

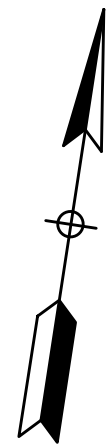
ADDENDUM C

Final Remedial Action Plan
DOE-EM/GJ1547
March 2024

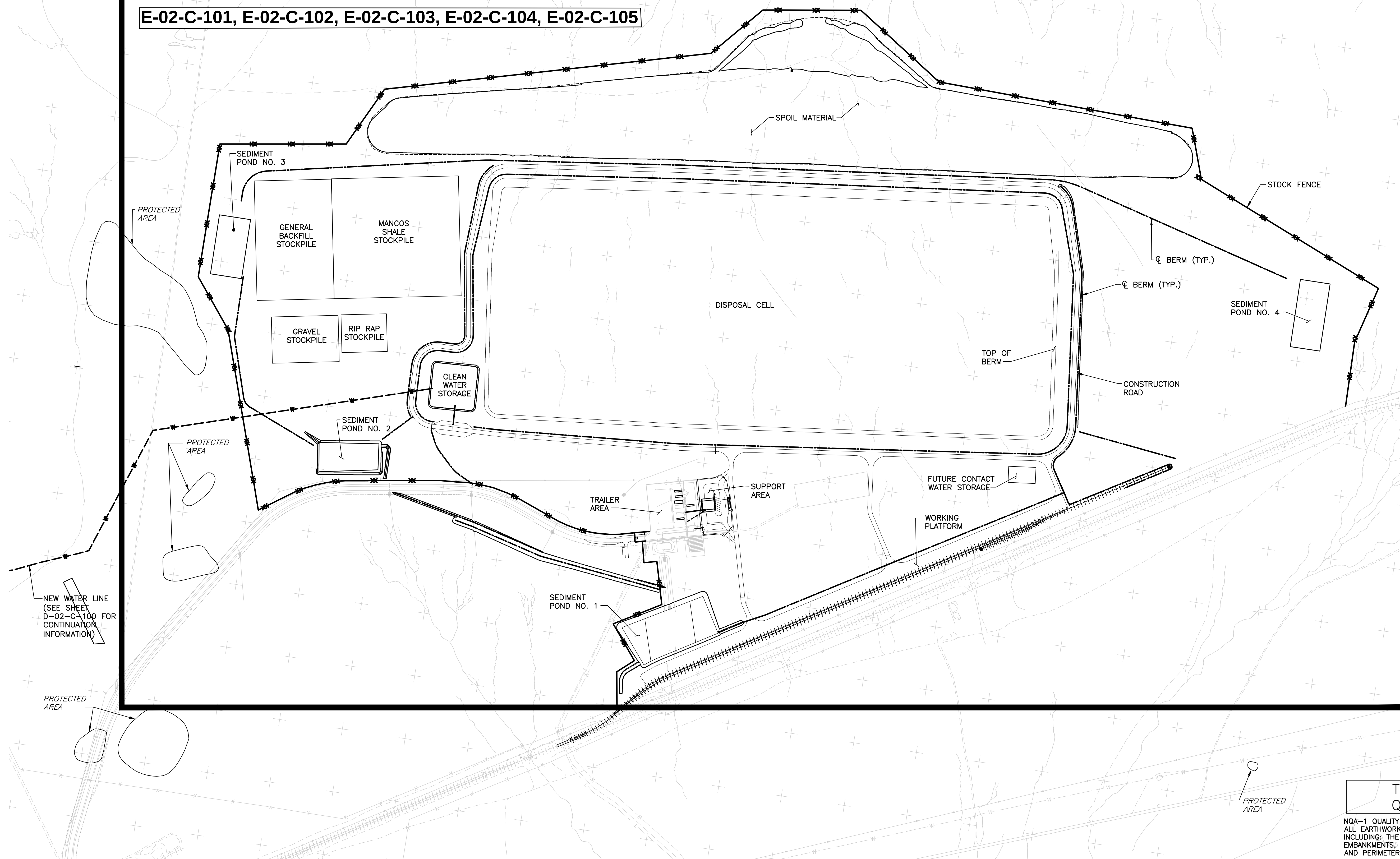
Final Design Drawings

Number	Title
E-02-C-100 R2	Overall Site Plan/Key Plan
E-02-C-101 R2	Overall Cell Layout Plan
E-02-C-102 R3	Overall Cell Grading Plan
E-02-C-103 R3	Overall Cell Top of Waste Plan
E-02-C-104 R5	Overall Cell Cap Plan/Fencing Plan
E-02-C-105 R2	ET Cover Plan
E-02-C-200	Existing Cover Removal
E-02-C-300 R2	Disposal Cell Cross Sections
E-02-C-301 R2	Disposal Cell Cross Sections
E-02-C-500 R3	Details – 1
E-02-C-501 R3	Details – 2

Note: This set of drawings modified and/or replaced the drawings submitted with the Final Remedial Action Plan, Addendum C, July 2008.

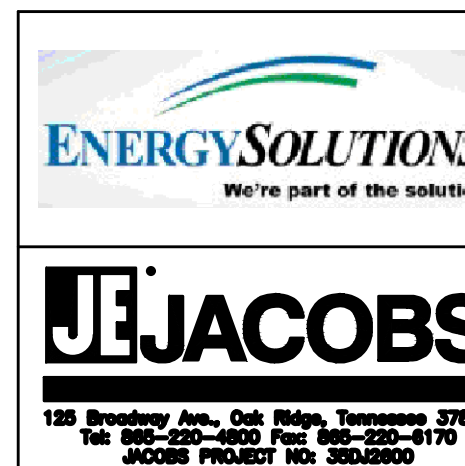
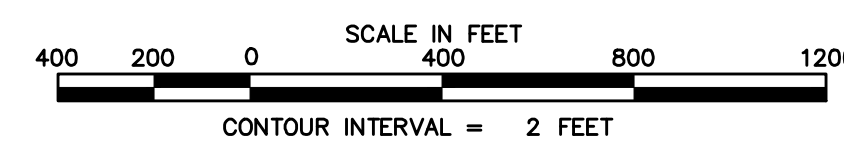


E-02-C-101, E-02-C-102, E-02-C-103, E-02-C-104, E-02-C-105



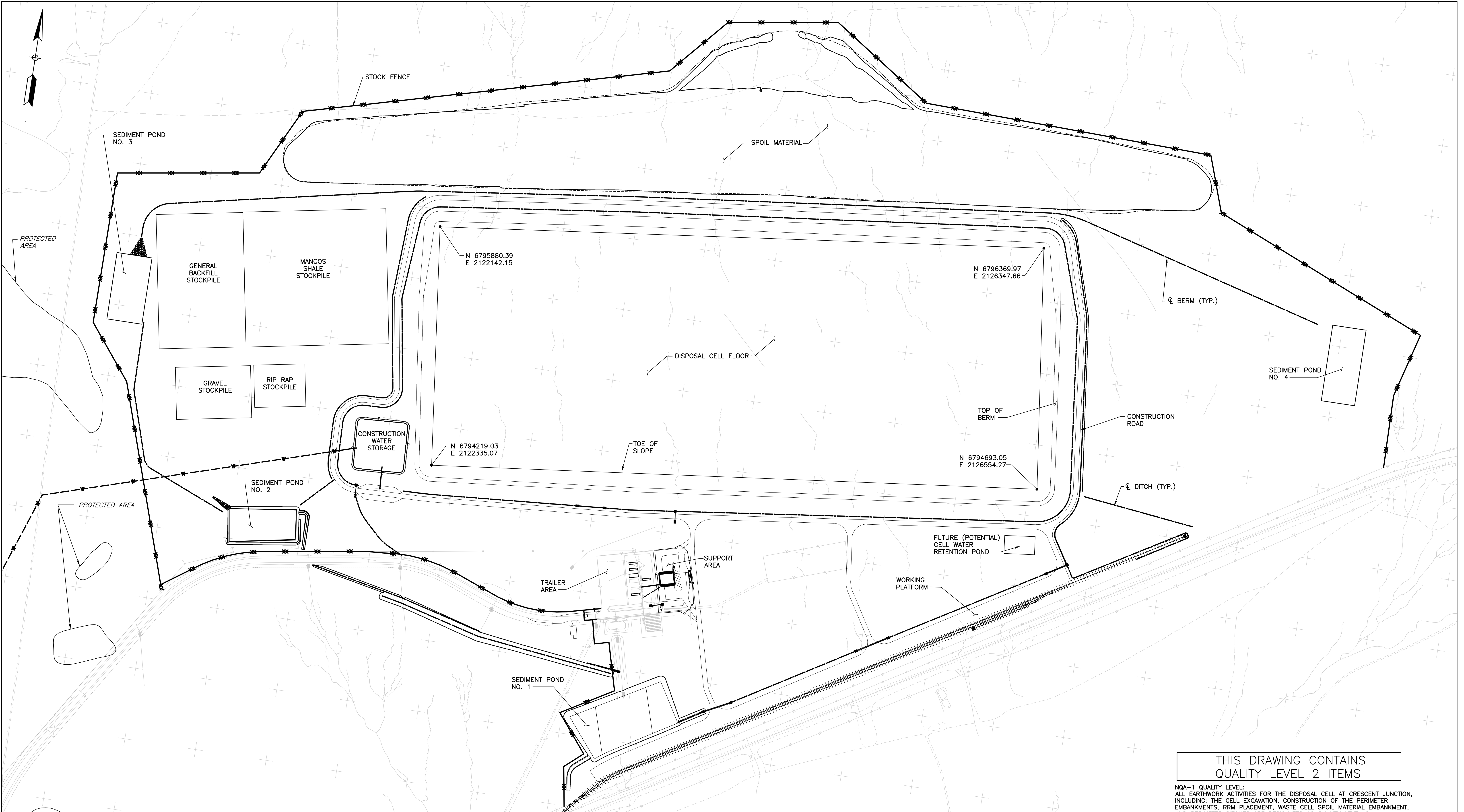
THIS DRAWING CONTAINS
QUALITY LEVEL 2 ITEMS

NOA-1 QUALITY LEVEL:
ALL EARTHWORK ACTIVITIES FOR THE DISPOSAL CELL AT CRESCENT JUNCTION,
INCLUDING: THE CELL EXCAVATION, CONSTRUCTION OF THE PERIMETER
EMBANKMENTS, RRM PLACEMENT, WASTE CELL SPOIL MATERIAL EMBANKMENT,
AND PERIMETER DITCHES ARE DESIGNATED AS QUALITY LEVEL 2.



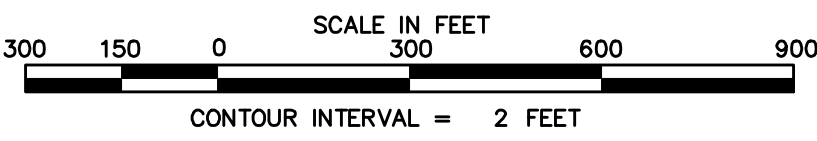
SEAL

1		04/23/08	Added Quality Assurance Level Notes	JGA	FMP		
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REVISION NO.		DATE	DESCRIPTION	DESIGNED BY	CHECKED BY	PROJECT MGR	APPROVAL
U.S. DEPARTMENT OF ENERGY GRAND JUNCTION, COLORADO				Dwyer Engineering, LLC Environmental, Geotechnical, Civil, Structural Engineering			
PROJECT LOCATION		APPROVALS		MOAB UMTRA PROJECT			
RAP DISPOSAL CELL DESIGN		DESIGNED BY	DATE	OVERALL CELL SITE PLAN/KEY PLAN			
REFERENCE		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.		DRAWING NO.		SHEET NO.	
				E-02-C-100		1 OF 1	



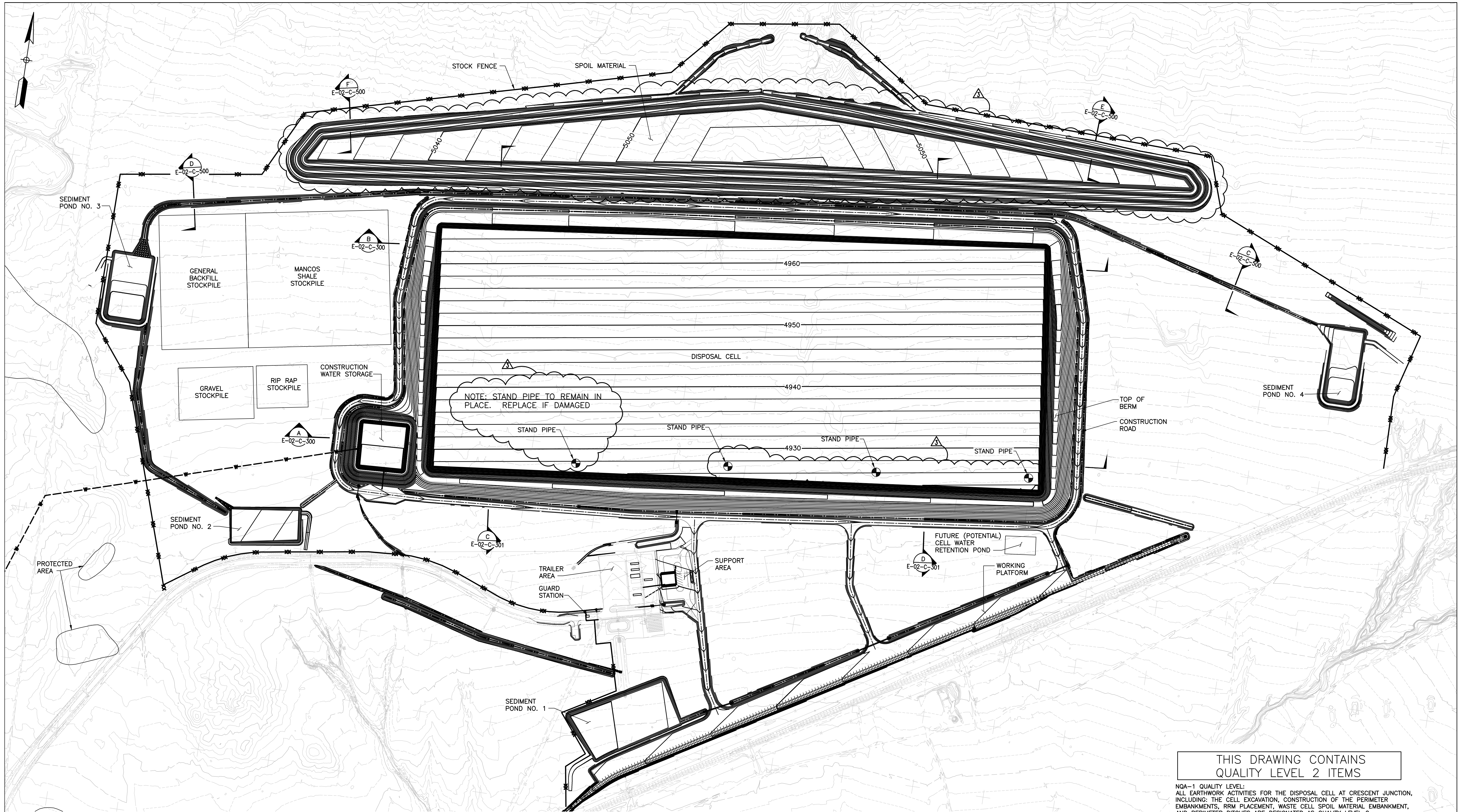
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QUALITY LEVEL 2 ITEMS

NOA-1 QUALITY LEVEL:
ALL EARTHWORK ACTIVITIES FOR THE DISPOSAL CELL AT CRESCENT JUNCTION,
INCLUDING: THE CELL EXCAVATION, CONSTRUCTION OF THE PERIMETER
EMBANKMENTS, RRW PLACEMENT, WASTE CELL SPOIL MATERIAL EMBANKMENT,
AND PERIMETER DITCHES ARE DESIGNATED AS QUALITY LEVEL 2.

