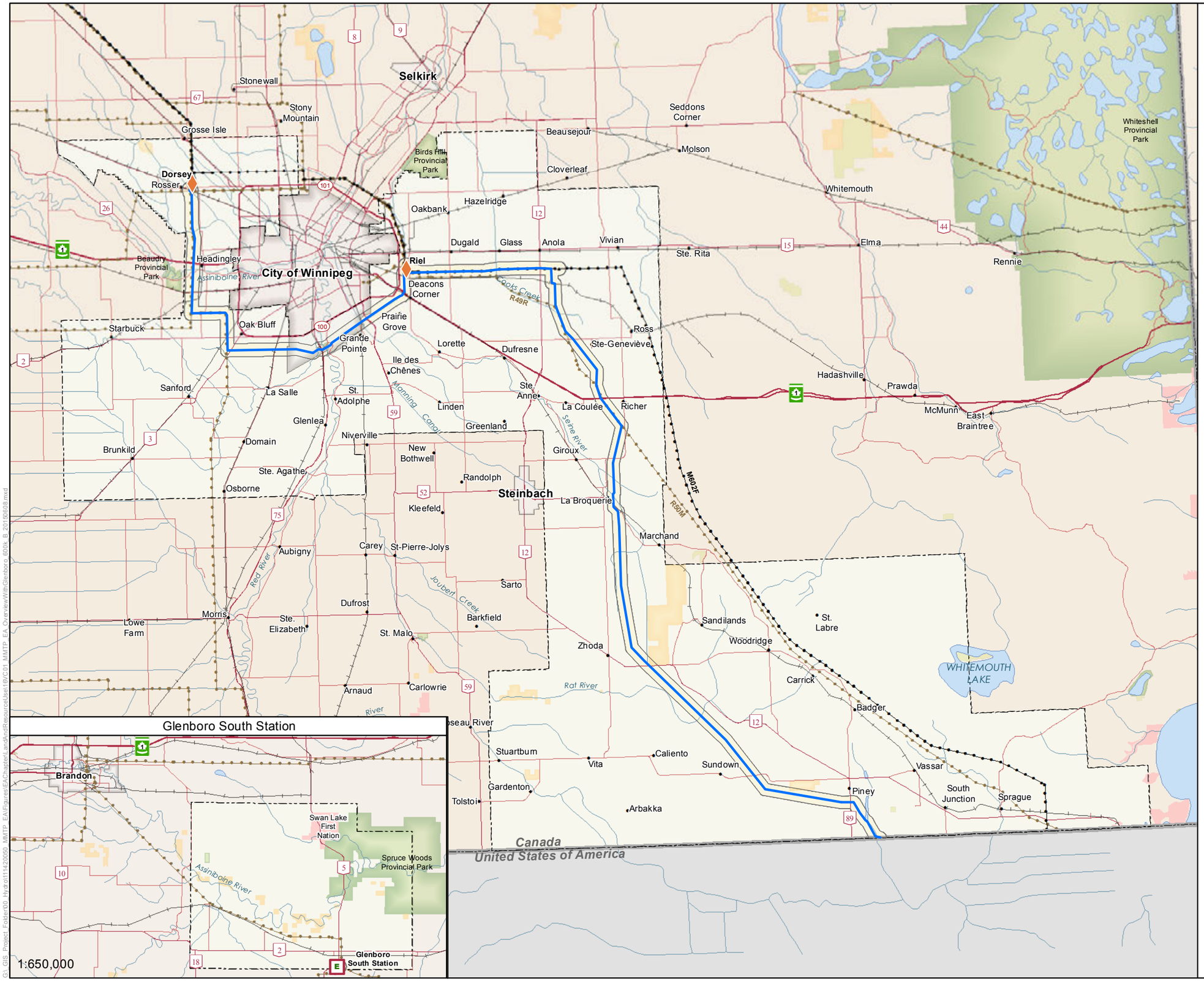


Manitoba Hydro

Manitoba-Minnesota Transmission Project

Project Infrastructure

- Converter Station (Existing)
- Final Preferred Route (FPR)

Infrastructure

- Existing 500kV Transmission Line
- Existing 230kV Transmission Line

Assessment Area

- Land and Resource Use Local Assessment Area
- Land and Resource Use Regional Assessment Area

Landbase

- Community
- Railway
- Trans Canada
- Provincial Highway
- Provincial Road
- City
- First Nation Lands
- Ecological Reserve
- Wildlife Management Area
- Provincial Park

Coordinate System: UTM Zone 14N NAD83
Data Source: MBHydro, ProvMB, NRCAN
Date Created: July 20, 2015

N

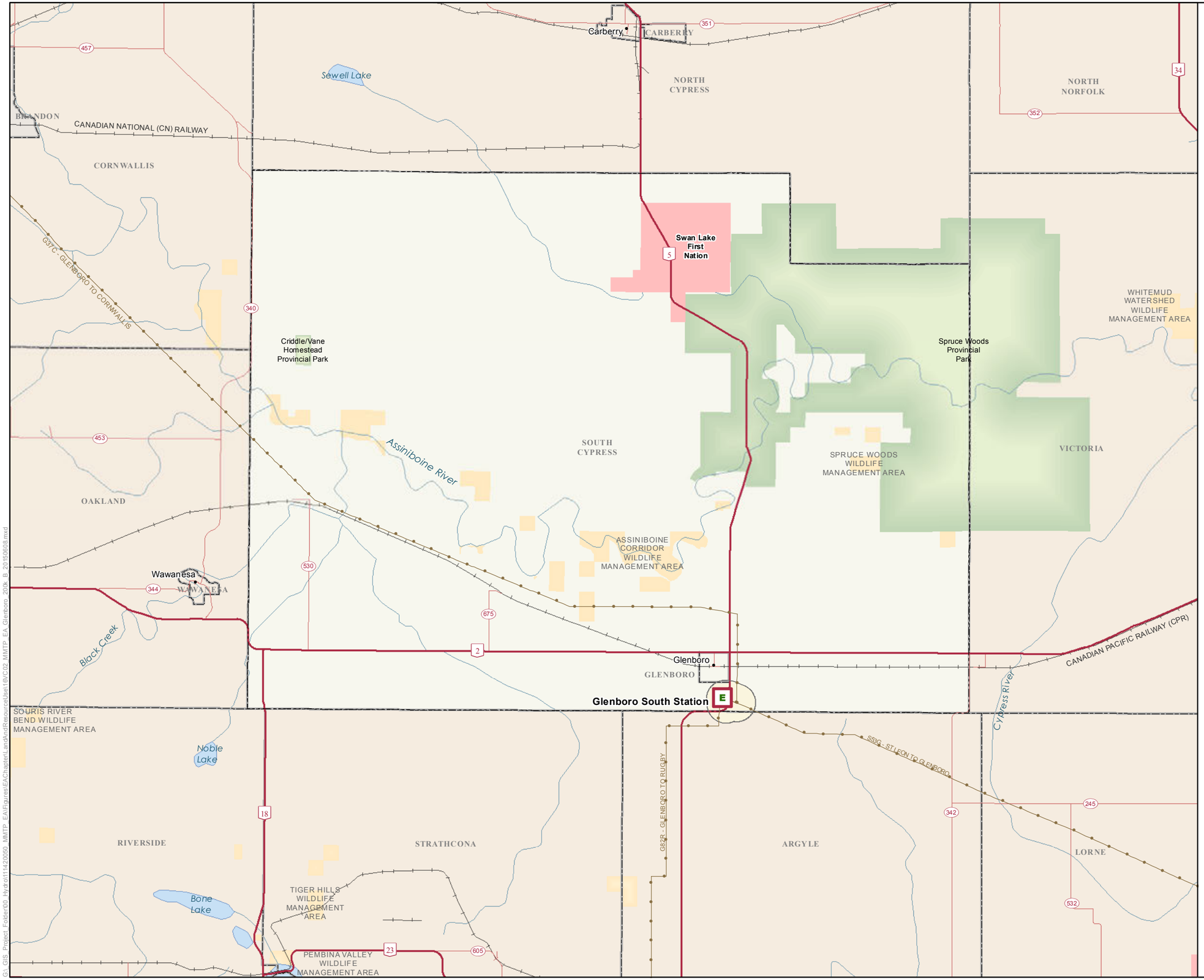
0 10 Kilometres
0 5 10 Miles

1:600,000

Land and Resource Use Assessment Area

Map 16-1

G:\ GIS_Project_Folder\00_Hydro\11142\0050_MMTP_EA\Figures\EAChapter\LandAndResourceUse\16/C01_MMTP_EA_OverviewWithGlenboro_600k_B_20150608.mxd



Manitoba Hydro

Manitoba-Minnesota Transmission Project

Infrastructure

- Electrical Station
- Existing Transmission Line

Assessment

- Land and Resource Use Local Assessment Area
- Land and Resource Use Regional Assessment Area

Landbase

- Community
- Railway
- Provincial Highway
- Provincial Road
- City / Town
- First Nation
- Wildlife Management Area
- National/Provincial Park
- Rural Municipality

Coordinate System: UTM Zone 14N NAD83
Data Source: MBHydro, ProvMB, NRCAN
Date Created: July 20, 2015

N

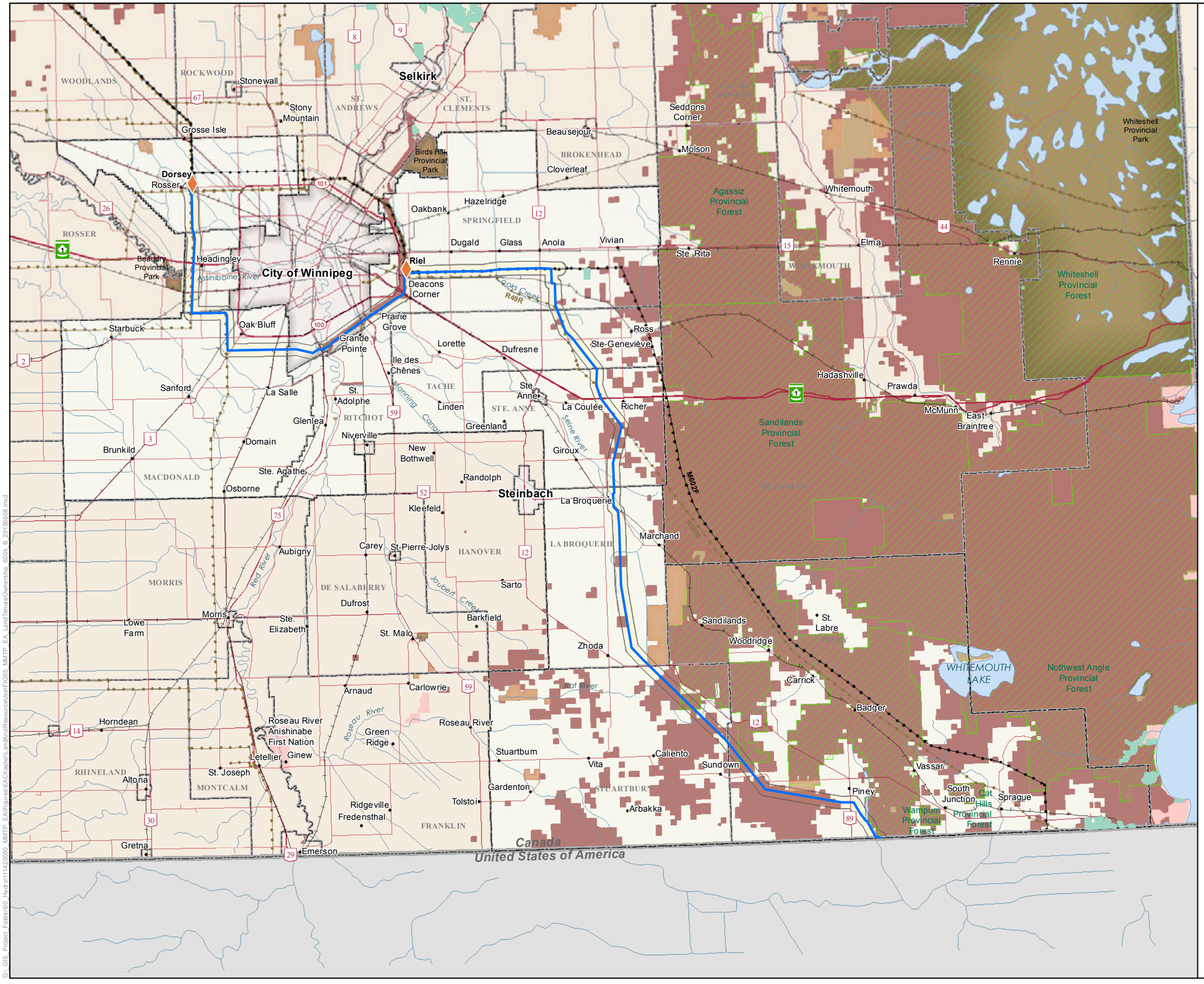
0 5 Kilometres
0 2.5 5 Miles

1:200,000

Glenboro South Station Land and Resource Use Assessment Area

Map 16-2

G:_GIS_Project_Folder\00_Hydro\11142005\0_MMTP_EA\Figures\EAChapter\LandAndResourceUse\16\C02_MMTP_EA_Glenboro_200k_B_20150603.mxd



Manitoba-Minnesota Transmission Project

Project Infrastructure

- Converter Station (Existing)
- Final Preferred Route (FPR)

Infrastructure

- Existing 500kV Transmission Line
- Existing 230kV Transmission Line

Land Tenure / Ownership

- Crown Land
- Provincial Forest
- Treaty Land Entitlement

Assessment Area

- Land and Resource Use Local Assessment Area
- Land and Resource Use Regional Assessment Area

Landbase

- Community
- Railway
- Trans Canada
- Provincial Highway
- Provincial Road
- City
- First Nation Lands
- Ecological Reserve
- Wildlife Management Area
- Provincial Park
- Rural Municipality

Coordinate System: UTM Zone 14N NAD83
Data Source: MBHydro, ProvMB, NRCAN
Date Created: August 07, 2015

N

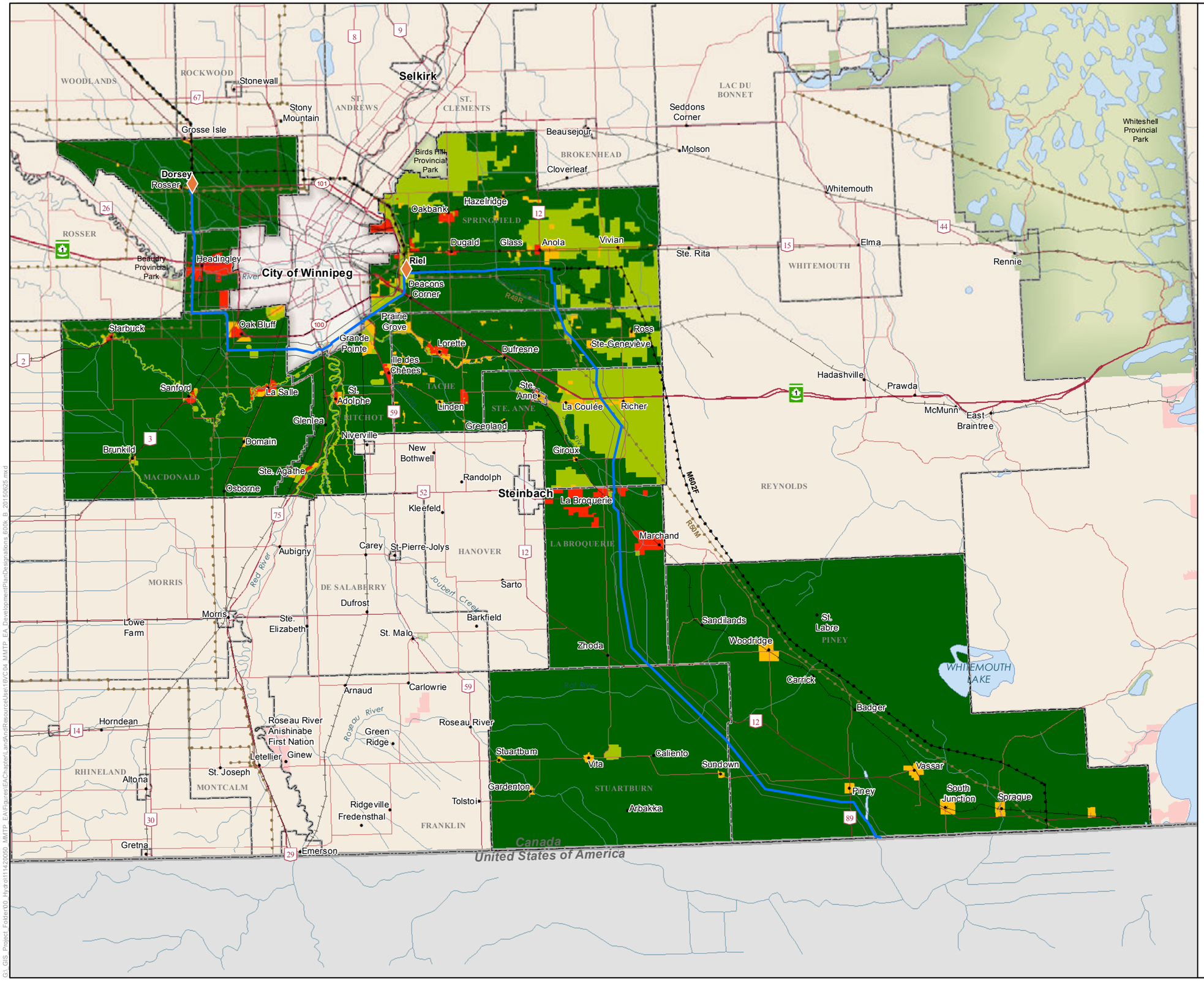
0 10 Kilometres
0 5 10 Miles

1:600,000

Land Tenure and Ownership

Map 16-3

G:\ GIS_Project_Folder\00_Hydro\111420050_MMTP_EA\Figures\EAChapter\LandandResourceUse\FIG05_MMTP_EA_LandTenureOwnership_600k_B_20150608.mxd



Manitoba Hydro

Manitoba-Minnesota Transmission Project

Project Infrastructure

- Converter Station (Existing)
- Final Preferred Route (FPR)

Infrastructure

- Existing 500kV Transmission Line
- Existing 230kV Transmission Line

Development Plan Rank[1]

- 100 (General Agriculture)
- 200 (Other Agriculture)
- 300 (Rural Development)
- 400 (Urban/Settlement Centre)

Assessment Area

- Land and Resource Use Local Assessment Area
- Land and Resource Use Regional Assessment Area

Landbase

- Community
- Railway
- Trans Canada
- Provincial Highway
- Provincial Road
- City
- First Nation Lands
- Provincial Park
- Rural Municipality

Source:
1. Development Plan Rankings, 2014, MMM Group

Coordinate System: UTM Zone 14N NAD83
Data Source: MBHydro, ProvMB, NRCAN
Date Created: July 20, 2015

