COLORADO DIVISION OF RECLAMATION, MINING AND SAFETY
1313 Sherman Street, Room 215, Denver, Colorado 80203 ph(303) 866-3567

REQUEST FOR TECHNICAL REVISION (TR) COVER SHEET

File No.: M- 1977-211 Site Name: Pikeview Quarry

County El Paso TR# *(DRMS Use only)*

Permittee: Castle Aggregates

Operator (If Other than Permittee):

Permittee Representative: Jerald Schnabel

Please provide a brief description of the proposed revision:

Updates to the reclamation drainage design based on conditions in the field and granitic bedrock that will be left in place.

As defined by the Minerals Rules, a Technical Revision (TR) is: "a change in the permit or application which does not have more than a minor effect upon the approved or proposed Reclamation or Environmental Protection Plan." The Division is charged with determining if the revision as submitted meets this definition. If the Division determines that the proposed revision is beyond the scope of a TR, the Division may require the submittal of a permit amendment to make the required or desired changes to the permit.

The request for a TR is not considered "filed for review" until the appropriate fee is received by the Division (as listed below by permit type). Please submit the appropriate fee with your request to expedite the review process. After the TR is submitted with the appropriate fee, the Division will determine if it is approvable within 30 days. If the Division requires additional information to approve a TR, you will be notified of specific deficiencies that will need to be addressed. If at the end of the 30 day review period there are still outstanding deficiencies, the Division must deny the TR unless the permittee requests additional time, in writing, to provide the required information.

There is no pre-defined format for the submittal of a TR; however, it is up to the permittee to provide sufficient information to the Division to approve the TR request, including updated mining and reclamation plan maps that accurately depict the changes proposed in the requested TR.

Required Fees for Technical Revision by Permit Type - Please mark the correct fee and submit it with your request for a Technical Revision.

Permit Type	**Required TR Fee**	**Submitted** (mark only one)
110c, 111, 112 construction materials, and 112 quarries	$216	☑
112 hard rock (not DMO)	$175	☐
110d, 112d(1, 2 or 3)	$1006	☐

Stantec

Memo

To:	Hunter Ridley	From:	Paul Kos
	CDRMS	Cc:	Jerald Schnabel, Castle Aggregates
Project/File:	Pikeview Quarry Reclamation Project	Date:	April 2, 2024

Reference: Technical Revision (TR-23), Pikeview Quarry, M-1977-211

Ms. Ridley,

Castle Aggregates (Castle) in the process of reclaiming the Pikeview Quarry located northwest of Colorado Springs, Colorado. As part of the detailed design process and recent communications with staff with City of Colorado Springs (City), Colorado Division of Reclamation, Mining, and Safety (DRMS), United States Forest Service (USFS), and construction and revegetation contractors, Castle is requesting the following Technical Revisions (TR):

Updates to the reclamation drainage design have been made due to the conditions in the field and the granitic bedrock that will be left in place. This TR contains updated information and is intended to be reviewed with Exhibit G of the Amendment 4 for model input parameters and background information. Below summarizes the additional channels and justification. The channel designs are summarized in Table 1.

- Cross Channel – This channel routes the flows from the upper area to the main channel. Reclamation construction revealed the presence of competent bedrock that the water needed to be diverted around from the previously approved design. The Cross Channel design has been separated into three sections based on the channel gradient and the calculated design flows.
- Channel T9 – Diverts water collected from the south peak watershed towards the south channel.
- Channel T8 – Due to the rock outcroppings that will remain in place, proposed terrace channel T8 was rerouted to avoid the outcroppings and to connect with terrace channel T7. Terrace channel T8 will have two segments. The upper segment design follows the terrace channel design. The lower/steep segment includes a riprap armored channel that slopes down to terrace channel T7.
- Channel T7 – The alignment of this channel did not change, but the design flows increased due to the additional flows from terrace channel T8. This channel has been divided into an upper and lower section. The upper segment is upstream from the confluence with T8, and the design follows the terrace channel design. The lower segment considers the flows from T8.

The revised hydrologic model reports and design drawings have been included as attachments.

TABLE 1: PIKEVIEW QUARRY RECLAMATION CHANNEL SUMMARY									
Channel	**100-yr, 24-hr Peak Flow (cfs)**	**100-yr, 24-hr Flow Depth (ft)**	**Channel Depth (ft)**	**Channel Lining**	**Bottom Width (ft)**	**Side Slope (xH:1V)**	**Rock D50 (inch)**	**Minimum Channel Slope (%)**	**Maximum Channel Slope (%)**
Cross Channel 1	75	0.6	2.0	Riprap	10	2	12	11	33
Cross Channel 2	67	0.94	2.0	Riprap	5	2	12	7	23
Cross Channel 3	16	0.38	2.0	Riprap	5	2	6	2	17
Channel T9	24	0.7	2.0	Riprap	0	2/10	3	2	4
Channel T8 Upper	38	1	2.0	Riprap	0	2/10	3	2	2
Channel T8 Steep	38	0.6	2.0	Riprap	0	2/10	12	23	23
Channel T7 Upper	22	0.7	2.0	Riprap	0	2/10	3	2	2
Channel T7 Lower	76	1.2	2.0	Riprap	0	2/10	6	2	2
Channel T10	47	0.8	2.0	Riprap	5	2	12	6	25
Lower North Channel	691	2.0	2.5	Riprap	20	2	18	14	14.5
Lower Middle North Channel	493	1.6	2.5	Riprap	20	2	12	13.8	14.5
Middle North Channel	475	1.5	2.5	Riprap	20	2	18	15.8	18.3
Upper Middle North Channel	475	1.4	2.5	Riprap	20	2	24	25.4	36
Upper North Channel	361	1.5	2.5	Riprap	20	2	18	15.3	19.7
Lower South Channel 1	165	0.8	2.3	Riprap	10	2	18	5.4	25.2
Lower South Channel 2	165	0.8	2.3	Riprap	10	2	12	10	12
Middle South Channel	82	0.6	2.0	Riprap	10	2	12	2.2	23.6
Upper South Channel	58	0.8	2.0	Bedrock	10	2	N/A	26.5	N/A
South Channel 1A	67	0.8	2.3	Riprap	10	2	6	0.8	5.6
C4 Channel	46	0.5	2.3	Riprap	10	2	6	0.4	17.9
Terrace	Up to 40	1.3	2.0	Riprap	0	2/10	3	2	2

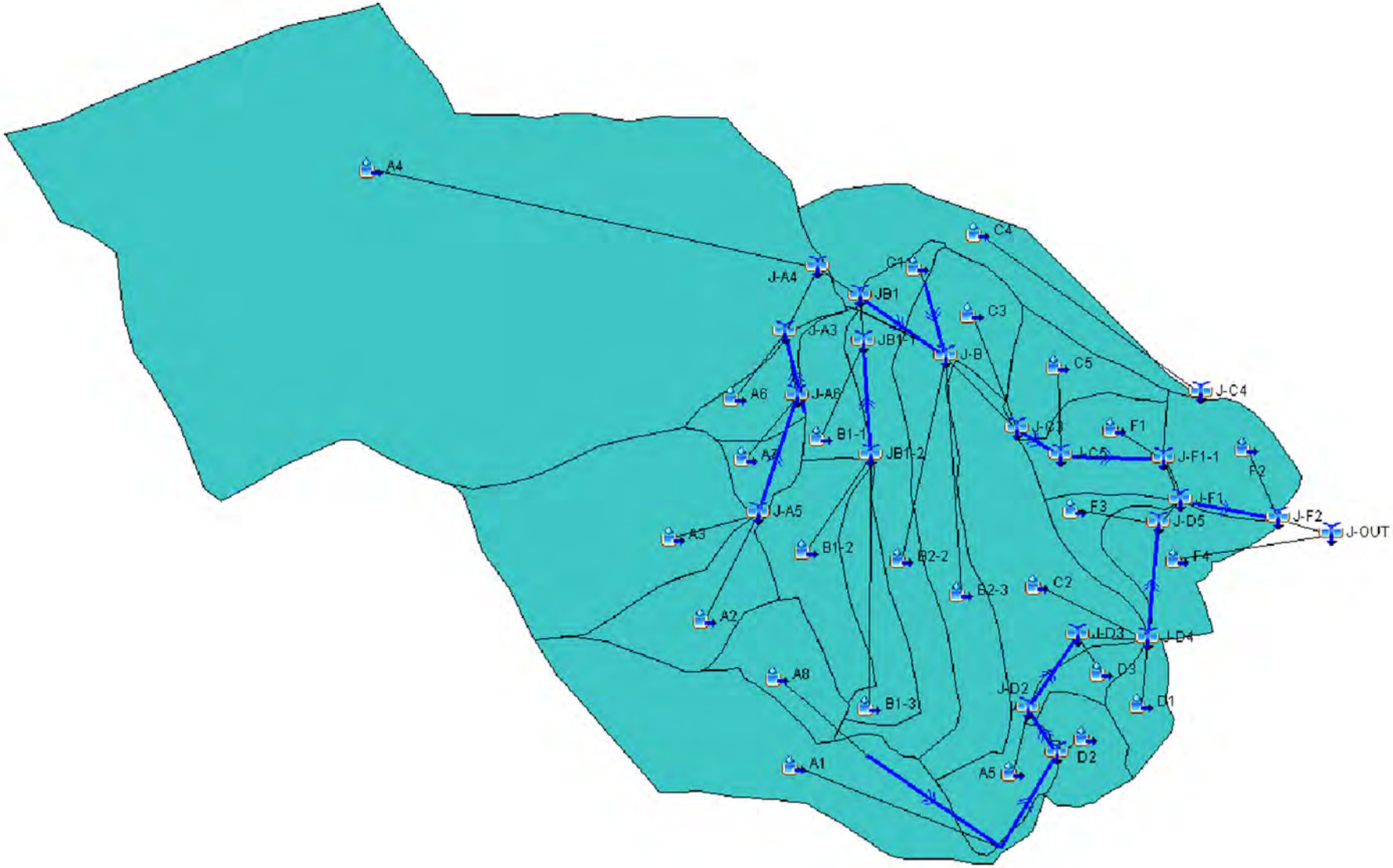
Notes:

- Major Channels were designed to accommodate at least a 0.5-ft freeboard
- Riprap was sized to have a minimum factor of safety of 1.3
- Bedrock may be encountered throughout the site and may provide erosion protection in more channel segments than indicated.

Reference: Technical Revision

HEC-HMS Model Reports

HEC-HMS Model



HEC-HMS Subbasin Input Parameters

Subbasin	Area (ac)	Area (mi2)	Curve Number	Lag Time (min)
A1	25.5	0.040	63.7	22.15
A2	8.1	0.013	63	15.57
A3	23.6	0.040	63	16.57
A4	158.8	0.250	63.5	19.70
A5	5.7	0.009	74	5.44
A6	4.3	0.007	63.1	6.67
A7	2.9	0.005	69.3	6.26
A8	6.3	0.010	74	7.35
B1-1	4.9	0.008	74	6.82
B1-2	9.2	0.014	74	5.61
B1-3	6.5	0.010	74	9.29
B2-2	12.1	0.019	74	11.56
B2-3	13.7	0.021	74	9.50
C1	2.3	0.004	74	3.60
C2	17.4	0.027	74	7.46
C3	6.4	0.010	74	10.43
C4	14.3	0.022	70.8	9.37
C5	5.9	0.009	72	10.69
D1	3.5	0.006	72.5	20.65
D2	4.6	0.007	73.2	33.49
D3	2.4	0.004	74	8.09
F1	7.7	0.012	73.4	10.44
F2	8.0	0.013	70.2	9.71
F3	3.6	0.006	74	8.05
F4	7.9	0.012	72.2	12.25

HEC-HMS Precipitation Model

Met Name: SCS_TypeII

Method: SCS Type 2

*Point Depth (IN): 5.64

Area Reduction: --None--

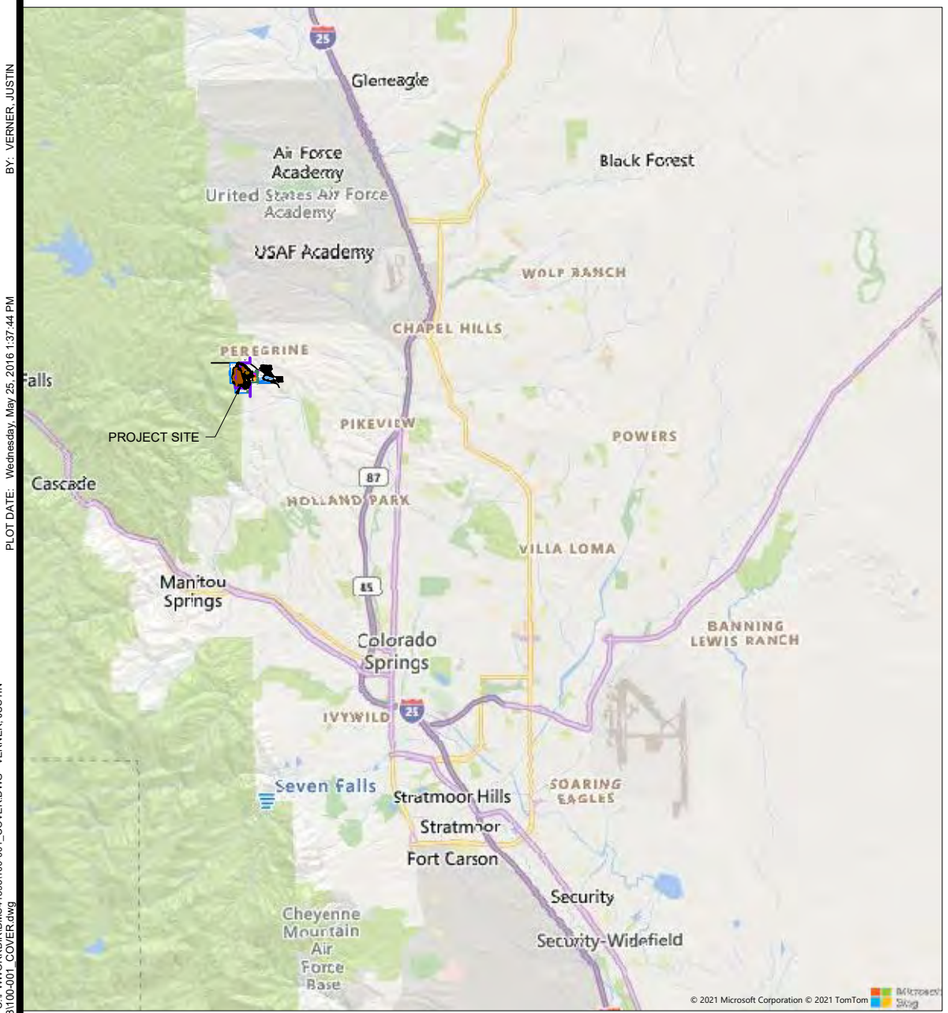
Reference: Technical Revision

HEC-HMS Model Results

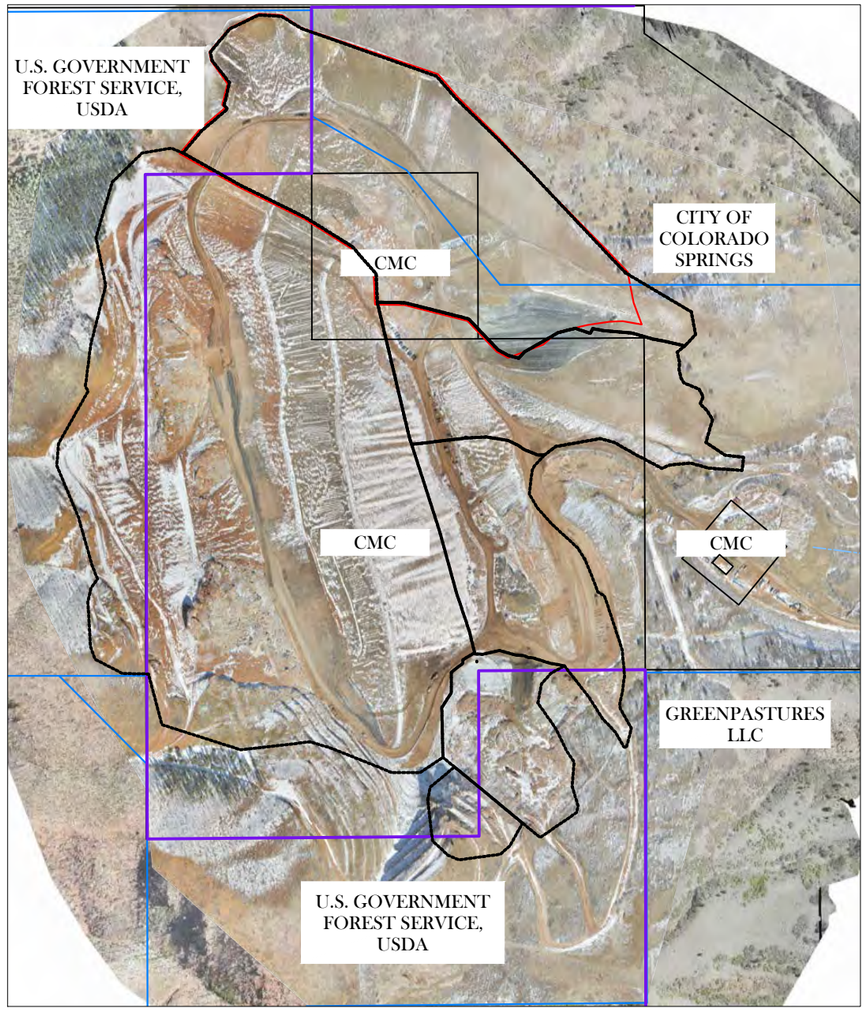
Hydrologic Element	Drainage Area (mi2)	Peak Discharge (cfs)	Time of Peak	Volume (acre-ft)
A1	0.040	44.1	01Jan2000, 12:10	5.0
A2	0.013	16.7	01Jan2000, 12:05	1.6
A3	0.037	47.3	01Jan2000, 12:05	4.6
A4	0.248	289.5	01Jan2000, 12:10	31.3
A5	0.009	23.5	01Jan2000, 11:55	1.5
A6	0.007	12.6	01Jan2000, 11:55	0.8
A7	0.005	10.5	01Jan2000, 11:55	0.7
A8	0.010	24.5	01Jan2000, 11:55	1.7
B1-1	0.008	19.4	01Jan2000, 11:55	1.3
B1-2	0.014	38.0	01Jan2000, 11:55	2.4
B1-3	0.010	22.4	01Jan2000, 12:00	1.7
B2-2	0.019	39.9	01Jan2000, 12:00	3.2
B2-3	0.021	47.3	01Jan2000, 12:00	3.6
C1	0.004	9.9	01Jan2000, 11:50	0.6
C2	0.027	67.2	01Jan2000, 11:55	4.6
C3	0.010	21.8	01Jan2000, 12:00	1.7
C4	0.022	45.7	01Jan2000, 12:00	3.5
C5	0.009	19.2	01Jan2000, 12:00	1.5
D1	0.005	8.2	01Jan2000, 12:10	0.9
D2	0.007	8.1	01Jan2000, 12:20	1.2
D3	0.004	9.1	01Jan2000, 11:55	0.6
F1	0.012	26.0	01Jan2000, 12:00	2.0
F2	0.013	25.0	01Jan2000, 12:00	1.9
F3	0.006	13.3	01Jan2000, 11:55	0.9
F4	0.012	24.3	01Jan2000, 12:00	2.0
JB1	0.341	407.6	01Jan2000, 12:05	44.4
JB1-1	0.032	76.3	01Jan2000, 11:55	5.4
JB1-2	0.024	60.4	01Jan2000, 11:55	4.1
J-A3	0.061	75.2	01Jan2000, 12:00	7.7
J-A4	0.309	360.8	01Jan2000, 12:05	38.9
J-A5	0.050	64.0	01Jan2000, 12:05	6.2
J-A6	0.054	67.4	01Jan2000, 12:05	6.8
J-B	0.385	475.5	01Jan2000, 12:05	51.7
J-C3	0.395	493.1	01Jan2000, 12:00	53.4
J-C4	0.022	45.7	01Jan2000, 12:00	3.5
J-C5	0.404	507.7	01Jan2000, 12:05	54.9
J-D1	0.057	63.2	01Jan2000, 12:05	7.9
J-D2	0.066	74.1	01Jan2000, 12:00	9.4
J-D3	0.070	82.4	01Jan2000, 12:00	10.0
J-D4	0.102	148.2	01Jan2000, 12:00	15.5
J-D5	0.108	164.5	01Jan2000, 12:00	16.5
J-F1	0.524	691.9	01Jan2000, 12:00	73.3
J-F1-1	0.416	533.0	01Jan2000, 12:05	56.9
J-F2	0.536	710.7	01Jan2000, 12:00	75.3
J-OUT	0.549	735.0	01Jan2000, 12:00	77.3
RA8	0.010	22.5	01Jan2000, 11:55	1.7

