Clearwater Lake
Jaques Lake
Blackberry Lake
32-24-55
33-24-55
34-24-55
35-24-55
36-24-55
31-23-55
32-23-55
Co Rd 453
Co Rd 71
Co Rd 434
Co Rd 421
Co Rd 10
Co Rd 447
Co Rd 446
Co Rd 442
Kent Ln
Clem Dr
Evergreen Dr
N Bluebird Dr
Creek Rd
5-24-54
4-24-54
3-24-54
2-24-54
1-24-54
6-23-54
5-23-54
James Dr
Blackberry Acres Rd
Blackberry Cemetery
BLACKBERRY (DIST)
Co Rd 483
Eino Lake
N Eagle Ln
Co Rd 436
1000
Dove Ln
Old Loop Rd
9-24-54
8-24-54
10-24-54
11-24-54
12-24-54
7-23-54
Mississippi Lake
Bluebird Dr
Cardinal Dr
Pine Trl
LAKEHEAD BLACKBERRY
Rice Lake
Happy Hollow Rd
S Eagle Ln
S Hummingbird Dr
17-24-54
16-24-54
15-24-54
14-24-54
13-24-54
18-23-54
US Hwy 2
1
2
3
0

Receptors

- Airport
- Cemetery
- Church
- Forest
- Parks & Recreation
- Post Office
- School & Institutions
- Summit
- Trail
- Residences
- Hospitals & Medical
- Snowmobile Parking
- Snow Park

Map Document: (\\sp3020-1\projects\AE\EIExenn050200\03Environmental\gis\MXDs_Wetland_Permit\Figure 16a-16d - Figure Mapbook Gas Alt1 032505 11x17 L.mxd)
11/4/2008 -- 3:22:59 PM

Excelsior Energy Inc.

Mesaba Energy Project

Energy, Innovation, and Economic Development for Minnesota

11100 Wayzata Boulevard Suite 305 Minnetonka, MN 55305
Phone 952.847.2360 Fax 952.847.2373

West Range

November 2008

Legend

- Plant Layout
- Footprint and Buffer Land
- Natural Gas Route
- Gas Mileposts
- Gas Proposed
- Gas Impacted ROW
- HVTL Substations
- HVTL Preferred
- HVTL Alternate
- PLS Sections (S-T-R)
- WMA
- Streams
- Surveyed Wetlands
- NWI (w/Gas Line Refinements)

Source: NAIP 2006, LMIC, Mn/EQB, Mn/DNR, Mn/DOT, USGS, ESRI, Fluor, Excelsior Energy, and SEH.
© 2008 SEH

