

MILNER LANDFILL
MODULE 8 CONSTRUCTION DRAWINGS
ROUTT COUNTY, COLORADO
MARCH 2025

COLORADO

VICINITY MAP

SCALE: 1" = 100'

SHEET LIST TABLE	
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9 ALT	DEWATERING PLAN
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11 ALT	DEWATERING PIPES AND PROFILE

Rev #

Date

By

CHK'd

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MILNER LANDFILL

MODULE 8 CONSTRUCTION

COVER SHEET

COLORADO LICENSED PROFESSIONAL ENGINEER

3.31.25

0048503

MICHAEL J. PETERSON

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Designed

MJP

Drawn

DJF

Checked

MJP

Date: March 2025

Scale: Horiz: Vert:

Project No: 4D24381

Sheet: 1 of 8

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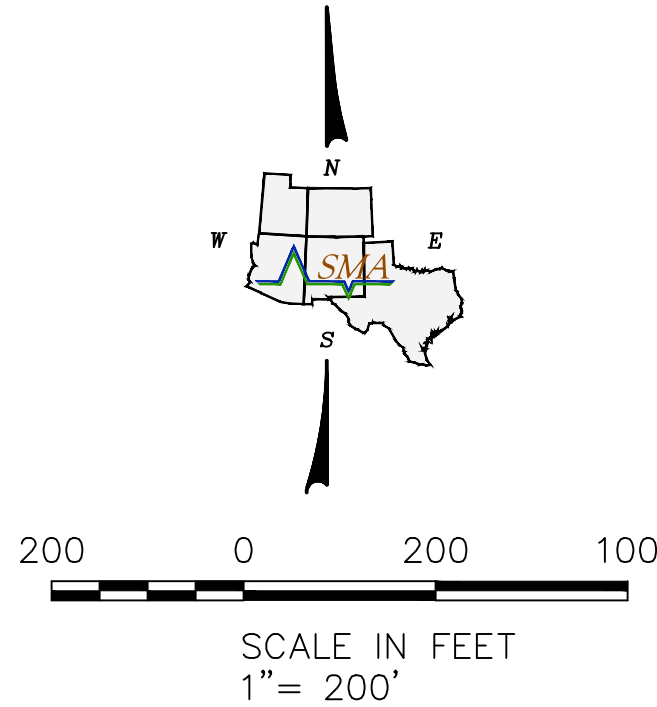
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Designed MJP	Drawn DJF	Checked MJP
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Date:	March 2025
Scale:	Horiz: Vert:

Project No:	4D24381

Sheet: 1 of 8



- SITE LEGEND:**
- PROPERTY BOUNDARY
 - MODULE BOUNDARY
 - MAJOR EXISTING CONTOURS, 2024 SURVEY
 - MINOR EXISTING CONTOURS, 2024 SURVEY
 - CONTRACTOR ACCESS ROUTE

- PZ PIEZOMETER
- GP GAS MONITOR PROBE
- MW MONITOR WELL
- NWCC TEST PIT (1997)

- NOTES**
1. SITE TOPOGRAPHY BASED ON DRONE SURVEY JUNE 2024.
 2. CONTRACTOR TO PROVIDE DUST CONTROL INCLUDING WATERING OF GRADES AND CONSTRUCTION HAUL ROAD
 3. WATER AVAILABLE ON-SITE AT WELL #1

Rev #	Date	Description	By	Crkd

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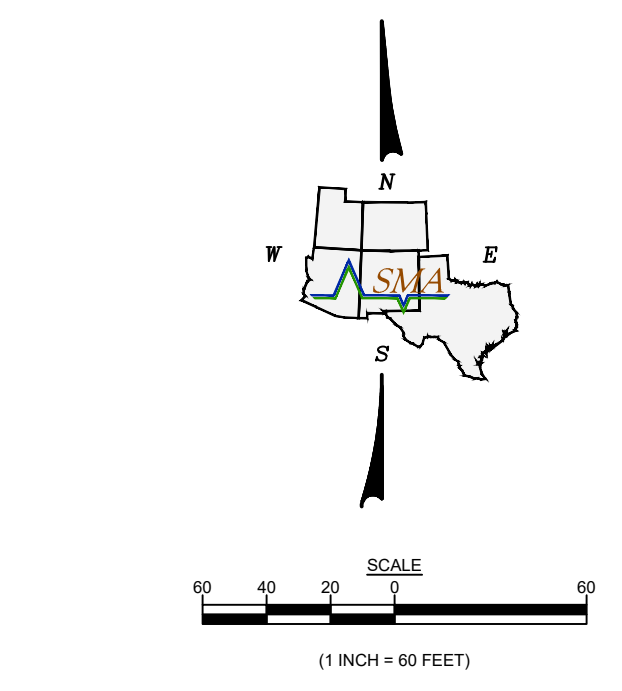
MILNER LANDFILL

MODULE 8 CONSTRUCTION

CONSTRUCTION SITE MANAGEMENT PLAN

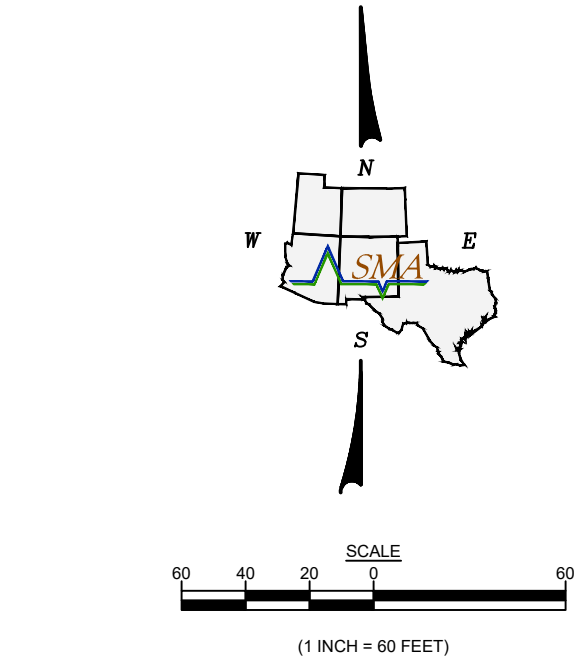
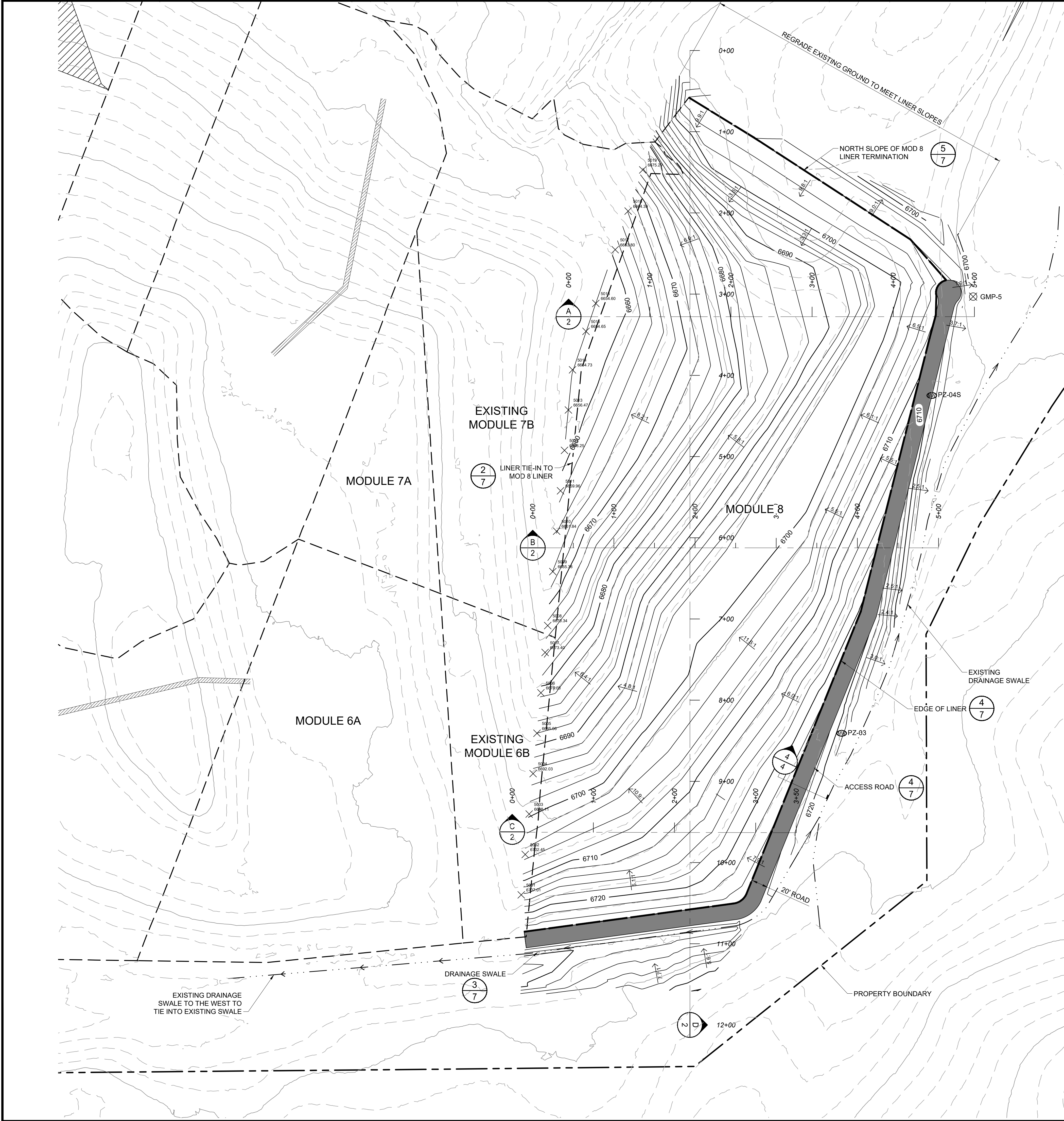


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Designed MJP	Drawn DJF	Checked MJP
Date: March 2025		
Scale: Horiz: Vert:		
Project No: 4D24381		
Sheet: 2 OF 8		



	PROPERTY BOUNDARY
	MODULE BOUNDARY
	MAJOR EXISTING CONTOURS
	MINOR EXISTING CONTOURS
	MAJOR PROPOSED CONTOURS - TOP OF SUBGRADE
	MINOR PROPOSED CONTOURS - TOP OF SUBGRADE
	EDGE OF LINER
	SWALE CENTER LINE
	PROPOSED ROAD
	PIEZOMETER
	GAS MONITORING PROBE
	CERTIFIED LINER POINT - GOLDER 2020

1. CONTRACTOR TO PROTECT EXISTING PIEZOMETERS AND GROUNDWATER MONITORING WELLS. DAMAGE TO THESE BY CONTRACTOR SHALL BE REPAIRED AT CONTRACTOR EXPENSE.
2. IF WASTE IS ENCOUNTERED DURING GRADING OF MODULE 8 NORTH SLOPE, CONTRACTOR SHALL REMOVE WASTE AND DISPOSE OF IN ACTIVE FACE OF LANDFILL. WASTE SHALL BE EXCAVATED TO A DEPTH SUCH THAT AT LEAST A FOOT OF SUBGRADE SOIL WILL COVER THE WASTE
3. GMP-5 TO BE INSTALLED BETWEEN THE EDGE OF ACCESS ROAD AND DRAINAGE CHANNEL



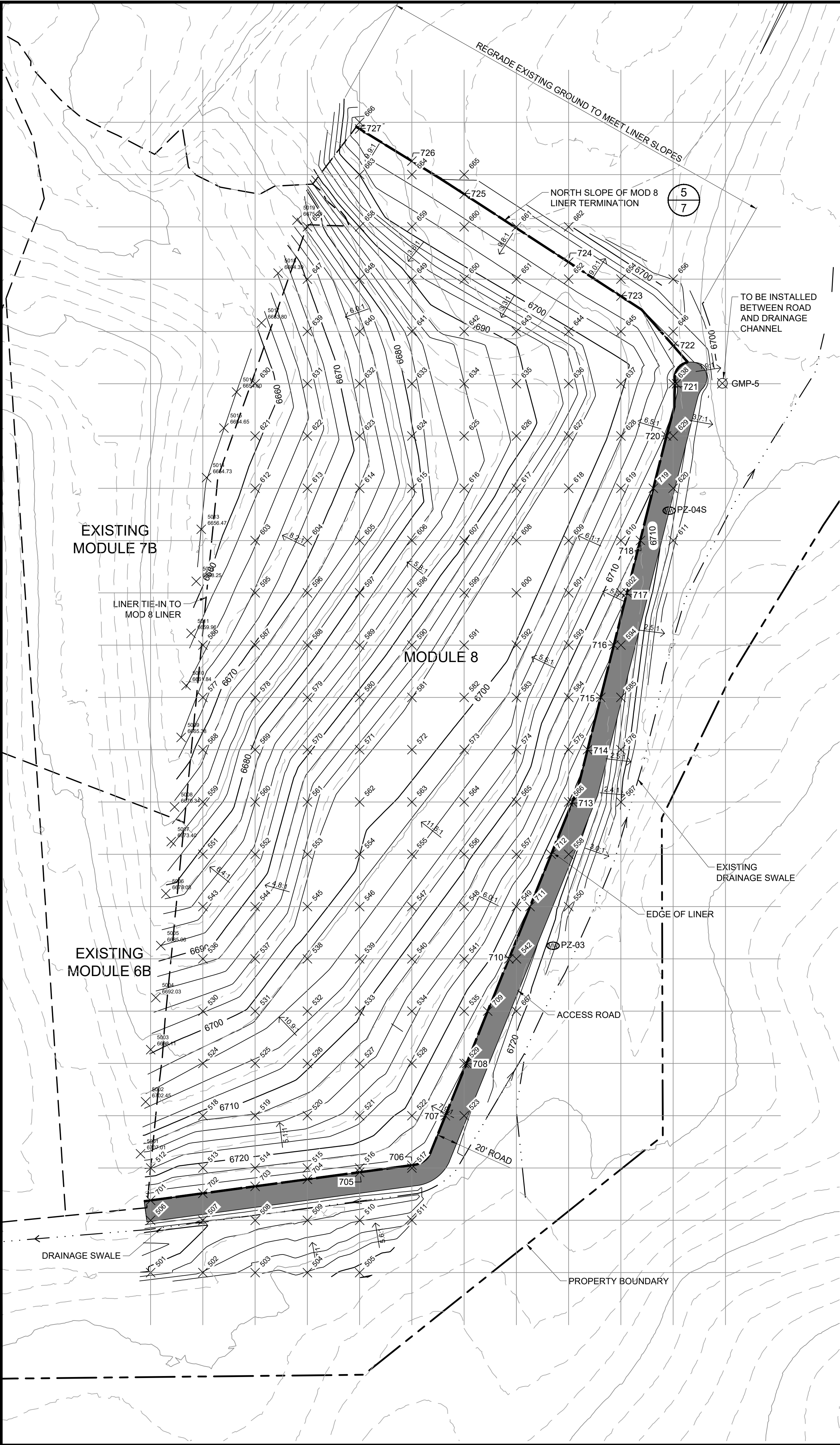
SITE LEGEND:

