North Dakota Tree and Shrub Mitigation Report

CapX2020 Fargo-St. Cloud 345 kV Transmission Line
Case No. PU-07-759

Prepared for
Xcel Energy

March 2015

North Dakota Tree and Shrub Mitigation Report

CapX2020 Fargo-St. Cloud 345 kV Transmission Line
Case No. PU-07-759

Prepared for
Xcel Energy

March 2015

right click to pick a Barr office

North Dakota Tree and Shrub Mitigation Report

March 2015

Contents

List of Tables

List of Appendices

1.0 Tree and Shrub Survey

A tree and shrub survey was conducted by Barr Engineering Company (Barr) on October 16, 2012 for Northern States Power Company (NSP)/Xcel Energy (Xcel) as part of the NSP Fargo-St Cloud MN 345 kV Cap-X Transmission Line Route Permit issued by the North Dakota Public Service Commission (PSC) on September 12, 2012 (Case No. PU-07-759). This report describes the purpose, goals, methodology, and results of the tree and shrub survey. Furthermore, a mitigation plan, which includes input from affected landowners, is also provided.

The overall surveyed corridor is located along a 33-mile, 150-foot wide right-of-way corridor slated for transmission line construction by the CapX2020 initiative within the State of North Dakota. This segment of transmission line is currently under construction. The alignment starts at the North Dakota/Minnesota border near the city of Oxbow and extends in a westerly direction until turning north in Normanna Township and continuing north for a short distance across Warren Township. In Warren Township, the route deviates west, and then turns north in Addison Township and continues north until ending at the proposed Bison Switching Station located in Harmony Township.

1.1 Purpose

The purpose of this survey was to assist Xcel with mitigation requirements for tree and shrub removal expected to occur as part of the proposed project's construction activities. These compliance measures were set by the North Dakota PSC and are outlined within the "Tree and Shrub Mitigation Specifications" section of the PSC's "Findings of Fact, Conclusions of Law and Order," (i.e. Route Permit) issued September 12, 2012.

1.2 Goals

There were two goals for this survey:

1. To locate, identify, and inventory trees and shrubs within the North Dakota portion of the CapX2020 project right-of-way.
2. To GPS locate each of the survey "plots" for future reference during construction activities (including access route clearing) and subsequent mitigation activities.

Barr staff conducted the initial Tree and Shrub Survey on October 16, 2012. During the initial survey, two areas of right-of-way containing woody vegetation were not accessible due to the landowners not graining right of entry. Access permission has since been required and follow-up surveys of these locations (Plots 8A, 16, and 16A) took place on October 10, 2013.

Methods and guidelines used during this survey are described below.

2.0 Methodology

Prior to the field survey, aerial photos of the corridor were examined to identify potential woody vegetation within the project corridor. Once in the field, Barr staff traveled the alignment along existing roadways and conducted field surveys when woody vegetation was identified within the project corridor using one of three survey methods. The survey method used was dependent on the size of the plot as well as the abundance of woody vegetation within the plot area. These three survey methods are described in further detail below:

- Direct Count Method: Trees or shrubs were directly and individually counted, noting species, type (tree or shrub), average diameter of the stems or trunk, and quantity (count) of each tree and shrub species. Twelve of the 15 survey plots were small enough to be counted using this method.

- Extrapolated Representative Plot Method: This method established representative 40-foot x 40-foot (40x40) sample areas within each plot. The number of representative sample areas per plot was chosen based on visual identification of plot size and homogeneity of woody vegetation within the plot. Species within each sample area were identified, measured, and counted in the field. In addition, the overall plot boundary was delineated in the field using sub-meter GPS data collection. The representative sample area data was then desktop analyzed by first averaging the stem and trunk diameters of each species identified. Then, the averaged data from the representative sample areas was extrapolated over the entire plot area to generate total plot counts. This method was used for two survey plots.

- Extrapolated Linear Method: This method was used for one plot that extended in a linear layout within the project corridor, parallel to the alignment centerline. Field staff traveled parallel to the vegetated plot in 20-foot sampling segments, recording the average count and measurements of each tree and shrub species within each segment. The average of the counts for each sampling segment was extrapolated across the length of the plot, yielding a total average count for the plot.

The following specifications were also followed during the field inventory:

- In windbreaks, shelterbelts, and other planted areas, trees or shrubs anticipated to be cleared, regardless of size, must be inventoried for replacement.

- In native growth areas, trees anticipated to be cleared that are 1 inch diameter at breast height (dbh) or greater must be inventoried for replacement.

- In native growth areas, shrubs anticipated to be cleared in the permanent right-of-way must be inventoried for replacement.

The Findings of Fact letter, issued for this project on September 12, 2012, permitted that the entire width of the right-of-way may be cleared through windbreaks, shelterbelts, and all other wooded areas. As such, trees and shrubs were inventoried through the entire right-of-way in both planted and native growth settings.

3.0 Tree and Shrub Survey Results

Barr staff identified and surveyed 18 plots of woody vegetation within the project corridor, totaling approximately 6.71 acres. A total of 3,859 trees and shrubs were identified within the project corridor, comprising 20 different species as shown below in **Table 1**. Of the counted woody vegetation species, 47 percent were native, 29 percent were non-native (primarily buckthorn), and the remainder could only be identified to the genus level.

Tree counts per individual plot can be found in **Appendix A**. Figures depicting the location of each plot along the project corridor, as well as each plot boundary are found in **Appendix B**. A photo log illustrating site conditions of each plot at the time of the survey is located in **Appendix C**.

Table 1 Summary of existing woody vegetation across all plots

Type	Common Name	Scientific Name	Non-native Species*	Average dbh (in.)	Count
Tree	European Buckthorn	*Rhamnus cathartica*	Yes	2.1	1,094
	Green Ash	*Fraxinus pennsylvanica*	No	8.5	490
	American Elm	*Ulmus Americana*	No	10.6	199
	Boxelder	*Acer negundo*	No	9.0	173
	Common Hackberry	*Celtis occidentalis*	No	5.1	81
	Willow species	*Salix sp.*	-	11.0	51
	Eastern Cottonwood	*Populus deltoides*	No	26.1	27
	Alder species	*Alnus sp.*	-	4.5	20
	White Spruce	*Picea glauca*	No	7	15
	Siberian Elm	*Ulmus pumila*	Yes	6.5	13
	Bur Oak	*Quercus macrocarpa*	No	11.3	12
	Choke Cherry	*Prunus virginiana*	No	2.5	10
	Peachleaf Willow	*Salix amygdaloides*	No	5.0	5
	Austrian Pine	*Pinus nigra*	No	5.5	4
				Tree Total	**2,188**
Shrub	Honeysuckle species	*Lonicera spp.*	-	0.7	667
	Red-Osier Dogwood	*Cornus alba*	No	0.9	541
	Plum species	*Prunus spp.*	-	1.2	202
	Choke Cherry	*Prunus virginiana*	No	1.0	173
	Red Elder	*Sambucus racemosa*	No	1.3	28
	Hophorn Beam	*Ostrya virginiana*	No	0.5	15
	Gray Dogwood	*Cornus racemosa*	No	1.3	2
				Shrub Total	**1,628**
				Tree and Shrub Combined Total	**3,816**

*Non-native species were identified by the USDA Plants Database (http://plants.usda.gov/java/).

4.0 Tree Mitigation Plan

4.1 Mitigation Approach

Xcel has planned tree mitigation for all trees counted within the surveyed plots. The mitigation plan includes the following parameters:

- Trees will be replaced at a 2:1 ratio with saplings at least two years of age.
- Trees will generally be replaced in-kind; however, non-native species will be replaced with similar native species included in the North Dakota Tree Handbook. Landowner requests for specific species will be considered.
- All mitigation trees will be planted outside of the project right-of-way, at locations on the affected parcel, unless otherwise specified by the impacted landowners.
- Low-growing shrubs will be cut to ground level, leaving the root structure in place, and recovered with site topsoil. As such, shrubs are expected to regenerate naturally and replacement shrubs are not considered in this mitigation plan.

The 18 identified tree plots encompassed 15 different landowners, with some landowners owning more than one plot area and others splitting a single tree plot.

Affected landowners were individually contacted to determine whether they would like replacement trees for those impacted on their property. If the affected landowner did not wish to have replacement trees, each signed a written waiver from having replacement trees planted on their property. Those landowners accepting mitigation trees selected from given species and quantity options. They were also asked to provide a location where they wanted their mitigation trees to be planted.

In one instance (the Doug Trom property) the landowner required that the trees be planted on an unstable river bank. The risk of the trees being unsuccessful at this location was discussed with the landowner who insisted that the trees be planted at the river bank site. In this case, landowner specifications prevailed and the trees will be planted on the unstable bank despite concerns about tree survival.

Of the 15 affected landowners, seven submitted mitigation waivers. The remaining eight accepted mitigation trees, as summarized in **Table 2**. Signed landowner waivers and agreements are included in **Appendix D**.

Table 2 Summary of Landowner Mitigation Acceptance

Plot	Landowner	Mitigation Accepted	Number of Trees Impacted	Total Eligible Mitigation Quantity
1 & 3	Fercho Family Farms	Yes	98	196
2	Brian & Kelly Duchescherer	Yes	739	1,478
4	Steven Brakke	Waived	1	2
5 & 6	Maurice & Joyce Rheault	Waived	60	120
7	Arcade & Rosemarie Duval	Waived	55	110
8	Edward & Joann Jameson	Yes	78	156
8A	Paul & Carolyn Thoen	Yes	31	62
9 & 10	Darren & Kristin Hoyme	Waived	136	272
11	Melissa and Doug Trom	Yes	103	206
12	Karen Bishop Trust	Waived	43	86
13	Susan Wilson	Waived	15	30
14	George & MaryAnn Waxler	Waived	1	2
15	Michael Kasowski	Yes	328	656
15	Mary Dalrymple, at al Trust	Yes (partial quantity)	436	872
16 & 16A	Dorothy Dubord	Yes	64	128
		Total	**2,188**	**4,376**

Landowners accepting mitigation trees were offered replacement species in-kind or of similar species. In the cases where buckthorn was removed, landowners could select either American linden or silver maple as the mitigation species. Alternate species were also selected based on what is typically available from commercial nursery suppliers in North Dakota.

Landowner requests for species other than those offered were considered and approved on a case-by-case basis (for example, one landowner requested silver maple in lieu of green ash). Based on these two scenarios, actual mitigation quantities per species may not equal double the quantity impacted.

To maximize efficiency of tree planting and future maintenance requirements, all waived trees were offered as additional trees to landowners accepting mitigation trees. All waived trees were accounted for in this manner. A summary of species impacted and quantities proposed for mitigation is included in **Table 3.**

Table 3 Summary of Impacted and Mitigation Trees by Species

Species	Quantity Impacted	Equivalent Quantity Proposed for Mitigation	Actual Mitigation Quantity
European Buckthorn	1,094	2,188	--
Silver Maple	--	--	1,582
American Linden	--	--	1,127
Green Ash	490	980	698
American Elm	199	398	--
Boxelder	173	346	121
Common Hackberry/ Northern Hackberry	81	162	245
Willow species	51	102	--
Peachleaf Willow	5	10	14
Sandbar Willow	--	--	15
Eastern Cottonwood	27	54	--
Hybrid Poplar	--	--	255
Siouxland Cottonwood	--	--	2
Alder species	20	40	--
White Spruce	15	30	--
Siberian Elm	13	26	--
Bur Oak	12	24	107
Choke Cherry	10	20	--
Amur Choke Cherry	--	--	20
Austrian Pine	4	8	--
Scotch Pine	--	--	112
Colorado Blue Spruce	--	--	30
Ponderosa Pine	--	--	8
Amur Maple	--	--	40
		Total	4,376

Landowners accepting mitigation trees were asked to provide information regarding where they would like the mitigation trees planted on their properties. Drawings of the mitigation planting locations are contained in **Appendix E.**

5.0 Maintenance and Monitoring

Xcel will select a qualified contractor to plant mitigation trees in the designated locations. Planting is anticipated to take place in Fall 2014 or Spring 2015, depending on availability of mitigation species. Each tree will have a guard installed to protect it from browsing mammals and will have a mulch ring placed around it to minimize competition from adjacent vegetation.

Mitigation plots will be inspected each fall for a period of three years. The first annual inspection will be performed at least one year from the anniversary date of the original plantings. A report of each annual inspection will be submitted to the PSC by October 1 of each year. The annual report will document the condition of the plantings and any maintenance work completed as of September of each year. If, after the three-year monitoring period, the tree survival rate is less than 75 percent, additional plantings may be installed at the discretion of the PSC.

Locations of removed buckthorn trees in the right-of-way will also be monitored for re-growth. Buckthorn trees that grow back in areas that do not interfere with the operation or maintenance of the line will be counted as successful mitigation as this species is not expected to grow to heights that would require future clearing.

Appendix A

Tree Count Summary by Plot

Plot 1

Plot 1 is located approximately 2 miles northwest of the city of Oxbow, approximately 0.8 miles west of State Highway 81. Trees and shrubs within this plot were inventoried using the Direct Count Method. The size of the plot was approximately 0.39 acres. Non-native trees and shrubs accounted for 5 percent of the identified species present within the plot. Plot 1 is a planted area; therefore, all trees and shrubs were inventoried for replacement.

Type	Common Name	Scientific Name	Non-native Species*	Average Diameter (in.)	Count
Tree	Green Ash	*Fraxinus pennsylvanica*	No	10	33
	Alder species	*Alnus spp.*	-	4.5	20
	Eastern Cottonwood	*Populus deltoides*	No	13	17
	White Spruce	*Picea glauca*	No	7	8
	European Buckthorn	*Rhamnus cathartica*	Yes	2	6
	Austrian Pine	*Pinus nigra*	No	5.5	4
				Total	**88**
Shrub	Honeysuckle species	*Lonicera spp.*	-	0.75	22
	Red-Osier Dogwood	*Cornus alba*	No	0.75	2
				Total	**24**

*Non-native species were identified by the USDA Plants Database (http://plants.usda.gov/java/).

Plot 2

Plot 2 abuts the west side of the Red River of the North approximately 0.5 miles east of State Highway 81 and 0.9 miles north-northeast of the city of Oxbow. Non-native trees and shrubs accounted for 71 percent of the known species present within the plot. The Extrapolated Representative Plot Method was used to gain the final count of tree and shrub species present given the large area of the plot (1.51 acres) and density of woody vegetation. Plot 2 is a native growth riparian area of the Red River; however, it did not contain shrubs. All trees greater than 1 inch dbh were inventoried for replacement.

Type	Common Name	Scientific Name	Non-Native Species*	Average Diameter (in.)	Count
REPRESENTATIVE SAMPLE AREA 1					
Tree	European Buckthorn	*Rhamnus cathartica*	Yes	3.5	20
	American Elm	*Ulmus americana*	No	30	2
	Bur Oak	*Quercus macrocarpa*	No	34	1
REPRESENTATIVE SAMPLE AREA 2					
Tree	European Buckthorn	*Rhamnus cathartica*	Yes	2.5	14
	Common Hackberry	*Celtis occidentalis*	No	10	1
	American Elm	*Ulmus americana*	No	10	1
REPRESENTATIVE SAMPLE AREA 3					
Tree	American Elm	*Ulmus americana*	No	10	9
	Common Hackberry	*Celtis occidentalis*	No	5.6	4
	European Buckthorn	*Rhamnus cathartica*	Yes	2.5	2
AVERAGE DIAMETER/COUNT WITHIN REPRESENTATIVE SAMPLE AREAS Average of each species within each of the three representative sample areas					
Tree	European Buckthorn	*Rhamnus cathartica*	Yes	3.0	12
	American Elm	*Ulmus americana*	No	16.7	4
	Common Hackberry	*Celtis occidentalis*	No	5.2	1.7
	Bur Oak	*Quercus macrocarpa*	No	11.3	0.3
TOTAL COUNT WITHIN PLOT AREA 65,775 ft^2 (*area of plot*) **divided by** 1,600 ft^2 (*40X40 sample area*) **equals** 41.1 (*total 40X40 areas within the plot area rounded to the nearest tenth*) **multiplied by** the average count (table above) within sample areas for each species (rounded to the nearest 1).					
Tree	European Buckthorn	*Rhamnus cathartica*	Yes		**493**
	American Elm	*Ulmus americana*	No		**164**
	Common Hackberry	*Celtis occidentalis*	No		**70**
	Bur Oak	*Quercus macrocarpa*	No		**12**

*Non-native species were identified by the USDA Plants Database (http://plants.usda.gov/java/).

Plot 3

Plot 3 is located 2 miles northwest of the city of Oxbow and approximately 120 feet east of 174½th Avenue Southeast. Woody vegetation within this area was sparse, and at 0.10 acres in size, the plot was relatively small; therefore the trees were inventoried by the Direct Count Method. No non-native species were observed within this plot. Plot 3 is a planted area; therefore, all trees were inventoried for replacement. No shrubs were identified in the Plot 3 survey area.

Type	Common Name	Scientific Name	Non-native Species*	Average Diameter (in.)	Count
Tree	Green Ash	*Fraxinus pennsylvanica*	No	10	16

*Non-native species were identified by the USDA Plants Database (http://plants.usda.gov/java/).

Plot 4

Plot 4 is located about 1.8 miles from the city of Oxbow, west of Interstate 29 and immediately adjacent to 173rd Avenue North. The plot is approximately 0.12 acres and predominantly comprised of shrubs that could not be identified. Shrubs were inventoried by Direct Count Method. Nearly all of the vegetation inventoried in Plot 4 is native. Plot 4 is a planted area; therefore, all trees and shrubs were inventoried for replacement.

Type	Common Name	Scientific Name	Non-native Species*	Average Diameter (in.)	Count
Tree	Siberian Elm	*Ulmus pumila*	Yes	5	1
Shrub	Chokecherry	*Prunus virginiana*	No	0.75	173

*Non-native species were identified by the USDA Plants Database (http://plants.usda.gov/java/).

Plot 5

Plot 5 is located 4.5 miles northwest of the city of Oxbow and approximately 0.5 miles east of State Highway 17. Given the small size of the plot (approximately 0.02 acres), shrubs were inventoried by the Direct Count Method. This plot was comprised entirely of non-native species. Plot 5 is a planted area; therefore, all trees were inventoried for replacement. No shrubs were identified in the Plot 5 survey area.

Type	Common Name	Scientific Name	Non-native Species*	Average Diameter (in.)	Count
Tree	European Buckthorn	*Rhamnus cathartica*	Yes	1.25	22

*Non-native species were identified by the USDA Plants Database (http://plants.usda.gov/java/).

Plot 6

Plot 6 is located approximately 340 feet straight south of Plot 5. Given the small size of the plot (approximately 0.01 acres), shrubs were inventoried by Direct Count Method. This plot was comprised entirely of non-native species. Plot 6 is a planted area; therefore, all trees were inventoried for replacement. No shrubs were identified in the Plot 6 survey area.

Type	Common Name	Scientific Name	Non-native Species*	Average Diameter (in.)	Count
Tree	European Buckthorn	*Rhamnus cathartica*	Yes	1.25	38

*Non-native species were identified by the USDA Plants Database (http://plants.usda.gov/java/).

Plot 7

Plot 7 is located approximately 90 feet straight south of Plot 6. The plot is approximately 0.03 acres, of which all of the woody vegetation was non-native. Vegetation was inventoried by the Direct Count Method. Plot 7 is a planted area; therefore, all trees were inventoried for replacement. No shrubs were identified in the Plot 7 survey area.

Type	Common Name	Scientific Name	Non-native Species*	Average Diameter (in.)	Count
Tree	European Buckthorn	*Rhamnus cathartica*	Yes	1.25	52
	Siberian Elm	*Ulmus pumila*	Yes	1.5	3

*Non-native species were identified by the USDA Plants Database (http://plants.usda.gov/java/).

Plot 8

Plot 8 is located 5.9 miles east-south east of the city of Davenport and abuts the west side of the Sheyenne River, approximately 662 feet south of 49th Street Southeast. Non-native trees and shrubs accounted for 39 percent of the known species present within the plot. The Extrapolated-Reference Plot Method was used to gain the final count of tree and shrub species for this plot given its size (0.38 acres), accessibility, and density of woody vegetation. Plot 8 is a native growth riparian area of the Sheyenne River. As such, all trees greater than 1 inch dbh and all shrubs were inventoried for replacement.

Type	Common Name	Scientific Name	Non-native Species*	Average Diameter (in.)	Count
SAMPLE AREA 1					
Tree	Green Ash	*Fraxinus pennsylvanica*	No	3.5	6
	American Elm	*Ulmus americana*	No	6	2
	Boxelder	*Acer negundo*	No	14	1
Shrub	Honeysuckle species	*Lonicera spp.*	-	1.25	1
SAMPLE AREA 2					
Tree	Boxelder	*Acer negundo*	No	16	5
	Green Ash	*Fraxinus pennsylvanica*	No	2	1
AVERAGE DIAMETER/COUNT WITHIN SAMPLE AREAS Average of each species within each of the three sample areas					
Tree	Green Ash	*Fraxinus pennsylvanica*	No	3.2	3.5
	Boxelder	*Acer negundo*	No	15	3
	American Elm	*Ulmus americana*	No	3	1
Shrub	Honeysuckle species	*Lonicera* spp.	Yes	0.6	0.5
TOTAL COUNT WITHIN PLOT AREA 16,603 ft^2 (*area of plot*) **divided by** 1,600 ft^2 (*40X40 sample area*) **equals** 10.4 (*total 40X40 areas within the plot area rounded to the nearest tenth*) **multiplied by** the average count (table above) within sample areas for each species (*rounded to the nearest 1*).					
Tree	Green Ash	*Fraxinus pennsylvanica*	No		**37**
	Boxelder	*Acer negundo*	No		**31**
	American Elm	*Ulmus americana*	No		**10**
Shrub	Honeysuckle species	*Lonicera spp.*	Yes		**5**

*Non-native species were identified by the USDA Plants Database (http://plants.usda.gov/java/).

Plot 8A

Plot 8A is located immediately east of Plot 8, on the east bank of the Sheyenne River. Trees and shrubs were counted by the Direct Count Method. This plot is approximately 0.22 acres, and 18 percent of the counted woody plants were non-native species. Plot 8a is a native growth riparian area of the Sheyenne River. As such, all trees greater than 1 inch dbh and all shrubs were inventoried for replacement.

Type	Common Name	Scientific Name	Non-native Species*	Average Diameter (in.)	Count
Tree	American Elm	*Ulmus americana*	No	12	25
	Boxelder	*Acer negundo*	No	8	5
	Eastern Cottonwood	*Populus deltoides*	No	42	1
Shrub	Hophorn Beam	*Ostrya virginiana*	No	0.5	15

*Non-native species were identified by the USDA Plants Database (http://plants.usda.gov/java/).

Plot 9

Plot 9 is located on the southeastern side of Warren Township, approximately 243 feet south of 49th Street Northeast. The plot is approximately 0.15 acres, and all inventoried species were non-native. Trees were inventoried by the Direct Count Method due to the small size of the plot. Plot 9 is a native growth riparian area of an unnamed stream. As such, all trees greater than 1 inch dbh were inventoried for replacement. No shrubs were identified in the Plot 9 survey area.

