Stantec Consulting Ltd.
1 – 70 Southgate Drive
Guelph, ON
Canada N1G 4P5
Tel: (519) 836-6050
Fax: (519) 836-2493

Stantec

Roadside ELC, Woodland & Wildlife Habitat Assessment Form

Project Number: 160950269 Project Name: WRWC

Date: Aug 15 Field Personnel: N.C, A.O

Weather Conditions:	TEMP (°C):	WIND:	CLOUD:	PPT:	PPT (in last 24 hrs):

POLYGON DESCRIPTION

ELC COMMUNITY DESCRIPTION & CLASSIFICATION		TOPOGRAPHIC FEATURE		HISTORY
	POLYGON: 11-4	☐ LACUSTRINE	☐ TALUS	☐ NATURAL
	START TIME: 10:45	☐ RIVERINE	☐ CREVICE / CAVE	☐ CULTURAL
	END TIME:	☐ BOTTOMLAND	☐ ALVAR	
		☐ TERRACE	☐ ROCKLAND	
		☐ VALLEY SLOPE	☐ BEACH / BAR	
		☐ TABLELAND	☐ SAND DUNE	
		☐ ROLL. UPLAND	☐ BLUFF	
		☐ CLIFF		

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	2	4	FRAX SP >> ULMAMER
2	SUB-CANOPY			N/A
3	UNDERSTOREY			N/A
4	GRD. LAYER	5-7	N/A	SOLIDAGO

HT CODES: 1=>25m 2=10<HT≤25m 3=2<HT≤10m 4=1<HT≤2m 5=0.5<HT≤1m 6=0.2<HT≤0.5m 7=HT<0.2m

CVR CODES: 0=NONE 1=0%<CVR≤10% 2=10<CVR≤25% 3=25<CVR≤60% 4=CVR>60% N/O=not observed

STANDING SNAGS:	<10	10 – 24	25 – 50	>50
ABUNDANCE CODES:	N=NONE R=RARE O=OCCASIONAL A=ABUNDANT N/O=Not observed			

STAND MATURITY:	PIONEER	YOUNG	MID-AGE	MATURE	OLD GROWTH

VEGETATION TYPE: CODE: FOD7-2

COMPLEX		CODE:

Evidence of Disturbance / Notes:

- only edge shrubs + ground veg visible

LAYERS: 1=CANOPY >10m 2=SUB-CANOPY 3=UNDERSTOREY 4=GROUND (GRD.) LAYER

ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT D=DOMINANT N/O=Not observed

SPECIES CODE	LAYER 1	LAYER 2	LAYER 3	LAYER 4	DISTANCE FROM RD. ≤5 m	DISTANCE FROM RD. >5 m	COLL.
TREES:							
FRAX SP	A						
ULMAMER	R-O						
SHRUBS:							
CORRALE							
GROUND:							
SOLIDAGO							

Signature: (Field Personnel)

Quality Control: This form is complete ☐ & legible ☐.

Signature: (Project Manager)

ELC Polygon: #11-4 **Assessment Type:** ☑-Visual; no access / ☐-Walk through feature

Extent of Physical Investigation of Feature: ☐-Entire / ☐-Partial, walk through polygon *(indicate on map)*

Reptile / Bat Hibernacula Features: Contains potential reptile hibernacula features?
☐-Y* / ☐-N / ☑-Unknown, no access *(*if yes, describe in table below)*
[i.e. features that would provide a route underground, including buried concrete or rock (e.g. foundations, bridge abutments or culverts with cracks/entry points, exposed rock crevices or inactive animal burrows)]
Contains potential bat hibernacula features?
☐-Y* / ☐-N / ☑-Unknown, no access *(*if yes, describe in table below)*
[i.e. karst topography, abandoned mines or caves]

POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED

UTM	Feature Description	Photo No.	Spp. Observed Using Feature

Bat Roosting Features: Contains potential bat roosting features?
☐-Y* / ☐-N / ☑-Unknown, no access *(*if yes, describe in table below)*
[i.e. tall trees with open surroundings, DBH >25cm, side-facing cavities ~10m high in tree]

POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED

UTM	Tree ID	Tree Spp.	DBH	Photo No.	Decay Class (1-5)	No. of Cavities	Height and Type of Cavities

Stick Nests: Contains large stick nests?
☐-Y* / ☑-N / ☐-Unknown, no access *(*if yes, describe in table below)*

STICK NEST(S) IDENTIFIED

UTM	Tree ID	Tree Spp.	Nest Size	Photo No.	Spp. Observed Using Feature

Seeps/Springs/Vernal Pools: Contains seeps/springs/vernal pools?
☐-Y* / ☐-N / ☑-Unknown, no access *(*if yes, describe in table below)*

SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED

UTM	Feature No. & Type	Feature Size (Diameter)	Water Depth	Photo No.	Sub/Emergent Veg. Spp. Present?	Shrubs/ Logs at Edge Present?

SPECIES & HABITAT OBSERVATIONS (list species and type of observation & indicate on map)

CA=carcass; DP=distinctive parts; FE=feeding evidence; FY=eggs/nest; HO=house/den; OB=observed; SC=scat; SI=other sign; TK=track; VO=vocalization

Stantec Consulting Ltd.
1 – 70 Southgate Drive
Guelph, ON
Canada N1G 4P5
Tel: (519) 836-6050
Fax: (519) 836-2493

Stantec

Roadside ELC, Woodland & Wildlife Habitat Assessment Form

Project Number: 160950269 Project Name: NRWC

Date: Aug 15 Field Personnel: N.C, A.O

Weather Conditions:	TEMP (°C):	WIND:	CLOUD:	PPT:	PPT (in last 24 hrs):

POLYGON DESCRIPTION

ELC — COMMUNITY DESCRIPTION & CLASSIFICATION

POLYGON: 11-5

START TIME: 10:55

END TIME:

TOPOGRAPHIC FEATURE		HISTORY
☐ LACUSTRINE	☐ TALUS	☐ NATURAL
☐ RIVERINE	☐ CREVICE / CAVE	☐ CULTURAL
☐ BOTTOMLAND	☐ ALVAR	
☐ TERRACE	☐ ROCKLAND	
☐ VALLEY SLOPE	☐ BEACH / BAR	
☐ TABLELAND	☐ SAND DUNE	
☐ ROLL. UPLAND	☐ BLUFF	
☐ CLIFF		

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	3	1	FRAX > JUGNIGR
2	SUB-CANOPY			
3	UNDERSTOREY			
4	GRD. LAYER	5-7	4	PHAARUN

HT CODES: 1=>25m 2=10<HT≤25m 3=2<HT≤10m 4=1<HT≤2m 5=0.5<HT≤1m 6=0.2<HT≤0.5m 7=HT<0.2m

CVR CODES: 0=NONE 1=0%<CVR≤10% 2=10<CVR≤25% 3=25<CVR≤60% 4=CVR>60% N/O=not observed

STANDING SNAGS:	N/O	~~<10~~	~~10-24~~	~~25-50~~	~~>50~~

ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT N/O=Not observed

STAND MATURITY:	PIONEER	YOUNG	MID-AGE	MATURE	OLD GROWTH

VEGETATION TYPE: CODE: MAM2-2

COMPLEX		CODE:

Evidence of Disturbance / Notes:

-not really marshy, but is the lowland floodplain

LAYERS: 1=CANOPY >10m 2=SUB-CANOPY 3=UNDERSTOREY 4=GROUND (GRD.) LAYER

ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT D=DOMINANT N/O=Not observed

SPECIES CODE	LAYER 1	2	3	4	DISTANCE FROM RD. ≤5 m	>5 m	COLL.
TREES:							
FRAX SP	R						
JUGNIGR	R						
SALIX	R						
SHRUBS:							
CORRACE			O				
GROUND:							
PHAARUN				D			
DIPFUSU				R-O			
SOLIDAGO				R-O			

Signature: (Field Personnel)

Quality Control: This form is complete ☐ & legible ☐.

Signature: (Project Manager)

ELC Polygon: #11-5 **Assessment Type:** ☑-Visual; no access / ☐-Walk through feature

Extent of Physical Investigation of Feature: ☐-Entire / ☐-Partial, walk through polygon *(indicate on map)*

Reptile / Bat Hibernacula Features:

Contains potential reptile hibernacula features?
☐-Y* / ☐-N / ☑-Unknown, no access *(*if yes, describe in table below)*
[i.e. features that would provide a route underground, including buried concrete or rock (e.g. foundations, bridge abutments or culverts with cracks/entry points, exposed rock crevices or inactive animal burrows)]

Contains potential bat hibernacula features?
☐-Y* / ☑-N / ☐-Unknown, no access *(*if yes, describe in table below)*
[i.e. karst topography, abandoned mines or caves]

POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED

UTM	Feature Description	Photo No.	Spp. Observed Using Feature

Bat Roosting Features:

Contains potential bat roosting features?
☐-Y* / ☑-N / ☐-Unknown, no access *(*if yes, describe in table below)*
[i.e. tall trees with open surroundings, DBH >25cm, side-facing cavities ~10m high in tree]

POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED

UTM	Tree ID	Tree Spp.	DBH	Photo No.	Decay Class (1-5)	No. of Cavities	Height and Type of Cavities

Stick Nests:

Contains large stick nests?
☐-Y* / ☑-N / ☐-Unknown, no access *(*if yes, describe in table below)*

STICK NEST(S) IDENTIFIED

UTM	Tree ID	Tree Spp.	Nest Size	Photo No.	Spp. Observed Using Feature

Seeps/Springs/Vernal Pools:

Contains seeps/springs/vernal pools?
☐-Y* / ☐-N / ☑-Unknown, no access *(*if yes, describe in table below)*

SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED

UTM	Feature No. & Type	Feature Size (Diameter)	Water Depth	Photo No.	Sub/Emergent Veg. Spp. Present?	Shrubs/ Logs at Edge Present?

SPECIES & HABITAT OBSERVATIONS (list species and type of observation & indicate on map)

CA=carcass; DP=distinctive parts; FE=feeding evidence; FY=eggs/nest; HO=house/den; OB=observed; SC=scat; SI=other sign; TK=track; VO=vocalization

Stantec Consulting Ltd.
1 – 70 Southgate Drive
Guelph, ON
Canada N1G 4P5
Tel: (519) 836-6050
Fax: (519) 836-2493

Stantec

Roadside ELC, Woodland & Wildlife Habitat Assessment Form

Project Number: 160950269 Project Name: NRWC

Date: Aug 15, 2012 Field Personnel: N.C, A.O

Weather Conditions:	TEMP (°C):	WIND:	CLOUD:	PPT:	PPT (in last 24 hrs):
	20°C	2	35%	—	—

POLYGON DESCRIPTION

ELC COMMUNITY DESCRIPTION & CLASSIFICATION		TOPOGRAPHIC FEATURE		HISTORY
	POLYGON: 11-1	☐ LACUSTRINE	☐ TALUS	☐ NATURAL
	START TIME: 9:40	☐ RIVERINE	☐ CREVICE / CAVE	☐ CULTURAL
	END TIME:	☐ BOTTOMLAND	☐ ALVAR	
		☐ TERRACE	☐ ROCKLAND	
		☐ VALLEY SLOPE	☐ BEACH / BAR	
		☐ TABLELAND	☐ SAND DUNE	
		☐ ROLL. UPLAND	☐ BLUFF	
		☐ CLIFF		

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY			
2	SUB-CANOPY			
3	UNDERSTOREY			
4	GRD. LAYER	5-7	4	PHAARUN

HT CODES: 1=>25m 2=10<HT≤25m 3=2<HT≤10m 4=1<HT≤2m 5=0.5<HT≤1m 6=0.2<HT≤0.5m 7=HT<0.2m

CVR CODES: 0=NONE 1=0%<CVR≤10% 2=10<CVR≤25% 3=25<CVR≤60% 4=CVR>60% N/O=not observed

STANDING SNAGS:		<10		10 – 24		25 – 50		>50

ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT N/O=Not observed

STAND MATURITY:		PIONEER		YOUNG		MID-AGE		MATURE		OLD GROWTH

VEGETATION TYPE: CODE: MAM2-2

	COMPLEX		CODE:

Evidence of Disturbance / Notes:

LAYERS: 1=CANOPY >10m 2=SUB-CANOPY 3=UNDERSTOREY 4=GROUND (GRD.) LAYER

ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT D=DOMINANT N/O=Not observed

SPECIES CODE	LAYER				DISTANCE FROM RD.		COLL.
	1	2	3	4	≤5 m	>5 m	
TREES:							
SHRUBS:							
GROUND:							
PHAARUN				D			

Signature: (Field Personnel)

Quality Control: This form is complete ☐ & legible ☐.

Signature: (Project Manager)

ELC Polygon: #11-1 **Assessment Type:** ☑-Visual; no access / ☐-Walk through feature

Extent of Physical Investigation of Feature: ☐-Entire / ☐-Partial, walk through polygon *(indicate on map)*

Reptile / Bat Hibernacula Features:

Contains potential reptile hibernacula features?
☐-Y* / ☐-N / ☑-Unknown, no access *(*if yes, describe in table below)*
[i.e. features that would provide a route underground, including buried concrete or rock (e.g. foundations, bridge abutments or culverts with cracks/entry points, exposed rock crevices or inactive animal burrows)]

Contains potential bat hibernacula features?
☐-Y* / ☐-N / ☑-Unknown, no access *(*if yes, describe in table below)*
[i.e. karst topography, abandoned mines or caves]

POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED

UTM	Feature Description	Photo No.	Spp. Observed Using Feature

Bat Roosting Features:

Contains potential bat roosting features?
☐-Y* / ☐-N / ☑-Unknown, no access *(*if yes, describe in table below)*
[i.e. tall trees with open surroundings, DBH >25cm, side-facing cavities ~10m high in tree]

POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED

UTM	Tree ID	Tree Spp.	DBH	Photo No.	Decay Class (1-5)	No. of Cavities	Height and Type of Cavities

Stick Nests:

Contains large stick nests?
☐-Y* / ☐-N / ☑-Unknown, no access *(*if yes, describe in table below)*

STICK NEST(S) IDENTIFIED

UTM	Tree ID	Tree Spp.	Nest Size	Photo No.	Spp. Observed Using Feature

Seeps/Springs/Vernal Pools:

Contains seeps/springs/vernal pools?
☐-Y* / ☐-N / ☑-Unknown, no access *(*if yes, describe in table below)*

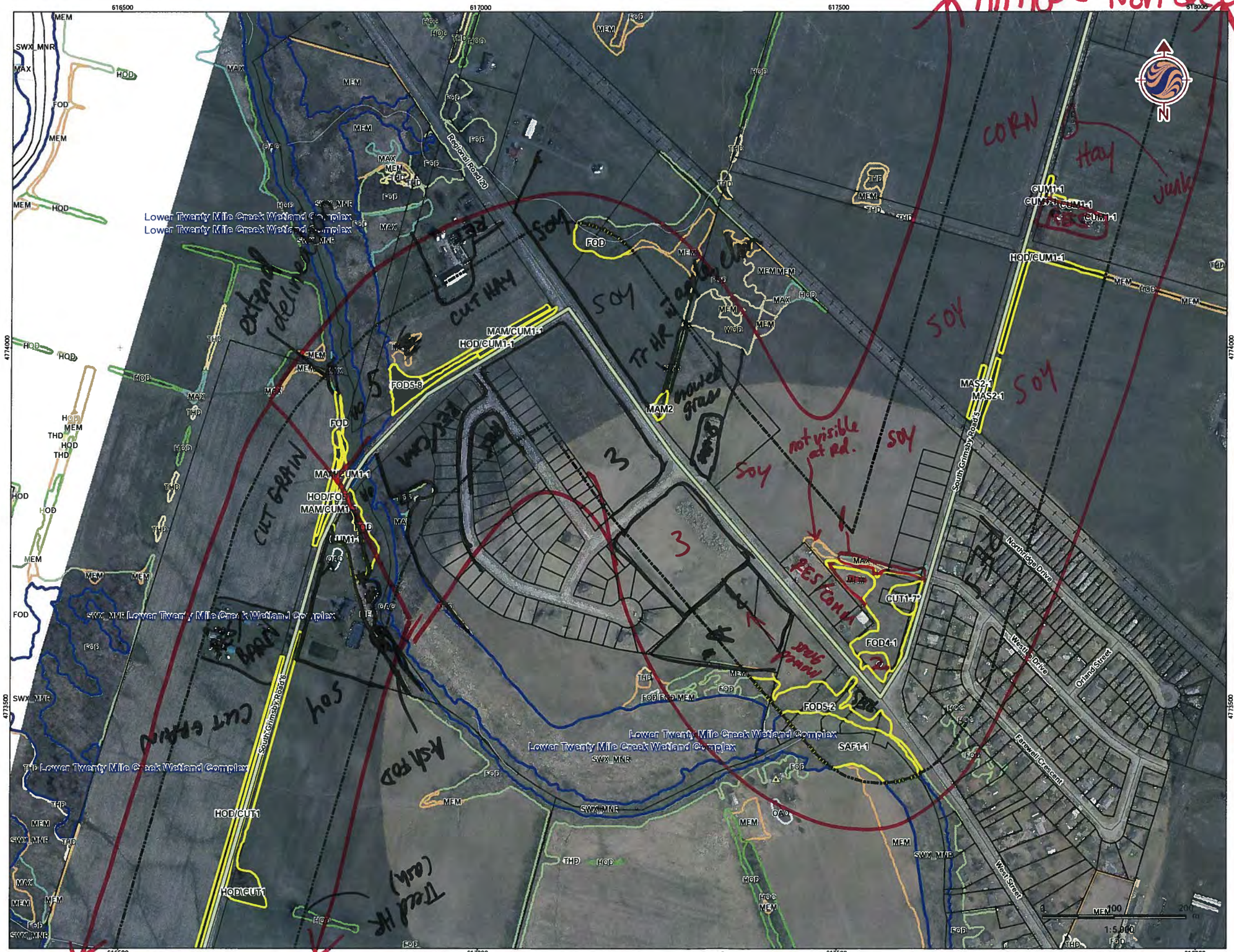
SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED

UTM	Feature No. & Type	Feature Size (Diameter)	Water Depth	Photo No.	Sub/Emergent Veg. Spp. Present?	Shrubs/ Logs at Edge Present?