- | | |
|-------------------|--|
| --- | PROPERTY BOUNDARY |
| - - - | MODULE BOUNDARY |
| --- | MAJOR EXISTING CONTOURS |
| --- | MINOR EXISTING CONTOURS |
| --- | MAJOR PROPOSED CONTOURS - TOP OF LINER |
| --- | MINOR PROPOSED CONTOURS - TOP OF LINER |
| --- | EDGE OF LINER |
| --- | SWALE CENTER LINE |
| --- | PROPOSED ROAD |
| ○ PZ | PIEZOMETER |
| ⊗ GMP-5 | GAS MONITORING PROBE |
| × 5002
0702.45 | CERTIFIED LINER POINT - GOLDER 2020 |

NOTES

- CONTRACTOR TO PROTECT EXISTING PIEZOMETERS AND GROUNDWATER MONITORING WELLS. DAMAGE TO THESE BY CONTRACTOR SHALL BE REPAIRED AT CONTRACTOR EXPENSE.
- IF WASTE IS ENCOUNTERED DURING GRADING OF MODULE 8 NORTH SLOPE, CONTRACTOR SHALL REMOVE WASTE AND DISPOSE OF IN ACTIVE FACE OF LANDFILL. WASTE SHALL BE EXCAVATED TO A DEPTH SUCH THAT AT LEAST A FOOT OF SUBGRADE SOIL WILL COVER THE WASTE
- GMP-5 TO BE INSTALLED BETWEEN THE EDGE OF ACCESS ROAD AND DRAINAGE CHANNEL

Description		By	CRK
Rev #		Date	
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MILNER, COLORADO			
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MILNER LANDFILL MODULE 8 CONSTRUCTION DESIGN CLAY LINER PLAN			
			
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Date: March 2025			
Scale: Horiz: Vert:			
Project No: 4D24381			
Sheet: 4 of 8			



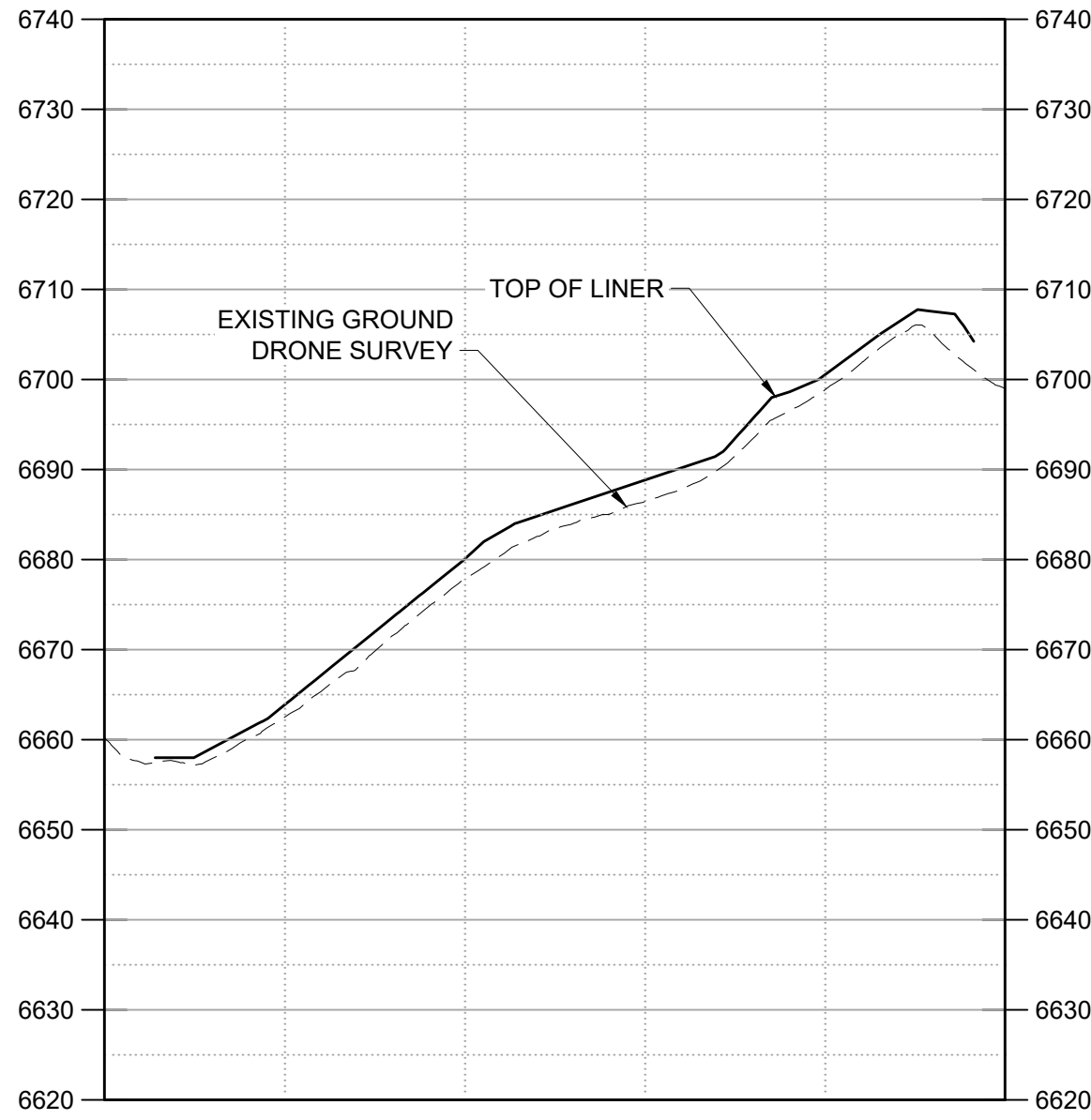
DESIGN ELEVATION SUBGRADE, CLAY LINER, GDL AND OPS LAYER						
POINT NUMBER	SUBGRADE ELEVATION	CLAY LINER ELEVATION	GDL ELEVATION	OPS LAYER ELEVATION	NORTHING	EASTING
501	6719.71	--	--	--	8391.43	8096.29
502	6723.22	--	--	--	8391.43	8146.29
503	6726.01	--	--	--	8391.43	8196.29
504	6727.11	--	--	--	8391.43	8246.29
505	6730.03	--	--	--	8391.43	8296.29
506	6724.21	--	--	--	8441.43	8096.29
507	6721.44	--	--	--	8441.43	8146.29
508	6719.76	--	--	--	8441.43	8196.29
509	6720.91	--	--	--	8441.43	8246.29
510	6722.84	--	--	--	8441.43	8296.29
511	6726.05	--	--	--	8441.43	8346.29
512	6717.40	6718.40	6719.10	6720.10	8491.43	8096.40
513	6720.02	6721.02	6721.72	6722.72	8491.43	8146.29
514	6721.21	6722.21	6722.91	6723.91	8491.43	8196.29
515	6722.40	6723.40	6724.10	6725.10	8491.43	8246.29
516	6723.58	6724.58	6725.28	6726.28	8491.43	8296.29
517	6724.20	--	--	--	8491.43	8346.29
518	6710.14	6711.14	6711.84	6712.84	8541.43	8146.29
519	6711.62	6712.62	6713.32	6714.32	8541.43	8196.29
520	6713.59	6714.59	6715.29	6716.29	8541.43	8246.29
521	6716.44	6717.44	6718.14	6719.14	8541.43	8296.29
522	6720.15	6721.15	6721.85	6722.85	8541.43	8346.29
523	6723.30	--	--	--	8541.43	8396.29
524	6703.06	6704.06	6704.76	6705.76	8591.43	8146.29
525	6705.46	6706.46	6707.16	6708.16	8591.43	8196.29
526	6708.57	6709.57	6710.27	6711.27	8591.43	8246.29
527	6712.44	6713.44	6714.14	6715.14	8591.43	8296.29
528	6717.22	6718.22	6719.22	6720.22	8591.43	8346.29
529	6722.79	--	--	--	8591.43	8396.29
530	6696.91	6697.91	6698.61	6699.61	8641.43	8146.29
531	6700.17	6701.17	6701.87	6702.87	8641.43	8196.29
532	6704.39	6705.39	6706.09	6707.09	8641.43	8246.29
533	6708.71	6709.71	6710.41	6711.41	8641.43	8296.29
534	6714.29	6715.29	6716.29	6717.29	8641.43	8346.29
535	6719.86	6720.86	6721.56	6722.56	8641.43	8396.29
536	6690.44	6691.44	6692.14	6693.14	8691.43	8146.29
537	6695.36	6696.36	6697.06	6698.06	8691.43	8196.29
538	6701.33	6702.33	6703.03	6704.03	8691.43	8246.29
539	6704.68	6705.68	6706.38	6707.38	8691.43	8296.29
540	6710.41	6711.41	6712.11	6713.11	8691.43	8346.29
541	6716.15	6717.15	6717.85	6718.85	8691.43	8396.29
542	6721.53	--	--	--	8691.43	8446.29
543	6684.35	6685.35	6686.05	6687.05	8741.43	8146.29
544	6690.57	6691.57	6692.27	6693.27	8741.43	8196.29
545	6697.34	6698.34	6699.04	6700.04	8741.43	8246.29
546	6702.00	6703.00	6703.70	6704.70	8741.43	8296.29
547	6706.10	6707.10	6707.80	6708.80	8741.43	8346.29
548	6711.92	6712.92	6713.62	6714.62	8741.43	8396.29
549	6719.07	6720.07	6720.77	6721.77	8741.43	8446.29
550	6716.06	--	--	--	8741.42	8496.29
551	6679.59	6680.59	6681.29	6682.29	8791.43	8146.29
552	6685.82	6686.82	6687.52	6688.52	8791.43	8196.29
553	6695.73	6696.73	6697.43	6698.43	8791.43	8246.29
554	6698.99	6699.99	6700.69	6701.69	8791.43	8296.29
555	6702.79	6703.79	6704.49	6705.49	8791.43	8346.29

DESIGN ELEVATION SUBGRADE, CLAY LINER, GDL AND OPS LAYER						
POINT NUMBER	SUBGRADE ELEVATION	CLAY LINER ELEVATION	GDL ELEVATION	OPS LAYER ELEVATION	NORTHING	EASTING
701	6724.77	6725.77	6726.47	6727.47	8460.46	8096.29
702	6724.67	6725.67	6726.37	6727.37	8467.19	8146.29
703	6724.56	6725.56	6726.26	6727.26	8473.93	8196.29
704	6724.46	6725.46	6726.16	6727.16	8480.66	8246.29
705	6724.36	6725.36	6726.06	6727.06	8487.39	8296.29
706	6724.25	6725.25	6725.95	6726.95	8494.13	8346.29
707	6723.72	6724.72	6725.42	6726.42	8541.43	8378.33
708	6723.04	6724.04	6724.74	6725.74	8591.43	8398.58
709	6722.37	6723.37	6724.07	6725.07	8641.43	8418.83
710	6721.70	6722.70	6723.40	6724.40	8691.43	8439.08
711	6721.02	6722.02	6722.72	6723.72	8741.43	8459.33
712	6720.35	6721.35	6722.05	6723.05	8791.42	8479.58
713	6719.67	6720.67	6721.37	6722.37	8841.42	8499.83
714	6718.13	6719.13	6719.83	6720.83	8891.42	8514.39

