

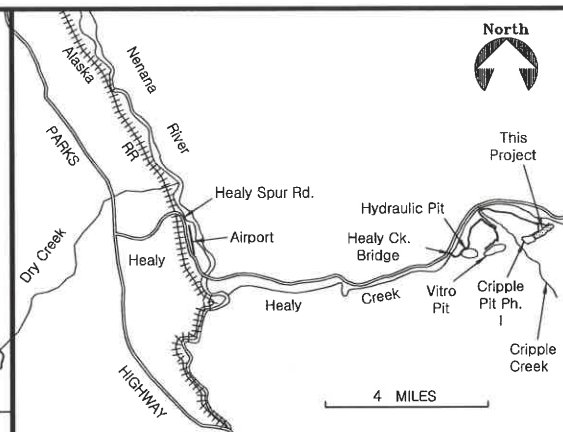
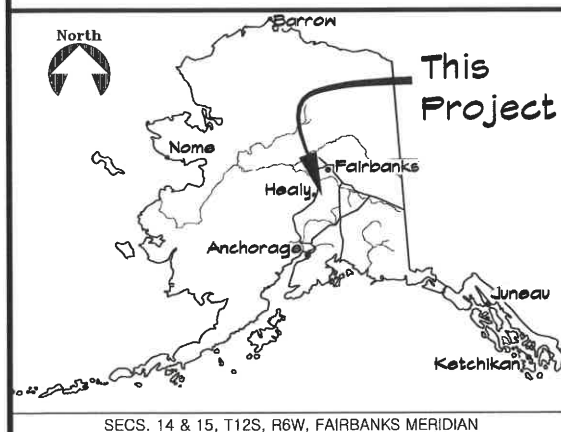
STATE OF ALASKA
 DEPARTMENT OF NATURAL RESOURCES
 DIVISION OF PARKS
 AND
 OUTDOOR RECREATION

CRIPPLE CREEK PIT
 RECLAMATION – PHASE II
 PROJECT NO.
 52959-6

in Cooperation with the AK DNR Division of ML&W

Vicinity Map

Location Map



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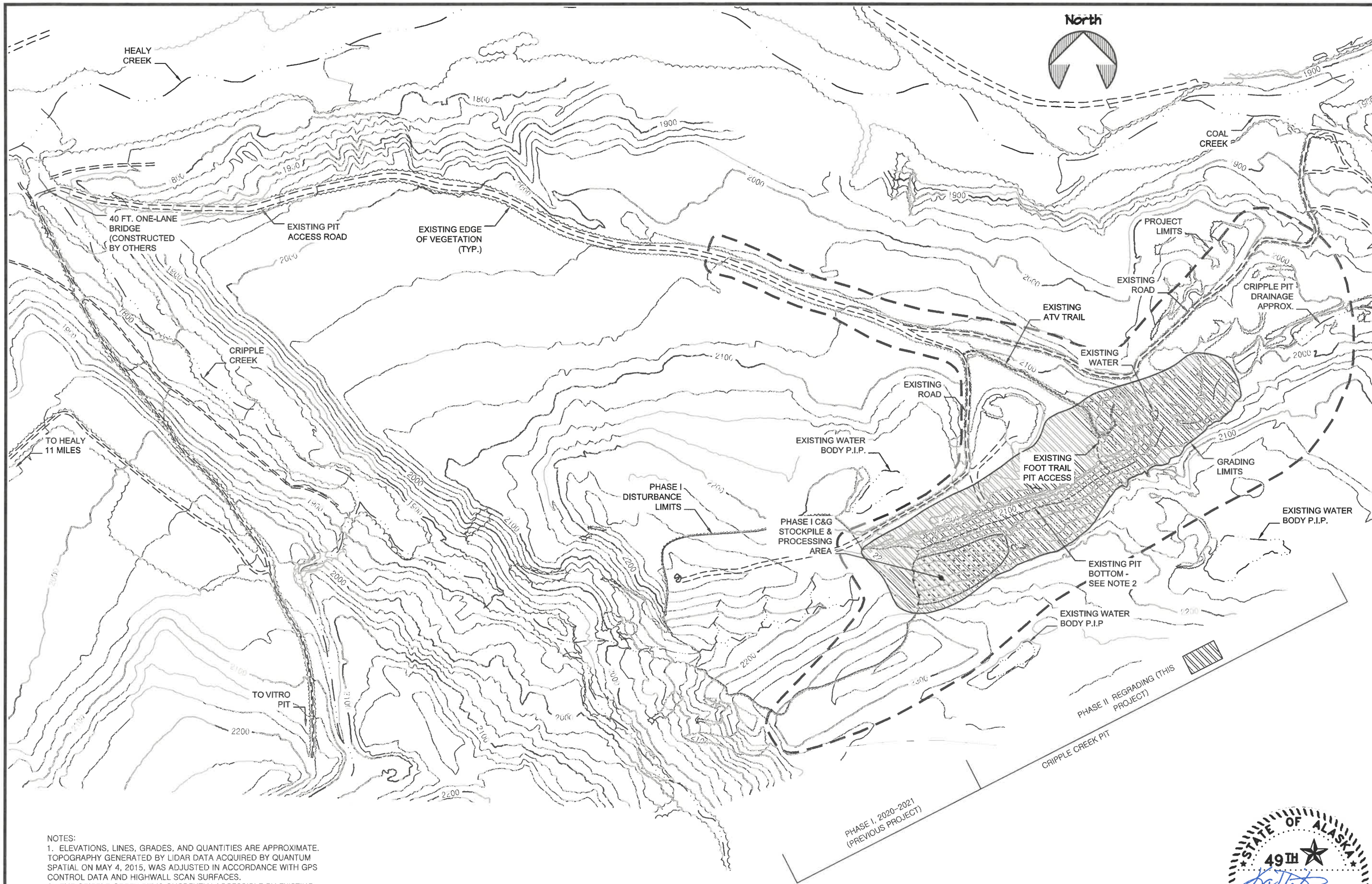
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|--|--------------------------|
| 1. TITLE SHEET | 6. DRAINAGE PLAN |
| 2. OVERVIEW | 7. PROFILE A-A' |
| 3. ESTIMATE OF QUANTITIES, LEGEND, & TABLE OF ESTIMATING FACTORS | 8. PROFILES B-B' & C-C' |
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| | 11. DETAILS |
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The following D.O.T. (Highways) standard drawings apply to this project: None

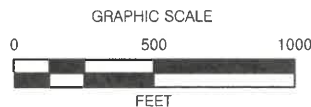
Plans developed by:
 STATE OF ALASKA
 Department of Natural Resources
 Abandoned Mine Lands Section
 550 W 7th Ave. Suite 920, Anchorage, AK 99501
 Recommended:

Charles J. Irey 2/15/24
 Charles J. Irey Date
 AML Program Manager

Approved:
Christy Colles 2/15/24
 Christy Colles Date
 Director, Division Mining, Land, & Water



NOTES:
 1. ELEVATIONS, LINES, GRADES, AND QUANTITIES ARE APPROXIMATE. TOPOGRAPHY GENERATED BY LIDAR DATA ACQUIRED BY QUANTUM SPATIAL ON MAY 4, 2015, WAS ADJUSTED IN ACCORDANCE WITH GPS CONTROL DATA AND HIGHWALL SCAN SURFACES.
 2. THE CRIPPLE CREEK PIT IS CURRENTLY ACCESSIBLE BY EXISTING GRAVEL ROADS ON ITS WESTERN END, AND AN ATV TRAIL TO ITS EASTERN END, WHERE A FOOT PATH DESCENDS A SCREE SLOPE INTO THE PIT BOTTOM. EQUIPMENT ROADS MAY REQUIRE DEVELOPMENT THROUGH THE PIT BOTTOM AND NORTH OF THE HIGHWALL TO ACCESS PROJECT AREAS.



