

# EL LICOTT SAND AND GRAVEL LLC - SITE DEVELOPMENT PLAN

Parts of the SW $\frac{1}{4}$ NE $\frac{1}{4}$ , SW $\frac{1}{4}$ SE $\frac{1}{4}$  & NW $\frac{1}{4}$ SE $\frac{1}{4}$ , Section 29, T-14-S, R-62-W, 6th P.M., El Paso County, Colorado. - Containing 66.1 acres more or less.

## STAGE 1 OF 6 - GRADING AND EROSION CONTROL PLANS

**CONTACTS:**  
**OWNER - Parcel No. 240000276**  
 Schubert Ranches Inc.  
 1555 S. Baggett Rd.  
 Calhan, CO 80808  
 Phone: (719) 683-2262  
 Email: grasstogo@aol.com

**APPLICANT**  
 Ellicott Sand and Gravel LLC  
 Christine Wilson, Manager  
 235 Franceville Coal Mine Road,  
 Colorado Springs, CO 80929  
 (719) 568-3164  
 ellicottsandgravel@gmail.com

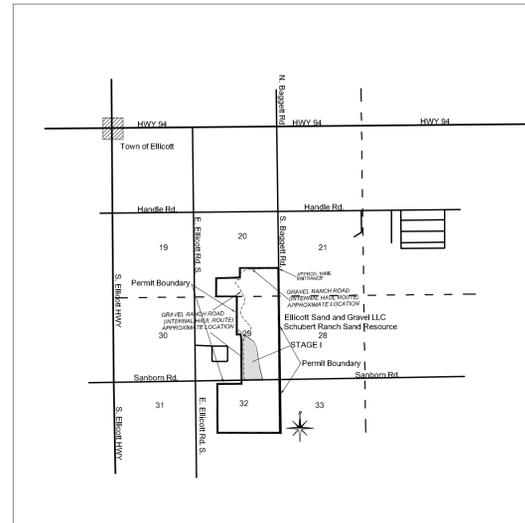
**ENGINEER**  
 Mr. G. Thomas Hastings, PE  
 Loveland, CO 80538  
 gthastings@gmail.com

**PLANNERS**  
 Consultants:  
 Environment, Inc.  
 Mr. Steve O'Brian - President  
 7985 Vance Dr., #205A, Arvada, CO 80003  
 (303) 423-7297  
 Environment-inc@outdrs.net

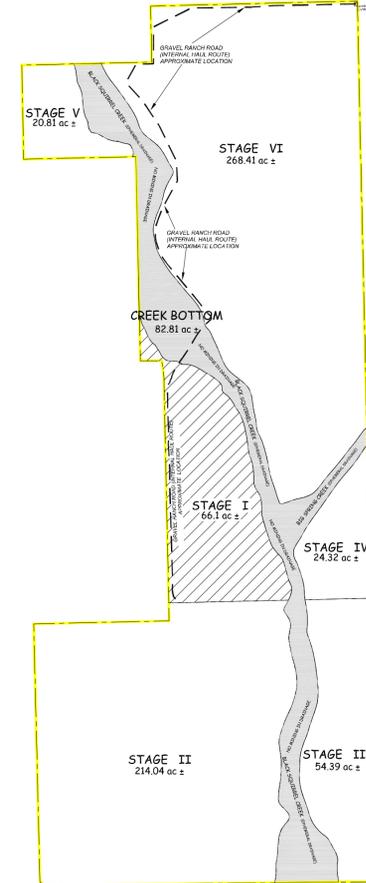
Regulatory Permits Management, Inc  
 Mr. H. Bruce Humphries - President  
 25049 E. Alder Dr., Aurora, CO 80016  
 (303) 854-7499  
 hhumphries2@comcast.net

**STANDARD NOTES FOR EL PASO COUNTY GRADING AND EROSION CONTROL PLANS**

- Stormwater discharges from sites shall not cause or threaten to cause pollution, contamination, or degradation of State Waters. All work and earth disturbance shall be done in a manner that minimizes pollution of any on-site or off-site waters, including wetlands.
- Notwithstanding anything depicted in these plans in words or graphic representation, all design and construction related to roads, storm drainage and erosion control shall conform to the standards and requirements of the most recent version of the relevant adopted El Paso County standards, including the Land Development Code, the Engineering Criteria Manual, the Drainage Criteria Manual, and the Drainage Criteria Manual (Volume 2. Any deviation from regulations
- A separate Stormwater Management Plan (SWMP) for this project shall be completed and an Erosion and Stormwater Quality Control Permit (ESQCP) issued prior to commencing construction Management of the SWMP during construction is the responsibility of the designated Qualified Stormwater Manager or Certified Erosion Control Inspector. The SWMP shall be located on-site at all times during construction and shall be kept up to date with work progress and changes in the field.
- Once the ESQCP is approved and a "Notice to Proceed" has been issued, the contractor may install the initial stage erosion and sediment control measures as indicated on the approved DEC. A Preconstruction Meeting between the contractor, engineer, and El Paso County will be held prior to any construction. It is the responsibility of the applicant to coordinate the meeting and place with County staff.
- Control measures must be installed prior to commencement of activities that could contribute pollutants to stormwater. Control measures for all slopes, channels, ditches, and disturbed land areas shall be installed immediately upon completion of the disturbance.
- All temporary and erosion control measures shall be maintained and remain in effective operating condition until permanent soil erosion control measures are implemented and final stabilization is established. All person engaged in land disturbance activities shall assess the adequacy of control measures at the site and identify if changes to those control measures are needed to ensure the continued effective performance of the control measures. All changes to temporary sediment and erosion control measures must be incorporated into the Stormwater Management Plan.
- Temporary stabilization shall be implemented on disturbed areas and stockpiles where ground disturbing construction activity has permanently ceased or temporarily ceased for longer than 14 days.
- Final stabilization must be implemented at all applicable construction sites. Final stabilization is achieved when all ground disturbing activities are complete and all disturbed areas either have a uniform vegetative cover with individual plant density of 70 percent of pre-disturbance levels established or equivalent permanent alternative stabilization method is implemented. All temporary sediment and erosion control measures shall be removed upon final stabilization and before permit closure.
- All permanent stormwater management facilities shall be installed as designed in the approved plans. Any proposed changes that effect the design or function of permanent stormwater management structures must be approved by the ECM Administrator prior to implementation.
- Earth disturbance shall be conducted in such a manner so as to effectively minimize accelerated soil erosion and resulting sedimentation. All disturbances shall be designed, constructed, and completed so that the exposed area of any disturbed land shall be limited to the shortest practical period of time. Pre-existing vegetation shall be protected and maintained within 50 horizontal feet of a waters of the state unless shown to be infeasible and specifically requested and approved.
- Compaction of soil must be prevented in areas designated for infiltration control measures or where final stabilization will be achieved by vegetative cover. Areas designated for infiltration control measures shall also be protected from sedimentation during construction until final stabilization is achieved. If compaction prevention is not feasible due to site constraints, all areas designated for infiltration and vegetation control measures must be loosened prior to installation of the control measure(s).
- Any temporary or permanent facility designed and constructed for the conveyance of stormwater around, through, or from the earth disturbance area shall be a stabilized conveyance designed to minimize erosion and the discharge of sediment off-site.
- Concrete wash water shall be contained and disposed of in accordance with the SWMP. No wash water shall be discharged to or allowed to enter State Waters, including any surface or subsurface storm drainage system or facilities. Concrete washouts shall not be located in an area where shallow groundwater may be present, or within 50 feet of a surface water body, creek or stream.
- During dewatering operations, uncontaminated groundwater may be discharged on-site, but shall not leave the site in the form of surface runoff unless an approved State dewatering permit is in place.
- Erosion control blanketing or other protective covering shall be used on slopes steeper than 3:1.
  - No final slopes will be steeper than 3H:1V.
  - During mining, interior slopes will be steeper than 3H:1V. However, all stormwater runoff will be interior to the site. Runoff will infiltrate into the sandy substrate.
- Contractor shall be responsible for the removal of all wastes from the construction site for disposal in accordance with local and State regulatory requirements. No construction debris, tree slash, building material wastes or unused building materials shall be buried, dumped, or discharged at the site.
- Waste materials shall not be temporarily placed or stored in the street, alley, or other public way, unless in accordance with an approved Traffic Control Plan. Control measures may be required by El Paso County Engineering if deemed necessary, based on specific conditions and circumstances.
- Tracking of soils and construction debris off-site shall be minimized. Materials tracked off-site shall be cleaned up and properly disposed of immediately.
- The owner/developer shall be responsible for the removal of all construction debris, dirt, trash, rock sediment, soil, and sand that may accumulate in roads, storm drains and other drainage conveyance systems and stormwater appurtenances as a result of the site development.
- The quantity of materials stored on the project site shall be limited, as much as practical, to that quantity required to perform the work in an orderly sequence. All materials stored on-site shall be stored in a neat, orderly manner, in their original containers, with original manufacturer's labels.
  - This is a mining operation, not a construction site. Therefore, this "Standard Condition" is not applicable.
- No chemical(s) having the potential to be released in stormwater are to be stored or used on-site unless permission for the use of such chemical(s) is granted in writing by the ECM Administrator. In granting approval for the use of such chemical(s), special conditions and monitoring may be required.
- Bulk storage of allowed petroleum products or other allowed liquid chemicals in excess of 55 gallons shall require adequate secondary containment protection to contain all spills on-site and to prevent any spilled materials from entering State Waters, any surface or subsurface storm drainage system or other facilities.
  - We have an SPCC plan to deal with any spilled petroleum products, in reportable quantities
- No person shall cause the impediment of stormwater flow in the curb and gutter or ditch except with approved sediment control measures.
- Owner/developer and their agents shall comply with the "Colorado Water Quality Act" (Title 24, Article 8, CRS), and the "Clean Water Act" (33 USC 1344), in addition to the requirements of the Land Development Code, DCM Volume 11 and the ECM Appendix 1. All appropriate permits must be obtained by the contractor prior to construction (1041, MPDES, Floodplain, 404, fugitive dust, etc.). In the event of conflicts between these requirement and other laws, rules, or regulations of other Federal, State, local, or County agencies the most restrictive laws, rules, or regulations shall apply.
- All construction traffic must enter/exit the site only at approved construction access points.
- Prior to construction the permittee shall verify the location of existing utilities.
- A water source shall be available on-site during earthwork operations and shall be utilized as required to minimize dust from earthwork equipment and wind.
  - A commercial water provider will supply water for operational needs.
- The soils report for this site has been prepared by Natural Resource Conservation Office, Mr. Greg Langer, District Conservationist, Colorado Springs, CO, March 29, 2018 and shall be considered a part of these plans.
- At least ten (10) days prior to the anticipated start of construction, for projects that will disturb one (s) acre or more the owner or operator of construction activity shall submit a permit application for stormwater discharge to the Colorado Department of Public Health and Environment, Water Quality Division. The application contains certification of completion of a stormwater management plan (SWMP), of which this Grading and Erosion Control Plan may be a part.
  - A stormwater management plan is part of this submittal packet.
  - The stormwater permit, permit number is COG500000.
  - The stormwater permit certification number is COG502203