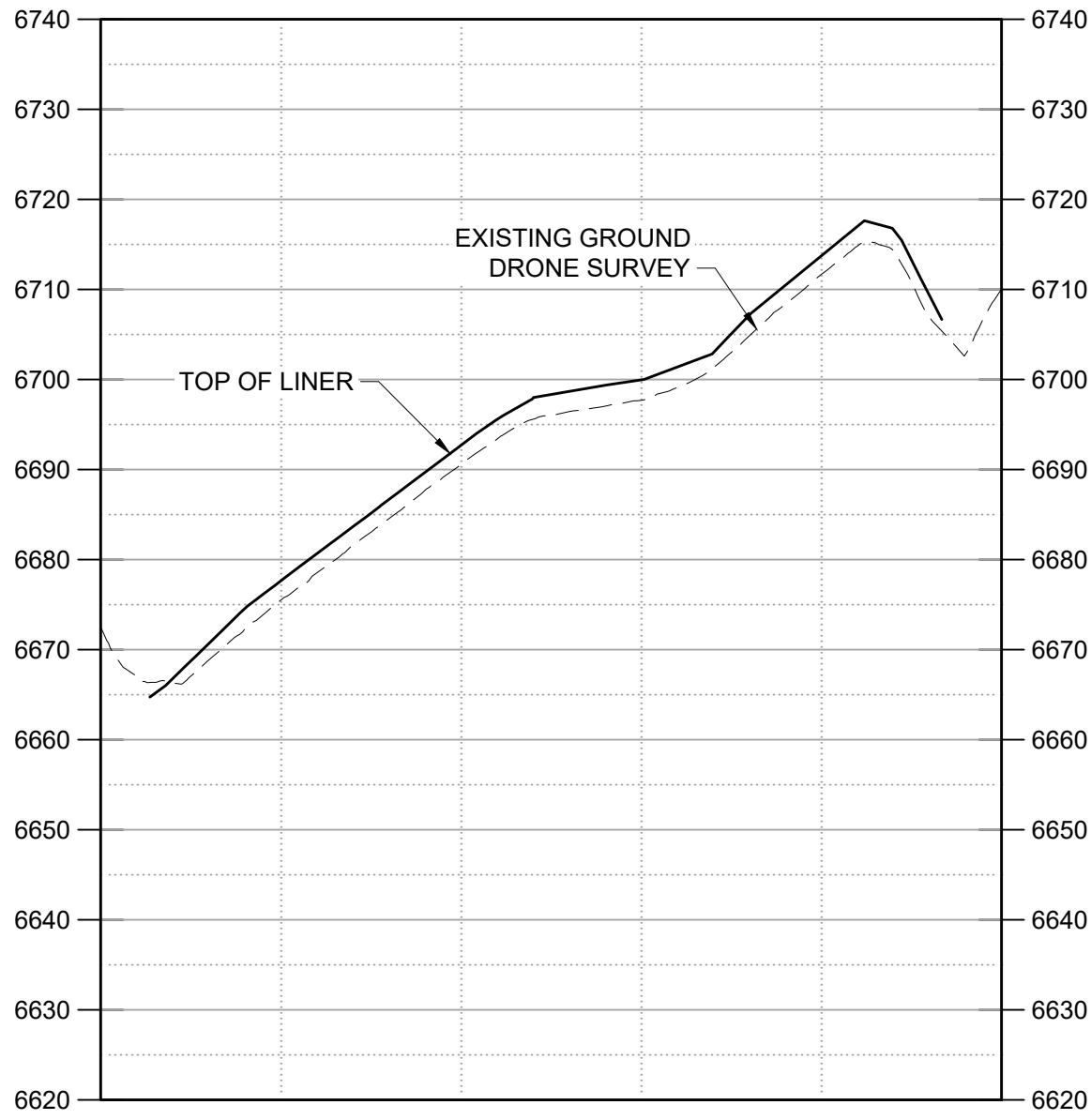
DESIGN ELEVATION SUBGRADE, CLAY LINER, GDL AND OPS LAYER						
POINT NUMBER	SUBGRADE ELEVATION	CLAY LINER ELEVATION	GDL ELEVATION	OPS LAYER ELEVATION	NORTHING	EASTING
556	6707.81	6708.81	6709.51	6710.51	8791.43	8396.29
557	6714.55	6715.55	6716.25	6717.25	8791.43	8446.29
558	6719.83	--	--	--	8791.42	8496.29
559	6674.61	6675.61	6676.31	6677.31	8841.43	8146.29
560	6683.01	6684.01	6684.71	6685.71	8841.43	8196.29
561	6692.93	6693.93	6694.63	6695.63	8841.43	8246.29
562	6697.95	6698.95	6699.65	6700.65	8841.43	8296.29
563	6700.16	6701.16	6701.86	6702.86	8841.43	8346.29
564	6703.75	6704.75	6705.45	6706.45	8841.43	8396.29
565	6709.57	6710.57	6711.27	6712.27	8841.43	8446.29
566	6719.00	6720.00	6720.70	6721.70	8841.42	8496.29
567	6709.06	--	--	--	8841.42	8546.29
568	6670.25	6671.25	6671.95	6672.95	8891.43	8146.29
569	6679.74	6680.74	6681.44	6682.44	8891.43	8196.29
570	6688.34	6689.34	6690.04	6691.04	8891.43	8246.29
571	6695.59	6696.59	6697.29	6698.29	8891.43	8296.29
572	6698.24	6699.24	6699.94	6700.94	8891.43	8346.29
573	6700.95	6701.95	6702.65	6703.65	8891.43	8396.29
574	6705.25	6706.25	6706.95	6707.95	8891.43	8446.29
575	6715.19	6716.19	6716.89	6717.89	8891.42	8496.29
576	6712.03	6713.03	6713.73	6714.73	8891.42	8546.29
577	6666.19	6667.19	6667.89	6668.89	8941.43	8146.29
578	6674.91	6675.91	6676.61	6677.61	8941.43	8196.29
579	6682.44	6683.44	6684.14	6685.14	8941.43	8246.29
580	6689.97	6690.97	6691.67	6692.67	8941.43	8296.29
581	6696.92	6697.92	6698.62	6699.62	8941.43	8346.29
582	6698.62	6699.62	6700.32	6701.32	8941.43	8396.29
583	6702.69	6703.69	6704.39	6705.39	8941.43	8446.29
584	6711.32	6712.32	6713.02	6714.02	8941.42	8496.29
585	6714.38	--	--	--	8941.42	8546.29
586	6662.49	6663.49	6664.19	6665.19	8991.43	8146.29
587	6669.23	6670.23	6670.93	6671.93	8991.43	8196.29
588	6676.73	6677.73	6678.43	6679.43	8991.43	8246.29
589	6684.23	6685.23	6685.93	6686.93	8991.43	8296.29
590	6691.72	6692.72	6693.42	6694.42	8991.43	8346.29
591	6697.53	6698.53	6699.23	6700.23	8991.43	8396.29
592	6699.31	6700.31	6701.01	6702.01	8991.43	8446.29
593	6707.46	6708.46	6709.16	6710.16	8991.42	8496.29
594	6714.15	--	--	--	8991.42	8546.29
595	6665.21	6666.21	6666.91	6667.91	9041.43	8196.29
596	6671.50	6672.50	6673.20	6674.20	9041.43	8246.29
597	6679.00	6680.00	6680.70	6681.70	9041.43	8296.29
598	6686.50	6687.50	6688.20	6689.20	9041.43	8346.29
599	6694.44	6695.44	6696.14	6697.14	9041.43	8396.29
600	6698.08	6699.08	6699.78	6700.78	9041.43	8446.29
601	6703.59	6704.59	6705.29	6706.29	9041.42	8496.29
602	6711.76	6712.76	6713.46	6714.46	9041.42	8546.29
603	6662.78	6663.78	6664.48	6665.48	9091.43	8196.29
604	6668.12	6669.12	6669.82	6670.82	9091.43	8246.29
605	6673.77	6674.77	6675.47	6676.47	9091.43	8296.29
606	6681.27	6682.27	6682.97	6683.97	9091.43	8346.29
607	6688.69	6689.69	6690.39	6691.39	9091.43	8396.29
608	6697.16	6698.16	6698.86	6699.86	9091.43	8446.29
609	6700.07	6701.07	6701.77	6702.77	9091.42	8496.29
610	6707.90	6708.90	6709.60	6710.60	9091.42	8546.29

DESIGN ELEVATION SUBGRADE, CLAY LINER, GDL AND OPS LAYER						
POINT NUMBER	SUBGRADE ELEVATION	CLAY LINER ELEVATION	GDL ELEVATION	OPS LAYER ELEVATION	NORTHING	EASTING
715	6716.32	6717.32	6718.02	6719.02	8941.42	8527.05
716	6714.52	6715.52	6716.22	6717.22	8991.42	8539.51
717	6712.71	6713.71	6714.41	6715.41	9041.42	8552.10
718	6710.89	6711.89	6712.59	6713.59	9091.42	8565.04
719	6709.10	6710.10	6710.80	6711.80	9141.42	8577.28
720	6707.32	6708.32	6709.02	6710.02	9191.42	8589.87
721	6706.45	6707.45	6708.15	6709.15	9241.42	8599.55
722	6705.19	6706.19	6706.89	6707.89	9277.84	8596.29
723	6705.00	6706.00	6706.70	6707.70	9325.10	8546.29
724	6705.00	6706.00	6706.70	6707.70	9357.65	8496.29
725	6705.00	6706.00	6706.70	6707.70	9422.76	8396.29
726	6705.00	6706.00	6706.70	6707.70	9454.30	8346.29
727	6705.00	6706.00	6706.70	6707.70	9485.04	8296.29

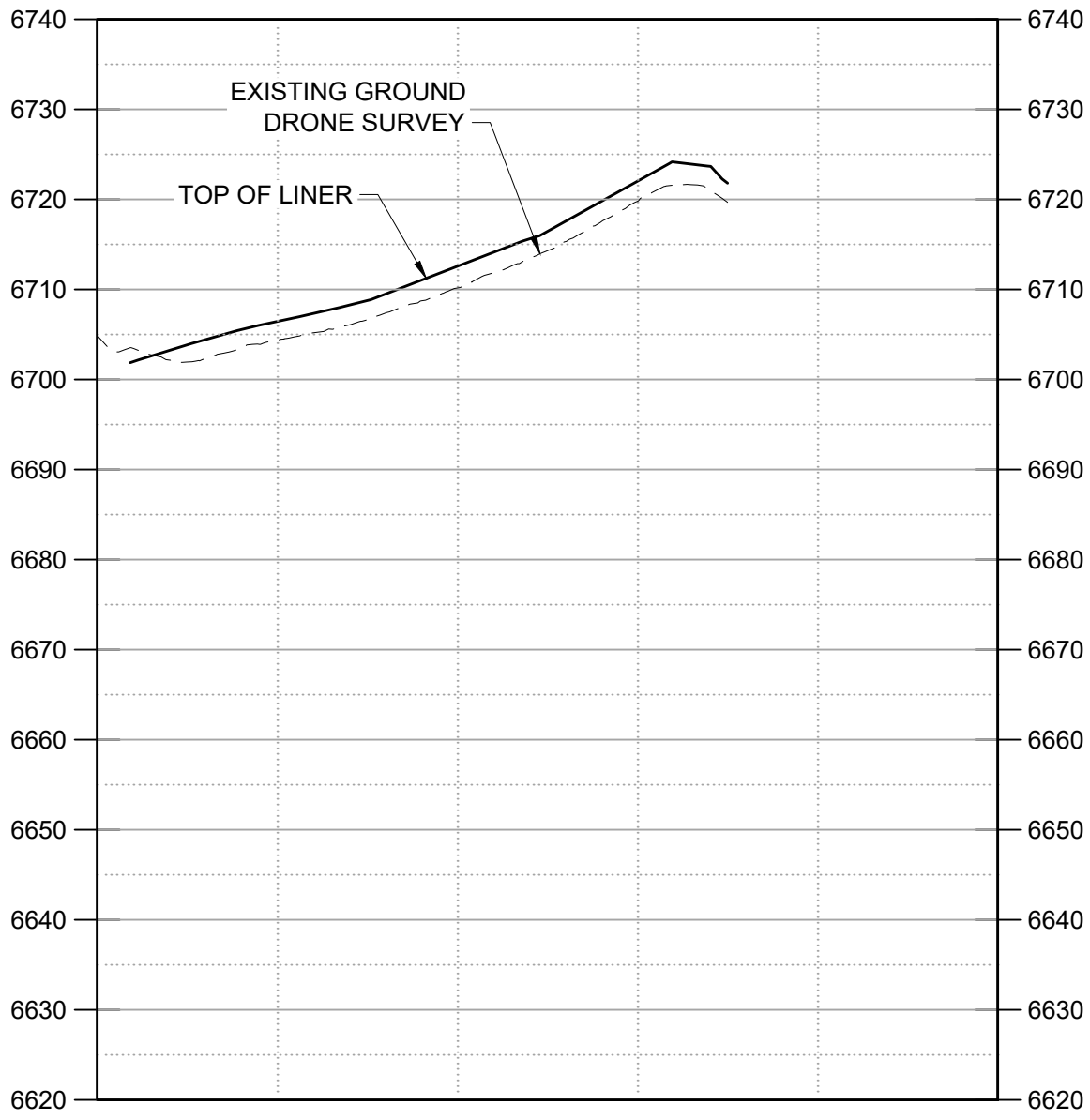
DESIGN ELEVATION SUBGRADE, CLAY LINER, GDL AND OPS LAYER						
POINT NUMBER	SUBGRADE ELEVATION	CLAY LINER ELEVATION	GDL ELEVATION	OPS LAYER ELEVATION	NORTHING	EASTING
611	6706.10	--	--	--	9091.42	8596.29
612	6660.56	6661.56	6662.26	6663.26	9141.43	8196.29