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CRIPPLE CREEK PIT RECLAMATION
 PHASE II -- PROJECT NO. 52959-6

OVERVIEW



PREPARED: RDA
 DRAWN: RDA
 REVIEWED: RM, KW
 DATE: 2/13/2024

SHEET
02
 OF 12 SHEETS

ESTIMATE OF QUANTITIES			
ITEM NO.	ITEM	UNIT	QUANTITY
201.0003.0000	CLEARING & GRUBBING	ACRE	32.35
203.0003.0000	UNCLASSIFIED EXCAVATION	CUBIC YARD	787,817
611.0002.0001	RIPRAP, CLASS I	TON	3,000
618.0001.0000	SEEDING	ACRE	47.89
620.0001.0000	TOPSOIL	SQUARE YARD	231,788
640.0001.0000	MOBILIZATION AND DEMOBILIZATION	LUMP SUM	ALL REQ'D
641.0001.0000	EROSION, SEDIMENT, AND POLLUTION CONTROL ADMINISTRATION	LUMP SUM	ALL REQ'D
641.0002.0000	TEMPORARY EROSION, SEDIMENT, AND POLLUTION CONTROL	CONTINGENT SUM	ALL REQ'D
641.0006.0000	SWPPP PRICE ADJUSTMENT / WITHOLDING	CONTINGENT SUM	ALL REQ'D
642.0001.0000	CONSTRUCTION SURVEYING	LUMP SUM	ALL REQ'D
647.2001.0000	WIDE PAD DOZER, 65 HP MINIMUM	HOUR	10
647.2030.0000	HYDRAULIC EXCAVATOR, 1 CY, 100 HP MINIMUM	HOUR	10
647.3000.0000	MOTOR GRADER, 220 HP MINIMUM	HOUR	10
680.0001.0000	SEDIMENT RETENTION POND	LUMP SUM	ALL REQ'D

TABLE OF ESTIMATING FACTORS		
ITEM NO.	ITEM	ESTIMATING FACTOR
611.0002.0001	RIPRAP, CLASS I	124 LB. / CU. FT.

LEGEND		ABBREVIATIONS	
EXISTING TOPOGRAPHY		Ø	DIAMETER
PROPOSED TOPOGRAPHY		2:1, 4:1	SLOPE RATIOS, IN HORIZONTAL TO VERTICAL UNITS
FOOT TRAIL ACCESS		ACOE	U.S. ARMY CORPS OF ENGINEERS
ATV TRAIL		ADEC	ALASKA DEPT. OF ENVIRONMENTAL CONSERVATION
EXISTING ROAD EDGES		ADF&G	ALASKA DEPARTMENT OF FISH AND GAME
EXISTING STREAM, POND		APPROX.	APPROXIMATE
EXISTING EDGE OF VEGETATION		BMP	BEST MANAGEMENT PRACTICES
PROPOSED CLEARING & GRUBBING		B.O.P.	BEGINNING OF PROJECT
PHASE II GRADING LIMITS		C&G	CLEARING AND GRUBBING
PHASE I DISTURBANCE LIMITS		CFS	CUBIC FEET PER SECOND
PROJECT BOUNDARY		CL	CENTERLINE
CONTROL POINT		CP	CONTROL POINT
		C.F.	CUBIC FEET
		C.Y.	CUBIC YARD
		E.C.B.	EROSION CONTROL BLANKET
		E.O.P.	END OF PROJECT
		F.G.	FINAL GRADE
		FT.	FEET
		GPM	GALLONS PER MINUTE
		GPS	GLOBAL POSITIONING SYSTEM
		IN.	INCHES
		L.S.	LUMP SUM
		N, S, E, W	NORTH, SOUTH, EAST WEST
		NAD83	NORTH AMERICAN DATUM, 1983
		O.G.	ORIGINAL GROUND, EXISTING TOPOGRAPHY
		O.H.W.	ORDINARY HIGH WATER
		PERF	PERFORATED
		P.I.P.	PRESERVE IN PLACE
		PT.	POINT
		Q	FLOW RATE, EXPRESSED IN VOLUME PER UNIT TIME
		S.P.	STATE PLANE COORDINATE SYSTEM
		SQ. FT.	SQUARE FEET
		SQ. YD.	SQUARE YARDS
		STA.	STATION
		TRANS.	TRANSITION
		TYP.	TYPICAL

OTHER LINETYPES AND HATCH PATTERNS WITH SPECIFIC APPLICATIONS ARE LABELED IN THE DRAWINGS.

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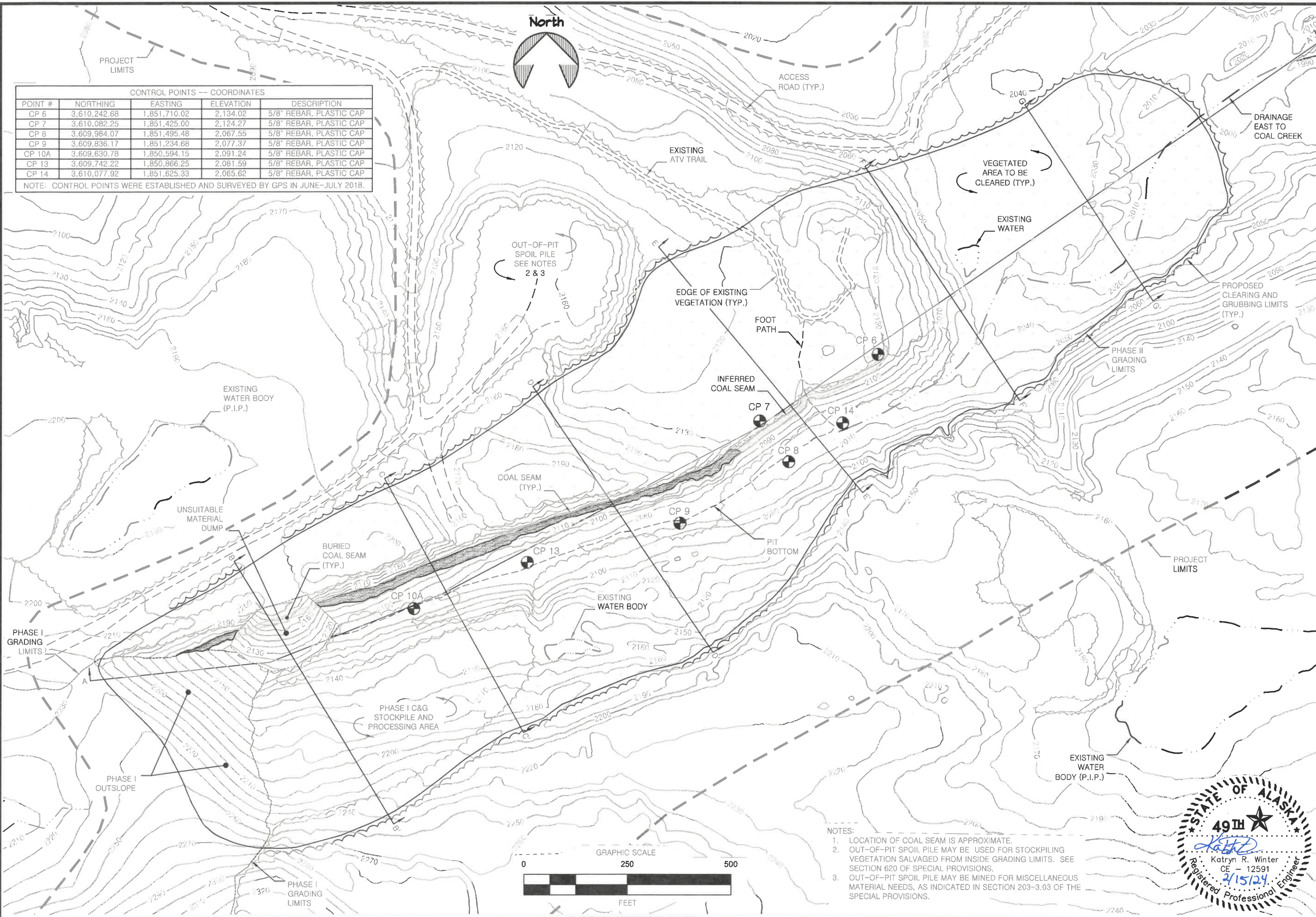
ESTIMATE OF QUANTITIES, LEGEND,
 & TABLE OF ESTIMATING FACTORS