Appendix F

4
3
2
1

Overview Map Tiles

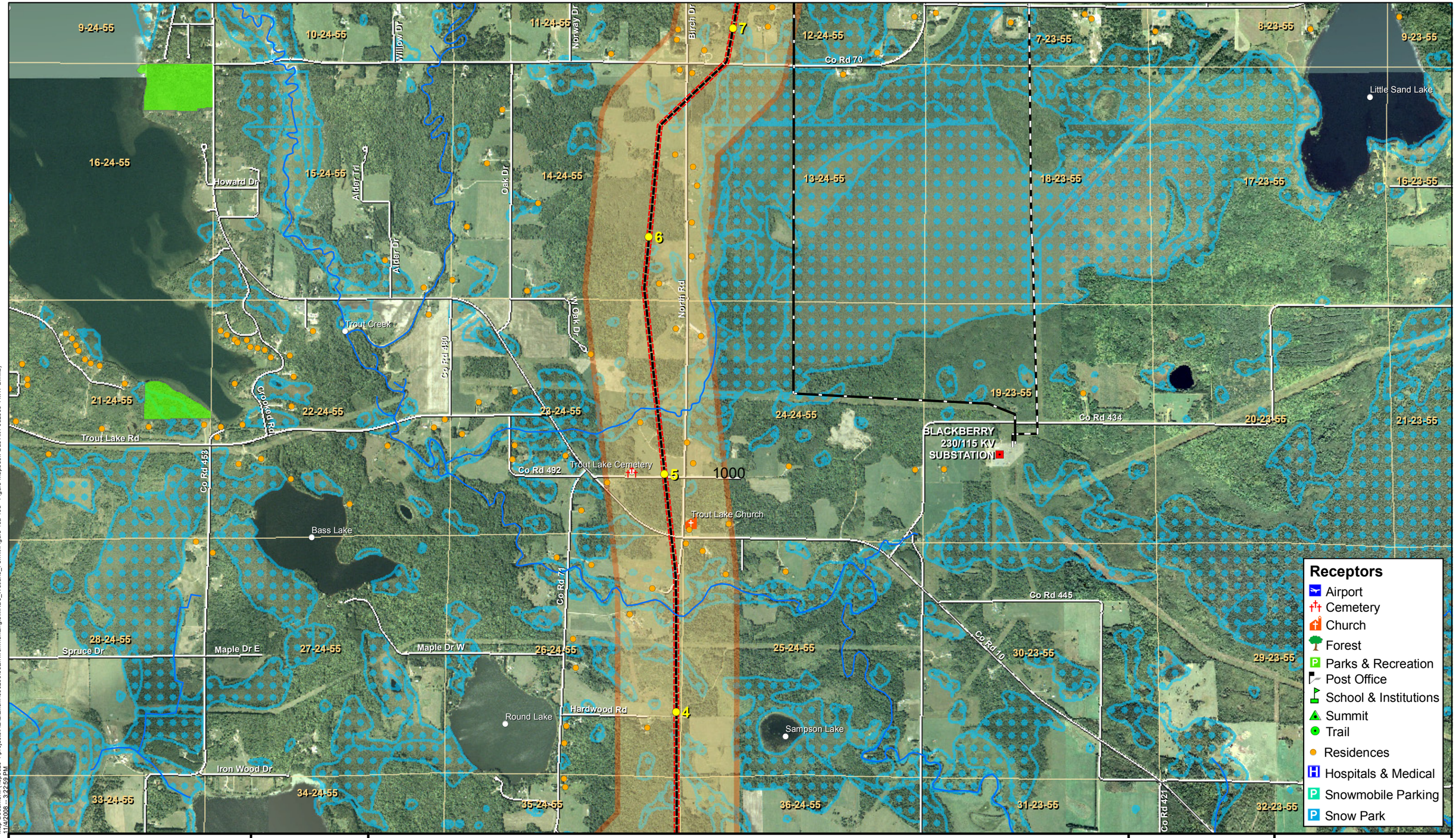
Figure F2-29a

Proposed Natural Gas Pipeline Route

Itasca County - South Coordinate System

N W E S

0 2,000 Feet



Map Document: (\\sp3020-1\projects\AE\IE\Exent\050200\03\Environmental\gis\MXDs_Wetland_Permit\Figure 16a-16d - Figure Mapbook Gas Alt1 032505 11x17 L.mxd)
11/4/2008 -- 3:22:59 PM

Excelsior Energy Inc.

Mesaba Energy Project
Energy, Innovation, and Economic Development for Minnesota

11100 Wayzata Boulevard Suite 305 Minnetonka, MN 55305
Phone 952.847.2360 Fax 952.847.2373

West Range

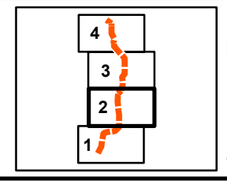
November 2008

Legend

- Plant Layout
- Footprint and Buffer Land
- Natural Gas Route
- Gas Mileposts
- Gas Proposed
- Gas Impacted ROW
- HVTL Substations
- HVTL Preferred
- HVTL Alternate
- PLS Sections (S-T-R)
- WMA
- Streams
- Surveyed Wetlands
- NWI (w/Gas Line Refinements)

Source: NAIP 2006, LMIC, Mn/EQB, Mn/DNR, Mn/DOT, USGS, ESRI, Fluor, Excelsior Energy, and SEH.
© 2008 SEH

Appendix F



Overview Map Tiles

Figure F2-29b

Proposed Natural Gas Pipeline Route

Itasca County - South Coordinate System

N
W
E
S

0 2,000 Feet

Map Document: (\\sp3020-1\projects\AE\EIExent\050200\03Environmental\gis\MXDs_Wetland_Permit\Figure 16a-16d - Figure Mapbook Gas Alt1 032505 11x17 L.mxd)
11/4/2008 - 3:22:59 PM