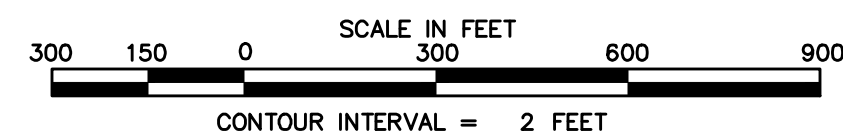


SEAL

1		04/23/08	Added Quality Assurance Level Notes	JGA	FMP		
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REVISION NO.		DATE	DESCRIPTION	DESIGNED BY	CHECKED BY	PROJECT A.S.	PERSONNEL
U.S. DEPARTMENT OF ENERGY				Work Performed by			
GRAND JUNCTION, COLORADO				Dwyer Engineering, LLC			
PROJECT LOCATION				MOAB UMTRA PROJECT			
RRW DISPOSAL CELL DESIGN				OVERALL CELL LAYOUT PLAN			
APPROVALS				PROJECT NO.			
DESIGNED BY		DATE		DRAWING NO.		SHEET	OF
L ENGLAND		12/17/07		E-02-C-101		1	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. ALL DISTURBED AREAS SHALL BE SEEDED, MULCHED, AND RE-VEGETATED BY OTHERS AT APPROPRIATE TIME.

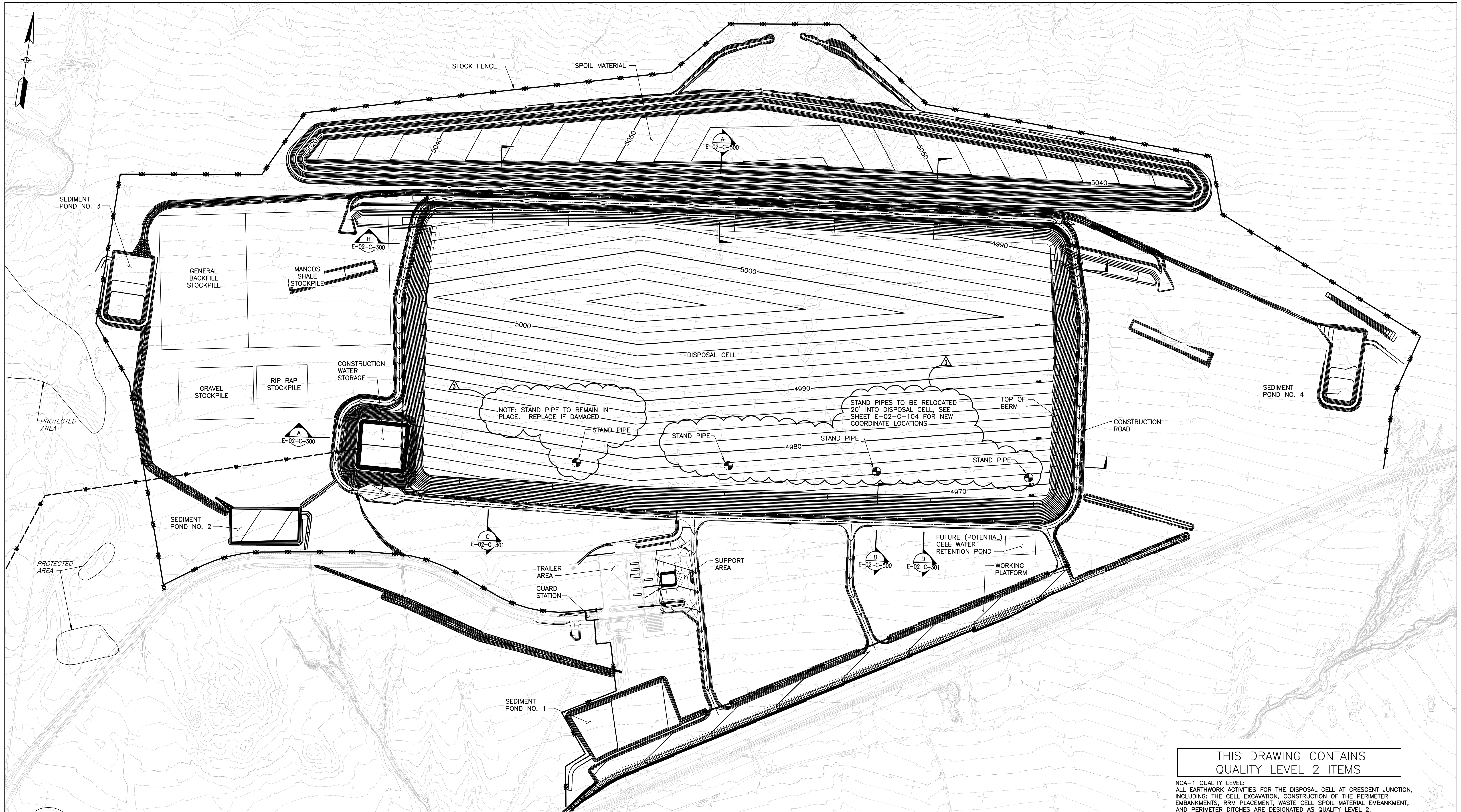


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QUALITY LEVEL 2 ITEMS

NQA-1 QUALITY LEVEL:
ALL EARTHWORK ACTIVITIES FOR THE DISPOSAL CELL AT CRESCENT JUNCTION,
INCLUDING: THE CELL EXCAVATION, CONSTRUCTION OF THE PERIMETER
EMBANKMENTS, RRM PLACEMENT, WASTE CELL SPOIL MATERIAL EMBANKMENT,
AND PERIMETER DITCHES ARE DESIGNATED AS QUALITY LEVEL 2.

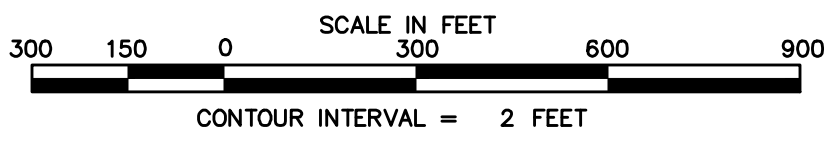
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2	04/23/08	Added Quality Assurance Level Notes	JGA	FMP		
1	02/29/08	Changed monitoring well label to stand pipe	LLE	FMP	FMP	MLO
0	12/17/07	Issued For Construction	LLE	FMP	-	-
REVISION NO. DATE DESCRIPTION			DRAWN BY: CHECKED BY: PROJECT MGR. APPROVAL			
U.S. DEPARTMENT OF ENERGY GRAND JUNCTION, COLORADO			Work Performed by <i>Dwyer Engineering, LLC</i> Environmental, Geotechnical, Civil, Structural Engineering			
PROJECT LOCATION RAP DISPOSAL CELL DESIGN			MOAB UMTA PROJECT OVERALL CELL GRADING PLAN			
APPROVALS			DESIGNED BY L. ENGLAND	12/17/07	DATE	
			DRAWN BY F. PARTON	12/17/07	DATE	
			CHECKED BY W. BARTON	12/17/07	DATE	
			APPROVED BY F. PARTON	12/17/07	DATE	
			PROJECT MANAGER M. OAKS	12/17/07	DATE	
			DESIGNED BY D. SMITH	12/17/07	DATE	
			PROJECT NO.	E-02-C-102		
			REV.	1	OF	1

SEAL



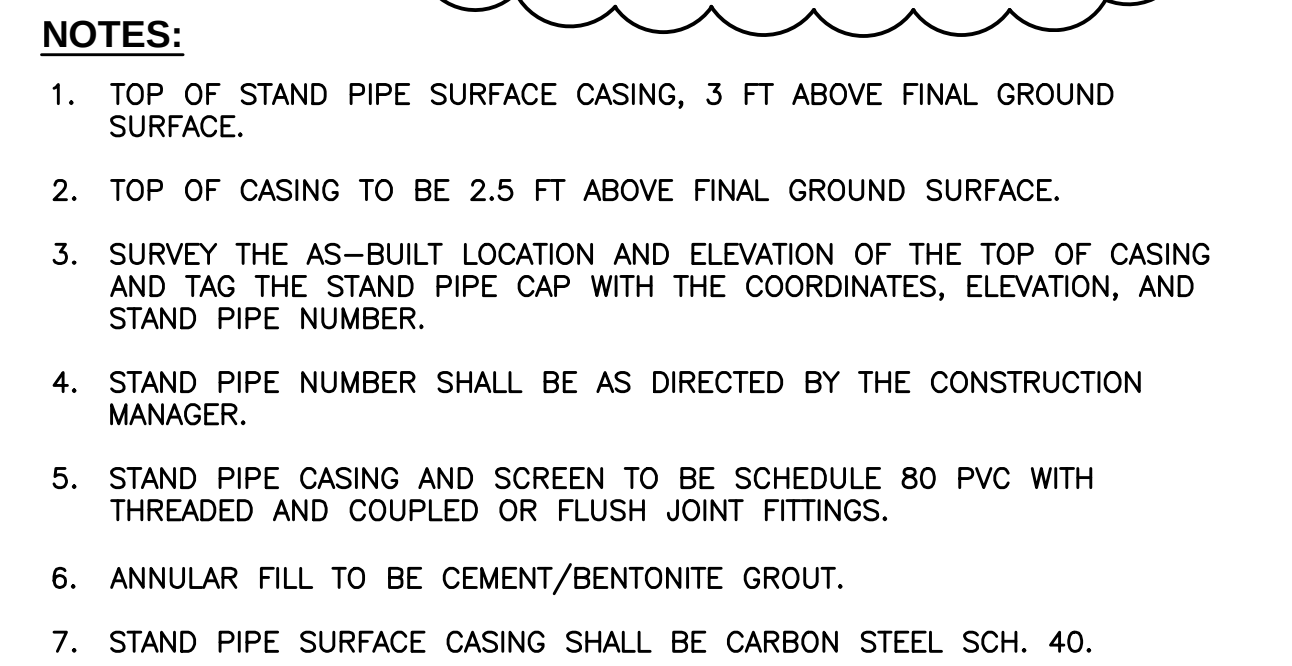
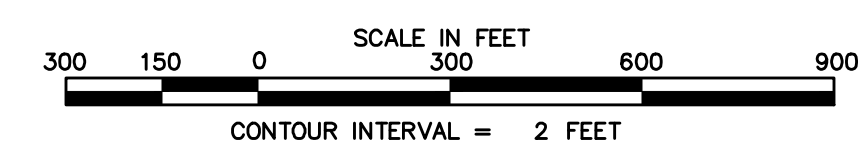
THIS DRAWING CONTAINS
QUALITY LEVEL 2 ITEMS

NOA-1 QUALITY LEVEL:
ALL EARTHWORK ACTIVITIES FOR THE DISPOSAL CELL AT CRESCENT JUNCTION,
INCLUDING: THE CELL EXCAVATION, CONSTRUCTION OF THE PERIMETER
EMBANKMENTS, RRM PLACEMENT, WASTE CELL SPOIL MATERIAL EMBANKMENT,
AND PERIMETER DITCHES ARE DESIGNATED AS QUALITY LEVEL 2.



SEAL

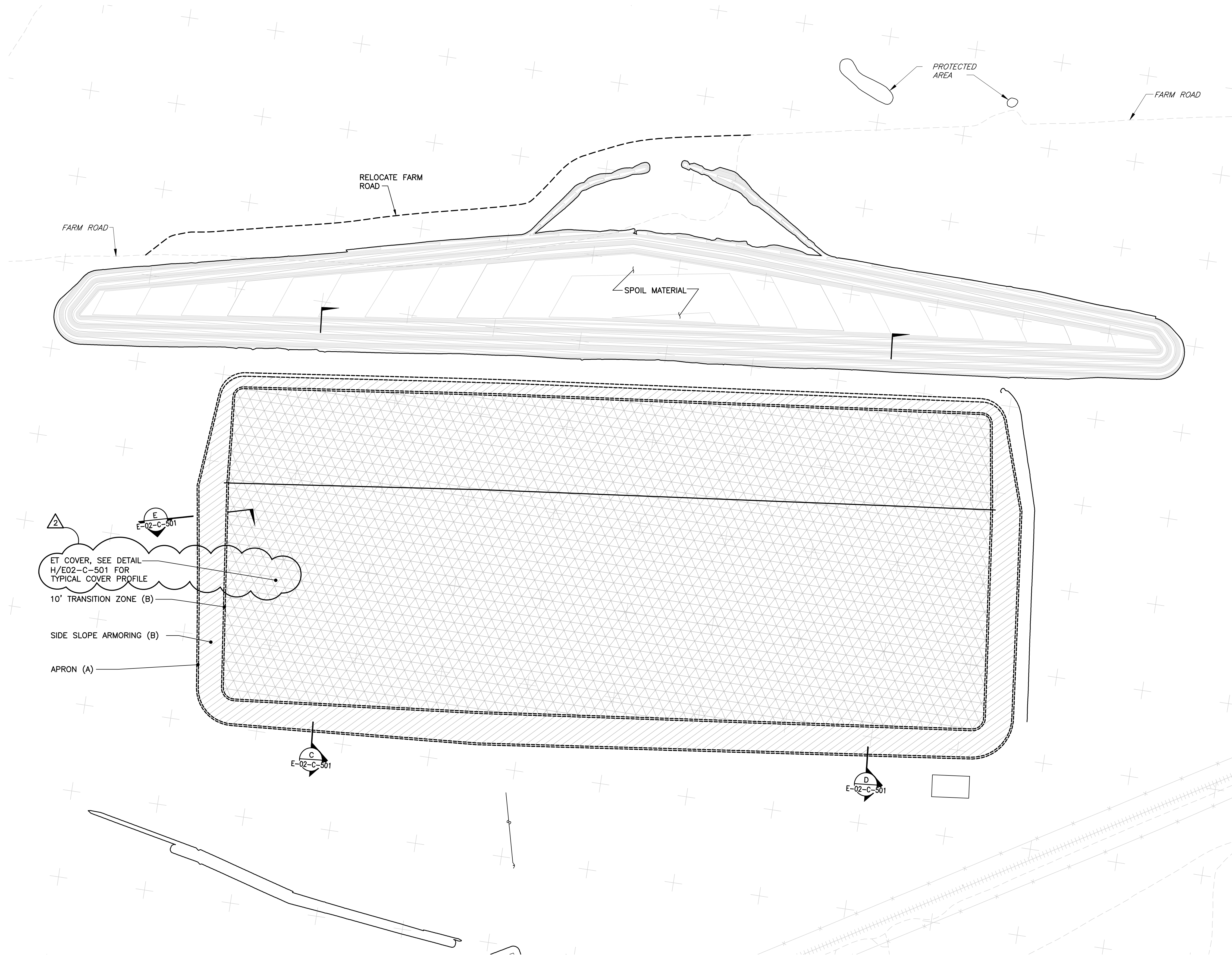
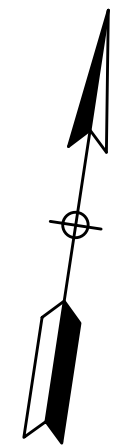
3	01/05/24	ET COVER	MWM	SFD	SFD	
2	04/23/08	Added Quality Assurance Level Notes	JGA	FMP		
1	02/29/08	Changed monitoring well label to stand pipe	LLE	FMP	FMP	MLO
0	12/17/07	Issued For Construction	LLE	FMP	-	-
REVISION NO. DATE DESCRIPTION			DESIGNED BY CHECKED BY PROJECT MGR. APPROVAL			
U.S. DEPARTMENT OF ENERGY GRAND JUNCTION, COLORADO			Work Performed by <i>Dwyer Engineering, LLC</i> Environmental, Geotechnical, Civil, Structural Engineering			
PROJECT LOCATION RAP DISPOSAL CELL DESIGN			MOAB UMTRA PROJECT			
APPROVALS			OVERALL CELL TOP OF WASTE PLAN			
DESIGNED BY L. ENGLAND			12/17/07		PROJECT NO.	
CHECKED BY F. PARTON			12/17/07		DRAWING NO.	
APPROVED BY W. BARTON			12/17/07		E-02-C-103	
PROJECT MANAGER F. PARTON			12/17/07		SHEET	
DESIGNED BY M. OAKS			12/17/07		1	
CHECKED BY D. SMITH			12/17/07		OF	
					1	



