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: Riverbend Industries Inc.

Operator (If Other than Permittee):

Permittee Representative: Jerald Schnabel

Please provide a brief description of the proposed revision:

Updates to reclamation drainage design, reclamation seed/plant species list, and weed management plan based on detailed design, seed/plant availability, and recently identified weeds.

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:	Tim Cazier	From:	Paul Kos
	CDRMS	Cc:	Jerald Schnabel, Riverbend
Project/File:	Pikeview Quarry Reclamation Project	Date:	September 15, 2023

Reference: Technical Revision, Pikeview Quarry, M-1977-211

Mr. Cazier,

Riverbend Industries Inc. (Riverbend) 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), Division of Reclamation, Mining, and Safety (DRMS), United States Forest Service (USFS), and construction and revegetation contractors, Riverbend requests the following Technical Revisions (TR):

- The species available for revegetating the site has been increased to promote biological diversity and provide alternatives based on plants available during the reclamation process. This TR is intended to be reviewed with Exhibit E of the Amendment 4.
- Drainage from the buttress area has been routed to the north, and the South Channel has been eliminated. 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.
- Updates to the weed control plan (see attached memorandum from Riverbend).

Revegetation

Riverbend and their vegetation contractor have identified alternate species that available from seed and plant vendors, and adding these species to the Pikeview Quarry reclamation plan will promote revegetation and increased biodiversity. Riverbend requests the following additions to the revegetation plan:

- Coniferous species will include White Fir in addition to the planned Douglas fir and ponderosa pine species.
- The following shrubs may be planted on private, City, and USFS lands in addition to or in lieu of the species USFS land seed mixes may include the following in addition to or in lieu of the species previously:
    - Snowberry
    - Golden Currant
    - Mountain Mahogany
    - Gamble Oak

Reference: Technical Revision

- The private, City, and USFS land seed mixes may include the following in addition to or in lieu of the species previously listed:
    - Alfalfa
    - White clover
    - Yellow clover
    - Smooth brome
    - Yellow sunflowers
    - Birch-leaf mountain mahogany
    - Parry's oatgrass
    - Colorado wildrye
    - Needle and thread grass
    - Mountain muhly
    - Rose pussytoe
    - Low sunflower
- There are no changes planned to the planting rates or elevation ranges for the different tree/shrub types.
- Seeding may occur before or after tree planting depending on the season and construction practices.

Drainage

Riverbend requests that the drainage plan be revised so that all terraces flow from south to north. During detailed engineering design of the drainage plan, Stantec engineers recommended simplifying the drainage plan by routing all water from the buttress area to the North Channel. This eliminated the South Channel which was routed at an angle and would be difficult to construct and maintain. Similar to the drainage plan in Amendment 4, the proposed reclamation drainage plan includes a network of terraces and ditches designed to convey runoff from the reclamation slopes and adjacent USFS land to the existing sediment control structures below the construction area. Stantec designed the channel geometries and riprap sizes following the same calculations and input parameters used for Amendment 4. These include the same curve numbers, design storm (100-yr, 24-hr), and routing parameters. The HEC-HMS model was used to calculate peak flows. The peak flows and resulting channel designs are summarized in Table 1 below. The design drawings have been updated with the revised channel layout and design details; these are attached to this TR. The HEC-HMS model reports are also attached. The revision to the terrace flow direction only impacts the locations of the terraces on the buttress slope; the buttress slope design did not change.

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	114	1.0	2.0	Riprap	10	2	18	12	27
Lower North Channel	663	1.9	2.5	Riprap	20	2	18	14	14.5
Lower Middle North Channel	507	1.4	2.5	Riprap	20	2	12	13.8	14.5
Middle North Channel	477	1.3	2.5	Riprap	20	2	18	15.8	18.3
Upper Middle North Channel	477	1.5	2.5	Riprap	20	2	24	25.4	36
Upper North Channel	404	1.7	2.5	Riprap	20	2	6	15.3	19.7
Lower South Channel 1	141	1.0	2.3	Riprap	10	2	18	5.4	25.2
Lower South Channel 2	141	1.2	2.3	Riprap	10	2	12	10	12
Middle South Channel	59	1.0	2.0	Riprap	10	2	12	2.2	23.6
Upper South Channel	44	0.5	2.0	Bedrock	10	2	N/A	N/A	N/A
South Channel 1A	67	1.3	2.3	Riprap	10	2	6	0.8	5.6
C4 Channel	47	1.2	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:

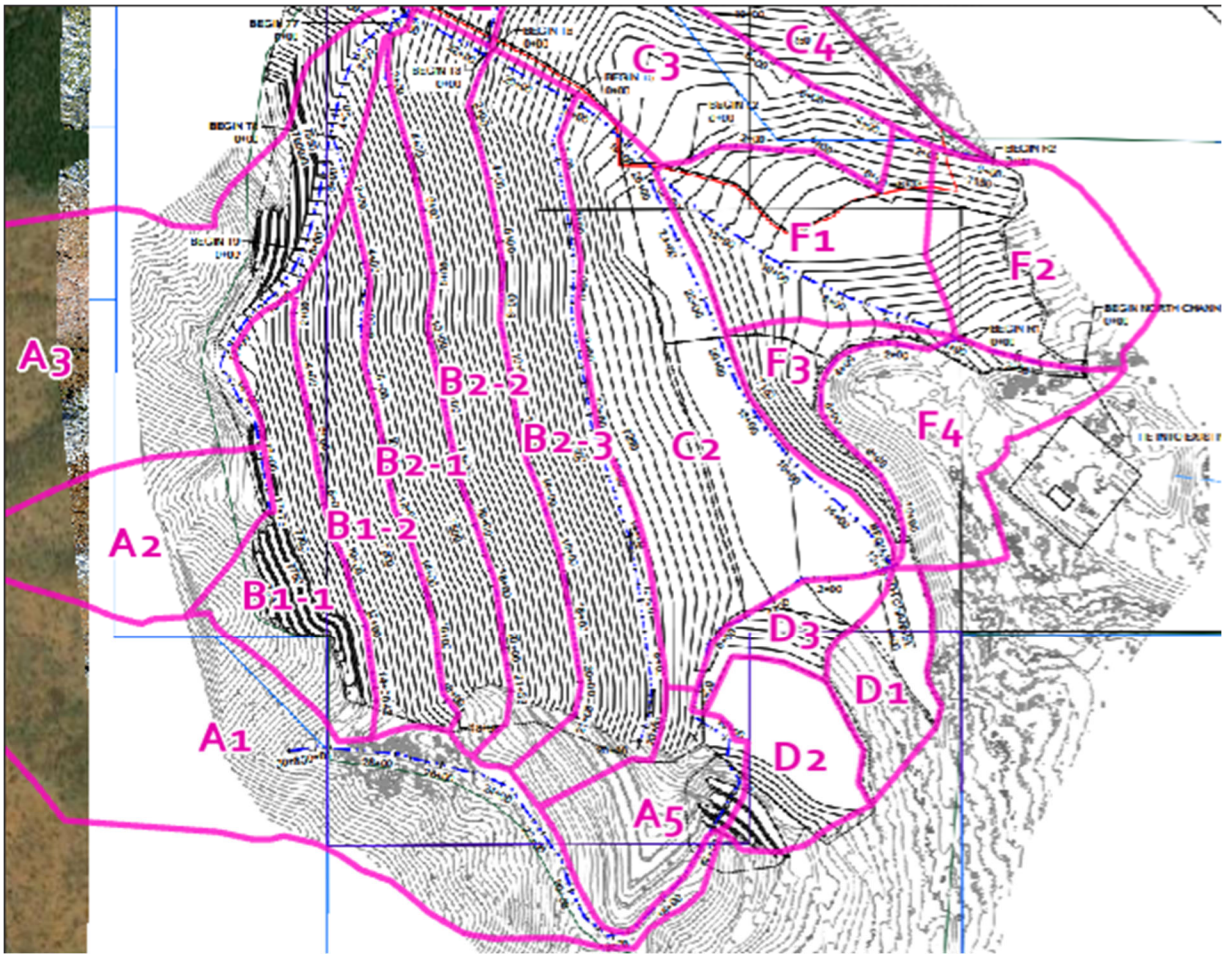
- Major Channels were designed to accommodate at least a 0.5-ft freeboard
- Riprap was sized to have a minimum factor of safety of 1.3

Stantec

Memo

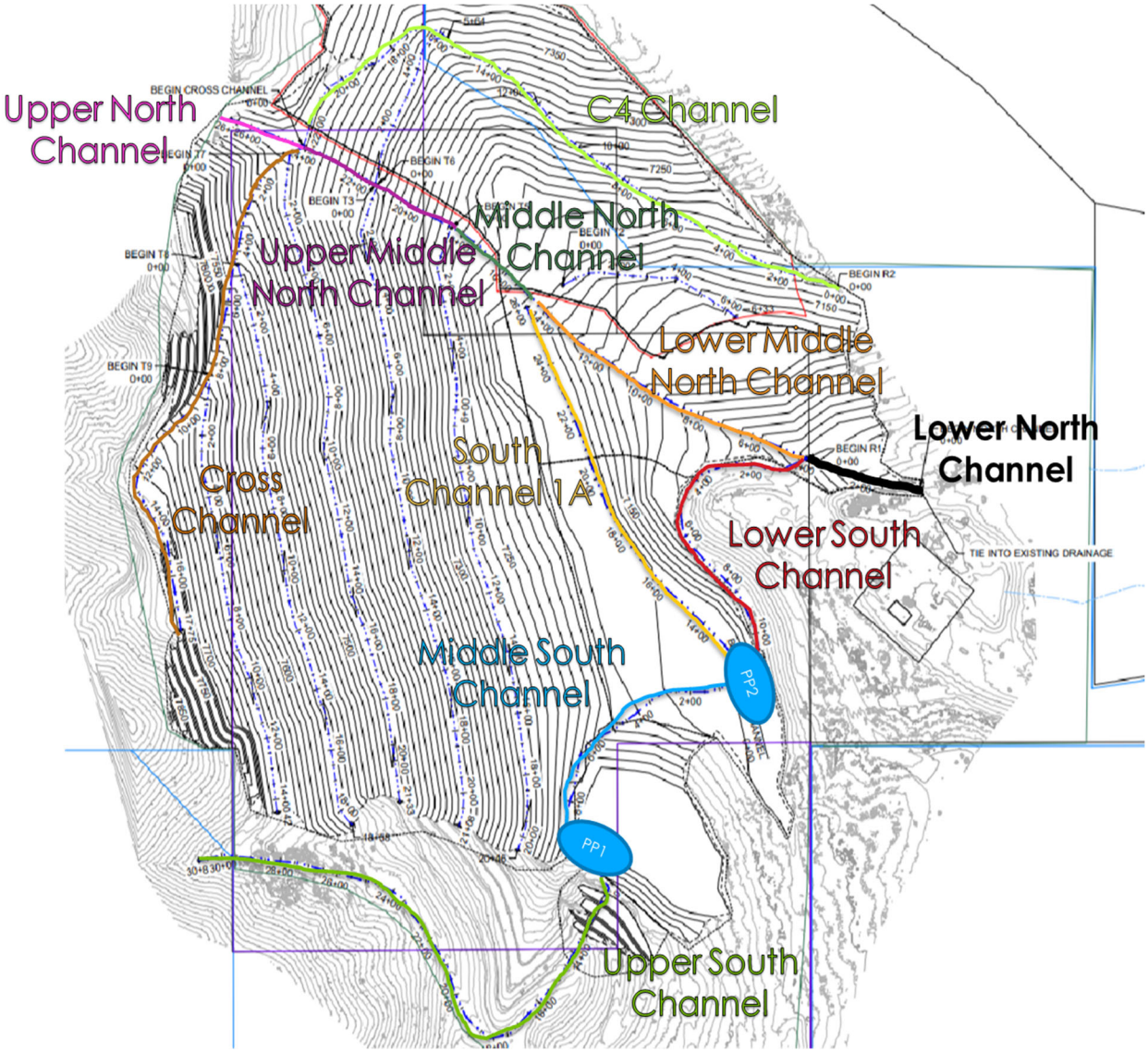
HEC-HMS Model Reports

Watershed Map and Terrace Channels



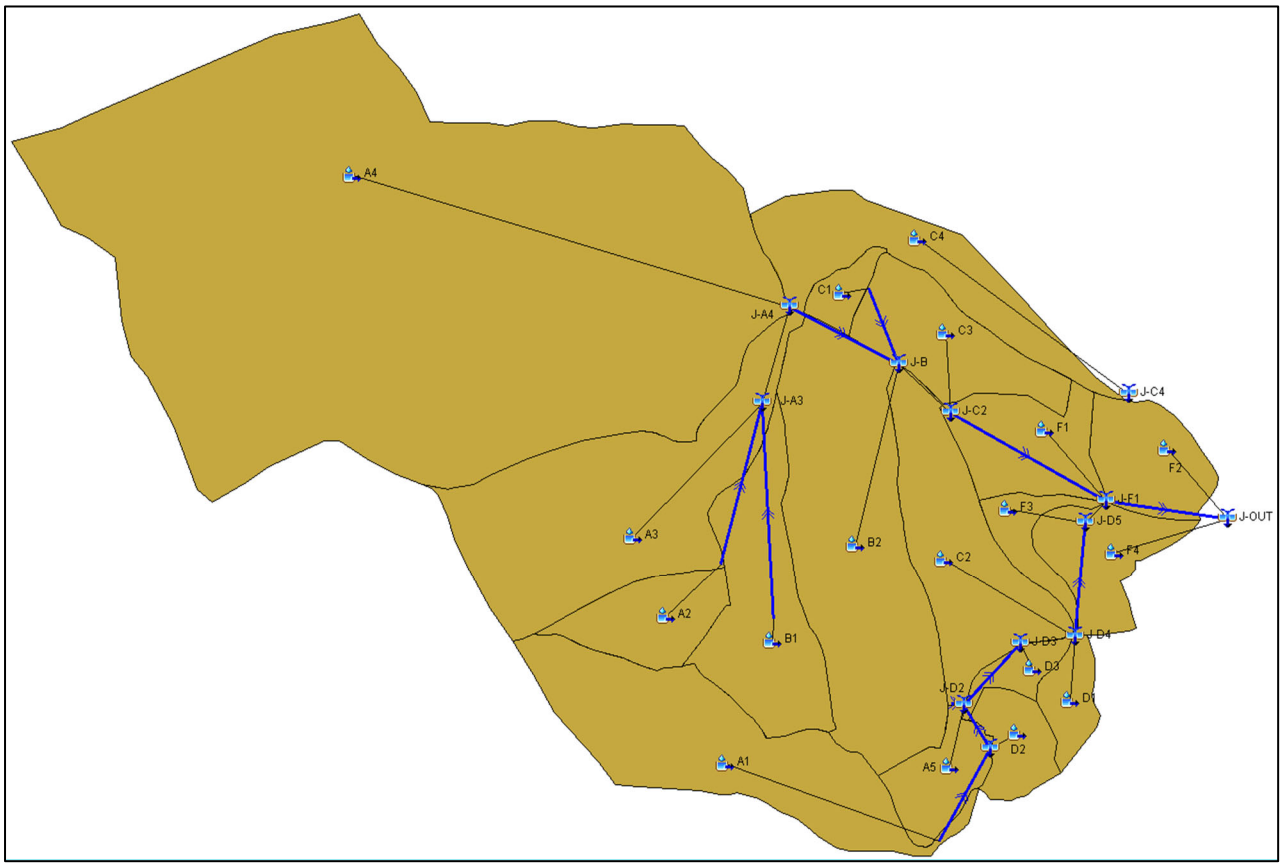
Reference: **Technical Revision**

Major Channels



Reference: Technical Revision

HEC-HMS Model

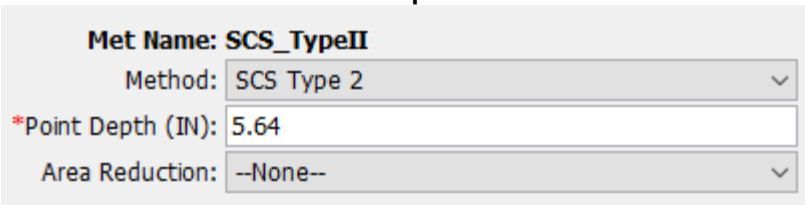


Reference: **Technical Revision**

HEC-HMS Subbasin Input Parameters

Subbasin	Area (ac)	Area (mi2)	Curve Number	Lag Time (min)
A4	161.01	0.2516	63.5	19.69
A3	31.80	0.0497	64.4	20.66
B1	16.38	0.0256	72.1	7.46
A2	7.73	0.0121	63.2	16.73
B2	35.15	0.0549	73.9	7.5
C1	2.95	0.0046	73.8	6.53
C3	16.14	0.0252	72.4	3.99
C4	13.88	0.0217	70.6	9.37
F1	25.07	0.0392	71.8	7.32
F2	4.35	0.0068	73.9	6.56
A1	25.25	0.0394	63.7	21.79
D1	1.73	0.0027	72	3.6
C2	6.71	0.0105	74	6.99
A5	5.44	0.0085	74	5.44
D2	5.42	0.0085	73.1	7.58
E	15.86	0.0248	69.4	11.48
D3	11.05	0.0173	73.6	8.59

HEC-HMS Precipitation Model



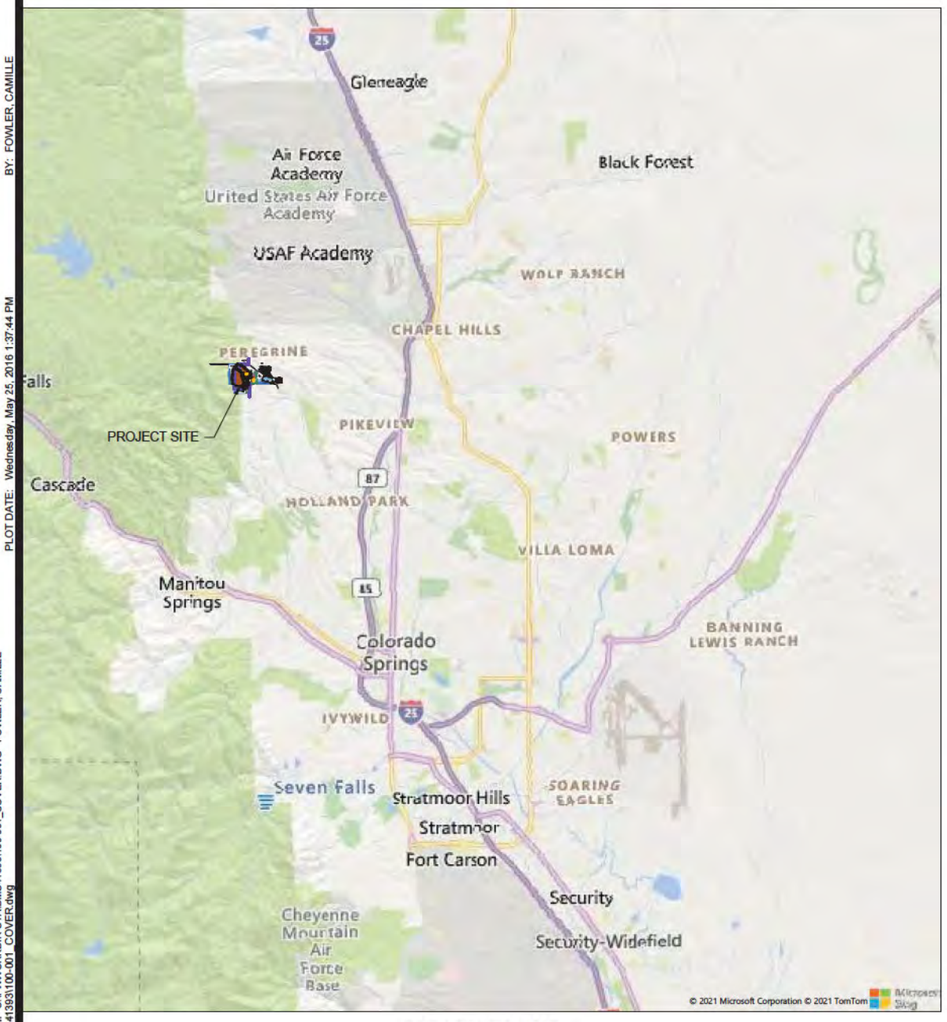
Reference: **Technical Revision**

HEC-HMS Model Results

Hydrologic Element	Drainage Area (mi2)	Peak Discharge (cfs)	Time of Peak	Volume (acre-ft)
A1	0.039726	44.0	01Jan2000, 12:15	5.0
A2	0.012074	15.5	01Jan2000, 12:10	1.5
A3	0.049689	58.6	01Jan2000, 12:15	6.4
A4	0.251575	293.7	01Jan2000, 12:15	31.6
A5	0.008835	23.5	01Jan2000, 12:00	1.5
B1	0.025597	54.7	01Jan2000, 12:00	4.1
B2	0.052237	125.1	01Jan2000, 12:00	8.8
C1	0.003532	9.9	01Jan2000, 11:55	0.6
C2	0.027213	67.2	01Jan2000, 12:00	4.6
C3	0.017012	35.3	01Jan2000, 12:05	2.7
C4	0.02237	47.4	01Jan2000, 12:05	3.6
D1	0.005484	8.3	01Jan2000, 12:15	0.9
D2	0.007203	8.1	01Jan2000, 12:25	1.2
D3	0.003797	8.9	01Jan2000, 12:00	0.6
F1	0.010439	23.5	01Jan2000, 12:00	1.7
F2	0.012505	26.4	01Jan2000, 12:05	2.0
F3	0.005547	12.9	01Jan2000, 12:00	0.9
F4	0.012358	24.8	01Jan2000, 12:05	2.0
J-A3	0.08736	113.7	01Jan2000, 12:05	12.0
J-A4	0.338935	404.2	01Jan2000, 12:10	43.7
J-B	0.394704	477.2	01Jan2000, 12:10	53.1
J-C2	0.411716	507.1	01Jan2000, 12:05	55.8
J-C4	0.02237	47.4	01Jan2000, 12:05	3.6
J-D1	0.046929	50.6	01Jan2000, 12:15	6.2
J-D2	0.055764	55.6	01Jan2000, 12:15	7.7
J-D3	0.059561	58.8	01Jan2000, 12:05	8.3
J-D4	0.092258	124.8	01Jan2000, 12:05	13.8
J-D5	0.097805	141.3	01Jan2000, 12:05	14.7
J-F1	0.51996	663.0	01Jan2000, 12:05	72.1
J-OUT	0.544823	708.0	01Jan2000, 12:05	76.1
RF2	0.51996	656.9	01Jan2000, 12:05	72.1
R-A3	0.012074	15.2	01Jan2000, 12:15	1.5
R-A5	0	0.0	01Jan2000, 00:00	0.0
R-B1	0.025597	54.5	01Jan2000, 12:05	4.1
R-B2	0.338935	397.8	01Jan2000, 12:10	43.6
R-C1	0.003532	9.3	01Jan2000, 12:00	0.6
R-D	0.092258	129.4	01Jan2000, 12:05	13.8
R-D1	0.039726	43.7	01Jan2000, 12:15	5.0
R-D2	0.046929	50.1	01Jan2000, 12:20	6.2
R-D3	0.055764	55.4	01Jan2000, 12:20	7.7
R-F1	0.411716	510.5517	01Jan2000, 12:10	55.7