28-24-56 | 27-24-56 | 26-24-56 | 25-24-56 | 30-23-56 | 29-23-56 | 28-23-56
33-24-56 | 34-24-56 | 35-24-56 | 36-24-56 | 31-23-56 | 32-23-56 | 33-23-56
4-24-55 | 3-24-55 | 2-24-55 | 1-24-55 | 6-23-55 | 5-23-55 | 4-23-55
9-24-55 | 10-24-55 | 11-24-55 | 12-24-55 | 7-23-55 | 8-23-55

Township Taconite
Township Bovey
US Hwy 169
Moon Dr
Twin Lakes Dr
Spring Lake
Taurus Rd
Co Rd 12
Bass Lake
Bass Lake Rd
Zeleznikar Dr
Seaburg Rd
W Swan River Rd
Pikko Rd
Loon Lake
Co Rd 10
Birch Dr
Old Mill Rd
Foot Lake
Co Rd 69
GOSHAWK TRL
Co Rd 70
Trout Lake Tailings Dike
Trout Lake Tailings Basin
Elm Dr
Rydberg Rd
Norway Dr
Trout Lake
1000

10
9
8
7

Receptors
- Airport
- Cemetery
- Church
- Forest
- Parks & Recreation
- Post Office
- School & Institutions
- Summit
- Trail
- Residences
- Hospitals & Medical
- Snowmobile Parking
- Snow Park

Excelsior Energy Inc.

Mesaba Energy Project
Energy, Innovation, and Economic Development for Minnesota

11100 Wayzata Boulevard Suite 305 Minnetonka, MN 55305
Phone 952.847.2360 Fax 952.847.2373

West Range

November 2008

Legend
- Plant Layout
- Footprint and Buffer Land
- Natural Gas Route
- Gas Mileposts
- Gas Proposed
- Gas Impacted ROW
- HVTL Substations
- HVTL Preferred
- HVTL Alternate
- PLS Sections (S-T-R)
- WMA
- Streams
- Surveyed Wetlands
- NWI (w/Gas Line Refinements)

Source: NAIP 2006, LMIC, Mn/EQB, Mn/DNR, Mn/DOT, USGS, ESRI, Fluor, Excelsior Energy, and SEH.
© 2008 SEH

Appendix F

4 | 3 | 2 | 1
Overview Map Tiles

Figure F2-29c

Proposed Natural Gas Pipeline Route

Itasca County - South Coordinate System

N W E S

0 2,000 Feet

Reilly Beach Rd
Co Rd 349
Co Rd 353
Scenic Hwy
Diamond Lake Rd
Dunning Lake
Big Diamond Lake
Little Diamond Lake
Arcturus Mine
Gross -Marble Mine
Marble
Township
Taconite
Township
Coleraine
Judd Mine
North Star Mine
Holman Cliffs Mine
South Judd Mine
Brown Mine
Sally Mine
Bingham Mine
Orwell Mine
Danube Mine
Morrison Mine
Bovey
Township
Walker Mine
Holman Lake
Twin Lakes
Ekman Ave
Alice Ave
Old 169
US Hwy 169
Gibbs Park Rd
Co Rd 15
Stephens St S
Cherokee Rd
Fayette Rd
Ball St
Heron Dr
Twin Lakes Dr
Moon Dr
8-24-56
9-24-56
10-24-56
11-24-56
12-24-56
7-23-56
8-23-56
17-24-56
16-24-56
15-24-56
14-24-56
13-24-56
18-23-56
17-23-56
20-24-56
21-24-56
22-24-56
23-24-56
24-24-56
19-23-56
29-24-56
28-24-56
27-24-56
26-24-56
25-24-56
30-23-56
13
12
11
1000
GREENWAY 115/23 KV SUBSTATION - TO BE DEMO'D

Receptors

- Airport
- Cemetery
- Church
- Forest
- Parks & Recreation
- Post Office
- School & Institutions
- Summit
- Trail
- Residences
- Hospitals & Medical
- Snowmobile Parking
- Snow Park

Map Document: (\\sp3020-1\projects\AE\IE\Exent\050200\03\Environmental\gis\MXDs_Wetland_Permit\Figure 16a-16d - Figure Mapbook Gas Alt1 032505 11x17 L.mxd)
11/4/2008 -- 3:22:59 PM

Excelsior Energy Inc.

