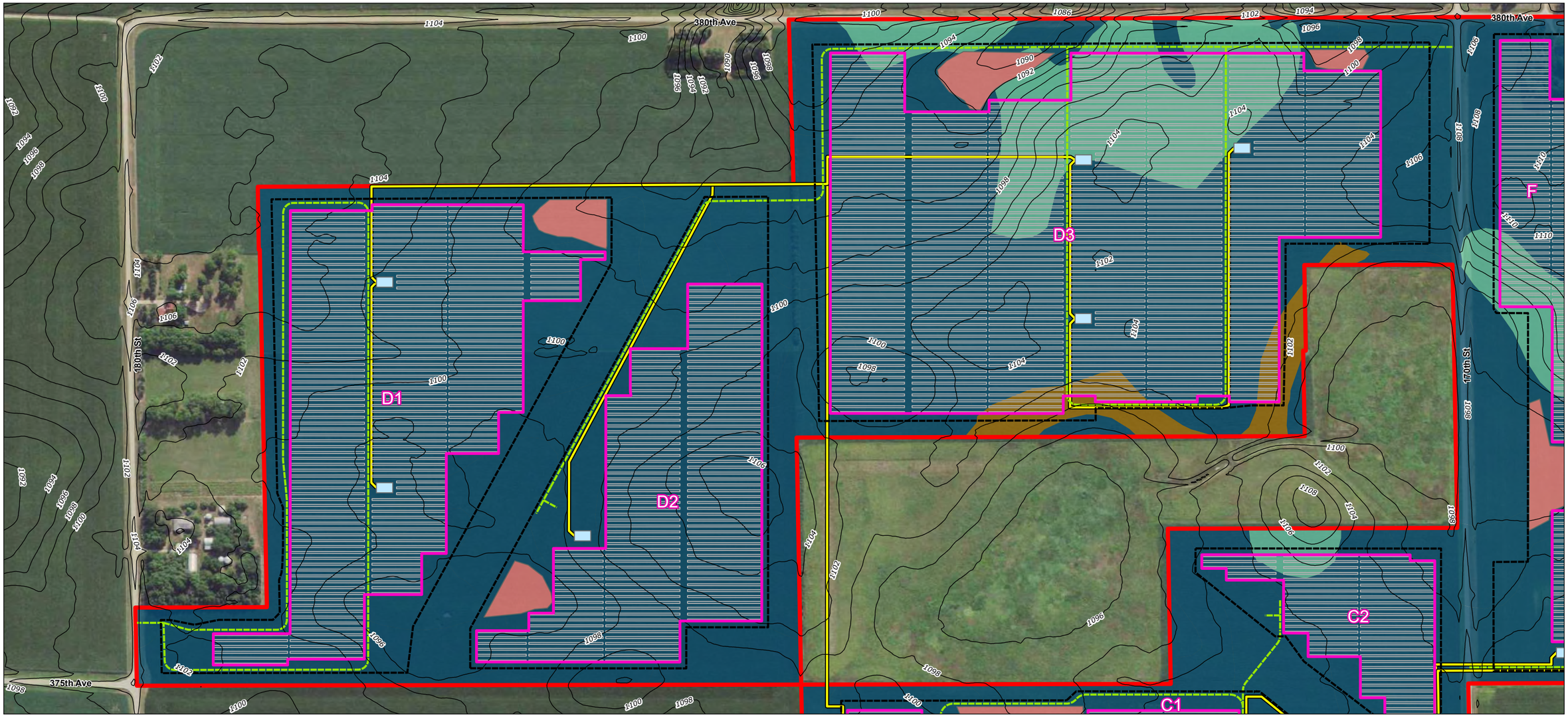

Watonwan County	Blue Earth County	Waseca County
Martin County	Faribault County	Freeborn County
	Minnesota	
	Iowa	

Legend

- Project Area
- Solar Array Development Area
- Arrays
- Inverters
- Security Fence
- Access Road
- Collection Line
- Contour (2ft)