PIKEVIEW QUARRY RECLAMATION PROJECT

APRIL 2024



SITE VICINITY MAP
NOT TO SCALE



SITE MAP
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SCALE IN FEET
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SHEET NUMBER	SHEET TITLE
100-001	COVER SHEET
100-002	GENERAL NOTES AND ABBREVIATIONS
100-003	SITE PLAN- AERIAL
100-004	PROJECT SITE PLAN EXISTING CONTOURS AND CONTROL POINTS
100-005	OVERAL GRADING PLAN
100-006	OVERALL DRAINAGE PLAN
100-008	PARCEL AND OWNERSHIP PLAN
200-001	BUTTRESS AREA GRADING PLAN
200-002	BUTTRESS AREA SECTIONS
200-004	NORTHERN BORROW AREA GRADING PLAN
200-005	NORTHERN BORROW AREA SECTIONS
200-007	LOWER BORROW AREA GRADING PLAN
200-008	LOWER BORROW AREA SECTIONS
200-010	SOUTHERN BORROW AREA GRADING PLAN
200-011	SOUTHERN BORROW AREA SECTIONS
300-001	OVERALL CHANNEL PLAN
300-002	CROSS CHANNEL PLAN AND PROFILE
300-003	NORTH CHANNEL PLAN AND PROFILE
300-004	SOUTH CHANNEL PLAN AND PROFILE
300-005	TYPICAL CHANNEL DETAILS
300-006	TRANSITION ZONE NORTH CHANNEL
400-001	SEEDING PLAN
400-002	REVEGETATION PLAN
500-001	EXISTING PRISM LOCATIONS
500-002	RECLAMATION PRISM LOCATIONS
600-001	OVERALL GEOLOGY PLAN
600-002	GEOLOGY SECTION B
600-003	GEOLOGY SECTION C
600-004	GEOLOGY SECTION D
600-005	GEOLOGY SECTION E

COLORADO LICENSED
PAUL J. KOS
40848
APRIL 2, 2024
PROFESSIONAL ENGINEER

REV	DATE	BY	DESCRIPTION
H	04/2024	JTV	DESIGN REVISION
G	07/2023	JTV	DESIGN REVISION

SCALE: AS NOTED

WARNING: 0 ½ 1 — IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

DESIGNED T. LEIDICH
DRAWN J. VERNER
CHECKED P. KOS

Stantec

PROJECT: PIKEVIEW QUARRY RECLAMATION PROJECT
COVER SHEET

SHEET: 100-001
JobNumber

PLOT DATE: Wednesday, May 25, 2016 1:37:44 PM BY: VERNER, JUSTIN
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GENERAL

1. THE CONTRACTOR WILL REFER TO THE CONSTRUCTION DRAWINGS, PROJECT MANUAL, CONTRACT, PERMITS, PROJECT DOCUMENTS (MEETING MINUTES, PUNCH LISTS, ETC.) FOR COMPLETE INFORMATION ABOUT THE REQUIRED WORK. ANY ONE OF THESE PARTS OF THE "CONSTRUCTION DOCUMENTS" MAY NOT CONTAIN ALL OF THE INFORMATION REQUIRED TO COMPLETE THE WORK.
2. FOR ANY INCONSISTENCIES ENCOUNTERED IN THE PLAN SET OR BETWEEN PLAN AND SPECIFICATION, CONTRACTOR SHALL POINT THESE OUT TO ENGINEER AND SEEK FURTHER DIRECTION/RESOLUTION.
3. PRIOR TO CLEARING AND GRUBBING, CONTRACTOR SHALL STAKE OUT LIMITS OF DISTURBANCE.
4. CONTRACTOR MAY ONLY EXTEND LIMITS OF DISTURBANCE WITH THE WRITTEN APPROVAL OF ENGINEER.
5. CONTRACTOR SHALL MINIMIZE IMPACTS TO ADJACENT TREES AND VEGETATION.
6. GRADING TO ACHIEVE SPECIFIED CONTOURS AND MINIMUM DIMENSIONS SHOWN
   - AS GRADES ARE FINAL AND INCLUDE TOPSOIL AND CHANNEL ARMORING
   - CHANNEL DEPTH/WIDTH, BANK SLOPE, CROSS SECTIONAL AREA SHALL BE WITHIN 0.1' OF DESIGN.
   - ALL GRADING WILL BE WITHIN 1.0' OF THE REQUIRED HORIZONTAL LOCATION(S) SHOWN ON THE PLANS AND TYPICAL SECTIONS UNLESS OTHERWISE SPECIFIED.
7. ALL DIMENSIONS ARE IN FEET UNLESS NOTED OTHERWISE.
8. SLOPES BETWEEN PROPOSED BENCHES AND EXISTING GROUND SHALL BE GRADED TO PROVIDE A SMOOTH AND NATURAL TRANSITION.
9. NATURAL VARIABILITY AT THE SITE MAY REQUIRE ADAPTATION OF THE DRAWINGS, NOTES, QUANTITIES, ETC., AND WILL NOT NECESSARILY CONSTITUTE A CHANGE IN THE WORK. ANY REQUESTED CHANGE IN PRICE WILL BE IDENTIFIED, SPECIFIED IN WRITING, AND APPROVED BY THE OWNER PRIOR TO THE START OF THE CHANGE.
10. THE QUANTITY OF ANY ITEM SHOWN ON THE DRAWINGS OR PROJECT MANUAL MAY BE ADJUSTED BY THE OWNER'S REPRESENTATIVE BASED ON FIELD CONDITIONS AT THE TIME THE WORK IS PERFORMED AND PER APPROVAL OF THE ENGINEER AND WILL NOT NECESSARILY CONSTITUTE A CHANGE IN THE WORK.
11. EXISTING SITE CONDITIONS SHOWN ON THE PLANS ARE BASED ON AERIAL IMAGES AND FIELD SURVEY DATA 05/31/2022, AND AS SUCH DOES NOT REFLECT CHANGES TO THE SITE THAT HAVE OCCURRED SINCE THEY WERE PERFORMED.
12. AFTER CONSTRUCTION, ACCESS ROADS LEADING TO THE PROJECT SITE SHALL BE RESTORED TO AS GOOD OR BETTER CONDITION THAN BEFORE CONSTRUCTION.
13. EXISTING TOPOGRAPHY AND AERIAL PHOTOGRAPHY PROVIDED BY CLIENT WITH FLYOVER DATE OF 05/31/2022.
14. SITE COORDINATE SYSTEM - STATE PLAN, COLORADO CENTRAL, NAD83 (NSRS2011).

UTILITIES

1. NO SUBSURFACE PLANS ARE AVAILABLE FOR THIS PROJECT. THE CONTRACTOR SHALL MAKE THEIR OWN INVESTIGATION TO DETERMINE SUBSURFACE CONDITIONS.
2. THE UTILITY/INFRASTRUCTURE FACILITIES/INFORMATION SHOWN ON THESE PLANS IS PROVIDED FOR INFORMATIONAL PURPOSES. COMPLIANCE WITH THESE NOTES AND PLANS DOES NOT CONSTITUTE RESPONSIBILITY BY THE OWNER, THEIR REPRESENTATIVE(S), AND/OR THE UTILITY/INFRASTRUCTURE FACILITY OWNER.
3. THE CONTRACTOR IS RESPONSIBLE FOR DIRECT COORDINATION WITH UTILITY/INFRASTRUCTURE FACILITY OWNERS AND SHALL NOTIFY THE OWNER AND ENGINEER OF ANY COORDINATION ACTIVITIES.
4. THE CONTRACTOR IS RESPONSIBLE FOR CONFIRMING THE ACTUAL LOCATION OF UTILITY AND INFRASTRUCTURE FACILITIES WITHIN THE PROJECT LIMITS INCLUDING PROJECT ACCESS, STAGING, AND CONSTRUCTION AREAS.
5. THE CONTRACTOR IS RESPONSIBLE FOR PREVENTING DAMAGE TO OR INTERFERENCE WITH EXISTING POWER LINES, COMMUNICATIONS FACILITIES, ROADWAYS, BURIED CABLES, AND OTHER FACILITIES ADJACENT TO OR CROSSING THE PROJECT AREA, FROM CONSTRUCTION ACTIVITIES RELATED TO THE PROPOSED WORK.
6. ANY REMEDIAL ACTION, RESULTING FROM THE CONSTRUCTION ACTIVITIES, REQUIRED BY THE UTILITY/INFRASTRUCTURE OWNER(S), SHALL BE AT THE CONTRACTOR'S SOLE COST AND EXPENSE.

SWPPP CONSTRUCTION NOTES

1. CONTRACTOR SHALL DEVELOP, OBTAIN, AND MANAGE SWPPP.
2. CONTRACTOR SHALL CLEAN UP THE EXISTING STREET INTERSECTIONS AND DRIVEWAYS DAILY, AS NECESSARY, TO REMOVE ANY EXCESS MUD, SILT, OR ROCK TRACKED FROM THE EXCAVATED AREA.
3. CONTRACTOR SHALL FOLLOW GOOD HOUSEKEEPING PRACTICES DURING THE CONSTRUCTION OF THE PROJECT, ALWAYS CLEANING UP DIRT AND LOOSE MATERIAL AS CONSTRUCTION PROGRESSES.
4. CONTRACTOR TO INSPECT AND MAINTAIN THE AREAS LISTED BELOW AT LEAST ONCE EVERY FOURTEEN (14) CALENDAR DAYS AND WITHIN 24 HOURS OF THE END OF A STORM EVENT OF 0.5 INCHES OR GREATER.
   - DISTURBED AREAS OF THE CONSTRUCTION SITE THAT HAVE NOT BEEN FINALLY STABILIZED.
   - AREAS USED FOR STORAGE OF MATERIALS THAT ARE EXPOSED TO PRECIPITATION.
   - STRUCTURAL CONTROL MEASURES.
   - LOCATIONS WHERE VEHICLES ENTER OR EXIT THE SITE.
5. CONTRACTOR TO BE RESPONSIBLE TO MAINTAIN EXISTING DITCHES AND/OR CULVERTS FOR UNOBSTRUCTED DRAINAGE AT ALL TIMES.
6. PRIOR TO ANY CONSTRUCTION ACTIVITY, INCLUDING CLEARING AND GRUBBING, BMPS SHALL BE ESTABLISHED PER SWPPP.

HEALTH AND SAFETY

1. IN ALL CONSTRUCTION ACTIVITIES SAFETY OF LIFE SHALL OUTWEIGH ALL OTHER CONSIDERATIONS. THE CONTRACTOR IS RESPONSIBLE FOR THE SAFETY OF THEIR EMPLOYEES, THEIR SUB-CONTRACTED EMPLOYEES AND OWNER'S REPRESENTATIVE INSPECTORS.
2. ALL OPERATIONS SHALL BE PERFORMED BY THE CONTRACTOR IN STRICT ACCORDANCE WITH THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION'S (OSHA) "SAFETY AND HEALTH REGULATIONS FOR CONSTRUCTION" AS WELL AS ANY APPLICABLE LOCAL, STATE, OR FEDERAL SAFETY REQUIREMENTS.
3. THE CONTRACTOR IS REQUIRED TO SUBMIT A “SAFETY PLAN” IN WRITING TO THE OWNER FOR REVIEW FIFTEEN (15) BUSINESS DAYS PRIOR TO ANY SITE ACTIVITY. THE OWNER IS NOT REQUIRED TO REVIEW AND/OR APPROVE THE CONTRACTOR'S SAFETY PLAN.
4. THE OWNER'S REPRESENTATIVE MAY REQUEST ADDITIONAL SAFETY MEASURES AT THAT TIME AND/OR ANY TIME THROUGHOUT THE DURATION OF THE PROJECT.
5. THE CONTRACTOR SHALL POST A COPY OF ALL APPLICABLE SAFETY RULES AND REGULATIONS ON-SITE. THE CONTRACTOR SHALL MAINTAIN A COPY OF THE “SAFETY PLAN” ON-SITE THROUGHOUT CONSTRUCTION.
6. THE CONTRACTOR SHALL CONDUCT AN ON-SITE PRE-CONSTRUCTION SAFETY MEETING FOR ALL EMPLOYEES AND SUBCONTRACTOR EMPLOYEES WORKING ON THE PROJECT SITE. THE CONTRACTOR SHALL REVIEW THE SAFETY PLAN AT THE PRE-CONSTRUCTION SAFETY MEETING. THE OWNER, ENGINEER, AND/OR FACILITY OWNER(S) SHALL BE NOTIFIED TEN (10) CALENDAR DAYS PRIOR TO THE PRE-CONSTRUCTION SAFETY MEETING SO THAT THEIR REPRESENTATIVE(S) MAY ATTEND.
7. WORK DONE ADJACENT TO UTILITIES/FACILITIES/HIGHWAYS SHALL COMPLY WITH SAFETY AND CONSTRUCTION PRACTICES REQUIRED BY THE UTILITY/FACILITY/HIGHWAY DEPARTMENT, IN ADDITION TO THOSE REQUIRED BY LOCAL, STATE AND FEDERAL LAWS.
8. THE CONTRACTOR SHALL HOLD SAFETY MEETINGS WITH ALL EMPLOYEES ON A REGULAR BASIS AND PROVIDE THE OWNER'S REPRESENTATIVE WITH A COPY OF THE MEETING MINUTES.
9. THE CONTRACTOR SHALL MAINTAIN ON-SITE A “SAFETY SIGN-IN SHEET” OF ALL EMPLOYEES AND SUB-CONTRACTOR EMPLOYEES ATTENDING THE PRE-CONSTRUCTION SAFETY MEETING. ANY CONTRACTOR AND SUB-CONTRACTOR EMPLOYEES ADDED DURING THE DURATION OF THE PROJECT SHALL ATTEND AN “ON-SITE” CONSTRUCTION SITE SAFETY MEETING PRIOR TO
10. STARTING WORK. IN ADDITION, THEIR NAMES SHALL BE ADDED TO THE “SAFETY SIGN-IN SHEET”.
11. A VISITOR “SIGN-IN” LOG SHALL BE KEPT ON-SITE BY THE CONTRACTOR. THE LOG SHALL AT A MINIMUM IDENTIFY THE NAME, ORGANIZATION, DATE, TIME OF ARRIVAL AND THE TIME OF DEPARTURE.

LEGEND

- EXISTING CONTOURS
- DESIGN CONTOURS
- AREA BOUNDARY
- EXISTING ROAD
- PROPOSED ROAD
- MAIN CHANNEL
- MINOR CHANNEL
- ISOPACH CUT CONTOURS
- ISOPACH FILL CONTOURS
- EXISTING ROADS
- EXISTING BUILDING
- EXISTING POWER LINES
- EXISTING STREAMS
- EXISTING TOP SOIL STOCKPILE
- CDRMS PERMIT BOUNDARY
- CITY OF COLORADO SPRINGS PERMIT BOUNDARY
- 7850-1 RECLAIMED PRISM LOCATION
- 7850-1 EXISTING PRISM LOCATION
- USFS LAND SEED MIX (20 AC)
- PRIVATE SURFACE SEED MIX (110 AC)
- HIGHWALL (6.2 AC)
- PONDEROSA PINE & DOUGLAS FIR (30.39 AC) (30 STEMS PER AC.REVEGETATED) (43 STEMS/AC. PLANTED)
- ROCKY MOUNTAIN JUNIPER & GRASS (37.52 AC) (21-42 TREES REVEGETATED) (30-60 TREES PLANTED)
- MTN MAHOGANY/GAMBEL OAK (69.40 AC)
- LOWER BORROW AREA ADDITIONAL MATERIAL
- PRIME DESIGNATED WORK AREA
- PARCEL LINE
- USFS PROPERTY BOUNDARY

COLORADO LICENSED
PAUL J. KOS
40848
PROFESSIONAL ENGINEER
DATE: April 2, 2024

REV	DATE	BY	DESCRIPTION
H	04/2024	JTV	DESIGN REVISION
G	07/2023	JTV	DESIGN REVISION

SCALE: AS NOTED

WARNING: 0 ½ 1 — IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

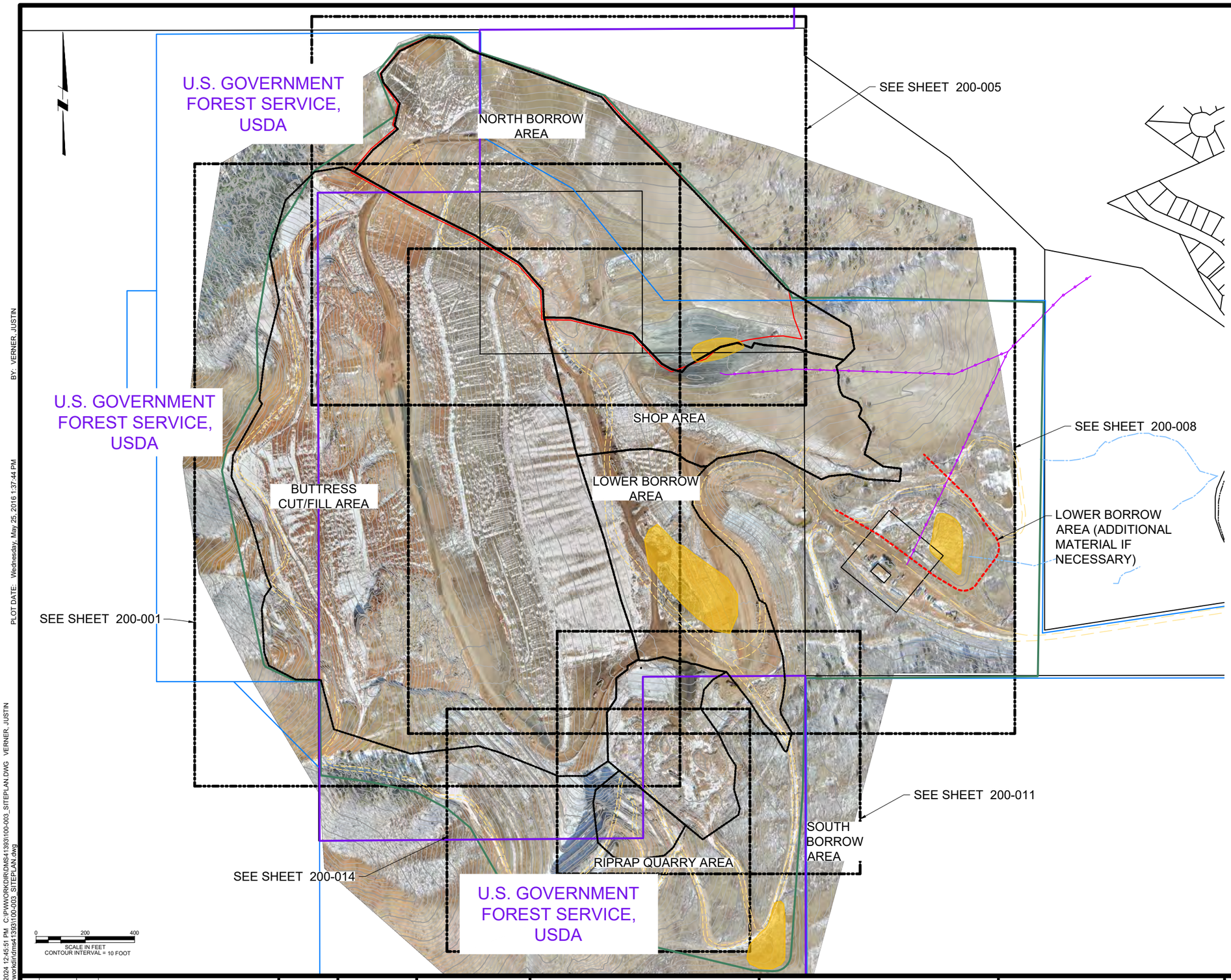
DESIGNED T. LEIDICH
DRAWN J. VERNER
CHECKED P. KOS

Stantec

PROJECT: PIKEVIEW QUARRY RECLAMATION PROJECT
GENERAL NOTES AND ABBREVIATIONS

SHEET: 100-002
JobNumber

PLOT DATE: Wednesday, May 25, 2016 1:37:44 PM BY: VERNER, JUSTIN
Tuesday, April 2, 2024 12:16:20 PM C:\PWWORKDIR\DMS\413931\100-002_002_NOTES.DWG VERNER, JUSTIN
DWG FILE: C:\pwworkdir\dms\413931\100-002_NOTES.dwg



