

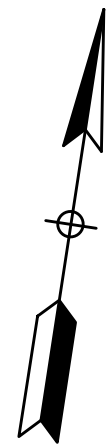
ADDENDUM C

Final Remedial Action Plan
DOE-EM/GJ1547
March 2024

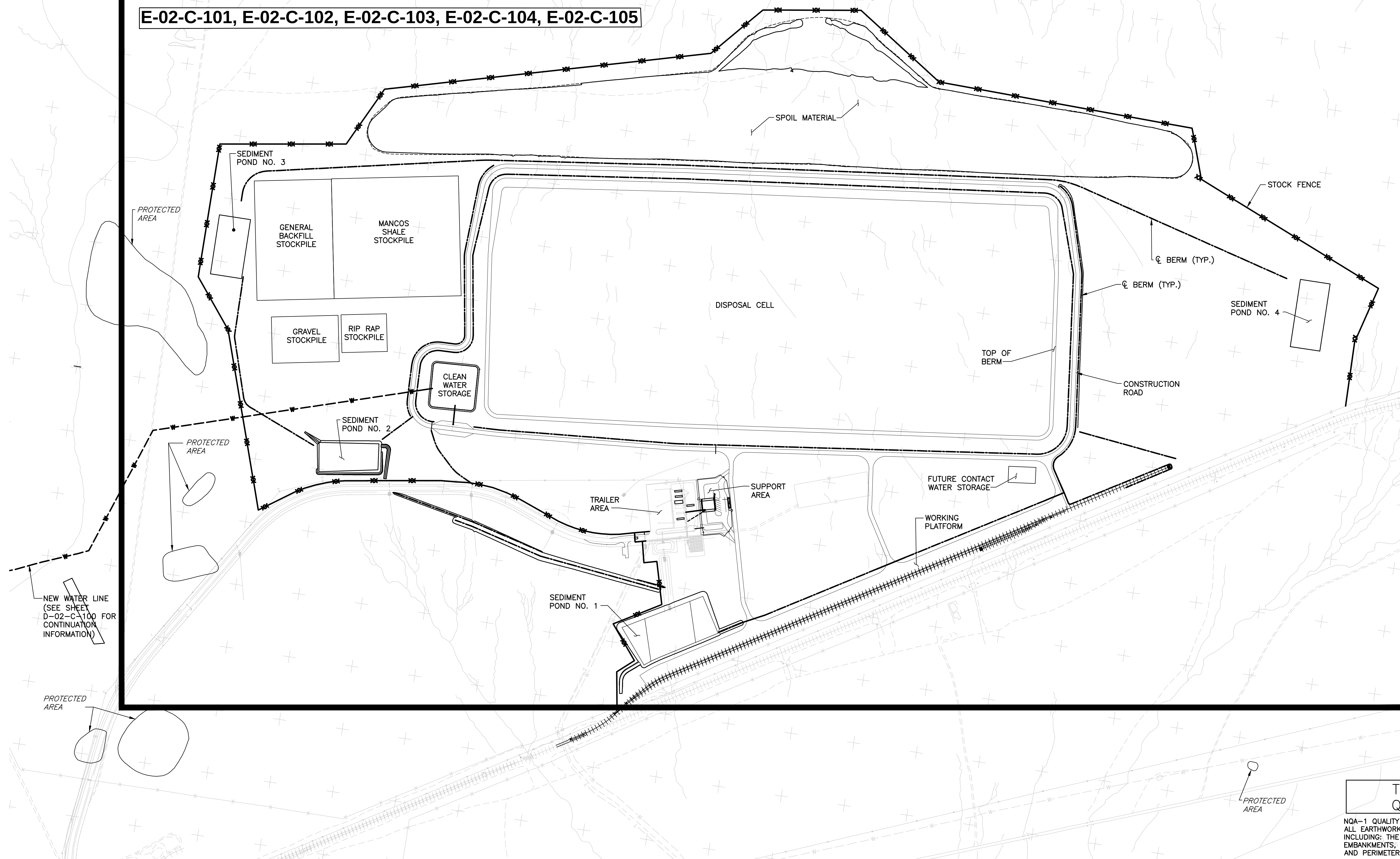
Final Design Drawings

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.



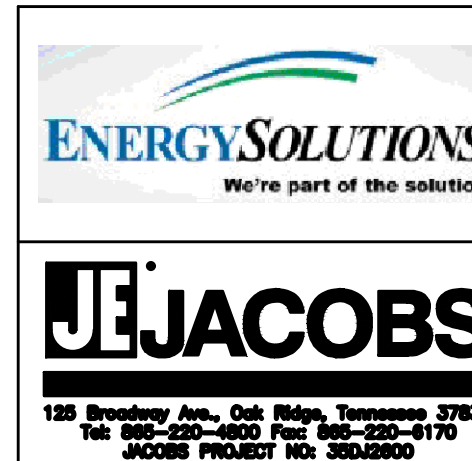
E-02-C-101, E-02-C-102, E-02-C-103, E-02-C-104, E-02-C-105



THIS DRAWING CONTAINS
QUALITY LEVEL 2 ITEMS

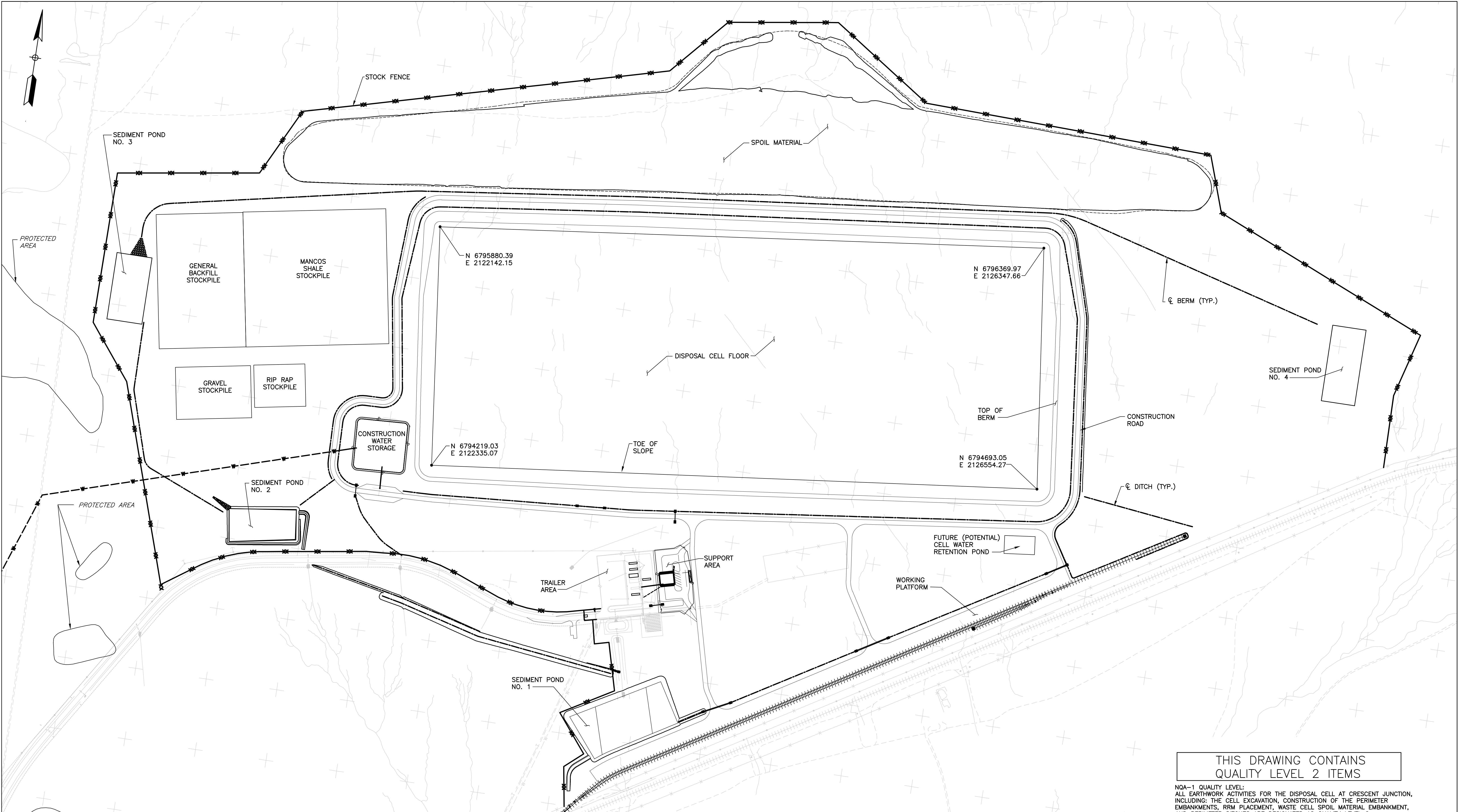
NOA-1 QUALITY LEVEL:
ALL EARTHWORK ACTIVITIES FOR THE DISPOSAL CELL AT CRESCENT JUNCTION,
INCLUDING: THE CELL EXCAVATION, CONSTRUCTION OF THE PERIMETER
EMBANKMENTS, RRM PLACEMENT, WASTE CELL SPOIL MATERIAL EMBANKMENT,
AND PERIMETER DITCHES ARE DESIGNATED AS QUALITY LEVEL 2.

SCALE IN FEET
400 200 0 400 800 1200
CONTOUR INTERVAL = 2 FEET



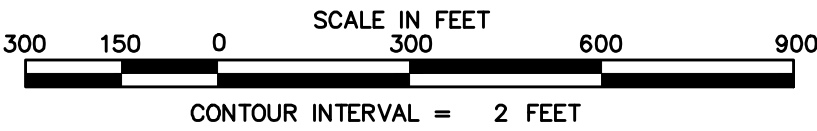
SEAL

1		04/23/08	Added Quality Assurance Level Notes	JGA	FMP		
0		12/17/07	Issued For Construction	LLE	FMP	-	-
U.S. DEPARTMENT OF ENERGY		Dwyer Engineering, LLC		Work Performed by			
GRAND JUNCTION, COLORADO		MOAB UMTRA PROJECT		OVERALL CELL SITE PLAN/KEY PLAN			
PROJECT LOCATION		APPROVALS		PROJECT NO.			
RRM DISPOSAL CELL DESIGN		DESIGNED BY	DATE	DRAWING NO.			
		L. ENGLAND	12/17/07	E-02-C-100			
		F. PARTON	12/17/07	1			
		W. BARTON	12/17/07	1			
		F. PARTON	12/17/07	1			
		M. OAKS	12/17/07	1			
		D. SMITH	12/17/07	1			



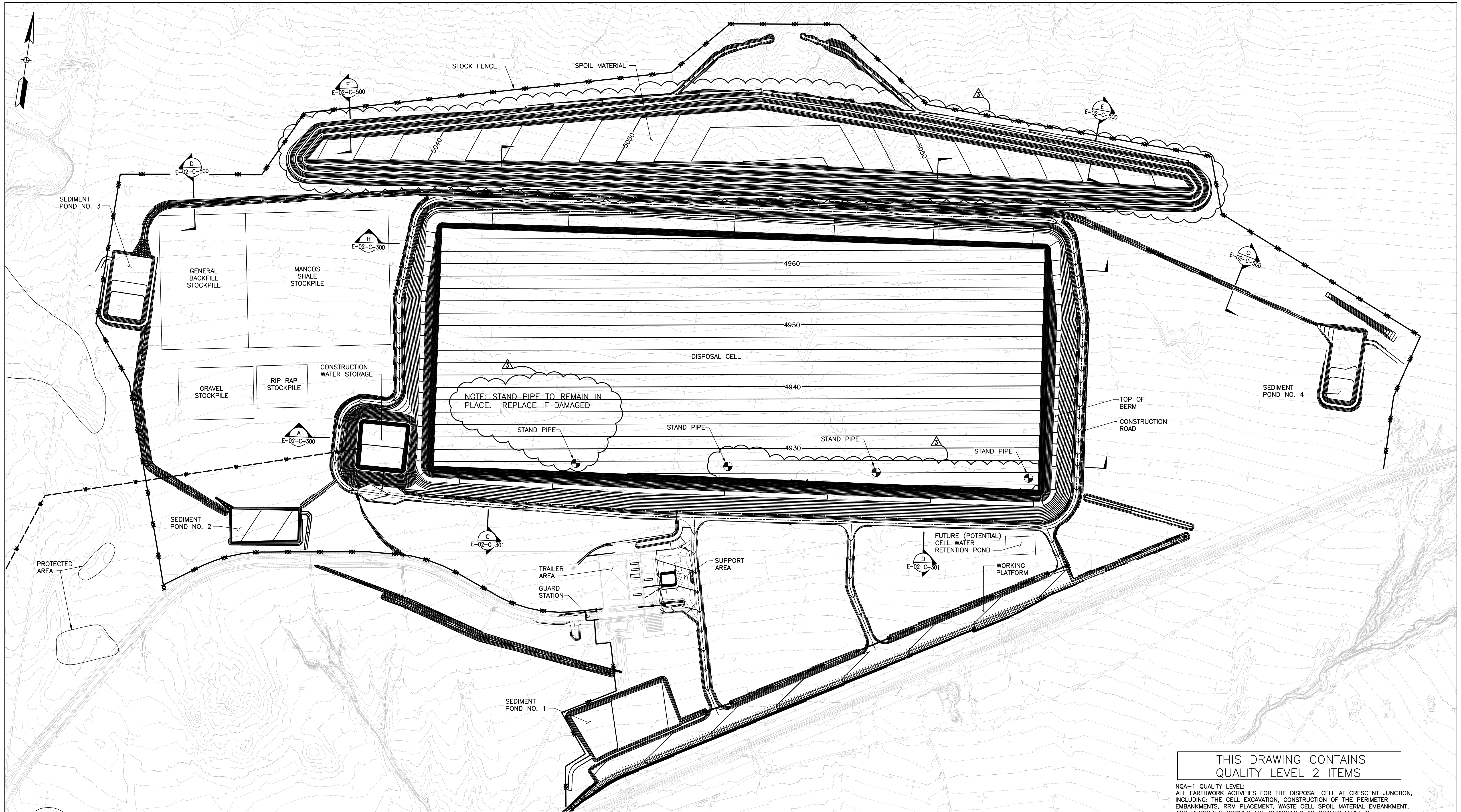
THIS DRAWING CONTAINS
QUALITY LEVEL 2 ITEMS

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

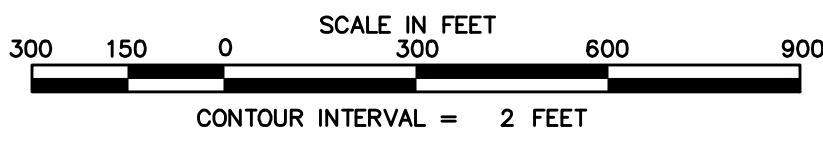


SEAL

1		04/23/08	Added Quality Assurance Level Notes	JGA	FMP		
0		12/17/07	Issued For Construction	LLE	FMP	-	-
REVISION NO.		DATE	DESCRIPTION	DESIGNED BY	CHECKED BY	PROJECT A.S.	APPROVAL
U.S. DEPARTMENT OF ENERGY				Work Performed by			
GRAND JUNCTION, COLORADO				Dwyer Engineering, LLC			
PROJECT LOCATION				MOAB UMTRA PROJECT			
RIP 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					