Seed Mix

- Wet-Mesic Grass-Only Seed Mix
- Mesic Grass-Only Seed Mix
- Dry Grass-Only Seed Mix
- Stormwater and Detention Pond Seed Mix

0 200 400 Feet

(At original document size of 11x17)
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N

Notes

1. Coordinate System: NAD 1983 HARN Adj MN Faribault Feet
2. Data Sources: USDA, MnDOT, Faribault Co., Stantec
3. Background: USDA FSA 2021 Aerial

Stantec

Project Location
Faribault Co., MN

Prepared by ARH on 2024-02-08

Client/Project 227706727
Westwood Professional Services, Inc.
Northern Crescent Solar
Vegetation Management Plan

Figure No.
14

Title
Solar Array Development Area D

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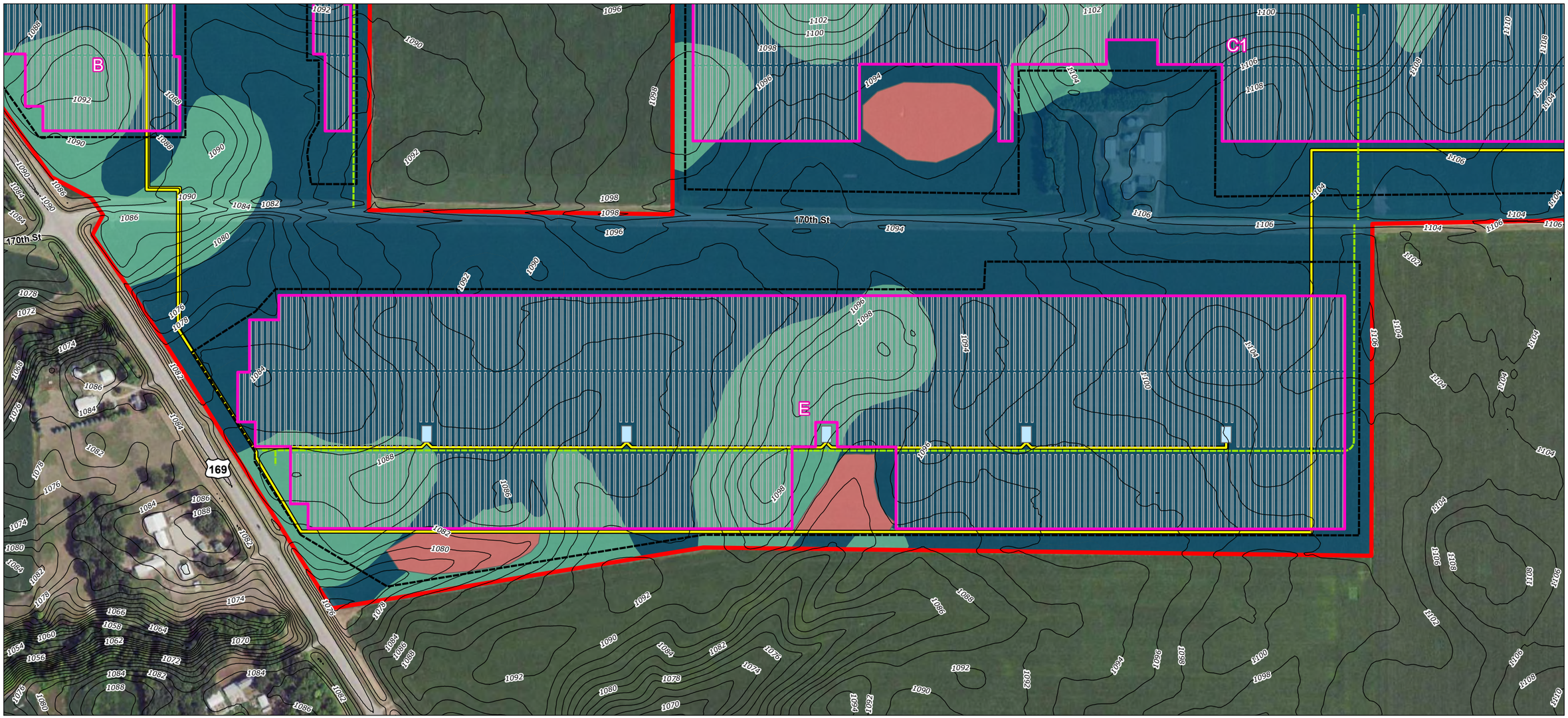

