

G:\17000\Projects\17000-17069\17062 Minnesota Valley OHV Park - Renville County.MXD\Map\DOCS\Figures\Figure 1 - Location Map.mxd



**PN: 15-17062** Source(s):  
 Municipalities (MnGeo/MN DOT, 5/29/2014)  
 Lakes (MN DNR, July, 2008)  
 Counties (MN DNR, July 2013)  
 PLS (MnGeo/USGS)

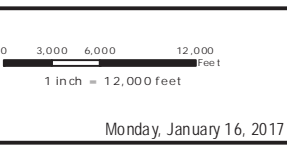
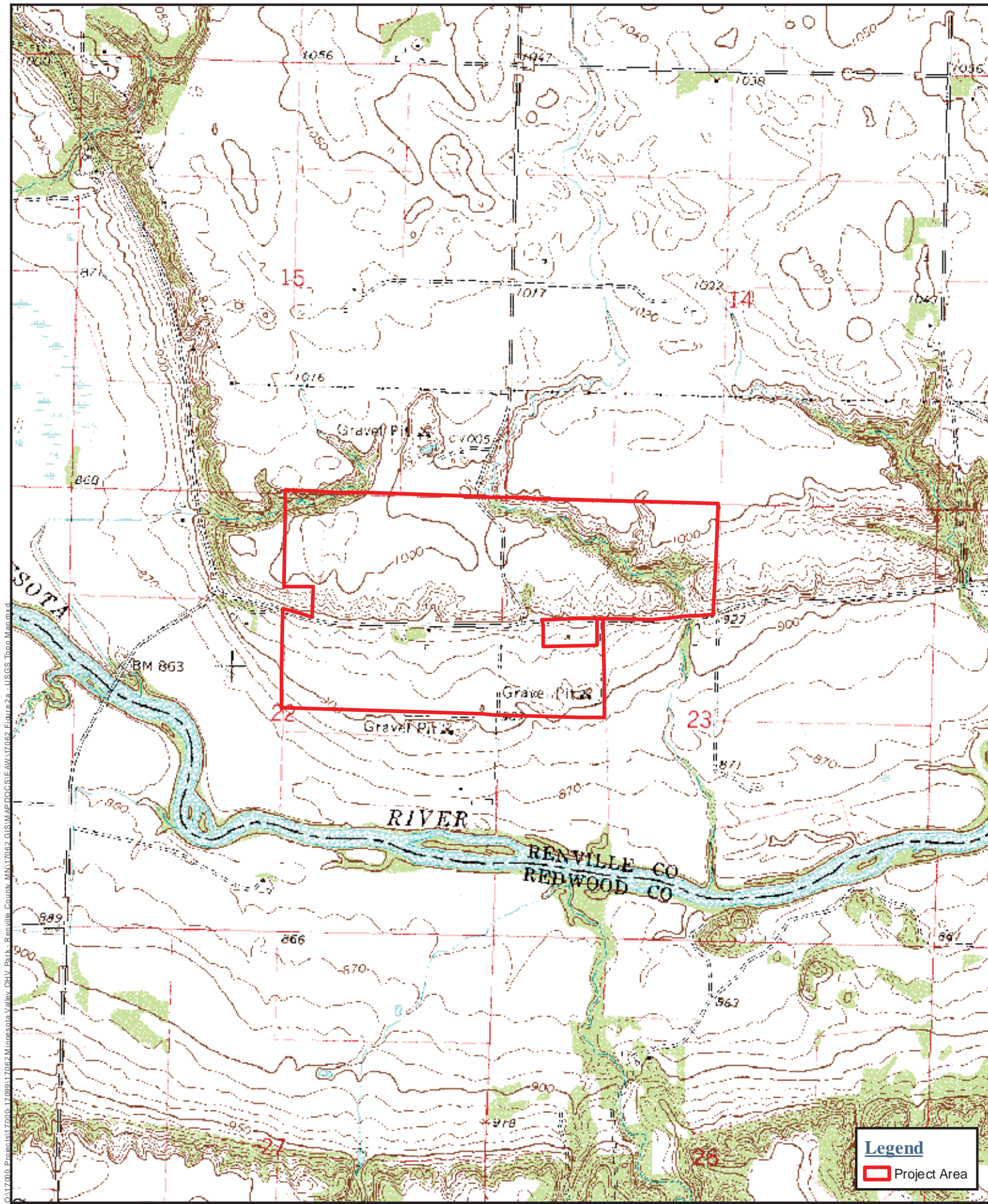


Figure 1  
**Project Location Map**  
 Minnesota Valley OHV Park  
 Sacred Heart Twp, Renville County, Minnesota

Monday, January 16, 2017



04/17/2016, Project: 15-17062 Minnesota Valley OHV Park, Renville County, MN 17062 GISMAP.DOC/SIE.AW/17062\_Eloraza - USGS Topo Map.mxd