SPECIES & HABITAT OBSERVATIONS (list species and type of observation & indicate on map)

CA=carcass; DP=distinctive parts; FE=feeding evidence; FY=eggs/nest; HO=house/den; OB=observed; SC=scat; SI=other sign; TK=track; VO=vocalization

All AG & Non Dc'd areas.



A: stormwater pond - mowed grass + golden rod

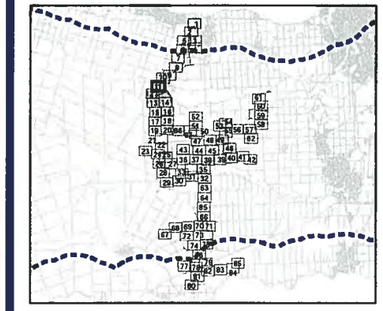
B: community centre

Legend

Turbines in Signed Lands

- Standard Turbine (105 dBA)
- 51 m Turbine Setback
- Non-Particpating Receptor
- Particpating Receptor
- Proposed Collector Cable
- Preliminary Study Area
- Signed Property
- Signed Property - Outside Study Area
- Potential Signed Property
- Potential Signed Property - Outside Study Area
- ELC Boundary
- Provincially Significant Wetland
- Other/Locally Significant Wetland
- Property Boundary
- Non-Participating Receptors 550m Setback
- Turbine and Access Road 150m buffer

Enterprise
519-767-5337



Notes

1. Coordinate System: NAD 1983 UTM Zone 17N).
2. Base features produced under license with the Ontario Ministry of Natural Resources © Queen's Printer for Ontario, 2011.

Stantec

August, 2012
160950269

Client/Project
Niagara Region Wind Corporation
ELC Delineation

Figure No.
11

Title
Transmission and Collector Line
Map: 11

V:\01609\Active\160950269\planning\drawing\mxd\20120423_NHA_Fieldmaps\160950269_Release_18_ELC_T_Line_Collector_Map_Book_20120727.mxd
Revised: 2012-08-08 By: bcowper

Stantec Consulting Ltd.
1 – 70 Southgate Drive
Guelph, ON
Canada N1G 4P5
Tel: (519) 836-6050
Fax: (519) 836-2493

Stantec

Roadside ELC, Woodland & Wildlife Habitat Assessment Form

Project Number: 160950269 Project Name: NRWC

Date: Aug 15 Field Personnel: NC, AO

Weather Conditions:	TEMP (°C):	WIND:	CLOUD:	PPT:	PPT (in last 24 hrs):

POLYGON DESCRIPTION

ELC — COMMUNITY DESCRIPTION & CLASSIFICATION

POLYGON: 12-1

START TIME:

END TIME:

TOPOGRAPHIC FEATURE		HISTORY
☐ LACUSTRINE	☐ TALUS	☐ NATURAL
☐ RIVERINE	☐ CREVICE / CAVE	
☐ BOTTOMLAND	☐ ALVAR	☐ CULTURAL
☐ TERRACE	☐ ROCKLAND	
☐ VALLEY SLOPE	☐ BEACH / BAR	
☐ TABLELAND	☐ SAND DUNE	
☐ ROLL. UPLAND	☐ BLUFF	
☐ CLIFF		

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY			
2	SUB-CANOPY			
3	UNDERSTOREY			
4	GRD. LAYER	5-7	4	FORBS >> GRASS

HT CODES: 1=>25m 2=10<HT≤25m 3=2<HT≤10m 4=1<HT≤2m 5=0.5<HT≤1m 6=0.2<HT≤0.5m 7=HT<0.2m

CVR CODES: 0=NONE 1=0%<CVR≤10% 2=10<CVR≤25% 3=25<CVR≤60% 4=CVR>60% N/O=not observed

STANDING SNAGS: N/O | <10 | 10-24 | 25-50 | >50

ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT N/O=Not observed

STAND MATURITY: PIONEER | YOUNG | MID-AGE | MATURE | OLD GROWTH

VEGETATION TYPE: CODE:

COMPLEX CODE:

Evidence of Disturbance / Notes:

Forb fallow field / CUM (1A)

1B: Grass > Forbs

- no marsh visible but there is a slight depression with PHAARUN

LAYERS: 1=CANOPY >10m 2=SUB-CANOPY 3=UNDERSTOREY 4=GROUND (GRD.) LAYER

ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT D=DOMINANT N/O=Not observed

SPECIES CODE	LAYER 1	LAYER 2	LAYER 3	LAYER 4	DISTANCE FROM RD. ≤5 m	DISTANCE FROM RD. >5 m	COLL.
TREES:							
SHRUBS:							
GROUND:							
DAUCARO				A			
LOTCORN				O			
CICINTY				O			
TRIREPE				O			
GRASS SP				O			
AMBARTE				O			
ARCMINN				O			

Signature: (Field Personnel)

Quality Control: This form is complete ☐ & legible ☐.

Signature: (Project Manager)

ELC Polygon: #12-1 **Assessment Type:** ☑-Visual; no access / ☐-Walk through feature

Extent of Physical Investigation of Feature: ☐-Entire / ☐-Partial, walk through polygon *(indicate on map)*

Reptile / Bat Hibernacula Features:

Contains potential reptile hibernacula features?
☐-Y* / ☐-N / ☑-Unknown, no access *(*if yes, describe in table below)*
[i.e. features that would provide a route underground, including buried concrete or rock (e.g. foundations, bridge abutments or culverts with cracks/entry points, exposed rock crevices or inactive animal burrows)]

Contains potential bat hibernacula features?
☐-Y* / ☑-N / ☐-Unknown, no access *(*if yes, describe in table below)*
[i.e. karst topography, abandoned mines or caves]

POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED

UTM	Feature Description	Photo No.	Spp. Observed Using Feature

Bat Roosting Features:

Contains potential bat roosting features?
☐-Y* / ☑-N / ☐-Unknown, no access *(*if yes, describe in table below)*
[i.e. tall trees with open surroundings, DBH >25cm, side-facing cavities ~10m high in tree]

POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED

UTM	Tree ID	Tree Spp.	DBH	Photo No.	Decay Class (1-5)	No. of Cavities	Height and Type of Cavities

Stick Nests:

Contains large stick nests?
☐-Y* / ☑-N / ☐-Unknown, no access *(*if yes, describe in table below)*

STICK NEST(S) IDENTIFIED

UTM	Tree ID	Tree Spp.	Nest Size	Photo No.	Spp. Observed Using Feature

Seeps/Springs/Vernal Pools:

Contains seeps/springs/vernal pools?
☐-Y* / ☐-N / ☑-Unknown, no access *(*if yes, describe in table below)*

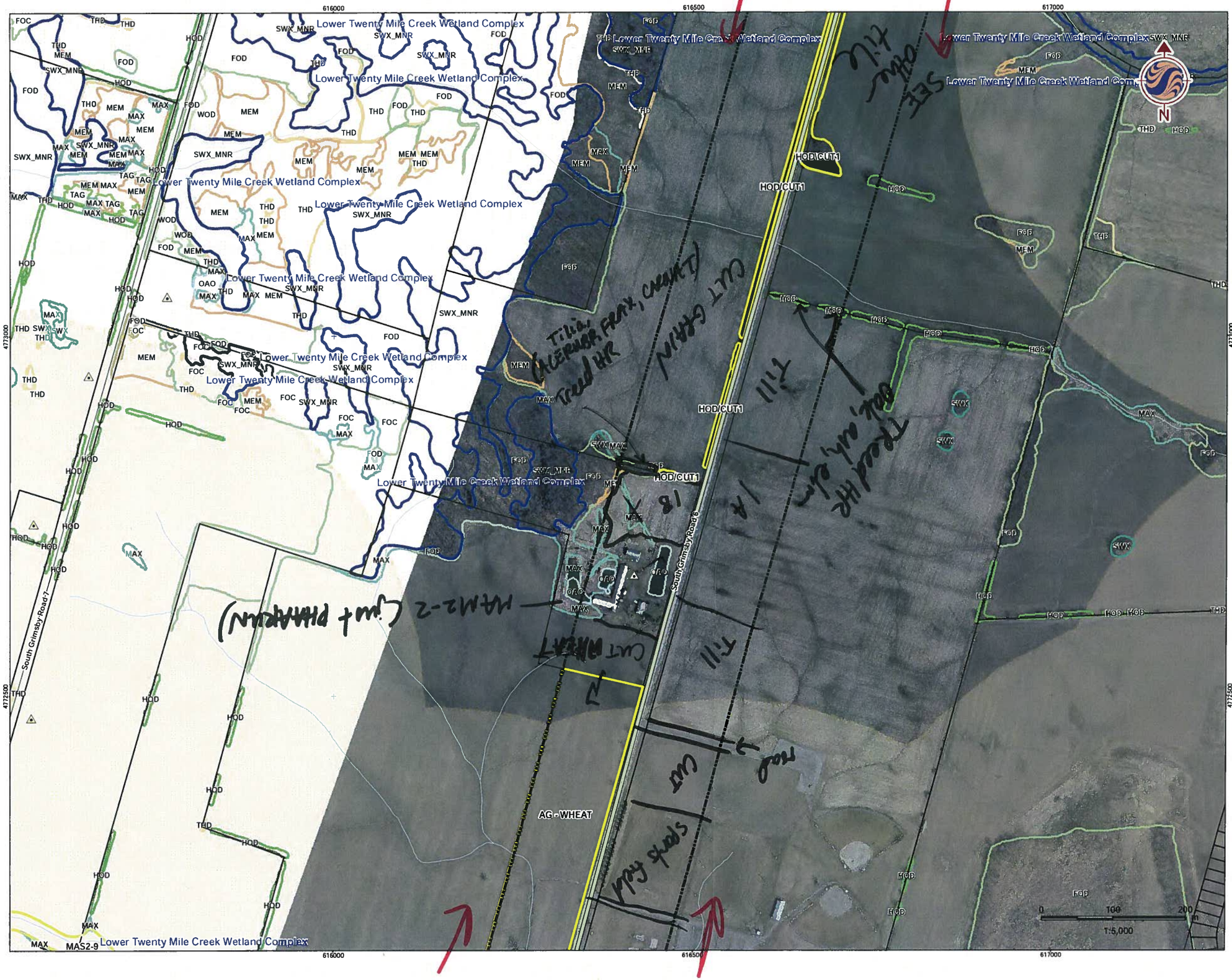
SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED

UTM	Feature No. & Type	Feature Size (Diameter)	Water Depth	Photo No.	Sub/Emergent Veg. Spp. Present?	Shrubs/ Logs at Edge Present?

SPECIES & HABITAT OBSERVATIONS (list species and type of observation & indicate on map)

CA=carcass; DP=distinctive parts; FE=feeding evidence; FY=eggs/nest; HO=house/den; OB=observed; SC=scat; SI=other sign; TK=track; VO=vocalization

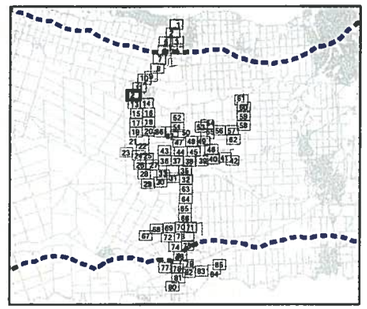
All AG Fields



Legend

Turbines in Signed Lands

- Standard Turbine (105 dBA)
- 51 m Turbine Setback
- Non-Particpating Receptor
- Particpating Receptor
- Proposed Collector Cable
- Preliminary Study Area
- Signed Property
- Signed Property - Outside Study Area
- Potential Signed Property
- Potential Signed Property - Outside Study Area
- ELC Boundary
- Provincially Significant Wetland
- Other/Locally Significant Wetland
- Property Boundary
- Non-Participating Receptors 550m Setback
- Turbine and Access Road 150m buffer



Notes

1. Coordinate System: NAD 1983 UTM Zone 17N).
2. Base features produced under license with the Ontario Ministry of Natural Resources © Queen's Printer for Ontario, 2011.

Stantec

August, 2012
160950269

Client/Project
Niagara Region Wind Corporation
ELC Delineation

Figure No.
12

Title
Transmission and Collector Line
Map: 12

V:\01609\Active\160950269\planning\drawing\mxd\20120423_NHA_Fieldmaps\160950269_Release_18_ELC_T_Line_Collector_Map_Book_20120727.mxd
Revised: 2012-08-08 By: bcowper

Stantec Consulting Ltd.
1 – 70 Southgate Drive
Guelph, ON
Canada N1G 4P5
Tel: (519) 836-6050
Fax: (519) 836-2493

Stantec

Roadside ELC, Woodland & Wildlife Habitat Assessment Form

Project Number: 160950269 Project Name: NRWC

Date: Aug 15 Field Personnel: NC, AO

Weather Conditions:	TEMP (°C):	WIND:	CLOUD:	PPT:	PPT (in last 24 hrs).

POLYGON DESCRIPTION

ELC COMMUNITY DESCRIPTION & CLASSIFICATION

POLYGON: 13-1

START TIME:

END TIME:

TOPOGRAPHIC FEATURE		HISTORY
☐ LACUSTRINE	☐ TALUS	☐ NATURAL
☐ RIVERINE	☐ CREVICE / CAVE	
☐ BOTTOMLAND	☐ ALVAR	☐ CULTURAL
☐ TERRACE	☐ ROCKLAND	
☐ VALLEY SLOPE	☐ BEACH / BAR	
☐ TABLELAND	☐ SAND DUNE	
☐ ROLL. UPLAND	☐ BLUFF	
☐ CLIFF		

STAND DESCRIPTION:

LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO)
CANOPY			
SUB-CANOPY			
UNDERSTOREY			
GRD. LAYER	5-7	4	DHAARUN

HT CODES: 1=>25m 2=10<HT≤25m 3=2<HT≤10m 4=1<HT≤2m 5=0.5<HT≤1m 6=0.2<HT≤0.5m 7=HT<0.2m

CVR CODES: 0=NONE 1=0%<CVR≤10% 2=10<CVR≤25% 3=25<CVR≤60% 4=CVR>60% N/O=not observed

STANDING SNAGS: N/O | <10 | 10 – 24 | 25 – 50 | >50

ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT N/O=Not observed

STAND MATURITY: PIONEER | YOUNG | MID-AGE | MATURE | OLD GROWTH

VEGETATION TYPE: CODE: MAM2-2

COMPLEX CODE:

Evidence of Disturbance / Notes:

- gray dogwood, willow, and oak trees near bridge along Smithville Rd but over-all community is MAM

- creek along south side is lined by CAROVAT and moist CUM1-1

LAYERS: 1=CANOPY >10m 2=SUB-CANOPY 3=UNDERSTOREY 4=GROUND (GRD.) LAYER

ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT D=DOMINANT N/O=Not observed

SPECIES CODE	LAYER 1	LAYER 2	LAYER 3	LAYER 4	DISTANCE FROM RD. ≤5 m	DISTANCE FROM RD. >5 m	COLL.
TREES:							
SHRUBS:							
GROUND:							
DHAARUN				D			
~~[illegible]~~							

Signature: (Field Personnel)

Quality Control: This form is complete ☐ & legible ☐.

