

ADDENDUM C

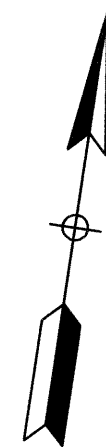
Final Remedial Action Plan
DOE-EM/GJ1547
February 2008

Final Design Drawings

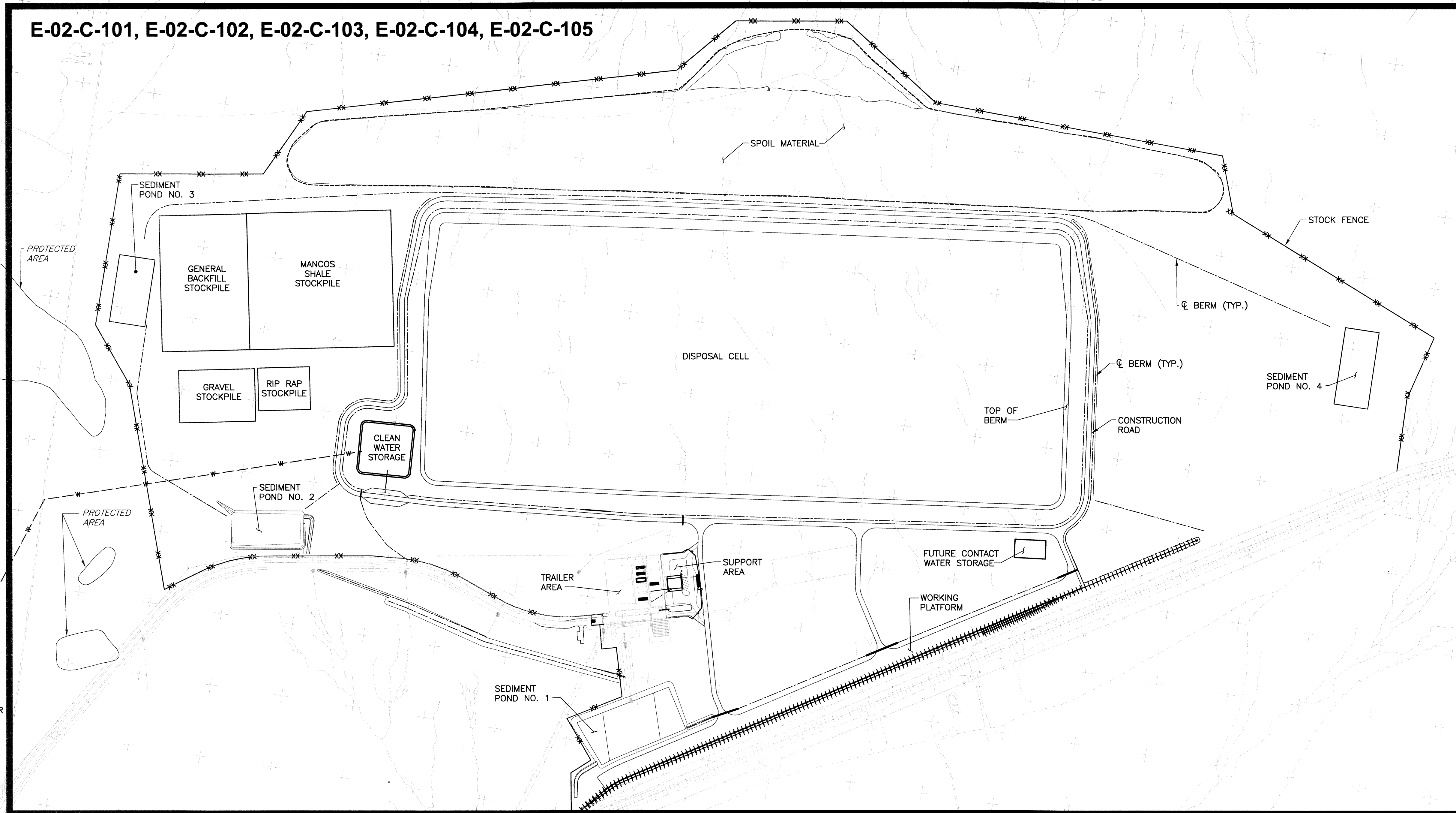
Number	Title	Pages
E-02-C-100	Overall Site Plan/Key Plan	01
E-02-C-101	Overall Cell Layout Plan	02
E-02-C-102	Overall Cell Grading Plan	03
E-02-C-103	Overall Cell Top of Waste Plan	04
E-02-C-104	Overall Cell Cap Plan/Fencing Plan	05
E-02-C-105	Rock Cover Plan	06
E-02-C-300	Disposal Cell Cross Sections	07
E-02-C-301	Disposal Cell Cross Sections	08
E-02-C-500	Details – 1	09
E-02-C-501	Details – 2	10

FOR EASY NAVIGATION – CLICK ON SECTION NAME / LINK ABOVE

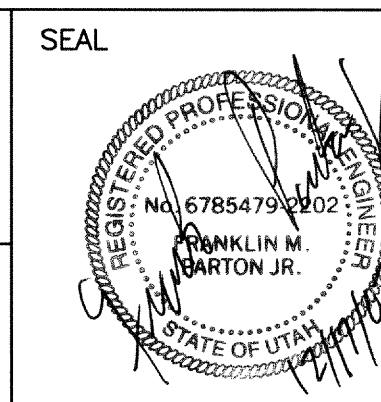
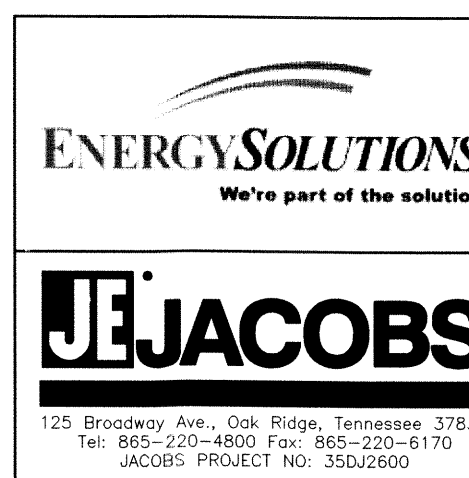
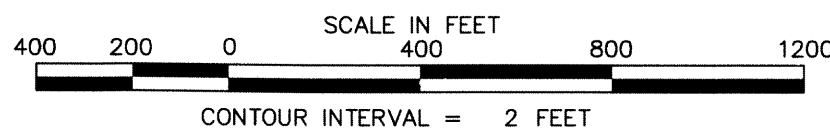
OR USE BOOKMARKS TAB AT LEFT



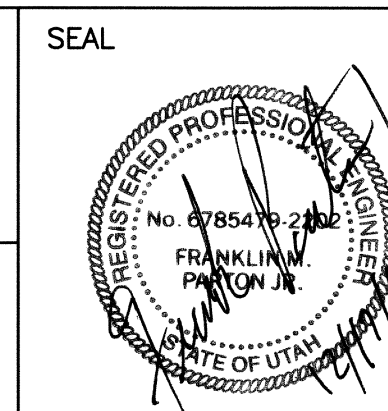
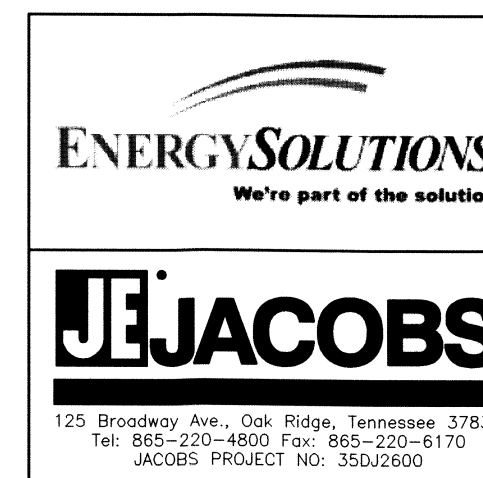
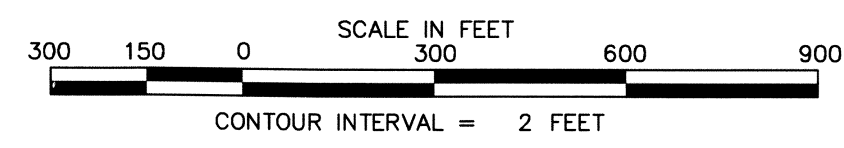
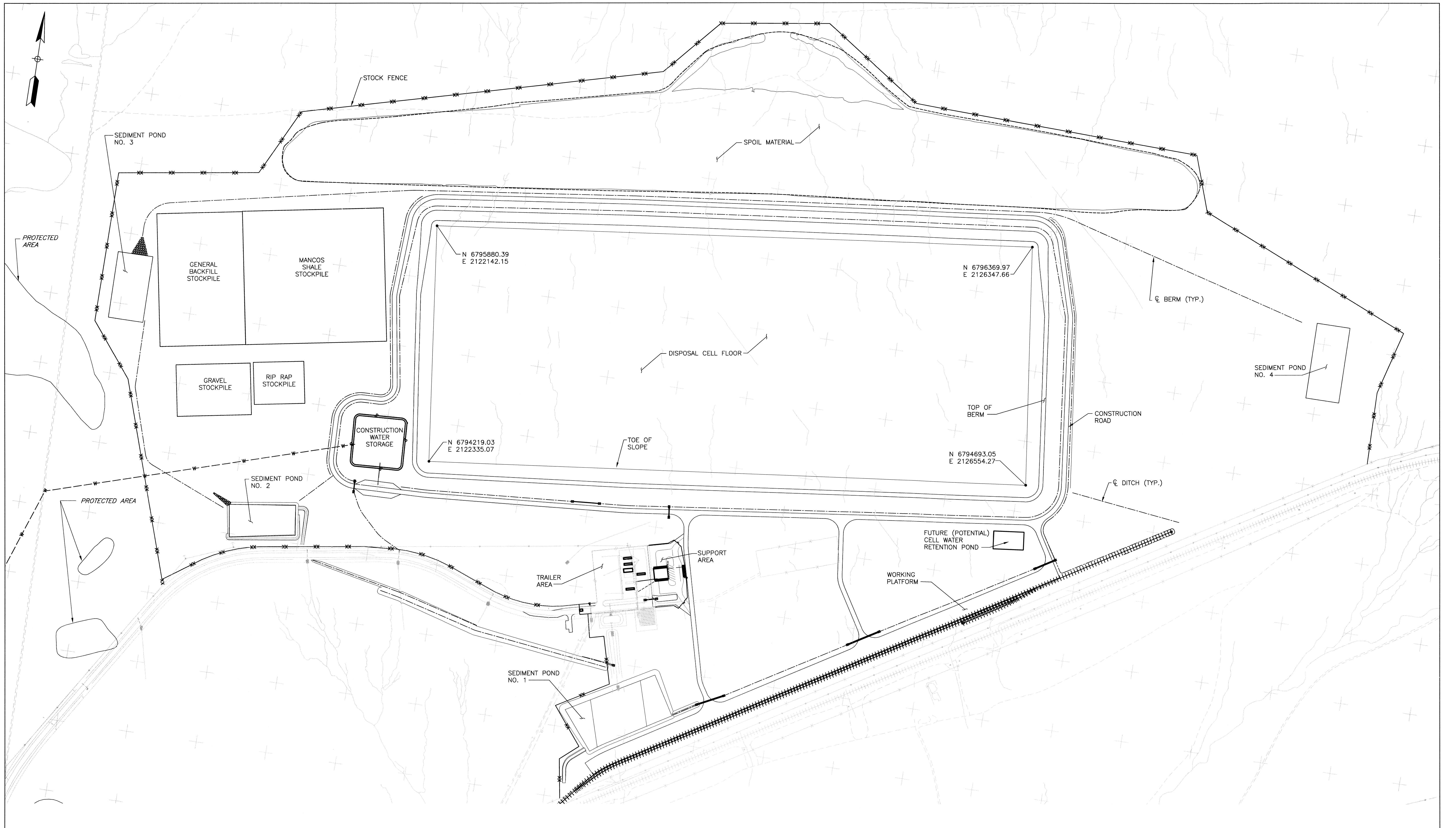
E-02-C-101, E-02-C-102, E-02-C-103, E-02-C-104, E-02-C-105



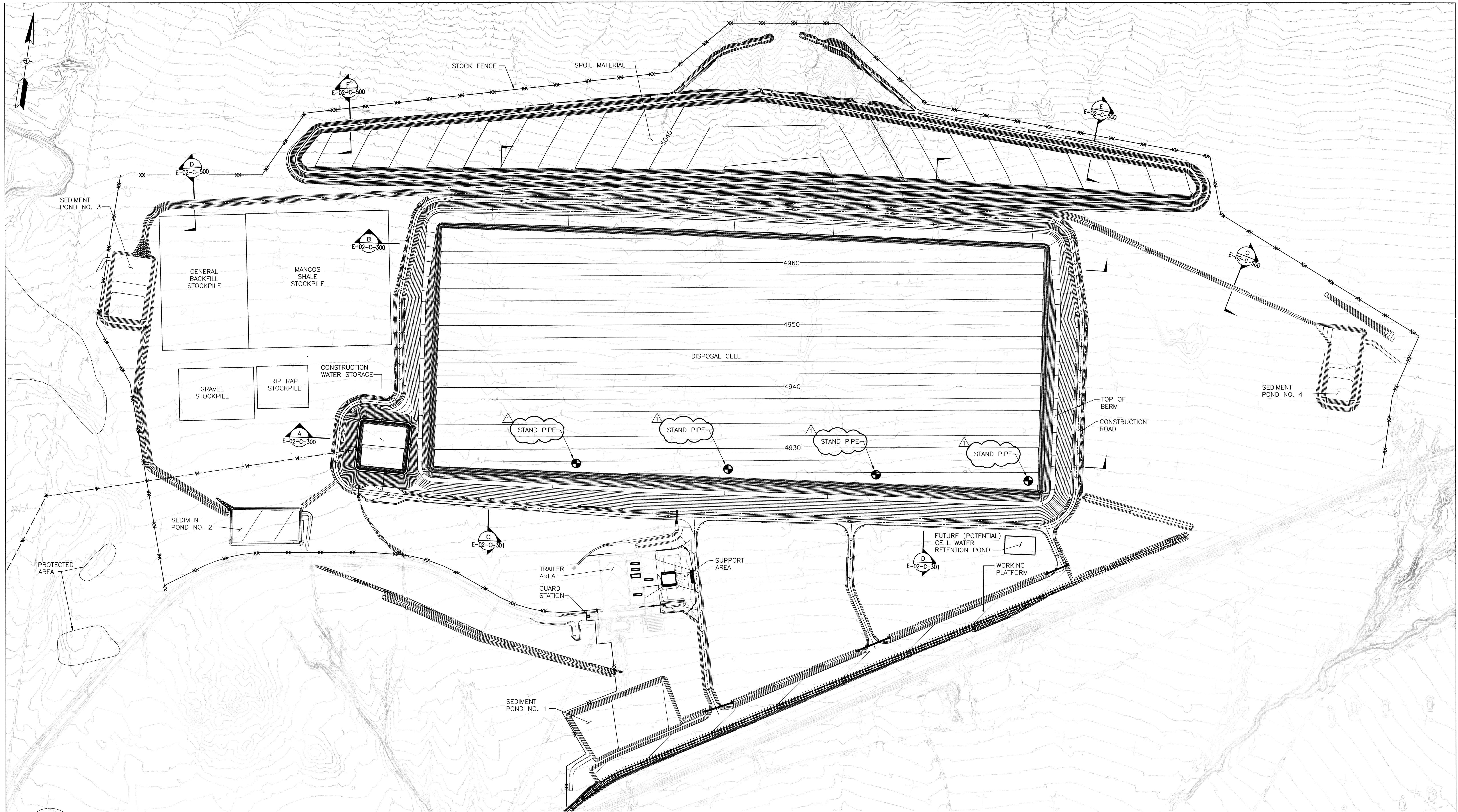
NEW WATER LINE (SEE SHEET D-02-C-100 FOR CONTINUATION INFORMATION)



