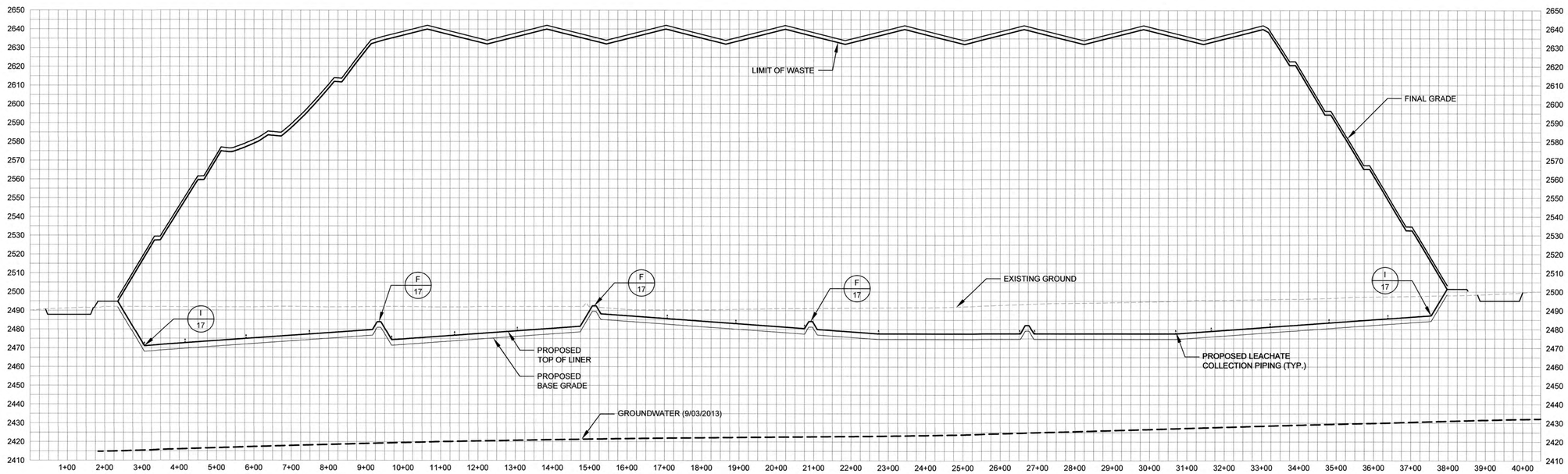

SECTION H-H

NO	BY	CK	APP
1	DAS	LBB	LEJ
0	DAS	LBB	LEJ

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LEONARDO E. JOYCE, JR.
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PROFESSIONAL ENGINEER
5/19/14

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BEDROC LANDFILL AND WASTE MGMT. FACILITY
LINCOLN COUNTY, NEVADA

SECTION H-H

PROJECT NO.
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SCALE
AS SHOWN

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9

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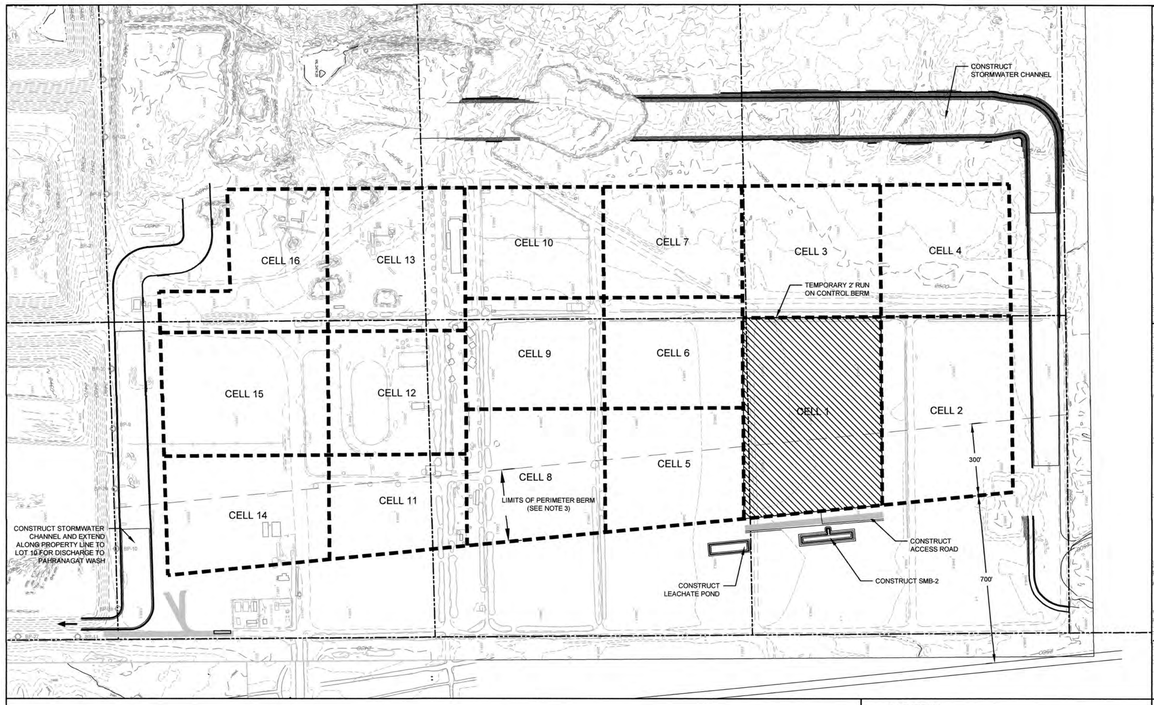


PHASE I

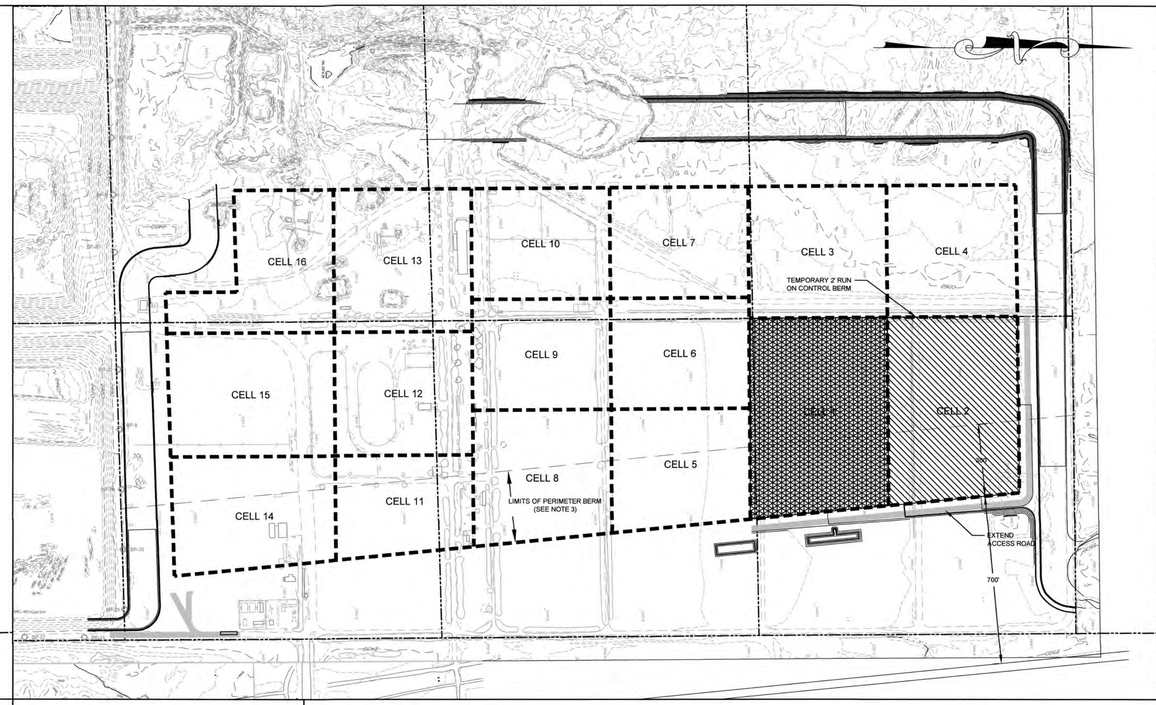
TOP OF LINER: CELL 1

CELL 1

AREA: ±10.79 AC.
CAPACITY: 2,033,845 C.Y.

NOTES:

1. CELL CAPACITY DETERMINED BY EXTENDING CELL LIMIT VERTICALLY TO THE TOP OF THE INTERMEDIATE COVER.
2. LANDFILL GAS BOUNDARY PROBES AND GROUNDWATER MONITORING WELLS WILL BE INSTALLED IN ACCORDANCE WITH THE SCHEDULES ON THE SITE MONITORING PLAN (DRAWING NO. 15)
3. PERIMETER SCREENING BERMS SHALL BE CONSTRUCTED IN ACCORDANCE WITH DETAIL A WHEN WASTE DISPOSAL ACTIVITIES ARE WITHIN 1,000' OF HIGHWAY 93.

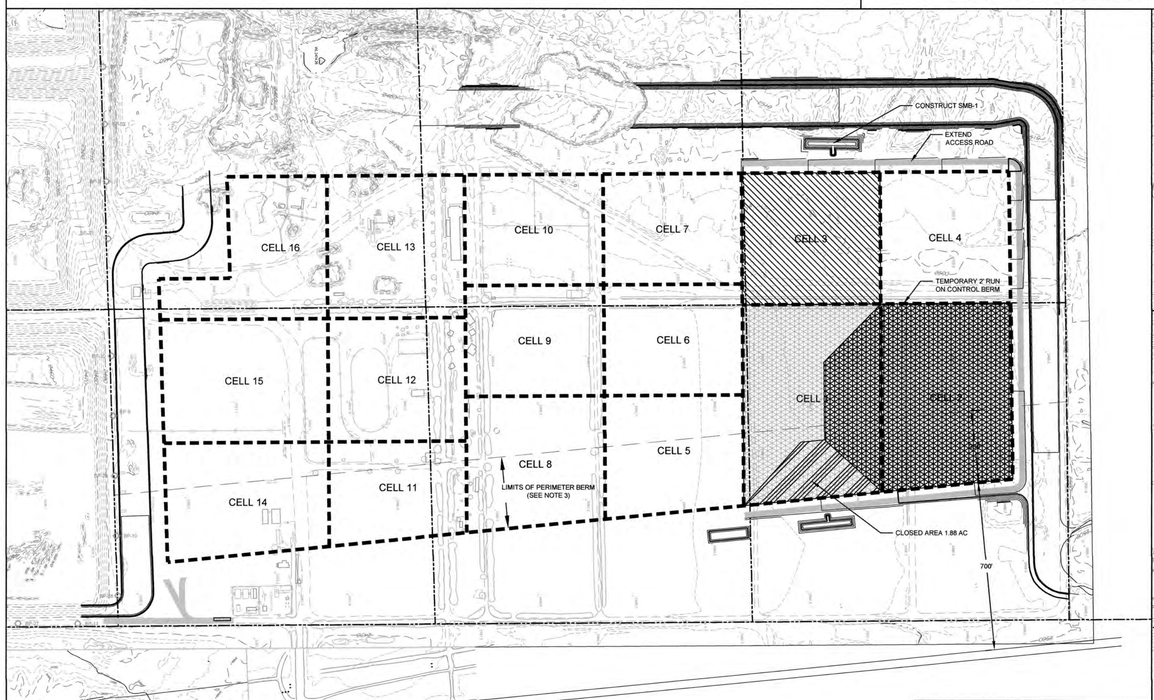


PHASE II

TOP OF WASTE : CELL 1
TOP OF LINER: CELL 2

CELL 2

AREA: ±9.53 AC.
CAPACITY: 1,202,177 C.Y.



PHASE III

TOP OF WASTE : CELL 2
TOP OF LINER: CELL 3

CELL 3

AREA: ±7.31 AC.
CAPACITY: 1,002,038 C.Y.

PHASE IV

TOP OF WASTE : CELL 3
TOP OF LINER: CELL 4

CELL 4

AREA: ±6.84 AC.
CAPACITY: 700,415 C.Y.

BASE GRADING AREA
INTERMEDIATE GRADING AREA
PREVIOUSLY FILLED AREA
AREA TO BE CLOSED

GRAPHIC SCALE
0 150 300 600
(FEET)

NO	BY	CK	APP
2	DAS	LBB	LEJ
1	DAS	LBB	LEJ
0	DAS	LBB	LEJ

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STATE OF NEVADA
LEE BOYD JOYCE
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5/19/14

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APPROVED LEJ
DATE 10/23/13

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JOYCE ENGINEERING
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RICHMOND, VA 23220
PHONE: (804) 355-4520