Type	Common Name	Scientific Name	Non-native Species*	Average Diameter (in.)	Count
Tree	Boxelder	*Acer negundo*	No	8.5	42
	Willow species	*Salix spp.*	-	13	31
	Eastern Cottonwood	*Populus deltoides*	No	18	6

*Non-native species were identified by the USDA Plants Database (http://plants.usda.gov/java/).

Plot 10

Plot 10 is located on the southeastern side of Warren Township approximately 240 feet south of 49th Street Northeast and 100 feet east of Plot 9. The plot is approximately 0.25 acres, of which 92 percent of the inventoried woody vegetation was non-native. Trees were inventoried by the Direct Count Method. Plot 10 is a native growth riparian area of an unnamed stream. As such, all trees greater than 1 inch dbh were inventoried for replacement. No shrubs were identified in the Plot 10 survey area.

Type	Common Name	Scientific Name	Non-native Species*	Average Diameter (in.)	Count
Tree	Boxelder	*Acer negundo*	No	11.5	31
	Willow species	*Salix spp.*	-	9	20
	Green Ash	*Fraxinus pennsylvanica*	No	6.5	3
	Eastern Cottonwood	*Populus deltoides*	No	27.5	2
	European Buckthorn	*Rhamnus cathartica*	Yes	3	1

*Non-native species were identified by the USDA Plants Database (http://plants.usda.gov/java/).

Plot 11

Plot 11 is located approximately 3.5 miles northwest of Warren Township, about 200 feet south of 44th Street Southeast. The plot is approximately 0.14 acres, of which only counted tree was non-native. Trees and shrubs were inventoried by the Direct Count Method. Plot 11 is a planted area; therefore, all trees and shrubs were inventoried for replacement.

Type	Common Name	Scientific Name	Non-native Species*	Average Diameter (in.)	Count
Tree	Green Ash	*Fraxinus pennsylvanica*	No	9	92
	Choke Cherry	*Prunus virginiana*	No	1	10
	Eastern Cottonwood	*Populus deltoides*	No	30	1

*Non-native species were identified by the USDA Plants Database (http://plants.usda.gov/java/).

Plot 12

Plot 12 is located approximately 1,450 feet south of Interstate 94 and the city of Mapleton on the east side of the Maple River. The plot is approximately 0.28 acres, of which 68 percent of the woody vegetation was non-native. Trees and shrubs were inventoried by the Direct Count Method. Plot 12 is a native growth riparian area of the Maple River. As such, all trees greater than 1 inch dbh and all shrubs were inventoried for replacement.

Type	Common Name	Scientific Name	Non-native Species*	Average Diameter (in.)	Count
Tree	Boxelder	*Acer negundo*	No	4.25	43
Shrub	Plum species	*Prunus spp.*	-	0.75	30

*Non-native species were identified by the USDA Plants Database (http://plants.usda.gov/java/).

Plot 13

Plot 13 is located approximately 1.3 miles southwest of the city of Mapleton, north of a rest stop along Interstate 94, and west of the Maple River. The plot is approximately 0.58 acres, of which 6 percent of the woody vegetation was non-native. Trees and shrubs were inventoried by the Direct Count Method. Plot 13 is a planted area; therefore, all trees and shrubs were inventoried for replacement.

Type	Common Name	Scientific Name	Non-native Species*	Average Diameter (in.)	Count
Tree	White Spruce	*Picea glauca*	No	7	7
	Boxelder	*Acer negundo*	No	4	6
	Green Ash	*Fraxinus pennsylvanica*	No	4	2
Shrub	Red-Osier Dogwood	*Cornus alba*	No	1.25	59
	Red Elder	*Sambucus racemosa*	No	1.25	28
	Plum species	*Prunus spp.*	-	2	12
	Gray Dogwood	*Cornus racemosa*	No	1.25	2

*Non-native species were identified by the USDA Plants Database (http://plants.usda.gov/java/).

Plot 14

Plot 14 is located within Harmony Township, approximately 325 feet north of the Lower Branch Rush River and immediately east of 162nd Avenue Southwest. The plot is comprised of a single non-native tree and was directly counted. Though it is unknown if this tree is a native specimen or if it was planted, it meets the size requirement to be inventoried for replacement regardless.

Type	Common Name	Scientific Name	Non-native Species*	Average Diameter (in.)	Count
Tree	Siberian Elm	*Ulmus pumila*	Yes	3	1

*Non-native species were identified by the USDA Plants Database (http://plants.usda.gov/java/).

Plot 15

Plot 15 is located approximately 0.8 miles west of the city of Mapleton and 140 feet south of 36th Avenue Southeast. Approximately 39 percent of identified species were non-native. Plot 15 extended linearly within the corridor and is 3,200 feet long and is 2.2 acres in size. The Extrapolated Linear Method was used to obtain a final count for this plot area, with the exception of green ash. Green ash was inventoried by the Direct Method. Plot 15 is a planted area; therefore, all trees and shrubs were inventoried for replacement.

Type	Common Name	Scientific Name	Non-native Species*	Average Diameter (in.)	Count
AVERAGE NUMBER OF SPECIES COUNTED EVERY 20 FEET					
Tree	European Buckthorn	*Rhamnus cathartica*	Yes	1.25	3
Shrub	Honeysuckle species	*Lonicera spp.*	-	0.75	4
	Red-Osier Dogwood	*Cornus alba*	No	0.75	3
	Plum species	*Prunus spp.*	-	0.75	1
TOTAL COUNT WITHIN PLOT AREA 3,500 ft. (*length of plot*) **divided by** 20 ft. (*species averaged every 20 feet*) **equals** 160 sections (*number of 20 foot segments spanning the 3,500 foot length of the plot*) **multiplied by** the average count (table above) within the sample areas for each species.					
Tree	European Buckthorn	*Rhamnus cathartica*	Yes		**480**
	Green Ash	*Fraxinus pennsylvanica*	No	10	**284**
Shrub	Honeysuckle species	*Lonicera spp.*	-		**640**
	Red-Osier Dogwood	*Cornus alba*	No		**480**
	Plum species	*Prunus spp.*	-		**160**

*Non-native species were identified by the USDA Plants Database (http://plants.usda.gov/java/).

Plot 16

Plot 16 is located 2.1 miles northwest of Oxbow, approximately 2,000 feet west of 173rd Avenue Southeast and is on the east bank of the Wild Rice River. The plot is approximately 0.15 acres, of which 20 percent of the woody vegetation was non-native. Trees were inventoried by the Direct Count Method. Plot 16 is a native growth riparian area of the Wild Rice River. As such, all trees greater than 1 inch dbh and were inventoried for replacement. No shrubs were identified in the Plot 16 survey area.

Type	Common Name	Scientific Name	Non-native Species*	Average Diameter (in.)	Count
Tree	Green Ash	*Fraxinus pennsylvanica*	No	14	23
	Siberian Elm	*Ulmus pumila*	Yes	13	6
	Common Hackberry	*Celtis occidentalis*	No	5	5
	Peachleaf Willow	*Salix amygdaloides*	No	5	5
	European Buckthorn	*Rhamnus cathartica*	Yes	4	2

*Non-native species were identified by the USDA Plants Database (http://plants.usda.gov/java/).

Plot 16A

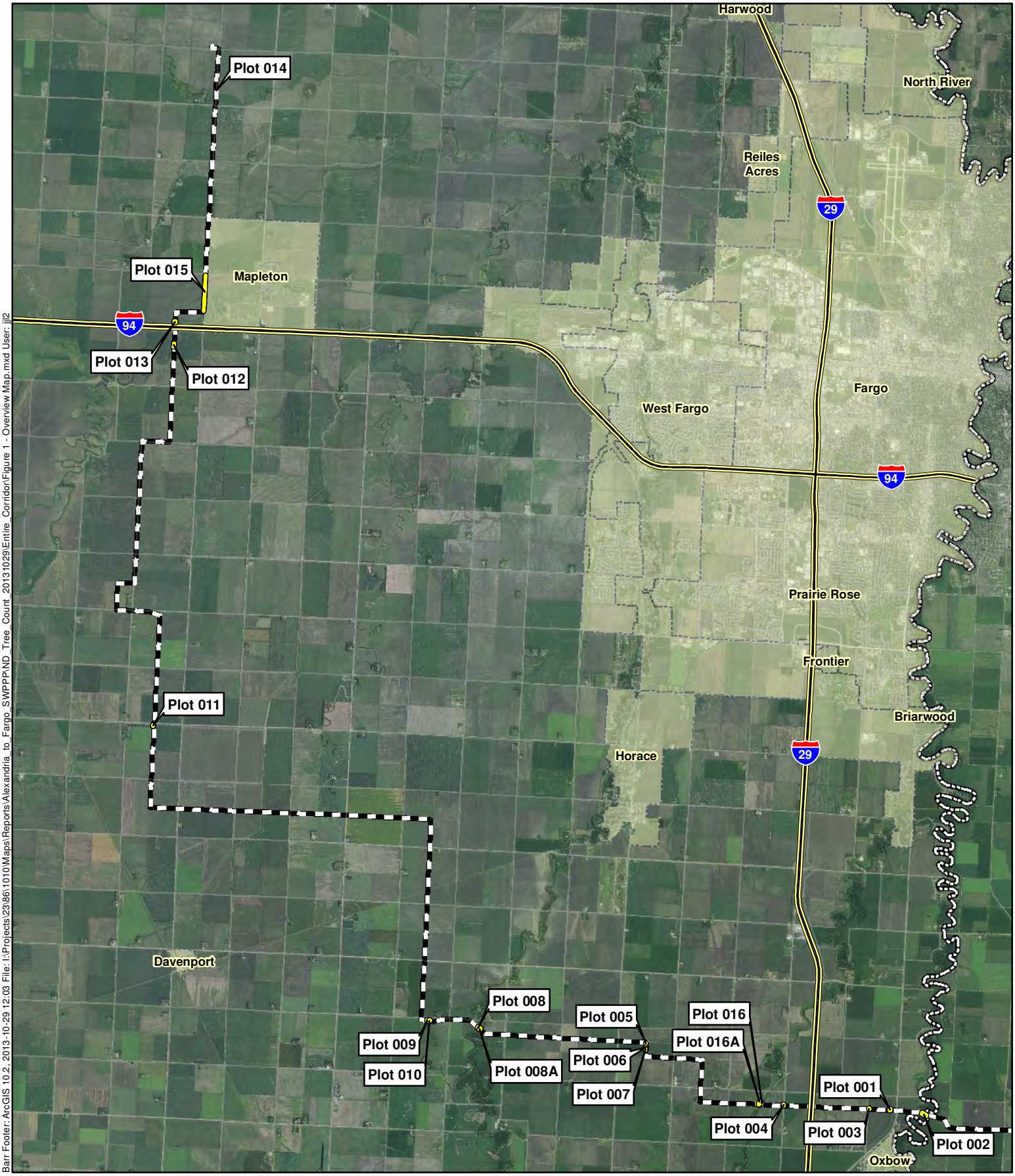
Plot 16A is located 2.1 miles northwest of Oxbow, approximately 2,000 feet west of 173rd Avenue Southeast and is on the west bank of the Wild Rice River directly across from Plot 16. The plot is approximately 0.18 acres, of which only 8 percent of the woody vegetation was non-native. Trees were inventoried by the Direct Count Method. Plot 16a is a native growth riparian area of the Wild Rice River. As such, all trees greater than 1 inch dbh and were inventoried for replacement. No shrubs were identified in the Plot 16a survey area.

Type	Common Name	Scientific Name	Non-native Species*	Average Diameter (in.)	Count
Tree	Boxelder	*Acer negundo*	No	12	15
	Common Hackberry	*Celtis occidentalis*	No	5	6
	Green Ash	*Fraxinus pennsylvanica*	No	10	3
	Siberian Elm	*Ulmus pumila*	Yes	10	2

*Non-native species were identified by the USDA Plants Database (http://plants.usda.gov/java/).

Appendix B

Tree Plot Location Figures



Barr Footer: ArcGIS 10.2, 2013-10-29 12:03 File: I:\Projects\23\86\1010\Maps\Reports\Alexandria_to_Fargo_SWPPP\ND_Tree_Count_20131029\Entire_Corridor\Figure 1 - Overview Map.mxd User: jjl2

Image Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, and the GIS User Community

- Alignment
- Vegetation Plot
- Municipality
- State Boundary

0 1 2 4 Miles

CapX2020
Delivering electricity you can rely on

Figure 1

Overview Map
CapX2020
Tree and Shrub Survey

10/29/2013

Barr Footer: ArcGIS 10.2, 2013-11-26 09:01 File: I:\Projects\23\86\1010\Maps\Reports\Alexandria_to_Fargo_SWPPPND_Tree_Count_20131029\Entire_Corridor\Tree and Shrub Survey Map Book.mxd User: JJL2

Alignment

Alignment ROW

Vegetation Plot

Municipality

State Boundary

0 100 200 Feet

CapX2020

Delivering electricity you can rely on

T137N R49W S13

Figure 2

Plot 001
CapX2020
Tree and Shrub Survey

11/26/2013

Barr Footer: ArcGIS 10.2, 2013-11-26 09:01 File: I:\Projects\23\86\1010\Maps\Reports\Alexandria_to_Fargo_SWPPPND_Tree_Count_20131029\Entire_Corridor\Tree and Shrub Survey Map Book.mxd User: JJL2

Alignment
Alignment ROW
Vegetation Plot
Municipality
State Boundary

0 100 200 Feet

T137N R48W S18

Figure 3

Plot 002
CapX2020
Tree and Shrub Survey

11/26/2013

Barr Footer: ArcGIS 10.2, 2013-11-26 09:01 File: I:\Projects\23\86\1010\Maps\Reports\Alexandria_to_Fargo_SWPPPND_Tree_Count_20131029\Entire_Corridor\Tree and Shrub Survey Map Book.mxd User: JJL2

Alignment
Alignment ROW
Vegetation Plot
Municipality
State Boundary

0 100 200 Feet

T137N R49W S13

Figure 4

Plot 003
CapX2020
Tree and Shrub Survey

11/26/2013

Barr Footer: ArcGIS 10.2, 2013-11-26 09:01 File: I:\Projects\23\86\1010\Maps\Reports\Alexandria_to_Fargo_SWPPPND_Tree_Count_20131029\Entire_Corridor\Tree and Shrub Survey Map Book.mxd User: JJL2

Alignment
Alignment ROW
Vegetation Plot
Municipality
State Boundary

0 100 200 Feet

CapX2020
Delivering electricity you can rely on

T137N R49W S14 and S15

Figure 5

Plot 004
CapX2020
Tree and Shrub Survey

11/26/2013

Barr Footer: ArcGIS 10.2, 2013-11-26 09:01 File: I:\Projects\23\86\1010\Maps\Reports\Alexandria_to_Fargo_SWPPPND_Tree_Count_20131029\Entire_Corridor\Tree and Shrub Survey Map Book.mxd User: JJL2

- Alignment
- Alignment ROW
- Vegetation Plot
- Municipality
- State Boundary

0 50 100 Feet

T137N R49W S8

Figure 6

Plot 005
CapX2020
Tree and Shrub Survey

11/26/2013

Barr Footer: ArcGIS 10.2, 2013-11-26 09:01 File: I:\Projects\23\86\1010\Maps\Reports\Alexandria_to_Fargo_SWPPPND_Tree_Count_20131029\Entire_Corridor\Tree and Shrub Survey Map Book.mxd User: JJL2

Alignment
Alignment ROW
Vegetation Plot
Municipality
State Boundary

0 50 100 Feet

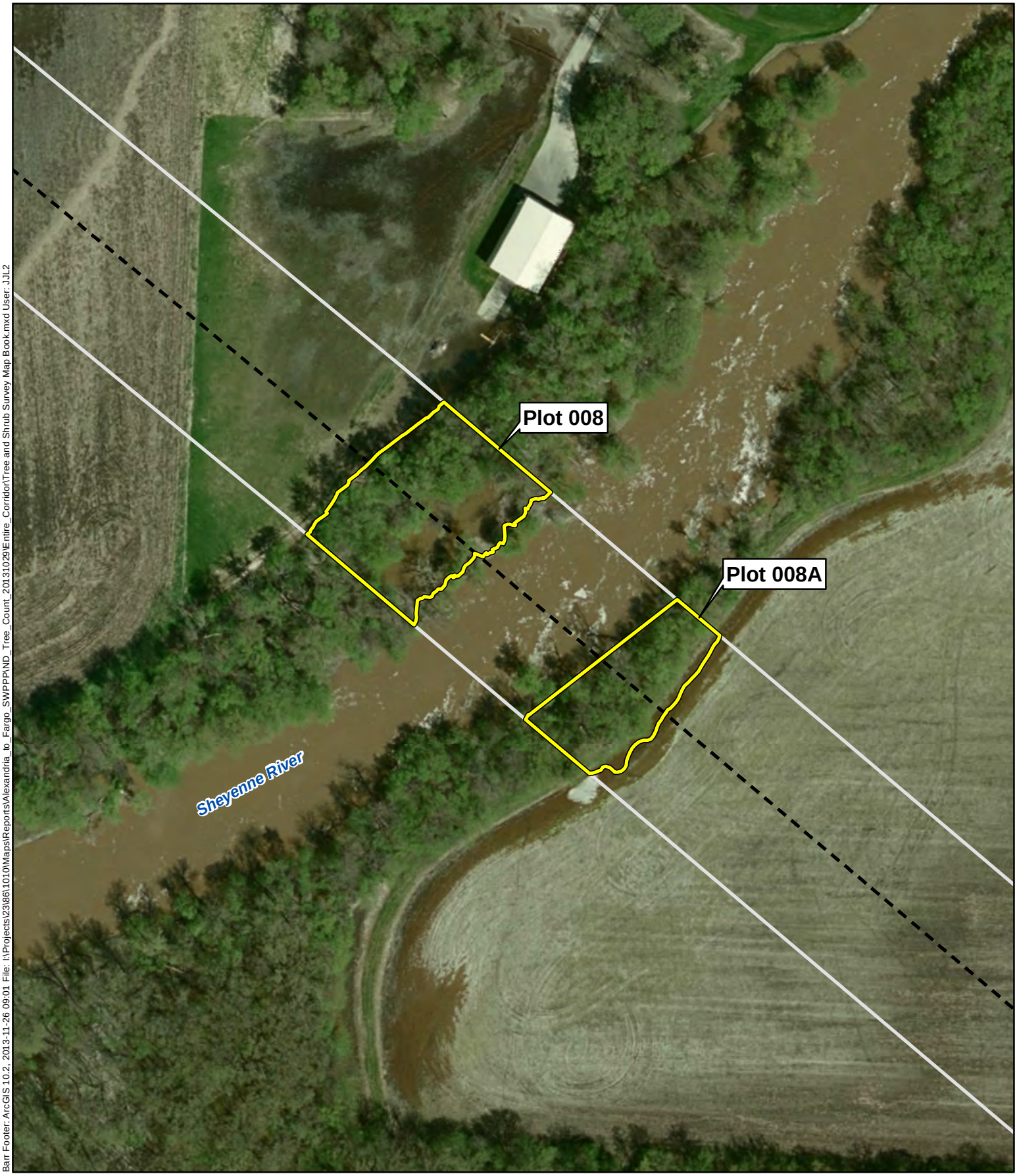
CapX2020
Delivering electricity you can rely on

T137N R49W S8

Figure 7

Plot 006 and 007
CapX2020
Tree and Shrub Survey

11/26/2013



Alignment
Alignment ROW
Vegetation Plot
Municipality
State Boundary

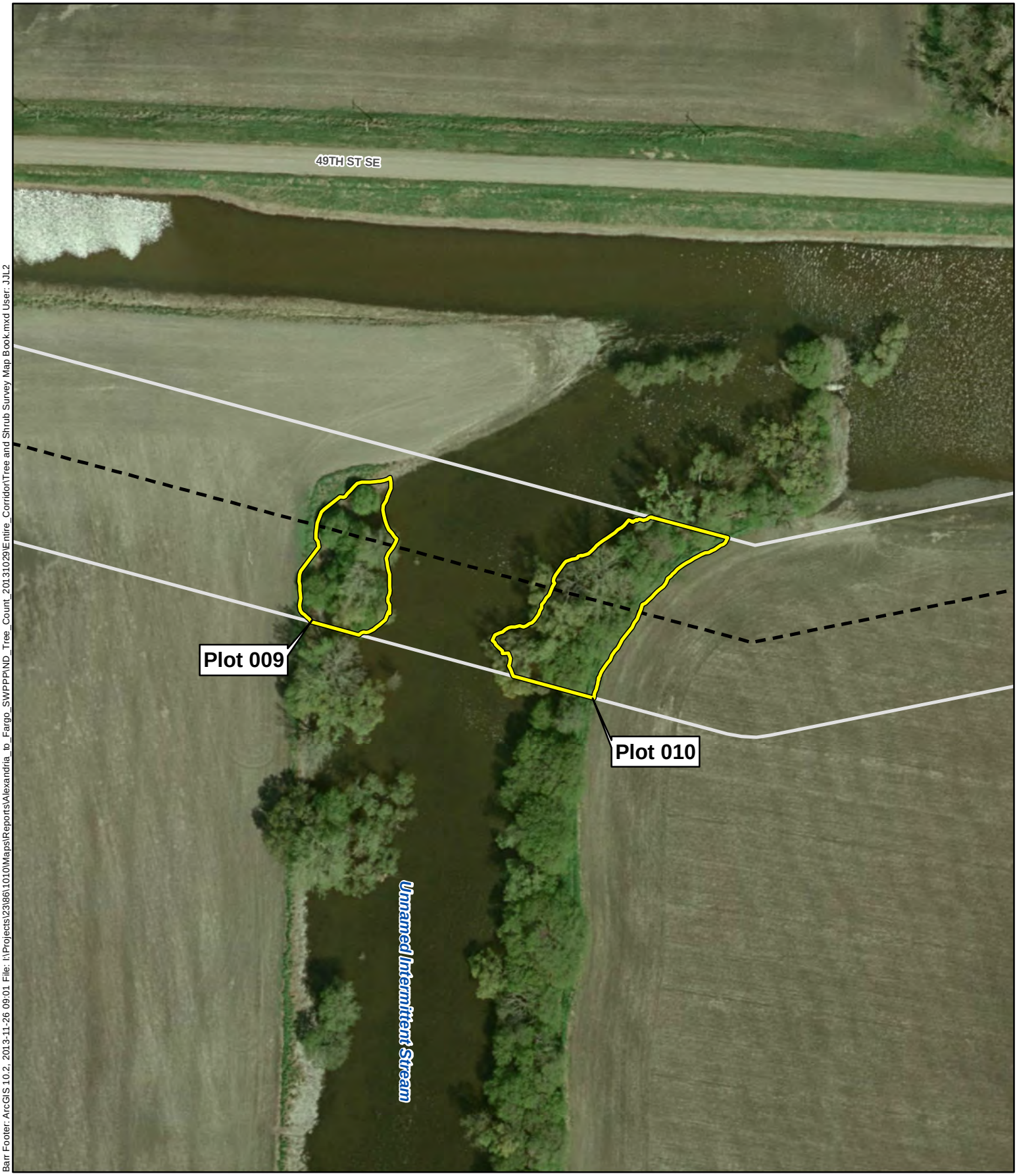
0 100 200 Feet

T137N R50W S11

Figure 8

Plot 008 and 008A
CapX2020
Tree and Shrub Survey

11/26/2013



Barr Footer: ArcGIS 10.2, 2013-11-26 09:01 File: I:\Projects\23\86\1010\Maps\Reports\Alexandria_to_Fargo_SWPPPND_Tree_Count_20131029\Entire_Corridor\Tree and Shrub Survey Map Book.mxd User: JJL2