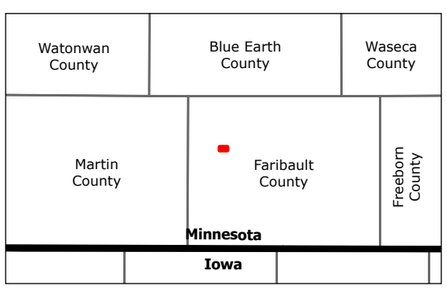

Legend

- Project Area
- Solar Array Development Area
- Arrays
- Inverters
- Security Fence
- Access Road
- Collection Line
- Contour (2ft)

Seed Mix

- Wet-Mesic Grass-Only Seed Mix
- Mesic Grass-Only Seed Mix
- Dry Grass-Only Seed Mix
- Stormwater and Detention Pond Seed Mix

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(At original document size of 11x17)
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Stantec

Project Location
Faribault Co., MN

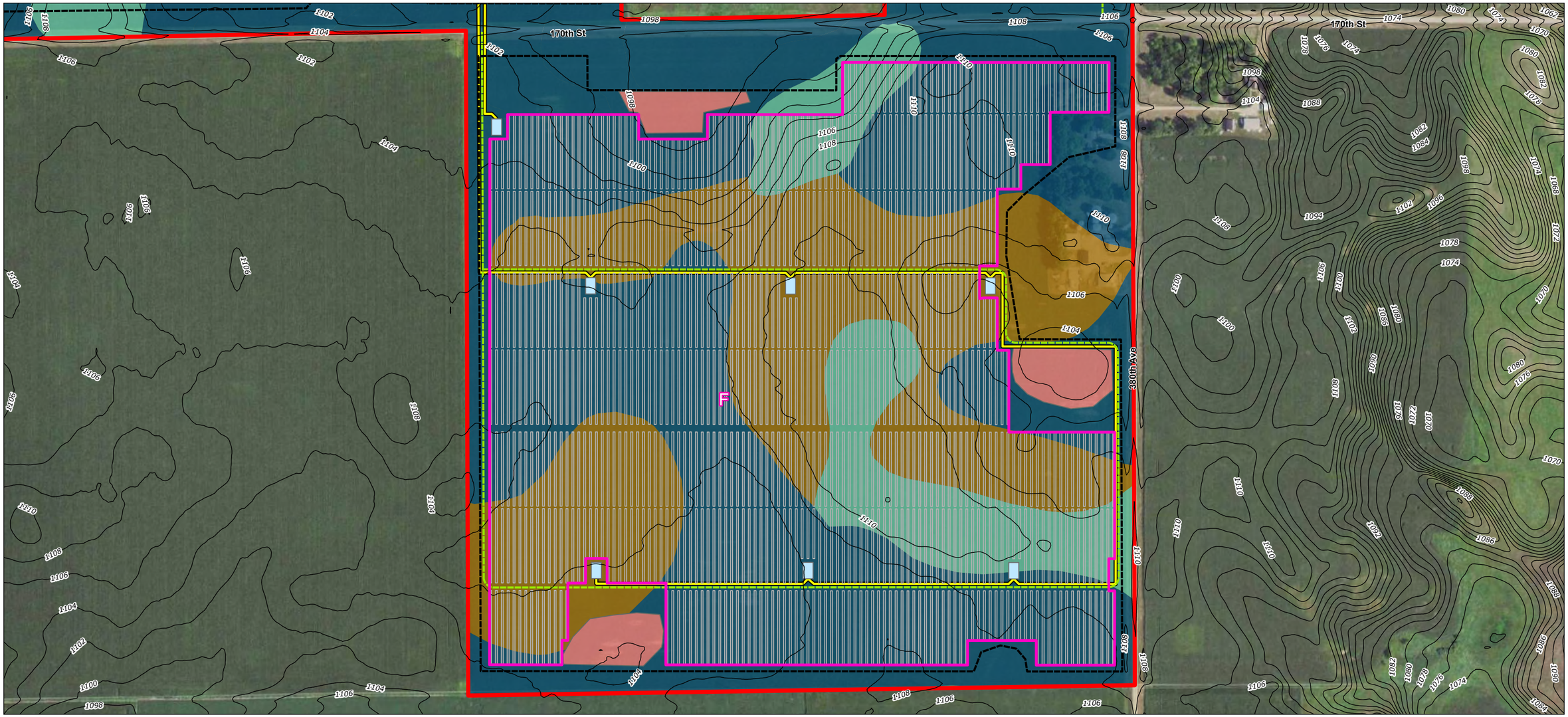
Prepared by ARH on 2024-02-08

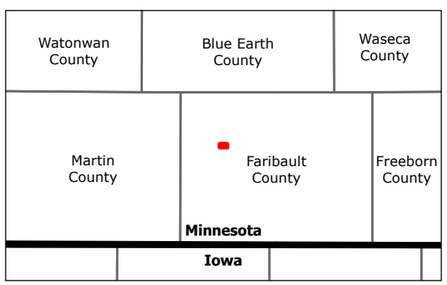
Client/Project
227706727
Westwood Professional Services, Inc.
Northern Crescent Solar
Vegetation Management Plan

Figure No.
15

Title
Solar Array Development Area E

Notes
1. Coordinate System: NAD 1983 HARN Adj MN Faribault Feet
2. Data Sources: USDA, MnDOT, Faribault Co., Stantec
3. Background: USDA FSA 2021 Aerial





Legend

- Project Area
- Solar Array Development Area
- Arrays
- Inverters
- Security Fence
- Access Road
- Collection Line
- Contour (2ft)

Seed Mix

- Wet-Mesic Grass-Only Seed Mix
- Mesic Grass-Only Seed Mix
- Dry Grass-Only Seed Mix
- Stormwater and Detention Pond Seed Mix

0 200 400 Feet

(At original document size of 11x17)
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Stantec

Project Location
Faribault Co., MN

Prepared by ARH on 2024-02-08