BEDROC LANDFILL AND WASTE MGMT. FACILITY
LINCOLN COUNTY, NEVADA

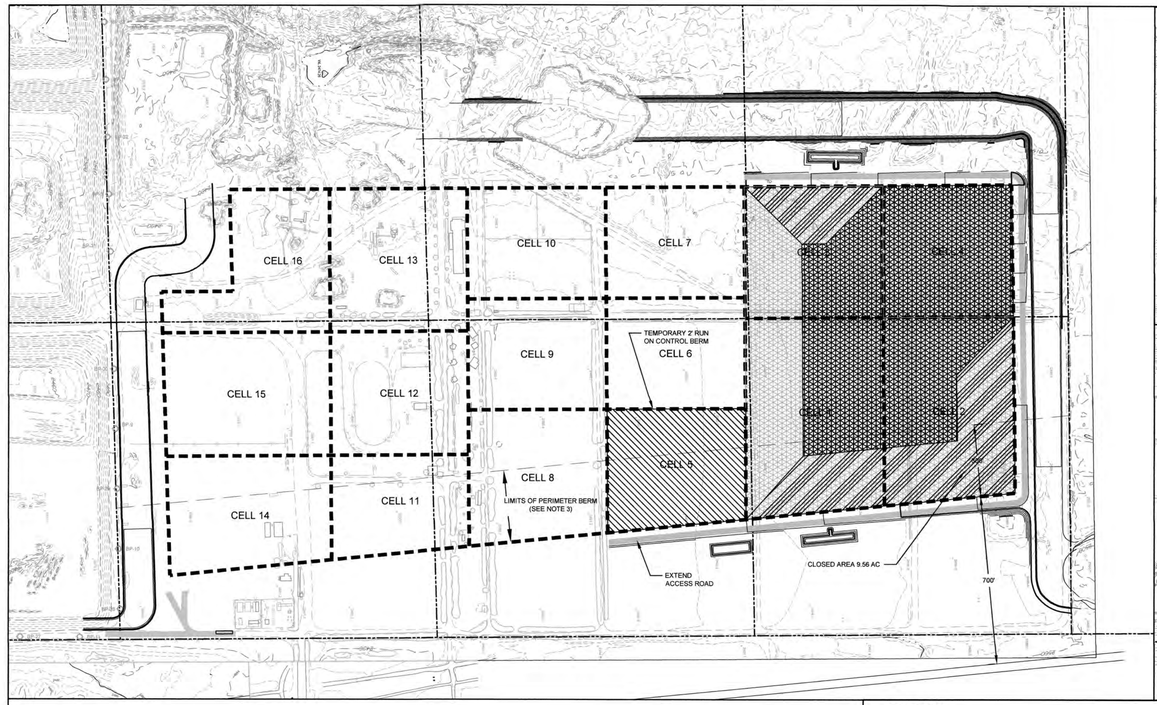
PHASING PLANS
PHASES I-IV

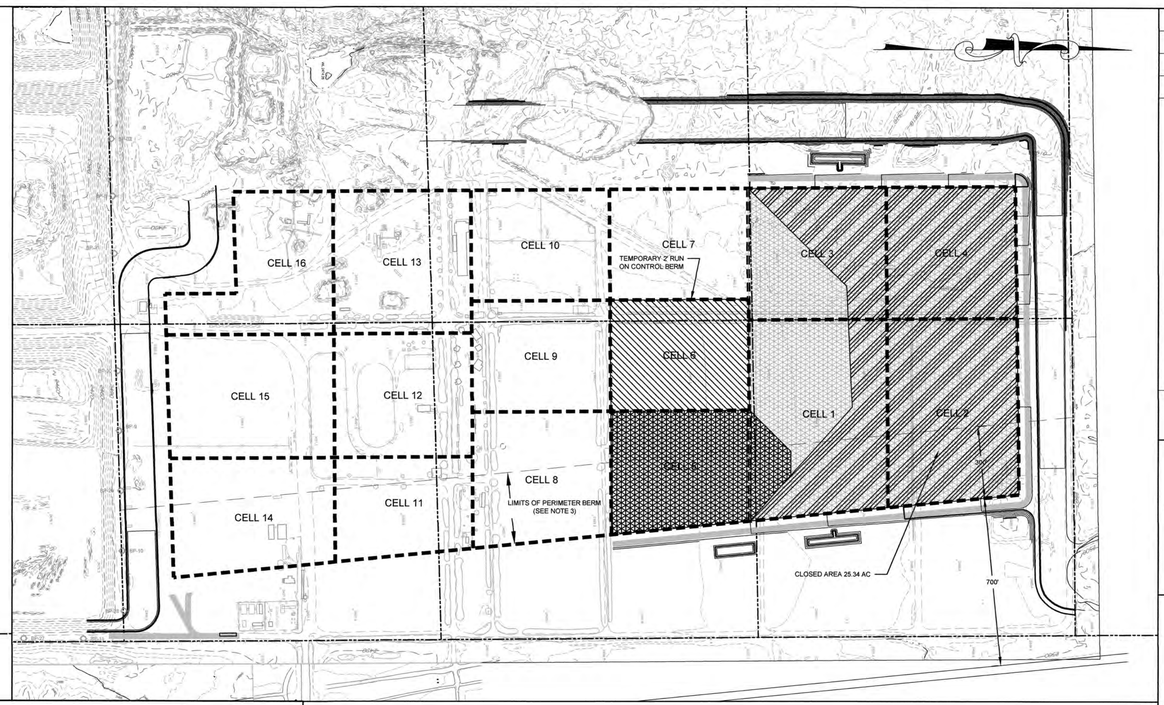
PROJECT NO.
383.1401.01

SCALE
AS SHOWN

DRAWING NO.
10

L:\Western Elite\dwg\Northern Site Expansion\Current Working Drawings\Print Sheets\14 Phasing Plans - Phases XVII-XIX.dwg Layout=10 Phasing Plans - Phases I-IV





PHASE V
TOP OF WASTE : CELL 4
TOP OF LINER: CELL 5

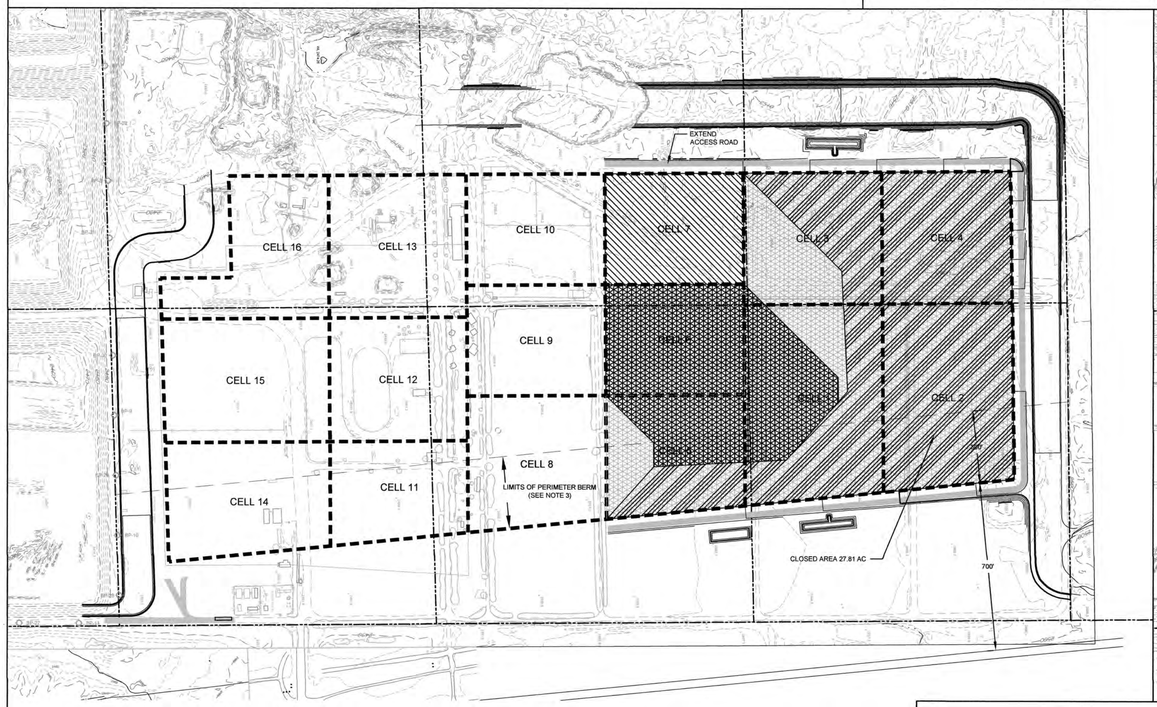
CELL 5
AREA: ±6.50 AC.
CAPACITY: 980,367 C.Y.

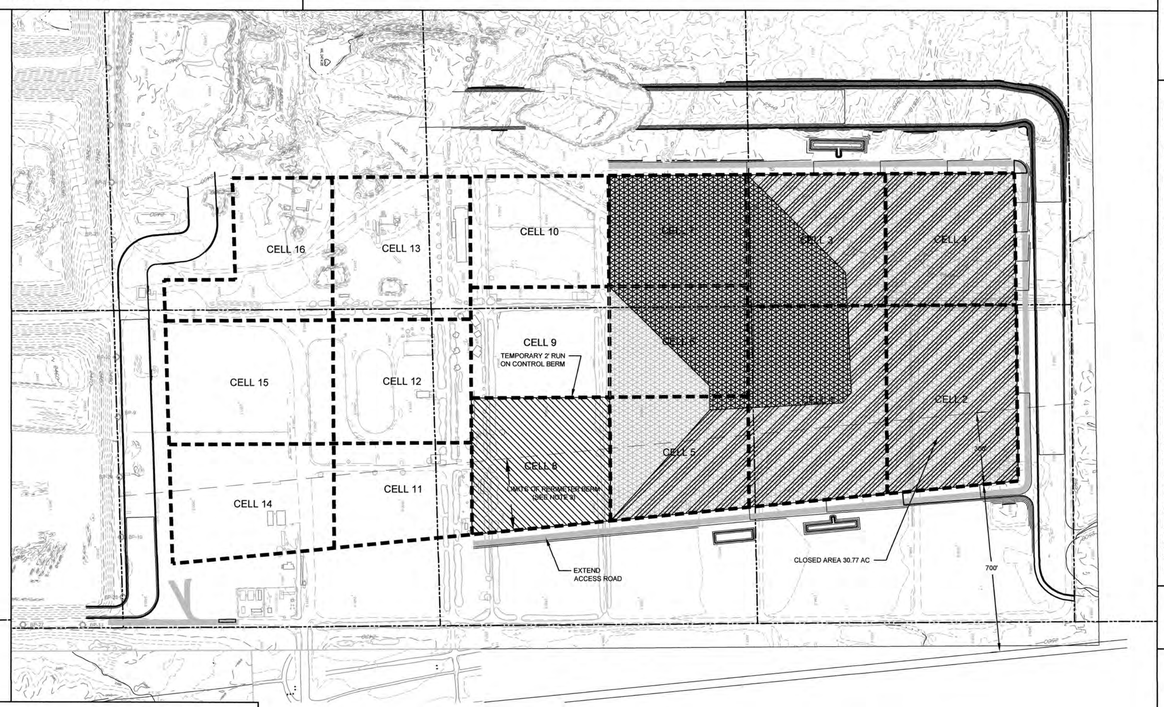
NOTES:

1. CELL CAPACITY DETERMINED BY EXTENDING CELL LIMIT VERTICALLY TO THE TOP OF THE INTERMEDIATE COVER.
2. LANDFILL GAS BOUNDARY PROBES AND GROUNDWATER MONITORING WELLS WILL BE INSTALLED IN ACCORDANCE WITH THE SCHEDULES ON THE SITE MONITORING PLAN (DRAWING NO. 15)
3. PERIMETER SCREENING BERMS SHALL BE CONSTRUCTED IN ACCORDANCE WITH DETAIL A WHEN WASTE DISPOSAL ACTIVITIES ARE WITHIN 1,000' OF HIGHWAY 93.

PHASE VI
TOP OF WASTE : CELL 5
TOP OF LINER: CELL 6

CELL 6
AREA: ±6.15 AC.
CAPACITY: 1,490,504 C.Y.





PHASE VII
TOP OF WASTE : CELL 6
TOP OF LINER: CELL 7

CELL 7
AREA: ±6.15 AC.
CAPACITY: 743,137 C.Y.

BASE GRADING AREA
INTERMEDIATE GRADING AREA
PREVIOUSLY FILLED AREA
AREA TO BE CLOSED

PHASE VIII
TOP OF WASTE : CELL 7
TOP OF LINER: CELL 8

CELL 8
AREA: ±7.20 AC.
CAPACITY: 1,051,218 C.Y.

GRAPHIC SCALE
0 150 300 600
(FEET)

NO	BY	CK	APP
2	DAS	LBB	LEJ
1	DAS	LBB	LEJ
0	DAS	LBB	LEJ

DATE	REVISIONS AND RECORD OF ISSUE
5/19/14	REVISED IN RESPONSE TO NDEP COMMENTS DATED 4/22/14
2/5/14	REVISED IN RESPONSE TO NDEP COMMENTS DATED 1/16/14
10/23/13	ISSUED FOR DEP REVIEW

STATE OF NEVADA
LEONARD E. JOYCE, JR.
CIVIL
No. 13876
PROFESSIONAL ENGINEER
5/19/14

DESIGNED LBB
DRAWN DAS
CHECKED LBB
APPROVED LEJ
DATE 10/23/13

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BEDROC LANDFILL AND WASTE MGMT. FACILITY
LINCOLN COUNTY, NEVADA

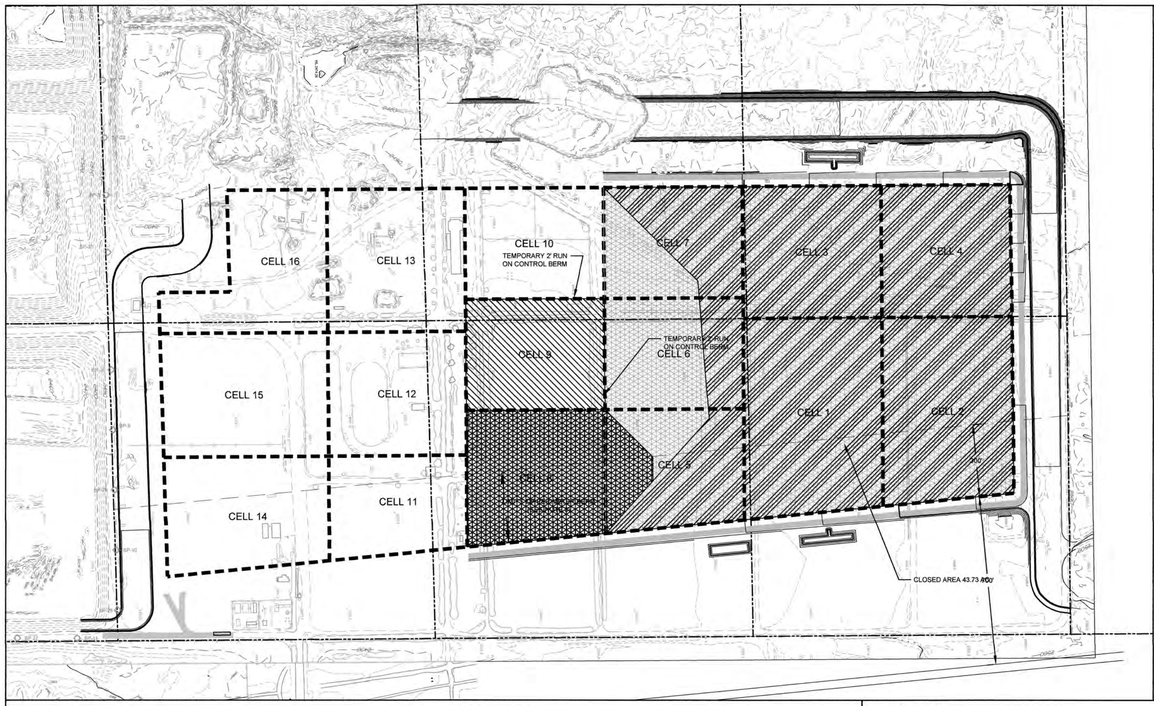
PHASING PLANS
PHASES V-VII

PROJECT NO.
383.1401.01

SCALE
AS SHOWN

DRAWING NO.
11

L:\Western Elite\dwg\Northern Site Expansion\Current Working Drawings\Print Sheets\14 Phasing Plans - Phases XVII-XIX.dwg Layout=11 Phasing Plans - Phases V-VII



PHASE IX

TOP OF WASTE : CELL 8
TOP OF LINER: CELL 9

CELL 9

AREA: ±6.15 AC.
CAPACITY: 1,437,008 C.Y.

NOTES:

1. CELL CAPACITY DETERMINED BY EXTENDING CELL LIMIT VERTICALLY TO THE TOP OF THE INTERMEDIATE COVER.
2. LANDFILL GAS BOUNDARY PROBES AND GROUNDWATER MONITORING WELLS WILL BE INSTALLED IN ACCORDANCE WITH THE SCHEDULES ON THE SITE MONITORING PLAN (DRAWING NO. 15)
3. PERIMETER SCREENING BERMS SHALL BE CONSTRUCTED IN ACCORDANCE WITH DETAIL A WHEN WASTE DISPOSAL ACTIVITIES ARE WITHIN 1,000' OF HIGHWAY 93.