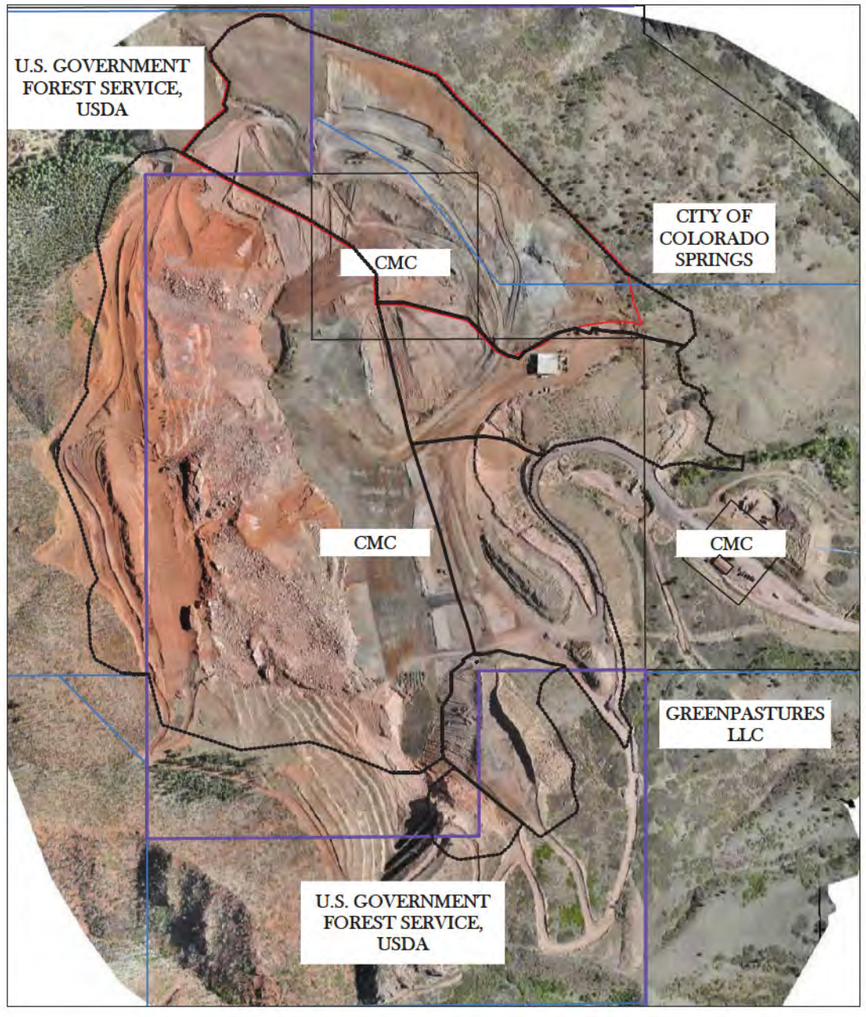
PIKEVIEW QUARRY RECLAMATION PROJECT

SEPTEMBER 2023



SITE VICINITY MAP

NOT TO SCALE



SITE MAP

0 250 500

SCALE IN FEET

CONTOUR INTERVAL = N/A

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

COLORADO LICENSED
PAUL J. KOS
40648
Sept 18, 2023
PROFESSIONAL ENGINEER

REV	DATE	BY	DESCRIPTION
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: FOWLER, CAMILLE

DWG FILE: C:\pwworkdir-stadms413931\100-001_COVER.DWG FOWLER, CAMILLE

Thursday, July 13, 2023 2:14:15 PM C:\PWWORKDIR-STAIDMS413931\100-001_COVER.dwg

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 Sept 18, 2023 PROFESSIONAL ENGINEER

REV	DATE	BY	DESCRIPTION
G	07/2023	JTV	DESIGN REVISION

SCALE: AS NOTED

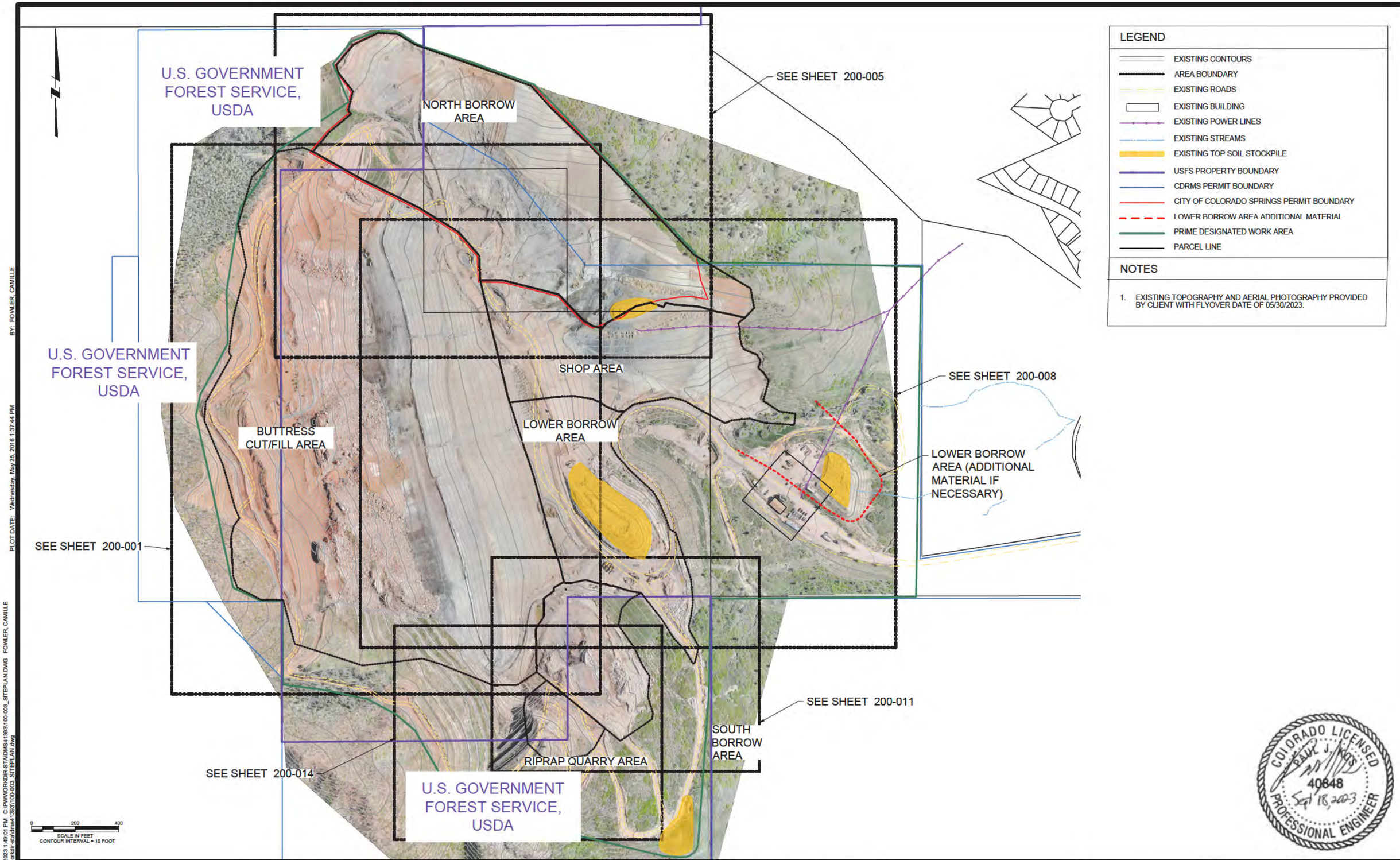
WARNING: 0 ½ 1 — IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

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

Stantec

PROJECT: PIKEVIEW QUARRY RECLAMATION PROJECT
GENERAL NOTES AND ABBREVIATIONS

SHEET: 100-002
JobNumber



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 05/30/2023.

COLORADO LICENSED PAUL J. KOS 40648 Sept 18, 2023 PROFESSIONAL ENGINEER

REV	DATE	BY	DESCRIPTION
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

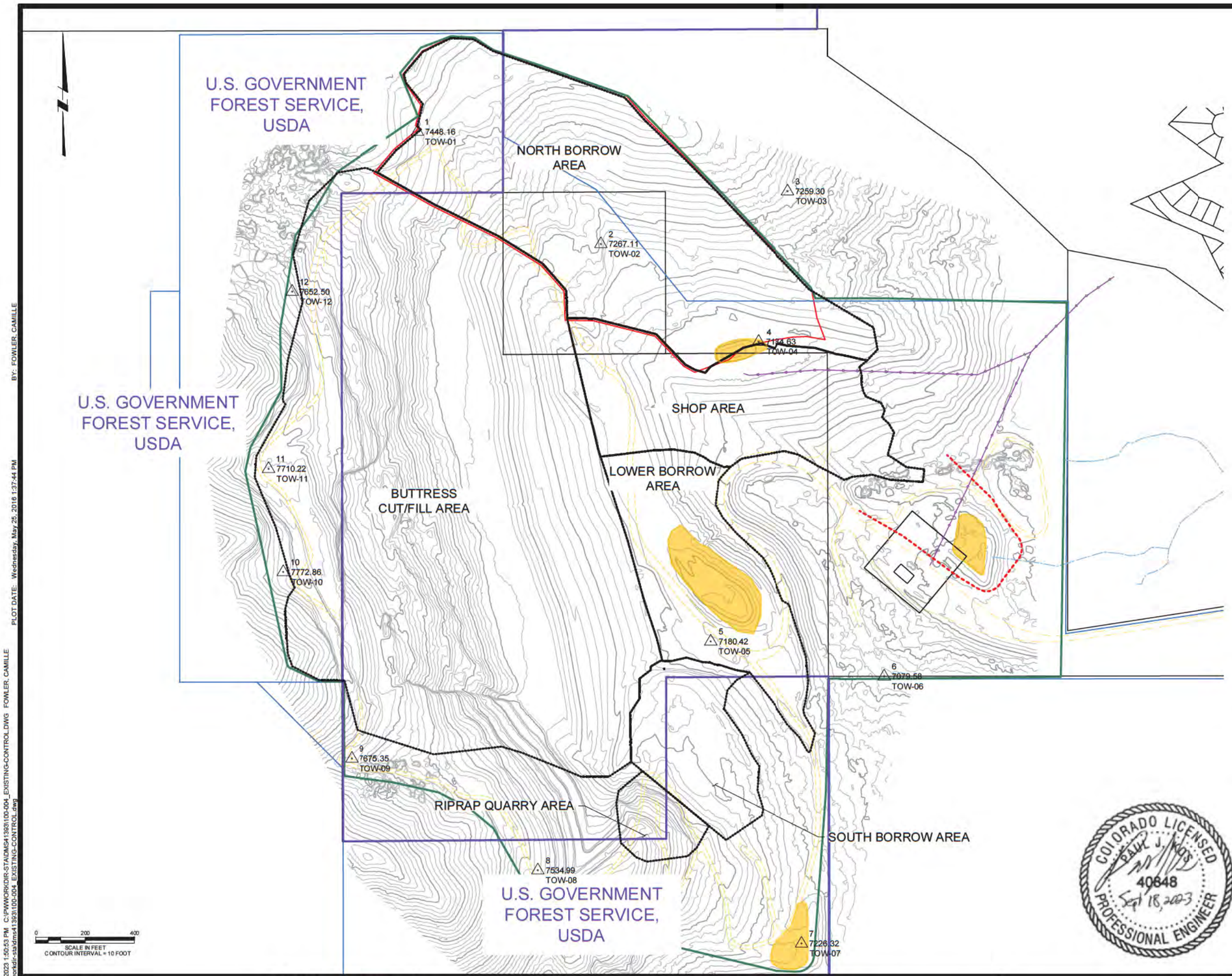
DESIGNED T. LEIDICH
DRAWN J. VERNER
CHECKED P. KOS

Stantec

PROJECT: PIKEVIEW QUARRY RECLAMATION PROJECT
SITE PLAN - AERIAL

SHEET: 100-003
JobNumber

PLOT DATE: Wednesday, May 25, 2016 1:37:44 PM BY: FOWLER, CAMILLE
Thursday, July 13, 2023 1:49:01 PM C:\PWWORKDIR-STAIDMS41393\100-003_SITEPLAN.DWG FOWLER, CAMILLE
DWG FILE: C:\pwworkdir-staidms41393\100-003_SITEPLAN.dwg



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 05/30/2023.
2. DESIGN TOPOGRAPHY IS THE FINAL GRADE FOR TOPSOIL

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

COLORADO LICENSED PAUL J. KOS 40648 Sept 18, 2023 PROFESSIONAL ENGINEER

REV	DATE	BY	DESCRIPTION
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

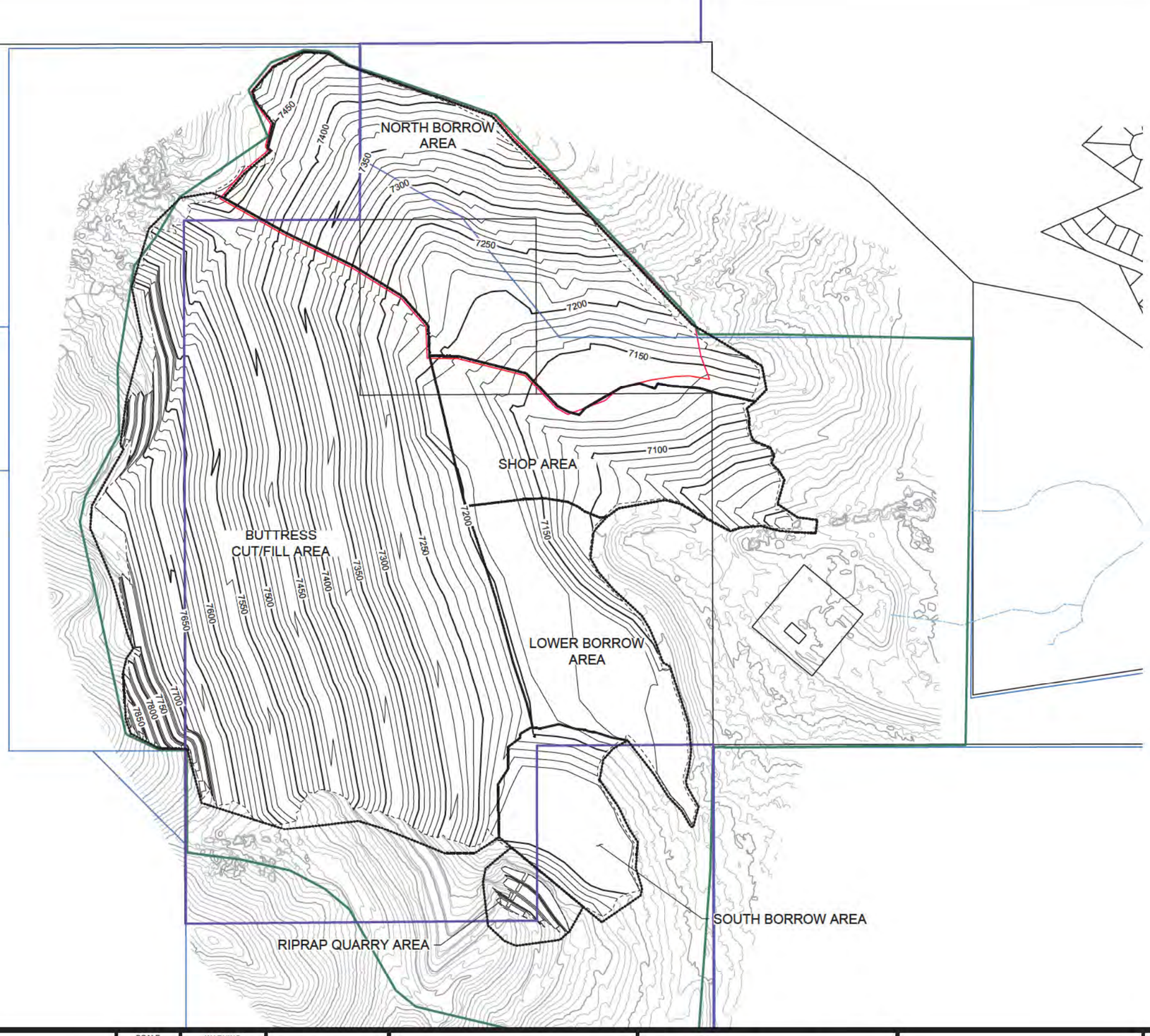
DESIGNED T. LEIDICH
DRAWN J. VERNER
CHECKED P. KOS

Stantec

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

SHEET: 100-004
JobNumber

Thursday, July 13, 2023 1:50:53 PM C:\PWWORKDIR-STA\DMS\413931\100-004_EXISTING-CONTROL.DWG FOWLER, CAMILLE
DWG FILE: C:\pwworkdir-sta\dms\413931\100-004_EXISTING-CONTROL.dwg
PLOT DATE: Wednesday, May 25, 2016 1:37:44 PM
BY: FOWLER, CAMILLE



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 05/30/2023.