N

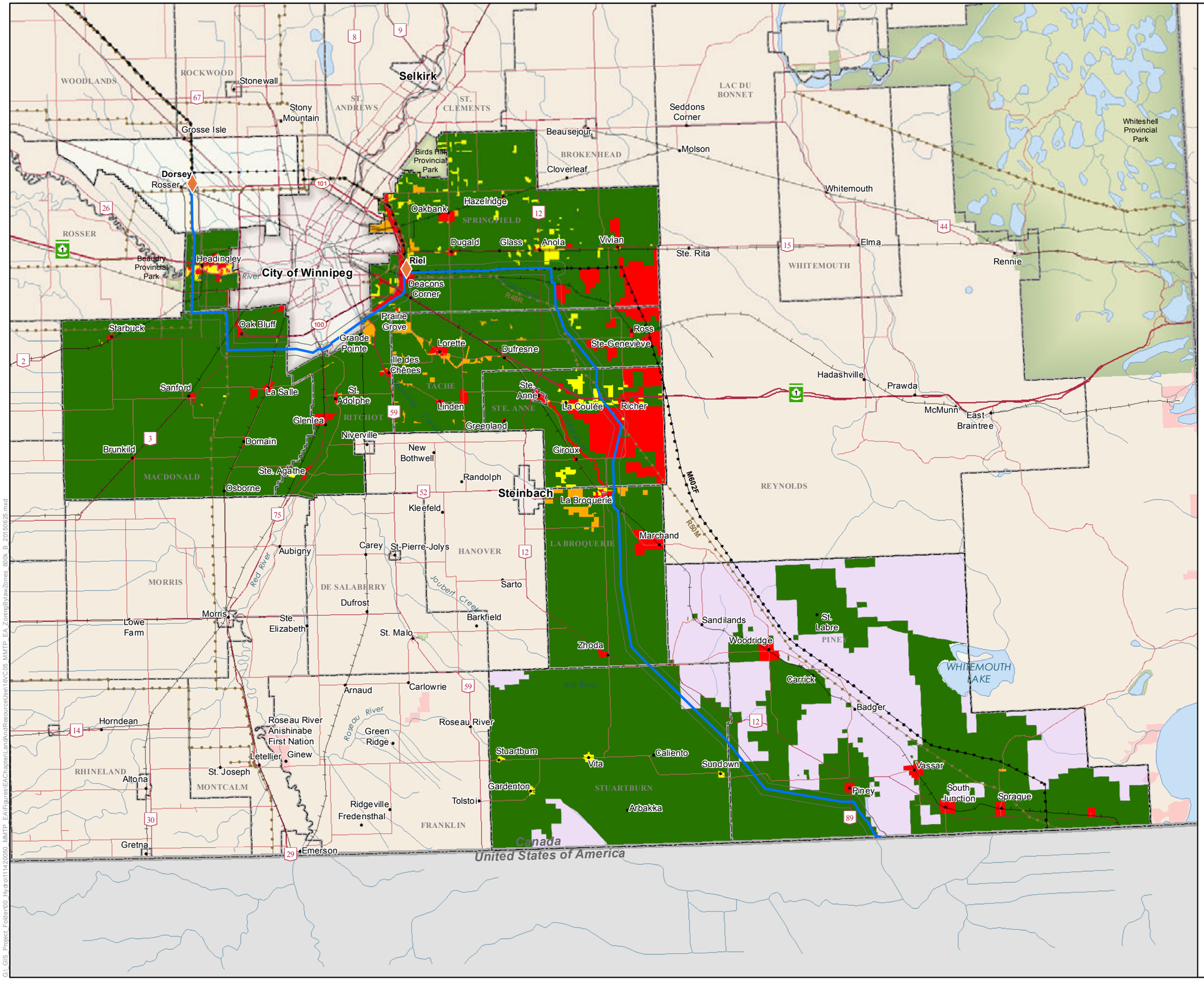
0 10 Kilometres
0 5 10 Miles

1:600,000

Development Plan Designations

Map 16-4

G:\ GIS_Project_Folder\00_Hydro\11142005\0_MMTP_EA\Figures\EA\Chapter\LandAndResourceUse\16\C04_MMTP_EA_DevelopmentPlanDesignations_600k_B_20150625.mxd



Manitoba Hydro

Manitoba-Minnesota Transmission Project

Project Infrastructure

- Converter Station (Existing)
- Final Preferred Route (FPR)

Infrastructure

- Existing 500kV Transmission Line
- Existing 230kV Transmission Line

Zoning By-law Zones Development Impediment Rank[1]

- 1-5 (Agriculture Zoning)
- 6-10
- 11-15
- 16-20 (Other, Urban Zoning & Open Space Zoning)
- Community Pastures, Provincial Forests and Crown Lands (No Zoning)

Assessment Area

- Land and Resource Use Local Assessment Area
- Land and Resource Use Regional Assessment Area

Landbase

- Community
- Railway
- Trans Canada
- Provincial Highway
- Provincial Road
- City
- First Nation Lands
- Provincial Park
- Rural Municipality

Source:
1. Zoning By-law Zones Development Impediment Rank, 2014, MMM Group

Coordinate System: UTM Zone 14N NAD83
Data Source: MBHydro, ProvMB, NRCAN
Date Created: July 20, 2015

N

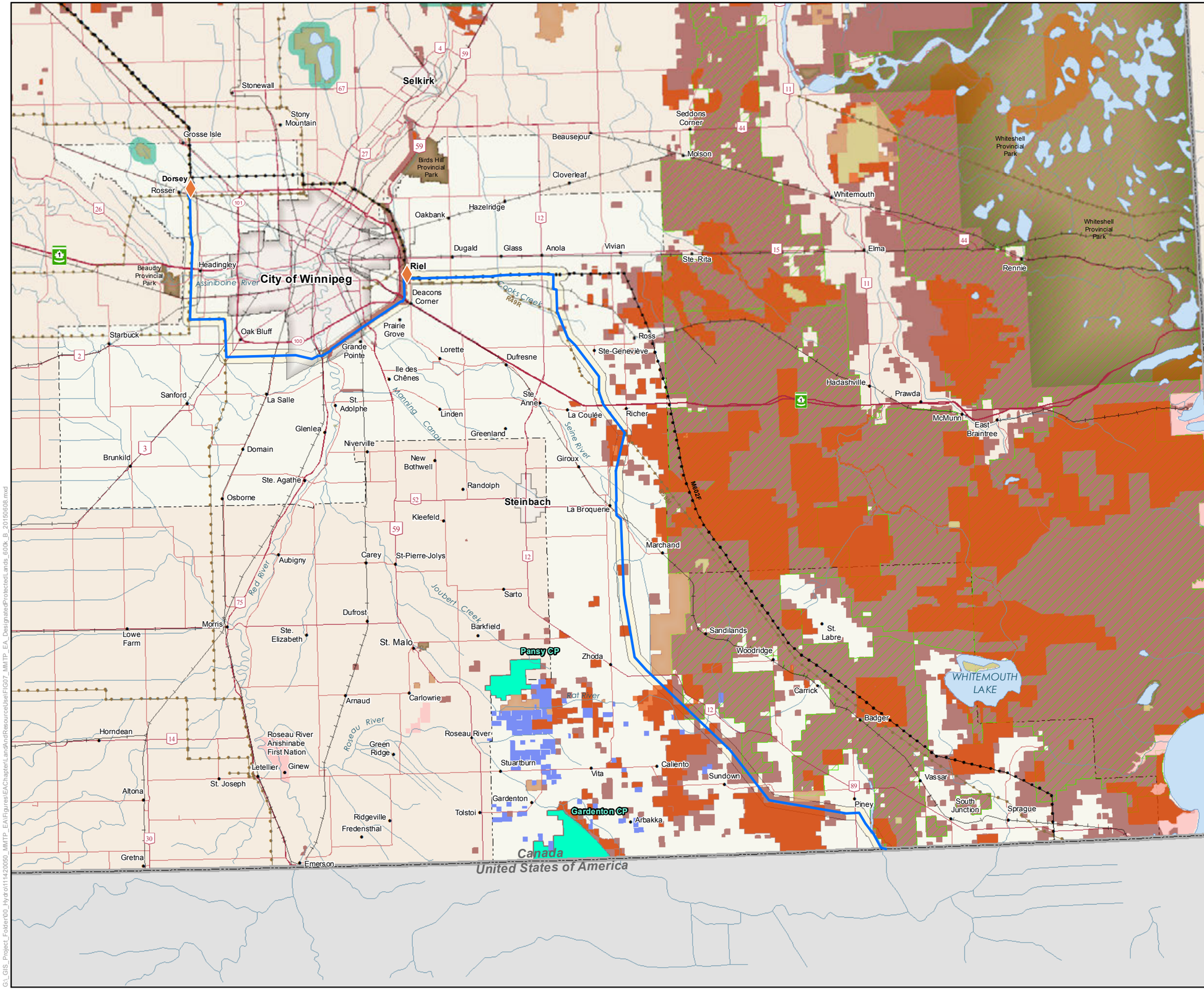
0 10 Kilometres
0 5 10 Miles

1:600,000

Zoning By-law Zones

Map 16-5

G:\ GIS_Project_Folder\00_Hydro\11142005\0_MMTP_EA\Figures\EA\Chapter\LandAndResourceUse\16\C05_MMTP_EA_ZoningBylawZones_600k_B_20150625.mxd



Manitoba Hydro

Manitoba-Minnesota Transmission Project

Project Infrastructure

- Converter Station (Existing)
- Final Preferred Route (FPR)

Infrastructure

- Existing 500kV Transmission Line
- Existing 230kV Transmission Line

Designated and Protected Lands[1]

- First Nation Lands
- Ecological Reserve
- Wildlife Management Area
- Provincial Park
- Privately Owned Tall Grass
- CDC Important Bird Areas
- Candidate Protected Areas[1]
- Community Pastures
- Provincial Forest
- Manitoba Crown Lands

Landbase

- Community
- Railway
- Trans Canada
- Provincial Highway
- Provincial Road
- City

Source:
1. Candidate Protected Areas, 2013, Manitoba Conservation and Water Stewardship

Coordinate System: UTM Zone 14N NAD83
Data Source: MBHydro, ProvMB, NRCAN
Date Created: August 07, 2015

N

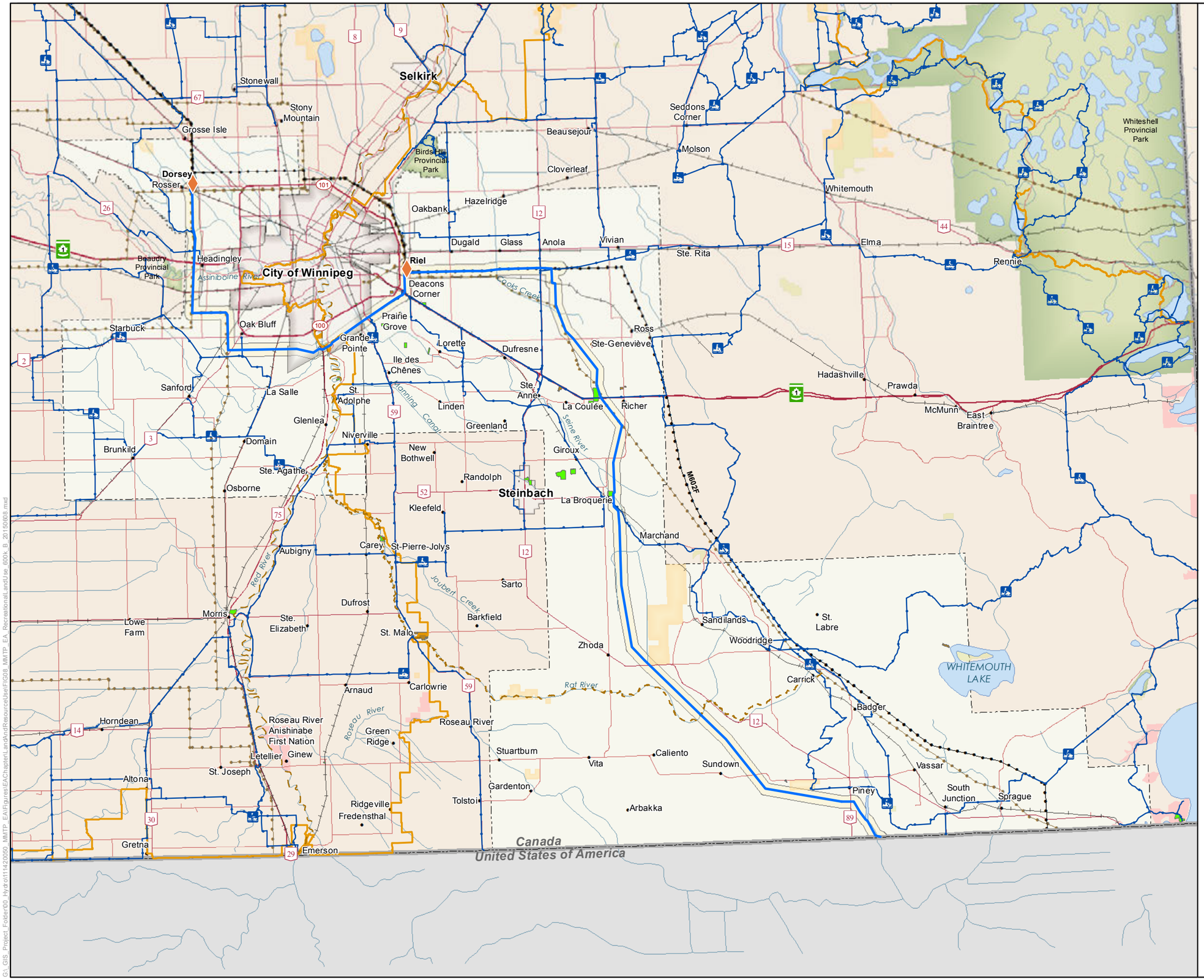
0 5 10 Kilometres
0 5 10 Miles

1:600,000

Designated Lands and Protected Areas

Map 16-6

G:_GIS_Project_Folder\00_Hydro\11142\0050_MMTP_EA\Figures\EA\Chapter\LandAndResourceUse\FIG07_MMTP_EA_DesignatedProtectedLands_600k_B_20150608.mxd



Manitoba Hydro

Manitoba-Minnesota Transmission Project

Project Infrastructure

- Converter Station (Existing)
- Final Preferred Route (FPR)

Infrastructure

- Existing 500kV Transmission Line
- Existing 230kV Transmission Line

Land Use and Recreation

- Snowmobile Shelters
- Canoe Route
- Snoman Designated Trails
- Trans Canada Trail
- Golf Course
- Campgrounds and Resorts
- Public Shooting Ground

Assessment Area

- Land and Resource Use Local Assessment Area
- Land and Resource Use Regional Assessment Area

Landbase

- Community
- Railway
- Trans Canada
- Provincial Highway
- Provincial Road
- City
- First Nation Lands
- Ecological Reserve
- Wildlife Management Area
- Provincial Park

Coordinate System: UTM Zone 14N NAD83
Data Source: MBHydro, ProvMB, NRCAN
Date Created: August 07, 2015

N

0 10 Kilometres
0 5 10 Miles

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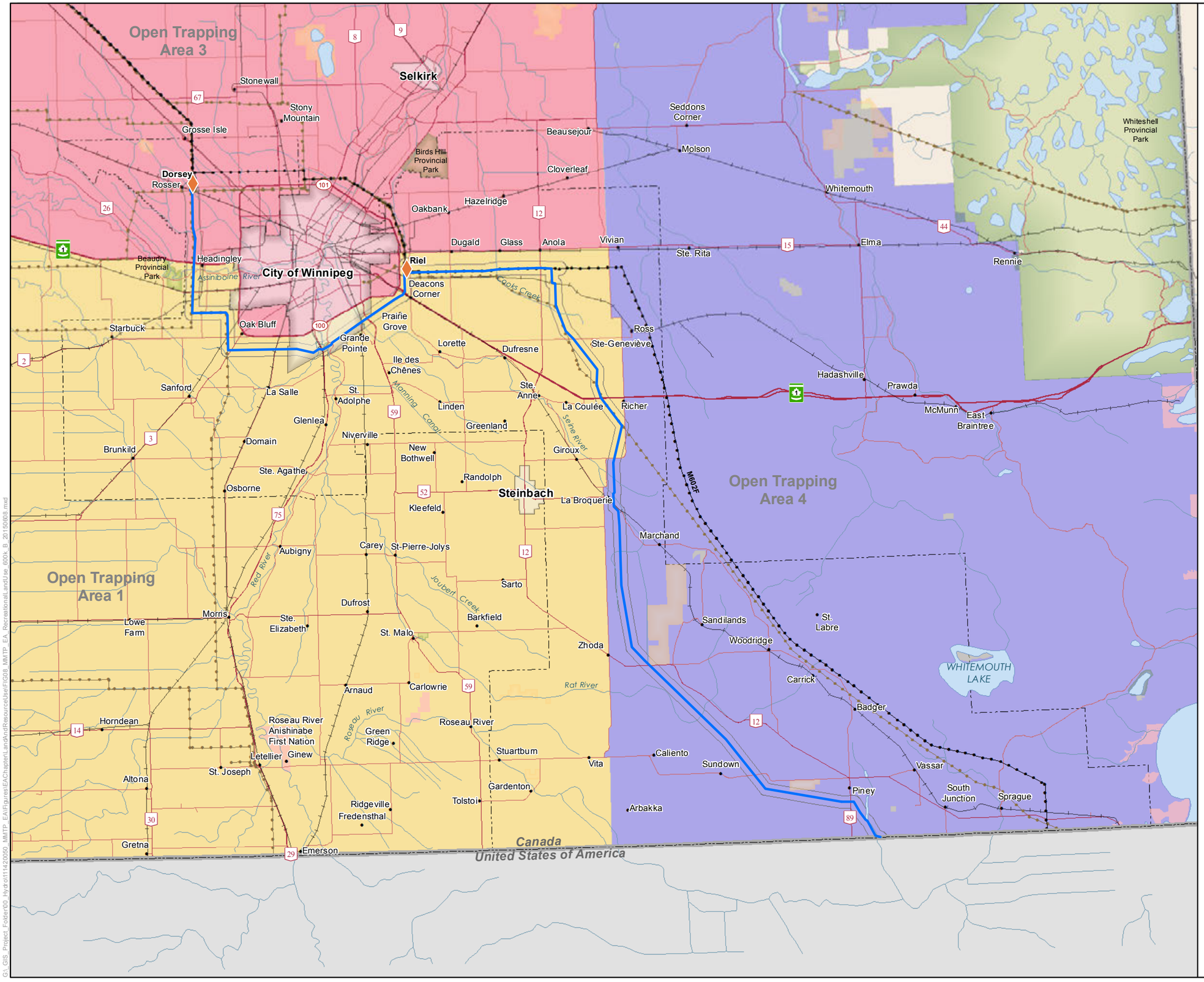
Recreational Land Use

Map 16-7

G:_GIS_Project_Folder\00_Hydro\111420050_MMTP_EA\Figures\EAChapter\LandandResourceUse\FIG08_MMTP_EA_RecreationalLandUse_600k_B_20150608.mxd



Manitoba Hydro

Manitoba-Minnesota Transmission Project

Project Infrastructure

- Converter Station (Existing)
- Final Preferred Route (FPR)

Infrastructure

- Existing 500kV Transmission Line
- Existing 230kV Transmission Line

Open Trapping Areas[1]

- Open Trapping Area 1
- Open Trapping Area 3
- Open Trapping Area 4

Assessment Area

- Land and Resource Use Local Assessment Area
- Land and Resource Use Regional Assessment Area

Landbase

- Community
- Railway
- Trans Canada
- Provincial Highway
- Provincial Road
- City
- First Nation Lands
- Ecological Reserve
- Wildlife Management Area
- Provincial Park

Source:
1. Open Trapping Areas, 2014, Manitoba Conservation and Water Stewardship

Coordinate System: UTM Zone 14N NAD83
Data Source: MBHydro, ProvMB, NRCAN
Date Created: August 13, 2015