PHASE X

TOP OF WASTE : CELL 9
TOP OF LINER: CELL 10

CELL 10

AREA: ±6.15 AC.
CAPACITY: 728,597 C.Y.

PHASE XI

TOP OF WASTE : CELL 10
TOP OF LINER: CELL 11

CELL 11

AREA: ±5.41 AC.
CAPACITY: 690,856 C.Y.

BASE GRADING AREA
INTERMEDIATE GRADING AREA
PREVIOUSLY FILLED AREA
AREA TO BE CLOSED

PHASE XII

TOP OF WASTE : CELL 11
TOP OF LINER: CELL 12

CELL 12

AREA: ±6.82 AC.
CAPACITY: 1,646,807 C.Y.

GRAPHIC SCALE
0 150 300 600
(FEET)

NO	BY	CK	APP
2	DAS	LBB	LEJ
1	DAS	LBB	LEJ
0	DAS	LBB	LEJ

REVISIONS AND RECORD OF ISSUE

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10/23/13	ISSUED FOR DEP REVIEW

STATE OF NEVADA
LEONARD E. JOYCE, JR.
CIVIL
No. 13914
PROFESSIONAL ENGINEER
5/19/14

DESIGNED LBB
DRAWN DAS
CHECKED LBB
APPROVED LEJ
DATE 10/23/13

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BEDROC LANDFILL AND WASTE MGMT. FACILITY
LINCOLN COUNTY, NEVADA

PHASING PLANS
PHASES IX-XII

PROJECT NO.
383.1401.01

SCALE
AS SHOWN

DRAWING NO.
12

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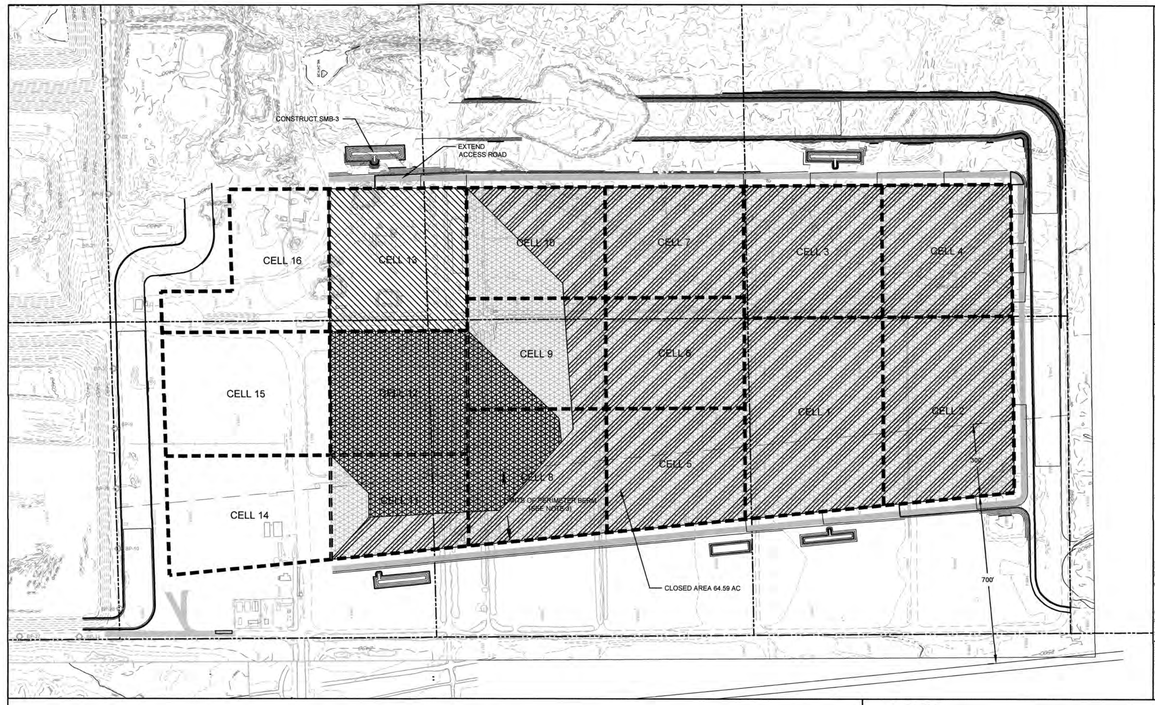
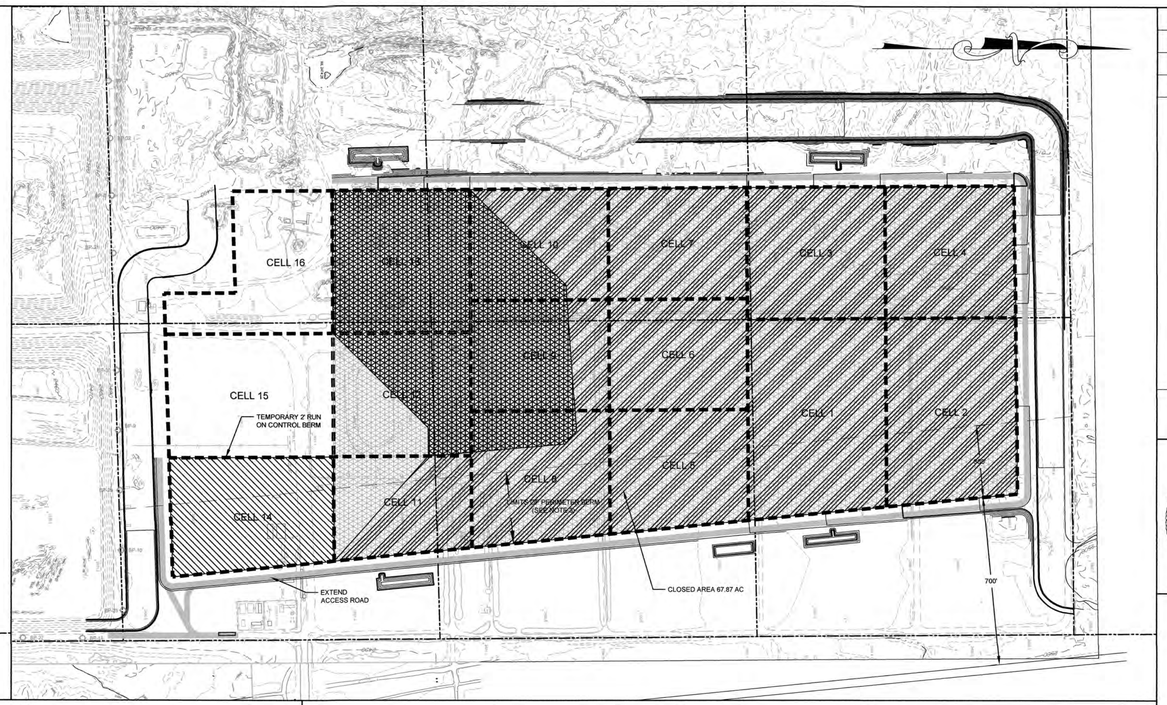




PHASE XIII

TOP OF WASTE : CELL 12
TOP OF LINER: CELL 13

CELL 13

AREA: ±7.88 AC.
CAPACITY: 1,186,439 C.Y.

NOTES:

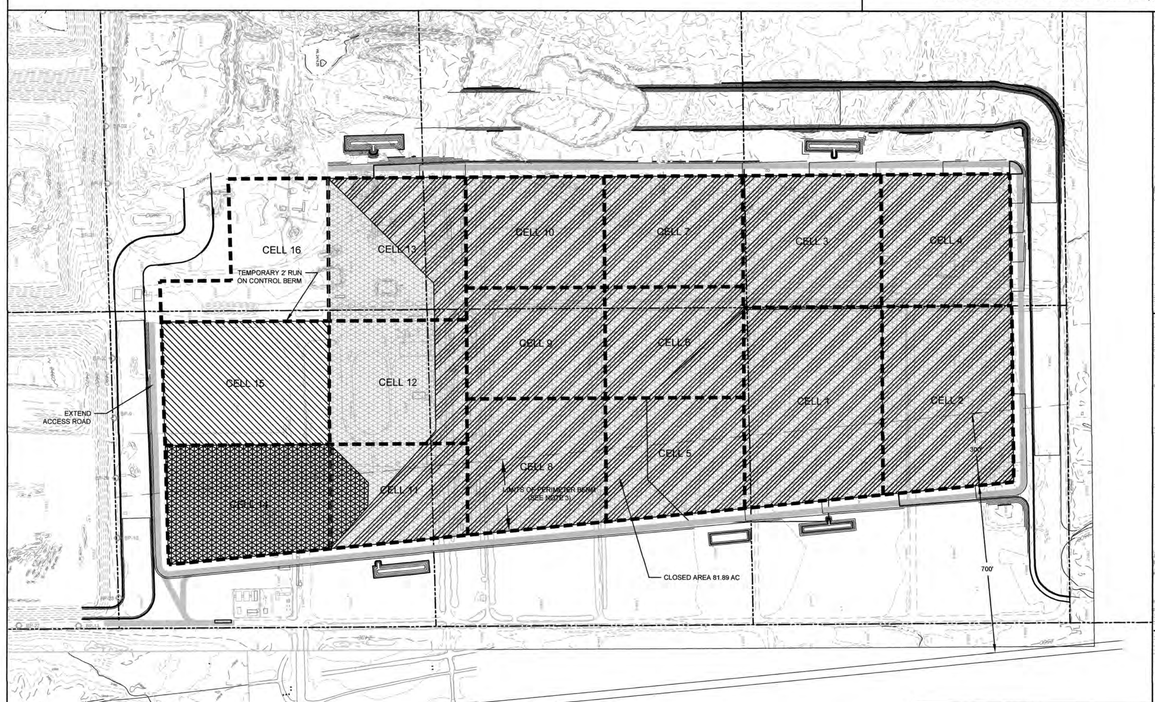
1. CELL CAPACITY DETERMINED BY EXTENDING CELL LIMIT VERTICALLY TO THE TOP OF THE INTERMEDIATE COVER.
2. LANDFILL GAS BOUNDARY PROBES AND GROUNDWATER MONITORING WELLS WILL BE INSTALLED IN ACCORDANCE WITH THE SCHEDULES ON THE SITE MONITORING PLAN (DRAWING NO. 15)
3. PERIMETER SCREENING BERMS SHALL BE CONSTRUCTED IN ACCORDANCE WITH DETAIL A WHEN WASTE DISPOSAL ACTIVITIES ARE WITHIN 1,000' OF HIGHWAY 93.

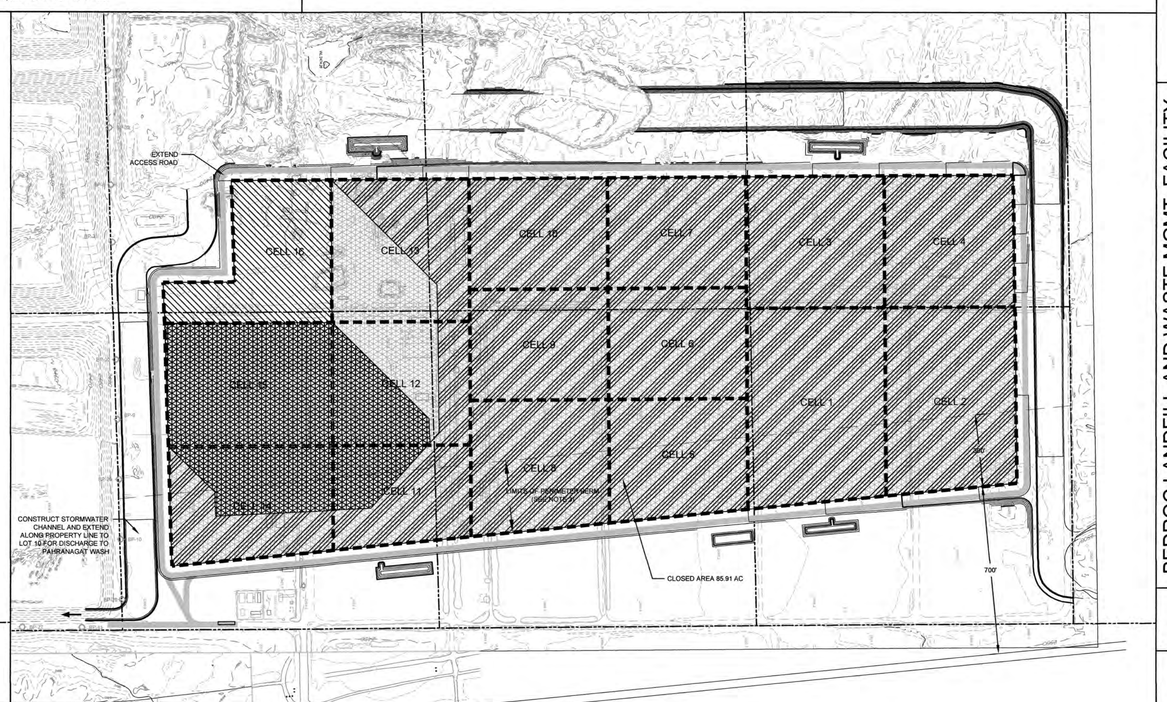
PHASE XIV

TOP OF WASTE : CELL 13
TOP OF LINER: CELL 14

CELL 14

AREA: ±7.31 AC.
CAPACITY: 867,767 C.Y.





PHASE XV

TOP OF WASTE : CELL 14
TOP OF LINER: CELL 15

CELL 15

AREA: ±8.22 AC.
CAPACITY: 1,366,591 C.Y.

BASE GRADING AREA
INTERMEDIATE GRADING AREA
PREVIOUSLY FILLED AREA
AREA TO BE CLOSED

PHASE XVI

TOP OF WASTE : CELL 15
TOP OF LINER: CELL 16

CELL 16

AREA: ±6.78 AC.
CAPACITY: 606,826 C.Y.