**Legend**  
 Project Area

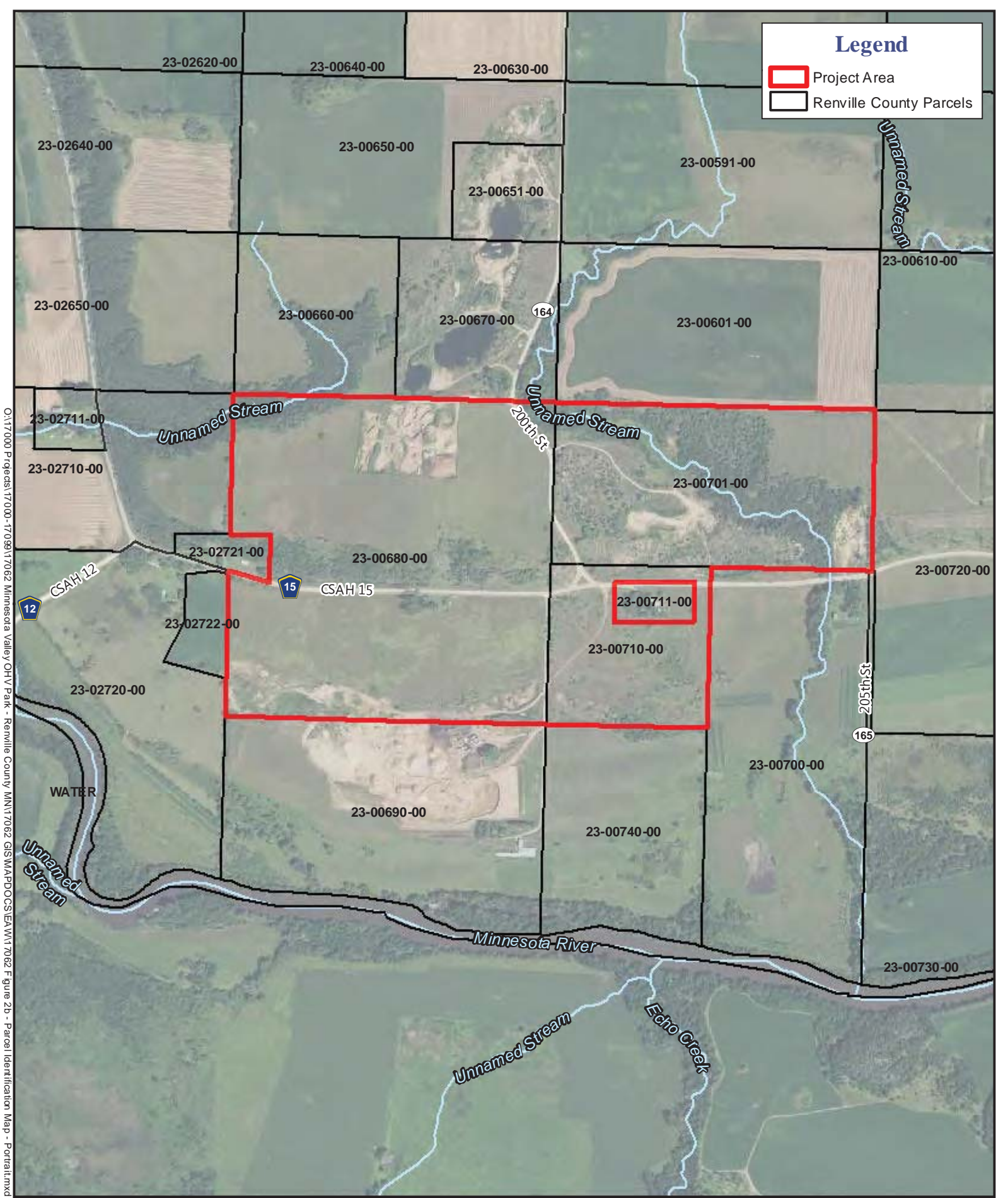


PN: 15-17062 USGS Topo (MN Geo)  
 Source(s):

0 380 760 1520 Feet  
 1 inch = 1,500 feet

Figure 2  
**USGS Topographic Map**  
 Minnesota Valley OHV Park  
  
 Sacred Heart Twp, Renville County, Minnesota


Tuesday, December 20, 2016



**Legend**

- Project Area
- Renville County Parcels

O:\17000 Projects\17000-17099\17082 Minnesota Valley OHV Park - Renville County MNT\17062 GIS\WAPDOCS\EA\W17062\_Figure 2b - Parcel Identification Map - Portrait.mxd


 PN: 15-17062  
 Source:  
 Orthophotograph (USDA, NAIP, 2015)  
 Renville County GIS Interactive Map (12/20/2016)




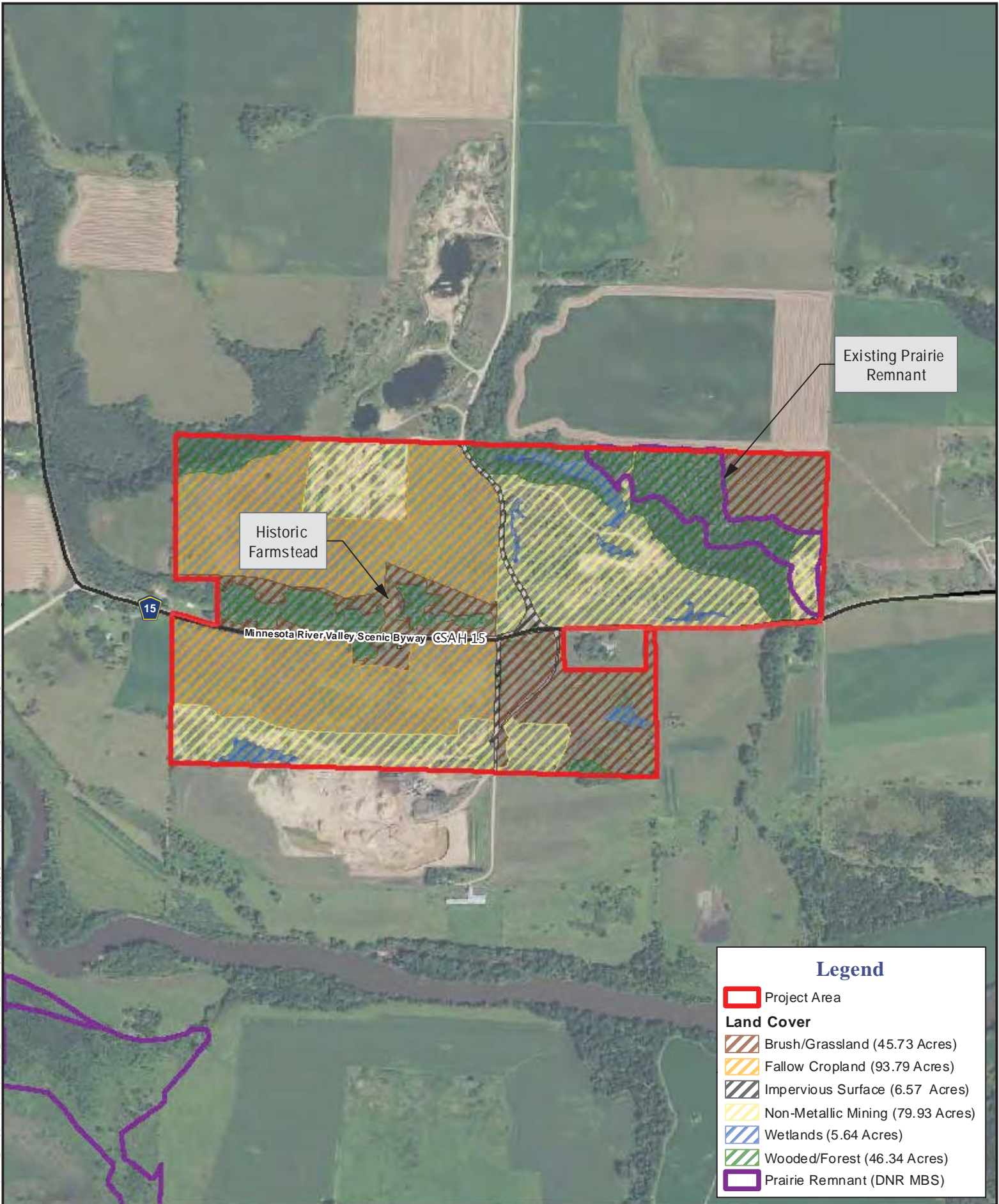

  
 1 inch = 1,000 feet  
 Wednesday, December 28, 2016

Figure 3  
 Parcel Identification Map  
 Minnesota Valley OHV Park  
 Sacred Heart Twp., Renville County, Minnesota



O:\17000 Projects\17-000-17-099\17062 Minnesota Valley OHV Park - Renville County MNT 7062 GIS\MAPDOCS\EA\W17062\_Figure 4 - Existing Land Use Map-Portrait.mxd



Existing Prairie Remnant

Historic Farmstead

Minnesota River Valley Scenic Byway CSAH-15

**Legend**

Project Area

**Land Cover**

- Brush/Grassland (45.73 Acres)
- Fallow Cropland (93.79 Acres)
- Impervious Surface (6.57 Acres)
- Non-Metallic Mining (79.93 Acres)
- Wetlands (5.64 Acres)
- Wooded/Forest (46.34 Acres)
- Prairie Remnant (DNR MBS)



PN: 15-17062  
 Source:  
 Orthophotograph (USDA, NAIP, 2015)  
 Landuse (Digitized from 2013 Orthophotograph)