N

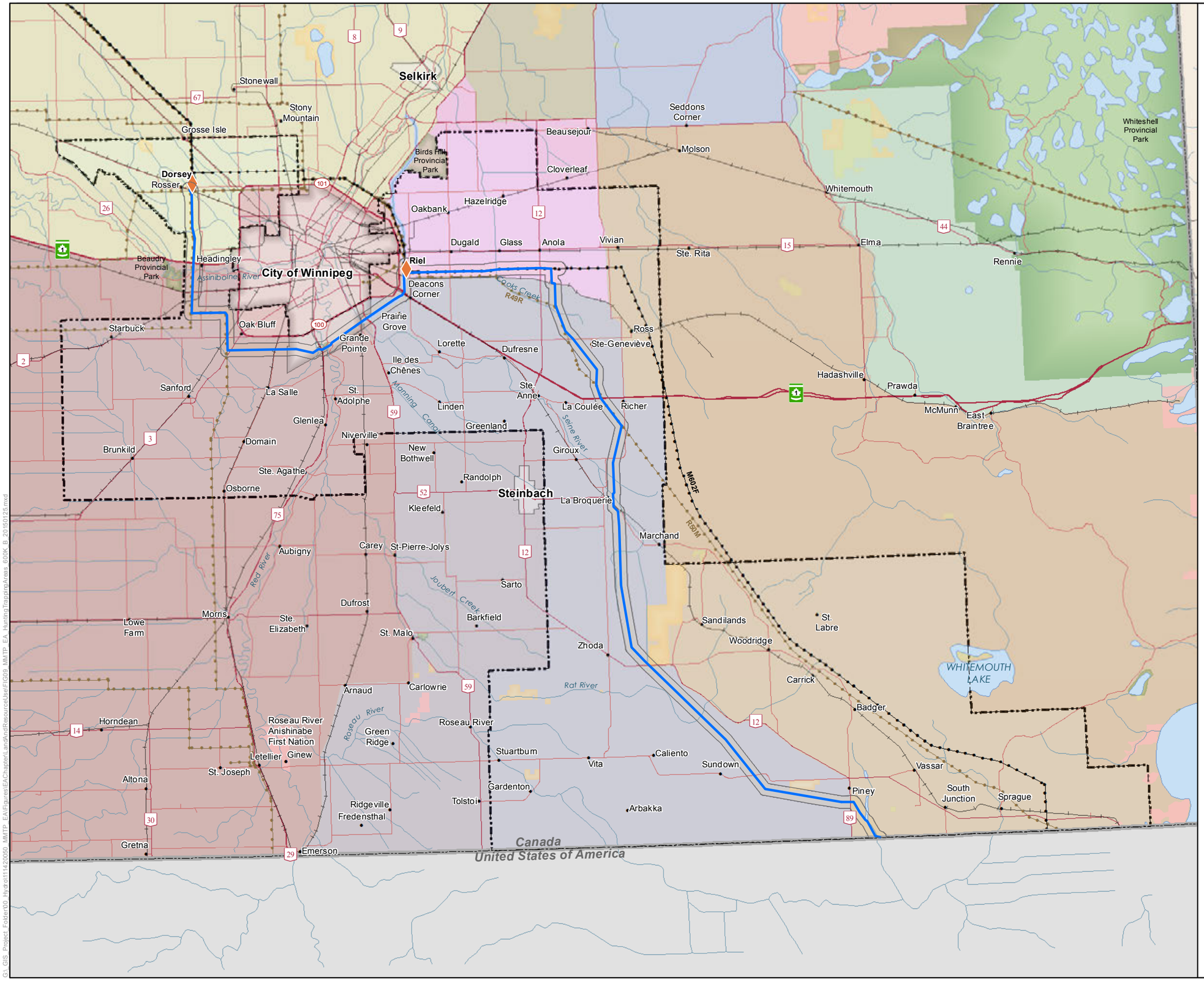
0 5 10 Kilometres
0 5 10 Miles

1:600,000

Open Trapping Areas

Map 16-8

G:_GIS_Project_Folder\00_Hydro\11142005\0_MMTP_EA\Figures\EAChapter\LandAndResourceUse\FIG08_MMTP_EA_RecreationalLandUse_600k_B_20150808.mxd



Manitoba Hydro

Manitoba-Minnesota Transmission Project

Project Infrastructure

- Converter Station (Existing)
- Final Preferred Route (FPR)

Infrastructure

- Existing 500kV Transmission Line
- Existing 230kV Transmission Line

Game Hunting Areas

25B	34C
26	35
33	35A
34	36
34A	38

Assessment Area

- Land and Resource Use Local Assessment Area
- Land and Resource Use Regional Assessment Area

Landbase

- Community
- Railway
- Trans Canada
- Provincial Highway
- Provincial Road
- City
- First Nation Lands
- Ecological Reserve
- Wildlife Management Area
- Provincial Park

Coordinate System: UTM Zone 14N NAD83
Data Source: MBHydro, ProvMB, NRCAN
Date Created: August 10, 2015

N

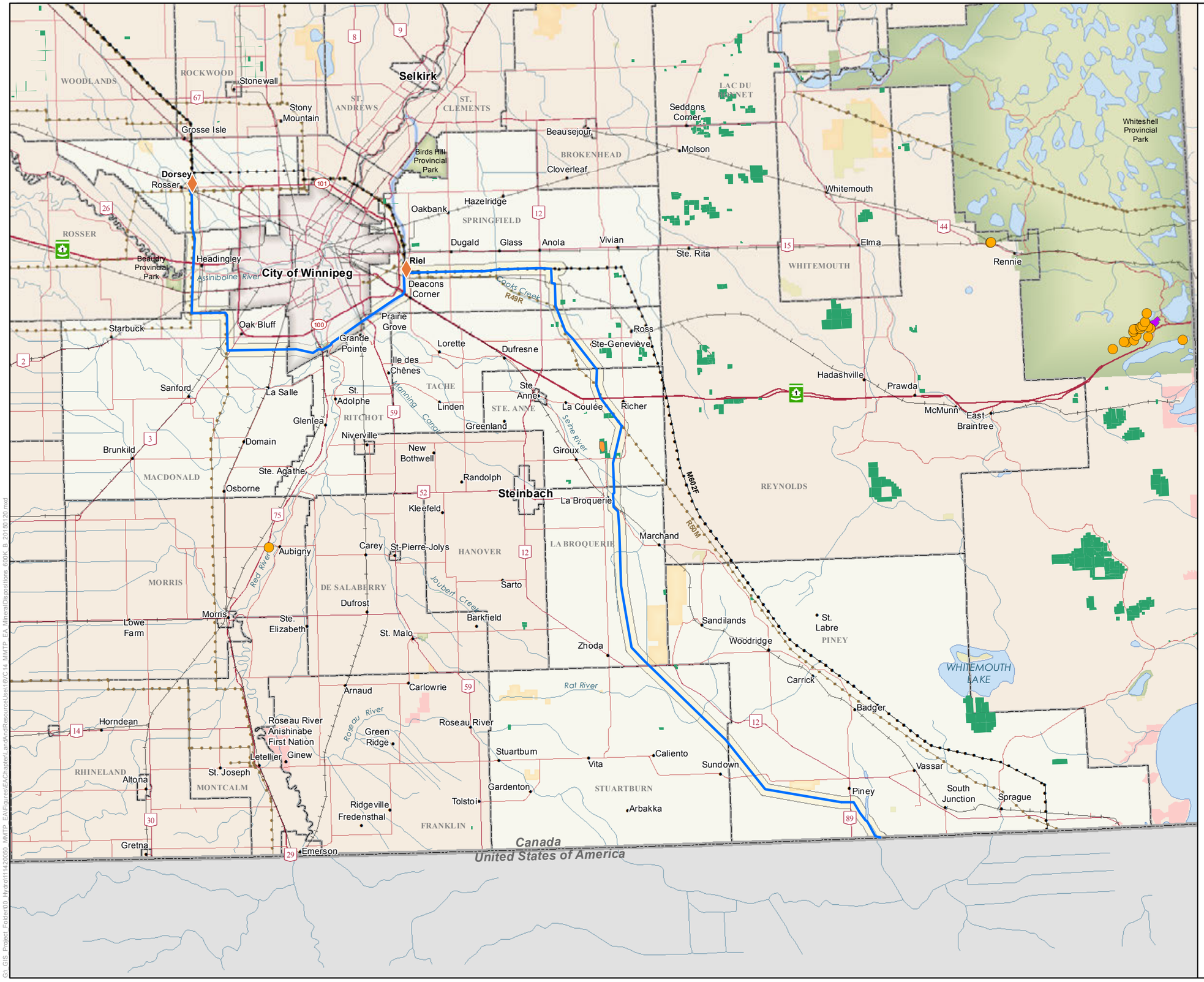
0 10 Kilometres
0 5 10 Miles

1:600,000

Game Hunting Areas

Map 16-9

G:\ GIS_Project_Folder\00_Hydro\11420050_MMTP_EA\Figures\EA\Chapter\LandandResourceUse\FIG09_MMTP_EA_HuntingTrappingAreas_600K_B_20150125.mxd


Selkirk
Dorsey
Rosser
Riel
City of Winnipeg
Steinbach
Aubigny
Morris
Emerson
Canada
United States of America
WOODLANDS
ROCKWOOD
ST. ANDREWS
ST. CLEMENTS
BROKENHEAD
SPRINGFIELD
ROSSER
TACHE
RITCHOT
ST. ANNE
MACDONALD
MORRIS
DE SALABERRY
HANOVER
LA BROQUERIE
LAC DU BONNET
WHITEMOUTH
REYNOLDS
PINEY
RHINELAND
MONTCALM
STUARTBURN
FRANKLIN
Stonewall
Stony Mountain
Grosse Isle
Birds Hill Provincial Park
Beausejour
Cloverleaf
Seddons Corner
Molson
Whitemouth
Whiteshell Provincial Park
Hazelridge
Oakbank
Dugald
Glass
Anola
Vivian
Ste. Rita
Elma
Rennie
Beaudry Provincial Park
Headingley
Assiniboine River
Deacons Corner
Cooks Creek
R49R
Starbuck
Oak Bluff
Prairie Grove
Grande Pointe
Lorette
Dufresne
Ross
Ste-Geneviève
Ile des Chênes
Hadashville
Prawda
McMunn
East Braintree
Sanford
La Salle
St. Adolphe
Linden
Ste. Anne
La Coulée
Richer
Glenlea
Niverville
Greenland
Serine River
Giroux
Brunkild
Domain
New Bothwell
Randolph
Ste. Agathe
Osborne
Kleefeld
La Broquerie
M602F
R50M
Marchand
Carey
St-Pierre-Jolys
Red River
Joubert Creek
Sarto
Dufrost
Barkfield
Lowe Farm
Ste. Elizabeth
St. Malo
Zhoda
Sandilands
St. Labre
Woodridge
Carrick
Badger
WHITEMOUTH LAKE
Arnaud
Carlowrie
Rat River
Horndean
Roseau River Anishinabe First Nation
Roseau River
Green Ridge
Letellier
Ginew
Stuartburn
Vita
Caliento
Sundown
Vassar
Altona
St. Joseph
Gardenton
Tolstoi
Arbakka
Piney
South Junction
Sprague
Ridgeville
Fredensthal
Gretna
Manitoba-Minnesota Transmission Project
Project Infrastructure
Converter Station (Existing)
Final Preferred Route (FPR)
Infrastructure
Existing 500kV Transmission Line
Existing 230kV Transmission Line
Resource Use
Mine Sites
Giroux Peat Bog
Mineral Leases[1]
Quarry Leases
Assessment Area
Land and Resource Use Local Assessment Area
Land and Resource Use Regional Assessment Area
Landbase
Community
Railway
Trans Canada
Provincial Highway
Provincial Road
City
First Nation Lands
Ecological Reserve
Wildlife Management Area
Provincial Park
Rural Municipality
Source:
1. Mineral Leases, 2014, Manitoba Mineral Resources
Coordinate System: UTM Zone 14N NAD83
Data Source: MBHydro, ProvMB, NRCAN
Date Created: July 20, 2015
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0 5 10 Miles
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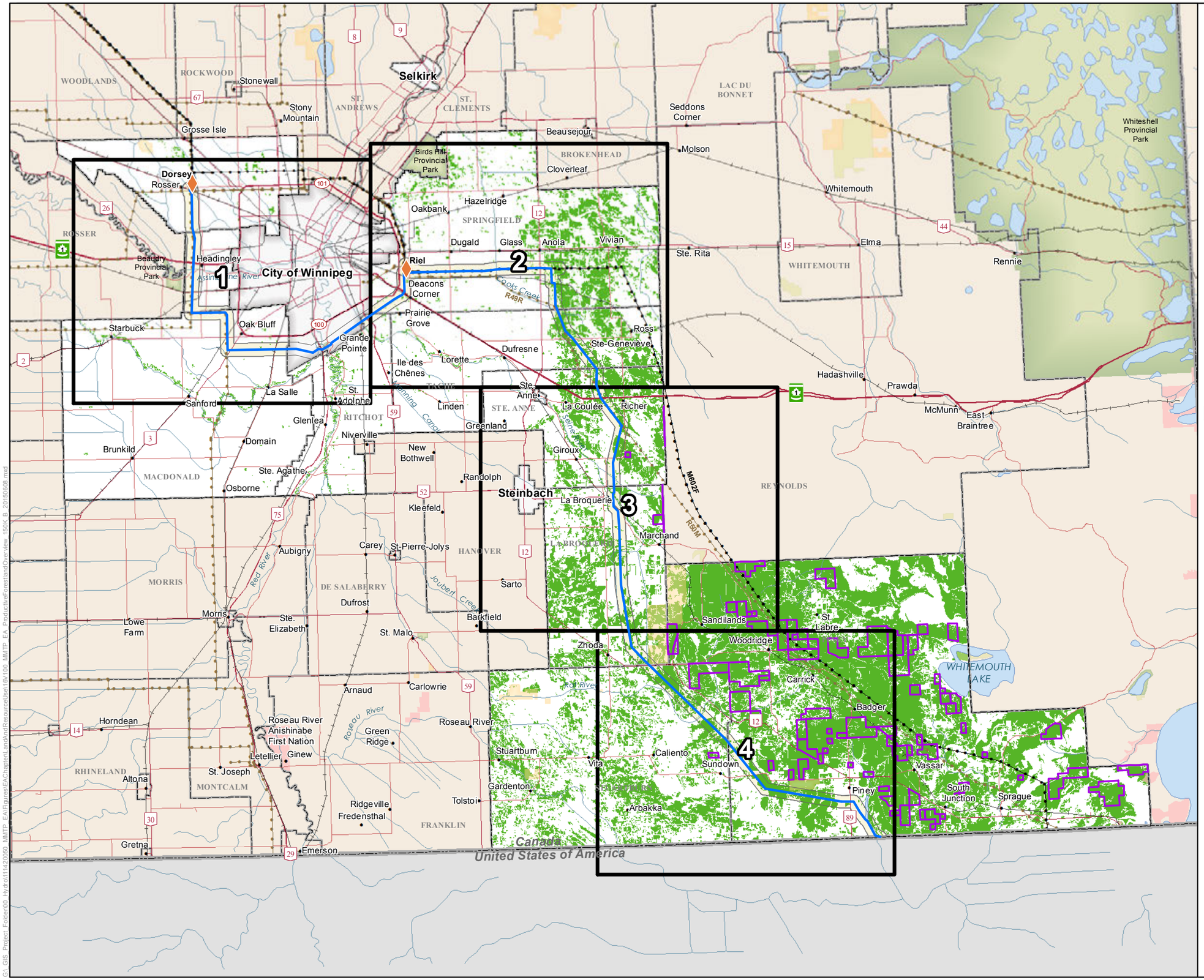
Mineral Dispositions
Map 16-10



Manitoba Hydro

Manitoba-Minnesota Transmission Project

Project Infrastructure

- Converter Station (Existing)
- Final Preferred Route (FPR)

Infrastructure

- Existing 500kV Transmission Line
- Existing 230kV Transmission Line

Productive Forestland

- Timber Sales Plan 2010-15
- Productive Forestland[1]

Map Series Index - 1:150,000

- Map Series Tile

Assessment Area

- Forestry Local Assessment Area
- Forestry Regional Assessment Area

Landbase

- Community
- Trans Canada Highway
- Provincial Highway
- Provincial Road
- City / Town
- First Nation Lands
- Rural Municipality
- Ecological Reserve
- Wildlife Management Area
- Provincial Park
- Watercourse
- Waterbody

Source:
1. Forest Resource Inventory, 1979-1999, Manitoba Conservation and Water Stewardship

Coordinate System: UTM Zone 14N NAD83
Data Source: MBHydro, ProvMB, NRCAN
Date Created: August 07, 2015

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0 5 10 Miles

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Index of Map Series
Productive Forestland

Map Series 16-100

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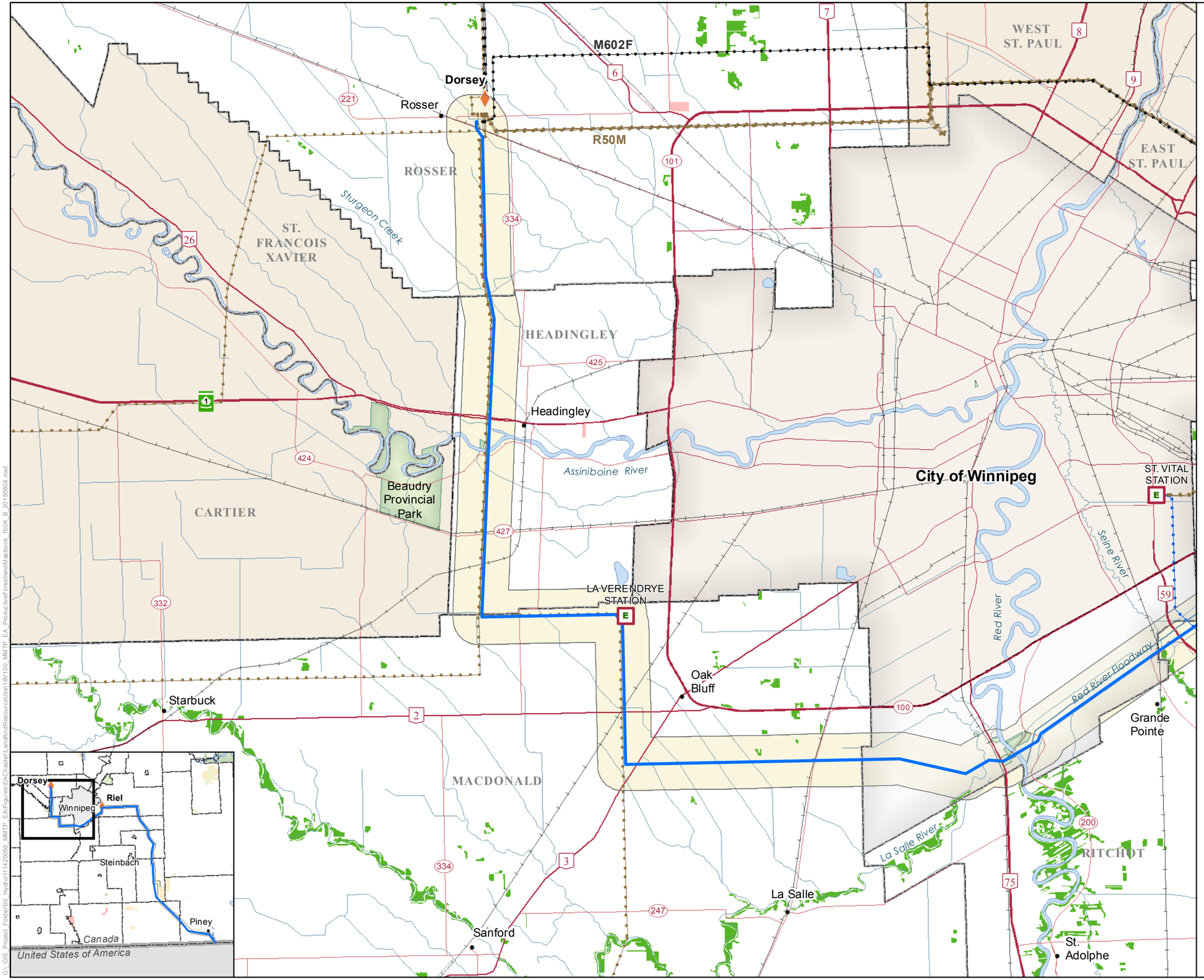

Manitoba Hydro

Manitoba-Minnesota Transmission Project

Project Infrastructure

- Converter Station (Existing)
- Final Preferred Route (FPR)

Infrastructure

- Electrical Station
- St. Vital Transmission Complex (V95L)
- Existing 500kV Transmission Line
- Existing 230kV Transmission Line

Productive Forestland

- Productive Forestland[1]

Assessment Area

- Forestry Local Assessment Area
- Forestry Regional Assessment Area

Landbase

- Community
- Trans Canada Highway
- Provincial Highway
- Provincial Road
- City / Town
- First Nation Lands
- Rural Municipality
- Ecological Reserve
- Wildlife Management Area
- Provincial Park
- Watercourse
- Waterbody

Source:
Forest Resource Inventory, 1979-1999, Manitoba Conservation and Water Stewardship

Coordinate System: UTM Zone 14N NAD83
Data Source: MBHydro, ProvMB, NRCAN
Date Created: June 26, 2015