GRAPHIC SCALE
0 150 300 600
(FEET)

NO	DATE	BY	CK	APP
2	5/19/14	DAS	LBB	LEJ
1	2/5/14	DAS	LBB	LEJ
	10/23/13	DAS	LBB	LEJ

REVISED IN RESPONSE TO NDEP COMMENTS DATED 4/23/14
REVISED IN RESPONSE TO NDEP COMMENTS DATED 1/16/14
ISSUED FOR DEP REVIEW

REVISIONS AND RECORD OF ISSUE

STATE OF NEVADA
PROFESSIONAL ENGINEER
LEONARD E. JOYCE, JR.
CIVIL
No. 13815
5/19/14

DESIGNED LBB
DRAWN DAS
CHECKED LBB
APPROVED LEJ
DATE 10/23/13

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BEDROC LANDFILL AND WASTE MGMT. FACILITY
LINCOLN COUNTY, NEVADA

PHASING PLANS
PHASES XIII-XVI

PROJECT NO.
383.1401.01

SCALE
AS SHOWN

DRAWING NO.
13

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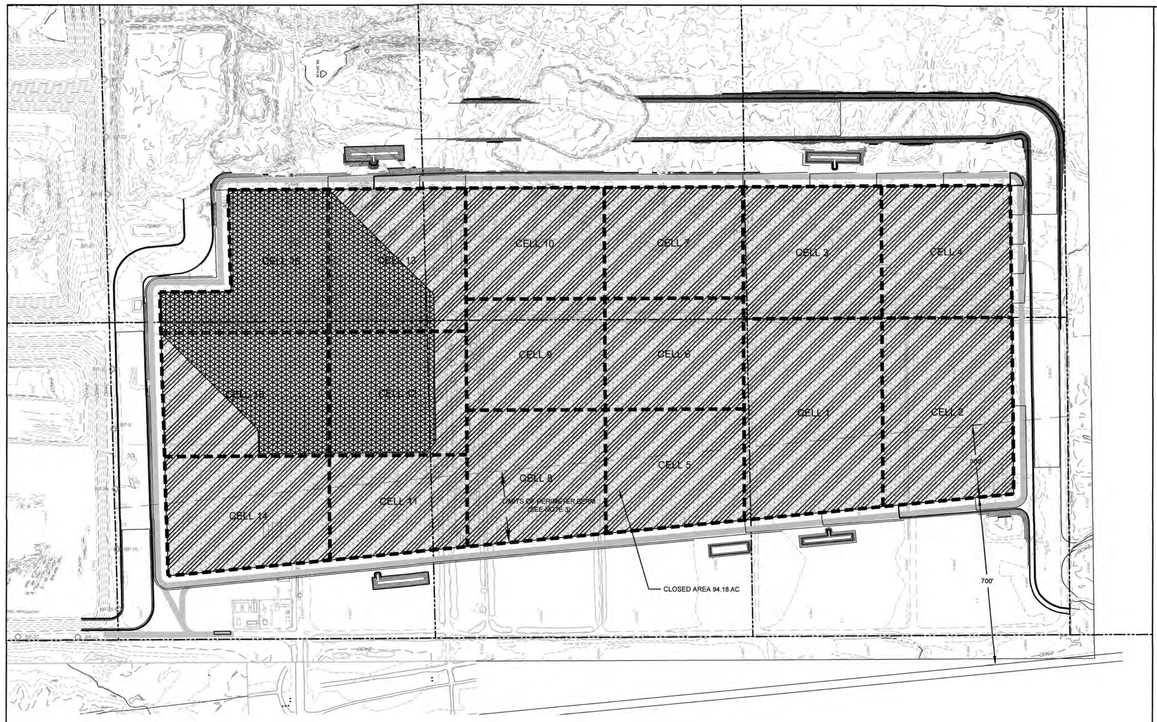

PHASE XVII
TOP OF WASTE : CELL 16

BASE GRADING AREA
INTERMEDIATE GRADING AREA
PREVIOUSLY FILLED AREA
AREA TO BE CLOSED

NOTES:

1. CELL CAPACITY DETERMINED BY EXTENDING CELL LIMIT VERTICALLY TO THE TOP OF THE INTERMEDIATE COVER.
2. LANDFILL GAS BOUNDARY PROBES AND GROUNDWATER MONITORING WELLS WILL BE INSTALLED IN ACCORDANCE WITH THE SCHEDULES ON THE SITE MONITORING PLAN (DRAWING NO. 15)
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GRAPHIC SCALE
0 150 300 600
(FEET)

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1	DAS	LBB	LEJ
0	DAS	LBB	LEJ

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STATE OF NEVADA
LEONARD JOYCE
CIVIL
No. 13876
PROFESSIONAL ENGINEER
5/19/14

DESIGNED LBB
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DATE 10/23/13

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BEDROC LANDFILL AND WASTE MGMT. FACILITY
LINCOLN COUNTY, NEVADA

PHASING PLANS
PHASES XVII-XIX

PROJECT NO.
383.1401.01

SCALE
AS SHOWN

DRAWING NO.
14

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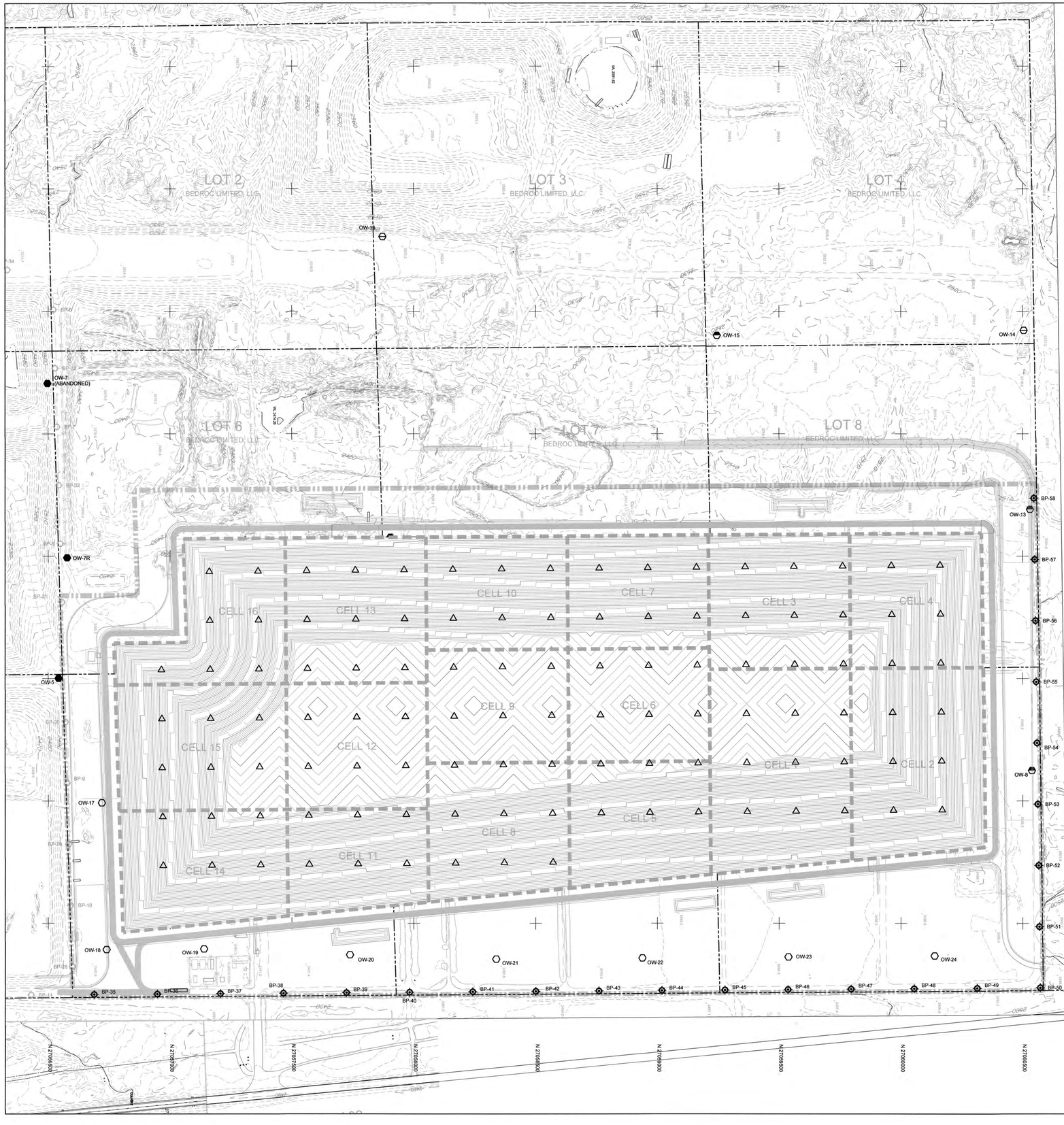

SCHEDULE OF ADDITION AND REMOVAL OF WELLS FROM COMPLIANCE NETWORK BEDROC LANDFILL AND WASTE MANAGEMENT FACILITY LINCOLN COUNTY, NEVADA				
	Monitoring Well Network Changes		Monitoring Well Network	
Cell No.	Add		Upgradient	Downgradient
Cell 1	OW-14, 0W-16, OW-22, OW-23 and OW-24	OW-9	OW-14 and OW-16	OW-22, OW-23 and OW-24
Cell 2	--	--	OW-14 and OW-16	OW-22, OW-23 and OW-24
Cell 3	--	OW-12	OW-14 and OW-16	OW-22, OW-23 and OW-24
Cell 4	--	--	OW-14 and OW-16	OW-22, OW-23 and OW-24
Cell 5	--	--	OW-14 and OW-16	OW-22, OW-23 and OW-24
Cell 6	--	--	OW-14 and OW-16	OW-22, OW-23 and OW-24
Cell 7	--	--	OW-14 and OW-16	OW-22, OW-23 and OW-24
Cell 8	OW-21	--	OW-14 and OW-16	OW-21, OW-22, OW-23 and OW-24
Cell 9	--	--	OW-14 and OW-16	OW-21, OW-22, OW-23 and OW-24
Cell 10	--	--	OW-14 and OW-16	OW-21, OW-22, OW-23 and OW-24
Cell 11	OW-20	OW-10	OW-14 and OW-16	OW-20, OW-21, OW-22, OW-23 and OW-24
Cell 12	--	--	OW-14 and OW-16	OW-20, OW-21, OW-22, OW-23 and OW-24
Cell 13	--	OW-11	OW-14 and OW-16	OW-20, OW-21, OW-22, OW-23 and OW-24
Cell 14	OW-18 and OW-19	--	OW-14 and OW-16	OW-18, OW-19, OW-20, OW-21, OW-22, OW-23 and OW-24
Cell 15	OW-17	--	OW-14 and OW-16	OW-17, OW-18, OW-19, OW-20, OW-21, OW-22, OW-23, and OW-24
Cell 16	OW-5 (formally Class III facility upgradient well)	--	OW-14 and OW-16	OW-5, OW-17, OW-18, OW-19, OW-20, OW-21, OW-22, OW-23, and OW-24

Boundary Probe Installation Schedule		
Cell	Add	Network
1	BP-44, 45, 46, 47 & 48	BP-44, 45, 46, 47 & 48
2	BP-47, 48, 49, 50, 51, 52, 53, 54, 55 & 56	BP-44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55 & 56
3		BP-44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55 & 56
4	BP-57 & 58	BP-44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57 & 58
5	BP-42 & 43	BP-42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57 & 58
6		BP-42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57 & 58
7		BP-42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57 & 58
8	BP-40 & 41	BP-40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57 & 58
9		BP-40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57 & 58
10		BP-40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57 & 58
11	BP-37, 38 & 39	BP-37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57 & 58
12		BP-37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57 & 58
13		BP-37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57 & 58
14	BP-35 & 36	BP-35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57 & 58
15		BP-35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57 & 58
16		BP-35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57 & 58

GRAPHIC SCALE
0 100 200 400
(FEET)

NO	BY	CK	APP
3	DAS	LBB	LEJ
2	DAS	LBB	LEJ
1	DAS	LBB	LEJ
0	DAS	LBB	LEJ

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10/23/13	ISSUED FOR DEPT REVIEW

STATE OF NEVADA
PROFESSIONAL ENGINEER
LEONARDO JOYCE, JR.
No. 13817
CIVIL
5/19/14

DESIGNED LBB
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DATE 10/23/13

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BEDROC LANDFILL AND WASTE MGMT. FACILITY
LINCOLN COUNTY, NEVADA

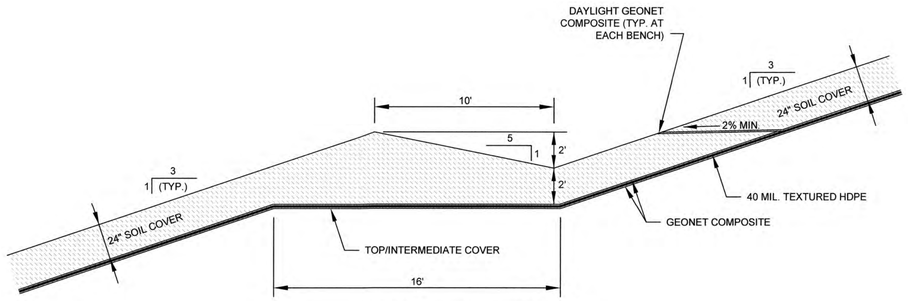
SITE MONITORING PLAN

PROJECT NO.
383.1401.01

SCALE
AS SHOWN

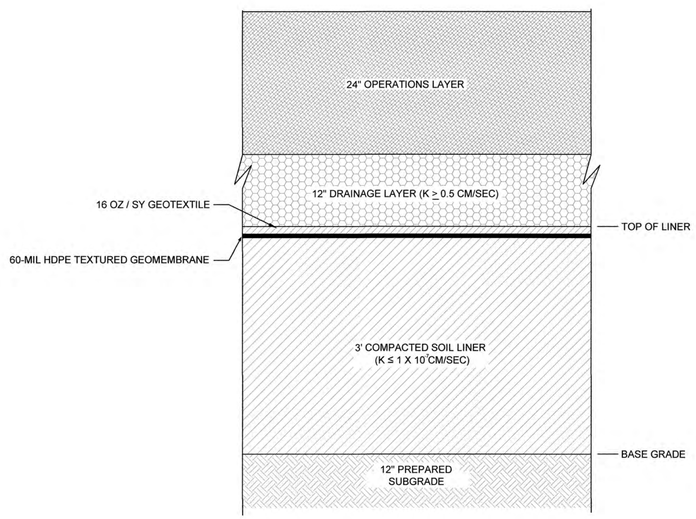
DRAWING NO.
15

L:\Western Elite\dwg\Northern Site Expansion\Current Working Drawings\Print Sheets\15 Site Monitoring Plan.dwg Layout=15 Site Monitoring Plan



CAP BENCH DETAIL (B)

N.T.S.