VICINITY MAP  
SCALE 1"=1 MILE



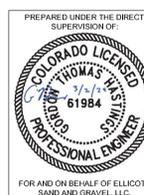
NO SCALE  
 SCHUBERT RANCH SAND RESOURCE  
 SPECIAL USE PERMIT AREA CASE # AL2014  
 Parts of the S $\frac{1}{4}$ N $\frac{1}{4}$ SE $\frac{1}{4}$ , S $\frac{1}{4}$ SE $\frac{1}{4}$  & SE $\frac{1}{4}$ SW $\frac{1}{4}$ , Section 29, T-14-S, R-62-W, 6th P.M., El Paso County, Colorado, and parts of the SW $\frac{1}{4}$ NE $\frac{1}{4}$ , SW $\frac{1}{4}$ SE $\frac{1}{4}$  & NW $\frac{1}{4}$ SE $\frac{1}{4}$ , Section 32, T-14-S, R-62-W, 6th P.M., El Paso County, Colorado, Containing 733.7 acres more or less.

**SHEET INDEX**

- COVER SHEET
- GRADING & EROSION CONTROL - INITIAL CONDITIONS
- GRADING & EROSION CONTROL - INTERIM PHASE
- GRADING & EROSION CONTROL - FINAL PHASE
- GRADING & EROSION CONTROL - DETAILS
- GRADING & EROSION CONTROL - CROSS SECTIONS

**EL PASO COUNTY STATEMENT:**  
 COUNTY PLAN REVIEW IS PROVIDED ONLY FOR GENERAL CONFORMANCE WITH COUNTY DESIGN CRITERIA. THE COUNTY IS NOT RESPONSIBLE FOR THE ACCURACY AND ADEQUACY OF THE DESIGN, DIMENSIONS, AND/OR ELEVATIONS WHICH SHALL BE CONFIRMED AT THE JOB SITE. THE COUNTY THROUGH THE APPROVAL OF THIS DOCUMENT ASSUMES NO RESPONSIBILITY FOR COMPLETENESS AND/OR ACCURACY OF THIS DOCUMENT.  
 FILED IN ACCORDANCE WITH THE REQUIREMENTS OF THE EL PASO COUNTY LAND DEVELOPMENT CODE, DRAINAGE CRITERIA MANUAL VOLUMES 1 AND 2, AND ENGINEERING CRITERIA MANUAL, AS AMENDED.  
 IN ACCORDANCE WITH ECM SECTION 1.12, THESE CONSTRUCTION DOCUMENTS WILL BE VALID FOR CONSTRUCTION FOR A PERIOD OF 2 YEARS FROM THE DATE SIGNED BY THE EL PASO COUNTY ENGINEER. IF CONSTRUCTION HAS NOT STARTED WITHIN THOSE 2 YEARS, THE PLANS WILL NEED TO BE RESUBMITTED FOR APPROVAL, INCLUDING PAYMENT OF REVIEW FEES AT THE PLANNING AND COMMUNITY DEVELOPMENT DIRECTORS DISCRETION.

JOSHUA PALMER, P.E. DATE \_\_\_\_\_  
 COUNTY ENGINEER/ECM ADMINISTRATOR  
**ENGINEER'S STATEMENT:**  
 THIS GRADING AND EROSION CONTROL PLAN WAS PREPARED UNDER MY DIRECTION AND SUPERVISION AND IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. SAID PLAN HAS BEEN PREPARED ACCORDING TO THE CRITERIA ESTABLISHED BY THE COUNTY FOR GRADING AND EROSION CONTROL PLANS. I ACCEPT RESPONSIBILITY FOR ANY LIABILITY CAUSED BY ANY NEGLIGENCE, ACTS, ERRORS OR OMISSIONS ON MY PART IN PREPARING THIS PLAN.  
 G. Thomas Hastings, PE 03/02/24  
 ENGINEER OF RECORD SIGNATURE DATE  
 G. Thomas Hastings, PE  
 COLORADO P.E. # 61984



**OWNER'S STATEMENT:**  
 I, THE OWNER/DEVELOPER HAVE READ AND WILL COMPLY WITH THE REQUIREMENTS OF THE GRADING AND EROSION CONTROL PLAN.  
 George Schubert, Manager 2-29-2024  
 OWNER'S SIGNATURE DATE  
 SCHUBERT RANCH LLC,  
 1555 S. Baggett Road  
 Calhan, CO 80808-7808

