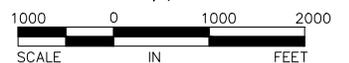
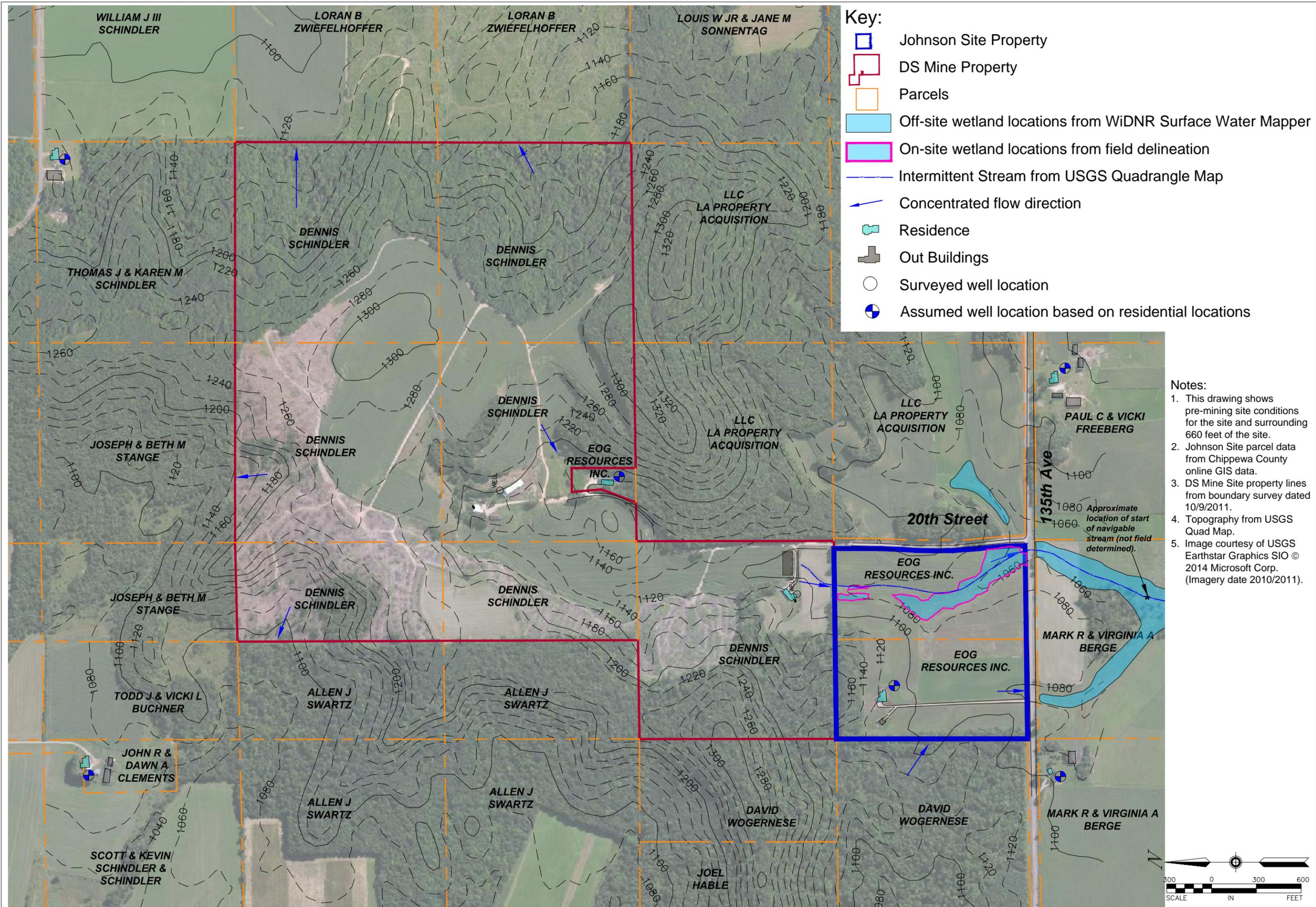


**FIGURE O-1
SITE LOCATION MAP**

DS MINE

Town of Cooks Valley, Chippewa County, Wisconsin
USGS QUADRANGLE MAP EXCERPT
Como Creek, WI and Colfax North, WI





- Key:**
- Johnson Site Property
 - DS Mine Property
 - Parcels
 - Off-site wetland locations from WiDNR Surface Water Mapper
 - On-site wetland locations from field delineation
 - Intermittent Stream from USGS Quadrangle Map
 - ↙ Concentrated flow direction
 - Residence
 - Out Buildings
 - Surveyed well location
 - Assumed well location based on residential locations

- Notes:**
1. This drawing shows pre-mining site conditions for the site and surrounding 660 feet of the site.
 2. Johnson Site parcel data from Chippewa County online GIS data.
 3. DS Mine Site property lines from boundary survey dated 10/9/2011.
 4. Topography from USGS Quad Map.
 5. Image courtesy of USGS Earthstar Graphics SIO © 2014 Microsoft Corp. (Imagery date 2010/2011).



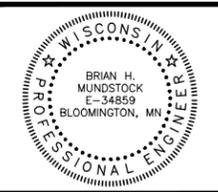
CONSULTING CIVIL ENGINEERS
 10830 NESSITT AVENUE SOUTH
 BLOOMINGTON, MINNESOTA 55437
 (952) 881-3344 TELEPHONE
 (952) 881-1913 FAX
 www.sundecivil.com

DS MINE

Town of Cooks Valley,
 Chippewa County,
 Wisconsin



KRAEMER
 MINING &
 MATERIALS, INC.