0 200 400
SCALE IN FEET
CONTOUR INTERVAL = 10 FOOT

COLORADO LICENSED
PAUL J. KOS
40848
Sept 18, 2023
PROFESSIONAL ENGINEER

REV	DATE	BY	DESCRIPTION
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

Monday, July 10, 2023 6:04:37 PM C:\PWWORKDIR\DM\41393\100-005_OVERALL GRADING PLAN.DWG VERNER, JUSTIN
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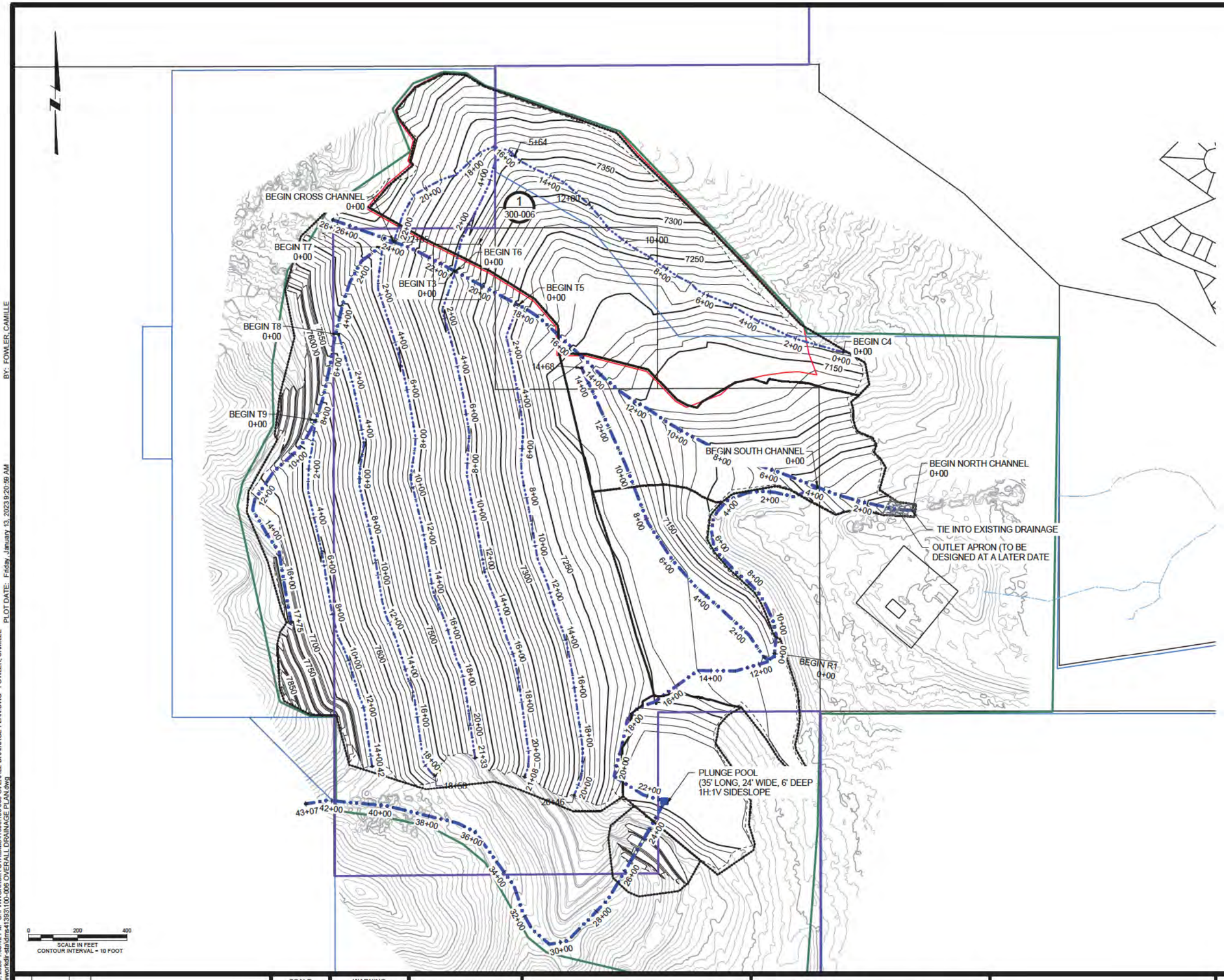
PLOT DATE: Wednesday, May 25, 2016 1:37:44 PM BY: VERNER, JUSTIN



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 05/30/2023.

COLORADO LICENSED
PAUL J. KOS
40648
Sept 18, 2023
PROFESSIONAL ENGINEER

REV	DATE	BY	DESCRIPTION
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

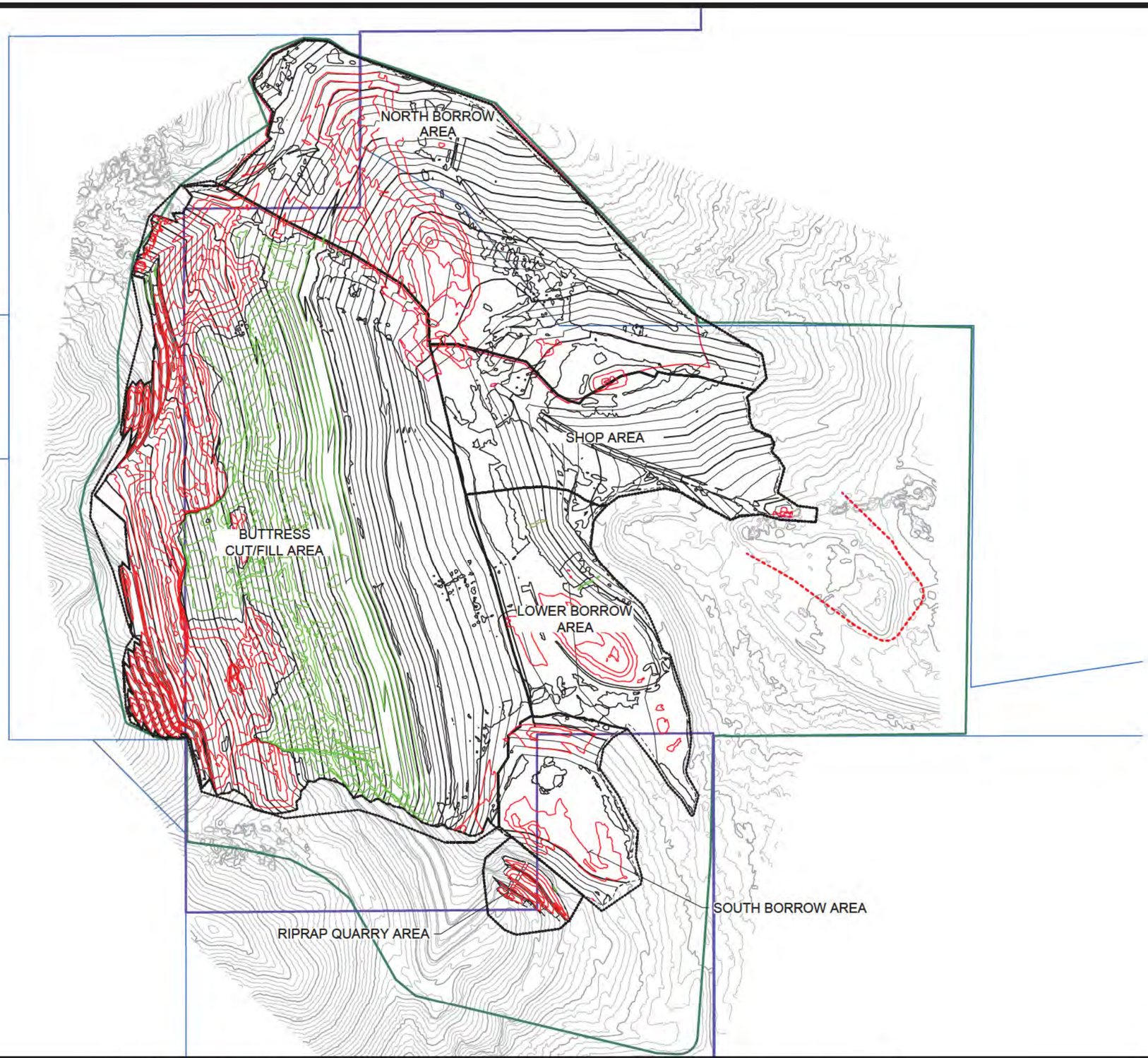
DESIGNED T. LEIDICH
DRAWN J. VERNER
CHECKED P. KOS

Stantec

PROJECT
PIKEVIEW QUARRY RECLAMATION PROJECT
OVERALL DRAINAGE PLAN

SHEET
100-006
JobNumber

Thursday, July 13, 2023 1:58:42 PM C:\PWWORKDIR-STA\DMS\413930\100-006 OVERALL DRAINAGE PLAN.DWG FOWLER, CAMILLE
DWG FILE: C:\pwworkdir-sta\dms\413930\100-006 OVERALL DRAINAGE PLAN.dwg PLOT DATE: Friday, January 13, 2023 9:20:59 AM BY: FOWLER, CAMILLE



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 05/30/2023.

COLORADO LICENSED
PAUL J. KOS
40848
Sept 18, 2023
PROFESSIONAL ENGINEER

REV	DATE	BY	DESCRIPTION
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

Tuesday, July 11, 2023 1:56:30 PM C:\PWWORKDIR\DMS41393\100-007_OVERALL ISOPACH PLAN.DWG VERNER, JUSTIN
DWG FILE: C:\pwworkdir\dms41393\100-007_OVERALL ISOPACH PLAN.dwg
PLOT DATE: Wednesday, May 25, 2016 1:37:44 PM
BY: VERNER, JUSTIN

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 05/30/2023.

COLORADO LICENSED 40848 PROFESSIONAL ENGINEER Sept 15, 2023

REV	DATE	BY	DESCRIPTION
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
DWG FILE: C:\pwworkdir\dms41393\100-008_PARCEL.dwg
Monday, July 10, 2023 11:10:51 PM C:\PWWORKDIR\DMS41393\100-008_PARCEL.DWG VERNER, JUSTIN

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 05/30/2023.

BUTTRESS CUT/FILL AREA

SOUTH BORROW AREA

LOWER BORROW AREA

SHOP AREA

NORTH BORROW AREA

BEGIN T8 0+00

BEGIN T7 0+00

BEGIN T3 0+00

BEGIN T6 0+00

BEGIN T5 0+00

A 200-002

B 200-003

T9

COLORADO LICENSED
PAUL J. KOS
40648
Sept 18, 2023
PROFESSIONAL ENGINEER

0 100 200
SCALE IN FEET
CONTOUR INTERVAL = 10 FOOT

REV	DATE	BY	DESCRIPTION
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

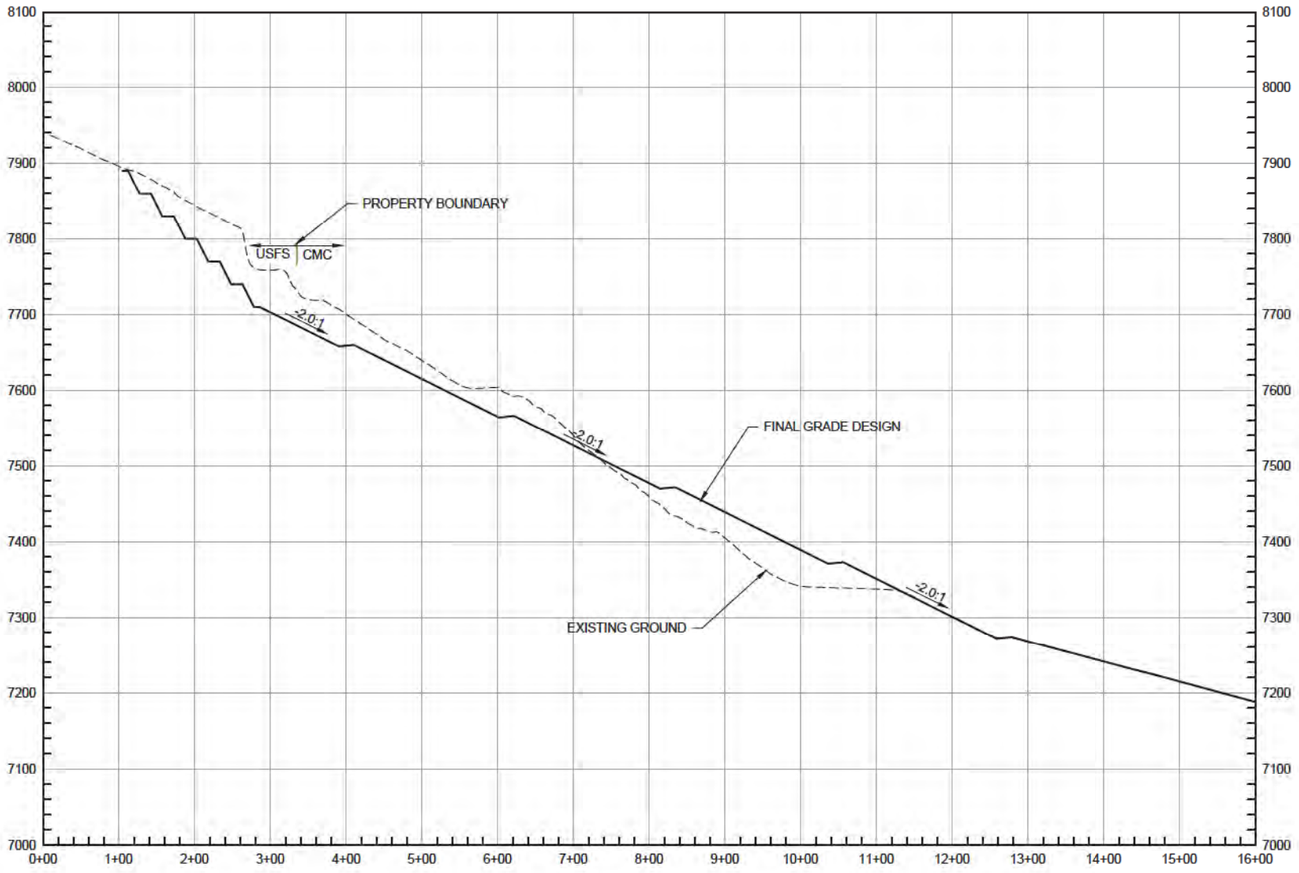
DESIGNED T. LEIDICH
DRAWN J. VERNER
CHECKED P. KOS

Stantec

PROJECT
PIKEVIEW QUARRY RECLAMATION PROJECT
BUTTRESS AREA GRADING PLAN

SHEET
200-001
JobNumber

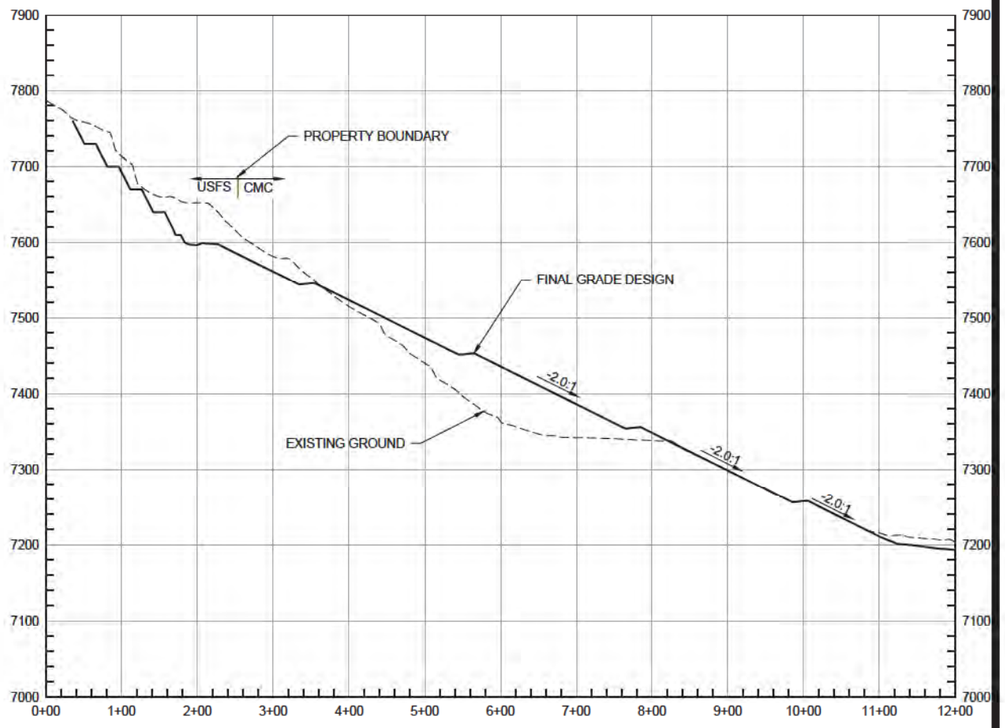
PLOT DATE: Wednesday, May 25, 2016 1:37:44 PM BY: VERNER, JUSTIN
DWG FILE: C:\pwworkdir\dms41393\200-001_FILL AREA PLAN.DWG VERNER, JUSTIN
Monday, July 10, 2023 11:48:59 PM C:\PWWORKDIR\DMS41393\200-001_FILL AREA PLAN.dwg



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
Sept 18, 2023
PROFESSIONAL ENGINEER

REV	DATE	BY	DESCRIPTION
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

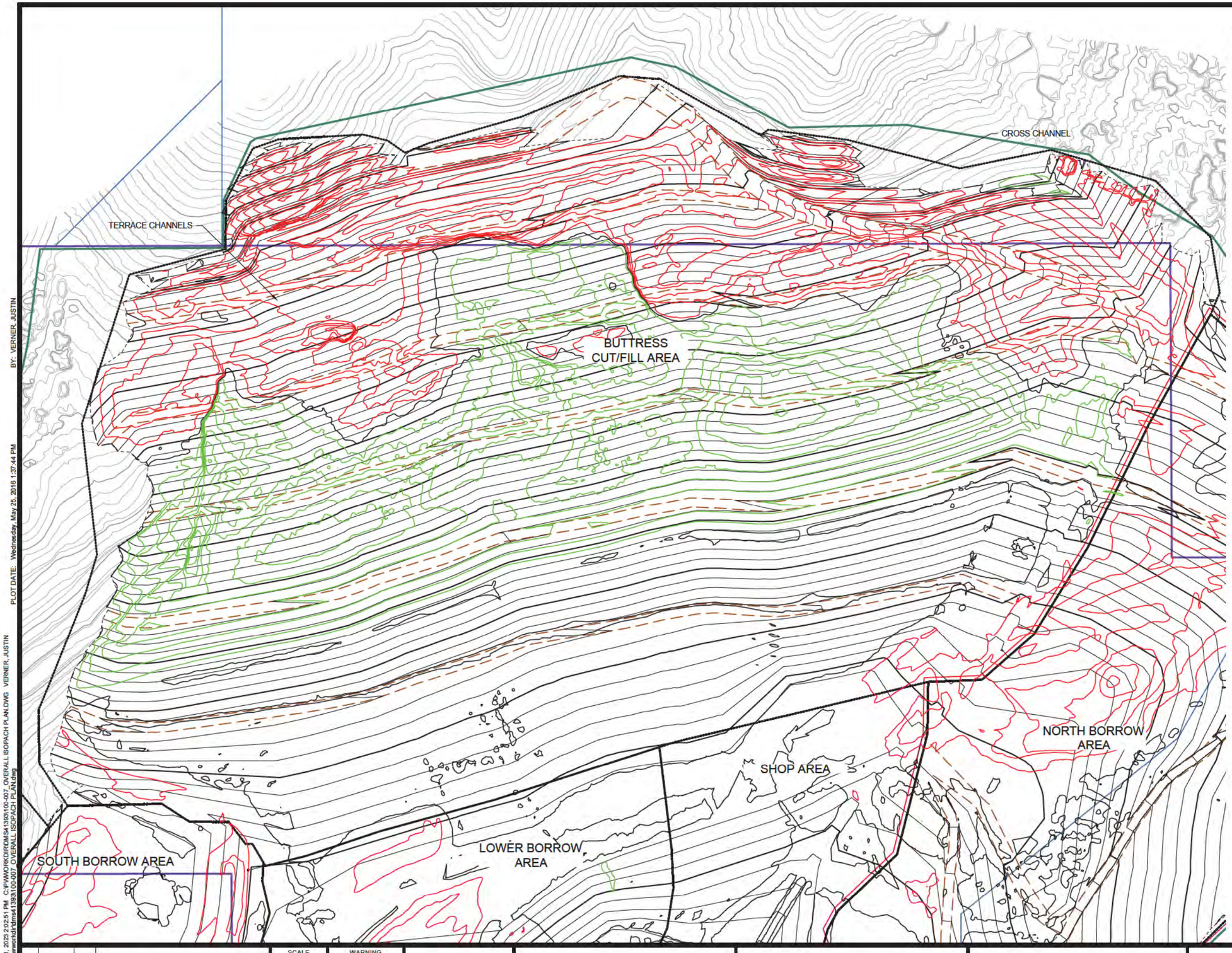
DESIGNED T. LEIDICH
DRAWN J. VERNER
CHECKED P. KOS

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
DWG FILE: C:\pwworkdir\dms41393\200-001_FILL AREA PLAN.DWG VERNER, JUSTIN
Monday, July 10, 2023 11:48:14 PM C:\PWWORKDIR\DMS41393\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 05/30/2023.

COLORADO LICENSED
PAUL J. KOS
40848
Sept 18, 2023
PROFESSIONAL ENGINEER

0 100 200
SCALE IN FEET
CONTOUR INTERVAL = 10 FOOT

REV	DATE	BY	DESCRIPTION
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

Tuesday, July 11, 2023 2:02:51 PM C:\PWWORKDIR\DMS4139\100-007_OVERALL ISOPACH PLAN.DWG VERNER, JUSTIN
DWG FILE: C:\pwworkdir\dms4139\100-007 OVERALL ISOPACH PLAN.dwg
PLOT DATE: Wednesday, May 25, 2016 1:37:44 PM
BY: VERNER, JUSTIN

C
200-006

D
200-006

NORTH BORROW
AREA

7400

7350

7300

7250

7200

7150

NORTH CHANNEL

CROSS CHANNEL

BUTTRESS
CUT/FILL AREA

14+68

14+00

12+00

SHOP AREA

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 05/30/2023.