Signature: (Project Manager)

ELC Polygon: #13-1 **Assessment Type:** ☑-Visual; no access / ☐-Walk through feature

Extent of Physical Investigation of Feature: ☐-Entire / ☐-Partial, walk through polygon *(indicate on map)*

Reptile / Bat Hibernacula Features:

Contains potential reptile hibernacula features?
☐-Y* / ☐-N / ☑-Unknown, no access *(*if yes, describe in table below)*
[i.e. features that would provide a route underground, including buried concrete or rock (e.g. foundations, bridge abutments or culverts with cracks/entry points, exposed rock crevices or inactive animal burrows)]

Contains potential bat hibernacula features?
☐-Y* / ☐-N / ☑-Unknown, no access *(*if yes, describe in table below)*
[i.e. karst topography, abandoned mines or caves]

POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED

UTM	Feature Description	Photo No.	Spp. Observed Using Feature

Bat Roosting Features:

Contains potential bat roosting features?
☐-Y* / ☐-N / ☑-Unknown, no access *(*if yes, describe in table below)*
[i.e. tall trees with open surroundings, DBH >25cm, side-facing cavities ~10m high in tree]

POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED

UTM	Tree ID	Tree Spp.	DBH	Photo No.	Decay Class (1-5)	No. of Cavities	Height and Type of Cavities

Stick Nests:

Contains large stick nests?
☐-Y* / ☑-N / ☐-Unknown, no access *(*if yes, describe in table below)*

STICK NEST(S) IDENTIFIED

UTM	Tree ID	Tree Spp.	Nest Size	Photo No.	Spp. Observed Using Feature

Seeps/Springs/Vernal Pools:

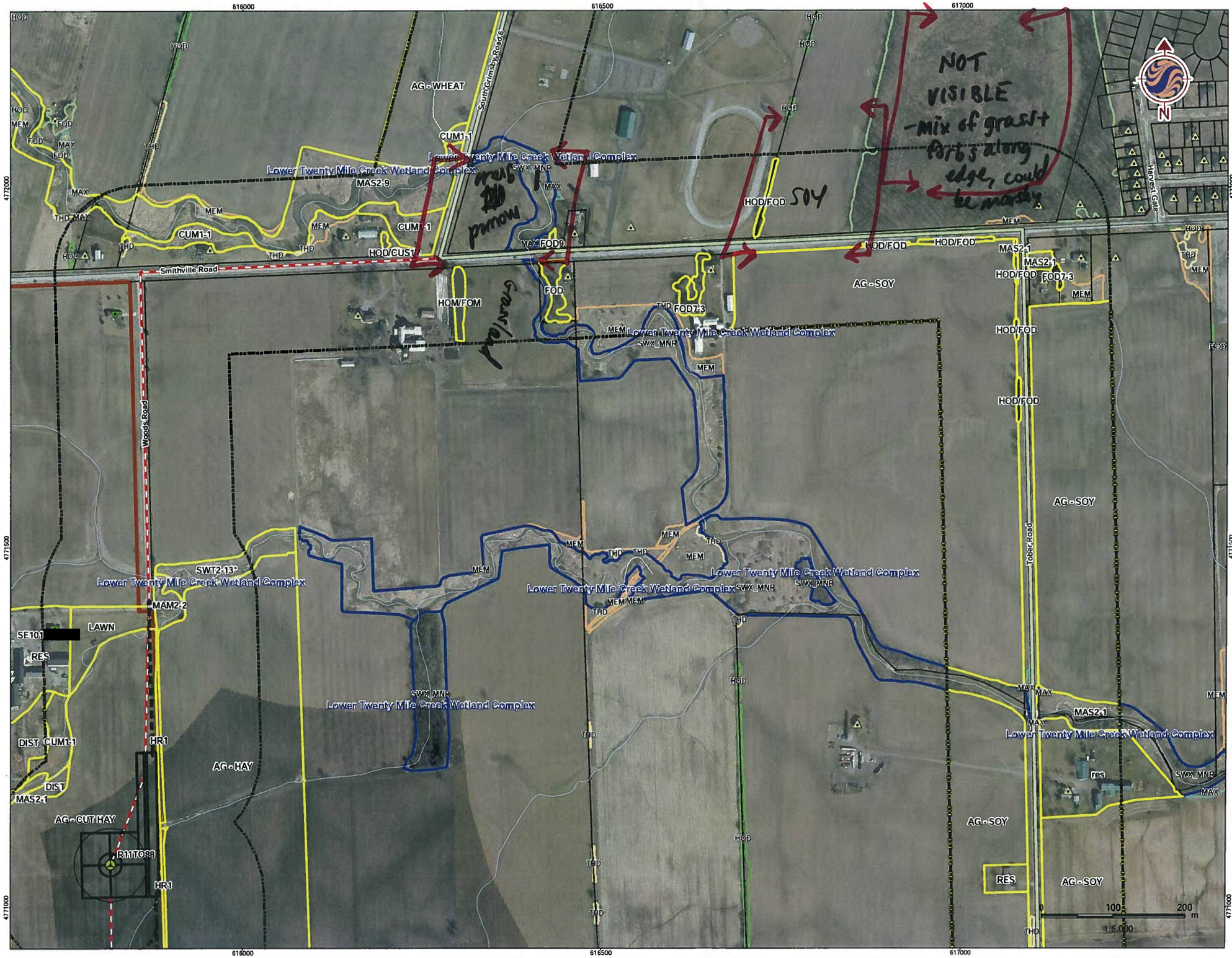
Contains seeps/springs/vernal pools?
☐-Y* / ☐-N / ☑-Unknown, no access *(*if yes, describe in table below)*

SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED

UTM	Feature No. & Type	Feature Size (Diameter)	Water Depth	Photo No.	Sub/Emergent Veg. Spp. Present?	Shrubs/ Logs at Edge Present?

SPECIES & HABITAT OBSERVATIONS (list species and type of observation & indicate on map)

CA=carcass; DP=distinctive parts; FE=feeding evidence; FY=eggs/nest; HO=house/den; OB=observed; SC=scat; SI=other sign; TK=track; VO=vocalization

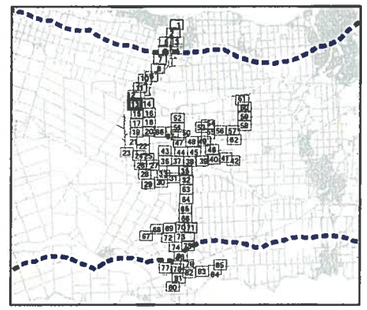


Creek, Ag, & Behind FOD

Legend

Turbines in Signed Lands

- Standard Turbine (105 dBA)
- 51 m Turbine Setback
- Non-Particpating Receptor
- Particpating Receptor
- Proposed Collector Cable
- Preliminary Study Area
- Signed Property
- Signed Property - Outside Study Area
- Potential Signed Property
- Potential Signed Property - Outside Study Area
- ELC Boundary
- Provincially Significant Wetland
- Other/Locally Significant Wetland
- Property Boundary
- Non-Participating Receptors 550m Setback
- Turbine and Access Road 150m buffer



Notes

1. Coordinate System: NAD 1983 UTM Zone 17N).
2. Base features produced under license with the Ontario Ministry of Natural Resources © Queen's Printer for Ontario, 2011.

Stantec

August, 2012
160950269

Client/Project
Niagara Region Wind Corporation
ELC Delineation

Figure No.
13

Title
Transmission and Collector Line
Map: 13

V:\01609\Active\160950269\planning\drawing\mxd\20120423_NHA_Fieldmaps\160950269_Release_18_ELC_T_Line_Collector_Map_Book_20120727.mxd
Revised: 2012-08-08 By: bcowper

Stantec Consulting Ltd.
1 – 70 Southgate Drive
Guelph, ON
Canada N1G 4P5
Tel: (519) 836-6050
Fax: (519) 836-2493

Stantec

Roadside ELC, Woodland & Wildlife Habitat Assessment Form

Project Number: 160950269 Project Name: NRWC

Date: Aug 15 Field Personnel: NC, AO

Weather Conditions:	TEMP (°C):	WIND:	CLOUD:	PPT:	PPT (in last 24 hrs):

POLYGON DESCRIPTION

ELC — COMMUNITY DESCRIPTION & CLASSIFICATION

POLYGON: 15-1

START TIME:

END TIME:

TOPOGRAPHIC FEATURE		HISTORY
☐ LACUSTRINE	☐ TALUS	☐ NATURAL
☐ RIVERINE	☐ CREVICE / CAVE	☐ CULTURAL
☐ BOTTOMLAND	☐ ALVAR	
☐ TERRACE	☐ ROCKLAND	
☐ VALLEY SLOPE	☐ BEACH / BAR	
☐ TABLELAND	☐ SAND DUNE	
☐ ROLL. UPLAND	☐ BLUFF	
☐ CLIFF		

STAND DESCRIPTION:

LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO)
CANOPY	2	4	
SUB-CANOPY			
UNDERSTOREY			
GRD. LAYER			

HT CODES: 1=>25m 2=10<HT≤25m 3=2<HT≤10m 4=1<HT≤2m 5=0.5<HT≤1m 6=0.2<HT≤0.5m 7=HT<0.2m

CVR CODES: 0=NONE 1=0%<CVR≤10% 2=10<CVR≤25% 3=25<CVR≤60% 4=CVR>60% N/O=not observed

STANDING SNAGS:	R	<10	O	10 – 24	R	25 – 50	N	>50

ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT N/O=Not observed

STAND MATURITY:	PIONEER	YOUNG	MID-AGE	X MATURE	OLD GROWTH

VEGETATION TYPE: CODE: FOD9/SWD

COMPLEX: CODE:

Evidence of Disturbance / Notes:

- can't be sure it isn't swamp
- no other veg visible except at edge

LAYERS: 1=CANOPY >10m 2=SUB-CANOPY 3=UNDERSTOREY 4=GROUND (GRD.) LAYER

ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT D=DOMINANT N/O=Not observed

SPECIES CODE	LAYER 1	LAYER 2	LAYER 3	LAYER 4	DISTANCE FROM RD. ≤5 m	DISTANCE FROM RD. >5 m	COLL.
TREES:							
CARYA SP	O						
QUERCUS SP	O						
FRAX SP	R-O						
ULM SP							
SHRUBS:							
CORRACE			O				
GROUND:							
PHAARUN				O			
SOLIDAGO				O			

Signature: (Field Personnel)

Quality Control: This form is complete ☐ & legible ☐.

Signature: (Project Manager)

ELC Polygon: #15-1 **Assessment Type:** ☑-Visual; no access / ☐-Walk through feature

Extent of Physical Investigation of Feature: ☐-Entire / ☐-Partial, walk through polygon *(indicate on map)*

Reptile / Bat Hibernacula Features:

Contains potential reptile hibernacula features?
☐-Y* / ☐-N / ☑-Unknown, no access *(*if yes, describe in table below)*
[i.e. features that would provide a route underground, including buried concrete or rock (e.g. foundations, bridge abutments or culverts with cracks/entry points, exposed rock crevices or inactive animal burrows)]

Contains potential bat hibernacula features?
☐-Y* / ☐-N / ☑-Unknown, no access *(*if yes, describe in table below)*
[i.e. karst topography, abandoned mines or caves]

POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED

UTM	Feature Description	Photo No.	Spp. Observed Using Feature

Bat Roosting Features:

Contains potential bat roosting features?
☐-Y* / ☐-N / ☑-Unknown, no access *(*if yes, describe in table below)*
[i.e. tall trees with open surroundings, DBH >25cm, side-facing cavities ~10m high in tree]

POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED

UTM	Tree ID	Tree Spp.	DBH	Photo No.	Decay Class (1-5)	No. of Cavities	Height and Type of Cavities

Stick Nests:

Contains large stick nests?
☐-Y* / ☐-N / ☑-Unknown, no access *(*if yes, describe in table below)*

STICK NEST(S) IDENTIFIED

UTM	Tree ID	Tree Spp.	Nest Size	Photo No.	Spp. Observed Using Feature

Seeps/Springs/Vernal Pools:

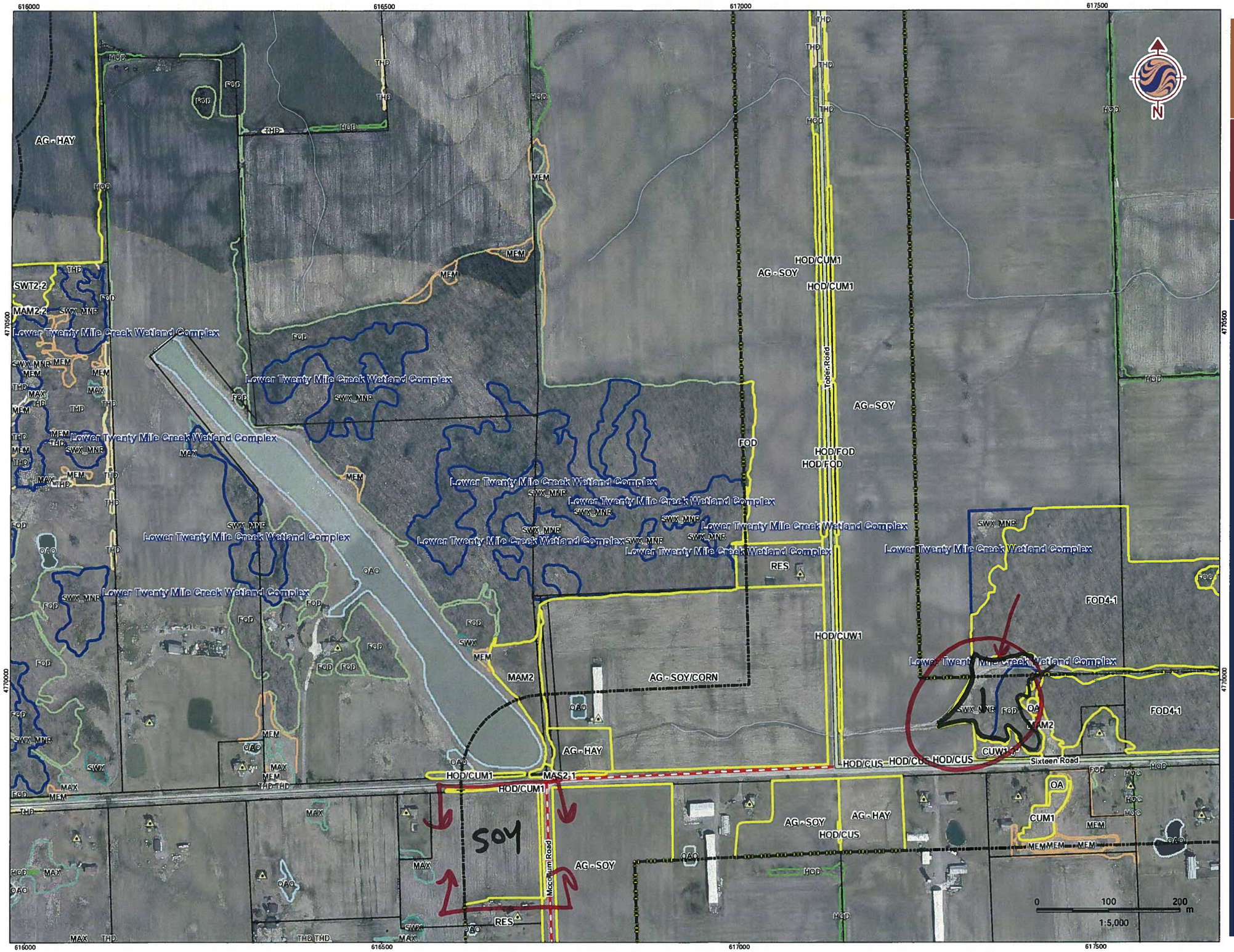
Contains seeps/springs/vernal pools?
☐-Y* / ☐-N / ☑-Unknown, no access *(*if yes, describe in table below)*

SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED

UTM	Feature No. & Type	Feature Size (Diameter)	Water Depth	Photo No.	Sub/Emergent Veg. Spp. Present?	Shrubs/ Logs at Edge Present?

SPECIES & HABITAT OBSERVATIONS (list species and type of observation & indicate on map)

CA=carcass; DP=distinctive parts; FE=feeding evidence; FY=eggs/nest; HO=house/den; OB=observed; SC=scat; SI=other sign; TK=track; VO=vocalization

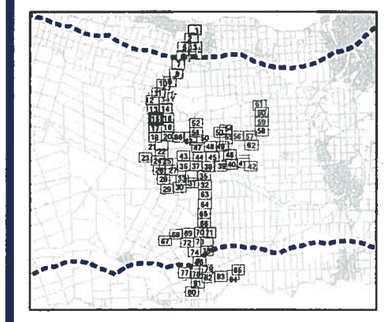


Legend

AG & SWX_MNR Community

Turbines in Signed Lands

- Standard Turbine (105 dBA)
- 51 m Turbine Setback
- Non-Particpating Receptor
- Particpating Receptor
- Proposed Collector Cable
- Preliminary Study Area
- Signed Property
- Signed Property - Outside Study Area
- Potential Signed Property
- Potential Signed Property - Outside Study Area
- ELC Boundary
- Provincially Significant Wetland
- Other/Locally Significant Wetland
- Property Boundary
- Non-Participating Receptors 550m Setback
- Turbine and Access Road 150m buffer



Notes

1. Coordinate System: NAD 1983 UTM Zone 17N).
2. Base features produced under license with the Ontario Ministry of Natural Resources © Queen's Printer for Ontario, 2011.

Stantec

August, 2012
160950269

Client/Project
Niagara Region Wind Corporation
ELC Delineation

Figure No.
15

Title
Transmission and Collector Line
Map: 15

V:\01609\Active\160950269\planning\drawing\mxd\20120423_NHA_Fieldmaps\160950269_Release_18_ELC_T_Line_Collector_Map_Book_20120727.mxd
Revised: 2012-08-08 By: bcowper

Turbine Shifted North

Crops + MAM? walkin

shrub HR (dogwood, hawthorn)

Can drive right up!

R11TO52

R11TO53

SE20 (14C) [redacted]

SE20 (14D) [redacted]

Upper Beaver Creek Wetland Complex

Concession 3

Silver Street

Gainsborough Road

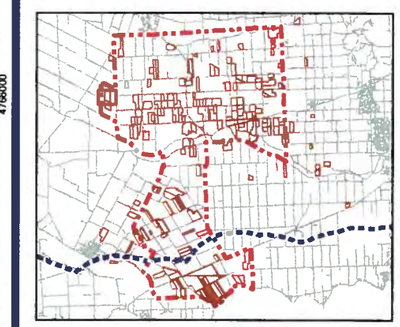
0 100 200 m

1:5,000

Legend

Turbines in Signed Lands

- Standard Turbine (105 dBA)
- 51 m Turbine Setback
- Non-Particpating Receptor
- Particpating Receptor
- Proposed Collector Cable
- Preliminary Study Area
- Signed Property
- Signed Property - Outside Study Area
- Potential Signed Property
- Potential Signed Property - Outside Study Area
- ELC Boundary
- Provincially Significant Wetland
- Other/Locally Significant Wetland
- Property Boundary
- Turbine and Access Road 150m buffer



Notes

1. Coordinate System: NAD 1983 UTM Zone 17N).
2. Base features produced under license with the Ontario Ministry of Natural Resources © Queen's Printer for Ontario, 2011.