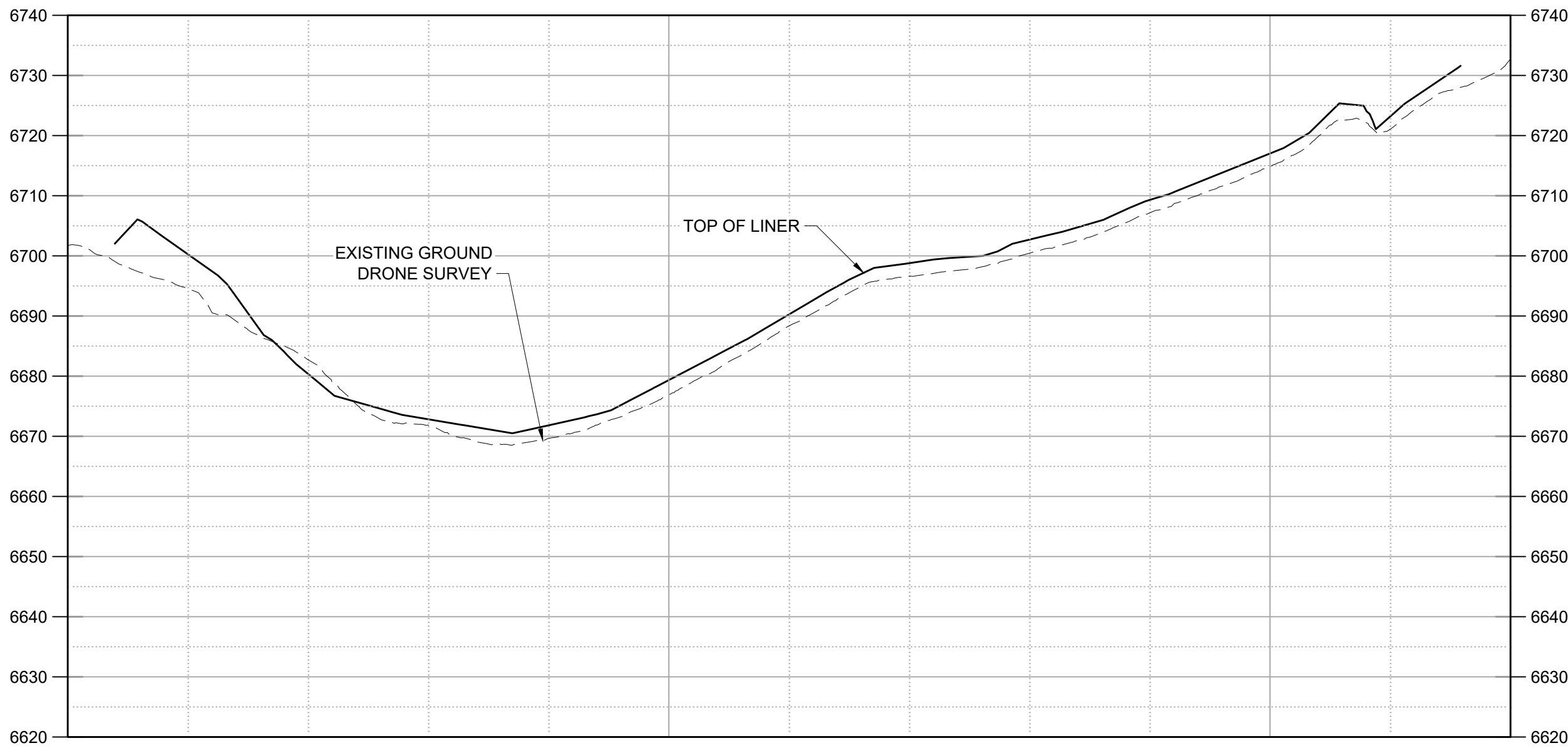
A
4
SECTION A PROFILE
HORIZONTAL SCALE: 1" = 100'
VERTICAL SCALE: 1" = 10'



B
4
SECTION B PROFILE
HORIZONTAL SCALE: 1" = 100'
VERTICAL SCALE: 1" = 10'



C
4
SECTION C PROFILE
HORIZONTAL SCALE: 1" = 100'
VERTICAL SCALE: 1" = 10'



D
4
SECTION D PROFILE
HORIZONTAL SCALE: 1" = 100'
VERTICAL SCALE: 1" = 10'

NOTES

1. SITE TOPOGRAPHY BASED ON DRONE SURVEY JUNE 2024 REFLECTED IN THESE CROSS-SECTIONS

Rev #	Date	Description	By	CRK'd

**SMA**

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MILNER, COLORADO

TWIN LANDFILL CORPORATION

**MILNER LANDFILL
MODULE 8 CONSTRUCTION
CROSS SECTIONS**



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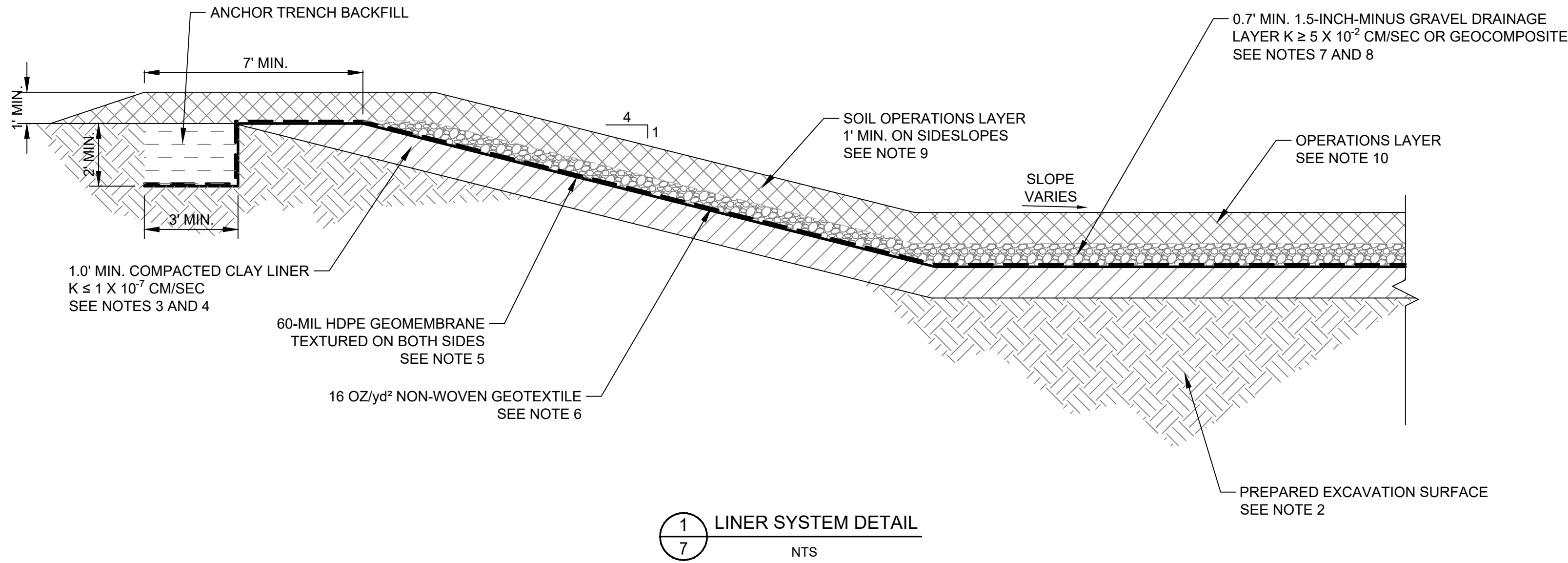
Designed MJP	Drawn DJF	Checked MJP
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Date: March 2025

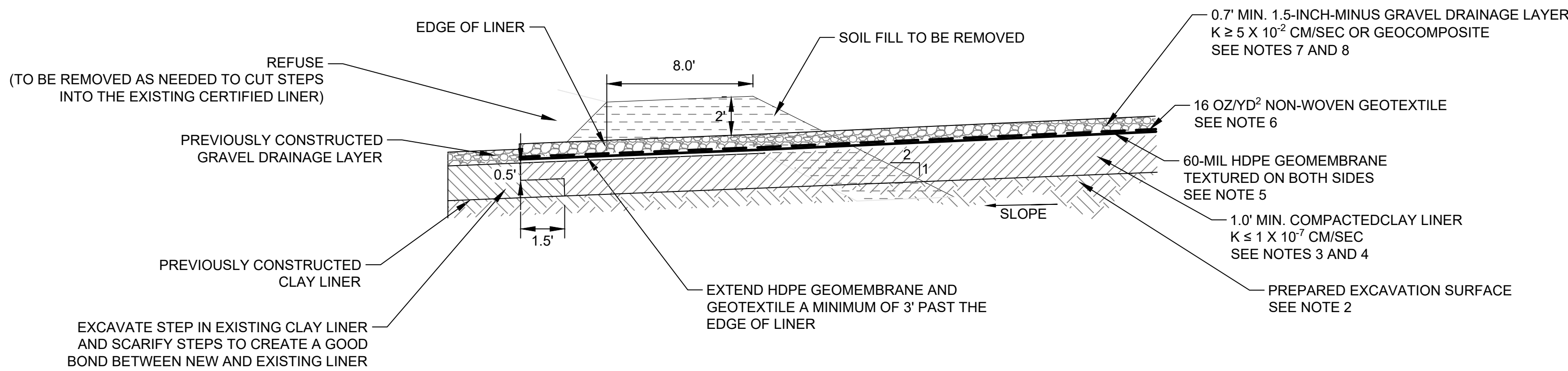
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Project No: 4D24381

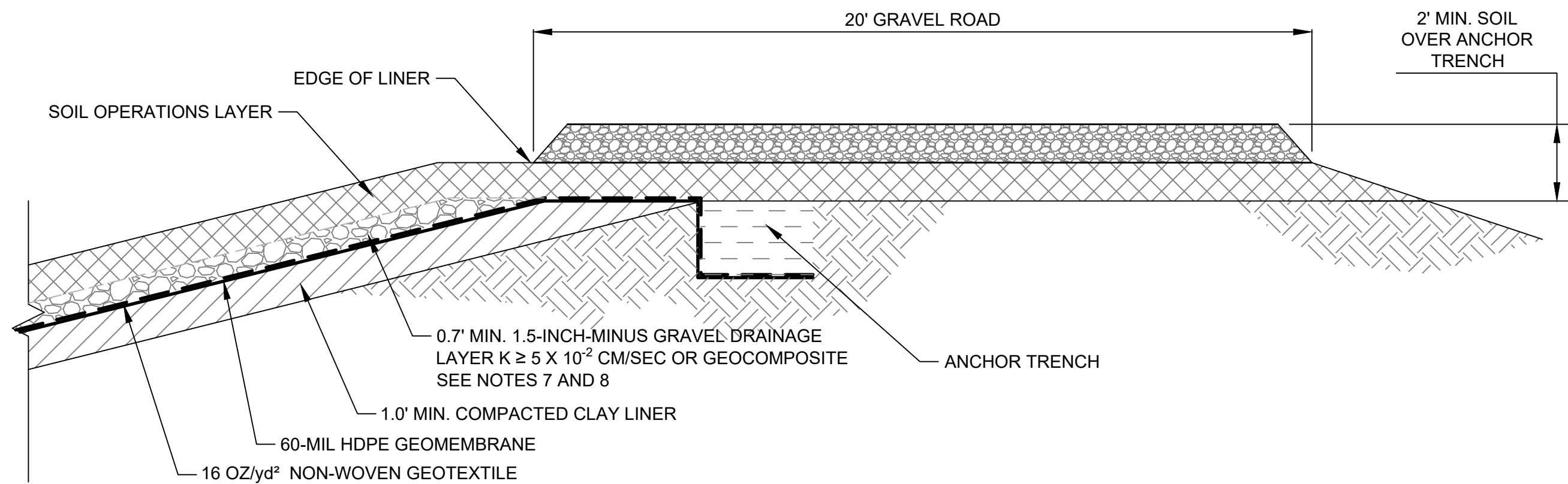
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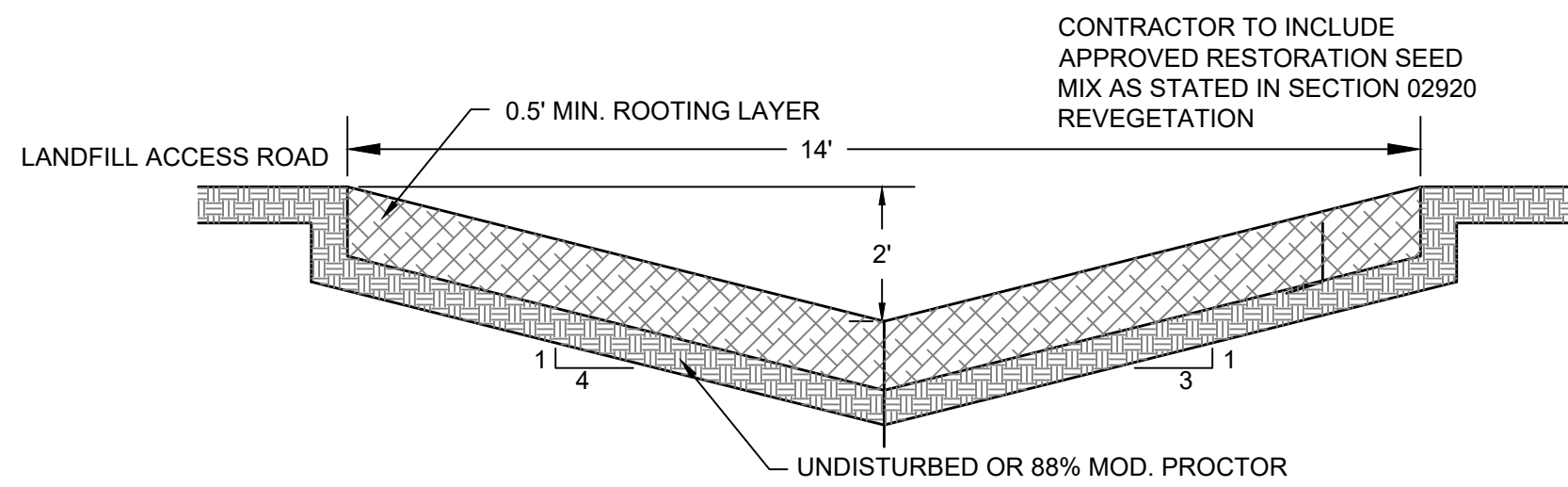
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LINER SYSTEM DETAIL
NTS