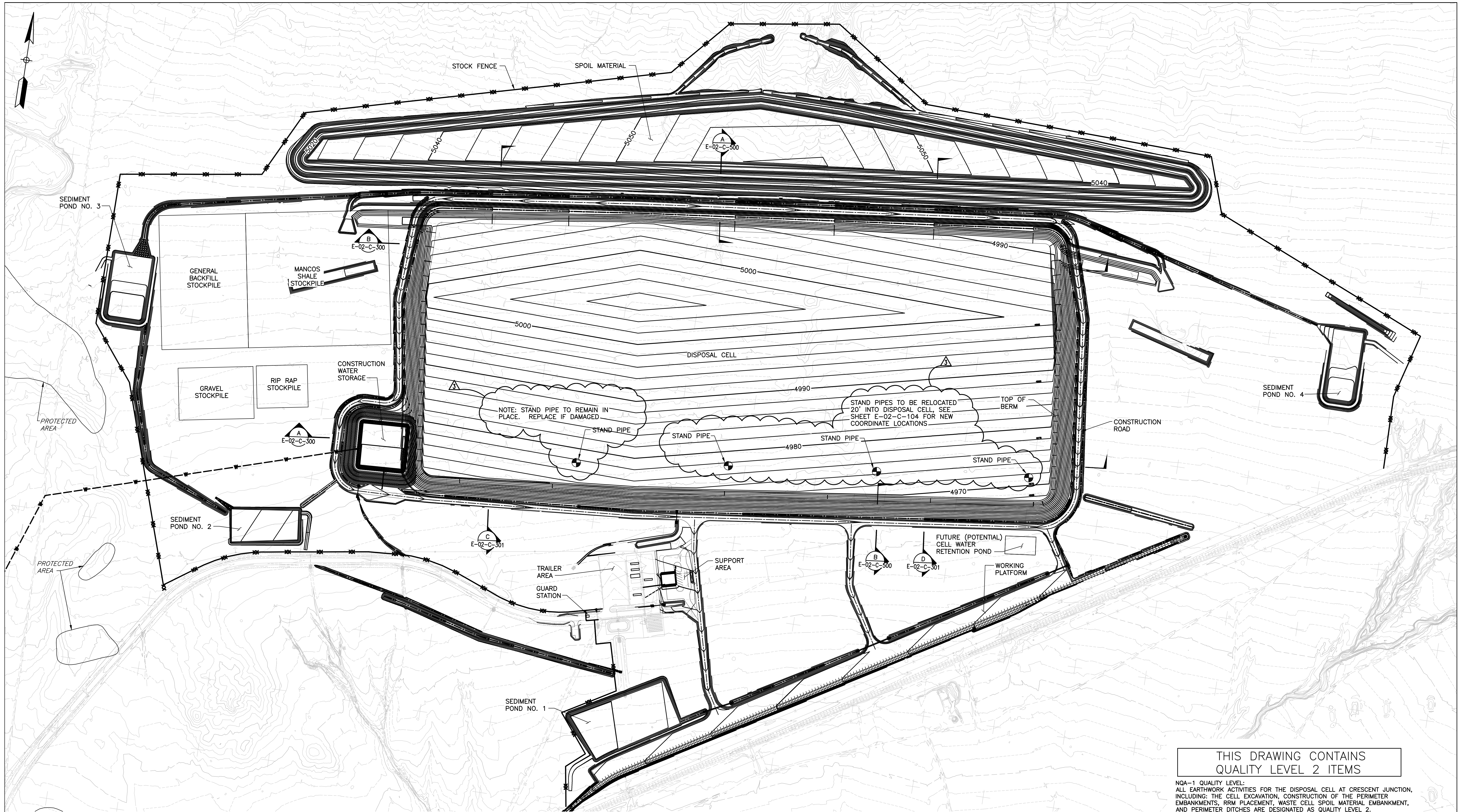
NOTES:
1. ALL DISTURBED AREAS SHALL BE SEEDED, MULCHED,
AND RE-VEGETATED BY OTHERS AT APPROPRIATE TIME.



THIS DRAWING CONTAINS
QUALITY LEVEL 2 ITEMS

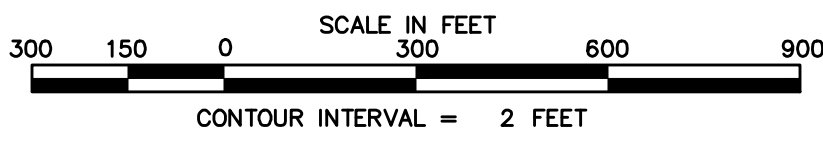
NQA-1 QUALITY LEVEL:
ALL EARTHWORK ACTIVITIES FOR THE DISPOSAL CELL AT CRESCENT JUNCTION,
INCLUDING: THE CELL EXCAVATION, CONSTRUCTION OF THE PERIMETER
EMBANKMENTS, RRM PLACEMENT, WASTE CELL SPOIL MATERIAL EMBANKMENT,
AND PERIMETER DITCHES ARE DESIGNATED AS QUALITY LEVEL 2.

3	01/05/24	ET COVER	MWM	SFD	SFD	
2	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			
PROJECT LOCATION RAP DISPOSAL CELL DESIGN			APPROVALS			
REFERENCE			DRAWN BY	DATE		
			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-102			SHEET NO. 1 OF 1
			Dwyer Engineering, LLC Environmental, Geotechnical, Civil, Structural Engineering			
			MOAB UMTA PROJECT			
			OVERALL CELL GRADING PLAN			

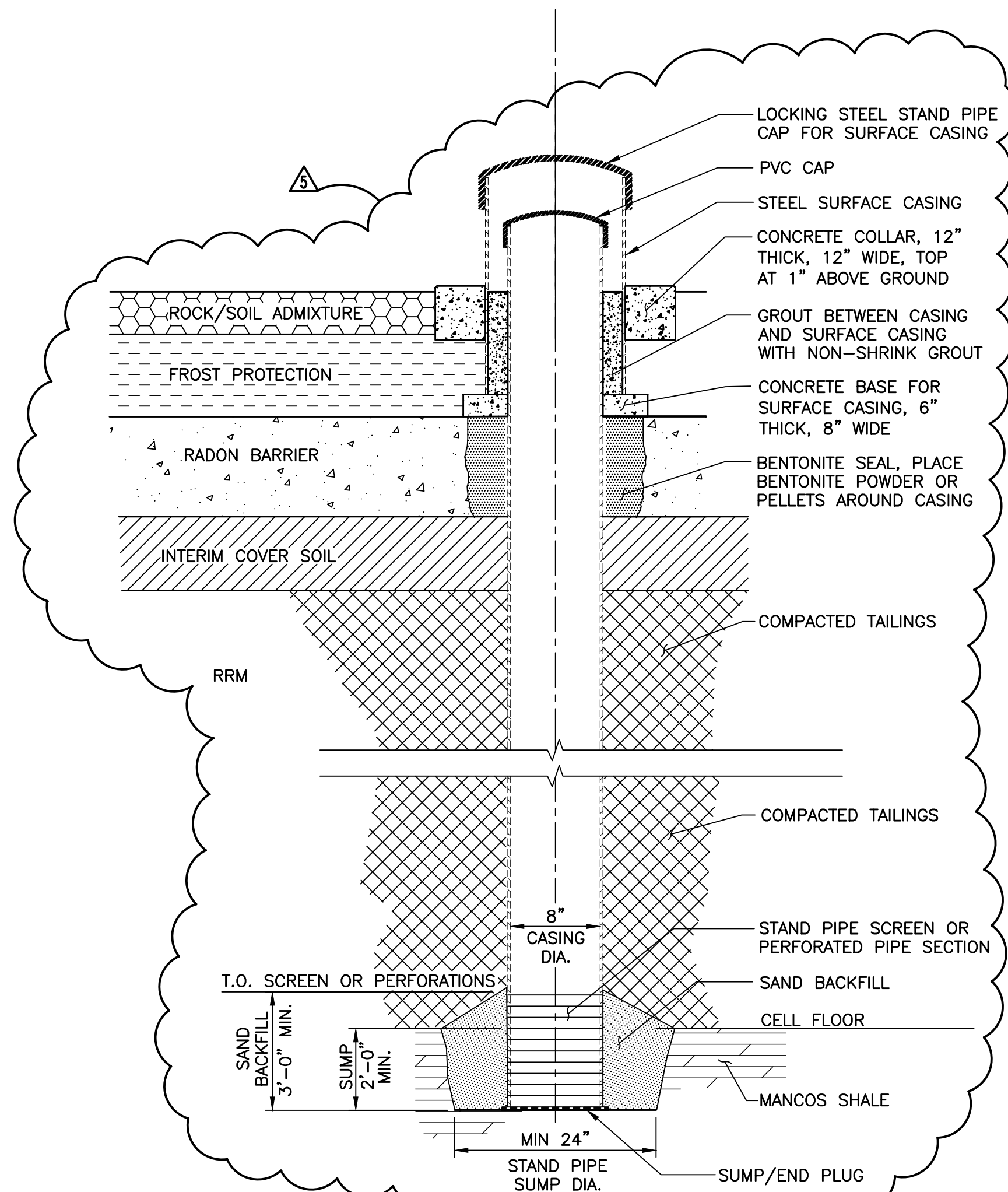
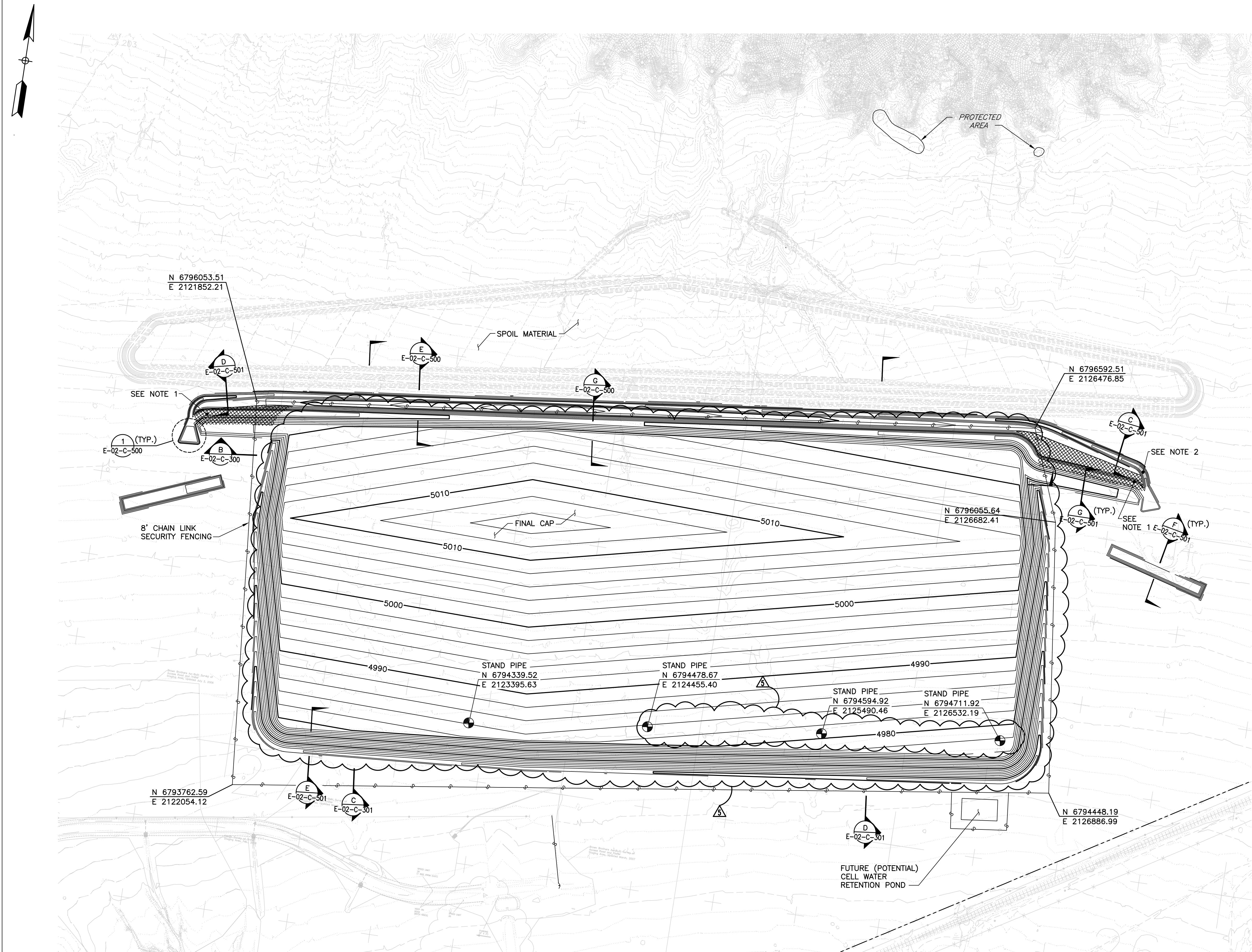


THIS DRAWING CONTAINS
QUALITY LEVEL 2 ITEMS

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	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			
SEAL			Work Performed by			
U.S. DEPARTMENT OF ENERGY GRAND JUNCTION, COLORADO			Dwyer Engineering, LLC 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. E-02-C-103			
CHECKED BY F. PARTON 12/17/07			SHEET 1 OF 1			
APPROVED BY W. BARTON 12/17/07						
DESIGNED BY F. PARTON 12/17/07						
PROJECT MANAGER M. OAKS 12/17/07						
DESIGNED BY D. SMITH 12/17/07						