INFORMATION:

PROJECT NO.: _____

DRAWN BY: _____

CHECKED BY: _____

APPROVED BY: _____

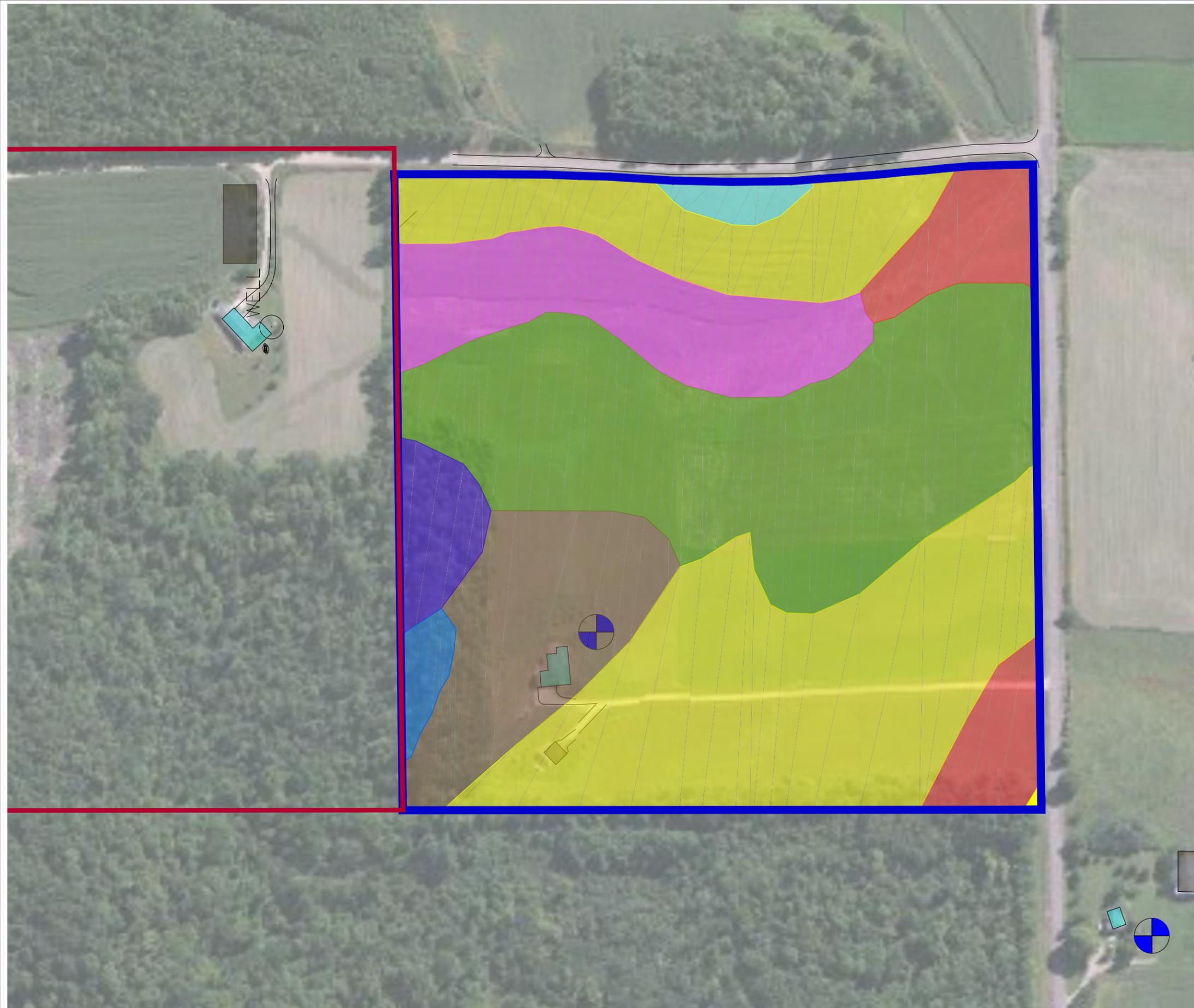
SCALE: _____

DATE: _____

**Appendix O -
 Initial Site Plan**

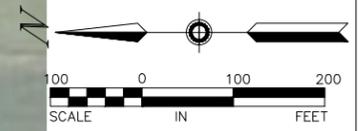
SHEET NO. _____

**Figure
 O-2**



- Key:**
-  Johnson Site Property
 -  DS Mine Property
 -  Arenzville silt loam
 -  Eleva sandy loam
 -  Elkmound loam
 -  Gale silt loam
 -  Northfield silt loam
 -  Orion silt loam
 -  Plainbo loamy sand
 -  Seaton silt loam

- Notes:**
1. Parcel data from Chippewa County online GIS data.
 2. Soil data from NRCS Chippewa County Soil Survey Data.
 5. Image courtesy of USGS Earthstar Graphics SIO © 2014 Microsoft Corp. (Imagery date 2010/2011).




Sunde Engineering, PLLC

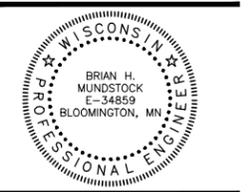
CONSULTING CIVIL ENGINEERS
 10830 NESSITT AVENUE SOUTH
 BLOOMINGTON, MINNESOTA 55437
 (952) 881-3344 TELEPHONE
 (952) 881-1913 FAX
 www.sundecivil.com

DS MINE

Town of Cooks Valley,
 Chippewa County,
 Wisconsin



KRAEMER
 MINING &
 MATERIALS, INC.

