

February 21, 2018

Mr. Darrell Nitschke
Executive Director
North Dakota Public Service Commission
600 East Boulevard; Department 408
Bismarck, ND 58505-0480

Dear Mr. Nitschke:

RE: Case No. PU-11-696 - Basin Electric Power Cooperative
AVS-Neset 345kV Transmission Project - Tree/Shrub Mitigation Plan 2018 Update

As per conditions of the Tree and Shrub Mitigation Specifications in the North Dakota Public Service Commission (NDPSC) Findings of Fact, Conclusions of Law and Order for the AVS to Neset 345kV Transmission Project (Project) in Case No. PU-11-696, you will find Basin Electric Power Cooperative's (Basin Electric) Tree/Shrub Mitigation Plan (Plan) update. Because the replacement tree planting opportunities are still being pursued, this submittal represents an update to the initial April 2017 Project Tree/Shrub Plan. This updated Plan has been filed electronically to the PU-11-696 Docket.

Tree/Shrub Replacement Plan

- Pre-Planting Efforts
 - Performed pre-project and post project tree/shrub surveys that identified species present and the quantification of trees/shrubs.
 - Identify landowners who request replacement trees/shrubs on their property on a 2:1 replacement basis.
 - Determined a total of 34,820 trees/shrubs required on a 2:1 basis.
- Landowner Tree/Shrub Planting Effort
 - Communicated the landowner listings and the number of tree/shrub replacements required to the local county Soil Conservation Service (SCS) staff.
 - Basin Electric committed to be the funding source to the county SCS to support the planting.
 - SCS staff coordinates with landowner to identify suitable lands for tree/shrub planting and make recommendations for the specific tree/shrub varieties to enhance survivability.
 - Basin Electric committed to the additional cost of incorporating ground fabric in all tree/shrub planting projects. The placement of ground fabric is strongly recommended by the SCS as it increases the survivability of the trees/shrubs.
 - Estimated 11,224 trees/shrubs will be replaced for individual landowners.

- Non-Landowner Tree/Shrub Planting Efforts
 - Basin Electric will continue to identify tree/shrub replacement opportunities that create a public benefit by formal and informal communication with local, county, and state agencies.
 - Preference given for planting projects in the affected five counties (Mercer, Dunn, McKenzie, Williams, and Mountrail).
 - Formal communication to city, county, and state agencies informing them of potential tree/shrub planting opportunities sent out March 2, 2017.
 - Estimated 23,596 trees/shrubs required for non-landowner plantings.
 - Tree/shrub planting opportunities previously approved by Commission (April 2017):
 - North Dakota Game & Fish Hoffland Bay Project - 3,570 trees/shrubs
 - City of Stanley Park District - 450 trees/shrubs

2018 Request

The following tree/shrub planting projects have been developed through cooperation with the individual county soil conservation service districts and approval from the NDPSC is being requested at this time. The projects are described as follows:

- Williams County SCS working through the City of Tioga in cooperation with the local Pheasant Forever Chapter are proposing to plant 846 trees/shrubs in 2017 as described in Appendix A.
- The Mercer County SCS working with the North Dakota Game and Fish have developed two projects in Mercer County for planting in 2017.
 - The Beulah Mine Project is proposing 1,000 trees/shrubs be planted as described in Appendix B.
 - The Harmony Lake Project is proposing 3,700 trees/shrubs be planted as described in Appendix C.
- The Stark County SCS working with the North Dakota Department of Transportation is proposing 11,917 trees/shrubs be planted at seven locations near Dickinson, North Dakota in 2019 as described in Appendix D.

Upon approval from NDPSC for these additional tree/shrub planting opportunities, Basin Electric will move forward with the Williams, Mercer, and Stark County SCS offices to make final arrangements for the planting efforts.

Outreach efforts to the various state, county, and city agencies, continues to identify additional tree/shrub planting opportunities. When additional specific tree/shrub planting opportunities are identified and detailed planting plans developed, they will be submitted to your agency for approval.