Alignment
Alignment ROW
Vegetation Plot
Municipality
State Boundary

0 100 200 Feet

T137N R50W S10

Figure 9

Plot 009 and 010
CapX2020
Tree and Shrub Survey

11/26/2013

Barr Footer: ArcGIS 10.2, 2013-11-26 09:01 File: I:\Projects\23\86\1010\Maps\Reports\Alexandria_to_Fargo_SWPPPND_Tree_Count_20131029\Entire_Corridor\Tree and Shrub Survey Map Book.mxd User: JJL2

Alignment
Alignment ROW
Vegetation Plot
Municipality
State Boundary

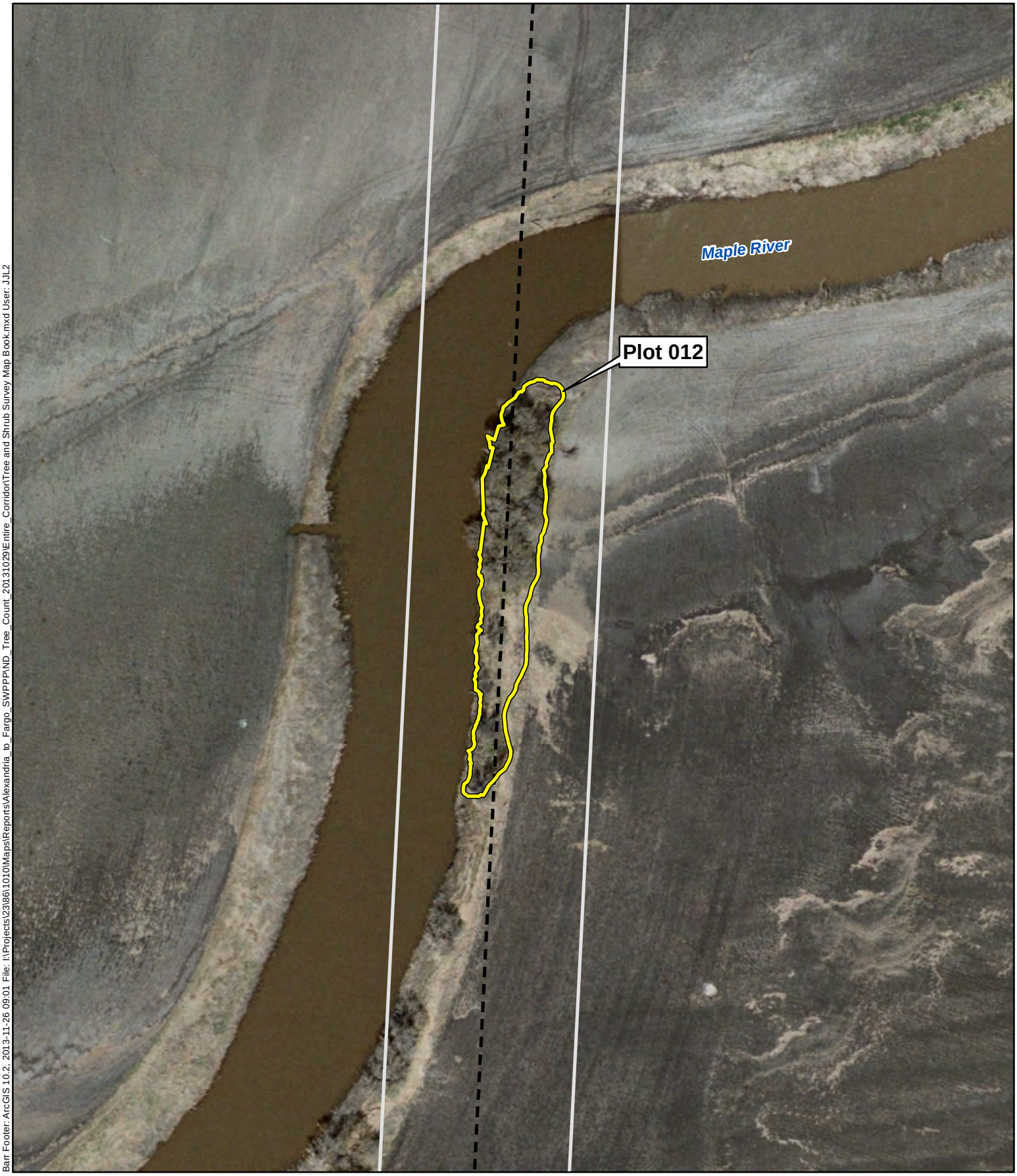
0 100 200 Feet

T138N R51W S14

Figure 10

Plot 011
CapX2020
Tree and Shrub Survey

11/26/2013



Barr Footer: ArcGIS 10.2, 2013-11-26 09:01 File: I:\Projects\23\86\1010\Maps\Reports\Alexandria_to_Fargo_SWPPPND_Tree_Count_20131029\Entire_Corridor\Tree and Shrub Survey Map Book.mxd User: JJL2

Alignment
Alignment ROW
Vegetation Plot
Municipality
State Boundary

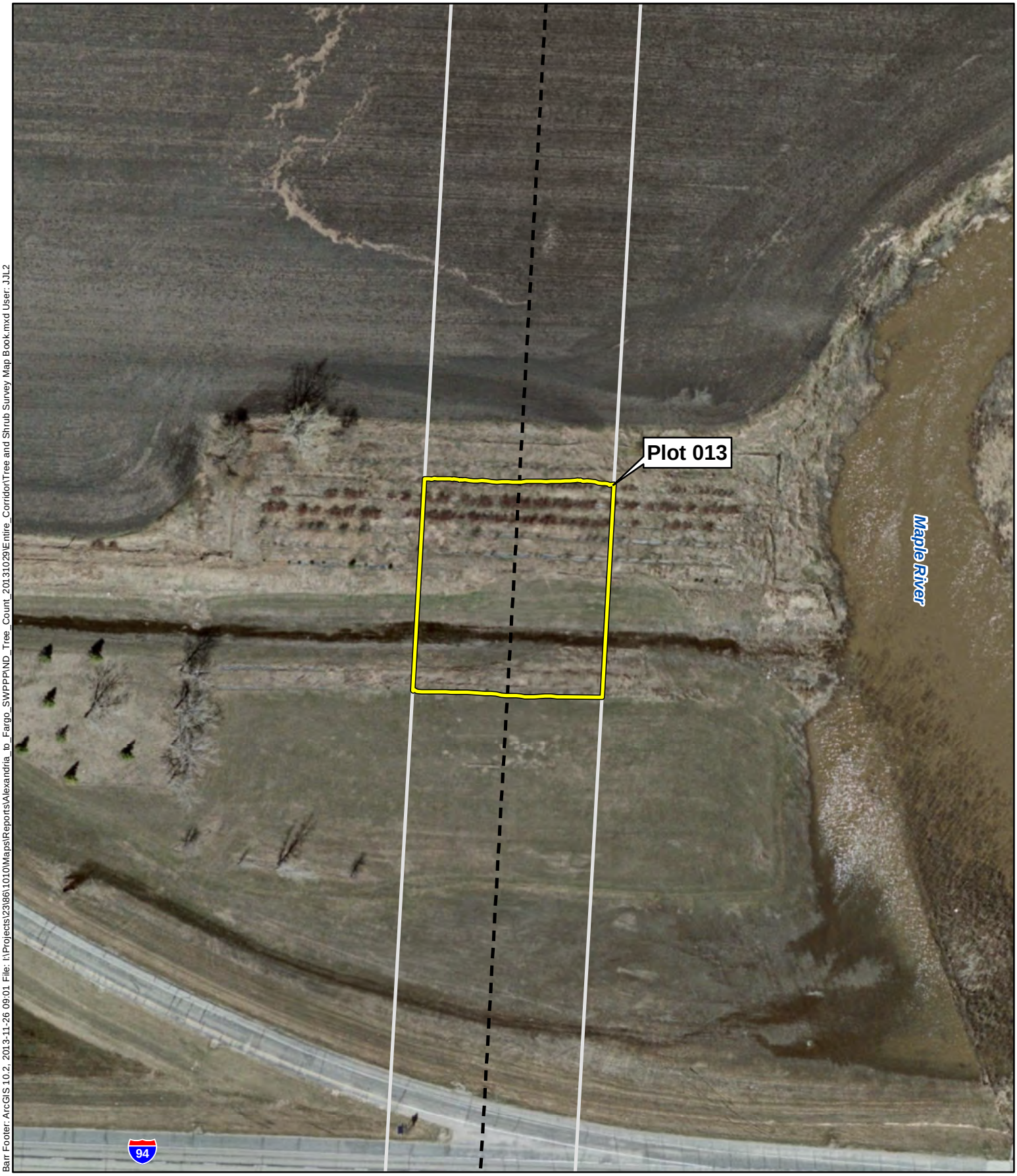
0 100 200 Feet

T139N R51W S11

Figure 11

Plot 012
CapX2020
Tree and Shrub Survey

11/26/2013



Barr Footer: ArcGIS 10.2, 2013-11-26 09:01 File: I:\Projects\23\86\1010\Maps\Reports\Alexandria_to_Fargo_SWPPPND_Tree_Count_20131029\Entire_Corridor\Tree and Shrub Survey Map Book.mxd User: JJL2

Alignment

Alignment ROW

Vegetation Plot

Municipality

State Boundary

0 100 200 Feet

CapX2020
Delivering electricity you can rely on

T139N R51W S2

Figure 12

Plot 013
CapX2020
Tree and Shrub Survey

11/26/2013

Barr Footer: ArcGIS 10.2, 2013-11-26 09:01 File: I:\Projects\23\86\1010\Maps\Reports\Alexandria_to_Fargo_SWPPPND_Tree_Count_20131029\Entire_Corridor\Tree and Shrub Survey Map Book.mxd User: JJL2

- Alignment
- Alignment ROW
- Vegetation Plot
- Municipality
- State Boundary

0 50 100 Feet

CapX2020
Delivering electricity you can rely on

T140N R51W S13 and S14

Figure 13

Plot 014
CapX2020
Tree and Shrub Survey

11/26/2013

Barr Footer: ArcGIS 10.2, 2013-11-26 09:01 File: I:\Projects\23\86\1010\Maps\Reports\Alexandria_to_Fargo_SWPPPND_Tree_Count_20131029\Entire_Corridor\Tree and Shrub Survey Map Book.mxd User: JJL2

- Alignment
- Alignment ROW
- Vegetation Plot
- Municipality
- State Boundary

0 100 200 400 600 800 Feet

T139N R51W S1

Figure 14

Plot 015
CapX2020
Tree and Shrub Survey

11/26/2013

Barr Footer: ArcGIS 10.2, 2013-11-26 09:01 File: I:\Projects\23\86\1010\Maps\Reports\Alexandria_to_Fargo_SWPPPND_Tree_Count_20131029\Entire_Corridor\Tree and Shrub Survey Map Book.mxd User: JJL2

Alignment
Alignment ROW
Vegetation Plot
Municipality
State Boundary

0 100 200 Feet

T137N R49W S15

Figure 15

Plot 016 and 016A
CapX2020
Tree and Shrub Survey

11/26/2013

Appendix C

Tree Plot Site Photos

Photo 1: Plot 1

Photo 2: Plot 1

Photo 3: Plot 2, Sample Area 1

Photo 4: Plot 2, Sample Area 2

Photo 5: Plot 2, Sample Area 3

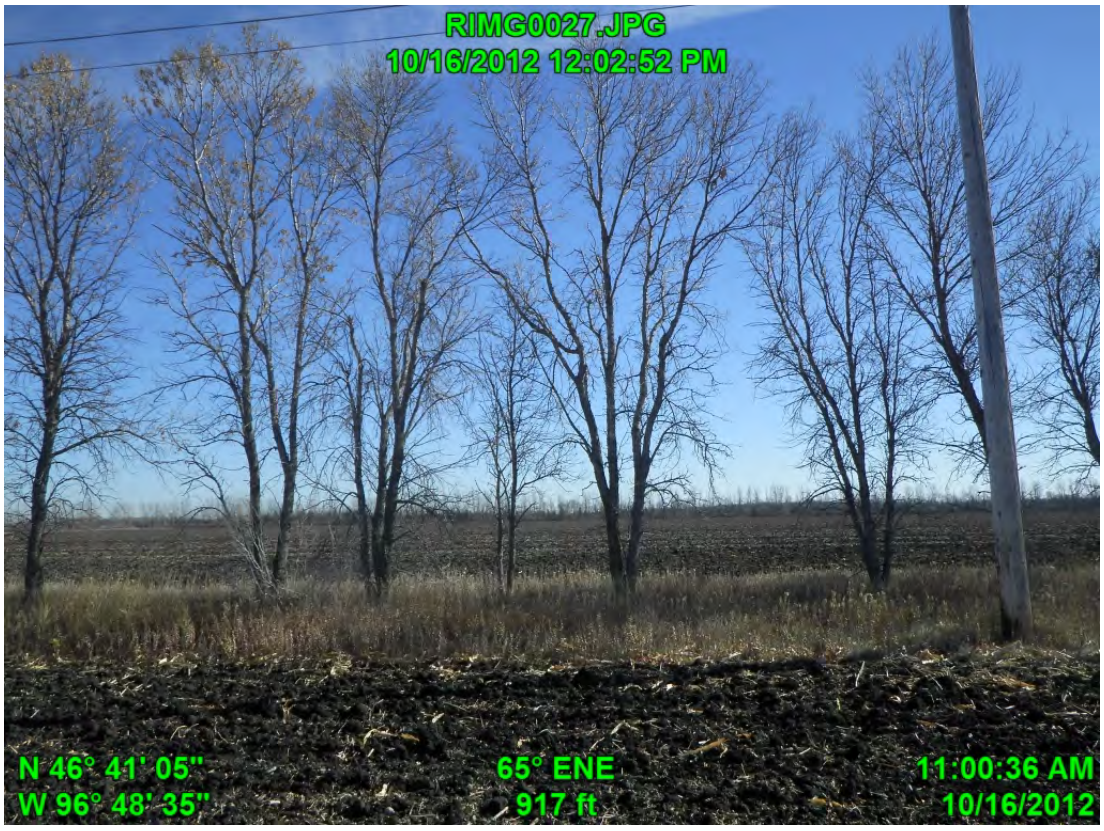


Photo 6: Plot 3

Photo 7: Plot 4

Photo 8: Plot 5

Photo 9: Plot 6

Photo 10: Plot 7

Photo 11: Plot 8, Sample Area 1

Photo 12: Plot 8, Sample Area 2

Photo 13: Plot 8A

Photo 14: Plot 10

Photo 15: Plot 11

Photo 16: Plot 12

Photo 17: Plot 13

Photo 18: Plot 14

Photo 19: Plot 15

Photo 20: Plot 16

Photo 21: Plot 16A

Appendix D

Signed Landowner Waivers and Agreements

Via email only

Northern States Power Company/Xcel Energy
CapX2020 Fargo to St. Cloud 345kV Transmission Line Project
North Dakota Public Service Commission Case No. PU-07-759
Tree Mitigation Options

Surveyed Tree Plots: 1 & 3 Parcel Number: 57000010291000 & 57000010292000

Landowner Name: Fercho Family Farms

Project Parcel Nbr. ND133/134

Landowner Address: 4903 Rose Creek Parkway
Fargo, ND 58104

Tall growing vegetation can interfere with the safe and reliable construction and operation of overhead transmission lines. As part of project, trees located within the project right-of-way will require clearing. You are being contacted as your property contains trees within the project right-of-way that will need to be cleared prior to construction. Per the mitigation specifications issued by the North Dakota Public Service Commission (PSC), trees are required to be mitigated at a 2:1 ratio; that is, two trees planted for every single tree cleared. The following contains a summary of tree impacts and mitigation requirements on the land parcels referenced above:

Tree Species	Quantity Impacted	Equivalent Quantity for Mitigation	Additional Now Available As Requested and Selected by Owner 6/17/14
Green Ash	49	98	NA
Alder	20	40	NA
Eastern Cottonwood	17	34	NA
White Spruce	8	16	NA
European Buckthorn	6	12	NA
Austrian Pine	4	8	NA
Silver Maple	NA	NA	263
American Linden	NA	NA	331
Hybrid Poplar	NA	NA	16
Colorado Blue Spruce	NA	NA	14
Bur Oak	NA	NA	83
Northern Hackberry	NA	NA	83
Scotch Pine	NA	NA	112
		208	**902**
Total for Quantity Required for Mitigation		**1,110**	

Per PSC tree mitigation guidance, "except in the case of invasive or noxious species, trees and shrubs must be replaced by the same species or similar species, suitable for North Dakota growing conditions as recommended by the North Dakota Forest Service." The North Dakota Tree Handbook, developed with the North Dakota Forest Service, was consulted to determine suitable species to select for mitigation. Tree saplings at least two years in age will be used for mitigation.

Low-growing shrubs will be cut to ground level, leaving the root structure in place. As such, shrubs are expected to regenerate naturally and replacement shrubs are not currently being considered in this agreement.

The landowner may select the following quantities and species for mitigation. For species with multiple mitigation options listed, any combination may be selected for mitigation. If the landowner does not wish to receive all of the mitigation trees they are permitted, please state the quantity unaccounted for in the table below.

Project Parcel Nbr. ND133/134

Species Impacted	Mitigation Options	Adjusted Quantity Available for Mitigation	Quantity Selected for Mitigation	Additional Now Available As Requested and Selected by Owner 6/17/14
Green Ash	~~Green Ash,~~ Silver Maple at Owner's request	98	98	NA
Alder	Amur Maple Amur Choke Cherry Japanese Tree Lilac	40	40 Amur Maple	NA
Eastern Cottonwood	Siouxland Cottonwood Hybrid Poplar	34	34 Hybrid Poplar	NA
White Spruce	Black Hills Spruce Colorado Blue Spruce	16	16 Colorado Blue Spruce	NA
European Buckthorn	American Linden Silver Maple	12	12 Silver Maple	NA
Austrian Pine	Jack Pine Ponderosa Pine Scotch Pine	8	8 Ponderosa Pine	NA
Silver Maple				263
American Linden				331
Hybrid Poplar				16
Colorado Blue Spruce				14
Bur Oak				83
Northern Hackberry				83
Scotch Pine				112
		Individual Totals	**208**	**902**
		Complete Total		**1,110**

Tree Mitigation Request (check one):

__✓__ I request that replacement trees (at a 2:1 ratio) be planted on my property in the following location(s):
Richland County S ½ of Section 30, Twp 136, Rge 52
Richland County SW ¼ of Section 5, Twp 136, Rge 52
Cass County W ½ of Section 23, Twp. 143, Rge 49

_____

In requesting planting of replacement trees, I acknowledge and grant Xcel access to these locations for planting and maintenance purposes. Removed trees will be replaced in-kind unless otherwise requested. No invasive species (i.e. buckthorn) will be replanted in tree mitigation efforts and an alternate, native species will be planted instead.

_____ I waive my right to planting of replacement trees on my property to mitigate for the project's removal of existing trees on the parcel of land referenced above.

Additional Comments:

Please contact property owner in advance to planting to arrange exact locations.

John Fercho, 701-371-9404

John Fercho

Landowner Signature

6-18-14

Date

Right-of-Way Agent Signature

6/18/14

Date

Northern States Power Company/Xcel Energy
CapX2020 Fargo to St. Cloud 345kV Transmission Line Project
North Dakota Public Service Commission Case No. PU-07-759
Tree Mitigation Options

Surveyed Tree Plots: 2 Parcel Number: 57000010211060

Landowner Name: Brian and Kelly Duchscherer

Project Parcel Nbr. ND136

Landowner Address: 17538 50th Street SE
Hickson, ND 58047

Tall growing vegetation can interfere with the safe and reliable construction and operation of overhead transmission lines. As part of project, trees located within the project right-of-way will require clearing. You are being contacted as your property contains trees within the project right-of-way that will need to be cleared prior to construction. Per the mitigation specifications issued by the North Dakota Public Service Commission (PSC), trees are required to be mitigated at a 2:1 ratio; that is, two trees planted for every single tree cleared. The following contains a summary of tree impacts and mitigation requirements on the land parcels referenced above:

Tree Species	Quantity Impacted	Equivalent Quantity for Mitigation	Quantity Now Available 5/30/14
European Buckthorn	493	986	NA-see page 2
American Elm	164	328	NA-see page 2
Common Hackberry	70	140	140 (No additional available)
Bur Oak	12	24	24 (No additional available)
Green Ash	NA	NA	211-see page 2
Silver Maple	NA	NA	39-see page 2
Total for Quantity Required for Mitigation		**1478**	**1728**

Per PSC tree mitigation guidance, "except in the case of invasive or noxious species, trees and shrubs must be replaced by the same species or similar species, suitable for North Dakota growing conditions as recommended by the North Dakota Forest Service." The North Dakota Tree Handbook, developed with the North Dakota Forest Service, was consulted to determine suitable species to select for mitigation. Tree saplings at least two years in age will be used for mitigation.

Low-growing shrubs will be cut to ground level, leaving the root structure in place. As such, shrubs are expected to regenerate naturally and replacement shrubs are not currently being considered in this agreement.

The landowner may select the following quantities and species for mitigation. For species with multiple mitigation options listed, any combination may be selected for mitigation. If the landowner does not wish to receive all of the mitigation trees they are permitted, please state the quantity unaccounted for in the table below.

Project Parcel Nbr. ND136

Species Impacted	Mitigation Options	Adjusted Quantity Available for Mitigation	Quantity Selected for Mitigation
European Buckthorn	American Linden	986	386
	Silver Maple		600
American Elm	American Linden	328	128
	Hybrid Poplar		200
Common Hackberry	Northern Hackberry	140	140
Bur Oak	Bur Oak	24	24
Additional Silver Maples available 5/30/14	NA	39	39
Additional Green Ash available 5/30/14	NA	211	211
		Total	**1728**

Tree Mitigation Request (check one):

X I request that replacement trees (at a 2:1 ratio) be planted on my property in the following location(s):

Property Surrounding my home

In requesting planting of replacement trees, I acknowledge and grant Xcel access to these locations for planting and maintenance purposes. Removed trees will be replaced in-kind unless otherwise requested. No invasive species (i.e. buckthorn) will be replanted in tree mitigation efforts and an alternate, native species will be planted instead.