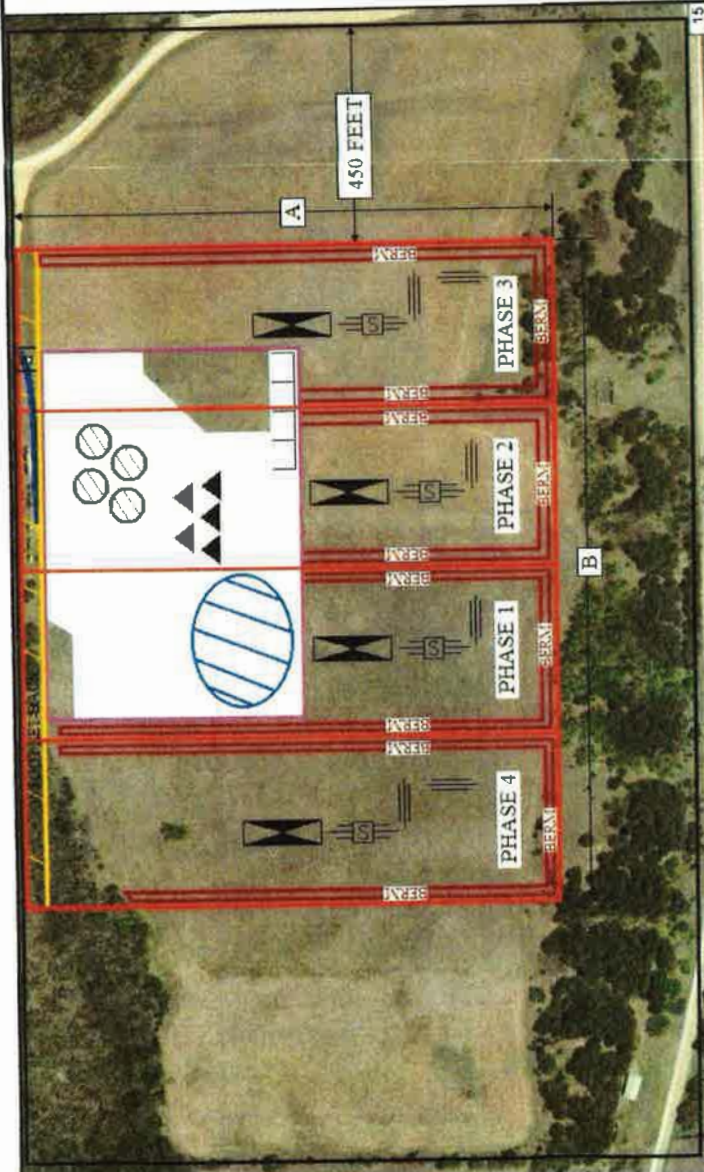


0 500 1,000  
 Feet  
 1 inch = 1,000 feet

Thursday, January 05, 2017

Figure 4  
 Existing Land Use Map  
 Minnesota Valley OHV Park  
 Sacred Heart Twp, Renville County, Minnesota



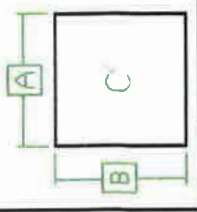


**KEY**

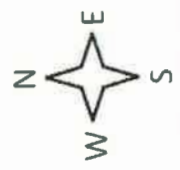
- A - PROPERTY LINE: ————
- B - FUTURE BUILDINGS OR SEDIMENT STRUCTURES: ————
- C - LOCATION OF MINE INCLUDING:
  - PHASE LOCATION: ————
  - SETBACKS: ————
- D - MACHINERY: [Symbol]
- ROLL CRUSHER: [Symbol]
- CONVEYOR: [Symbol]
- E - LOCATIONS OF: (SEE NOTE 4)
  - BERMS: [Symbol]
  - STORAGE AREA: [Symbol]
  - GRAVEL (SEE NOTE 1): [Symbol]
  - RECYCLED: [Symbol]
- F - PARKING: [Symbol]
- G - EXPLOSIVE STORAGE: [Symbol]
- H - EXPLOSIVE AND SEDIMENT CONTROL STRUCTURES: [Symbol]
- I - SAND WASH AREA: [Symbol]
- J - LEAK CONTAINMENT (SEE NOTE 2): [Symbol]
- K - SETTLING BASIN: [Symbol]
- L - LOCATIONS OF:
  - GATE: [Symbol]
  - SCALE: [Symbol]
  - (SEE NOTE 3)
  - M - EXISTING GRAVEL PIT: [Symbol]

- 1) Gravel stockpile sizes shall be approximately 75 feet wide, upto 200 feet long and 35 feet high. Recycled material sizes shall be approximately 75 feet wide, upto 200 feet long and 35 feet high.
- 2) In the event of machinery break down all maintenance is done off site. In the event of an oil, Engine coolant, or hydraulic fluid leak, drip pans will be placed under machinery to prevent soil contamination. All fluid in the drip pans will be placed in approved containers and taken off site to be disposed of.
- 3) To weigh the gravel the scale is located with in the conveyor.
- 4) Berm sizes shall be upto 15 feet high, 15 feet wide and 350 or 700 feet in length. Typically each 350 foot long berms is created as each phase begins, and then removed when the phase is completed before the next phase begins. Occasionally after a phase is completed, an additional 350 foot berm will be created adding to an existing 350 foot berm, (totaling 700 feet) to start the next phase before the completed phase is reclaimed and the 350 foot berm is removed.
- 5) The depth of excavation within the proposed gravel pit will not exceed 18 feet.
- 6) Existing settling basin Size 100 X 100 Feet, Depth 20 Feet, will be used for surface water runoff. All storm water within the gravel pit will be diverted to this basin. The existing settling basin was created during the previous mining permit that is currently expired.

**NOTES:**



- GRAVEL PIT DIMENSIONS**
- A = 1,100 LINEAR FEET
  - B = 1,500 LINEAR FEET
  - C = 1,650,000 SQ FEET
  - C<sup>2</sup> = 37.88 ACRES