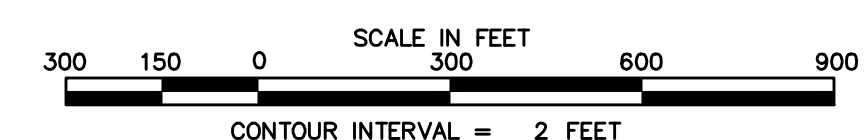


- NOTES:**
1. TOP OF STAND PIPE SURFACE CASING, 3 FT ABOVE FINAL GROUND SURFACE.
 2. TOP OF CASING TO BE 2.5 FT ABOVE FINAL GROUND SURFACE.
 3. SURVEY THE AS-BUILT LOCATION AND ELEVATION OF THE TOP OF CASING AND TAG THE STAND PIPE CAP WITH THE COORDINATES, ELEVATION, AND STAND PIPE NUMBER.
 4. STAND 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

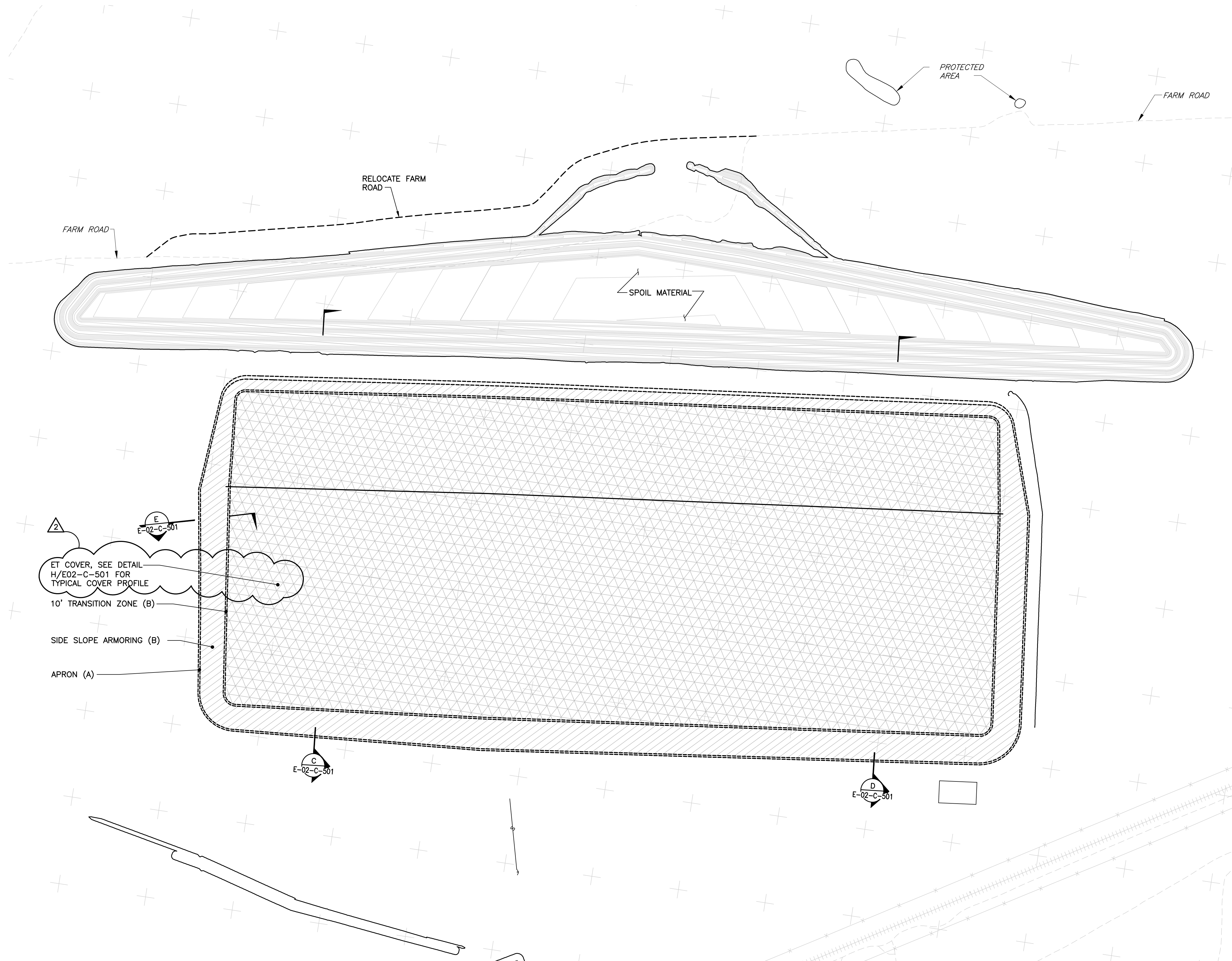
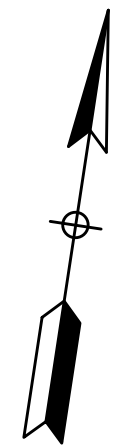
THIS DRAWING CONTAINS
QUALITY LEVEL 2 ITEMS

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

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 MGR	APPROVAL
U.S. DEPARTMENT OF ENERGY GRAND JUNCTION, COLORADO			Work Performed by Dwyer Engineering, LLC Environmental, Geotechnical, Civil, Structural Engineering			
PROJECT LOCATION RAP DISPOSAL CELL DESIGN			MOAB UMTRA PROJECT			
REFERENCE			OVERALL CELL CAP PLAN			
			APPROVALS	DATE	PROJECT NO.	SHT. OF
			DRAWN BY L. ENGLAND	12/17/07	E-02-C-104	1 1
			ENGINEER F. PARTON	12/17/07		
			DISCIPLINE LEAD W. BARTON	12/17/07		
			APPROVED BY F. PARTON	12/17/07		
			PROJECT MANAGER M. OAKS	12/17/07		
			DESIGNER D. SMITH	12/17/07		



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

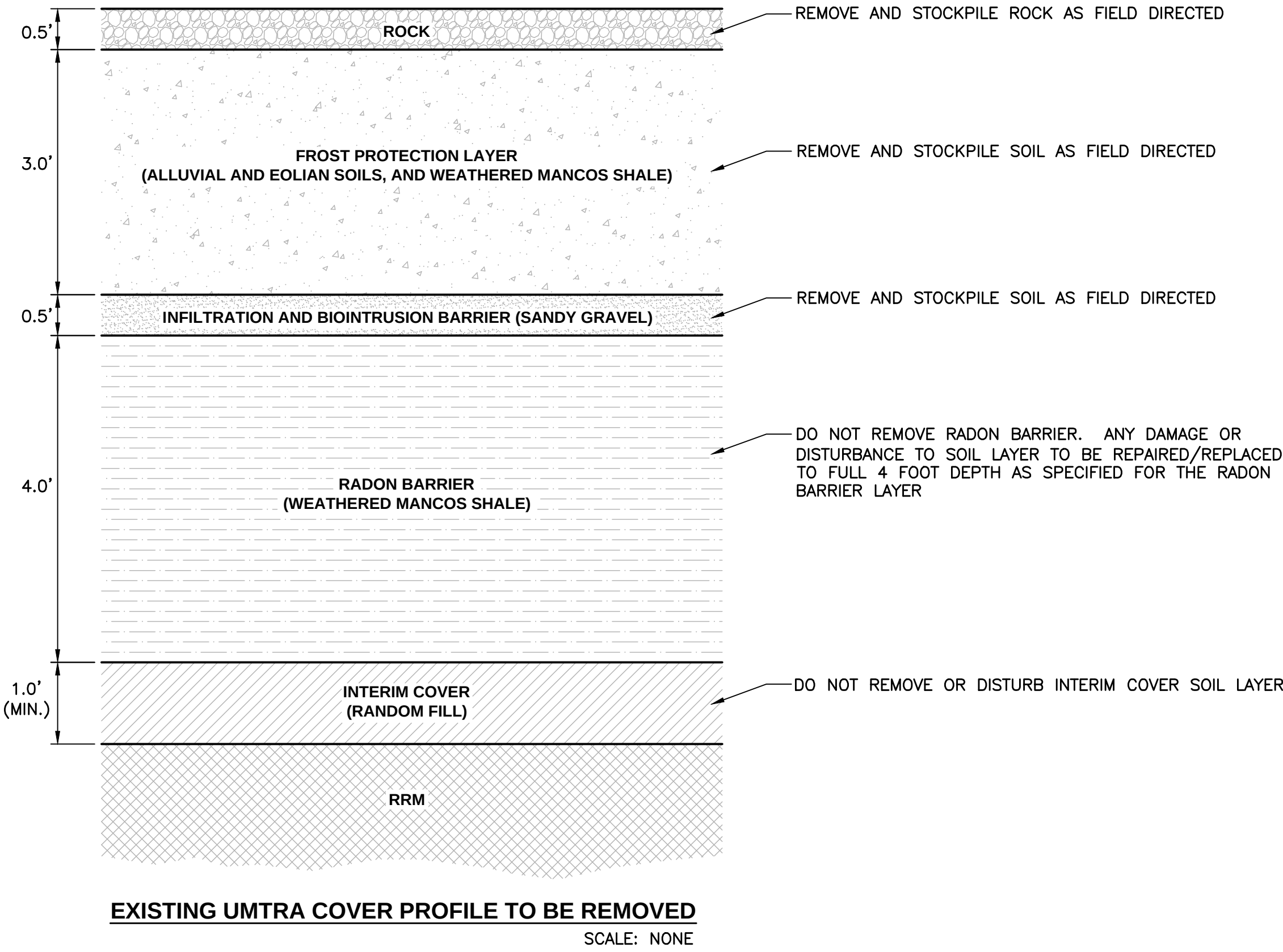
D
E-02-C-501

300 150 0 300 600 900
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
EMBANKMENTS, RRM PLACEMENT, WASTE CELL SPOIL MATERIAL EMBANKMENT,
AND PERIMETER DITCHES ARE DESIGNATED AS QUALITY LEVEL 2.

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 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		APPROVALS L. ENGLAND 12/17/07 F. PARTON 12/17/07 W. BARTON 12/17/07 M. OAKS 12/17/07 D. SMITH 12/17/07		MOAB UMTRA PROJECT ET COVER PLAN		
REFERENCE PROJECT MANAGER M. OAKS D. SMITH		PROJECT NO. E-02-C-105		SHEET 1 OF 1		

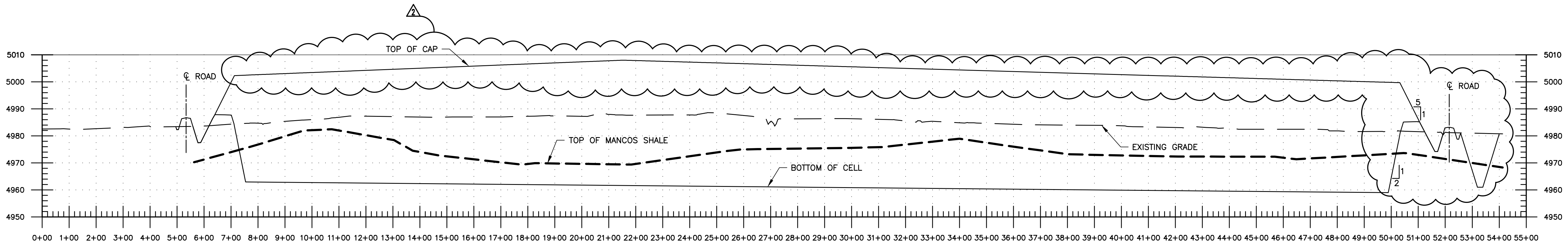


NOTE:
THIS AERIAL PHOTOGRAPH IS OUTDATED DUE TO ONGOING WORK. THE INTENT OF THIS DRAWING IS TO DESCRIBE THAT THE OLDER UMTRA COVER PROFILE MATERIALS INSTALLED ABOVE RADON BARRIER SHALL BE REMOVED AND MATERIAL STOCKPILED FOR SUBSEQUENT DEPLOYMENT WITH THE REVISED ET COVER PROFILE. THE INTERIM COVER AND 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.