____ I waive my right to planting of replacement trees on my property to mitigate for the project's removal of existing trees on the parcel of land referenced above.

Additional Comments:

Please install with fabric where possible to improve opportunity to grow.

Please contact owner prior to installation.

701-353-9774

Landowner Signature

5/30/14
Date

Right-of-Way Agent Signature

6/2/14
Date

Northern States Power Company/Xcel Energy

CapX2020 Fargo to St. Cloud 345kV Transmission Line Project
North Dakota Public Service Commission Case No. PU-07-759
Tree Mitigation Options

Surveyed Tree Plot: 4 Parcel Number: 57000010299000

Landowner Name: Steven C. Brakke

Project Parcel Nbr. ND 130

Landowner Address: 5060 173rd Avenue SE
Hickson, ND 58047

Tall growing vegetation can interfere with the safe and reliable construction and operation of overhead transmission lines. As part of project, trees located within the project right-of-way will require clearing. You are being contacted as your property contains trees within the project right-of-way that will need to be cleared prior to construction. Per the mitigation specifications issued by the North Dakota Public Service Commission (PSC), trees are required to be mitigated at a 2:1 ratio; that is, two trees planted for every single tree cleared. The following contains a summary of tree impacts and mitigation requirements on the land parcel referenced above:

Tree Species	Quantity Impacted	Equivalent Quantity for Mitigation
Siberian Elm	1	2
Total for Quantity Required for Mitigation		**2**

Per PSC tree mitigation guidance, "except in the case of invasive or noxious species, trees and shrubs must be replaced by the same species or similar species, suitable for North Dakota growing conditions as recommended by the North Dakota Forest Service." The North Dakota Tree Handbook, developed with the North Dakota Forest Service, was consulted to determine suitable species to select for mitigation. Tree saplings at least two years in age will be used for mitigation.

Low-growing shrubs will be cut to ground level, leaving the root structure in place. As such, shrubs are expected to regenerate naturally and replacement shrubs are not currently being considered in this agreement.

The landowner may select the following quantities and species for mitigation. For species with multiple mitigation options listed, any combination may be selected for mitigation. If the landowner does not wish to receive all of the mitigation trees they are permitted, please state the quantity unaccounted for in the table below.

Species Impacted	Mitigation Options	Quantity Available for Mitigation	Quantity Selected for Mitigation
Siberian Elm	American Linden	2	
	Silver Maple		
Quantity of mitigation trees unaccounted for			
Total			**2**

Project Parcel Nbr. ND 130

Tree Mitigation Request (check one):

_____ I request that replacement trees (at a 2:1 ratio) be planted on my property in the following location(s):

_____

In requesting planting of replacement trees, I acknowledge and grant Xcel access to these locations for planting and maintenance purposes. Removed trees will be replaced in-kind unless otherwise requested. No invasive species (i.e. buckthorn) will be replanted in tree mitigation efforts and an alternate, native species will be planted instead.

X I waive my right to planting of replacement trees on my property to mitigate for the project's removal of existing trees on the parcel of land referenced above.

Additional Comments:

_____

_____

_____

_____

_____

_____

_____

_____

701-588-4128 (H) 701-371-3758 (C)

Steven C Burke

Landowner Signature

_____

Right-of-Way Agent Signature

1-21-14

Date

_____

Date

Northern States Power Company/Xcel Energy
CapX2020 Fargo to St. Cloud 345kV Transmission Line Project
North Dakota Public Service Commission Case No. PU-07-759
Tree Mitigation Options

Surveyed Tree Plots: 5 & 6 Parcel Number: 57000010263010

Landowner Name: Maurice C. and Joyce Rheault

Project Parcel Nbr. ND 115
Landowner Address: 2121 16th Street S.
Fargo, ND 58103

Tall growing vegetation can interfere with the safe and reliable construction and operation of overhead transmission lines. As part of project, trees located within the project right-of-way will require clearing. You are being contacted as your property contains trees within the project right-of-way that will need to be cleared prior to construction. Per the mitigation specifications issued by the North Dakota Public Service Commission (PSC), trees are required to be mitigated at a 2:1 ratio; that is, two trees planted for every single tree cleared. The following contains a summary of tree impacts and mitigation requirements on the land parcel referenced above:

Tree Species	Quantity Impacted	Equivalent Quantity for Mitigation
European Buckthorn	60	120
Total for Quantity Required for Mitigation		**120**

Per PSC tree mitigation guidance, "except in the case of invasive or noxious species, trees and shrubs must be replaced by the same species or similar species, suitable for North Dakota growing conditions as recommended by the North Dakota Forest Service." The North Dakota Tree Handbook, developed with the North Dakota Forest Service, was consulted to determine suitable species to select for mitigation. Tree saplings at least two years in age will be used for mitigation.

Low-growing shrubs will be cut to ground level, leaving the root structure in place. As such, shrubs are expected to regenerate naturally and replacement shrubs are not currently being considered in this agreement.

The landowner may select the following quantities and species for mitigation. For species with multiple mitigation options listed, any combination may be selected for mitigation. If the landowner does not wish to receive all of the mitigation trees they are permitted, please state the quantity unaccounted for in the table below.

Species Impacted	Mitigation Options	Quantity Available for Mitigation	Quantity Selected for Mitigation
European Buckthorn	American Linden	120	
	Silver Maple		
Quantity of mitigation trees unaccounted for			
Total			**120**

Project Parcel Nbr. ND 115

Tree Mitigation Request (check one):

_____ I request that replacement trees (at a 2:1 ratio) be planted on my property in the following location(s):

_____

In requesting planting of replacement trees, I acknowledge and grant Xcel access to these locations for planting and maintenance purposes. Removed trees will be replaced in-kind unless otherwise requested. No invasive species (i.e. buckthorn) will be replanted in tree mitigation efforts and an alternate, native species will be planted instead.

X I waive my right to planting of replacement trees on my property to mitigate for the project's removal of existing trees on the parcel of land referenced above.

Additional Comments:

_____

_____

_____

_____

_____

_____

_____

_____

701-540-5139

Maurice Thibeault

Landowner Signature

_____

Right-of-Way Agent Signature

1-22-14

Date

_____

Date

Northern States Power Company/Xcel Energy

CapX2020 Fargo to St. Cloud 345kV Transmission Line Project
North Dakota Public Service Commission Case No. PU-07-759
Tree Mitigation Options

Surveyed Tree Plot: 7 Parcel Number: 57000010263000

Landowner Name: Arcade & Rosemarie Duval

Project Parcel Nbr. ND 115.1

Landowner Address: 1532 22nd Avenue South
Fargo, ND 58103

Tall growing vegetation can interfere with the safe and reliable construction and operation of overhead transmission lines. As part of project, trees located within the project right-of-way will require clearing. You are being contacted as your property contains trees within the project right-of-way that will need to be cleared prior to construction. Per the mitigation specifications issued by the North Dakota Public Service Commission (PSC), trees are required to be mitigated at a 2:1 ratio; that is, two trees planted for every single tree cleared. The following contains a summary of tree impacts and mitigation requirements on the land parcel referenced above:

Tree Species	Quantity Impacted	Equivalent Quantity for Mitigation
European Buckthorn	52	104
Siberian Elm	3	6
Total for Quantity Required for Mitigation		**110**

Per PSC tree mitigation guidance, "except in the case of invasive or noxious species, trees and shrubs must be replaced by the same species or similar species, suitable for North Dakota growing conditions as recommended by the North Dakota Forest Service." The North Dakota Tree Handbook, developed with the North Dakota Forest Service, was consulted to determine suitable species to select for mitigation. Tree saplings at least two years in age will be used for mitigation.

Low-growing shrubs will be cut to ground level, leaving the root structure in place. As such, shrubs are expected to regenerate naturally and replacement shrubs are not currently being considered in this agreement.

The landowner may select the following quantities and species for mitigation. For species with multiple mitigation options listed, any combination may be selected for mitigation. If the landowner does not wish to receive all of the mitigation trees they are permitted, please state the quantity unaccounted for in the table below.

Project Parcel Nbr. ND 115.1

Species Impacted	Mitigation Options	Quantity Available for Mitigation	Quantity Selected for Mitigation
European Buckthorn (104) Siberian Elm (6)	American Linden	110	
	Silver Maple		
Quantity of mitigation trees unaccounted for			
Total			**110**

Tree Mitigation Request (check one):

_____ I request that replacement trees (at a 2:1 ratio) be planted on my property in the following location(s):

_____

In requesting planting of replacement trees, I acknowledge and grant Xcel access to these locations for planting and maintenance purposes. Removed trees will be replaced in-kind unless otherwise requested. No invasive species (i.e. buckthorn) will be replanted in tree mitigation efforts and an alternate, native species will be planted instead.

__✓__ I waive my right to planting of replacement trees on my property to mitigate for the project's removal of existing trees on the parcel of land referenced above.

Additional Comments:

_____

_____

_____

_____

_____

_____

701-476-0538

Rosemarie Duval and Brenda Duval

Landowner Signature

Right-of-Way Agent Signature

1-23-14

Date

Date

Via email

email attached

Northern States Power Company/Xcel Energy
CapX2020 Fargo to St. Cloud 345kV Transmission Line Project
North Dakota Public Service Commission Case No. PU-07-759
Tree Mitigation Options

Surveyed Tree Plots: 8 Parcel Number: 55000009652010

Landowner Name: Edward and Joann Jameson

Project Parcel Nbr. ND107

Landowner Address: 16750 49th St. SE
Kindred, ND 58051

Tall growing vegetation can interfere with the safe and reliable construction and operation of overhead transmission lines. As part of project, trees located within the project right-of-way will require clearing. You are being contacted as your property contains trees within the project right-of-way that will need to be cleared prior to construction. Per the mitigation specifications issued by the North Dakota Public Service Commission (PSC), trees are required to be mitigated at a 2:1 ratio; that is, two trees planted for every single tree cleared. The following contains a summary of tree impacts and mitigation requirements on the land parcels referenced above:

Tree Species	Quantity Impacted	Equivalent Quantity for Mitigation	Quantity Now Available 5/30/14
Green Ash	92	74	NA-see page 2
Boxelder	31	62	NA-see page 2
American Elm	10	20	NA-see page 2
Additional American Linden 5/30/14			20
Total for Quantity Required for Mitigation		**156**	**176**

Per PSC tree mitigation guidance, "except in the case of invasive or noxious species, trees and shrubs must be replaced by the same species or similar species, suitable for North Dakota growing conditions as recommended by the North Dakota Forest Service." The North Dakota Tree Handbook, developed with the North Dakota Forest Service, was consulted to determine suitable species to select for mitigation. Tree saplings at least two years in age will be used for mitigation.

Low-growing shrubs will be cut to ground level, leaving the root structure in place. As such, shrubs are expected to regenerate naturally and replacement shrubs are not currently being considered in this agreement.

The landowner may select the following quantities and species for mitigation. For species with multiple mitigation options listed, any combination may be selected for mitigation. If the landowner does not wish to receive all of the mitigation trees they are permitted, please state the quantity unaccounted for in the table below.

Project Parcel Nbr. ND107

Species Impacted	Mitigation Options	Adjusted Quantity Available for Mitigation	Quantity Selected for Mitigation
Green Ash	Green Ash	74	74
Boxelder	Boxelder	62	62
American Elm	American Linden	20	15
	Hybrid Poplar		5
Additional American Linden 5/30/14	Additional Trees Available 5/30/14	20	20
		Total	**176**

Tree Mitigation Request (check one):

X I request that replacement trees (at a 2:1 ratio) be planted on my property in the following location(s):

See prior agreement (attached) will be at same property as surveyed plot.

In requesting planting of replacement trees, I acknowledge and grant Xcel access to these locations for planting and maintenance purposes. Removed trees will be replaced in-kind unless otherwise requested. No invasive species (i.e. buckthorn) will be replanted in tree mitigation efforts and an alternate, native species will be planted instead.

_____ I waive my right to planting of replacement trees on my property to mitigate for the project's removal of existing trees on the parcel of land referenced above.

Additional Comments:

Owner will be present during planting. Please contact owner for instructions prior to planting.

701-866-4220 (JoAnn) 701-361-5572 (Ed)

_____ Brian Ore

Landowner Signature | Right-of-Way Agent Signature

_____ 6/23/14

Date | Date

Brian Mielke

From: Joann Jameson <edmundoi@aol.com>
Sent: Friday, June 20, 2014 8:28 AM
To: Brian Mielke
Cc: edjameson@stockmens.com
Subject: Re: CapX2020 Fargo to St. Cloud 345kV Transmission Line Project, Tree Mitigation

Thanks Brian and I apologize for not getting this done sooner. Yes, we would like 20 additional Linden trees since they are available. I will ask Ed to reprint this form and I'll try again to send it to you. Hopefully this response to the email will act as my electronic signature to the changes.
JoAnn Jameson
16750 49 St SE
Kindred ND 58051

-----Original Message-----
From: Brian Mielke <Brian.Mielke@Ulteig.com>
To: edmundoi <edmundoi@aol.com>
Sent: Wed, Jun 18, 2014 1:20 pm
Subject: FW: CapX2020 Fargo to St. Cloud 345kV Transmission Line Project, Tree Mitigation

Here's that email again.

Brian Mielke, SR/WA

Senior Right-of-Way Specialist

4285 Lexington Ave. N. • St. Paul, MN 55126

Direct: 651-415-3824 • Mobile: (612)669-7562

www.ulteig.com

Find Ulteig on: Facebook | Twitter | LinkedIn | YouTube

Click here to sign up for our monthly newsletter, Connect.

From: Brian Mielke
Sent: Friday, May 30, 2014 10:24 AM
To: edmundoi@aol.com
Subject: CapX2020 Fargo to St. Cloud 345kV Transmission Line Project, Tree Mitigation

Good morning JoAnn,

Thank you for your time today and discussing the tree mitigation updates at your property. As discussed, I've updated the agreement to reflect the additional lindens and have also attached a copy of the prior agreement. The updated form is based on the new availability carried forward as discussed. I did not fill in the location information, however.

When you have had an opportunity to review the enclosed information, please complete the signature line and location information, returning via email or mail to the address below. You can also contact me at 651-415-3824 with any questions.

Thanks again!

Brian Mielke, SR/WA

Senior Right-of-Way Specialist

4285 Lexington Ave. N. • St. Paul, MN 55126

Direct: 651-415-3824 • Mobile: (612)669-7562

www.ulteig.com

Find Ulteig on: Facebook | Twitter | LinkedIn | YouTube

Click here to sign up for our monthly newsletter, Connect.

Northern States Power Company/Xcel Energy

CapX2020 Fargo to St. Cloud 345kV Transmission Line Project
North Dakota Public Service Commission Case No. PU-07-759
Tree Mitigation Options

Surveyed Tree Plot: 8 Parcel Number: 55000009652010

Landowner Names: Edward & Joann Jameson

Project Parcel Nbr. ND 107

Landowner Address: 16750 49th Street SE
Kindred, ND 58051

Tall growing vegetation can interfere with the safe and reliable construction and operation of overhead transmission lines. As part of project, trees located within the project right-of-way will require clearing. You are being contacted as your property contains trees within the project right-of-way that will need to be cleared prior to construction. Per the mitigation specifications issued by the North Dakota Public Service Commission (PSC), trees are required to be mitigated at a 2:1 ratio; that is, two trees planted for every single tree cleared. The following contains a summary of tree impacts and mitigation requirements on the land parcel referenced above:

Tree Species	Quantity Impacted	Equivalent Quantity for Mitigation
Green Ash	37	74
Boxelder	31	62
American Elm	10	20
Total for Quantity Required for Mitigation		**156**

Per PSC tree mitigation guidance, "except in the case of invasive or noxious species, trees and shrubs must be replaced by the same species or similar species, suitable for North Dakota growing conditions as recommended by the North Dakota Forest Service." The North Dakota Tree Handbook, developed with the North Dakota Forest Service, was consulted to determine suitable species to select for mitigation. Tree saplings at least two years in age will be used for mitigation.

Low-growing shrubs will be cut to ground level, leaving the root structure in place. As such, shrubs are expected to regenerate naturally and replacement shrubs are not currently being considered in this agreement.

The landowner may select the following quantities and species for mitigation. For species with multiple mitigation options listed, any combination may be selected for mitigation. If the landowner does not wish to receive all of the mitigation trees they are permitted, please state the quantity unaccounted for in the table below.

Project Parcel Nbr. ND 107

Species Impacted	Mitigation Options	Quantity Available for Mitigation	Quantity Selected for Mitigation
Green Ash	Green Ash	74	74
Boxelder	Boxelder	62	62
American Elm	American Linden	20	15
	Silver Maple		5
Quantity of mitigation trees unaccounted for			
		Total	156

Tree Mitigation Request (check one):

X I request that replacement trees (at a 2:1 ratio) be planted on my property in the following location(s): JoAnn 701-866-4220 Ed 701-361-5572 Please contact owner for instructions prior to planting

In requesting planting of replacement trees, I acknowledge and grant Xcel access to these locations for planting and maintenance purposes. Removed trees will be replaced in-kind unless otherwise requested. No invasive species (i.e. buckthorn) will be replanted in tree mitigation efforts and an alternate, native species will be planted instead.

____ I waive my right to planting of replacement trees on my property to mitigate for the project's removal of existing trees on the parcel of land referenced above.

Additional Comments:

Owner will be present during planting

701-428-3871

JoAnn Jameson
Landowner Signature

3/10/14
Date

Brian
Right-of-Way Agent Signature

3/17/14
Date

Northern States Power Company/Xcel Energy
CapX2020 Fargo to St. Cloud 345kV Transmission Line Project
North Dakota Public Service Commission Case No. PU-07-759
Tree Mitigation Options

Surveyed Tree Plot: 8A Parcel Number: 55000009652020

Landowner Names: Paul & Carolyn Thoen

Project Parcel Nbr. ND 106

Landowner Address: 16767 49th Street SE
Kindred, ND 58051

Tall growing vegetation can interfere with the safe and reliable construction and operation of overhead transmission lines. As part of project, trees located within the project right-of-way will require clearing. You are being contacted as your property contains trees within the project right-of-way that will need to be cleared prior to construction. Per the mitigation specifications issued by the North Dakota Public Service Commission (PSC), trees are required to be mitigated at a 2:1 ratio; that is, two trees planted for every single tree cleared. The following contains a summary of tree impacts and mitigation requirements on the land parcel referenced above:

Tree Species	Quantity Impacted	Equivalent Quantity for Mitigation
American Elm	25	50
Boxelder	5	10
Eastern Cottonwood	1	2
Total for Quantity Required for Mitigation		**62**

Per PSC tree mitigation guidance, "except in the case of invasive or noxious species, trees and shrubs must be replaced by the same species or similar species, suitable for North Dakota growing conditions as recommended by the North Dakota Forest Service." The North Dakota Tree Handbook, developed with the North Dakota Forest Service, was consulted to determine suitable species to select for mitigation. Tree saplings at least two years in age will be used for mitigation.

Low-growing shrubs will be cut to ground level, leaving the root structure in place. As such, shrubs are expected to regenerate naturally and replacement shrubs are not currently being considered in this agreement.

Project Parcel Nbr. ND 106

The landowner may select the following quantities and species for mitigation. For species with multiple mitigation options listed, any combination may be selected for mitigation. If the landowner does not wish to receive all of the mitigation trees they are permitted, please state the quantity unaccounted for in the table below.

Species Impacted	Mitigation Options	Quantity Available for Mitigation	Quantity Selected for Mitigation
American Elm	American Linden	50	25
	Silver Maple		25
Boxelder	Boxelder	10	10
Eastern Cottonwood	Siouxland Cottonwood (cottonless species)	2	2
	~~Hybrid Poplar~~		
Quantity of mitigation trees unaccounted for			
		Total	**62**

Tree Mitigation Request (check one):

X I request that replacement trees (at a 2:1 ratio) be planted on my property in the following location(s):

16767 49 St SE, Kindred, ND - on farmstead

In requesting planting of replacement trees, I acknowledge and grant Xcel access to these locations for planting and maintenance purposes. Removed trees will be replaced in-kind unless otherwise requested. No invasive species (i.e. buckthorn) will be replanted in tree mitigation efforts and an alternate, native species will be planted instead.

_____ I waive my right to planting of replacement trees on my property to mitigate for the project's removal of existing trees on the parcel of land referenced above.

Additional Comments:

Contact Landowner prior to start of planting

701-428-3225

Carolyn Thoen / Paul Thoen
Landowner Signature

01-30-2014
Date

Right-of-Way Agent Signature

2-4-14
Date

These data are provided on an "AS-IS" basis, without warranty of any type, expressed or implied, including but not limited to any warranty as to their performance, merchantability, or fitness for any particular purpose.

ND106 Highligted

Date: 2/4/2014

This map is not a substitute for accurate field surveys or for locating actual property lines and any adjacent features

CASS COUNTY GOVERNMENT

Northern States Power Company/Xcel Energy

CapX2020 Fargo to St. Cloud 345kV Transmission Line Project
North Dakota Public Service Commission Case No. PU-07-759
Tree Mitigation Options

Surveyed Tree Plots: 9 & 10 Parcel Number: 55000009648000

Landowner Names: Darren and Kristin Hoyme

Project Parcel Nbr. ND 104

Landowner Address: 241 Walnut Street
Kindred, ND 58051

Tall growing vegetation can interfere with the safe and reliable construction and operation of overhead transmission lines. As part of project, trees located within the project right-of-way will require clearing. You are being contacted as your property contains trees within the project right-of-way that will need to be cleared prior to construction. Per the mitigation specifications issued by the North Dakota Public Service Commission (PSC), trees are required to be mitigated at a 2:1 ratio; that is, two trees planted for every single tree cleared. The following contains a summary of tree impacts and mitigation requirements on the land parcel referenced above:

Tree Species	Quantity Impacted	Equivalent Quantity for Mitigation
Boxelder	73	146
Willow species	51	102
Eastern Cottonwood	8	16
Green Ash	3	6
European Buckthorn	1	2
Total for Quantity Required for Mitigation		**272**

Per PSC tree mitigation guidance, "except in the case of invasive or noxious species, trees and shrubs must be replaced by the same species or similar species, suitable for North Dakota growing conditions as recommended by the North Dakota Forest Service." The North Dakota Tree Handbook, developed with the North Dakota Forest Service, was consulted to determine suitable species to select for mitigation. Tree saplings at least two years in age will be used for mitigation.

Low-growing shrubs will be cut to ground level, leaving the root structure in place. As such, shrubs are expected to regenerate naturally and replacement shrubs are not currently being considered in this agreement.

Project Parcel Nbr. ND 104

The landowner may select the following quantities and species for mitigation. For species with multiple mitigation options listed, any combination may be selected for mitigation. If the landowner does not wish to receive all of the mitigation trees they are permitted, please state the quantity unaccounted for in the table below.