**MAP B**

**PROPOSED OPERATIONS**

**TUFTO GRAVEL PIT**

REVISION
1
DATE
02/03/2016

**FIGURE 5A**  
North Mine (Tufto Site)

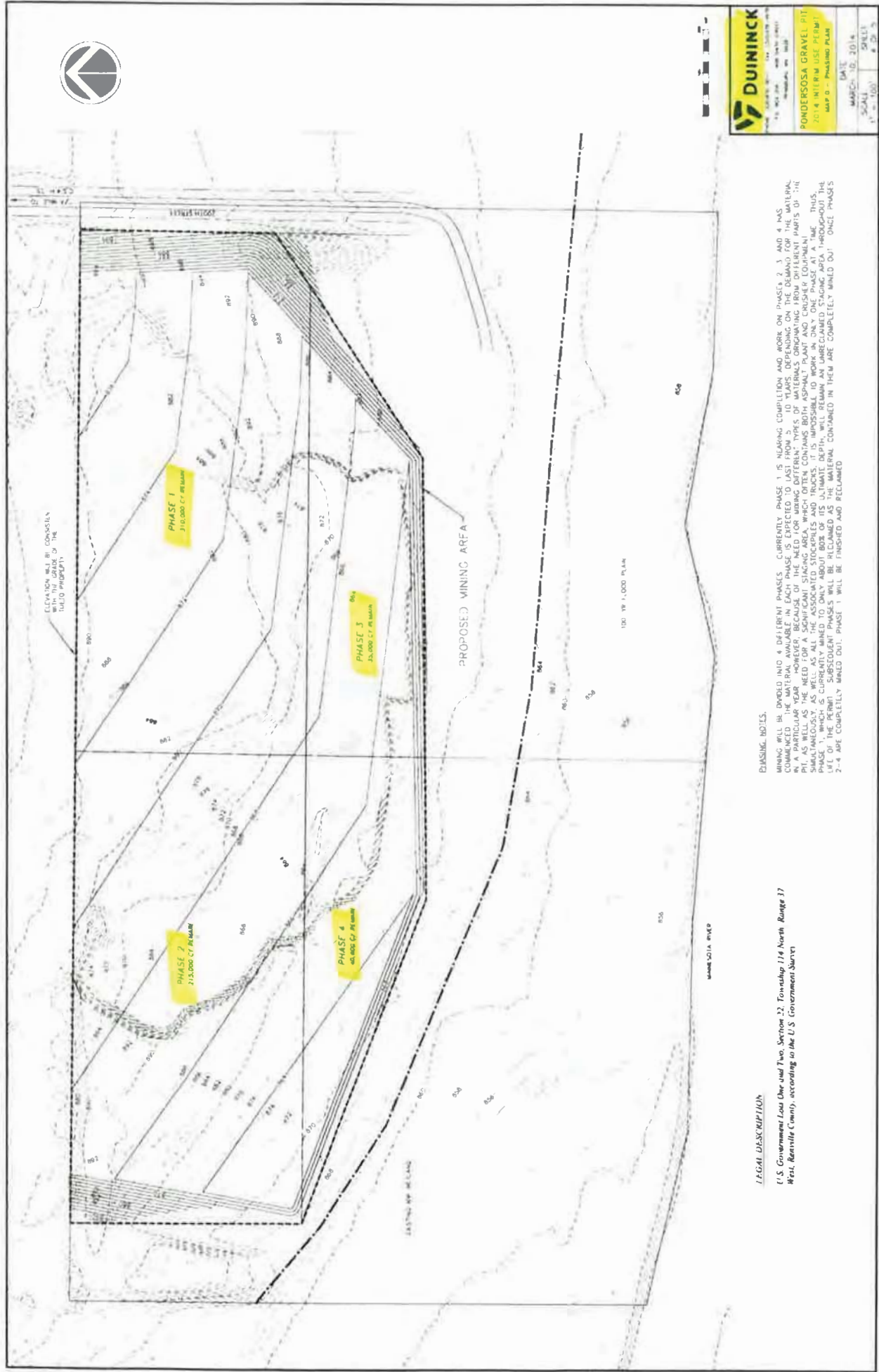
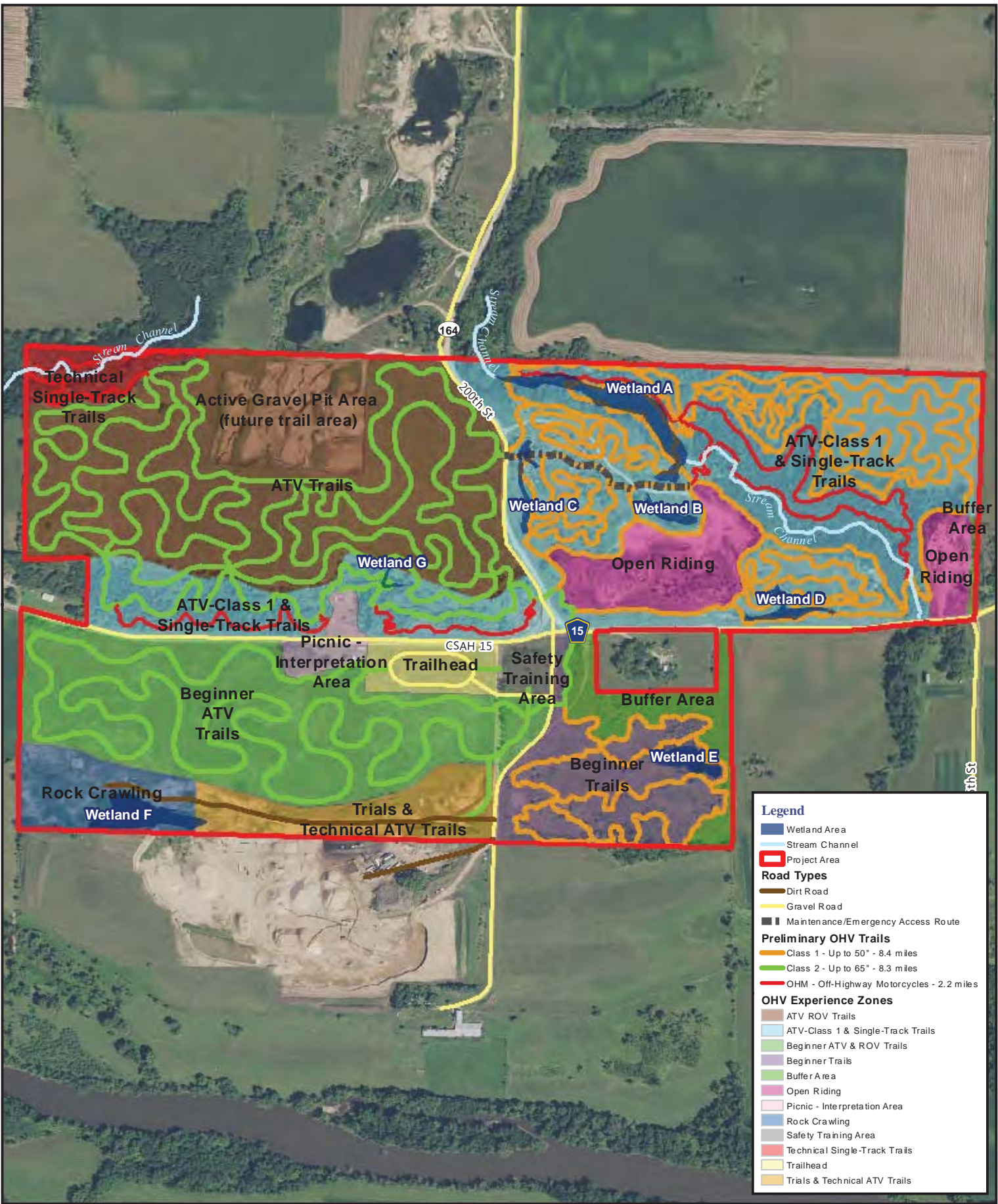


Figure 5B  
South Mine Area (Ponderosa Pit)

O:\17000 Project\17000-17099\17062 Minnesota Valley OHV Park - Renville County MNT\7062 GIS\MA\POCCS\EA\17062\_Figure 6 - Conceptual Site Plan Map-Portrait.mxd



**Legend**

- Wetland Area
- Stream Channel
- Project Area
- Road Types**
- Dirt Road
- Gravel Road
- Maintenance/Emergency Access Route
- Preliminary OHV Trails**
- Class 1 - Up to 50" - 8.4 miles
- Class 2 - Up to 65" - 8.3 miles
- OHM - Off-Highway Motorcycles - 2.2 miles
- OHV Experience Zones**
- ATV ROV Trails
- ATV-Class 1 & Single-Track Trails
- Beginner ATV & ROV Trails
- Beginner Trails
- Buffer Area
- Open Riding
- Picnic - Interpretation Area
- Rock Crawling
- Safety Training Area
- Technical Single-Track Trails
- Trailhead
- Trials & Technical ATV Trails