COLORADO LICENSED
PAUL J. KOS
40648
Sept 18, 2023
PROFESSIONAL ENGINEER

N

0 80 160
SCALE IN FEET
CONTOUR INTERVAL = 10 FOOT

REV	DATE	BY	DESCRIPTION
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
Tuesday, July 11, 2023 12:02:01 AM C:\PW\WORKDIR\DM\64139\200-005 NORTHERN BORROW AREA.DWG VERNER, JUSTIN
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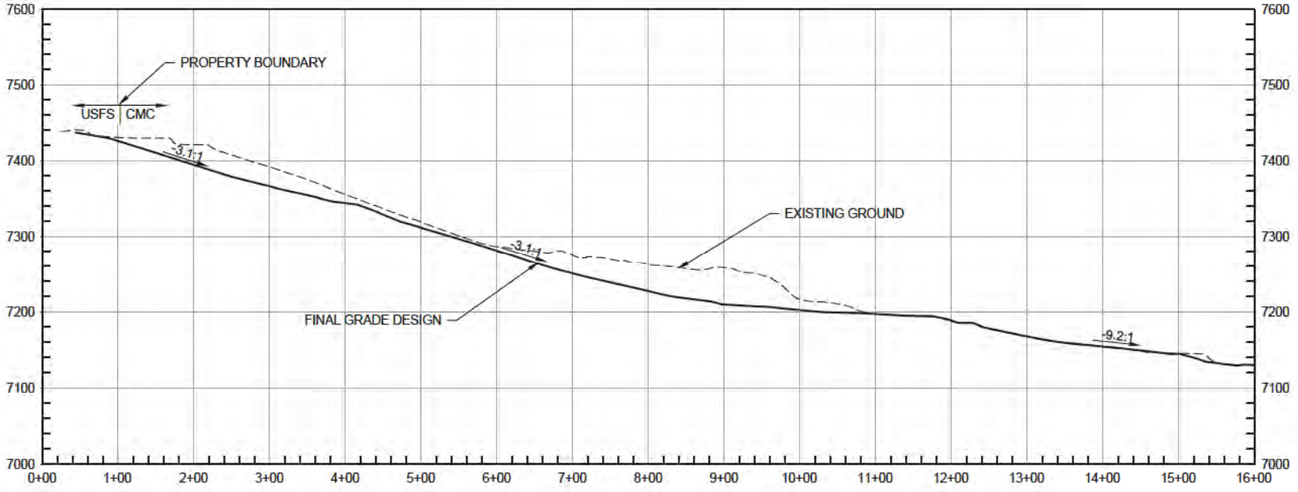
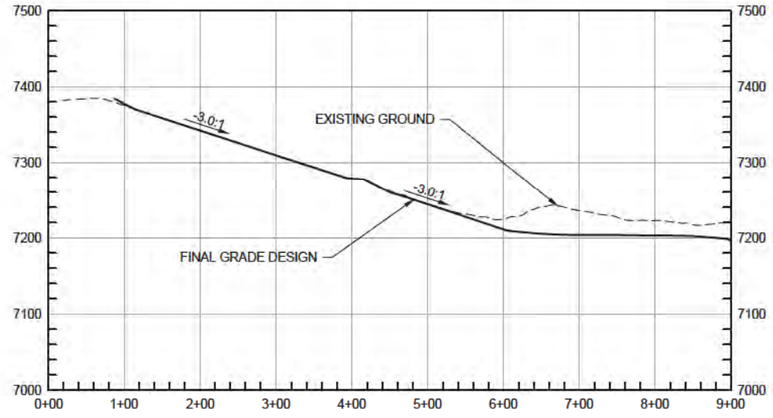


C SECTION
200-005

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
40648
Sept 18, 2023
PROFESSIONAL ENGINEER

REV	DATE	BY	DESCRIPTION
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

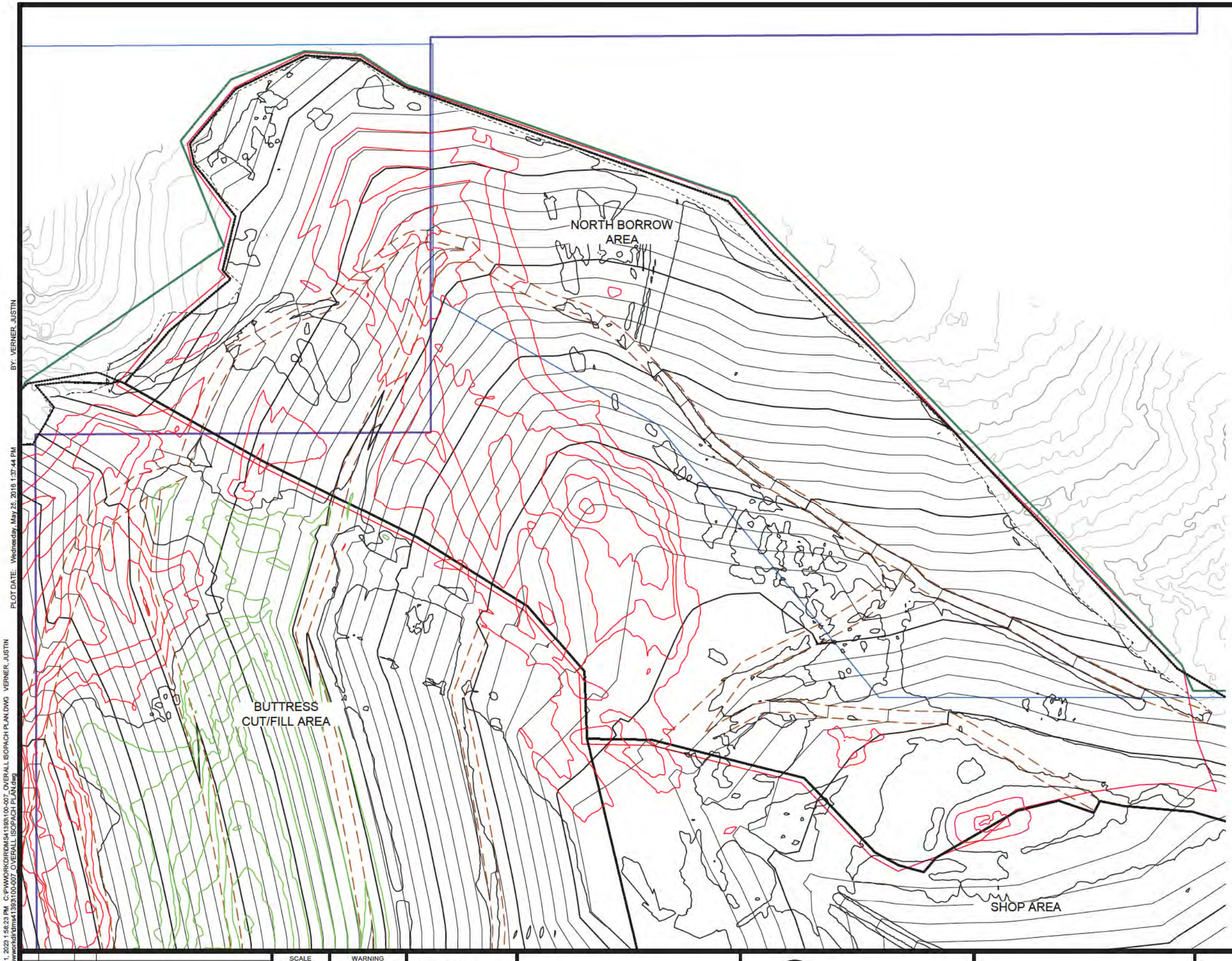
DESIGNED T. LEIDICH
DRAWN J. VERNER
CHECKED P. KOS

Stantec

PROJECT
PIKEVIEW QUARRY RECLAMATION PROJECT
NORTHERN BORROW AREA SECTIONS

SHEET
200.005
JobNumber

Tuesday, July 11, 2023 12:04:46 AM C:\PWWORKDIR\DMS\41393\200-005 NORTHERN BORROW AREA.DWG VERNER, JUSTIN
DWG FILE: C:\pwworkdir\dms\41393\200-005 NORTHERN 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 05/30/2023.

COLORADO LICENSED
PAUL J. KOS
40648
Sept 18, 2023
PROFESSIONAL ENGINEER

N

0 80 160
SCALE IN FEET
CONTOUR INTERVAL = 10 FOOT

REV	DATE	BY	DESCRIPTION
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

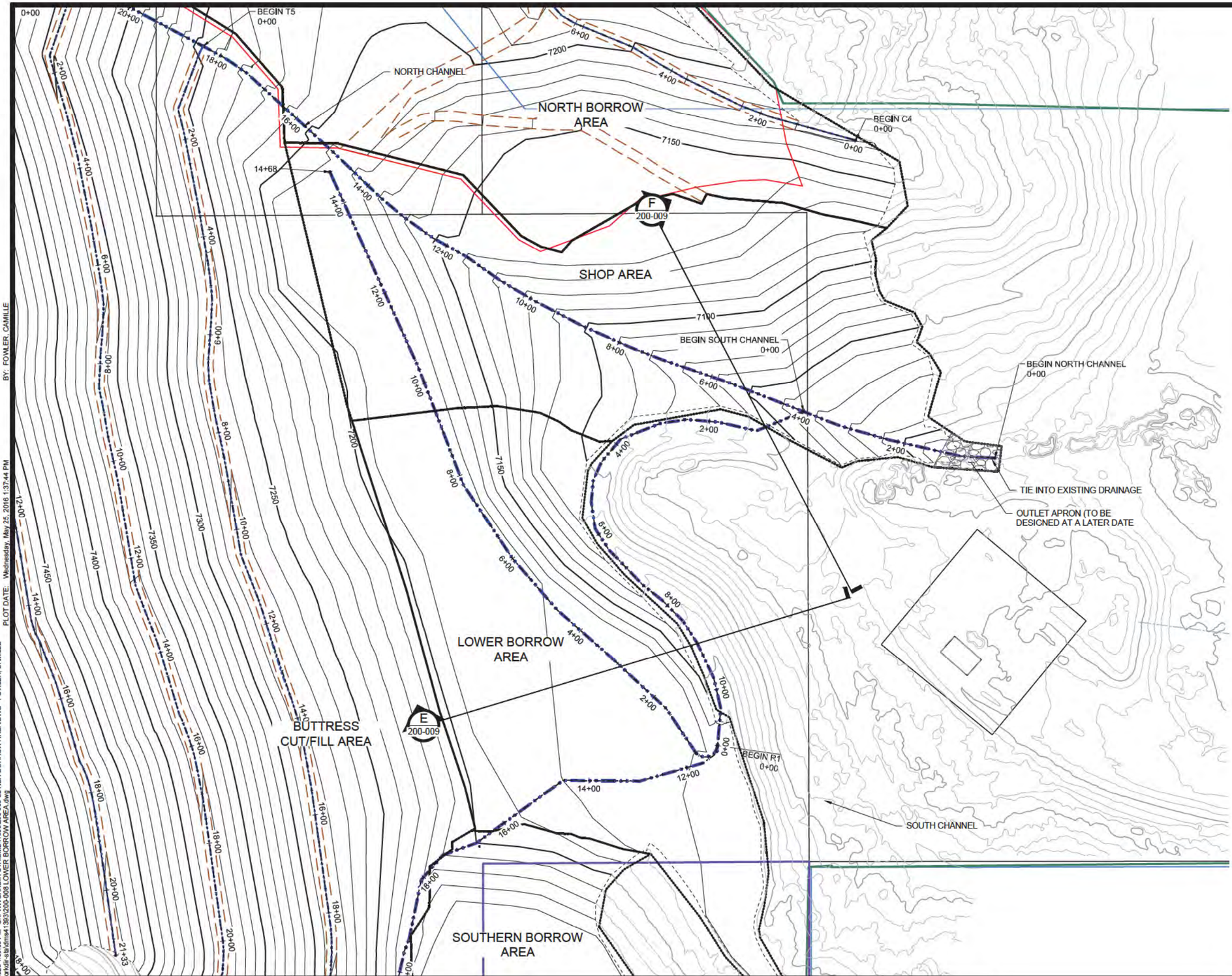
DESIGNED T. LEIDICH
DRAWN J. VERNER
CHECKED P. KOS

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
DWG FILE: C:\pwworkdir\dms41393\100-007_OVERALL ISOPACH PLAN.dwg Tuesday, July 11, 2023 1:58:23 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 05/30/2023.

COLORADO LICENSED PAUL J. KOS 40848 Sept 18, 2023 PROFESSIONAL ENGINEER

0 80 160
SCALE IN FEET
CONTOUR INTERVAL = 10 FOOT

REV	DATE	BY	DESCRIPTION
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

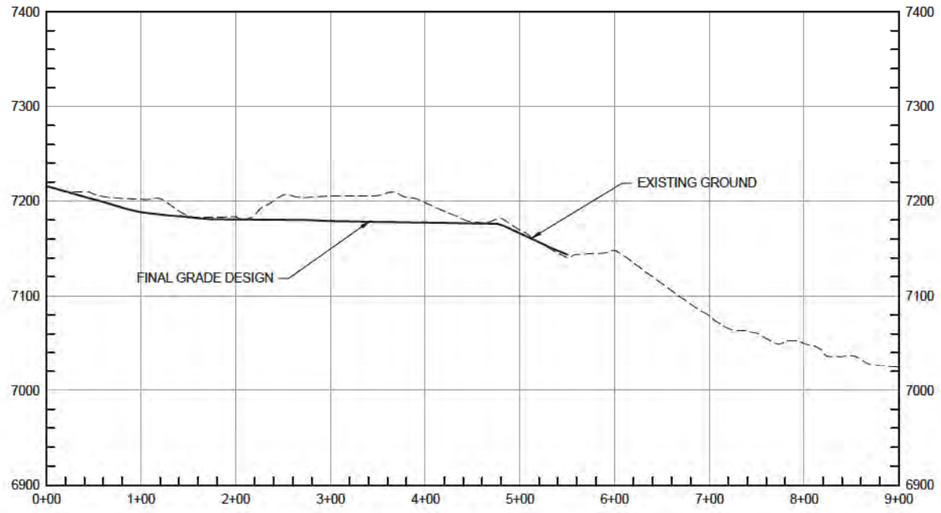
DESIGNED T. LEIDICH
DRAWN J. VERNER
CHECKED P. KOS

Stantec

PROJECT: PIKEVIEW QUARRY RECLAMATION PROJECT
LOWER BORROW AREA GRADING PLAN

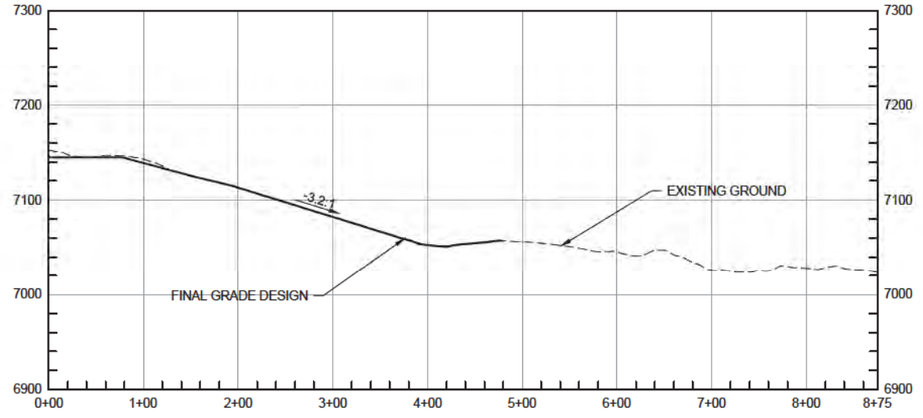
SHEET: 200-007
JobNumber

PLOT DATE: Wednesday, May 25, 2016 1:37:44 PM BY: FOWLER, CAMILLE
DWG FILE: C:\pwworkdir-sta\dms41393\200-008 LOWER BORROW AREA.DWG FOWLER, CAMILLE
Thursday, July 13, 2023 1:59:00 PM C:\PWWORKDIR-STA\DMS41393\200-008 LOWER BORROW AREA.dwg



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
Sept 18, 2023
PROFESSIONAL ENGINEER

REV	DATE	BY	DESCRIPTION
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

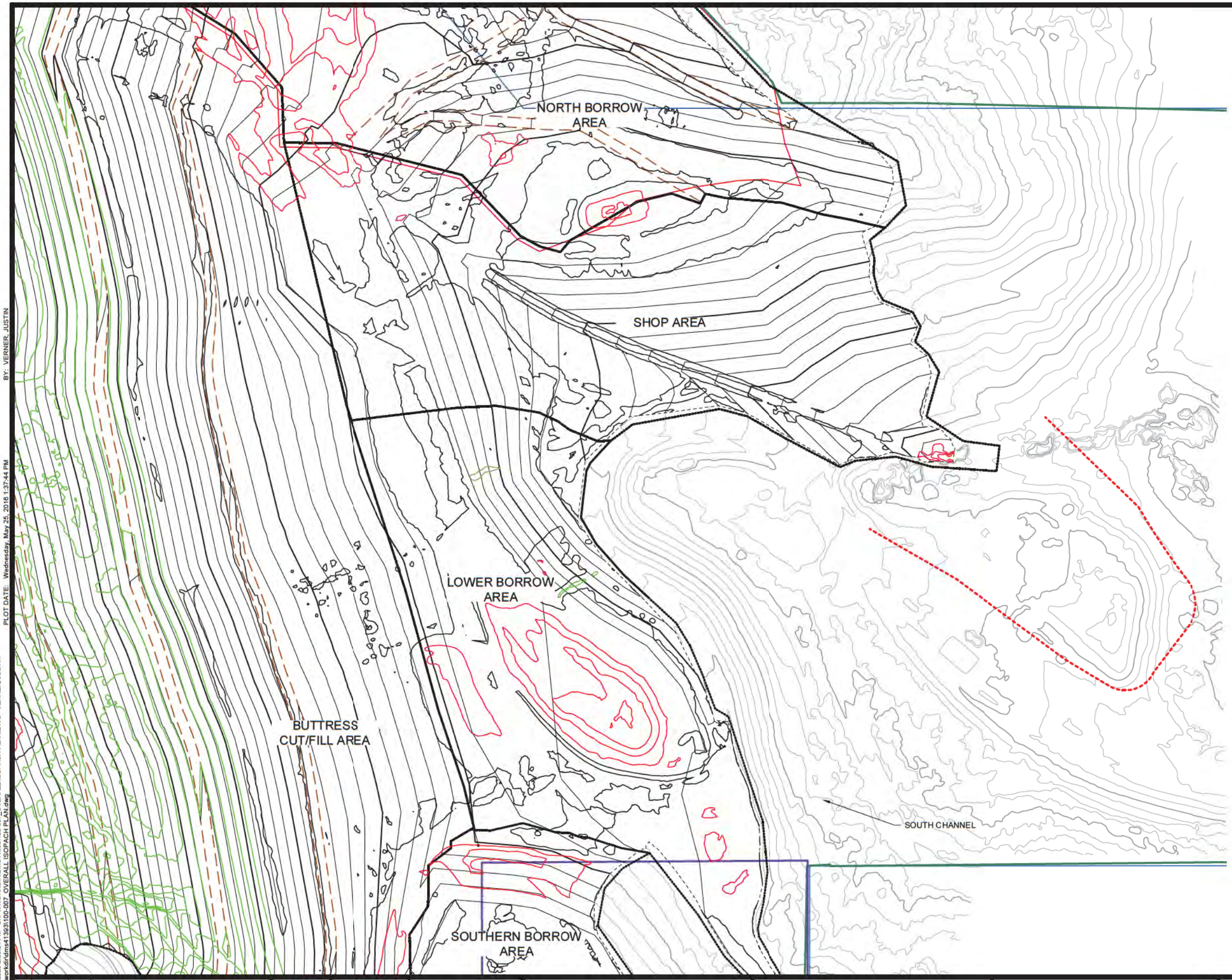
DESIGNED T. LEIDICH
DRAWN J. VERNER
CHECKED P. KOS

Stantec

PROJECT
PIKEVIEW QUARRY RECLAMATION PROJECT
LOWER BORROW AREA SECTIONS

SHEET
200.008
JobNumber

Tuesday, July 11, 2023 12:19:26 AM C:\PWWORKDIR\DMS41393200-008 LOWER BORROW AREA.DWG VERNER, JUSTIN
DWG FILE: C:\pwworkdir\dms41393200-008 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 05/30/2023.

COLORADO LICENSED
PAUL J. KOS
40648
Sept 18, 2023
PROFESSIONAL ENGINEER

N

0 80 160
SCALE IN FEET
CONTOUR INTERVAL = 10 FOOT

REV	DATE	BY	DESCRIPTION
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
DWG FILE: C:\pwworkdir\dms41393\100-007_OVERALL ISOPACH PLAN.DWG VERNER, JUSTIN
Tuesday, July 11, 2023 2:00:24 PM C:\PWWORKDIR\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
7250
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 05/30/2022.