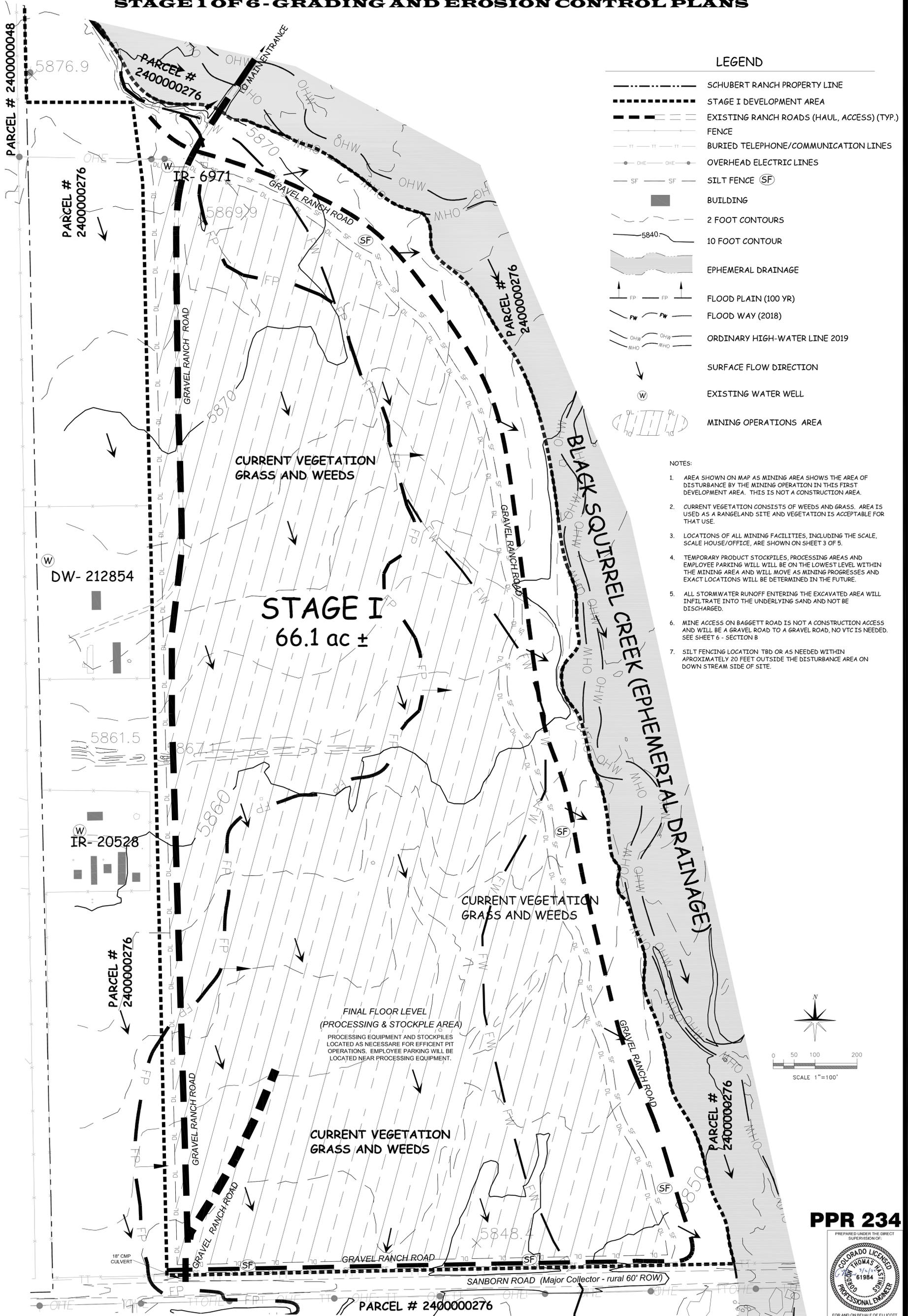
PPR 234

PROJECT # ESG COUNTY	<b>EL PASO COUNTY SITE DEVELOPMENT PLAN          COVER SHEET          FOR          SCHUBERT RANCH SAND RESOURCE          ELLICOTT, COLORADO</b>	REVISIONS: SPECIAL USE PERMIT APPROVAL - BCC 08-02-2022	DATE: 08-02-2022	<b>EL LICOTT SAND AND GRAVEL LLC</b> 235 Franceville Coal Mine Road   Colorado Springs Co 80929 phone: (602) 558-0846	DRAWN BY: ENV/510 CHECKED BY: GTH	DATE: 01/30/2024 FILE NAME: ESG-DF-GRADING	<b>1</b> SHEET 1 of 6
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**ELLICOTT SAND AND GRAVEL LLC - SITE DEVELOPMENT PLAN**

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**STAGE 1 OF 6 - GRADING AND EROSION CONTROL PLANS**



**LEGEND**

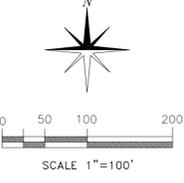
- SCHUBERT RANCH PROPERTY LINE
- STAGE I DEVELOPMENT AREA
- EXISTING RANCH ROADS (HAUL, ACCESS) (TYP.)
- FENCE
- BURIED TELEPHONE/COMMUNICATION LINES
- OVERHEAD ELECTRIC LINES
- SILT FENCE (SF)
- BUILDING
- 2 FOOT CONTOURS
- 10 FOOT CONTOUR
- EPHEMERAL DRAINAGE
- FLOOD PLAIN (100 YR)
- FLOOD WAY (2018)
- ORDINARY HIGH-WATER LINE 2019
- SURFACE FLOW DIRECTION
- EXISTING WATER WELL
- MINING OPERATIONS AREA

**NOTES:**

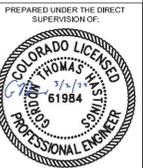
1. AREA SHOWN ON MAP AS MINING AREA SHOWS THE AREA OF DISTURBANCE BY THE MINING OPERATION IN THIS FIRST DEVELOPMENT AREA. THIS IS NOT A CONSTRUCTION AREA.
2. CURRENT VEGETATION CONSISTS OF WEEDS AND GRASS. AREA IS USED AS A RANGELAND SITE AND VEGETATION IS ACCEPTABLE FOR THAT USE.
3. LOCATIONS OF ALL MINING FACILITIES, INCLUDING THE SCALE, SCALE HOUSE/OFFICE, ARE SHOWN ON SHEET 3 OF 5.
4. TEMPORARY PRODUCT STOCKPILES, PROCESSING AREAS AND EMPLOYEE PARKING WILL BE ON THE LOWEST LEVEL WITHIN THE MINING AREA AND WILL MOVE AS MINING PROGRESSES AND EXACT LOCATIONS WILL BE DETERMINED IN THE FUTURE.
5. ALL STORMWATER RUNOFF ENTERING THE EXCAVATED AREA WILL INFILTRATE INTO THE UNDERLYING SAND AND NOT BE DISCHARGED.
6. MINE ACCESS ON BAGGETT ROAD IS NOT A CONSTRUCTION ACCESS AND WILL BE A GRAVEL ROAD TO A GRAVEL ROAD, NO VTC IS NEEDED. SEE SHEET 6 - SECTION B
7. SILT FENCING LOCATION TBD OR AS NEEDED WITHIN APPROXIMATELY 20 FEET OUTSIDE THE DISTURBANCE AREA ON DOWN STREAM SIDE OF SITE.

**STAGE I**  
66.1 ac ±

**FINAL FLOOR LEVEL**  
(PROCESSING & STOCKPILE AREA)  
PROCESSING EQUIPMENT AND STOCKPILES LOCATED AS NECESSARY FOR EFFICIENT PIT OPERATIONS. EMPLOYEE PARKING WILL BE LOCATED NEAR PROCESSING EQUIPMENT.



**PPR 234**

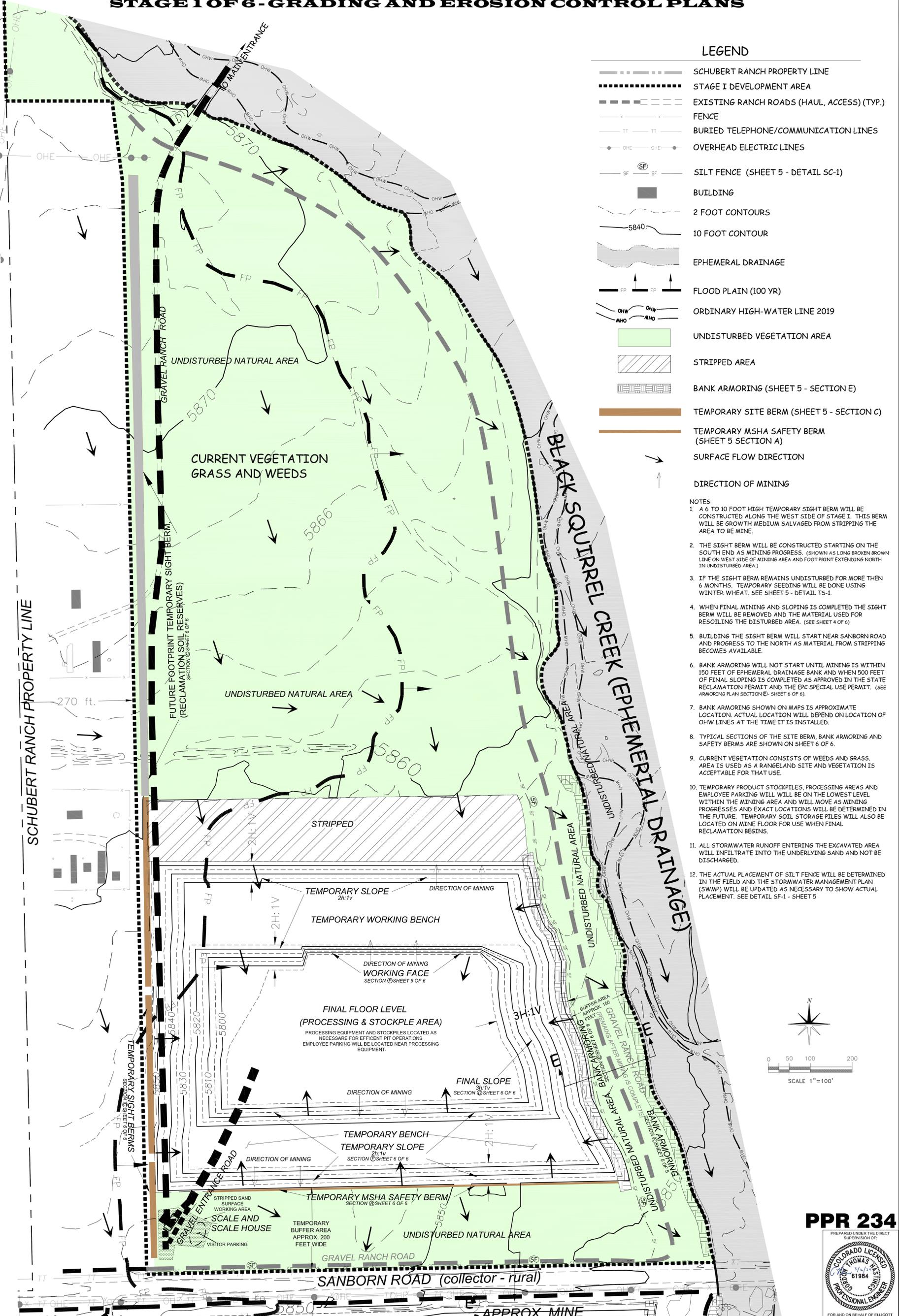


<b>2</b>	PROJECT # ESG-COUNTY	EL PASO COUNTY DEVELOPMENT PLAN INITIAL CONDITIONS	REVISIONS: SPECIAL USE PERMIT APPROVAL - BCC	DATE: 08-02-2022	<b>ELLICOTT SAND AND GRAVEL LLC</b>	235 Franceville Coal Mine Road   Colorado Springs Co 80929 phone: (602) 558-0846	DATE: 01/30/2024	FILE NAME: ESG-DP GRADING 2	SCALE: AS NOTED	DRAWN BY: EM/MS	CHECKED BY: BH
		FOR SCHUBERT RANCH SAND RESOURCE ELLICOTT, COLORADO									