Summary

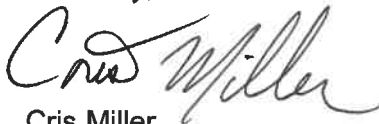
The following tabular summary of Basin Electric's tree/shrub plantings to date:

Description	County	Tree/Shrub Removed	Tree/Shrub (2:1 Basis)	Year
Total Tree/Shrub removed during construction activity	Mercer, Dunn, McKenzie, Williams, and Mountrail	17,410	<u>34,820</u>	2014-2017

Committed Replacement Projects	Tree/Shrub	Year	PSC Approval	
Huffland Bay	Williams	3,570	2017	Yes
Stanley	Mountrail	622	2017	Yes
Harmony Lake	Mercer	3,700	2018	Pending
Beulah Mine Hills	Mercer	1,000	2018	Pending
Pheasant Forever-Tioga	Williams	846	2018	Pending
NDDoT	Stark	11,917	2019	Pending
Total Committed Plantings		<u>21,655</u>		
Landowner Plantings Committed	Mercer, Dunn, McKenzie, Williams and Mountrail	<u>11,224</u>	On-going	
Remaining Planting Obligations		<u>1,941</u>		

For inquiries regarding this initial Tree/Shrub Mitigation Plan, please contact me directly at 701.557.5635 or cmiller@bepc.com.

Sincerely,



Cris Miller
Senior Environmental Project Specialist

/ser

Enclosures

cc: Casey Jacobson
Mike Murray
Amanda Wangler

Appendix A

Pheasant Forever Chapter Project

WILLIAMS COUNTY SOIL CONSERVATION DISTRICT
1106 West 2nd Street
Williston, ND 58801

Date: January 5, 2018

Basin Electric
%Cris Miller
(Pheasants Forever Project)
1717 E Interstate Ave
Bismarck, ND 58503

Enclosed is your tree planting order, worksheet and diagram based on our conversations. I have enclosed the worksheets showing your tree choices and location of trees. If there are any questions or problems please let us know as soon as possible.

Williams County Soil Conservation District requires a 50% deposit on the trees and/or fabric. This is to guarantee the district payment for the trees we've ordered for you and fabric purchased. A minimum of 50% down payment is required by February 1st and is non-refundable after that.

Williams County Soil Conservation District does not guarantee the survival of trees planted by the tree crew.

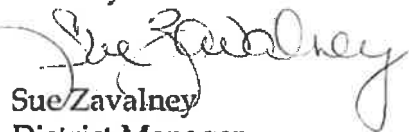
After the trees are planted, your deposit will be applied to the remaining balance and you will be billed for any remaining due or an overage will be returned to you.

You have approximately 4340 feet of planting trees and 4340 feet of fabric.

43 Units X \$31.00 = \$	1,333.00
43 Units x \$55.00 = \$	<u>2,365.00</u>
Total	\$ 3,698.00

Your down payment of \$ 1,849.00 is due by February 1st, 2018. If deposit is not received by February 1st, 2018 we will cancel your tree plan for this year.

Thank you.



Sue Zavalney
District Manager
Williams Co. SCD
1-701-572-6729 Ext 101

CONSERVATION, DEVELOPMENT. SELF-GOVERNMENT

All programs and services of the District are offered on a non-discriminatory basis, without regard to race, color, national origin, sex, age, marital status or handicap.



R1 Lilac 1630'

R2 Ponderosa Pine 1440'

R3 Lilac 1270'

R1 R2 R3

S 22
T 167
R 95

1100'

SIGNAL ST. W

WELLS ST. W
SIGNAL ST. E

Appendix B

Beulah Mine Project

ND - NRCS

WEST - TREE AND SHRUB PLANTING WORKSHEET

ND-CPA-4, Rev. 8-2015

Name **ND Game and Fish** Address **406 Dakota Ave, Riverdale ND, 58565** Phone # **(701) 654-7574** Date: **10/18/2017**



Quarter **NW 1/4** Section **8** Twshp **144** Range **87**
 Lon/Lat **-101.74 47.3085** Planned by: **BK & MJ** Plan approved by _____
 Planned Soil Mapunit / name component(s) **E3527B**
 Conservation Tree & Shrub Group **3** Select MLRA **54**
 Type of Planting **New**
 Landuse **Wildlife** Cost share Program **Basin Elec**
 Site Preparation **Fallow** Site protected from livestock? **Yes**
 Condition of site at planting time: _____
 Spacing between rows: **12** feet
 Distance from Windward row to roads or bldgs: **<200** feet
 (Minimum 200' on N & W, and 100' on S & E)
 Planted by: _____
 Date: _____
Remarks / Management (Weed Control)
Weed barrier to be installed. Under Basin Electric mitigation. Part of a larger planting.

This practice installation **MEETS / DOES NOT MEET** the ND FOTG standards and specifications.