COLORADO LICENSED
PAUL J. KOS
40648
Sept 18, 2023
PROFESSIONAL ENGINEER

N

0 50 100
SCALE IN FEET
CONTOUR INTERVAL = 10 FOOT

REV	DATE	BY	DESCRIPTION
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\dms41393\200-011 SOUTHERN BORROW AREA.dwg VERNER, JUSTIN
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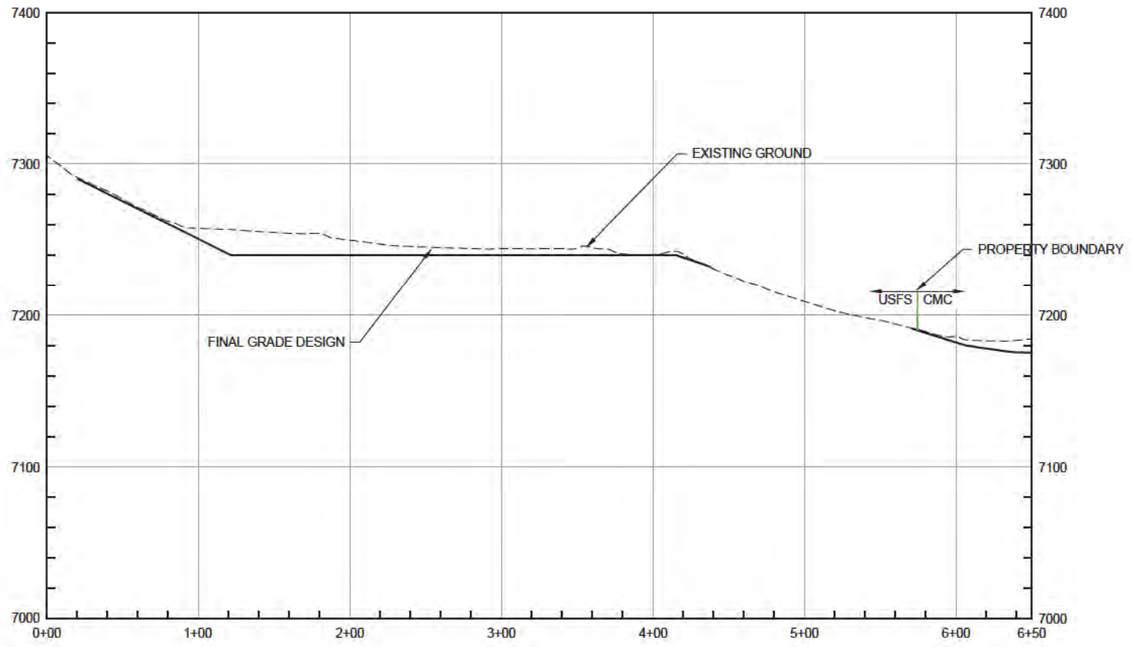

H SECTION
200-011

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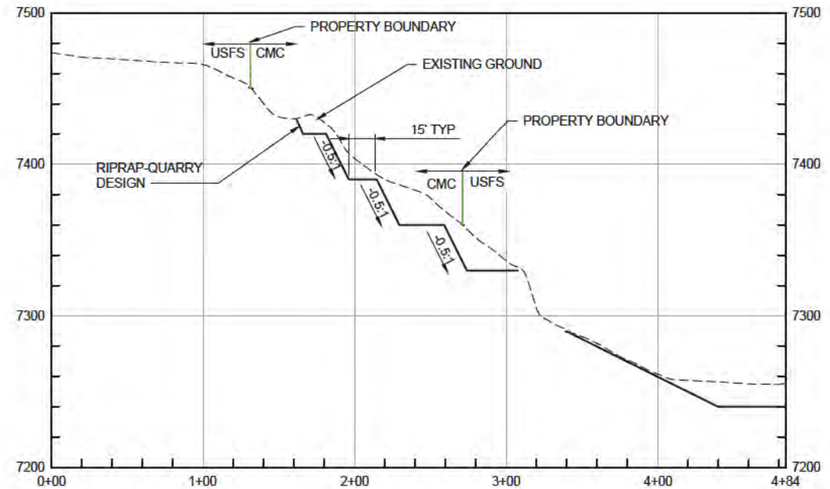
VERT 0 50 100
SCALE IN FEET



K SECTION
200-011

HORZ 0 50 100
VERT 0 50 100
SCALE IN FEET

COLORADO LICENSED
PAUL J. KOS
40848
Sept 18, 2023
PROFESSIONAL ENGINEER

REV	DATE	BY	DESCRIPTION
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 SECTIONS

SHEET
200.011
JobNumber

Tuesday, July 11, 2023 12:53:22 AM C:\PWWORKDIR\DM\641393\200-011 SOUTHERN BORROW AREA.DWG VERNER, JUSTIN
DWG FILE: C:\pwworkdir\dms\641393\200-011 SOUTHERN BORROW AREA.dwg
PLOT DATE: Wednesday, May 25, 2016 1:37:44 PM
BY: VERNER, JUSTIN

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 05/30/2023.

COLORADO LICENSED PROFESSIONAL ENGINEER
PAUL J. KOS
40648
Sept 18, 2023

N

0 50 100
SCALE IN FEET
CONTOUR INTERVAL = 10 FOOT

REV	DATE	BY	DESCRIPTION
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

PLOT DATE: Wednesday, May 25, 2016 1:37:44 PM BY: VERNER, JUSTIN
Tuesday, July 11, 2023 2:01:15 PM C:\PWWORKDIR\DM\5413931\100-007_OVERALL ISOPACH PLAN.DWG VERNER, JUSTIN
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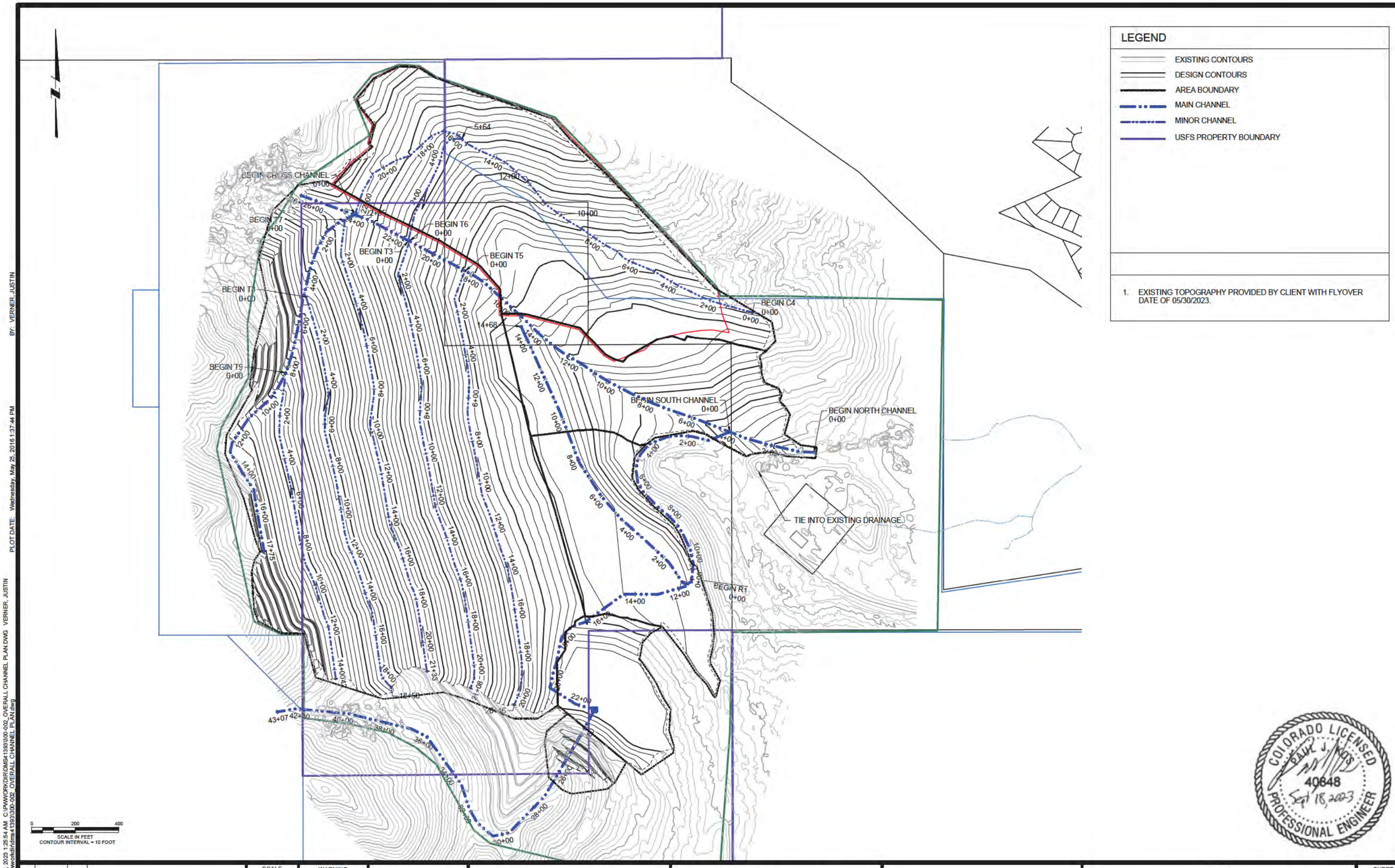


LEGEND

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

1. EXISTING TOPOGRAPHY PROVIDED BY CLIENT WITH FLYOVER DATE OF 05/30/2023.

COLORADO LICENSED
PAUL J. KOS
40848
Sept 18, 2023
PROFESSIONAL ENGINEER

REV	DATE	BY	DESCRIPTION
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

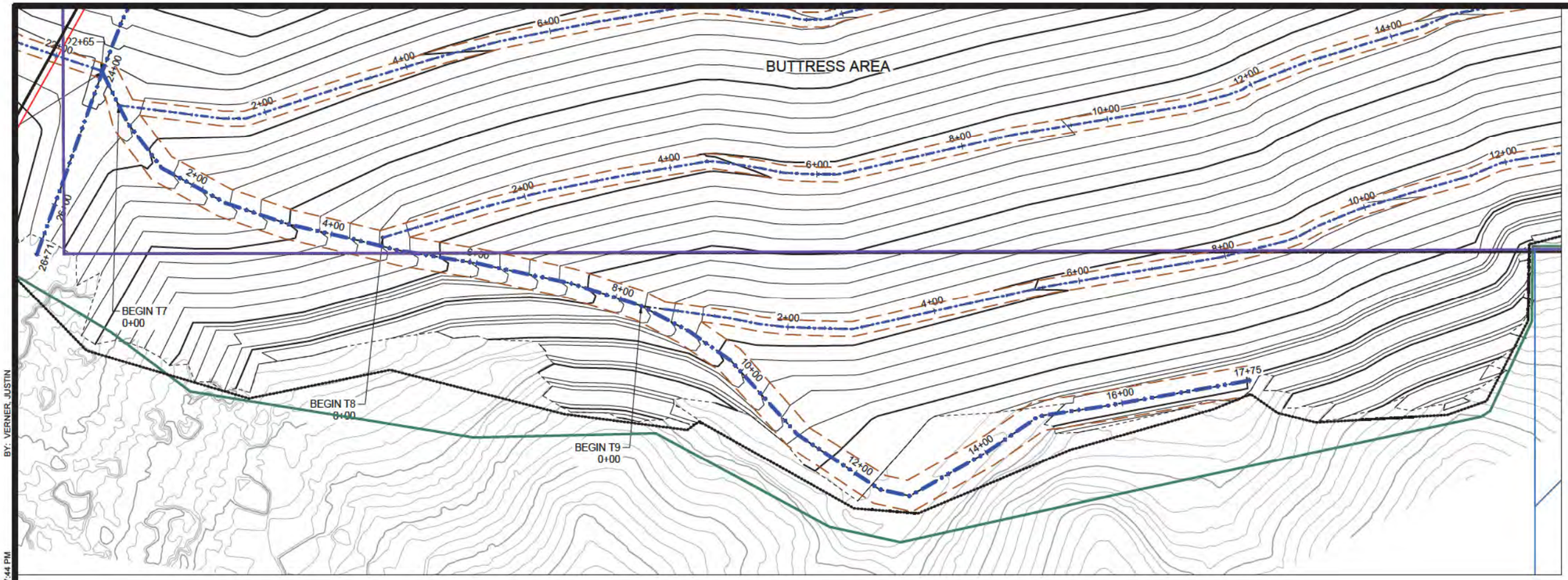
DESIGNED T. LEIDICH
DRAWN J. VERNER
CHECKED P. KOS

Stantec

PROJECT
PIKEVIEW QUARRY RECLAMATION PROJECT
OVERALL CHANNEL PLAN

SHEET
300-001
JobNumber

PLOT DATE: Wednesday, May 29, 2019 1:37:44 PM BY: VERNER, JUSTIN
DWG FILE: C:\pwworkdir\dms41393\300-002_OVERALL CHANNEL PLAN.DWG VERNER, JUSTIN
Tuesday, July 11, 2023 12:25:54 AM C:\PWWORKDIR\DMS41393\300-002_OVERALL CHANNEL PLAN.dwg



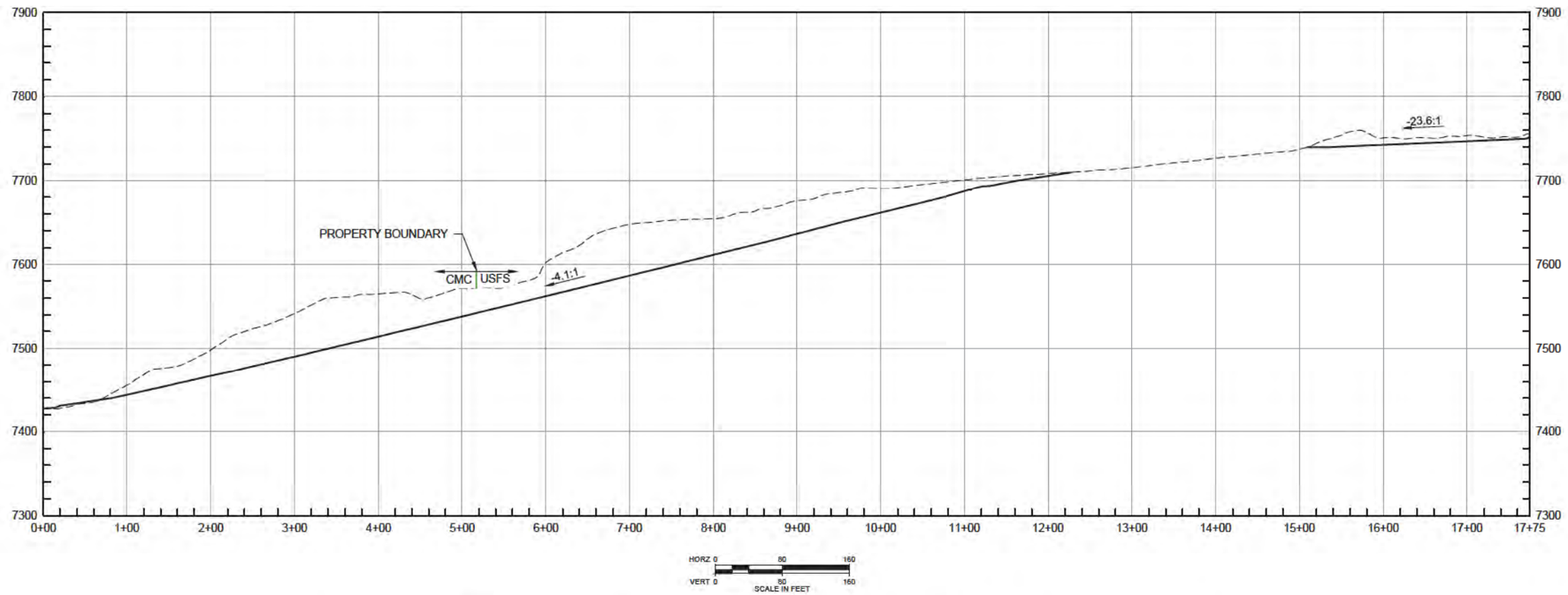
LEGEND

- 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 05/30/2023.
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
Sept 18, 2023
PROFESSIONAL ENGINEER

REV	DATE	BY	DESCRIPTION
G	07/2023	JTV	DESIGN REVISION

SCALE: AS NOTED

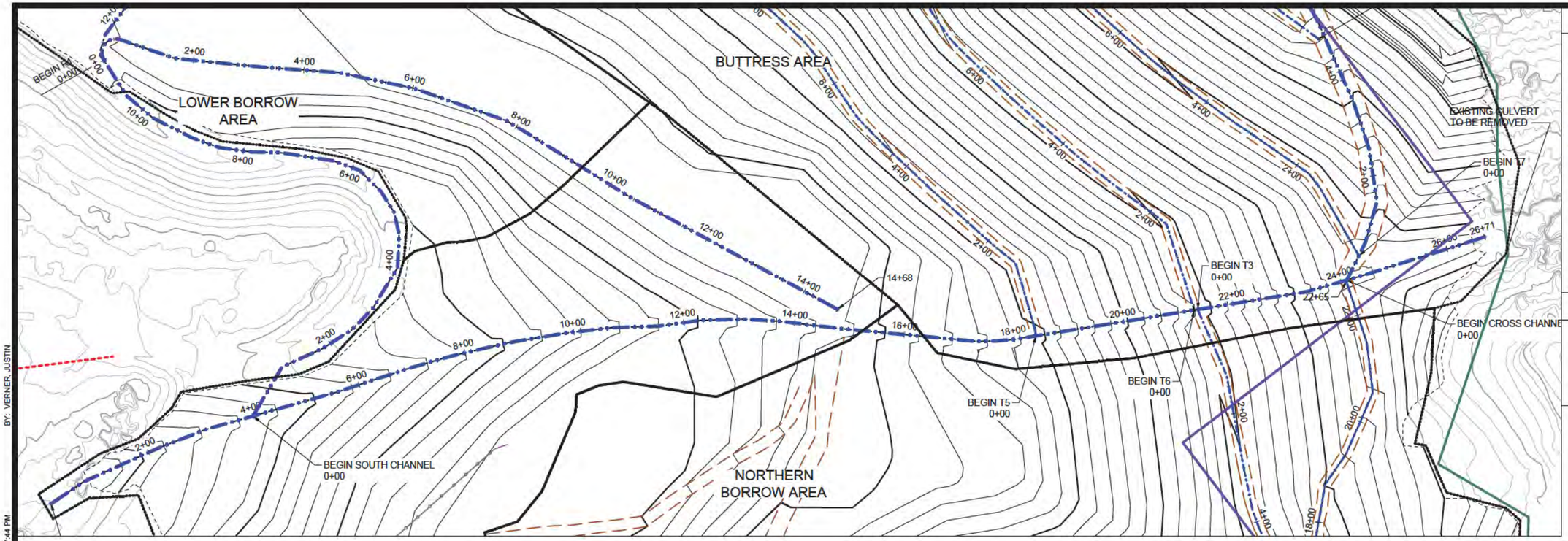
WARNING: 0 ½ 1 — IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

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

Stantec

PROJECT
PIKEVIEW QUARRY RECLAMATION PROJECT
CROSS CHANNEL PLAN AND PROFILE

SHEET
300-002
JobNumber



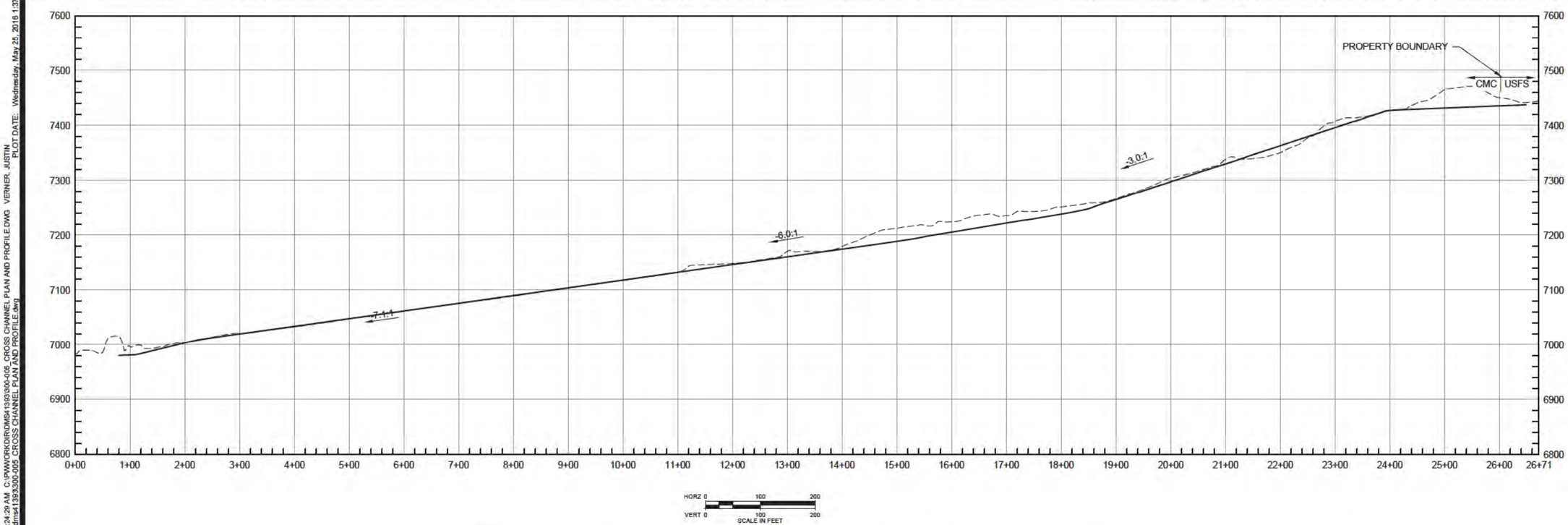
LEGEND

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

NOTES

1. EXISTING TOPOGRAPHY PROVIDED BY CLIENT WITH FLYOVER DATE OF 05/30/2023.
2. SEE TYPICAL CHANNEL DETAIL AND SIZING TABLE ON SHEET 300-009.