LEGEND

- EXISTING CONTOURS
- AREA BOUNDARY
- EXISTING ROADS
- EXISTING BUILDING
- EXISTING POWER LINES
- EXISTING STREAMS
- EXISTING TOP SOIL STOCKPILE
- USFS PROPERTY BOUNDARY
- CDRMS PERMIT BOUNDARY
- CITY OF COLORADO SPRINGS PERMIT BOUNDARY
- LOWER BORROW AREA ADDITIONAL MATERIAL
- PRIME DESIGNATED WORK AREA
- PARCEL LINE

NOTES

1. EXISTING TOPOGRAPHY AND AERIAL PHOTOGRAPHY PROVIDED BY CLIENT WITH FLYOVER DATE OF 02/28/2024.

COLORADO LICENSED
PAUL J. KOS
40848
APRIL 2, 2024
PROFESSIONAL ENGINEER

REV	DATE	BY	DESCRIPTION
H	04/2024	JTV	DESIGN REVISION
G	07/2023	JTV	DESIGN REVISION

SCALE: AS NOTED

WARNING: 0 ½ 1 — IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

DESIGNED T. LEIDICH
DRAWN J. VERNER
CHECKED P. KOS

Stantec

PROJECT: PIKEVIEW QUARRY RECLAMATION PROJECT

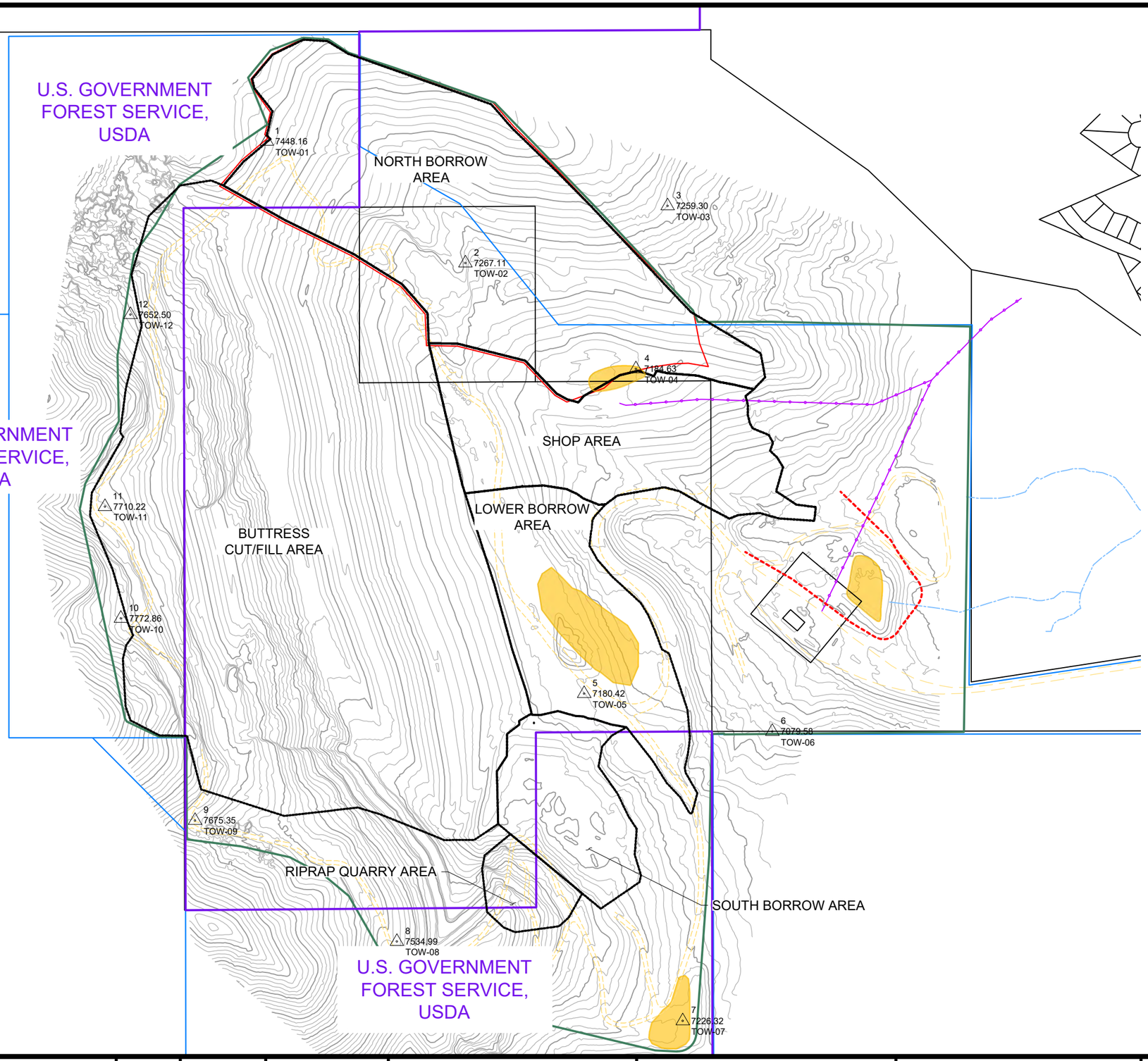
SITE PLAN - AERIAL

SHEET: 100-003

JobNumber

PLOT DATE: Wednesday, May 25, 2016 1:37:44 PM BY: VERNER, JUSTIN

DWG FILE: C:\pwworkdir\dms41393\100-003_SITEPLAN.dwg Tuesday, April 2, 2024 12:45:51 PM C:\PWWORKDIR\DMS41393\100-003_SITEPLAN.DWG VERNER, JUSTIN



LEGEND

- EXISTING CONTOURS
- AREA BOUNDARY
- EXISTING ROADS
- EXISTING BUILDING
- EXISTING POWER LINES
- EXISTING STREAMS
- EXISTING TOP SOIL STOCKPILE
- CDRMS PERMIT BOUNDARY
- CITY OF COLORADO SPRINGS PERMIT BOUNDARY
- LOWER BORROW AREA ADDITIONAL MATERIAL
- PRIME DESIGNATED WORK AREA
- PARCEL LINE
- USFS PROPERTY BOUNDARY

NOTES

1. EXISTING TOPOGRAPHY PROVIDED BY CLIENT WITH FLYOVER DATE OF 02/28/2024.
2. DESIGN TOPOGRAPHY IS THE FINAL GRADE FOR TOPSOIL

COLORADO LICENSED PAUL J. KOS 40848 APRIL 2, 2024 PROFESSIONAL ENGINEER

CONTROL POINT TABLE

POINT	NORTHING	EASTING	ELEVATION (FT)	DESCRIPTION
1	1403340.35	3172780.52	7448.16	TOW-01
2	1402884.75	3173524.61	7267.11	TOW-02
3	1403098.91	3174281.57	7259.30	TOW-03
4	1402487.60	3174162.95	7184.63	TOW-04
5	1401271.01	3173969.48	7180.42	TOW-05
6	1401129.05	3174674.10	7079.58	TOW-06
7	1400045.02	3174338.42	7226.32	TOW-07
8	1400341.98	3173267.89	7534.99	TOW-08
9	1400795.80	3172512.04	7675.35	TOW-09
10	1401552.76	3172233.99	7772.86	TOW-10
11	1401971.86	3172174.20	7710.22	TOW-11
12	1402691.11	3172269.59	7652.50	TOW-12

REV	DATE	BY	DESCRIPTION
H	04/2024	JTV	DESIGN REVISION
G	07/2023	JTV	DESIGN REVISION

SCALE: AS NOTED

WARNING: 0 ½ 1 — IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

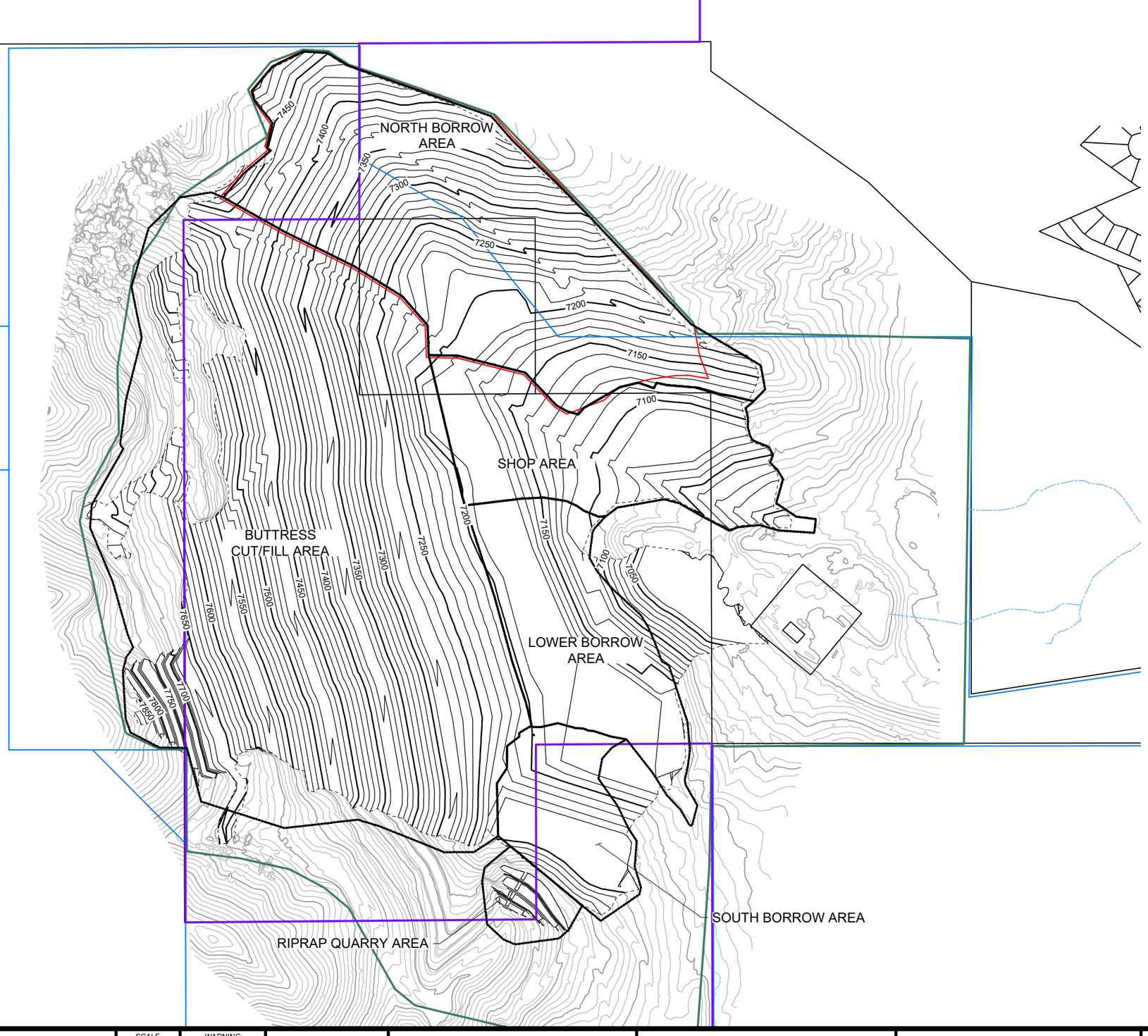
DESIGNED T. LEIDICH
DRAWN J. VERNER
CHECKED P. KOS

Stantec

PROJECT: PIKEVIEW QUARRY RECLAMATION PROJECT
PROJECT SITE PLAN, EXISTING CONTOURS AND CONTROL POINTS

SHEET: 100-004
JobNumber

PLOT DATE: Wednesday, May 25, 2016 1:37:44 PM BY: VERNER, JUSTIN
DWG FILE: C:\pwworkdir\dms41393\100-004_EXISTING-CONTROL.dwg
Tuesday, April 2, 2024 12:51:28 PM C:\PWWORKDIR\DMS41393\100-004_EXISTING-CONTROL.DWG VERNER, JUSTIN



LEGEND

- EXISTING CONTOURS
- PROPOSED DESIGN CONTOURS
- AREA BOUNDARY
- EXISTING STREAMS
- CDRMS PERMIT BOUNDARY
- CITY OF COLORADO SPRINGS PERMIT BOUNDARY
- USFS PROPERTY BOUNDARY
- PRIME DESIGNATED WORK AREA
- PARCEL LINE

1. EXISTING TOPOGRAPHY PROVIDED BY CLIENT WITH FLYOVER DATE OF 02/28/2024.

COLORADO LICENSED
PAUL J. KOS
40848
April 2, 2024
PROFESSIONAL ENGINEER

REV	DATE	BY	DESCRIPTION
H	04/2024	JTV	DESIGN REVISION
G	07/2023	JTV	DESIGN REVISION

SCALE: AS NOTED

WARNING: 0 ½ 1 — IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

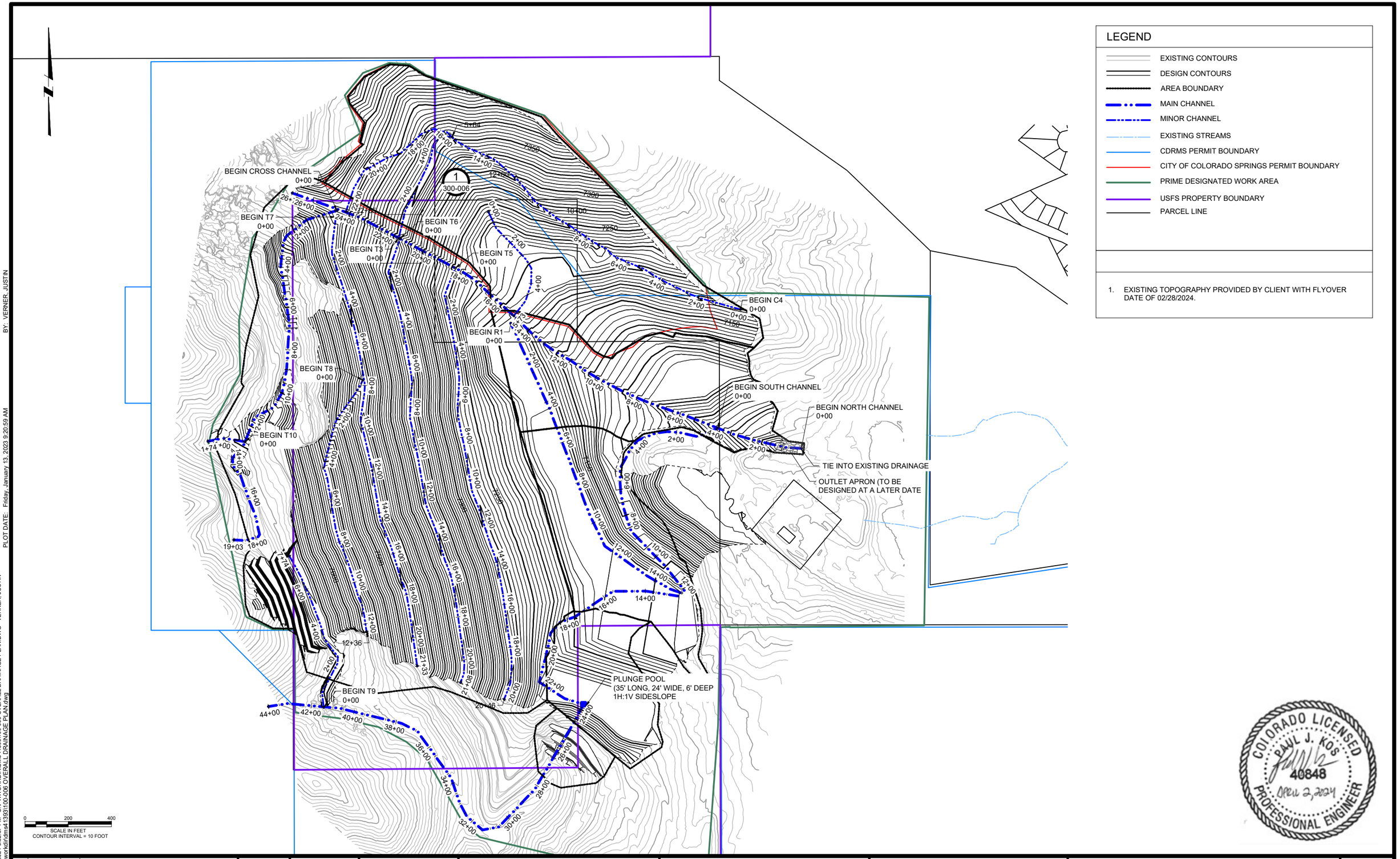
DESIGNED T. LEIDICH
DRAWN J. VERNER
CHECKED P. KOS

Stantec

PROJECT: PIKEVIEW QUARRY RECLAMATION PROJECT
OVERALL GRADING PLAN

SHEET: 100-005
JobNumber

PLOT DATE: Wednesday, May 25, 2016 1:37:44 PM BY: VERNER, JUSTIN
Tuesday, April 2, 2024 12:57:43 PM C:\PWWORKDIR\DMS\41393\100-005_OVERALL GRADING PLAN.DWG VERNER, JUSTIN
DWG FILE: C:\pwworkdir\dms\41393\100-005_OVERALL GRADING PLAN.dwg



LEGEND

- EXISTING CONTOURS
- DESIGN CONTOURS
- AREA BOUNDARY
- MAIN CHANNEL
- MINOR CHANNEL
- EXISTING STREAMS
- CDRMS PERMIT BOUNDARY
- CITY OF COLORADO SPRINGS PERMIT BOUNDARY
- PRIME DESIGNATED WORK AREA
- USFS PROPERTY BOUNDARY
- PARCEL LINE