Certified By:

Date:

Field No.	Planned Length	Planted Length	Planted Width	Acres	Row #	Primary Species of Tree or Shrub	Type or Variety	Alternating Specie	Average Spacing in row	Number Planted (est)	Number Planted (actual)	Primary Specie Suitability	Alternating Specie Suitability
A	1,000		16	0.37	1	Plum, American		Buffaloberry	4	250	0	suitable	suitable
	1,000		12	0.28	2	Cherry, Mongolian	Pin Cherry	Indigo, False	4	250	0	suitable	suitable
	1,000		12	0.28	3	Dogwood	Gray	Chokecherry, common	4	250	0	suitable	suitable
	1,000		16	0.37	4	Currant, Black		Silverberry	4	250	0	suitable	suitable
			0	0.00	5					0	0	0	0
			0	0.00	6					0	0	0	0
			0	0.00	7					0	0	0	0
			0	0.00	8					0	0	0	0
			0	0.00	9					0	0	0	0
			0	0.00	10					0	0	0	0
			0	0.00	11					0	0	0	0
			0	0.00	12					0	0	0	0
			0	0.00	13					0	0	0	0
			0	0.00	14					0	0	0	0
			0	0.00	15					0	0	0	0
			0	0.00	16					0	0	0	0
Totals										4000	0	56	1.29

TREEPLAN

Appendix C

Harmon Lake Project

ND - NRCS

WEST - TREE AND SHRUB PLANTING WORKSHEET

ND-CPA-4, Rev. 8-2015

Name **ND Game and Fish** Address **406 Dakota Ave, Riverdale ND, 58565** Phone # **654-7574, c 391-9782** Date: **11/3/2017**



Quarter **NW 1/4** Section **17** Twshp **145** Range **86**
 Planned by: **BK & MJ** Plan approved by: _____
 Planned Soil Mapunit / name component(s): **E4911F & E4915F**
 Conservation Tree & Shrub Group **10** Select MLRA **54**
 Type of Planting **New**
 Landuse **Wildlife** Cost share Program _____
 Site Preparation **Fallow** Site protected from livestock? **Yes**
 Condition of site at planting time: _____
 Spacing between rows: **12** feet
 Distance from Windward row to roads or bldgs: **<200** feet
 (Minimum 200' on N & W, and 100' on S & E) Planted by: _____
 Date: _____
Remarks / Management (Weed Control)
 Weed barrier to be installed. Under Basin Electric mitigation. Area listed as CTSG 10 because of mining history. Row 3 of planting A is planned for 100 Arnold Hawthorn included in the American Hazelnut half of that row. (In row 3 we plant 231 Hazelnut, 100 Hawthorn, and 332 Chokecherry.)

This practice installation MEETS / DOES NOT MEET the ND FOTG standards and specification

Certified By:

Date:

Field No.	Planned Length	Planted Length	Planted Width	Acres	Row #	Primary Species of Tree or Shrub	Type or Variety	Alternating Specie	Average Spacing in row	Number Planted (est)	Number Planted (actual)	Primary Specie Suitability	Alternating Specie Suitability				
A	2,650		16	0.97	1	Sumac, Skunkbush		Buffaloberry	4	663	0	NR	NR				
	2,650		12	0.73	2	Plum, American		Silverberry	4	663	0	NR	NR				
	2,250		12	0.62	3	Plum, American	Hazelnut	Chokecherry, commc	4	563	0	NR	NR				
	400		16	0.15	3	Hawthorn, Arnold			4	100	0	NR	0				
			0	0.00	5					0	0	0	0				
B	2,000		12	0.55	6	Dogwood	Gray	Buffaloberry	4	500	0	NR	NR				
	2,000		12	0.55	7	Viburnum, Nannybern		Silverberry	4	500	0	NR	NR				
	2,000		16	0.73	8	Cherry, Mongolian	Pin	Chokecherry, commc	4	500	0	NR	NR				
			0	0.00	9					0	0	0	0				
			0	0.00	10					0	0	0	0				
			0	0.00	11					0	0	0	0				
			0	0.00	12					0	0	0	0				
			0	0.00	13					0	0	0	0				
			0	0.00	14					0	0	0	0				
			0	0.00	15					0	0	0	0				
			0	0.00	16					0	0	0	0				
Totals										13950	0	96	4.31	3488	0		