Species Impacted	Mitigation Options	Quantity Available for Mitigation	Quantity Selected for Mitigation
Boxelder	Boxelder	146	
Willow species	Peachleaf Willow	102	
	Sandbar Willow		
Eastern Cottonwood	Siouxland Cottonwood (cottonless species)	16	
	Hybrid Poplar		
Green Ash	Green Ash	6	
European Buckthorn	American Linden	2	
	Silver Maple		
	Quantity of mitigation trees unaccounted for		
	Total		**272**

Tree Mitigation Request (check one):

_____ I request that replacement trees (at a 2:1 ratio) be planted on my property in the following location(s):

_____

In requesting planting of replacement trees, I acknowledge and grant Xcel access to these locations for planting and maintenance purposes. Removed trees will be replaced in-kind unless otherwise requested. No invasive species (i.e. buckthorn) will be replanted in tree mitigation efforts and an alternate, native species will be planted instead.

✓ I waive my right to planting of replacement trees on my property to mitigate for the project's removal of existing trees on the parcel of land referenced above.

Additional Comments:

_____

_____

701-428-9901 (H) 701-361-3108 (C)

_____ _____

Landowner Signature Right-of-Way Agent Signature

3/5/14 3/10/14

Date Date

Northern States Power Company/Xcel Energy
CapX2020 Fargo to St. Cloud 345kV Transmission Line Project
North Dakota Public Service Commission Case No. PU-07-759
Tree Mitigation Options

Surveyed Tree Plots: 11 Parcel Number: 21000000063000

Landowner Name: Melissa and Doug Trom

Project Parcel Nbr. ND060

Landowner Address: 319 Edgewater Dr.
West Fargo, ND 58078

Tall growing vegetation can interfere with the safe and reliable construction and operation of overhead transmission lines. As part of project, trees located within the project right-of-way will require clearing. You are being contacted as your property contains trees within the project right-of-way that will need to be cleared prior to construction. Per the mitigation specifications issued by the North Dakota Public Service Commission (PSC), trees are required to be mitigated at a 2:1 ratio; that is, two trees planted for every single tree cleared. The following contains a summary of tree impacts and mitigation requirements on the land parcels referenced above:

Tree Species	Quantity Impacted	Equivalent Quantity for Mitigation	Quantity Now Available 5/30/14
Green Ash	92	184	NA-see page 2
Choke Cherry	10	20	20
Eastern Cottonwood	1	2	NA-see page 2
Total Silver Maples-replacing Green Ash and Eastern Cottonwoods			236
Total for Quantity Required for Mitigation		**206**	**256**

Per PSC tree mitigation guidance, "except in the case of invasive or noxious species, trees and shrubs must be replaced by the same species or similar species, suitable for North Dakota growing conditions as recommended by the North Dakota Forest Service." The North Dakota Tree Handbook, developed with the North Dakota Forest Service, was consulted to determine suitable species to select for mitigation. Tree saplings at least two years in age will be used for mitigation.

Low-growing shrubs will be cut to ground level, leaving the root structure in place. As such, shrubs are expected to regenerate naturally and replacement shrubs are not currently being considered in this agreement.

The landowner may select the following quantities and species for mitigation. For species with multiple mitigation options listed, any combination may be selected for mitigation. If the landowner does not wish to receive all of the mitigation trees they are permitted, please state the quantity unaccounted for in the table below.

Project Parcel Nbr. ND060

Species Impacted	Mitigation Options	Adjusted Quantity Available for Mitigation	Quantity Selected for Mitigation
Green Ash	Green Ash	184	0
Choke Cherry	Amur Choke Cherry	20	20
Eastern Cottonwood	Siouxland Cottonwood	4	0
	Hybrid Poplar		
Silver Maple-requested by landowner and approved as mitigation for Green Ash and Cottonwood, including adjustment for 50 additional available 5/30/14	Silver Maple	NA	236
		Total	**256**

Tree Mitigation Request (check one):

X I request that replacement trees (at a 2:1 ratio) be planted on my property in the following location(s):

In requesting planting of replacement trees, I acknowledge and grant Xcel access to these locations for planting and maintenance purposes. Removed trees will be replaced in-kind unless otherwise requested. No invasive species (i.e. buckthorn) will be replanted in tree mitigation efforts and an alternate, native species will be planted instead.

_____ I waive my right to planting of replacement trees on my property to mitigate for the project's removal of existing trees on the parcel of land referenced above.

Additional Comments:

Landowner or landowner's representative to be present at planting to ensure proper location.

701-532-0600, 701-238-1885

Landowner Signature

6/09/14
Date

Right-of-Way Agent Signature

6/16/14
Date

Northern States Power Company/Xcel Energy

CapX2020 Fargo to St. Cloud 345kV Transmission Line Project
North Dakota Public Service Commission Case No. PU-07-759
Tree Mitigation Options

Surveyed Tree Plots: 12 Parcel Number: 34000003639000

Landowner Names: Karen Bishop Trust

Project Parcel Nbr. ND 029

Landowner Address: C/O Joey Bishop
PO BOX 143
Mapleton, ND 58059

Tall growing vegetation can interfere with the safe and reliable construction and operation of overhead transmission lines. As part of project, trees located within the project right-of-way will require clearing. You are being contacted as your property contains trees within the project right-of-way that will need to be cleared prior to construction. Per the mitigation specifications issued by the North Dakota Public Service Commission (PSC), trees are required to be mitigated at a 2:1 ratio; that is, two trees planted for every single tree cleared. The following contains a summary of tree impacts and mitigation requirements on the land parcel referenced above:

Tree Species	Quantity Impacted	Equivalent Quantity for Mitigation
Boxelder	43	86
Total for Quantity Required for Mitigation		**86**

Per PSC tree mitigation guidance, "except in the case of invasive or noxious species, trees and shrubs must be replaced by the same species or similar species, suitable for North Dakota growing conditions as recommended by the North Dakota Forest Service." The North Dakota Tree Handbook, developed with the North Dakota Forest Service, was consulted to determine suitable species to select for mitigation. Tree saplings at least two years in age will be used for mitigation.

Low-growing shrubs will be cut to ground level, leaving the root structure in place. As such, shrubs are expected to regenerate naturally and replacement shrubs are not currently being considered in this agreement.

Project Parcel Nbr. ND 029

The landowner may select the following quantities and species for mitigation. For species with multiple mitigation options listed, any combination may be selected for mitigation. If the landowner does not wish to receive all of the mitigation trees they are permitted, please state the quantity unaccounted for in the table below.

Species Impacted	Mitigation Options	Quantity Available for Mitigation	Quantity Selected for Mitigation
Boxelder	Boxelder	86	
		Quantity of mitigation trees unaccounted for	
		Total	**86**

Tree Mitigation Request (check one):

_____ I request that replacement trees (at a 2:1 ratio) be planted on my property in the following location(s):

_____

In requesting planting of replacement trees, I acknowledge and grant Xcel access to these locations for planting and maintenance purposes. Removed trees will be replaced in-kind unless otherwise requested. No invasive species (i.e. buckthorn) will be replanted in tree mitigation efforts and an alternate, native species will be planted instead.

S, B I waive my right to planting of replacement trees on my property to mitigate for the project's removal of existing trees on the parcel of land referenced above.

Additional Comments:

_____

_____

_____

_____

_____

Joey Bishop, 701-261-2733

Landowner Signature

2-1-14

Date

Right-of-Way Agent Signature

2/14/14

Date

Northern States Power Company/Xcel Energy
CapX2020 Fargo to St. Cloud 345kV Transmission Line Project
North Dakota Public Service Commission Case No. PU-07-759
Tree Mitigation Options

Surveyed Tree Plots: 13 Parcel Number: 34000003603040

Landowner Names: Susan Wilson

Project Parcel Nbr. ND 027

Landowner Address: PO Box 220
Casselton, ND 58012

Tall growing vegetation can interfere with the safe and reliable construction and operation of overhead transmission lines. As part of project, trees located within the project right-of-way will require clearing. You are being contacted as your property contains trees within the project right-of-way that will need to be cleared prior to construction. Per the mitigation specifications issued by the North Dakota Public Service Commission (PSC), trees are required to be mitigated at a 2:1 ratio; that is, two trees planted for every single tree cleared. The following contains a summary of tree impacts and mitigation requirements on the land parcel referenced above:

Tree Species	Quantity Impacted	Equivalent Quantity for Mitigation
White Spruce	7	14
Boxelder	6	12
Green Ash	2	4
Total for Quantity Required for Mitigation		**30**

Per PSC tree mitigation guidance, "except in the case of invasive or noxious species, trees and shrubs must be replaced by the same species or similar species, suitable for North Dakota growing conditions as recommended by the North Dakota Forest Service." The North Dakota Tree Handbook, developed with the North Dakota Forest Service, was consulted to determine suitable species to select for mitigation. Tree saplings at least two years in age will be used for mitigation.

Low-growing shrubs will be cut to ground level, leaving the root structure in place. As such, shrubs are expected to regenerate naturally and replacement shrubs are not currently being considered in this agreement.

Project Parcel Nbr. ND 027

The landowner may select the following quantities and species for mitigation. For species with multiple mitigation options listed, any combination may be selected for mitigation. If the landowner does not wish to receive all of the mitigation trees they are permitted, please state the quantity unaccounted for in the table below.

Species Impacted	Mitigation Options	Quantity Available for Mitigation	Quantity Selected for Mitigation
White Spruce	Black Hills Spruce	14	
	Colorado Blue Spruce		
Boxelder	Boxelder	12	
Green Ash	Green Ash	4	
	Quantity of mitigation trees unaccounted for		
		Total	**30**

Tree Mitigation Request (check one):

_____ I request that replacement trees (at a 2:1 ratio) be planted on my property in the following location(s):

_____

In requesting planting of replacement trees, I acknowledge and grant Xcel access to these locations for planting and maintenance purposes. Removed trees will be replaced in-kind unless otherwise requested. No invasive species (i.e. buckthorn) will be replanted in tree mitigation efforts and an alternate, native species will be planted instead.

X I waive my right to planting of replacement trees on my property to mitigate for the project's removal of existing trees on the parcel of land referenced above.

Additional Comments:

_____

_____

_____

Debbie 701-347-4291

Susan Nilsen
Landowner Signature

2/19/14
Date

Brian Arn
Right-of-Way Agent Signature

2/27/14
Date

Northern States Power Company/Xcel Energy

CapX2020 Fargo to St. Cloud 345kV Transmission Line Project
North Dakota Public Service Commission Case No. PU-07-759
Tree Mitigation Options

Surveyed Tree Plots: 14 Parcel Number: 43000006354000

Landowner Names: George & Mary Ann Waxler

Project Parcel Nbr. ND 003

Landowner Address: 3280 163rd Avenue SE
Mapleton, ND 58059

Tall growing vegetation can interfere with the safe and reliable construction and operation of overhead transmission lines. As part of project, trees located within the project right-of-way will require clearing. You are being contacted as your property contains trees within the project right-of-way that will need to be cleared prior to construction. Per the mitigation specifications issued by the North Dakota Public Service Commission (PSC), trees are required to be mitigated at a 2:1 ratio; that is, two trees planted for every single tree cleared. The following contains a summary of tree impacts and mitigation requirements on the land parcel referenced above:

Tree Species	Quantity Impacted	Equivalent Quantity for Mitigation
Siberian Elm	1	2
Total for Quantity Required for Mitigation		**2**

Per PSC tree mitigation guidance, "except in the case of invasive or noxious species, trees and shrubs must be replaced by the same species or similar species, suitable for North Dakota growing conditions as recommended by the North Dakota Forest Service." The North Dakota Tree Handbook, developed with the North Dakota Forest Service, was consulted to determine suitable species to select for mitigation. Tree saplings at least two years in age will be used for mitigation.

Low-growing shrubs will be cut to ground level, leaving the root structure in place. As such, shrubs are expected to regenerate naturally and replacement shrubs are not currently being considered in this agreement.

Project Parcel Nbr. ND 003

The landowner may select the following quantities and species for mitigation. For species with multiple mitigation options listed, any combination may be selected for mitigation. If the landowner does not wish to receive all of the mitigation trees they are permitted, please state the quantity unaccounted for in the table below.

Species Impacted	Mitigation Options	Quantity Available for Mitigation	Quantity Selected for Mitigation
Siberian Elm	American Linden	2	
	Silver Maple		
	Quantity of mitigation trees unaccounted for		2
	Total		**2**

Tree Mitigation Request (check one):

_____ I request that replacement trees (at a 2:1 ratio) be planted on my property in the following location(s):

_____

In requesting planting of replacement trees, I acknowledge and grant Xcel access to these locations for planting and maintenance purposes. Removed trees will be replaced in-kind unless otherwise requested. No invasive species (i.e. buckthorn) will be replanted in tree mitigation efforts and an alternate, native species will be planted instead.

_____ I waive my right to planting of replacement trees on my property to mitigate for the project's removal of existing trees on the parcel of land referenced above.

Additional Comments:

_____

_____

_____

_____

701-~~382~~-382-3710

_____

Landowner Signature

_____

Right-of-Way Agent Signature

1/20/14

Date

_____

Date

Northern States Power Company/Xcel Energy
CapX2020 Fargo to St. Cloud 345kV Transmission Line Project
North Dakota Public Service Commission Case No. PU-07-759
Tree Mitigation Options

Surveyed Tree Plot: 15 Parcel Number: 18010013812020

Landowner Name: Mary K. Dalrymple, et al Trust

Project Parcel Nbr. ND 017.4

Landowner Address: PO Box 220
Casselton, ND 58012

Tall growing vegetation can interfere with the safe and reliable construction and operation of overhead transmission lines. As part of project, trees located within the project right-of-way will require clearing. You are being contacted as your property contains trees within the project right-of-way that will need to be cleared prior to construction. Per the mitigation specifications issued by the North Dakota Public Service Commission (PSC), trees are required to be mitigated at a 2:1 ratio; that is, two trees planted for every single tree cleared. The following contains a summary of tree impacts and mitigation requirements on the land parcels referenced above:

Tree Species	Quantity Impacted	Equivalent Quantity for Mitigation
European Buckthorn	274	548
Green Ash	162	324
Total for Quantity Required for Mitigation		**872**

Per PSC tree mitigation guidance, "except in the case of invasive or noxious species, trees and shrubs must be replaced by the same species or similar species, suitable for North Dakota growing conditions as recommended by the North Dakota Forest Service." The North Dakota Tree Handbook, developed with the North Dakota Forest Service, was consulted to determine suitable species to select for mitigation. Tree saplings at least two years in age will be used for mitigation.

Low-growing shrubs will be cut to ground level, leaving the root structure in place. As such, shrubs are expected to regenerate naturally and replacement shrubs are not currently being considered in this agreement.

Project Parcel Nbr. ND 017.4

The landowner may select the following quantities and species for mitigation. For species with multiple mitigation options listed, any combination may be selected for mitigation. If the landowner does not wish to receive all of the mitigation trees they are permitted, please state the quantity unaccounted for in the table below.

Species Impacted	Mitigation Options	Quantity Available for Mitigation	Quantity Selected for Mitigation
European Buckthorn	American Linden	548	
	Silver Maple		
Green Ash	Green Ash	324	
Quantity of mitigation trees unaccounted for			
		Total	**872**

Tree Mitigation Request (check one):

X I request that replacement trees (at a 2:1 ratio) be planted on my property in the following location(s):

SW 1/4 Section 36 - Carselton Twsp.

In requesting planting of replacement trees, I acknowledge and grant Xcel access to these locations for planting and maintenance purposes. Removed trees will be replaced in-kind unless otherwise requested. No invasive species (i.e. buckthorn) will be replanted in tree mitigation efforts and an alternate, native species will be planted instead.

_____ I waive my right to planting of replacement trees on my property to mitigate for the project's removal of existing trees on the parcel of land referenced above.

Additional Comments:

Will provide aerial map

Contact prior to planting

Debbie, 701-347-4291

Mary K. Dalrymple Trust
by J.S. Dalrymple, P.A.

Landowner Signature

2/19/14

Date

Right-of-Way Agent Signature

2/27/14

Date

Mr Mielke –

Need two rows:

Yard side next to sod: Silver Maple

Field side second row: European Buckthorn

Short distances as marked

Must have plastic placed at planting

Call Ron Sell at 701 371-5596 (Cell) for exact locations

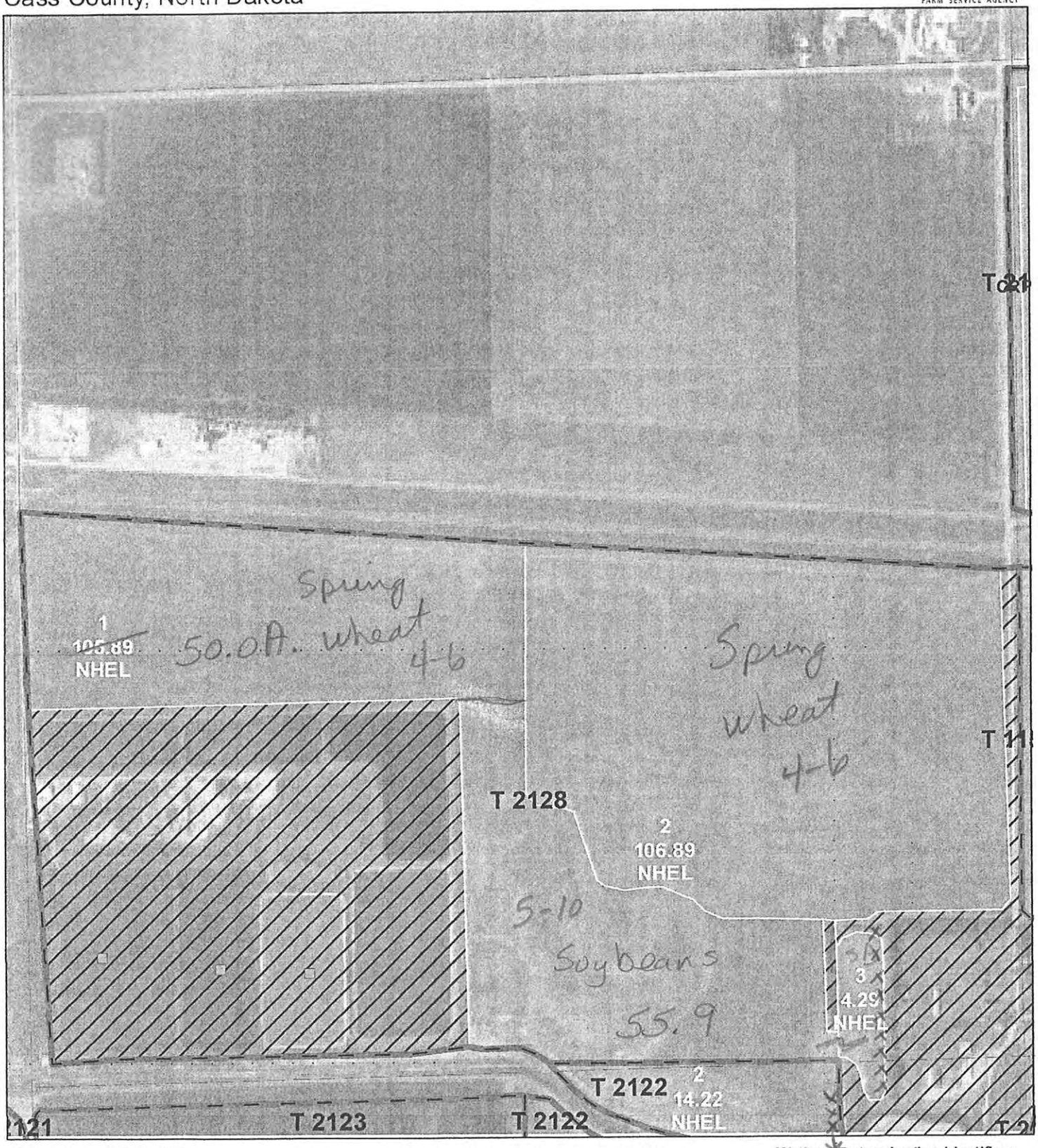
Thank you,

Jack Dalrymple

Office contact: Debbie 347-4291

USDA Farm Service Agency

Cass County, North Dakota



Farm 10342

S36 T140N R52W

Casselton Township

Cass County, ND

2012 Program Year

Wetland Determination Identifiers

- Limited Restrictions
- Exempt from Conservation Provisions
- Restricted Use

Common Land Unit

Cropland / / Non-cropland

Disclaimer: Wetland identifiers do not represent the size, shape or specific determination of the area. Refer to your original determination (CPA-026 and attached maps) for exact wetland boundaries and determinations, or contact NRCS.

Brian Mielke

From: dalfarm@aol.com
Sent: Thursday, April 24, 2014 1:07 PM
To: Brian Mielke
Subject: Tree Mitigation

Brian,
The number of trees being requested is: 85 Green Ash and 85 Silver Maple
We have two seperate strips with 2 rows (1 row of Green Ash and 1 row of Silver Maple)
One strip is 500 feet so we calculated 50 trees of each variety (100) spaced 10 feet apart and the distance between the rows at 14' to 16' apart.
The second strip is 340 feet so we calculated 35 trees of each variety (70)
We need plastic put down where they planted.
We will waive the remaining trees allowed.
Thanks,
Deb
Dalrymple Farms
701-347-4291

Northern States Power Company/Xcel Energy
CapX2020 Fargo to St. Cloud 345kV Transmission Line Project
North Dakota Public Service Commission Case No. PU-07-759
Tree Mitigation Options

Surveyed Tree Plot: 15 Parcel Number: 18010013811020

Landowner Name: Michael A. Kasowski

Project Parcel Nbr. ND 017.3

Landowner Address: PO Box 753
Casselton, ND 58012

Tall growing vegetation can interfere with the safe and reliable construction and operation of overhead transmission lines. As part of project, trees located within the project right-of-way will require clearing. You are being contacted as your property contains trees within the project right-of-way that will need to be cleared prior to construction. Per the mitigation specifications issued by the North Dakota Public Service Commission (PSC), trees are required to be mitigated at a 2:1 ratio; that is, two trees planted for every single tree cleared. The following contains a summary of tree impacts and mitigation requirements on the land parcels referenced above:

Tree Species	Quantity Impacted	Equivalent Quantity for Mitigation
European Buckthorn	206	412
Green Ash	122	244
Total for Quantity Required for Mitigation		**656**

Per PSC tree mitigation guidance, "except in the case of invasive or noxious species, trees and shrubs must be replaced by the same species or similar species, suitable for North Dakota growing conditions as recommended by the North Dakota Forest Service." The North Dakota Tree Handbook, developed with the North Dakota Forest Service, was consulted to determine suitable species to select for mitigation. Tree saplings at least two years in age will be used for mitigation.

Low-growing shrubs will be cut to ground level, leaving the root structure in place. As such, shrubs are expected to regenerate naturally and replacement shrubs are not currently being considered in this agreement.

Project Parcel Nbr. ND 017.3

The landowner may select the following quantities and species for mitigation. For species with multiple mitigation options listed, any combination may be selected for mitigation. If the landowner does not wish to receive all of the mitigation trees they are permitted, please state the quantity unaccounted for in the table below.