INFORMATION:

PROJECT NO.: _____

DRAWN BY: _____

CHECKED BY: _____

APPROVED BY: _____

SCALE: _____

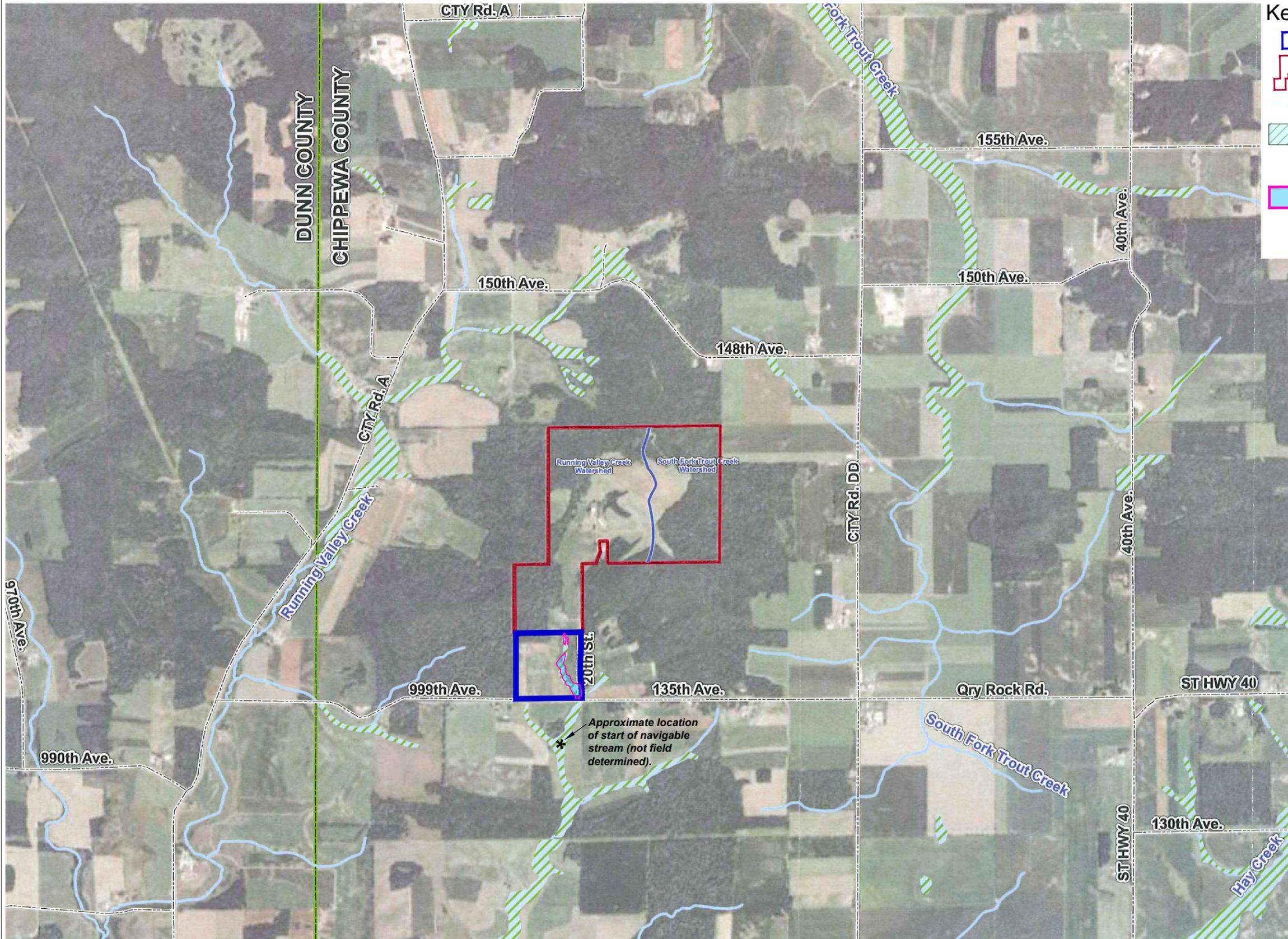
DATE: _____

DESCRIPTION:

**Appendix O -
 Soil Survey Map**

SHEET NO. _____

**Figure
 O-3**



Key:

- Johnson Site Property
- DS Mine Property
- ~ Streams
- WiDNR Wetland location
- On-site wetland locations from field delineation

Note:

1. Running Valley Creek is classified as a Class II Trout Stream.
2. Background image from Appendix Figure F-1, by SEH dated 6/23/11.

SCALE IN FEET

Sunde
Engineering, PLLC

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

DS MINE

Town of Cooks Valley,
Chippewa County,
Wisconsin

KRAEMER
MINING &
MATERIALS, INC.

BRIAN H. MUNDSTOCK
E-34859
BLOOMINGTON, MN

INFORMATION:

PROJECT NO.: _____

DRAWN BY: _____

CHECKED BY: _____

APPROVED BY: _____

SCALE: _____

DATE: _____

DESCRIPTION:
Appendix O - Site and Surrounding Features Map

SHEET NO. _____

Figure O-4



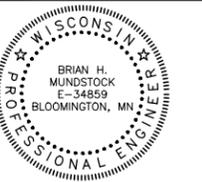
CONSULTING CIVIL ENGINEERS
 10830 NESSITT AVENUE SOUTH
 BLOOMINGTON, MINNESOTA 55437
 (952) 881-3344 TELEPHONE
 (952) 881-1913 FAX
 www.sundecivil.com

DS MINE

Town of Cooks Valley,
 Chippewa County,
 Wisconsin



KRAEMER
 MINING &
 MATERIALS, INC.