1. EXISTING TOPOGRAPHY PROVIDED BY CLIENT WITH FLYOVER DATE OF 02/28/2024.

COLORADO LICENSED
PAUL J. KOS
40848
APRIL 2, 2024
PROFESSIONAL ENGINEER

REV	DATE	BY	DESCRIPTION
H	04/2024	JTV	DESIGN REVISION
G	07/2023	JTV	DESIGN REVISION

SCALE: AS NOTED

WARNING: 0 ½ 1 — IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

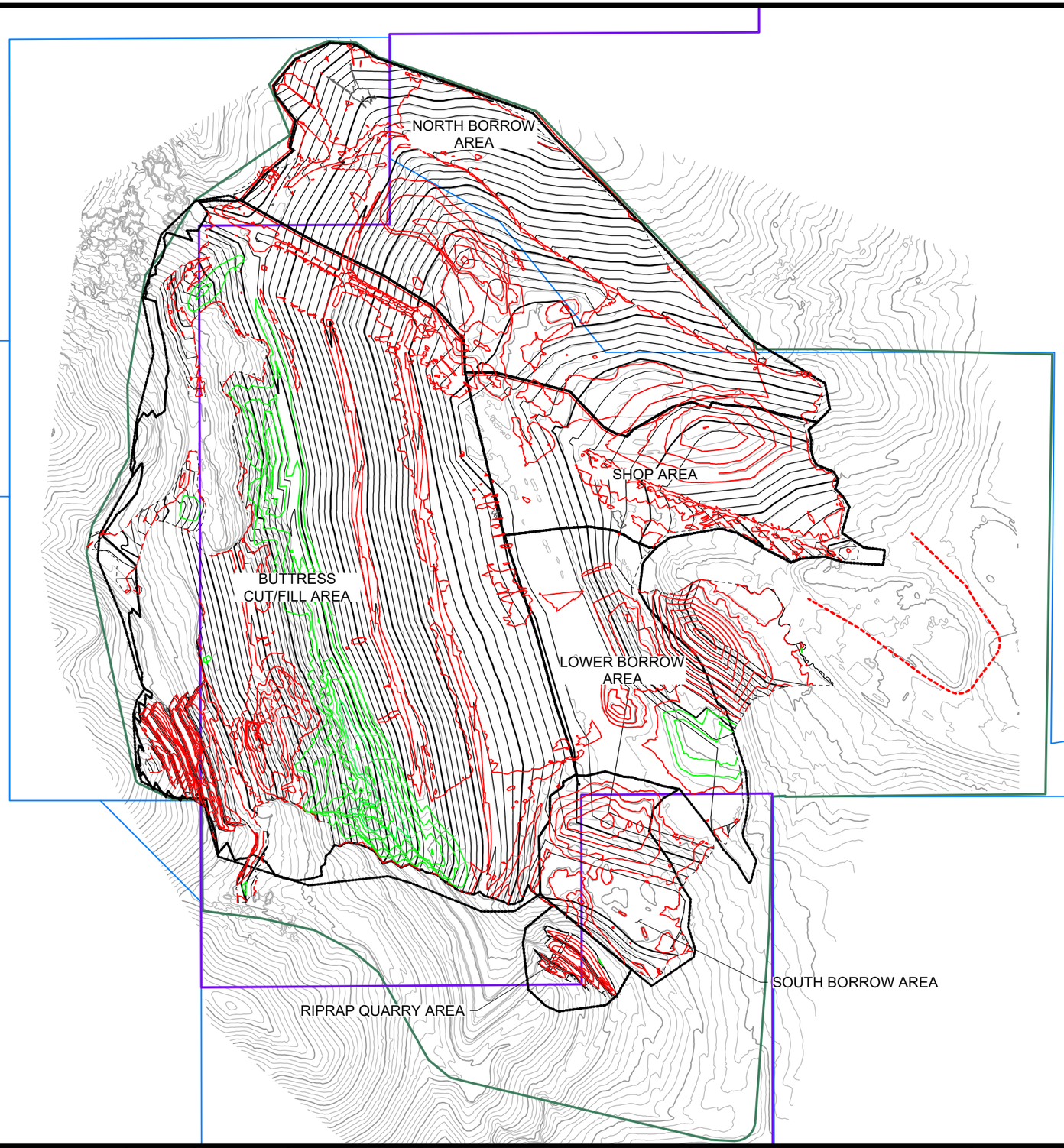
DESIGNED T. LEIDICH
DRAWN J. VERNER
CHECKED P. KOS

Stantec

PROJECT: PIKEVIEW QUARRY RECLAMATION PROJECT
OVERALL DRAINAGE PLAN

SHEET: 100-006
JobNumber

PLOT DATE: Friday, January 13, 2023 9:20:59 AM BY: VERNER, JUSTIN
Tuesday, April 2, 2024 3:32:37 PM C:\PWWORKDIR\DMS\41393\100-006 OVERALL DRAINAGE PLAN.DWG VERNER, JUSTIN
DWG FILE: C:\pwworkdir\dms\41393\100-006 OVERALL DRAINAGE PLAN.dwg



LEGEND

- EXISTING CONTOURS
- DESIGN CONTOURS
- AREA BOUNDARY
- ISOPACH CUT CONTOURS
- ISOPACH FILL CONTOURS
- CITY OF COLORADO SPRINGS PERMIT BOUNDARY
- CDRMS PERMIT BOUNDARY
- LOWER BORROW AREA ADDITIONAL MATERIAL
- PRIME DESIGNATED WORK AREA
- USFS PROPERTY BOUNDARY

NOTES

1. EXISTING TOPOGRAPHY PROVIDED BY CLIENT WITH FLYOVER DATE OF 02/28/2024.

0 200 400
SCALE IN FEET
CONTOUR INTERVAL = 10 FOOT

COLORADO LICENSED
PAUL J. KOS
40848
PROFESSIONAL ENGINEER
APRIL 2, 2024

REV	DATE	BY	DESCRIPTION
G	04/2024	JTV	DESIGN REVISION
F	07/2023	JTV	DESIGN REVISION

SCALE: AS NOTED

WARNING: 0 ½ 1 — IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

DESIGNED T. LEIDICH
DRAWN J. VERNER
CHECKED P. KOS

Stantec

PROJECT
PIKEVIEW QUARRY RECLAMATION PROJECT
OVERALL CUT/FILL ISOPACH

SHEET
100-007
JobNumber

PLOT DATE: Wednesday, May 25, 2016 1:37:44 PM BY: VERNER, JUSTIN
Tuesday, April 2, 2024 2:49:01 PM C:\PWWORKDIR\DMS41393\100-007_OVERALL ISOPACH PLAN.DWG VERNER, JUSTIN
DWG FILE: C:\pwworkdir\dms41393\100-007_OVERALL ISOPACH PLAN.dwg

U.S. GOVERNMENT FOREST SERVICE, USDA

CMC

CITY OF COLORADO SPRINGS

CITY OF COLORADO SPRINGS

CMC

CMC

GREENPASTURES LLC

U.S. GOVERNMENT FOREST SERVICE, USDA

0 200 400
SCALE IN FEET
CONTOUR INTERVAL = 10 FOOT

LEGEND

- EXISTING CONTOURS
- AREA BOUNDARY
- PERMIT BOUNDARY
- CITY OF COLORADO SPRINGS PERMIT BOUNDARY
- PRIME DESIGNATED WORK AREA
- USFS PROPERTY BOUNDARY
- PARCEL LINE

NOTES

1. EXISTING TOPOGRAPHY PROVIDED BY CLIENT WITH FLYOVER DATE OF 02/28/2024.

COLORADO LICENSED
PAUL J. KOS
40848
PROFESSIONAL ENGINEER
April 2, 2024

REV	DATE	BY	DESCRIPTION
H	04/2024	JTV	DESIGN REVISION
G	07/2023	JTV	DESIGN REVISION

SCALE: AS NOTED

WARNING: 0 ½ 1 — IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

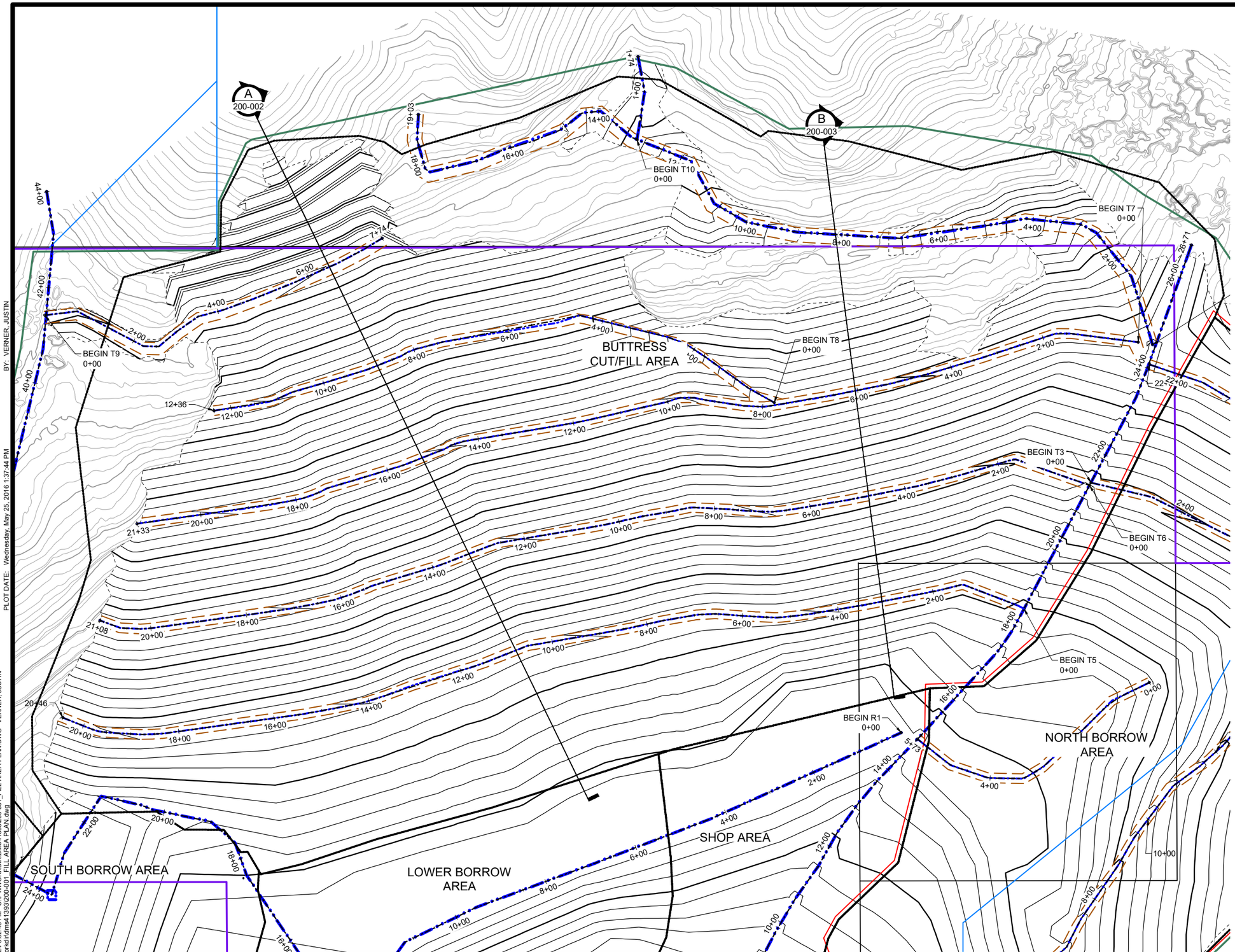
DESIGNED T. LEIDICH
DRAWN J. VERNER
CHECKED P. KOS

Stantec

PROJECT
PIKEVIEW QUARRY RECLAMATION PROJECT
PARCEL AND OWNERSHIP PLAN

SHEET
100-008
JobNumber

PLOT DATE: Wednesday, May 25, 2016 1:37:44 PM BY: VERNER, JUSTIN
Tuesday, April 2, 2024 3:38:42 PM C:\PW\WORKDIR\DMS41393\100-008_PARCEL.DWG VERNER, JUSTIN
DWG FILE: C:\pw\workdir\dms41393\100-008_PARCEL.dwg



LEGEND

- EXISTING CONTOURS
- DESIGN CONTOURS
- AREA BOUNDARY
- ROAD
- MAIN CHANNEL
- MINOR CHANNEL
- EXISTING POWER LINES
- CDRMS PERMIT BOUNDARY
- CITY OF COLORADO SPRINGS PERMIT BOUNDARY
- USFS PROPERTY BOUNDARY

1. EXISTING TOPOGRAPHY PROVIDED BY CLIENT WITH FLYOVER DATE OF 02/28/2024.

COLORADO LICENSED
PAUL J. KOS
40848
APRIL 2, 2024
PROFESSIONAL ENGINEER

0 100 200
SCALE IN FEET
CONTOUR INTERVAL = 10 FOOT

REV	DATE	BY	DESCRIPTION
H	04/2024	JTV	DESIGN REVISION
G	07/2023	JTV	DESIGN REVISION

SCALE: AS NOTED

WARNING: 0 ½ 1 — IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

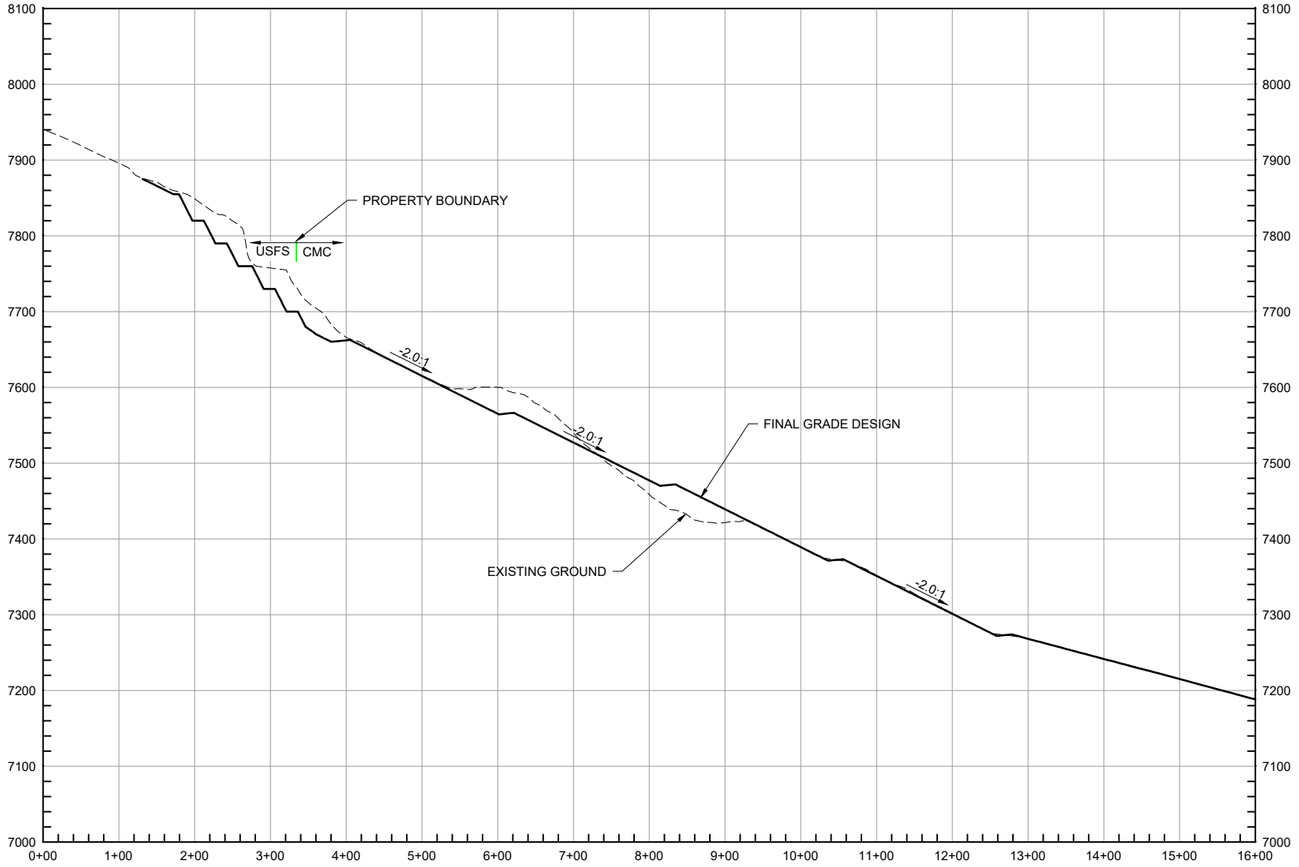
DESIGNED T. LEIDICH
DRAWN J. VERNER
CHECKED P. KOS

Stantec

PROJECT
PIKEVIEW QUARRY RECLAMATION PROJECT
BUTTRESS AREA GRADING PLAN

SHEET
200-001
JobNumber

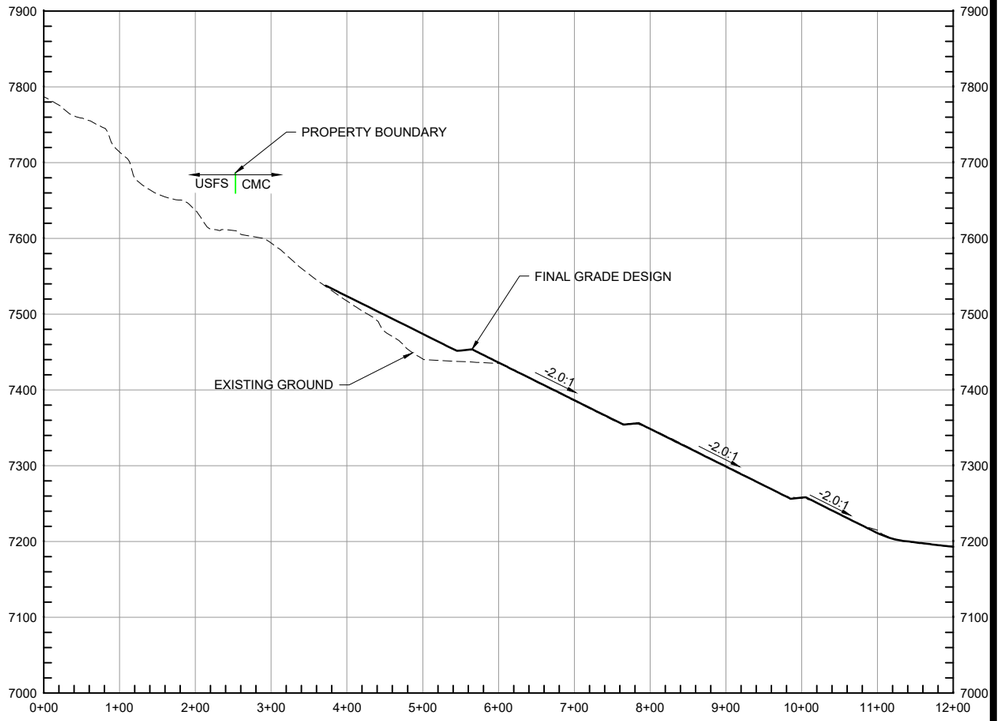
PLOT DATE: Wednesday, May 25, 2016 1:37:44 PM BY: VERNER, JUSTIN
DWG FILE: C:\pwworkdir\dms41393\200-001_FILL AREA PLAN.dwg
Tuesday, April 2, 2024 5:32:48 PM C:\PWWORKDIR\DMS41393\200-001_FILL AREA PLAN.DWG VERNER, JUSTIN