PN: 15-17062  
 Source:  
 Orthophotograph (USDA NAIP, 2015)  
 Wetland Delineation (ISG, April 2016)

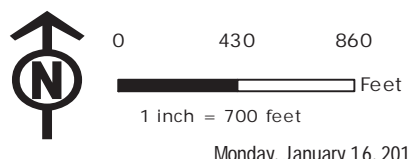
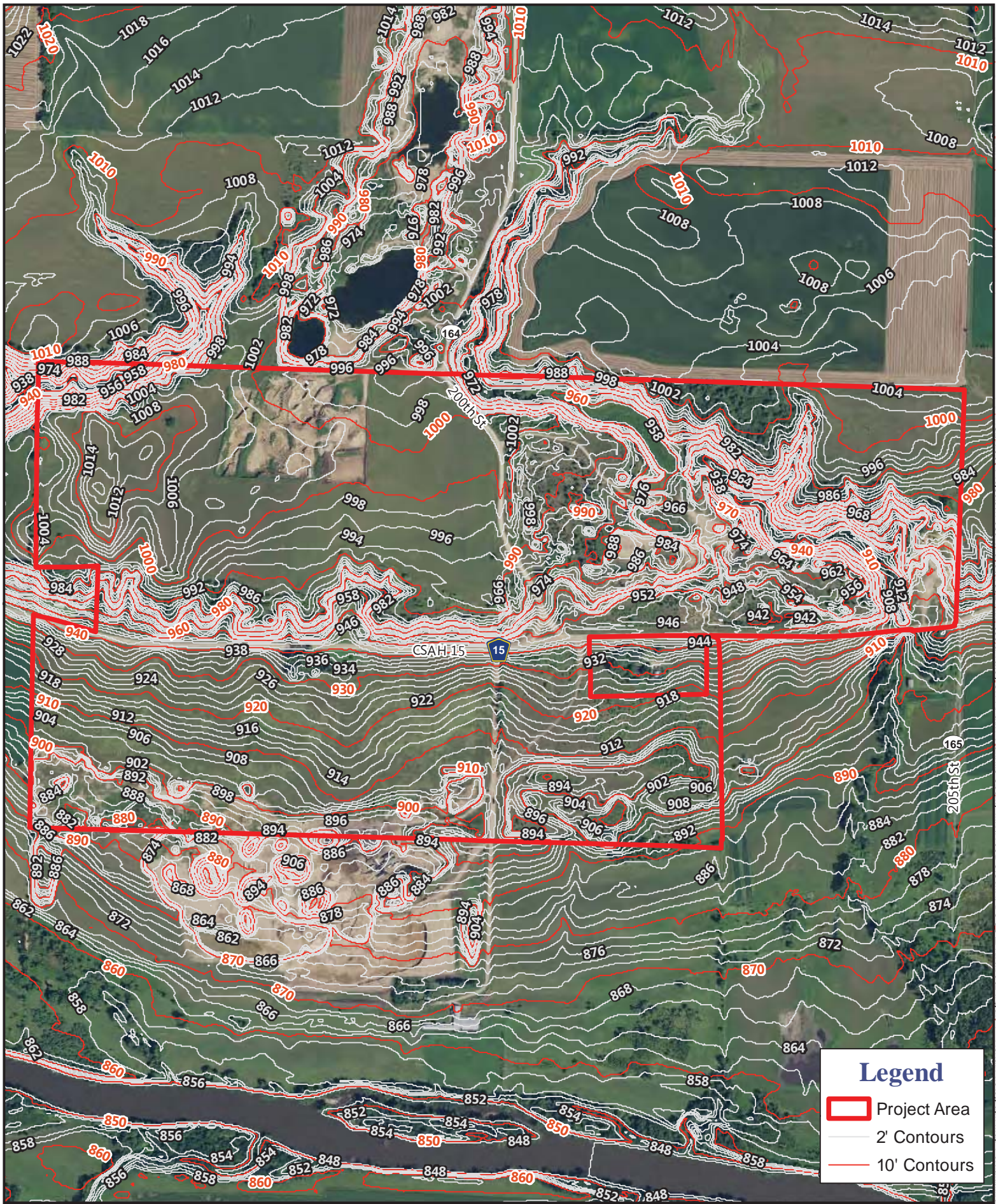


Figure 6  
 Conceptual Site Plan Map  
 Minnesota Valley OHV Park  
 Sacred Heart Twp, Renville County, Minnesota

Monday, January 16, 2017



0117000\_P01ec0117000-1709917092\_Minnesota Valley OHV Park - Renville County, MN\17062\_GIS\MAPOCS\1EA\17062\_Figure 7 - Aerial Photograph Map\_Portrait.mxd



PN: 15-17062  
 Source:  
 Orthophotograph (USDA, NAIP, 2015)  
 2ft Contours (2010)

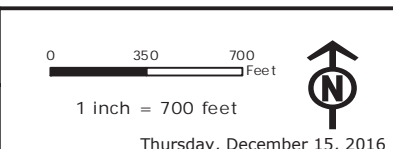
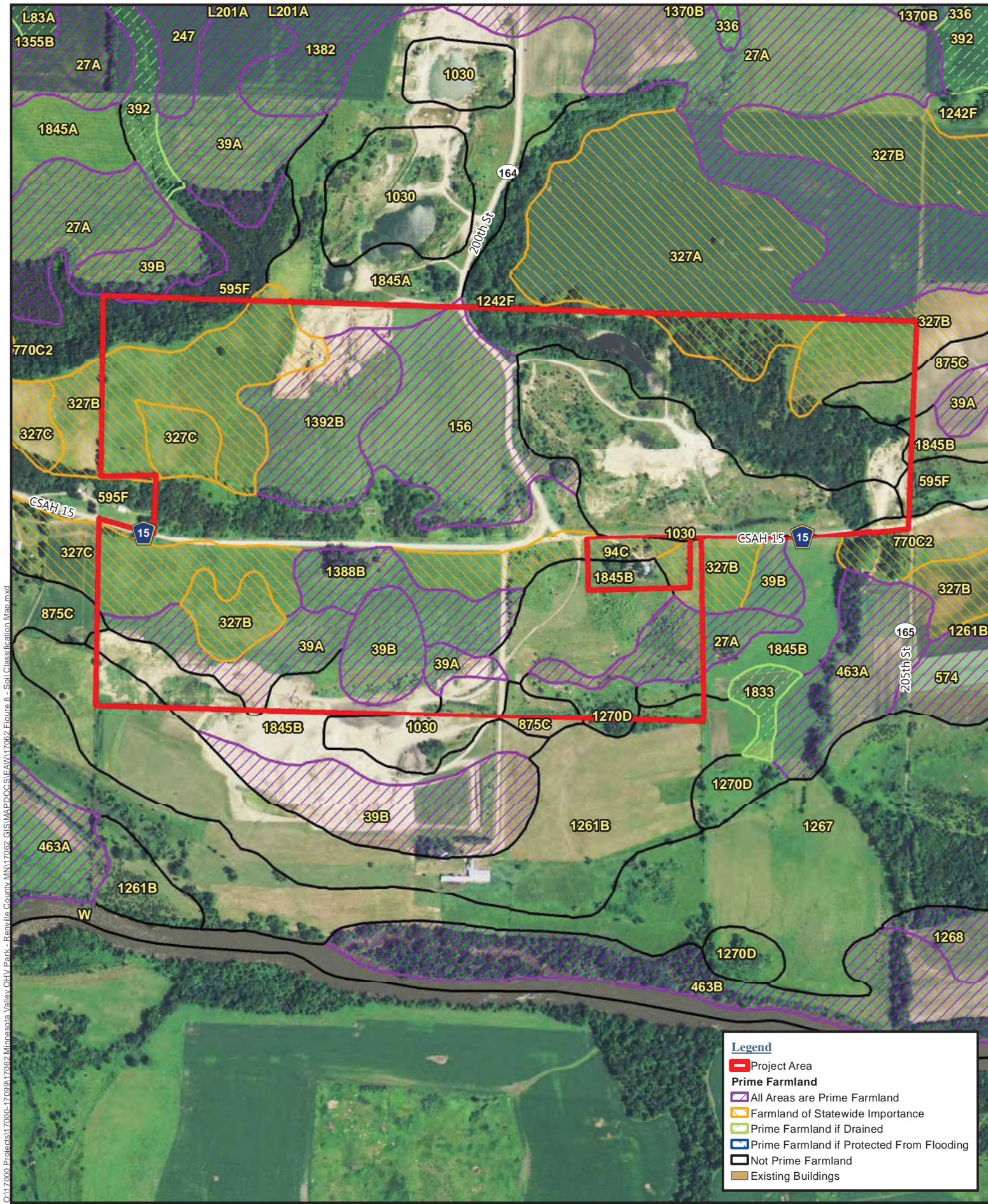