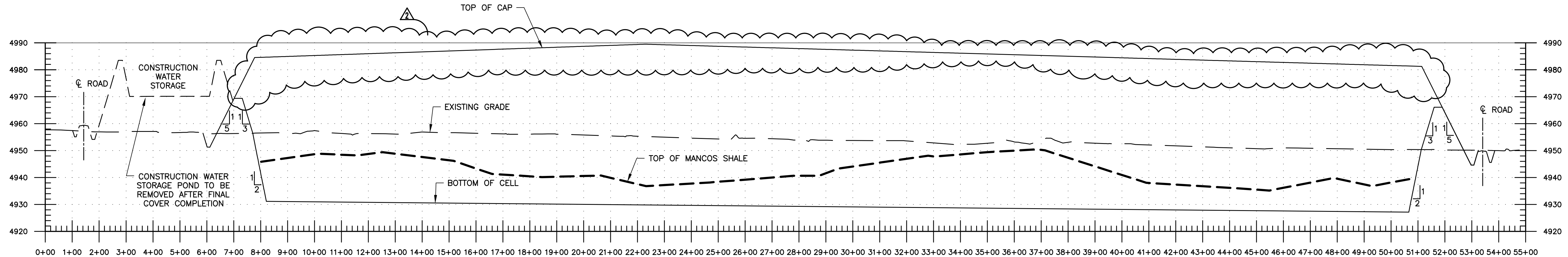
THIS DRAWING CONTAINS
QUALITY LEVEL 2 ITEMS

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	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			Work Performed by			
	PROJECT LOCATION			MOAB UMTRA PROJECT			
RAP DISPOSAL CELL DESIGN			DRAWN BY M MEANS	12/18/23	EXISTING COVER REMOVAL		
			CHECKED BY S DWYER	12/18/23			
			PROJECT MANAGER				
			QA MANAGER				
			PROJECT NO.				
			DRAWING NO.	E-02-C-200	SHEET 1 OF 1		



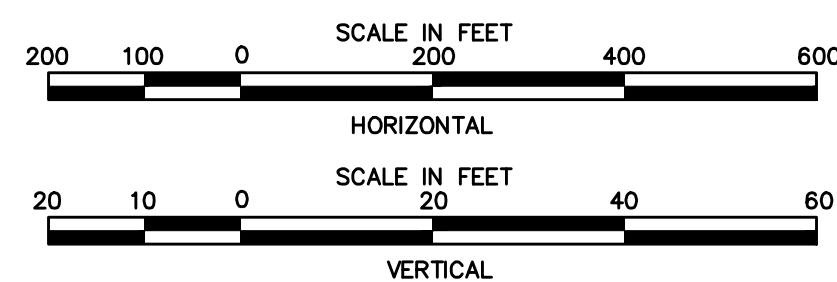
B SECTION
SCALE: HORIZONTAL 1"=200'
VERTICAL 1"=20'



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

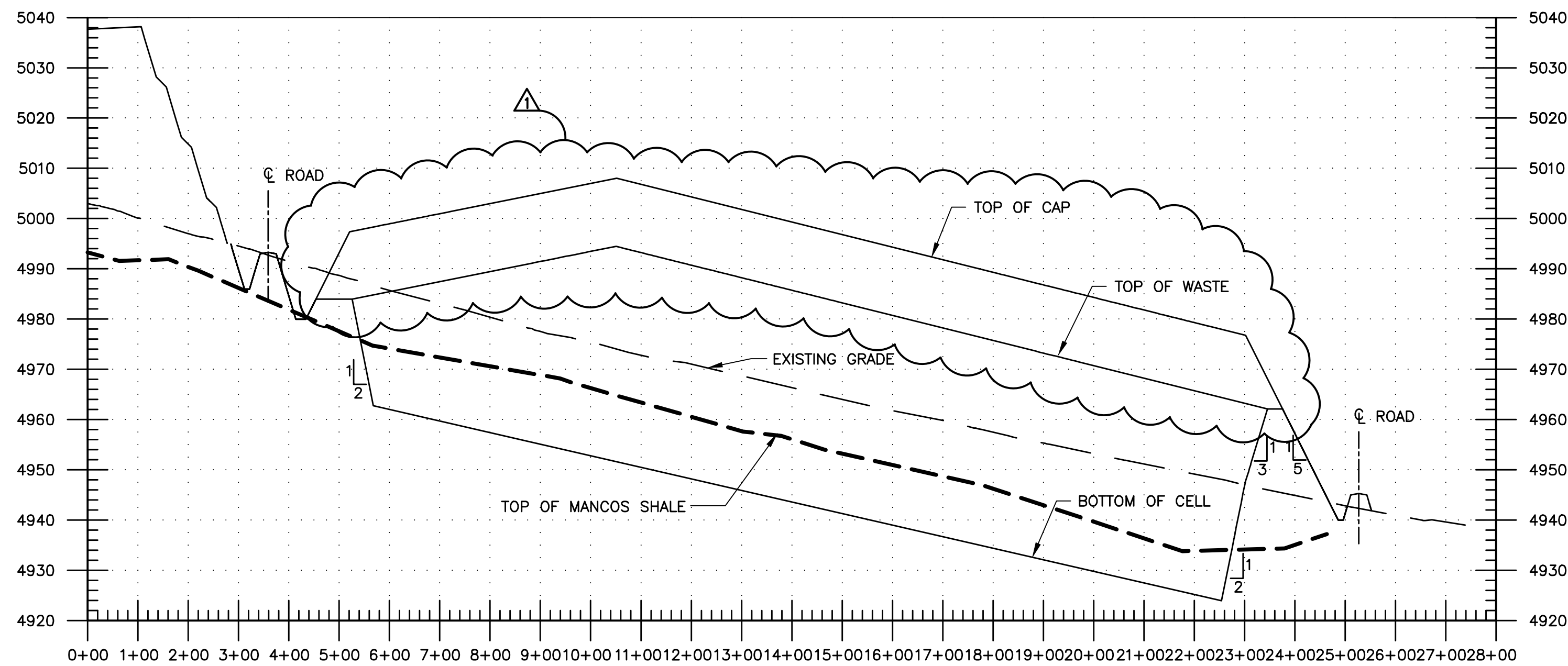
THIS DRAWING CONTAINS
QUALITY LEVEL 2 ITEMS

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.

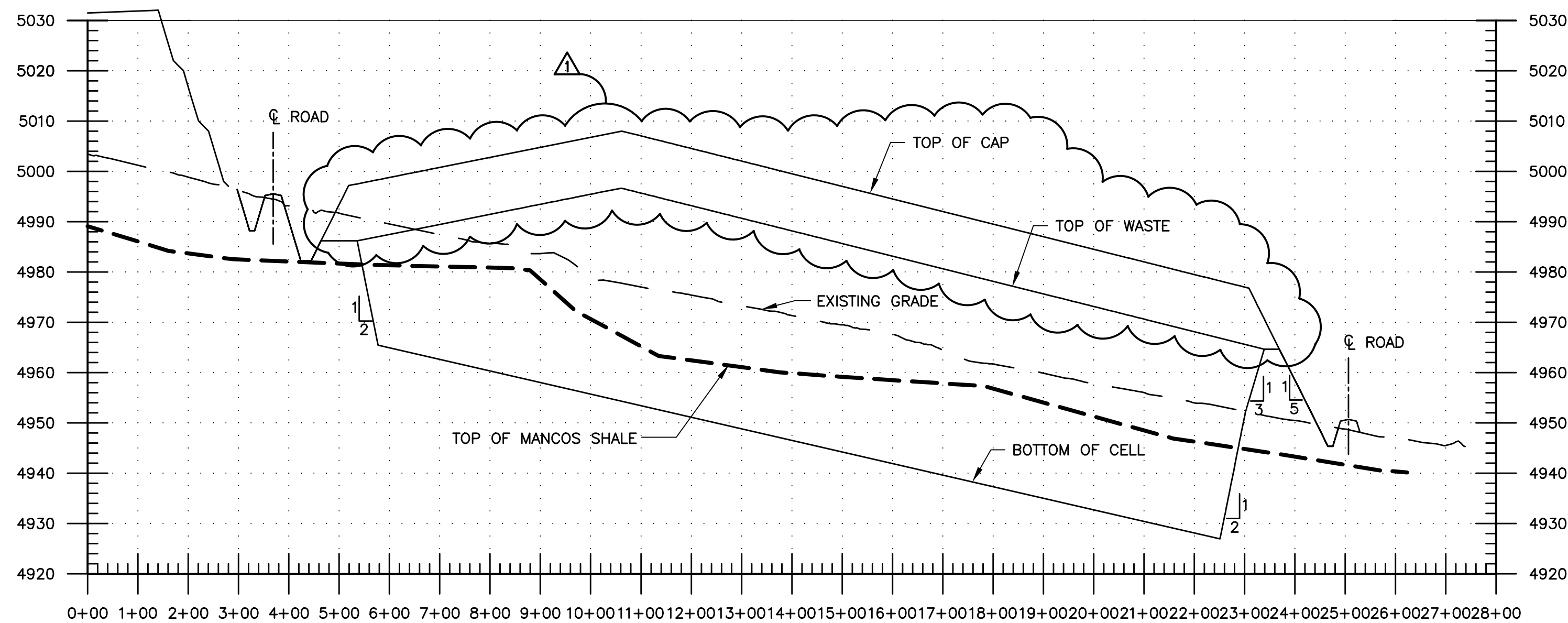


SEAL

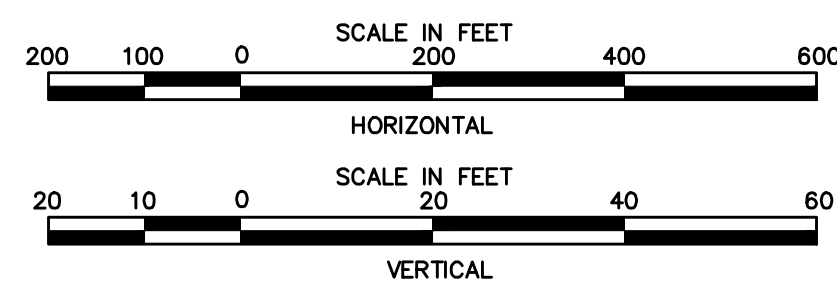
U.S. DEPARTMENT OF ENERGY GRAND JUNCTION, COLORADO				Dwyer Engineering, LLC Environmental, Geotechnical, Civil, Structural Engineering			
PROJECT LOCATION RAP DISPOSAL CELL DESIGN				MOAB UMTRA PROJECT DISPOSAL CELL CROSS SECTIONS			
APPROVALS				PROJECT NO. E-02-C-300			
DESIGNED BY L. ENGLAND 12/17/07				SHEET 1 OF 1			
CHECKED BY F. PARTON 12/17/07							
APPROVED BY W. BARTON 12/17/07							
PROJECT MANAGER M. OAKS 12/17/07							
DESIGNED BY D. SMITH 12/17/07							