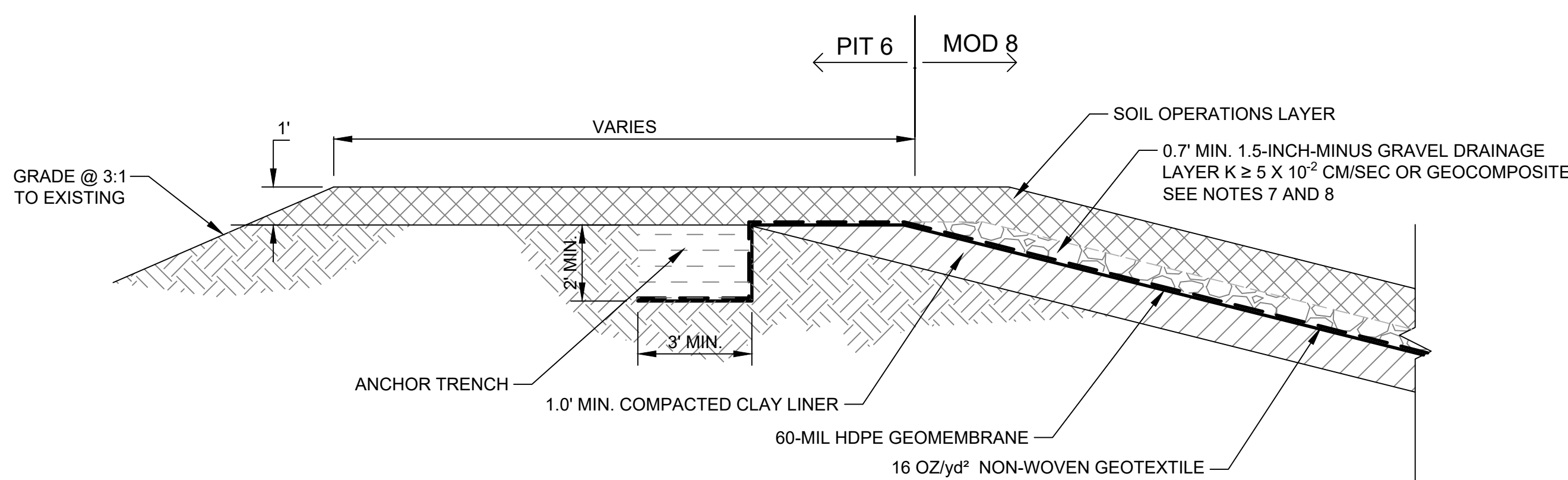
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COMPOSITE LINER WITH GEOMEMBRANE TIE-IN TO
COMPOSITE LINER IN MODULES 6 & 7
NTS



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7
GRAVEL ROAD SECTION
NTS

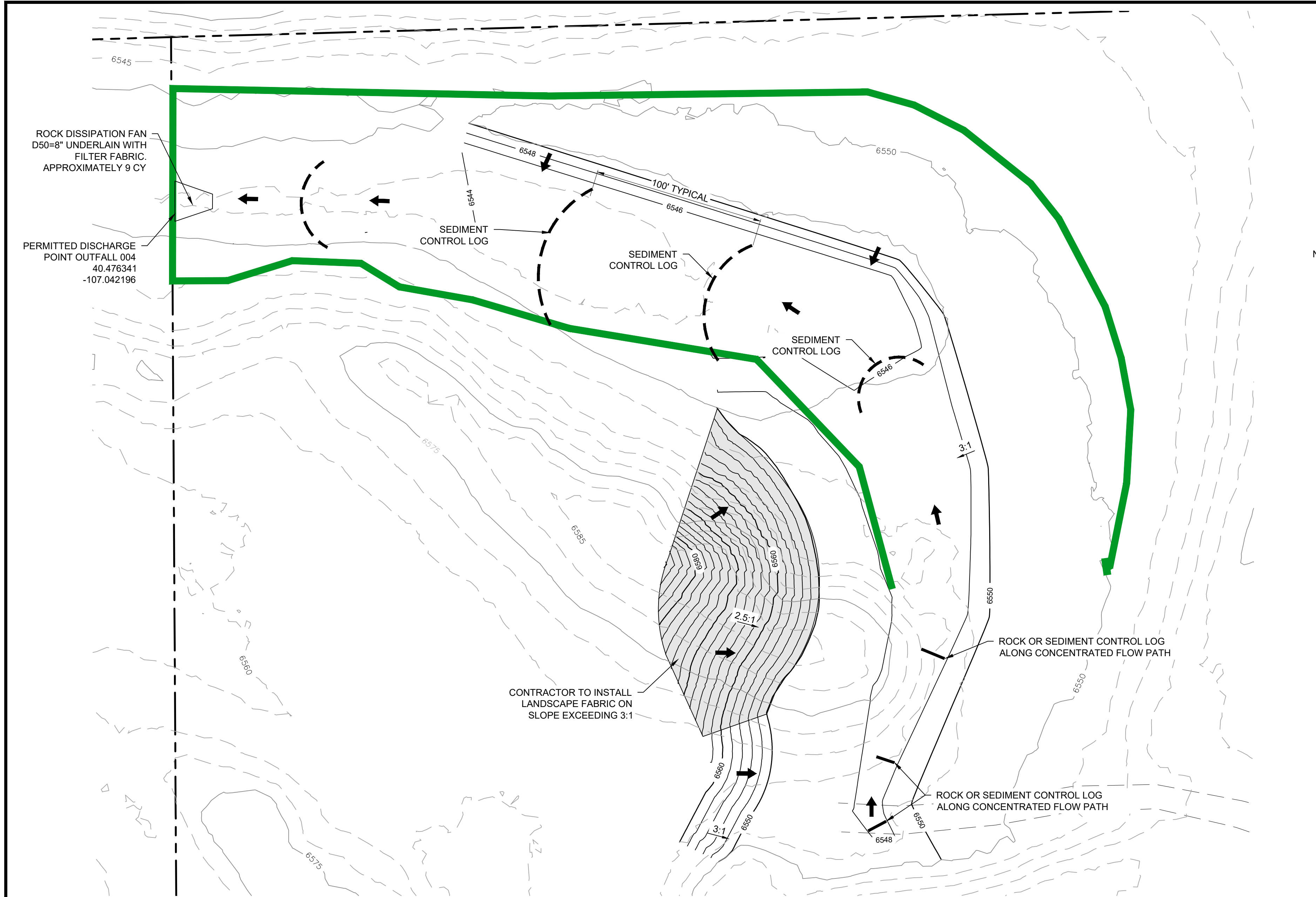


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GRASS-LINED PERIMETER CHANNEL
NTS

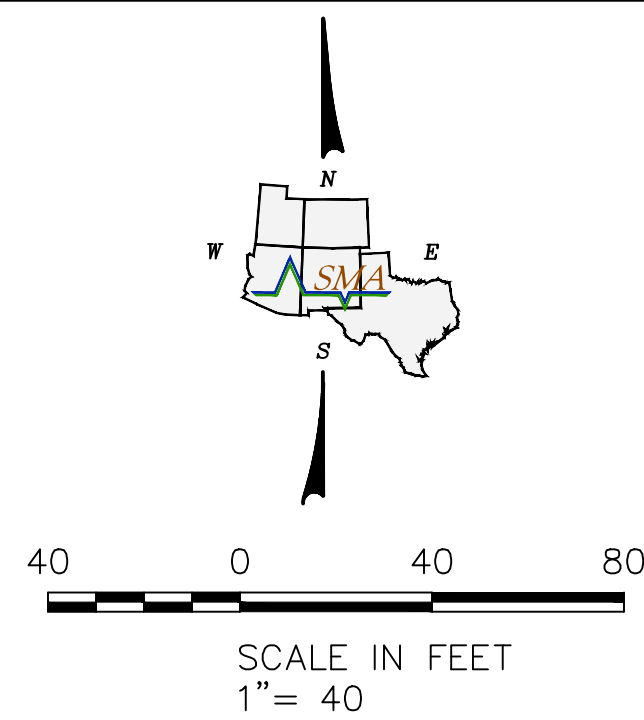


5
7
NORTH SLOPE OF MOD 8 LINER TERMINATION
NTS

1. REFERENCE THE CONSTRUCTION QUALITY ASSURANCE AND QUALITY CONTROL (CQAQC) PLAN PREPARED BY SOUDER MILLER IN NOVEMBER 2024 FOR ADDITIONAL EARTHWORKS AND LINER SPECIFICATIONS AND REQUIREMENTS, AS WELL AS CONSTRUCTION QUALITY ASSURANCE TESTING REQUIREMENTS AND FREQUENCY.
2. PRIOR TO CONSTRUCTING THE LINER, THE EXCAVATED AREA SHALL BE SMOOTHED UNTIL THE SURFACE IS FREE OF CLODS, RUTS, OR UNEVEN FEATURES THAT WOULD PREVENT UNIFORM COMPACTION BY THE EQUIPMENT USED. THE FINISHED EXCAVATION SURFACE SHALL BE PROOF-ROLLED WITH HEAVY EQUIPMENT PRIOR TO PLACEMENT OF LINER MATERIAL TO IDENTIFY SOFT OR UNSTABLE SUBGRADE MATERIALS. SUCH MATERIALS SHALL BE REMOVED AT THE DIRECTION OF THE CONSTRUCTION QUALITY ASSURANCE (CQA) MONITOR AND REPLACED WITH COMPACTED STRUCTURAL FILL. ALL AREAS WHERE FILL IS REQUIRED TO REACH THE EXCAVATION SURFACE GRADES SHALL BE BACKFILLED WITH STRUCTURAL FILL.
3. ALL CLAY LINER SHALL BE COMPACTED IN ACCORDANCE WITH THE CQAQCP AND HAVE A HYDRAULIC CONDUCTIVITY OF 1×10^{-7} CM/SEC OR LESS.
4. THE CLAY LINER SHALL BE CONSTRUCTED BY PLACING THE SOIL IN THIN LIFTS (LOOSE THICKNESS OF EIGHT INCHES OR LESS) AND COMPACTING WITH A SHEEPSFOOT ROLLER OR OTHER APPROPRIATE COMPACTION EQUIPMENT AS APPROVED BY THE CQA MONITOR. THE FINAL SURFACE OF THE CLAY LINER SHALL BE SMOOTH AND FREE OF FEATURES THAT COULD IMPEDE LEACHATE DRAINAGE OR THAT COULD DAMAGE THE HDPE GEOMEMBRANE.
5. A 60-MIL, DOUBLE-SIDED TEXTURED HDPE GEOMEMBRANE SHALL BE INSTALLED DIRECTLY OVER THE 1-FT CLAY LINER. THE GEOMEMBRANE SHALL BE MANUFACTURED TO MEET OR EXCEED THE MATERIAL PROPERTIES AS DEFINED IN THE CQAQC PLAN. INSTALLATION OF THE GEOMEMBRANE SHALL ADHERE TO THE METHODS DESCRIBED IN THE CQAQC PLAN.
6. A 16-OZ/YD² NON-WOVEN POLYPROPYLENE GEOTEXTILE SHALL BE PLACED OVER THE GEOMEMBRANE PRIOR TO GRAVEL DRAINAGE PLACEMENT TO PROTECT THE GEOMEMBRANE FROM PUNCTURE. THE GEOTEXTILE SHALL BE MANUFACTURED TO MEET OR EXCEED THE MATERIAL PROPERTIES AS DEFINED IN THE CQAQC PLAN. INSTALLATION OF THE GEOTEXTILE SHALL ADHERE TO THE METHODS DESCRIBED IN THE CQAQC PLAN.
7. ALL GRAVEL DRAINAGE LAYER MATERIAL SHALL PASS A 1.5-INCH SIEVE, SHALL CONTAIN LESS THAN 5% FINES PASSING A NUMBER 200 SIEVE, AND SHALL HAVE A HYDRAULIC CONDUCTIVITY OF $\geq 5 \times 10^{-2}$ CM/SEC.
8. TRANSNET 220-2-6 (OR ENGINEER APPROVED EQUIVALENT) GEOCOMPOSITE GEONET WITH 6 OZ OR GREATER GEOTEXTILE ON BOTH SIDES AND COVERED WITH 0.7' OF SELECT FILL WITH A FINES CONTENT OF LESS THAN 15% MAY BE SUBSTITUTED FOR THE GRAVEL DRAINAGE LAYER.
9. THE OPERATIONS LAYER ON SIDE SLOPES SHALL BE 1.0 FEET THICK AND WILL BE COMPRISED OF SOIL TYPES SM, SC, CL, OR CH OR COMBINATION OF THESE SOIL TYPES ACCORDING TO USCS WITH A MAXIMUM PARTICLE SIZE OF 4 INCHES.
10. THE OPERATIONS LAYER ON THE BOTTOM WILL CONSIST OF 4 FEET OF NON-C&D MSW. IF THIS MSW LAYER CANNOT BE PLACED BY DECEMBER 1ST OF THE CONSTRUCTION YEAR, A 1-FOOT SOIL OPERATIONS LAYER CONSISTING OF MATERIAL WITH NO MORE THAN 20% FINES WILL BE USED.