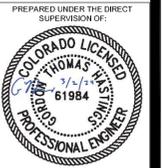
# EL LICOTT SAND AND GRAVEL LLC - SITE DEVELOPMENT PLAN

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## STAGE 1 OF 6 - GRADING AND EROSION CONTROL PLANS



**PPR 234**



FOR AND ON BEHALF OF EL LICOTT SAND AND GRAVEL, LLC

3	PROJECT #: ESG-COUNTY	EL PASO COUNTY DEVELOPMENT PLAN	REVISIONS:	DATE:	EL LICOTT SAND AND GRAVEL LLC	DRAWN BY: EM/MSB	SCALE: AS NOTED	FILE NAME: ESG-DP GRADING 3	DATE: 01/30/2023
		INTERIM PHASE	SPECIAL USE PERMIT APPROVAL - BCC	08-02-2022					
SHEET 3 of 5		FOR SCHUBERT RANCH SAND RESOURCE			235 Franceville Coal Mine Road   Colorado Springs Co 80929				
		ELLICOTT, COLORADO			phone: (602) 558-0846				

# EL LICOTT SAND AND GRAVEL LLC - SITE DEVELOPMENT PLAN

Parts of the SW $\frac{1}{4}$ NE $\frac{1}{4}$ , SW $\frac{1}{4}$ SE $\frac{1}{4}$  & NW $\frac{1}{4}$ SE $\frac{1}{4}$ , Section 29, T-14-S, R-62-W, 6th P.M., El Paso County, Colorado. - Containing 66.1 acres more or less.

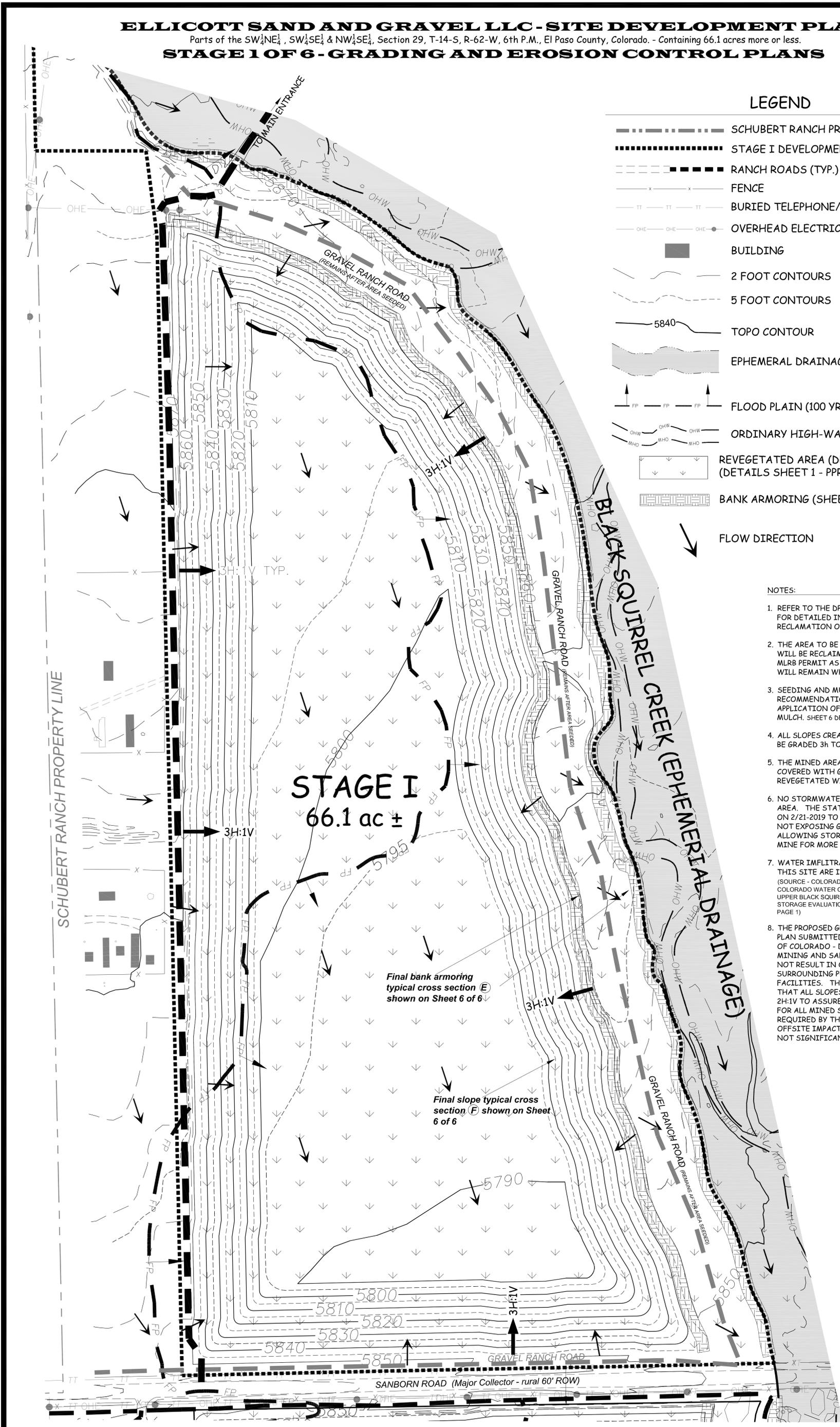
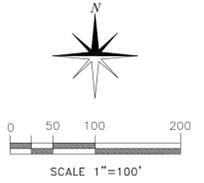
## STAGE 1 OF 6 - GRADING AND EROSION CONTROL PLANS

### LEGEND

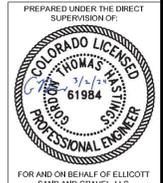
- SCHUBERT RANCH PROPERTY LINE
- STAGE I DEVELOPMENT AREA
- RANCH ROADS (TYP.)
- FENCE
- BURIED TELEPHONE/COMMUNICATION LINES
- OVERHEAD ELECTRIC LINES
- BUILDING
- 2 FOOT CONTOURS
- 5 FOOT CONTOURS
- TOPO CONTOUR
- EPHEMERAL DRAINAGE
- FLOOD PLAIN (100 YR)
- ORDINARY HIGH-WATER LINE 2019
- REVEGETATED AREA (DETAIL MSS - SHEET 6 OF 6)  
(DETAILS SHEET 1 - PPR234 LANDSCAPING PLAN)
- BANK ARMORING (SHEET 5 - SECTION E)
- FLOW DIRECTION

### NOTES:

1. REFER TO THE DP - LANDSCAPING PLAN SHEET 1 OF 2 FOR DETAILED INFORMATION ON FINAL RECLAMATION OF STAGE 1 OF 6.
2. THE AREA TO BE REVEGETATED SHOWN ON MAP WILL BE RECLAIMED ACCORDING TO THE APPROVED MLRB PERMIT AS PASTURE. EXISTING RANCH ROADS WILL REMAIN WHEN AREA IS SEEDED.
3. SEEDING AND MULCHING WILL FOLLOW NRCS RECOMMENDATIONS USING THEIR SEED MIX AND APPLICATION OF 4000 POUNDS/AC. OF CLEAN STRAW MULCH. SHEET 6 DETAILS MU-1 AND MSS
4. ALL SLOPES CREATED IN THE EXCAVATED AREA WILL BE GRADED 3H TO 1V OR FLATTER AS SHOWN ON MAP.
5. THE MINED AREAS AND ARMORED BANKS WILL BE COVERED WITH GROWTH MEDIUM AND REVEGETATED WITH APPROVED SEED MIX.
6. NO STORMWATER WILL ACCUMULATE IN MINED AREA. THE STATE ENGINEER PROVIDED COMMENTS ON 2/21-2019 TO THE DRMS. ESG COMMITTED TO NOT EXPOSING GROUND WATER, AND NOT ALLOWING STORMWATER TO ACCUMULATE IN THE MINE FOR MORE THEN 72 HOURS.
7. WATER INFILTRATION RATES FOR THE SOILS ON THIS SITE ARE IN EXCESS OF 4 INCHES/HOUR (SOURCE - COLORADO WATER CIRCULAR #32, PUBLISHED BY THE COLORADO WATER CONSERVATION BOARD IN 1976. (FROM THE UPPER BLACK SQUIRREL CREEK BASIN AQUIFER RECHARGE AND STORAGE EVALUATION, RALF TOPPER, CPG, DECEMBER 2008, PAGE 1)
8. THE PROPOSED GRADING AND EROSION CONTROL PLAN SUBMITTED TO AND APPROVED BY THE STATE OF COLORADO - DIVISION OF RECLAMATION, MINING AND SAFETY (CDRMS) WILL BE STABLE, AND NOT RESULT IN OFFSITE IMPACTS TO THE SURROUNDING PUBLIC OR PRIVATE STRUCTURES AND FACILITIES. THE STATE REGULATIONS REQUIRE THAT ALL SLOPES BE RECLAIMED TO A MINIMUM 2H:1V TO ASSURE STABILITY. THE PROPOSED 3H:1V FOR ALL MINED SLOPES ARE FLATTER THEN REQUIRED BY THE STATE. THE POTENTIAL FOR OFFSITE IMPACTS DUE TO A SLOPE FAILURE ARE NOT SIGNIFICANT OR LIKELY.