Client/Project
Westwood Professional Services, Inc.
Northern Crescent Solar
Vegetation Management Plan

227706727

Figure No.
16

Title
Solar Array Development Area F

Notes
1. Coordinate System: NAD 1983 HARN Adj MN Faribault Feet
2. Data Sources: USDA, MnDOT, Faribault Co., Stantec
3. Background: USDA FSA 2021 Aerial

APPENDIX B

SOIL CHARACTERISTICS OF MAPPED SOIL UNITS

Mapped Soil Series	Soil Drainage Class	Hydric Class	Farmland Classification	Flooding Frequency	Erosion Hazard	Acres within Project Area	Approx. percent of Project Area
Bold-Truman complex, 12 to 18 percent slopes, eroded	Well drained	Predominantly non-hydric	Not prime farmland	None	Severe	0.72	0.06
Brownton silty clay loam, 0 to 2 percent slopes	Poorly drained	Hydric	Prime farmland if drained	None	Slight	6.79	0.58
Canisteo clay loam, 0 to 2 percent slopes	Poorly drained	Hydric	Prime farmland if drained	None	Slight	15.12	1.28
Clarion loam, 2 to 6 percent slopes	Moderately well drained	Predominantly non-hydric	Prime farmland	None	Moderate	42.46	3.60
Collinwood silty clay loam, 1 to 3 percent slopes	Somewhat poorly drained	Predominantly non-hydric	Prime farmland	None	Slight	3.77	0.32
Darfur loam	Poorly drained	Predominantly hydric	Prime farmland if drained	None	Slight	4.52	0.38
Delft clay loam, 0 to 2 percent slopes	Poorly drained	Predominantly hydric	Prime farmland if drained	None	Slight	1.46	0.12