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

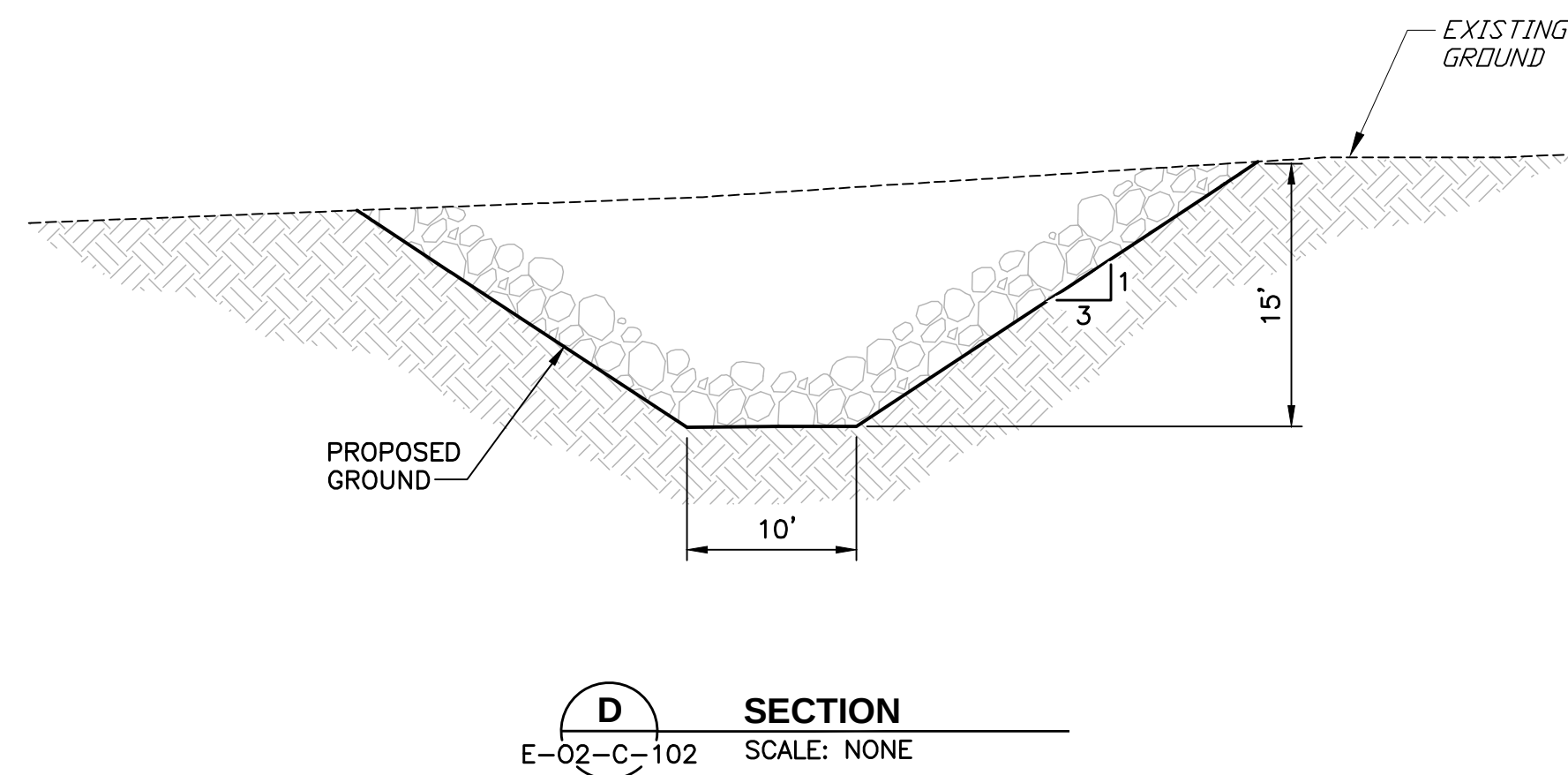
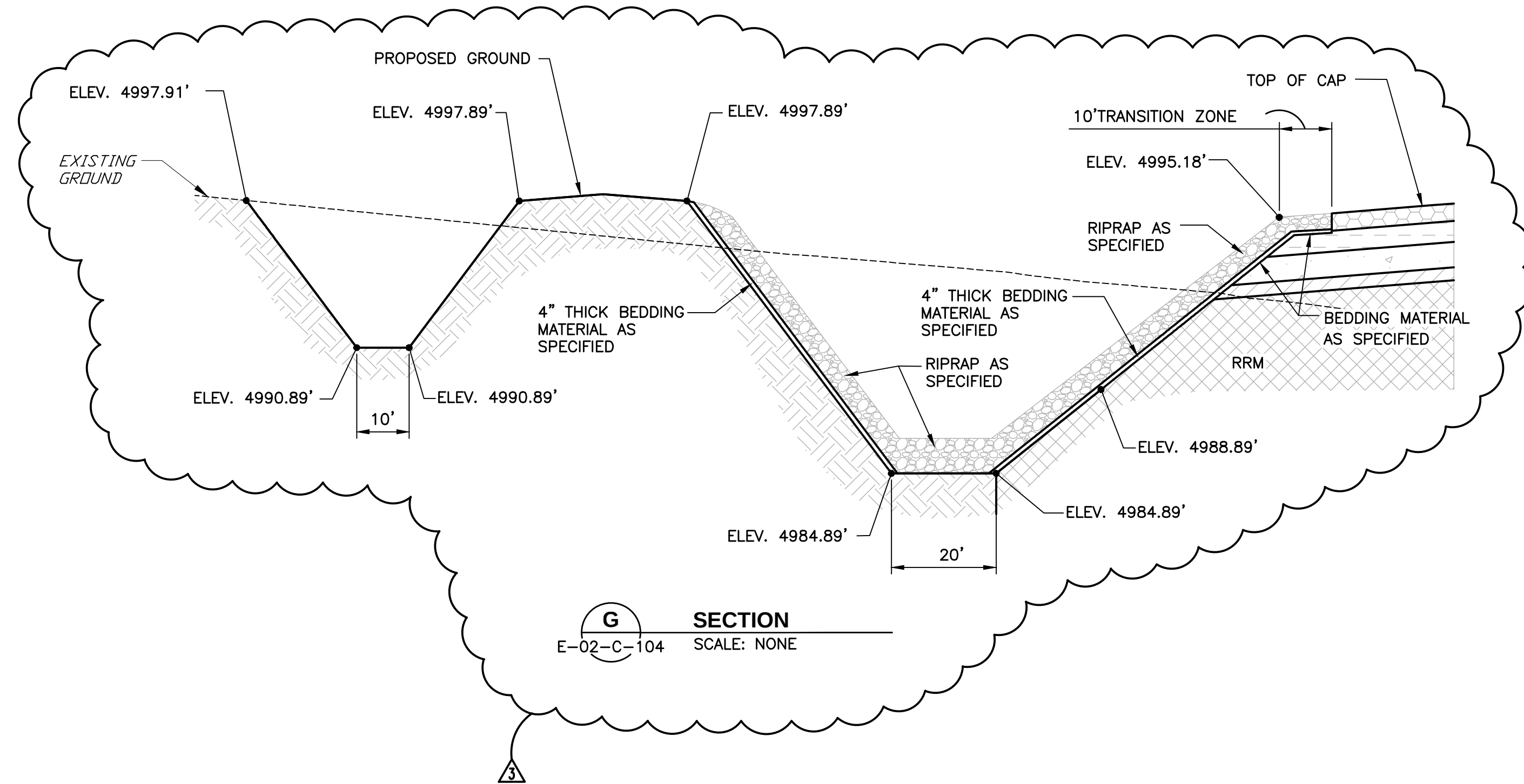
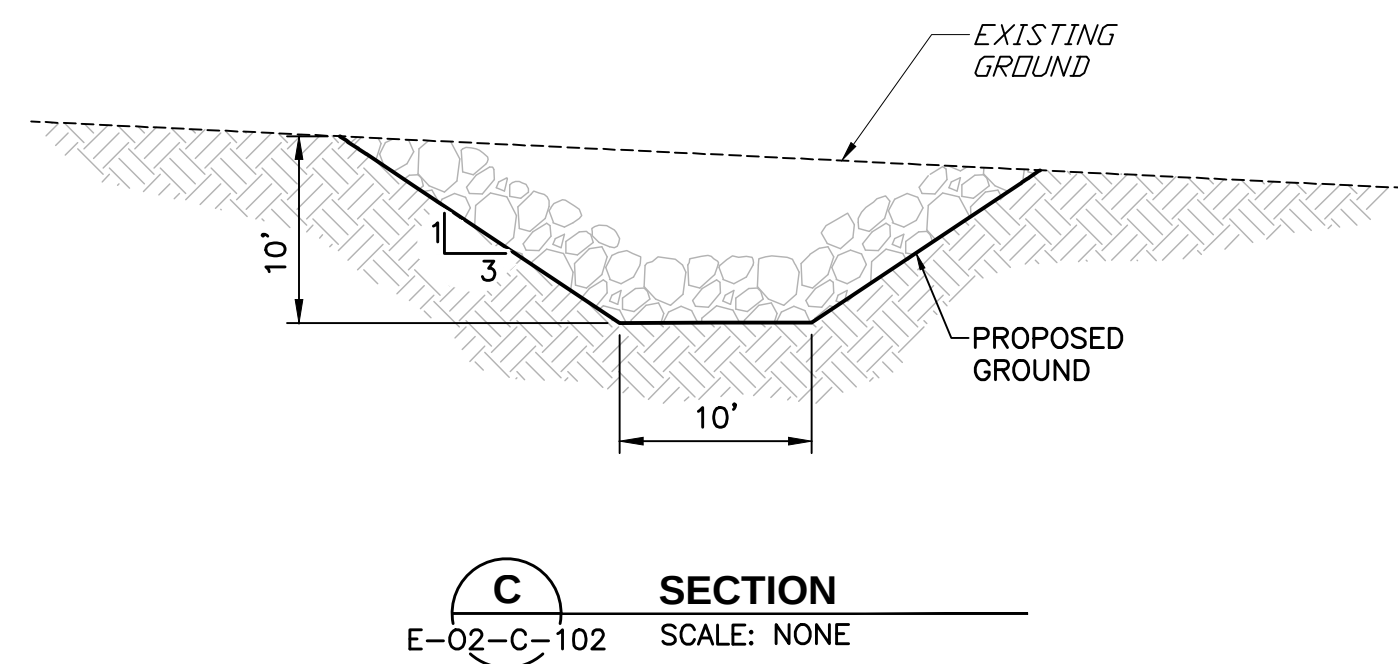
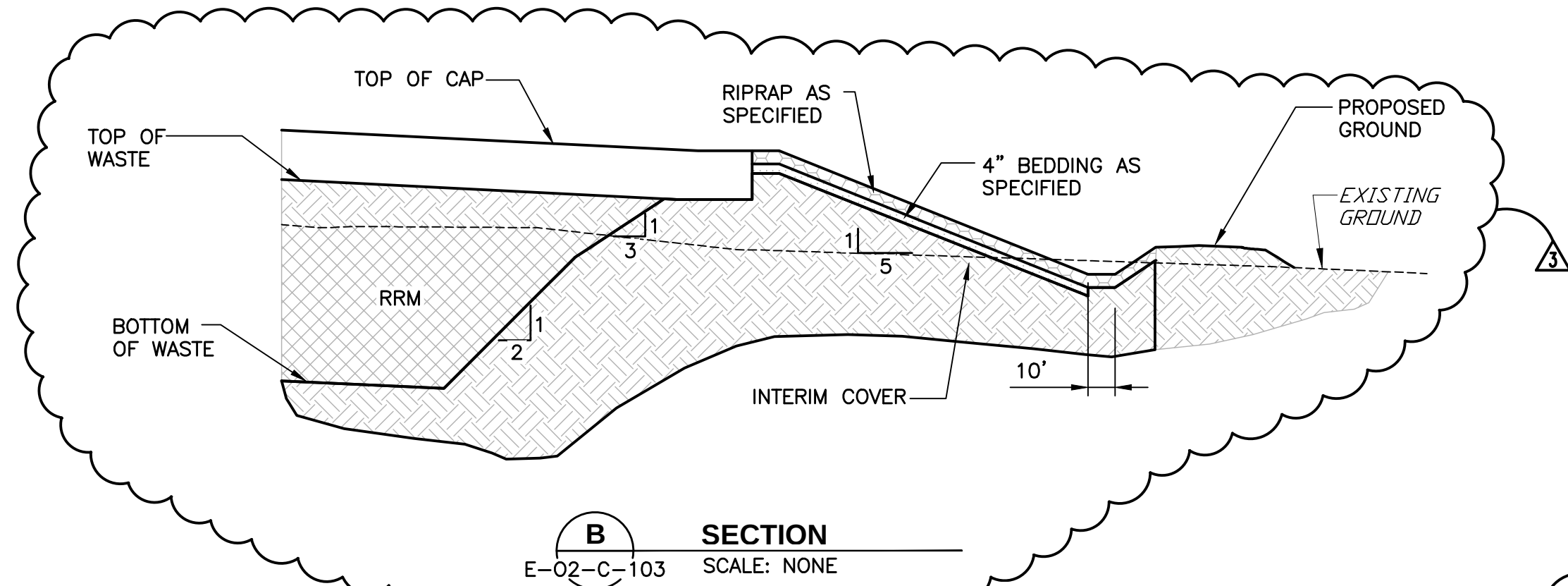
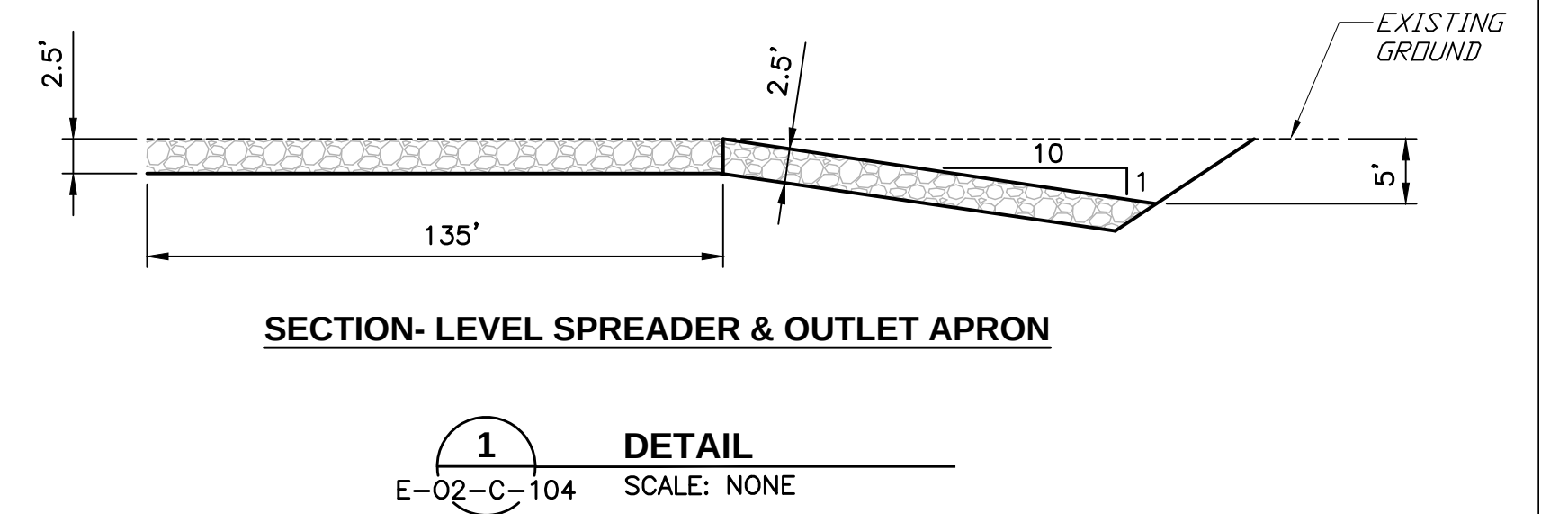
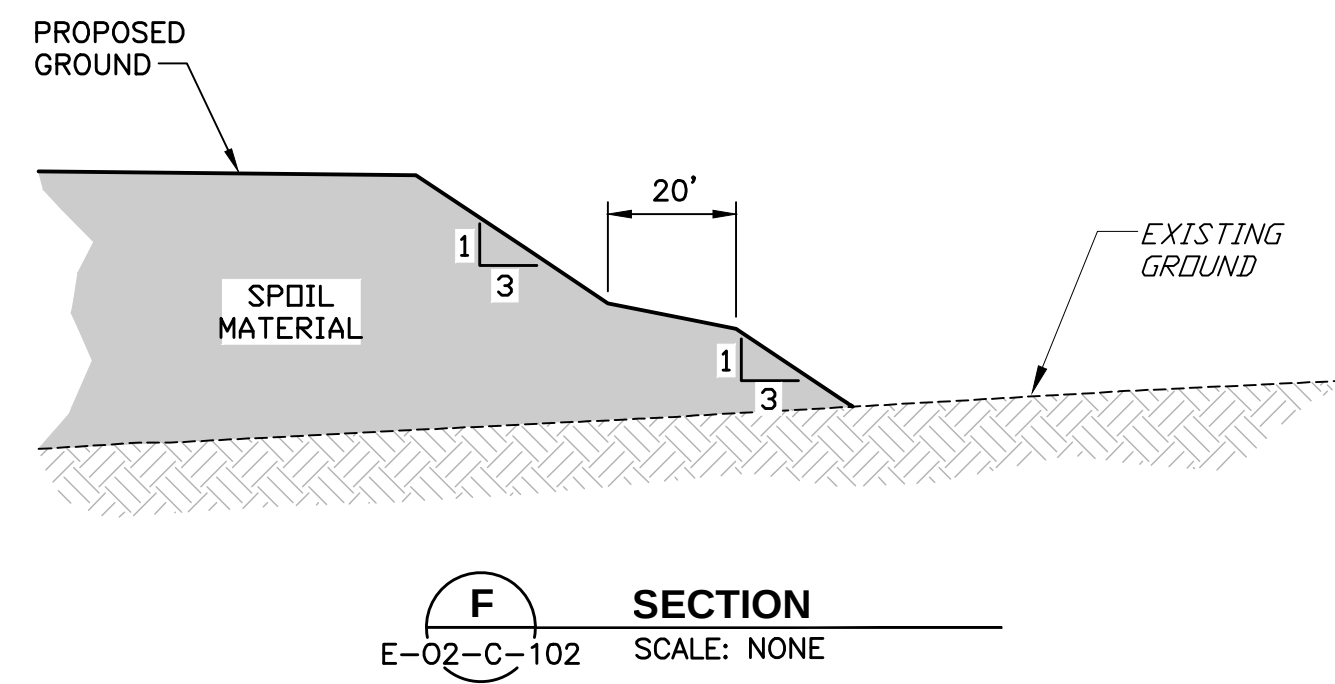
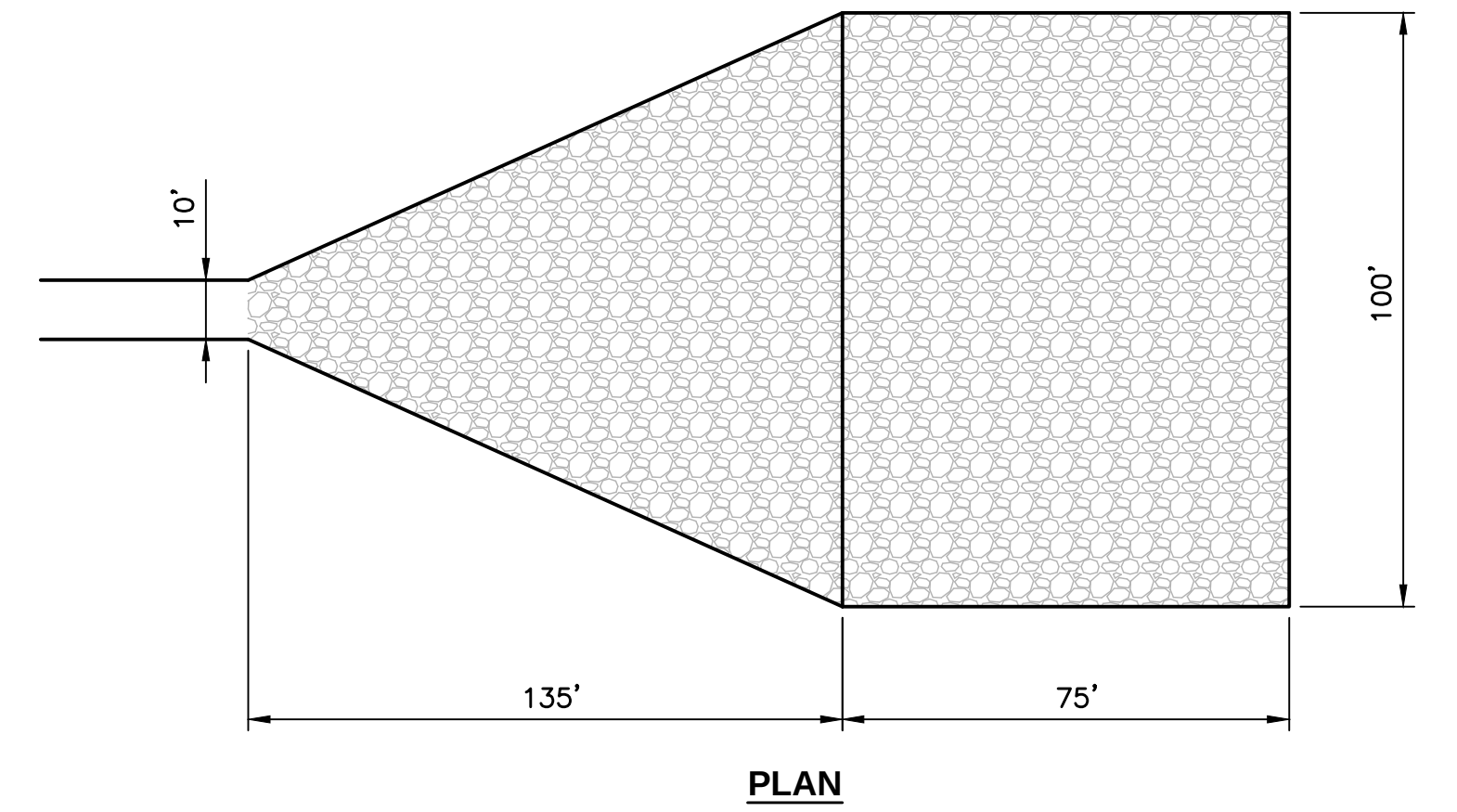
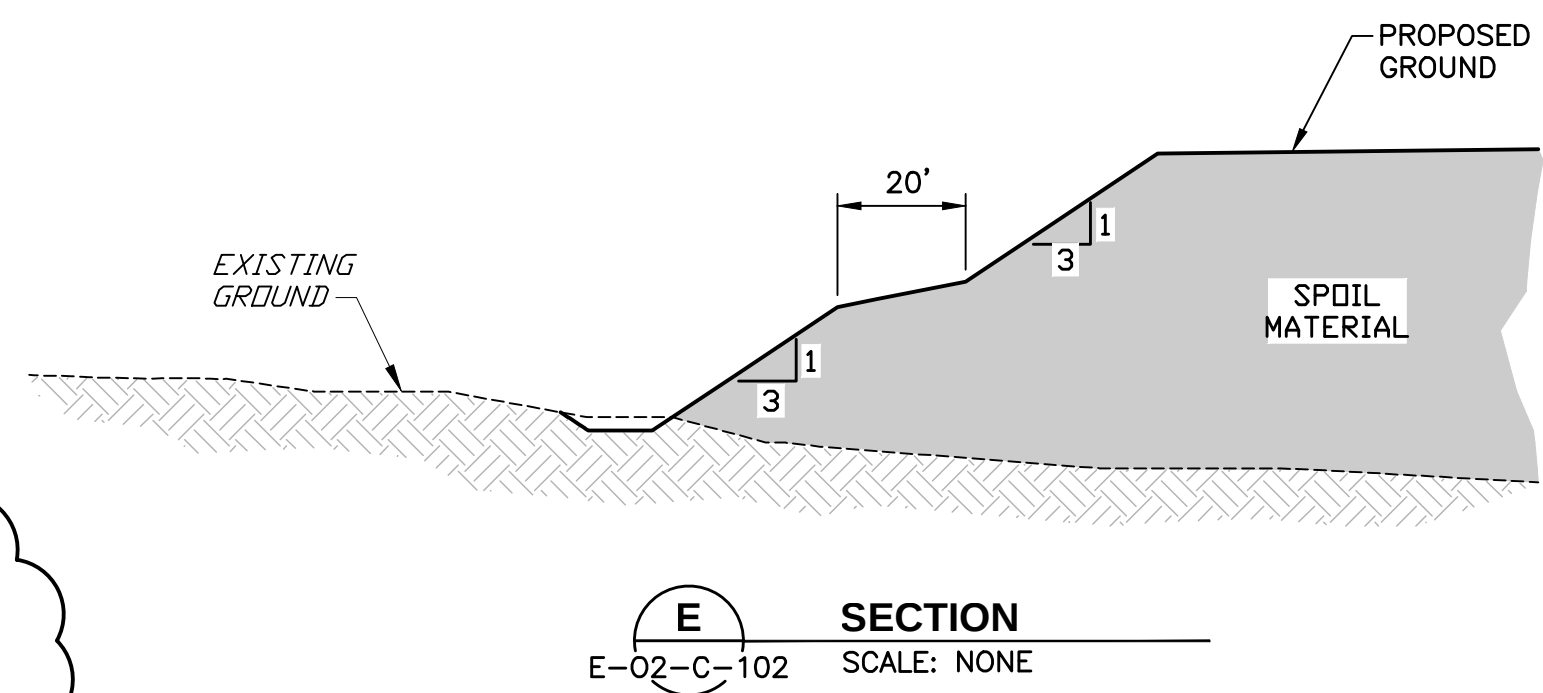
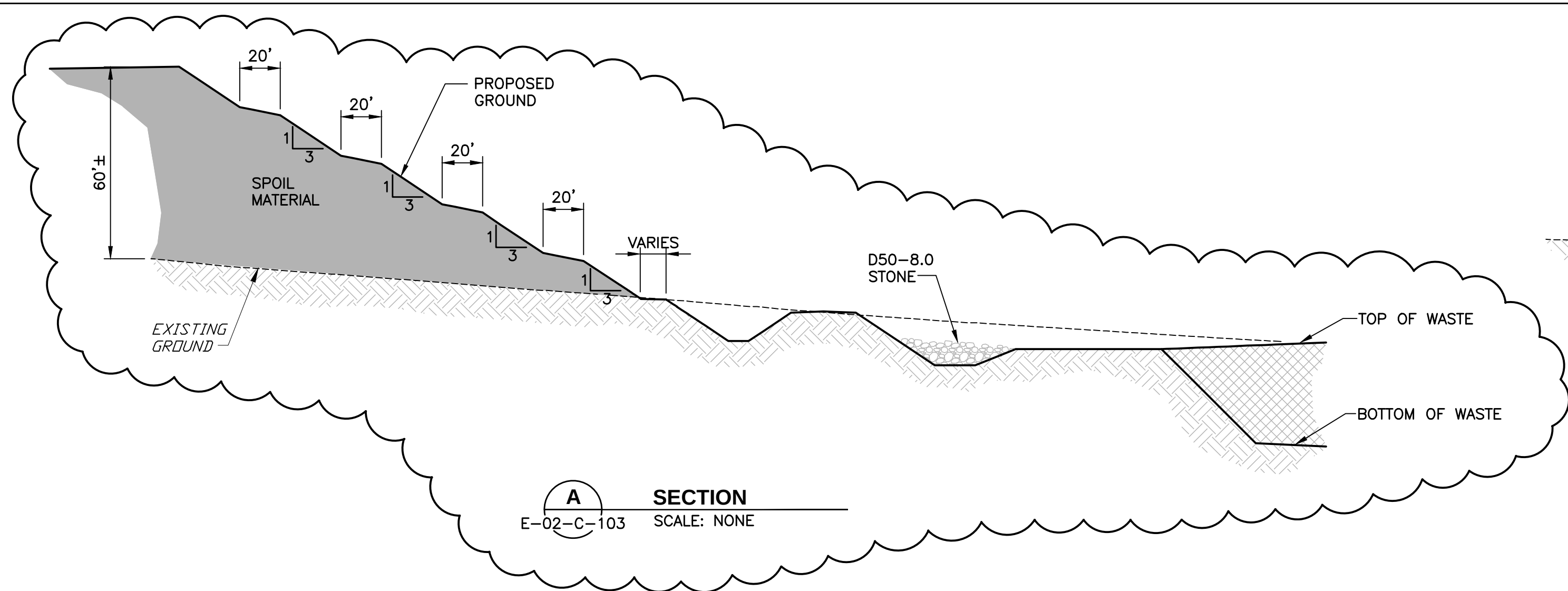