CRIPPLE CREEK PIT RECLAMATION
 PHASE II -- PROJECT NO. 52959-6



PREPARED: RDA
 DRAWN: RDA
 REVIEWED: RM, KW
 DATE: 2/13/2024

SHEET
03
 OF 12 SHEETS



CONTROL POINTS -- COORDINATES				
POINT #	NORTHING	EASTING	ELEVATION	DESCRIPTION
CP 6	3,610,242.68	1,851,710.02	2,134.02	5/8" REBAR, PLASTIC CAP
CP 7	3,610,082.25	1,851,425.00	2,124.27	5/8" REBAR, PLASTIC CAP
CP 8	3,609,984.07	1,851,495.48	2,067.55	5/8" REBAR, PLASTIC CAP
CP 9	3,609,836.17	1,851,234.68	2,077.37	5/8" REBAR, PLASTIC CAP
CP 10A	3,609,630.78	1,850,594.15	2,091.24	5/8" REBAR, PLASTIC CAP
CP 13	3,609,742.22	1,850,866.25	2,081.59	5/8" REBAR, PLASTIC CAP
CP 14	3,610,077.92	1,851,625.33	2,065.62	5/8" REBAR, PLASTIC CAP

NOTE: CONTROL POINTS WERE ESTABLISHED AND SURVEYED BY GPS IN JUNE-JULY 2018.

- NOTES:
1. LOCATION OF COAL SEAM IS APPROXIMATE. OUT-OF-PIT SPOIL PILE MAY BE USED FOR STOCKPILING VEGETATION SALVAGED FROM INSIDE GRADING LIMITS. SEE SECTION 620 OF SPECIAL PROVISIONS.
 2. OUT-OF-PIT SPOIL PILE MAY BE MINED FOR MISCELLANEOUS MATERIAL NEEDS, AS INDICATED IN SECTION 203-3.03 OF THE SPECIAL PROVISIONS.



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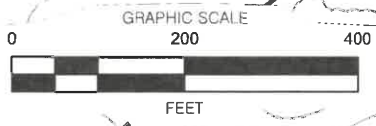
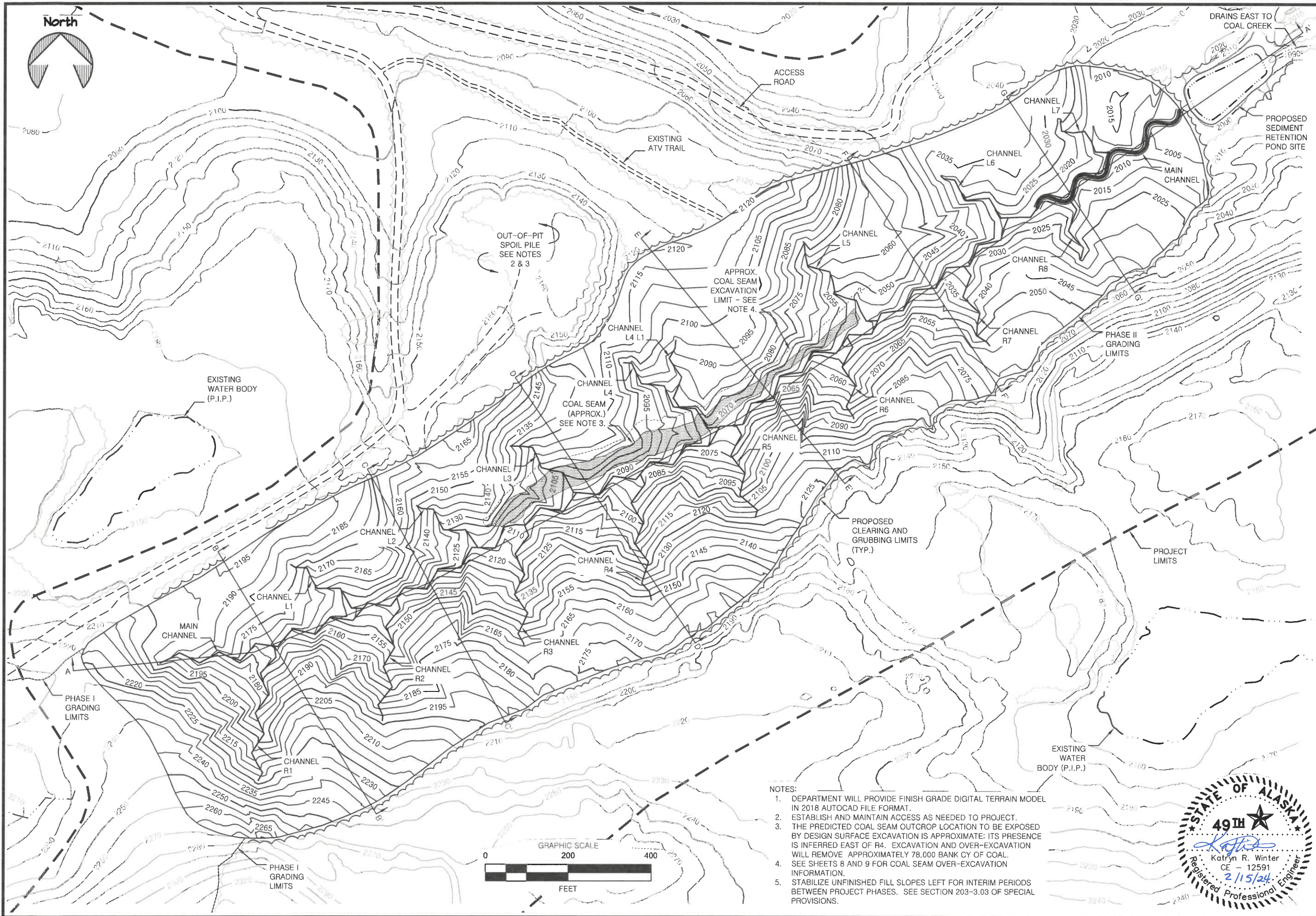
EXISTING CONDITIONS, CLEARING & GRUBBING PLAN, & CONTROL POINTS

CRIPPLE CREEK PIT RECLAMATION
 PHASE II -- PROJECT NO. 52959-6



PREPARED: RDA
 DRAWN: RDA
 REVIEWED: RM, KW
 DATE: 2/13/2024

SHEET
04
 OF 12 SHEETS



- NOTES:
1. DEPARTMENT WILL PROVIDE FINISH GRADE DIGITAL TERRAIN MODEL IN 2018 AUTOCAD FILE FORMAT.
 2. ESTABLISH AND MAINTAIN ACCESS AS NEEDED TO PROJECT.
 3. THE PREDICTED COAL SEAM OUTCROP LOCATION TO BE EXPOSED BY DESIGN SURFACE EXCAVATION IS APPROXIMATE; ITS PRESENCE IS INFERRED EAST OF R4. EXCAVATION AND OVER-EXCAVATION WILL REMOVE APPROXIMATELY 78,000 BANK CY OF COAL.
 4. SEE SHEETS 8 AND 9 FOR COAL SEAM OVER-EXCAVATION INFORMATION.
 5. STABILIZE UNFINISHED FILL SLOPES LEFT FOR INTERIM PERIODS BETWEEN PROJECT PHASES. SEE SECTION 203-3.03 OF SPECIAL PROVISIONS.