THIS DRAWING CONTAINS
QUALITY LEVEL 2 ITEMS

NQA-1 QUALITY LEVEL:
ALL EARTHWORK ACTIVITIES FOR THE DISPOSAL CELL AT CRESCENT JUNCTION, INCLUDING:
THE CELL EXCAVATION, CONSTRUCTION OF THE PERIMETER EMBANKMENTS, RM PLACEMENT,
WASTE CELL SPOIL MATERIAL EMBANKMENT, AND PERIMETER DITCHES ARE DESIGNATED AS
QUALITY LEVEL 2.

5	01/05/24	ET COVER		MWM	SFD	SFD	
4	07/09/08	Draft Changes Due to Replacement of UMTRA Cap		JGA	FMP		
3	04/24/08	Added Quality Assurance Level Notes		LLE	FMP	-	M OAKS
0	12/17/07	Issued For Construction		LLE	FMP	-	-
REVISION NO.	DATE	DESCRIPTION		DRAWN BY	CHECKED BY	PROJECT A/E	APPROVAL
U.S. DEPARTMENT OF ENERGY GRAND JUNCTION, COLORADO				Work Performed by Dwyer Engineering, LLC Environmental, Geotechnical, Civil, Structural Engineering			
PROJECT LOCATION			APPROVALS		MOAB UMTRA PROJECT		
RAP DISPOSAL CELL DESIGN			DRAWN BY:	DATE:	OVERALL CELL CAP PLAN		
			L. ENGLAND	12/17/07			
			ENGINEER:				
			F. PARTON	12/17/07			
			PROJECT LEAD:				
REFERENCE:			W. BARTON	12/17/07			
			APPROVED BY:				
			F. PARTON	12/17/07			
			PROJECT MANAGER:				
			M. OAKS	12/17/07			
			DATE DRAWN:	PROJECT NO.:			
			D. SMITH	12/17/07	DRAWING NO.:	E-02-C-104	
						SHT.	OF
						1	1



2
ET COVER, SEE DETAIL
H/E02-C-501 FOR
TYPICAL COVER PROFILE
10' TRANSITION ZONE (B)
SIDE SLOPE ARMORING (B)
APRON (A)

C
E-02-C-501

D
E-02-C-501

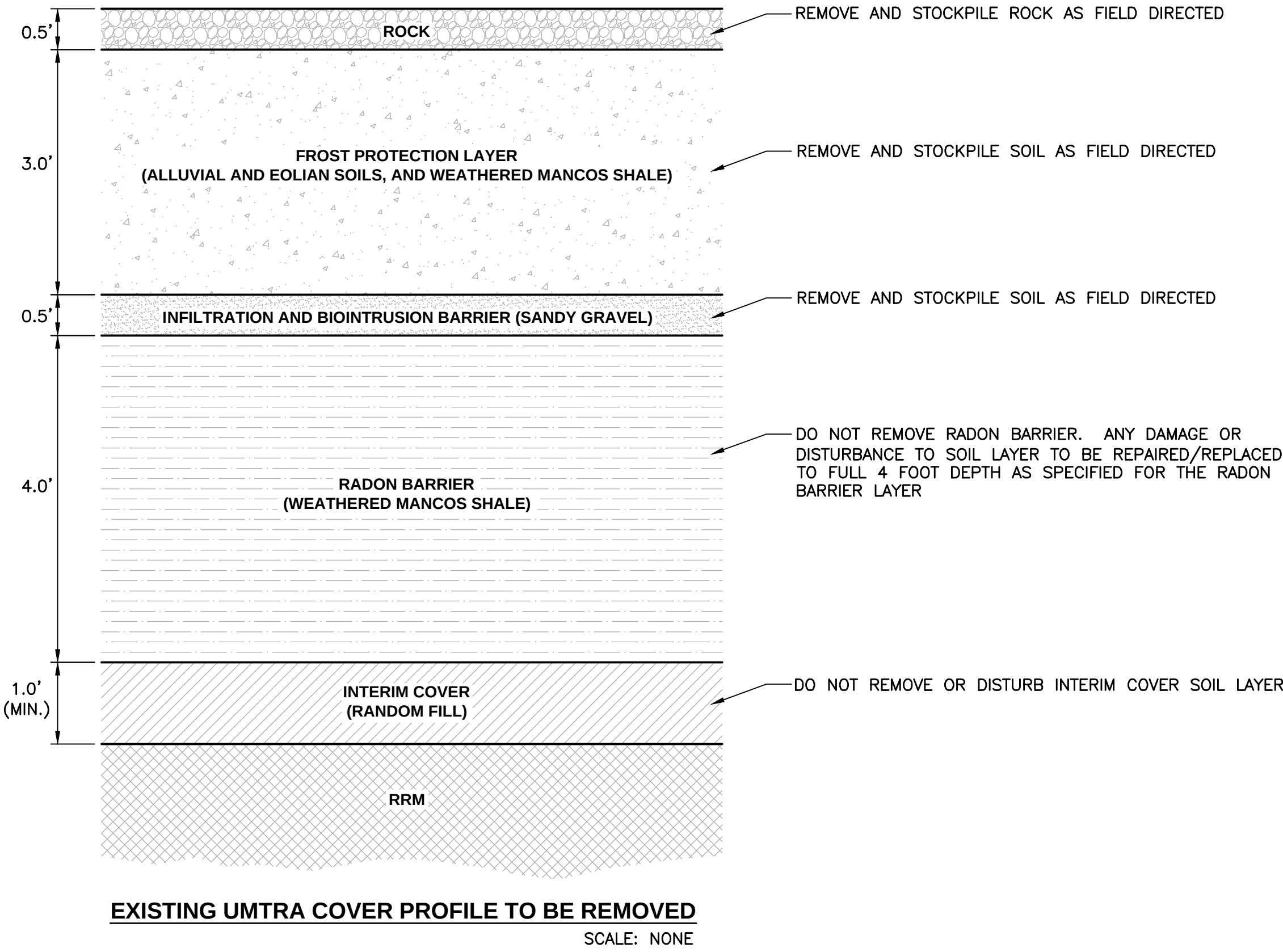
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SCALE IN FEET
CONTOUR INTERVAL = 2 FEET

THIS DRAWING CONTAINS
QUALITY LEVEL 2 ITEMS

NQA-1 QUALITY LEVEL:
ALL EARTHWORK ACTIVITIES FOR THE DISPOSAL CELL AT CRESCENT JUNCTION,
INCLUDING: THE CELL EXCAVATION, CONSTRUCTION OF THE PERIMETER
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2	01/05/24	ET COVER		MWM	SFD	SFD		
1	04/23/08	Added Quality Assurance Level Notes		JGA	FMP			
0	12/17/07	Issued For Construction		LLE	FMP	-	-	-
REVISION NO.	DATE	DESCRIPTION		DRAWN BY	CHECKED BY	PROJECT A/E	APPROVAL	
U.S. DEPARTMENT OF ENERGY				Work Performed by				
GRAND JUNCTION, COLORADO				 <i>Dwyer Engineering, LLC</i> Environmental, Geotechnical, Civil, Structural Engineering				
PROJECT LOCATION			APPROVALS		DATE			
RAP DISPOSAL CELL DESIGN			L. ENGLAND		12/17/07			
			F. PARTON		12/17/07			
			DISPOSING LEAD		12/17/07			
			W. BARTON		12/17/07			
REFERENCE			APPROVED BY:		12/17/07			
			F. PARTON		12/17/07			
			PROJECT MANAGER		12/17/07			
			M. OAKS		12/17/07			
			D. MANAGER		12/17/07			
			D. SMITH		12/17/07			
PROJECT NO.					SHT.			
DRAWING NO.					OF			
E-02-C-105					1 1			

SEAL

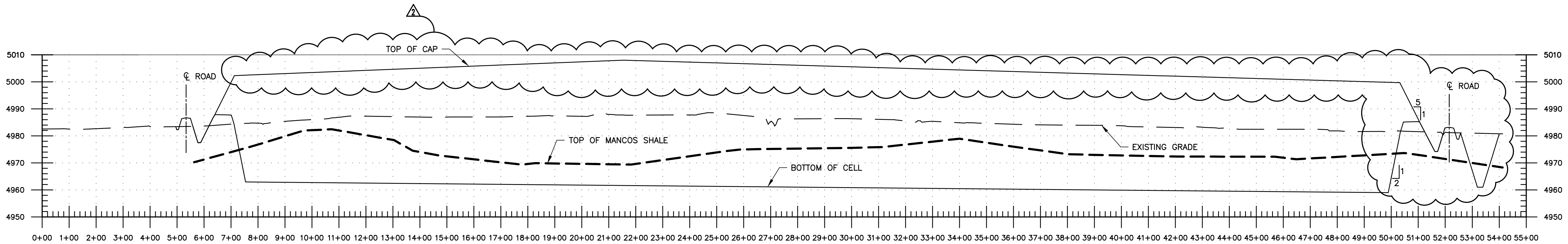


NOTE:
THIS AERIAL PHOTOGRAPH IS OUTDATED DUE TO ONGOING WORK. THE INTENT OF THIS DRAWING IS TO DESCRIBE THAT THE OLDER UMTRA COVER PROFILE MATERIALS INSTALLED ABOVE RADON BARRIER SHALL BE REMOVED AND MATERIAL STOCKPILED FOR SUBSEQUENT DEPLOYMENT WITH THE REVISED ET COVER PROFILE. THE INTERIM COVER AND RADON BARRIER LAYERS PREVIOUSLY INSTALLED WILL BE LEFT IN PLACE. THE REMAINDER OF THE ET COVER PROFILE WILL THEN BE INSTALLED ABOVE THE RADON BARRIER LEFT IN PLACE. AREAS THAT HAVE NOT YET HAD THE COVER INSTALLED OR ONLY PART OF THE INTERIM COVER AND RADON BARRIER SHALL BE BUILT WITH THE NEW ET COVER PROFILE.

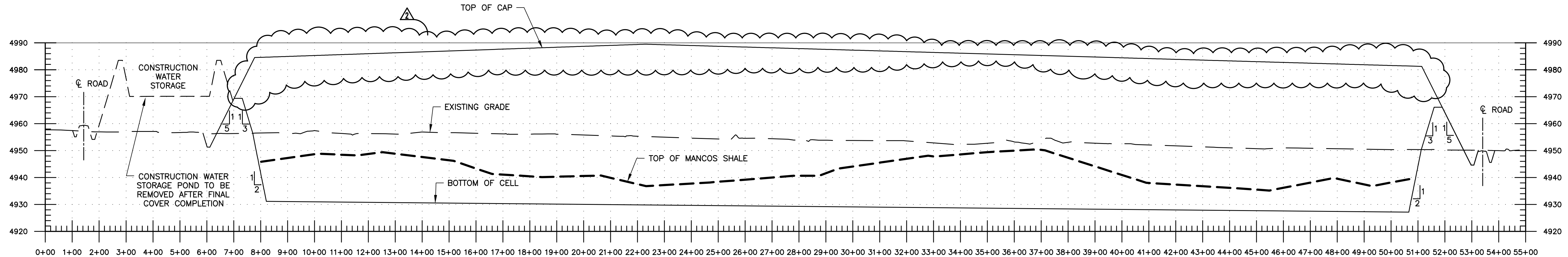
THIS DRAWING CONTAINS
QUALITY LEVEL 2 ITEMS

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ALL EARTHWORK ACTIVITIES FOR THE DISPOSAL CELL AT CRESCENT JUNCTION, INCLUDING: THE CELL EXCAVATION, CONSTRUCTION OF THE PERIMETER EMBANKMENTS, RRM PLACEMENT, WASTE CELL SPOIL MATERIAL EMBANKMENT, AND PERIMETER DITCHES ARE DESIGNATED AS QUALITY LEVEL 2.