Figure 7  
 Aerial Photograph and LiDAR Map  
 Minnesota Valley OHV Park  
 Sacred Heart Twp, Renville County, Minnesota







O:\17000\Projects\17000-17099\17062 Minnesota Valley OHV Park - Renville County.MXD\17062 GIS\MAPDOC\SEAM\17062 Figure 8 - Soil Classification Map.mxd

**Legend**

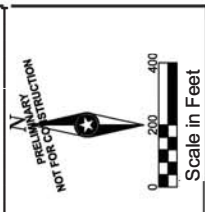
- Project Area
- Prime Farmland**
- All Areas are Prime Farmland
- Farmland of Statewide Importance
- Prime Farmland if Drained
- Prime Farmland if Protected From Flooding
- Not Prime Farmland
- Existing Buildings

PN: 15-17062  
 Source(s):  
 Orthophoto (USDA, NAIP, 2013)  
 Soil Survey (USDA NRCS, 2015)

Thursday, February 23, 2017

Figure 8  
**Soil Classification Map**  
 Minnesota Valley OHV Park  
 Sacred Heart Twp, Renville Minnesota

DEPARTMENT OF  
 NATURAL RESOURCES



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

DATE: \_\_\_\_\_ LIC. NO.: \_\_\_\_\_  
 I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

DATE: \_\_\_\_\_ LIC. NO.: \_\_\_\_\_  
 THIS DOCUMENT IS THE PROPERTY OF ILS & GROUP, INC. AND MAY NOT BE REPRODUCED OR DUPLICATED WITHOUT PRIOR WRITTEN CONSENT.

**RENVILLE COUNTY  
 MINNESOTA VALLEY  
 OHV PARK**

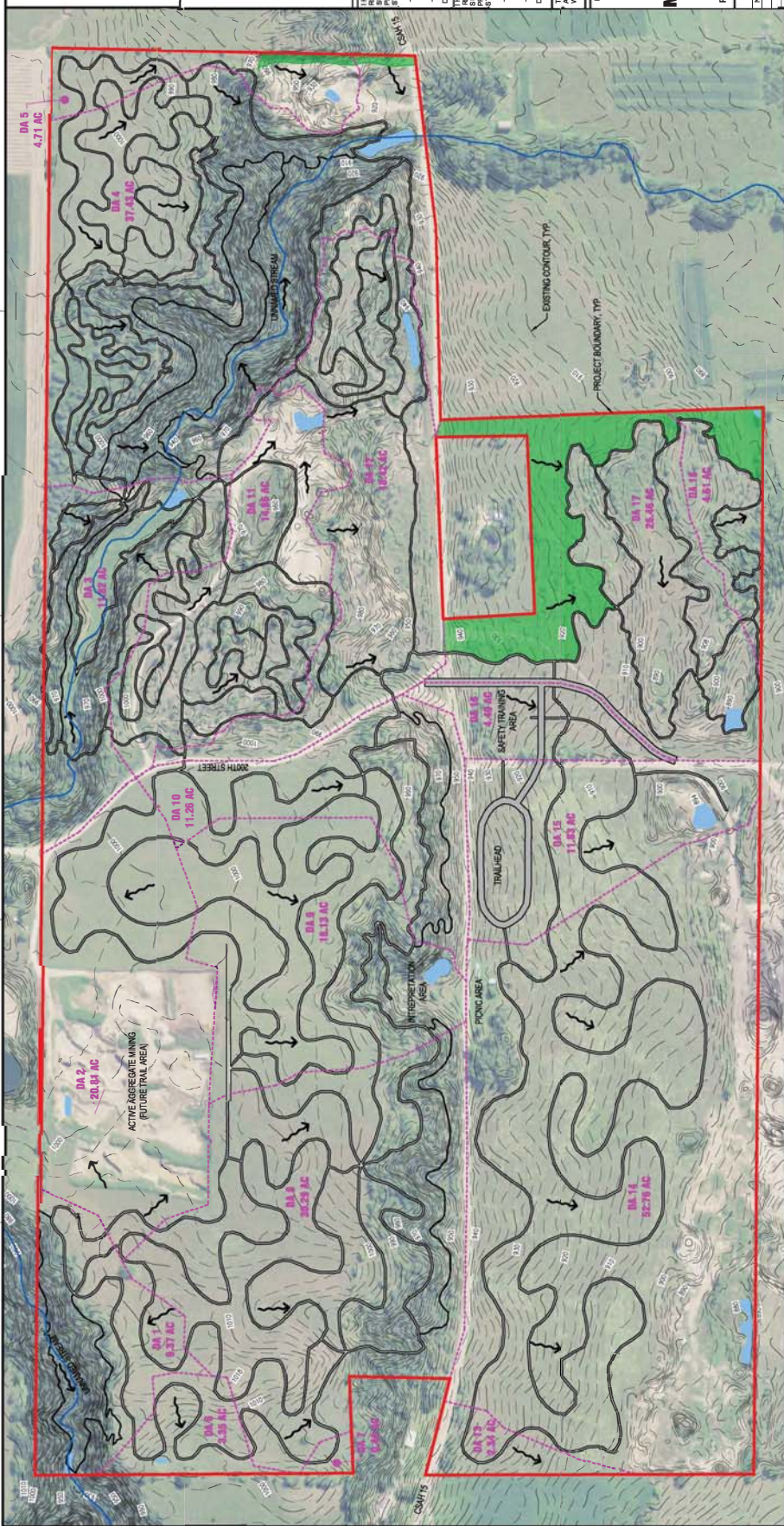
RENVILLE COUNTY MINNESOTA

NO.	DATE	REVISION SCHEDULE	DESCRIPTION
1			

PROJECT NO. 14-1708Z  
 FILE NAME 1708Z.DWG  
 DESIGNED BY BWP  
 REVIEWED BY ATB  
 ORIGINAL ISSUE DATE --/--  
 CLIENT PROJECT NO. --  
 TITLE