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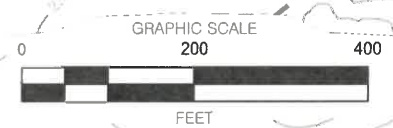
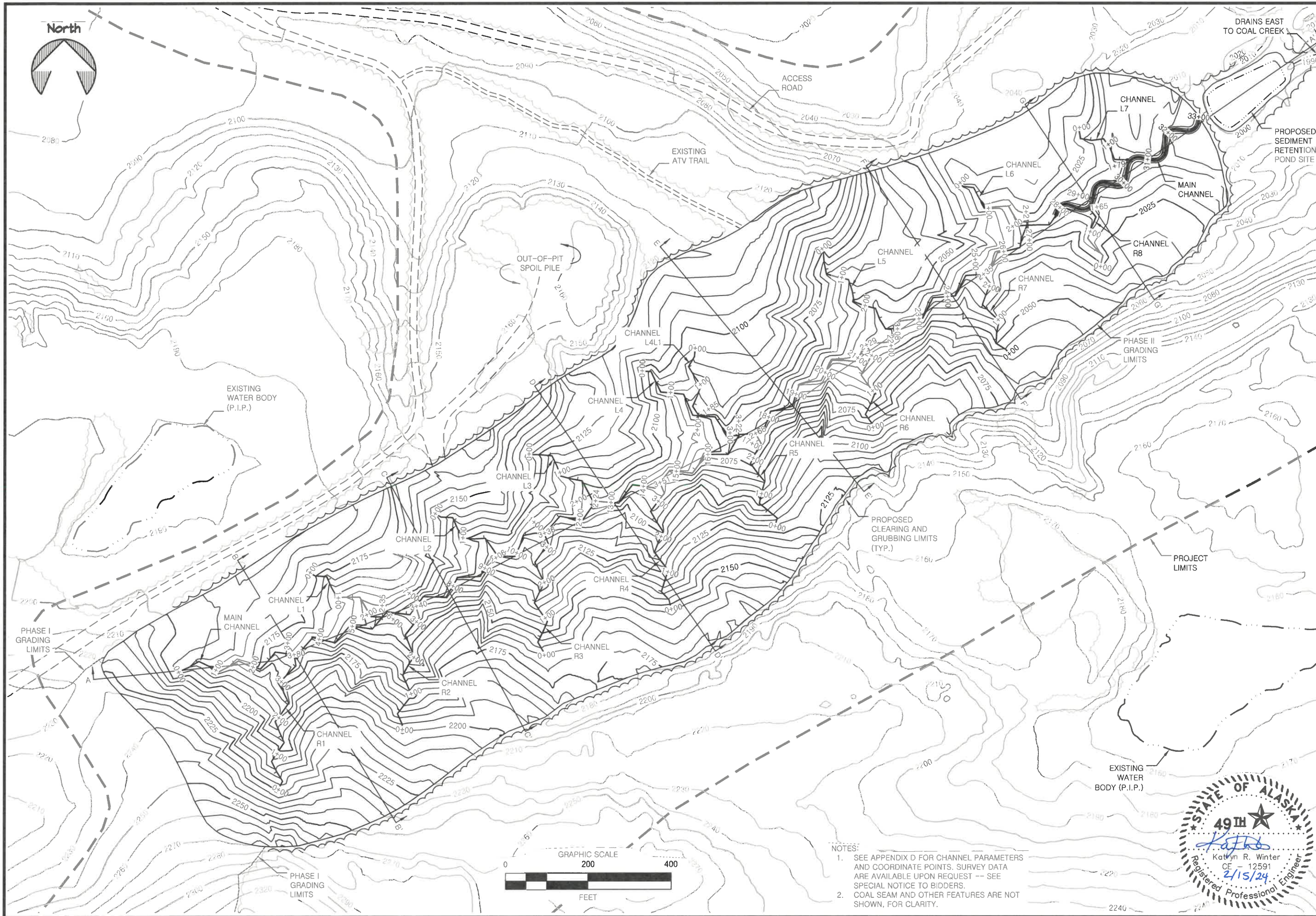
CRIPPLE CREEK PIT RECLAMATION
 PHASE II -- PROJECT NO. 52959-6

GRADING PLAN



PREPARED: RDA
 DRAWN: RDA
 REVIEWED: RM, KW
 DATE: 2/13/2024

SHEET
05
 OF 12 SHEETS



- NOTES:
1. SEE APPENDIX D FOR CHANNEL PARAMETERS AND COORDINATE POINTS. SURVEY DATA ARE AVAILABLE UPON REQUEST --- SEE SPECIAL NOTICE TO BIDDERS.
 2. COAL SEAM AND OTHER FEATURES ARE NOT SHOWN, FOR CLARITY.