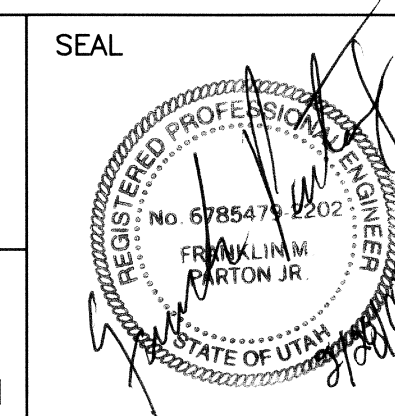
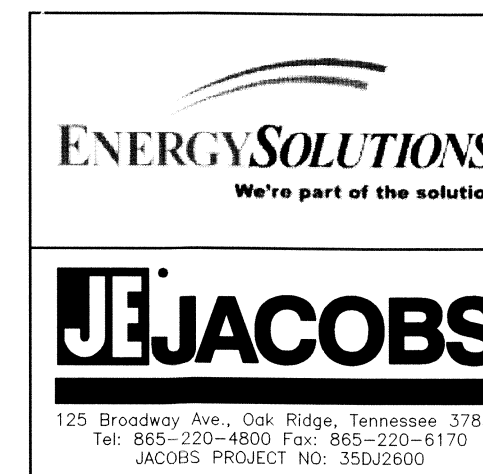
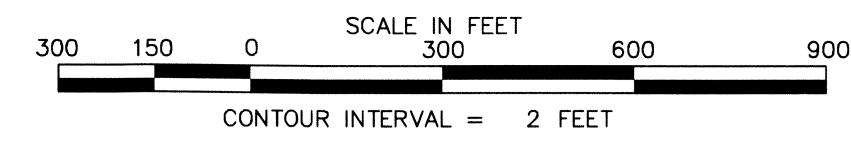
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PROJECT LOCATION: RAP DISPOSAL CELL DESIGN			MOAB UMTRA PROJECT			
APPROVALS			OVERALL CELL SITE PLAN/KEY PLAN			
DESIGNED BY	L. ENGLAND	12/17/07				
CHECKED BY	F. PARTON	12/17/07				
APPROVED BY	W. BARTON	12/17/07				
PROJECT MANAGER	F. PARTON	12/17/07				
DATE PLOTTED	M. OAKS	12/17/07				
DATE PRINTED	D. SMITH	12/17/07				
PROJECT NO. E-02-C-100			SHEET 1 OF 1			



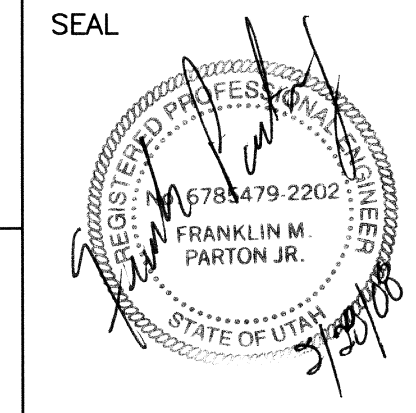
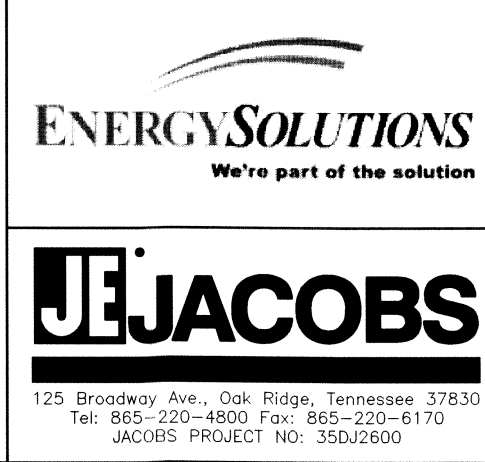
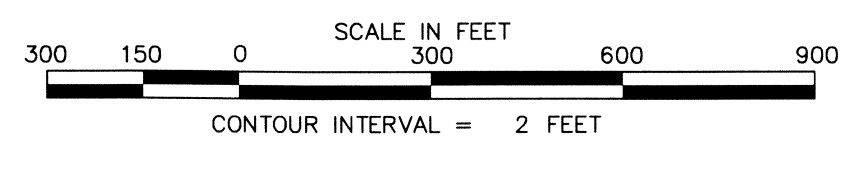
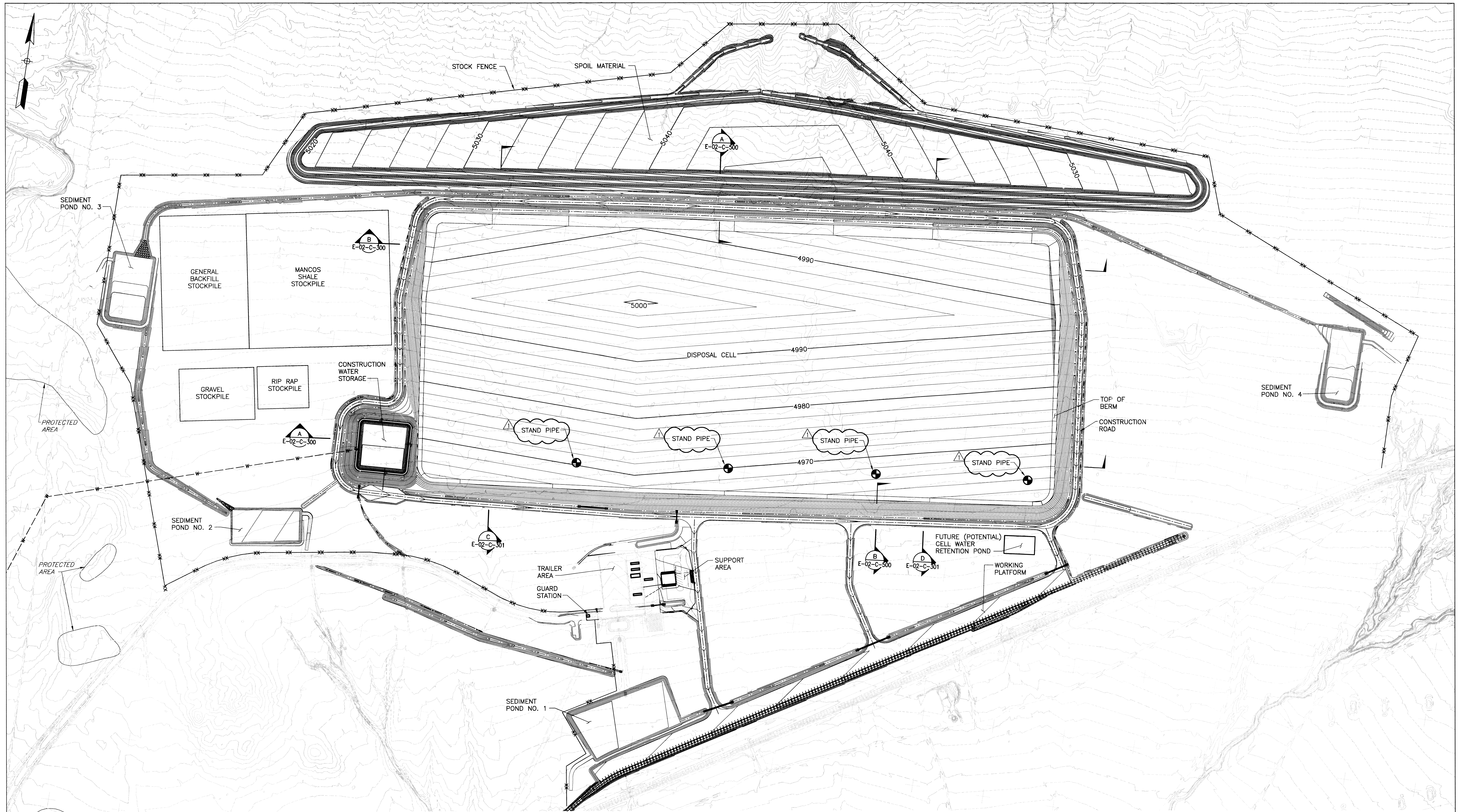
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U.S. DEPARTMENT OF ENERGY GRAND JUNCTION, COLORADO						EnergySolutions / Jacobs Under DOE Contract No. DE-AM09-05SR22406						
PROJECT LOCATION	RAP DISPOSAL CELL DESIGN					APPROVALS	DATE	MOAB UMTRA PROJECT				
DESIGNED BY	L. ENGLAND					DATE	12/17/07	OVERALL CELL LAYOUT PLAN				
CHECKED BY	F. PARTON					DATE	12/17/07					
APPROVED BY	W. BARTON					DATE	12/17/07					
PROJECT MANAGER	M. OAKS					DATE	12/17/07					
DATE	12/17/07					PROJECT NO.	E-02-C-101					
						SHEET	1	OF 1				