Species Impacted	Mitigation Options	Quantity Available for Mitigation	Quantity Selected for Mitigation
European Buckthorn	American Linden	412	
	Silver Maple		
Green Ash	Green Ash	244	
Quantity of mitigation trees unaccounted for			
		Total	**656**

Tree Mitigation Request (check one):

✓ I request that replacement trees (at a 2:1 ratio) be planted on my property in the following location(s):

SW¼ + W½ SE¼ - 12 - 139N - 51W on N + E Property line

In requesting planting of replacement trees, I acknowledge and grant Xcel access to these locations for planting and maintenance purposes. Removed trees will be replaced in-kind unless otherwise requested. No invasive species (i.e. buckthorn) will be replanted in tree mitigation efforts and an alternate, native species will be planted instead.

_____ I waive my right to planting of replacement trees on my property to mitigate for the project's removal of existing trees on the parcel of land referenced above.

Additional Comments:

Approximately 1¼ miles planted single row, whatever species of tree that is hardy, fastgrowing, and with the least amount of maintenance.

701-412-1598 Mike Jr.

Landowner Signature

4-30-14

Date

Right-of-Way Agent Signature

4 30 14

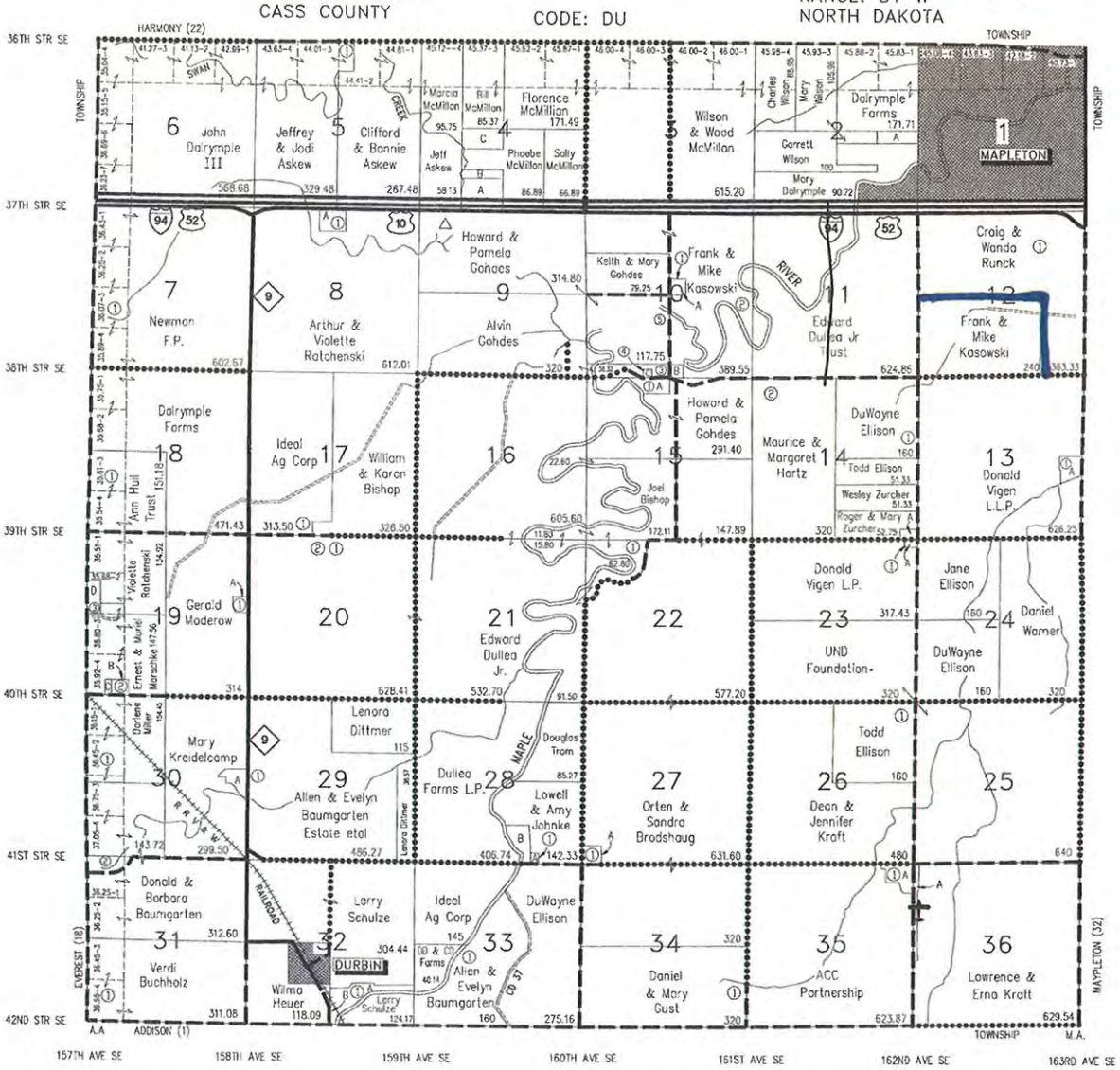
Date

MIDLAND ATLAS CO. LLC
WATFORD CITY, NORTH DAKOTA

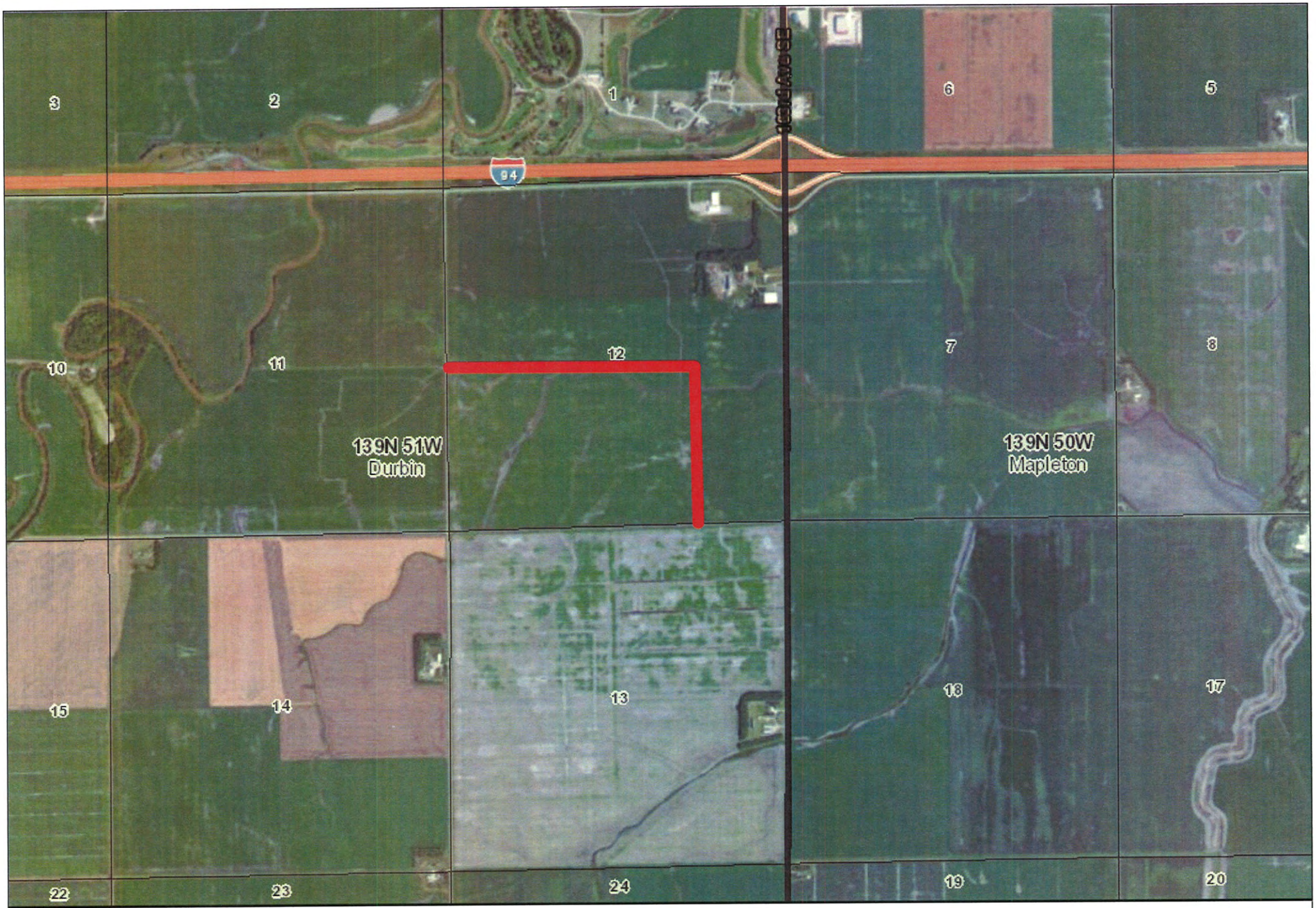
MAP OF DURBIN

MIDLAND ATLAS COMPANY LLC COPYRIGHT 2002

TOWNSHIP: 139 N
CASS COUNTY
CODE: DU
RANGE: 51 W
NORTH DAKOTA



SEE LETTERED SMALL TRACTS ON LANDOWNER DIRECTORY LIST



www.ulteig.com
888-858-3441
info@ulteig.com

Ulteig

Mike Kasowski

4/30/2014
Tree Planting

0 2,000 4,000 Feet

0 0.375 0.75 Miles

N

Northern States Power Company/Xcel Energy
CapX2020 Fargo to St. Cloud 345kV Transmission Line Project
North Dakota Public Service Commission Case No. PU-07-759
Tree Mitigation Options

Surveyed Tree Plots: 16 and 16A Parcel Number: 57000010303000

Landowner Name: Dorothy Dubord

Project Parcel Nbr. ND128

Landowner Address: C/O Mike Dubord
3218 40th Ave. South, Unit A
Fargo, ND 58104

Tall growing vegetation can interfere with the safe and reliable construction and operation of overhead transmission lines. As part of project, trees located within the project right-of-way will require clearing. You are being contacted as your property contains trees within the project right-of-way that will need to be cleared prior to construction. Per the mitigation specifications issued by the North Dakota Public Service Commission (PSC), trees are required to be mitigated at a 2:1 ratio; that is, two trees planted for every single tree cleared. The following contains a summary of tree impacts and mitigation requirements on the land parcels referenced above:

Tree Species	Quantity Impacted (Corrected)	Equivalent Quantity for Mitigation	Quantity Now Available 5/30/14
Green Ash	23	46	84
Boxelder	15	30	49
Common Hackberry	11	22	22 (no additional available)
Siberian Elm	8	16	26
Peachleaf Willow	5	10	29
European Buckthorn	2	4	6
Total for Quantity Required for Mitigation		**134**	**216**

Per PSC tree mitigation guidance, "except in the case of invasive or noxious species, trees and shrubs must be replaced by the same species or similar species, suitable for North Dakota growing conditions as recommended by the North Dakota Forest Service." The North Dakota Tree Handbook, developed with the North Dakota Forest Service, was consulted to determine suitable species to select for mitigation. Tree saplings at least two years in age will be used for mitigation.

Low-growing shrubs will be cut to ground level, leaving the root structure in place. As such, shrubs are expected to regenerate naturally and replacement shrubs are not currently being considered in this agreement.

The landowner may select the following quantities and species for mitigation. For species with multiple mitigation options listed, any combination may be selected for mitigation. If the landowner does not wish to receive all of the mitigation trees they are permitted, please state the quantity unaccounted for in the table below.

Project Parcel Nbr. ND128

Species Impacted	Mitigation Options	Adjusted Quantity Available for Mitigation	Quantity Selected for Mitigation
Green Ash	Green Ash	84	84
Boxelder	Boxelder	49	49
Common Hackberry	Northern Hackberry	22	22
Siberian Elm	American Linden	26	13
	Silver Maple		13
Peachleaf Willow	Peachleaf Willow	29	14
	Sandbar Willow		15
European Buckthorn	American Linden	6	3
	Silver Maple		3
Quantity of mitigation trees unaccounted for			
		Total	**216**

Tree Mitigation Request (check one):

V I request that replacement trees (at a 2:1 ratio) be planted on my property in the following location(s):

Section 15 (See Map) & Leo DuBord Farm 5210 124 Ave S Horace ND

In requesting planting of replacement trees, I acknowledge and grant Xcel access to these locations for planting and maintenance purposes. Removed trees will be replaced in-kind unless otherwise requested. No invasive species (i.e. buckthorn) will be replanted in tree mitigation efforts and an alternate, native species will be planted instead.

____ I waive my right to planting of replacement trees on my property to mitigate for the project's removal of existing trees on the parcel of land referenced above.

Additional Comments:

Contact Mike when planting for placement.

701-281-2427, 701-793-6573 Mike and Kathy Dubord

Dorothy DuBord Michael J DuBord POA
Landowner Signature

Brian Mai
Right-of-Way Agent Signature

6/3/14
Date

6/9/14
Date


Sec. 10
50Th St SE
Plant
Trees
Here
ND127
BORD, DOROTHY LE
WRENCE G & SUSAN
ND128
DUBORD, DOROTHY
0955-172
0955-173
0955-174
Sec. 15
CASS
Pleasant
Township

Appendix E

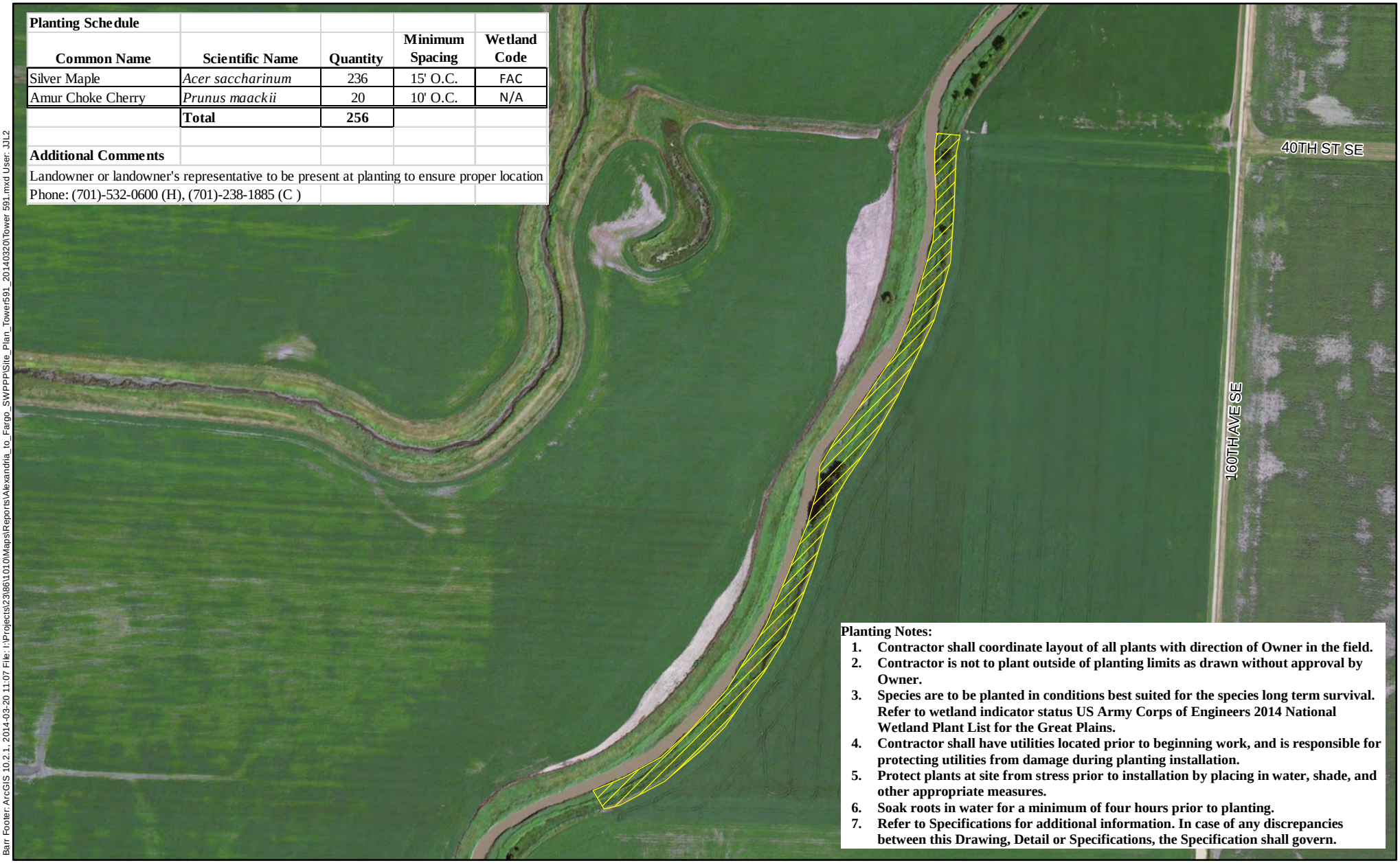
Mitigation Plot Locations

Planting Schedule				
Common Name	**Scientific Name**	**Quantity**	**Minimum Spacing**	**Wetland Code**
Silver Maple	*Acer saccharinum*	236	15' O.C.	FAC
Amur Choke Cherry	*Prunus maackii*	20	10' O.C.	N/A
	Total	**256**		

Additional Comments

Landowner or landowner's representative to be present at planting to ensure proper location

Phone: (701)-532-0600 (H), (701)-238-1885 (C)



Planting Notes:

1. **Contractor shall coordinate layout of all plants with direction of Owner in the field.**
2. **Contractor is not to plant outside of planting limits as drawn without approval by Owner.**
3. **Species are to be planted in conditions best suited for the species long term survival. Refer to wetland indicator status US Army Corps of Engineers 2014 National Wetland Plant List for the Great Plains.**
4. **Contractor shall have utilities located prior to beginning work, and is responsible for protecting utilities from damage during planting installation.**
5. **Protect plants at site from stress prior to installation by placing in water, shade, and other appropriate measures.**
6. **Soak roots in water for a minimum of four hours prior to planting.**
7. **Refer to Specifications for additional information. In case of any discrepancies between this Drawing, Detail or Specifications, the Specification shall govern.**

Legend

- Alignment ROW
- Planting Location
- Parcel Boundry

CapX2020

Delivering electricity you can rely on

0 100 200 400 600 Feet

Tree Replacement Mitigation Plan

7/15/2014

Landowner Name: Melissa and Doug Trom
Project Parcel Number: ND060
Planting Location: Along East Side of Maple River, NE 1/4- Section 28, Township 139, Range 51
Nearest Intersection: 40th St SE & 160th Ave SE

Planting Notes:

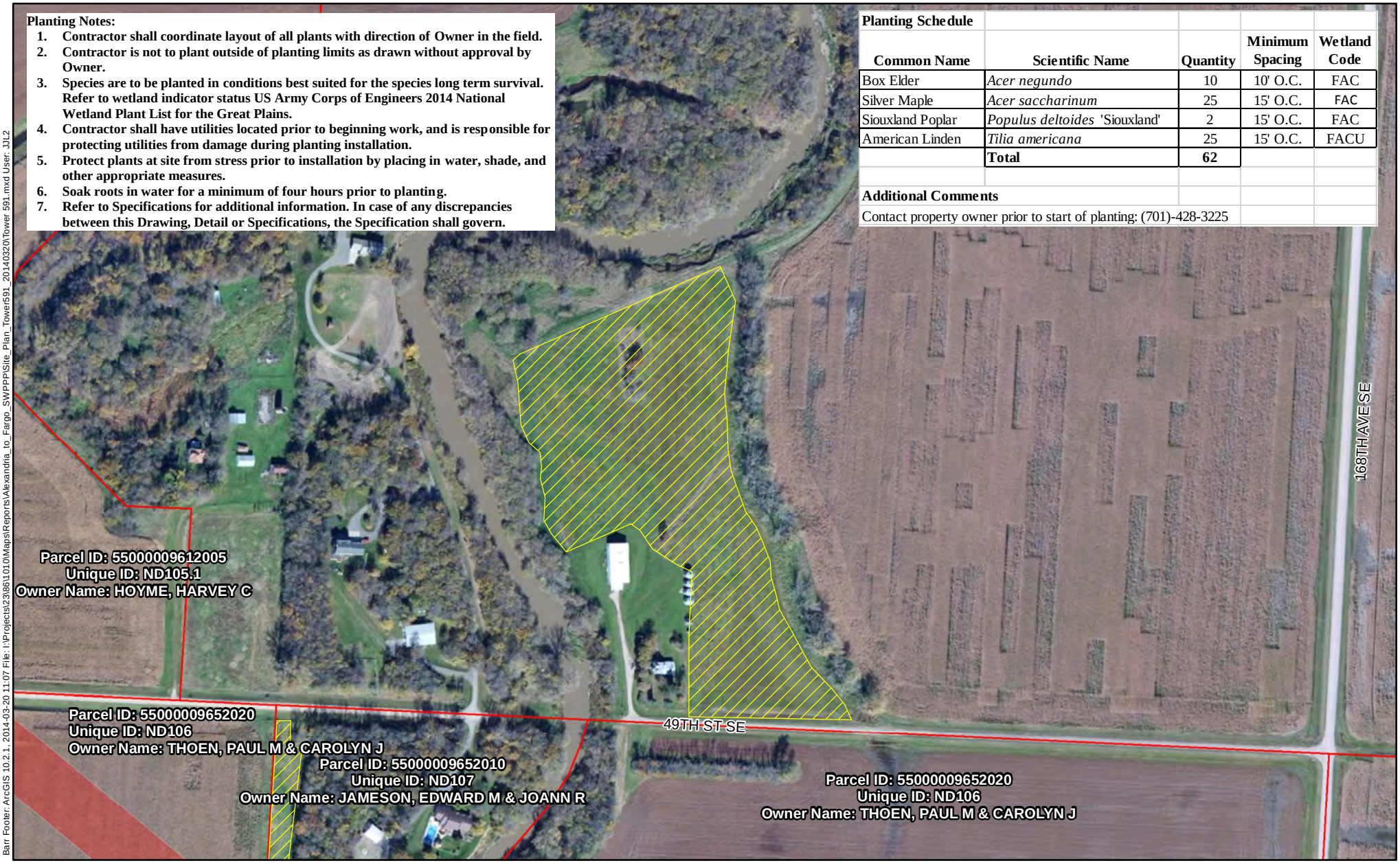
1. Contractor shall coordinate layout of all plants with direction of Owner in the field.
2. Contractor is not to plant outside of planting limits as drawn without approval by Owner.
3. Species are to be planted in conditions best suited for the species long term survival. Refer to wetland indicator status US Army Corps of Engineers 2014 National Wetland Plant List for the Great Plains.
4. Contractor shall have utilities located prior to beginning work, and is responsible for protecting utilities from damage during planting installation.
5. Protect plants at site from stress prior to installation by placing in water, shade, and other appropriate measures.
6. Soak roots in water for a minimum of four hours prior to planting.
7. Refer to Specifications for additional information. In case of any discrepancies between this Drawing, Detail or Specifications, the Specification shall govern.