INFORMATION:

PROJECT NO.: _____

DRAWN BY: _____

CHECKED BY: _____

APPROVED BY: _____

SCALE: _____

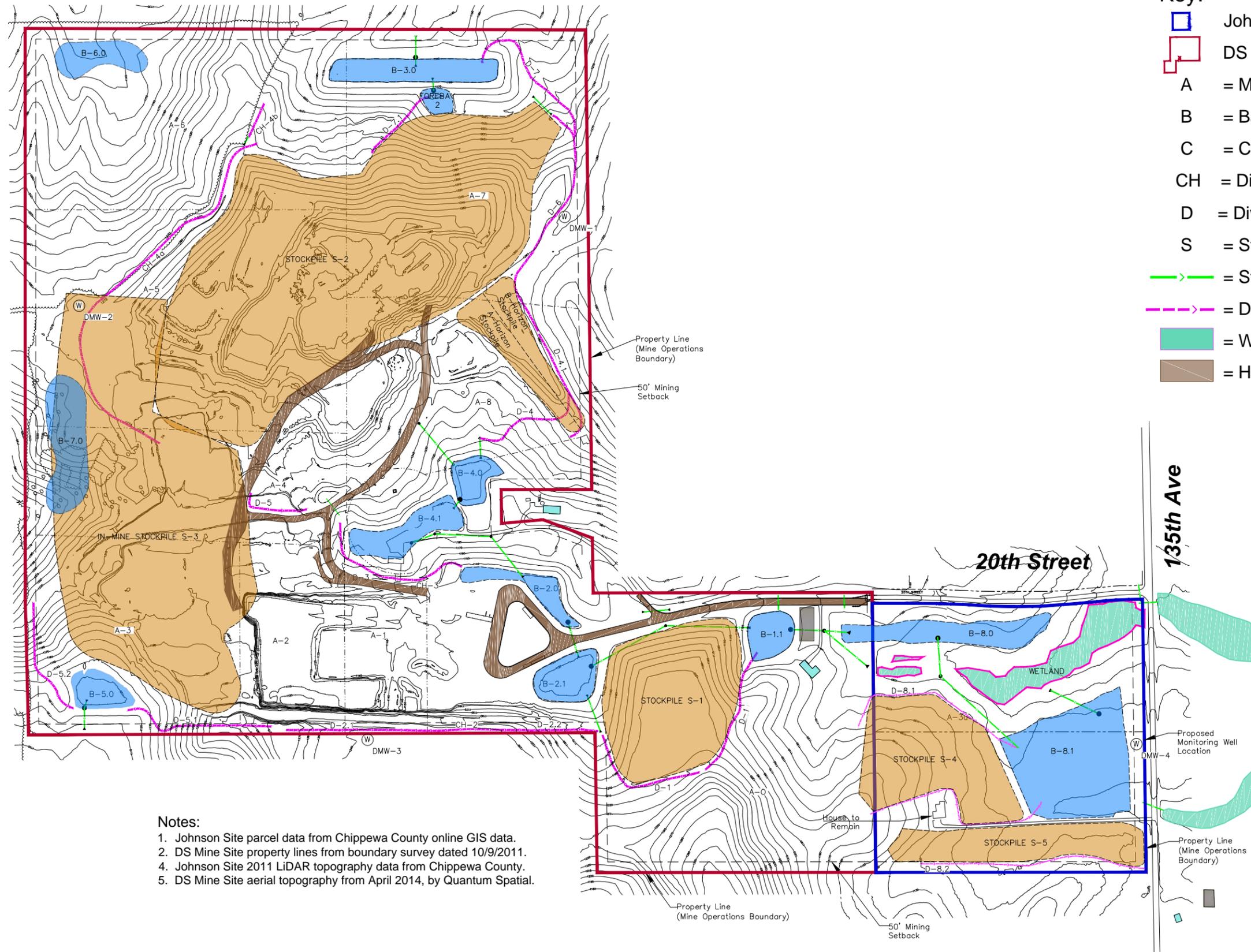
DATE: _____

DESCRIPTION:

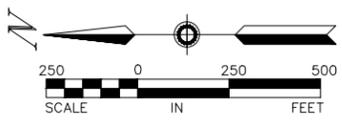
**Appendix O -
 Site Operations
 Plan**

SHEET NO. _____
**Figure
 O-5**

- Key:**
- Johnson Site Property
 - DS Mine Property
 - A = Mining Area
 - B = Basin ()
 - C = Culvert
 - CH = Ditch Channel
 - D = Diversion Berm/Swale
 - S = Stockpile ()
 - = Storm Sewer
 - = Diversion
 - = Wetland
 - = Haul Roads