**OVERALL  
 DRAINAGE PLAN**

FIGURE 9



**LEGEND**

- DRAINAGE ARROW
- DRAINAGE AREA BOUNDARY
- STORMWATER MANAGEMENT BASIN
- BUFFER AREA

**TRAIL DESIGN NOTES**

SUSTAINABLE NATURAL SURFACE TRAIL DESIGN PRACTICES DESCRIBED IN THE MN DNR TRAIL PLANNING, DESIGN, AND DEVELOPMENT GUIDELINES SHALL BE IMPLEMENTED THROUGHOUT THE SITE TO MINIMIZE TREAD EROSION. THESE PRACTICES INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:

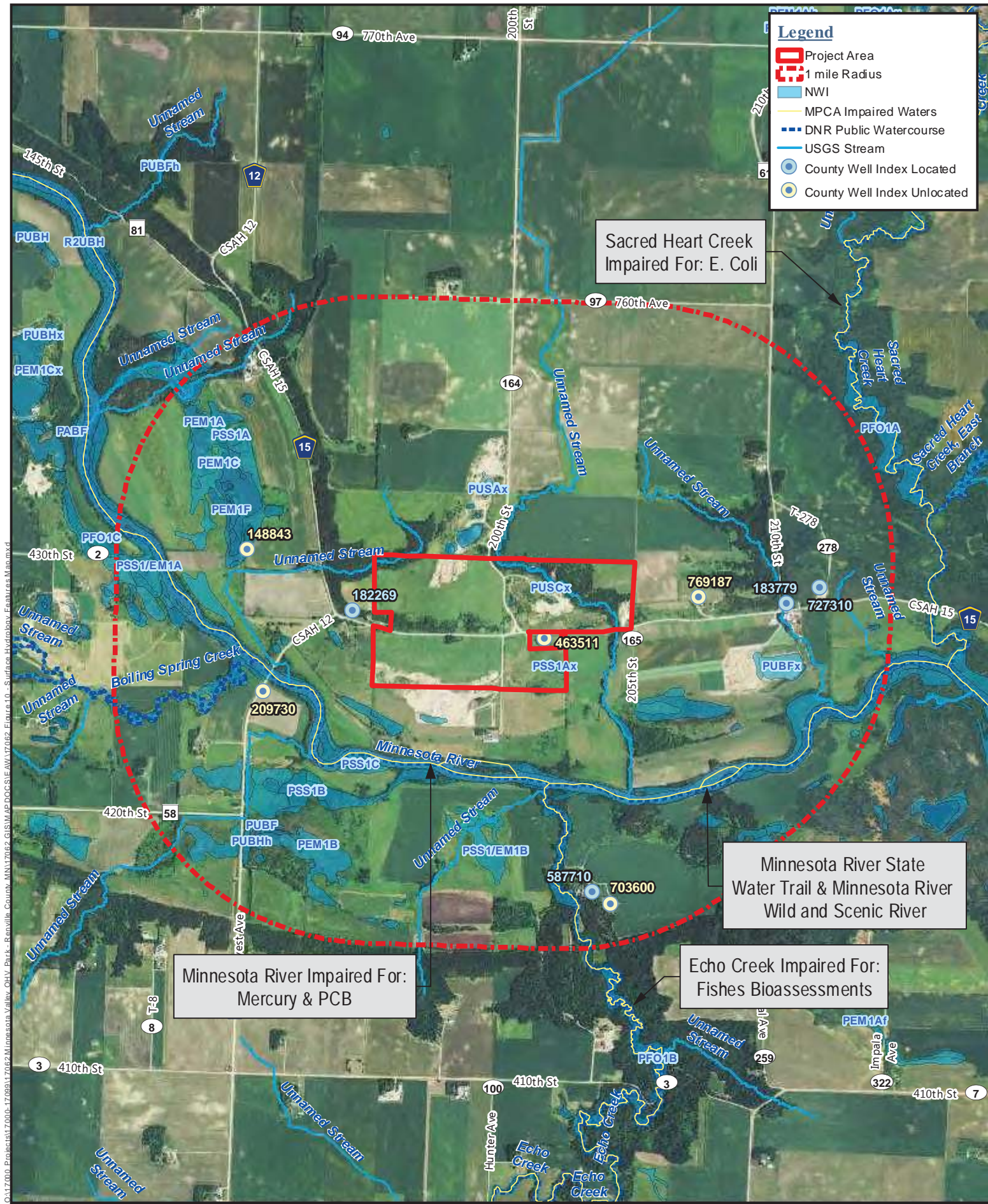
- PRIMARILY UTILIZING A "ROLLING GRADE" DESIGN PATTERN
- LIMITING TREAD GRADE
- USING ALIGNED TREAD CRESTS
- USING CONSTRUCTED TREAD CRESTS, SUCH AS FILLED TREAD CRESTS OR HARDENING TREAD CRESTS, WHERE NECESSARY TO PREVENT TREAD CLOSING
- USING ALIGNED TREAD DIPS
- USING CONSTRUCTED TREAD DIPS WHERE ALIGNMENT TREAD DIPS ARE NOT Viable
- DESIGNING TREAD DIPS TO PREVENT CLOSING
- TREAD HARDENING IN UNSTABLE SOILS
- DESIGNING TREAD CROSSINGS AS A TREADDIP
- HARDENING TREAD CROSSINGS WHERE NECESSARY

ADDITIONALLY, EFFECTIVE TRAIL MAINTENANCE AND MAINTENANCE PRACTICES ARE IMPORTANT IN PREVENTING AND MINIMIZING EROSION.



**MPCA STORMWATER MANAGEMENT CALCULATIONS**

Basin	Total Drainage Area	New Impervious Area	Required Infiltration Surface Area	Provided Infiltration Surface Area	Comments
Drainage Area 1 Basin	4.71 ACRES	0.00 ACRES	0.00 ACRES	0.00 ACRES	
Drainage Area 2 Basin	9.37 ACRES	0.86 ACRES	0.03 ACRES	0.04 ACRES	
Drainage Area 3 Basin	20.81 ACRES	0.64 ACRES	0.07 ACRES	0.03 ACRES	
Drainage Area 4 Basin	37.43 ACRES	2.28 ACRES	0.16 ACRES	0.16 ACRES	
Drainage Area 5 Basin	47.71 ACRES	4.71 ACRES	0.07 ACRES	0.07 ACRES	
Drainage Area 6 Basin	34.23 ACRES	2.53 ACRES	0.03 ACRES	0.04 ACRES	
Drainage Area 7 Basin	42.12 ACRES	2.79 ACRES	0.07 ACRES	0.10 ACRES	Drainage Area includes DA 10 and DA 16
Drainage Area 8 Basin	14.86 ACRES	1.07 ACRES	0.07 ACRES	0.17 ACRES	
Drainage Area 9 Basin	18.13 ACRES	1.13 ACRES	0.08 ACRES	0.08 ACRES	
Drainage Area 10 Basin	11.26 ACRES	4.47 ACRES	0.10 ACRES	0.10 ACRES	
Drainage Area 11 Basin	14.86 ACRES	1.07 ACRES	0.07 ACRES	0.17 ACRES	
Drainage Area 12 Basin	14.82 ACRES	0.92 ACRES	0.08 ACRES	0.17 ACRES	
Drainage Area 13 Basin	16.06 ACRES	0.96 ACRES	0.08 ACRES	0.17 ACRES	
Drainage Area 14 Basin	86.06 ACRES	1.13 ACRES	0.13 ACRES	0.13 ACRES	Total Drainage Area includes DA 8 and DA 13
Drainage Area 15 Basin	1.43 ACRES	1.43 ACRES	0.10 ACRES	0.11 ACRES	
Drainage Area 16 Basin	1.43 ACRES	1.43 ACRES	0.10 ACRES	0.11 ACRES	
Drainage Area 17 Basin	4.47 ACRES	0.00 ACRES	0.00 ACRES	0.00 ACRES	
Drainage Area 18 Basin	4.47 ACRES	0.00 ACRES	0.00 ACRES	0.00 ACRES	