Mesaba Energy Project
Energy, Innovation, and Economic Development for Minnesota

11100 Wayzata Boulevard Suite 305 Minnetonka, MN 55305
Phone 952.847.2360 Fax 952.847.2373

West Range

November 2008

Legend

- Plant Layout
- Footprint and Buffer Land
- Natural Gas Route
- Gas Mileposts
- Gas Proposed
- Gas Impacted ROW
- HVTL Substations
- HVTL Preferred
- HVTL Alternate
- PLS Sections (S-T-R)
- WMA
- Streams
- Surveyed Wetlands
- NWI (w/Gas Line Refinements)

Source: NAIP 2006, LMIC, Mn/EQB, Mn/DNR, Mn/DOT, USGS, ESRI, Fluor, Excelsior Energy, and SEH.
© 2008 SEH

Appendix F

4
3
2
1
Overview Map Tiles

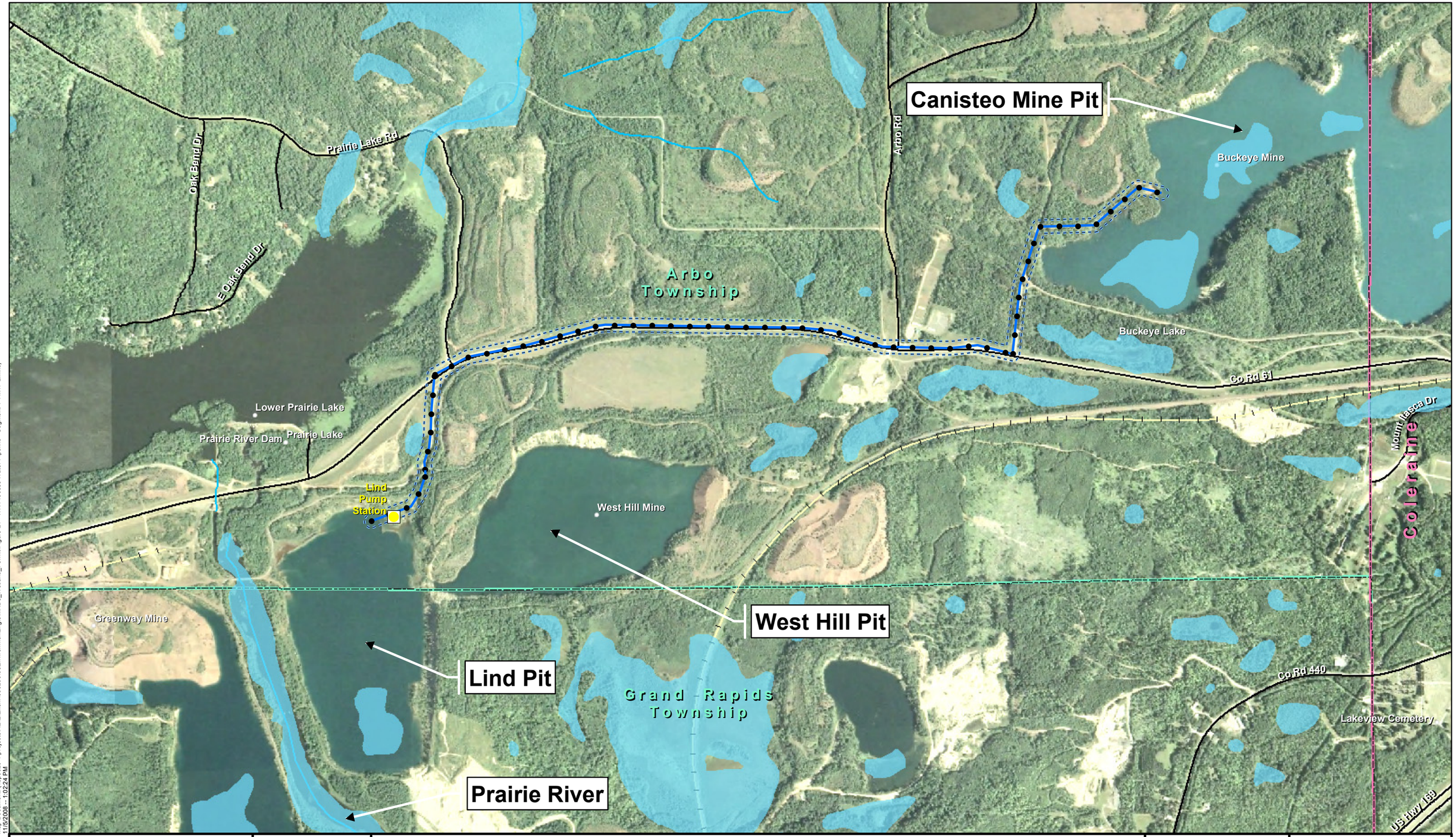
Figure F2-29d

Proposed Natural Gas Pipeline Route

Itasca County - South Coordinate System

N
W
E
S

0 2,000 Feet



Map Document: (\\sp3020-1\projects\AE\E\Exenr\050200\03Environmental\gis\MXDs_Wetland_Permit\Figure 21 - WR Process Water Pipeline - Segment 1 11x17 L.mxd)
11/5/2008 -- 1:02:24 PM

Excelsior Energy Inc.

Mesaba Energy Project
Energy, Innovation, and Economic Development for Minnesota

11100 Wayzata Boulevard Suite 305 Minnetonka, MN 55305
Phone 952.847.2360 Fax 952.847.2373

West Range

November 2008

Legend

- Footprint and Buffer Land
- Plant Layout
- Source Water
- Proposed Pump Station
- Process Water Pipeline 1
- Process Water Pipeline 1 Construction Limits
- Surveyed Wetlands
- NWI
- Existing Roads