TREEPLAN

Appendix D

ND Department of Transportation Project



2493 4th Ave West
 Dickinson, ND 58601
 Ph# 701-225-3811

Estimate

Date	Estimate #
1/29/2018	37

Name / Address
ND DOT 1700 3rd Ave W Ste 101 Dickinson, ND 58601-3009

			Project
Description	Qty	Rate	Total
Linear feet of machine tree planting	10,600	0.22	2,332.00
Per foot of weed barrier applied	10,600	0.45	4,770.00
Linear feet of machine tree planting	5,500	0.22	1,210.00
Per foot of weed barrier applied	5,500	0.45	2,475.00
Linear feet of machine tree planting	9,000	0.22	1,980.00
Per foot of weed barrier applied	9,000	0.45	4,050.00
Linear feet of machine tree planting	10,000	0.22	2,200.00
Per foot of weed barrier applied	10,000	0.45	4,500.00
Linear feet of machine tree planting	18,400	0.22	4,048.00
Per foot of weed barrier applied	18,400	0.45	8,280.00
Linear feet of machine tree planting	5,100	0.22	1,122.00
Per foot of weed barrier applied	5,100	0.45	2,295.00
Linear feet of machine tree planting	9,400	0.22	2,068.00
Per foot of weed barrier applied	9,400	0.45	4,230.00
		Total	\$45,560.00

ND - NRCS

WESTERN ND - TREE AND SHRUB PLANTING WORKSHEET

ND-CPA-4, Rev. 02-2017

Name NDDOT Address Dickinson Phone # _____ Date: _____



Plan Sketch Map

Quarter SE 1/4 Section 1 Twship 139 Range 96

Planned Soil Mapunit / name component(s) _____ Planned by: _____ Date: _____

Approved by: _____ Date: _____

Conservation Tree & Shrub Group 9N Select MLRA 54

Type of Planting New

Landuse Living Snow Fence Program _____

Site Preparation Fallow Protected from livestock? Yes

Site conditions at planting time: _____

Spacing between rows: 16 feet

Distance from Windward row to roads or bldgs.: _____ feet
(Minimum 200' on N & W, and 100' on S & E)

Planted by: _____ Date: _____

Remarks on site prep, conditions and management (Weed Control) _____

Weed Barrier Planting # 2 will have some breaks for drainage and power lines.

This practice installation **MEETS** / **DOES NOT MEET** the ND FOTG standards and specifications. (circle one)

Checkout by: _____		Date: _____		Certified By: _____		Date: _____										
Planting No.	Planned Length	Planted Length	Planned Width	Acres	Row #	Primary Species of Tree or Shrub	Type or Variety	Alternating Specie	Planned Spacing in row	Row Spacing (installed)	Number Planned (est)	Number Planted (installed)	Primary Species / CTSG Suitability	Alternating Specie / CTSG Suitability		
1	1400		20	0.64		Juniper, Rocky Mtn.			6		234		suitable			
2	4600		20	2.11	1	Juniper, Rocky Mtn.			6		767		suitable			
3	2300		18	0.95	1	Current, Golden			4		575		suitable			
	2300				2	Juniper, Rocky Mtn.			6		384		suitable			
												Totals				
												10600	56	3.71		