N

0 2 4 Kilometres
0 1.5 3 Miles

1:150,000

Productive Forestland

Map 16-100-01

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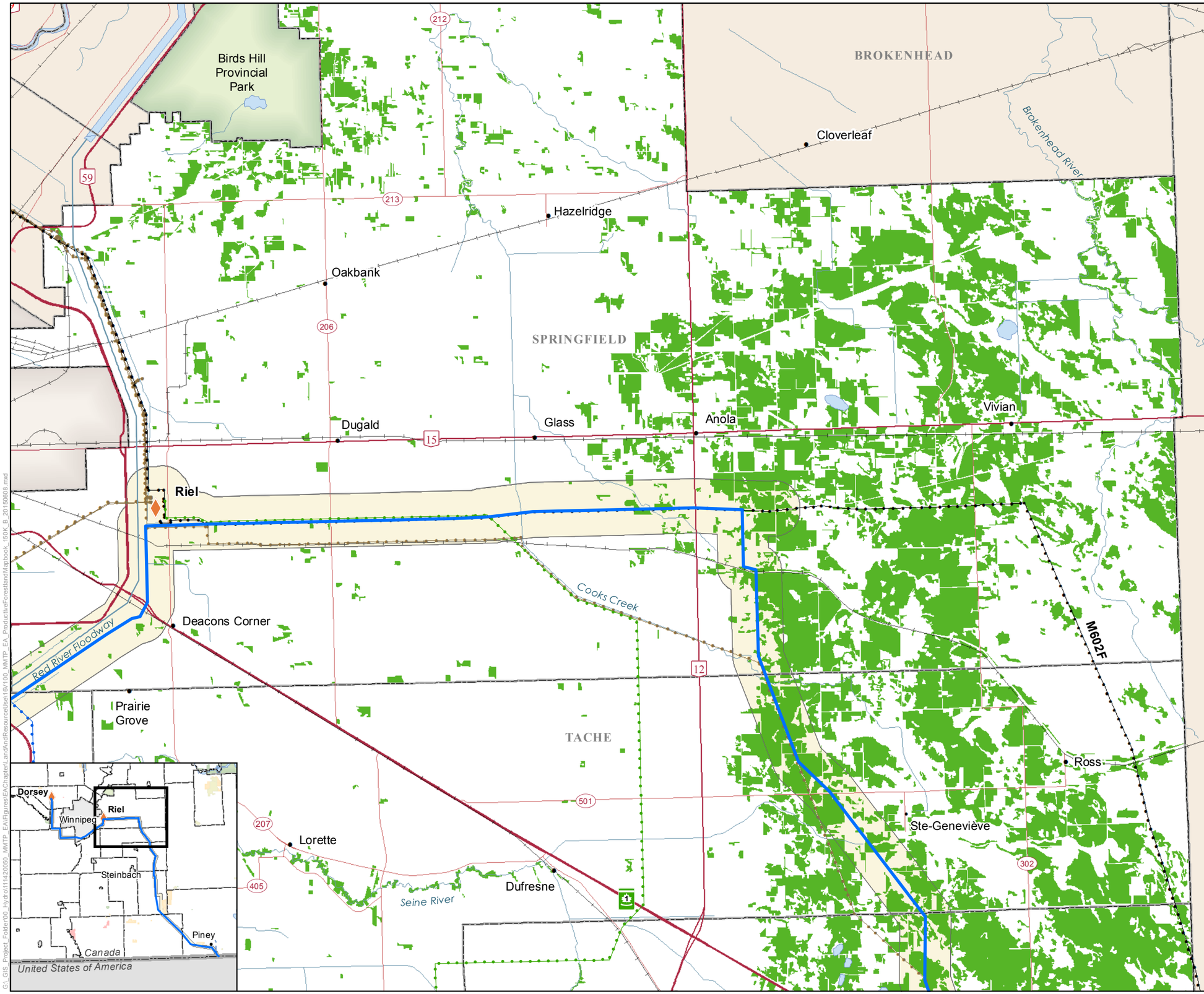

Manitoba Hydro

Manitoba-Minnesota Transmission Project

Project Infrastructure

- Converter Station (Existing)
- Final Preferred Route (FPR)

Infrastructure

- Bipole III Transmission Line (Approved)
- St. Vital Transmission Complex (V95L)
- Existing 500kV Transmission Line
- Existing 230kV Transmission Line

Productive Forestland

- Productive Forestland

Assessment Area[1]

- Forestry Local Assessment Area
- Forestry Regional Assessment Area

Landbase

- Community
- Trans Canada Highway
- Provincial Highway
- Provincial Road
- City / Town
- First Nation Lands
- Rural Municipality
- Ecological Reserve
- Wildlife Management Area
- Provincial Park
- Watercourse
- Waterbody

Source:
1. Forest Resource Inventory, 1979-1999, Manitoba Conservation and Water Stewardship

Coordinate System: UTM Zone 14N NAD83
Data Source: MBHydro, ProvMB, NRCAN
Date Created: June 26, 2015

N

0 2 4 Kilometres
0 1.5 3 Miles

1:150,000

Productive Forestland

Map 16-100-02

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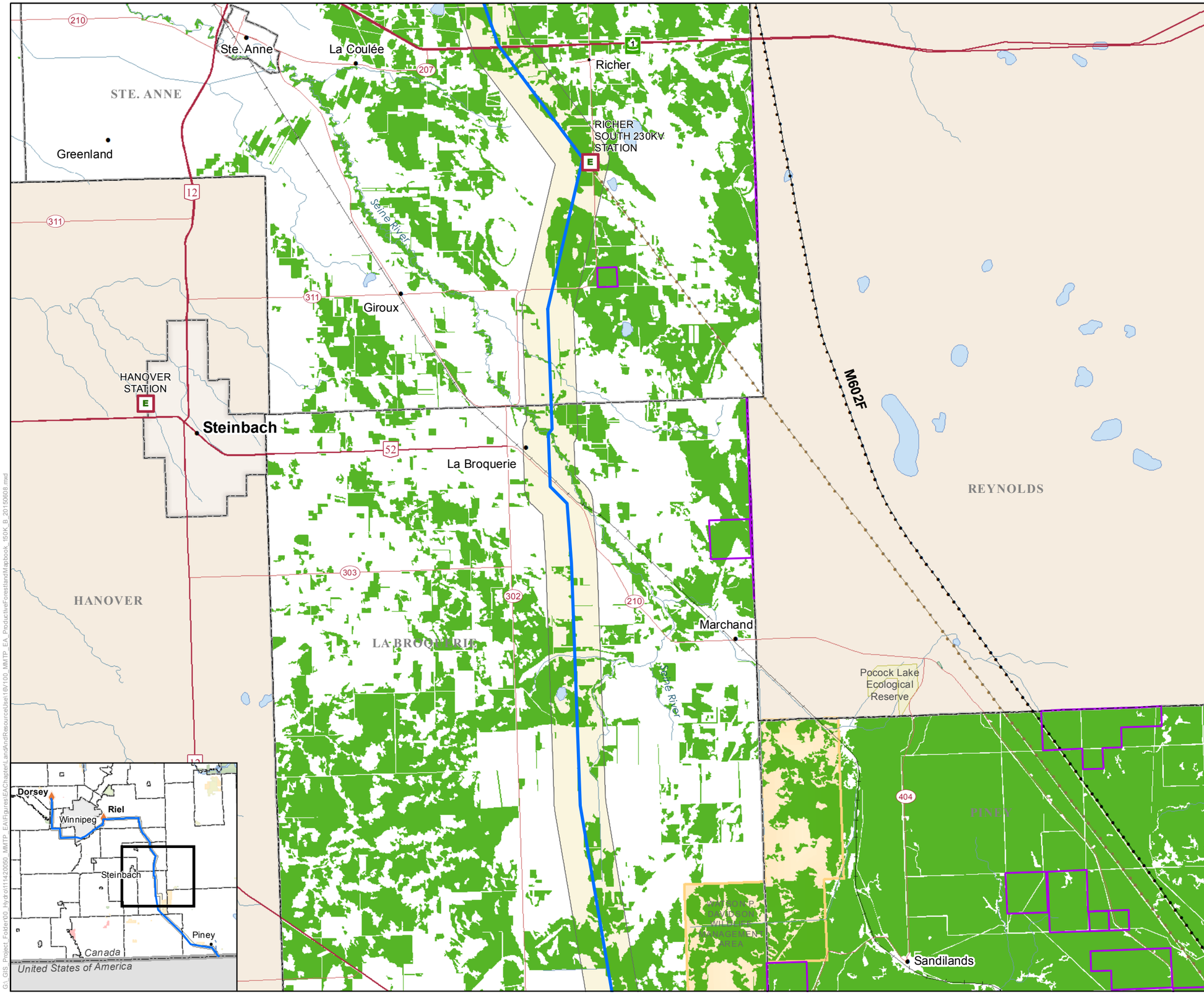

Manitoba Hydro

Manitoba-Minnesota Transmission Project

Project Infrastructure

- Converter Station (Existing)
- Final Preferred Route (FPR)

Infrastructure

- Electrical Station
- Existing 500kV Transmission Line
- Existing 230kV Transmission Line

Productive Forestland

- Timber Sales Plan 2010-15
- Productive Forestland[1]

Assessment Area

- Forestry Local Assessment Area
- Forestry Regional Assessment Area

Landbase

- Community
- Trans Canada Highway
- Provincial Highway
- Provincial Road
- City / Town
- First Nation Lands
- Rural Municipality
- Ecological Reserve
- Wildlife Management Area
- Provincial Park
- Watercourse
- Waterbody

Coordinate System: UTM Zone 14N NAD83
Data Source: MBHydro, ProvMB, NRCAN
Date Created: August 10, 2015

N

0 2 4 Kilometres
0 1.5 3 Miles

1:150,000

Productive Forestland

Map 16-100-03

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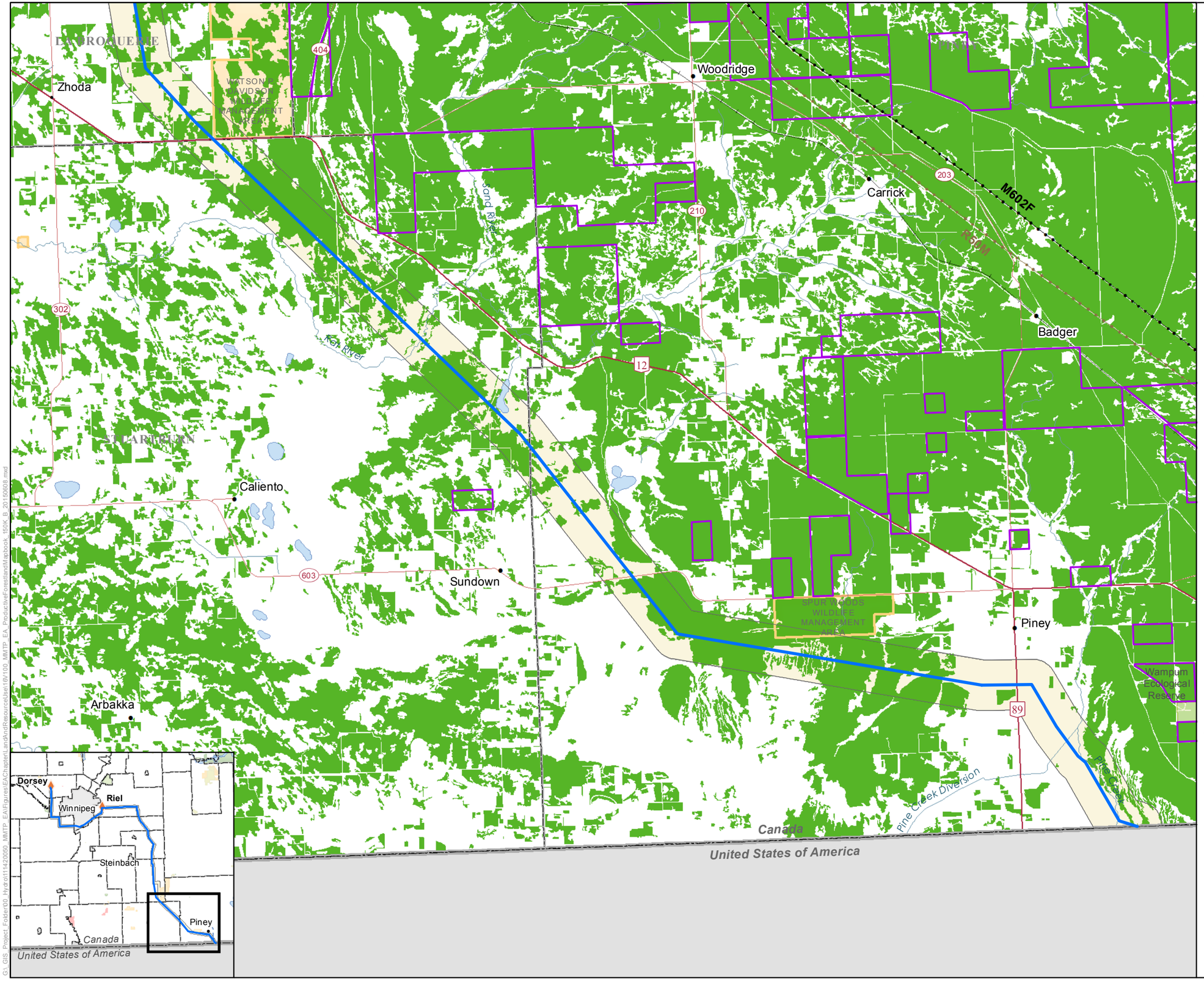

Manitoba Hydro

Manitoba-Minnesota Transmission Project

Project Infrastructure

- Converter Station (Existing)
- Final Preferred Route (FPR)

Infrastructure

- Existing 500kV Transmission Line
- Existing 230kV Transmission Line

Productive Forestland

- Timber Sales Plan 2010-15
- Productive Forestland[1]

Assessment Area

- Forestry Local Assessment Area
- Forestry Regional Assessment Area

Landbase

- Community
- Trans Canada Highway
- Provincial Highway
- Provincial Road
- City / Town
- First Nation Lands
- Rural Municipality
- Ecological Reserve
- Wildlife Management Area
- Provincial Park
- Watercourse
- Waterbody

Source:
1. Forest Resource Inventory, 1979-1999, Manitoba Conservation and Water Stewardship

Coordinate System: UTM Zone 14N NAD83
Data Source: MBHydro, ProvMB, NRCAN
Date Created: June 26, 2015

N

0 2 4 Kilometres
0 1.5 3 Miles

1:150,000

Productive Forestland

Map 16-100-04

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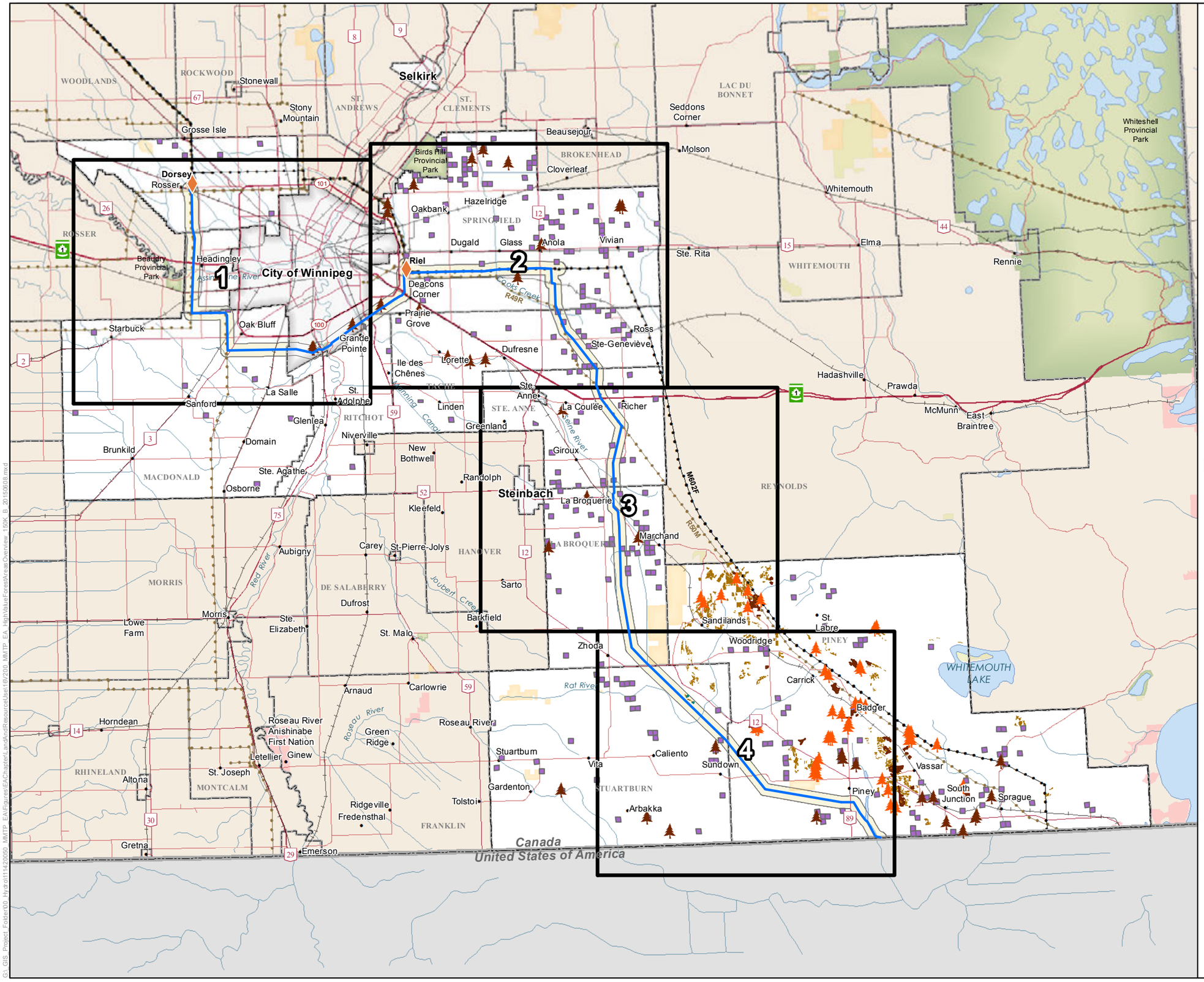

Manitoba Hydro

Manitoba-Minnesota Transmission Project

Project Infrastructure

- Converter Station (Existing)
- Final Preferred Route (FPR)

Infrastructure

- Existing 500kV Transmission Line
- Existing 230kV Transmission Line

High Value Forest Area

- Permanent Sample Plots
- Trees For Tomorrow
- Tending
- Plantations
- Tree Improvement Sites
- Manitoba Forestry Association Woodlot Locations

Map Series Index - 1:150,000

- Map Series Tile

Assessment Area

- Forestry Local Assessment Area
- Forestry Regional Assessment Area

Landbase

- Community
- Trans Canada Highway
- Provincial Highway
- Provincial Road
- City / Town
- First Nation Lands
- Rural Municipality
- Ecological Reserve
- Wildlife Management Area
- Provincial Park
- Watercourse
- Waterbody

Source:
1. Tending, 1984-2002, Manitoba Conservation and Water Stewardship
2. Plantations, 1951-2011, Manitoba Conservation and Water Stewardship

Coordinate System: UTM Zone 14N NAD83
Data Source: MBHydro, ProvMB, NRCAN
Date Created: August 10, 2015