- Existing Railroads
- Geographic Names
- Municipal Boundaries
- Civil Township
- State Park
- Streams

Appendix F

Source: NAIP 2006, USGS, Mn/DNR, Mn/DOT, Itasca County, Fluor, Excelsior Energy, and SEH.
© 2008 SEH

Figure F2-30

Process Water Pipeline 1 Wetlands

Itasca County - South Coordinate System

N W E S

0 1,000 Feet

Iron Range Township

Co Rd 349

Co Rd 358

Taconite

Dunning Lake

Canisteo Mine Pit

Scenic Hwy

Diamond Lake Rd

Big Diamond Lake

Little Diamond Lake

Canisteo Pump Station

Judd Mine

Coleraine

North Star Mine

Holman Cliffs Mine

Map Document: (\\sp3020-1\projects\AE\EIExenh\05020\003\Environmental\gis\MXDs_Wetland_Permit\Figure 22 - WR Process Water Pipeline - Segment 2 11x17 L.mxd)
11/5/2008 - 1:10:42 PM

Excelsior Energy Inc.

Mesaba Energy Project

Energy, Innovation, and Economic Development for Minnesota

11100 Wayzata Boulevard Suite 305 Minnetonka, MN 55305
Phone 952.847.2360 Fax 952.847.2373

West Range

November 2008

Legend

- Footprint and Buffer Land
- Plant Layout
- Source Water
- Proposed Pump Station
- Process Water Pipeline 2
- Process Water Pipeline 2 Construction Limits
- Surveyed Wetlands
- NWI
- Existing Roads
- Existing Railroads
- Geographic Names
- Municipal Boundaries
- Civil Township
- State Park
- Streams

Appendix F

Source: NAIP 2006, USGS, Mn/DNR, Mn/DOT, Itasca County, Fluor, Excelsior Energy, and SEH.
© 2008 SEH