CLASS I BOTTOM LINER SECTION (A)

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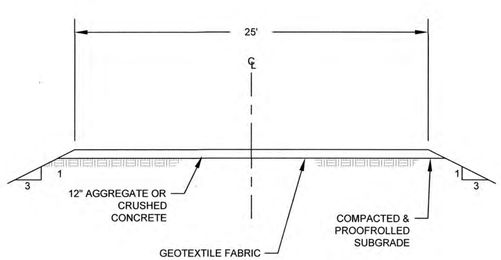
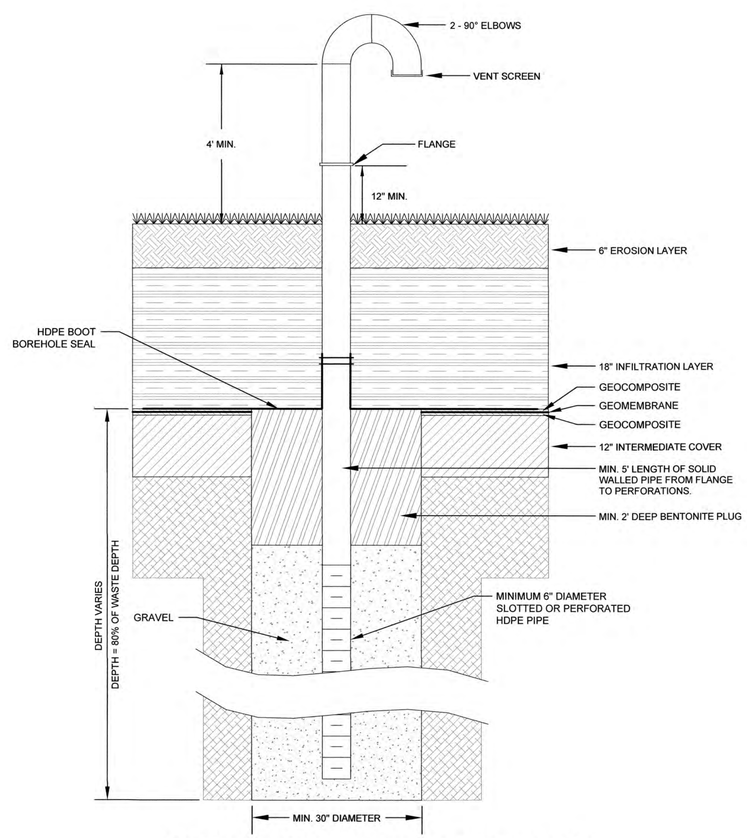


ROAD DETAIL (E)

N.T.S.

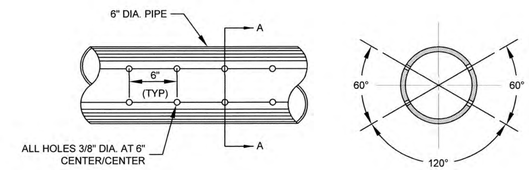
NOTES:

1. PREPARED SUBGRADE CONSISTS OF MATERIALS MEETING THE UNIFIED SOIL CLASSIFICATION CODES OF SC, ML, CL, MH, OR CH. IT WILL BE COMPACTED TO 95% OF THE MAXIMUM DRY DENSITY IN ACCORDANCE WITH ASTM D698. THE SURFACE WILL BE SMOOTH ROLLED AND FREE OF ROCKS OR STONE IN EXCESS OF 3/4".
2. THE OPERATIONS LAYER WILL CONSIST OF A MINIMUM OF 24 INCHES OF SELECT WASTE, AVOIDING BULKY AND LARGE RIGID ITEMS. THIS LAYER WILL NOT BE COMPACTED AND WILL SERVE AS A PROTECTIVE LAYER TO THE LINER AND DRAINAGE SYSTEM.
3. THE OPERATIONS LAYER SHOWN ON THESE DRAWINGS WILL NOT BE PLACED DURING CONSTRUCTION OF THE LINER. THIS LAYER WILL BE PLACED IN THE CELL AFTER THE CERTIFICATE TO OPERATE FOR THE CELL IS ISSUED FROM DEP.



TYPICAL PASSIVE LANDFILL GAS VENT (B)

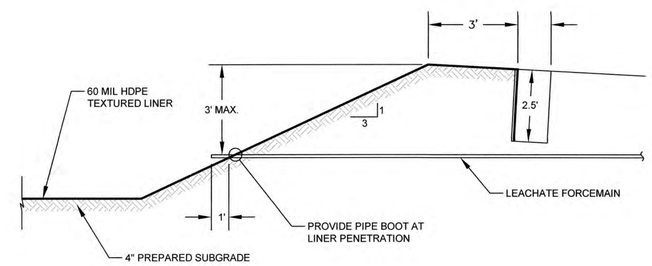
N.T.S.



SECTION A - A

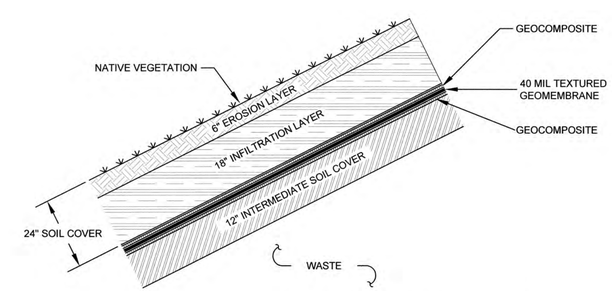
PERFORATED LEACHATE COLLECTION PIPE DETAIL (C)

N.T.S.



LEACHATE POND LINER DETAIL (D)

N.T.S.



FINAL COVER DETAIL (E)

N.T.S.

NO	BY	CK	APP
0	JEI	LBB	LEJ

REVISIONS AND RECORD OF ISSUE

ISSUED FOR DEP REVIEW — 10/23/13

STATE OF NEVADA — PROFESSIONAL ENGINEER — LEONARD E. JOYCE, JR. — CIVIL — No. 13876

DESIGNED JEI
DRAWN DAS
CHECKED LBB
APPROVED LEJ
DATE 10/23/13

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RICHMOND, VA 23220
PHONE: (804) 355-4520

BEDROC LANDFILL AND WASTE MGMT. FACILITY
LINCOLN COUNTY, NEVADA

DETAILS

PROJECT NO. 383.1401.01

SCALE AS SHOWN

DRAWING NO. 16

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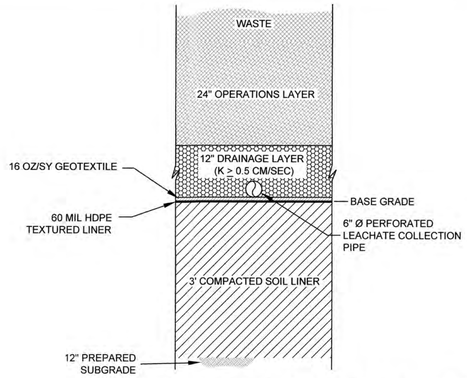
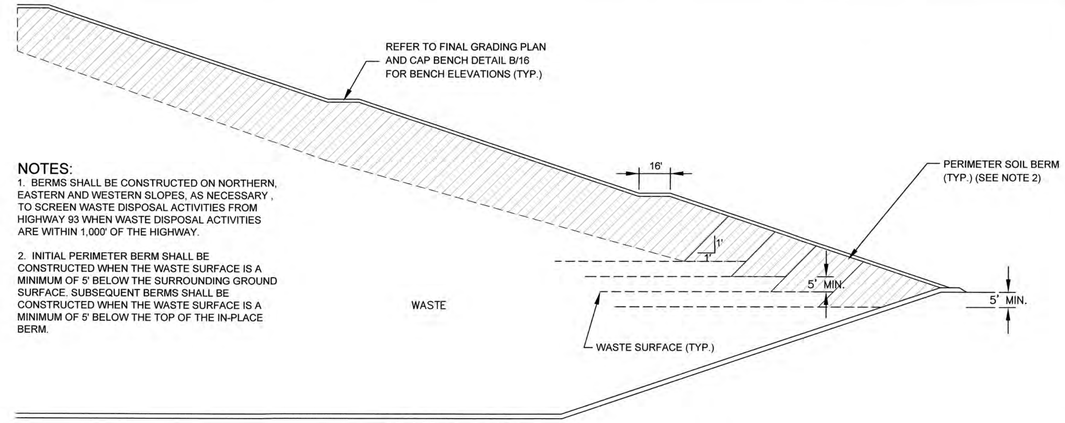


SECTION AT LEACHATE PIPE (A)

N.T.S.

NOTES:

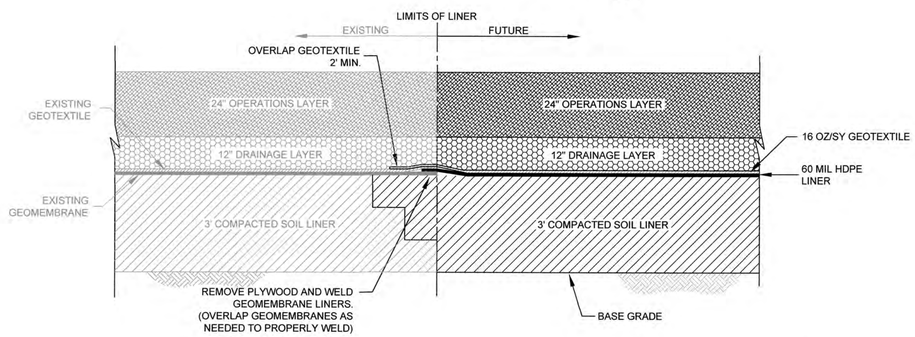
1. PREPARED SUBGRADE CONSISTS OF MATERIALS MEETING THE UNIFIED SOIL CLASSIFICATION CODES OF SC, ML, CL, MH, OR CH. IT WILL BE COMPACTED TO 95% OF THE MAXIMUM DRY DENSITY IN ACCORDANCE WITH ASTM D698. THE SURFACE WILL BE SMOOTH ROLLED AND FREE OF ROCKS OR STONE IN EXCESS OF 3/4".
2. THE OPERATIONS LAYER WILL CONSIST OF A MINIMUM OF 24 INCHES OF SELECT WASTE, AVOIDING BULKY AND LARGE RIGID ITEMS. THIS LAYER WILL NOT BE COMPACTED AND WILL SERVE AS A PROTECTIVE LAYER TO THE LINER AND DRAINAGE SYSTEM.
3. THE OPERATIONS LAYER SHOWN ON THESE DRAWINGS WILL NOT BE PLACED DURING CONSTRUCTION OF THE LINER. THIS LAYER WILL BE PLACED IN THE CELL AFTER THE CERTIFICATE TO OPERATE FOR THE CELL IS ISSUED FROM DEP.

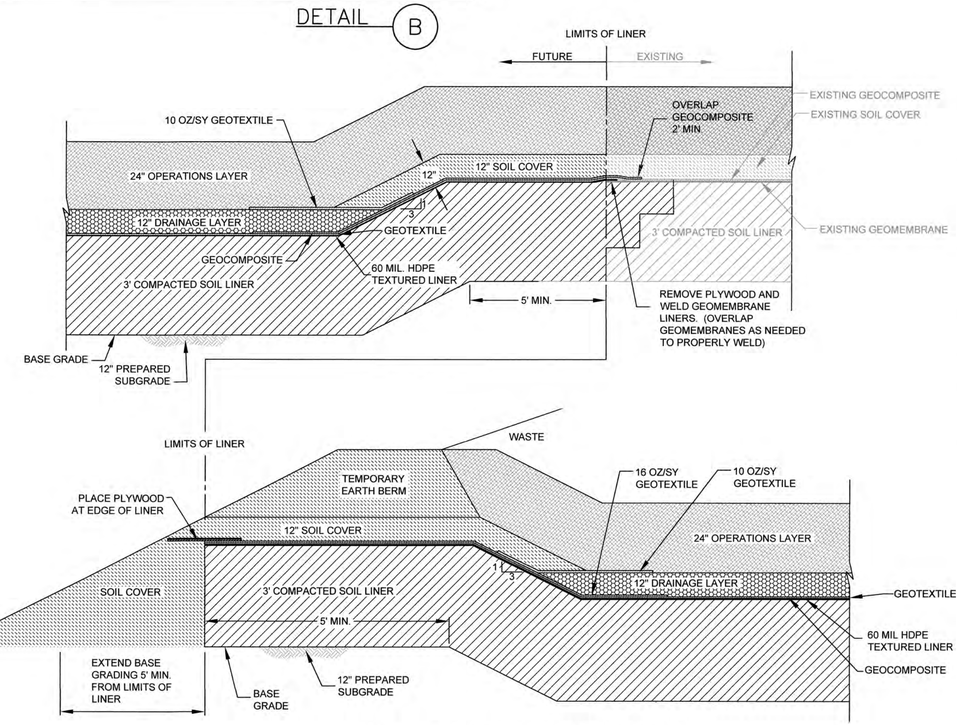


NOTES:

1. BERMS SHALL BE CONSTRUCTED ON NORTHERN, EASTERN AND WESTERN SLOPES, AS NECESSARY , TO SCREEN WASTE DISPOSAL ACTIVITIES FROM HIGHWAY 93 WHEN WASTE DISPOSAL ACTIVITIES ARE WITHIN 1,000' OF THE HIGHWAY.
2. INITIAL PERIMETER BERM SHALL BE CONSTRUCTED WHEN THE WASTE SURFACE IS A MINIMUM OF 5' BELOW THE SURROUNDING GROUND SURFACE. SUBSEQUENT BERMS SHALL BE CONSTRUCTED WHEN THE WASTE SURFACE IS A MINIMUM OF 5' BELOW THE TOP OF THE IN-PLACE BERM.

DETAIL (B)





INTERMEDIATE CELL BERM (F)

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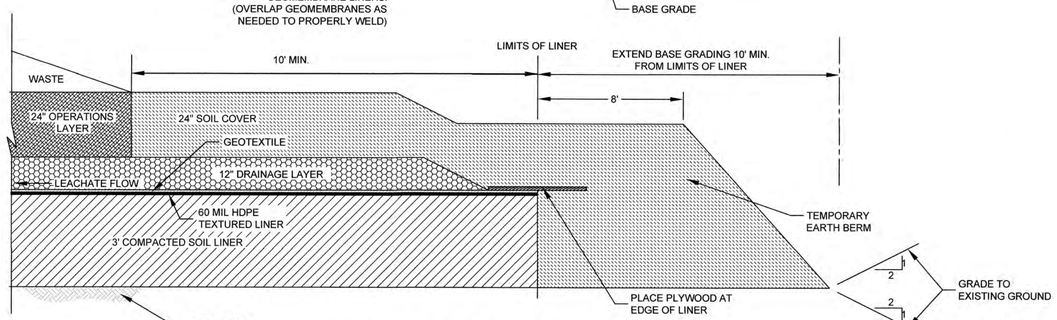
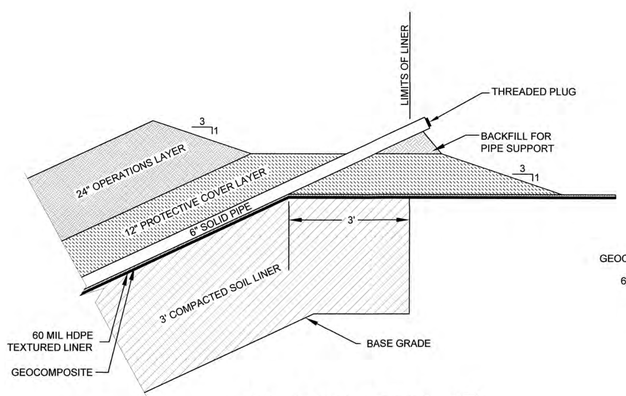


EDGE OF LINER @ CELL LIMIT (E)

N.T.S.