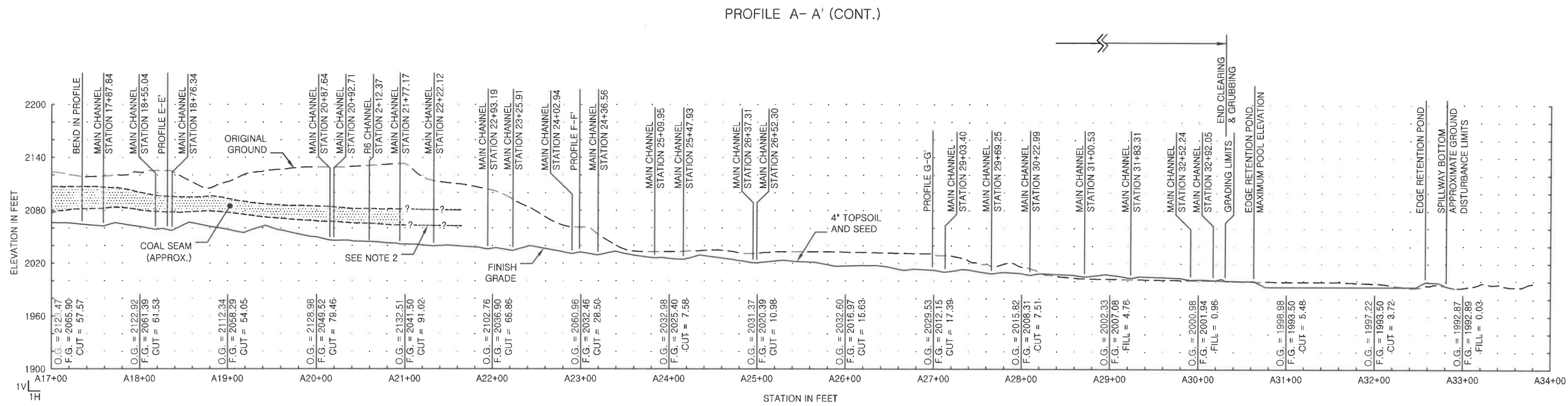
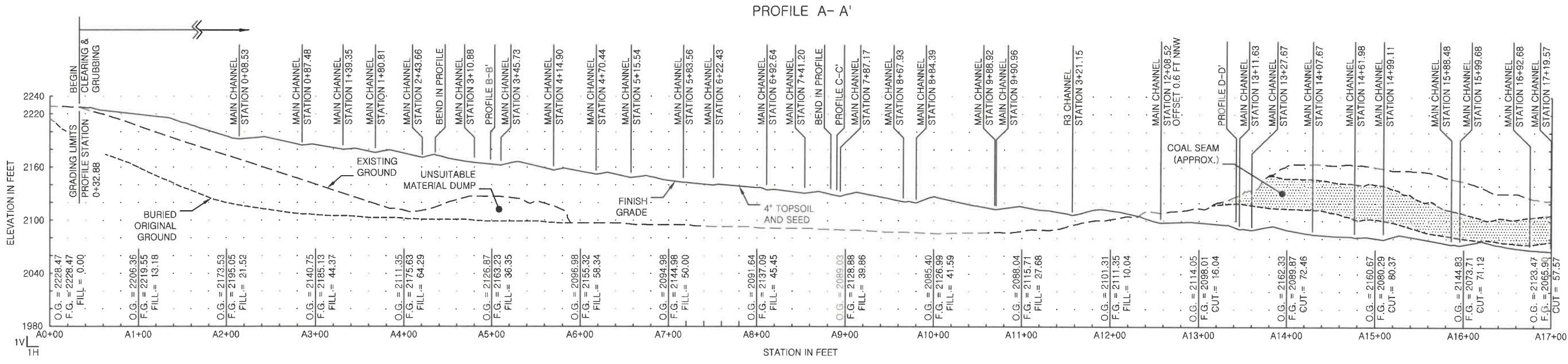
PREPARED: RDA
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 REVIEWED: RM, KW
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06
 OF 12 SHEETS

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CRIPPLE CREEK PIT RECLAMATION
 PHASE II -- PROJECT NO. 52959-6

DRAINAGE PLAN



- NOTES:
1. PROFILE INTERCEPTS OF CHANNELS ARE REFERENCED TO STATIONING ALONG THEIR CENTERLINES, AS NOTED.
 2. COAL SEAM IS INFERRED WHERE BURIED, EAST OF APPROX. PROFILE STATION 21+00.

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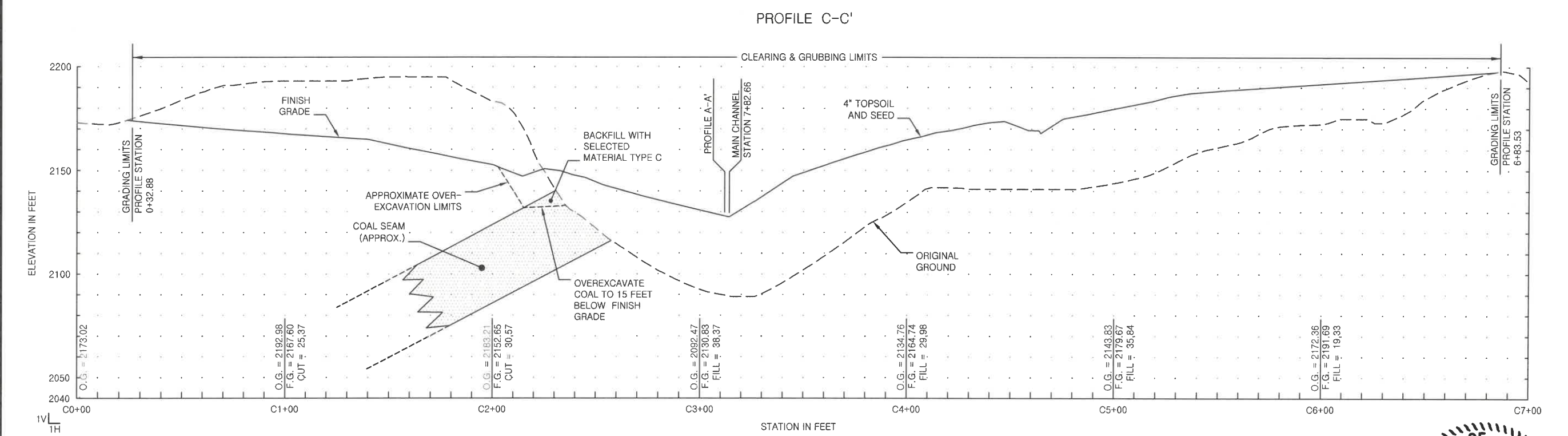
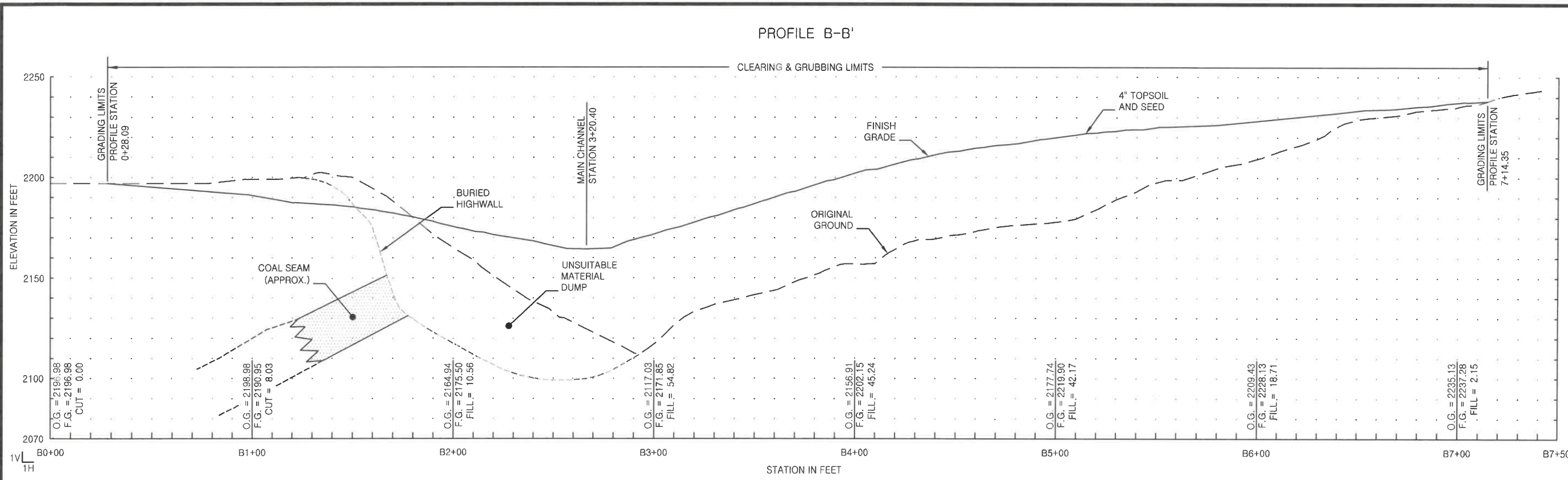
CRIPPLE CREEK PIT RECLAMATION
 PHASE II -- PROJECT NO. 52959-6

PROFILE A-A'



PREPARED: RDA
 DRAWN: RDA
 REVIEWED: RM, KW
 DATE: 2/1/2024

SHEET
07
 OF 12 SHEETS



NOTE: PROFILE INTERCEPTS OF CHANNELS ARE REFERENCED TO STATIONING ALONG THEIR CENTERLINES.