SEAL

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.

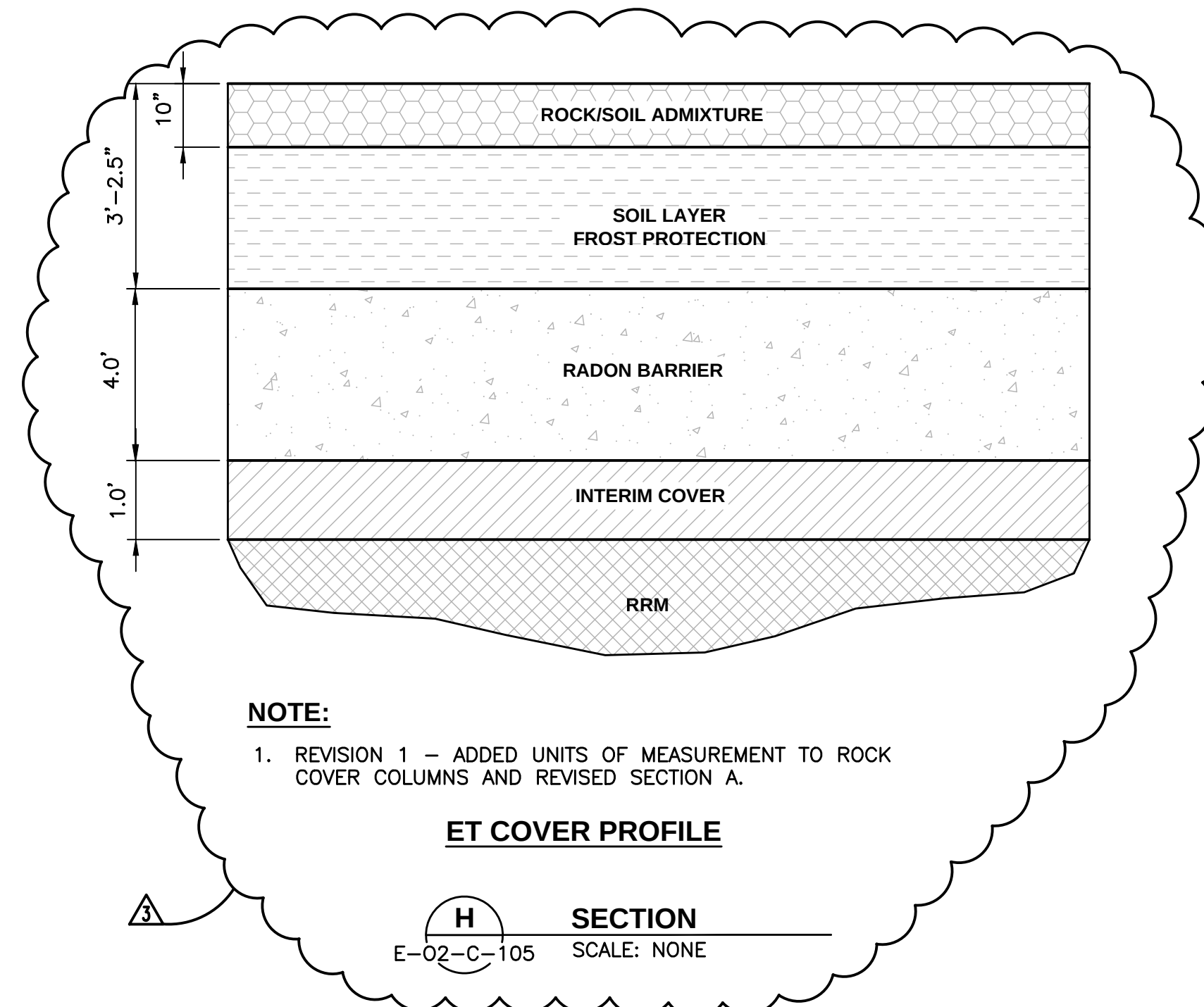
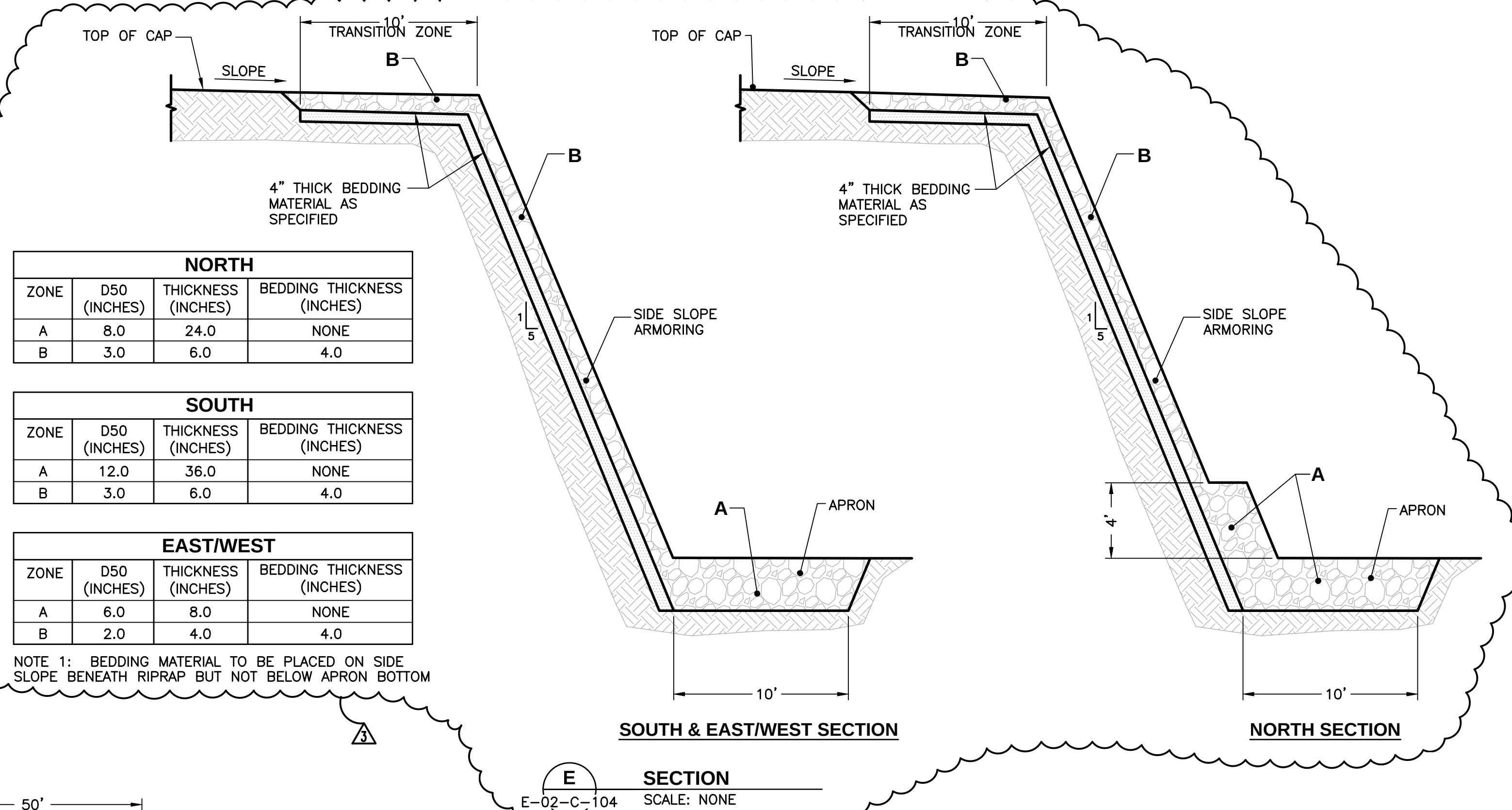
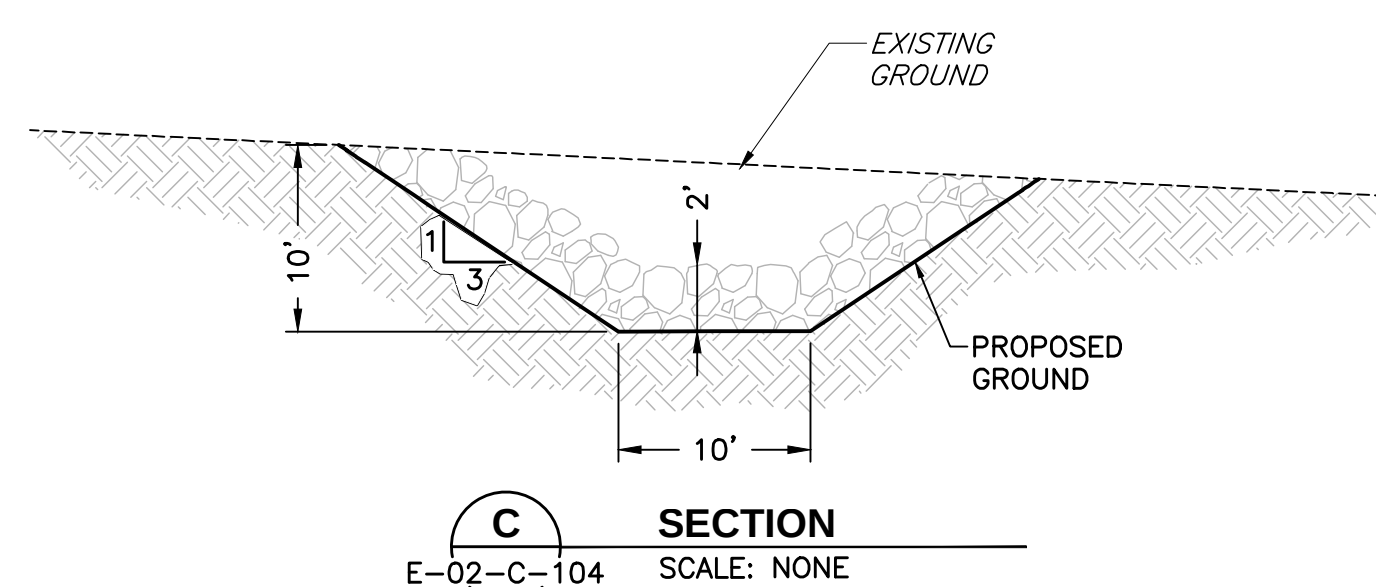
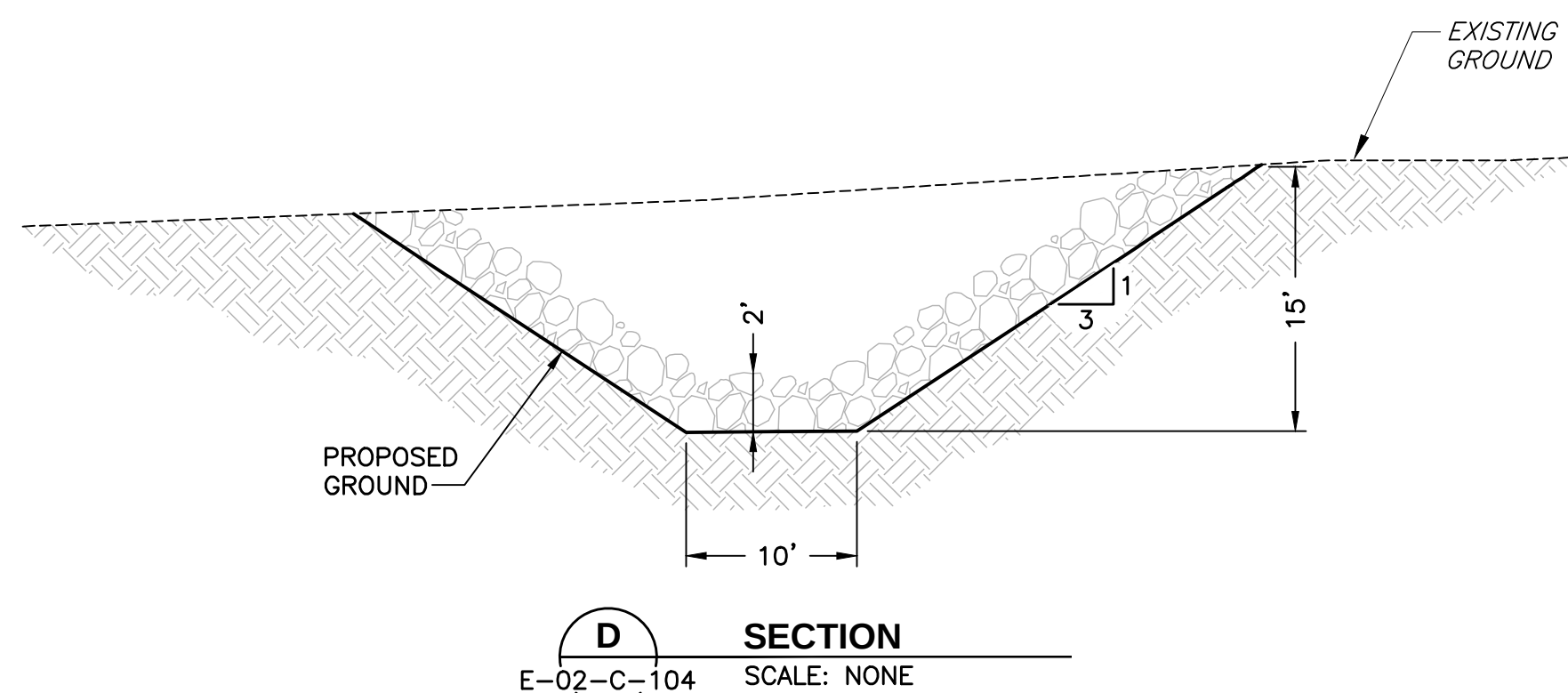
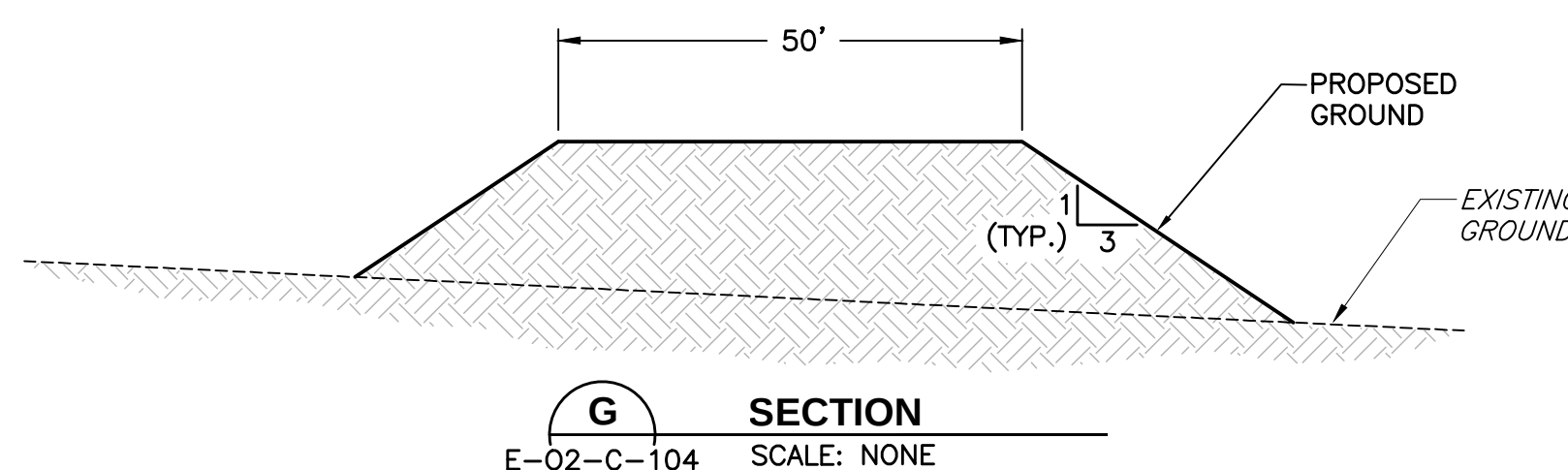
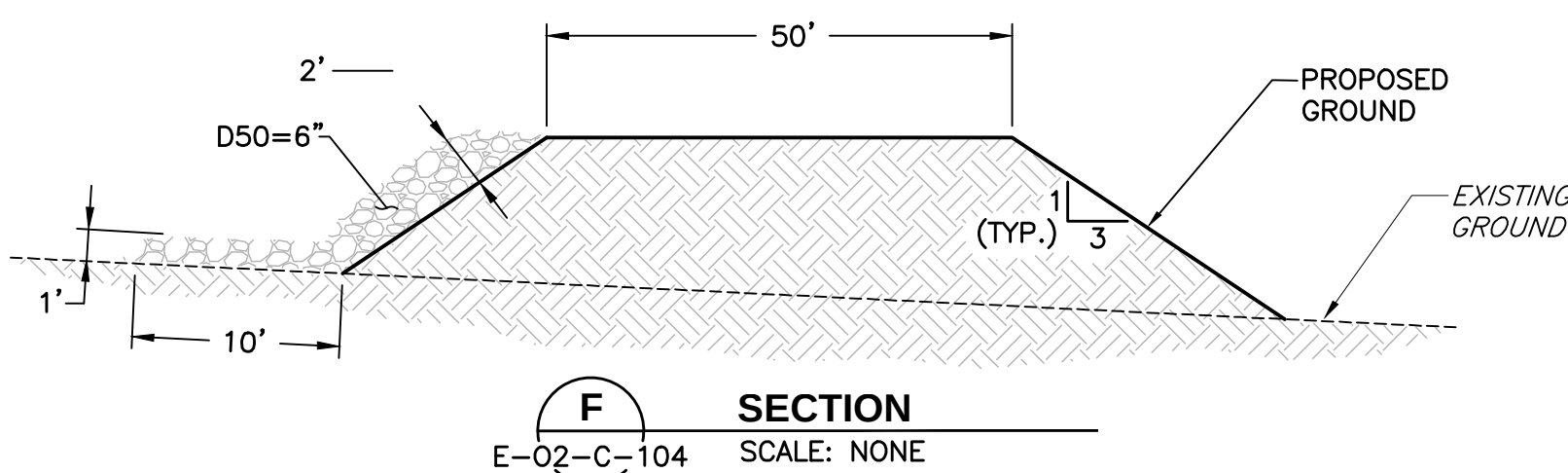
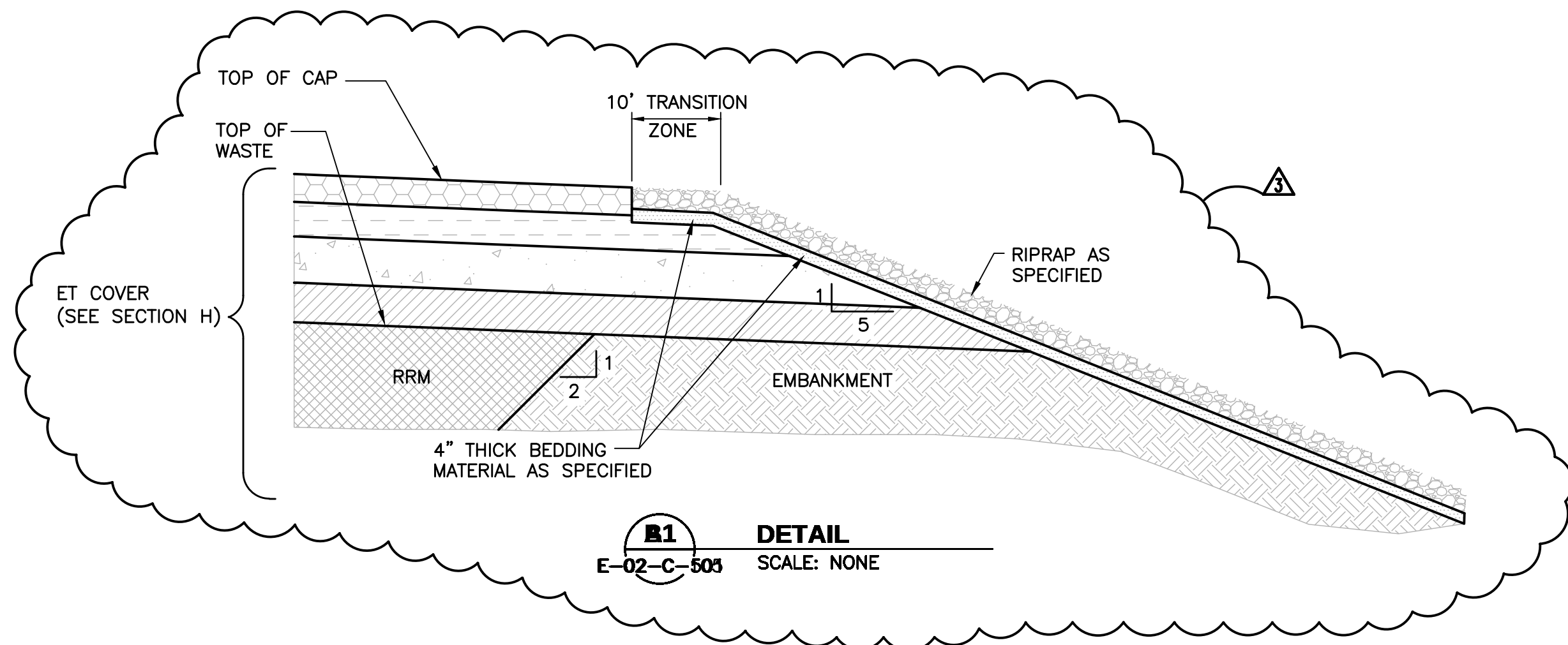
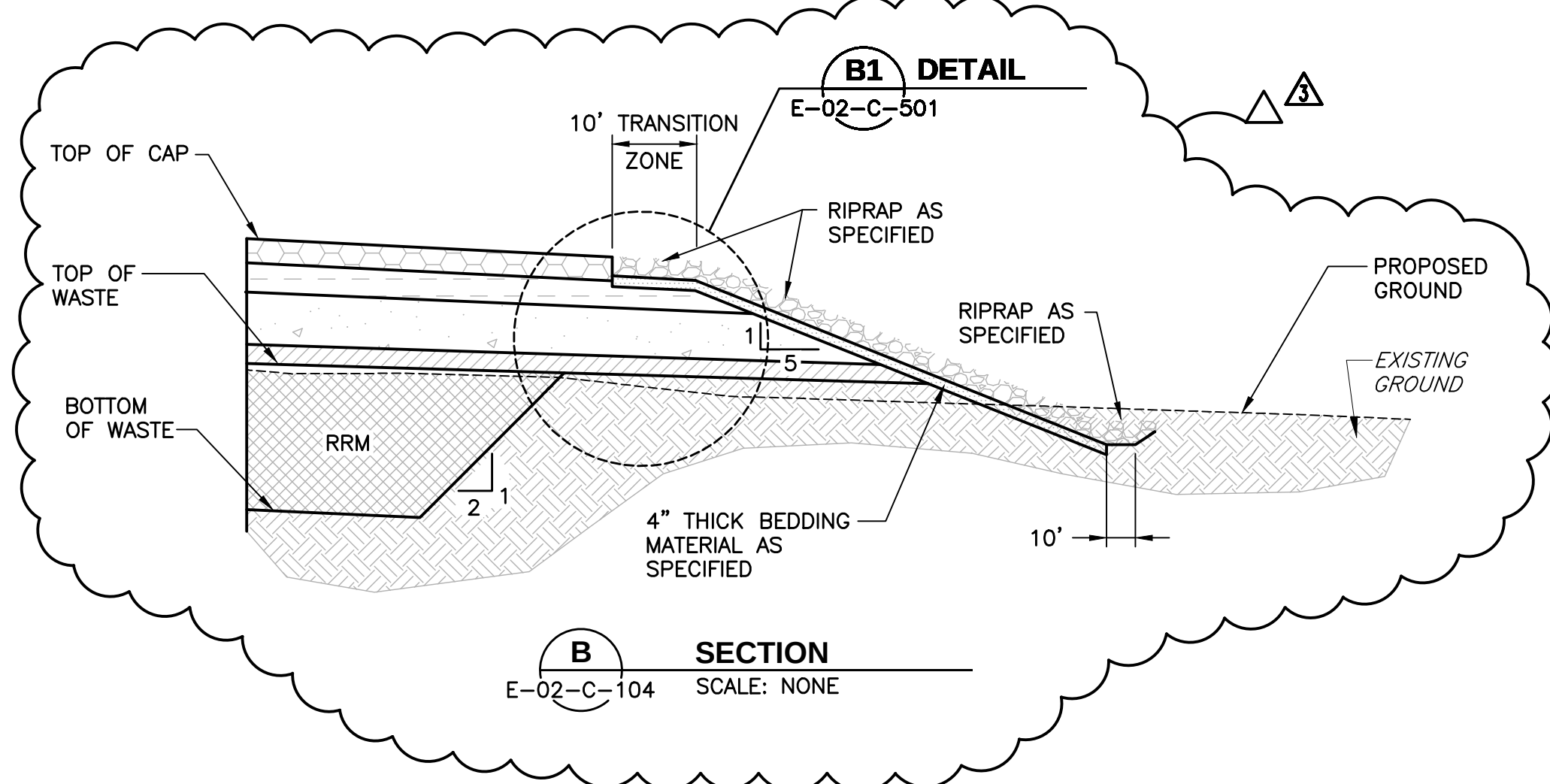
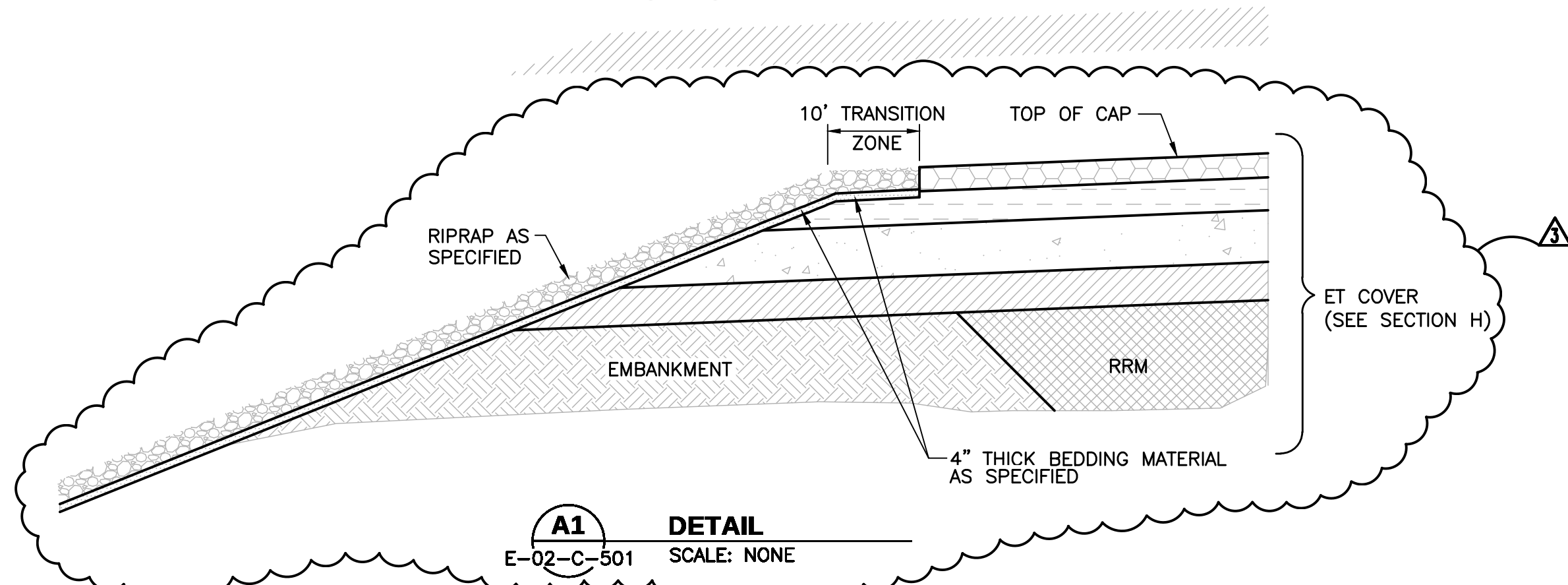
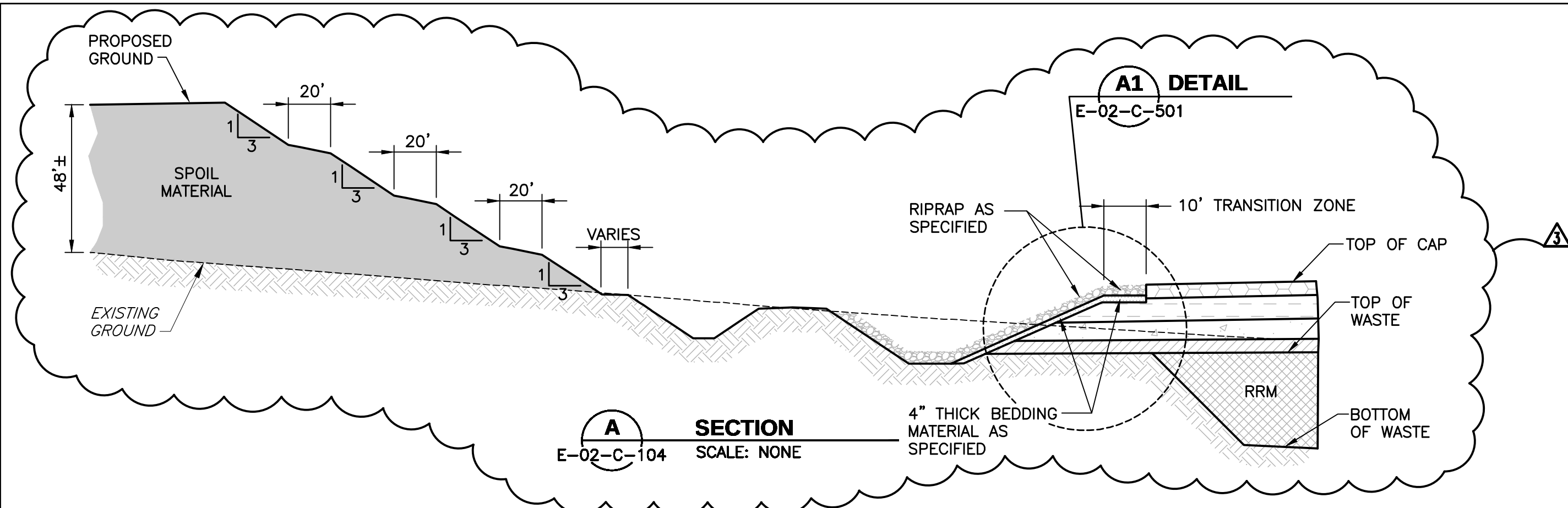
2	01/05/24	ET COVER		MWM	SFD	SFD
1	04/23/08	Added Quality Assurance Level Notes		JGA	FMP	
0	12/17/07	Issued For Construction		LLE	FMP	-
REVISION NO.	DATE	DESCRIPTION	DRAWN BY	CHECKED BY	PROJECT A/E	APPROVAL
U.S. DEPARTMENT OF ENERGY			Work Performed by			
GRAND JUNCTION, COLORADO			Dwyer Engineering, LLC			
			Environmental, Geotechnical, Civil, Structural Engineering			
PROJECT LOCATION		APPROVALS		MOAB UMTRA PROJECT		
RRP DISPOSAL CELL DESIGN		DRAWN BY	L ENGLAND	12/17/07	DISPOSAL CELL CROSS SECTIONS	
		ENGINEER	F PARTON	12/17/07		
		PROJECT TITLE	W BARTON	12/17/07		
		APPROVED BY	F PARTON	12/17/07		
		PROJECT MANAGER	M OAKS	12/17/07		
		DESIGNER	D SMITH	12/17/07		
REFERENCE			PROJECT NO.		SHT. 1 OF 1	
		DRAWING NO.		E-02-C-301		