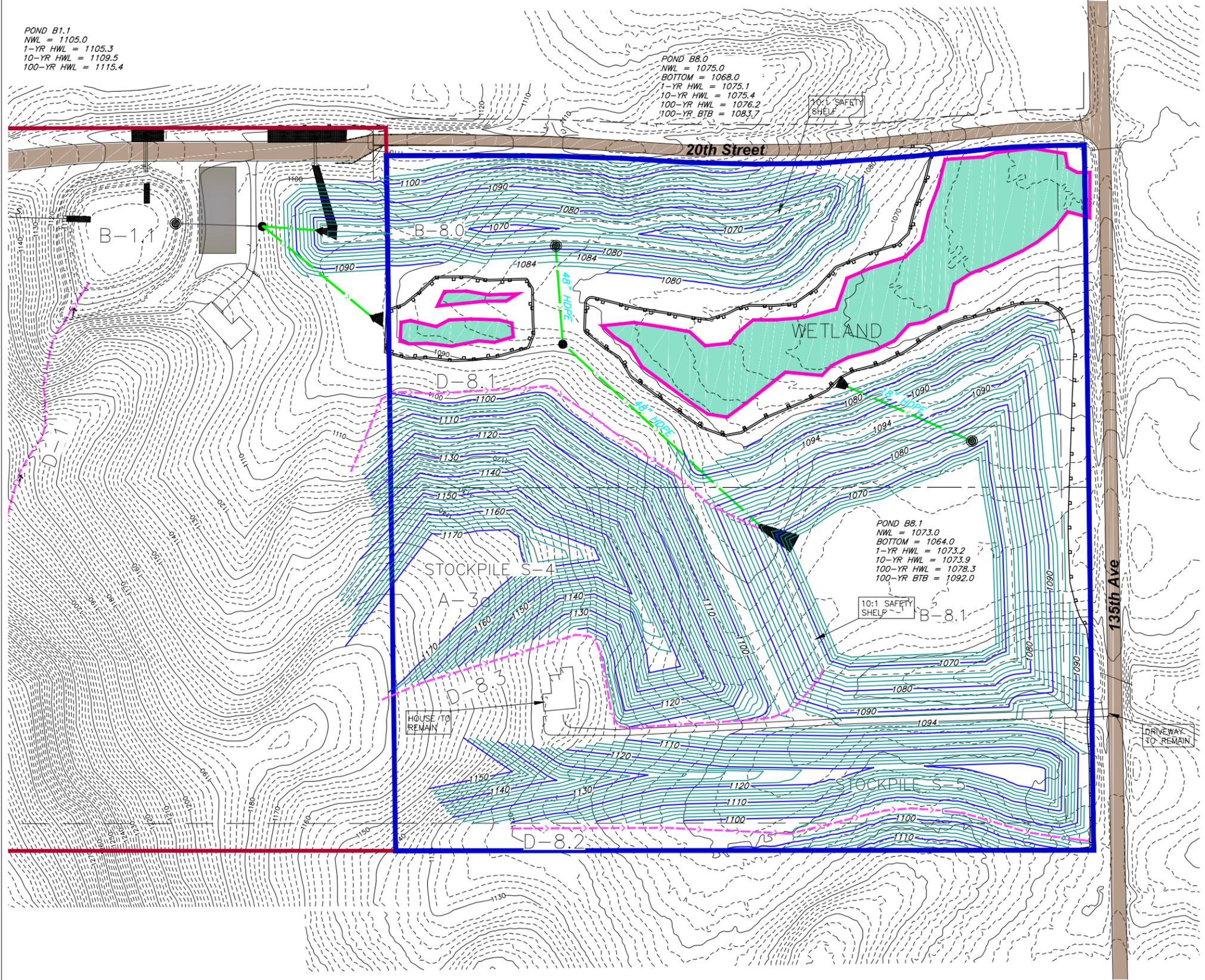
- Notes:**
1. Johnson Site parcel data from Chippewa County online GIS data.
 2. DS Mine Site property lines from boundary survey dated 10/9/2011.
 4. Johnson Site 2011 LiDAR topography data from Chippewa County.
 5. DS Mine Site aerial topography from April 2014, by Quantum Spatial.



POND B1.1
 NWL = 1105.0
 1-YR HWL = 1105.3
 10-YR HWL = 1109.5
 100-YR HWL = 1115.4

POND B8.0
 NWL = 1075.0
 BOTTOM = 1068.0
 1-YR HWL = 1075.1
 10-YR HWL = 1075.4
 100-YR HWL = 1076.2
 100-YR BTB = 1083.7

POND B8.1
 NWL = 1073.0
 BOTTOM = 1064.0
 1-YR HWL = 1073.2
 10-YR HWL = 1073.9
 100-YR HWL = 1078.3
 100-YR BTB = 1092.0



- Key:**
- Johnson Site Property
 - DS Mine Property
 - = Storm Sewer
 - = Diversion/Swale
 - = Wetland
 - = Roads

LEGEND	
	EROSION MAT - CL I TYPE B *
	EROSION MAT - CL III TYPE C *
	RIPRAP WITH FABRIC TYPE HR
	SILT FENCE *
	EROSION LOG DITCH CHECK *
	DIVERSION SWALE/BERM **

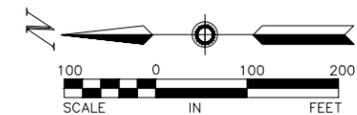
* INSTALL IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
 ** MAINTAIN DIVERSION AS REQUIRED.

BMP Notes:

1. All disturbed sideslopes shall have topsoil, seed and mulch and/or erosion mat applied.
2. All pond outlets to have sluice gates that remain in the closed position.
3. Place double row of siltfence around wetlands.

Notes:

1. Johnson Site parcel data from Chippewa County online GIS data.
2. DS Mine Site property lines from boundary survey dated 10/9/2011.
4. Johnson Site 2011 LiDAR topography data from Chippewa County.
5. DS Mine Site aerial topography from April 2014, by Quantum Spatial.