SCALE IN FEET
CONTOUR INTERVAL = 10 FOOT



HORZ 0 100 200
VERT 0 100 200
SCALE IN FEET

COLORADO LICENSED
PAUL J. KOS
40848
PROFESSIONAL ENGINEER
Sept 18, 2023

REV	DATE	BY	DESCRIPTION
G	07/2023	JTV	DESIGN REVISION

SCALE: AS NOTED

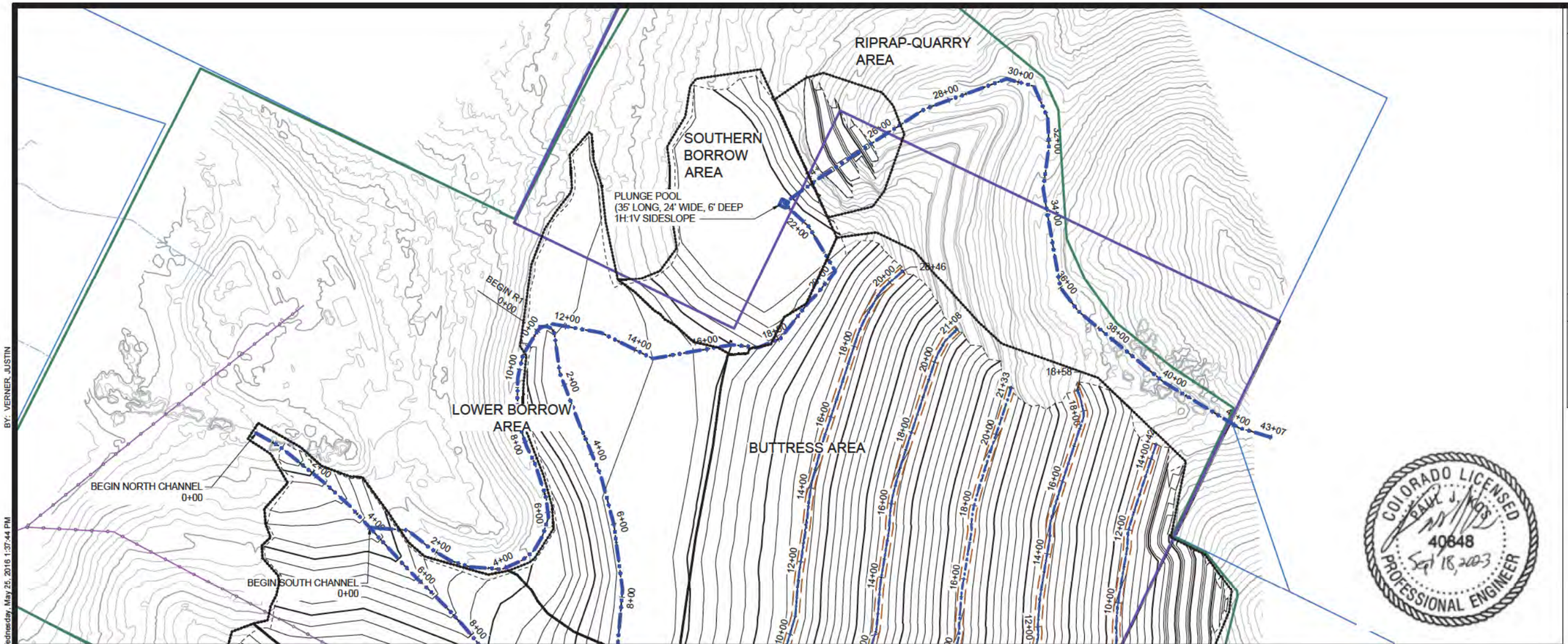
WARNING: 0 ½ 1 — IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

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

Stantec

PROJECT
PIKEVIEW QUARRY RECLAMATION PROJECT
NORTH CHANNEL PLAN AND PROFILE

SHEET
300-003
JobNumber



LEGEND

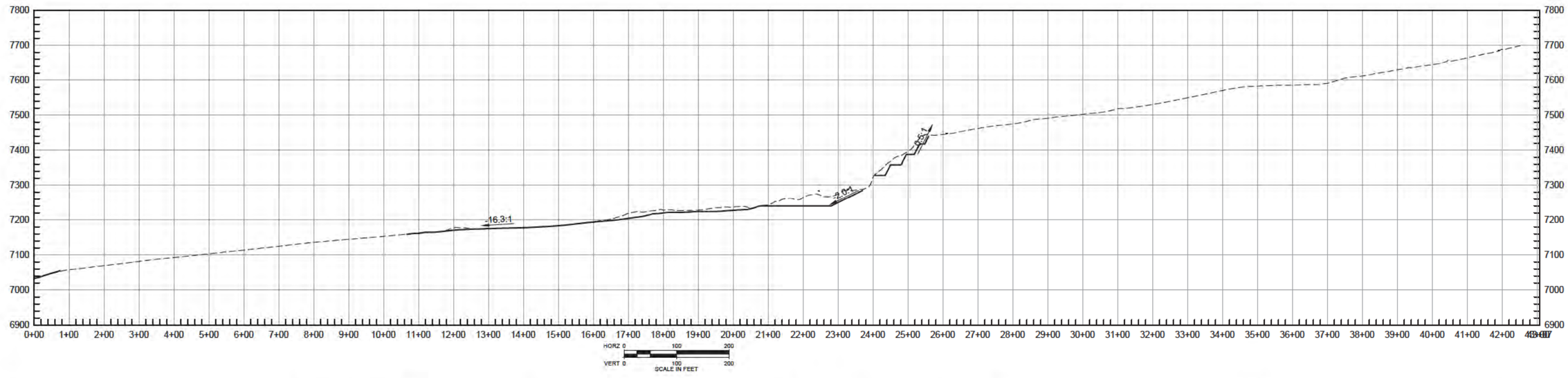
- EXISTING CONTOURS
- DESIGN CONTOURS
- AREA BOUNDARY
- EXISTING ROAD
- MAIN CHANNEL
- MINOR CHANNEL

NOTES

1. EXISTING TOPOGRAPHY PROVIDED BY CLIENT WITH FLYOVER DATE OF 05/30/2023.
2. SEE TYPICAL CHANNEL DETAIL AND SIZING TABLE ON SHEET 300-009.

SCALE IN FEET
CONTOUR INTERVAL = 10 FOOT

COLORADO LICENSED
PAUL J. KOS
40648
Sept 18, 2023
PROFESSIONAL ENGINEER



REV	DATE	BY	DESCRIPTION
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

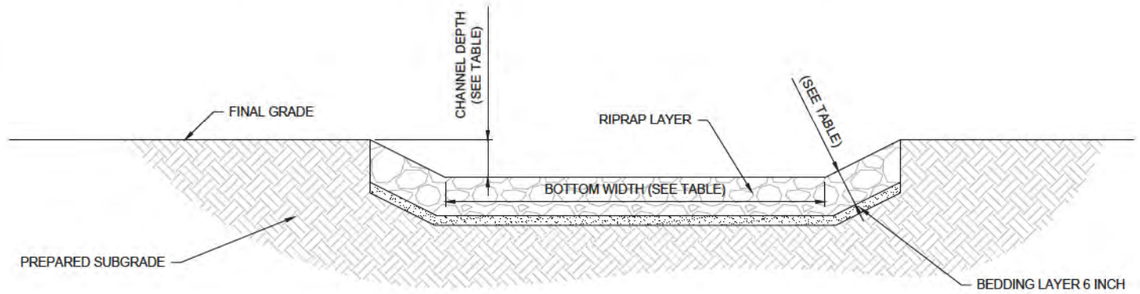
DESIGNED T. LEIDICH
DRAWN J. VERNER
CHECKED P. KOS

Stantec

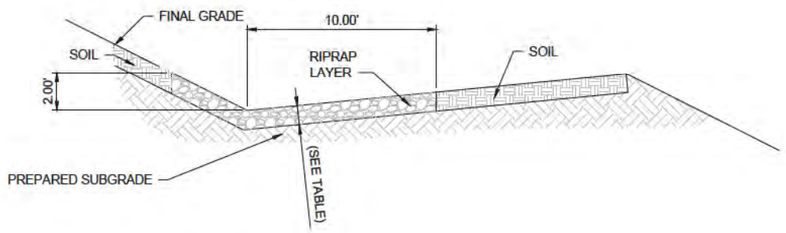
PROJECT
PIKEVIEW QUARRY RECLAMATION PROJECT
SOUTH CHANNEL PLAN AND PROFILE

SHEET
300-004
JobNumber

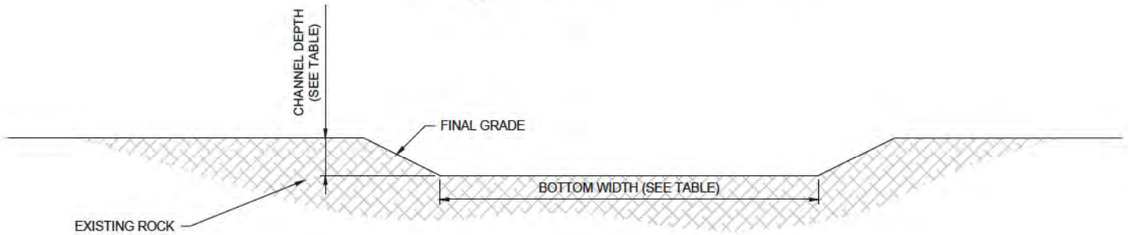
Tuesday, July 11, 2023 11:26:22 AM C:\PWWORKDIR\DMS\41393\300-005_CROSS CHANNEL PLAN AND PROFILE.DWG VERNER, JUSTIN
DWG FILE: C:\pwworkdir\dms\41393\300-005_CROSS CHANNEL PLAN AND PROFILE.dwg
PLOT DATE: Wednesday, May 25, 2016 1:37:44 PM BY: VERNER, JUSTIN



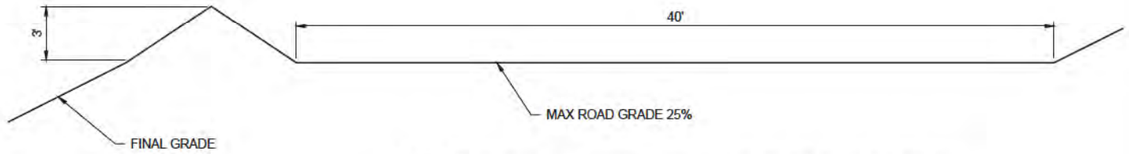
1 - TYPICAL CHANNEL DETAIL
N.T.S



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 [ft]	Channel Lining	Bottom Width [ft]	Left Side Slope [xH:1V]	Right Side Slope [xH:1V]	Initial Station	Terminating Station	Channel Length (ft)	Rock D50 [inch]	"Riprap Layer Thickness (2 x D50) [ft]"	Minimum Channel Slope [%]	Maximum Channel Slope [%]
Cross Channel	2.0	Riprap	10.0	2.0	2.0	0+00	17+75	1775.0	18.0	3.0	12.0	27.0
Lower North Channel	2.5	Riprap	20.0	2.0	2.0	0+00	4+00	400.0	18.0	3.0	14.0	14.5
Lower Middle North Channel	2.5	Riprap	20.0	2.0	2.0	4+00	14+00	1000.0	12.0	2.0	13.8	14.5
Middle North Channel	2.5	Riprap	20.0	2.0	2.0	14+00	18+00	400.0	18.0	3.0	15.8	18.3
Upper Middle North Channel	2.5	Riprap	20.0	2.0	2.0	18+00	24+00	600.0	24.0	4.0	25.4	36.0
Upper North Channel	2.5	Riprap	20.0	2.0	2.0	24+00	26+00	200.0	6.0	1.0	15.3	19.7
Lower South Channel 1	2.3	Riprap	10.0	2.0	2.0	0+00	2+00	200.0	18.0	3.0	5.4	25.2
Lower South Channel 2	2.3	Riprap	10.0	2.0	2.0	2+00	11+64.54	964.5	12.0	2.0	10.0	12.0
Middle South Channel	2.0	Riprap	10.0	2.0	2.0	11+64.54	22+73	1108.5	12.0	2.0	2.2	23.6
Upper South Channel	2.0	Rockcut	10.0	2.0	2.0	22+73	43+07	2034.0				
South Channel 1A (R1)	2.3	Riprap	10.0	2.0	2.0	0+00	14+35	1435.0	6.0	1.0	0.8	5.6
C4 Channel	2.3	Riprap	10.0	2.0	2.0	0+00	22+65	2265.0	6.0	1.0	0.4	17.9
Minor Channel	2.0	RipRap	0.0	2.0	10.0	-	-	10000.0	3.0	0.5	2.0	2.0

COLORADO LICENSED
PAUL J. KOS
40848
Sept 18, 2023
PROFESSIONAL ENGINEER

REV	DATE	BY	DESCRIPTION
F	01/11/2023	JTV	DESIGN REVISION
E	07/15/2022	JTV	DESIGN REVISION
D	06/2022	JTV	REVISION
C	03/2022	JTV	REVISION
B	11/2021	JTV	ISSUED FOR TENDER - REVISED

SCALE: AS NOTED

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

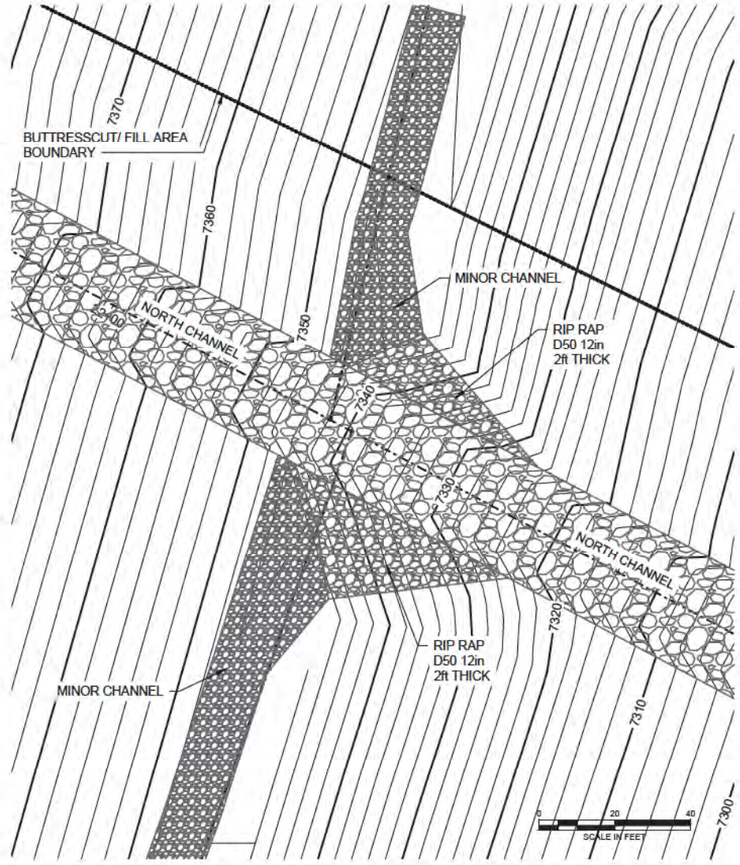
DESIGNED T. LEIDICH
DRAWN J. VERNER
CHECKED P. KOS

Stantec

PROJECT
PIKEVIEW QUARRY RECLAMATION PROJECT
TYPICAL CHANNEL DETAILS

SHEET
300-005
JobNumber

Tuesday, July 11, 2023 11:43:42 AM 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

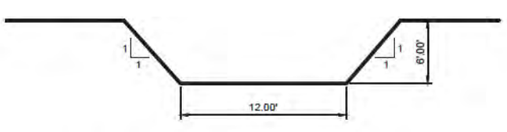


1 - TYPICAL TRANSITION ZONE NORTH CHANNEL RIPRAP DETAIL

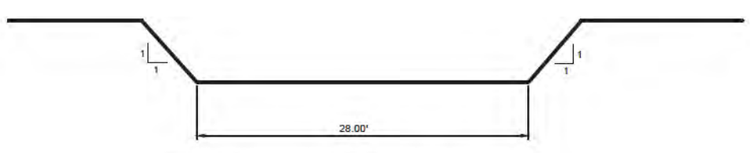
COLORADO LICENSED PROFESSIONAL ENGINEER
PAUL J. KOS
40648
Sept 18, 2023

GENERAL SHEET NOTES

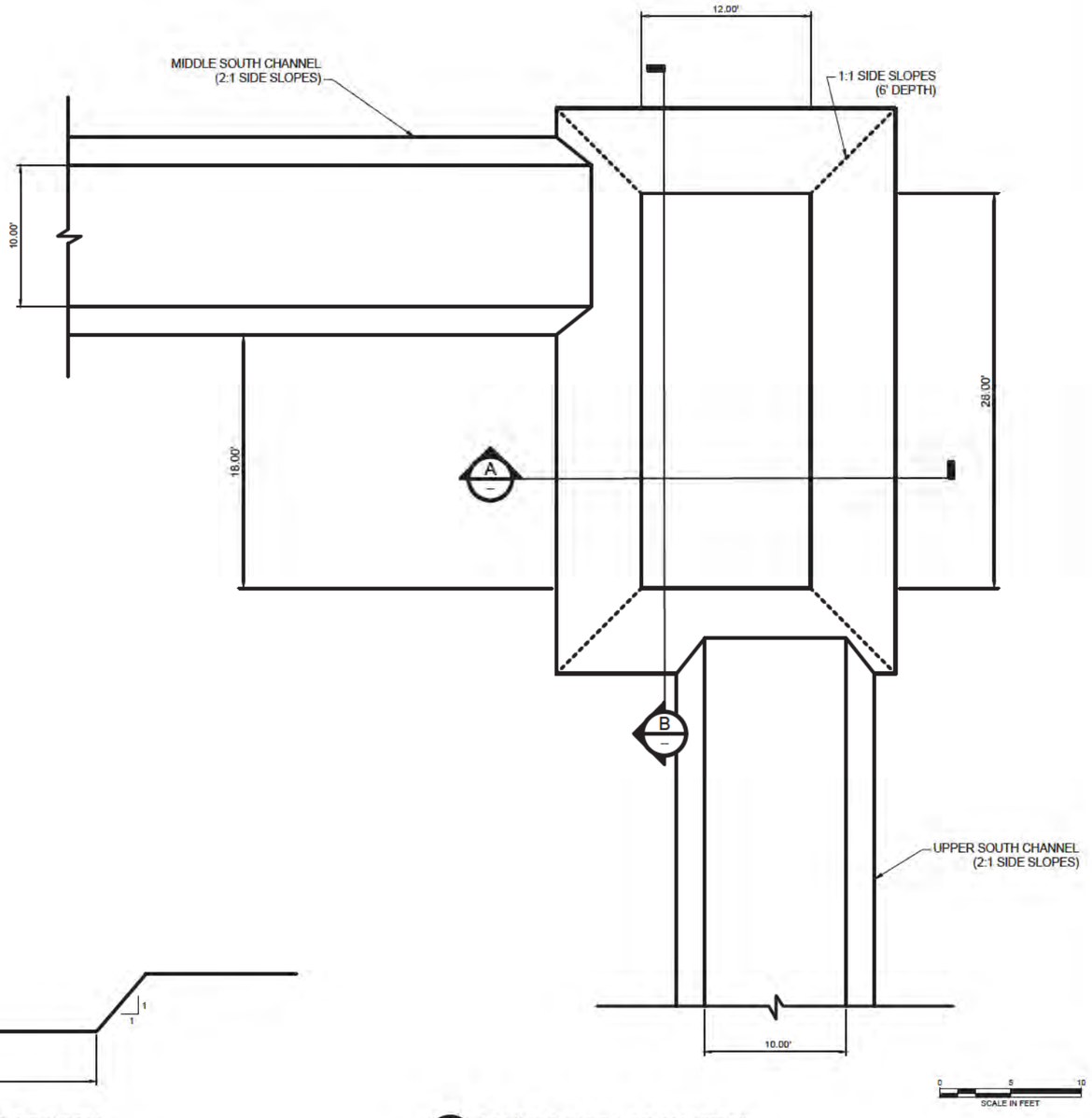
1. PLUNGE POOL TO BE LOCATED AT TOE OF SLOPE.
2. PLUNGE POOL TO BE EXCAVATED INTO BEDROCK.