Planting Schedule

Common Name	Scientific Name	Quantity	Minimum Spacing	Wetland Code
Box Elder	*Acer negundo*	10	10' O.C.	FAC
Silver Maple	*Acer saccharinum*	25	15' O.C.	FAC
Siouxland Poplar	*Populus deltoides* 'Siouxland'	2	15' O.C.	FAC
American Linden	*Tilia americana*	25	15' O.C.	FACU
	Total	**62**		

Additional Comments

Contact property owner prior to start of planting: (701)-428-3225



Barr Footer: ArcGIS 10.2.1, 2014-03-20 11:07 File: I:\Projects\23861\1010\Maps\Reports\Alexandria_to_Fargo_SWPPP\Site_Plan_Tower591_20140320Tower 591.mxd User: JJL2

Legend

- Alignment ROW
- Planting Location
- Parcel Boundry

CapX2020 — Delivering electricity you can rely on

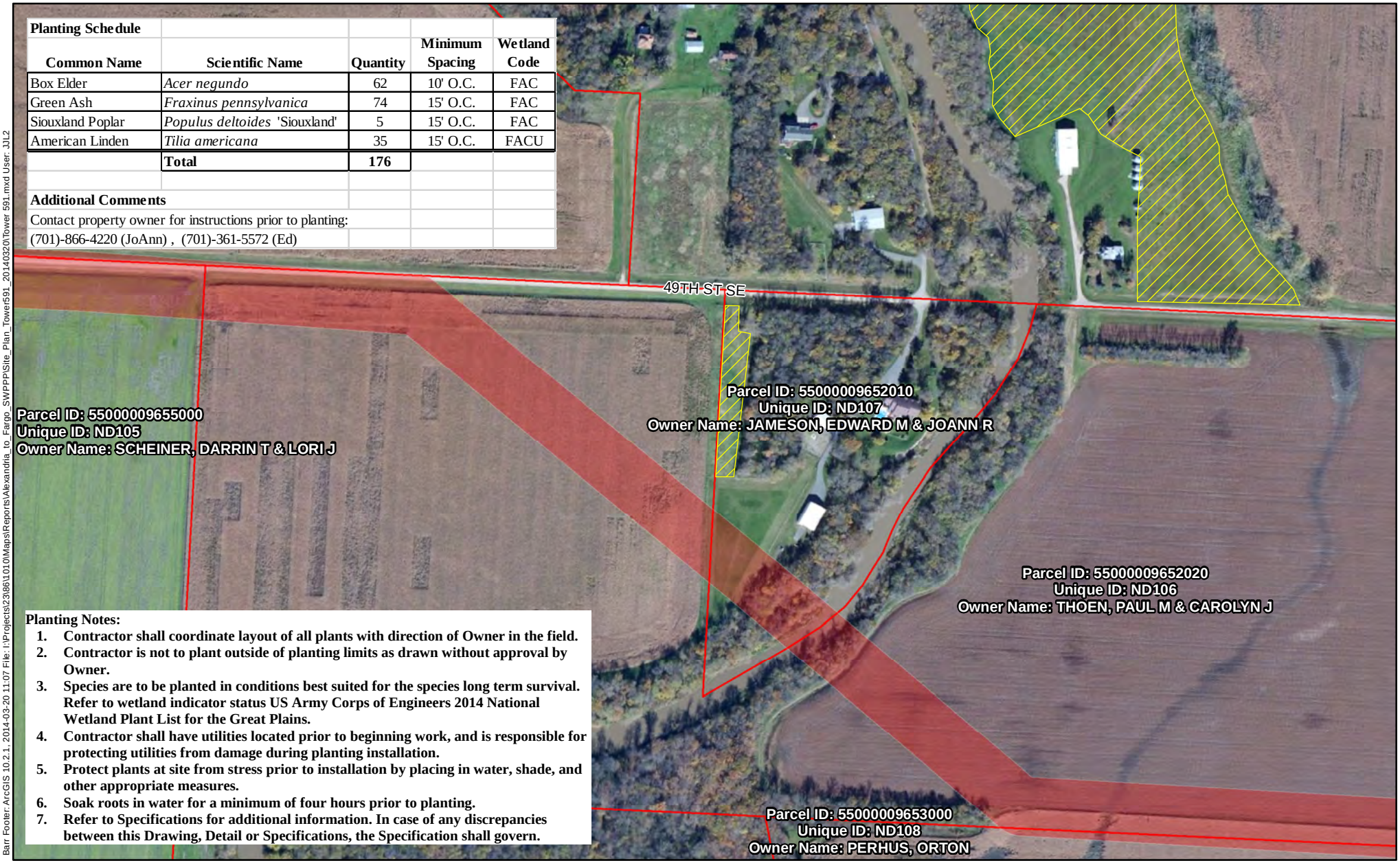
0 100 200 400 Feet

Tree Replacement Mitigation Plan

7/15/2014

Landowner Name: Paul and Carolyn Thoen
Project Parcel Number: ND106
Planting Location: 16767 49th St SE
Kindred, ND 58051
Nearest Intersection: 49th St SE & 168th Ave SE

Planting Schedule				
Common Name	**Scientific Name**	**Quantity**	**Minimum Spacing**	**Wetland Code**
Box Elder	*Acer negundo*	62	10' O.C.	FAC
Green Ash	*Fraxinus pennsylvanica*	74	15' O.C.	FAC
Siouxland Poplar	*Populus deltoides* 'Siouxland'	5	15' O.C.	FAC
American Linden	*Tilia americana*	35	15' O.C.	FACU
	Total	**176**		
Additional Comments				
Contact property owner for instructions prior to planting:				
(701)-866-4220 (JoAnn) , (701)-361-5572 (Ed)				



Planting Notes:

1. **Contractor shall coordinate layout of all plants with direction of Owner in the field.**
2. **Contractor is not to plant outside of planting limits as drawn without approval by Owner.**
3. **Species are to be planted in conditions best suited for the species long term survival. Refer to wetland indicator status US Army Corps of Engineers 2014 National Wetland Plant List for the Great Plains.**
4. **Contractor shall have utilities located prior to beginning work, and is responsible for protecting utilities from damage during planting installation.**
5. **Protect plants at site from stress prior to installation by placing in water, shade, and other appropriate measures.**
6. **Soak roots in water for a minimum of four hours prior to planting.**
7. **Refer to Specifications for additional information. In case of any discrepancies between this Drawing, Detail or Specifications, the Specification shall govern.**

Legend

- Alignment ROW
- Planting Location
- Parcel Boundry

CapX2020
Delivering electricity you can rely on

200 100 0 200 Feet

Tree Replacement Mitigation Plan

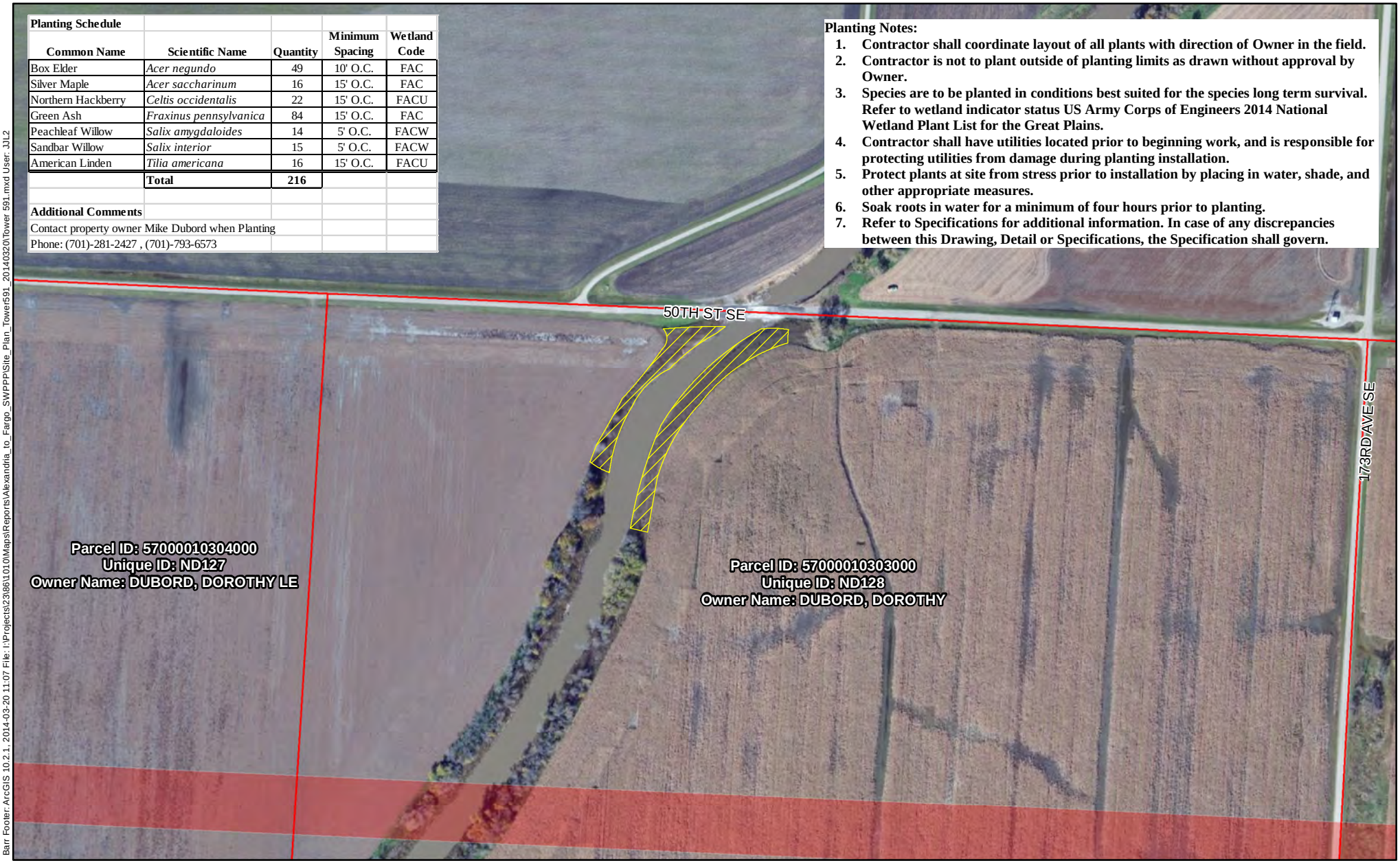
7/15/2014

Landowner Name: Edward and JoAnna Jameson
Project Parcel Number: ND107
Planting Location: Contact property owner prior to planting for instructions
Address: 16750 49th St. SE
Kindred, ND 58051

Planting Schedule				
Common Name	**Scientific Name**	**Quantity**	**Minimum Spacing**	**Wetland Code**
Box Elder	*Acer negundo*	49	10' O.C.	FAC
Silver Maple	*Acer saccharinum*	16	15' O.C.	FAC
Northern Hackberry	*Celtis occidentalis*	22	15' O.C.	FACU
Green Ash	*Fraxinus pennsylvanica*	84	15' O.C.	FAC
Peachleaf Willow	*Salix amygdaloides*	14	5' O.C.	FACW
Sandbar Willow	*Salix interior*	15	5' O.C.	FACW
American Linden	*Tilia americana*	16	15' O.C.	FACU
	Total	**216**		
Additional Comments				
Contact property owner Mike Dubord when Planting				
Phone: (701)-281-2427 , (701)-793-6573				

Planting Notes:

1. **Contractor shall coordinate layout of all plants with direction of Owner in the field.**
2. **Contractor is not to plant outside of planting limits as drawn without approval by Owner.**
3. **Species are to be planted in conditions best suited for the species long term survival. Refer to wetland indicator status US Army Corps of Engineers 2014 National Wetland Plant List for the Great Plains.**
4. **Contractor shall have utilities located prior to beginning work, and is responsible for protecting utilities from damage during planting installation.**
5. **Protect plants at site from stress prior to installation by placing in water, shade, and other appropriate measures.**
6. **Soak roots in water for a minimum of four hours prior to planting.**
7. **Refer to Specifications for additional information. In case of any discrepancies between this Drawing, Detail or Specifications, the Specification shall govern.**



Barr Footer: ArcGIS 10.2.1, 2014-03-20 11:07 File: I:\Projects\23861\010\Maps\Reports\Alexandria_to_Fargo_SWPPP\Site_Plan_Tower591_20140320Tower 591.mxd User: JJL2

Legend

- Alignment ROW
- Planting Location
- Parcel Boundry

CapX2020 — Delivering electricity you can rely on

0 100 200 400 Feet

Tree Replacement Mitigation Plan

7/15/2014

Landowner Name: Mike and Dorothy Dubord
Project Parcel Number.: ND128
Planting Location: N 1/4- Section 15, Township 137, Range 49
Nearest Intersection: 50th St SE & 173 Ave SE

Planting Schedule							
Common Name	Scientific Name	Quantity	Minimum Spacing	Wetland Code		Additional Comments	
Amur Maple	Acer ginnala	40	10' O.C.	N/A		Contact property owner for instructions	
Silver Maple	Acer saccharinum	373	15' O.C.	FAC		prior to planting to arrange exact locations:	
Northern Hackberry	Celtis occidentalis	83	15' O.C.	FACU		John Fercho: (701)-371-9404	
Colorado Blue Spruce	Picea pungens	30	15' O.C.	FAC			
Ponderosa Pine	Pinus ponderosa	8	15' O.C.	UPL			
ScotsPine	Pinus sylvestris	112	10' O.C.	N/A			
Siouxland Poplar	Populus deltoides 'Siouxland'	50	15' O.C.	FAC			
Bur Oak	Quercus macrocarpa	83	20' O.C.	FACU			
American Linden	Tilia americana	331	15' O.C.	FACU			
	Total	1110					

Planting Notes:

1. **Contractor shall coordinate layout of all plants with direction of Owner in the field.**
2. **Contractor is not to plant outside of planting limits as drawn without approval by Owner.**
3. **Species are to be planted in conditions best suited for the species long term survival. Refer to wetland indicator status US Army Corps of Engineers 2014 National Wetland Plant List for the Great Plains.**
4. **Contractor shall have utilities located prior to beginning work, and is responsible for protecting utilities from damage during planting installation.**
5. **Protect plants at site from stress prior to installation by placing in water, shade, and other appropriate measures.**
6. **Soak roots in water for a minimum of four hours prior to planting.**
7. **Refer to Specifications for additional information. In case of any discrepancies between this Drawing, Detail or Specifications, the Specification shall govern.**

Planting Location: South West 1/4 of Section 5, Township 136, Range 52
Nearest Intersection: 55th St SE & 151st Ave SE

Planting Location: Wst 1/2 of Section 23, Township 143, Range 49
Nearest Intersection: 16th St SE & 172nd Ave SE

Planting Location: South 1/2 of Section 30, Township 136, Range 52
Nearest Intersection: 58th St SE & 151st Ave SE

Legend

- Alignment ROW
- Planting Location
- Parcel Boundry

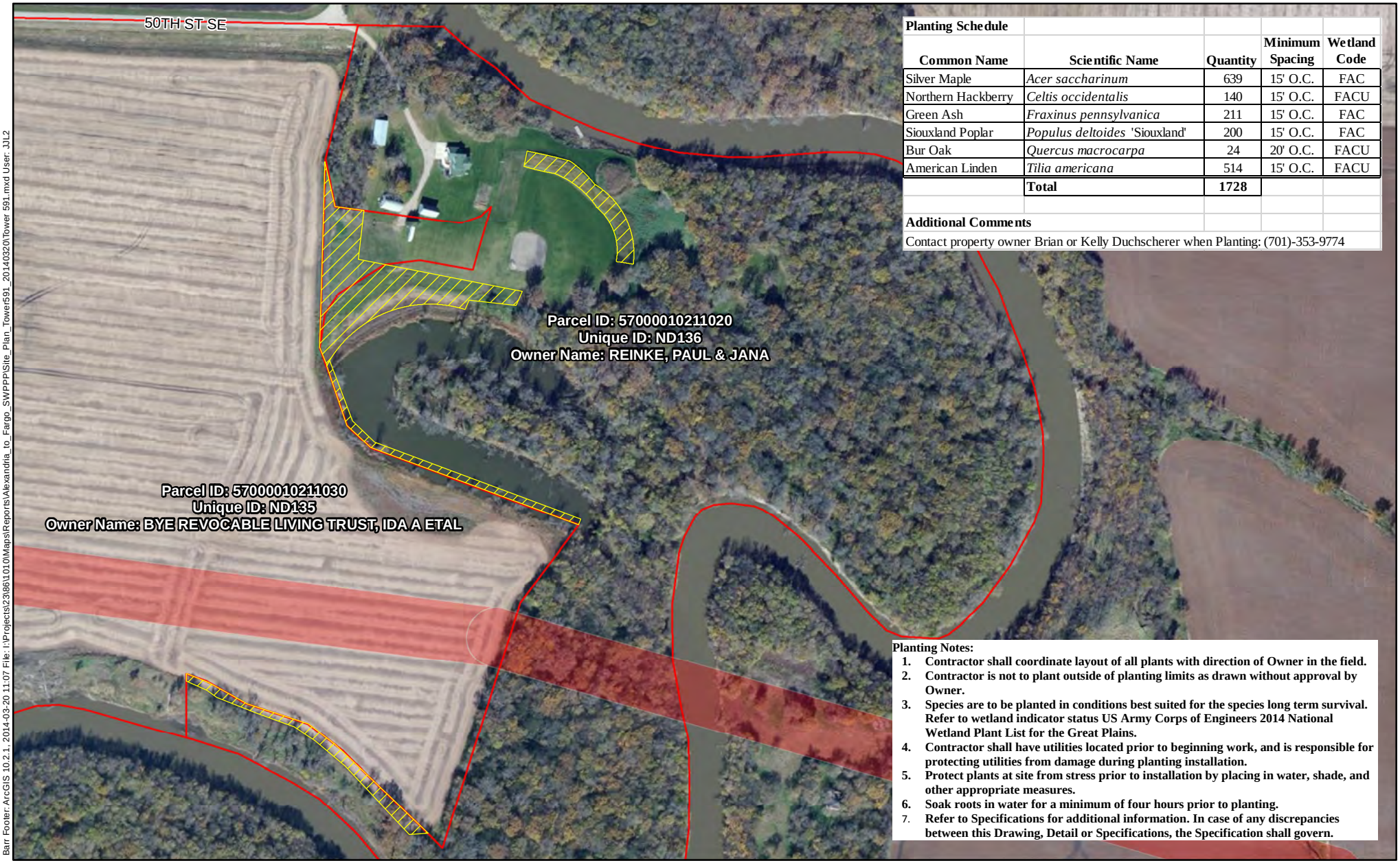
CapX2020
Delivering electricity you can rely on

0 5001,000 2,000 3,000 Feet

Tree Replacement Mitigation Plan

7/15/2014

Landowner Name: Fercho Family Farms
Project Parcel Number: ND133/134
Planting Location: Contact property owner in advance of planting to arrange exact locations: John Fercho: (701)-371-9404



Planting Schedule				
Common Name	**Scientific Name**	**Quantity**	**Minimum Spacing**	**Wetland Code**
Silver Maple	*Acer saccharinum*	639	15' O.C.	FAC
Northern Hackberry	*Celtis occidentalis*	140	15' O.C.	FACU
Green Ash	*Fraxinus pennsylvanica*	211	15' O.C.	FAC
Siouxland Poplar	*Populus deltoides* 'Siouxland'	200	15' O.C.	FAC
Bur Oak	*Quercus macrocarpa*	24	20' O.C.	FACU
American Linden	*Tilia americana*	514	15' O.C.	FACU
	Total	**1728**		
Additional Comments				
Contact property owner Brian or Kelly Duchscherer when Planting: (701)-353-9774				

Planting Notes:

1. **Contractor shall coordinate layout of all plants with direction of Owner in the field.**
2. **Contractor is not to plant outside of planting limits as drawn without approval by Owner.**
3. **Species are to be planted in conditions best suited for the species long term survival. Refer to wetland indicator status US Army Corps of Engineers 2014 National Wetland Plant List for the Great Plains.**
4. **Contractor shall have utilities located prior to beginning work, and is responsible for protecting utilities from damage during planting installation.**
5. **Protect plants at site from stress prior to installation by placing in water, shade, and other appropriate measures.**
6. **Soak roots in water for a minimum of four hours prior to planting.**
7. **Refer to Specifications for additional information. In case of any discrepancies between this Drawing, Detail or Specifications, the Specification shall govern.**

Legend

- Alignment ROW
- Planting Location
- Parcel Boundry

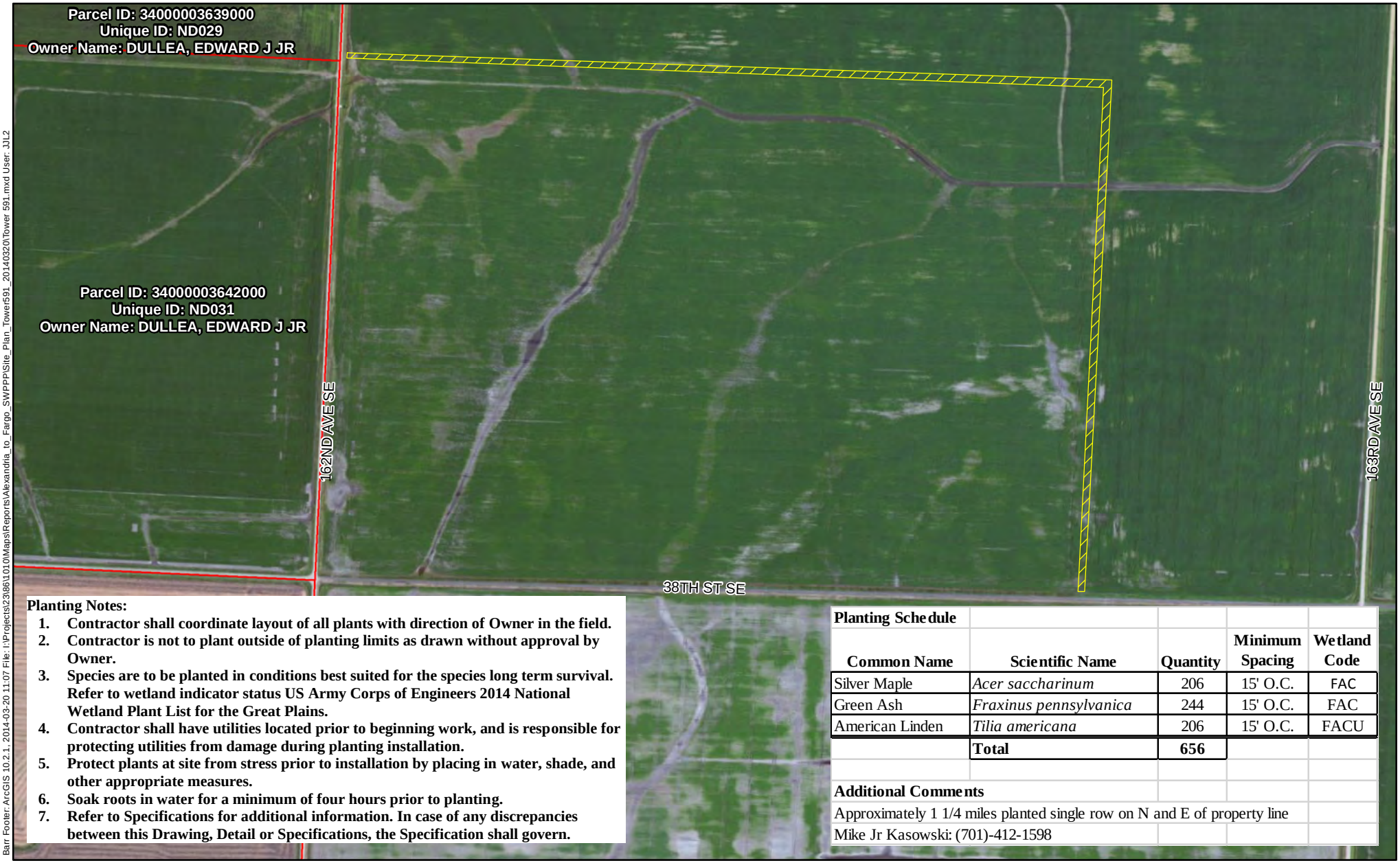
CapX2020
Delivering electricity you can rely on

0 100 200 400 Feet

Tree Replacement Mitigation Plan

7/15/2014

Landowner Name: Brian and Kelly Duchscherer
Project Parcel Number: ND136
Planting Location: Property Surrounding Home
Address: 17538 50th Street SE
Hickson, ND 58047



Planting Notes:

1. Contractor shall coordinate layout of all plants with direction of Owner in the field.
2. Contractor is not to plant outside of planting limits as drawn without approval by Owner.
3. Species are to be planted in conditions best suited for the species long term survival. Refer to wetland indicator status US Army Corps of Engineers 2014 National Wetland Plant List for the Great Plains.
4. Contractor shall have utilities located prior to beginning work, and is responsible for protecting utilities from damage during planting installation.
5. Protect plants at site from stress prior to installation by placing in water, shade, and other appropriate measures.
6. Soak roots in water for a minimum of four hours prior to planting.
7. Refer to Specifications for additional information. In case of any discrepancies between this Drawing, Detail or Specifications, the Specification shall govern.