N

0 10 Kilometres
0 5 10 Miles

1:600,000

Index of Map Series
High Value Forest Sites

Map Series 16-200

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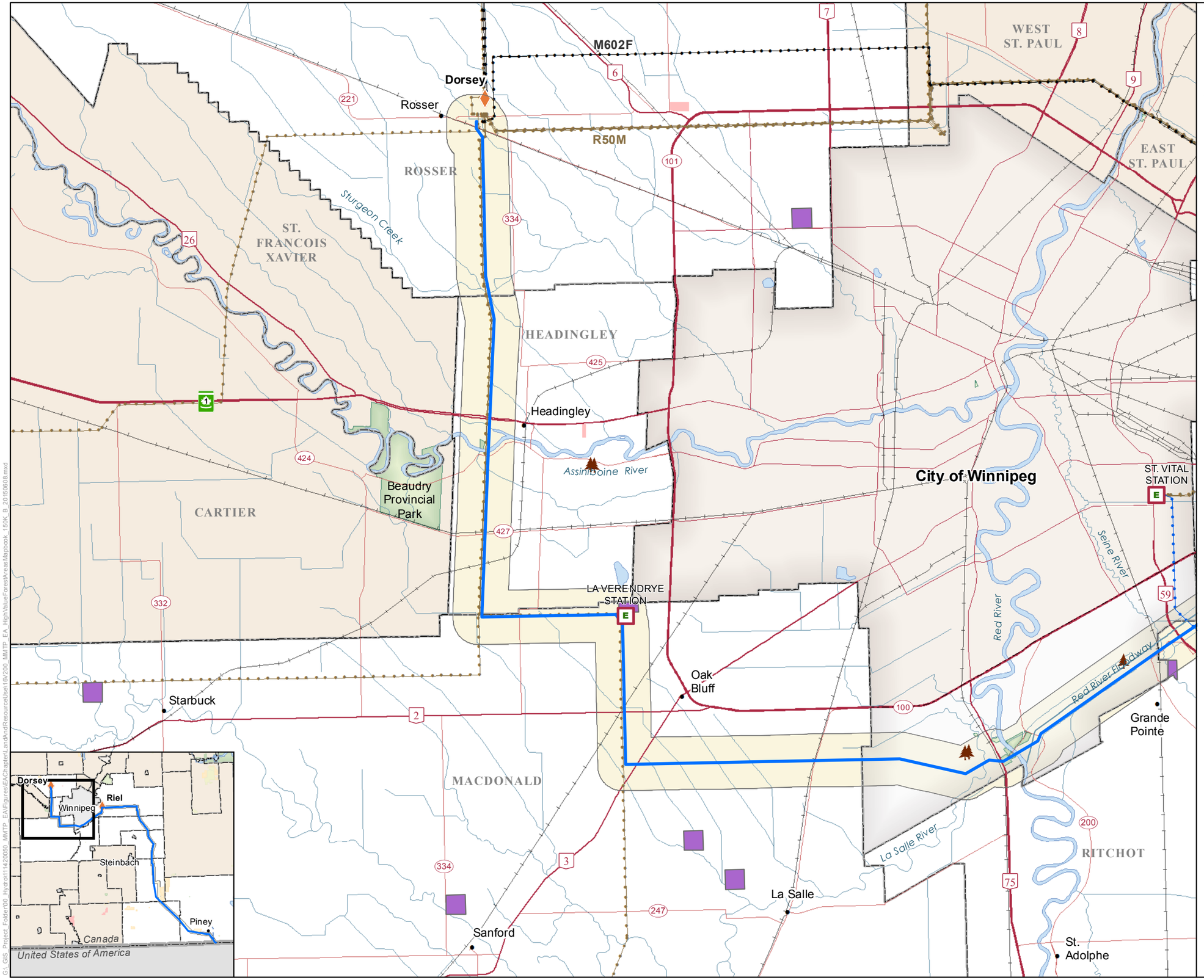

Manitoba Hydro

Manitoba-Minnesota Transmission Project

Project Infrastructure

- Converter Station (Existing)
- Final Preferred Route (FPR)

Infrastructure

- Electrical Station
- St. Vital Transmission Complex (V95L)
- Existing 500kV Transmission Line
- Existing 230kV Transmission Line

High Value Forest Area

- Trees For Tomorrow
- MFA Woodlot Locations

Assessment Area

- Forestry Local Assessment Area
- Forestry Regional Assessment Area

Landbase

- Community
- Trans Canada Highway
- Provincial Highway
- Provincial Road
- City / Town
- First Nation Lands
- Rural Municipality
- Ecological Reserve
- Wildlife Management Area
- Provincial Park
- Watercourse
- Waterbody

Coordinate System: UTM Zone 14N NAD83
Data Source: MBHydro, ProvMB, NRCAN
Date Created: June 26, 2015

N

0 2 4 Kilometres
0 1.5 3 Miles

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High Value Forest Sites

Map 16-200-01

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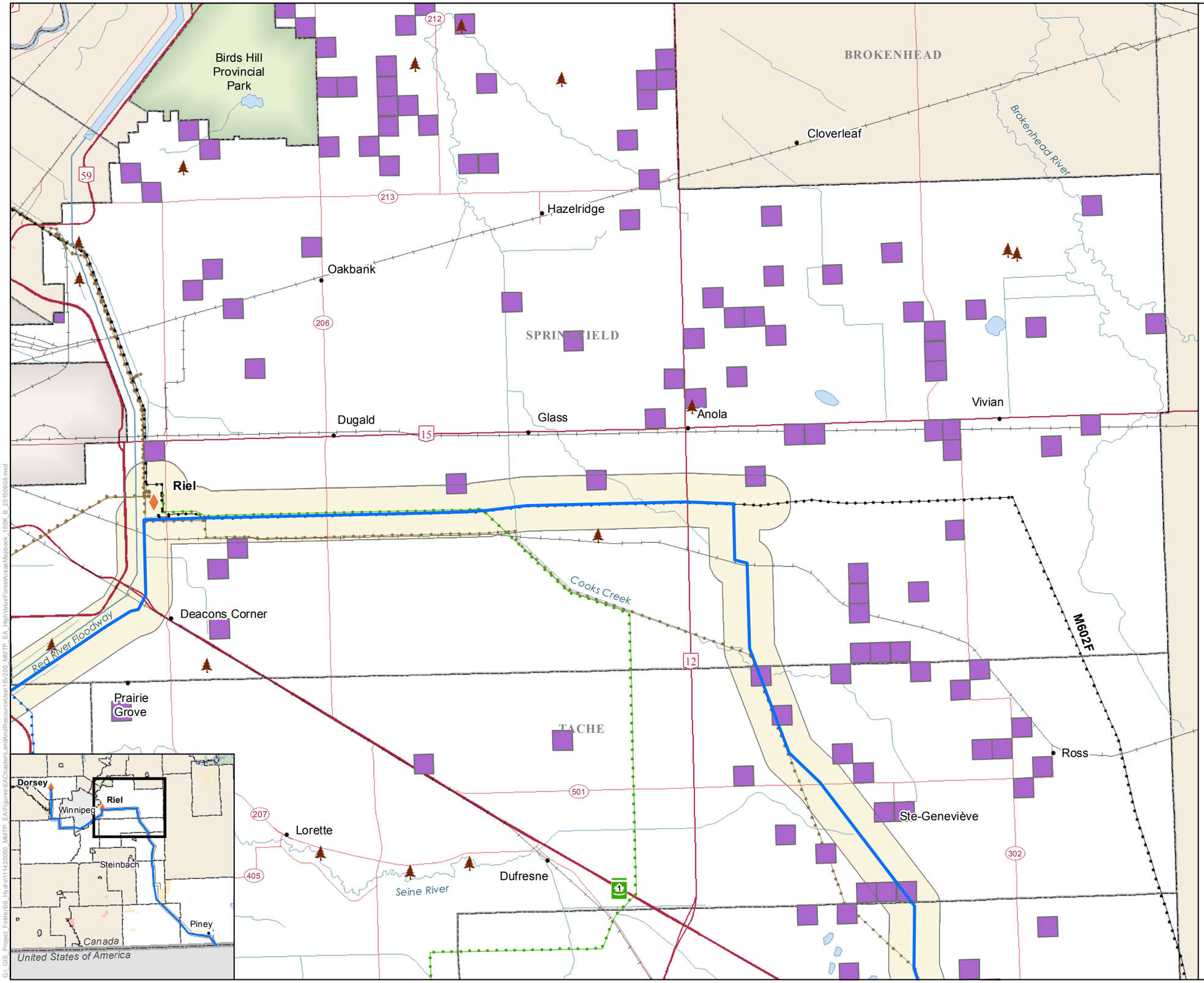

Manitoba Hydro

Manitoba-Minnesota Transmission Project

Project Infrastructure
- Converter Station (Existing)
- Final Preferred Route (FPR)

Infrastructure
- Bipole III Transmission Line (Approved)
- St. Vital Transmission Complex (V95L)
- Existing 500kV Transmission Line
- Existing 230kV Transmission Line

High Value Forest Area
- Trees For Tomorrow
- MFA Woodlot Locations

Assessment Area
- Forestry Local Assessment Area
- Forestry Regional Assessment Area

Landbase
- Community
- Trans Canada Highway
- Provincial Highway
- Provincial Road
- City / Town
- First Nation Lands
- Rural Municipality
- Ecological Reserve
- Wildlife Management Area
- Provincial Park
- Watercourse
- Waterbody

Coordinate System: UTM Zone 14N NAD83
Data Source: MBHydro, ProvMB, NRCAN
Date Created: June 26, 2015

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0 2 4 Kilometres
0 1.5 3 Miles

1:150,000

High Value Forest Sites

Map 16-200-02

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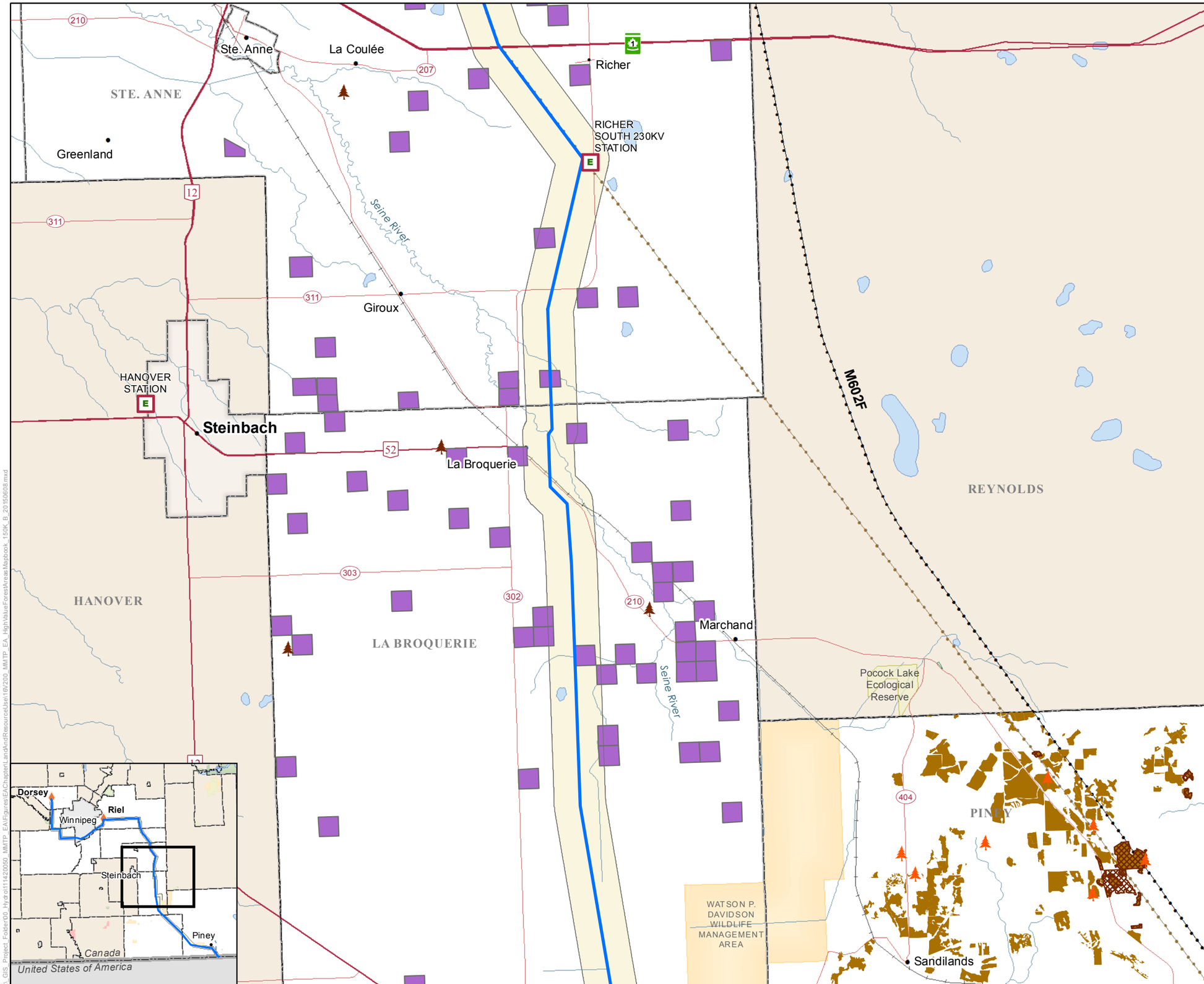

Manitoba Hydro

Manitoba-Minnesota Transmission Project

Project Infrastructure
- Converter Station (Existing)
- Final Preferred Route (FPR)

Infrastructure
- Electrical Station
- Existing 500kV Transmission Line
- Existing 230kV Transmission Line

High Value Forest Area
- Permanent Sample Plots
- Trees For Tomorrow
- Tending
- Plantations
- MFA Woodlot Locations

Assessment Area
- Forestry Local Assessment Area
- Forestry Regional Assessment Area

Landbase
- Community
- Trans Canada Highway
- Provincial Highway
- Provincial Road
- City / Town
- First Nation Lands
- Rural Municipality
- Ecological Reserve
- Wildlife Management Area
- Provincial Park
- Watercourse
- Waterbody

Coordinate System: UTM Zone 14N NAD83
Data Source: MBHydro, ProvMB, NRCAN
Date Created: June 26, 2015

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0 1.5 3 Miles

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High Value Forest Sites

Map 16-200-03

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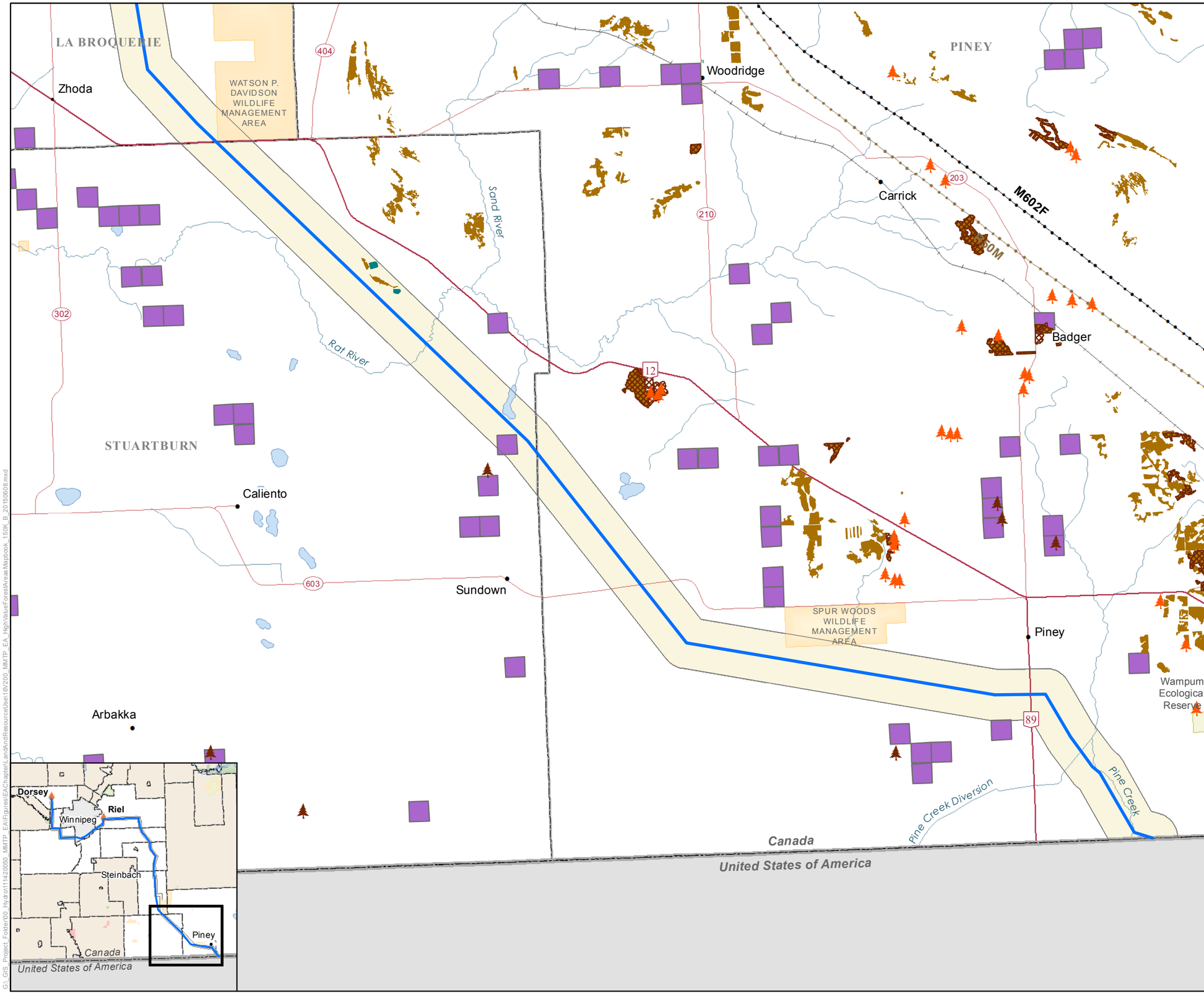

Manitoba Hydro

Manitoba-Minnesota Transmission Project

Project Infrastructure

- Converter Station (Existing)
- Final Preferred Route (FPR)

Infrastructure

- Existing 500kV Transmission Line
- Existing 230kV Transmission Line

High Value Forest Area

- Permanent Sample Plots
- Trees For Tomorrow
- Tending
- Plantations
- Tree Improvement Sites
- MFA Woodlot Locations

Assessment Area

- Forestry Local Assessment Area
- Forestry Regional Assessment Area

Landbase

- Community
- Trans Canada Highway
- Provincial Highway
- Provincial Road
- City / Town
- First Nation Lands
- Rural Municipality
- Ecological Reserve
- Wildlife Management Area
- Provincial Park
- Watercourse
- Waterbody

Coordinate System: UTM Zone 14N NAD83
Data Source: MBHydro, ProvMB, NRCAN
Date Created: June 26, 2015