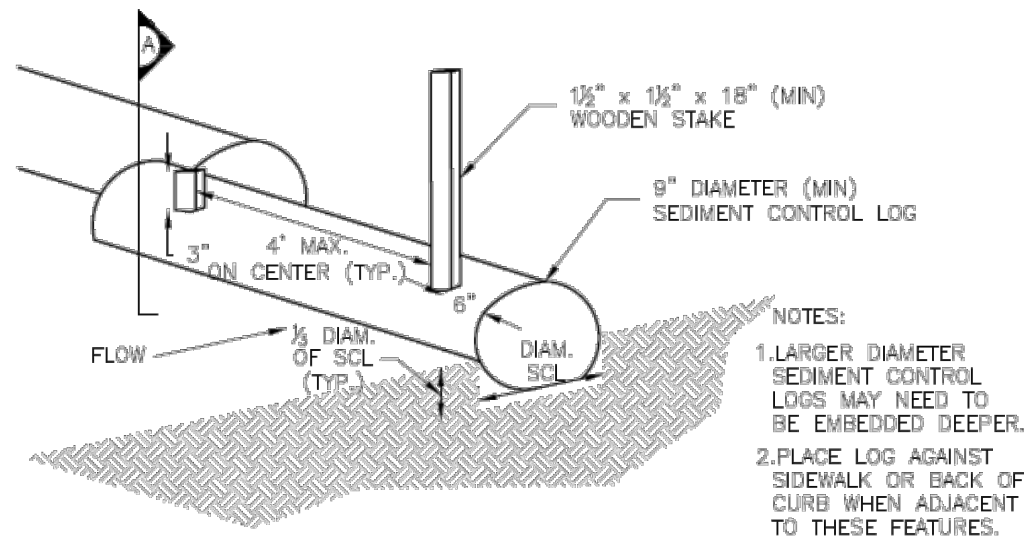


- SITE LEGEND:**
- PROPERTY BOUNDARY
 - - - MODULE BOUNDARY
 - - - MAJOR EXISTING CONTOURS, 2024 SURVEY
 - - - MINOR EXISTING CONTOURS, 2024 SURVEY
 - SEDIMENT CONTROL LOG
 - NORTH BORROW AREA
 - PZ --- PIEZOMETER
 - GP --- GAS MONITOR PROBE
 - MW --- MONITOR WELL
 - NWCC --- TEST PIT (1997)

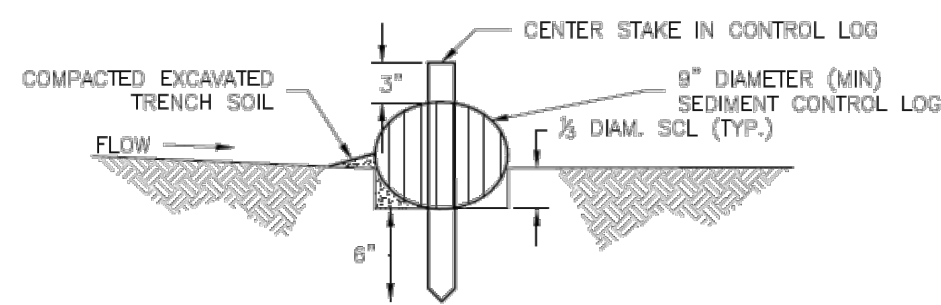


Species	Percent of Mixture	Drilled Rate lbs PLS/acre
Tall wheat grass	10	1.1
Shoshone beardless wild rye	10	0.6
Ladak alfalfa	15	0.6
Manchar smooth brome	15	2.0
Mammoth wild rye	25	2.2
Basin wild rye	25	1.2

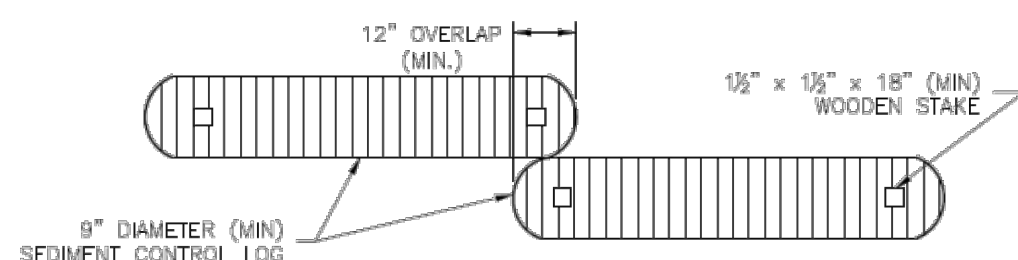
Seeding Mixture for Native Seeding



TRENCHED SEDIMENT CONTROL LOG



SECTION A
TRENCHED SEDIMENT CONTROL LOG



LOG JOINTS

SCL-1. TRENCHED SEDIMENT CONTROL LOG

SEDIMENT CONTROL LOG INSTALLATION NOTES

- SEE PLAN VIEW FOR LOCATION AND LENGTH OF SEDIMENT CONTROL LOGS.
- SEDIMENT CONTROL LOGS THAT ACT AS A PERIMETER CONTROL SHALL BE INSTALLED PRIOR TO ANY UPGRADIENT LAND-DISTURBING ACTIVITIES.
- SEDIMENT CONTROL LOGS SHALL CONSIST OF STRAW, COMPOST, EXCELSIOR OR COCONUT FIBER, AND SHALL BE FREE OF ANY NOXIOUS WEED SEEDS OR DEFECTS INCLUDING RIPS, HOLES AND OBVIOUS WEAR.
- SEDIMENT CONTROL LOGS MAY BE USED AS SMALL CHECK DAMS IN DITCHES AND SWALES. HOWEVER, THEY SHOULD NOT BE USED IN PERENNIAL STREAMS.
- IT IS RECOMMENDED THAT SEDIMENT CONTROL LOGS BE TRENCHED INTO THE GROUND TO A DEPTH OF APPROXIMATELY 1/3 OF THE DIAMETER OF THE LOG. IF TRENCHING TO THIS DEPTH IS NOT FEASIBLE AND/OR DESIRABLE (SHORT TERM INSTALLATION WITH DESIRE NOT TO DAMAGE LANDSCAPE) A LESSER TRENCHING DEPTH MAY BE ACCEPTABLE WITH MORE ROBUST STAKING. COMPOST LOGS THAT ARE 8 LB/FT DO NOT NEED TO BE TRENCHED.
- THE UPWILL SIDE OF THE SEDIMENT CONTROL LOG SHALL BE BACKFILLED WITH SOIL OR FILTER MATERIAL THAT IS FREE OF ROCKS AND DEBRIS. THE SOIL SHALL BE TIGHTLY COMPACTED INTO THE SHAPE OF A RIGHT TRIANGLE USING A SHOVEL OR WEIGHTED LAWN ROLLER OR BLOWN IN PLACE.
- FOLLOW MANUFACTURERS' GUIDANCE FOR STAKING. IF MANUFACTURERS' INSTRUCTIONS DO NOT SPECIFY SPACING, STAKES SHALL BE PLACED ON 4' CENTERS AND EMBEDDED A MINIMUM OF 6" INTO THE GROUND. 3" OF THE STAKE SHALL PROTRUDE FROM THE TOP OF THE LOG. STAKES THAT ARE BROKEN PRIOR TO INSTALLATION SHALL BE REPLACED. COMPOST LOGS SHOULD BE STAKED 10' ON CENTER.

SEDIMENT CONTROL LOG MAINTENANCE NOTES

- INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
 - FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
 - WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
 - SEDIMENT ACCUMULATED UPSTREAM OF SEDIMENT CONTROL LOG SHALL BE REMOVED AS NEEDED TO MAINTAIN FUNCTIONALITY OF THE BMP. TYPICALLY WHEN DEPTH OF ACCUMULATED SEDIMENTS IS APPROXIMATELY 1/2 OF THE HEIGHT OF THE SEDIMENT CONTROL LOG.
 - SEDIMENT CONTROL LOG SHALL BE REMOVED AT THE END OF CONSTRUCTION. COMPOST FROM COMPOST LOGS MAY BE LEFT IN PLACE AS LONG AS BAGS ARE REMOVED AND THE AREA SEEDED. IF DISTURBED AREAS EXIST AFTER REMOVAL, THEY SHALL BE COVERED WITH TOP SOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE LOCAL JURISDICTION.
- (DETAILS ADAPTED FROM TOWN OF PARKER, COLORADO, JEFFERSON COUNTY, COLORADO, DOUGLAS COUNTY, COLORADO, AND CITY OF AURORA, COLORADO, NOT AVAILABLE IN AUTOCAD)
- NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

NOTES:

- INSTALL WATTLES ALONG CONTOURS.
- SECURELY KNOT EACH END OF WATTLE. OVERLAP ADJACENT WATTLE ENDS 12" BEHIND ONE ANOTHER AND SECURELY TIE TOGETHER.
- COMPACT EXCAVATED SOIL AND TRENCHES TO PREVENT UNDERCUTTING. ADDITIONAL STAKING MAY BE NECESSARY TO PREVENT UNDERCUTTING.
- INSTALL WATTLE PERPENDICULAR TO FLOW ALONG CONTOURS.
- WATTLES SHALL BE INSPECTED REGULARLY TO ENSURE THEY REMAIN THOROUGHLY ENTRENCHED AND IN CONTACT WITH THE SOIL.

**STORMWATER MANAGEMENT MILNER
LANDFILL NORTH BORROW**

Table RECP-1. ECTC Standard Specification for Temporary Rolled Erosion Control Products
(Adapted from Erosion Control Technology Council 2005)

Product Description	Slope Applications*		Channel Applications*	Minimum Tensile Strength ¹	Expected Longevity
	Maximum Gradient	C Factor ^{2,3}	Max. Shear Stress ^{3,4,6}		
Mulch Control Nets	5:1 (H:V)	≤0.10 @ 5:1	0.25 lbs/ft ² (12 Pa)	5 lbs/ft (0.073 kN/m)	Up to 12 months
Netless Rolled Erosion Control Blankets	4:1 (H:V)	≤0.10 @ 4:1	0.5 lbs/ft ² (24 Pa)	5 lbs/ft (0.073 kN/m)	
Single-net Erosion Control Blankets & Open Weave Textiles	3:1 (H:V)	≤0.15 @ 3:1	1.5 lbs/ft ² (72 Pa)	50 lbs/ft (0.73 kN/m)	
Double-net Erosion Control Blankets	2:1 (H:V)	≤0.20 @ 2:1	1.75 lbs/ft ² (84 Pa)	75 lbs/ft (1.09 kN/m)	
Mulch Control Nets	5:1 (H:V)	≤0.10 @ 5:1	0.25 lbs/ft ² (12 Pa)	25 lbs/ft (0.36 kN/m)	24 months
Erosion Control Blankets & Open Weave Textiles (slowly degrading)	1.5:1 (H:V)	≤0.25 @ 1.5:1	2.00 lbs/ft ² (96 Pa)	100 lbs/ft (1.45 kN/m)	24 months
Erosion Control Blankets & Open Weave Textiles	1:1 (H:V)	≤0.25 @ 1:1	2.25 lbs/ft ² (108 Pa)	125 lbs/ft (1.82 kN/m)	36 months

* C Factor and shear stress for mulch control nettings must be obtained with netting used in conjunction with pre-applied mulch material. (See Section 5.3 of Chapter 7 Construction BMPs for more information on the C Factor.)

¹ Minimum Average Roll Values, Machine direction using ECTC Mod. ASTM D 5035.