Mapped Soil Series	Soil Drainage Class	Hydric Class	Farmland Classification	Flooding Frequency	Erosion Hazard	Acres within Project Area	Approx. percent of Project Area
Fostoria loam	Somewhat poorly drained	Predominantly non-hydric	Prime farmland	None	Slight	85.12	7.22
Grogan silt loam, 1 to 6 percent slopes	Well drained	Predominantly non-hydric	Prime farmland	None	Moderate	11.76	1.00
Guckeen silty clay loam, 1 to 3 percent slopes	Somewhat poorly drained	Predominantly non-hydric	Prime farmland	None	Slight	6.73	0.57
Kingston silty clay loam, 1 to 3 percent slopes	Somewhat poorly drained	Predominantly non-hydric	Prime farmland	None	Slight	193.80	16.44
Klossner muck, lake plain, depressional, 0 to 1 percent slopes	Very poorly drained	Hydric	Farmland of statewide importance	None	Slight	4.96	0.42
Lakefield silt loam	Moderately well drained	Predominantly non-hydric	Prime farmland	None	Slight	58.47	4.96
Madelia silty clay loam, 0 to 2 percent slopes	Poorly drained	Predominantly hydric	Prime farmland if drained	None	Slight	315.86	26.79
Marna silty clay loam, 0 to 2 percent slopes	Poorly drained	Predominantly hydric	Prime farmland if drained	None	Slight	31.46	2.67

Mapped Soil Series	Soil Drainage Class	Hydric Class	Farmland Classification	Flooding Frequency	Erosion Hazard	Acres within Project Area	Approx. percent of Project Area
Nicollet clay loam, 1 to 3 percent slopes	Somewhat poorly drained	Predominantly non-hydric	Prime farmland	None	Slight	18.87	1.60
Ocheyedan loam, 2 to 6 percent slopes	Well drained	Predominantly non-hydric	Prime farmland	None	Moderate	55.82	4.73
Okoboji silty clay loam, 0 to 1 percent slopes	Very poorly drained	Hydric	Prime farmland if drained	None	Slight	16.26	1.38
Shorewood silty clay loam, 1 to 3 percent slopes	Somewhat poorly drained	Predominantly non-hydric	Prime farmland	None	Slight	1.51	0.13
Shorewood silty clay loam 3 to 6 percent slopes	Moderately well drained	Predominantly non-hydric	Prime farmland	None	Moderate	6.35	0.54
Spicer silty clay loam, 0 to 2 percent slopes	Poorly drained	Predominantly hydric	Prime farmland if drained	None	Slight	91.02	7.72
Truman silt loam, 2 to 6 percent slopes	Well drained	Predominantly non-hydric	Prime farmland	None	Moderate	76.88	6.52
Waldorf silty clay loam	Poorly drained	Predominantly hydric	Prime farmland if drained	None	Slight	26.27	2.23
Webster clay loam, 0 to 2 percent slopes	Poorly drained	Predominantly hydric	Prime farmland if drained	None	Slight	103.03	8.74