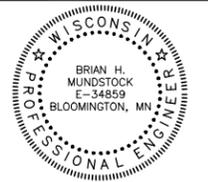
CONSULTING CIVIL ENGINEERS
 10830 NESSBITT AVENUE SOUTH
 BLOOMINGTON, MINNESOTA 55437
 (952) 881-3344 TELEPHONE
 (952) 881-1913 FAX
 www.sundecivil.com

DS MINE

Town of Cooks Valley,
 Chippewa County,
 Wisconsin



KRAEMER
 MINING &
 MATERIALS, INC.



INFORMATION:

PROJECT NO.: _____

DRAWN BY: _____

CHECKED BY: _____

APPROVED BY: _____

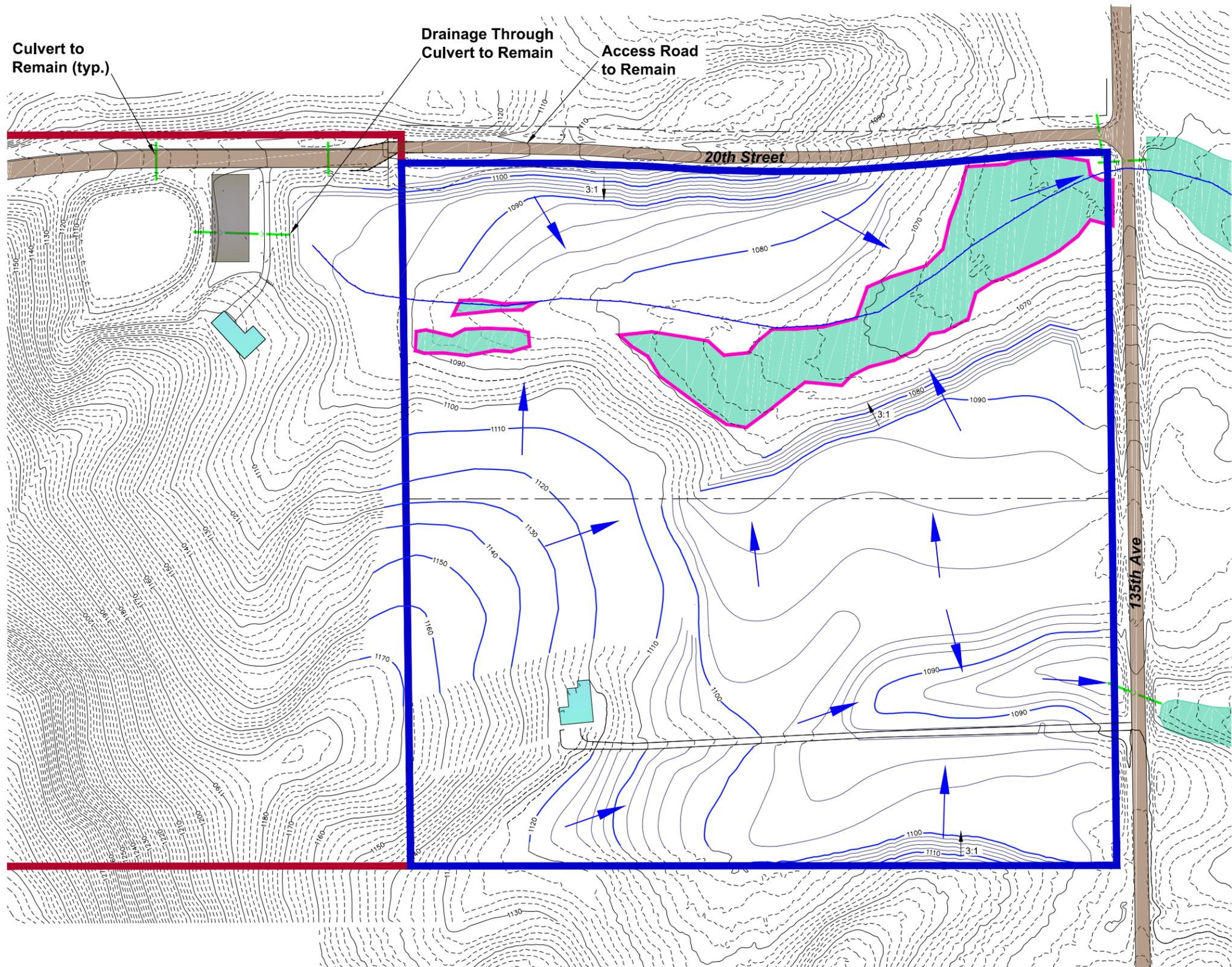
SCALE: _____

DATE: _____

DESCRIPTION: _____

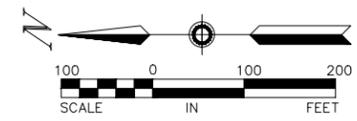
**Appendix O -
 Concept Stormwater
 BMP Site Plan**

SHEET NO. _____
**Figure
 O-6**



- Key:**
- Johnson Site Property
 - DS Mine Property
 - = Storm Sewer
 - = Direction of Surface Flow
 - = Wetland
 - = Roads

- Notes:**
1. Johnson Site parcel data from Chippewa County online GIS data.
 2. DS Mine Site property lines from boundary survey dated 10/9/2011.
 4. Johnson Site 2011 LiDAR topography data from Chippewa County.
 5. DS Mine Site aerial topography from April 2014, by Quantum Spatial.



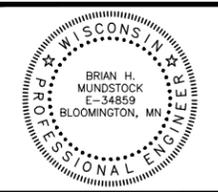
CONSULTING CIVIL ENGINEERS
 10830 NESSBITT AVENUE SOUTH
 BLOOMINGTON, MINNESOTA 55437
 (952) 881-3344 TELEPHONE
 (952) 881-1913 FAX
 www.sundecivil.com

DS MINE

Town of Cooks Valley,
 Chippewa County,
 Wisconsin



KRAEMER
 MINING &
 MATERIALS, INC.