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CRIPPLE CREEK PIT RECLAMATION
 PHASE II -- PROJECT NO. 52959-6

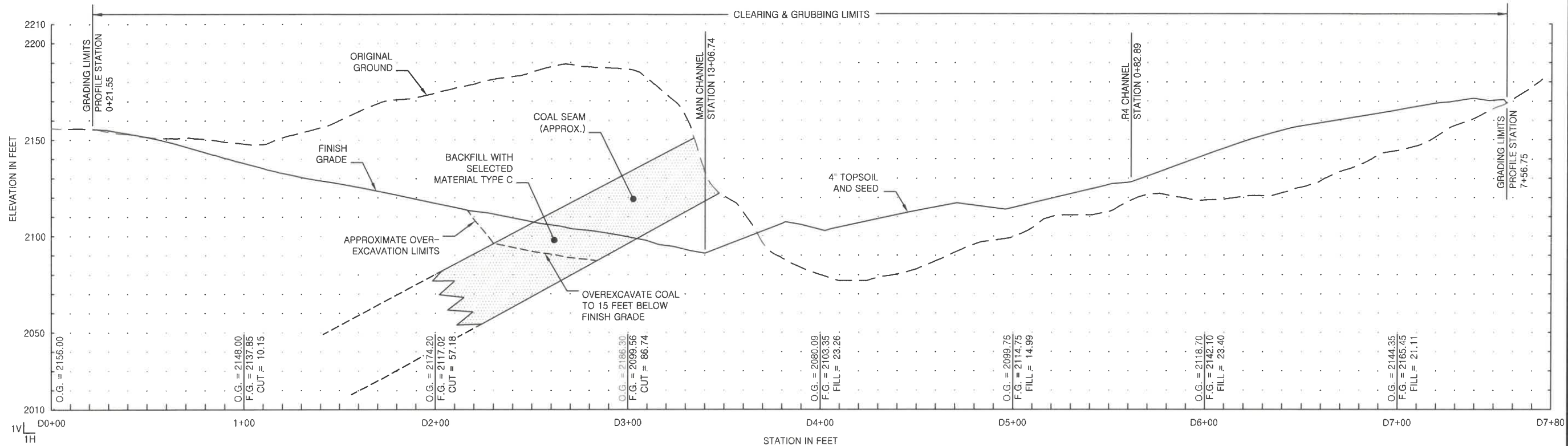
PROFILES B-B' & C-C'



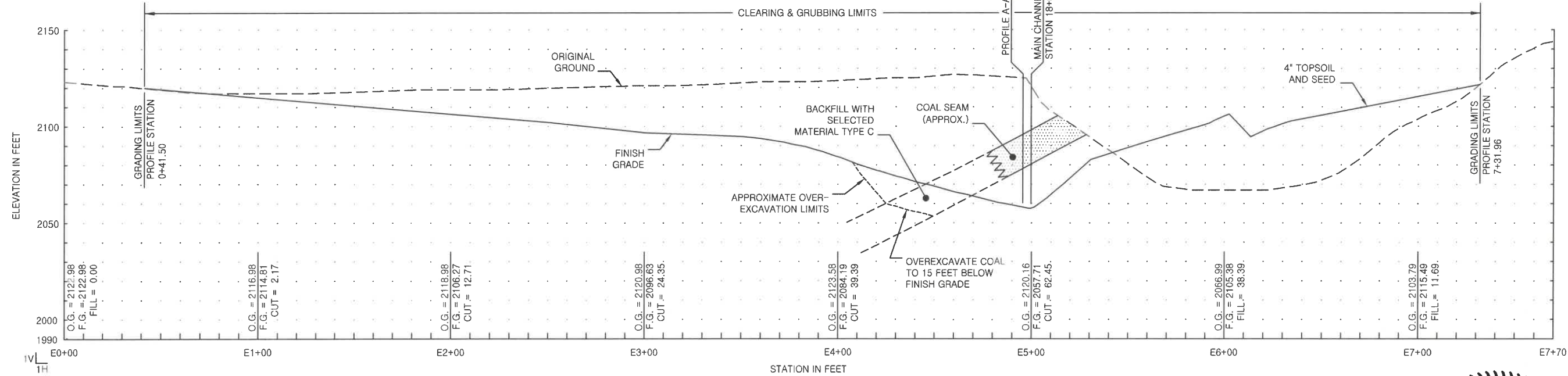
PREPARED: RDA
 DRAWN: RDA
 REVIEWED: RM, KW
 DATE: 2/2/2024

SHEET
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 OF 12 SHEETS

PROFILE D-D'



PROFILE E-E'



NOTE: PROFILE INTERCEPTS OF CHANNELS ARE REFERENCED TO STATIONING ALONG THEIR CENTERLINES.



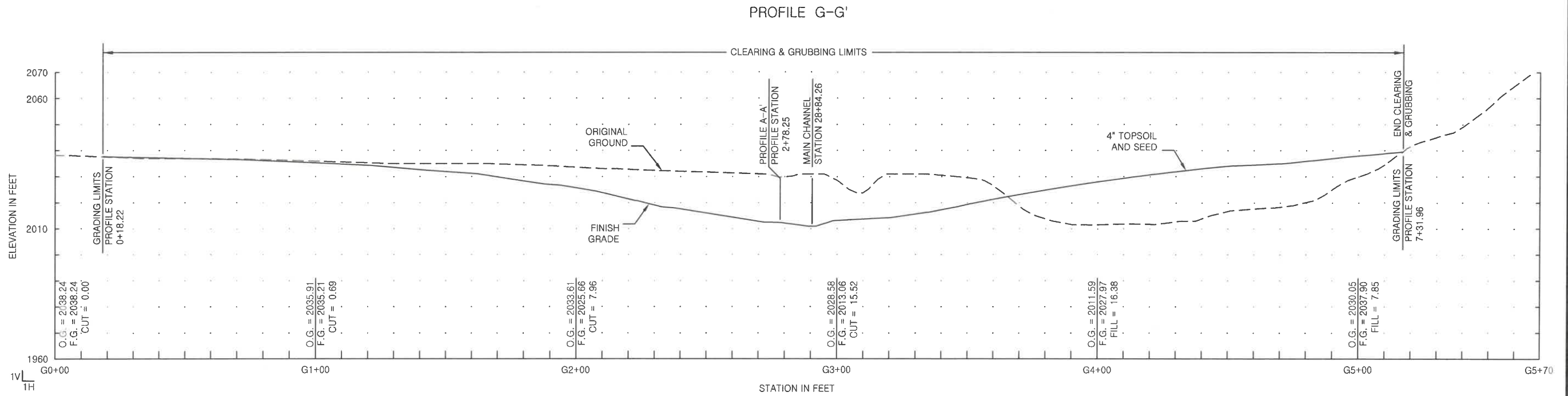
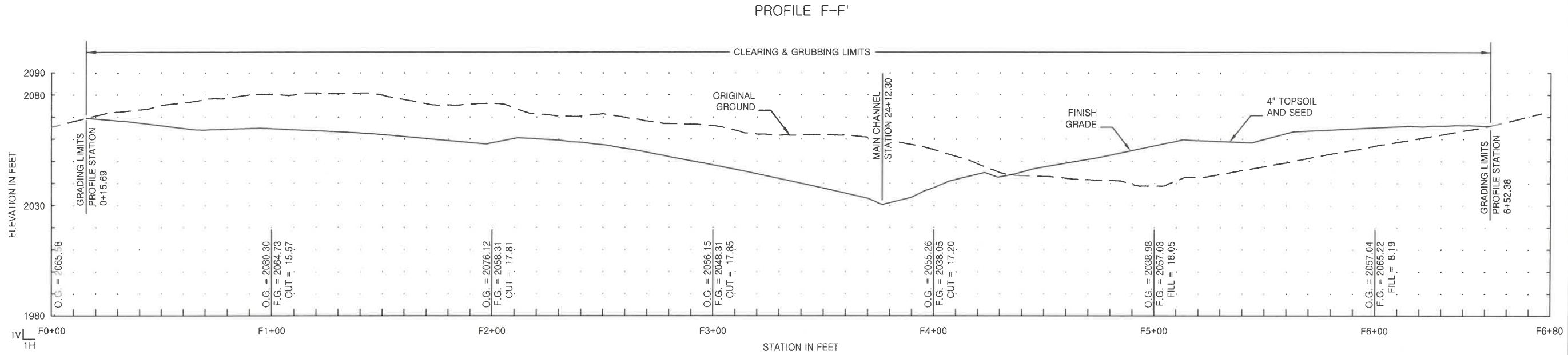
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 DATE: 2/2/2024