SEAL	1	01/05/24	ET COVER	MWM	SFD	SFD	
	REVISION NO.	DATE	DESCRIPTION	DRAWN BY	CHECKED BY	PROJECT MGR	APPROVAL
	U.S. DEPARTMENT OF ENERGY			Dwyer Engineering, LLC			
	GRAND JUNCTION, COLORADO			Environmental, Geotechnical, Civil, Structural Engineering			
	PROJECT LOCATION			Work Performed by			
RAP DISPOSAL CELL DESIGN			APPROVALS	DATE	MOAB UMTRA PROJECT		
			DRAWN BY: M. MEANS	12/18/23	EXISTING COVER REMOVAL		
			CHECKED BY: S. DWYER	12/18/23			
			DISCIPLINE LEAD				
			APPROVED BY:				
			PROJECT MANAGER		PROJECT NO.		
			QA MANAGER		SHEET 1 OF 1		
			DRAWING NO. E-02-C-200				



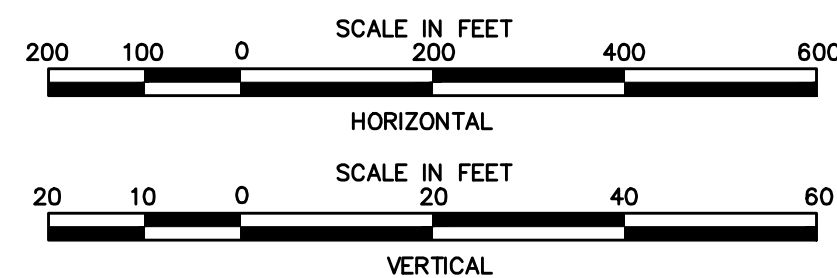
B SECTION
SCALE: HORIZONTAL 1"=200'
VERTICAL 1"=20'



A SECTION
SCALE: HORIZONTAL 1"=200'
VERTICAL 1"=20'

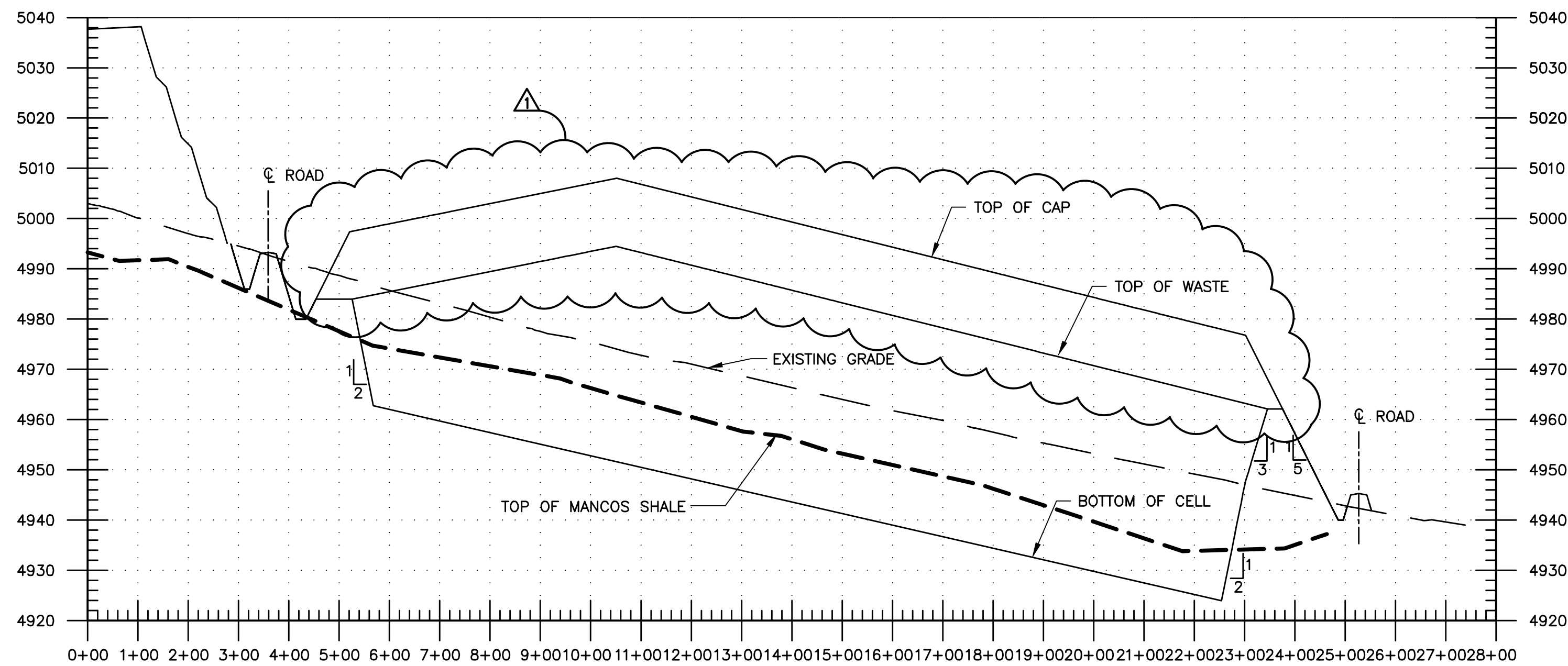
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WASTE CELL SPOIL MATERIAL EMBANKMENT, AND PERIMETER DITCHES ARE DESIGNATED AS
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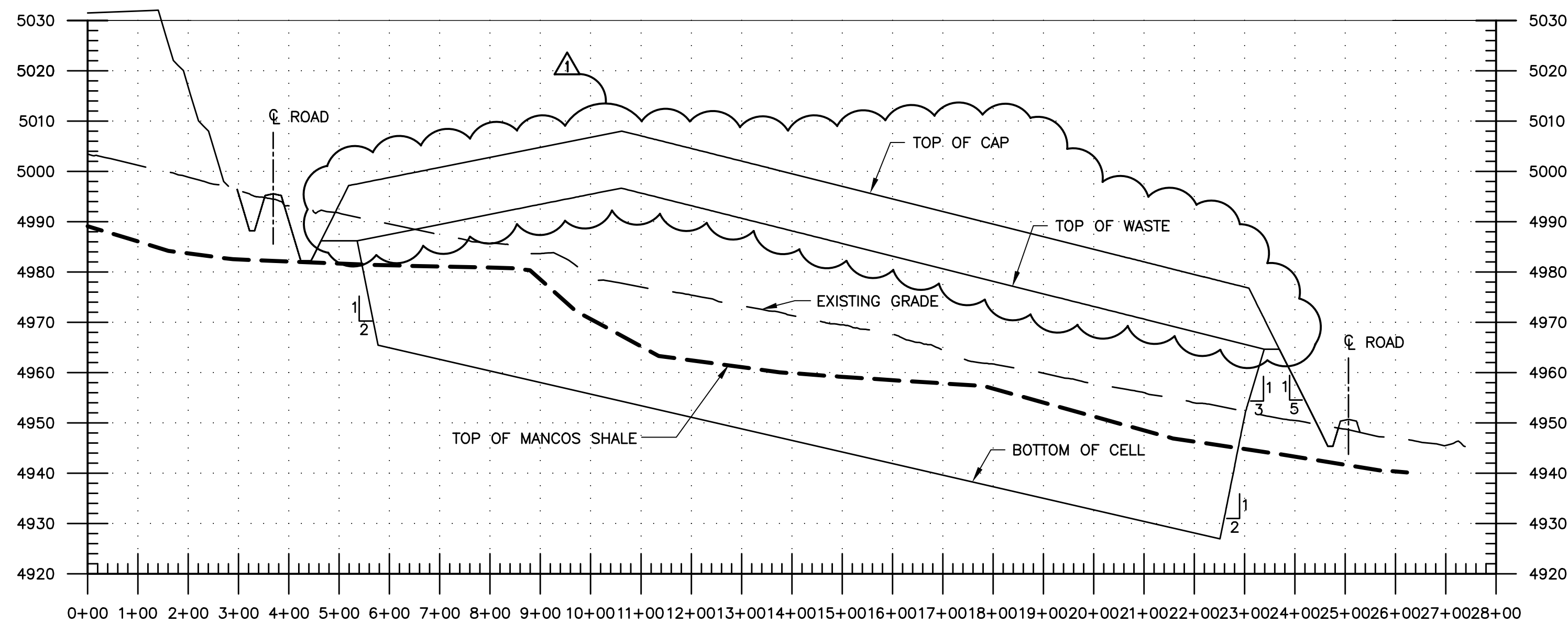


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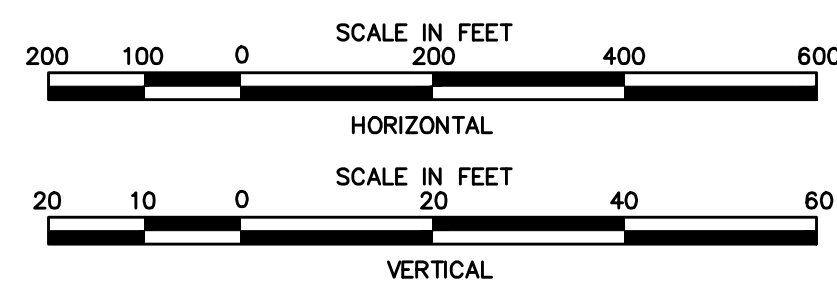
U.S. DEPARTMENT OF ENERGY				Dwyer Engineering, LLC			
GRAND JUNCTION, COLORADO				Environmental, Geotechnical, Civil, Structural Engineering			
PROJECT LOCATION				MOAB UMTRA PROJECT			
RAP DISPOSAL CELL DESIGN				DISPOSAL CELL CROSS SECTIONS			
APPROVALS				PROJECT NO.			
DESIGNED BY				DRAWING NO.			
L ENGLAND				E-02-C-300			
F PARTON				1			
W BARTON				1			
F PARTON				1			
M OAKS				1			
D SMITH				1			