INFORMATION:

PROJECT NO.: _____

DRAWN BY: _____

CHECKED BY: _____

APPROVED BY: _____

SCALE: _____

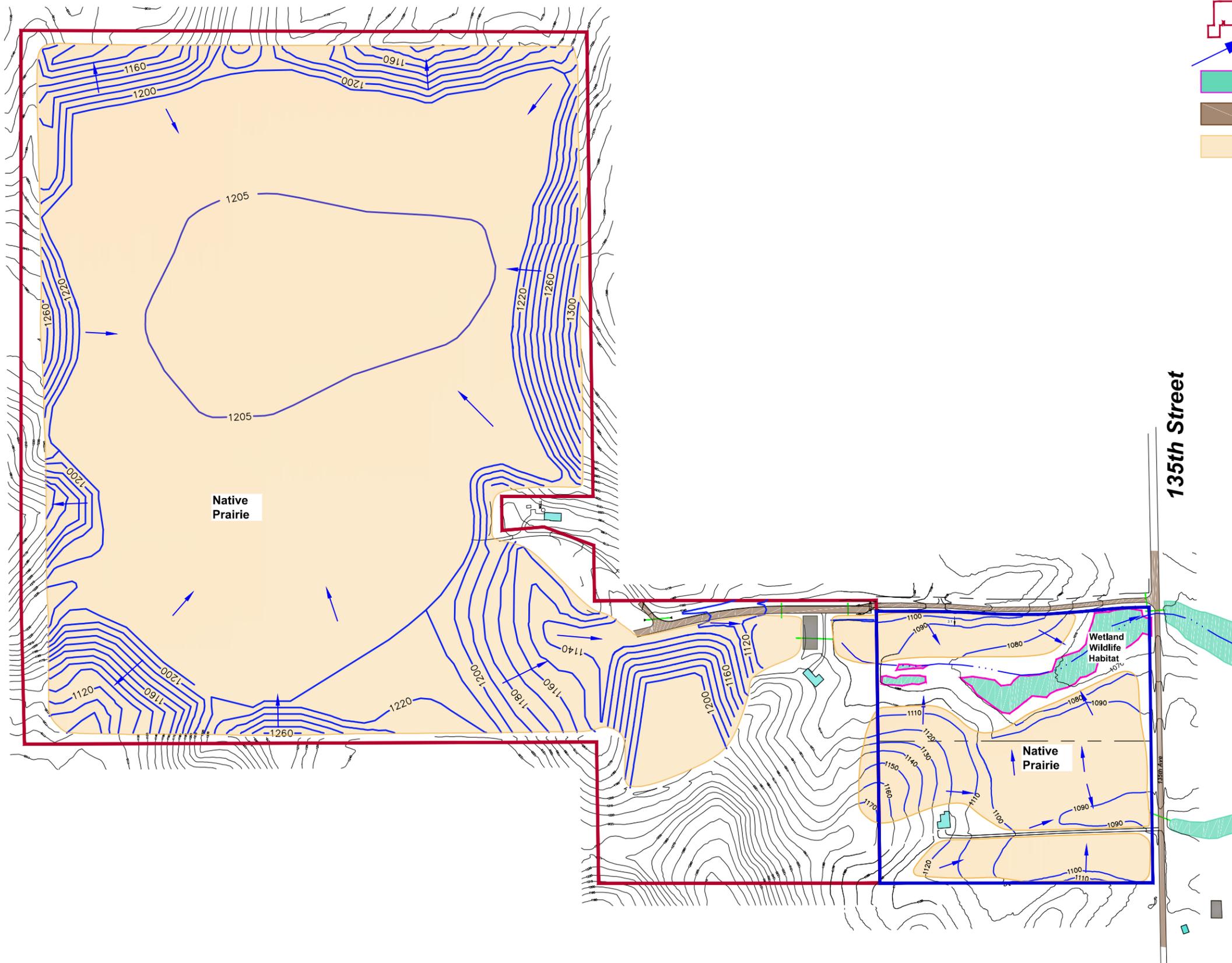
DATE: _____

DESCRIPTION:

**Appendix O -
 Final Site Plan**

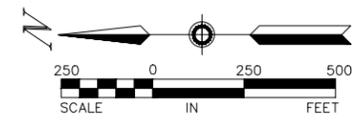
SHEET NO. _____

**Figure
 O-7**



- Key:**
-  Johnson Site Property
 -  DS Mine Property
 -  = Direction of Surface Flow
 -  = Pre-Mining Wetland
 -  = Roads
 -  = Native Prairie

- Notes:**
1. Johnson Site parcel data from Chippewa County online GIS data.
 2. DS Mine Site property lines from boundary survey dated 10/9/2011.
 4. Johnson Site 2011 LiDAR topography data from Chippewa County.
 5. DS Mine Site aerial topography from April 2014, by Quantum Spatial.



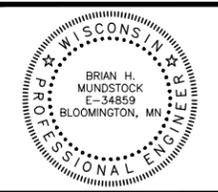
CONSULTING CIVIL ENGINEERS
 10830 NESSBITT AVENUE SOUTH
 BLOOMINGTON, MINNESOTA 55437
 (952) 881-3344 TELEPHONE
 (952) 881-1913 FAX
 www.sundecivil.com

DS MINE

Town of Cooks Valley,
 Chippewa County,
 Wisconsin



KRAEMER
 MINING &
 MATERIALS, INC.