04/17/2016, Project: 170016-1700161700162 Minnesota Valley OHV Park - Renville, County: MINN, Map Doc: 16-1700161700162 Surface Hydrology Features Map.mxd

**Legend**

- Project Area
- 1 mile Radius
- NWI
- MPCA Impaired Waters
- DNR Public Watercourse
- USGS Stream
- County Well Index Located
- County Well Index Unlocated

Sacred Heart Creek Impaired For: E. Coli

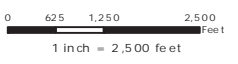
Minnesota River State Water Trail & Minnesota River Wild and Scenic River

Minnesota River Impaired For: Mercury & PCB

Echo Creek Impaired For: Fishes Bioassessments



PN: 16-17062  
 Source(s): Orthophoto (USDA, NAIP, 2013)  
 Impaired Waters (MPCA, 2012)



Monday, January 16, 2017

Figure 10  
**Surface Hydrology Features Map**  
 Minnesota Valley OHV Park  
 Sacred Heart Twp, Renville, Minnesota



04172010\_Projens172010-172062\_Minnesota Valley\_OHV\_Park\_-\_Renville\_County\_MN17062\_GISMAP.DOC\$E:\AW17062\_Figures\11 - Road Classification Map.mxd



**Legend**

- Project Area
- Counties
- Roads**
- Interstate
- US Highway
- State Highway
- County State Aid Highway
- County Road
- Local Roads
- Township Road



PN: 15-17062  
Source(s):  
Roads (MNDOT, 2012)

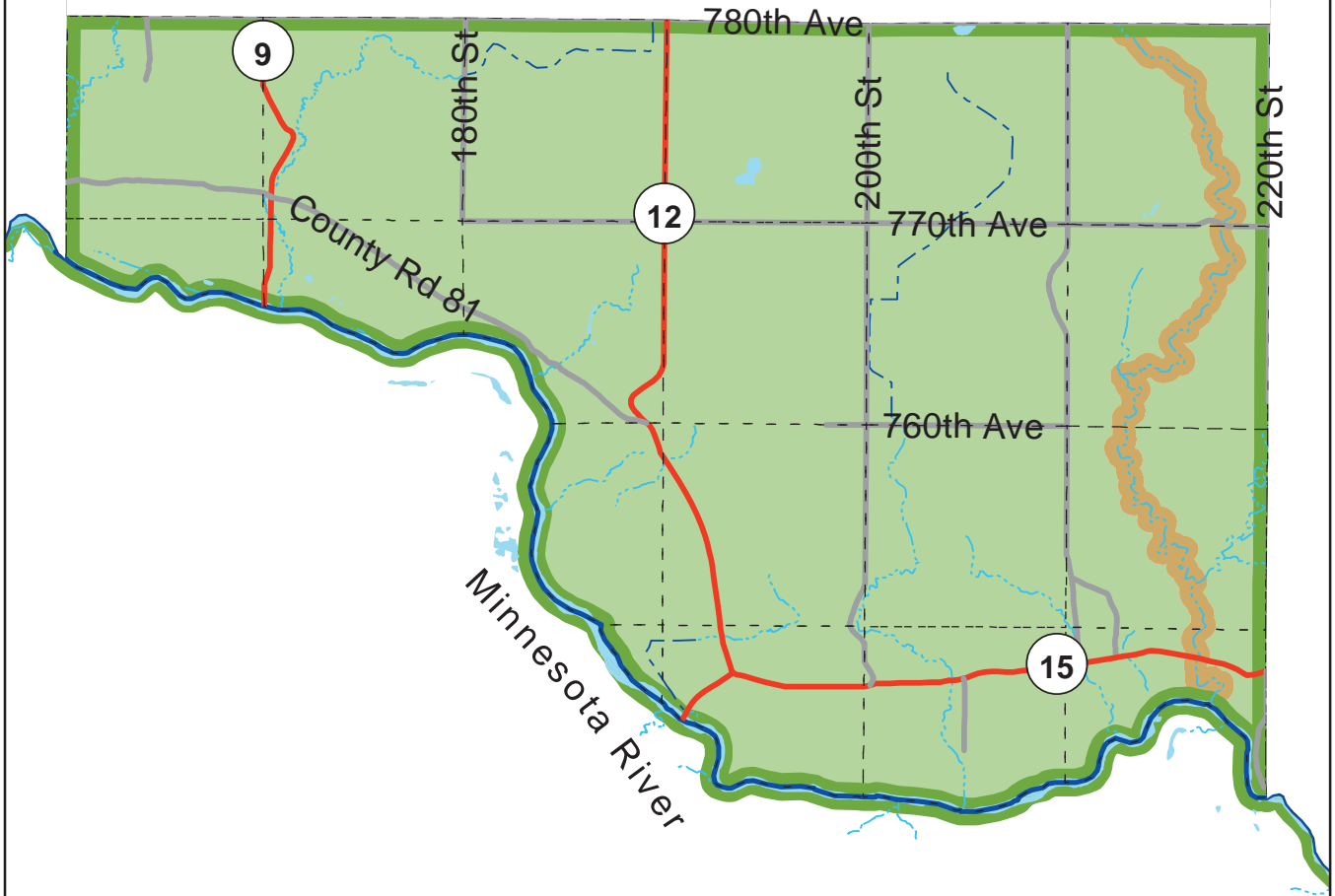
Monday, January 16, 2017

Figure 11  
**Road Classification Map**  
Minnesota Valley OHV Park  
Sacred Heart Twp, Renville County, Minnesota



# Renville County, MN

## SACRED HEART SOUTH TOWNSHIP



### ZONING MAP

April, 2011

#### Zoning Districts

- |                                    |                           |                  |
|------------------------------------|---------------------------|------------------|
| Agricultural (A)                   | U.S. Highway              | Rivers           |
| Commercial / Industrial (CI)       | State Highway             | Drainage Ditches |
| Rural Residential (RR)             | C.S.A.H.                  | Streams          |
| Shoreland Residential (SR)         | County and Township Roads |                  |
| Shoreland Special Protection (SSP) | Municipal                 |                  |
| Urban Expansion (UE)               |                           |                  |
| Incorporated Cities (IC)           |                           |                  |



### FIGURE 12