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



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

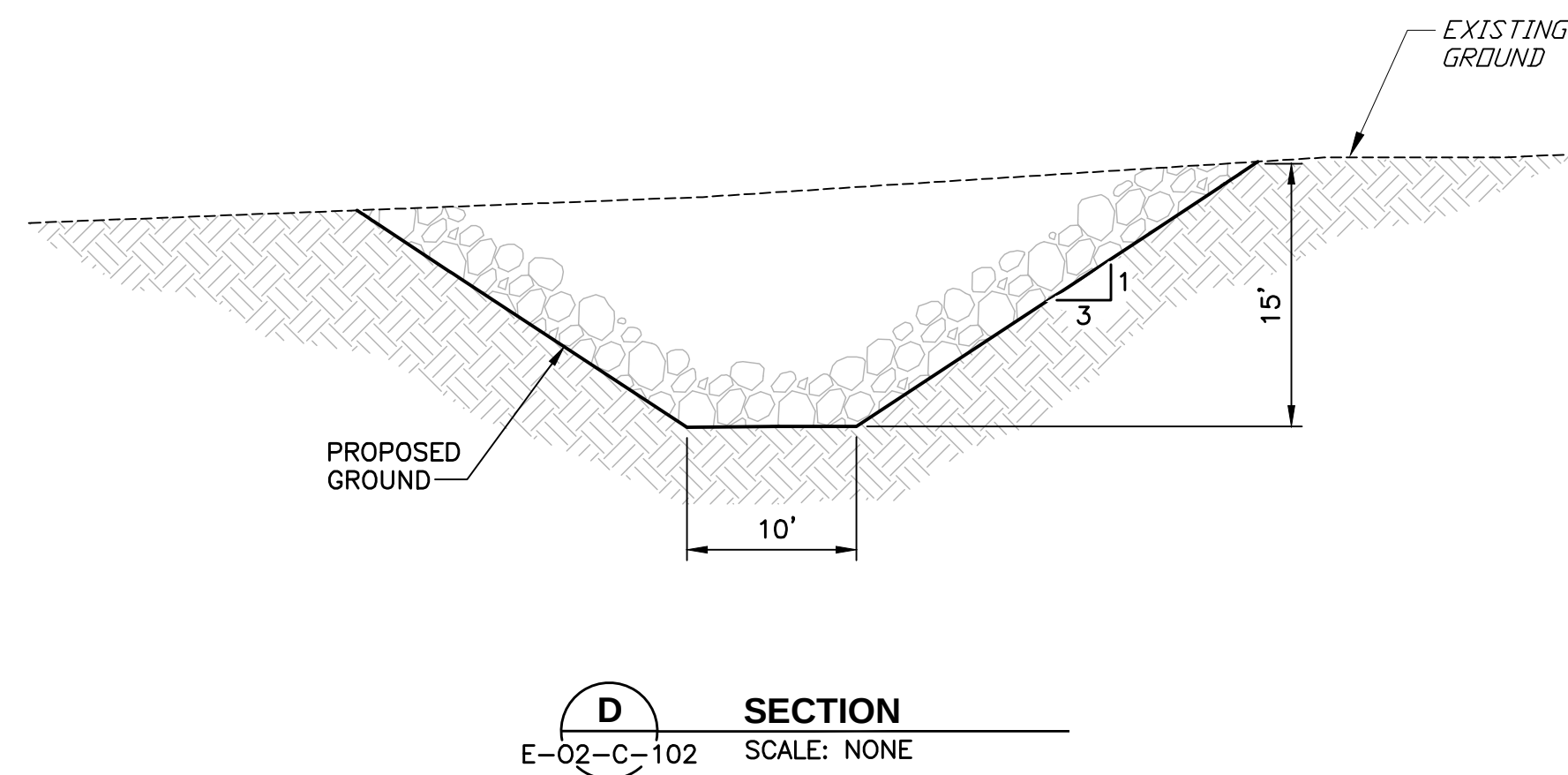
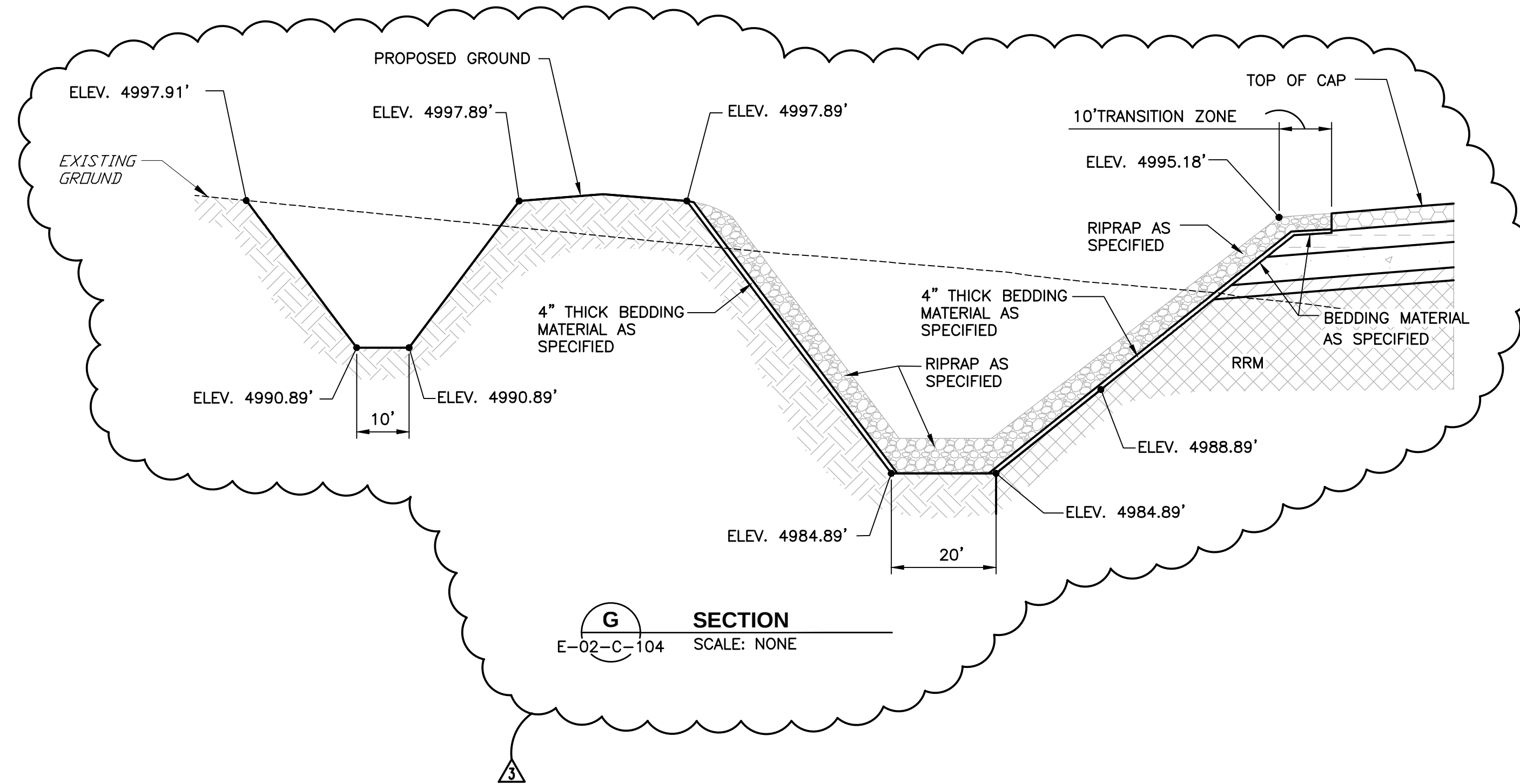
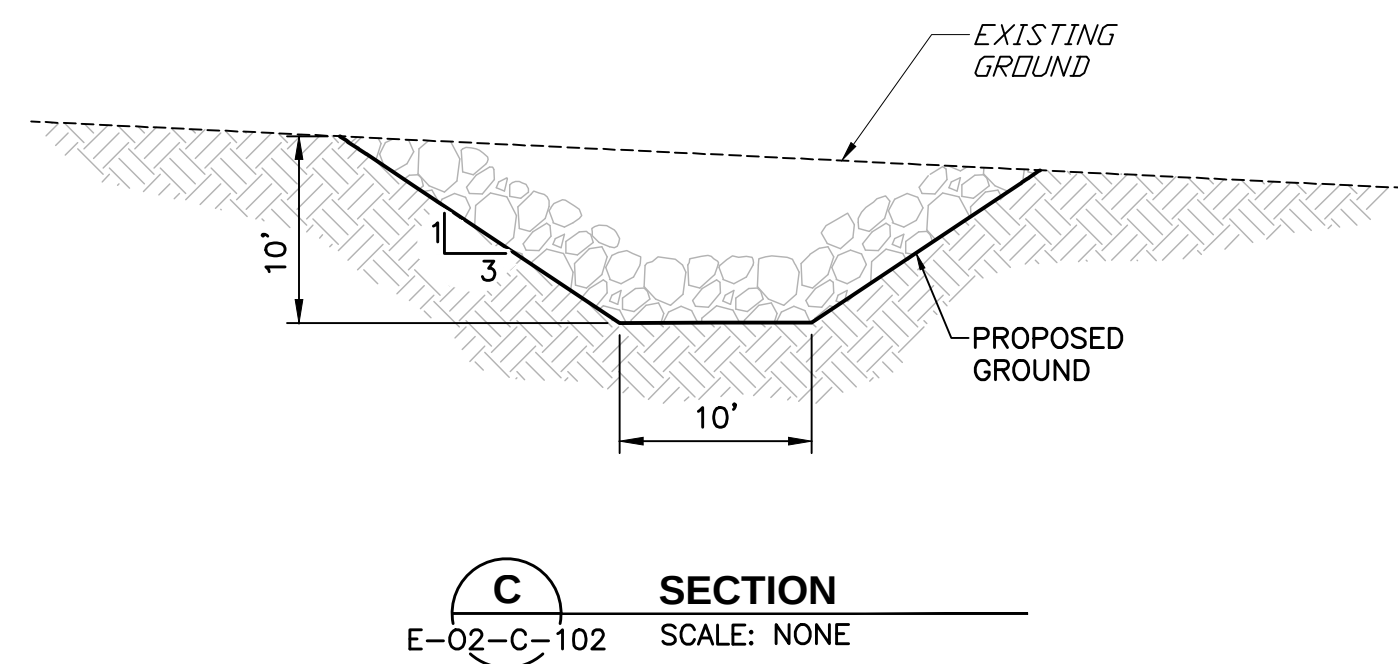
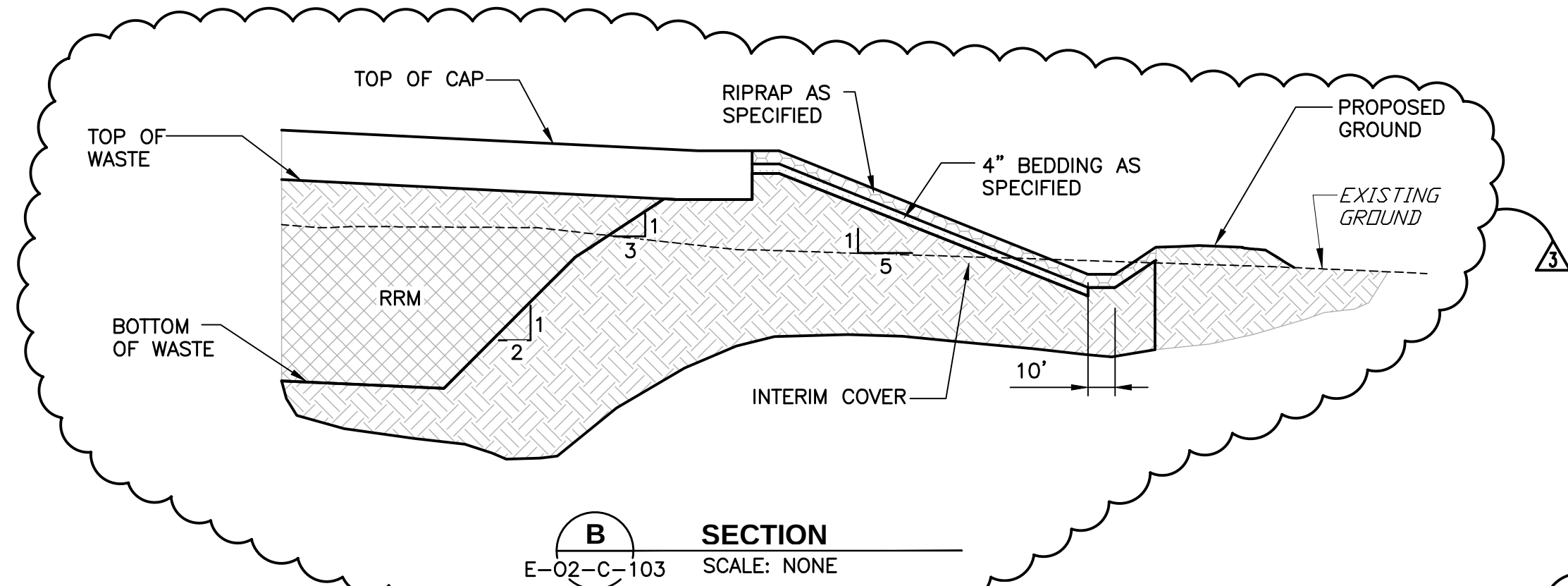
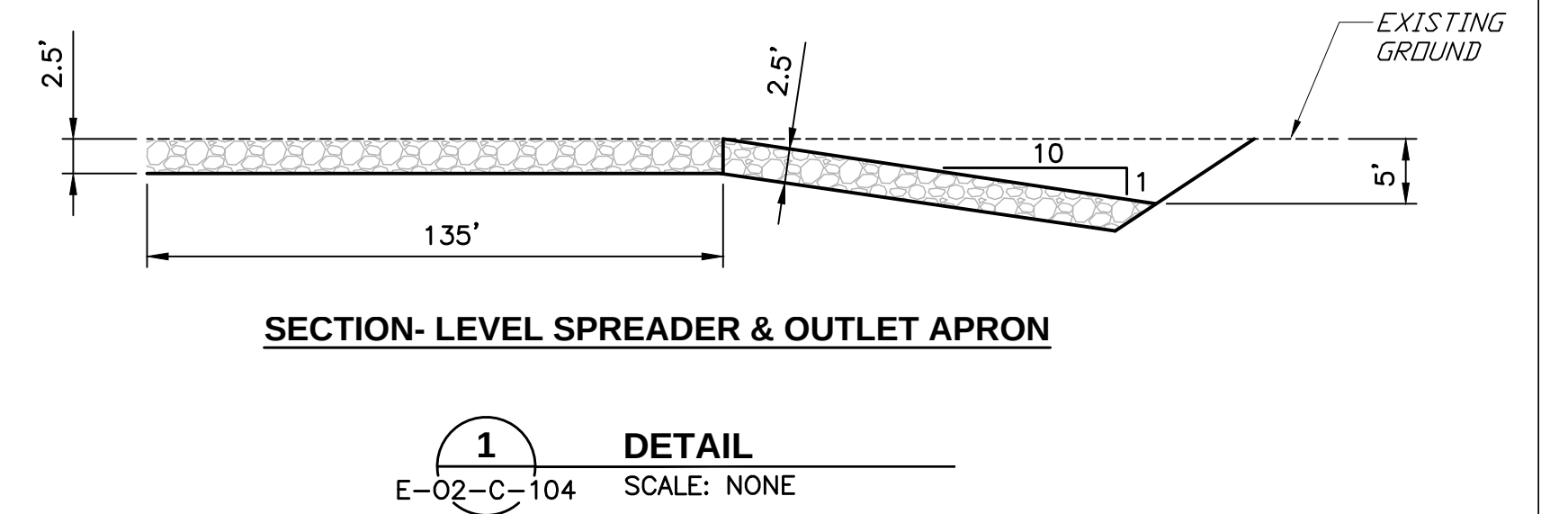
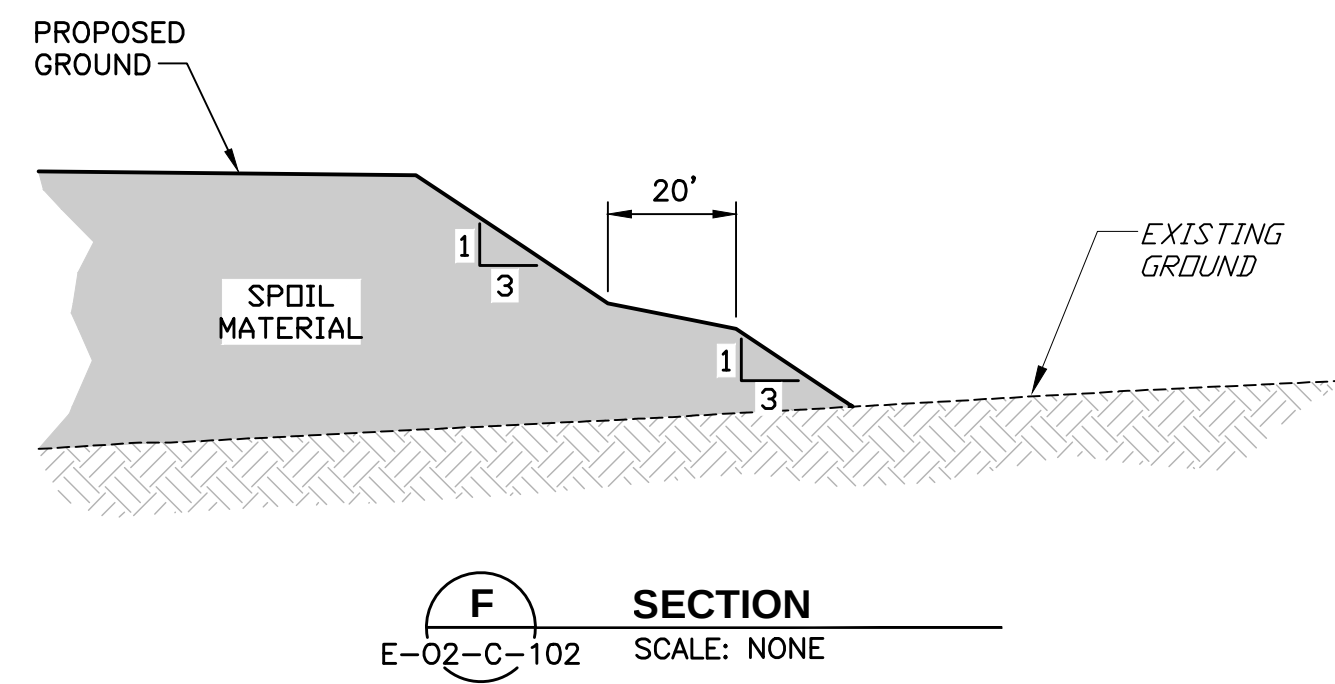
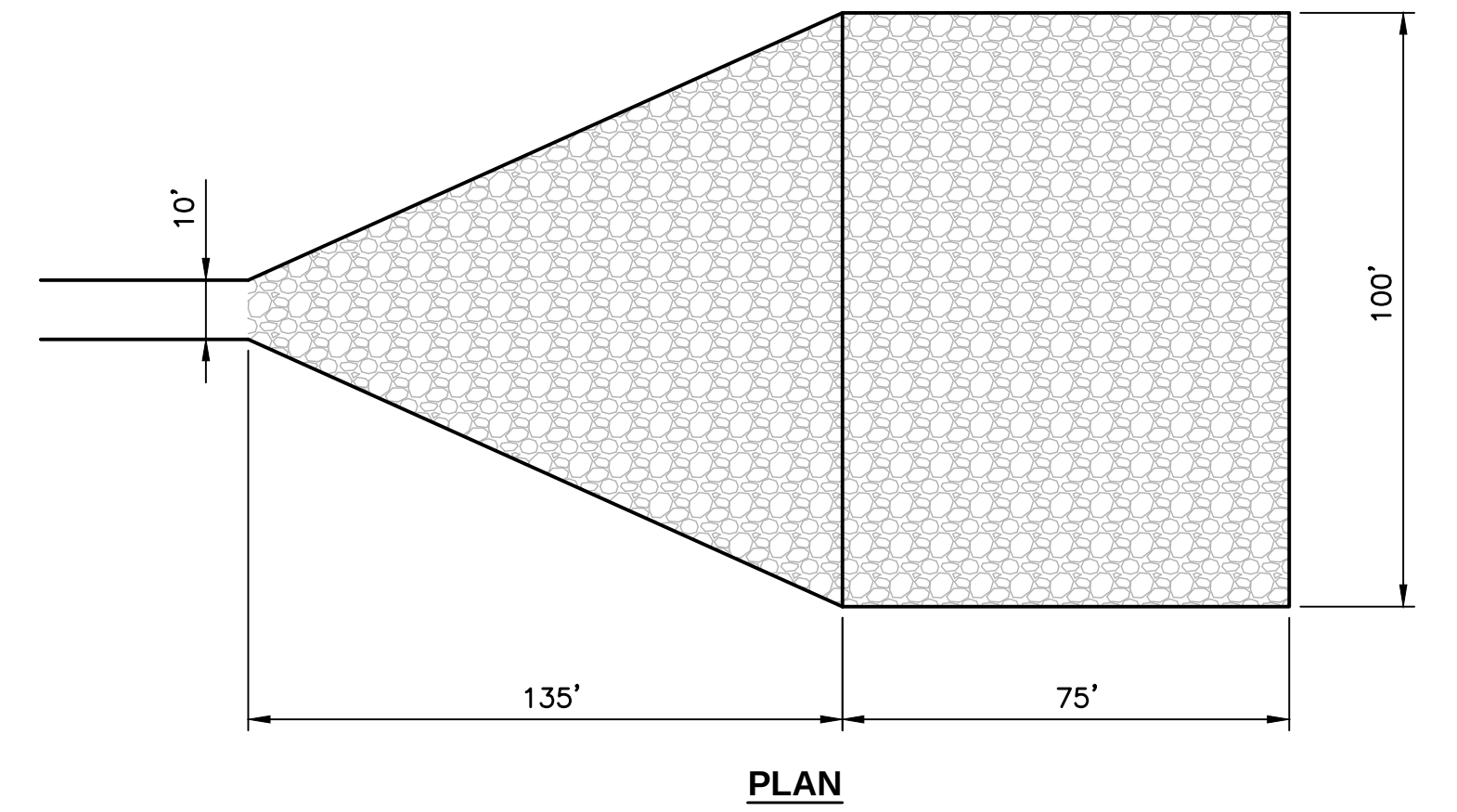
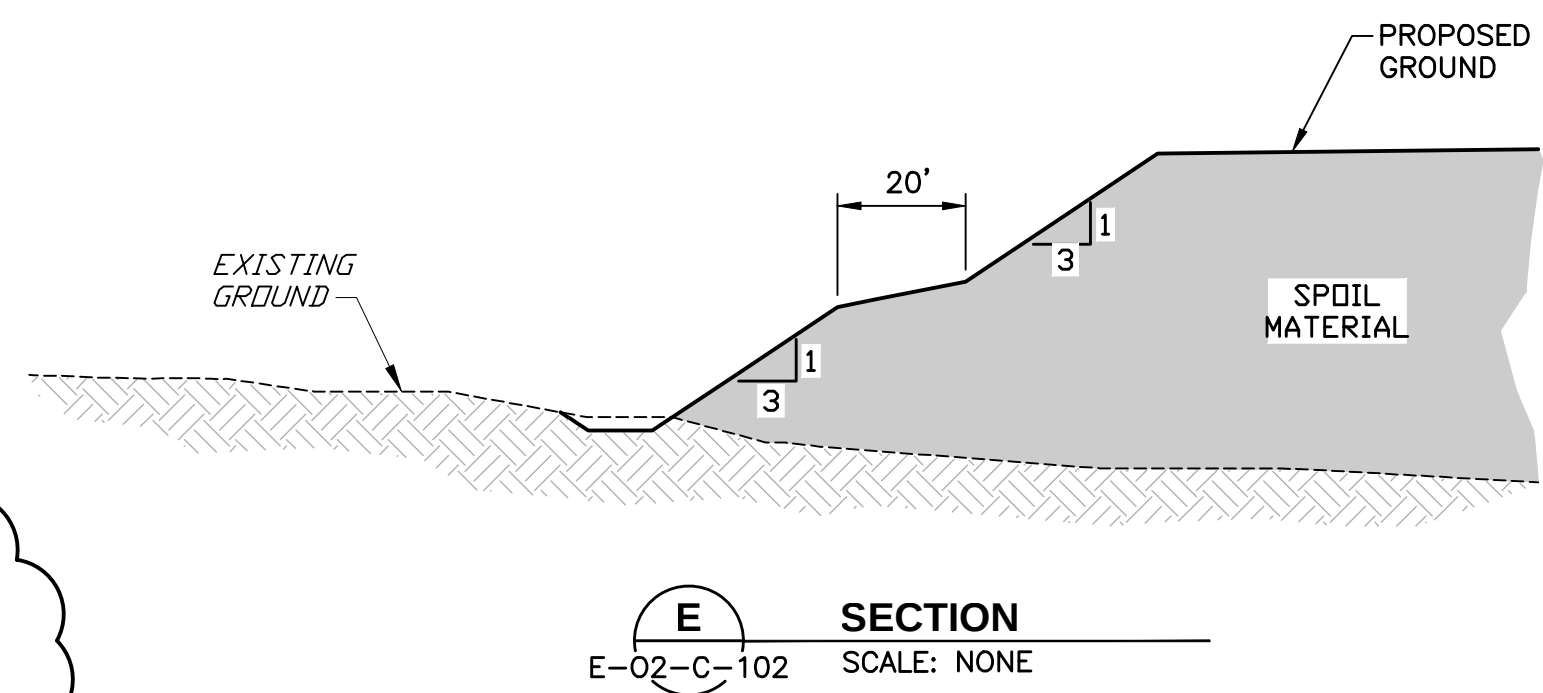
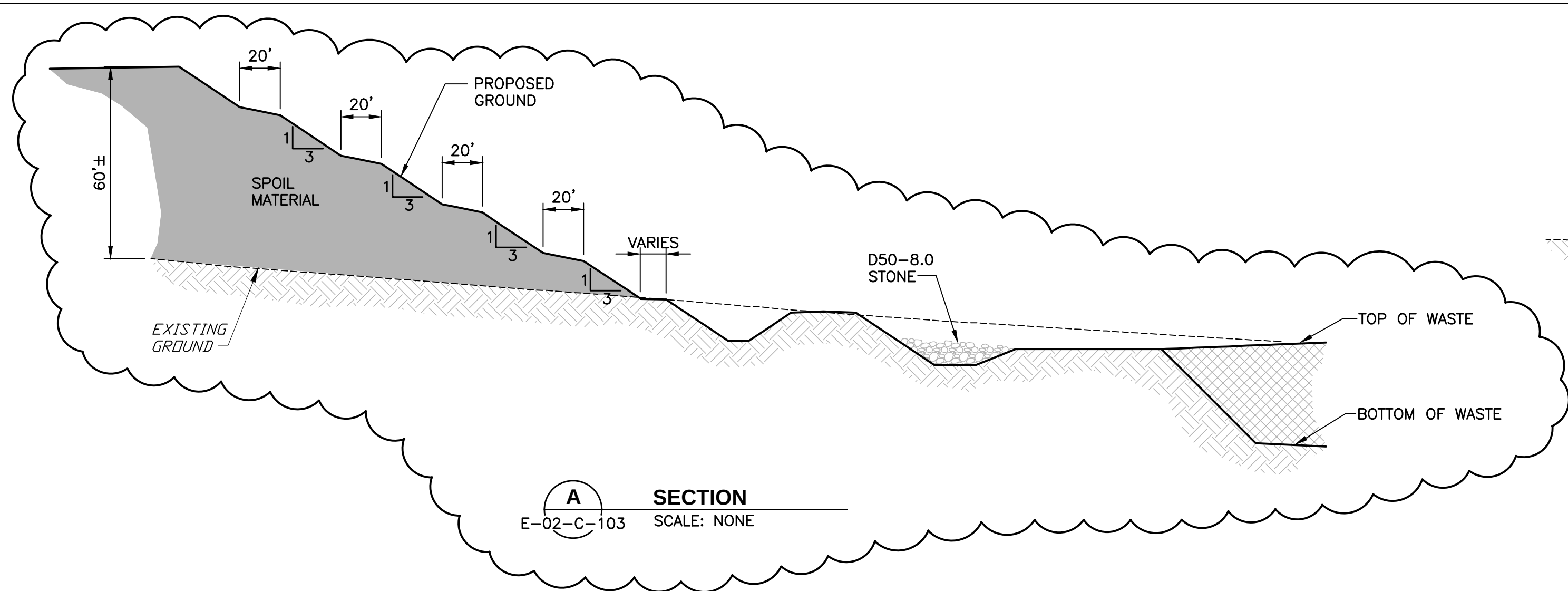