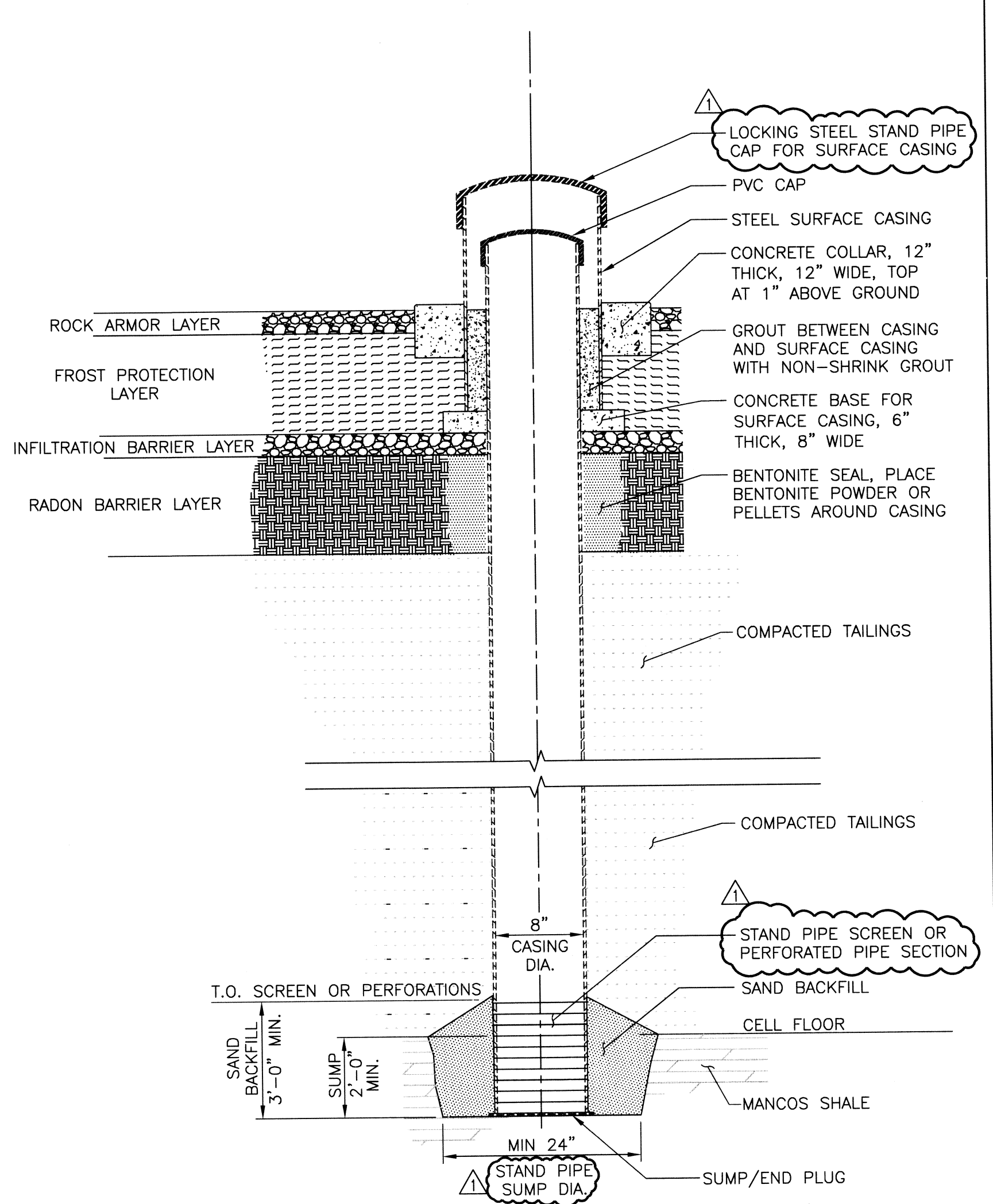
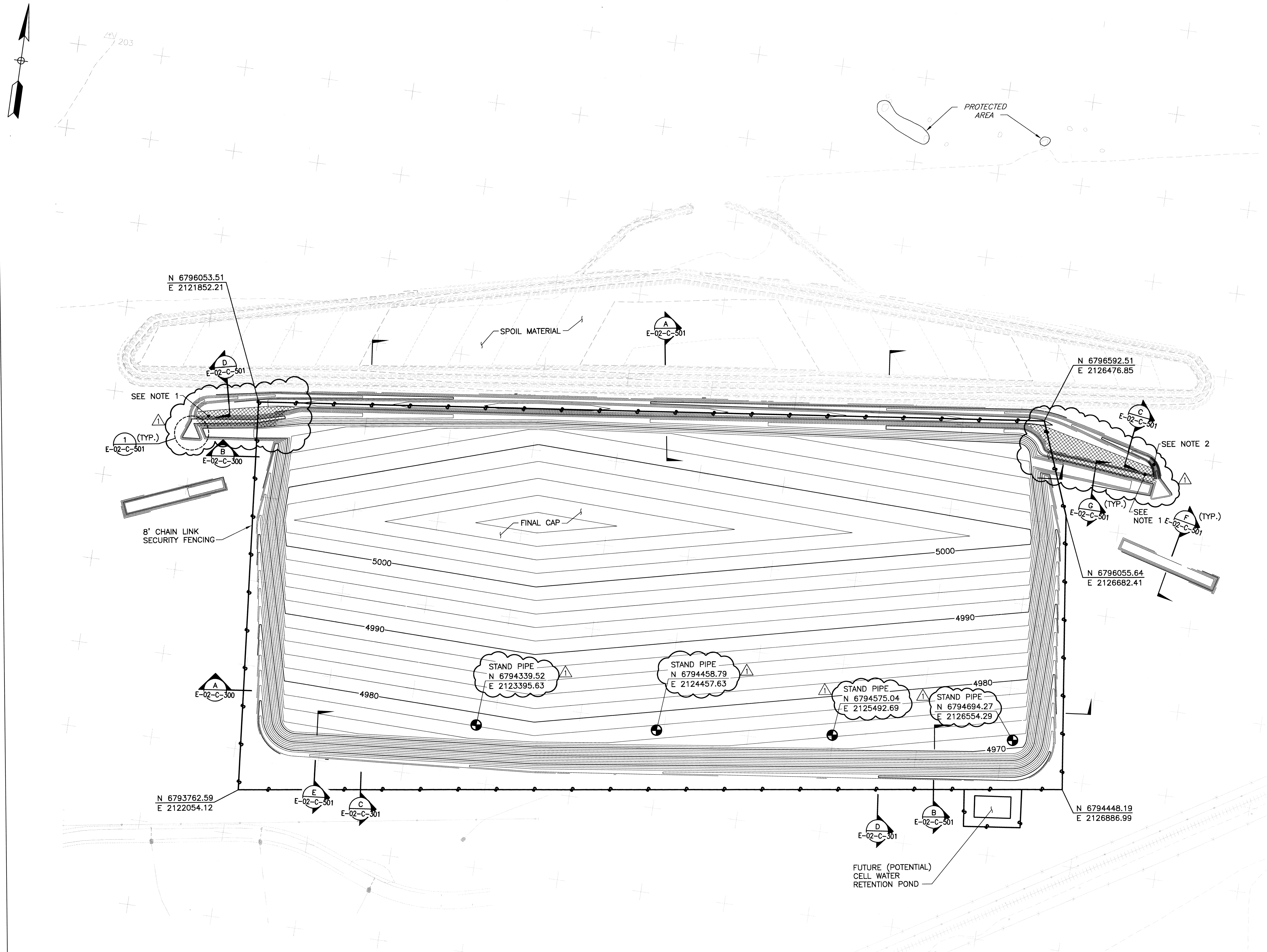
NOTES:
 1. ALL DISTURBED AREAS SHALL BE SEEDED, MULCHED, AND RE-VEGETATED BY OTHERS AT APPROPRIATE TIME.



1	02/29/08	Changed monitoring well label to stand pipe	LLE	FMP	SW	MRO
0	12/17/07	Issued For Construction	LLE	FMP		
PROJECT LOCATION		U.S. DEPARTMENT OF ENERGY GRAND JUNCTION, COLORADO		EnergySolutions / Jacobs Under DOE Contract No. DE-AM09-05SR22406		
PROJECT DESCRIPTION		RAP DISPOSAL CELL DESIGN		MOAB UMTRA PROJECT		
APPROVALS		PROJECT BY: L ENGLAND 12/17/07 PROJECT BY: F PARTON 12/17/07 PROJECT BY: W BARTON 12/17/07 PROJECT BY: F PARTON 12/17/07 PROJECT BY: M OAKS 12/17/07 PROJECT BY: D SMITH 12/17/07		OVERALL CELL GRADING PLAN		
PROJECT NO.		E-02-C-102		SHEET 1 OF 1		



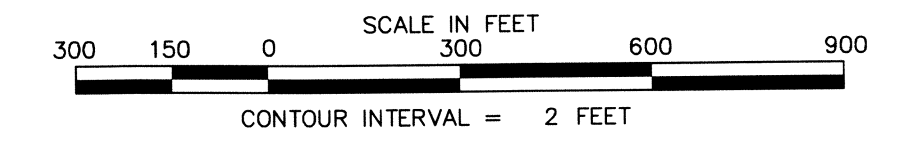
1	02/29/08	Changed monitoring well label to stand pipe	LLE	FMP	SM	MED
0	12/17/07	Issued For Construction	LLE	FMP		
U.S. DEPARTMENT OF ENERGY GRAND JUNCTION, COLORADO			EnergySolutions / Jacobs Under DOE Contract No. DE-AM09-05SR22406			
PROJECT LOCATION RAP DISPOSAL CELL DESIGN		MOAB UMTRA PROJECT				
REFERENCE		OVERALL CELL TOP OF WASTE PLAN				
APPROVALS		PROJECT NO. E-02-C-103				
L ENGLAND 12/17/07		SHEET 1 OF 1				
F PARTON 12/17/07						
W BARTON 12/17/07						
F PARTON 12/17/07						
M OAKS 12/17/07						
D SMITH 12/17/07						



- NOTES:**
1. TOP OF STAND PIPE SURFACE CASING, 3 FT ABOVE FINAL GROUND SURFACE.
 2. TOP OF CASING TO BE 2.5 FT ABOVE FINAL GROUND SURFACE.
 3. SURVEY THE AS-BUILT LOCATION AND ELEVATION OF THE TOP OF CASING AND TAG THE STAND PIPE CAP WITH THE COORDINATES, ELEVATION, AND STAND PIPE NUMBER.
 4. STAND PIPE NUMBER SHALL BE AS DIRECTED BY THE CONSTRUCTION MANAGER.
 5. STAND PIPE CASING AND SCREEN TO BE SCHEDULE 80 PVC WITH THREADED AND COUPLED OR FLUSH JOINT FITTINGS.
 6. ANNULAR FILL TO BE CEMENT/BENTONITE GROUT.
 7. STAND PIPE SURFACE CASING SHALL BE CARBON STEEL SCH. 40.

STAND PIPE DETAIL
SCALE: NONE

- NOTES:**
1. COVER HATCHED AREA WITH D50=3" CRUSHED STONE.
 2. FOR THIS SECTION OF DITCH USE D50=8" CRUSHED STONE.
 3. REVISION 1 - REVISED GRADING AND CHANGED MONITORING WELL LABEL TO STAND PIPE.

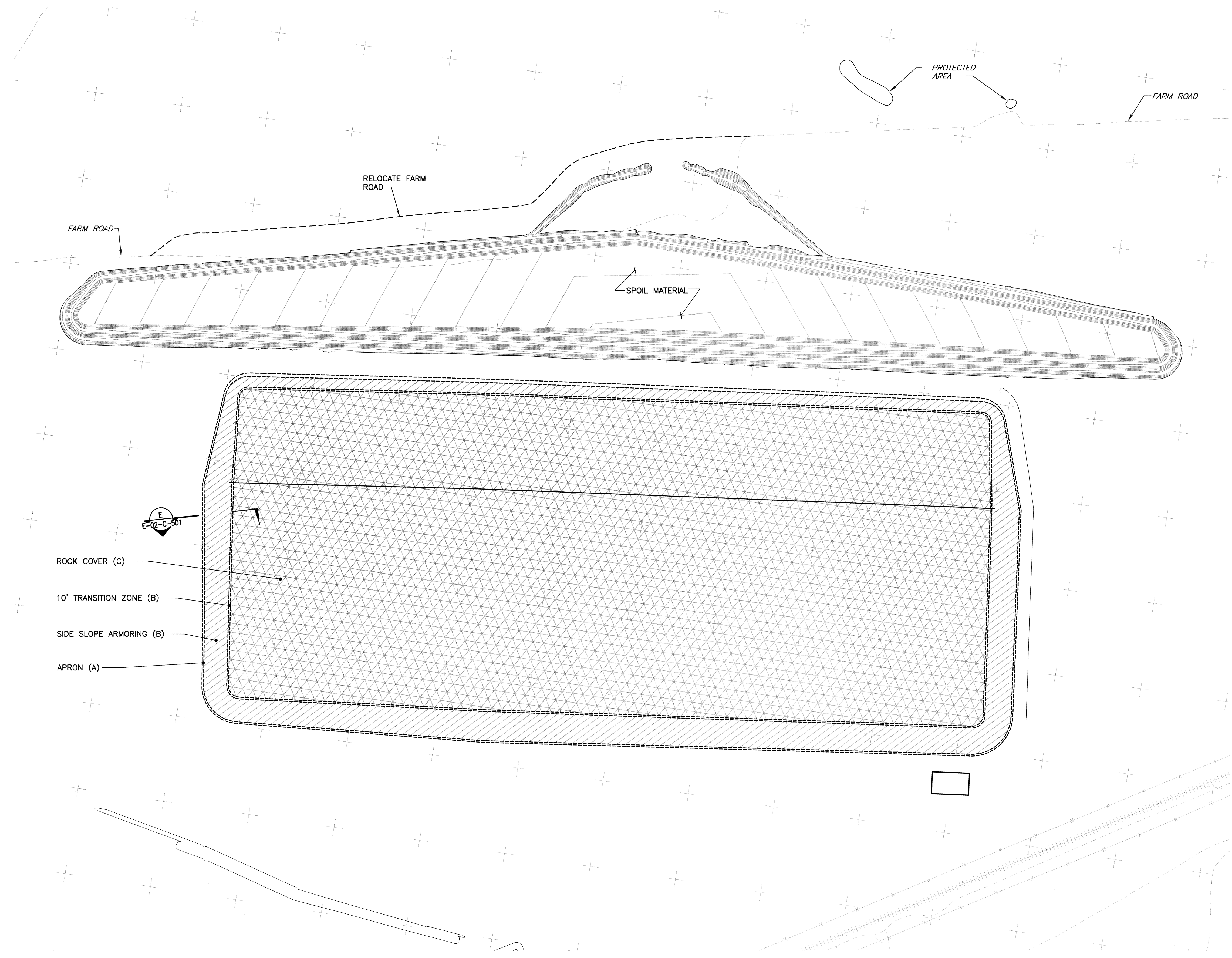
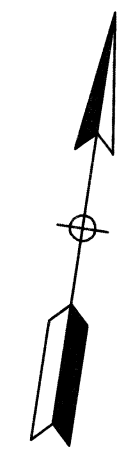


ENERGYSOLUTIONS
We're part of the solution

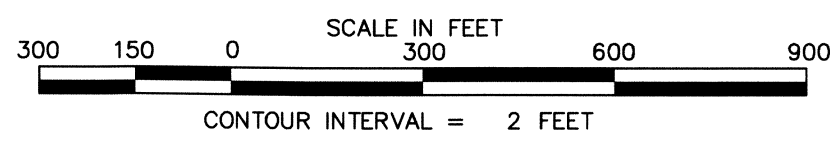
JACOBS
120 Broadway Ave., Oak Ridge, Tennessee 37830
Tel: 865-220-4800 Fax: 865-220-6170
JACOBS PROJECT NO: 3502600

SEAL
Professional Engineer
No. 578949-9-2202
FRANK M. PARTON JR.
STATE OF TENNESSEE

1	01/25/08	Issued For Construction	LLE	FMP	WOB	MDO
0	12/17/07	Issued For Construction	LLE	FMP		
U.S. DEPARTMENT OF ENERGY GRAND JUNCTION, COLORADO EnergySolutions / Jacobs Under DOE Contract No. DE-AM09-05SR22406 MOAB UMTRA PROJECT OVERALL CELL CAP PLAN/ FENCING PLAN						
PROJECT LOCATION RAP DISPOSAL CELL DESIGN		APPROVALS L ENGLAND 12/17/07 F PARTON 12/17/07 W BARTON 12/17/07 F PARTON 12/17/07 M OAKS 12/17/07 D SMITH 12/17/07		PROJECT NO. E-02-C-104		
SHEET NO. 1 OF 1						

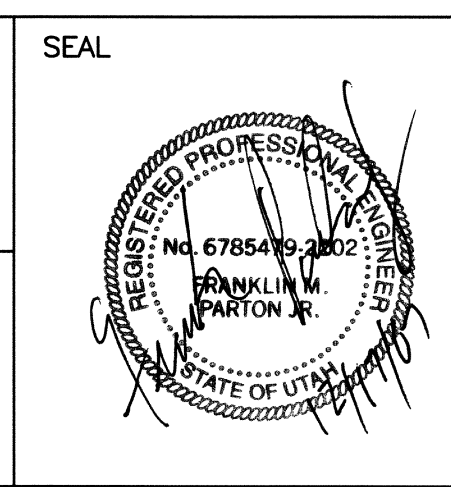


- ROCK COVER (C)
- 10' TRANSITION ZONE (B)
- SIDE SLOPE ARMORING (B)
- APRON (A)