CLEAN-OUT DETAIL (G)

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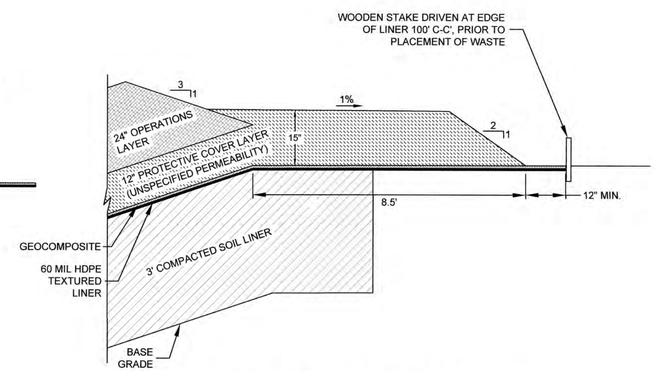
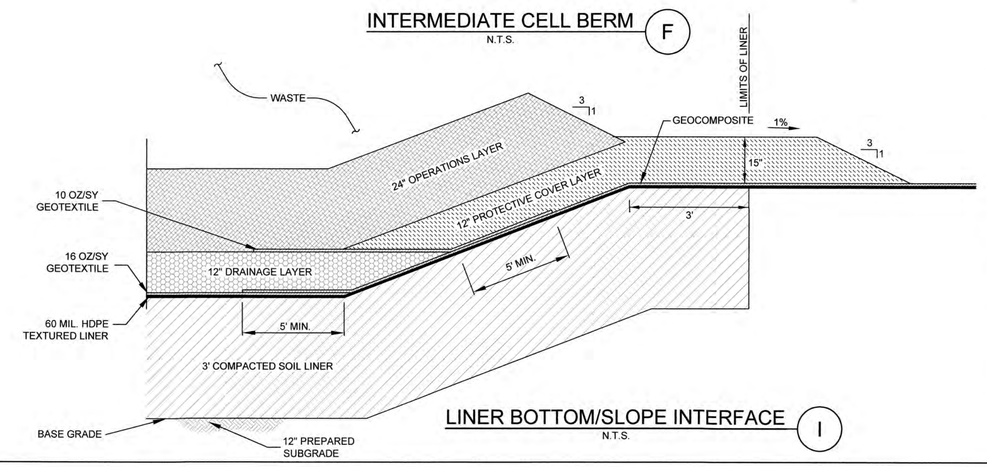


LINER ANCHOR TRENCH DETAIL (H)

N.T.S.



LINER BOTTOM/SLOPE INTERFACE (I)

N.T.S.

NO	BY	CK	APP
1	NW	LBB	LEJ
0	JEI	LBB	LEJ

DATE	REVISIONS AND RECORD OF ISSUE
5/19/14	REVISED IN RESPONSE TO NDEP COMMENTS DATED 4/22/14
10/23/13	ISSUED FOR DEP REVIEW

DESIGNED JEI
DRAWN DAS
CHECKED LBB
APPROVED LEJ
DATE 10/23/13

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BEDROC LANDFILL AND WASTE MGMT. FACILITY
LINCOLN COUNTY, NEVADA

DETAILS

PROJECT NO. 383.1401.01

SCALE AS SHOWN

DRAWING NO. 17

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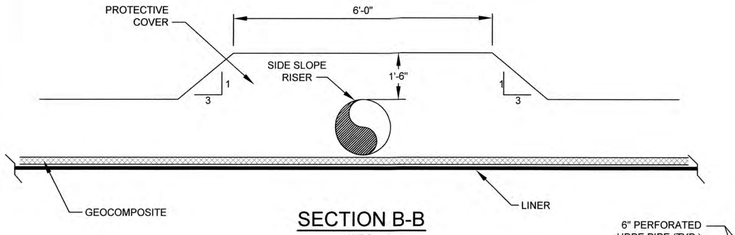
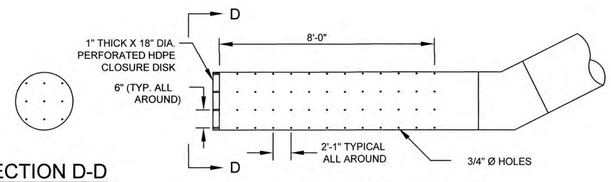


SECTION B-B
N.T.S.



SECTION D-D
N.T.S.

PERFORATION DETAIL FOR HDPE SIDE SLOPE RISER (E)
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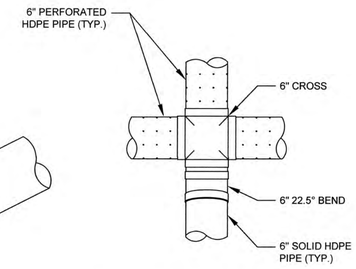
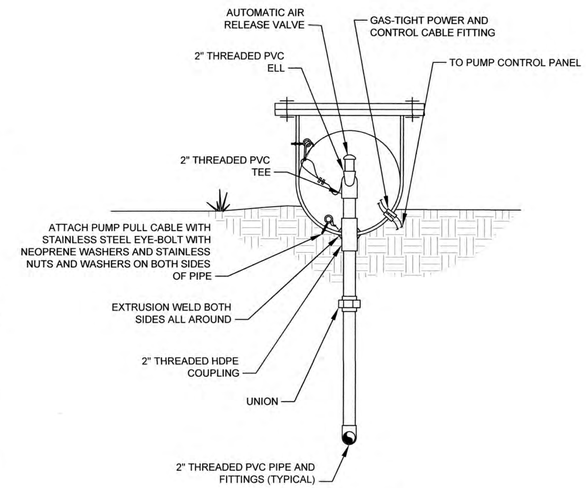


LEACHATE COLLECTION PIPE INTERSECTION DETAIL (F)
N.T.S.

TECHNICAL SPECIFICATIONS

1. SIDE SLOPE RISER PIPES SHALL BE HIGH DENSITY POLYETHYLENE (HDPE) WITH A STANDARD DIMENSION RATIO (SDR) OF 17. PIPES SHALL HAVE FUSION WELDED JOINTS, END CAPS, AND FITTINGS. ELBOWS MAY BE MITERED.
2. ALL TWO INCH DIAMETER AND SMALLER PIPES SHALL BE HIGH DENSITY POLYETHANE (HDPE) SDR 17 WITH FUSION WELDED JOINTS AND MOLDED FITTINGS.
3. LEACHATE PUMPS SHALL BE CONSTRUCTED OF ALL STAINLESS STEEL PARTS EXCEPT SEALS AND BEARINGS. PUMPS SHALL PUMP LEACHATE AT 3 GALLONS PER MINUTE AT 70 FEET OF TOTAL DYNAMIC HEAD WITH A MINIMUM LEACHATE DEPTH MEASURED FROM THE BOTTOM OF THE SUMP OF 4 INCHES. PROVIDE CERTIFIED PUMP PERFORMANCE CURVES AND MANUFACTURER'S DETAILS FOR APPROVAL BY THE ENGINEER BEFORE ORDERING THE PUMPS. PUMPS SHALL INCLUDE BUILT-IN CHECK VALVES. PUMPS SHALL BE CONSTRUCTED WITH WHEELS OR SLIDES DESIGNED SPECIFICALLY FOR LOWERING THE PUMPS INTO AND REMOVING THE PUMPS FROM THE SIDE SLOPE RISERS SHOWN ON THE PLANS. LOWERING AND REMOVING SHALL BE ACCOMPLISHED WITH STAINLESS STEEL PUMP LIFT CABLES OF SUFFICIENT STRENGTH TO SUPPORT THE WEIGHT OF THE PUMPS, DISCHARGE HOSES AND ACCESSORIES. PUMP LIFT CABLES SHALL BE 10' LONGER THAN THE SIDE SLOPE RISER PIPES.
4. PUMP MOTORS SHALL BE RATED EXPLOSION PROOF AND SEALED IN STAINLESS STEEL CONSTRUCTION. MOTORS SHALL BE CAPABLE OF STARTING A MINIMUM OF 120 TIMES PER 24 HOUR DAY WITHOUT DAMAGE.
5. PUMPS SHALL BE CONTROLLED BY AUTOMATIC LIQUID LEVEL SENSORS IN THE SUMP TO START AND STOP THE PUMPS AND ACTIVATE ALARM LIGHTS (MOUNTED OUTSIDE THE ENCLOSURE) AT THE LEACHATE LEVELS INDICATED ON THE PLANS. PROVIDE ALL CONTROLS IN A NEMA TYPE 4 ENCLOSURE. THE CONTROL PANEL SHALL CONTAIN HAND-OFF-AUTO SWITCHES, FAILURE, AND RUN LIGHT INDICATORS FOR EACH PUMP. PROVIDE LIGHTENING ARRESTORS AND GROUND RODS. LOCATE THE CONTROL ENCLOSURE APPROXIMATELY 4' ABOVE GROUND ON ALUMINUM OR, PRESSURE TREATED WOOD SUPPORTS. ELECTRIC POWER WILL BE PROVIDED TO THE AREA BY THE OWNER. CONTRACTOR SHALL COORDINATE THE POWER INSTALLATION WITH HIS WORK AND SHALL BE RESPONSIBLE FOR ALL CONNECTIONS, DISCONNECTS, WIRING, CONDUITS AND ALL MATERIALS, LABOR, PERMITS AND CONSTRUCTION NECESSARY TO COMPLETE THE WORK.
6. CONTRACTOR SHALL TEST PUMPS IN THE PRESENCE OF THE ENGINEER. TESTS SHALL INCLUDE DEMONSTRATING THAT THE PUMPS WILL AUTOMATICALLY START AND STOP AT THE WATER LEVELS INDICATED ON THE PLANS, AND ACTIVATE THE ALARM LEVEL INDICATOR. THERE SHALL BE NO VISIBLE LEAKS IN THE PIPING INSTALLED BY THE CONTRACTOR DURING THE TESTS. CONTRACTOR SHALL ALSO DEMONSTRATE THAT THE HOSE QUICK DISCONNECTS WORK PROPERLY AND THAT THE PUMPS CAN BE LIFTED AND REMOVED FROM THE SIDE SLOPE RISERS AND REPLACED AS SHOWN ON THE PLANS.
7. AIR VALVES SHALL BE 1 INCH WITH MINIMUM 5/64 INCH ORIFICE. VALVE SHALL BE A COMBINATION AIR RELEASE, AIR AND VACUUM VALVE. VALVE BODY SHALL BE CAST IRON. SEAT SHALL BE BUNA-N. ALL INTERNAL PARTS SHALL BE STAINLESS STEEL.
8. PUMP DISCHARGE HOSES SHALL BE MANUFACTURED OF VINYL NITRILE THERMOPLASTIC WITH POLYESTER, HELICAL WIRE REINFORCEMENT. HOSES SHALL BE RATED FOR A MINIMUM OF 200 PSI WORKING PRESSURE AT -10 TO +180 DEGREES F TEMPERATURE. HOSE FITTINGS AND CONNECTIONS SHALL BE STAINLESS STEEL.



SECTION C-C
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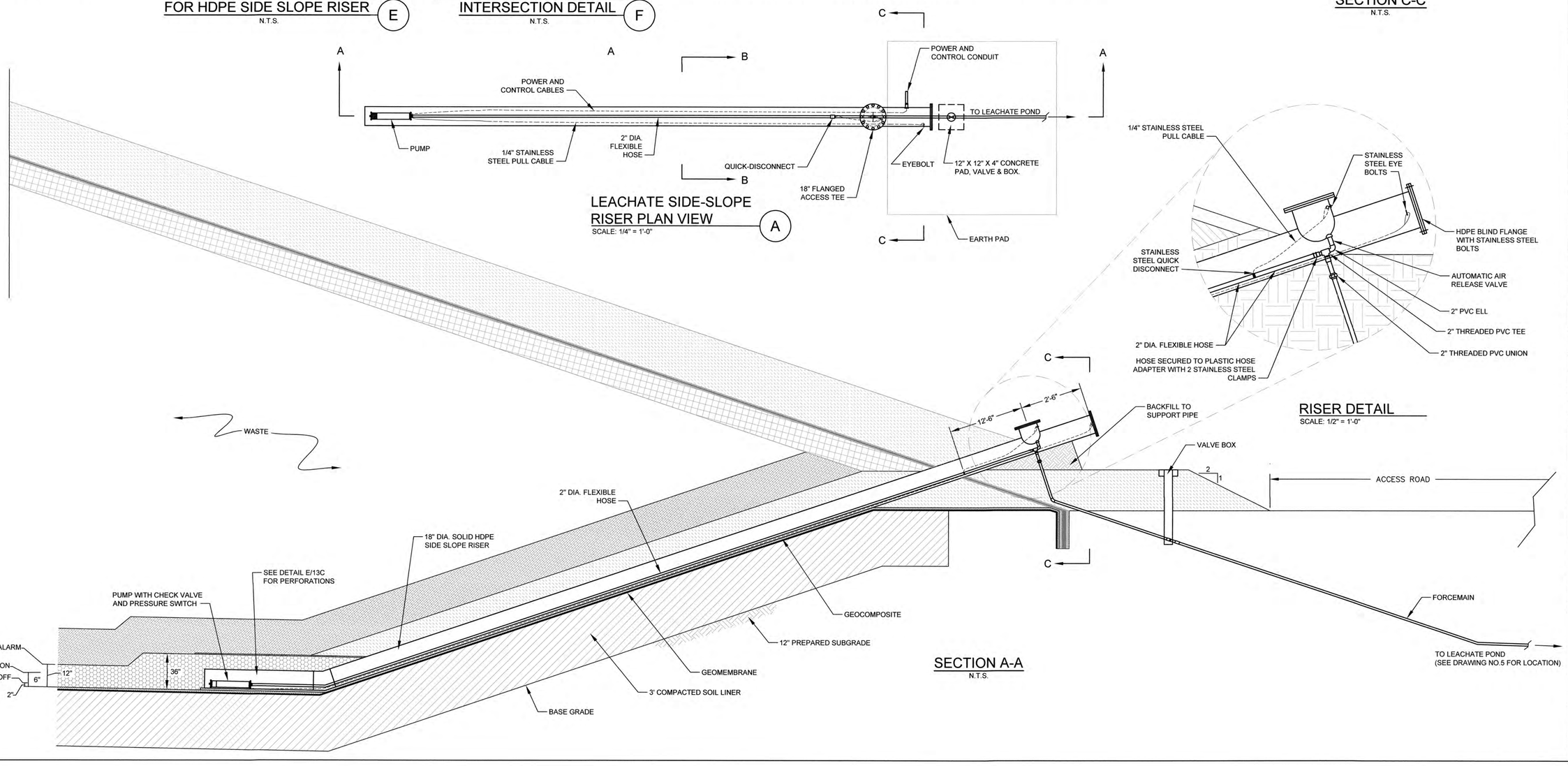

LEACHATE SIDE-SLOPE RISER PLAN VIEW (A)
SCALE: 1/4" = 1'-0"

RISER DETAIL
SCALE: 1/2" = 1'-0"

SECTION A-A
N.T.S.