SEAL

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QUALITY LEVEL 2 ITEMS

NQA-1 QUALITY LEVEL:
ALL EARTHWORK ACTIVITIES FOR THE DISPOSAL CELL AT CRESCENT JUNCTION, INCLUDING:
THE CELL EXCAVATION, CONSTRUCTION OF THE PERIMETER EMBANKMENTS, RRM PLACEMENT,
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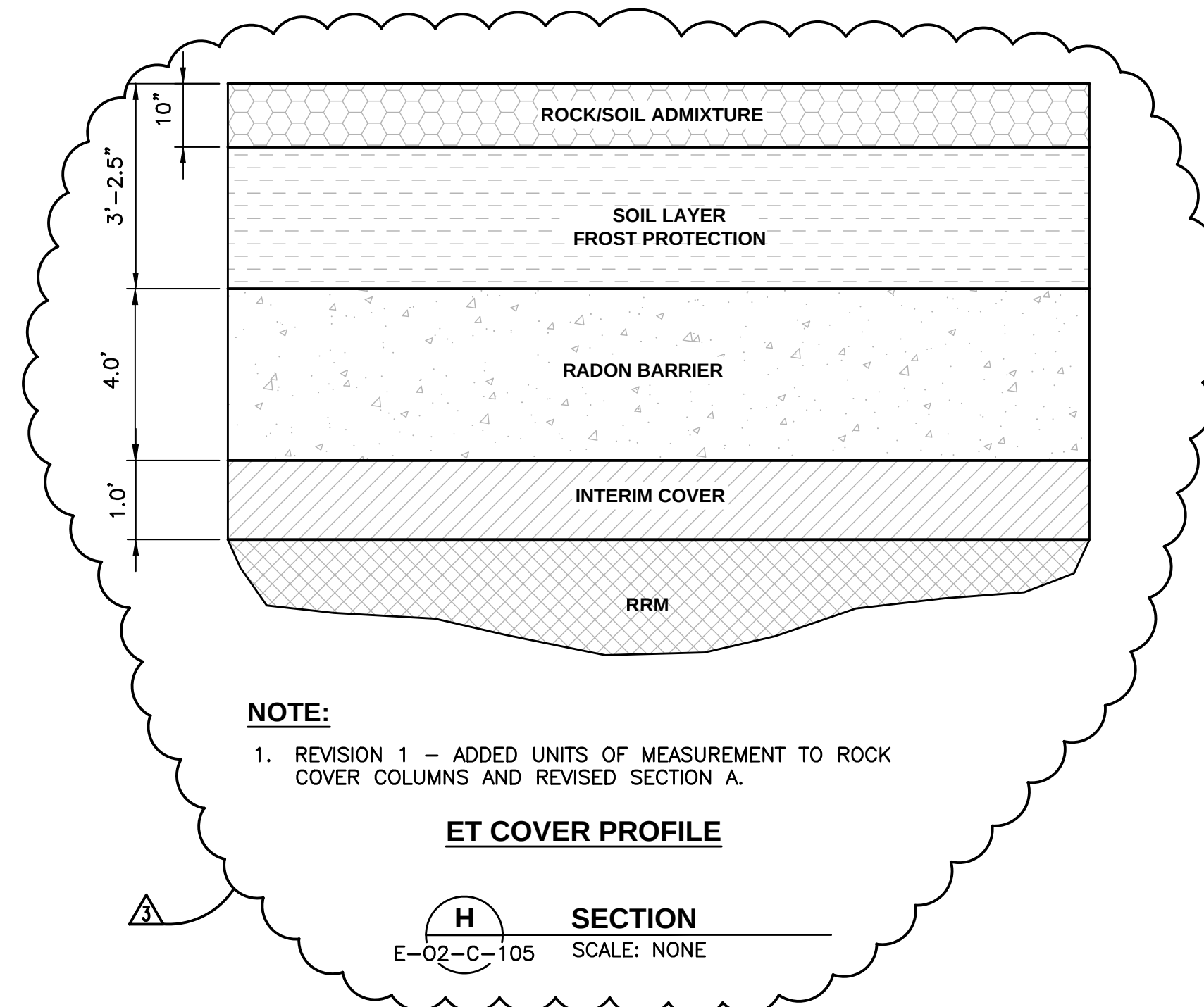
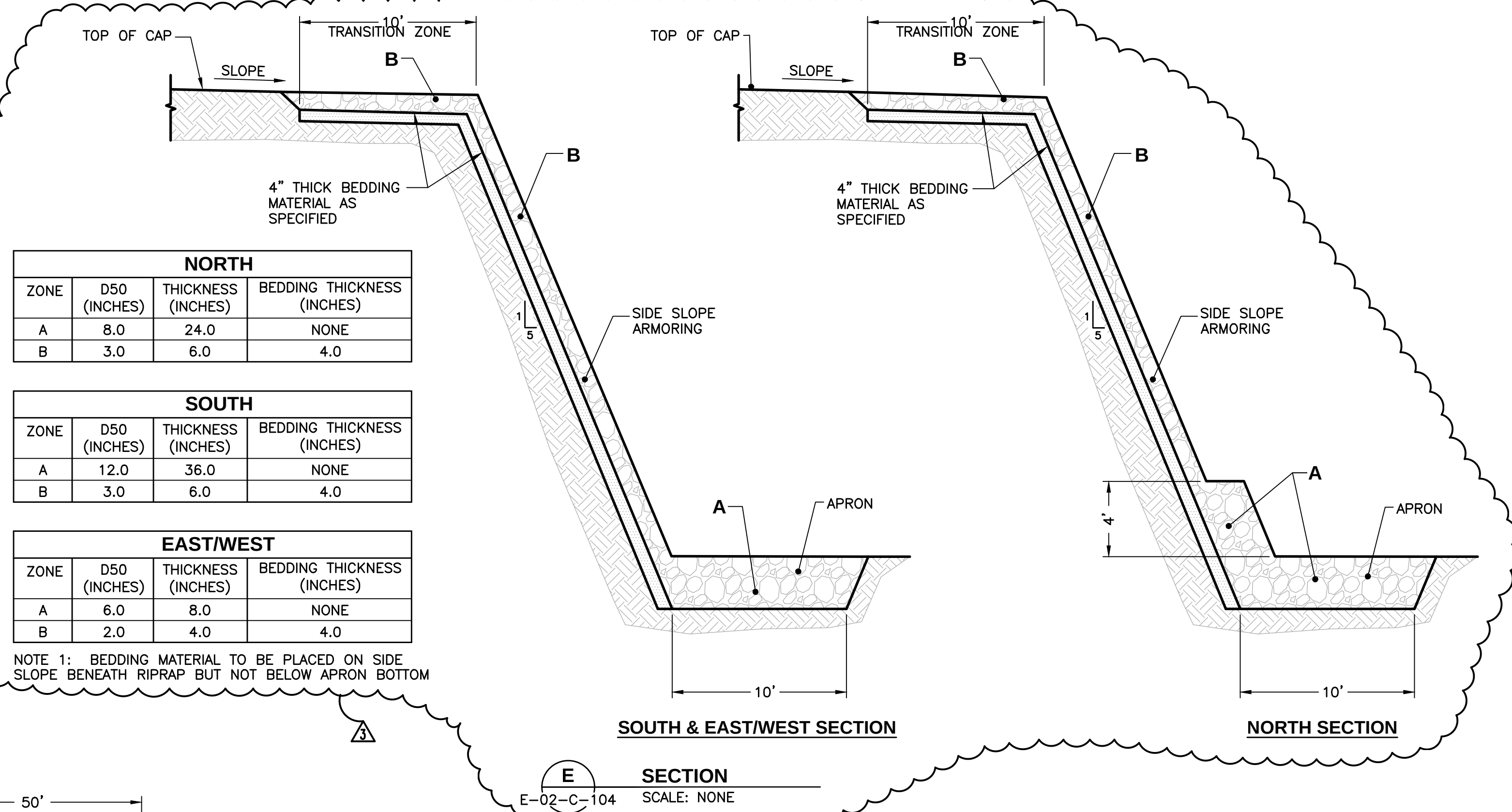
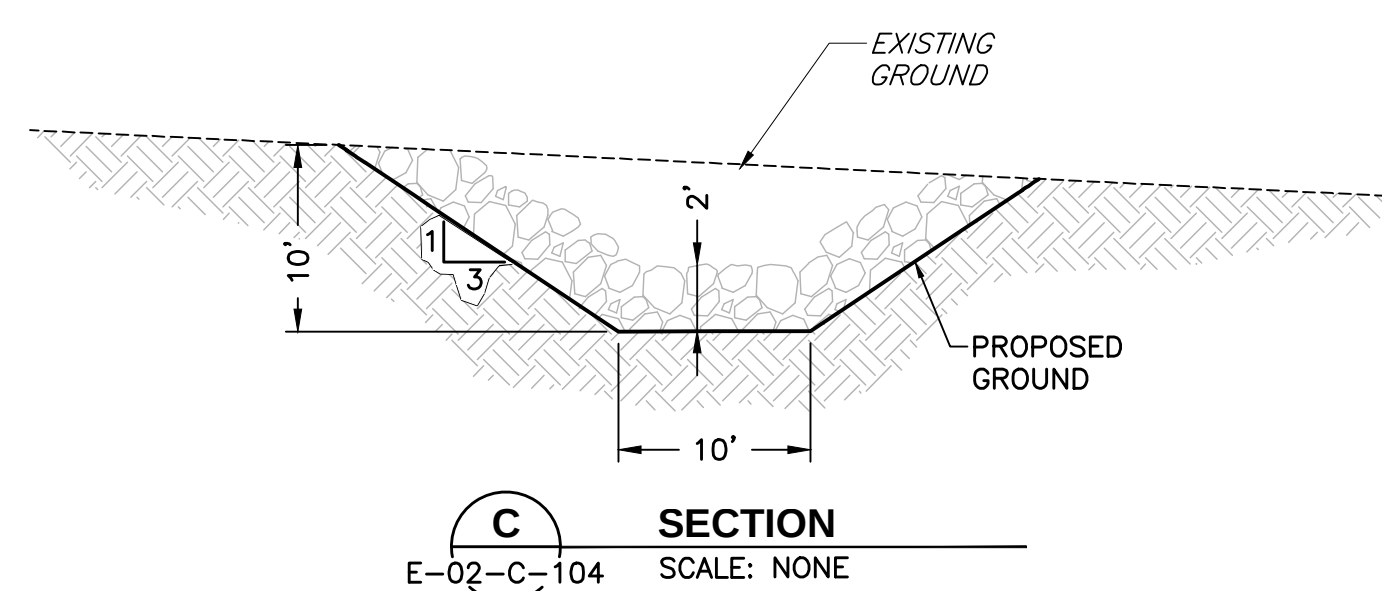
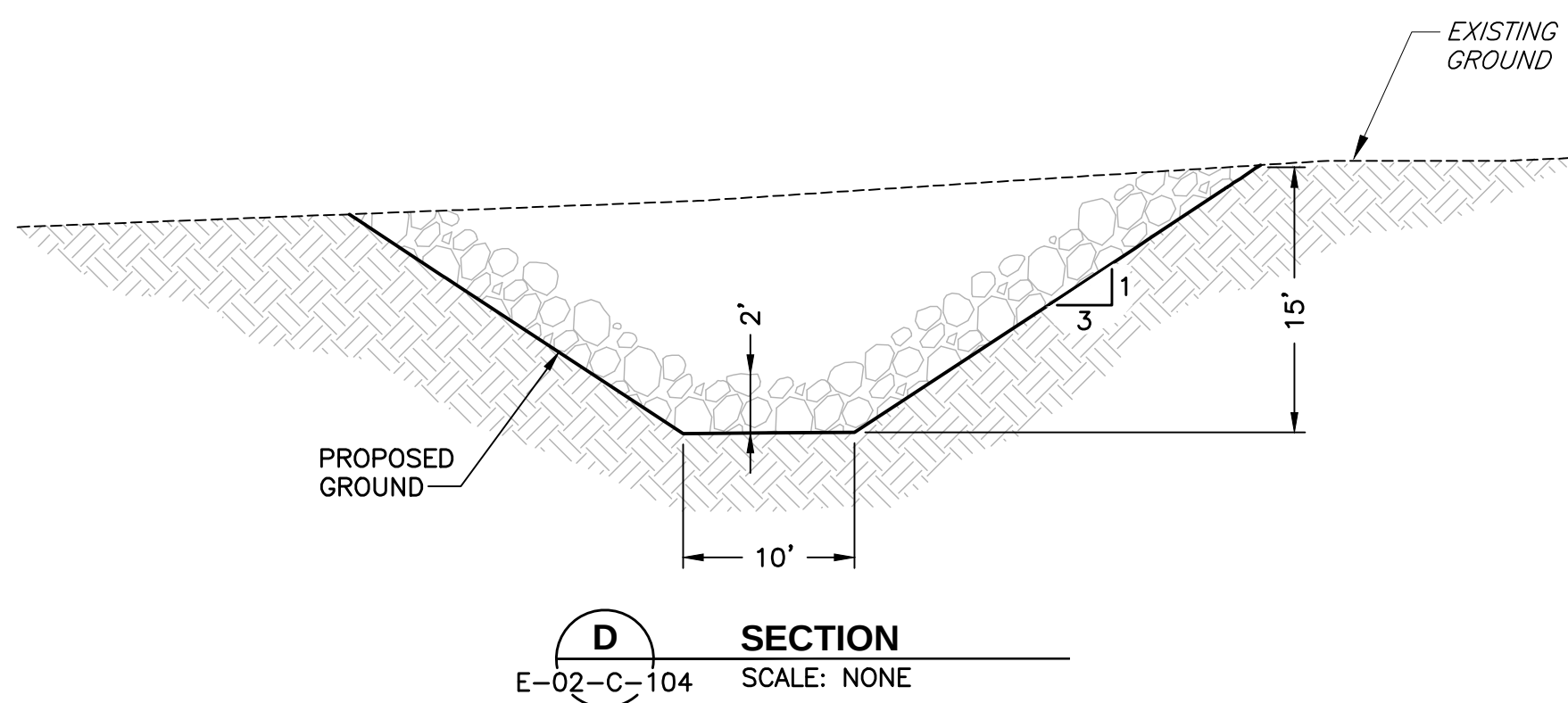
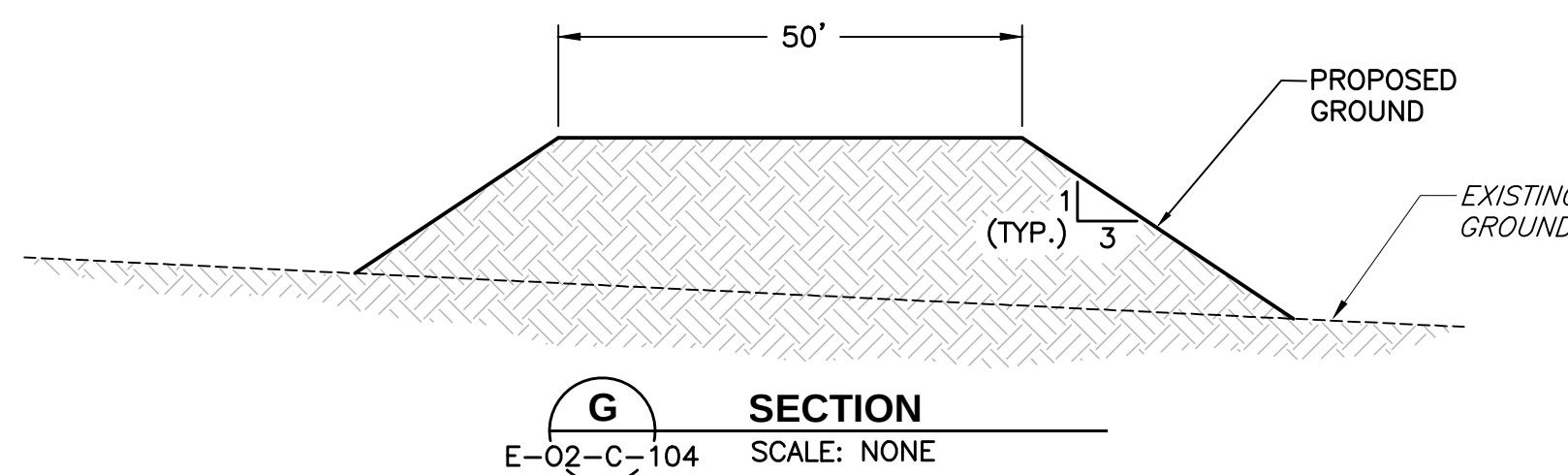
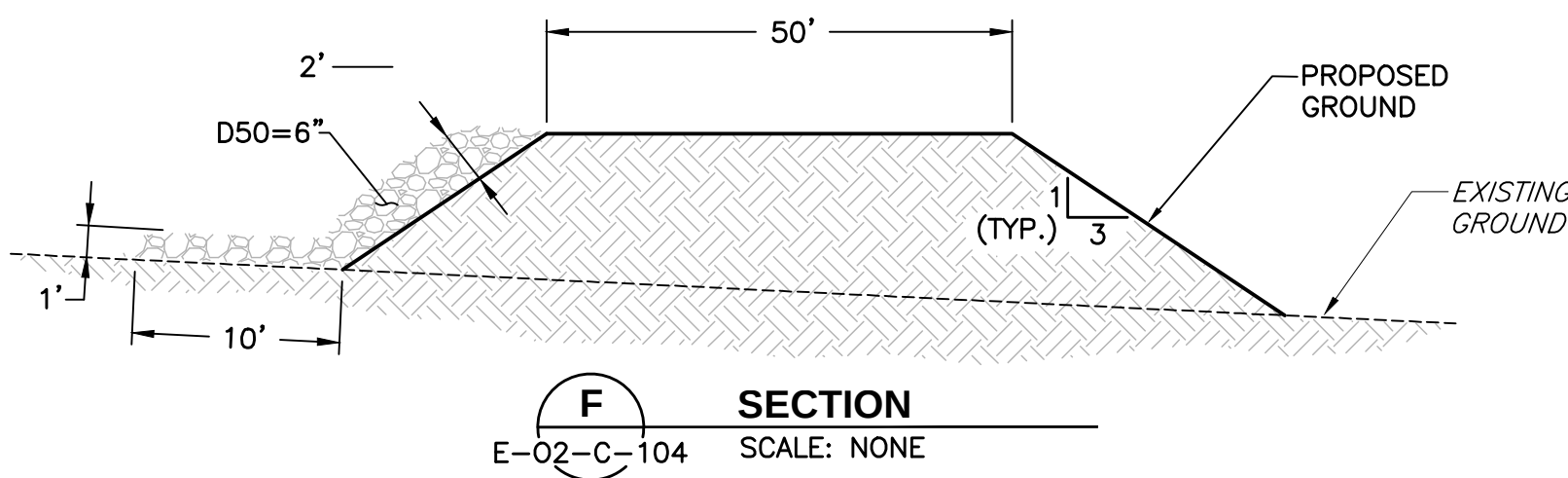
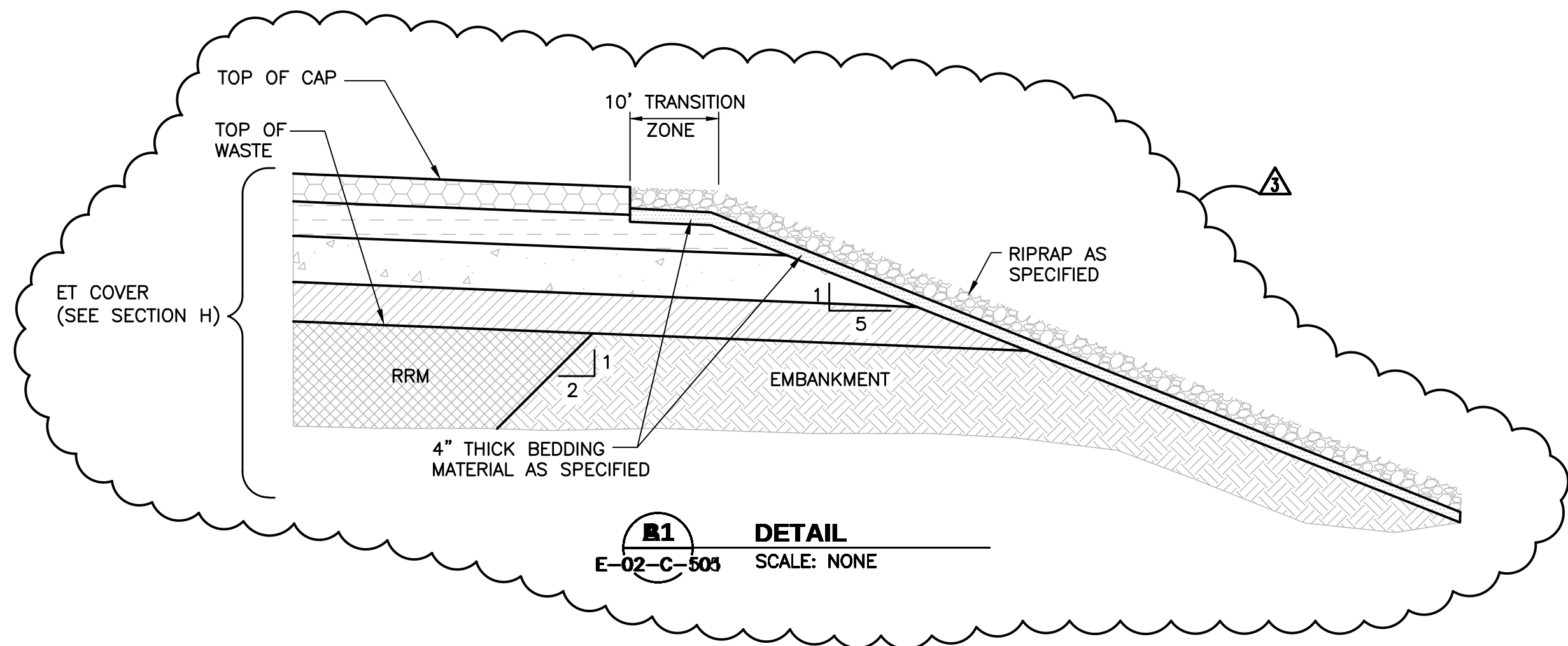
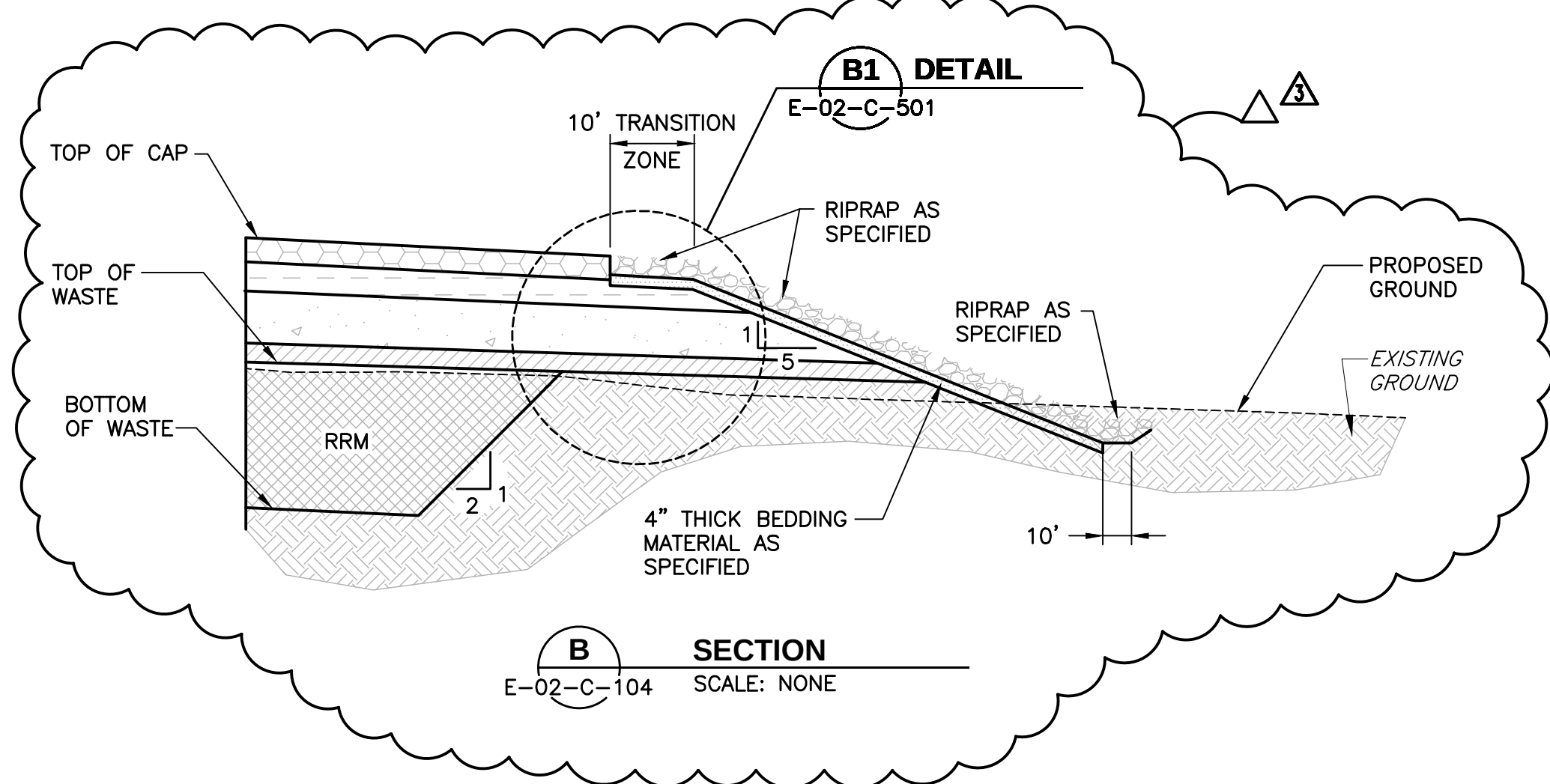
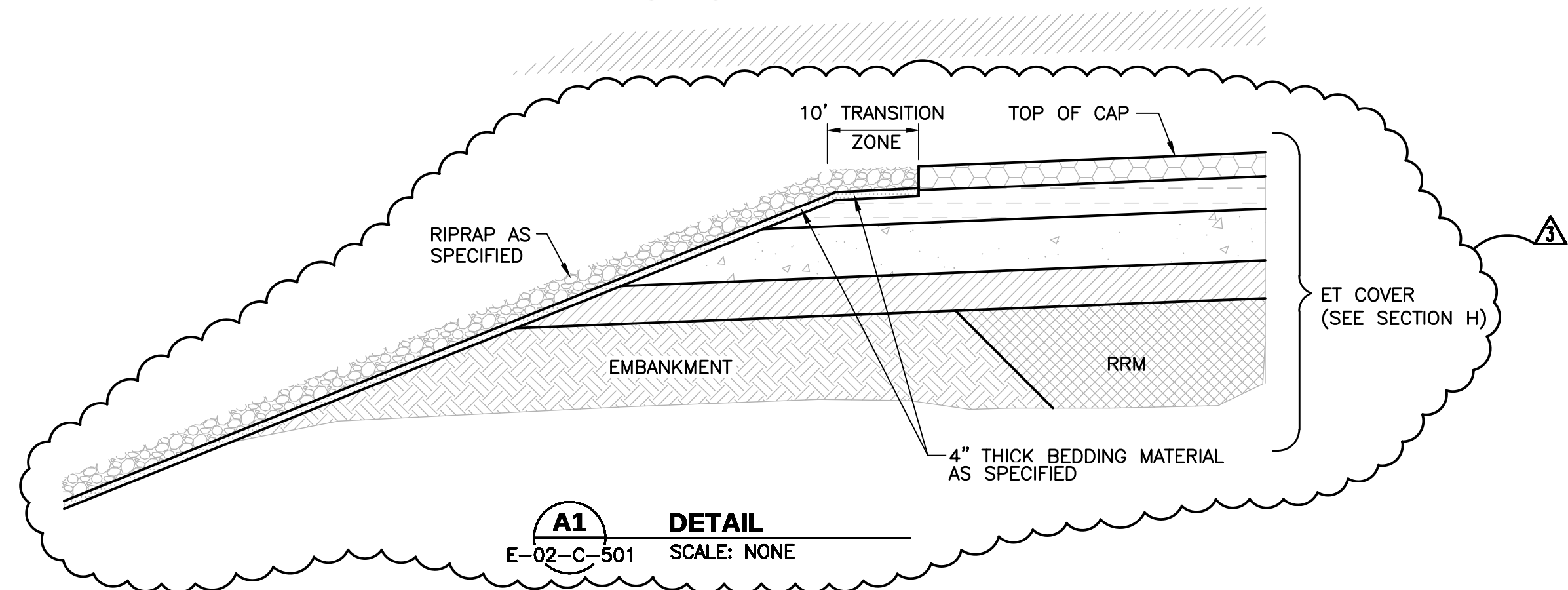
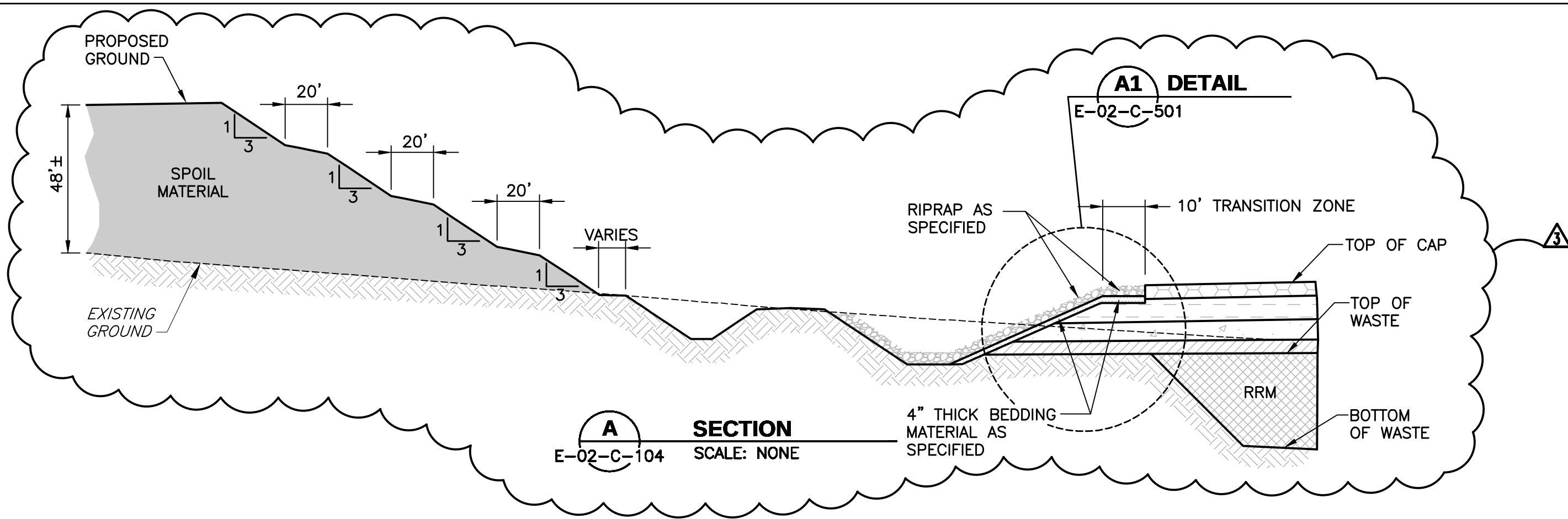
2	01/05/24	ET COVER		MWM	SFD	SFD	
1	04/23/08	Added Quality Assurance Level Notes		JGA	FMP		
0	12/17/07	Issued For Construction		LLE	FMP	- -	
REVISION NO.	DATE	DESCRIPTION	Work Performed by				
U.S. DEPARTMENT OF ENERGY			Dwyer Engineering, LLC Environmental, Geotechnical, Civil, Structural Engineering				
GRAND JUNCTION, COLORADO							
PROJECT LOCATION		APPROVALS		MOAB UMTRA PROJECT			
RAP DISPOSAL CELL DESIGN		DRAWN BY	L ENGLAND	12/17/07	DISPOSAL CELL CROSS SECTIONS		
		ENGINEER	F PARTON	12/17/07			
		DRAWING TEAM	W BARTON	12/17/07			
		APPROVED BY	F PARTON	12/17/07			
		PROJECT MANAGER	M OAKS	12/17/07			
		TO: WORKSHEET	D SMITH	12/17/07			
REFERENCE				PROJECT NO.	SHT.	OF	
			DRAWING NO. E-02-C-301			1	1