Stantec

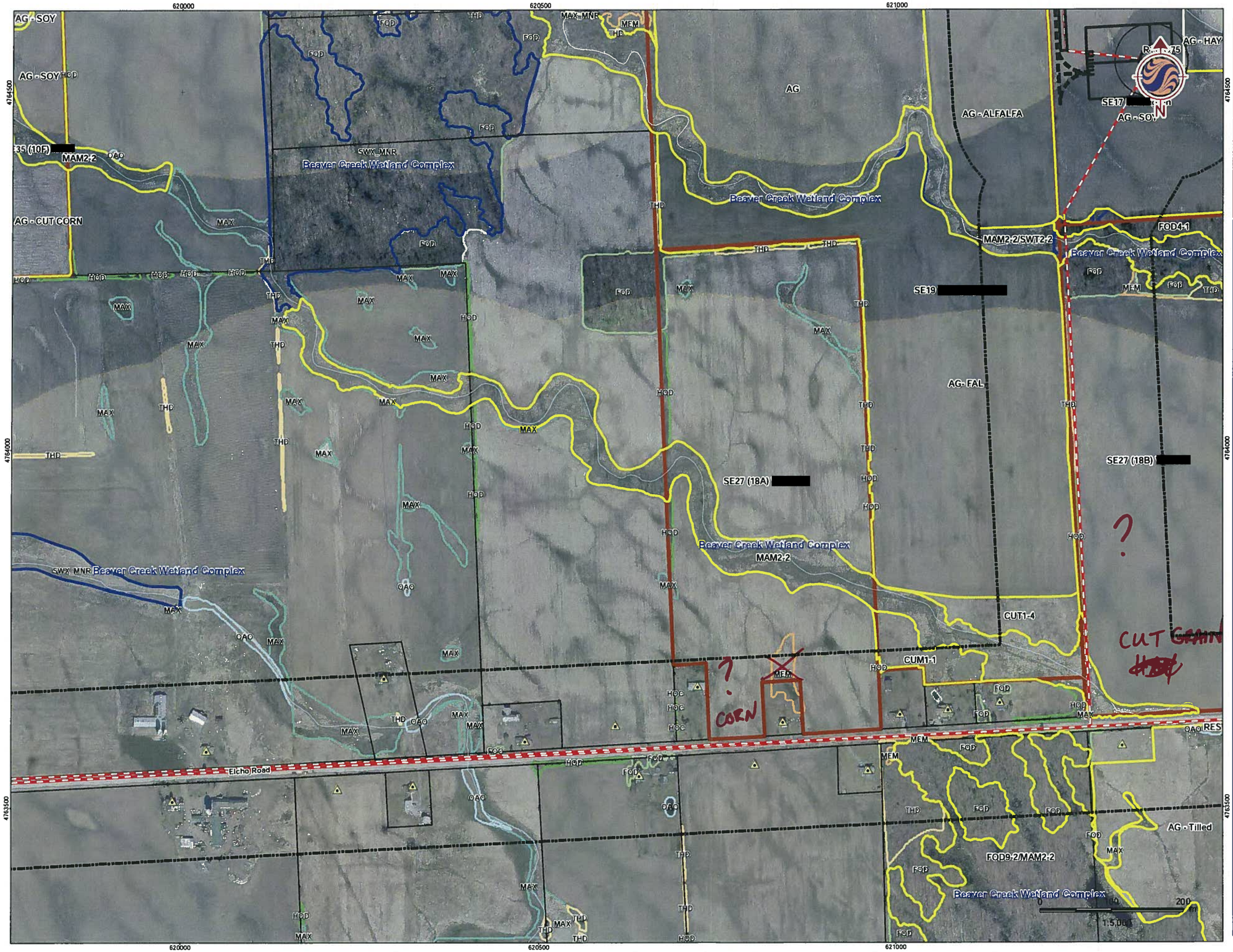
July, 2012
160950269

Client/Project
Niagara Region Wind Corporation
Amphibian Field Maps

Figure No.
23

Title
Property with Turbine
SE20 (14C) [redacted]

V:\01609\Active\160950269\planning\drawing\mxd\20120423_NHA_Fieldmaps\160950269_Release_18_ELC_Map_Book_20120716.mxd
Revised: 2012-07-27 By: bcowper

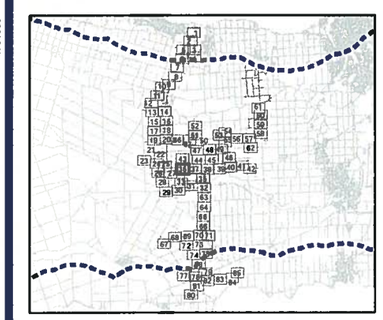


Legend

Crop types.

Turbines in Signed Lands

- Standard Turbine (105 dBA)
- 51 m Turbine Setback
- Non-Particpating Receptor
- Particpating Receptor
- Proposed Collector Cable
- Preliminary Study Area
- Signed Property
- Signed Property - Outside Study Area
- Potential Signed Property
- Potential Signed Property - Outside Study Area
- ELC Boundary
- Provincially Significant Wetland
- Other/Locally Significant Wetland
- Property Boundary
- Non-Participating Receptors 550m Setback
- Turbine and Access Road 150m buffer



Notes

1. Coordinate System: NAD 1983 UTM Zone 17N).
2. Base features produced under license with the Ontario Ministry of Natural Resources © Queen's Printer for Ontario, 2011.

Stantec

August, 2012
160950269

Client/Project
Niagara Region Wind Corporation
ELC Delineation

Figure No.
36

Title
Transmission and Collector Line
Map: 36

V:\01609\Active\160950269\planning\drawing\mxd\20120423_NHA_Fieldmaps\160950269_Release_18_ELC_T_Line_Collector_Map_Book_20120727.mxd
Revised: 2012-08-08 By: bcowper

Stantec Consulting Ltd.
1 – 70 Southgate Drive
Guelph, ON
Canada N1G 4P5
Tel: (519) 836-6050
Fax: (519) 836-2493

Stantec

Roadside ELC, Woodland & Wildlife Habitat Assessment Form

Project Number: 160950269 Project Name: NRWC

Date: Aug 15, 2012 Field Personnel: NC, AO

eather Conditions:	TEMP (°C):	WIND:	CLOUD:	PPT:	PPT (in last 24 hrs):

POLYGON DESCRIPTION

ELC COMMUNITY DESCRIPTION & CLASSIFICATION		TOPOGRAPHIC FEATURE		HISTORY
	POLYGON: 47-1	☐ LACUSTRINE	☐ TALUS	☐ NATURAL
	START TIME: 1:50	☐ RIVERINE	☐ CREVICE / CAVE	☐ CULTURAL
	END TIME:	☐ BOTTOMLAND	☐ ALVAR	
		☐ TERRACE	☐ ROCKLAND	
		☐ VALLEY SLOPE	☐ BEACH / BAR	
		☐ TABLELAND	☐ SAND DUNE	
		☐ ROLL. UPLAND	☐ BLUFF	
		☐ CLIFF		

TAND DESCRIPTION:

LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO)
CANOPY			
SUB-CANOPY			
UNDERSTOREY			
GRD. LAYER	5-7	4	PHAARUN >> DAUCARO = DIPFUSY

T CODES: 1=>25m 2=10<HT≤25m 3=2<HT≤10m 4=1<HT≤2m 5=0.5<HT≤1m 6=0.2<HT≤0.5m 7=HT<0 2m

VR CODES: 0=NONE 1=0%<CVR≤10% 2=10<CVR≤25% 3=25<CVR≤60% 4=CVR>60% N/O=not observed

TANDING SNAGS:	~~<10~~	10 – 24	25 – 50	>50

BUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT N/O=Not observed

TAND MATURITY:	PIONEER	YOUNG	MID-AGE	MATURE	OLD GROWTH

EGETATION TYPE: CODE: MAM2-2

COMPLEX		CODE:

vidence of Disturbance / Notes:

- should be upland community if we had a code

LAYERS: 1=CANOPY >10m 2=SUB-CANOPY 3=UNDERSTOREY 4=GROUND (GRD.) LAYER

ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT D=DOMINANT N/O=Not observed

SPECIES CODE	LAYER 1	LAYER 2	LAYER 3	LAYER 4	DISTANCE FROM RD. ≤5 m	DISTANCE FROM RD. >5 m	COLL.
TREES:							
SHRUBS:							
GROUND:							
PHAARUN				A			
DAUCARO				R-O			
DIPFUSY				R-O			
TRIREPE				R			

Signature: (Field Personnel)

Quality Control: This form is complete ☐ & legible ☐.

Signature: (Project Manager)

ELC Polygon: #47-1 **Assessment Type:** ☑-Visual; no access / ☐-Walk through feature

Extent of Physical Investigation of Feature: ☐-Entire / ☐-Partial, walk through polygon *(indicate on map)*

Reptile / Bat Hibernacula Features:

Contains potential reptile hibernacula features?
☐-Y* / ☐-N / ☑-Unknown, no access *(*if yes, describe in table below)*
[i.e. features that would provide a route underground, including buried concrete or rock (e.g. foundations, bridge abutments or culverts with cracks/entry points, exposed rock crevices or inactive animal burrows)]

Contains potential bat hibernacula features?
☐-Y* / ☐-N / ☑-Unknown, no access *(*if yes, describe in table below)*
[i.e. karst topography, abandoned mines or caves]

POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED

UTM	Feature Description	Photo No.	Spp. Observed Using Feature

Bat Roosting Features:

Contains potential bat roosting features?
☐-Y* / ☑-N / ☐-Unknown, no access *(*if yes, describe in table below)*
[i.e. tall trees with open surroundings, DBH >25cm, side-facing cavities ~10m high in tree]

POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED

UTM	Tree ID	Tree Spp.	DBH	Photo No.	Decay Class (1-5)	No. of Cavities	Height and Type of Cavities

Stick Nests:

Contains large stick nests?
☐-Y* / ☑-N / ☐-Unknown, no access *(*if yes, describe in table below)*

STICK NEST(S) IDENTIFIED

UTM	Tree ID	Tree Spp.	Nest Size	Photo No.	Spp. Observed Using Feature

Seeps/Springs/Vernal Pools:

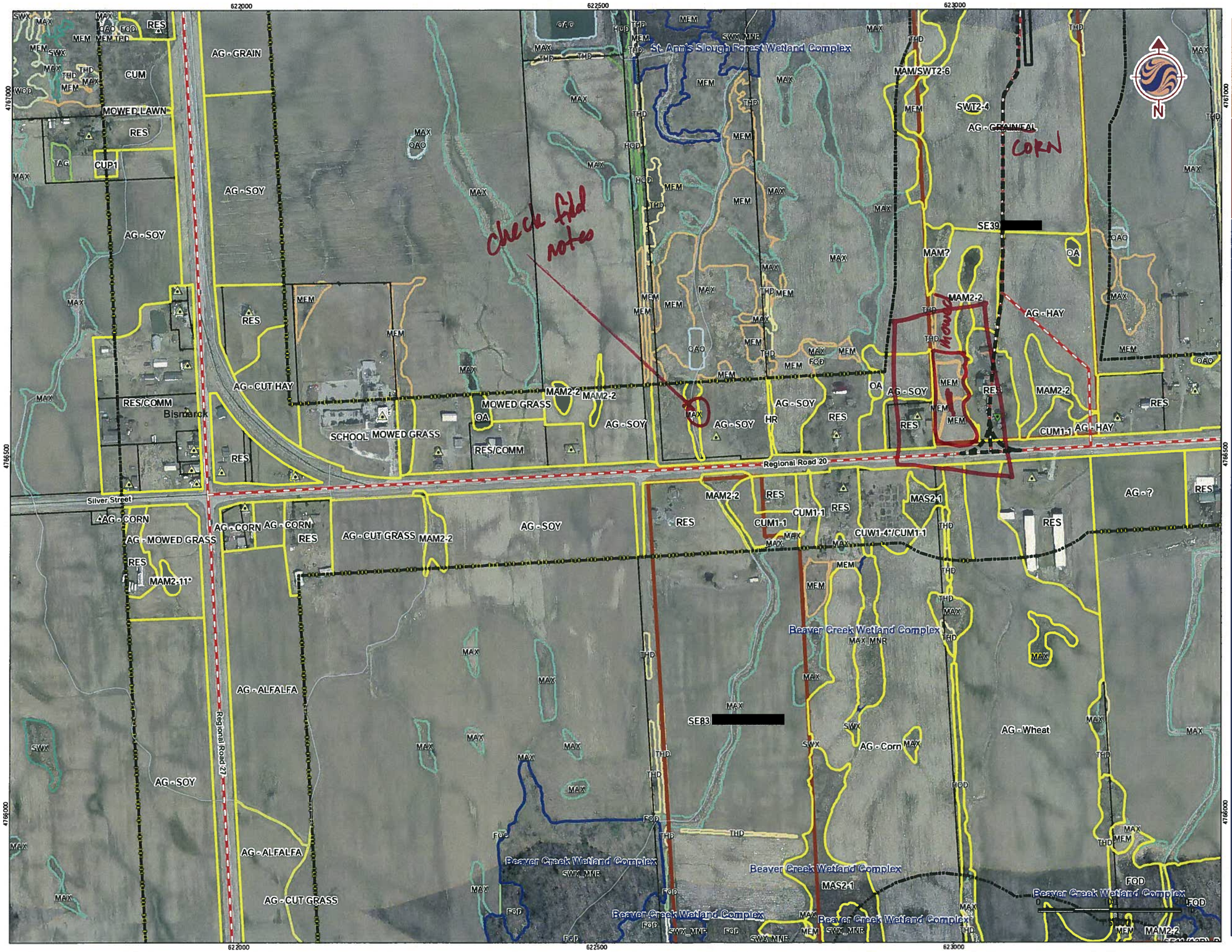
Contains seeps/springs/vernal pools?
☐-Y* / ☐-N / ☑-Unknown, no access *(*if yes, describe in table below)*

SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED

UTM	Feature No. & Type	Feature Size (Diameter)	Water Depth	Photo No.	Sub/Emergent Veg. Spp. Present?	Shrubs/ Logs at Edge Present?

SPECIES & HABITAT OBSERVATIONS (list species and type of observation & indicate on map)

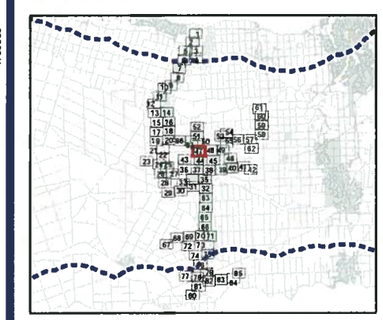
CA=carcass; DP=distinctive parts; FE=feeding evidence; FY=eggs/nest; HO=house/den; OB=observed; SC=scat; SI=other sign; TK=track; VO=vocalization



Legend

Turbines in Signed Lands

- Standard Turbine (105 dBA)
- 51 m Turbine Setback
- Non-Particpating Receptor
- Particpating Receptor
- Proposed Collector Cable
- Preliminary Study Area
- Signed Property
- Signed Property - Outside Study Area
- Potential Signed Property
- Potential Signed Property - Outside Study Area
- ELC Boundary
- Provincially Significant Wetland
- Other/Locally Significant Wetland
- Property Boundary
- Non-Participating Receptors 550m Setback
- Turbine and Access Road 150m buffer



Notes

1. Coordinate System: NAD 1983 UTM Zone 17N).
2. Base features produced under license with the Ontario Ministry of Natural Resources © Queen's Printer for Ontario, 2011.