A SECTION
200-001

HORZ 0 100 200
VERT 0 100 200
SCALE IN FEET

1. DESIGN SURFACE SHOWN IS FINAL GRADE SUBGRADE IS 6" LOWER.



B SECTION
200-001

HORZ 0 100 200
VERT 0 100 200
SCALE IN FEET

COLORADO LICENSED
PAUL J. KOS
40848
April 2, 2024
PROFESSIONAL ENGINEER

REV	DATE	BY	DESCRIPTION
H	04/2024	JTV	DESIGN REVISION
G	07/2023	JTV	DESIGN REVISION

SCALE: AS NOTED

WARNING: 0 ½ 1 — IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

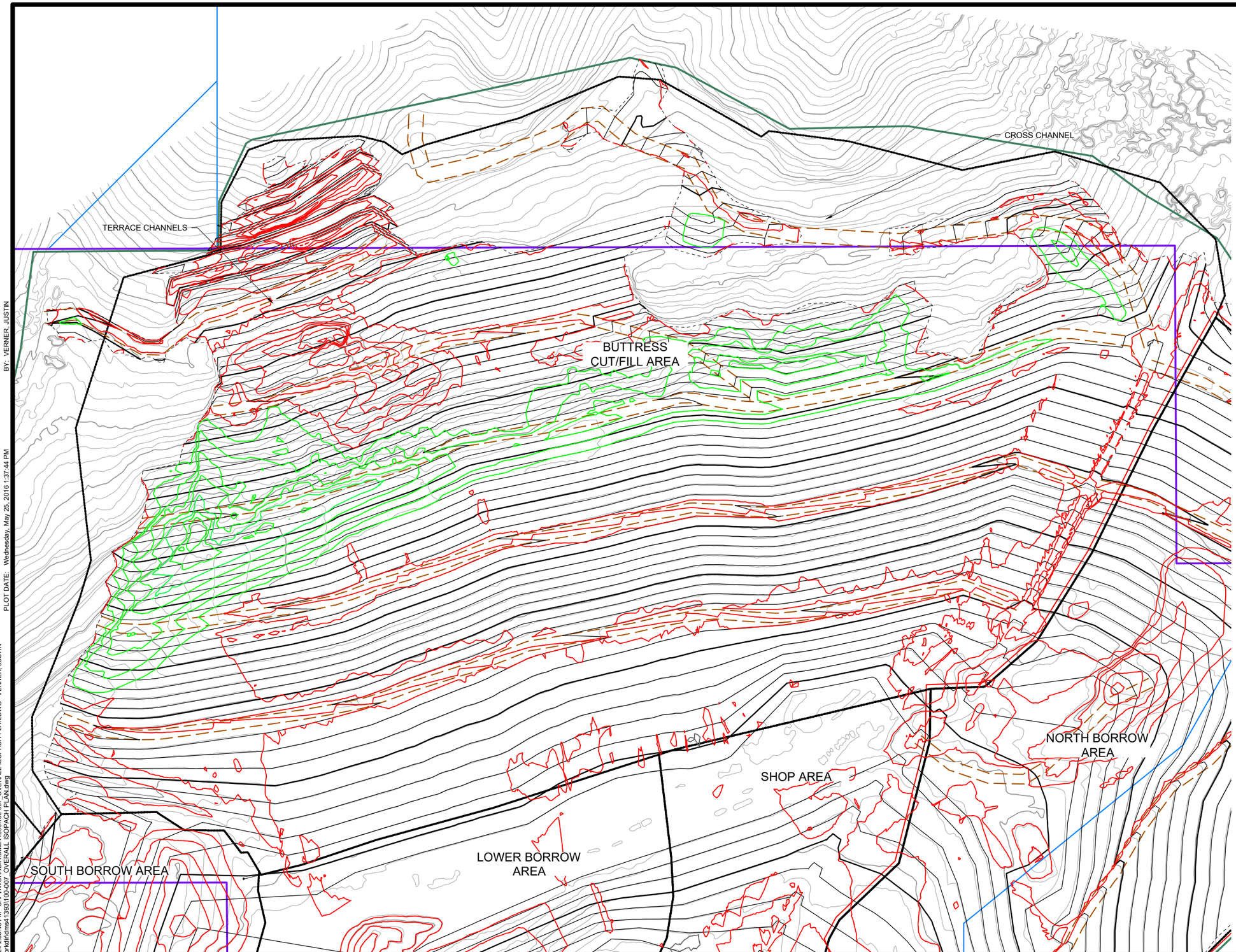
DESIGNED T. LEIDICH
DRAWN J. VERNER
CHECKED P. KOS

Stantec

PROJECT
PIKEVIEW QUARRY RECLAMATION PROJECT
OVERALL DRAINAGE PLAN

SHEET
200.002
JobNumber

PLOT DATE: Wednesday, May 25, 2016 1:37:44 PM BY: VERNER, JUSTIN
Tuesday, April 2, 2024 5:34:19 PM C:\PWWORKDIR\DMS\413932\200-001_FILL AREA PLAN.DWG VERNER, JUSTIN
DWG FILE: C:\pwworkdir\dms\413932\200-001_FILL AREA PLAN.dwg



LEGEND

- EXISTING CONTOURS
- DESIGN CONTOURS
- AREA BOUNDARY
- ISOPACH CUT CONTOURS
- ISOPACH FILL CONTOURS
- CITY OF COLORADO SPRINGS PERMIT BOUNDARY
- CDRMS PERMIT BOUNDARY
- LOWER BORROW AREA ADDITIONAL MATERIAL
- PRIME DESIGNATED WORK AREA
- USFS PROPERTY BOUNDARY

NOTES

1. EXISTING TOPOGRAPHY PROVIDED BY CLIENT WITH FLYOVER DATE OF 02/28/2024.

COLORADO LICENSED
PAUL J. KOS
40848
APRIL 2, 2024
PROFESSIONAL ENGINEER

0 100 200
SCALE IN FEET
CONTOUR INTERVAL = 10 FOOT

REV	DATE	BY	DESCRIPTION
G	04/2024	JTV	DESIGN REVISION
F	07/2023	JTV	DESIGN REVISION

SCALE: AS NOTED

WARNING: 0 ½ 1 — IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

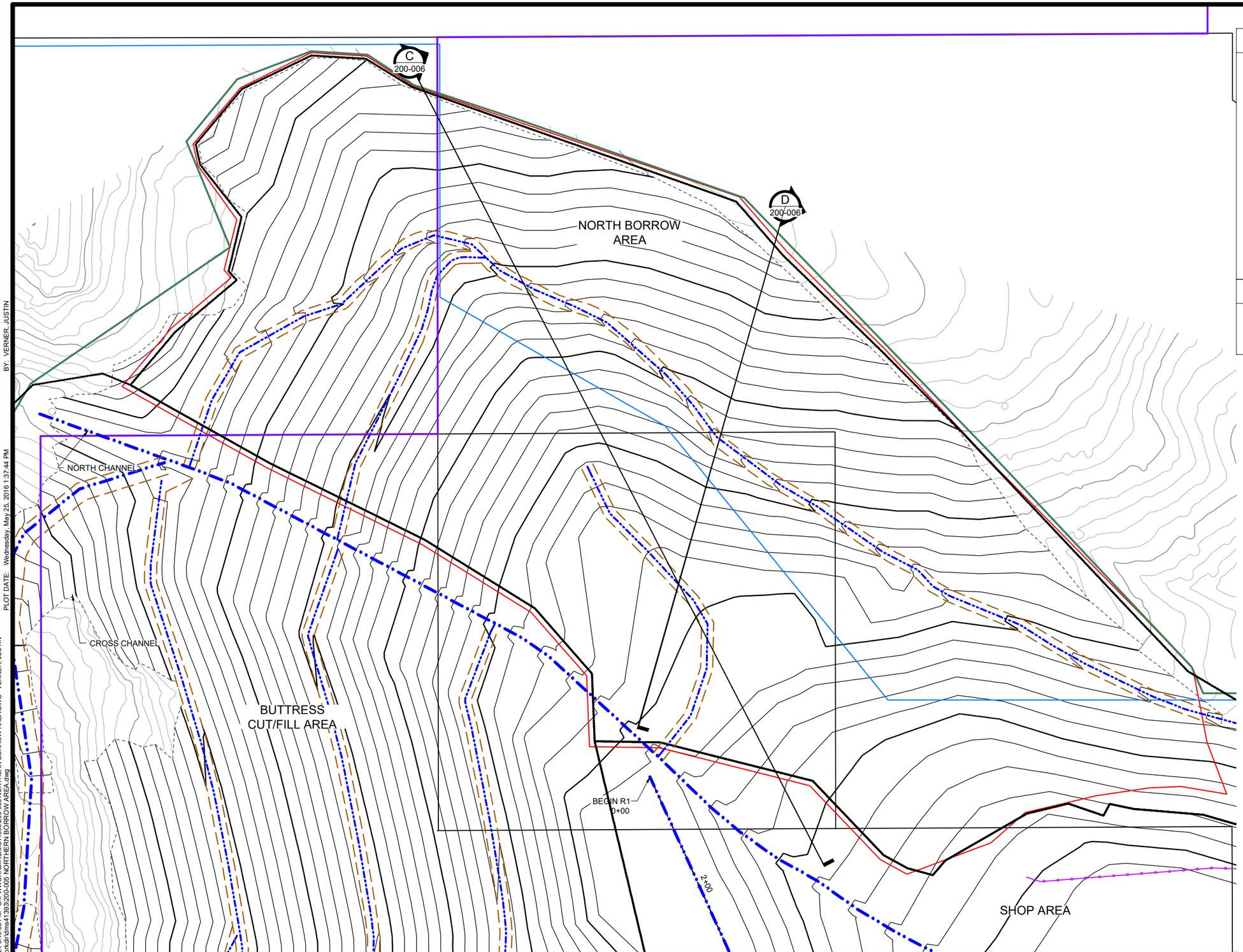
DESIGNED T. LEIDICH
DRAWN J. VERNER
CHECKED P. KOS

Stantec

PROJECT
PIKEVIEW QUARRY RECLAMATION PROJECT
BUTTRESS AREA CUT/FILL ISOPACH

SHEET
200-003
JobNumber

PLOT DATE: Wednesday, May 25, 2016 1:37:44 PM BY: VERNER, JUSTIN
DWG FILE: C:\pwworkdir\dms41393\100-007_OVERALL ISOPACH PLAN.dwg
Tuesday, April 2, 2024 2:50:48 PM C:\PWWORKDIR\DMS41393\100-007_OVERALL ISOPACH PLAN.DWG VERNER, JUSTIN



LEGEND

- EXISTING CONTOURS
- DESIGN CONTOURS
- AREA BOUNDARY
- PROPOSED ROAD
- MAIN CHANNEL
- MINOR CHANNEL
- USFS PROPERTY BOUNDARY

1. EXISTING TOPOGRAPHY PROVIDED BY CLIENT WITH FLYOVER DATE OF 02/28/2024.

COLORADO LICENSED
PAUL J. KOS
40848
APRIL 2, 2024
PROFESSIONAL ENGINEER

N

0 80 160
SCALE IN FEET
CONTOUR INTERVAL = 10 FOOT

REV	DATE	BY	DESCRIPTION
H	04/2024	JTV	DESIGN REVISION
G	07/2023	JTV	DESIGN REVISION

SCALE: AS NOTED

WARNING: 0 ½ 1 — IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

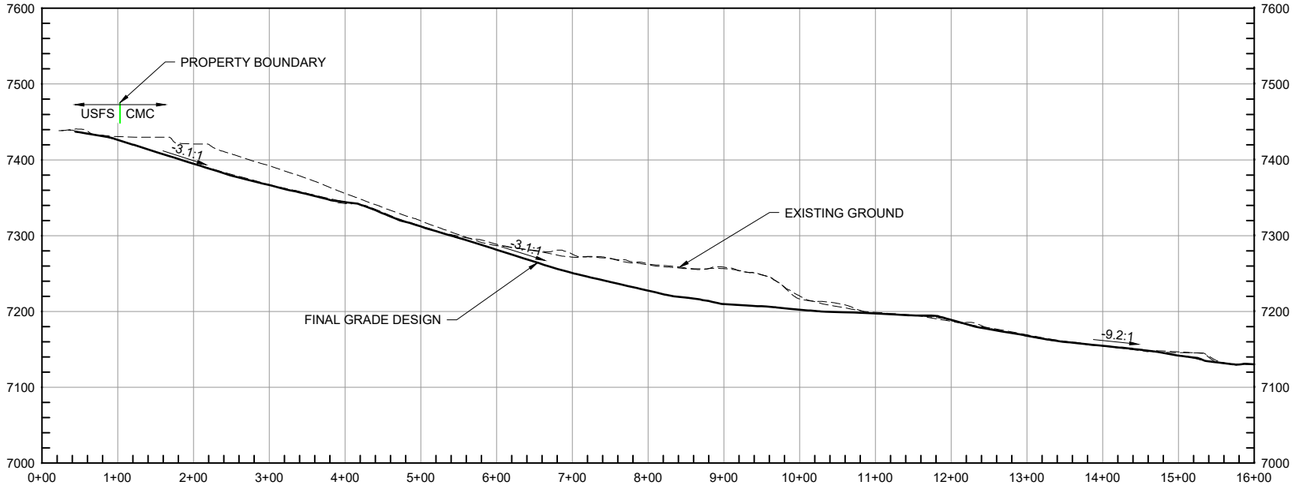
DESIGNED T. LEIDICH
DRAWN J. VERNER
CHECKED P. KOS

Stantec

PROJECT: PIKEVIEW QUARRY RECLAMATION PROJECT
NORTHERN BORROW AREA GRADING PLAN

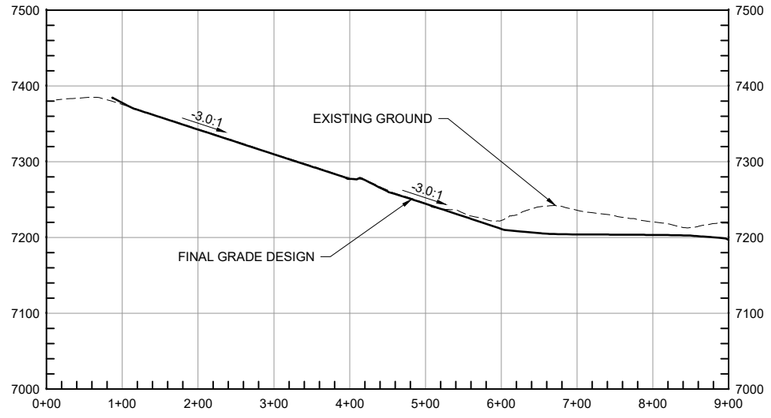
SHEET: 200-004
JobNumber

PLOT DATE: Wednesday, May 25, 2016 1:37:44 PM BY: VERNER, JUSTIN
DWG FILE: C:\pwworkdir\dms41393\200-005 NORTHERN BORROW AREA.dwg
Tuesday, April 2, 2024 5:49:53 PM C:\PWWORKDIR\DMS41393\200-005 NORTHERN BORROW AREA.DWG VERNER, JUSTIN



C SECTION
200-005

HORZ 0 100 200
VERT 0 100 200
SCALE IN FEET



D SECTION
200-005

HORZ 0 100 200
VERT 0 100 200
SCALE IN FEET

COLORADO LICENSED
PAUL J. KOS
40848
April 2, 2024
PROFESSIONAL ENGINEER

REV	DATE	BY	DESCRIPTION
H	04/2024	JTV	DESIGN REVISION
G	07/2023	JTV	DESIGN REVISION

SCALE: AS NOTED

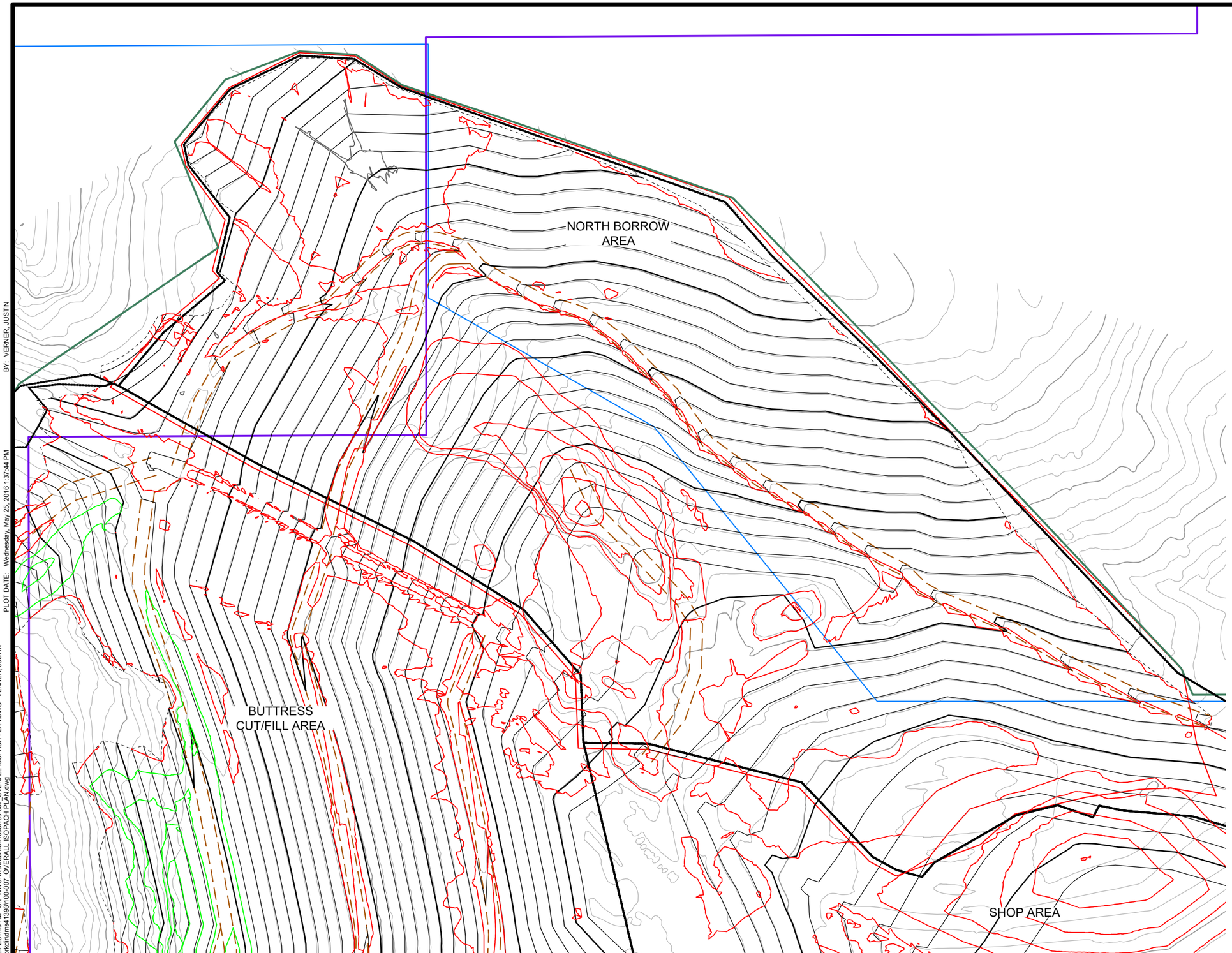
WARNING: 0 ½ 1 — IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