THIS DRAWING CONTAINS
QUALITY LEVEL 2 ITEMS

NOA-1 QUALITY LEVEL:
ALL EARTHWORK ACTIVITIES FOR THE DISPOSAL CELL AT CRESCENT JUNCTION, INCLUDING:
THE CELL EXCAVATION, CONSTRUCTION OF THE PERIMETER EMBANKMENTS, RRM PLACEMENT,
WASTE CELL SPOIL MATERIAL EMBANKMENT, AND PERIMETER DITCHES ARE DESIGNATED AS
QUALITY LEVEL 2.

3	01/05/24	ET COVER		MWM	SFD	SFD	
2	07/9/08	Added Detail 1 & Section G					
1	04/24/08	Added Quality Assurance Level Notes		JGA	FMP		
0	12/17/07	Issued For Construction		LLE	FMP	-	-
REVISION NO.	DATE	DESCRIPTION	DRAWN BY	CHECKED BY	PROJECT MGR	APPROVAL	
			Work Performed by				
			U.S. DEPARTMENT OF ENERGY				
			GRAND JUNCTION, COLORADO				
			MOAB UMTRA PROJECT				
			DETAILS - 1				
			PROJECT NO. E-02-C-500				
			SHEET 1 OF 1				



THIS DRAWING CONTAINS
QUALITY LEVEL 2 ITEMS

NQA-1 QUALITY LEVEL:
ALL EARTHWORK ACTIVITIES FOR THE DISPOSAL CELL AT CRESCENT JUNCTION, INCLUDING: THE CELL EXCAVATION, CONSTRUCTION OF THE PERIMETER EMBANKMENTS, RRM PLACEMENT, WASTE CELL SPOIL MATERIAL EMBANKMENT, AND PERIMETER DITCHES ARE DESIGNATED AS QUALITY LEVEL 2.

3	01/05/24	ET COVER	MWM	SFD	SFD	
2	12/8/09	ADDED QUALITY ASSURANCE NOTES	LLE	FMP	WDB	-
0	12/17/07	Issued For Construction	LLE	FMP	-	-
REVISION NO. DATE DESCRIPTION			DRAWN BY: L. ENGLAND CHECKED BY: F. PARTON PROJECT A/E: W. BARTON APPROVAL: M. OAKS DATE: 12/17/07			
PROJECT LOCATION: RAP DISPOSAL CELL DESIGN			U.S. DEPARTMENT OF ENERGY GRAND JUNCTION, COLORADO			
REFERENCE:			Work Performed by: Dwyer Engineering, LLC Environmental, Geotechnical, Civil, Structural Engineering			
			MOAB UMTRA PROJECT			
			DETAILS - 2			
			PROJECT NO. E-02-C-501		SHEET 1 OF 1	