**PPR 234**



**4**  
SHEET 4 of 5

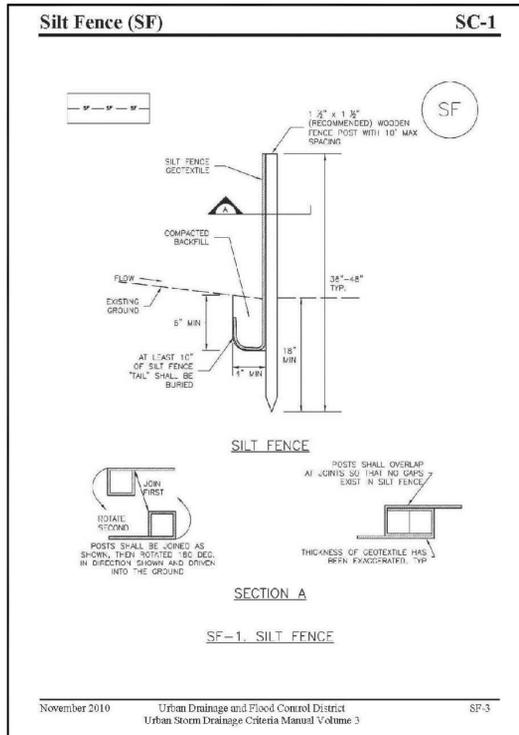
EL PASO COUNTY DEVELOPMENT PLAN  
FINAL PHASE  
FOR  
SCHUBERT RANCH SAND RESOURCE  
EL LICOTT, COLORADO

REVISIONS:	DATE:
SPECIAL USE PERMIT APPROVAL - BCC	08-02-2022

**EL LICOTT SAND AND GRAVEL LLC**  
235 Franceville Coal Mine Road | Colorado Springs Co 80929  
phone: (602) 558-0846

DATE:	01/30/2024
FILE NAME:	ESG_DP_GRADING
SCALE:	AS NOTED
DRAWN BY:	EM/BSB
CHECKED BY:	BH

**ELLICOTT SAND AND GRAVEL LLC - SITE DEVELOPMENT PLAN**  
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**STAGE 1 OF 6 - GRADING AND EROSION CONTROL PLANS**



**SC-1 Silt Fence (SF)**

**SILT FENCE INSTALLATION NOTES**

- SILT FENCE MUST BE PLACED AWAY FROM THE TOE OF THE SLOPE TO ALLOW FOR WATER FLOWING. SILT FENCE AT THE TOE OF A SLOPE SHOULD BE INSTALLED IN A FLAT LOCATION AT LEAST SEVERAL FEET (2 - 5 FT) FROM THE TOE OF THE SLOPE TO ALLOW ROOM FOR FLOWING AND DEPOSITION.
- A UNIFORM 6" x 4" ANCHOR TRENCH SHALL BE EXCAVATED USING TRENCHER OR SILT FENCE INSTALLATION DEVICE, NO ROAD GRADERS, BACKHOES, OR SIMILAR EQUIPMENT SHALL BE USED.
- COMPACT ANCHOR TRENCH BY HAND WITH A "JUMPING JACK" OR BY WHEEL ROLLING. COMPACTOR SHALL BE SUCH THAT SILT FENCE RESISTS BEING PULLED OUT OF ANCHOR TRENCH BY HAND.
- SILT FENCE SHALL BE PULLED TIGHT AS IT IS ANCHORED TO THE STAKES. THERE SHOULD BE NO NOTICEABLE SAG BETWEEN STAKES AFTER IT HAS BEEN ANCHORED TO THE STAKES.
- SILT FENCE FABRIC SHALL BE ANCHORED TO THE STAKES USING 1" HEAVY DUTY STAPLES OR NAILS WITH 1" HEADS. STAPLES AND NAILS SHOULD BE PLACED 3" ALONG THE FABRIC DOWN THE STAKE.
- AT THE END OF A RUN OF SILT FENCE ALONG A CONTOUR, THE SILT FENCE SHOULD BE TURNED PERPENDICULAR TO THE CONTOUR TO CREATE A "U-HOOK" OR "J-HOOK" EXTENDING PERPENDICULAR TO THE CONTOUR SHOULD BE OF SUFFICIENT LENGTH TO KEEP RUNOFF FROM FLOWING AROUND THE END OF THE SILT FENCE (TYPICALLY 10' - 20').
- SILT FENCE SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES.

**SILT FENCE MAINTENANCE NOTES**

- INSPECT BMPs EACH WORKDAY AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PREVENTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
- FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
- WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
- SEDIMENT ACCUMULATED UPSTREAM OF THE SILT FENCE SHALL BE REMOVED AS NEEDED TO MAINTAIN THE FUNCTIONALITY OF THE BMP. TYPICALLY WITHIN DEPTH OF ACCUMULATED SEDIMENTS IS APPROXIMATELY 6".
- REPAIR OR REPLACE SILT FENCE WHEN THERE ARE SIGNS OF WEAR, SUCH AS SAGGING, TEARING, OR COLLAPSE.
- SILT FENCE IS TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND APPROVED BY THE LOCAL JURISDICTION, OR IS REPLACED BY AN EQUIVALENT PERMEABLE SEDIMENT CONTROL BMP.
- WHEN SILT FENCES ARE REMOVED, ALL DISTURBED AREAS SHALL BE COVERED WITH TOPSOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED AS APPROVED BY LOCAL JURISDICTION. (DETAIL ADAPTED FROM TOWN OF PARKER, COLORADO AND CITY OF AURORA, NOT AVAILABLE IN AURORA)

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM LIDCOF STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

SF-4      Urban Drainage and Flood Control District      November 2010  
 Urban Storm Drainage Criteria Manual Volume 3

**RECOMMENDED ANNUAL GRASSES**

SPECIES (COMMON NAME)	GROWTH SEASON	SEEDING DATE	POUNDS OF PURE LIVE SEED (PLS) (PLS/ACRE)	PLANTING DEPTH (INCHES)
1. OATS	COOL	MARCH 16 - APRIL 30	30-60	1-2
2. SPRING WHEAT	COOL	MARCH 16 - APRIL 30	25-35	1-2
3. SPRING BARLEY	COOL	MARCH 16 - APRIL 30	25-35	1-2
4. ANNUAL RYEGRASS	COOL	MARCH 16 - JUNE 30	10-15	1/2
5. MILLET	WARM	MAY 15 - JULY 15	5-15	1/2-3/4
6. SUDANGRASS	WARM	MAY 15 - JULY 15	5-10	1/2-3/4
7. SORGHUM	WARM	MAY 15 - JULY 15	5-10	1/2-3/4
8. WINTER WHEAT	COOL	SEPTEMBER 1 - 30	20-35	1-2
9. WINTER BARLEY	COOL	SEPTEMBER 1 - 30	20-35	1-2
10. WINTER RYE	COOL	SEPTEMBER 1 - 30	20-35	1-2
11. TRITICALE	COOL	SEPTEMBER 1 - 30	28-40	1-2

THIS TABLE WAS TAKEN FROM LIDCOF FOR RECOMMENDED ANNUAL GRASSES FOR THE DENVER METROPOLITAN AREA. THIS TABLE MAY BE USED UNLESS A SITE-SPECIFIC SEED MIX IS REQUESTED AND APPROVED.