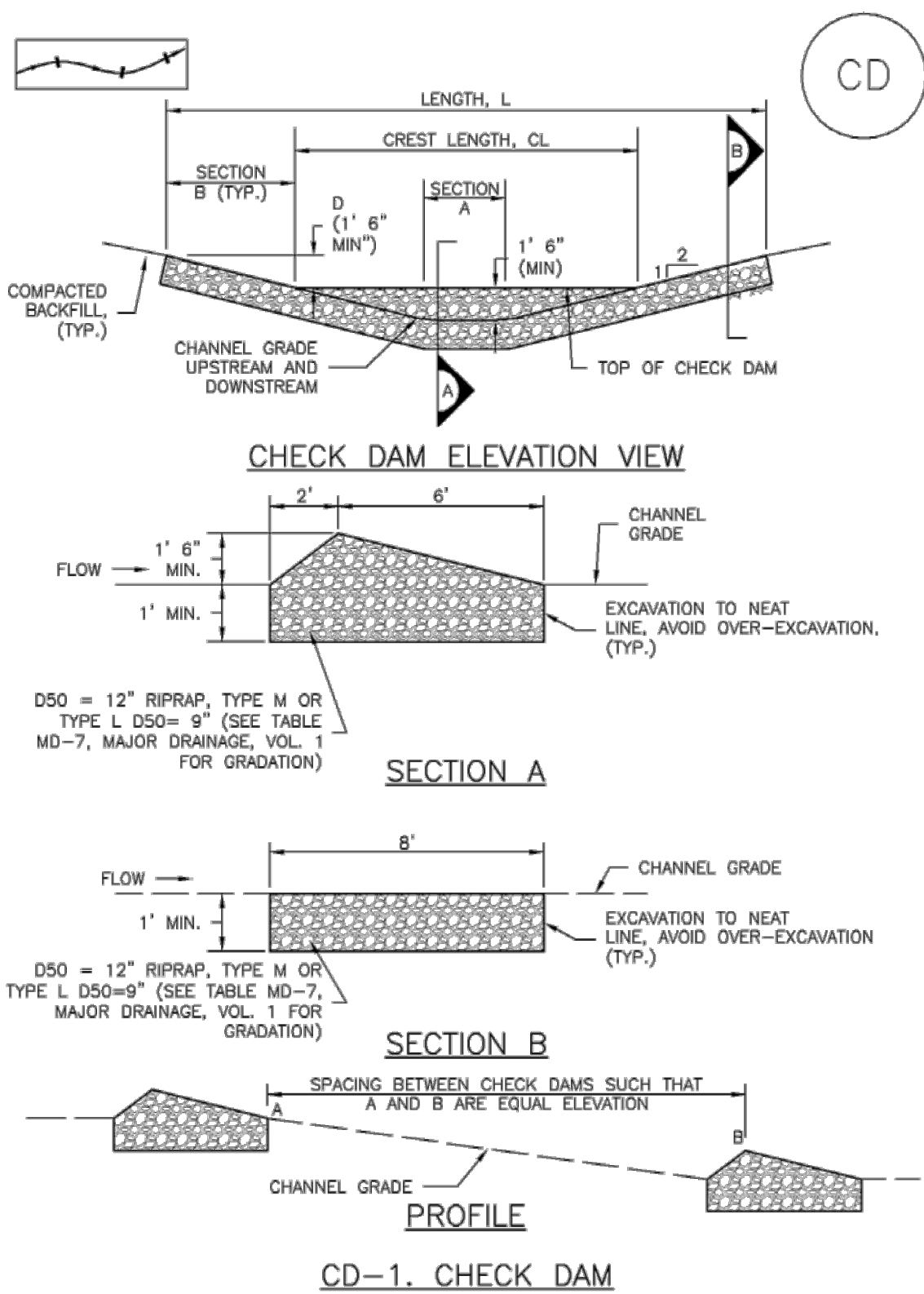
² C Factor calculated as ratio of soil loss from RECP protected slope (tested at specified or greater gradient, H:V) to ratio of soil loss from unprotected (control) plot in large-scale testing.

³ Required minimum shear stress RECP (unvegetated) can sustain without physical damage or excess erosion (> 12.7 mm (0.5 in) soil loss) during a 30-minute flow event in large-scale testing.

⁴ The permissible shear stress levels established for each performance category are based on historical experience with products characterized by Manning's roughness coefficients in the range of 0.01 - 0.05.

⁵ Acceptable large-scale test methods may include ASTM D 6459, or other independent testing deemed acceptable by the engineer.

⁶ Per the engineer's discretion. Recommended acceptable large-scale testing protocol may include ASTM D 6460, or other independent testing deemed acceptable by the engineer.



CD-1. CHECK DAM

By: CML

Description

Rev #

Date

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MILNER LANDFILL
MODULE 8 CONSTRUCTION
NORTH BORROW AREA FINAL GRADING
AND RESTORATION PLAN

COLORADO LICENSED
MICHEL J. PETER
0048503
PROFESSIONAL ENGINEER

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MJP

Drawn
DJF

Checked
MJP

Date:
March 2025

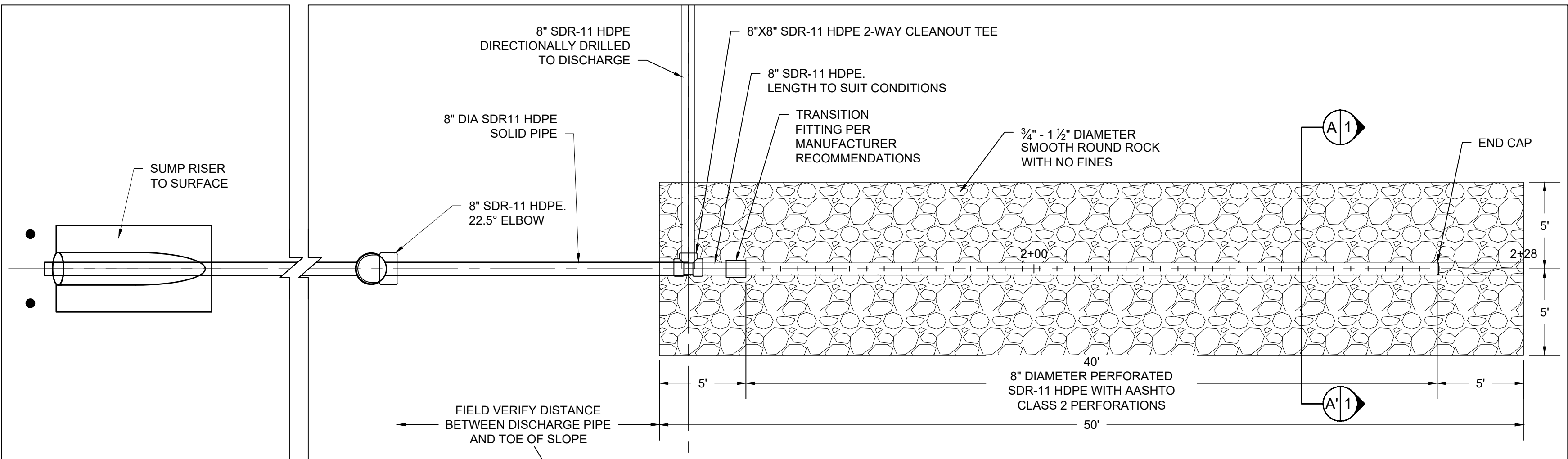
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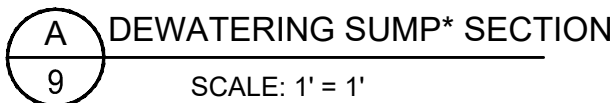
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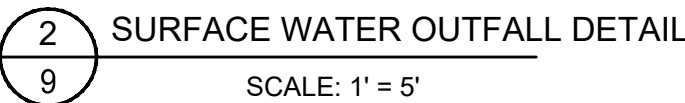


1 DEWATERING SUMP DETAIL - PLAN VIEW
9 SCALE: 1' = 5'

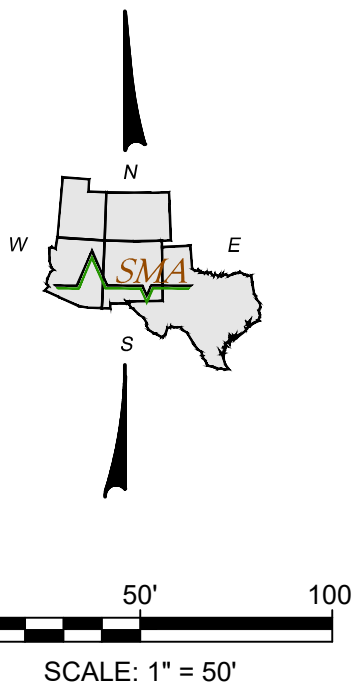


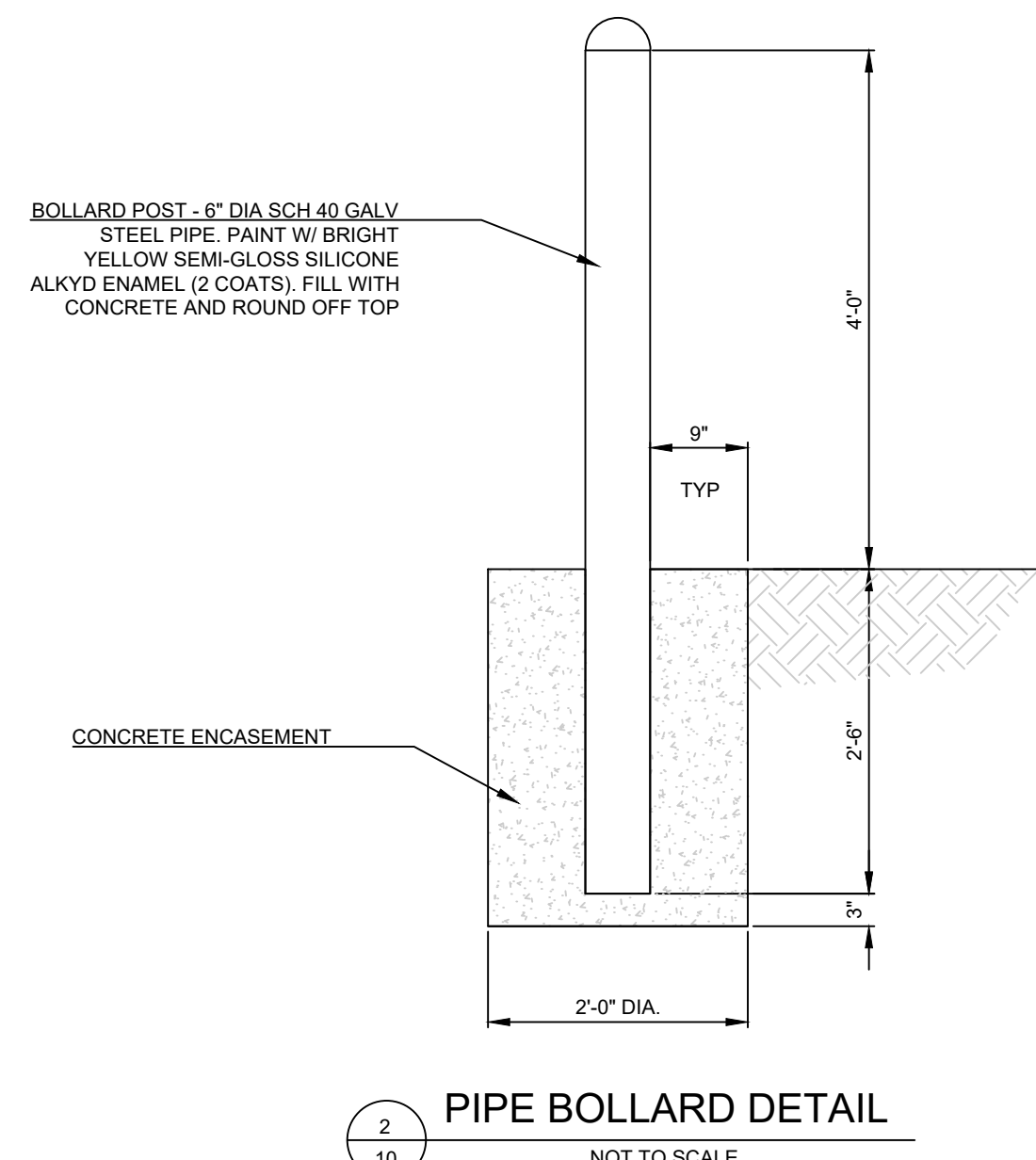
NOTE

1. THE DRAINAGE LINE IS TO REMAIN PLUGGED UNTIL APPROPRIATELY PERMITTED AND APPROVED FOR DISCHARGE



SCALE: 1' = 5'