SHEET
09
 OF 12 SHEETS

CRIPPLE CREEK PIT RECLAMATION
 PHASE II -- PROJECT NO. 52959-6
 PROFILES D-D' & E-E'



NOTE: PROFILE INTERCEPTS OF CHANNELS ARE REFERENCED TO STATIONING ALONG THEIR CENTERLINES.



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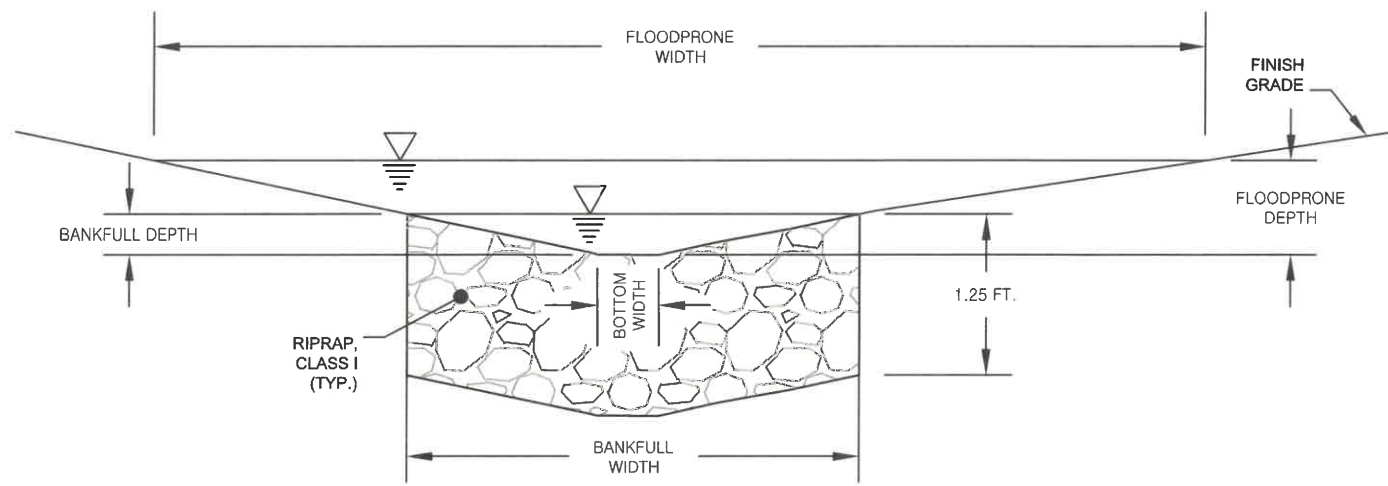
SHEET

10

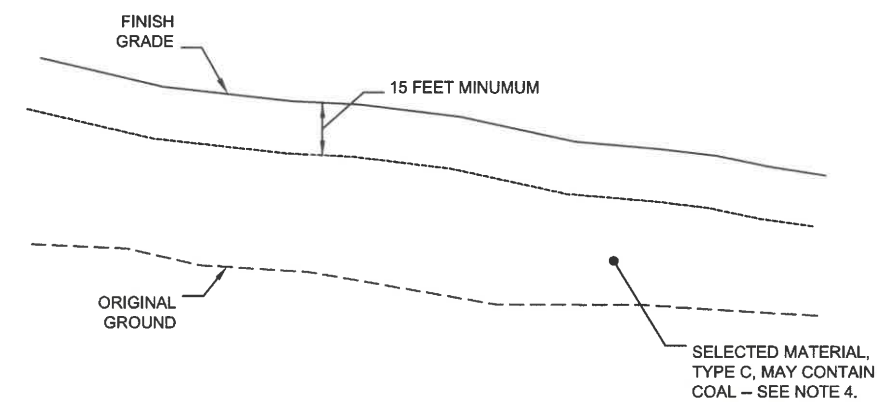
OF 12 SHEETS

PROFILES F-F' & G-G'

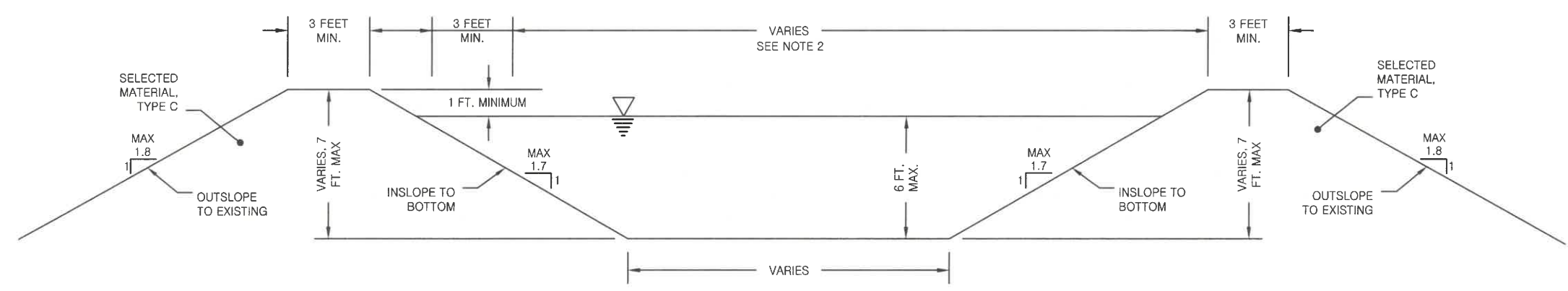
CRIPPLE CREEK PIT RECLAMATION
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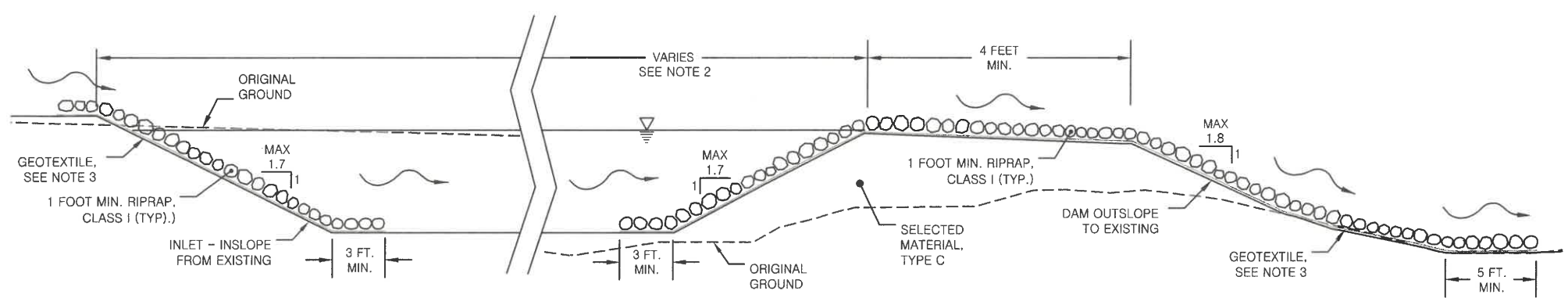
1 CHANNEL PARAMETERS, TYPICAL SECTION
12 TYPICAL CHANNEL -- SEE NOTE 1