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 A/E APPROVAL				
U.S. DEPARTMENT OF ENERGY GRAND JUNCTION, COLORADO			Work Performed by <i>Dwyer Engineering, LLC</i> Environmental, Geotechnical, Civil, Structural Engineering				
PROJECT LOCATION		APPROVALS		MOAB UMTRA PROJECT			
RAP DISPOSAL CELL DESIGN		DRAWN BY	L. ENGLAND	12/17/07	DETAILS — 1		
		ENGINEER	F. PARTON	12/17/07			
		DISCIPLINE LEAD	W. BARTON	12/17/07			
		APPROVED BY	F. PARTON	12/17/07			
		PROJECT MANAGER		M. OAKS			
REFERENCE			PROJECT NO.			SHT.	OF
		DR. BARRETT D. SMITH	12/17/07	DRAWING NO. E-02-C-500		1	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 MANAGER: M. OAKS DATE: 12/17/07			
U.S. DEPARTMENT OF ENERGY GRAND JUNCTION, COLORADO			Work Performed by Dwyer Engineering, LLC Environmental, Geotechnical, Civil, Structural Engineering			
PROJECT LOCATION RAP DISPOSAL CELL DESIGN			APPROVALS L. ENGLAND 12/17/07 F. PARTON 12/17/07 W. BARTON 12/17/07 M. OAKS 12/17/07 D. SMITH 12/17/07			
REFERENCE			PROJECT NO. E-02-C-501 SHEET 1 OF 1			
			MOAB UMTRA PROJECT DETAILS - 2			