1. DRAINAGE LINE IS TO REMAIN PLUGGED UNTIL APPROPRIATELY PERMITTED AND APPROVED FOR DISCHARGE



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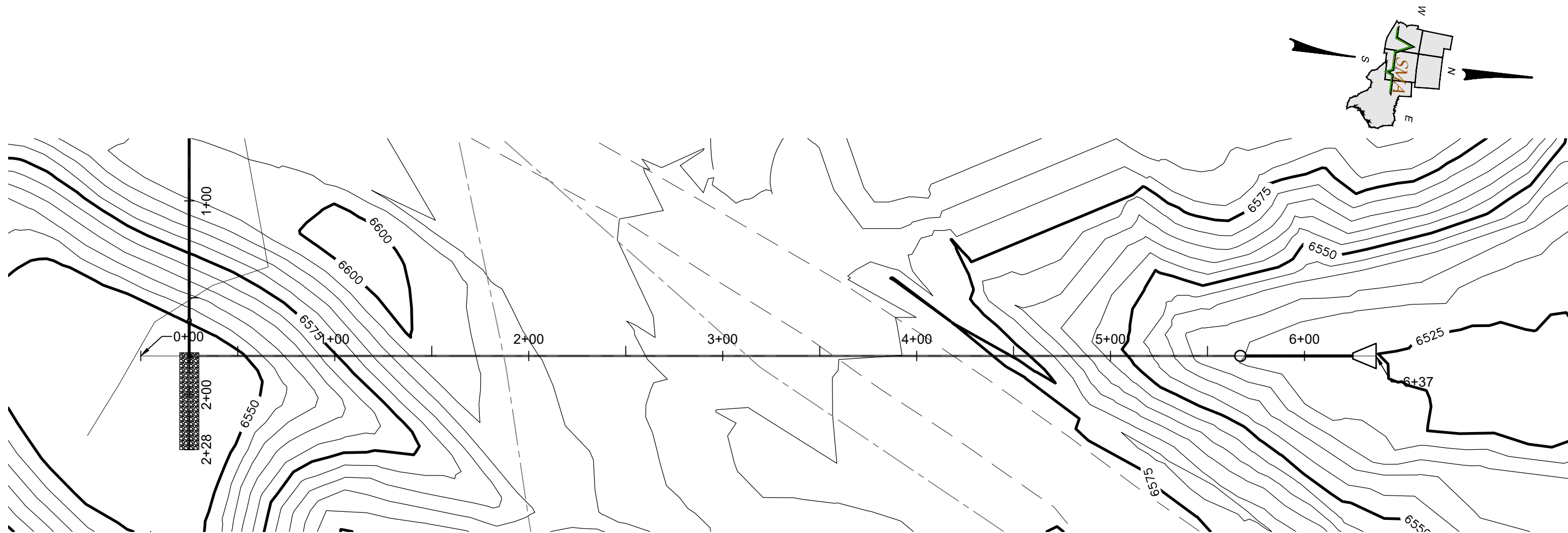
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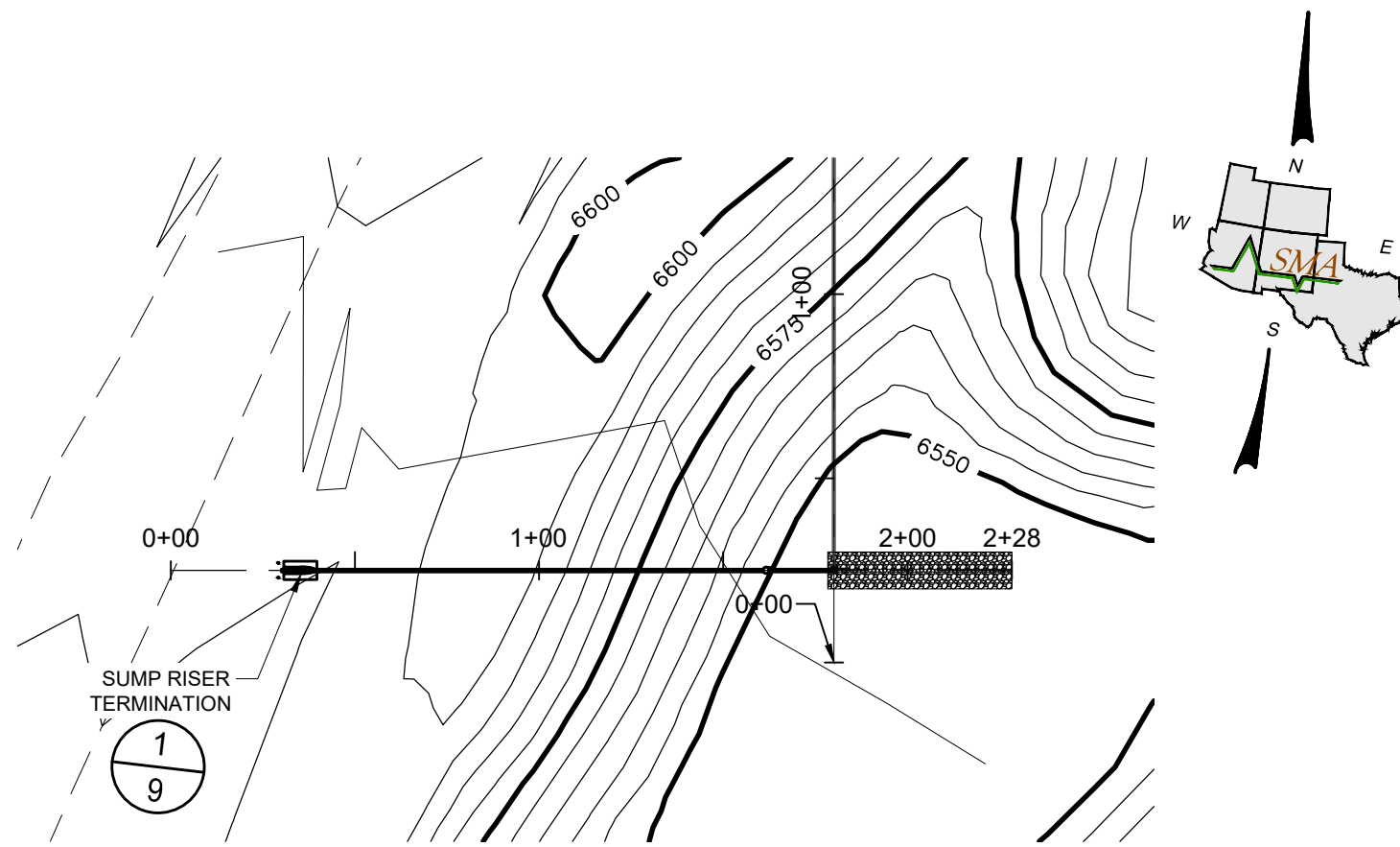
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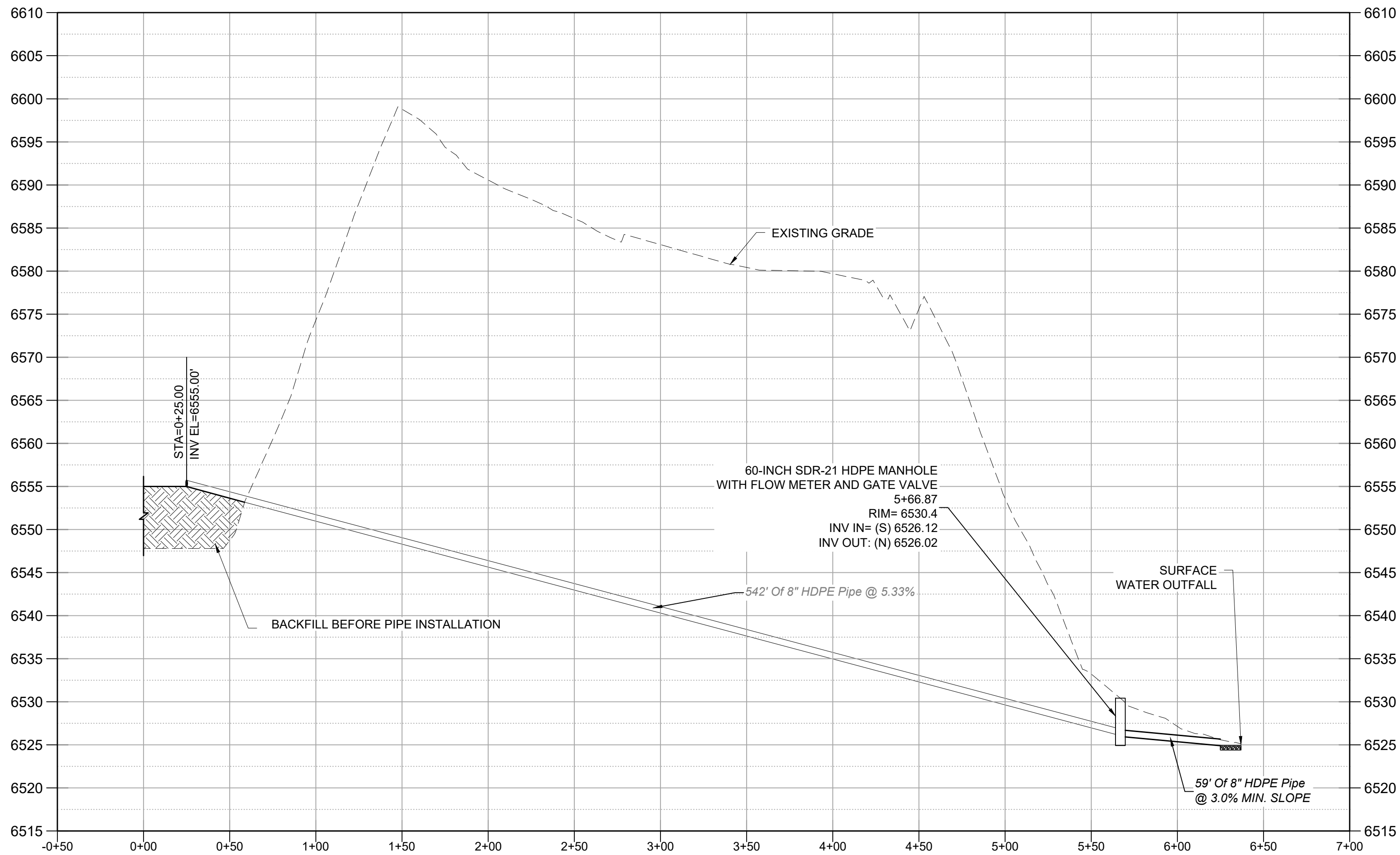


DISCHARGE LINE PLAN
SCALE: 1"= 50'

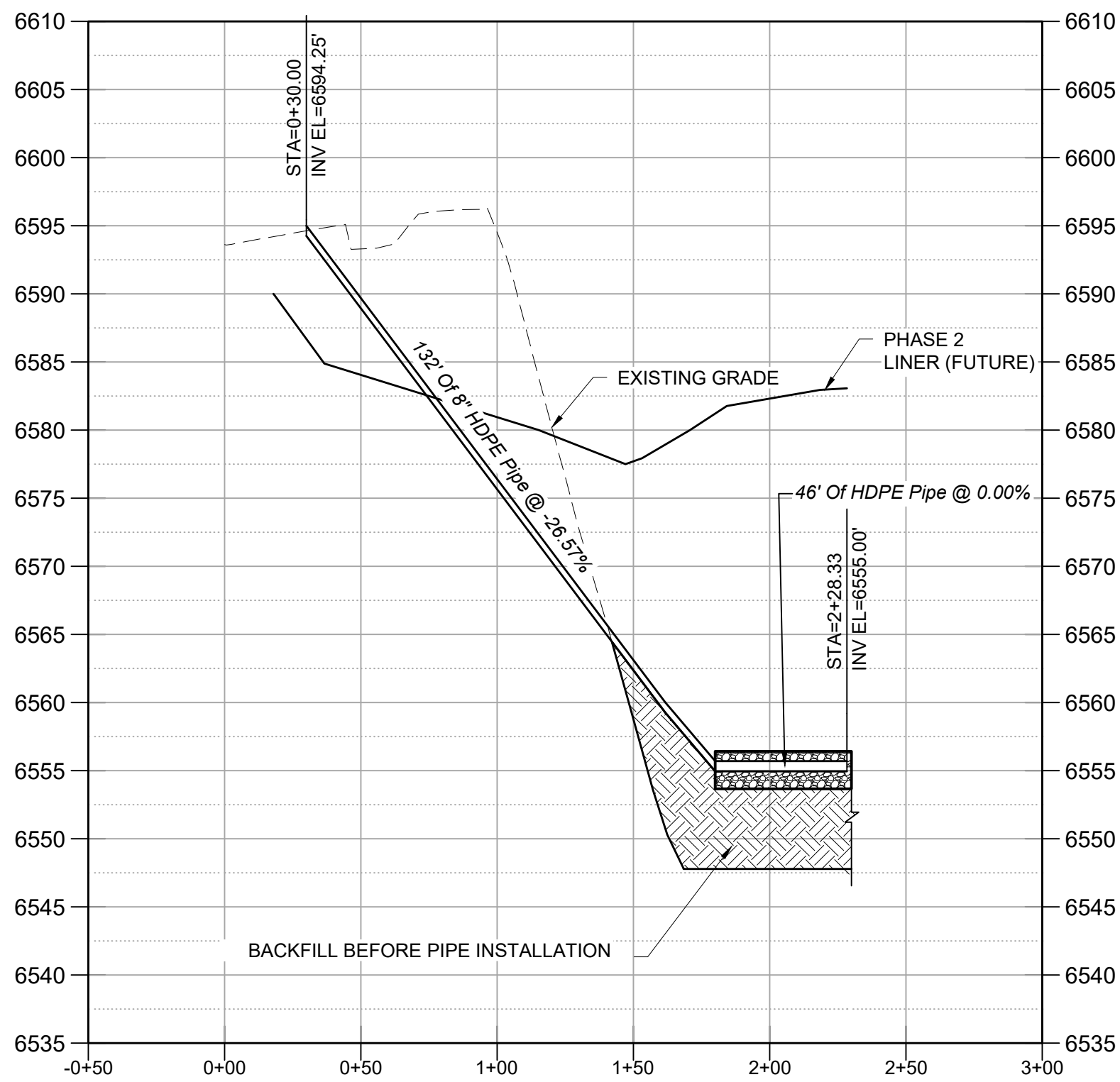
• THE DEWATERING SUMP DISCHARGE LINE WILL BE CAPPED UNTIL APPROPRIATELY PERMITTED AND APPROVED. NO DISCHARGE OF THE DEWATERING SUMP WILL OCCUR UNTIL NECESSARY PERMITS ARE IN PLACE



SUMP RISER PLAN
SCALE: 1"= 50'



DISCHARGE LINE PROFILE
HORIZONTAL SCALE: 1"= 50'
VERTICAL SCALE: 1"= 10'



SUMP RISER PROFILE
HORIZONTAL SCALE: 1"= 50'
VERTICAL SCALE: 1"= 10'

NOTES

- CONTRACTOR TO ENSURE AND MAINTAIN A SAFE TRENCH WORKING CONDITION AT ALL TIMES

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**MILNER LANDFILL
MODULE 8 CONSTRUCTION
DEWATERING PIPE PLAN AND PROFILE**

**COLORADO LICENSED
MICHAEL J. PETER
0048503
PROFESSIONAL ENGINEER**

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