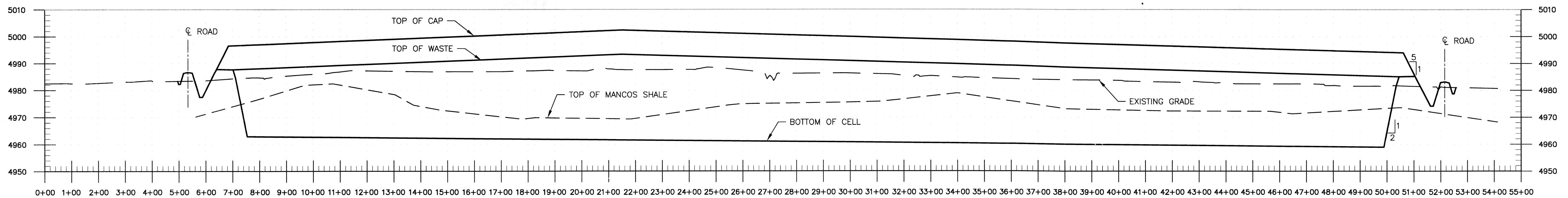


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We're part of the solution

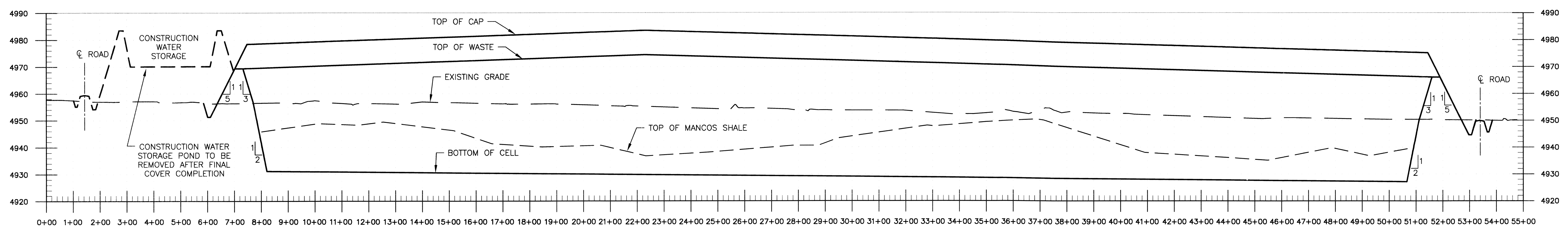
JE JACOBS
125 Broadway Ave., Oak Ridge, Tennessee 37830
Tel: 865-220-8800 Fax: 865-220-8170
JACOBS PROJECT NO: 35DJ2600



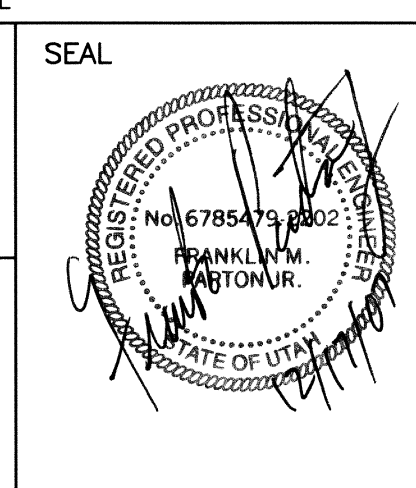
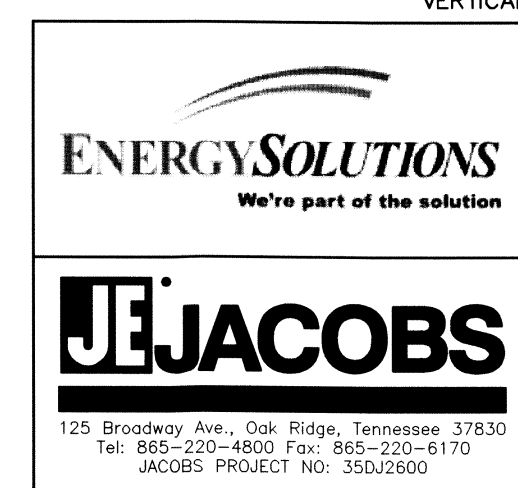
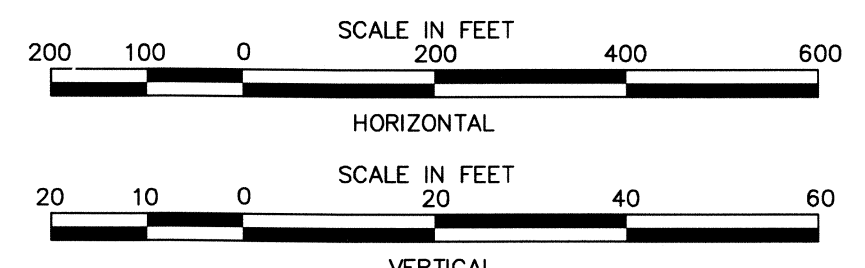
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U.S. DEPARTMENT OF ENERGY GRAND JUNCTION, COLORADO			EnergySolutions / Jacobs Under DOE Contract No. DE-AM09-05SR22406			
PROJECT LOCATION		APPROVALS		MOAB UMTRA PROJECT		
RAP DISPOSAL CELL DESIGN		DESIGNED BY	DATE	ROCK COVER PLAN		
		F. PARTON	12/17/07			
		W. BARTON	12/17/07			
		F. PARTON	12/17/07			
		M. OAKS	12/17/07			
		D. SMITH	12/17/07			
PROJECT NO.				DRAWING NO.		SHT. OF
				E-02-C-105		1 OF 1



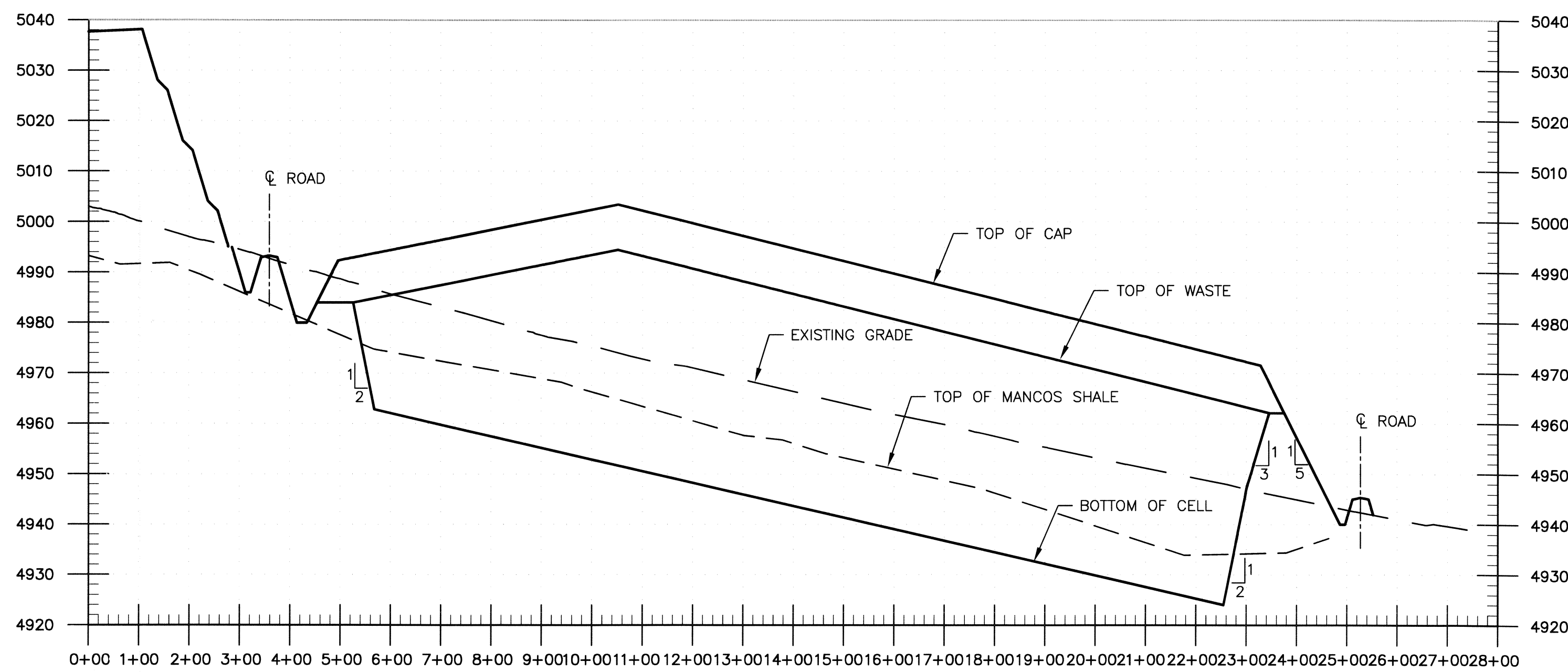
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 E-02-C-102 SCALE: HORIZONTAL 1"=200'
 E-02-C-103 VERTICAL 1"=20'
 E-02-C-104



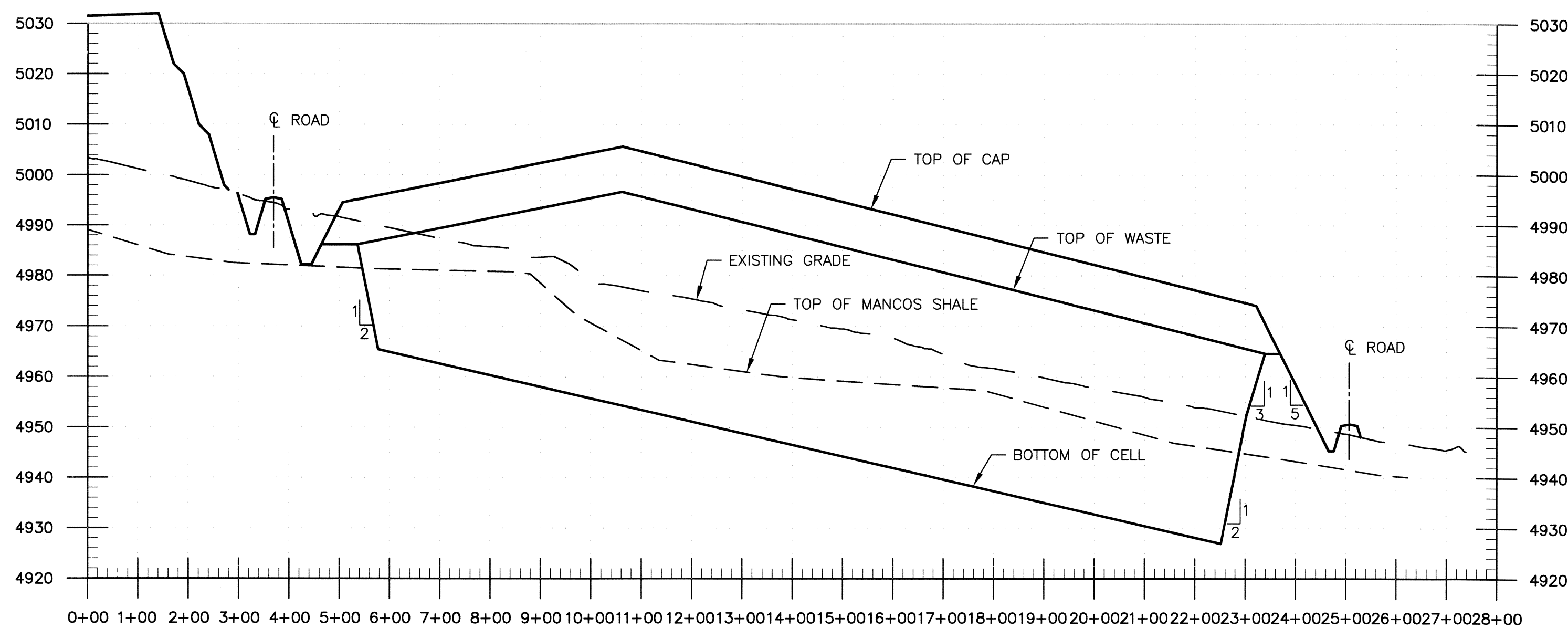
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 E-02-C-102 SCALE: HORIZONTAL 1"=200'
 E-02-C-103 VERTICAL 1"=20'
 E-02-C-104



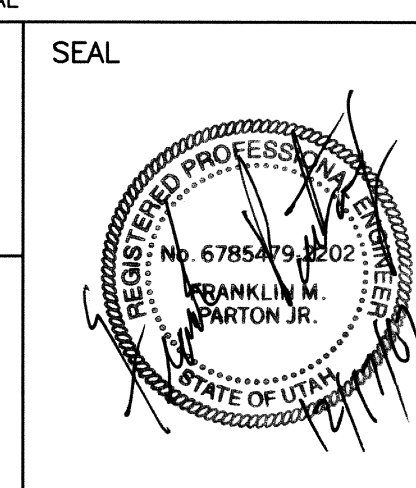
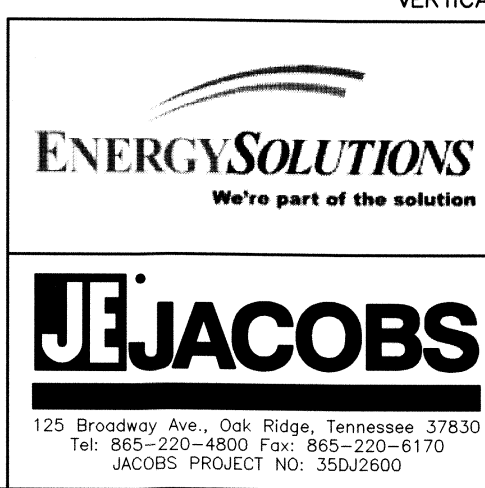
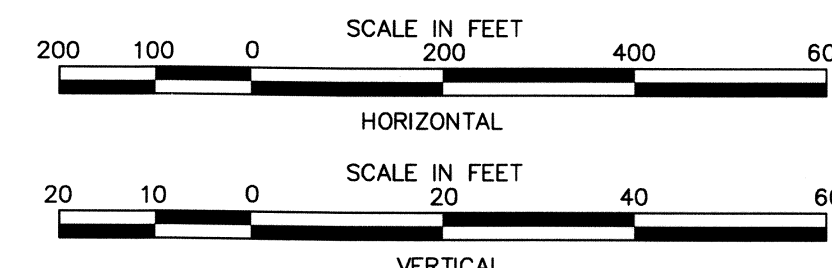
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U.S. DEPARTMENT OF ENERGY GRAND JUNCTION, COLORADO						EnergySolutions / Jacobs Under DOE Contract No. DE-AM09-05SR22406					
PROJECT LOCATION RWP DISPOSAL CELL DESIGN						MOAB UMTRA PROJECT DISPOSAL CELL CROSS SECTIONS					
APPROVALS DESIGNED BY: L ENGLAND 12/17/07 CHECKED BY: F PARTON 12/17/07 PROJECT ENGINEER: W BARTON 12/17/07 PROJECT MANAGER: F PARTON 12/17/07 PROJECT SUPERVISOR: M OAKS 12/17/07 PROJECT ENGINEER: D SMITH 12/17/07						PROJECT NO. E-02-C-300 SHEET 1 OF 1					