1-139-96 6-139-95

ND - NRCS

WESTERN ND - TREE AND SHRUB PLANTING WORKSHEET

ND-CPA-4, Rev. 02-2017

Name NDDOT Address Dickinson Phone # _____ Date: _____

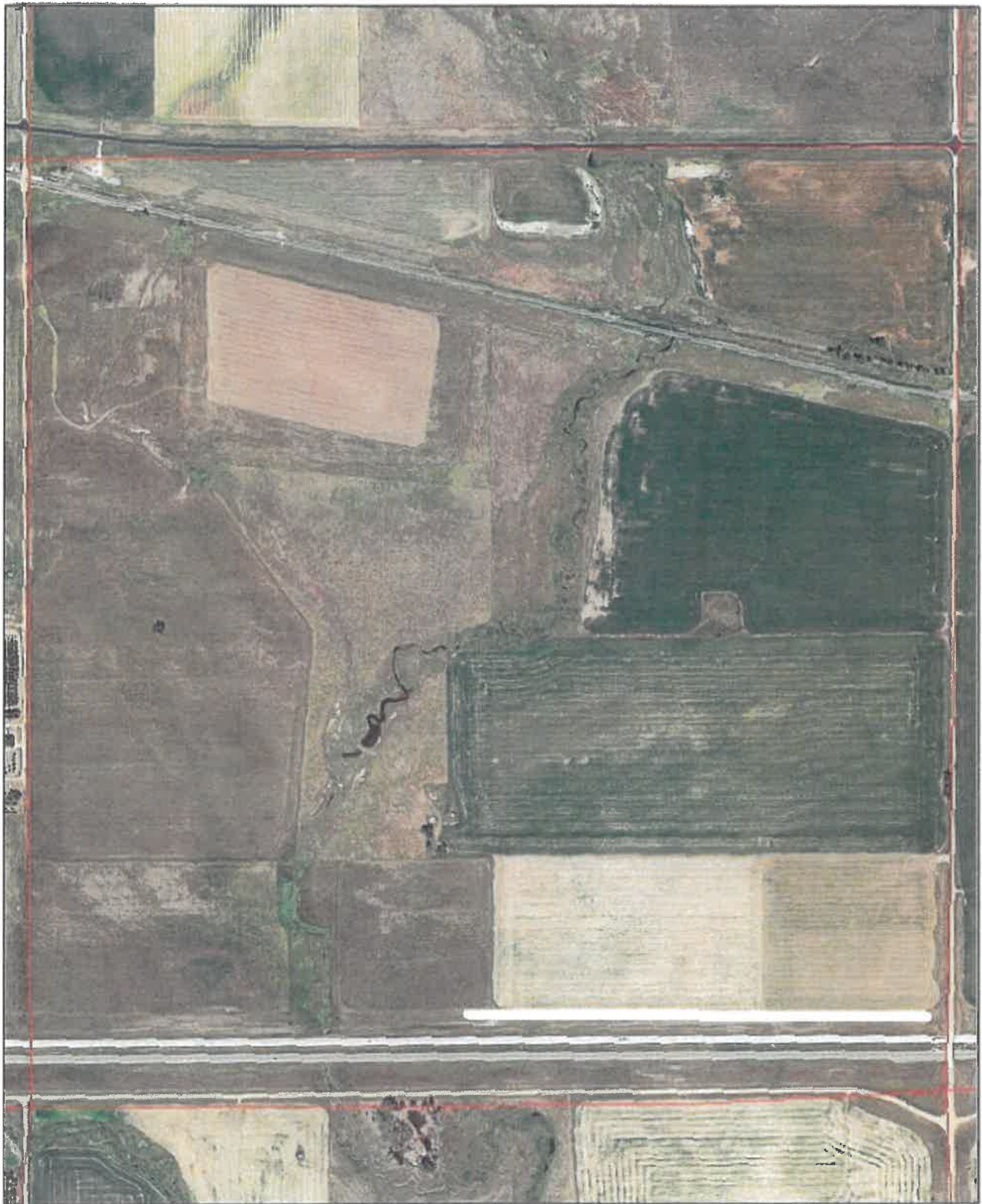
Plan Sketch Map



Quarter SE 1/4 Section 2 Twnshp 139 Range 93
 Planned Soil Mapunit / name component(s) _____ Planned by: _____ Date: _____
 Approved by: _____ Date: _____
 Conservation Tree & Shrub Group 6D Select MLRA 54
 Type of Planting New
 Landuse Living Snow Fence Program _____
 Site Preparation Fallow Protected from livestock? Yes
 Spacing between rows: 16 feet Site conditions at planting time: _____
 Distance from Windward row to roads or bldgs.: _____ feet
 (Minimum 200' on N & W, and 100' on S & E) Planted by: _____
 Remarks on site prep, conditions and management (Weed Control) Date: _____
 Weed Barrier _____

This practice installation **MEETS** / **DOES NOT MEET** the ND FOTG standards and specifications. (circle one)

Checkout by: _____		Date: _____		Certified By: _____		Date: _____								
Planting No.	Planned Length	Planted Length	Planned Width	Acres	Row #	Primary Species of Tree or Shrub	Type or Variety	Alternating Specie	Planned Spacing in row	Row Spacing (Installed)	Number Planned (est)	Number Planted (installed)	Primary Specie / CTSG Suitability	Alternating Specie / CTSG Suitability
1	2750		18	1.14		Juniper, Rocky Mtn.			6		459		suitable	
	2750					Pine, Ponderosa			12		230		suitable	
5500			18	1.14	Totals						689			