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



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



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

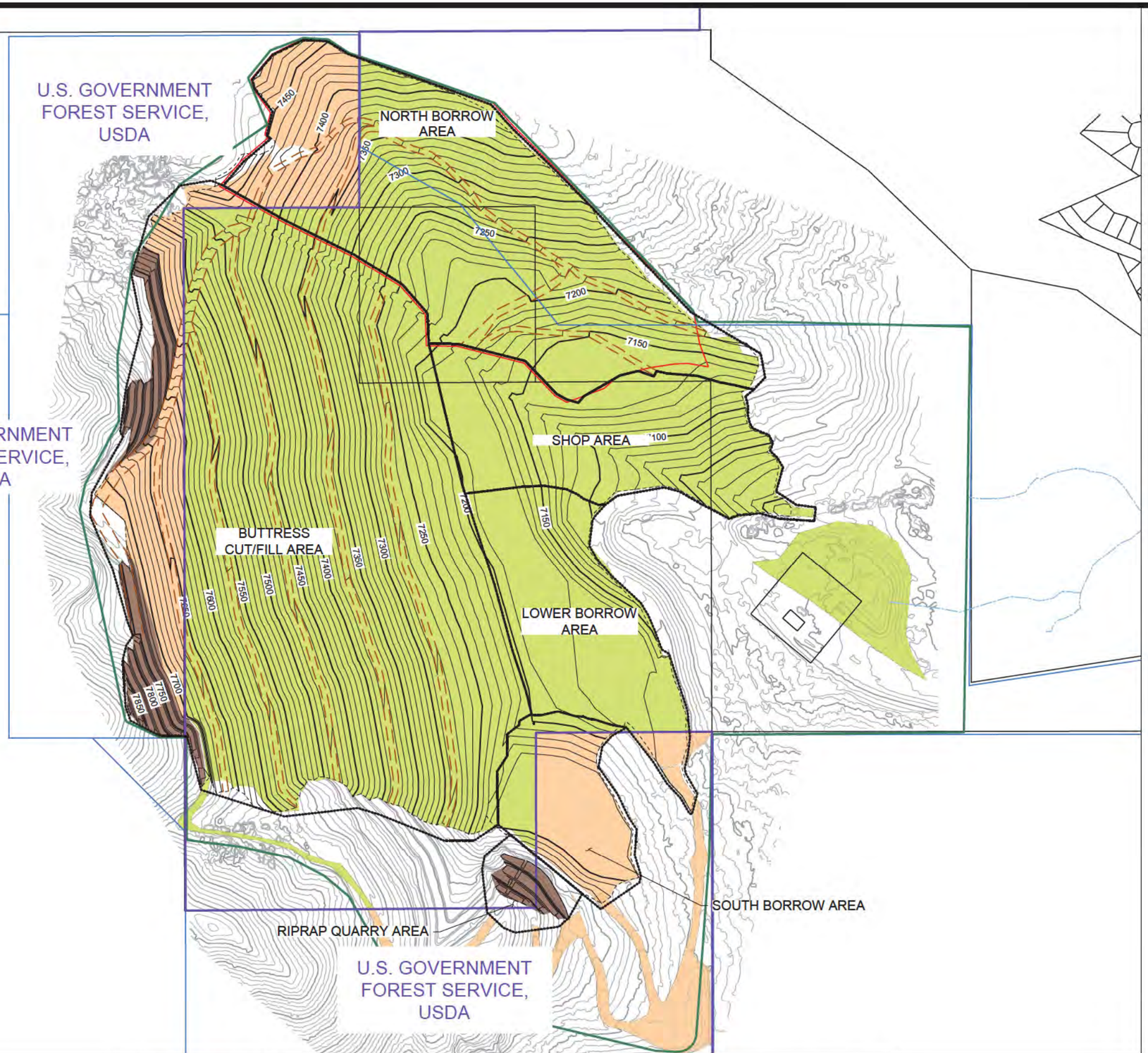
WARNING: 0 ½ 1 — IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

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

Stantec

PROJECT: PIKEVIEW QUARRY RECLAMATION PROJECT
TRANSITION ZONE NORTH CHANNEL

SHEET: 300-006
JobNumber



LEGEND

- EXISTING CONTOURS
- DESIGN CONTOURS
- AREA BOUNDARY
- MAIN CHANNEL
- MINOR CHANNEL
- EXISTING POWER LINES
- USFS PROPERTY BOUNDARY
- EXISTING STREAMS
- CDRMS PERMIT BOUNDARY
- CITY OF COLORADO SPRINGS PERMIT BOUNDARY
- USFS LAND SEED MIX (20 AC)
- PRIVATE SURFACE SEED MIX (110 AC)
- HIGHWALL (6.2 AC)

NOTES

1. ALL SLOPES 3H:1V OR STEEPER WILL BE COVERED WITH EROSION MAT. HIGHWALL SLOPES WILL NOT REQUIRE EROSION MAT.
2. HIGHWALL BENCHES TO BE REVEGETATED.

COLORADO LICENSED
PAUL J. KOS
40648
Sept 18, 2023
PROFESSIONAL ENGINEER

REV	DATE	BY	DESCRIPTION
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
SEEDING PLAN

SHEET: 400-001
JobNumber

PLOT DATE: Wednesday, May 29, 2016 1:37:44 PM BY: VERNER, JUSTIN
DWG FILE: C:\pwworkdir\dms413931\400-001_SEEDING PLAN.dwg Tuesday, July 11, 2023 12:23:04 PM C:\PWWORKDIR\DMS413931\400-001_SEEDING PLAN.DWG VERNER, JUSTIN

U.S. GOVERNMENT FOREST SERVICE, USDA

NORTH BORROW AREA

SHOP AREA

BUTTRESS CUT/FILL AREA

LOWER BORROW AREA

SOUTH BORROW AREA

RIPRAP QUARRY AREA

U.S. GOVERNMENT FOREST SERVICE, USDA

U.S. GOVERNMENT FOREST SERVICE, USDA

7450 7400 7350 7300 7250 7200 7150 7100 7200 7150 7250 7300 7350 7400 7450 7500 7550 7600 7650 7700 7750 7800 7850

0 200 400
SCALE IN FEET
CONTOUR INTERVAL = 10 FOOT

LEGEND

- EXISTING CONTOURS
- DESIGN CONTOURS
- AREA BOUNDARY
- EXISTING POWER LINES
- EXISTING STREAMS
- CITY OF COLORADO SPRINGS PERMIT BOUNDARY
- CDRMS PERMIT BOUNDARY
- USFS PROPERTY BOUNDARY
- 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)

NOTES

1. HIGHWALL BENCHES TO BE REVEGETATED .

COLORADO LICENSED
PAUL J. KOS
40648
Sept 18, 2023
PROFESSIONAL ENGINEER

REV	DATE	BY	DESCRIPTION
G	07/2023	JTV	DESIGN REVISION

SCALE: AS NOTED

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

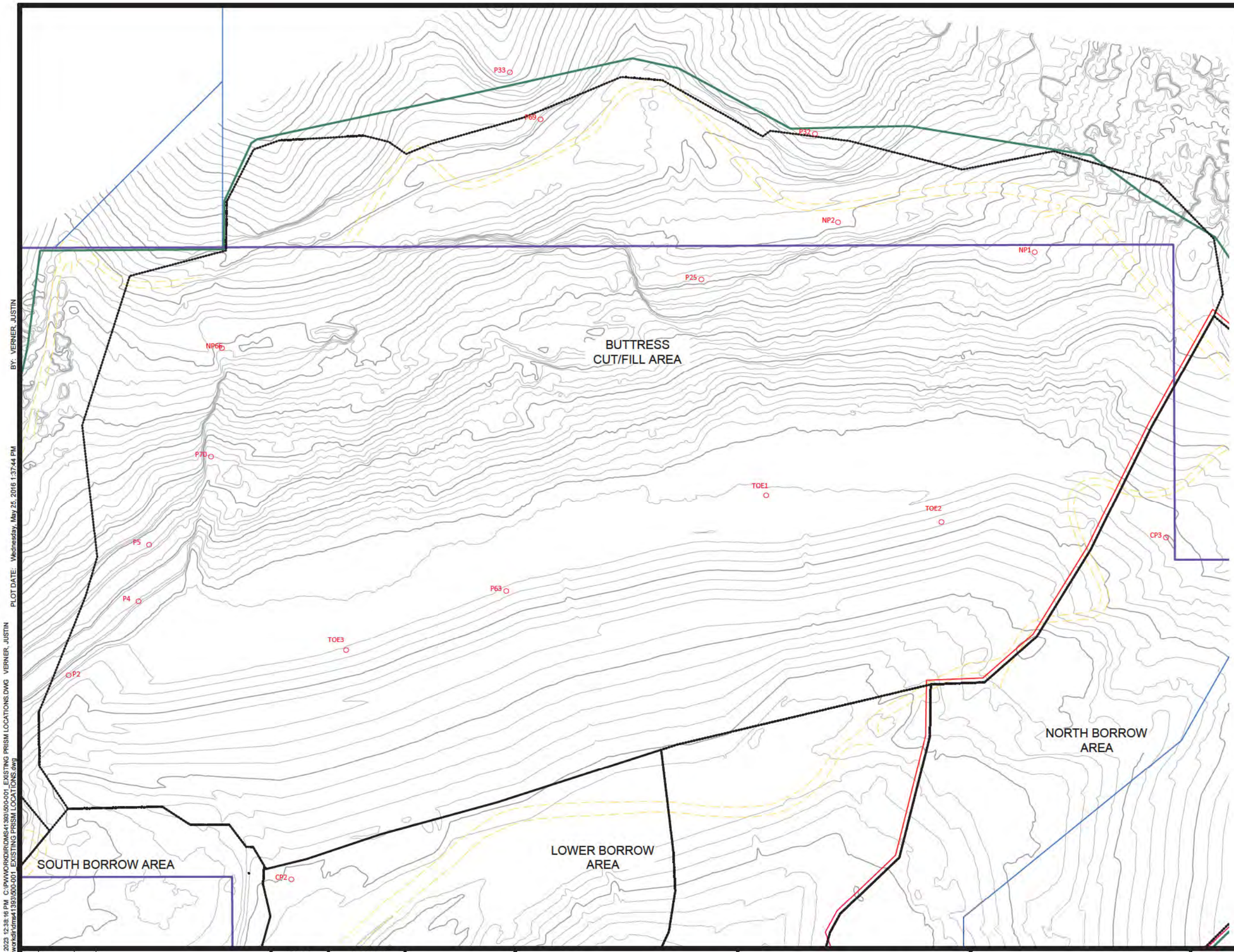
DESIGNED T. LEIDICH
DRAWN J. VERNER
CHECKED P. KOS

Stantec

PROJECT: PIKEVIEW QUARRY RECLAMATION PROJECT
REVEGETATION PLAN

SHEET: 400-002
JobNumber

PLOT DATE: Wednesday, May 25, 2016 1:37:44 PM BY: VERNER, JUSTIN
DWG FILE: C:\pwworkdir\dms41393\400-002_REVEGETATION PLAN.dwg
Tuesday, July 11, 2023 12:52:22 PM C:\PWWORKDIR\DMS41393\400-002_REVEGETATION PLAN.DWG VERNER, JUSTIN



LEGEND

- EXISTING CONTOURS
- AREA BOUNDARY
- EXISTING ROADS
- EXISTING BUILDING
- CITY OF COLORADO SPRINGS PERMIT BOUNDARY
- CDRMS PERMIT BOUNDARY
- 7850-1 EXISTING PRISM LOCATION
- USFS PROPERTY BOUNDARY

NOTES

1. EXISTING TOPOGRAPHY PROVIDED BY CLIENT WITH FLYOVER DATE OF 05/30/2023.

COLORADO LICENSED
PAUL J. KOS
40648
Sept 18, 2023
PROFESSIONAL ENGINEER

0 100 200
SCALE IN FEET
CONTOUR INTERVAL = 10 FOOT

REV	DATE	BY	DESCRIPTION
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

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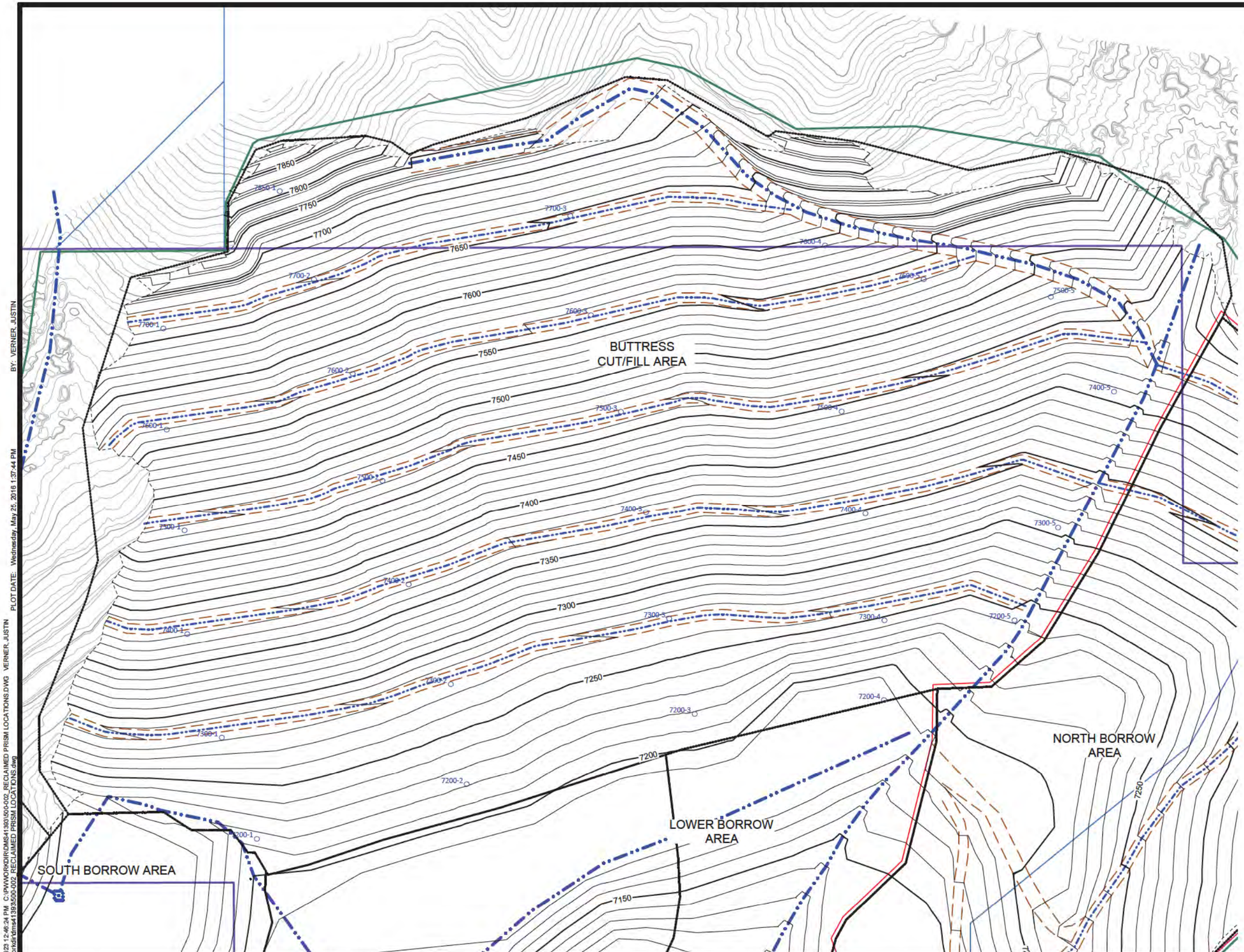
DRAWN J. VERNER
CHECKED P. KOS

Stantec

PROJECT
PIKEVIEW QUARRY RECLAMATION PROJECT
EXISTING PRISM LOCATIONS

SHEET
500-001
JobNumber

PLOT DATE: Wednesday, May 25, 2016 1:37:44 PM BY: VERNER, JUSTIN
DWG FILE: C:\pwworkdir\dms41393\500-001_EXISTING PRISM LOCATIONS.dwg Tuesday, July 11, 2023 12:38:16 PM C:\PWWORKDIR\DMS41393\500-001_EXISTING PRISM LOCATIONS.DWG VERNER, JUSTIN



LEGEND

- EXISTING CONTOURS
- DESIGN CONTOURS
- AREA BOUNDARY
- PROPOSED ROAD
- MAIN CHANNEL
- MINOR CHANNEL
- 7850-1 RECLAIMED PRISM LOCATION
- CDRMS PERMIT BOUNDARY
- CITY OF COLORADO SPRINGS PERMIT BONDARY
- USFS PROPERTY BOUNDARY

1. EXISTING TOPOGRAPHY PROVIDED BY CLIENT WITH FLYOVER DATE OF 05/30/2023.

COLORADO LICENSED
PAUL J. KOS
40848
Sept 18, 2023
PROFESSIONAL ENGINEER

0 100 200
SCALE IN FEET
CONTOUR INTERVAL = 10 FOOT

REV	DATE	BY	DESCRIPTION
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

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CHECKED P. KOS

Stantec

PROJECT
PIKEVIEW QUARRY RECLAMATION PROJECT
RECLAIMED PRISM LOCATIONS

SHEET
500-002
JobNumber

PLOT DATE: Wednesday, May 29, 2019 1:37:44 PM BY: VERNER, JUSTIN
DWG FILE: C:\pwworkdir\dms4139\500-002_RECLAIMED PRISM LOCATIONS.dwg
Tuesday, July 11, 2023 12:46:24 PM C:\PWWORKDIR\DMS4139\500-002_RECLAIMED PRISM LOCATIONS.DWG VERNER, JUSTIN

To:	Tim Cazier	From:	Jerald Schnabel
	CDRMS		Riverbend
Project/File:	Pikeview Quarry Reclamation Project	Date:	September 15, 2023

Reference: Technical Revision for Weed Control Program, Pikeview Quarry, M-1977-211

Mr. Cazier,

Riverbend Industries Inc. (Riverbend) in the process of reclaiming the Pikeview Quarry located northwest of Colorado Springs, Colorado. Following recent communications Division of Reclamation, Mining, and Safety (DRMS), City of Colorado Springs (City), United States Forest Service (USFS), and construction and revegetation contractor staff, Riverbend requests the following Technical Revision (TR) to control weeds at the Pikeview Quarry.

Weed Control Program

Pikeview quarry has experienced greater than average rain fall at the quarry in 2023, and this has resulted in an increase in weed species and count over this past summer. We are proposing a technical revision to our permit Number M1977-211-04 to address this development and control the invasive species on our site and adjoining properties.

DRMS comment following August 9, 2023 inspection: The site has received much higher the average rainfall. The extra precipitation has allowed the previously observed noxious weeds to proliferate. In addition to the previously observed spotted and diffuse knapweed and scotch thistle, the following noxious weeds were also present: both Canada and musk thistle, Chinese clematis, both yellow and dalmatian toadflax, common mullein, downy brome (cheat grass), Russian olive (three smaller trees along the entrance road) and myrtle spurge. The site has an approved noxious weed control plan (AM-4) that was expanded in April of 2023 as part of the City of Colorado Springs area free-use permit process for the USFS. Several of the observed noxious weeds showed signs of having been sprayed, including the myrtle spurge. Myrtle spurge is a List A species on the Colorado Dept of Agriculture's noxious weed list. List A species require eradication. The existing noxious weed control plan does not address the eradication of List A species. The DRMS requires the noxious weed control plan be updated through the technical revision process to address the eradication of List A species (specifically myrtle spurge).

In addition to the practices included in the approved Weed Control Plan, Riverbend proposes the following measures to reduce the presence and spread of these plants:

1. **Increased Spraying with Herbicides.**

    a. Currently Rocky Mountain Weed Management conducts weed spraying on behalf of Pikeview Quarry in the spring and fall of each calendar year. We have seen a reduction in Scotch Thistle using the current herbicide and will continue the use of this herbicide (see attached specifications). Along with continuing the biannual spraying, we will increase the frequency to monthly until weather prohibits applying the herbicide. Monthly spraying during the growing season will continue while necessary to control weeds.

    b. See Map M-1 for areas to be sprayed

2. **Manually cut and remove weed species that are resistant to herbicides.**

a. A weed removal crew will be used to identify herbicide-resistant species (including myrtle spurge) and remove the plants using shovels and hoes. The removed plants will be placed in plastic bags, which will be sealed and disposed of in a landfill.

b. Along with the use of shovels, a propane torch commonly known as a *weed burner* will be used where necessary to destroy the plant above ground. This will be performed by a week removal crew equipped with radios and fire suppression gear. The concern for fire prevention at the quarry is the primary goal in any use of this method, and the crew will have water and fire extinguishers. This method is intended to be used sparingly, if at all.