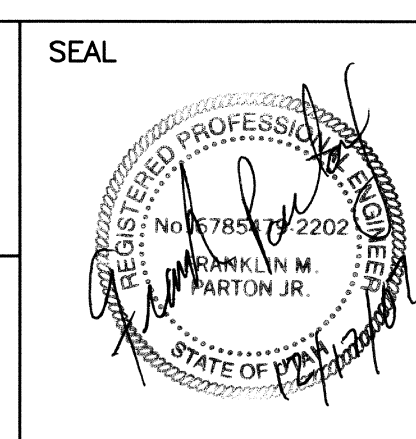
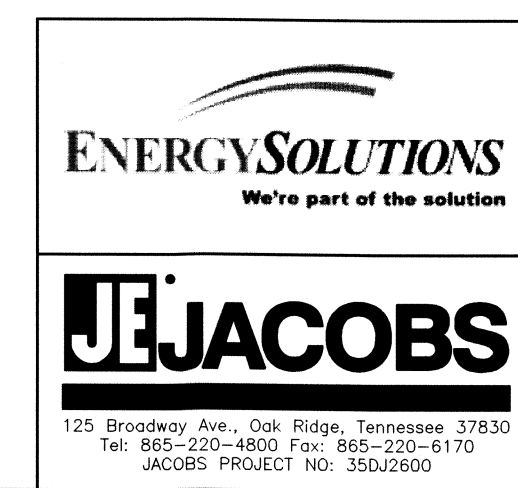
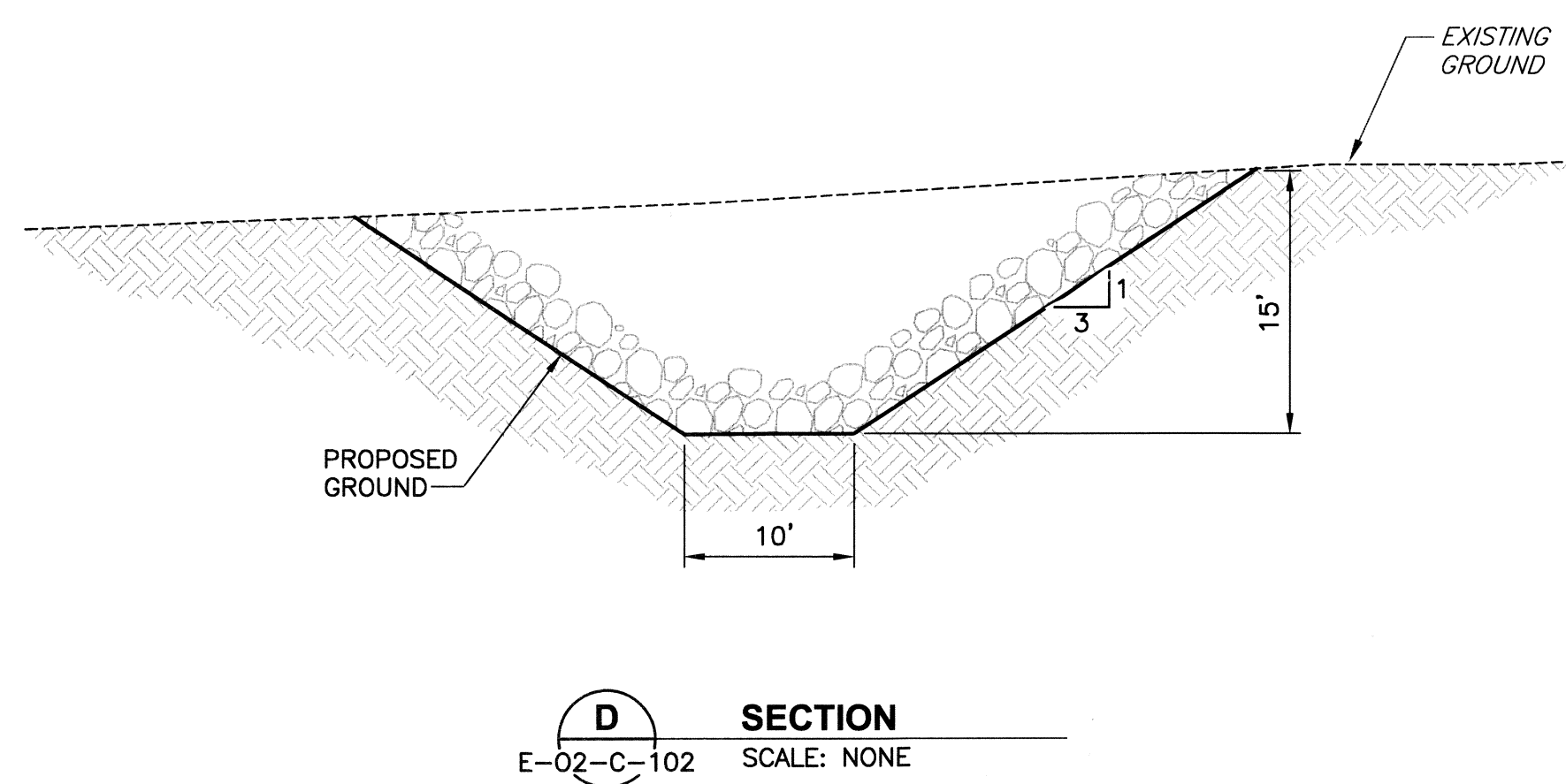
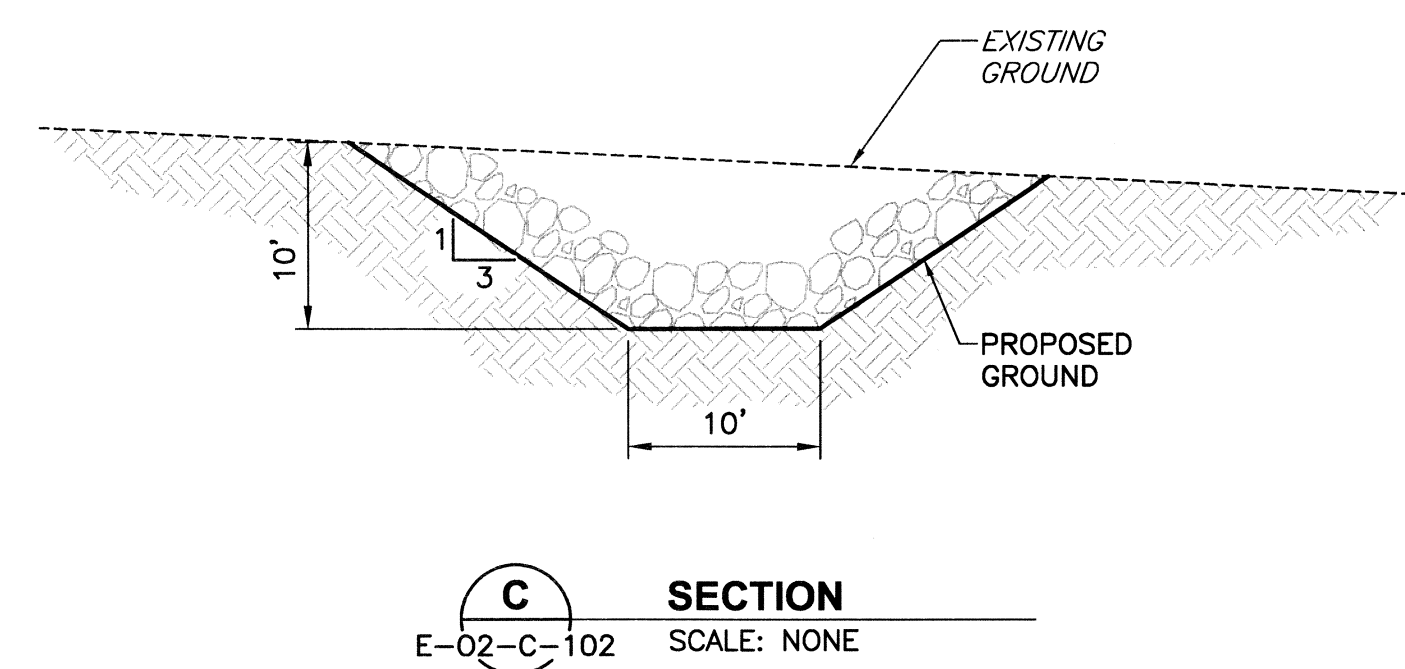
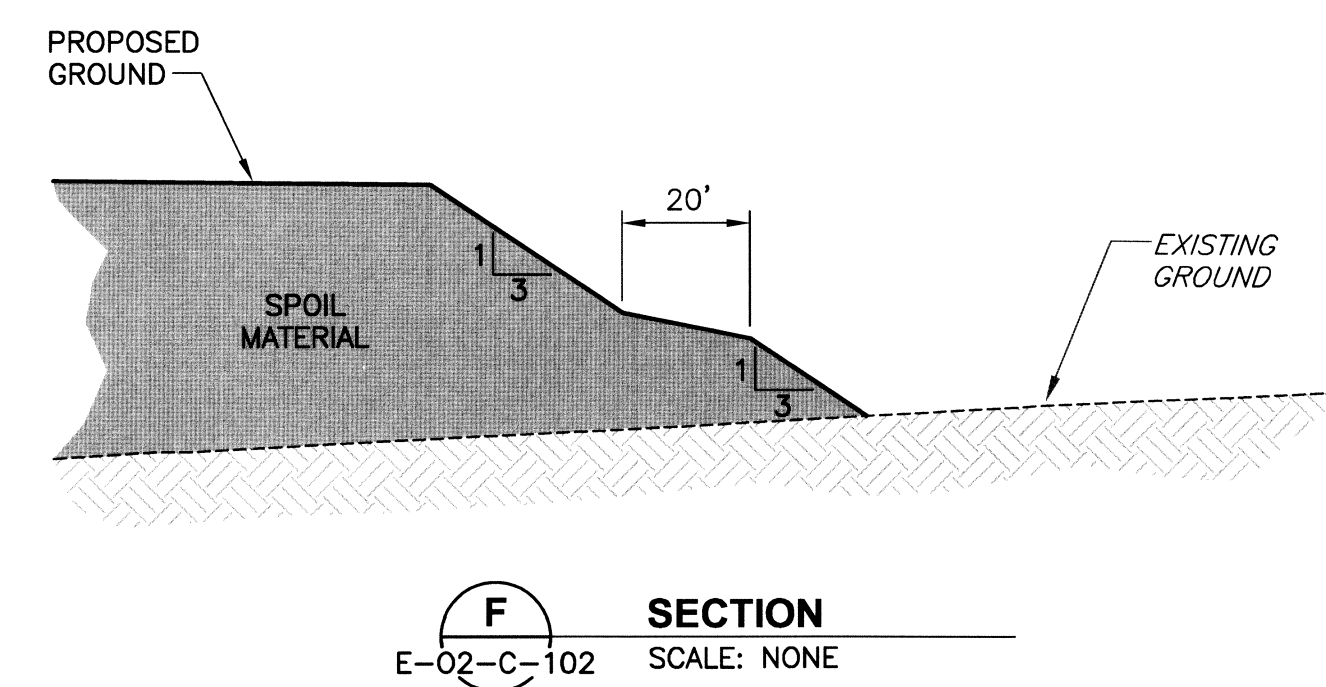
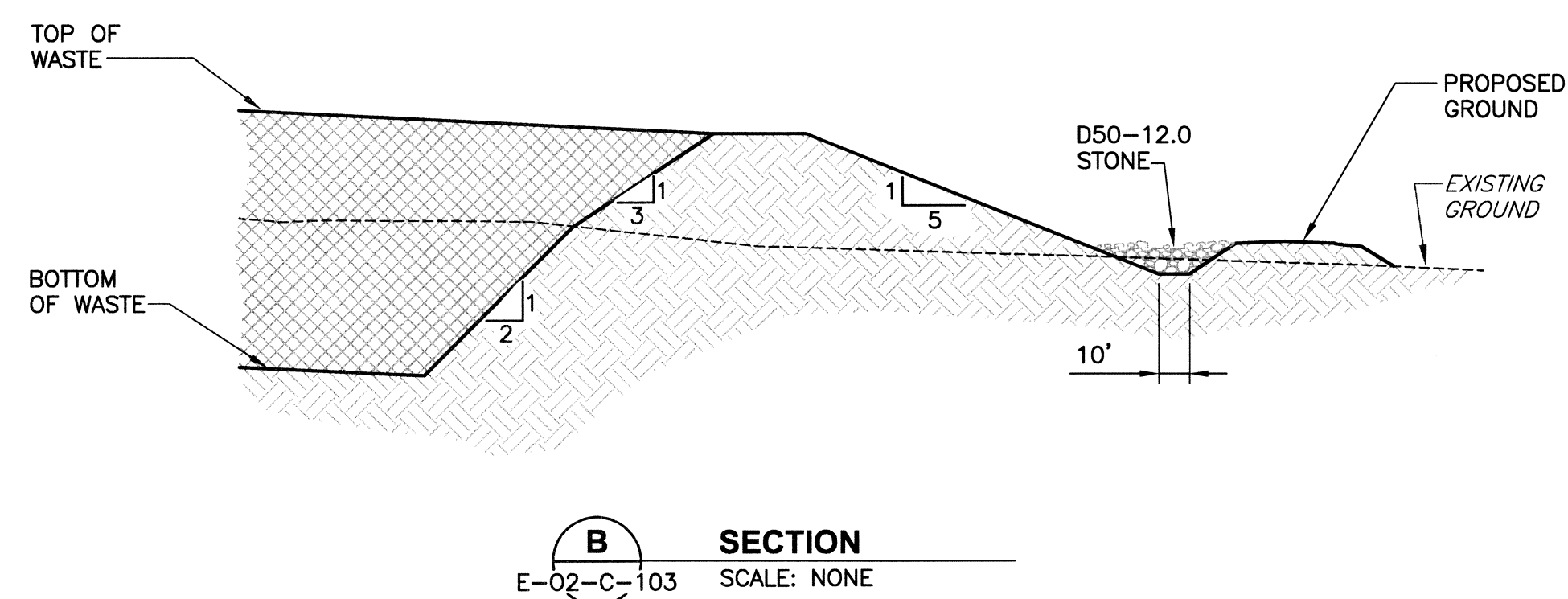
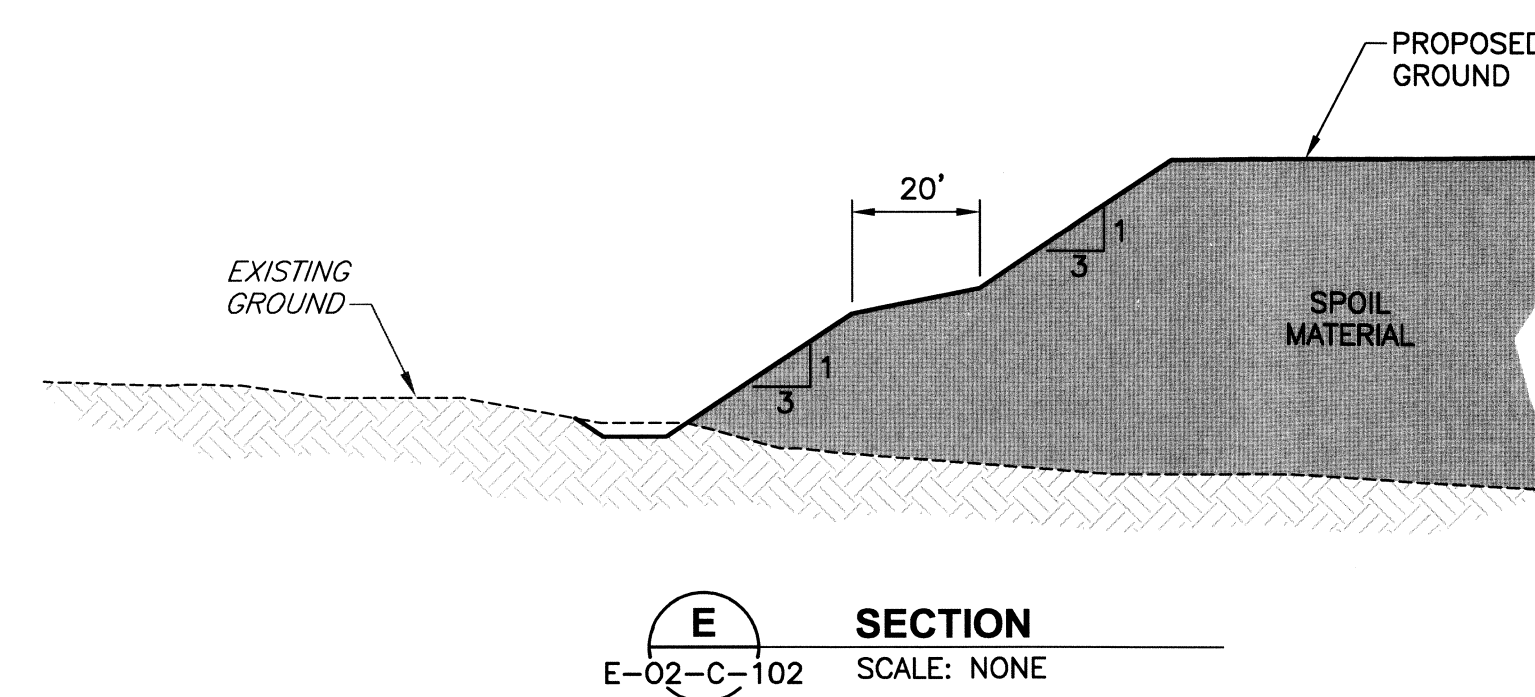
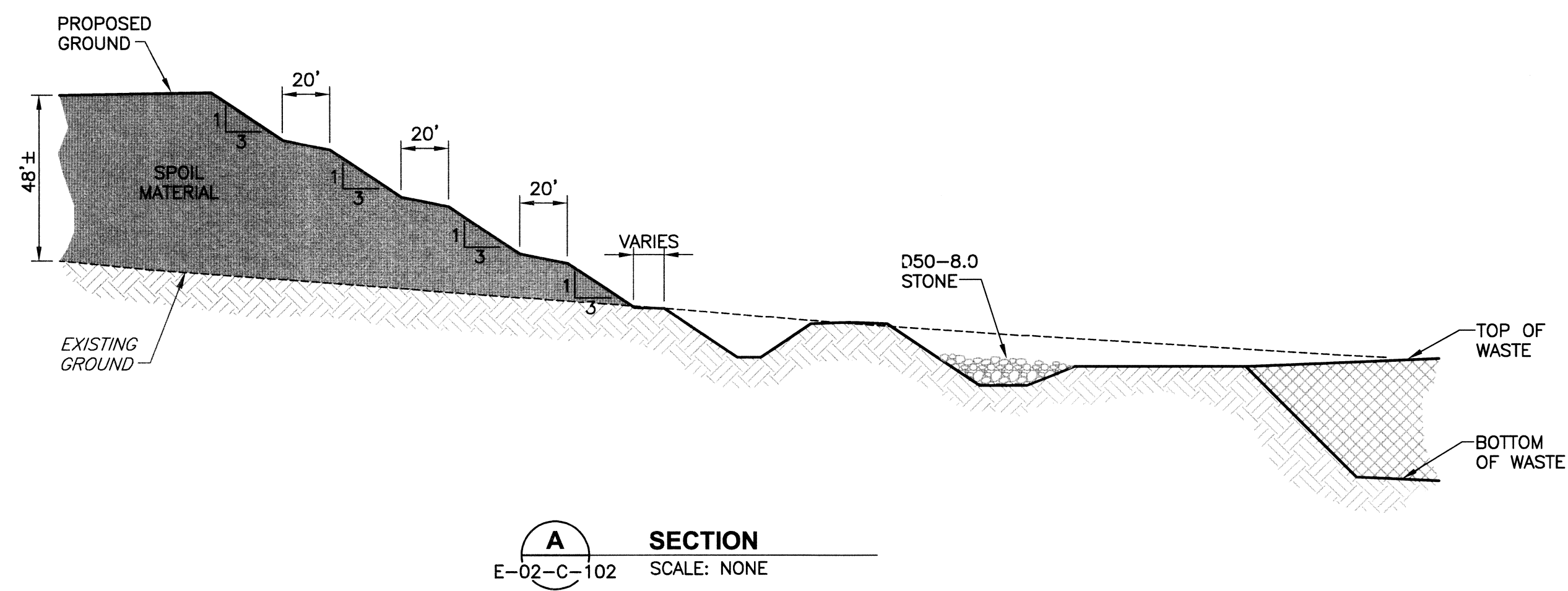
D SECTION
 E-02-C-102 SCALE: HORIZONTAL 1"=200'
 E-02-C-103 VERTICAL 1"=20'
 E-02-C-104