N

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0 1.5 3 Miles

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High Value Forest Sites

Map 16-200-04

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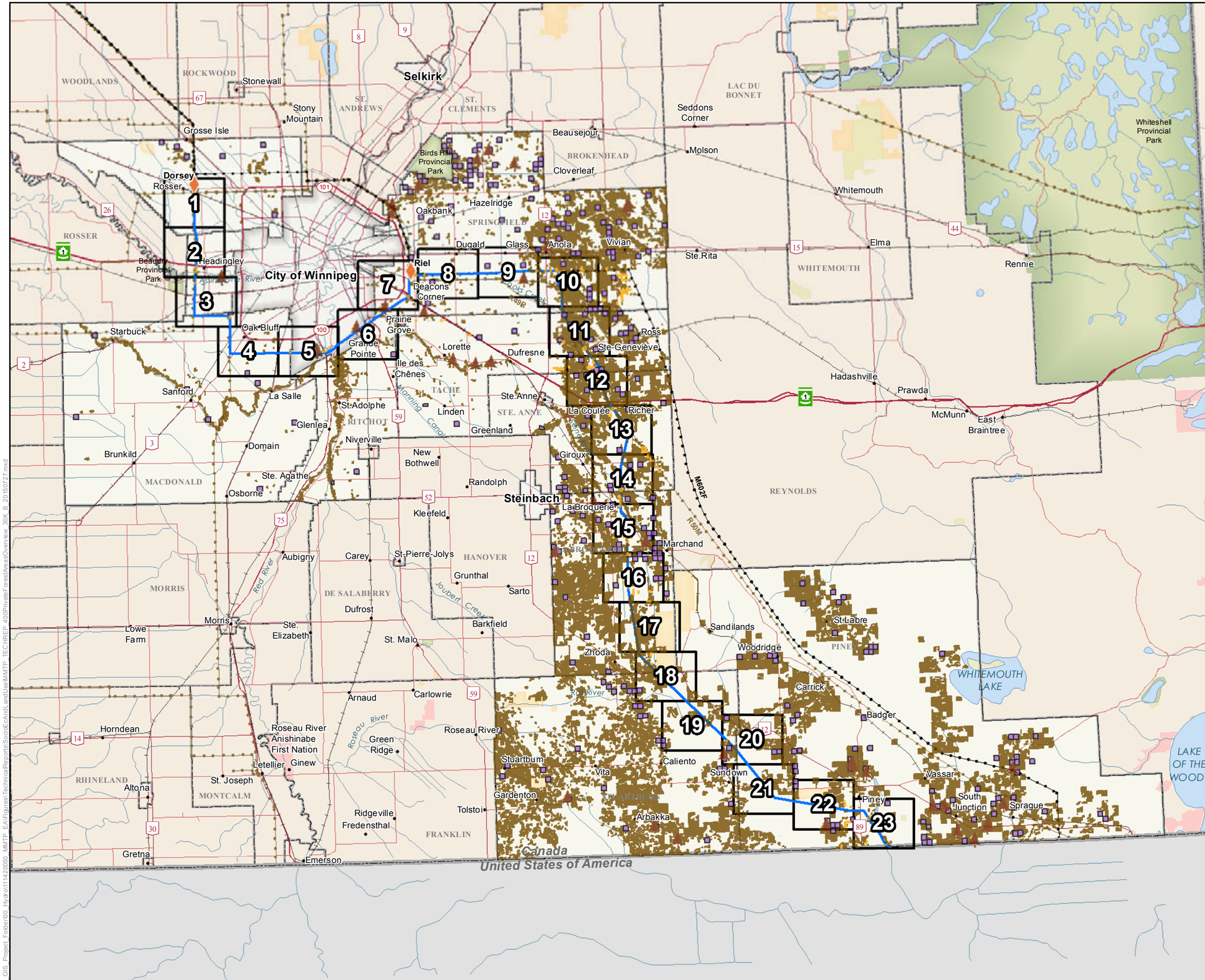

Manitoba-Minnesota Transmission Project

Project Infrastructure

- Converter Station (Existing)
- Final Preferred Route (FPR)

Infrastructure

- Existing 500kV Transmission Line
- Existing 230kV Transmission Line

Map Series Index - 1:30,000

- Map Series Tile

Private Land Forest Areas

- Trees For Tomorrow [1]
- Shelterbelt [2]
- Private Forest Land - Photo Interpretation [2]
- Manitoba Forestry Association Woodlot Locations [3]
- Private Forest Land - Provincial Forest Inventory [4]

Assessment Area

- Forestry Local Assessment Area
- Forestry Regional Assessment Area

Landbase

- Community
- Railway
- Trans Canada
- Provincial Highway
- Provincial Road
- City
- First Nation Lands
- Ecological Reserve
- Wildlife Management Area
- Provincial Park
- Rural Municipality

Source:
1. Trees for Tomorrow Planting Sites (2008-2010), 2010, Manitoba Conservation Forestry Branch.
2. Private Land Forest Value, 2014, Maskwa.
3. Woodlot Locations, 2013, Manitoba Forestry Association (MFA).
4. Forest Resource Inventory,1979-1999, Manitoba Conservation and Water Stewardship.

Coordinate System: UTM Zone 14N NAD83
Data Source: MBHydro, ProvMB, NRCAN
Date Created: July 28, 2015

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0 5 10 Miles

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Index of Map Series
Private Land Forest Areas

Map Series 16-300

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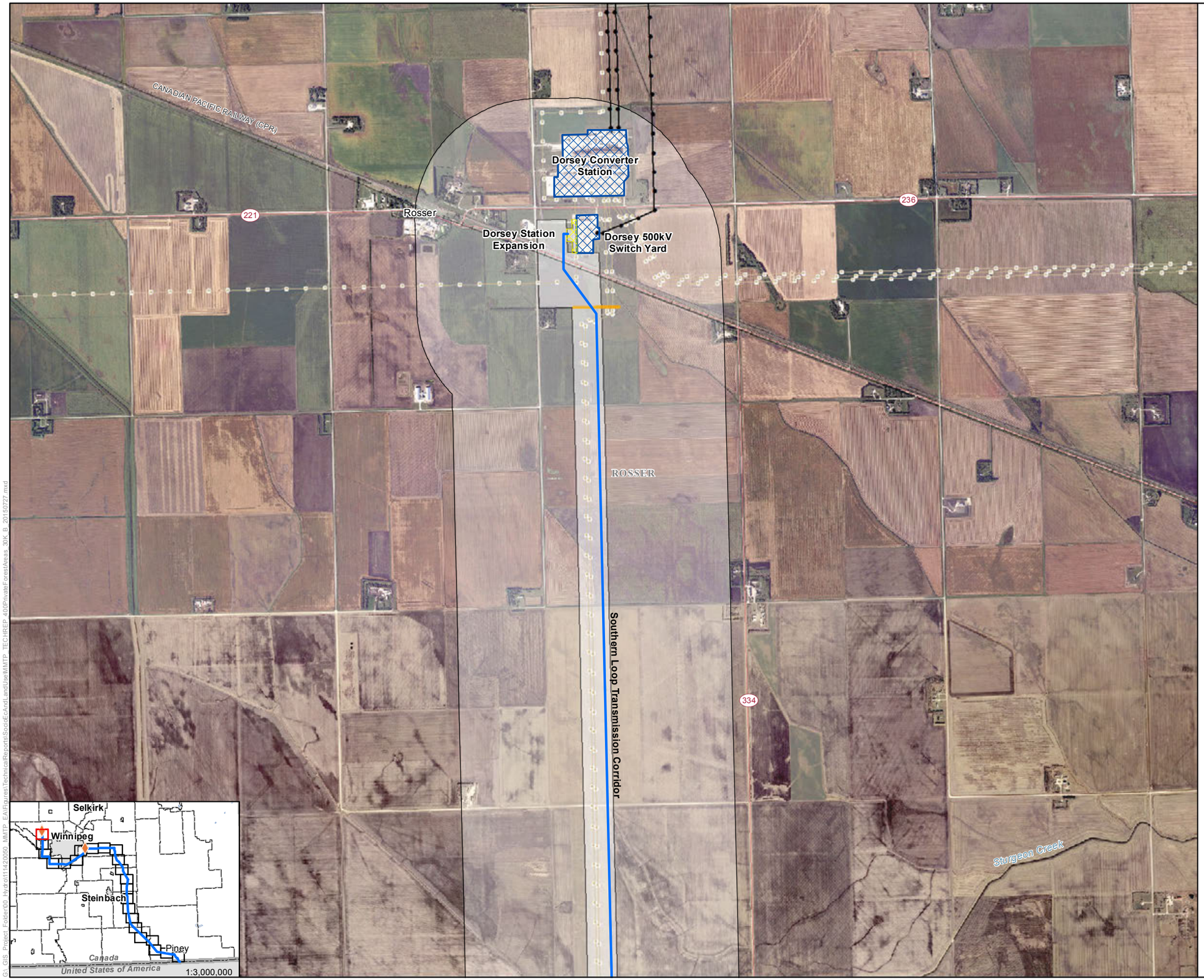

Manitoba Hydro

Manitoba-Minnesota Transmission Project

Project Infrastructure

- Final Preferred Route (FPR)
- Station Expansion
- Converter Station Footprint

Infrastructure

- Existing 500 kV Transmission Line
- Existing 230kV Transmission Line

Private Forest Land Areas

- Shelterbelt [2]

Assessment Area

- Project Development Area (PDA)
- Forestry Local Assessment Area

Landbase

- Community
- Railway
- Trans Canada
- Provincial Highway
- Provincial Road
- Rural Municipality

Source:
1. Trees for Tomorrow Planting Sites (2008-2010), 2010, Manitoba Conservation Forestry Branch.
2. Private Land Forest Value, 2014, Maskwa.
3. Woodlot Locations, 2013, Manitoba Forestry Association (MFA).
4. Forest Resource Inventory,1979-1999 Manitoba Conservation and Water Stewardship.

Coordinate System: UTM Zone 14N NAD83
Data Source: MBHydro, ProvMB, NRCAN
Date Created: July 28, 2015

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Private Land Forest Areas

Map 16-300-01

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Manitoba Hydro

Manitoba-Minnesota Transmission Project

Project Infrastructure

- Final Preferred Route (FPR)

Infrastructure

- Existing 230kV Transmission Line

Private Forest Land Areas

- Trees For Tomorrow [1]
- Shelterbelt [2]
- Private Forest Land - Photo Interpretation [2]
- Private Forest Land - Provincial Forest Inventory [4]

Assessment Area

- Project Development Area (PDA)
- Forestry Local Assessment Area

Landbase

- Community
- Railway
- Trans Canada
- Provincial Highway
- Provincial Road
- First Nation Lands
- National/Provincial Park
- Rural Municipality

Source:
1. Trees for Tomorrow Planting Sites (2008-2010), 2010, Manitoba Conservation Forestry Branch.
2. Private Land Forest Value, 2014, Maskwa.
3. Woodlot Locations, 2013, Manitoba Forestry Association (MFA).
4. Forest Resource Inventory,1979-1999, Manitoba Conservation and Water Stewardship.

Coordinate System: UTM Zone 14N NAD83
Data Source: MBHydro, ProvMB, NRCAN
Date Created: July 28, 2015

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Private Land Forest Areas

Map 16-300-02

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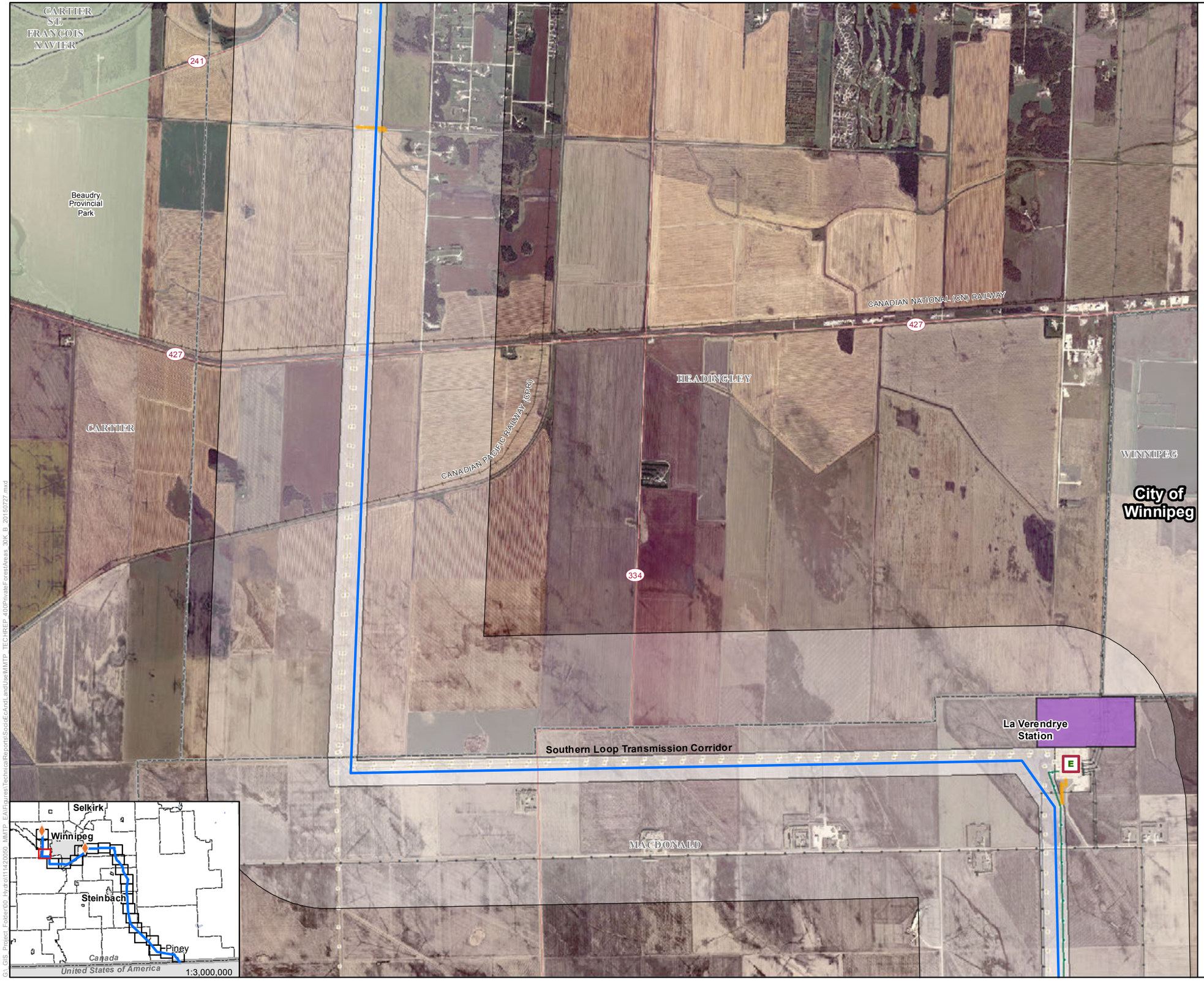

Manitoba Hydro

Manitoba-Minnesota Transmission Project

Project Infrastructure

- Final Preferred Route (FPR)

Infrastructure

- Electrical Station
- Existing 230kV Transmission Line
- St. Vital Transmission Complex (Proposed)
- Existing 115-230kV Transmission Line

Private Forest Land Areas

- Trees For Tomorrow [1]
- Shelterbelt [2]
- Manitoba Forestry Association Woodlot Locations [3]

Assessment Area

- Project Development Area (PDA)
- Forestry Local Assessment Area

Landbase

- Community
- Railway
- Trans Canada
- Provincial Highway
- Provincial Road
- City / Town
- National/Provincial Park
- Rural Municipality

Source:
1. Trees for Tomorrow Planting Sites (2008-2010), 2010, Manitoba Conservation Forestry Branch.
2. Private Land Forest Value, 2014, Maskwa.
3. Woodlot Locations, 2013, Manitoba Forestry Association (MFA).
4. Forest Resource Inventory,1979-1999, Manitoba Conservation and Water Stewardship.

Coordinate System: UTM Zone 14N NAD83
Data Source: MBHydro, ProvMB, NRCAN
Date Created: July 28, 2015

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Private Land Forest Areas

Map 16-300-03

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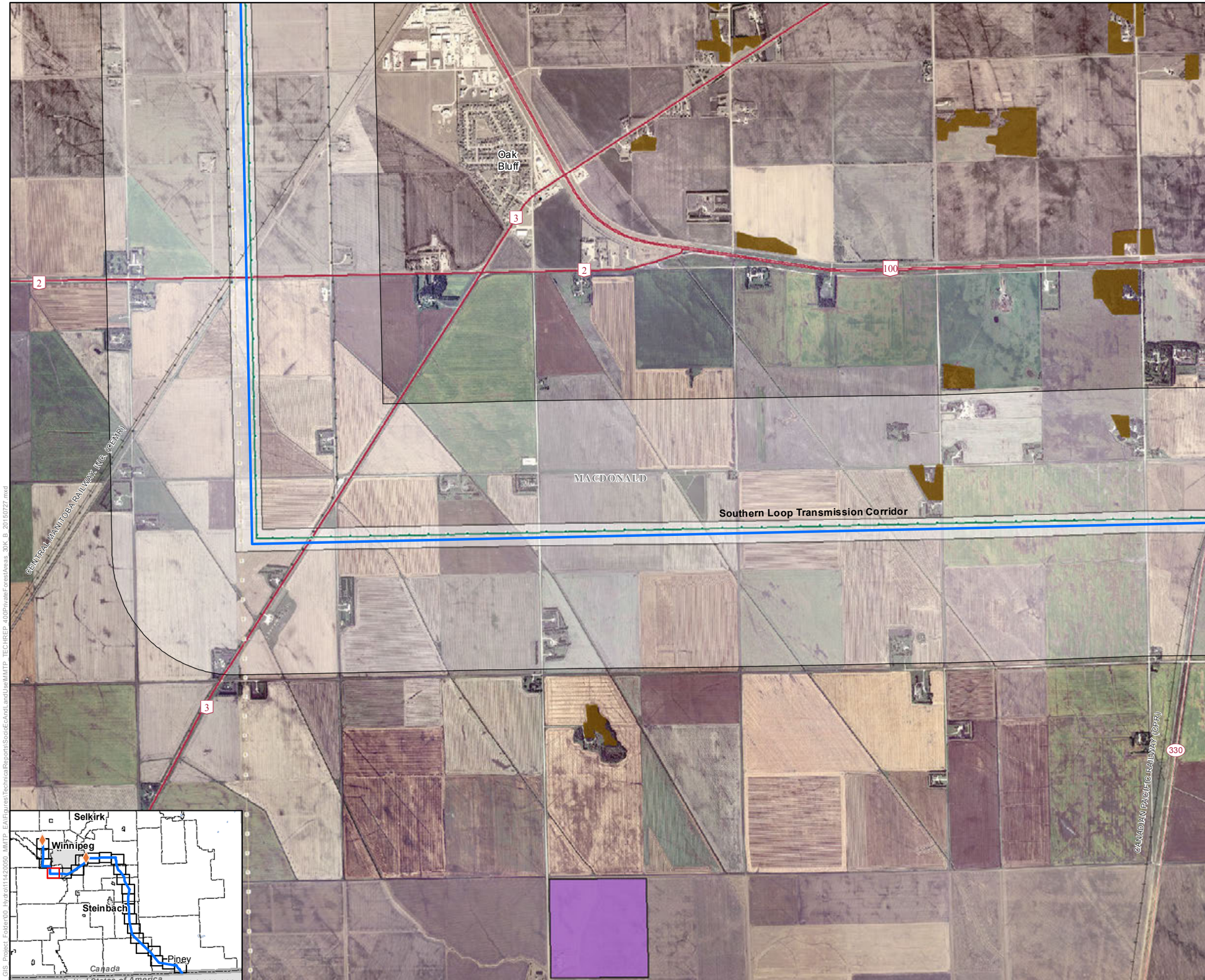

Manitoba Hydro

Manitoba-Minnesota Transmission Project

Project Infrastructure

- Final Preferred Route (FPR)

Infrastructure

- Existing 230kV Transmission Line
- St. Vital Transmission Complex (Proposed)
- Existing 115-230kV Transmission Line

Private Forest Land Areas

- Manitoba Forestry Association Woodlot Locations [3]
- Private Forest Land - Provincial Forest Inventory [4]

Assessment Area

- Project Development Area (PDA)
- Forestry Local Assessment Area

Landbase

- Community
- Railway
- Trans Canada
- Provincial Highway
- Provincial Road
- Rural Municipality

Source:
1. Trees for Tomorrow Planting Sites (2008-2010), 2010, Manitoba Conservation Forestry Branch.
2. Private Land Forest Value, 2014, Maskwa.
3. Woodlot Locations, 2013, Manitoba Forestry Association (MFA).
4. Forest Resource Inventory,1979-1999, Manitoba Conservation and Water Stewardship.