INFORMATION:

PROJECT NO.: _____

DRAWN BY: _____

CHECKED BY: _____

APPROVED BY: _____

SCALE: _____

DATE: _____

DESCRIPTION:

**Appendix O -
 Post Mining
 Land Use**

SHEET NO. _____

**Figure
 O-8**



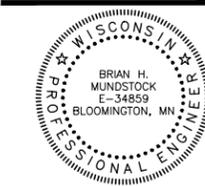
CONSULTING CIVIL ENGINEER
 10830 NESSITT AVENUE SOUTH
 BLOOMINGTON, MINNESOTA 55437
 (952) 881-3344 TELEPHONE
 (952) 881-1913 FAX
 www.sundeecivil.com

DS MINE

Town of Cooks Valley,
 Chippewa County,
 Wisconsin



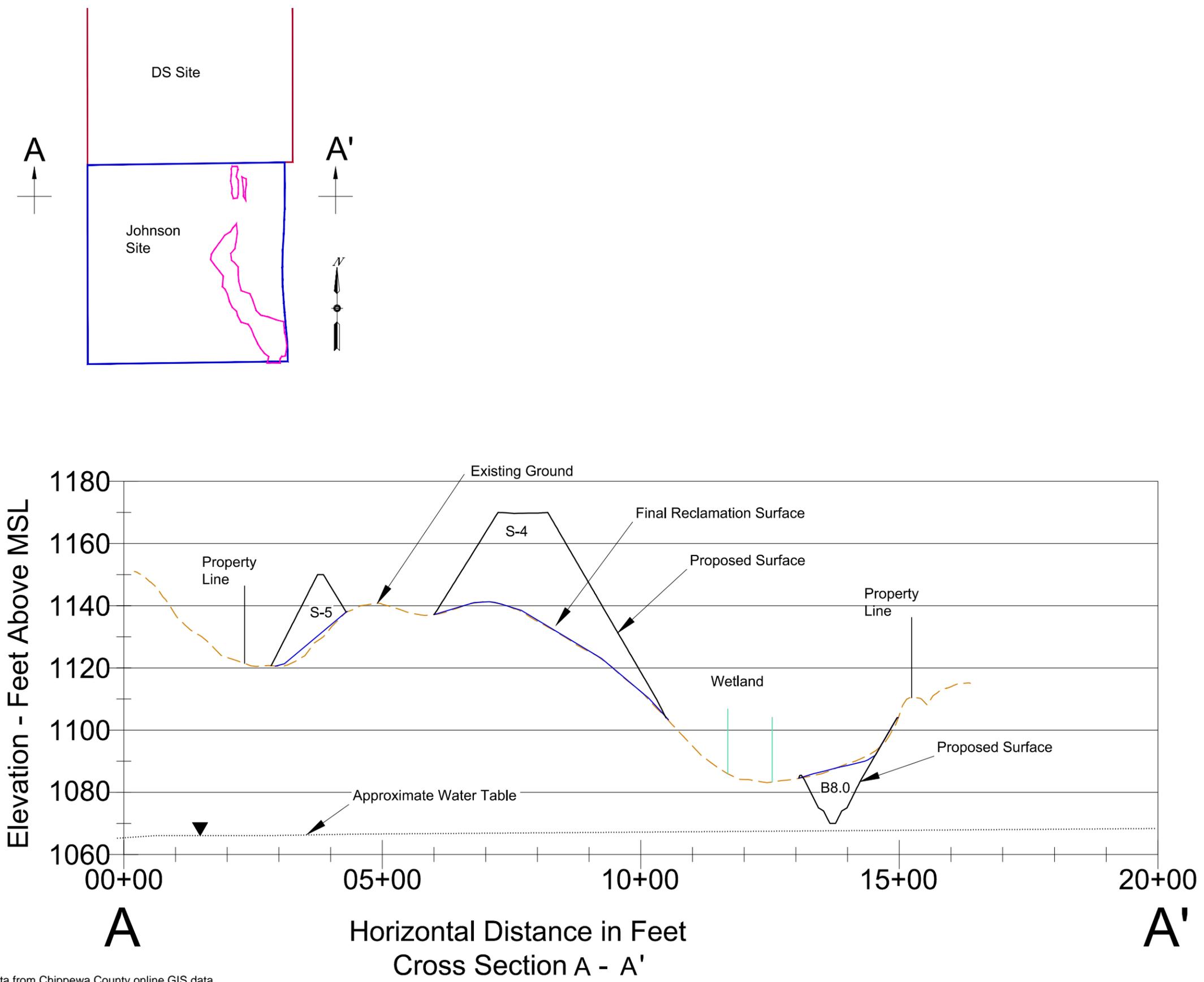
KRAEMER
 MINING &
 MATERIALS, INC.



INFORMATION:
 PROJECT NO.: _____
 DRAWN BY: _____
 CHECKED BY: _____
 APPROVED BY: _____
 SCALE: _____
 DATE: _____

DESCRIPTION:
**Appendix O -
 Cross Section**

SHEET NO:
**Figure
 O-9**



- Notes:
1. Johnson Site parcel data from Chippewa County online GIS data.
 2. DS Mine Site property lines from boundary survey dated 10/9/2011.
 3. DS Mine Site aerial topography from April 2014, by Quantum Spatial.
 4. Johnson Site 2011 LiDAR topography data from Chippewa County.
 5. DS Mine Site aerial topography from April 2014, by Quantum Spatial.