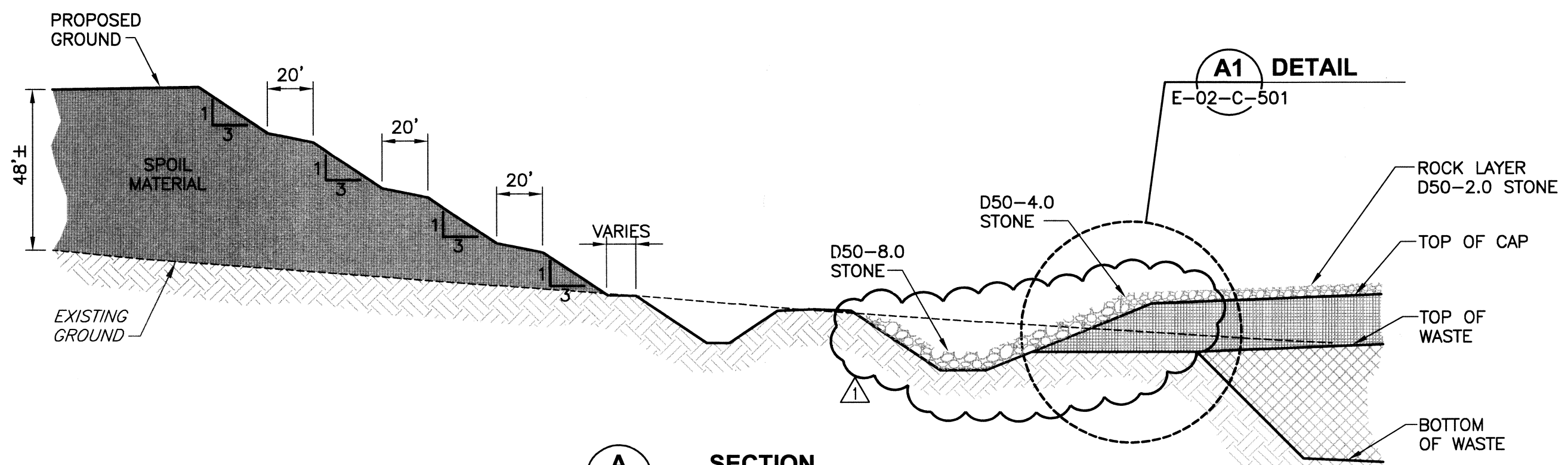
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 E-02-C-103 VERTICAL 1"=20'
 E-02-C-104



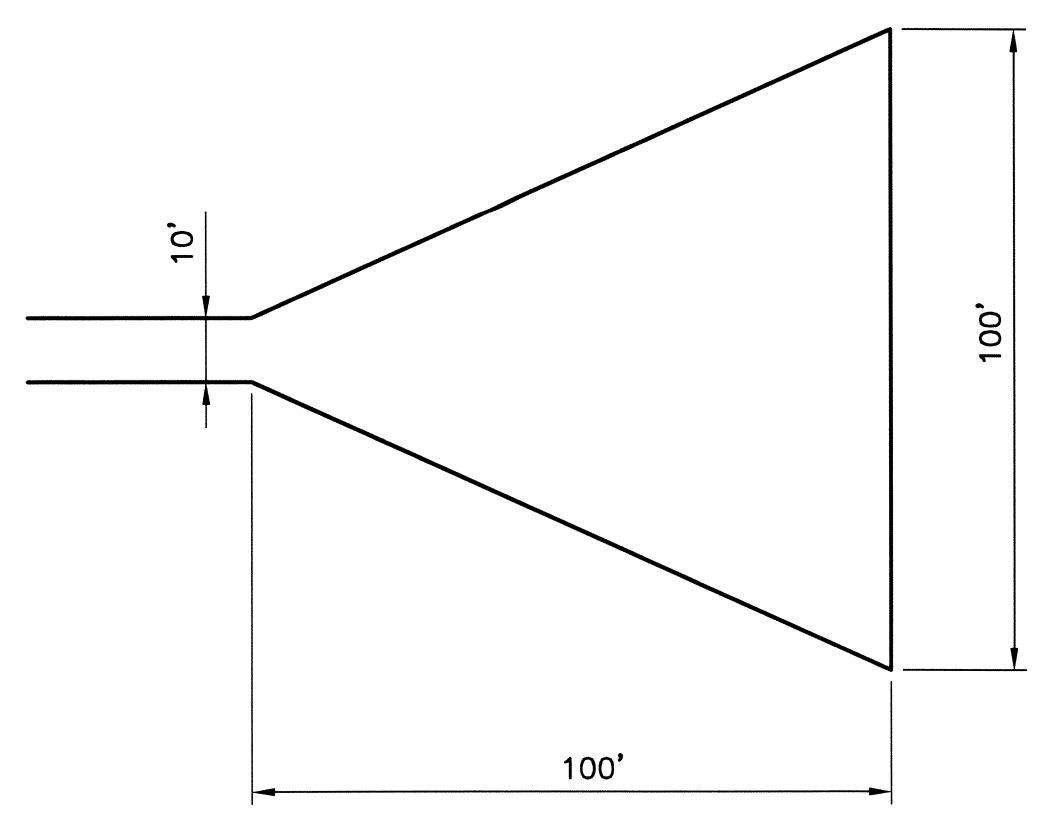
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PROJECT LOCATION						U.S. DEPARTMENT OF ENERGY GRAND JUNCTION, COLORADO					
PROJECT DESCRIPTION						RAP DISPOSAL CELL DESIGN					
APPROVALS						MOAB UMTRA PROJECT					
DESIGNED BY						L ENGLAND 12/17/07					
CHECKED BY						F BARTON 12/17/07					
PROJECT A/E						W BARTON 12/17/07					
PROJECT MANAGER						F PARTON 12/17/07					
PROJECT NO.						M OAKS 12/17/07					
DRAWING NO.						D SMITH 12/17/07					
PROJECT NO.						E-02-C-301					
SHEET						1 OF 1					