DESIGNED T. LEIDICH
DRAWN J. VERNER
CHECKED P. KOS

Stantec

PROJECT
PIKEVIEW QUARRY RECLAMATION PROJECT
NORTHERN BORROW AREA SECTIONS

SHEET
200.005
JobNumber



LEGEND

- EXISTING CONTOURS
- DESIGN CONTOURS
- AREA BOUNDARY
- ISOPACH CUT CONTOURS
- ISOPACH FILL CONTOURS
- CITY OF COLORADO SPRINGS PERMIT BOUNDARY
- CDRMS PERMIT BOUNDARY
- LOWER BORROW AREA ADDITIONAL MATERIAL
- PRIME DESIGNATED WORK AREA
- USFS PROPERTY BOUNDARY

NOTES

1. EXISTING TOPOGRAPHY PROVIDED BY CLIENT WITH FLYOVER DATE OF 02/28/2024.

COLORADO LICENSED
PAUL J. KOS
40848
APRIL 2, 2024
PROFESSIONAL ENGINEER

N

0 80 160
SCALE IN FEET
CONTOUR INTERVAL = 10 FOOT

REV	DATE	BY	DESCRIPTION
G	04/2024	JTV	DESIGN REVISION
F	07/2023	JTV	DESIGN REVISION

SCALE: AS NOTED

WARNING: 0 ½ 1 — IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

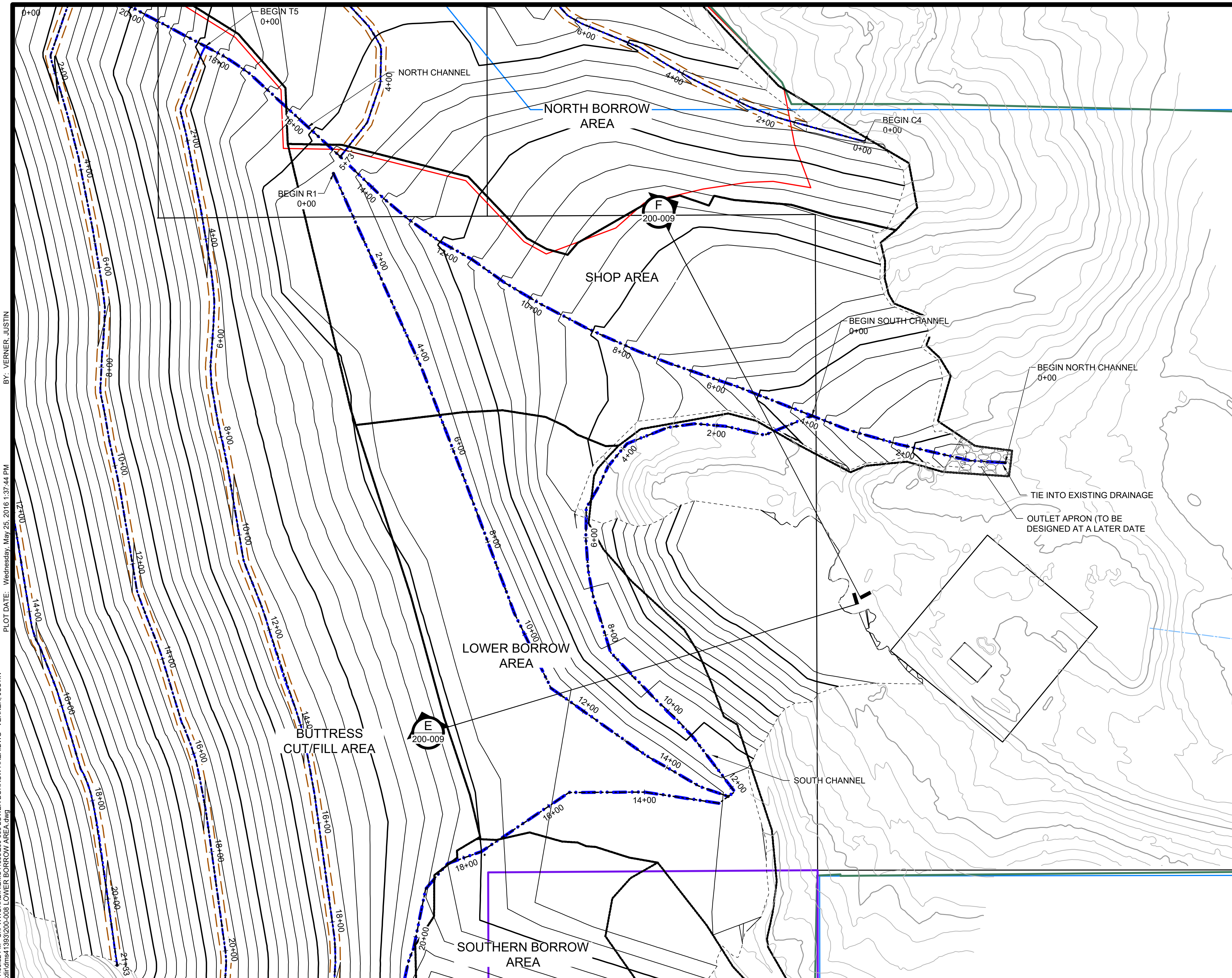
DESIGNED T. LEIDICH
DRAWN J. VERNER
CHECKED P. KOS

Stantec

PROJECT: PIKEVIEW QUARRY RECLAMATION PROJECT
NORTHERN BORROW AREA CUT/FILL ISOPACH

SHEET: 200-006
JobNumber

PLOT DATE: Wednesday, May 25, 2016 1:37:44 PM BY: VERNER, JUSTIN
Tuesday, April 2, 2024 2:51:45 PM C:\PWWORKDIR\DMS\41393\100-007_OVERALL ISOPACH PLAN.DWG VERNER, JUSTIN
DWG FILE: C:\pwworkdir\dms\41393\100-007_OVERALL ISOPACH PLAN.dwg



LEGEND

- EXISTING CONTOURS
- DESIGN CONTOURS
- AREA BOUNDARY
- PROPOSED ROAD
- MAIN CHANNEL
- MINOR CHANNEL
- USFS PROPERTY BOUNDARY

1. EXISTING TOPOGRAPHY PROVIDED BY CLIENT WITH FLYOVER DATE OF 02/28/2024.

COLORADO LICENSED PAUL J. KOS 40848 PROFESSIONAL ENGINEER April 2, 2024

SCALE IN FEET 0 80 160
CONTOUR INTERVAL = 10 FOOT

REV	DATE	BY	DESCRIPTION
H	04/2024	JTV	DESIGN REVISION
G	07/2023	JTV	DESIGN REVISION

SCALE: AS NOTED

WARNING: 0 ½ 1 IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

DESIGNED T. LEIDICH
DRAWN J. VERNER
CHECKED P. KOS

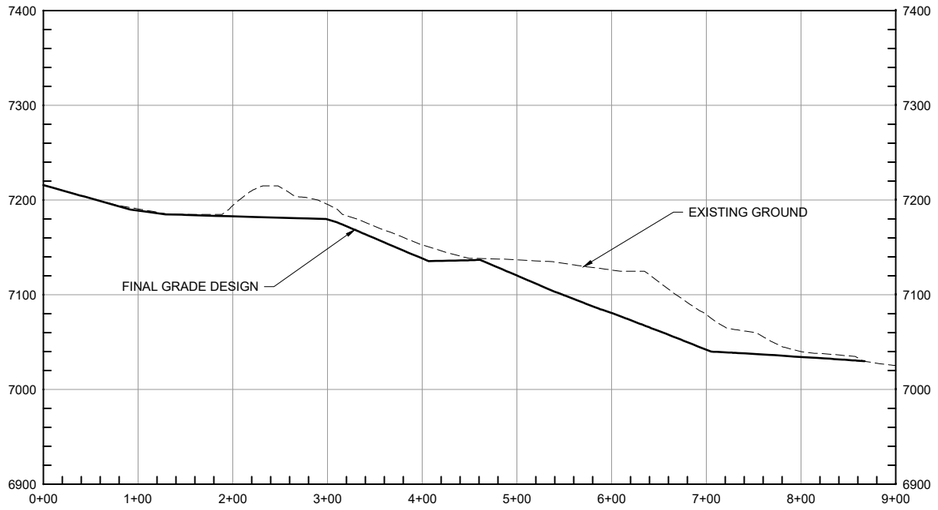
Stantec

PROJECT: PIKEVIEW QUARRY RECLAMATION PROJECT
LOWER BORROW AREA GRADING PLAN

SHEET 200-007

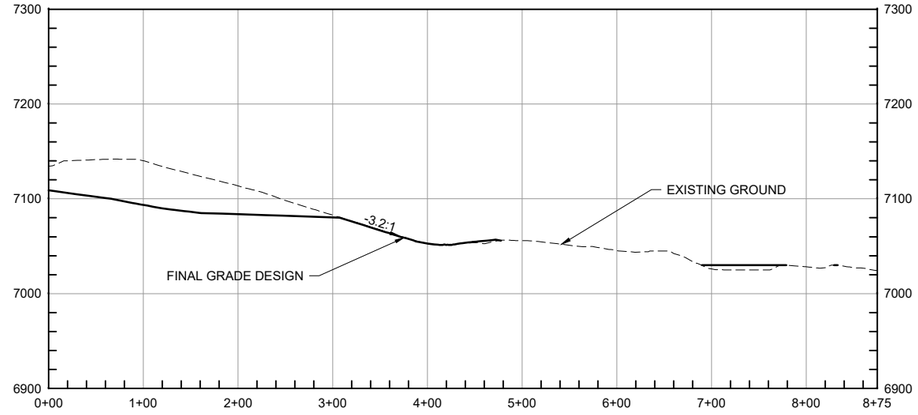
JobNumber

Tuesday, April 2, 2024 7:06:32 PM C:\PWWORKDIR\DMS41393\200-008 LOWER BORROW AREA.DWG VERNER, JUSTIN
DWG FILE: C:\pwworkdir\dms41393\200-008 LOWER BORROW AREA.dwg
PLOT DATE: Wednesday, May 25, 2016 1:37:44 PM BY: VERNER, JUSTIN



E SECTION
200-008

HORZ 0 80 160
VERT 0 80 160
SCALE IN FEET



F SECTION
200-008

HORZ 0 80 160
VERT 0 80 160
SCALE IN FEET

COLORADO LICENSED
PAUL J. KOS
40848
April 2, 2024
PROFESSIONAL ENGINEER

REV	DATE	BY	DESCRIPTION
H	04/2024	JTV	DESIGN REVISION
G	07/2023	JTV	DESIGN REVISION

SCALE: AS NOTED

WARNING: 0 ½ 1 — IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

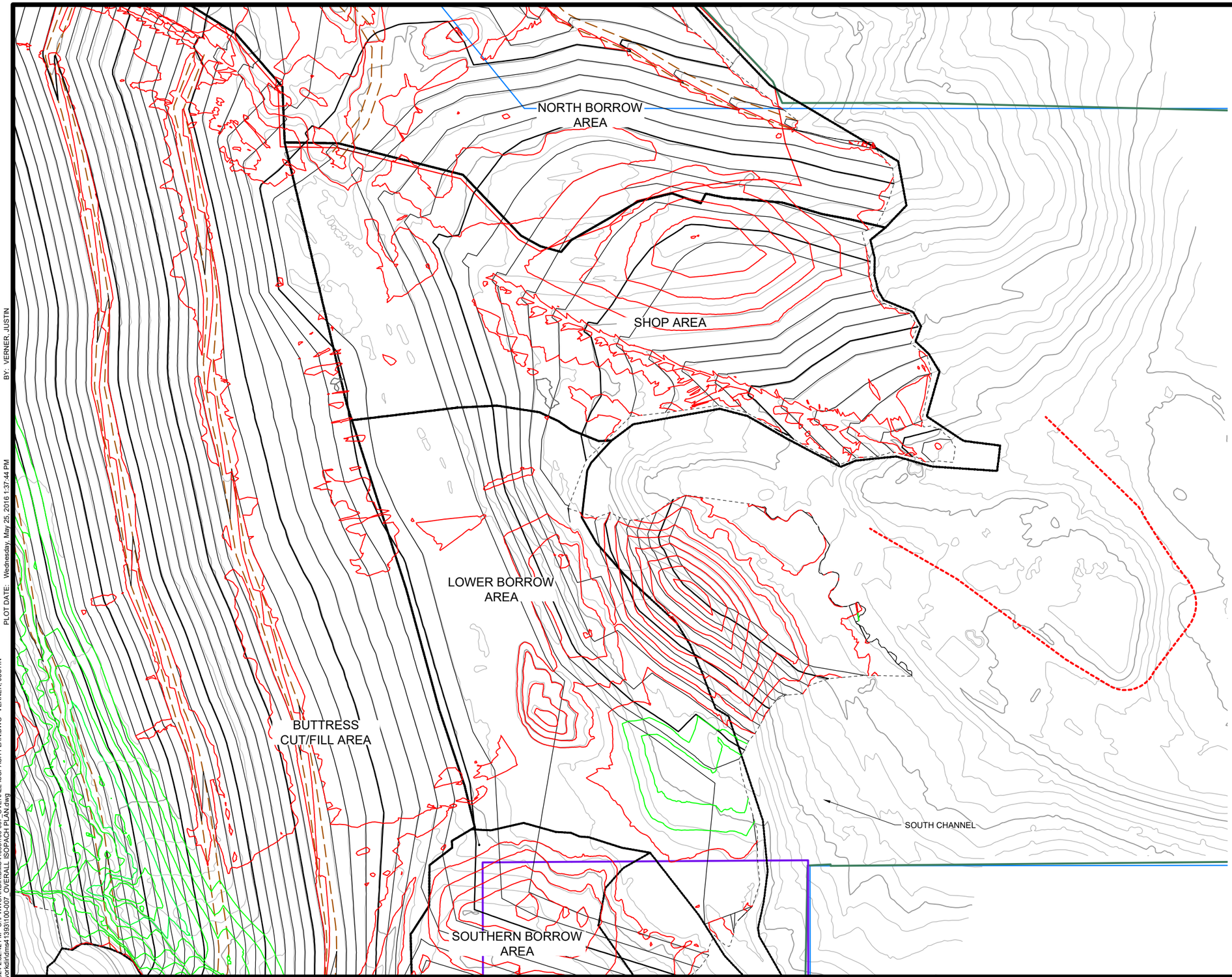
DESIGNED T. LEIDICH
DRAWN J. VERNER
CHECKED P. KOS

Stantec

PROJECT
PIKEVIEW QUARRY RECLAMATION PROJECT
LOWER BORROW AREA SECTIONS

SHEET
200.008
JobNumber

Tuesday, April 2, 2024 7:10:06 PM C:\PWWORKDIR\DMS41393\200-008 LOWER BORROW AREA.DWG VERNER, JUSTIN
DWG FILE: C:\pwworkdir\dms41393\200-008 LOWER BORROW AREA.dwg
PLOT DATE: Wednesday, May 25, 2016 1:37:44 PM BY: VERNER, JUSTIN



LEGEND

- EXISTING CONTOURS
- DESIGN CONTOURS
- AREA BOUNDARY
- ISOPACH CUT CONTOURS
- ISOPACH FILL CONTOURS
- CITY OF COLORADO SPRINGS PERMIT BOUNDARY
- CDRMS PERMIT BOUNDARY
- LOWER BORROW AREA ADDITIONAL MATERIAL
- PRIME DESIGNATED WORK AREA
- USFS PROPERTY BOUNDARY

NOTES

1. EXISTING TOPOGRAPHY PROVIDED BY CLIENT WITH FLYOVER DATE OF 02/28/2024.

COLORADO LICENSED
PAUL J. KOS
40848
APRIL 2, 2024
PROFESSIONAL ENGINEER

N

0 80 160
SCALE IN FEET
CONTOUR INTERVAL = 10 FOOT

REV	DATE	BY	DESCRIPTION
G	04/2024	JTV	DESIGN REVISION
F	07/2023	JTV	DESIGN REVISION

SCALE: AS NOTED

WARNING: 0 ½ 1 — IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

DESIGNED T. LEIDICH
DRAWN J. VERNER
CHECKED P. KOS

Stantec

PROJECT
PIKEVIEW QUARRY RECLAMATION PROJECT
LOWER BORROW AREA CUT/FILL ISOPACH

SHEET
200-009
JobNumber

PLOT DATE: Wednesday, May 25, 2016 1:37:44 PM BY: VERNER, JUSTIN
Tuesday, April 2, 2024 2:52:42 PM C:\PW\WORKDIR\DMS41393\100-007_OVERALL ISOPACH PLAN.DWG VERNER, JUSTIN
DWG FILE: C:\pw\workdir\dms41393\100-007_OVERALL ISOPACH PLAN.dwg

BUTTRESS CUT/FILL AREA

LOWER BORROW AREA

SOUTHERN BORROW AREA

RIPRAP QUARRY AREA

PLUNGE POOL
(40' LONG, 24' WIDE, 6' DEEP
1H:1V SIDESLOPE

14+00
16+00
18+00
20+00
22+00
24+00
26+00
28+00
16+00
18+00
20+00
7350
7400

H
200-012

K
200-015

LEGEND

- EXISTING CONTOURS
- DESIGN CONTOURS
- AREA BOUNDARY
- EXISTING ROAD
- MAIN CHANNEL
- MINOR CHANNEL
- USFS PROPERTY BOUNDARY

1. EXISTING TOPOGRAPHY PROVIDED BY CLIENT WITH FLYOVER DATE OF 02/28/2024.

COLORADO LICENSED
PAUL J. KOS
40848
April 2, 2024
PROFESSIONAL ENGINEER

0 50 100
SCALE IN FEET
CONTOUR INTERVAL = 10 FOOT

REV	DATE	BY	DESCRIPTION
H	04/2024	JTV	DESIGN REVISION
G	07/2023	JTV	DESIGN REVISION

SCALE: AS NOTED

WARNING: 0 ½ 1 — IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

DESIGNED T. LEIDICH
DRAWN J. VERNER
CHECKED P. KOS

Stantec

PROJECT
PIKEVIEW QUARRY RECLAMATION PROJECT
SOUTHERN BORROW AREA GRADING PLAN

SHEET
200-010
JobNumber

PLOT DATE: Wednesday, May 25, 2016 1:37:44 PM BY: VERNER, JUSTIN
DWG FILE: C:\pwworkdir\dms4139\200-011 SOUTHERN BORROW AREA.dwg VERNER, JUSTIN
Tuesday, April 2, 2024 7:01:04 PM C:\PWWORKDIR\DMS4139\200-011 SOUTHERN BORROW AREA.dwg

BUTTRESS CUT/FILL AREA

LOWER BORROW AREA

SOUTHERN BORROW AREA

RIPRAP QUARRY AREA

LEGEND

- EXISTING CONTOURS
- DESIGN CONTOURS
- AREA BOUNDARY
- ISOPACH CUT CONTOURS
- ISOPACH FILL CONTOURS
- CITY OF COLORADO SPRINGS PERMIT BOUNDARY
- CDRMS PERMIT BOUNDARY
- LOWER BORROW AREA ADDITIONAL MATERIAL
- PRIME DESIGNATED WORK AREA
- USFS PROPERTY BOUNDARY

NOTES

1. EXISTING TOPOGRAPHY PROVIDED BY CLIENT WITH FLYOVER DATE OF 02/28/2024.

COLORADO LICENSED
PAUL J. KOS
40848
APRIL 2, 2024
PROFESSIONAL ENGINEER

0 50 100
SCALE IN FEET
CONTOUR INTERVAL = 10 FOOT

PLOT DATE: Wednesday, May 25, 2016 1:37:44 PM BY: VERNER, JUSTIN
Tuesday, April 2, 2024 2:53:43 PM C:\PWWORKDIR\DMS413931\100-007_OVERALL ISOPACH PLAN.DWG VERNER, JUSTIN
DWG FILE: C:\pwworkdir\dms413931\100-007_OVERALL ISOPACH PLAN.dwg