Stantec

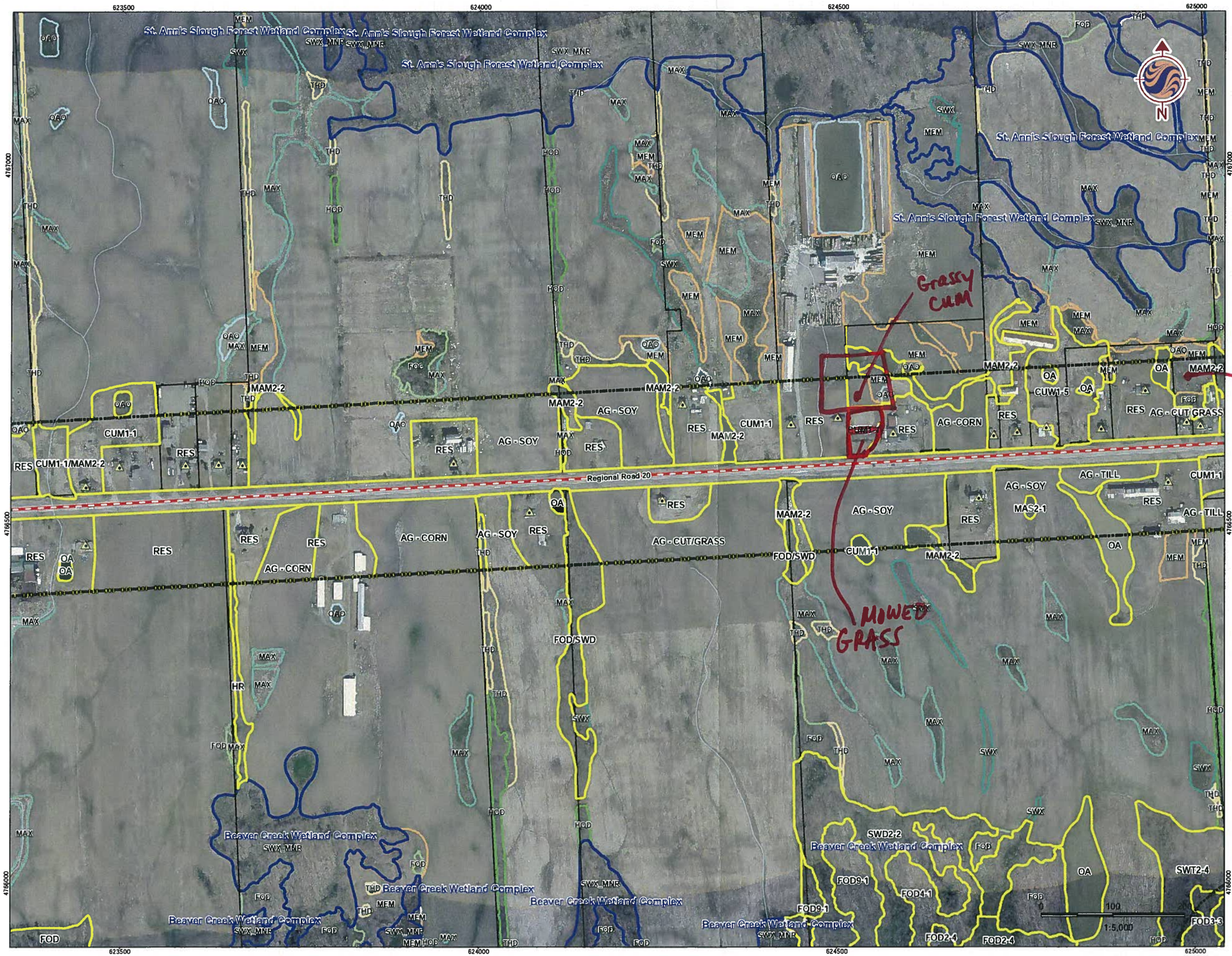
August, 2012
160950269

Client/Project
Niagara Region Wind Corporation
ELC Delineation

Figure No.
47

Title
Transmission and Collector Line
Map: 47

V:\01609\Active\160950269\planning\drawing\mxd\20120423_NHA_Fieldmaps\160950269_Release_18_ELC_T_Line_Collector_Map_Book_20120727.mxd
Revised: 2012-08-08 By: bcowper



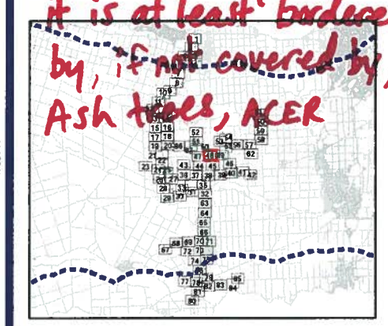
Legend

Turbines in Signed Lands

- Standard Turbine (105 dBA)
- 51 m Turbine Setback
- Non-Particpating Receptor
- Particpating Receptor
- Proposed Collector Cable
- Preliminary Study Area
- Signed Property
- Signed Property - Outside Study Area
- Potential Signed Property
- Potential Signed Property - Outside Study Area
- ELC Boundary
- Provincially Significant Wetland
- Other/Locally Significant Wetland
- Property Boundary
- Non-Participating Receptors 550m Setback
- Turbine and Access Road 150m buffer

Field behind CUM

Not at all visible without property access, it is at least bordered by, if not covered by, Ash trees, ACER



Notes

1. Coordinate System: NAD 1983 UTM Zone 17N).
2. Base features produced under license with the Ontario Ministry of Natural Resources © Queen's Printer for Ontario, 2011.

Stantec

August, 2012
160950269

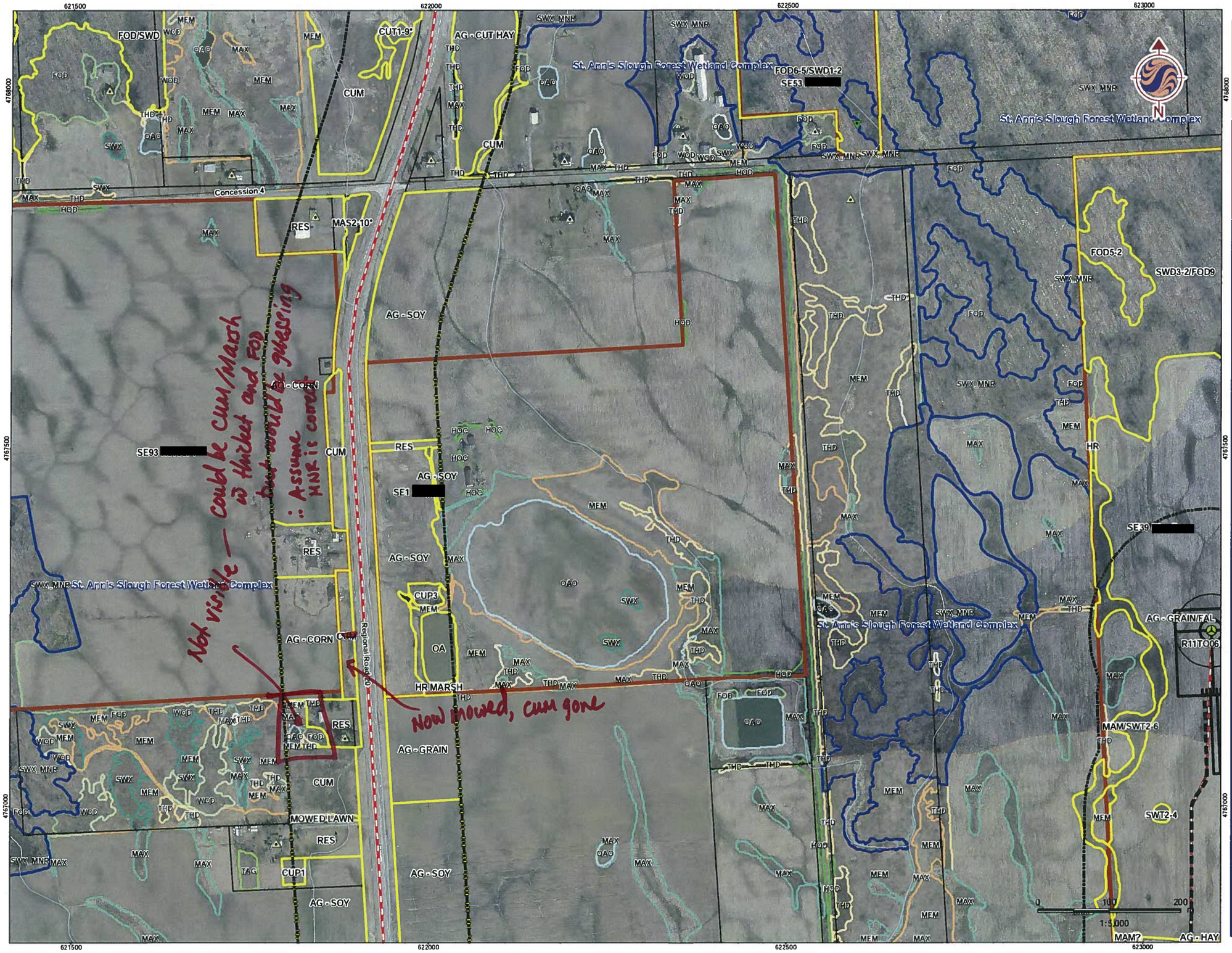
Client/Project
Niagara Region Wind Corporation
ELC Delineation

Figure No.
48

Title
Transmission and Collector Line
Map: 48

V:\01609\Active\160950269\planning\drawing\mxd\20120423_NHA_Fieldmaps\1160950269_Release_18_ELC_T_Line_Collector_Map_Book_20120727.mxd
Revised: 2012-08-08 By: bcowper

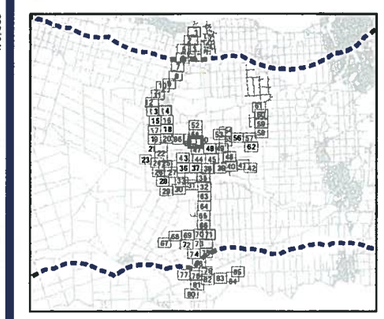
Area behind RZ



Legend

Turbines in Signed Lands

- Standard Turbine (105 dBA)
- 51 m Turbine Setback
- Non-Particpating Receptor
- Particpating Receptor
- Proposed Collector Cable
- Preliminary Study Area
- Signed Property
- Signed Property - Outside Study Area
- Potential Signed Property
- Potential Signed Property - Outside Study Area
- ELC Boundary
- Provincially Significant Wetland
- Other/Locally Significant Wetland
- Property Boundary
- Non-Participating Receptors 550m Setback
- Turbine and Access Road 150m buffer



Notes

1. Coordinate System: NAD 1983 UTM Zone 17N).
2. Base features produced under license with the Ontario Ministry of Natural Resources © Queen's Printer for Ontario, 2011.

Stantec

August, 2012
160950269

Client/Project
Niagara Region Wind Corporation
ELC Delineation

Figure No.
50

Title
Transmission and Collector Line
Map: 50

V:\01609\Active\160950269\planning\drawing\mxd\20120423_NHA_Fieldmaps\160950269_Release_18_ELC_T_Line_Collector_Map_Book_20120727.mxd
Revised: 2012-08-08 By: bcowper

Grassy Section.

Shrub HR

Brian, ignore the red box. This area is a paved truck inspection station with an area of mowed grass adjacent to the road. Eastern edge bordered by an HR

St. Ann's Slough Forest Wetland Complex

Regional Road 20

Concession 4

R11TO28

R11TO27

SE53

SE1

SE39

FOD5-2

FOD6-5/SWD1-2

FOD9-1/SWD

CUM1-1/MAS2-1

AG - CORN

AG - SOY

AG - CUT HAY

AG - Hay/Fallow

AG - Soy

CUT1-4

CUT1-9

MAM2-2

MAS2-1

SWX_MNR

FOD/SWD

SWD3-2/FOD9

1:5,000

0 100 200 m

Legend

Turbines in Signed Lands

- Standard Turbine (105 dBA)
- 51 m Turbine Setback
- Non-Particpating Receptor
- Particpating Receptor
- Proposed Collector Cable
- Preliminary Study Area
- Signed Property
- Signed Property - Outside Study Area
- Potential Signed Property
- Potential Signed Property - Outside Study Area
- ELC Boundary
- Provincially Significant Wetland
- Other/Locally Significant Wetland
- Property Boundary
- Non-Participating Receptors 550m Setback
- Turbine and Access Road 150m buffer

Notes

1. Coordinate System: NAD 1983 UTM Zone 17N).
2. Base features produced under license with the Ontario Ministry of Natural Resources © Queen's Printer for Ontario, 2011.

Stantec

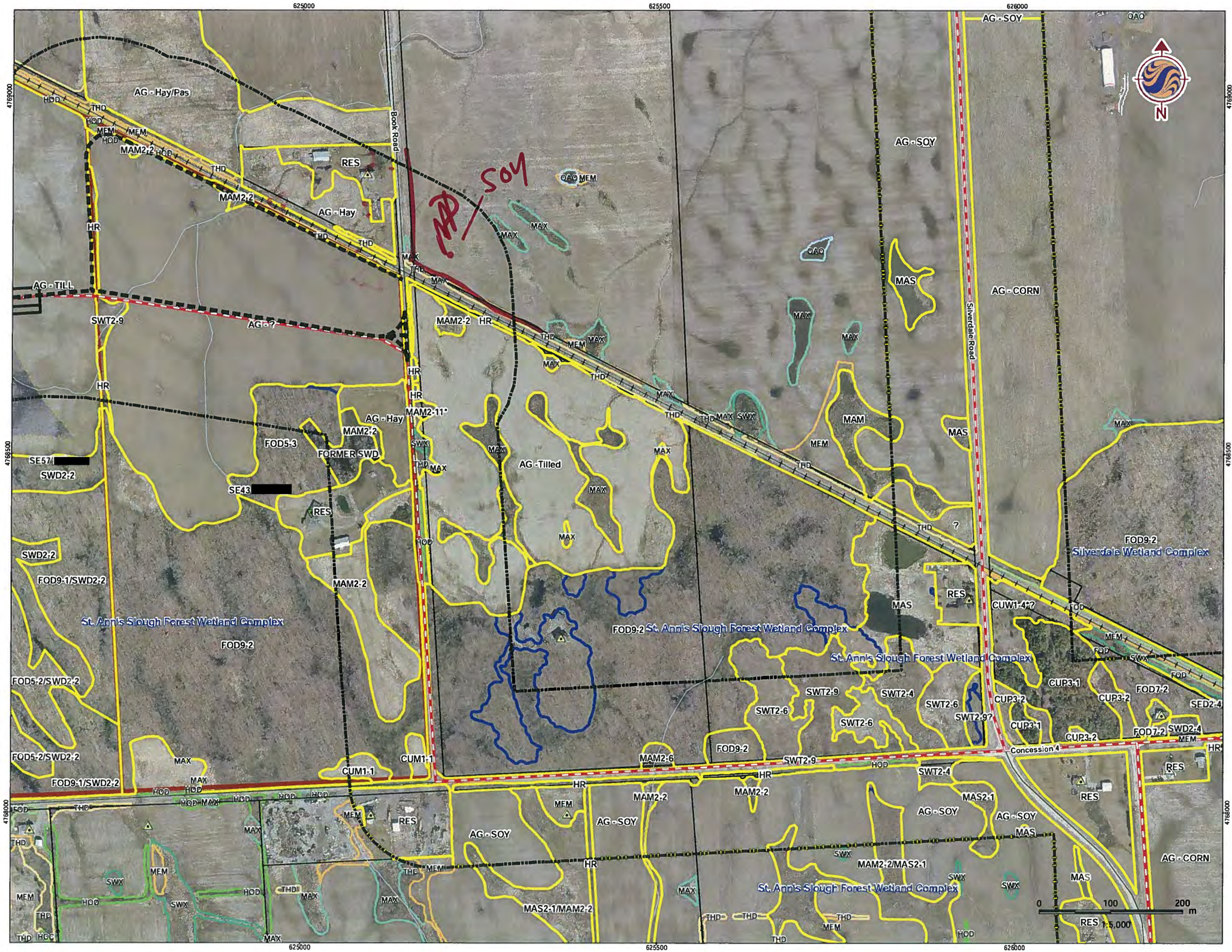
August, 2012
160950269

Client/Project
Niagara Region Wind Corporation
ELC Delineation

Figure No.
51

Title
Transmission and Collector Line
Map: 51

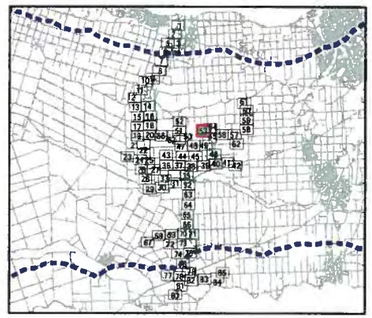
V:\01609\Active\160950269\planning\drawing\mxd\20120423_NHA_Fieldmaps\160950269_Release_18_ELC_T_Line_Collector_Map_Book_20120727.mxd
Revised: 2012-08-08 By: bcowper



Legend

Ag type

Turbines in Signed Lands
- Standard Turbine (105 dBA)
- 51 m Turbine Setback
- Non-Particpating Receptor
- Particpating Receptor
- Proposed Collector Cable
- Preliminary Study Area
- Signed Property
- Potential Signed Property
- ELC Boundary
- Provincially Significant Wetland
- Other/Locally Significant Wetland
- Property Boundary
- Non-Participating Receptors 550m Setback
- Turbine and Access Road 150m buffer



Notes

1. Coordinate System: NAD 1983 UTM Zone 17N).
2. Base features produced under license with the Ontario Ministry of Natural Resources © Queen's Printer for Ontario, 2011.