Coordinate System: UTM Zone 14N NAD83
Data Source: MBHydro, ProvMB, NRCAN
Date Created: July 28, 2015

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Private Land Forest Areas

Map 16-300-04

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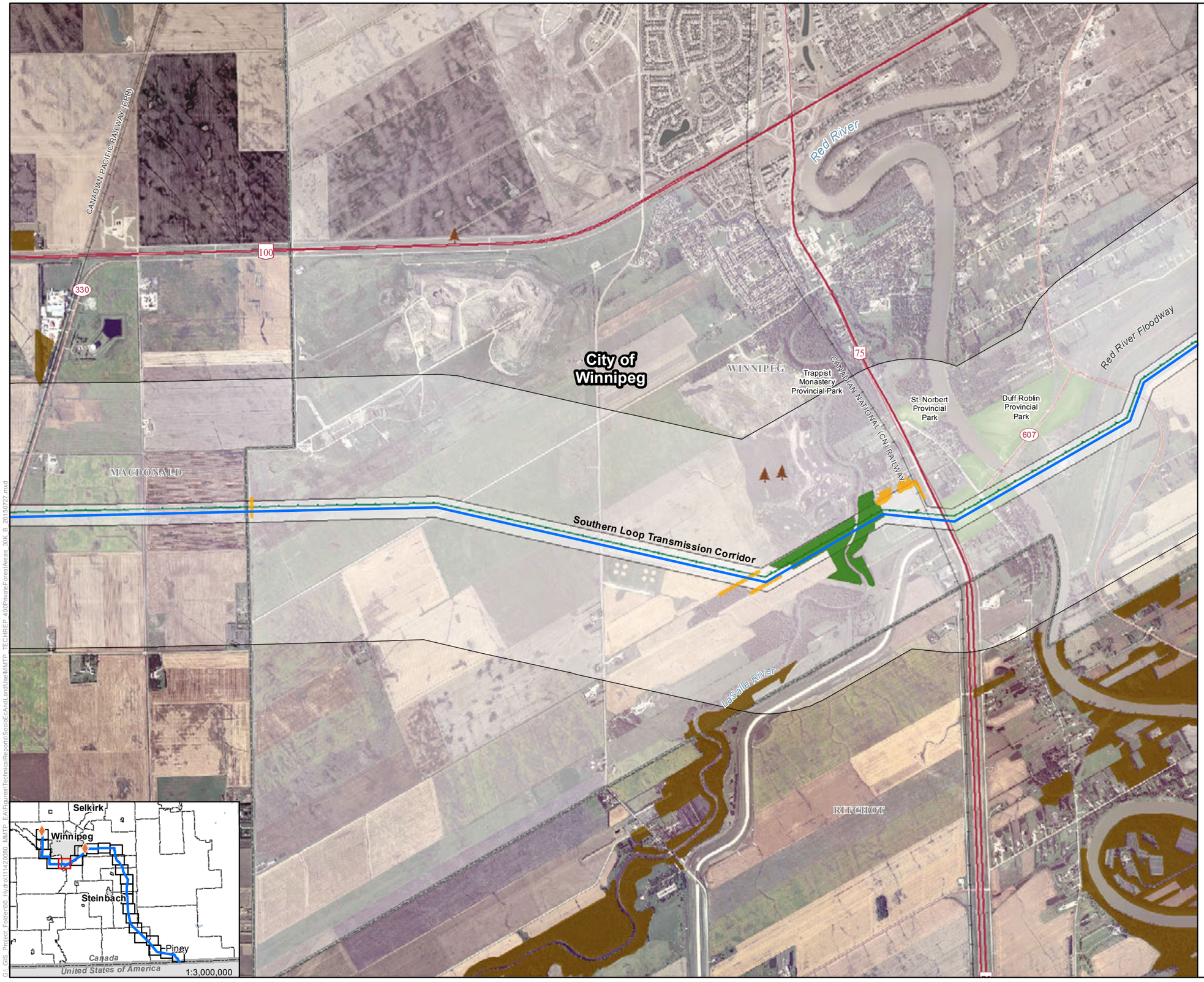

Manitoba Hydro

Manitoba-Minnesota Transmission Project

Project Infrastructure
- Final Preferred Route (FPR)

Infrastructure
- St. Vital Transmission Complex (Proposed)

Private Forest Land Areas
- Trees For Tomorrow [1]
- Shelterbelt [2]
- Private Forest Land - Photo Interpretation [2]
- Private Forest Land - Provincial Forest Inventory [4]

Assessment Area
- Project Development Area (PDA)
- Forestry Local Assessment Area

Landbase
- Community
- Railway
- Trans Canada
- Provincial Highway
- Provincial Road
- City / Town
- National/Provincial Park
- Rural Municipality

Source:
1. Trees for Tomorrow Planting Sites (2008-2010), 2010, Manitoba Conservation Forestry Branch.
2. Private Land Forest Value, 2014, Maskwa.
3. Woodlot Locations, 2013, Manitoba Forestry Association (MFA).
4. Forest Resource Inventory,1979-1999, Manitoba Conservation and Water Stewardship.

Coordinate System: UTM Zone 14N NAD83
Data Source: MBHydro, ProvMB, NRCAN
Date Created: July 28, 2015

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Private Land Forest Areas

Map 16-300-05

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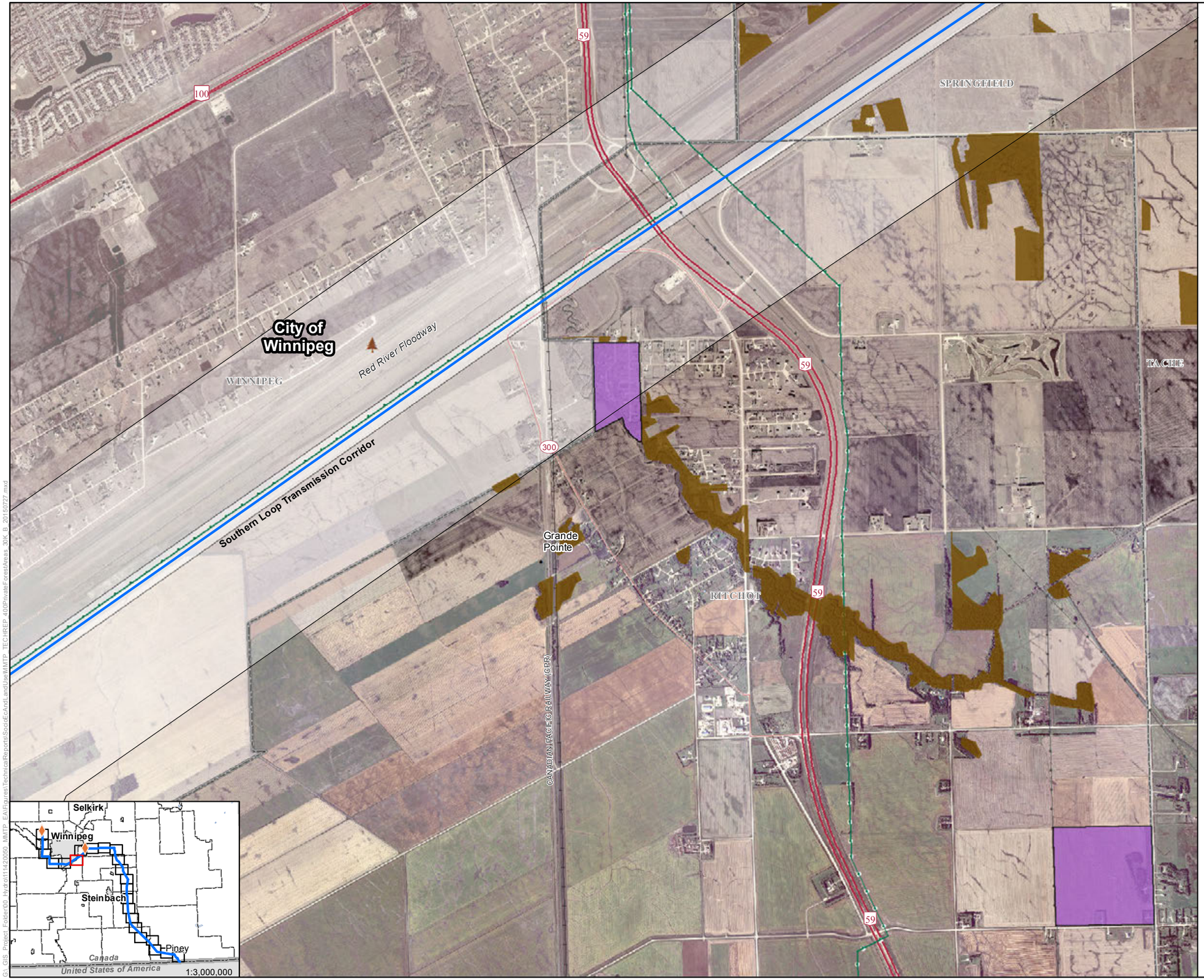

Manitoba Hydro

Manitoba-Minnesota Transmission Project

Project Infrastructure

- Final Preferred Route (FPR)

Infrastructure

- St. Vital Transmission Complex (Proposed)
- Existing 115-230kV Transmission Line

Private Forest Land Areas

- Trees For Tomorrow [1]
- Manitoba Forestry Association Woodlot Locations [3]
- Private Forest Land - Provincial Forest Inventory [4]

Assessment Area

- Project Development Area (PDA)
- Forestry Local Assessment Area

Landbase

- Community
- Railway
- Trans Canada
- Provincial Highway
- Provincial Road
- City / Town
- Rural Municipality

Source:
1. Trees for Tomorrow Planting Sites (2008-2010), 2010, Manitoba Conservation Forestry Branch.
2. Private Land Forest Value, 2014, Maskwa.
3. Woodlot Locations, 2013, Manitoba Forestry Association (MFA).
4. Forest Resource Inventory,1979-1999, Manitoba Conservation and Water Stewardship.

Coordinate System: UTM Zone 14N NAD83
Data Source: MBHydro, ProvMB, NRCAN
Date Created: July 28, 2015

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Private Land Forest Areas

Map 16-300-06

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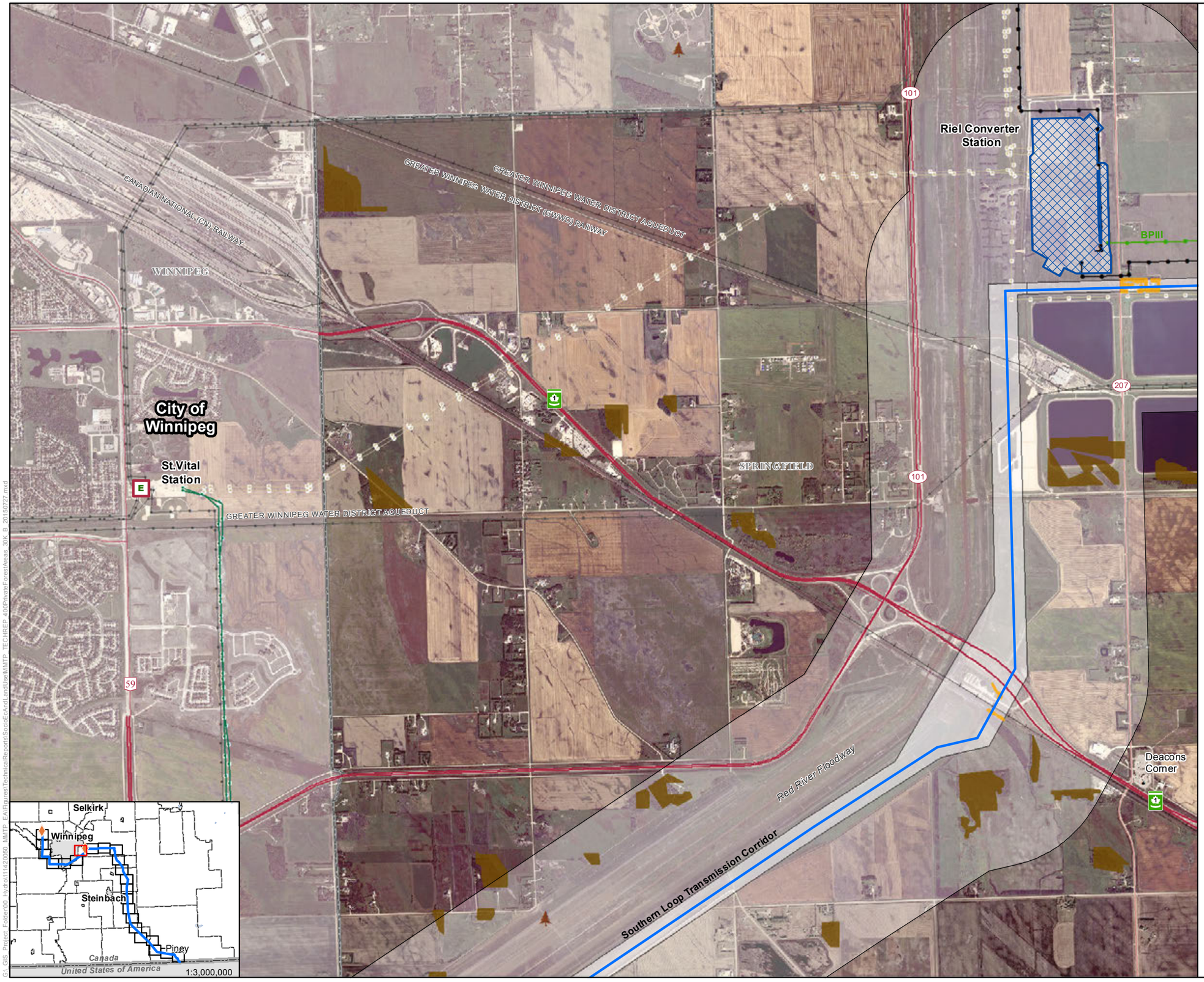

Manitoba Hydro

Manitoba-Minnesota Transmission Project

Project Infrastructure

- Final Preferred Route (FPR)
- Converter Station Footprint

Infrastructure

- Electrical Station
- Existing 500 kV Transmission Line
- Existing 230kV Transmission Line
- Bipole III Transmission Line (Approved)
- St. Vital Transmission Complex (Proposed)
- Existing 115-230kV Transmission Line

Private Forest Land Areas

- Trees For Tomorrow [1]
- Shelterbelt [2]
- Private Forest Land - Provincial Forest Inventory [4]

Assessment Area

- Project Development Area (PDA)
- Forestry Local Assessment Area

Landbase

- Community
- Railway
- Trans Canada
- Provincial Highway
- Provincial Road
- City / Town
- Rural Municipality

Source:
1. Trees for Tomorrow Planting Sites (2008-2010), 2010, Manitoba Conservation Forestry Branch.
2. Private Land Forest Value, 2014, Maskwa.
3. Woodlot Locations, 2013, Manitoba Forestry Association (MFA).
4. Forest Resource Inventory,1979-1999 Manitoba Conservation and Water Stewardship.

Coordinate System: UTM Zone 14N NAD83
Data Source: MBHydro, ProvMB, NRCAN
Date Created: July 28, 2015

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Private Land Forest Areas

Map 16-300-07

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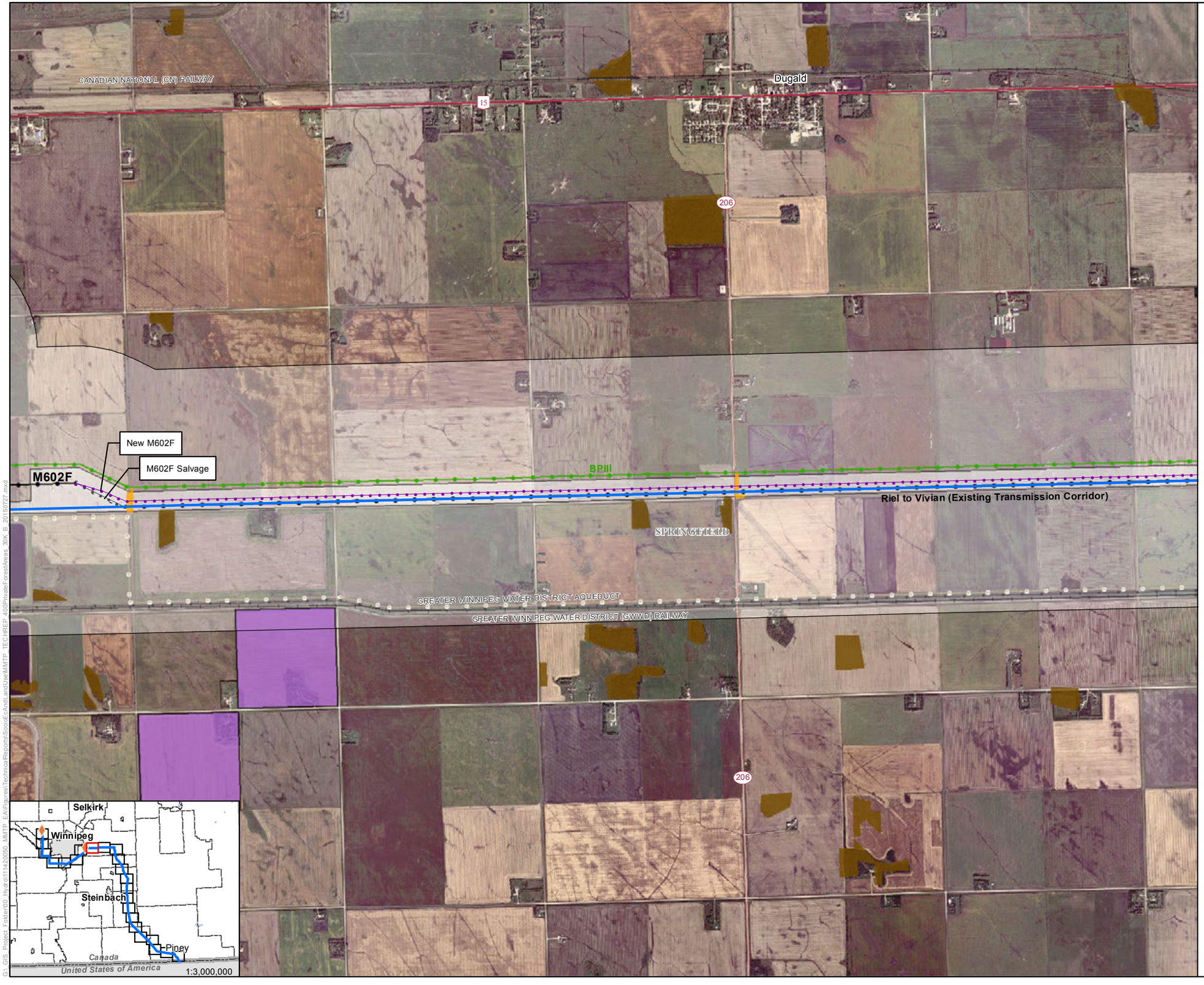

Manitoba Hydro

Manitoba-Minnesota Transmission Project

Project Infrastructure

- Final Preferred Route (FPR)
- M602F Modification (Salvage)
- M602F Modification (New)

Infrastructure

- Existing 500 kV Transmission Line
- Existing 230kV Transmission Line
- Bipole III Transmission Line (Approved)
- Existing 115-230kV Transmission Line

Private Forest Land Areas

- Shelterbelt [2]
- Manitoba Forestry Association Woodlot Locations [3]
- Private Forest Land - Provincial Forest Inventory [4]

Assessment Area

- Project Development Area (PDA)
- Forestry Local Assessment Area

Landbase

- Community
- Railway
- Trans Canada
- Provincial Highway
- Provincial Road
- Rural Municipality

Source:
1. Trees for Tomorrow Planting Sites (2008-2010), 2010, Manitoba Conservation Forestry Branch.
2. Private Land Forest Value, 2014, Maskwa.
3. Woodlot Locations, 2013, Manitoba Forestry Association (MFA).
4. Forest Resource Inventory,1979-1999, Manitoba Conservation and Water Stewardship.