APPENDIX C

SOIL SAMPLING RESULTS

BORING ID	SAMPLE DEPTH (ft)	SAMPLE ID	USCS CLASSIFICATION[2][3][4]	NATURAL MOISTURE CONTENT (%)	GRAIN-SIZE DISTRIBUTION[1][11]				ATTERBERG LIMITS		CHEMICAL CONSTITUENTS			
					% Gravel	% Sand	% Silt	% Clay	LL	PI	pH	Oxydatio-Reduction Potential (mV)	CHLORIDE (mg/kg)	SULFATES (mg/kg)
B-02	1-5	BULK	**Fat Clay w/ Sand (CH)**	24.3	0	20	51	29	57	37	7.7	454	16[5]	53
B-05	0-1.5	SS-01	Lean Clay (CL)	22.6							6.8	450	< 16	12[5]
B-09	1-5	BULK	**Lean Clay (CL)**	32.5	0	3	97		48	22	7.6	445	< 16	< 10
B-09	1-5	BULK	**Sandy Lean Clay (CL)**	17.8	2	39	42	19	41	23	7.6	447	< 16	13[5]
B-13	1-5	BULK	**Fat Clay (CH)**	30.4	0	7	67	26	55	31	7.5	451	< 16	< 10
B-14	1-5	BULK	**Fat Clay (CH)**	30.9	0	11	60	29	53	29	7.7	432	< 16	< 10
B-16	0-1.5	SS-01	Lean Clay (CL)	27.6										
B-17	1-5	BULK	**Sandy Lean Clay (CL)**	20.7	1	37	43	19	38	21	7.9	438	< 16	64[5]
BESS-01	0-1.5	SS-01	Lean Clay (CL)	27.5							7.4	440	< 16	61
SUB-01	1-5	BULK	**Lean Clay w/ Sand (CL)**	25.5	1	26	48	25	49	29	7.8	422	< 16	13[5]

APPENDIX D

CIVIL DESIGN FOR NORTHERN CRESCENT SOLAR AND STORAGE PROJECT

(To be inserted on final engineering design)

APPENDIX E

SEED MIXES

Mesic – Native Grass-Only Seed Mix

Uses: Within array field and fence lines with solar facility infrastructure in moderately drained soils as a perennial vegetation cover.

Scientific Name	Common Name	Rate (lb/ac)	Pct of Mix (By Wt)	Seed/sqft	Pct of Mix (Seeds/sqft)
Grasses					
Calamagrostis canadensis	Bluejoint	0.05	0.1%	5.00	5.4%
Glyceria striata	Fowl Manna Grass	0.10	0.3%	3.30	3.6%
Leersia oryzoides	Rice Cut Grass	0.25	0.6%	3.10	3.3%
Poa palustris	Fowl Bluegrass	0.42	1.1%	20.00	21.5%
	Subtotal	0.82	2.1%	31.40	33.8%
Sedges					
Carex scoparia	Lance-fruited Oval sedge	0.07	0.2%	2.10	2.3%
Carex stipata	Common Fox Sedge	0.17	0.4%	2.10	2.3%
Carex vulpinoidea	Brown Fox Sedge	0.11	0.3%	4.00	4.3%
Scirpus cyperinus	Woolgrass	0.06	0.2%	40.00	43.1%
	Subtotal	0.41	1.0%	48.20	51.9%
Cover Crop					
Avena sativa	Oats	37.88	96.9%	11.13	12.0%
	Subtotal	37.88	96.9%	11.13	12.0%
	Total	39.11	100.0%	92.83	100.0%

Wet - Mesic – Native Grass-Only Seed Mix

Uses: Within array field and fence lines with solar facility infrastructure in poorly drained soils as a perennial vegetation cover.

Scientific Name	Common Name	Rate (lb/ac)	Pct of Mix (By Wt)	Seed/sqft	Pct of Mix (Seeds/sqft)
Grasses					
Bromus ciliatus	Fringed Brome	1.10	10.1%	4.45	3.0%
Calamagrostis canadensis	Bluejoint	0.05	0.5%	5.00	3.4%
Elymus virginicus	Virginia Wild Rye	1.00	9.2%	1.55	1.1%
Leersia oryzoides	Rice Cut Grass	0.25	2.3%	3.10	2.1%
Glyceria grandis	Tall Manna Grass	0.15	1.4%	3.90	2.6%
Glyceria striata	Fowl Manna Grass	0.10	0.9%	3.30	2.2%
Poa palustris	Fowl Bluegrass	0.35	3.2%	16.50	11.2%
	Subtotal	3.00	27.5%	37.80	25.6%
Sedges					
Carex comosa	Bristly Sedge	0.21	1.9%	2.36	1.6%
Carex scoparia	Pointed Broom Sedge	0.05	0.5%	1.60	1.1%
Carex stipata	Awl-fruited Sedge	0.17	1.6%	2.10	1.4%
Carex stricta	Tussock Sedge	0.03	0.3%	0.50	0.3%
Carex vulpinoidea	Fox Sedge	0.14	1.3%	5.00	3.4%
Juncus tenuis	Path Rush	0.04	0.4%	15.00	10.2%
Scirpus atrovirens	Dark Green Bulrush	0.18	1.7%	30.00	20.3%
Scirpus cyperinus	Woolgrass	0.08	0.7%	50.00	33.9%
	Subtotal	0.90	8.3%	106.56	72.3%
Cover Crop					
Avena sativa	Oats	7.00	64.2%	3.12	2.1%
	Subtotal	7.00	64.2%	3.12	2.1%
	Total	10.90	100.0%	147.48	100.0%