3. Grading large areas and moving large quantities of earth.

a. Pikeview Quarry's earthmoving contractor (currently Dwire Earthmoving) will be performing the heavy civil earthwork at the quarry. As they excavate areas with weed growth, the removal of weeds will be sorted by equipment, including bulldozers and front-end loaders. Large piles of weed materials will be loaded onto a covered tandem axle truck and removed for disposal at an approved landfill (i.e., Midway Landfill in Fountain, CO). Minor amounts of weed trimmings and any remaining dormant seed in the soil will be placed in the buttress and incorporated as fill material. The large amount (up to 100 feet) of compacted soil placed on top of the potential seed will prevent future growth of the weed in question. Similarly, there will be a large amount (up to 70 feet) of excavation, which will remove the weed roots and seed from these areas.

b. Areas to be graded are generally in the disturbed cuts and buttress fill areas. The most common species to be removed will be Cochia (tumble Weeds)

4. Topsoil preparation and weed control

a. Topsoil placement, seeding, and container stock planting is ongoing as part of the reclamation process. The Pikeview Quarry vegetation contractor (currently CDI) will be performing the seeding, planting, and placement of erosion control measures. They are currently "raking" the topsoil on the slopes at a direction perpendicular to the slope to loosen the topsoil for planting. This process will remove the rills formed over the delayed time between placing the topsoil and seeding. Hydromulch will be applied to slopes that are 3h:1v or shallower immediately after seeding to avoid rills reforming. Erosion control blanket will be placed on steeper slopes. Seeded areas will be monitored for any invasive species that are not part of the revegetation plan. Monthly walk through inspections will be supplemented by walk through inspection by Pikeview Quarry personnel on a weekly schedule. No herbicide will be applied to areas of new growth until it is deemed safe to the new vegetation. Weeds may be removed by hand or shovel during these inspections.

Approximate area of spraying herbicides each month for the next 12 months (weather permitting)

BEGIN CROSS CHANNEL 0+00
BEGIN T7 0+00
BEGIN T6 0+00
BEGIN T3 0+00
BEGIN T5 0+00
BEGIN T1 0+00
BEGIN T9 0+00
BEGIN C4 0+00
BEGIN SOUTH CHANNEL 0+00
BEGIN NORTH CHANNEL 0+00
BEGIN R1 0+00
TIE INTO EXISTING DRAINAGE
OUTLET APRON (TO BE DESIGNED AT A LATER DATE
PLUNGE POOL (35' LONG, 24' WIDE, 6' DEEP 1H:1V SIDESLOPE

1 300-006

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 05/30/2023.

0 200 400
SCALE IN FEET
CONTOUR INTERVAL = 10 FOOT

REV	DATE	BY	DESCRIPTION
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

Thursday, July 13, 2023 1:58:42 PM C:\PWWORKDIR-STA\DMS\41393\100-006 OVERALL DRAINAGE PLAN.DWG FOWLER, CAMILLE
DWG FILE: C:\pwworkdir-sta\dms\41393\100-006 OVERALL DRAINAGE PLAN.dwg
PLOT DATE: Friday, January 13, 2023 9:20:59 AM BY: FOWLER, CAMILLE

ROCKY MOUNTAIN WEED MANAGEMENT LLC

(719) 492-8515 Michael C. Finlay, Owner

Rocky Mountain Weed Management, LLC

Rocky Mountain Weed Management, LLC is locally owned and operated in Colorado by Michael C. Finlay. Michael is licensed as a Qualified Supervisor with the Colorado Department of Agriculture in the categories of:

- Agriculture Weed Control
- Rangeland Pest Control
- Industrial & Right-of-Way Weed Control
- Turf Pest Control
- Outdoor Vertebrate Control

ROCKY MOUNTAIN
WEED MANAGEMENT
LLC

HERBICIDE APPLICATION DATA REPORT

APPLICATION DATE: August 24,, 2022 TIME OF DAY: 8:00-10:00am

NAME AND LOCATION FOR WHICH PESTICIDE APPLICATION WAS MADE:
Castle Aggregates, 7250 Alleghany Dr, Colorado Springs, CO 80919

TARGET PEST: Noxious Weeds – common mullein, musk, scotch & canada thistle, diffuse knapweed, myrtle spurge, dalmation toadflax

SPECIFIC SITES: Pike View Quarry – South road to the top, around buildings, lower roadsides, open areas throughout.

PESTICIDE TRADE NAME	EPA REG#	MANUFACTURER
WhetStone	81927-82	Alligare
MSO (sticker)		

DILUTION RATE: 7 ounces per Acre

APPLICATION RATE: 15 gallons per acre

WIND VELOCITY: 0-2 mph (measured) TEMPERATURE: 65* F

WEATHER CONDITIONS: sunny and clear

EQUIPMENT USED: UTV power hand sprayer/boom sprayer

COMMENTS:

APPLICATOR(S):
Michael C Finlay

SUPERVISOR:
MICHAEL C. FINLAY
QS License # 00316
(719) 492-8515

COMMERCIAL APPLICATORS ARE LICENSED BY THE COLO. DEPT. OF AGRICULTURE

SAFETY DATA SHEET

EMERGENCY CALL: 1-800-424-9300 (CHEMTREC)

Alligare
A member of the ADAMA Group

1. IDENTIFICATION

PRODUCT NAME: WHETSTONE™ Herbicide
DESCRIPTION: A liquid herbicide.
EPA Reg. No.: 81927-82

COMPANY IDENTIFICATION:
Alligare, LLC
1565 5th Avenue
Opelika, AL 36801

2. HAZARD IDENTIFICATION

This product is not hazardous according to OSHA Hazard Communication Standard 29 CFR 1910.1200.

HAZARD CLASSIFICATION

Health Hazard	Category	Physical Hazards	Category
None	-	None	-
		Environmental Hazards	**Category**
		None	-

HAZARDS NOT OTHERWISE CLASSIFIED (HNOC)
None

PRECAUTIONARY STATEMENTS
None

3. COMPOSITION / INFORMATION ON INGREDIENTS

Common Name	Chemical Name	CAS #	Composition
Aminopyralid Triisopropanolamine Salt	2-Pyridinecarboxylic acid, 4-amino-3,6-dichloro-, compd. with 1,1',1"-nitrilotris[2-propanol] (1:1)	566191-89-7	40.6%
Triisopropanolamine	2-Propanol, 1,1',1"-nitrilotris-	122-20-3	1.5%

NOTE: Ingredients not precisely identified are proprietary or non-hazardous. Values are not product specifications.

4. FIRST AID MEASURES

Have the product container or label with you when calling a poison control center or doctor or going for treatment. You may also contact 1-800-424-9300 for emergency medical treatment information.

5. FIREFIGHTING MEASURES

Flash Point (CC): >100°C

Flammable Limits (LFL-UFL): Not determined

Fire and Explosion Hazards: None known.

Extinguishing Medium: None known.

Fire Fighting Equipment: Firefighters should be equipped with self-container positive pressure breathing apparatus and full bunker gear.

Fire Fighting Instructions: Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

Remove undamaged containers from fire area if it is safe to do so. Evacuate area. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Use water spray to cool unopened containers.

5. FIREFIGHTING MEASURES (CONT.)

Hazardous Combustion Products: Under fire conditions some components of this product may decompose. The smoke may contain unidentified toxic and/or irritating compounds. Combustion products may include and are not limited to: Nitrogen oxides. Hydrogen chloride. Carbon monoxide. Carbon dioxide.

NFPA Ratings: Health – 1 / Flammability – 1 / Reactivity - 0

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions: Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.

Spill Cleanup: Contain spilled material if possible. Absorb with materials such as clay, dirt, sand. Sweep up and collect in suitable and properly labeled containers. See Section 13, Disposal Considerations, for additional information.

7. HANDLING AND STORAGE

Handling: Avoid contact with eyes or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet.

Storage: If this product is exposed to subfreezing temperatures, the active ingredient may crystallize and settle out of solution. Under these conditions the product should be warmed to at least 40°F and agitated well to dissolve any crystallized active ingredient prior to use.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls: Workplace should be equipped with a shower and eye-wash station.

Component	Regulation	Type of listing	Value/Notation
Triisopropanolamine	Dow IHG	TWA	10 mg/m^3

Protective Clothing: Applicators and other handlers must wear: long-sleeved shirt and long pants, and shoes plus socks.

General: Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and warm/tepid water. Keep and wash PPE separately from other laundry

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	light to dark red-brown liquid	**pH:**	6.5-7.5
Odor:	mild to sweet	**Dynamic viscosity:**	8.92-12.2 cP @ 20°C
Melting/freezing point:	<-10°C(<14°F)	**Solubility:**	soluble
Boiling point/Boiling range:	not available	**Partition coefficient:**	not available
Flammability:	not available	**Vapor pressure:**	not available
Flammability limits (upper/lower):	not available	**Density:**	1.14 g/mL (9.51 lb/gal)
Flash point (cc):	>100°C	**Relative vapor density:**	not available
Auto-ignition temperature:	none below 400°C	**Particle characteristics:**	not available
Decomposition temperature:	not available		

10. STABILITY AND REACTIVITY

CONDITIONS TO AVOID: None known.

CHEMICAL STABILITY: No decomposition if stored and applied as directed. Stable under all normal use and storage conditions.

HAZARDOUS DECOMPOSITION PRODUCTS: Decomposition products depend upon temperature, air supply and the presence of other materials. Decomposition products can include and are not limited to hydrogen chloride and nitrogen oxides.

INCOMPATIBILITY WITH OTHER MATERIALS: Strong oxidizers

HAZARDOUS POLYMERIZATION: Will not occur.

11. TOXICOLOGICAL INFORMATION

Information presented below is from testing done on an identical or substantially similar product:

ORAL TOXICITY (rat LD_{50}): > 5,000 mg/kg

DERMAL TOXICITY (rat LD_{50}): > 5,000 mg/kg

INHALATION TOXICITY (rat LC_{50}): > 5.79 mg/L (4-hour)

EYE IRRITATION: Essentially nonirritating to eyes.

SKIN IRRITATION: Essentially nonirritating to skin.

SKIN SENSITIZATION: Not a contact sensitizer. (Guinea Pig)

CARCINOGENICITY:
EPA: Not Likely to be Carcinogenic to Humans (Aminopyralid)
ACGIH: Not listed **NTP:** Not Listed
IARC: Not Listed **OSHA:** Not Listed

REPRODUCTIVE TOXICITY / DEVELOPMENTAL TOXICITY / TERATOGENICITY: Did not cause birth defects or any other fetal effects in laboratory animals. In animal studies, did not interfere with reproduction.

MUTAGENICITY TOXICITY: In vitro genetic toxicity studies were negative. Animal genetic toxicity studies were negative.

12. ECOLOGICAL INFORMATION

Aminopyralid is practically non-toxic to fish, birds, mammals, aquatic invertebrates and honeybee adults on acute exposure basis. Pesticide is highly toxic to algae/aquatic plants on an acute basis.

AQUATIC TOXICITY

Rainbow Trout (96-hr LC_{50}):	360 mg/L
Sheepshead Minnow (96-hr LC_{50}):	>100 mg/L
Water Flea (48-hr LC_{50}):	>460 mg/L
Mysid Shrimp (96-hr LC_{50}):	>104 mg/L

For similar material(s)

Very highly toxic to aquatic organisms on an acute basis (LC_{50}/EC_{50}):	<0.1 mg/L
Green Algae (72-hr EC_{50}):	>1,000 mg/L
Myriophyllum spicatum (14-d EC_{50} / NOAEC):	0.363 mg/L / 0.0639 mg/L

AVIAN TOXICITY

Bobwhite Quail (Dietary LC_{50}):	>21,422 mg/kg
Bobwhite Quail (Oral LD_{50}):	>10,000 ppm

BEE TOXICITY

Honey Bee (Oral LD_{50})	>460 µg/bee
Honey Bee (Contact LD_{50})	>460 µg/bee

PERSISTENCE AND DEGRADABILITY
Material is not readily biodegradable according to OECD/EEC guidelines.

13. DISPOSAL CONSIDERATIONS

PESTICIDE DISPOSAL: Waste resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

CONTAINER DISPOSAL: Nonrefillable and refillable containers. Refer to the product label for specific container handling instructions.

14. TRANSPORT INFORMATION

UN Number:	UN3082
Proper Shipping Name:	Environmentally hazardous substance, liquid, N.O.S. (contains aminopyralid triisopropanolamine salt)
Transport Hazard Class:	9
Packing Group:	III
Hazard Zone:	None
Marine Pollutant:	Yes[1]
Hazardous Substance RQ:	None
Labels / Placards:	US-DOT: Class 9 Environmentally Hazardous Substance[2] IMDG, IATA: Class 9 Environmentally Hazardous Substance[3]
Emergency Guide:	171 (NAERG – North American Emergency Response Guide)
[1] **Marine Pollutant Note:**	Ground-only shipments are excluded from Marine Pollutant labeling requirements as per 49CFR§172.101 Appendix B(4). For any shipments involving all or part of the transport by vessel, the shipment must be classified as a Marine Pollutant unless a limited quantity exemption applies (see note 3 below).
[2] **US-DOT Note:**	Not regulated for "ground only" shipments.
[3] **IMDG / IATA Note:**	Not regulated when shipped in single or inner packaging ≤ 1.3 gal. (5 L).

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

15. REGULATORY INFORMATION

FIFRA –

This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. The following is the hazard information as required on the pesticide label:

PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS
CAUTION: Causes moderate eye irritation.

See inside label booklet for additional Precautionary Statements and Directions for Use including Storage and Disposal instructions.

ENVIRONMENTAL HAZARDS
This chemical has properties and characteristics associated with chemicals detected in groundwater. The use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination. Application around a cistern or well may result in contamination of drinking water or groundwater.

15. REGULATORY INFORMATION (CONT.)

All pesticides are governed under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA). The regulatory information presented below is pertinent only when this product is handled outside of the normal use and application as a pesticide. This product is excluded from listing requirements under EPA/TSCA.

SARA Title III – Section 302 Extremely Hazardous Substances
Not listed

SARA Title III – Section 311/312 Hazard Categories
Immediate (acute)

SARA Title III – Section 312 Threshold Planning Quantity
N/A

SARA Title III – Section 313 Reportable Ingredients
None

CERCLA –
None

CALIFORNIA PROP 65 STATUS –
This product does not contain any chemicals known to the state of California to cause cancer or reproductive harm.

CANADA –
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all of the information required by CPR.

16. OTHER INFORMATION

THIS INFORMATION IN THIS SDS IS BASED ON DATA AVAILABLE AS OF THE REVISION DATE GIVEN HEREIN, AND BELIEVED TO BE CORRECT. CONTACT ALLIGARE, LLC TO CONFIRM IF YOU HAVE THE MOST CURRENT MSDS. JUDGMENTS AS TO THE SUITABILITY OF THE INFORMATION HEREIN FOR THE INDIVIDUAL'S OWN USE OR PURPOSES IS NECESSARILY THE INDIVIDUAL'S OWN RESPONSIBILITY. ALTHOUGH REASONABLE CARE HAS BEEN TAKEN IN THE PREPARATION OF SUCH INFORMATION, ALLIGARE, LLC EXTENDS NO WARRANTIES, MAKES NO
REPRESENTATIONS, AND ASSUMES NO RESPONSIBILITY AS TO THE ACCURACY OR SUITABILITY OF SUCH INFORMATION FOR APPLICATION TO THE INDIVIDUAL'S PURPOSES OR THE CONSEQUENCES OF ITS USE.

This Safety Data Sheet (SDS) serves different purposes than and DOES NOT REPLACE OR MODIFY THE EPA APPROVED PRODUCT LABELING (attached to and accompanying the product container). This SDS provides important health, safety, and environmental information for employers, employees, emergency responders and others handling large quantities of the product in activities generally other than product use, while the labeling provides that information specifically for product use in the ordinary course.

SDS Version: 2.0 Effective Date: 03/28/2023

"

What Do Roundup® Weed & Grass Killer Products Control?

We know of over 200 types of weeds and grasses that our products can help you handle.

Wondering if our products are the answer to your weeding woes? Good news. The main active ingredient in Roundup® Weed and Grass Killer products is glyphosate. It works by targeting an enzyme that is essential to plant growth.

“Over 200 types of weeds and grasses.”

AMERICA’S LEAST WANTED WEEDS

Any weed can be a headache, but we’ve found that these 12 usual suspects are especially likely to threaten your yard, garden, or landscape.

What Do Roundup® Weed & Grass Killer Products Control?

Bamboo

This fast-growing, super-tough plant can look great, but it’s also exceptionally tough to control.

Bentgrass

This meddlesome grass is a putting green favorite, but a backyard bane.

Dallisgrass

No matter how much you pull, this southern weed's unsightly stalks will keep coming back.

Bermudagrass

This aggressive grass would love to push other grasses out of your yard.

Common Buckthorn

One of the most common weeds throughout much of the United States, buckthorn is a huge threat to native plants.

English Ivy

Most weeds only threaten ground space, but this one extends its grasp over trees and buildings too

Johnsongrass

This burly bully is a burden to farmers and fauna alike because it crowds out desirable plants and destroys food and shelter for wildlife.

Monkeygrass

There are two common varieties of monkeygrass — Liriope muscari, which stays put after planting, and Liriope spicata, which is aggressive and likes to spread.

Nimblewill

Don't let the cute name fool you. This grassy weed might be lurking in the dark, damp corners of your yard.

Orchardgrass

All year-round, this forage crop sticks out like a sore thumb.

FURTHER WEEDING

Check out Further Weeding *for info on how to stop these common nuisances that are uncommonly annoying.*

AND THE REST

Here are a bunch of other weeds and grasses that can be stopped with Roundup® Weed & Grass Killer products. Identifying weeds isn't always easy, so here's a good rule of thumb: If it's an undesirable plant, Roundup® Weed & Grass Killer products have its number.

Alder
Annual Ryegrass
Artichoke Thistle
Ash
Aspen (quaking)
Bahiagrass
Barnyardgrass
Bittercress
Black Locust
Black Medic
Black Nightshade
Blackberry
Blackgum
Blue Mustard
Blue Toadflax
Bluegrass (annual)
Bluegrass (Kentucky)
Bluegum Eucalyptus
Brackenfern
Brassbuttons
Broadleaf Plantain
Bromegrass
Broom (French, Scotch)
Buckhorn Plantain
Buckwheat
Bur Clover
Burcucumber
Buttercup
Canada Thistle
Carolina Geranium
Cattail
Ceanothus
Chamise
Cheat
Cherry
Chickweed (Common)
Dandelion
Dewberry
Diffuse Lovegrass
Dog Fennel
Dogwood
Dollarweed
Elderberry
Elm
Eucalyptus
Evening Primrose
Fall Panicum
False Dandelion
Fennel
Fescue species
Fiddleneck
Field Bindweed
Field Pennycress
Field Sandbur
Filaree
Florida Pusley
Garden Spurge
Giant Foxtail
Giant Ragweed
Giant Reed
Goosegrass
Green Foxtail
Guineagrass
Hairy Nightshade
Hawthorn
Hazel
Hemp Dogbane
Hemp Sesbania
Henbit
Honeysuckle
Horsenettle
Horseradish
Little Bitter Cress
Locust
London Rocket
Lovegrass
Madrone
Maiden Cane
Mallow
Maple
Mayweed
Milkweed
Morning Glory (annual)
Nutsedge
Oak
Oldenlandia
Oxalis
Pampasgrass
Pennsylvania Smartweed
Pennywort
Perennial Ryegrass
Persimmon
Pine
Poison Hemlock
Poison Sumac
Poplar
Prickly Lettuce
Primrose
Prostrate Spurge
Puncture Vine
Purple Nutsedge
Purslane
Purslane Speedwell
Quackgrass
Ragweed (Common)
Raspberry
Red Clover
Redroot Pigweed
Smooth Pigweed
Sourwood
Sowthistle (annual)
Sowthistle (perennial)
Spotted Spurge
Sprangletop
Spurred Anoda
St. Augustinegrass
Stinkgrass
Sumac
Sunflower
Swamp Smartweed
Sweetgum
Swinecress
Tan Oak
Tansy Mustard
Tansy Ragwort
Teaweed
Texas Panicum
Thimbleberry
Timothy
Torpedograss
Tree Tobacco
Trumpetcreeper
Tumble Mustard
Vaseygrass
Velvetleaf
Virginia Creeper
Virginia Pepperweed
White Clover
Whitetop
Wild Barley
Wild Blackberry
Wild Buckwheat
Wild Mustard
Wild Oats

Chickweed (Mouseear)
Cocklebur
Cogongrass
Common Groundsel
Common Mullein
Common Pokeweed
Corn Speedwell
Coyote Brush
Crabgrass
Creeping Beggarweed
Creeping Charlie
Crowfootgrass
Curly Dock
Horseweed/ Marestail
Iceplant
Itchgrass
Jimsonweed
Junglerice
Kikuyugrass
Knapweed
Knotweed
Kochia
Kudzu
Lambsquarters
Lantana
Leafy Spurge
Redvine
Reed Canarygrass
Russian Thistle
Sage
Salmonberry
Saltcedar
Sandspur
Sassafras
Shattercane
Shepherd's-purse
Sicklepod
Smooth Bromegrass
Smooth Cat's Ear
Wild Proso Millet
Wild Rose (multiflora)
Wild Sweet Potato
Wild Violet
Willow
Wirestem Muhly
Witchgrass
Wooly Cupgrass
Yellow Foxtail
Yellow Nutsedge
Yellow Poplar
Yellow Rocket
Yellow Starthistle
Zoysia