**TABLE TS-1**

**TEMPORARY SEEDING NOTES**

**INSTALLATION REQUIREMENTS**

- DISTURBED AREAS ARE TO BE SEEDED WITHIN 21 DAYS AFTER CONSTRUCTION ACTIVITY OR GRADING ENDS IF SEASON ALLOWS.
- IF NECESSARY, SOIL IS TO BE CONDITIONED FOR PLANT GROWTH BY APPLYING TOPSOIL, FERTILIZER, OR LIME.
- SOIL IS TO BE TILLED IMMEDIATELY PRIOR TO APPLYING SEEDS. COMPACT SOIL ESPECIALLY NEED TO BE LOOSENED.
- SEEDBED DEPTH IS TO BE 4 INCHES FOR SLOPES FLATTER THAN 2:1 AND 1 INCH FOR SLOPES STEEPER THAN 2:1.
- ANNUAL GRASSES LISTED IN TABLE TS-1 ARE TO BE USED FOR TEMPORARY SEEDING. SEED MIXES ARE NOT TO CONTAIN ANY NOXIOUS WEED SEEDS INCLUDING RUSSIAN OR CANADIAN THISTLE, KNAPWEED, PURPLE LOOSESTRIFE, EUROPEAN BIRDMERE, JOHNSON GRASS, AND LEAFY SPURGE.
- TABLE TS-1 ALSO PROVIDES REQUIREMENTS FOR SEEDING RATES, SEEDING DATES, AND PLANTING DEPTHS FOR THE APPROVED TYPES OF ANNUAL GRASSES.
- SEEDING IS TO BE APPLIED USING MECHANICAL TYPE DRILLS EXCEPT WHERE SLOPES ARE STEEP OR ACCESS IS LIMITED THEN HYDRAULIC SEEDING MAY BE USED.
- ALL SEEDED AREAS ARE TO BE MULCHED (SEE FACTSHEET ON MULCHING).
- IF HYDRAULIC SEEDING IS USED THEN HYDRAULIC MULCHING SHALL BE DONE SEPARATELY TO AVOID SEEDS BECOMING ENCAPSULATED IN THE MULCH.

**MAINTENANCE REQUIREMENTS**

- REGULAR INSPECTIONS ARE TO BE MADE OF ALL SEEDED AREAS TO ENSURE GROWTH.
- AREAS WHERE GROWTH IS NOT OCCURRING QUICKLY OR THE MULCH HAS BEEN REMOVED SHALL BE RE-SEEDED AS SOON AS POSSIBLE AND RE-MULCHED IF NEEDED.
- SEEDED AREAS ARE NOT TO BE DRIVEN OVER WITH CONSTRUCTION EQUIPMENT OR VEHICLES.

City of Colorado Springs Stormwater Quality      Figure TS-1 Temporary Seeding Construction Detail and Maintenance Requirements

**MULCHING NOTES**

**INSTALLATION REQUIREMENTS**

- ALL DISTURBED AREAS MUST BE MULCHED WITHIN 21 DAYS AFTER FINAL GRADE AND SEEDED AREAS ARE TO BE MULCHED WITHIN 24 HOURS AFTER SEEDING.
- MATERIAL USED FOR MULCH CAN BE CERTIFIED CLEAN, WEED- AND SEED-FREE LONG STEMMED FIELD OR MARSH HAY, OR STRAW OF OATS, BARLEY, WHEAT, RYE, OR TRITICALE CERTIFIED BY THE COLORADO DEPARTMENT OF AGRICULTURE WEED FREE FORAGE CERTIFICATION PROGRAM.
- HYDRAULIC MULCHING MATERIAL SHALL CONSIST OF VIRGIN WOOD FIBER MANUFACTURED FROM CLEAN WHOLE WOOD CHIPS. WOOD CHIPS CANNOT CONTAIN ANY GROWTH OR GERMINATION INHIBITORS OR BE PRODUCED FROM RECYCLED MATERIAL. GRAVEL CAN ALSO BE USED.
- MULCH IS TO BE APPLIED EVENLY AT A RATE OF 2 TONS PER ACRE.
- MULCH IS TO BE ANCHORED EITHER BY CRIMPING (TUCKING MULCH FIBERS 4 INCHES INTO THE SOIL, USING NETTING USED ON SMALL AREAS WITH STEEP SLOPES), OR WITH A TACKIFIER.
- HYDRAULIC MULCHING AND TACKIFIERS ARE NOT TO BE USED IN THE PRESENCE OF FREE SURFACE WATER.

**MAINTENANCE REQUIREMENTS**

- REGULAR INSPECTIONS ARE TO BE MADE OF ALL MULCHED AREAS.
- MULCH IS TO BE REPLACED IMMEDIATELY IN THOSE AREAS IT HAS BEEN REMOVED, AND IF NECESSARY THE AREA SHOULD BE RESEEDED.

City of Colorado Springs Stormwater Quality      Figure MU-1 Mulching Construction Detail and Maintenance Requirements

**MINE SEEDING SPECS (MSS)**

A. COLORADO MINED LAND RECLAMATION BOARD APPROVED SEED MIXE. USING THIS MIXTURE, WHEN DRILLED, WILL PROVIDE APPROXIMATELY 40 SEEDS PER SQUARE FOOT. IF THE SEED IS BROADCAST, THE AMOUNT WILL BE DOUBLED AND SPREAD ON A ROUGH SURFACE.

1. THIS MIX WAS PREPARED BY MR. GREG LANGER OF THE COLORADO NRCS SPECIFICALLY FOR THIS MINE AND IS BEST LEFT UNMOWED FOR THE FIRST 2 GROWING SEASONS.

**ESTABLISHMENT**

NON-IRRIGATED GRASS SEED RECOMMENDATION

SEED	RATE PLS/ACRE
SIDE-OATS GRAMA (VAUGHN)	0.91
SAND DROPSSEED (COMMON)	0.01
LITTLE BLUESTEM (CAMPER)	0.67
WESTERN WHEATGRASS (ARRIBA)	1.60
SAND BLUESTEM (CHET)	0.79
PRAIRIE SANDREED (GOSHEN)	0.32
YELLOW INDIANGRASS (CHEYENNE)	1.02
SWITCHGRASS (BLACKWELL)	1.12
GREEN NEEDLEGRASS (LORDORM)	0.48
INDIAN RICEGRASS (NEXPAR)	1.11
PURPLE PRAIRIE CLOVER	0.03
FOUR-WING SALTBUSSH	1.00
WINTERFAT	0.02
TOTAL PLS/AC.	9.08

**B. SEEDBED PREPARATION:**

2. WHEN MINING ON AN AREA IS COMPLETE, RECLAMATION WILL BEGIN. THE STOCKPILED SOILS WILL BE SPREAD, SMOOTHED OF LARGE CLODS, WORKED UNTIL MODERATELY FINE. ON THE AREAS WHERE SEED IS BROADCAST THE SURFACE WILL BE LEFT FAIRLY ROUGH TO TRAP THE SEED AND KEEP IT FROM BEING AFFECTED BY WIND.

**C. SEEDING:**

3. SEEDING SHALL BE DONE IMMEDIATELY AFTER SOIL PREPARATION OPERATIONS TO DISCOURAGE WEED COMPETITION. SEED SHALL BE EVENLY DISTRIBUTED OVER GROUND INTO A SLIGHTLY MOIST SEEDBED, USING AN APPROVED GRASS DRILL FOLLOWED BY PACKER WHEELS. HAND-BROADCASTING METHODS SHALL BE AT DOUBLE THE SEEDING RATE AND SHALL BE RAKED IN OR OTHERWISE COVERED WITH SOIL TO A DEPTH OF 1/4 INCH. HYDRAULIC SEEDING CAN BE USED IN AREAS NOT ACCESSIBLE FOR MACHINE METHODS.

4. THE GRASS SEED MIXTURE WILL BE PLANTED FROM EARLY FALL THRU MID-SPRING (NOVEMBER 1 TO APRIL 30). THE TIME OF PLANTING WILL BE CONTROLLED BY WHEN THE RESEEDED AREAS ARE READY FOR PLANTING. IF FALL PLANTING IS CONVENIENT, THE SEEDING WILL BE DONE BEFORE THE FIRST FREEZE (ABOUT THE TIME WINTERWHEAT IS PLANTED). IF SPRING PLANTING IS CALLED FOR, IT WILL BE DONE IN MARCH OR APRIL WEATHER PERMITTING AFTER THE LAST FROST. BOTH PERIODS ASSURE THERE WILL BE ADEQUATE RESIDUAL GROUND MOISTURE AVAILABLE FOR THE NEWLY PLANTED SEEDS.

**MINE SEEDING SPECS (MSS)**

5. ALL SEEDED AREAS SHALL BE MULCHED USING WEED FREE GRASS STRAW AND CRIMPED, AT RATES RECOMMENDED BY THE NRCS. (SEE MULCHING DETAIL (MU-1) ON SHEET 6 OF 6 IN THE GEO PLAN. REVEGETATION WILL BE CARRIED OUT IN SUCH A WAY SO AS TO ESTABLISH A DIVERSE, EFFECTIVE AND LONG-LASTING VEGETATIVE COVER THAT IS CAPABLE OF SELF-REGENERATION WITHOUT CONTINUED DEPENDENCE ON IRRIGATION, SOIL AMENDMENTS OR FERTILIZERS."

6. NO IRRIGATION IS PLANNED FOR THE REVEGETATED AREA IN THE MINE. IT MAKES THE VEGETATION DEPENDENT ON WATER AND DOES NOT PROMOTE A VEGETATION COVER THAT IS DIVERSE AND CAPABLE OF SELF-REGENERATION.