Dry – Native Grass-Only Seed Mix

Uses: Within array field and fence lines with solar facility infrastructure in wel-drained soils as a perennial vegetation cover.

Scientific Name	Common Name	Rate (lb/ac)	Pct of Mix (By Wt)	Seed/sqft	Pct of Mix (Seeds/sqft)
Grasses					
Bouteloua curtipendula	Side-oats Grama	3.00	11.0%	6.62	13.5%
Bouteloua gracilis	Blue Grama	0.62	2.3%	9.18	18.8%
Koeleria macrantha	Junegrass	0.14	0.5%	9.18	18.8%
Schizachyrium scoparium	Little Bluestem	1.50	5.5%	8.26	16.9%
Sporobolus heterolepis	Prairie Dropseed	1.00	3.7%	5.88	12.0%
	Subtotal	6.26	23.0%	39.12	80.0%
Sedges					
Carex bicknellii	Bicknell's Sedge	0.24	0.9%	1.56	3.2%
Carex brevior	Short Sedge	0.24	0.9%	1.56	3.2%
Carex pensylvanica	Pennsylvania Sedge	0.06	0.2%	0.69	1.4%
	Subtotal	0.54	2.0%	3.81	7.8%
Cover Crop					
Avena sativa	Oats	20.42	75.0%	6.00	12.3%
	Subtotal	20.42	75.0%	6.00	12.3%
	Total	27.22	100.0%	48.93	100.0%

Stormwater and Detention Pond Seed Mix

Uses: Areas designated as stormwater pond edges, temporarily flooded dry ponds, and temporarily flooded ditch bottoms to act as a perennial vegetation cover.

Note: Seed mix is derived from Minnesota State Seed Mix 33-261 Stormwater South and West

Scientific Name	Common Name	Rate (lb/ac)	Pct of Mix (By Wt)	Seeds/sqft	Pct of Mix (Seeds/sqft)
Grasses					
Andropogon gerardii	Big Bluestem	2.00	5.7%	7.35	4.1%
Bromus ciliatus	Fringed Brome	2.00	5.7%	8.10	4.5%
Calamagrostis canadensis	Bluejoint	0.06	0.2%	6.40	3.5%
Elymus trachycaulus	Slender Wheatgrass	1.00	2.9%	2.53	1.4%
Elymus virginicus	Virginia Wild Rye	1.50	4.3%	2.31	1.3%
Panicum virgatum	Switchgrass	0.38	1.1%	1.93	1.1%
Poa palustris	Fowl Bluegrass	1.06	3.0%	50.70	28.0%
Sorghastrum nutans	Indian Grass	0.12	0.3%	0.55	0.3%
Spartina pectinata	Prairie Cordgrass	0.38	1.1%	0.91	0.5%
	Subtotal	8.50	24.3%	80.78	44.7%
Sedges					
Carex stipata	Awl-fruited Sedge	0.25	0.7%	3.10	1.7%
Scirpus atrovirens	Dark Green Bulrush	0.19	0.5%	31.70	17.5%
Scirpus cyperinus	Woolgrass	0.06	0.2%	39.00	21.6%
	Subtotal	0.50	1.4%	73.80	40.8%
Forbs					
Anemone canadensis	Canada Anemone	0.07	0.2%	0.20	0.1%
Asclepias incarnata	Marsh Milkweed	0.11	0.3%	0.20	0.1%
Bidens frondosa	Leafy Beggarticks	0.11	0.3%	0.20	0.1%
Doellingeria umbellata	Flat-topped Aster	0.06	0.2%	1.50	0.8%
Eutrochium maculatum	Spotted Joe Pye Weed	0.06	0.2%	2.19	1.2%
Helenium autumnale	Autumn Sneezeweed	0.13	0.4%	5.97	3.3%
Physostegia virginiana	Obedient Plant	0.07	0.2%	0.30	0.2%
Rudbeckia laciniata	Tall Coneflower	0.07	0.2%	0.37	0.2%
Symphyotrichum novae-angliae	New England Aster	0.07	0.2%	1.56	0.9%
Verbena hastata	Blue Vervain	0.05	0.1%	1.85	1.0%
Zizia aurea	Golden Alexanders	0.20	0.6%	0.79	0.4%
	Subtotal	1.00	2.9%	15.13	8.4%
Cover Crop					
Avena sativa	Oats	25.00	71.4%	11.14	6.2%
	Subtotal	25.00	71.4%	11.14	6.2%
	Total	35.00	100.0%	180.85	100.0%