NO	BY	CK	APP
1	WW	LBB	LEJ
0	JEI	LBB	LEJ

DATE	REVISIONS AND RECORD OF ISSUE
5/19/14	REVISED IN RESPONSE TO NDEP COMMENTS DATED 4/22/14
10/23/13	ISSUED FOR DEP REVIEW

STATE OF NEVADA PROFESSIONAL ENGINEER LEONARD E. JOYCE, JR. CIVIL No. 13976 5/19/14

DESIGNED JEI
DRAWN DAS
CHECKED LBB
APPROVED LEJ
DATE 10/23/13

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BEDROC LANDFILL AND WASTE MGMT. FACILITY
LINCOLN COUNTY, NEVADA

DETAILS

PROJECT NO. 383.1401.01

SCALE AS SHOWN

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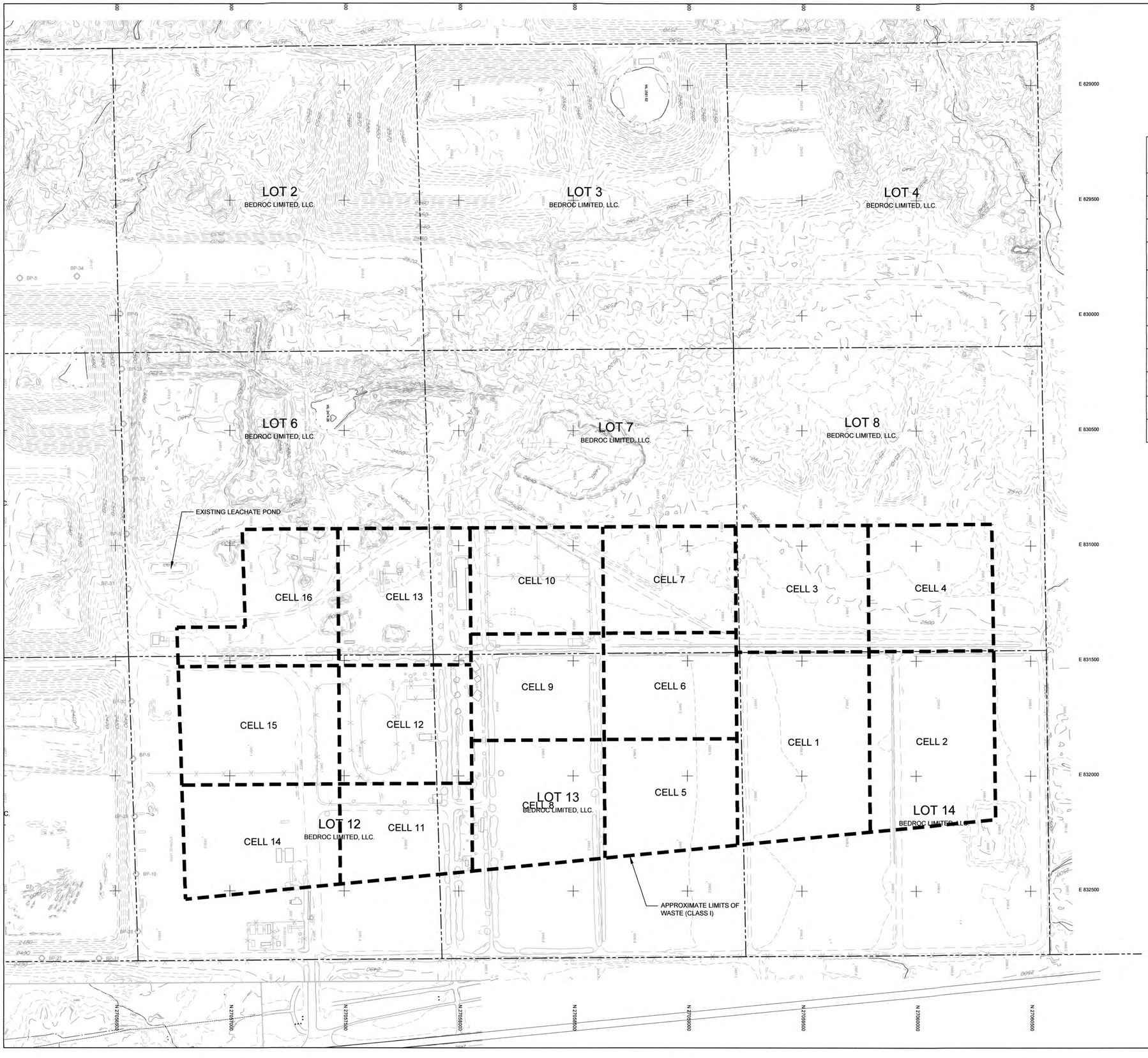

SOIL BALANCE (CY)	
CLASS I	
24" FINAL COVER	371,680
12" INTERMEDIATE COVER	185,840
12" PROTECTIVE COVER	4,650
12" PREPARED SUBGRADE	185,840
DAILY COVER (5% OF AIRSPACE)	886,730
SUBTOTAL	1,634,740
OVERALL	
EXCESS SOIL FROM CELL CONSTRUCTION	2,856,650
ADDITIONAL SOIL EXCAVATION REQUIRED FROM BORROW AREA	0
NET	+ 1,221,910

NOTES:

1. SOILS NEEDED FOR CONSTRUCTION AND LANDFILL OPERATION WILL BE EXCAVATED FROM THE PROPOSED CLASS I FOOTPRINT AND ADJACENT LOTS OWNED BY BEDROC, AS NEEDED.

GRAPHIC SCALE
0 100 200 400
(FEET)

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1	DAS	LBB	LEJ
0	DAS	LBB	LEJ

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STATE OF NEVADA
PROFESSIONAL ENGINEER
LEONARD E. JOYCE, JR.
CIVIL
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BEDROC LANDFILL AND WASTE MGMT. FACILITY
LINCOLN COUNTY, NEVADA

LOCATION OF BORROW AREA

PROJECT NO.
383.1401.01

SCALE
AS SHOWN

DRAWING NO.
19

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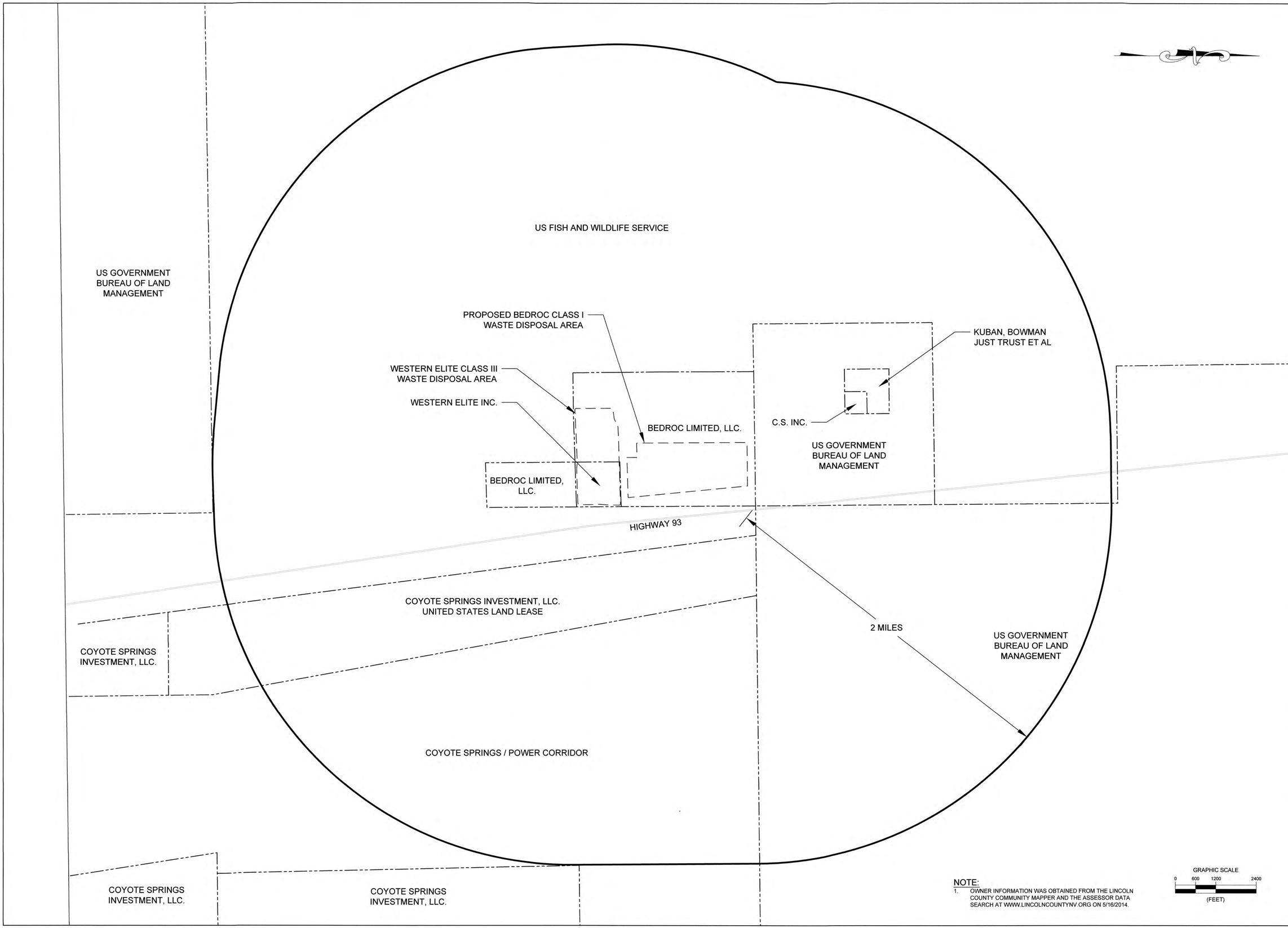

NOTE:
1. OWNER INFORMATION WAS OBTAINED FROM THE LINCOLN COUNTY COMMUNITY MAPPER AND THE ASSESSOR DATA SEARCH AT WWW.LINCOLNCOUNTYNV.ORG ON 5/16/2014.

NO	BY	CK	APP
0	DAS	LBB	LEJ

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LEONARD E. JOYCE, JR. CIVIL
STATE OF NEVADA PROFESSIONAL ENGINEER
No. 13876
5/19/14

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APPROVED LEJ
DATE 5/19/2014

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BEDROC LANDFILL AND WASTE MGMT. FACILITY
LINCOLN COUNTY, NEVADA

ADJACENT PROPERTY OWNERS WITHIN 2 MILE RADIUS

PROJECT NO.
383.1401.01

SCALE
AS SHOWN

DRAWING NO.
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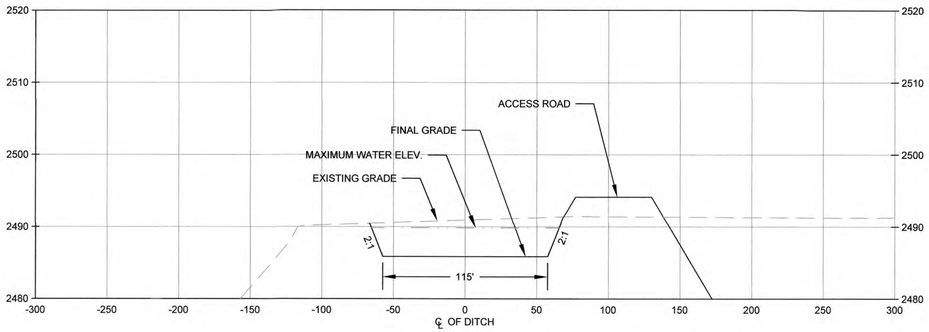

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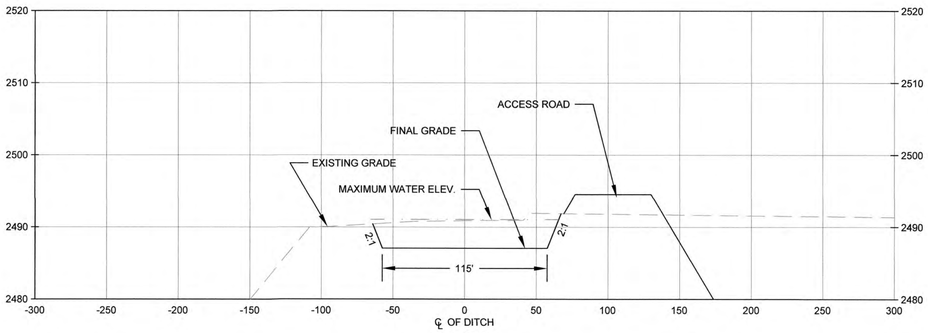

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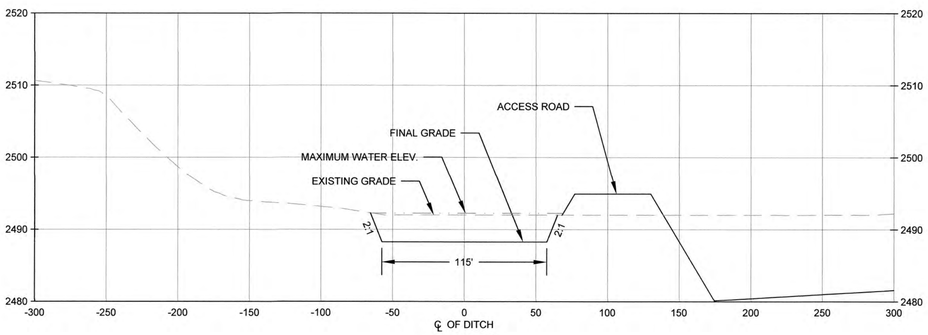

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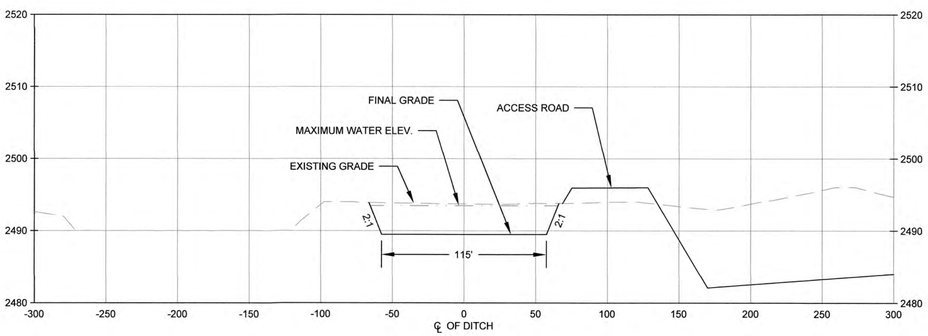

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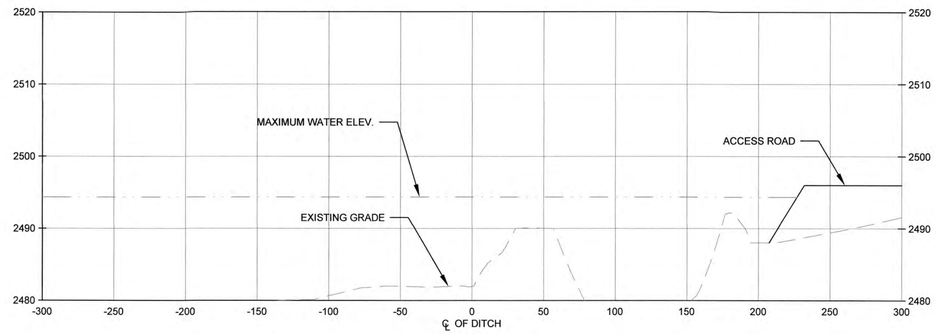