Stantec

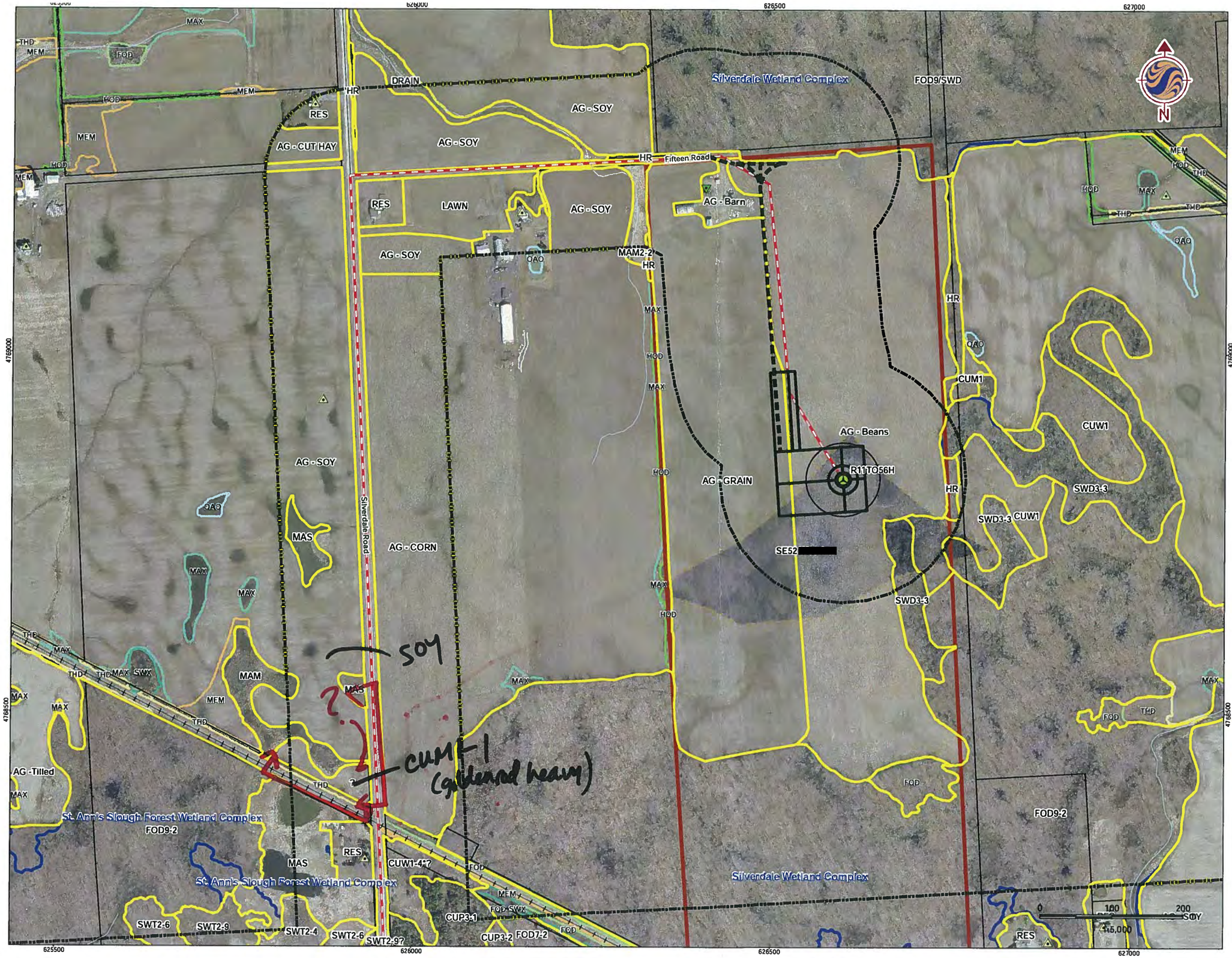
August, 2012
160950269

Client/Project
Niagara Region Wind Corporation
ELC Delineation

Figure No.
53

Title
Transmission and Collector Line
Map: 53

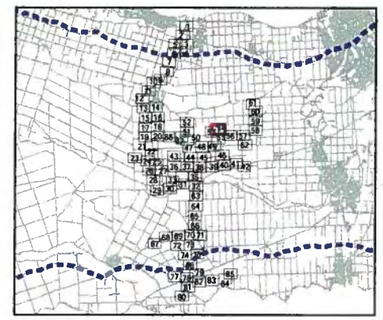
V:\01609\Active\160950269\planning\drawing\mxd\20120809_NHA_Fieldmaps\160950269_Release_20_ELC_T_Line_Collector_Map_Book_20120809.mxd
Revised: 2012-08-11 By: bcowper



Legend

Ag type

Turbines in Signed Lands
- Standard Turbine (105 dBA)
- 51 m Turbine Setback
- Non-Particpating Receptor
- Particpating Receptor
- Proposed Collector Cable
- Preliminary Study Area
- Signed Property
- Potential Signed Property
- ELC Boundary
- Provincially Significant Wetland
- Other/Locally Significant Wetland
- Property Boundary
- Non-Participating Receptors 550m Setback
- Turbine and Access Road 150m buffer



Notes

1. Coordinate System: NAD 1983 UTM Zone 17N).
2. Base features produced under license with the Ontario Ministry of Natural Resources © Queen's Printer for Ontario, 2011.

Stantec

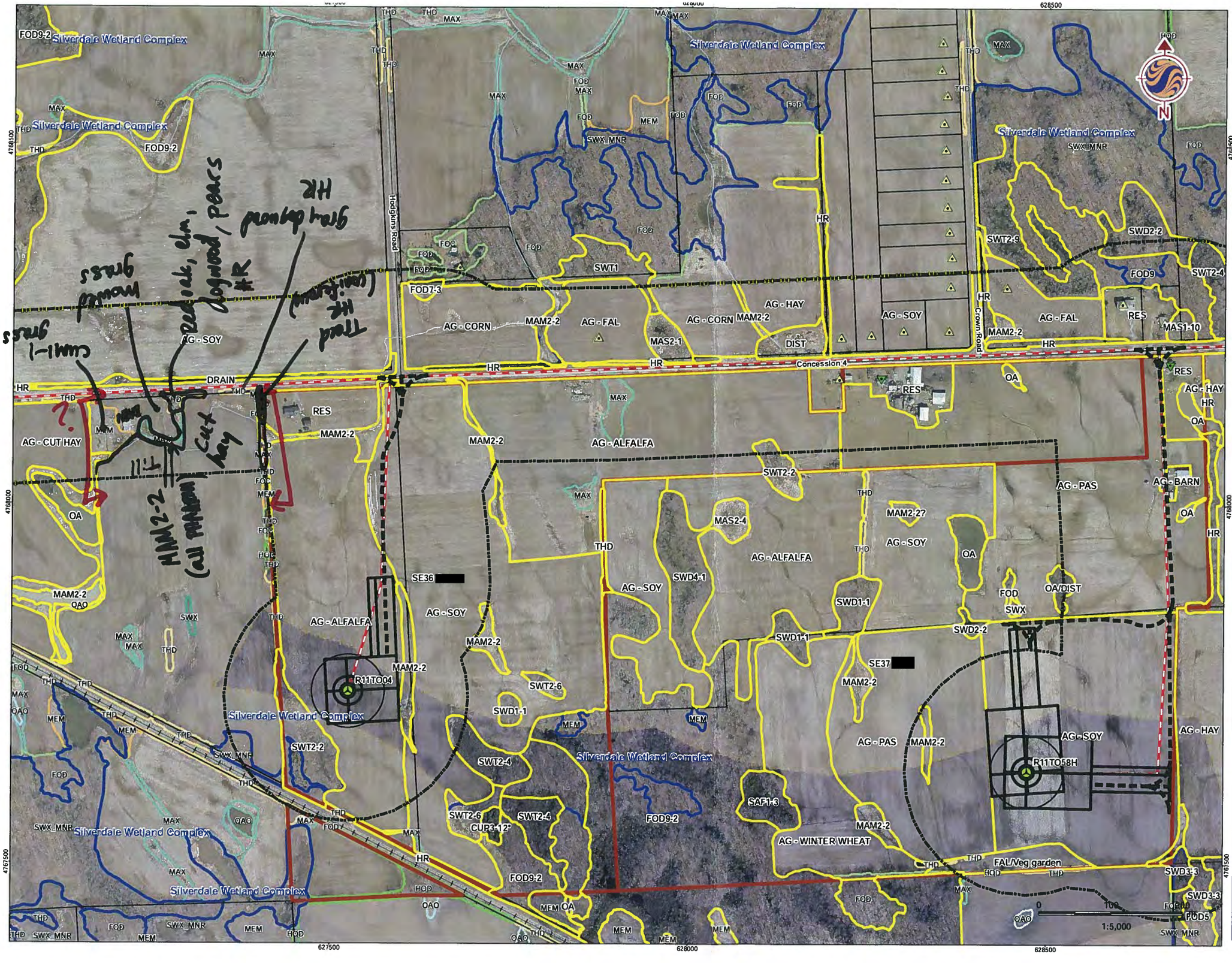
August, 2012
160950269

Client/Project
Niagara Region Wind Corporation
ELC Delineation

Figure No.
54

Title
Transmission and Collector Line
Map: 54

V:\01609\Active\160950269\planning\drawing\mxd\20120809_NHA_Fieldmaps\160950269_Release_20_ELC_T_Line_Collector_Map_Book_20120809.mxd
Revised: 2012-08-11 By: bcowper

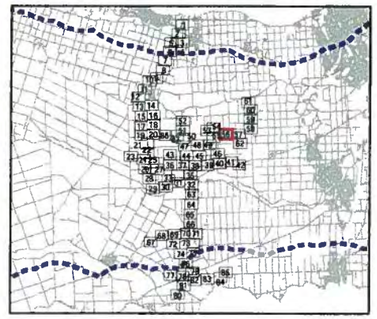


Legend

Turbines in Signed Lands

- Standard Turbine (105 dBA)
- 51 m Turbine Setback
- Non-Particpating Receptor
- Particpating Receptor
- Proposed Collector Cable
- Preliminary Study Area
- Signed Property
- Potential Signed Property
- ELC Boundary
- Provincially Significant Wetland
- Other/Locally Significant Wetland
- Property Boundary
- Non-Participating Receptors 550m Setback
- Turbine and Access Road 150m buffer

Ag + MEM + HR's (All in red line)



Notes

1. Coordinate System: NAD 1983 UTM Zone 17N).
2. Base features produced under license with the Ontario Ministry of Natural Resources © Queen's Printer for Ontario, 2011.

Stantec

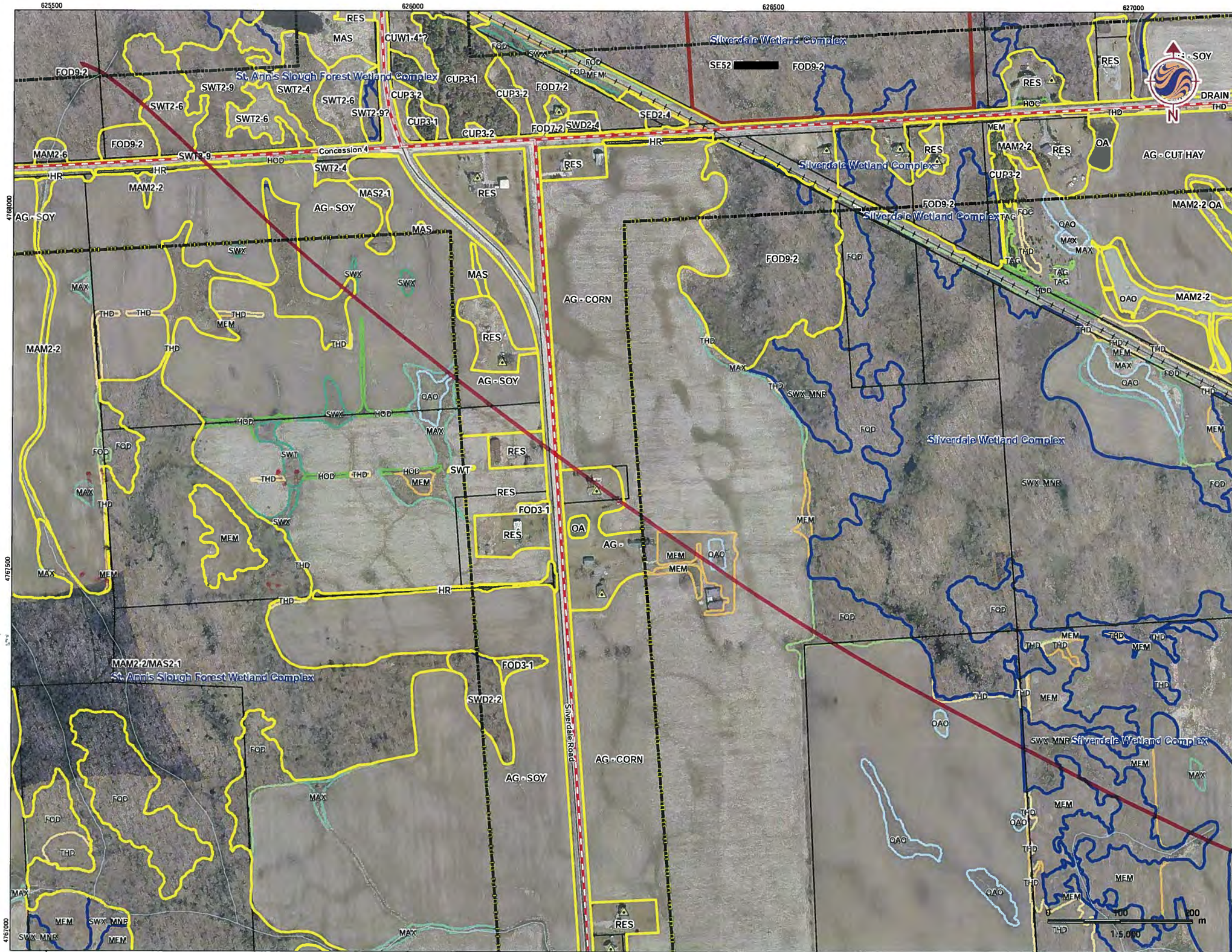
August, 2012
160950269

Client/Project
Niagara Region Wind Corporation
ELC Delineation

Figure No.
56

Title
Transmission and Collector Line
Map: 56

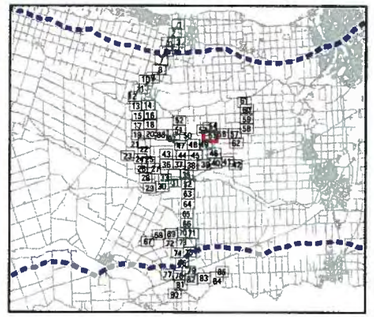
V:\01609\Active\160950269\planning\drawing\mxd\20120809_NHA_Fieldmaps\160950269_Release_20_ELC_T_Line_Collector_Map_Book_20120809.mxd
Revised: 2012-08-11 By: bcowpar



Legend

Turbines in Signed Lands

- Standard Turbine (105 dBA)
- 51 m Turbine Setback
- Non-Particpating Receptor
- Particpating Receptor
- Proposed Collector Cable
- Preliminary Study Area
- Signed Property
- Potential Signed Property
- ELC Boundary
- Provincially Significant Wetland
- Other/Locally Significant Wetland
- Property Boundary
- Non-Participating Receptors 550m Setback
- Turbine and Access Road 150m buffer



Notes

1. Coordinate System: NAD 1983 UTM Zone 17N).
2. Base features produced under license with the Ontario Ministry of Natural Resources © Queen's Printer for Ontario, 2011.

Stantec

August, 2012
160950269

Client/Project
Niagara Region Wind Corporation
ELC Delineation

Figure No.
55

Title
Transmission and Collector Line
Map: 55

V:\01609\Active\160950269\planning\drawing\mxd\20120809_NHA_Fieldmaps\160950269_Release_20_ELC_Line_Collector_Map_Book_20120809.mxd
Revised: 2012-08-11 By: bcowper

redo roadside especially MAM?

All corn — no MAM

dogwood HR w/ some elm, maple

Fifteen Mile Creek Above Escarpment

Victoria Avenue

Metler Road

Concession 4

AG - CORN

AG - SOY

AG - CUT HAY

AG - CUT WHEAT

AG - FAL

AG - ?

CUT LAWN

SWT

SWT2-9

SWT2-6

FOD2-4

FOD6-5/SWD3

FOD7-2

MAS2-1

MAM2-2

MAM?

CUT1-4/CUM1-1

CUT1-4

RES

HR

630500

631000

631500

4769000

4768500

4768000

1:5,000

0 100 200 m

Legend

Turbines in Signed Lands

- Standard Turbine (105 dBA)
- 51 m Turbine Setback
- Non-Particpating Receptor
- Particpating Receptor
- Proposed Collector Cable
- Preliminary Study Area
- Signed Property
- Potential Signed Property
- ELC Boundary
- Provincially Significant Wetland
- Other/Locally Significant Wetland
- Property Boundary
- Non-Participating Receptors 550m Setback
- Turbine and Access Road 150m buffer

Notes

1. Coordinate System: NAD 1983 UTM Zone 17N).
2. Base features produced under license with the Ontario Ministry of Natural Resources © Queen's Printer for Ontario, 2011.