Temporary Seed Mixes

Uses: Provide temporary vegetation in areas where land disturbance has or will occur or to bridge the gap between disturbance and the next optimal perennial seeding window. Acts to stabilize soil and meet erosion and sediment control permit conditions.

Note: Select seed mix based on when seeding occurs and seasonal trends. Increase rate by 50% when broadcast seeding is the installation method.

Spring/Fall Seed Mix (April 1 – June 1; August 1 – September 15)

Scientific Name	Common Name	Rate (lb/ac)	Pct of Mix (By Wt)	Seed/sqft	Pct of Mix (Seeds/sqft)
Grasses					
Avena sativa	Oats	12.00	26.7%	5.40	16.8%
Hordeum vulgare	Spring Barley	15.00	33.3%	4.68	14.6%
Lolium multiflorum	Annual Ryegrass	3.00	6.7%	13.10	40.7%
	Subtotal	30.00	66.7%	23.19	72.0%
Legumes					
Trifolium repens	White clover	0.50	1.1%	9.00	28.0%
	Subtotal	0.50	1.1%	9.00	28.0%
	Total	30.50	67.8%	32.19	100.0%

Summer Seed Mix (May 1 – August 15)

Scientific Name	Common Name	Rate (lb/ac)	Pct of Mix (By Wt)	Seed/sqft	Pct of Mix (Seeds/sqft)
Grasses					
Fagopyrum esculentum	Buckwheat	18.00	40.0%	8.43	18.9%
Lolium multiflorum	Annual Ryegrass	4.50	10.0%	19.66	44.0%
Pennisetum glaucum	Pearl Millet	4.00	8.9%	7.56	16.9%
	Subtotal	26.50	58.9%	35.65	79.8%
Legumes					
Trifolium repens	White clover	0.50	1.1%	9.00	20.2%
	Subtotal	0.50	1.1%	9.00	20.2%
	Total	27.00	60.0%	44.65	100.0%

Winter Seed Mix (September 1 – November 15)

Scientific Name	Common Name	Rate (lb/ac)	Pct of Mix (By Wt)	Seed/sqft	Pct of Mix (Seeds/sqft)
Grasses					
Triticum aestivum	Winter Wheat	10.00	22.2%	3.44	19.9%
Secale cereale	Winter Rye	20.00	44.4%	9.14	52.9%
Hordeum vulgare	Winter Barley	15.00	33.3%	4.68	27.1%
xTriticosecale	Winter Triticale	5.00	11.1%	2.61	15.1%
	Subtotal	45.00	100.0%	17.26	100.0%
	Total	45.00	100.0%	17.26	100.0%

APPENDIX F

STORMWATER POLLUTION PREVENTION PLAN

(To be inserted on final engineering design)

APPENDIX G

AGRICULTURAL IMPACT MITIGATION PLAN