REV	DATE	BY	DESCRIPTION
G	04/2024	JTV	DESIGN REVISION
F	07/2023	JTV	DESIGN REVISION

SCALE: AS NOTED

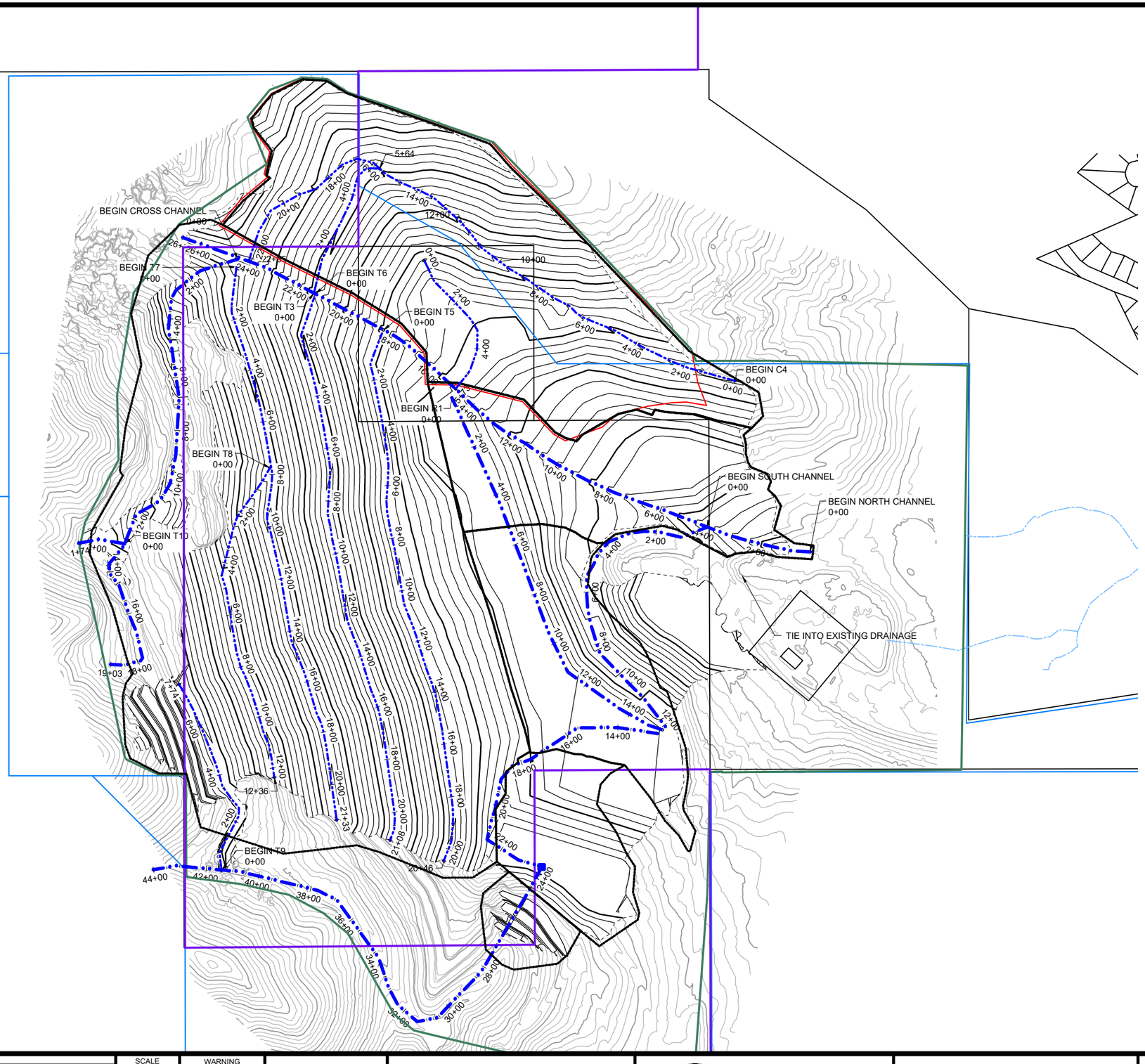
WARNING: 0 ½ 1 — IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

DESIGNED T. LEIDICH
DRAWN J. VERNER
CHECKED P. KOS

Stantec

PROJECT
PIKEVIEW QUARRY RECLAMATION PROJECT
SOUTHERN BORROW AREA CUT/FILL ISOPACH

SHEET
200-012
JobNumber



LEGEND

- EXISTING CONTOURS
- DESIGN CONTOURS
- AREA BOUNDARY
- MAIN CHANNEL
- MINOR CHANNEL
- USFS PROPERTY BOUNDARY

NOTE

1. EXISTING TOPOGRAPHY PROVIDED BY CLIENT WITH FLYOVER DATE OF 02/28/2024.

COLORADO LICENSED
PAUL J. KOS
40848
APRIL 2, 2024
PROFESSIONAL ENGINEER

REV	DATE	BY	DESCRIPTION
H	04/2024	JTV	DESIGN REVISION
G	07/2023	JTV	DESIGN REVISION

SCALE: AS NOTED

WARNING: 0 ½ 1 — IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

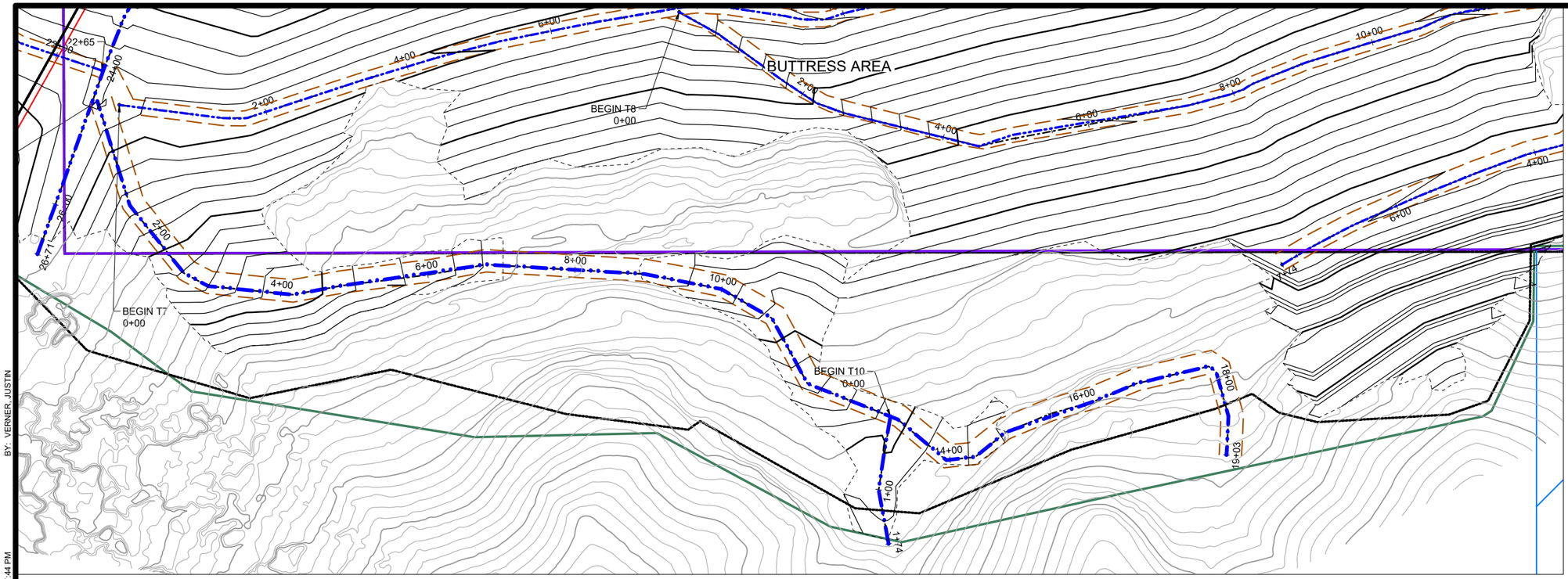
DESIGNED T. LEIDICH
DRAWN J. VERNER
CHECKED P. KOS

Stantec

PROJECT
PIKEVIEW QUARRY RECLAMATION PROJECT
OVERALL CHANNEL PLAN

SHEET
300-001
JobNumber

Tuesday, April 2, 2024 6:55:17 PM C:\PWWORKDIR\DMS\413393\300-002_OVERALL CHANNEL PLAN.DWG VERNER, JUSTIN
DWG FILE: C:\pwworkdir\dms\413393\300-002_OVERALL CHANNEL PLAN.dwg
PLOT DATE: Wednesday, November 15, 2023 8:41:47 AM
BY: VERNER, JUSTIN



LEGEND

- EXISTING CONTOURS
- DESIGN CONTOURS
- AREA BOUNDARY
- EXISTING ROAD
- MAIN CHANNEL
- MINOR CHANNEL
- USFS PROPERTY BOUNDARY

NOTES

1. EXISTING TOPOGRAPHY PROVIDED BY CLIENT WITH FLYOVER DATE OF 02/28/2024.
2. SEE TYPICAL CHANNEL DETAIL AND SIZING TABLE ON SHEET 300-009.

0 80 160
SCALE IN FEET
CONTOUR INTERVAL = 10 FOOT

COLORADO LICENSED
PAUL J. KOS
40848
APRIL 2, 2024
PROFESSIONAL ENGINEER

REV	DATE	BY	DESCRIPTION
H	04/2024	JTV	DESIGN REVISION
G	07/2023	JTV	DESIGN REVISION

SCALE: AS NOTED

WARNING: 0 ½ 1 — IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

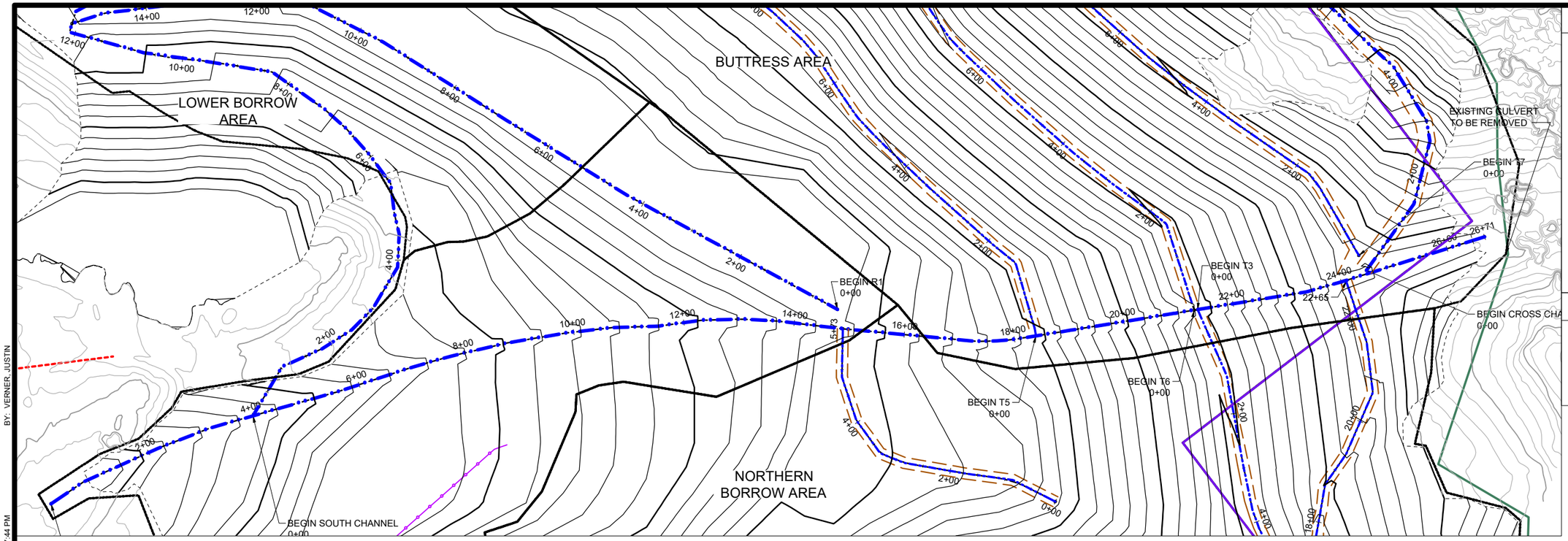
DESIGNED T. LEIDICH
DRAWN J. VERNER
CHECKED P. KOS

Stantec

PROJECT
PIKEVIEW QUARRY RECLAMATION PROJECT
CROSS CHANNEL PLAN AND PROFILE

SHEET
300-002
JobNumber

Tuesday, April 2, 2024 6:50:20 PM C:\PWWORKDIR\DMS413393300-005_CROSS CHANNEL PLAN AND PROFILE.DWG VERNER, JUSTIN
DWG FILE: C:\pwworkdir\dms413393300-005_CROSS CHANNEL PLAN AND PROFILE.dwg PLOT DATE: Wednesday, May 25, 2016 1:37:44 PM BY: VERNER, JUSTIN



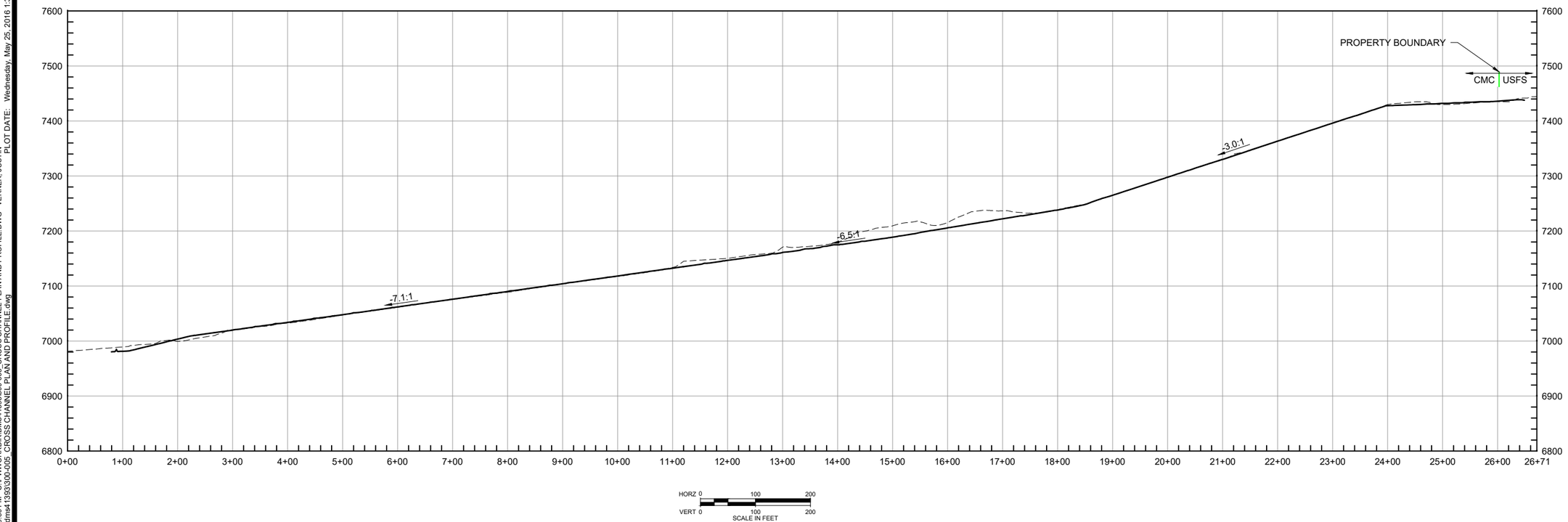
LEGEND

- EXISTING CONTOURS
- DESIGN CONTOURS
- AREA BOUNDARY
- EXISTING ROAD
- MAIN CHANNEL
- MINOR CHANNEL

NOTES

1. EXISTING TOPOGRAPHY PROVIDED BY CLIENT WITH FLYOVER DATE OF 02/28/2024.
2. SEE TYPICAL CHANNEL DETAIL AND SIZING TABLE ON SHEET 300-009.

0 100 200
SCALE IN FEET
CONTOUR INTERVAL = 10 FOOT



HORZ 0 100 200
VERT 0 100 200
SCALE IN FEET

COLORADO LICENSED
PAUL J. KOS
40848
APRIL 2, 2024
PROFESSIONAL ENGINEER

REV	DATE	BY	DESCRIPTION
H	04/2024	JTV	DESIGN REVISION
G	07/2023	JTV	DESIGN REVISION

SCALE: AS NOTED

WARNING: 0 ½ 1 — IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

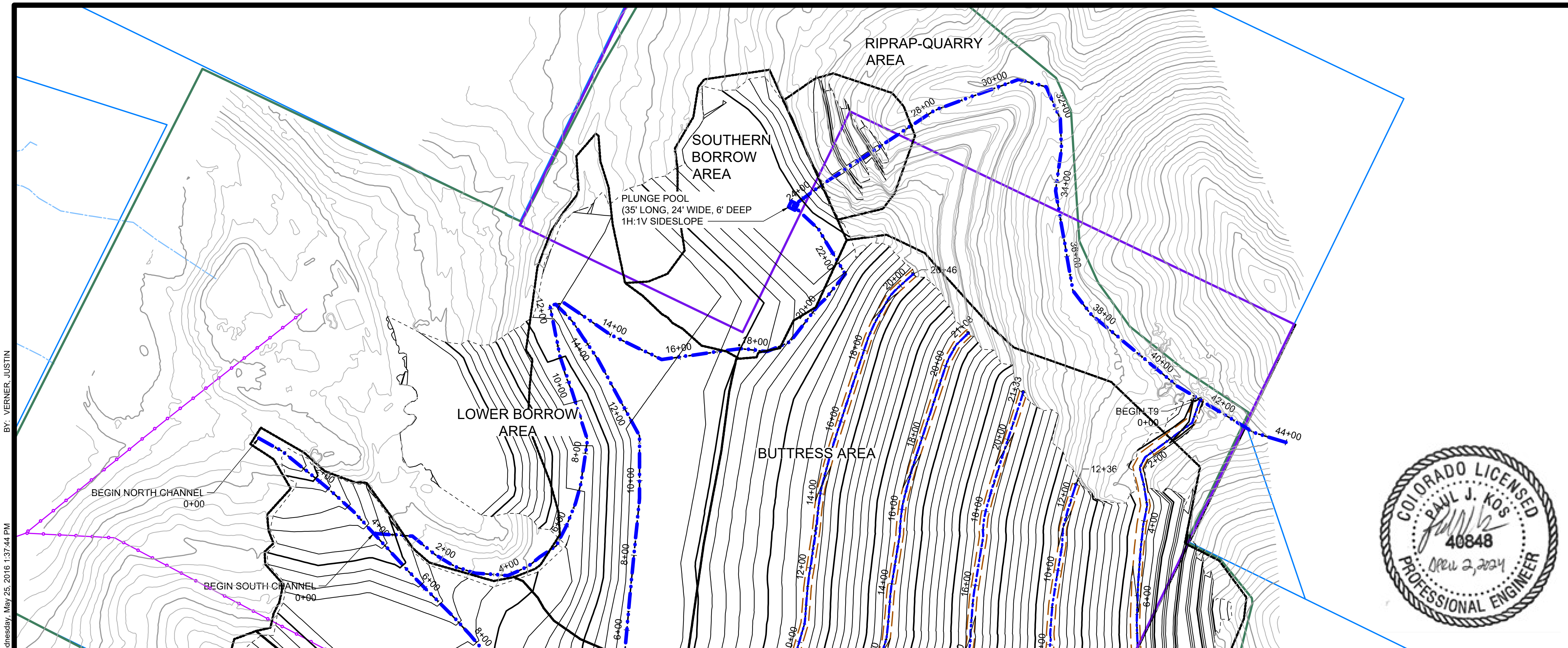
DESIGNED T. LEIDICH
DRAWN J. VERNER
CHECKED P. KOS

Stantec

PROJECT: PIKEVIEW QUARRY RECLAMATION PROJECT
NORTH CHANNEL PLAN AND PROFILE

SHEET: 300-003
JobNumber

Tuesday, April 2, 2024 6:49:50 PM C:\PWWORKDIR\DMS4\1393\300-005_CROSS CHANNEL PLAN AND PROFILE.DWG VERNER, JUSTIN
DWG FILE: C:\pwworkdir\dms4\1393\300-005_CROSS CHANNEL PLAN AND PROFILE.dwg PLOT DATE: Wednesday, May 25, 2016 1:37:44 PM BY: VERNER, JUSTIN