Stantec

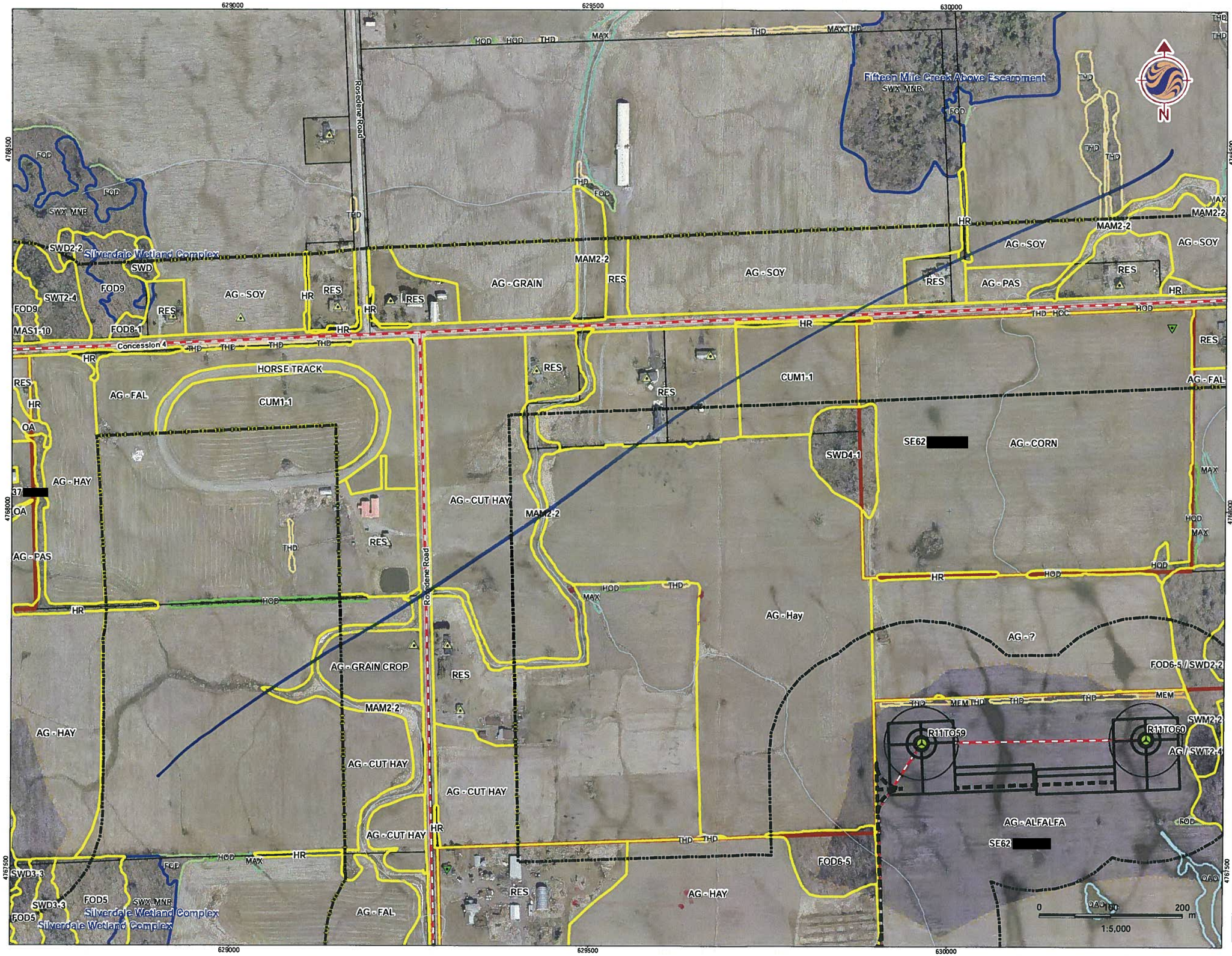
August, 2012
160950269

Client/Project
Niagara Region Wind Corporation
ELC Delineation

Figure No.
58

Title
Transmission and Collector Line
Map: 58

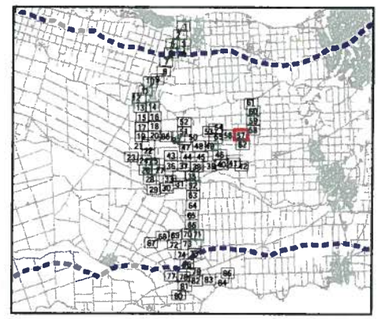
V:\01609\Active\160950269\planning\drawing\mxd\20120809_NHA_Fieldmaps\160950269_Release_20_ELC_T_Line_Collector_Map_Book_20120809.mxd
Revised: 2012-08-11 By: bcowper



Legend

Turbines in Signed Lands

- Standard Turbine (105 dBA)
- 51 m Turbine Setback
- Non-Particpating Receptor
- Particpating Receptor
- Proposed Collector Cable
- Preliminary Study Area
- Signed Property
- Potential Signed Property
- ELC Boundary
- Provincially Significant Wetland
- Other/Locally Significant Wetland
- Property Boundary
- Non-Participating Receptors 550m Setback
- Turbine and Access Road 150m buffer



Notes

1. Coordinate System: NAD 1983 UTM Zone 17N).
2. Base features produced under license with the Ontario Ministry of Natural Resources © Queen's Printer for Ontario, 2011.

Stantec

August, 2012
160950269

Client/Project
Niagara Region Wind Corporation
ELC Delineation

Figure No.
57

Title
Transmission and Collector Line
Map: 57

V:\01609\Active\160950269\planning\drawing\mxd\20120609_NHA_Fieldmaps\160950269_Release_20_ELC_T_Line_Collector_Map_Book_20120609.mxd
Revised: 2012-08-11 By: bcowper

Stantec Consulting Ltd.
1 – 70 Southgate Drive
Guelph, ON
Canada N1G 4P5
Tel: (519) 836-6050
Fax: (519) 836-2493

Stantec

Roadside ELC, Woodland & Wildlife Habitat Assessment Form

Project Number:

Project Name: NRWC

Date: Aug 15

Field Personnel: N. Charlton, A. Orr

Weather Conditions:	TEMP (°C):	WIND:	CLOUD:	PPT:	PPT (in last 24 hrs):

POLYGON DESCRIPTION

ELC COMMUNITY DESCRIPTION & CLASSIFICATION

POLYGON: 61-3

START TIME:

END TIME:

TOPOGRAPHIC FEATURE		HISTORY
☐ LACUSTRINE	☐ TALUS	☐ NATURAL
☐ RIVERINE	☐ CREVICE / CAVE	☐ CULTURAL
☐ BOTTOMLAND	☐ ALVAR	
☐ TERRACE	☐ ROCKLAND	
☐ VALLEY SLOPE	☐ BEACH / BAR	
☐ TABLELAND	☐ SAND DUNE	
☐ ROLL. UPLAND	☐ BLUFF	
☐ CLIFF		

STAND DESCRIPTION:

LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO)
CANOPY	2	4	ACESASA > QUERUBR = TILAMER
SUB-CANOPY			
UNDERSTOREY			
GRD. LAYER			

HT CODES: 1=>25m 2=10<HT≤25m 3=2<HT≤10m 4=1<HT≤2m 5=0.5<HT≤1m 6=0.2<HT≤0.5m 7=HT<0.2m

CVR CODES: 0=NONE 1=0%<CVR≤10% 2=10<CVR≤25% 3=25<CVR≤60% 4=CVR>60% N/O=not observed

STANDING SNAGS:		<10	10 – 24	25 – 50	>50

ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT N/O=Not observed

STAND MATURITY:		PIONEER	YOUNG	MID-AGE	MATURE	OLD GROWTH

VEGETATION TYPE: CODE: FOD6

COMPLEX: CODE:

Evidence of Disturbance / Notes:

- low visibility to interior
- can't see other layers
- goldenrod and BRONIN at edge and listed shrubs + VITIS

LAYERS: 1=CANOPY >10m 2=SUB-CANOPY 3=UNDERSTOREY 4=GROUND (GRD.) LAYER

ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT D=DOMINANT N/O=Not observed

SPECIES CODE	LAYER 1	LAYER 2	LAYER 3	LAYER 4	DISTANCE FROM RD. ≤5 m	DISTANCE FROM RD. >5 m	COLL.
TREES:							
QUERUBR	O						
ACESASA	A						
TILAMER	O						
SHRUBS:							
CORRACE			A				
LONTART			R				
GROUND:							
VITRIPA							

Signature: (Field Personnel)

Quality Control: This form is complete ☐ & legible ☐.

Signature: (Project Manager)

ELC Polygon: #61-3 **Assessment Type:** ☑-Visual; no access / ☐-Walk through feature

Extent of Physical Investigation of Feature: ☐-Entire / ☐-Partial, walk through polygon *(indicate on map)*

Reptile / Bat Hibernacula Features:

Contains potential reptile hibernacula features?
☐-Y* / ☐-N / ☑-Unknown, no access *(*if yes, describe in table below)*
[i.e. features that would provide a route underground, including buried concrete or rock (e.g. foundations, bridge abutments or culverts with cracks/entry points, exposed rock crevices or inactive animal burrows)]

Contains potential bat hibernacula features?
☐-Y* / ☐-N / ☑-Unknown, no access *(*if yes, describe in table below)*
[i.e. karst topography, abandoned mines or caves]

POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED

UTM	Feature Description	Photo No.	Spp. Observed Using Feature

Bat Roosting Features:

Contains potential bat roosting features?
☐-Y* / ☐-N / ☑-Unknown, no access *(*if yes, describe in table below)*
[i.e. tall trees with open surroundings, DBH >25cm, side-facing cavities ~10m high in tree]

POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED

UTM	Tree ID	Tree Spp.	DBH	Photo No.	Decay Class (1-5)	No. of Cavities	Height and Type of Cavities

Stick Nests:

Contains large stick nests?
☐-Y* / ☐-N / ☑-Unknown, no access *(*if yes, describe in table below)*

STICK NEST(S) IDENTIFIED

UTM	Tree ID	Tree Spp.	Nest Size	Photo No.	Spp. Observed Using Feature

Seeps/Springs/Vernal Pools:

Contains seeps/springs/vernal pools?
☐-Y* / ☐-N / ☑-Unknown, no access *(*if yes, describe in table below)*

SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED

UTM	Feature No. & Type	Feature Size (Diameter)	Water Depth	Photo No.	Sub/Emergent Veg. Spp. Present?	Shrubs/ Logs at Edge Present?

SPECIES & HABITAT OBSERVATIONS (list species and type of observation & indicate on map)

CA=carcass; DP=distinctive parts; FE=feeding evidence; FY=eggs/nest; HO=house/den; OB=observed; SC=scat; SI=other sign; TK=track; VO=vocalization

Stantec Consulting Ltd.
1 – 70 Southgate Drive
Guelph, ON
Canada N1G 4P5
Tel: (519) 836-6050
Fax: (519) 836-2493

Stantec

Roadside ELC, Woodland & Wildlife Habitat Assessment Form

Project Number: 160950216 9 | Project Name: NRWC

Date: Aug 15, 2012 | Field Personnel: NC, AO

Weather Conditions:	TEMP (°C):	WIND:	CLOUD:	PPT:	PPT (in last 24 hrs):

POLYGON DESCRIPTION

ELC — COMMUNITY DESCRIPTION & CLASSIFICATION

POLYGON: 61 – 1

START TIME:

END TIME:

TOPOGRAPHIC FEATURE		HISTORY
☐ LACUSTRINE	☐ TALUS	☐ NATURAL
☐ RIVERINE	☐ CREVICE / CAVE	☐ CULTURAL
☐ BOTTOMLAND	☐ ALVAR	
☐ TERRACE	☐ ROCKLAND	
☐ VALLEY SLOPE	☐ BEACH / BAR	
☐ TABLELAND	☐ SAND DUNE	
☐ ROLL. UPLAND	☐ BLUFF	
☐ CLIFF		

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	2	3	FRAAMER > QUEMACR > Shagbark hickory
2	SUB-CANOPY	3	3	FRAAMER > QUEMACR > Shagbark hickory
3	UNDERSTOREY	5	2	CORRACE >> CRA_SP
4	GRD. LAYER	5	2	PHAARUN > ASTER_SP

HT CODES: 1=>25m 2=10<HT≤25m 3=2<HT≤10m 4=1<HT≤2m 5=0.5<HT≤1m 6=0.2<HT≤0.5m 7=HT<0.2m

CVR CODES: 0=NONE 1=0%<CVR≤10% 2=10<CVR≤25% 3=25<CVR≤60% 4=CVR>60% N/O=not observed

STANDING SNAGS:	<10	10 – 24	25 – 50	>50

ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT N/O=Not observed

STAND MATURITY:	PIONEER	YOUNG	MID-AGE	MATURE	OLD GROWTH

VEGETATION TYPE: CODE: FOD9

COMPLEX: CODE:

Evidence of Disturbance / Notes:

LAYERS: 1=CANOPY >10m 2=SUB-CANOPY 3=UNDERSTOREY 4=GROUND (GRD.) LAYER

ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT D=DOMINANT N/O=Not observed

SPECIES CODE	LAYER 1	LAYER 2	LAYER 3	LAYER 4	DISTANCE FROM RD. ≤5 m	DISTANCE FROM RD. >5 m	COLL.
TREES:							
FRAPENN							
QUEMACR							
Shagbark Hickory							
SHRUBS:							
CRA_SP							
CORRACE							
GROUND:							
PHAARUN							
ASTER_SP							
SOL_SP							

Quality Control: This form is complete ☐ & legible ☐.

Signature: _____ (Field Personnel)

Signature: _____ (Project Manager)

ELC Polygon: #61-1 **Assessment Type:** ☑-Visual; no access / ☐-Walk through feature

Extent of Physical Investigation of Feature: ☐-Entire / ☐-Partial, walk through polygon *(indicate on map)*

Reptile / Bat Hibernacula Features:

Contains potential reptile hibernacula features?
☐-Y* / ☐-N / ☑-Unknown, no access *(*if yes, describe in table below)*
[i.e. features that would provide a route underground, including buried concrete or rock (e.g. foundations, bridge abutments or culverts with cracks/entry points, exposed rock crevices or inactive animal burrows)]
Contains potential bat hibernacula features?
☐-Y* / ☐-N / ☑-Unknown, no access *(*if yes, describe in table below)*
[i.e. karst topography, abandoned mines or caves]

POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED

UTM	Feature Description	Photo No.	Spp. Observed Using Feature

Bat Roosting Features:

Contains potential bat roosting features?
☐-Y* / ☐-N / ☑-Unknown, no access *(*if yes, describe in table below)*
[i.e. tall trees with open surroundings, DBH >25cm, side-facing cavities ~10m high in tree]

POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED

UTM	Tree ID	Tree Spp.	DBH	Photo No.	Decay Class (1-5)	No. of Cavities	Height and Type of Cavities

Stick Nests:

Contains large stick nests?
☐-Y* / ☐-N / ☑-Unknown, no access *(*if yes, describe in table below)*

STICK NEST(S) IDENTIFIED

UTM	Tree ID	Tree Spp.	Nest Size	Photo No.	Spp. Observed Using Feature

Seeps/Springs/Vernal Pools:

Contains seeps/springs/vernal pools?
☐-Y* / ☐-N / ☑-Unknown, no access *(*if yes, describe in table below)*

SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED

UTM	Feature No. & Type	Feature Size (Diameter)	Water Depth	Photo No.	Sub/Emergent Veg. Spp. Present?	Shrubs/ Logs at Edge Present?

SPECIES & HABITAT OBSERVATIONS (list species and type of observation & indicate on map)

CA=carcass; DP=distinctive parts; FE=feeding evidence; FY=eggs/nest; HO=house/den; OB=observed; SC=scat; SI=other sign; TK=track; VO=vocalization

Stantec Consulting Ltd.
1 – 70 Southgate Drive
Guelph, ON
Canada N1G 4P5
Tel. (519) 836-6050
Fax: (519) 836-2493

Stantec

Roadside ELC, Woodland & Wildlife Habitat Assessment Form

Project Number: 160950269 Project Name: NRWC

Date: Aug 15, 2012 Field Personnel: NC, AO

Weather Conditions:	TEMP (°C):	WIND:	CLOUD:	PPT:	PPT (in last 24 hrs):
	25	3-4	40%	none	none

POLYGON DESCRIPTION

ELC — COMMUNITY DESCRIPTION & CLASSIFICATION

POLYGON: 61-2

START TIME:

END TIME:

TOPOGRAPHIC FEATURE		HISTORY
☐ LACUSTRINE	☐ TALUS	☒ NATURAL
☒ RIVERINE	☐ CREVICE / CAVE	☐ CULTURAL
☒ BOTTOMLAND	☐ ALVAR	
☐ TERRACE	☐ ROCKLAND	
☐ VALLEY SLOPE	☐ BEACH / BAR	
☐ TABLELAND	☐ SAND DUNE	
☐ ROLL. UPLAND	☐ BLUFF	
☐ CLIFF		

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	2	2	FRAPENN
2	SUB-CANOPY	3	2	QUEBICO
3	UNDERSTOREY	4	2	CORRACE
4	GRD. LAYER	5-7	4	PHAARUN > SOLIDAGO > TYPLATI = DIPFUSY

HT CODES: 1=>25m 2=10<HT≤25m 3=2<HT≤10m 4=1<HT≤2m 5=0.5<HT≤1m 6=0.2<HT≤0.5m 7=HT<0.2m

CVR CODES: 0=NONE 1=0%<CVR≤10% 2=10<CVR≤25% 3=25<CVR≤60% 4=CVR>60% N/O=not observed

STANDING SNAGS:	N	<10	O	10 – 24	O	25 – 50	N	>50

ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT N/O=Not observed

STAND MATURITY:	PIONEER	YOUNG	☒ MID-AGE	☒ MATURE	OLD GROWTH

VEGETATION TYPE: green ash swamp CODE: SWD2-2

COMPLEX: reed canary CODE: MAM2-2

Evidence of Disturbance / Notes:

- Floodplain community

LAYERS: 1=CANOPY >10m 2=SUB-CANOPY 3=UNDERSTOREY 4=GROUND (GRD.) LAYER

ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT D=DOMINANT N/O=Not observed

SPECIES CODE	LAYER 1	LAYER 2	LAYER 3	LAYER 4	DISTANCE FROM RD. ≤5 m	DISTANCE FROM RD. >5 m	COLL.
TREES:							
FRAPENN	A						
QUEBICO		A	A				
SHRUBS:							
CORRACE			A				
GROUND:							
PHAARUN				A			
LYTSALI				R			
SOLIDAGO				A-O			
DIPFUSY				R			
TYPLATI				O			
				R-O			

Signature: (Field Personnel)

Quality Control: This form is complete ☐ & legible ☐.