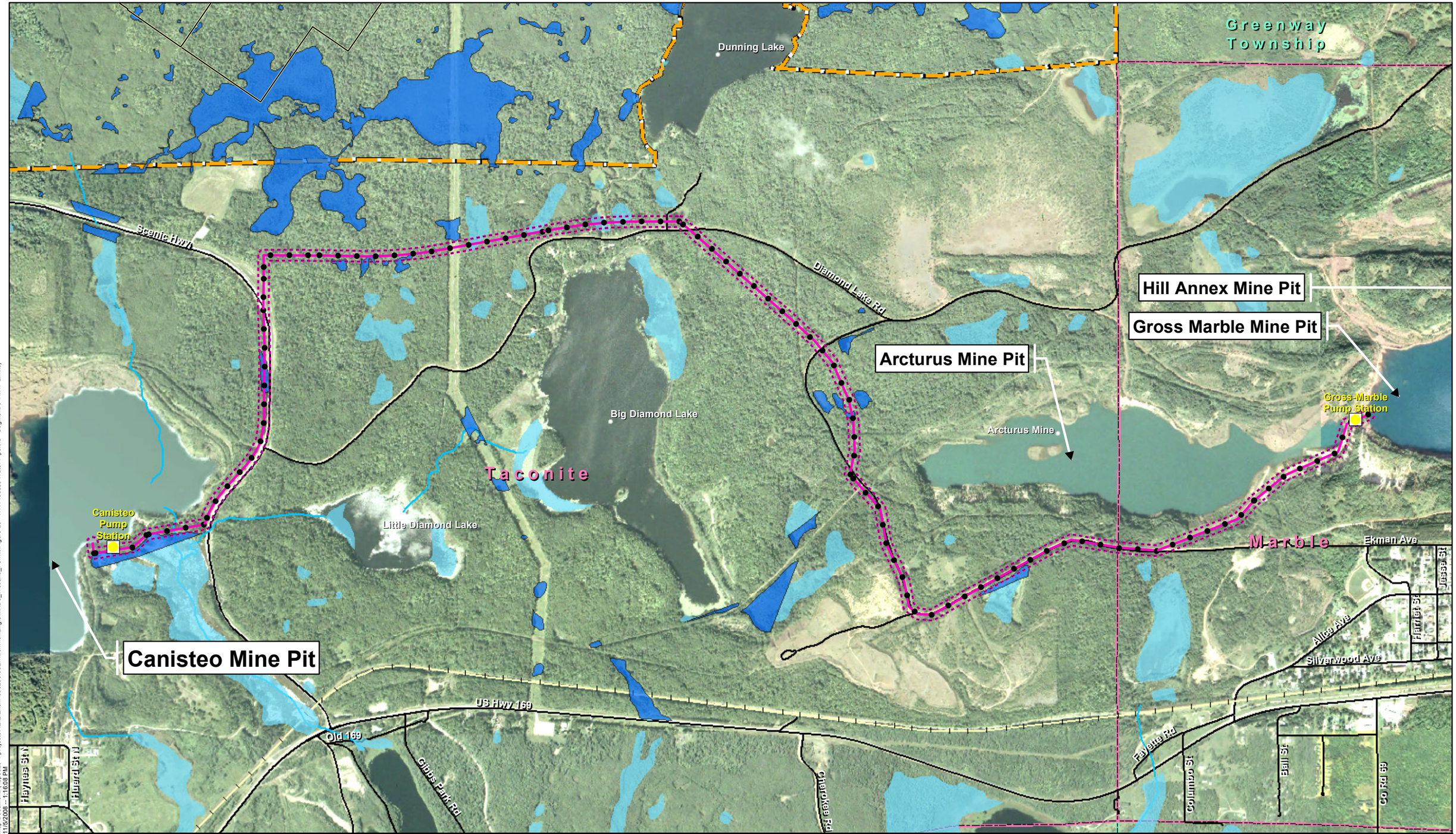
Figure F2-31

Process Water Pipeline 2 Wetlands

Itasca County - South Coordinate System

N W E S

0 1,000 Feet



Map Document: (\\sp3020-1\projects\AE\E\Exenn\05020\00\03\Environmental\gis\MXDs_Wetland_Permit\Figure 23 - WR Process Water Pipeline - Segment 3 11x17 L.mxd)
11/5/2008 -- 11:16:08 PM

Excelsior Energy Inc.

Mesaba Energy Project
Energy, Innovation, and Economic Development for Minnesota

11100 Wayzata Boulevard Suite 305 Minnetonka, MN 55305
Phone 952.847.2360 Fax 952.847.2373

West Range

November 2008

Legend

- Footprint and Buffer Land
- Plant Layout
- Source Water
- Proposed Pump Station
- Process Water Pipeline 3
- Process Water Pipeline 3 Construction Limits
- Surveyed Wetlands
- NWI
- Existing Roads
- Existing Railroads
- Geographic Names
- Municipal Boundaries
- Civil Township
- State Park
- Streams

Appendix F

Source: NAIP 2006, USGS, Mn/DNR, Mn/DOT, Itasca County, Fluor, Excelsior Energy, and SEH.
© 2008 SEH