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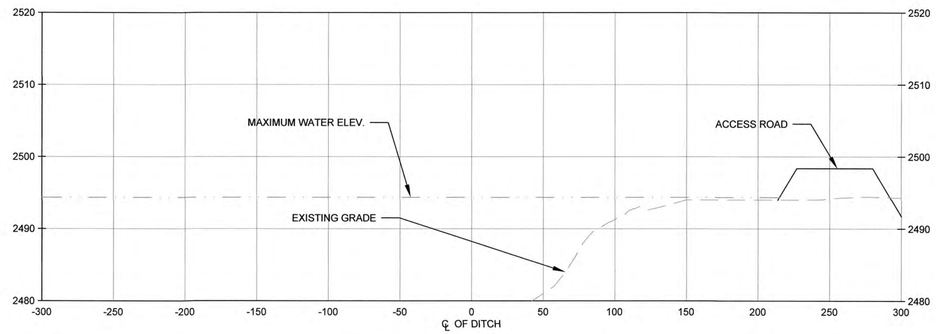

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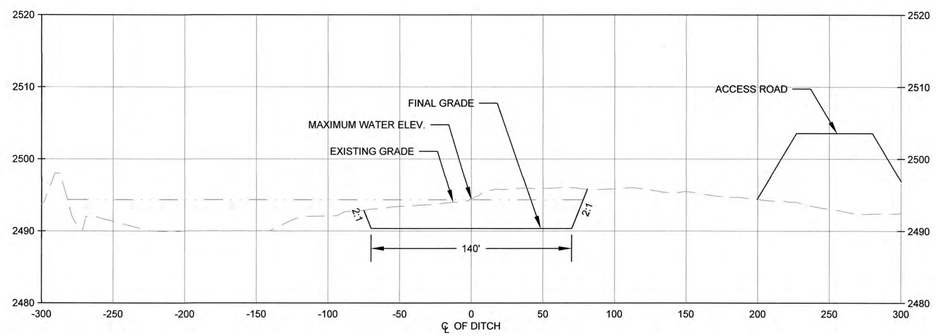

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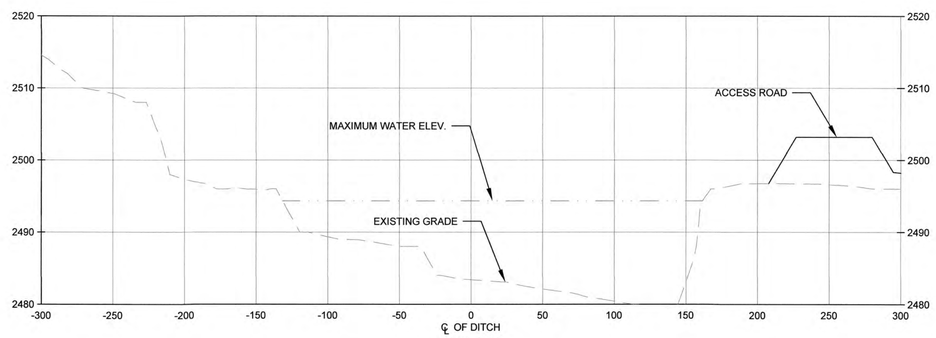

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0	DAS	LBB	LEJ

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STATE OF NEVADA
LEONARD E. JOYCE, JR.
PROFESSIONAL ENGINEER
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CIVIL

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BEDROC LANDFILL AND WASTE MGMT. FACILITY
LINCOLN COUNTY, NEVADA

STORMWATER CHANNEL SECTIONS

PROJECT NO.
383.1401.01

SCALE
H: 1" = 50'
V: 1" = 10'

DRAWING NO.
21

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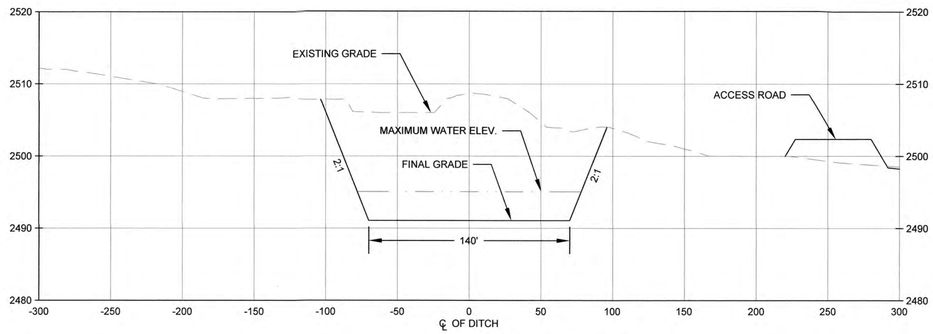

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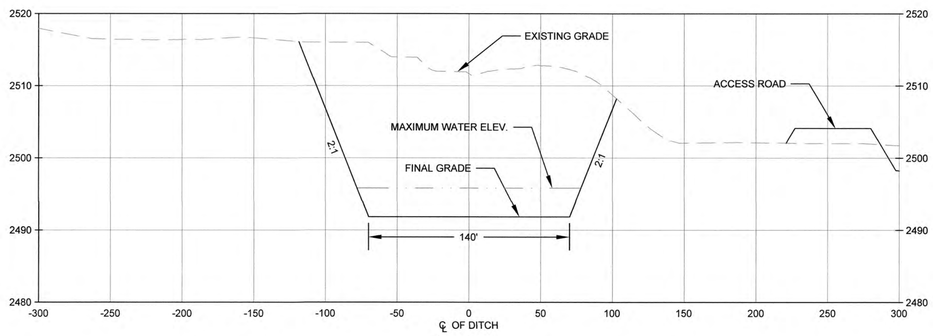

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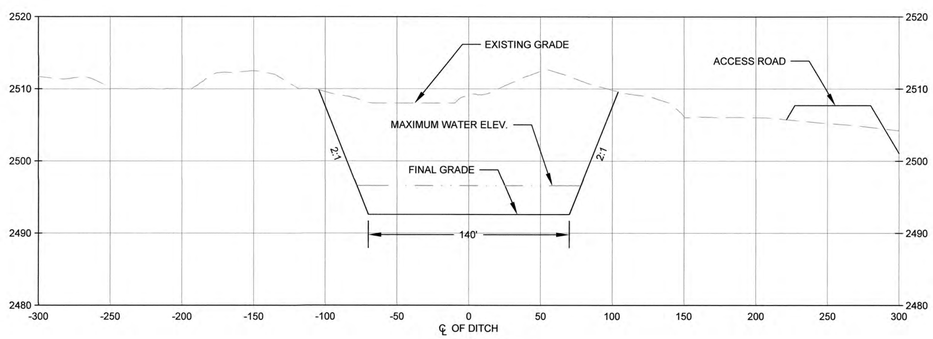

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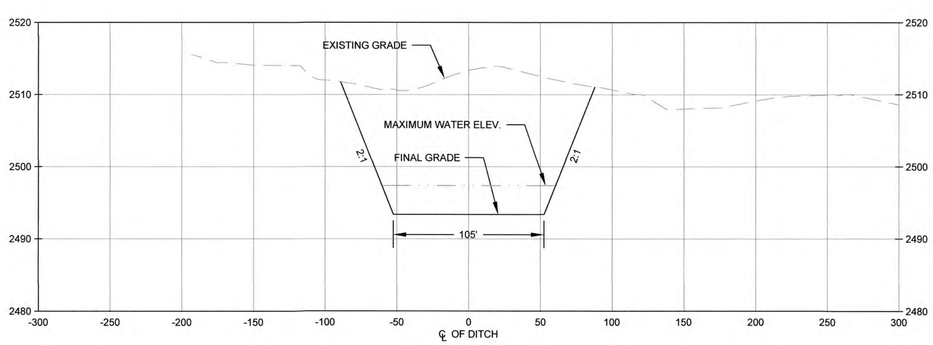

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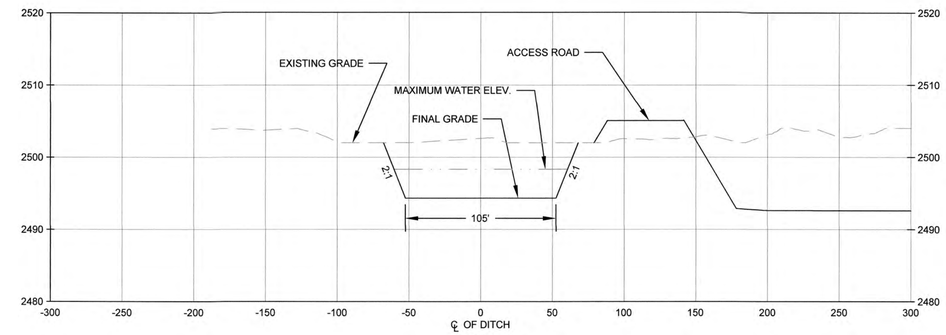

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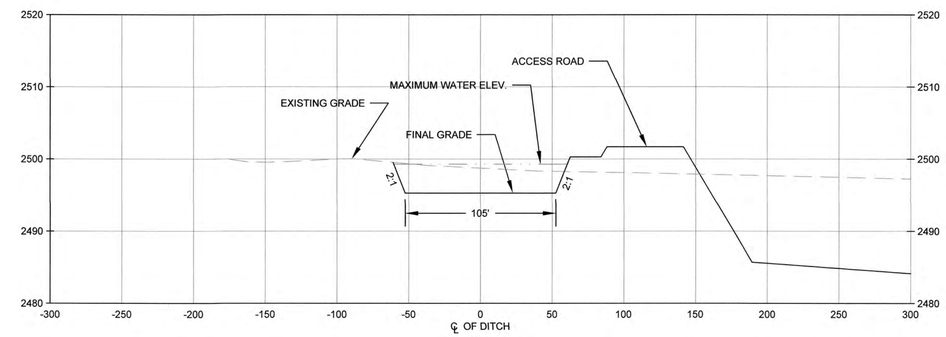

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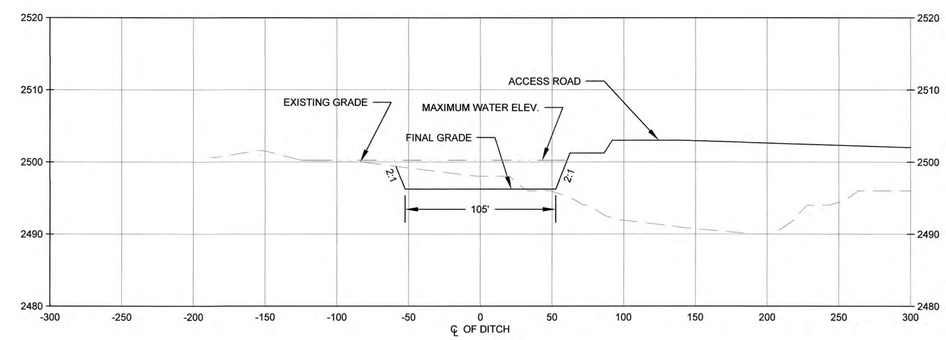

75+00.00

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PROFESSIONAL ENGINEER STATE OF NEVADA LEONARD E. JOYCE, JR. CIVIL No. 13876 5/19/14

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CHECKED LBB
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DATE 5/19/14

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BEDROC LANDFILL AND WASTE MGMT. FACILITY
LINCOLN COUNTY, NEVADA

STORMWATER CHANNEL SECTIONS

PROJECT NO.
383.1401.01

SCALE
H: 1" = 50'
V: 1" = 10'

DRAWING NO.
22

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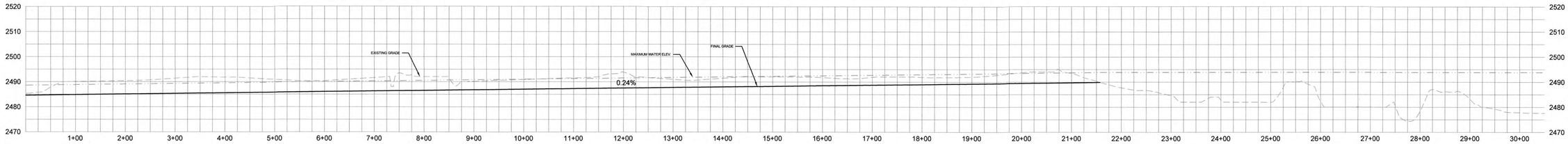

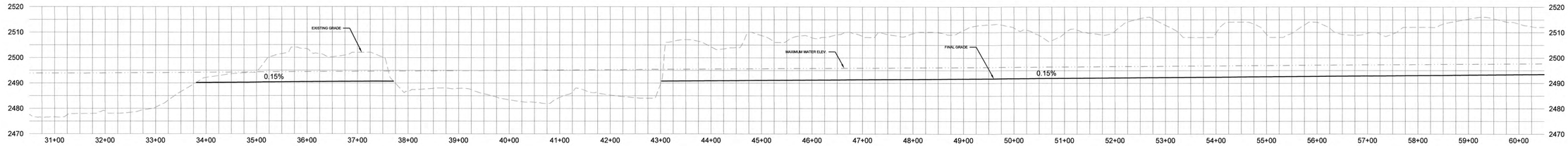

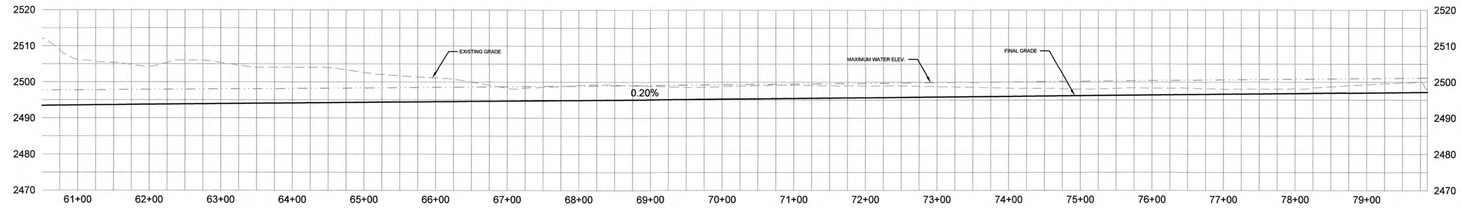

NO	BY	CK	APP
0	DAS	LBB	LEJ

DATE	REVISIONS AND RECORD OF ISSUE
5/19/14	ISSUED FOR NDEP REVIEW

DESIGNED LBB
DRAWN DAS
CHECKED LBB
APPROVED LEJ
DATE 5/19/14

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BEDROC LANDFILL AND WASTE MGMT. FACILITY
LINCOLN COUNTY, NEVADA

STORMWATER PROFILE

PROJECT NO.
383.1401.01

SCALE
H: 1" = 100'
V: 1" = 20'

DRAWING NO.
23

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