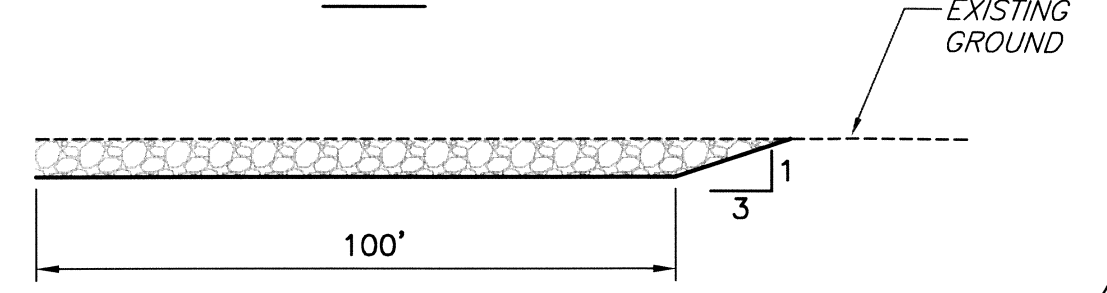
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U.S. DEPARTMENT OF ENERGY GRAND JUNCTION, COLORADO			EnergySolutions / Jacobs Under DOE Contract No. DE-AM09-05SR22406			
PROJECT LOCATION RAP DISPOSAL CELL DESIGN			MOAB UMTRA PROJECT			
APPROVALS			DETAILS - 1			
REFERENCE						
PROJECT MANAGER			PROJECT NO.			
D SMITH			E-02-C-500			
			SHT. 1 OF 1			



A SECTION
E-02-C-104 SCALE: NONE

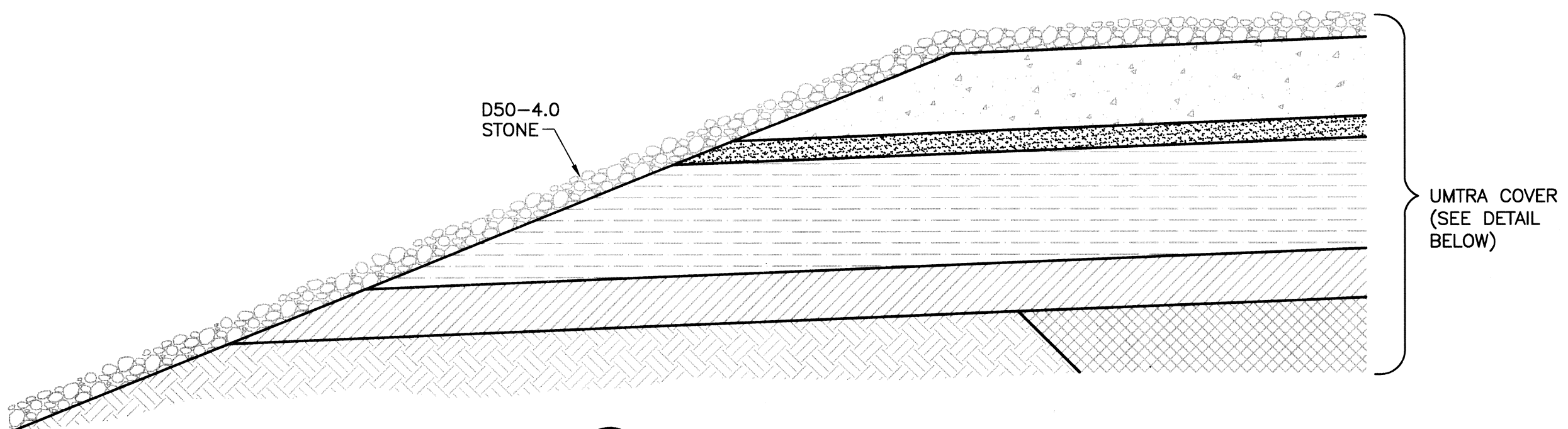


PLAN



SECTION-LEVEL SPREADER

1 DETAIL
E-02-C-104 SCALE: NONE



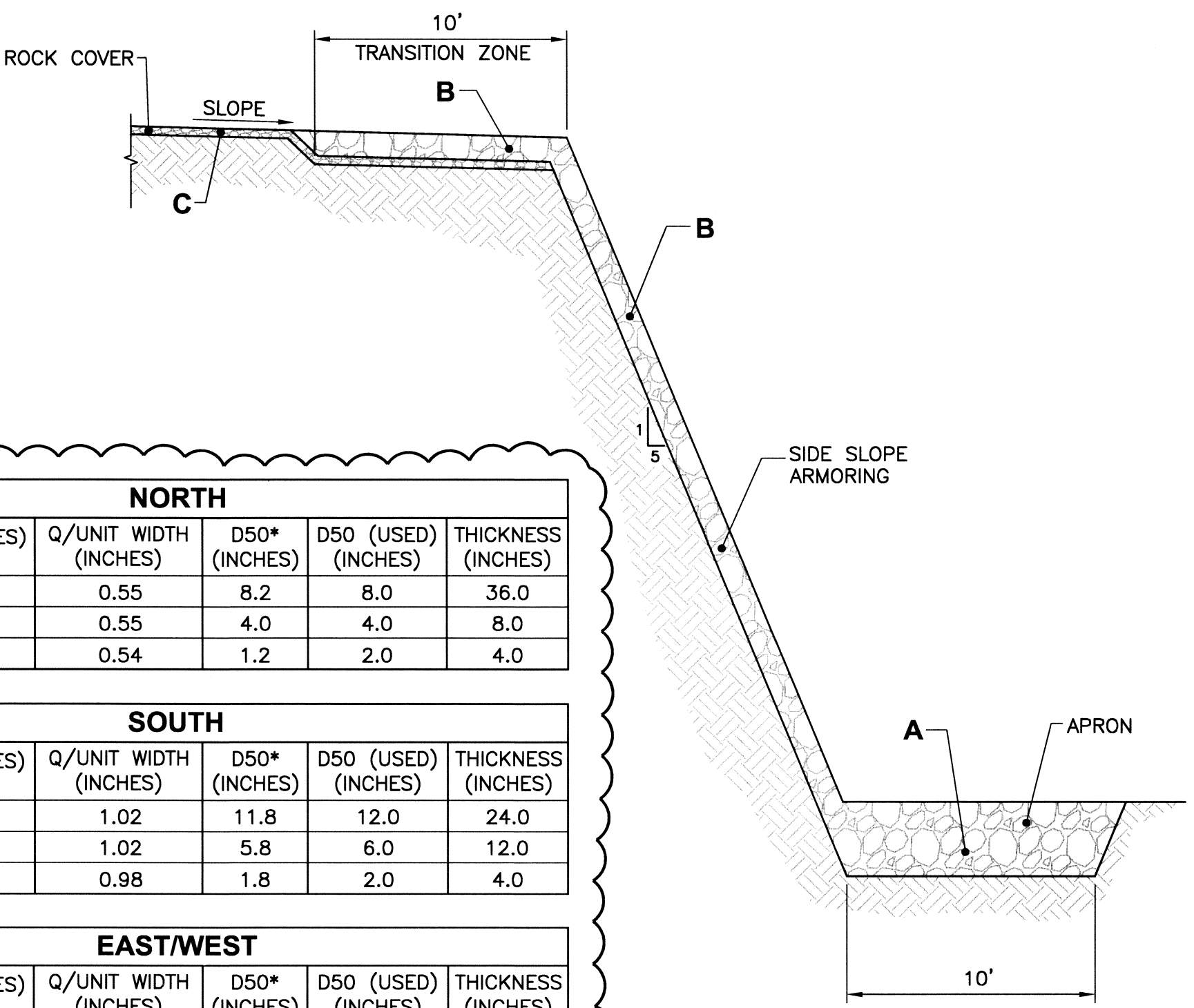
A1 DETAIL
E-02-C-501 SCALE: NONE

NORTH					
	AREA (ACRES)	Q/UNIT WIDTH (INCHES)	D50* (INCHES)	D50 (USED) (INCHES)	THICKNESS (INCHES)
A	1.95	0.55	8.2	8.0	36.0
B	7.0	0.55	4.0	4.0	8.0
C	55.85	0.54	1.2	2.0	4.0

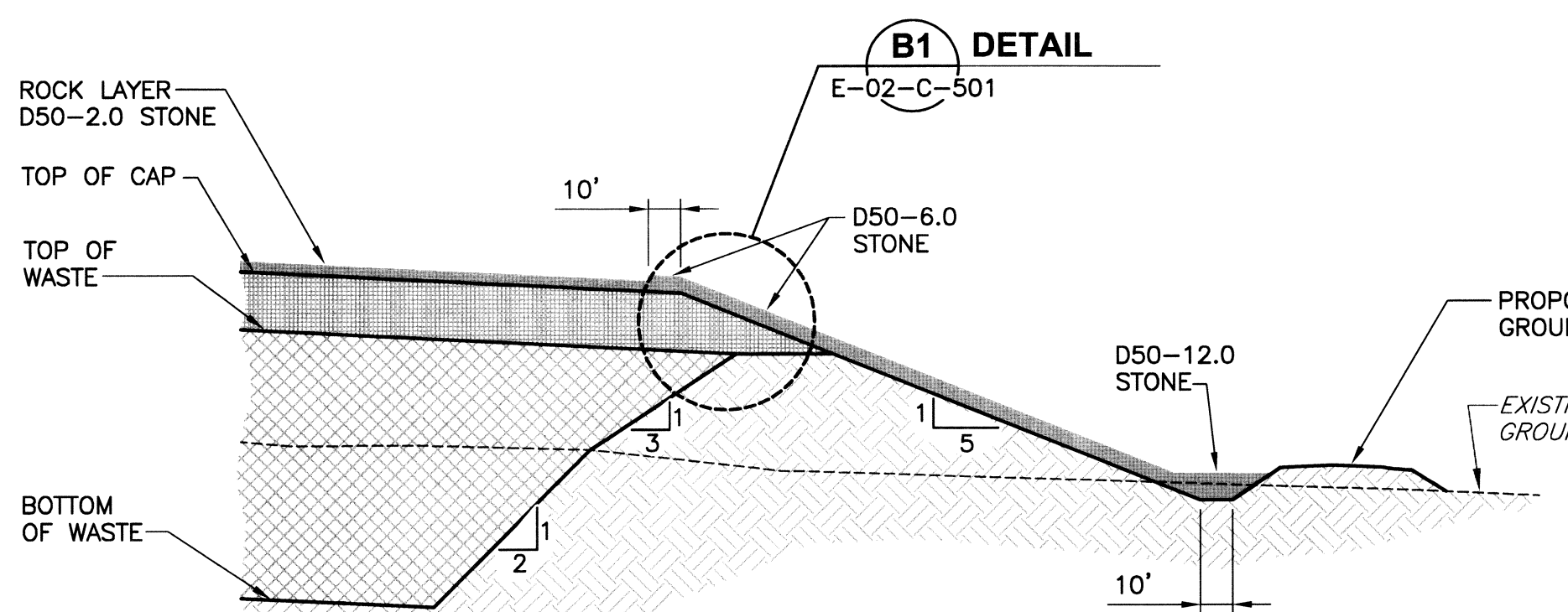
SOUTH					
	AREA (ACRES)	Q/UNIT WIDTH (INCHES)	D50* (INCHES)	D50 (USED) (INCHES)	THICKNESS (INCHES)
A	0.98	1.02	11.8	12.0	24.0
B	16.41	1.02	5.8	6.0	12.0
C	128.91	0.98	1.8	2.0	4.0

EAST/WEST					
	AREA (ACRES)	Q/UNIT WIDTH (INCHES)	D50* (INCHES)	D50 (USED) (INCHES)	THICKNESS (INCHES)
A	1.08	0.2	4.7	6.0	18.0
B	13.63	0.2	2.3	4.0	8.0
C	NA	NA	NA	NA	NA