Signature: (Project Manager)

ELC Polygon: #61-2 **Assessment Type:** ☑-Visual; no access / ☐-Walk through feature

Extent of Physical Investigation of Feature: ☐-Entire / ☐-Partial, walk through polygon *(indicate on map)*

Reptile / Bat Hibernacula Features:

Contains potential reptile hibernacula features?
☐-Y* / ☐-N / ☑-Unknown, no access *(*if yes, describe in table below)*
[i.e. features that would provide a route underground, including buried concrete or rock (e.g. foundations, bridge abutments or culverts with cracks/entry points, exposed rock crevices or inactive animal burrows)]

Contains potential bat hibernacula features?
☐-Y* / ☐-N / ☑-Unknown, no access *(*if yes, describe in table below)*
[i.e. karst topography, abandoned mines or caves]

POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED

UTM	Feature Description	Photo No.	Spp. Observed Using Feature

Bat Roosting Features:

Contains potential bat roosting features?
☐-Y* / ☐-N / ☑-Unknown, no access *(*if yes, describe in table below)*
[i.e. tall trees with open surroundings, DBH >25cm, side-facing cavities ~10m high in tree]

POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED

UTM	Tree ID	Tree Spp.	DBH	Photo No.	Decay Class (1-5)	No. of Cavities	Height and Type of Cavities

Stick Nests:

Contains large stick nests?
☐-Y* / ☐-N / ☑-Unknown, no access *(*if yes, describe in table below)*

STICK NEST(S) IDENTIFIED

UTM	Tree ID	Tree Spp.	Nest Size	Photo No.	Spp. Observed Using Feature

Seeps/Springs/Vernal Pools:

Contains seeps/springs/vernal pools?
☐-Y* / ☐-N / ☑-Unknown, no access *(*if yes, describe in table below)*

SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED

UTM	Feature No. & Type	Feature Size (Diameter)	Water Depth	Photo No.	Sub/Emergent Veg. Spp. Present?	Shrubs/ Logs at Edge Present?

SPECIES & HABITAT OBSERVATIONS (list species and type of observation & indicate on map)

CA=carcass; DP=distinctive parts; FE=feeding evidence; FY=eggs/nest; HO=house/den; OB=observed; SC=scat; SI=other sign; TK=track; VO=vocalization

Stantec Consulting Ltd.
1 – 70 Southgate Drive
Guelph, ON
Canada N1G 4P5
Tel. (519) 836-6050
Fax: (519) 836-2493

Stantec

Roadside ELC, Woodland & Wildlife Habitat Assessment Form

Project Number: 160950269 Project Name: NRWC

Date: Aug 15, 2012 Field Personnel: NC, AO

Weather Conditions:	TEMP (°C):	WIND:	CLOUD:	PPT:	PPT (in last 24 hrs):

POLYGON DESCRIPTION

ELC COMMUNITY DESCRIPTION & CLASSIFICATION		TOPOGRAPHIC FEATURE		HISTORY
	POLYGON: 61-5	☐ LACUSTRINE	☐ TALUS	☐ NATURAL
	START TIME:	☐ RIVERINE	☐ CREVICE / CAVE	☐ CULTURAL
		☐ BOTTOMLAND	☐ ALVAR	
		☐ TERRACE	☐ ROCKLAND	
		☐ VALLEY SLOPE	☐ BEACH / BAR	
	END TIME:	☐ TABLELAND	☐ SAND DUNE	
		☐ ROLL. UPLAND	☐ BLUFF	
		☐ CLIFF		

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	2	4	QUERUBR>>PINSTRO=ACESASA
2	SUB-CANOPY			
3	UNDERSTOREY			
4	GRD. LAYER			

HT CODES: 1=>25m 2=10<HT≤25m 3=2<HT≤10m 4=1<HT≤2m 5=0.5<HT≤1m 6=0.2<HT≤0.5m 7=HT<0.2m

CVR CODES: 0=NONE 1=0%<CVR≤10% 2=10<CVR≤25% 3=25<CVR≤60% 4=CVR>60% N/O=not observed

STANDING SNAGS:	N/O	<10	10 – 24	25 – 50	>50

ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT N/O=Not observed

STAND MATURITY:	PIONEER	YOUNG	MID-AGE	MATURE	OLD GROWTH

VEGETATION TYPE: Deciduous forest CODE: FOD

COMPLEX: CODE:

Evidence of Disturbance / Notes:

- Edge only
↳ composition ratios most likely do not reflect interior conditions
∴ no vegetation type selected

LAYERS: 1=CANOPY >10m 2=SUB-CANOPY 3=UNDERSTOREY 4=GROUND (GRD.) LAYER
ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT D=DOMINANT N/O=Not observed

SPECIES CODE	LAYER 1	LAYER 2	LAYER 3	LAYER 4	DISTANCE FROM RD. ≤5 m	DISTANCE FROM RD. >5 m	COLL.
TREES:							
QUERUBR	A						
PINSTRO	R-O						
ACESASA	R	R					
TILAMER	R						
FRAX SP	R						
Salix	R						
SHRUBS:							
CORRACE			O				
GROUND:							
PHAARUN				O			

Signature: (Field Personnel)

Quality Control: This form is complete ☐ & legible ☐.

Signature: (Project Manager)

ELC Polygon: #61-5 **Assessment Type:** ☑-Visual; no access / ☐-Walk through feature

Extent of Physical Investigation of Feature: ☐-Entire / ☐-Partial, walk through polygon *(indicate on map)*

Reptile / Bat Hibernacula Features:

Contains potential reptile hibernacula features?
☐-Y* / ☐-N / ☑-Unknown, no access *(*if yes, describe in table below)*
[i.e. features that would provide a route underground, including buried concrete or rock (e.g. foundations, bridge abutments or culverts with cracks/entry points, exposed rock crevices or inactive animal burrows)]

Contains potential bat hibernacula features?
☐-Y* / ☐-N / ☑-Unknown, no access *(*if yes, describe in table below)*
[i.e. karst topography, abandoned mines or caves]

POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED

UTM	Feature Description	Photo No.	Spp. Observed Using Feature

Bat Roosting Features:

Contains potential bat roosting features?
☐-Y* / ☐-N / ☑-Unknown, no access *(*if yes, describe in table below)*
[i.e. tall trees with open surroundings, DBH >25cm, side-facing cavities ~10m high in tree]

POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED

UTM	Tree ID	Tree Spp.	DBH	Photo No.	Decay Class (1-5)	No. of Cavities	Height and Type of Cavities

Stick Nests:

Contains large stick nests?
☐-Y* / ☐-N / ☑-Unknown, no access *(*if yes, describe in table below)*

STICK NEST(S) IDENTIFIED

UTM	Tree ID	Tree Spp.	Nest Size	Photo No.	Spp. Observed Using Feature

Seeps/Springs/Vernal Pools:

Contains seeps/springs/vernal pools?
☐-Y* / ☐-N / ☑-Unknown, no access *(*if yes, describe in table below)*

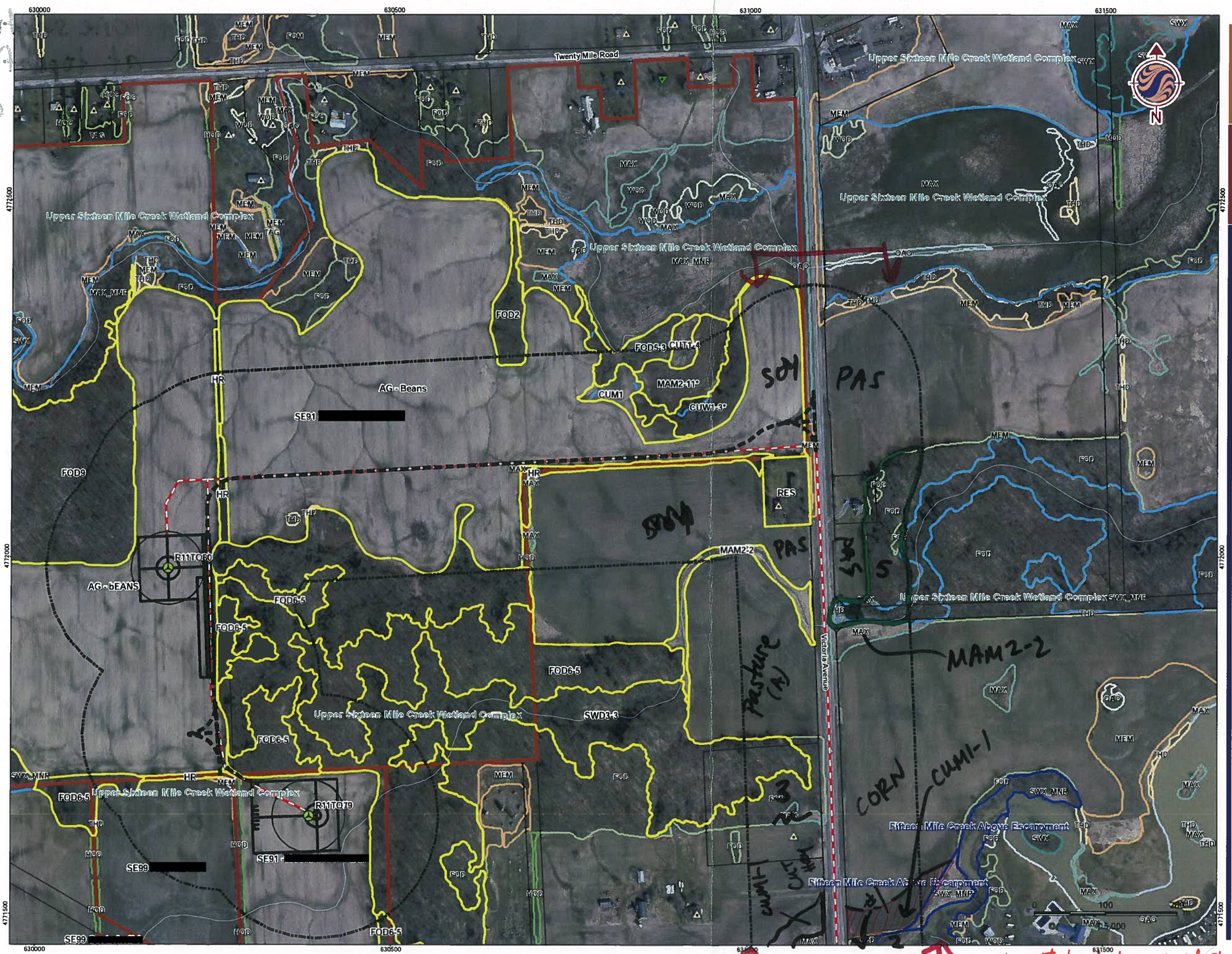
SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED

UTM	Feature No. & Type	Feature Size (Diameter)	Water Depth	Photo No.	Sub/Emergent Veg. Spp. Present?	Shrubs/ Logs at Edge Present?

SPECIES & HABITAT OBSERVATIONS (list species and type of observation & indicate on map)

CA=carcass; DP=distinctive parts; FE=feeding evidence; FY=eggs/nest; HO=house/den; OB=observed; SC=scat; SI=other sign; TK=track; VO=vocalization

Leadsful ELC along Victoria Ave.



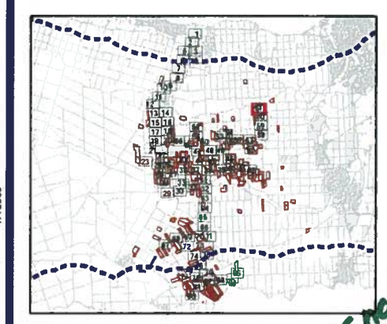
A: DANCARO, GRASS

if this section has already been ELCd please use that instead (mapping will be better)

Legend

Turbines in Signed Lands

- Standard Turbine (105 dBA)
- 51 m Turbine Setback
- Non-Particpating Receptor
- Particpating Receptor
- Proposed Collector Cable
- Preliminary Study Area
- Signed Property
- Signed Property - Outside Study Area
- Potential Signed Property
- Potential Signed Property - Outside Study Area
- ELC Boundary
- Provincially Significant Wetland
- Other/Locally Significant Wetland
- Property Boundary
- Turbine and Access Road 150m buffer



Notes

1. Coordinate System: NAD 1983 UTM Zone 17N).
2. Base features produced under license with the Ontario Ministry of Natural Resources © Queen's Printer for Ontario, 2011.

was not done in conjunction with Tuble

Find Field Sheet - dig. incomplete

Stantec

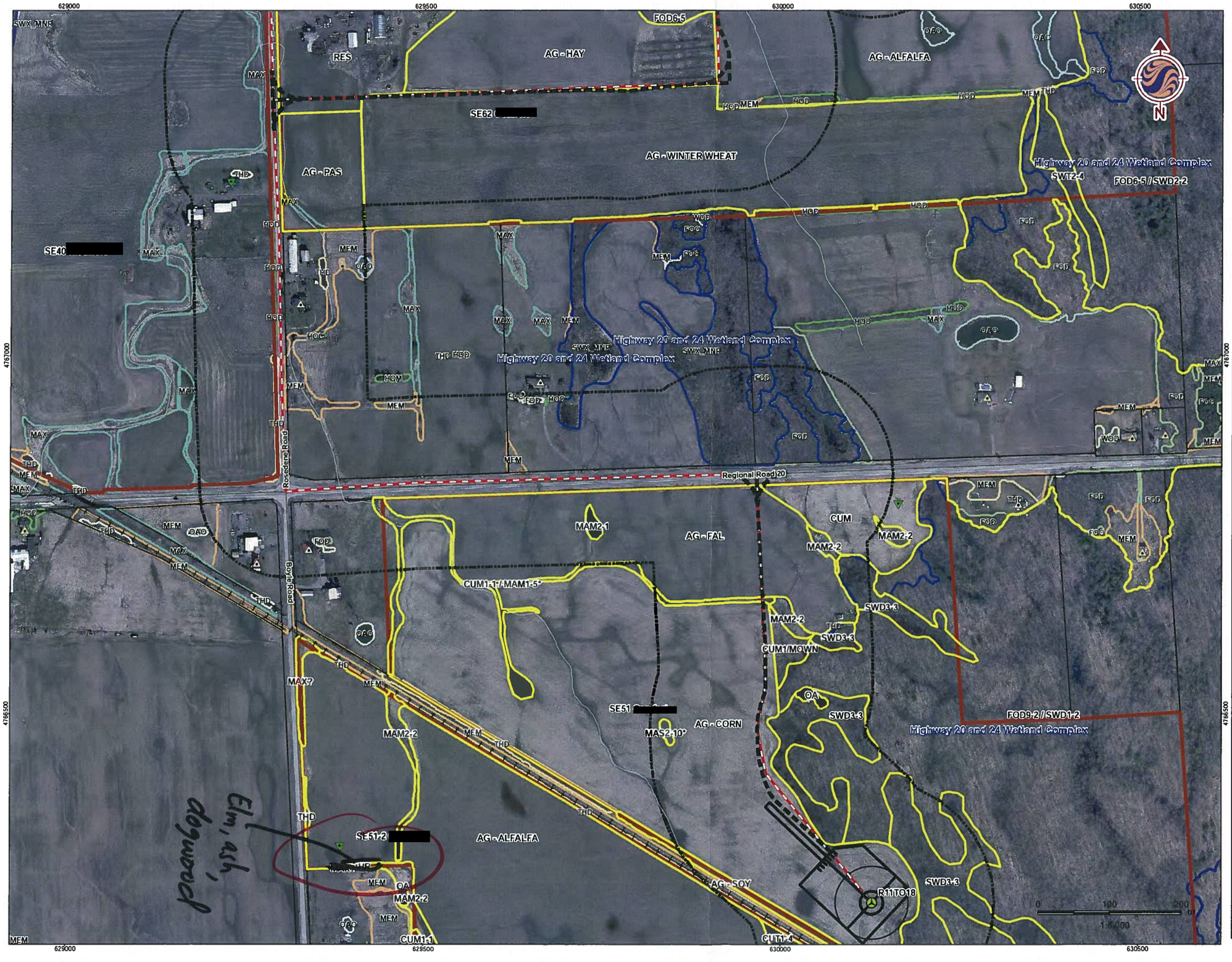
July, 2012
160950269

Client/Project
Niagara Region Wind Corporation
ELC Delineation

Figure No.
61

Title
Transmission and Collector Line
Map: 61

V:\01609\Active\160950269\planning\drawing\mxd\20120423_NHA_Fieldmaps\160950269_Release_18_ELC_T_Line_Collector_Map_Book_20120727.mxd
Revised: 2012-07-27 By: bcowper

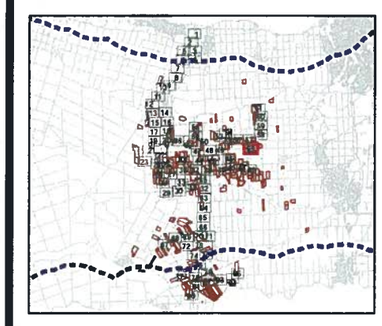


Legend

Turbines in Signed Lands

- Standard Turbine (105 dBA)
- 51 m Turbine Setback
- Non-Particpating Receptor
- Particpating Receptor
- Proposed Collector Cable
- Preliminary Study Area
- Signed Property
- Signed Property - Outside Study Area
- Potential Signed Property
- Potential Signed Property - Outside Study Area
- ELC Boundary
- Provincially Significant Wetland
- Other/Locally Significant Wetland
- Property Boundary
- Turbine and Access Road 150m buffer

Clock HR



Notes

1. Coordinate System: NAD 1983 UTM Zone 17N).
2. Base features produced under license with the Ontario Ministry of Natural Resources © Queen's Printer for Ontario, 2011.

Stantec

July, 2012
160950269

Client/Project
Niagara Region Wind Corporation
ELC Delineation

Figure No.
62

Title
Transmission and Collector Line
Map: 62

V:\01609\Active\160950269\planning\drawing\mxd\20120423_NHA_Fieldmaps\160950269_Release_18_ELC_T_Line_Collector_Map_Book_20120727.mxd
Revised: 2012-07-27 By: bcowper