2-139-93

ND - NRCS

WESTERN ND - TREE AND SHRUB PLANTING WORKSHEET

ND-CPA-4, Rev. 02-2017

Name NDDOT Address Dickinson Phone # _____ Date: _____



Plan Sketch Map



Quarter S 1/2 Section 6 Twnshp 139 Range 92
 Planned Soil Mapunit / name component(s) _____ Planned by: _____ Date: _____
 Approved by: _____ Date: _____
 Conservation Tree & Shrub Group 6D Select MLRA 54
 Type of Planting New
 Landuse Living Snow Fence Program _____
 Site Preparation Fallow Protected from livestock? Yes
 Spacing between rows: 16 feet Site conditions at planting time: _____
 Distance from Windward row to roads or bldgs.: _____ feet
 (Minimum 200' on N & W, and 100' on S & E) Planted by: _____
 Remarks on site prep, conditions and management (Weed Control) Date: _____
 Weed Barrier _____

This practice installation **MEETS** / **DOES NOT MEET** the ND FOTG standards and specifications. (circle one)

Checkout by: _____		Date: _____		Certified By: _____		Date: _____								
Planting No.	Planned Length	Planted Length	Planned Width	Acres	Row #	Primary Species of Tree or Shrub	Type or Variety	Alternating Specie	Planned Spacing In row	Row Spacing (Installed)	Number Planned (est)	Number Planted (installed)	Primary Species / CTSG Suitability	Alternating Specie / CTSG Suitability
1	4500		18	1.86	1	Juniper, Rocky Mtn.			6		750		suitable	
	4500				2	Silverberry			4		1125		suitable	
9000			18	1.86	Totals						1875			



6-139-92

ND - NRCS

WESTERN ND - TREE AND SHRUB PLANTING WORKSHEET

ND-CPA-4, Rev. 02-2017

Name NDDOT Address Dickinson Phone # _____ Date: _____



Plan Sketch Map



Quarter S 1/2 Section 10 Twnshp 139 Range 92
 Planned Soil Mapunit / name component(s) _____ Planned by: _____ Date: _____
 Approved by: _____ Date: _____
 Conservation Tree & Shrub Group 6D Select MLRA 54
 Type of Planting New
 Landuse Living Snow Fence Program _____
 Site Preparation Fallow Protected from livestock? Yes
 Spacing between rows: 16 feet Site conditions at planting time: _____
 Distance from Windward row to roads or bldgs.: _____ feet
 (Minimum 200' on N & W, and 100' on S & E) Planted by: _____
 Remarks on site prep, conditions and management (Weed Control) Date: _____
 Weed Barrier _____

This practice installation **MEETS** / **DOES NOT MEET** the ND FOTG standards and specifications. (circle one)