4 TYPICAL COAL DISPOSAL DETAIL
12 PROFILE SHOWING MINIMUM BURIAL DEPTH



2 TYPICAL SEDIMENT RETENTION POND CROSS-SECTION
12 PROFILE ACROSS POND WIDTH



3 TYPICAL SEDIMENT RETENTION POND INLET & OUTLET
12 PROFILE ALONG POND LENGTH

- NOTES:
1. CHANNEL WIDTHS, DEPTHS, AND SIDE SLOPES VARY. SEE APPENDIX D FOR CHANNEL DIMENSIONS THAT VARY BY STATIONING.
 2. DIMENSION POND TO MEET THE FOLLOWING REQUIREMENTS:
CAPACITY: 84,300 CUBIC FEET
INFLOW RATE: 21.7 CFS PEAK FLOW
OUTFLOW RATE: 2.0 CFS AT PEAK FLOW
FINAL CONFIGURATION AND DIMENSIONS ARE TO BE DEVELOPED BY THE CONTRACTOR.
 3. GEOTEXTILE SEPARATION FABRIC, CLASS 1 OR BETTER.
 4. COAL MAY BE BURIED WITHIN FILL LIMITS, WITH A MINIMUM 15-FOOT DEPTH OF NON-COAL FILL COVER.



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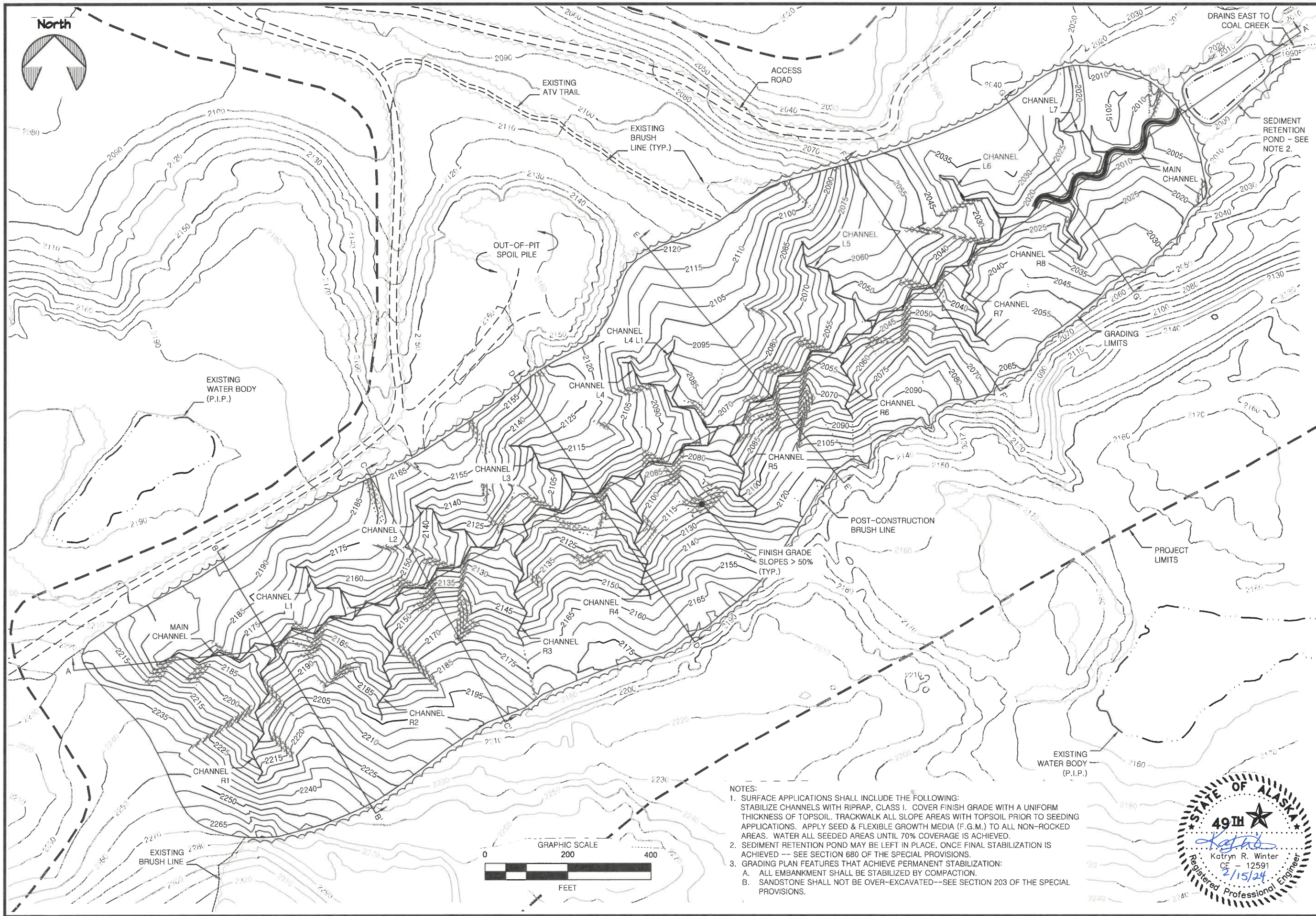


PREPARED: RDA
DRAWN: RDA
REVIEWED: RM, KW
DATE: 2/7/2024

SHEET
11
OF 12 SHEETS

CRIPPLE CREEK PIT RECLAMATION
PHASE II -- PROJECT NO. 52959-6

DETAILS



- NOTES:
1. SURFACE APPLICATIONS SHALL INCLUDE THE FOLLOWING:
 STABILIZE CHANNELS WITH RIPRAP, CLASS I. COVER FINISH GRADE WITH A UNIFORM THICKNESS OF TOPSOIL. TRACKWALK ALL SLOPE AREAS WITH TOPSOIL PRIOR TO SEEDING APPLICATIONS. APPLY SEED & FLEXIBLE GROWTH MEDIA (F.G.M.) TO ALL NON-ROCKED AREAS. WATER ALL SEEDED AREAS UNTIL 70% COVERAGE IS ACHIEVED.
 2. SEDIMENT RETENTION POND MAY BE LEFT IN PLACE, ONCE FINAL STABILIZATION IS ACHIEVED -- SEE SECTION 680 OF THE SPECIAL PROVISIONS.
 3. GRADING PLAN FEATURES THAT ACHIEVE PERMANENT STABILIZATION:
 - A. ALL EMBANKMENT SHALL BE STABILIZED BY COMPACTION.
 - B. SANDSTONE SHALL NOT BE OVER-EXCAVATED--SEE SECTION 203 OF THE SPECIAL PROVISIONS.



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CRIPPLE CREEK PIT RECLAMATION
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FINAL STABILIZATION



PREPARED: RDA
 DRAWN: RDA
 REVIEWED: RM. KW
 DATE: 2/13/2024

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 OF 12 SHEETS