Planting Schedule

Common Name	Scientific Name	Quantity	Minimum Spacing	Wetland Code
Silver Maple	*Acer saccharinum*	206	15' O.C.	FAC
Green Ash	*Fraxinus pennsylvanica*	244	15' O.C.	FAC
American Linden	*Tilia americana*	206	15' O.C.	FACU
	Total	**656**		

Additional Comments

Approximately 1 1/4 miles planted single row on N and E of property line

Mike Jr Kasowski: (701)-412-1598

Legend

- Alignment ROW
- Planting Location
- Parcel Boundry

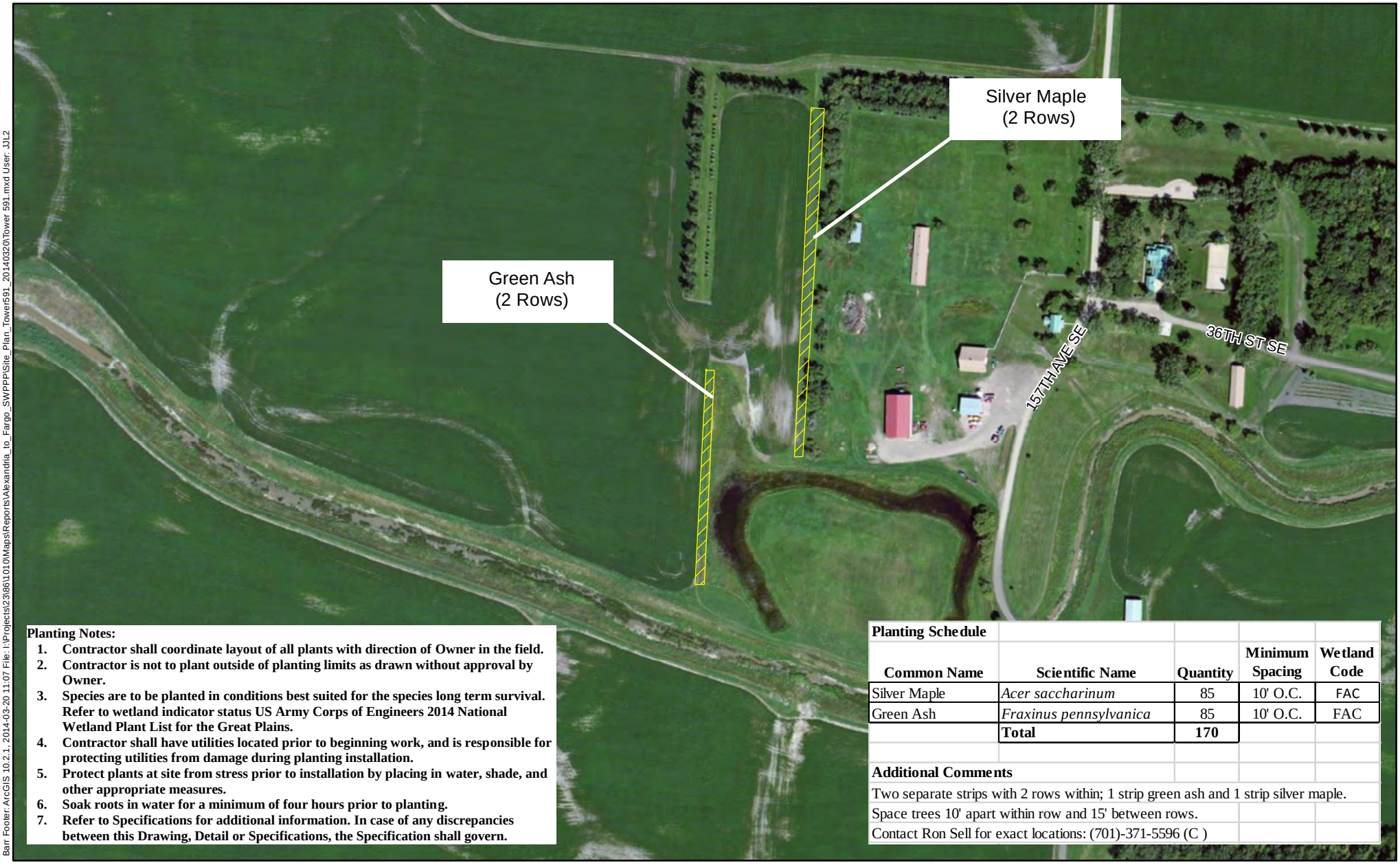
CapX2020
Delivering electricity you can rely on

0 200 400 800 Feet

Tree Replacement Mitigation Plan

7/15/2014

Landowner Name: Michael Kasowski
Project Parcel Number: ND017.3
Planting Location: Section 12, Township 139, Range 5
Nearest Intersection: 38th St SE & 162nd Ave SE



Planting Notes:

1. **Contractor shall coordinate layout of all plants with direction of Owner in the field.**
2. **Contractor is not to plant outside of planting limits as drawn without approval by Owner.**
3. **Species are to be planted in conditions best suited for the species long term survival. Refer to wetland indicator status US Army Corps of Engineers 2014 National Wetland Plant List for the Great Plains.**
4. **Contractor shall have utilities located prior to beginning work, and is responsible for protecting utilities from damage during planting installation.**
5. **Protect plants at site from stress prior to installation by placing in water, shade, and other appropriate measures.**
6. **Soak roots in water for a minimum of four hours prior to planting.**
7. **Refer to Specifications for additional information. In case of any discrepancies between this Drawing, Detail or Specifications, the Specification shall govern.**

Planting Schedule				
Common Name	**Scientific Name**	**Quantity**	**Minimum Spacing**	**Wetland Code**
Silver Maple	*Acer saccharinum*	85	10' O.C.	FAC
Green Ash	*Fraxinus pennsylvanica*	85	10' O.C.	FAC
	Total	**170**		
Additional Comments				
Two separate strips with 2 rows within; 1 strip green ash and 1 strip silver maple.				
Space trees 10' apart within row and 15' between rows.				
Contact Ron Sell for exact locations: (701)-371-5596 (C)				

Legend

- Alignment ROW
- Planting Location
- Parcel Boundry

CapX2020
Delivering electricity you can rely on

0 100 200 400 Feet

Tree Replacement
Mitigation Plan

7/15/2014

Landowner Name: Mary K. Dalrymple, et al Trust
Project Parcel Number: ND017.4
Planting Location: 3598 157th Ave SE
Casselton, ND 58012
Nearest Intersection: 36th St SE & 157th Ave SE

Parcel ND 128
Planting Schedule

Common Name	Scientific Name	Quantity	Minimum Spacing	Wetland Code
Box Elder	*Acer negundo*	49	10' O.C.	FAC
Silver Maple	*Acer saccharinum*	16	15' O.C.	FAC
Northern Hackberry	*Celtis occidentalis*	22	15' O.C.	FACU
Green Ash	*Fraxinus pennsylvanica*	84	15' O.C.	FAC
Peachleaf Willow	*Salix amygdaloides*	14	5' O.C.	FACW
Sandbar Willow	*Salix interior*	15	5' O.C.	FACW
American Linden	*Tilia americana*	16	15' O.C.	FACU
	Total	**216**		

Additional Comments
Contact property owner Mike or Kathy Dubord when Planting: (701)-281-2427 , (701)-793-6573

Parcel ND136
Planting Schedule

Common Name	Scientific Name	Quantity	Minimum Spacing	Wetland Code
Green Ash	*Fraxinus pennsylvanica*	211	15' O.C.	FAC
Siouxland Poplar	*Populus deltoides* 'Siouxland'	200	15' O.C.	FAC
Northern Hackberry	*Celtis occidentalis*	140	15' O.C.	FACU
American Linden	*Tilia americana*	514	15' O.C.	FACU
Silver Maple	*Acer saccharinum*	639	15' O.C.	FAC
Bur Oak	*Quercus macrocarpa*	24	20' O.C.	FACU
	Total	**1728**		

Additional Comments
Contact property owner Brian or Kelly Duchscherer when Planting: (701)-353-9774

Parcel ND60
Planting Schedule

Common Name	Scientific Name	Quantity	Minimum Spacing	Wetland Code
Amur Choke Cherry	*Prunus maackii*	20	10' O.C.	N/A
Silver Maple	*Acer saccharinum*	236	15' O.C.	FAC
	Total	**256**		

Additional Comments
Landowner or landowner's representative to be present at planting to ensure proper location
Phone: (701)-532-0600 (H), (701)-238-1885 (C)

Parcel ND107
Planting Schedule

Common Name	Scientific Name	Quantity	Minimum Spacing	Wetland Code
Green Ash	*Fraxinus pennsylvanica*	74	15' O.C.	FAC
Siouxland Poplar	*Populus deltoides* 'Siouxland'	5	15' O.C.	FAC
Box Elder	*Acer negundo*	62	10' O.C.	FAC
American Linden	*Tilia americana*	35	15' O.C.	FACU
	Total	**176**		

Additional Comments
Contact property owner for instructions prior to planting:
(701)-866-4220 (JoAnn) , (701)-361-5572 (Ed)

Parcel ND133/134
Planting Schedule

Common Name	Scientific Name	Quantity	Minimum Spacing	Wetland Code
Silver Maple	*Acer saccharinum*	373	15' O.C.	FAC
Northern Hackberry	*Celtis occidentalis*	83	15' O.C.	FACU
Colorado Blue Spruce	*Picea pungens*	30	15' O.C.	FAC
ScotsPine	*Pinus sylvestris*	112	10' O.C.	N/A
Siouxland Poplar	*Populus deltoides* 'Siouxland'	50	15' O.C.	FAC
Amur Maple	*Acer ginnala*	40	10' O.C.	N/A
Ponderosa Pine	*Pinus ponderosa*	8	15' O.C.	UPL
Bur Oak	*Quercus macrocarpa*	83	20' O.C.	FACU
American Linden	*Tilia americana*	331	15' O.C.	FACU
	Total	**1110**		

Additional Comments
Contact property owner for instructions
prior to planting to arrange exact locations:
John Fercho: (701)-371-9404

Parcel ND 017.3
Planting Schedule

Common Name	Scientific Name	Quantity	Minimum Spacing	Wetland Code
Silver Maple	*Acer saccharinum*	206	15' O.C.	FAC
Green Ash	*Fraxinus pennsylvanica*	244	15' O.C.	FAC
American Linden	*Tilia americana*	206	15' O.C.	FACU
	Total	**656**		

Additional Comments

Approximately 1 1/4 miles planted single row on N and E of property line
Mike Jr Kasowski: (701)-412-1598

Parcel ND017.4
Planting Schedule

Common Name	Scientific Name	Quantity	Minimum Spacing	Wetland Code
Silver Maple	*Acer saccharinum*	85	10' O.C.	FAC
Green Ash	*Fraxinus pennsylvanica*	85	10' O.C.	FAC
	Total	**170**		

Additional Comments
Two separate strips with 2 rows; 1 row green ash and 1 row silver maple.
Space trees 10' apart within row and 15' between rows.
Contact Ron Sell for exact locations: (701)-371-5596 (C)
Alt. Contact Debbie (701)-347-4291 (W)

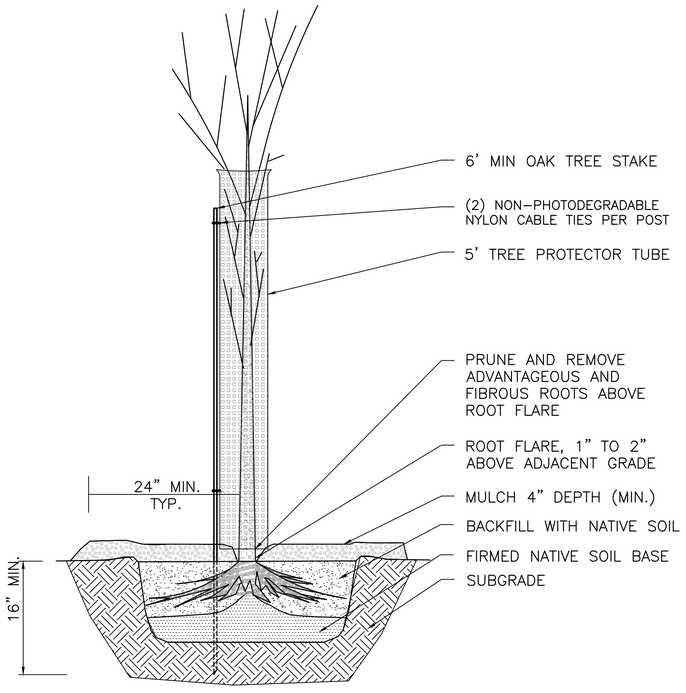
Parcel ND106
Planting Schedule

Common Name	Scientific Name	Quantity	Minimum Spacing	Wetland Code
Box Elder	*Acer negundo*	10	10' O.C.	FAC
Silver Maple	*Acer saccharinum*	25	15' O.C.	FAC
Siouxland Poplar	*Populus deltoides* 'Siouxland'	2	15' O.C.	FAC
American Linden	*Tilia americana*	25	15' O.C.	FACU
	Total	**62**		

Additional Comments
Contact property owner prior to start of planting: (701)-428-3225

PLANTING NOTES:

1. CONTRACTOR SHALL COORDINATE LAYOUT OF ALL PLANTS WITH DIRECTION OF OWNER OR IN THE FIELD
2. CONTRACTOR IS NOT TO PLANT OUTSIDE OF PLANTING LIMITS AS DRAWN WITHOUT APPROVAL BY OWNER.
3. INDIVIDUAL PLANT SPECIES ARE TO BE PLANTED IN A LOCATION SUITED FOR THE SPECIES LONG TERM SURVIVAL.
4. CONTRACTOR SHALL HAVE UTILITIES LOCATED PRIOR TO BEGINNING WORK, AND IS RESPONSIBLE FOR PROTECTING UTILITIES FROM DAMAGE DURING PLANTING INSTALLATION.
5. PRIOR TO PLANTING, ROOTS SHALL BE SOAKED FOR A MINIMUM OF FOUR HOURS TO ENSURE PROPER HYDRATION.
6. PROTECT PLANTS AT SITE FROM STRESS PRIOR TO INSTALLATION BY PLACING IN WATER, SHADE, AND BY TAKING OTHER APPROPRIATE MEASURES.
7. PROTECT EXISTING SITE FROM IMPACT BY PLANTING OPERATIONS. AVOID COMPACTING SOIL WITH HEAVY EQUIPMENT. ANY DAMAGE TO SITE TO BE REPAIRED AT CONTRACTOR'S EXPENSE
8. NO PLANT OR PRODUCT SUBSTITUTIONS ARE ACCEPTABLE WITHOUT PRIOR APPROVAL BY OWNER.
9. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION. IN CASE OF ANY DISCREPANCIES BETWEEN THIS DETAIL, PLANS OR SPECIFICATIONS, THE SPECIFICATION SHALL GOVERN.



NOTES:

1. PLANTING HOLE DIMENSION SHALL BE THREE TIMES ROOT BALL DIAMETER. SCARIFY SIDES AND BOTTOM OF PLANTING HOLE. WHEN PLANTING WITH AUGER CUT DOWN SIDES WITH SHOVEL TO ELIMINATE GLAZING.

2. REMOVE DEAD OR WITHERED ROOTS AND STEMS. LIVE BRANCHES SHALL NOT BE PRUNED.

3. TRANSFER PLANT DIRECTLY FROM WATER TO HOLE, SET PLANT AT SAME DEPTH AS IT WAS GROWN IN NURSERY.

4. SET PLUMB AND IMMEDIATELY BACKFILL WITH SOIL. DO NOT LEAVE IN PLANTING HOLE UNCOVERED.

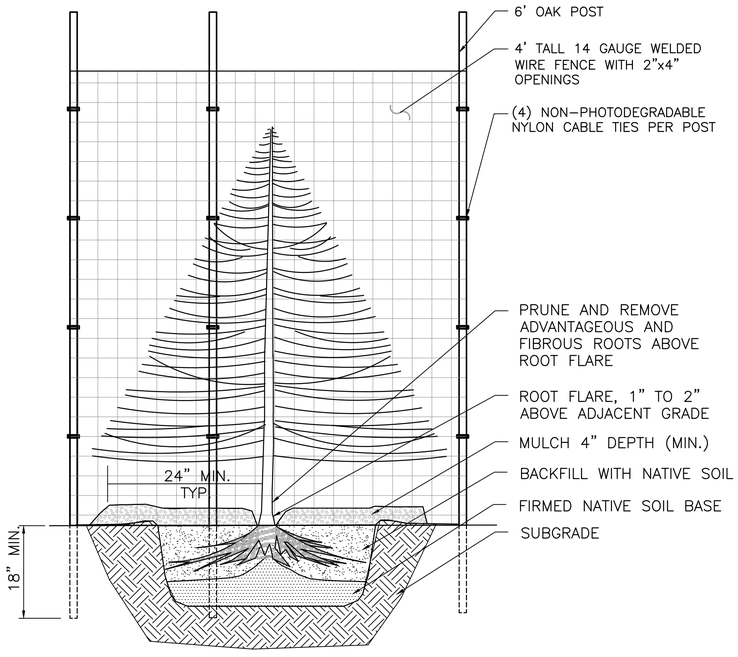
5. APPLY WATER TO SETTLE PLANTS AND FILL VOIDS THEN CONSTRUCT 3" DEPTH WATERING BASIN.

6. WATER THOROUGHLY WITHIN TWO HOURS OF PLANTING.

7. PLACE SHREDDED HARDWOOD MULCH WITHIN 48 HOURS OF THE SECOND WATERING. MULCH SHALL HAVE 24" RADIUS (MIN.).

8. DRIVE OAK TREE STAKE 16" INTO GROUND ON WINDWARD SIDE OF TREE. GUIDE TREE PROTECTOR TUBE GENTLY OVER TREE. SET TUBE FIRMLY INTO SOIL AND SECURE TUBE TO STAKE WITH CABLE TIES (2).

1 – DETAIL: DECIDUOUS BARE ROOT STOCK
NOT TO SCALE



NOTES:

1. PLANTING HOLE DIMENSION SHALL BE THREE TIMES ROOT BALL DIAMETER. SCARIFY SIDES AND BOTTOM OF PLANTING HOLE. WHEN PLANTING WITH AUGER CUT DOWN SIDES WITH SHOVEL TO ELIMINATE GLAZING.

2. REMOVE DEAD OR WITHERED ROOTS AND STEMS. LIVE BRANCHES SHALL NOT BE PRUNED.

3. TRANSFER PLANT DIRECTLY FROM WATER TO HOLE, SET PLANT AT SAME DEPTH AS IT WAS GROWN IN NURSERY.

4. SET PLUMB AND IMMEDIATELY BACKFILL WITH SOIL. DO NOT LEAVE IN PLANTING HOLE UNCOVERED.

5. APPLY WATER TO SETTLE PLANTS AND FILL VOIDS THEN CONSTRUCT 3" DEPTH WATERING BASIN.

6. WATER THOROUGHLY WITHIN TWO HOURS OF PLANTING.

7. PLACE SHREDDED HARDWOOD MULCH WITHIN 48 HOURS OF THE SECOND WATERING. MULCH SHALL HAVE 24" RADIUS (MIN.).

8. INSTALL 6' HARDWOOD OAK POST MINIMUM 18" INTO THE GROUND, (3) SPACED EVENLY AROUND TREE.

9. 4' TALL 14 GAGE WELDED WIRE FENCE WITH 2"x4" OPENINGS.

10. FENCING TIE TO POST WITH (4) NON–PHOTODEGRADABLE NYLON CABLE TIES (0.15" WIDE UV–WEATHER RESISTANT ZIP STRIPS).

11. WIRE SHALL BE FROM TREE TO ALLOW FOR GROWTH OF BRANCHES TO REMAIN WITHIN ENCLOSURE.

2 – DETAIL: CONIFEROUS BARE ROOT STOCK
NOT TO SCALE

NO.	BY	CHK.	APP.	DATE	REVISION DESCRIPTION

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.
PRINTED NAME
SIGNATURE
DATE ____ LICENSE # ____

	A	B	C	0	1	2	3
CLIENT							
BID							
CONSTRUCTION							
RELEASED TO/FOR							
DATE RELEASED							

BARR
Corporate Headquarters: Minneapolis, Minnesota
Ph: 1–800–632–2277

Project Office:
BARR ENGINEERING CO.
4700 WEST 77TH STREET
MINNEAPOLIS, MN 55435
Ph: 1–800–632–2277
Fax: (952) 832–2601
www.barr.com

Scale	AS SHOWN
Date	7/15/14
Drawn	BHD
Checked	MEK
Designed	BARR
Approved	

CAPX2020
FARGO TO ST. CLOUD 345KV LINE

TREE AND SHRUB MITIGATION PLAN
CASE NUMBER: PU–07–759

TREE PLANTING DETAILS

BARR PROJECT No.	23–86–1010
CLIENT PROJECT No.	
DWG. No.	L–01
REV. No.	0