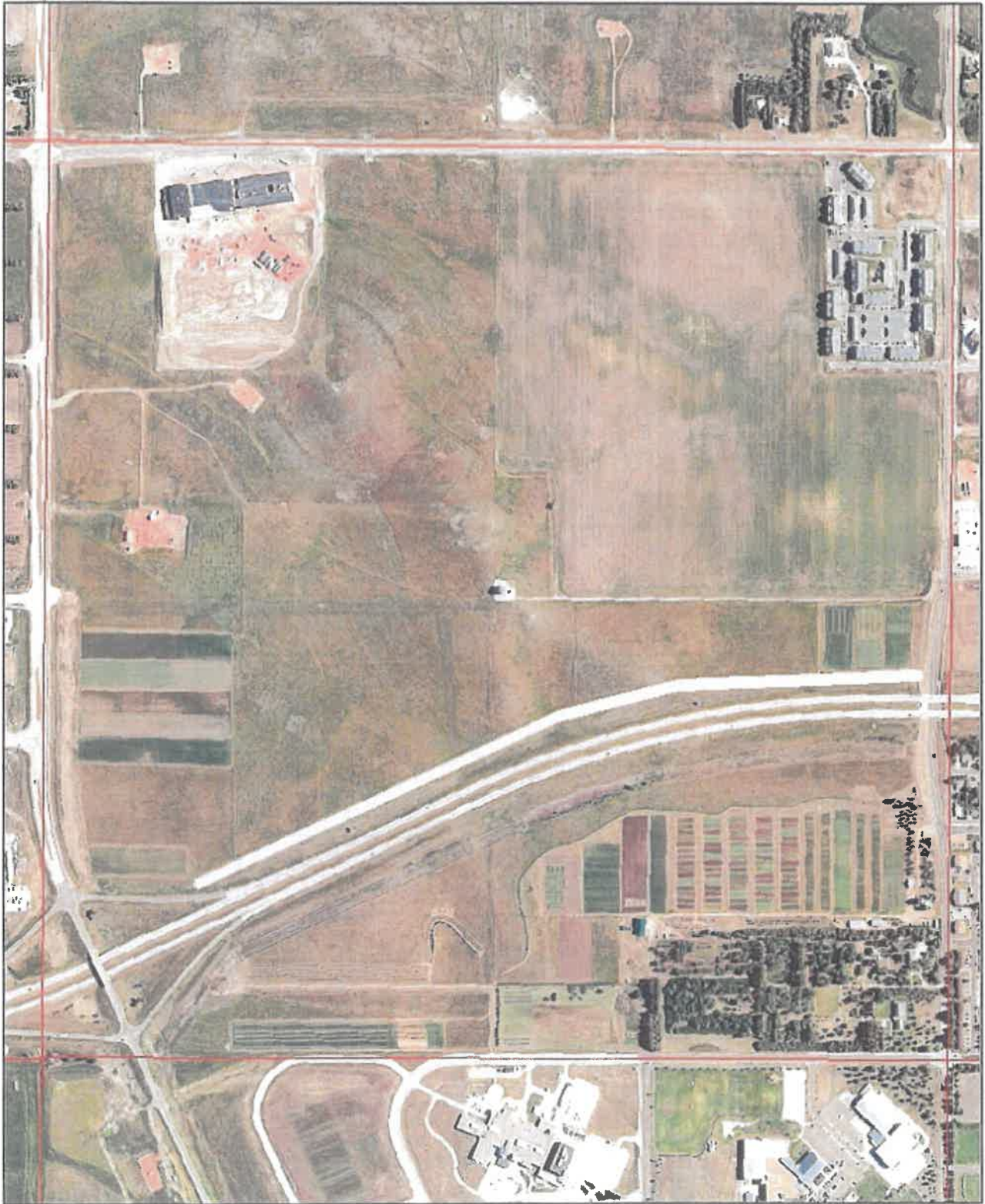
Checkout by: _____		Date: _____		Certified By: _____		Date: _____								
Planting No.	Planned Length	Planted Length	Planned Width	Acres	Row #	Primary Species of Tree or Shrub	Type or Variety	Alternating Specie	Planned Spacing in row	Row Spacing (installed)	Number Planned (est)	Number Planted (installed)	Primary Specie / CTSG Suitability	Alternating Specie / CTSG Suitability
1	5000		18	2.07	1	Buffaloberry			4		1250		suitable	
	5000				2	Pine, Ponderosa			12		417		suitable	
10000			18	2.07	Totals						1667			



10-139-92



31-140-96
6-139-96
36-140-97



32-140-96

ND - NRCS

WESTERN ND - TREE AND SHRUB PLANTING WORKSHEET

ND-CPA-4, Rev. 02-2017

Name NDDOT Address Dickinson Phone # _____ Date: _____



Quarter S 1/2 Section 35 Twnshp 140 Range 96
 Planned Soil Mapunit / name component(s) _____ Planned by: _____
 Approved by: _____ Date: _____
 Conservation Tree & Shrub Group 6D Select MLRA 54
 Type of Planting New
 Landuse Living Snow Fence Program _____
 Site Preparation Fallow Protected from livestock? Yes
 Spacing between rows: 16 feet Site conditions at planting time: _____
 Distance from Windward row to roads or bldgs.: _____ feet
 (Minimum 200' on N & W, and 100' on S & E)
 Planted by: _____
 Remarks on site prep, conditions and management (Weed Control) Date: _____
 Weed Barrier Will be a 200 foot opening for waterway.

This practice installation **MEETS** / **DOES NOT MEET** the ND FOTG standards and specifications. (circle one)

Checkout by:		Date:		Certified By:		Date:								
Planting No.	Planned Length	Planted Length	Planned Width	Acres	Row #	Primary Species of Tree or Shrub	Type or Variety	Alternating Species	Planned Spacing in row	Row Spacing (Installed)	Number Planned (est)	Number Planted (installed)	Primary Species / CTSG Suitability	Alternating Species / CTSG Suitability
1	4700		18	1.94		Buffalobery			4		1175		suitable	
	4700					Pine, Ponderosa			12		392		suitable	
9400			18	1.94	Totals						1667			



35-140-96