Figure F2-32

Process Water Pipeline 3 Wetlands

Itasca County - South Coordinate System

N W E S

0 1,250 Feet

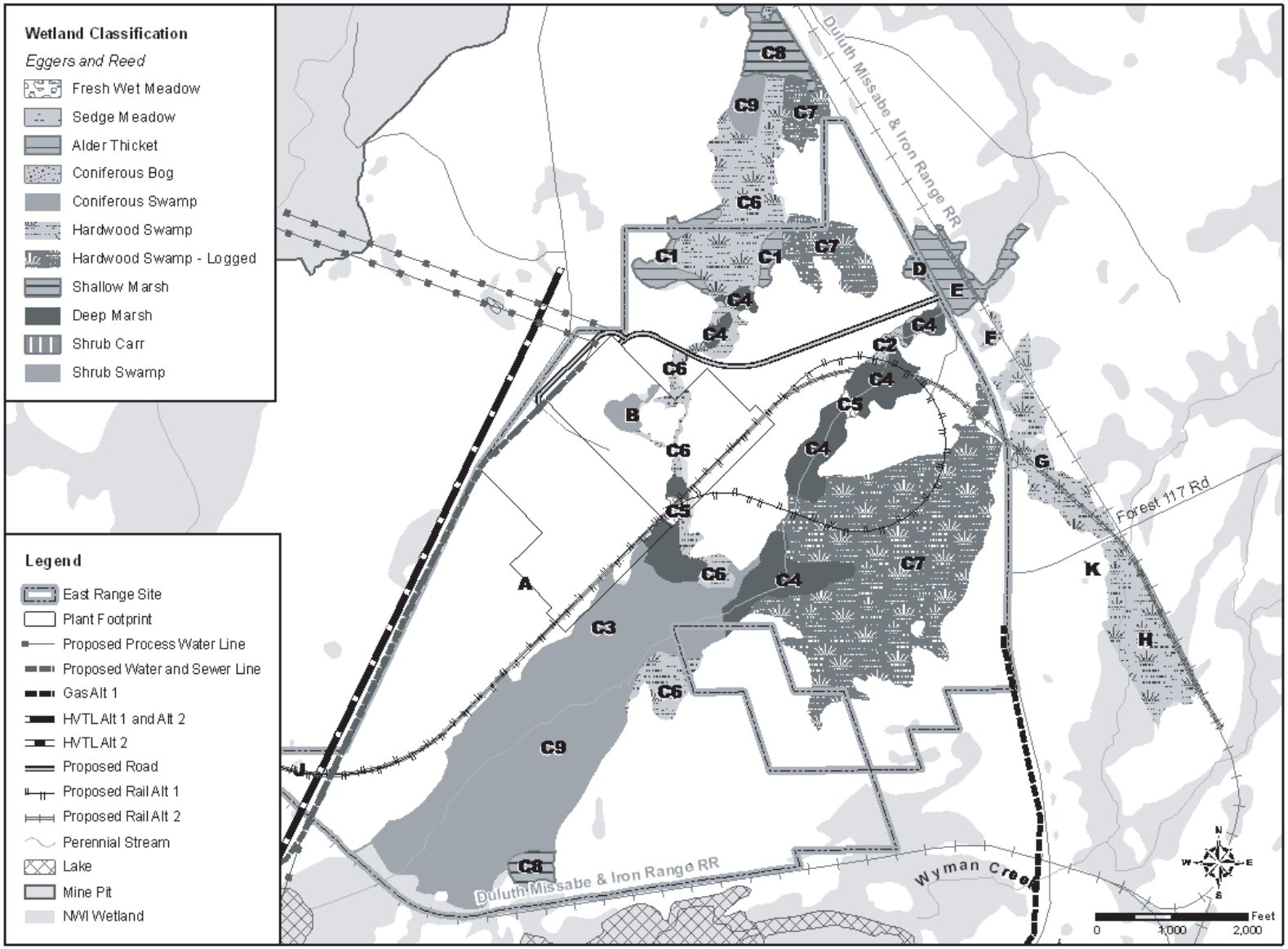


Figure F2-33. East Range Central EIS with Eggers and Reed Wetland Classifications