**D. WEED CONTROL & ACCEPTANCE:**

1. WEED CONTROL IS AN IMPORTANT FACTOR FOR GRASS ESTABLISHMENT. TIMELY MOWING OPERATIONS ARE THE MOST SUCCESSFUL METHOD OF CONTROL. OPERATOR SHOULD FOLLOW THE APPROVED WEED CONTROL AND MANAGEMENT PLAN APPROVED BY THE DIVISION OF RECLAMATION MINING AND SAFETY. THE SEEDBED SHOULD BE MOWED BEFORE ANNUAL SEED SET EACH YEAR IF NEEDED. FOR PERENNIAL WEED CONTROL, USE SPOT CHEMICAL SPRAYING OR HAND WEED AFTER GRASS PLANTS ARE UP AND FAIRLY MATURE, AT THE MINIMUM, PAST THE THREE (3) TO FIVE (5) LEAF STAGE.

2. THE USE OF JOURNEY SELECTIVE, PRE-EMERGENT HERBICIDE OR APPROVED EQUAL SHALL BE REQUIRED IN AREAS INFESTED WITH CHEATGRASS (BROMUS TECTORUM) AND OTHER GRASSY WEEDS. JOURNEY SHALL BE APPLIED IN LATE SUMMER PRIOR TO GERMINATION OF CHEATGRASS AND OTHER WINTER ANNUAL WEEDS.

3. ESTABLISHMENT TIME AND ACCEPTANCE FOR BOTH NATIVE AND NATURALIZED GRASS SEED SPECIES, GERMINATION SHOULD START WITHIN THREE (3) TO SIX (6) WEEKS. DEPENDING ON PLANTING TIME, AVAILABLE MOISTURE AND SUCCESS OF WEED CONTROL, FULL ESTABLISHMENT AND INITIAL ACCEPTANCE OF SEED CAN TAKE A MINIMUM OF ONE (1) FULL GROWING SEASON, BUT USUALLY TAKES LONGER. FULL ESTABLISHMENT OF NON-IRRIGATED SEED CAN TAKE THREE (3) TO FIVE (5) YEARS OR MORE. HIGHER SEED RATES, SHALLOW DRILLING OF NO GREATER THAN 1/2" AND NARROW (2-4") SEEDER ROW SPACING HAVE PROVEN TO BE CRITICAL IN OBTAINING RAPID ESTABLISHMENT.

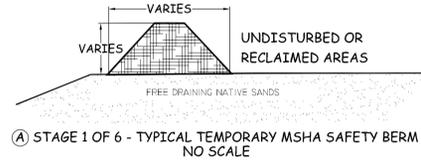
4. SEEDED AREAS WILL NOT BE ACCEPTED UNTIL THE STAND OF GRASS DISPLAYS UNIFORM COVERAGE OF THE SEED MIX PLANTED, WITH ALL SPECIES OF THE MIX BEING WELL REPRESENTED, AND MINIMAL WEEDS ARE PRESENT.

REVISIONS:	DATE:
SPECIAL USE PERMIT APPROVAL - BCC	08-02-2022

# ELLICOTT SAND AND GRAVEL LLC - SITE DEVELOPMENT PLAN

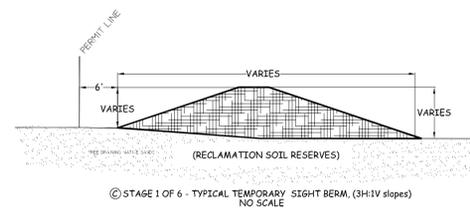
Parts of the SW $\frac{1}{4}$ NE $\frac{1}{4}$ , SW $\frac{1}{4}$ SE $\frac{1}{4}$  & NW $\frac{1}{4}$ SE $\frac{1}{4}$ , Section 29, T-14-S, R-62-W, 6th P.M., El Paso County, Colorado. - Containing 66.1 acres more or less.

## STAGE 1 OF 6 - GRADING AND EROSION CONTROL PLANS



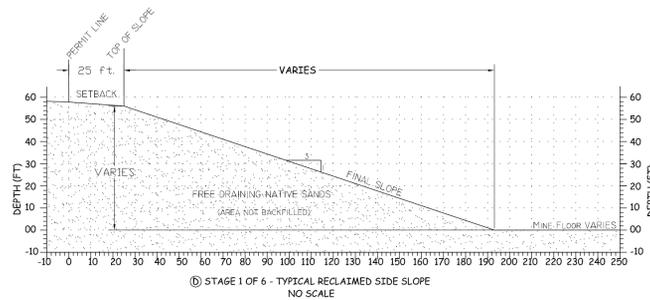
### TEMPORARY SAFETY BERMS

- 1) WILL BE CONSTRUCTED TO MINE HEALTH & SAFETY ADMINISTRATION STANDARDS (MSHA) TO PREVENT VEHICLES FROM ENTERING THE HAZARDOUS AREAS.
- 2) WILL HAVE STEEP SIDES AND ADEQUATE HEIGHT TO PREVENT HEAVY EQUIPMENT FROM CROSSING.
- 3) LOCATION OF SAFETY BERMS WILL CHANGE AND MAINTAINED AS NEEDED DURING THE LIFE OF THE MINE.
- 4) WILL BE REMOVED DURING RECLAMATION OF ADJOINING SLOPES, OR WHEN DETERMINED TO BE NO LONGER NEEDED FOR SAFE OPERATIONS.



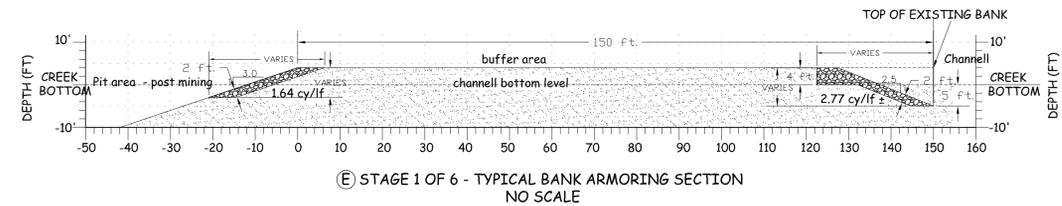
### TEMPORARY SIGHT BERMS

- 1) TEMPORARY SIGHT BERM WILL BE INSTALLED AS MINING PROGRESS ALONG THE WEST SIDE OF STAGE 1 USING THE SALVAGED GROWTH MEDIUM. THE MATERIAL WILL LATER BE USED DURING RECLAMATION.
- 2) THE HEIGHT OF THE BERMS WILL BE 6 TO 10 FEET HIGH TO LIMIT VISUAL IMPACTS TO RESIDENCES NORTH OF SANBORN ROAD.
- 3) WILL BE BUILT IN 300 TO 400 FEET LONG SEGMENTS.
- 4) SIDE SLOPE OF EACH SEGMENT WILL BE GRADED 3H:1V AND SEEDED WITH THE APPROVED SEED MIX AS SOON AS PRACTICAL.
- 5) BERM DEVELOPMENT WILL PROGRESS WITH MINING.
- 6) BERM WILL BE REMOVED DURING RECLAMATION OF ADJOINING SLOPES.
- 7) BERMS WILL BE SEEDED WITH WINTER WHEAT IF LEFT UNDISTURBED FOR MORE THAN 6 MONTHS. SEE DETAIL TS - SHEET 5



### FINAL SLOPE GRADING

- 1) ALL EXTERIOR SLOPES WILL BE GRADED INTO THE MINED AREA AND RECLAIMED PER THE DIVISION OF RECLAMATION, MINING AND SAFETY APPROVED RECLAMATION PLAN.
- 2) RECLAMATION WILL RUN CONCURRENT WITH MINING. MEANING AS MINING PROGRESS WHEN THE FINAL SLOPING AND RESOILED IS COMPLETE AND THE AREA WILL NOT BE REDISTURBED IT WILL BE SEEDED TO REDUCE THE AMOUNT OF SITE DISTURBANCE AT ONE TIME.
- 3) SLOPES FROM THE SURFACE TO THE FLOOR WILL BE GRADED 3H:1V OR FLATTER.
- 4) GROWTH MEDIUM STORED IN THE SIGHT BERMS WILL BE RESPREAD OVER THE AREA TO BE SEEDED.
- 5) THE MINED AREA WILL BE REVEGETATED WHEN RESOILING IS COMPLETE. IT WILL BE DONE DURING THE RECOMMENDED SEASON FOR DRYLAND SEEDING.
- 6) INFORMATION PROVIDED ON THIS SECTION MAY CHANGE AS MINING PROGRESSES DUE TO VARIATIONS IN THE MATERIAL DEPTH, THE DEPTH TO THE WATER TABLE AND LOCATION IN MINING AREA.