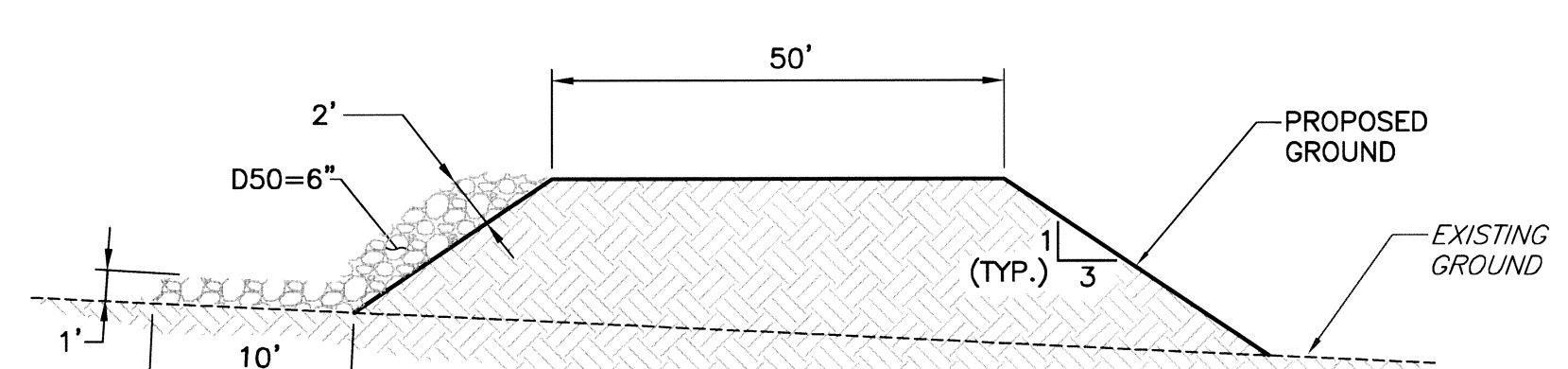
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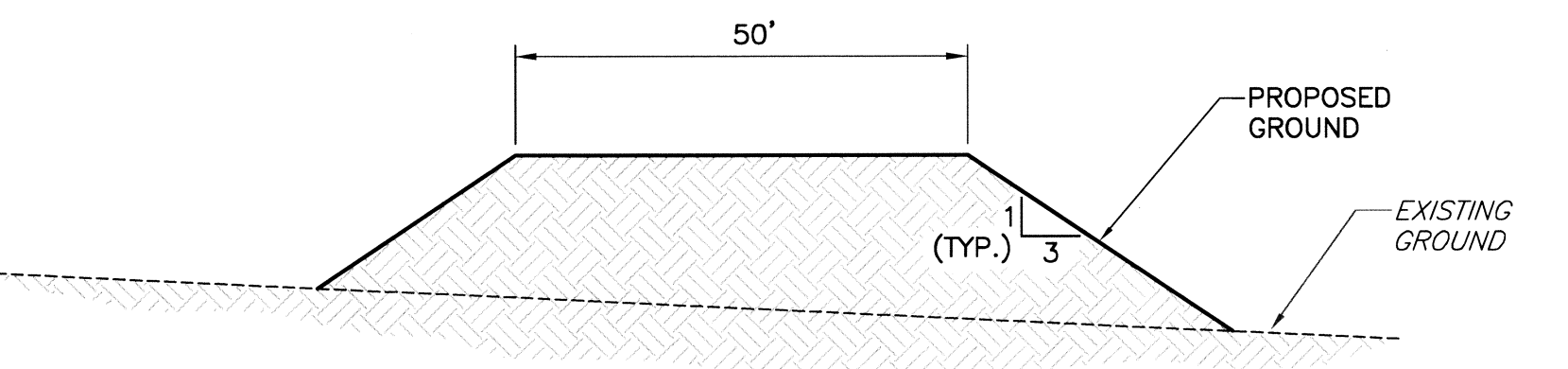
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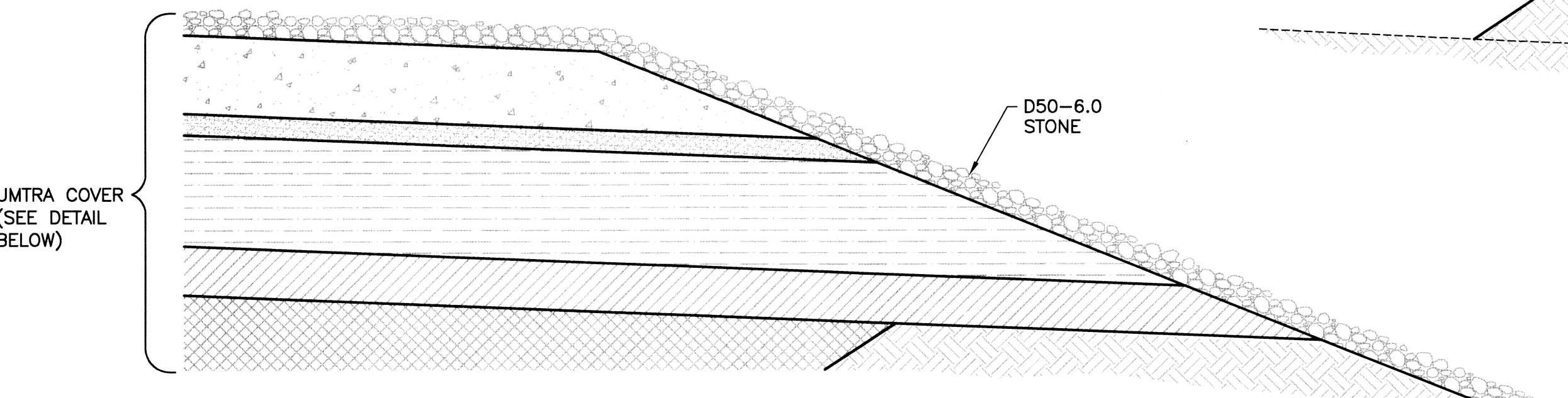
B SECTION
E-02-C-104 SCALE: NONE



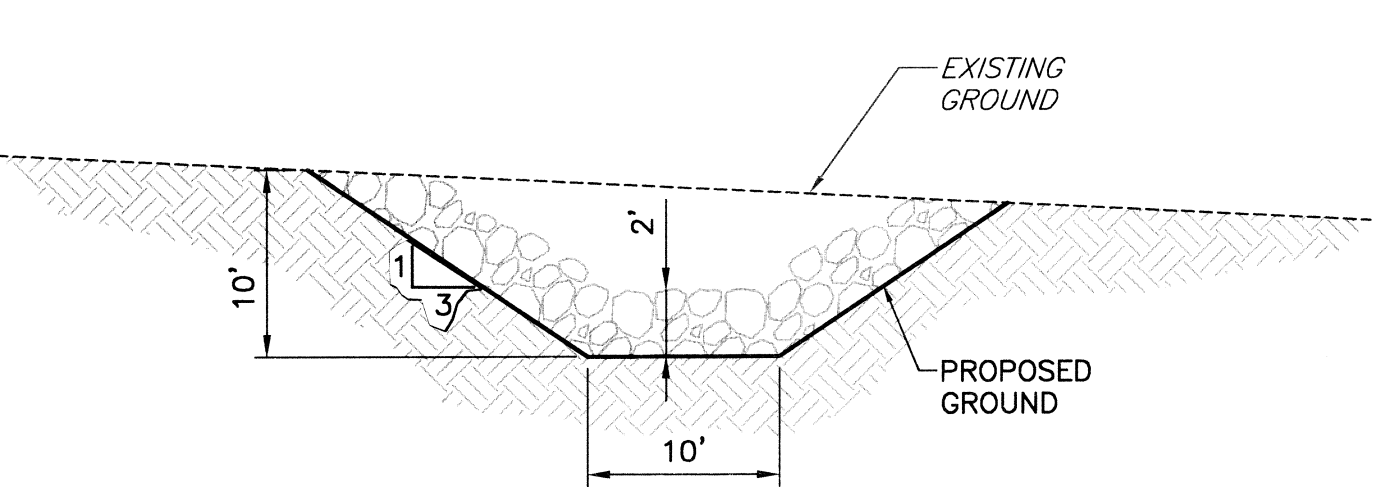
F SECTION
E-02-C-104 SCALE: NONE



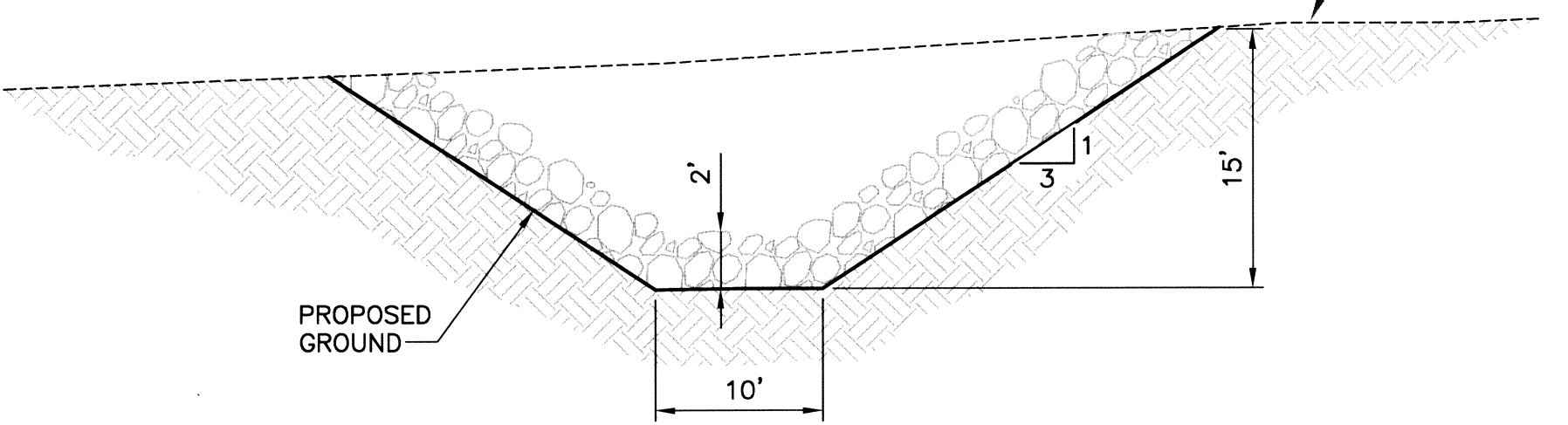
G SECTION
E-02-C-104 SCALE: NONE



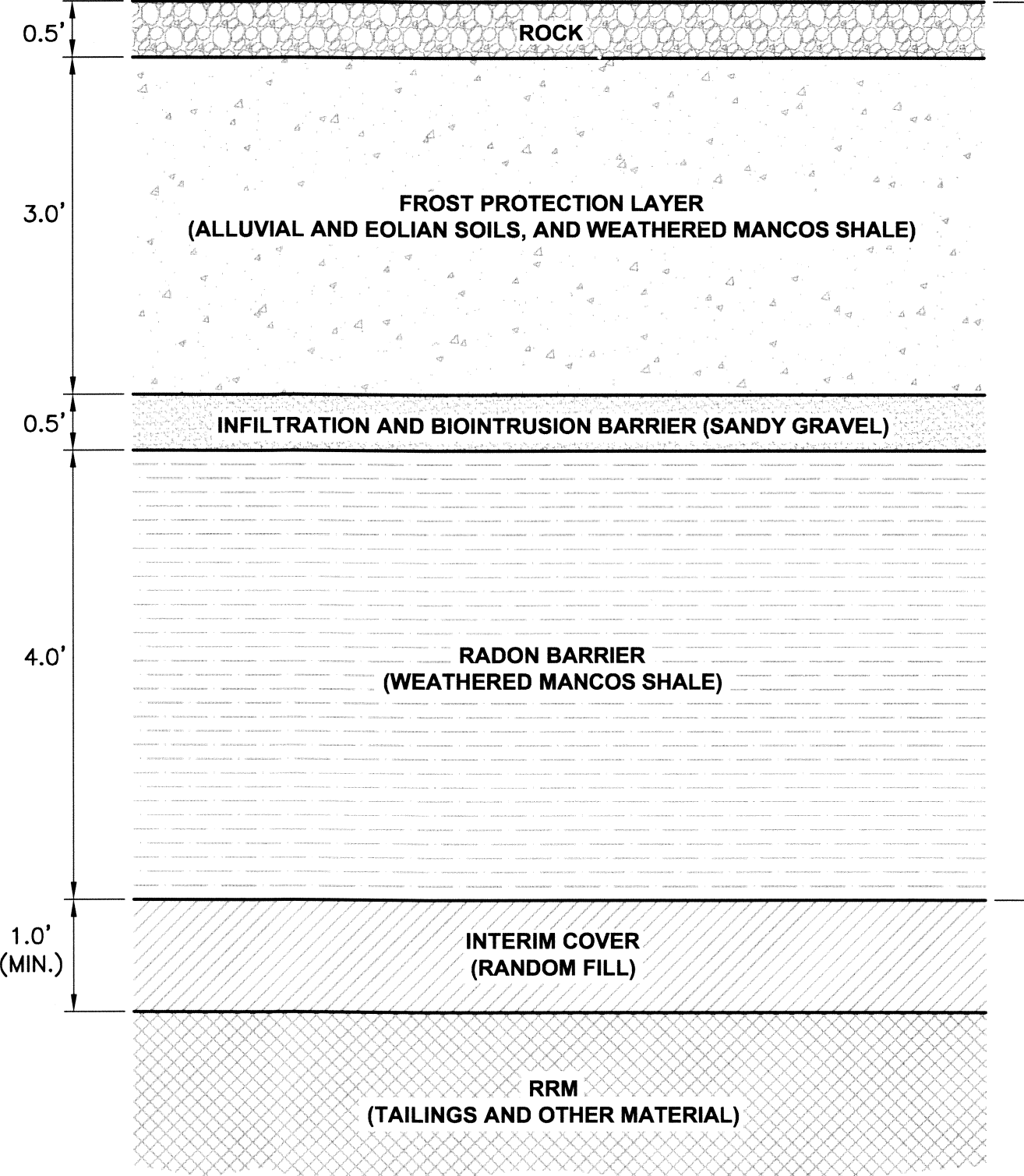
B1 DETAIL
E-02-C-501 SCALE: NONE



C SECTION
E-02-C-104 SCALE: NONE



D SECTION
E-02-C-104 SCALE: NONE



UMTRA COVER DESIGN

Final Cover

	Volume (CY)	Volume (MCY)
Waste	11200000	11.2
Interim Cover	298144	0.298
Radon Barrier	1192576	1.193
Infiltration Barrier	149072	0.149
Frost Protection Layer	894432	0.894

	Vol (CF) D ₅₀ 12 in	Vol (CF) D ₅₀ 8 in	Vol (CF) D ₅₀ 6 in	Vol (CF) D ₅₀ 4 in	Vol (CF) D ₅₀ 2 in
Total Vol A	130680	169884	71874	598224	2683296.0
Total Vol B			714384	598224	
Total Vol C					2683296.0
Total (CF)	130680	169884	786258	598224	2683296
Total (ton)	6077	7900	36561	27817	156973

Each Additional 50' Expansion West

	Volume (CY)
Waste	123044
Interim Cover	3406
Radon Barrier	13622
Infiltration Barrier	1703
Frost Protection Layer	10217

	Vol (CF) D ₅₀ 12 in	Vol (CF) D ₅₀ 8 in	Vol (CF) D ₅₀ 6 in	Vol (CF) D ₅₀ 4 in	Vol (CF) D ₅₀ 2 in
Total Vol A	189	296	298	63	852
Total Vol B					
Total Vol C					
Total (CF)	189	296	298	63	852
Total (ton)	9	14	14	3	50

NOTE:
1. REVISION 1 - ADDED UNITS OF MEASUREMENT TO ROCK COVER COLUMNS AND REVISED SECTION A.

1	02/29/08	Issued For Construction	LLE	FMP	gpd	mab
0	12/17/07	Issued For Construction	LLE	FMP		

U.S. DEPARTMENT OF ENERGY GRAND JUNCTION, COLORADO		EnergySolutions / Jacobs Under DOE Contract No. DE-AM09-05SR22406	
PROJECT LOCATION	APPROVALS	DESIGNED BY	PROJECT A/E
RAP DISPOSAL CELL DESIGN	L ENGLAND 12/17/07 F PARTON 12/17/07 W BARTON 12/17/07 F PARTON 12/17/07		MOAB UMTRA PROJECT
REFERENCE	M OAKS 12/17/07 D SMITH 12/17/07		DETAILS - 2
		PROJECT NO.	DWT. OF
		E-02-C-501	1 of 1

