



**Notes:**

1. All materials used for backfilling shall be free of all contaminants and shall be non-noxious, non-flammable, and non-combustible.
2. Screening berms to be removed and used in final reclamation.
3. Final grades not to exceed 5:1 Horizontal to Vertical, except within 500 feet of top of bluff, final grade not to exceed 8%.
4. The maximum depth of mining shall be ten feet above the water table. Water table information from water level data from on-site soil borings and wetland delineation. Soil Boring B-2 did not encounter groundwater within the granular material or the underlying clay. However, because of the low transmissivity of the clay layer, groundwater likely did not have time to equilibrate. For the purposes of this reclamation plan, the elevation of the water table was conservatively assumed at the top of the clay. In the future, applicant may request an amendment to the reclamation plan and IUP pending further verification of groundwater elevations. Such amendment would require Board approval.
5. Reclamation grades generally represent the lowest final elevation. Reclamation grades across the floor of the mine may be raised based on final soils balance.
6. Comply with all Carver County Water Management Organization (CCWMO) permit requirements including sediment and erosion control, topsoil management and seeding and vegetation standards.
7. The site is planned to return to agricultural production. If any areas are not returned to agricultural production, seeding and mulching shall be consistent with MNDOT specifications for rights of way. Reclaimed areas that are not returned to agricultural production will be seeded with a native grass seed mix or in accordance with the permit requirements of the Carver County Water Management (CCWMO).
8. Soil reclamation, seeding, and mulching must occur within each phase as soon as final grades have been established. Exceptions to seeding and mulching include the 15 acre operational area allowed during active mine operation.
9. Soil erosion and sedimentation control measures shall be consistent with MPCA's publication entitled "Protecting Water Quality in Urban Areas" and the CCWMO permit.
10. Perimeter controls, such as vegetated filter strips, sediment logs, or silt fence will be used to secure the the perimeter until permanent vegetation is established.
11. Within nine months after completion of mineral extraction or after termination of the permit, all equipment, vehicles, machinery, materials, stockpiles of extracted mineral materials, and debris shall be removed from the site.
12. Reclamation will be progressive, and in proportion with advances of mining to maintain a maximum of 10 acres of active mining, 15 acres of operation areas, and 10 acres of active reclamation at all times.
13. Reclamation will not result in an increase of impervious area. Paved portion of private roadway to active mine to be removed as part of final reclamation.
14. Wetlands field delineated by Anderson Engineering.
15. Preserve existing topsoil. Strip, salvage, and re-spread topsoil on site as part of reclamation. The graded or backfilled area shall be surfaced to a depth of 6" with a soil quality at least equal to the topsoil of land areas immediately surrounding areas.
16. Till or use a backhoe with a toothed bucket in order to scarify and de-compact the subsoil to a depth of at least 6-inches before the first lift of topsoil is applied.
17. Areas of future infiltration basin should not be backfilled with non granular material. Rip and loosen base of infiltration basin to a depth of 18" below final grade. Base of infiltration basin is 34" below final grade. Place 30" of well-blended granular mix consisting of 70% - 85% sand and 15% - 30% organic matter. Place 4" of double shredded wood mulch (MnDOT TYPE 6) over granular mix. Plant with deep rooted native plants.
18. Construct reinforced grass spillway at 863.5.



CONSULTING CIVIL ENGINEERS  
 10830 NESSBITT AVENUE SOUTH  
 BLOOMINGTON, MINNESOTA 55437  
 (952) 881-3344 TELEPHONE  
 (952) 881-1913 FAX  
 www.sundecivil.com

**Ron Olson  
 Construction**

**Proposed Sand  
 and Gravel Mine**

San Francisco  
 Township  
 Carver County, MN

DATE	REVISION
3/17/2022	IUP
5/30/2022	Adjust graders to 8% w/ 500 ft of Bluff

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

Kirsten Pauly  
 DATE: 3/17/2022 REG. NO.: 21842

INFORMATION:

PROJECT NO.:	_____
DRAWN BY:	AB
CHECKED BY:	KP
APPROVED BY:	KP
SCALE:	Graphic
DATE:	_____

DESCRIPTION:

**Reclamation  
 Plan**

SHEET NO. \_\_\_\_\_

**C3**