### EPHEMERAL DRAINAGE BANK AND MINED BANK PROTECTION PLAN

This bank protection plan is presented to explain the bank armoring on both side of the Black Squirrel Creek and the tops of the excavated slope that run parallel to the channel. This armoring is being proposed to keep the Black Squirrel Creek within the historic banks so the excavated area will not capture if a epic flood event were to occur after reclamation is complete. The minimum width of the top of the armored banks will be 150 feet.

We have followed the 2013 Urban Drainage and Flood Control District (UDFCD) Publication guideline document for planning and design of the armoring on the mining side bank and the bank armoring on the creek channel side. The armor is intended to define the channel and protect the banks should a 100 year event occur after an area has been mined. All armoring done in or along the dry channel will be done outside the Ordinary Highwater Line (OHW) to avoid needing a U.S. Army Corps of Engineers permit. The existing OHW is shown on all map exhibits in the permit packet as an orange line. If this changes a mining advances around the permit area the armoring locations will change to meet the conditions at that time. The armoring will be covered with a 6 inch layer of growth medium and seeded with the approved seed mix.

We have sized the armoring, based on the results from the HEC-RAS modeling of the 100-year storm. Black Squirrel Creek is a true ephemeral drainage where the only water that travels down the drainage is during isolated storm events that create mini floods. In most cases the OHW is 10 feet or less across. The 100-year Floodplain information provided by El Paso County has been added to all of the Map Exhibits in the Reclamation Packet and is shown as a blue line.

There are general items that will be common to both armoring areas. In general, all armoring material will be recycled concrete fragments with surface rebar removed that meets the definition of Inert Materials, there will be no exposed rebar in the concrete and it will be sized 12 to 24 inches with a few larger pieces and fines mixed in to fill voids. The top of the armoring will be a minimum of 3 feet below the existing creek channel thalweg as described below. ESG will keep enough material stored on the mine to complete armoring needed on an area as it is mined and ready for armoring. At a minimum, 850 cubic yards will be stockpiled on the mine for use in armoring. This is enough to armor a minimum of 500 feet of excavation bank. The stockpile of armoring material will be placed parallel to the water flow so it will not interfere with flows in the flood plain if flooding occurs and within the 150 foot setback so it is close to the area where it will be placed.

The attached Figure 1 shows the cross section of the areas discussed below and details of the armoring to protect the banks along Black Squirrel Creek and Big Spring Creek. Sheet 4 - Final Phase - Reclamation Plan Map shows the location of the areas to be armored in the mine.

### Channel Bank Armoring.

Along the banks of Black Squirrel Creek and Big Springs Creek bank armoring will be placed wherever mining will take place within 400 feet of the bank. The armoring will be done as mining advances in each stage so that if mining ended along the channels before mining reached the 400 foot line no armoring would need to be done. As mining approaches the 400 foot limit the channel adjacent to mining area will be armored following the UDFCD Guidelines.

Bank armoring will be done, using the concrete recycle material described above. The armored face of the bank will extend to 5 feet below the thalweg of the dry channel to the top of the existing bank and will be a minimum of 2 feet thick. This will leave an armored face along the surface that is 29 feet wide. On average this will require 2.77 cu-yds per linear foot. The armoring will not take place in the OHW but rather along the historic bank of the creeks. The face of the armoring will be sloped 2.5h to 1v per the guidelines.

### Excavation Bank Armoring.

On the inside of the mined area adjacent to the creek channels the armoring will be placed from the existing elevation so the toe of the armoring will be a minimum of 3 feet below the creek thalweg and will be 2 feet or more thick. This is approximately 1.64 cyd/ft along the excavation bank slopes. The armoring will cover the bank slopes from the original ground surface to a depth of 3 feet below the channel thalweg and parallel to the channel. Once sloping begins the armoring will be installed on 500 foot sections until completed. This will leave an armored face along the surface that is 27 feet wide.

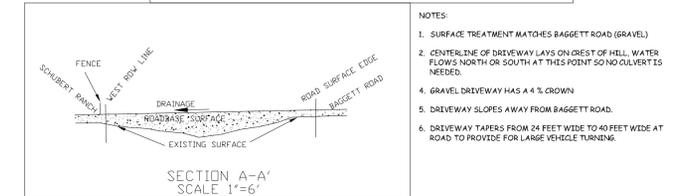
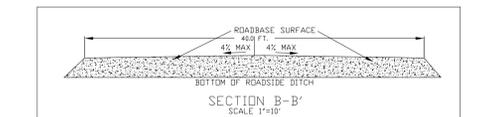
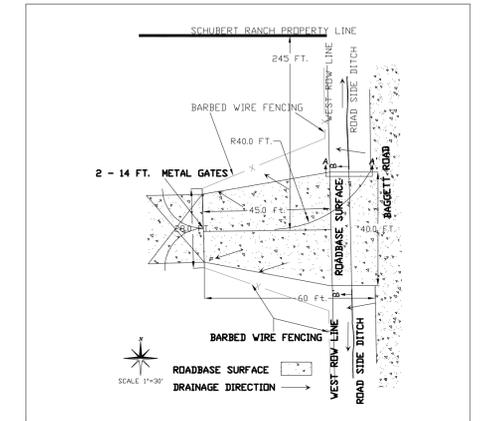
### Supplied supporting documents

Figure 1 - Bank Protection Plan cross section (Revised 01-24-2024)

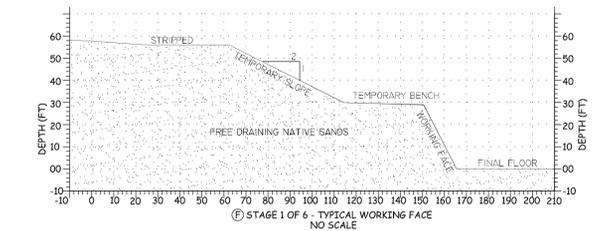
See PPR 234 Drainage Plan Appendix A - Table 7 for analysis of armor sizing.

THIS ARMORING PLAN HAS BEEN REVIEWED AND APPROVED BY THE COLORADO DIVISION OF RECLAMATION, MINING AND SAFETY (CDRMS) AND BONDED FOR COMPLETION.

DESIGN IS BASED ON MILE HIGH FLOOD DISTRICT (AKA URBAN DRAINAGE) AND IS BASED ON RECOMMENDED TECHNICAL REVIEW GUIDELINES FOR GRAVEL MINING AND WATER STORAGE ACTIVITIES WITHIN OR ADJACENT TO 100-YEAR FLOODPLAINS (JANUARY 2013)



- NOTES:
1. SURFACE TREATMENT MATCHES BAGGETT ROAD (GRAVEL)
  2. CENTERLINE OF DRIVEWAY LAYS ON CREST OF HILL, WATER FLOWS NORTH OR SOUTH AT THIS POINT SO NO OVERTURNS NEEDED.
  3. GRAVEL DRIVEWAY HAS A 4% CROWN
  4. DRIVEWAY SLOPES AWAY FROM BAGGETT ROAD.
  5. DRIVEWAY TAPERS FROM 24 FEET WIDE TO 40 FEET WIDE AT ROAD TO PROVIDE FOR LARGE VEHICLE TURNING.



### MINING AREA GRADING

- 1) WHEN MINING COMMENCES, THE TOP 8 TO 12 INCHES OF GROWTH MEDIUM WILL BE REMOVED LEAVING A SHALLOW HOLE WHERE MINING WILL TAKE PLACE. GROWTH MEDIUM WILL BE PLACED IN THE SIGHT BERMS.
- 2) WHEN STRIPPING STARTS, ALL DISTURBED AREA WILL BE SLOPED TO DRAIN INTO THE DISTURBED AREA, SO ALL STORMWATER WILL BE RETAINED ON SITE TO EITHER SOAK INTO THE GROUND OR EVAPORATE.
- 3) ALL FINAL SLOPES WILL BE GRADED 3H:1V. TEMPORARY SLOPES WILL BE GRADED 2H:1V FOR SAFETY REASONS AND ACTIVE WORKING FACES WILL BE MINED NEAR VERTICAL. TEMPORARY AND WORKING FACE SLOPES ALL DRAIN INTO THE MINE SO NO OFF-SITE DRAINAGE PROTECTION IS NEEDED.
- 4) INFORMATION PROVIDED ON THIS SECTION MAY CHANGE AS MINING PROGRESSES DUE TO VARIATIONS IN THE MATERIAL DEPTH, THE DEPTH TO THE WATER TABLE AND LOCATION IN MINING AREA.



PPR 234

EL PASO COUNTY SITE DEVELOPMENT PLAN  
CROSS SECTIONS  
FOR  
SCHUBERT RANCH SAND RESOURCE  
ELLICOTT, COLORADO

REVISIONS:	DATE:
SPECIAL USE PERMIT APPROVAL - BCC	08-02-2022

**ELLICOTT SAND AND GRAVEL LLC**  
235 Franceville Coal Mine Road | Colorado Springs Co 80929  
phone: (602) 558-0846

FILE NAME:	01/30/2024
SCALE:	NA
DRAWN BY:	ENV/510
CHECKED BY:	GTH

6

SHEET 6 of 6

PROJECT #:  
EL PASO COUNTY