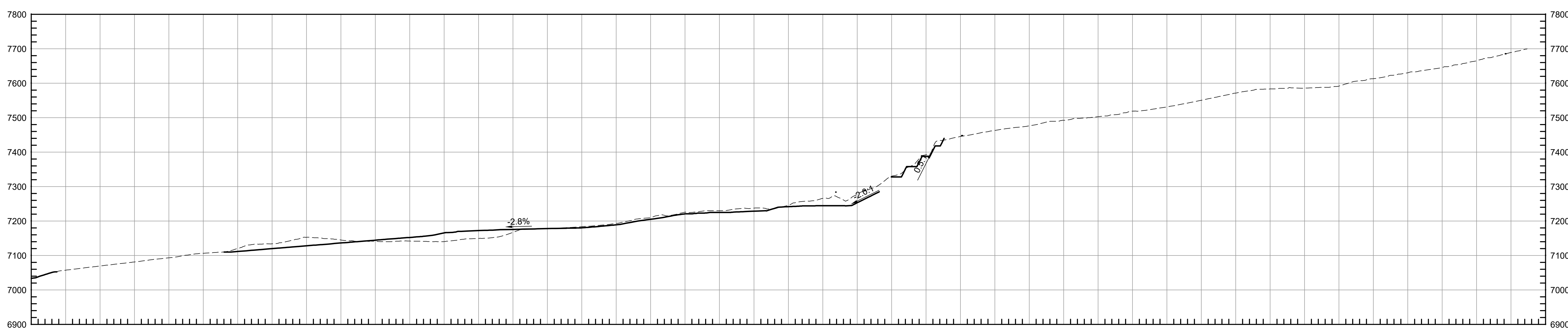
LEGEND

- EXISTING CONTOURS
- DESIGN CONTOURS
- AREA BOUNDARY
- EXISTING ROAD
- MAIN CHANNEL
- MINOR CHANNEL

NOTES

1. EXISTING TOPOGRAPHY PROVIDED BY CLIENT WITH FLYOVER DATE OF 02/28/2024.
2. SEE TYPICAL CHANNEL DETAIL AND SIZING TABLE ON SHEET 300-009.

0 150 300
SCALE IN FEET
CONTOUR INTERVAL = 10 FOOT



HORZ 0 100 200
VERT 0 100 200
SCALE IN FEET

REV	DATE	BY	DESCRIPTION
H	04/2024	JTV	DESIGN REVISION
G	07/2023	JTV	DESIGN REVISION

SCALE: AS NOTED

WARNING: 0 ½ 1 — IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

DESIGNED T. LEIDICH
DRAWN J. VERNER
CHECKED P. KOS

Stantec

PROJECT: PIKEVIEW QUARRY RECLAMATION PROJECT

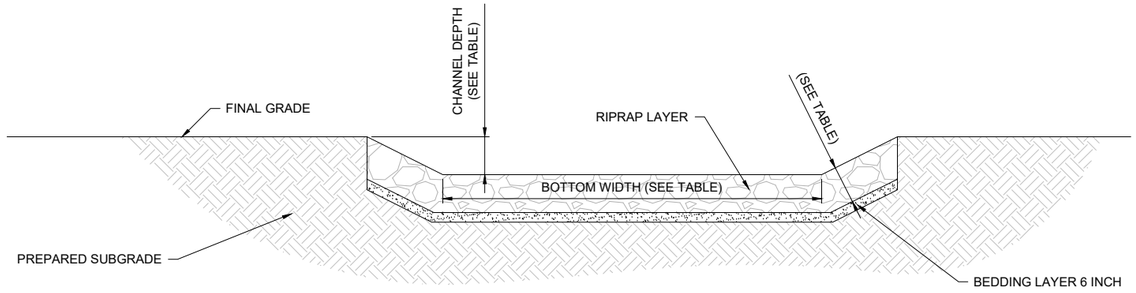
SOUTH CHANNEL PLAN AND PROFILE

SHEET 300-004

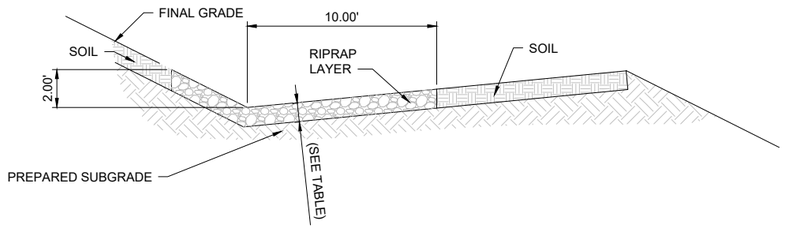
JobNumber

BY: VERNER, JUSTIN PLOT DATE: Wednesday, May 25, 2016 1:37:44 PM

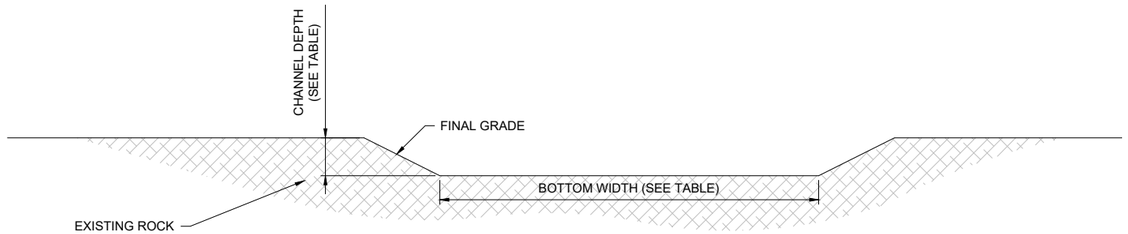
Tuesday, April 2, 2024 6:49:19 PM C:\PWWORKDIR\DMS41393\300-005_CROSS CHANNEL PLAN AND PROFILE.DWG VERNER, JUSTIN
DWG FILE: C:\pwworkdir\dms41393\300-005_CROSS CHANNEL PLAN AND PROFILE.dwg



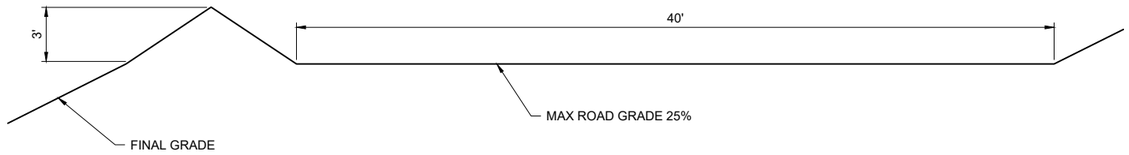
1 - TYPICAL CHANNEL DETAIL
N.T.S



3 - TYPICAL MINOR CHANNEL DETAIL
N.T.S



2 - TYPICAL ROCK CUT CHANNEL DETAIL
N.T.S



4 - TYPICAL TWO WAY HAUL ROAD CROSS-SECTION
N.T.S

Channel Sizing Table												
Channel	Channel Depth	Channel Lining	Bottom width [ft]	Left Side Slope [xH:1V]	Right Side Slope [xH:1V]	Initial Station	Terminating Station	Channel Length	Rock D50 [inch]	"Riprap Layer Thickness (2 x D50) [ft]"	Minimum Channel Slope [%]	Maximum Channel Slope [%]
Cross Channel 1	2.0	Riprap	10.0	2.0	2.0	0+00	8+92	892.0000	12.0000	2.0000	11	33
Cross Channel 2	2.0	Riprap	5.0	2.0	2.0	8+92	13+00	408.0000	12.0000	2.0000	7	23
Cross Channel 3	2.0	Riprap	5.0	2.0	2.0	13+00	19+03	603.0000	6.0000	1.0000	2	17
Channel T9	2.0	Riprap	5.0	2.0	2.0	0+00	7+74	774.0000	3.0000	0.5000	2	4
Channel T8 Upper	2.0	Riprap	0.0	2.0	10.0	0+00	4+50	450.0000	3.0000	0.5000	2	2
Channel T8 Steep	2.0	Riprap	0.0	2.0	10.0	4+50	12+36	786.0000	12.0000	2.0000	23	23
Channel T7 Upper	2.0	Riprap	0.0	2.0	10.0	7+75	21+33	1358.0000	3.0000	0.5000	2	2
Channel T7 Lower	2.0	Riprap	0.0	2.0	10.0	0+00	7+75	775.0000	6.0000	1.0000	2	2
T10	2.0	Riprap	5.0	2.0	2.0	-	-	162.0000	12.0000	2.0000	6	25
Upper South Channel	2.0	Rockcut	10.0	2.0	2.0	22+73	43+07	2034.0000	N/A	N/A	N/A	N/A
Lower North Channel	2.5	Riprap	20.0	2.0	2.0	0+00	4+00	400.0000	18.0000	3.0000	14	14
Lower Middle North Channel	2.5	Riprap	20.0	2.0	2.0	4+00	14+00	1000.0000	12.0000	2.0000	13	14
Middle North Channel	2.5	Riprap	20.0	2.0	2.0	14+00	18+00	400.0000	18.0000	3.0000	15	18
Upper Middle North Channel	2.5	Riprap	20.0	2.0	2.0	18+00	24+00	600.0000	24.0000	4.0000	25	36
Upper North Channel	2.5	Riprap	20.0	2.0	2.0	24+00	26+00	200.0000	12.0000	2.0000	15	19
Lower South Channel 1	2.3	Riprap	10.0	2.0	2.0	0+00	2+00	200.0000	18.0000	3.0000	5	25
Lower South Channel 2	2.3	Riprap	10.0	2.0	2.0	2+00	11+64.54	964.5000	12.0000	2.0000	10	12
Middle South Channel	2.0	Riprap	10.0	2.0	2.0	11+64.54	22+73	1108.5000	12.0000	2.0000	2	23
South Channel 1A (R1)	2.3	Riprap	10.0	2.0	2.0	0+00	14+35	1435.0000	6.0000	1.0000	0	5
C4 Channel	2.3	Riprap	10.0	2.0	2.0	0+00	22+65	2265.0000	6.0000	1.0000	0	17
Minor Channel	2.0	Riprap	0.0	2.0	10.0	-	-	10000.0000	3.0000	0.5000	2	2

COLORADO LICENSED
PAUL J. KOS
40848
APRIL 2, 2024
PROFESSIONAL ENGINEER

REV	DATE	BY	DESCRIPTION
G	04/2024	JTV	DESIGN REVISION

SCALE: AS NOTED

WARNING: 0 ½ 1 — IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

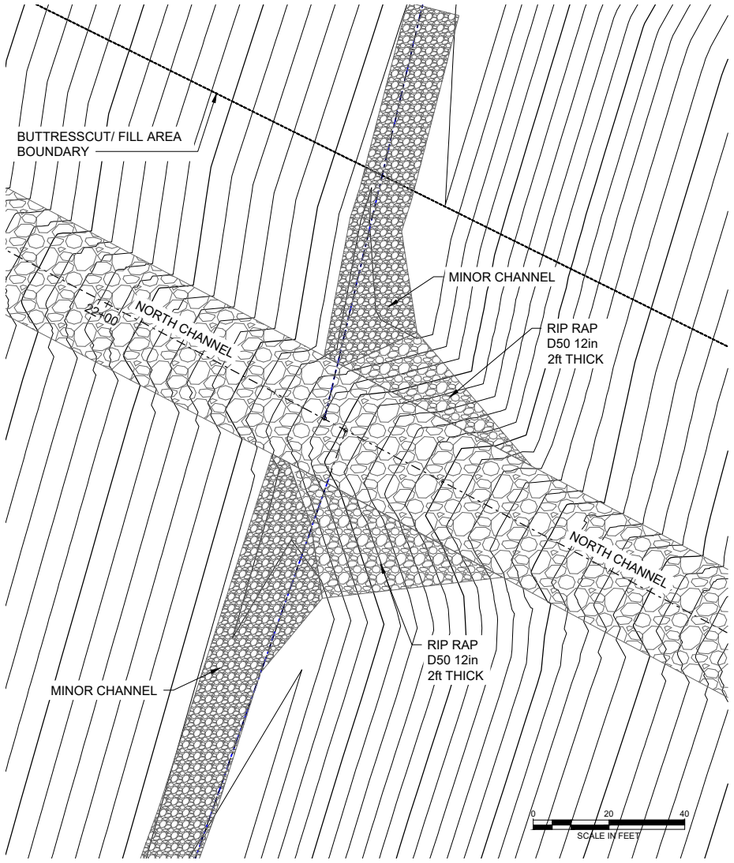
DESIGNED T. LEIDICH
DRAWN J. VERNER
CHECKED P. KOS

Stantec

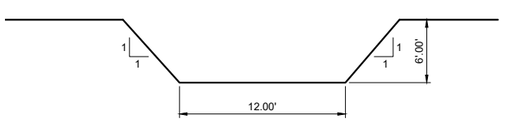
PROJECT: PIKEVIEW QUARRY RECLAMATION PROJECT
TYPICAL CHANNEL DETAILS

SHEET: 300-005
JobNumber

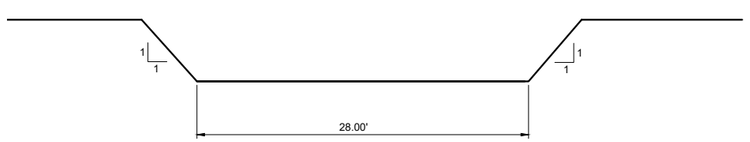
Tuesday, April 2, 2024 4:34:14 PM C:\PWWORKDIR\DMS\41393\300-009_TYPICAL CHANNEL DETAILS.DWG VERNER, JUSTIN
DWG FILE: C:\pwworkdir\dms\41393\300-009_TYPICAL CHANNEL DETAILS.dwg
PLOT DATE: Thursday, January 19, 2023 1:32:07 PM BY: VERNER, JUSTIN



1 - TYPICAL TRANSITION ZONE NORTH CHANNEL RIPRAP DETAIL



A - PLUNGE POOL CROSS SECTION (N.T.S.)

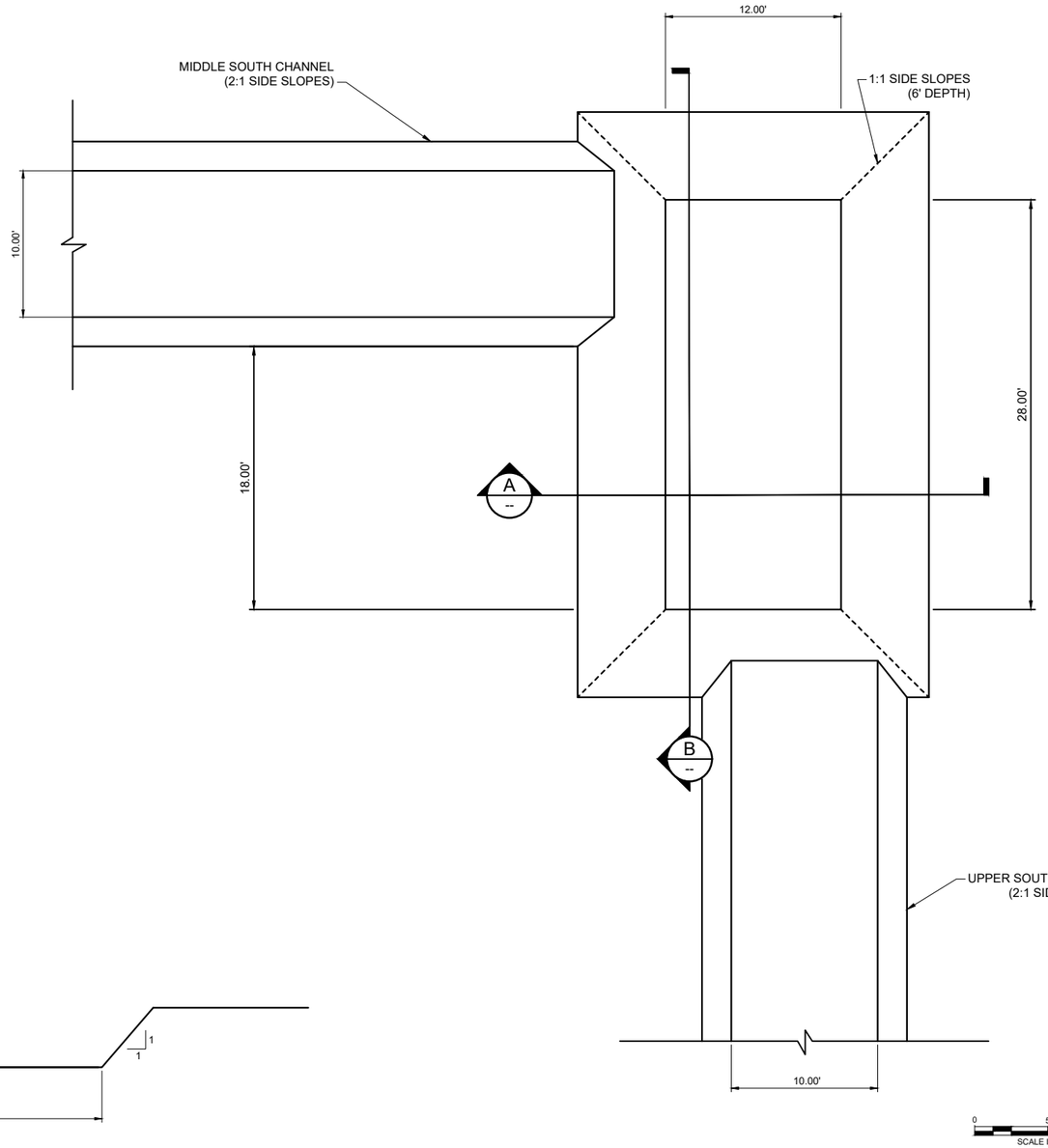


B - PLUNGE POOL CROSS SECTION (N.T.S.)

COLORADO LICENSED
PAUL J. KOS
40848
APRIL 2, 2024
PROFESSIONAL ENGINEER

GENERAL SHEET NOTES

1. PLUNGE POOL TO BE LOCATED AT TOE OF SLOPE.
2. PLUNGE POOL TO BE EXCAVATED INTO BEDROCK.



2 - PLUNGE POOL (PLAN VIEW) TYPICAL DETAIL

REV	DATE	BY	DESCRIPTION
B	02/2023	FT	PLUNGE POOL DETAIL ADDED
A	01/2023	FT	ISSUED FOR REVIEW

SCALE: AS NOTED

WARNING: 0 ½ 1 — IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

DESIGNED T. LEIDICH
DRAWN J. VERNER
CHECKED P. KOS

Stantec

PROJECT: PIKEVIEW QUARRY RECLAMATION PROJECT
TRANSITION ZONE NORTH CHANNEL

SHEET: 300-006
JobNumber