Coordinate System: UTM Zone 14N NAD83
Data Source: MBHydro, ProvMB, NRCAN
Date Created: July 28, 2015

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Private Land Forest Areas

Map 16-300-08

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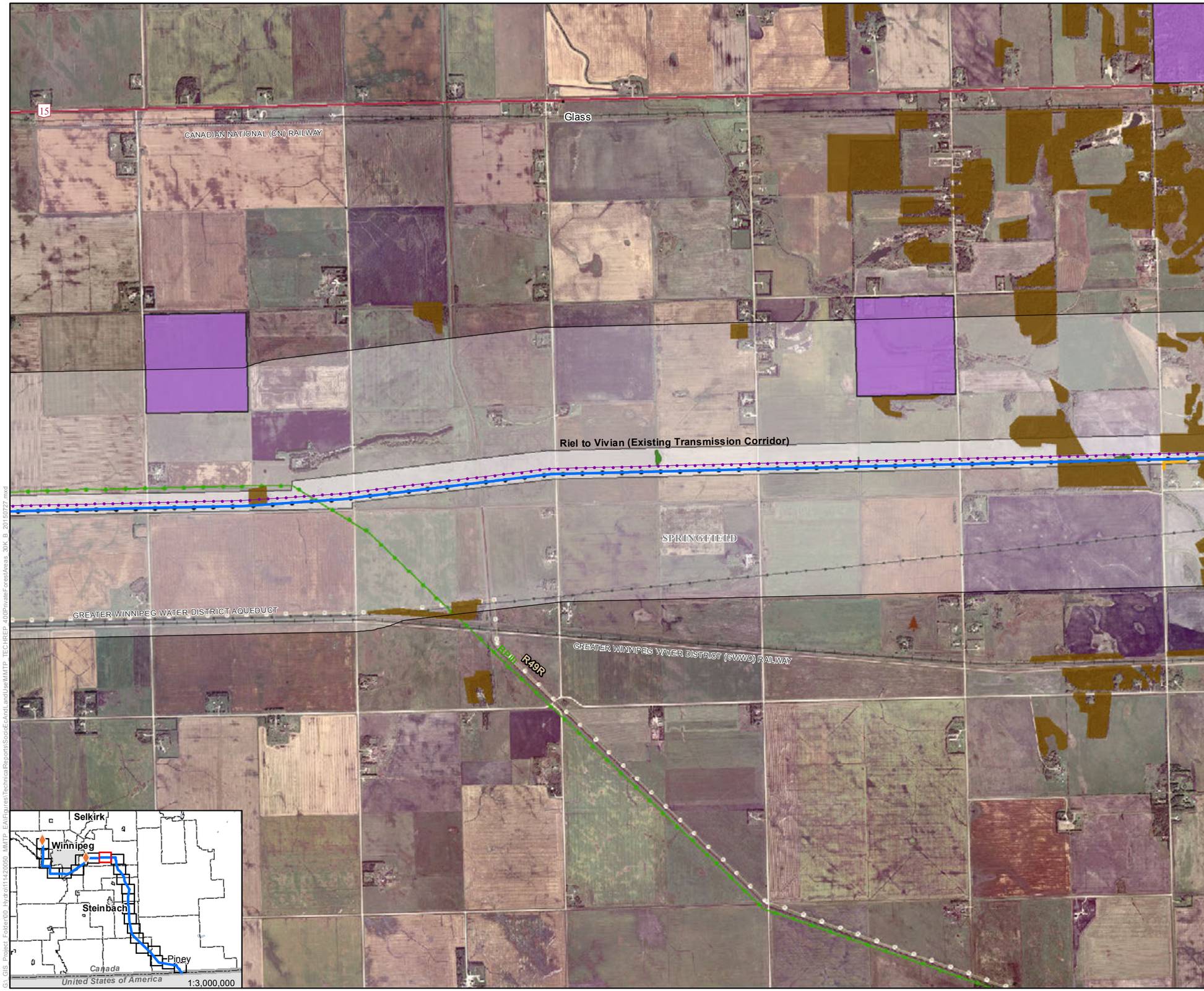

Manitoba Hydro

Manitoba-Minnesota Transmission Project

Project Infrastructure

- Final Preferred Route (FPR)
- M602F Modification (New)

Infrastructure

- Existing 500 kV Transmission Line
- Existing 230kV Transmission Line
- Bipole III Transmission Line (Approved)
- Existing 115-230kV Transmission Line

Private Forest Land Areas

- Trees For Tomorrow [1]
- Shelterbelt [2]
- Private Forest Land - Photo Interpretation [2]
- Manitoba Forestry Association Woodlot Locations [3]
- Private Forest Land - Provincial Forest Inventory [4]

Assessment Area

- Project Development Area (PDA)
- Forestry Local Assessment Area

Landbase

- Community
- Railway
- Trans Canada
- Provincial Highway
- Provincial Road
- Rural Municipality

Source:
1. Trees for Tomorrow Planting Sites (2008-2010), 2010, Manitoba Conservation Forestry Branch.
2. Private Land Forest Value, 2014, Maskwa.
3. Woodlot Locations, 2013, Manitoba Forestry Association (MFA).
4. Forest Resource Inventory,1979-1999 Manitoba Conservation and Water Stewardship.

Coordinate System: UTM Zone 14N NAD83
Data Source: MBHydro, ProvMB, NRCAN
Date Created: July 28, 2015

N

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Private Land Forest Areas

Map 16-300-09

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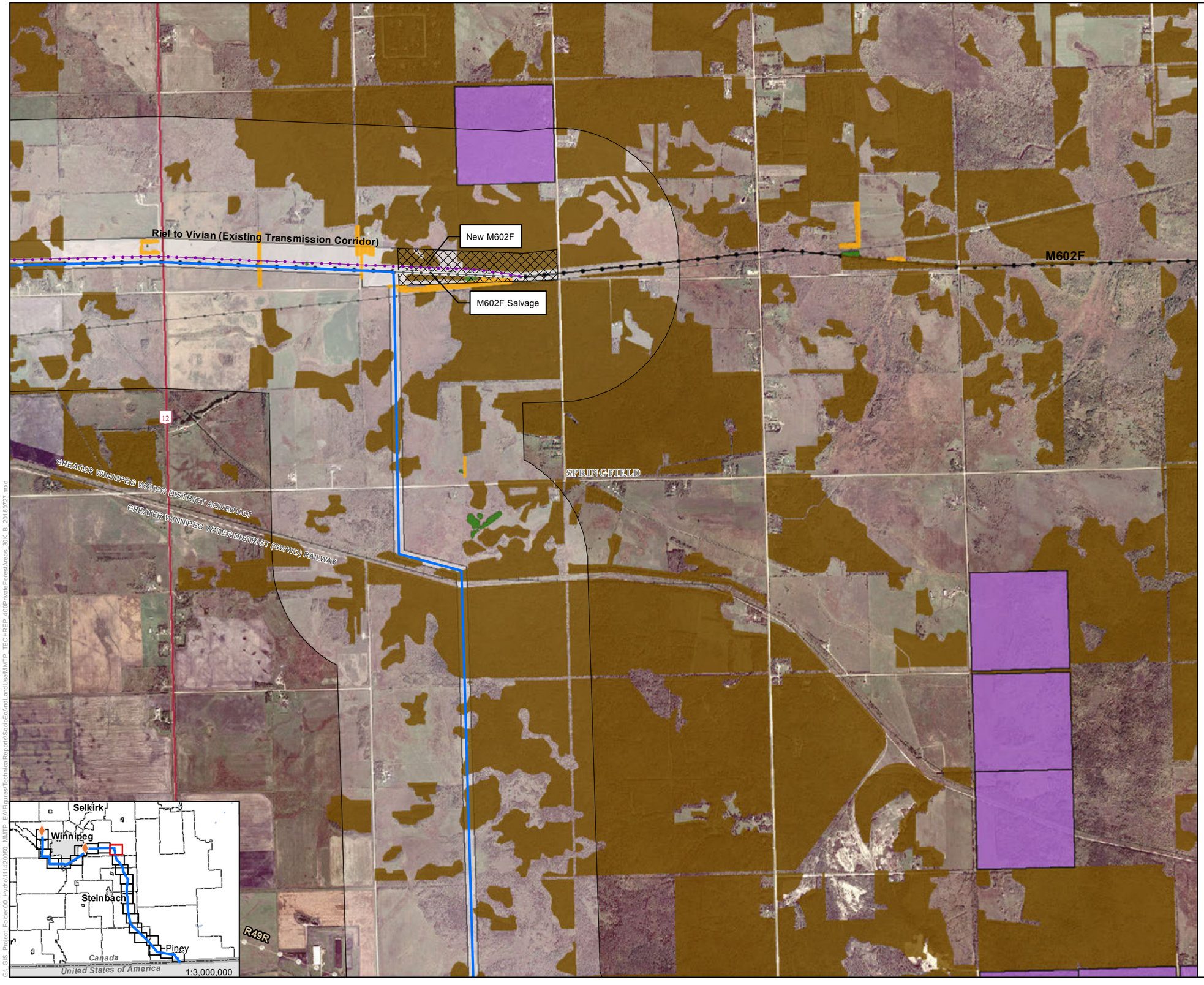

Manitoba Hydro

Manitoba-Minnesota Transmission Project

Project Infrastructure

- Final Preferred Route (FPR)
- M602F Modification (Salvage)
- M602F Modification (New)
- M602F Extension and Salvage

Infrastructure

- Existing 500 kV Transmission Line
- Existing 230kV Transmission Line
- Existing 115-230kV Transmission Line

Private Forest Land Areas

- Shelterbelt [2]
- Private Forest Land - Photo Interpretation [2]
- Manitoba Forestry Association Woodlot Locations [3]
- Private Forest Land - Provincial Forest Inventory [4]

Assessment Area

- Project Development Area (PDA)
- Forestry Local Assessment Area

Landbase

- Community
- Railway
- Trans Canada
- Provincial Highway
- Provincial Road
- Rural Municipality

Source:
1. Trees for Tomorrow Planting Sites (2008-2010), 2010, Manitoba Conservation Forestry Branch.
2. Private Land Forest Value, 2014, Maskwa.
3. Woodlot Locations, 2013, Manitoba Forestry Association (MFA).
4. Forest Resource Inventory,1979-1999, Manitoba Conservation and Water Stewardship.

Coordinate System: UTM Zone 14N NAD83
Data Source: MBHydro, ProvMB, NRCAN
Date Created: July 28, 2015

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Private Land Forest Areas

Map 16-300-10

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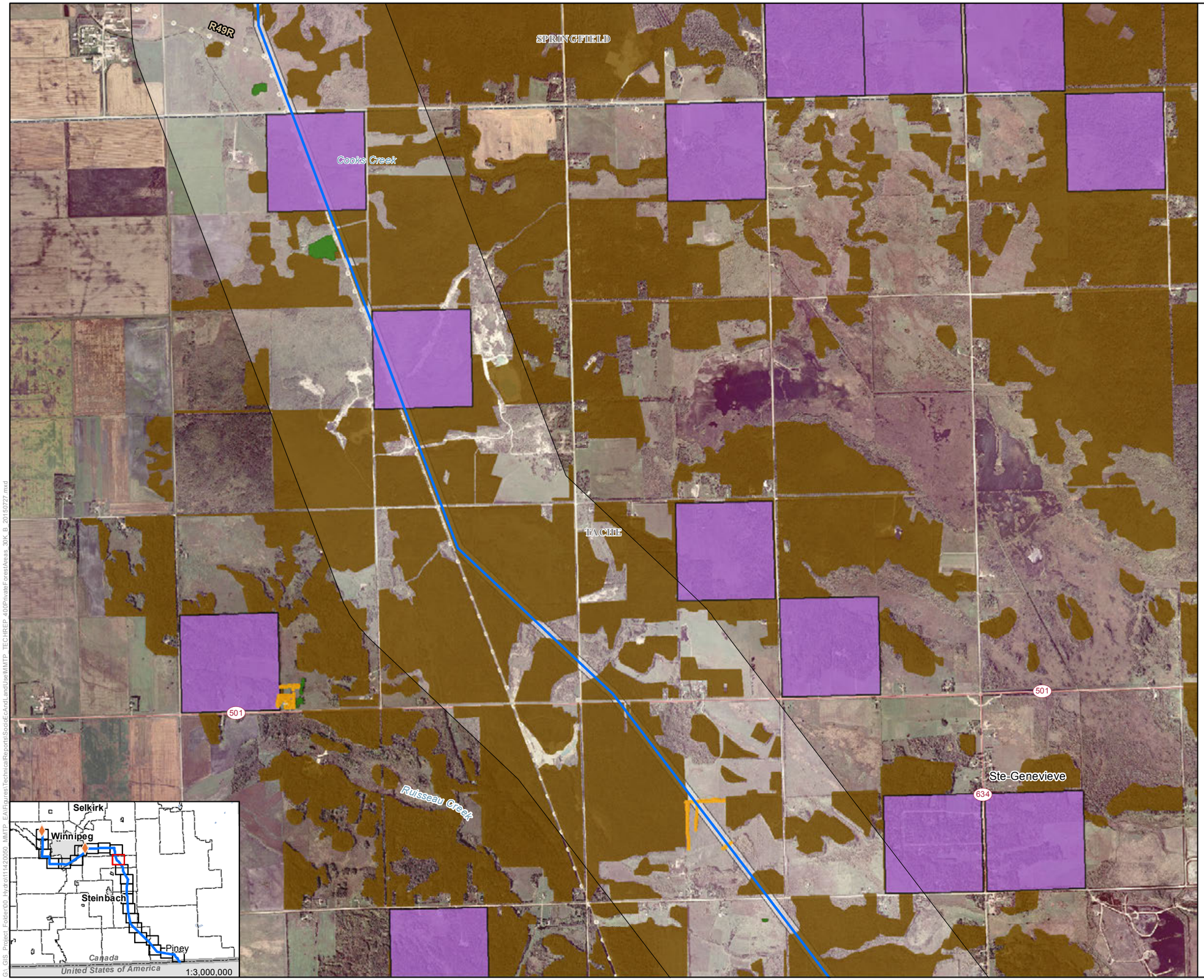


Manitoba Hydro

Manitoba-Minnesota Transmission Project

Project Infrastructure
- Final Preferred Route (FPR)

Infrastructure
- Existing 230kV Transmission Line

Private Forest Land Areas
- Shelterbelt [2]
- Private Forest Land - Photo Interpretation [2]
- Manitoba Forestry Association Woodlot Locations [3]
- Private Forest Land - Provincial Forest Inventory [4]

Assessment Area
- Project Development Area (PDA)
- Forestry Local Assessment Area

Landbase
- Community
- Railway
- Trans Canada
- Provincial Highway
- Provincial Road
- Rural Municipality

Source:
1. Trees for Tomorrow Planting Sites (2008-2010), 2010, Manitoba Conservation Forestry Branch.
2. Private Land Forest Value, 2014, Maskwa.
3. Woodlot Locations, 2013, Manitoba Forestry Association (MFA).
4. Forest Resource Inventory,1979-1999, Manitoba Conservation and Water Stewardship.

Coordinate System: UTM Zone 14N NAD83
Data Source: MBHydro, ProvMB, NRCAN
Date Created: July 28, 2015

N

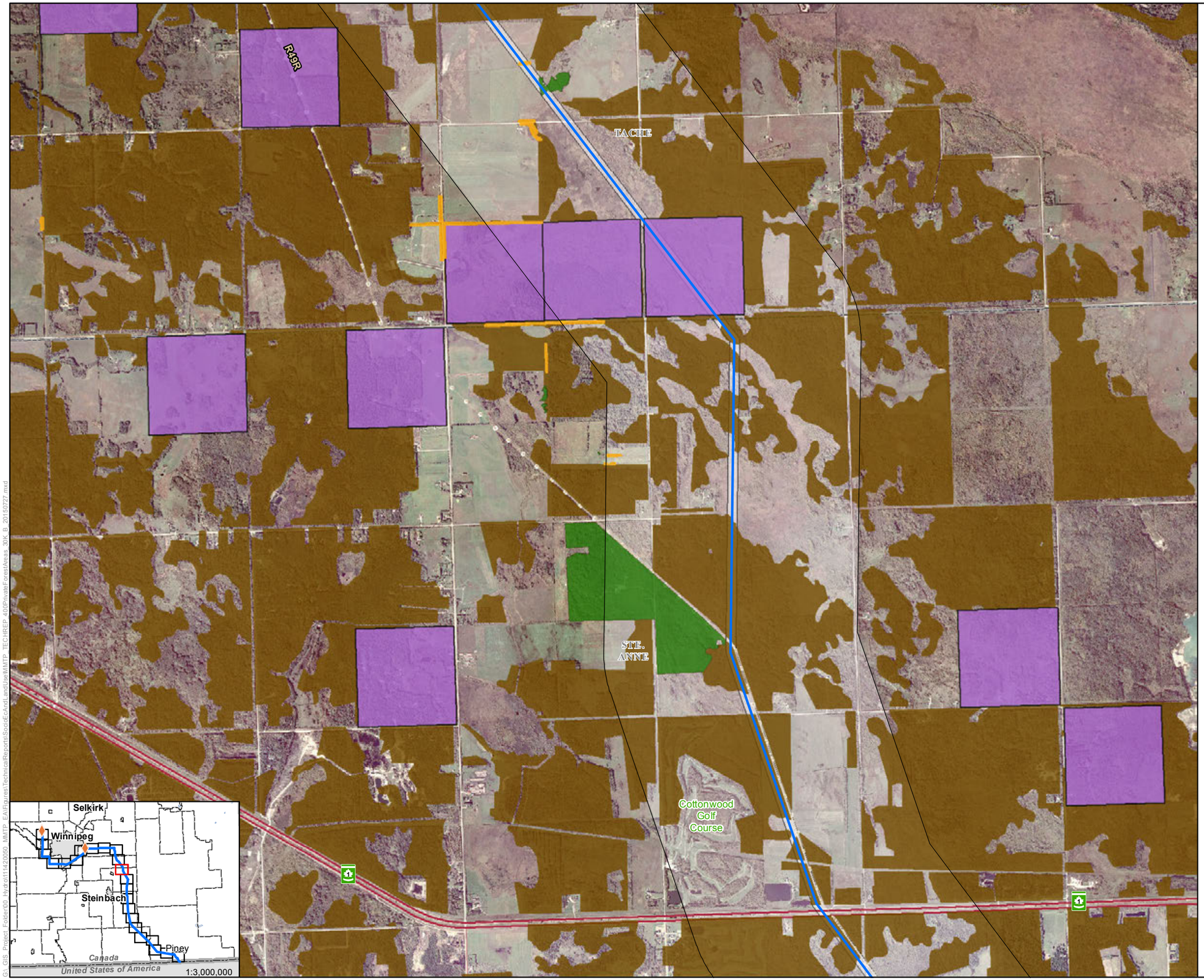
0 0.5 1 Kilometres
0 0.25 0.5 Miles

1:30,000

Private Land Forest Areas

Map 16-300-11

G:_GIS_Project_Folder\00_Hydro\111420050_MMTP_EA\Figures\TechnicalReports\SocioEcoAndLandUse\MMTP_TECHREP_400PrivateForestAreas_30K_B_20150727.mxd



Manitoba Hydro

Manitoba-Minnesota Transmission Project

Project Infrastructure
- Final Preferred Route (FPR)

Infrastructure
- Existing 230kV Transmission Line

Private Forest Land Areas
- Shelterbelt [2]
- Private Forest Land - Photo Interpretation [2]
- Manitoba Forestry Association Woodlot Locations [3]
- Private Forest Land - Provincial Forest Inventory [4]

Assessment Area
- Project Development Area (PDA)
- Forestry Local Assessment Area

Landbase
- Community
- Railway
- Trans Canada
- Provincial Highway
- Provincial Road
- Rural Municipality

Source:
1. Trees for Tomorrow Planting Sites (2008-2010), 2010, Manitoba Conservation Forestry Branch.
2. Private Land Forest Value, 2014, Maskwa.
3. Woodlot Locations, 2013, Manitoba Forestry Association (MFA).
4. Forest Resource Inventory,1979-1999, Manitoba Conservation and Water Stewardship.

Coordinate System: UTM Zone 14N NAD83
Data Source: MBHydro, ProvMB, NRCAN
Date Created: July 28, 2015

N

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1:30,000

Private Land Forest Areas

Map 16-300-12

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Manitoba Hydro

Manitoba-Minnesota Transmission Project

Project Infrastructure

- Final Preferred Route (FPR)

Infrastructure

- Electrical Station
- Existing 230kV Transmission Line

Private Forest Land Areas

- Shelterbelt [2]
- Private Forest Land - Photo Interpretation [2]
- Manitoba Forestry Association Woodlot Locations [3]
- Private Forest Land - Provincial Forest Inventory [4]

Assessment Area

- Project Development Area (PDA)
- Forestry Local Assessment Area

Landbase

- Community
- Railway
- Trans Canada
- Provincial Highway
- Provincial Road
- Rural Municipality

Source:
1. Trees for Tomorrow Planting Sites (2008-2010), 2010, Manitoba Conservation Forestry Branch.
2. Private Land Forest Value, 2014, Maskwa.
3. Woodlot Locations, 2013, Manitoba Forestry Association (MFA).
4. Forest Resource Inventory,1979-1999, Manitoba Conservation and Water Stewardship.

Coordinate System: UTM Zone 14N NAD83
Data Source: MBHydro, ProvMB, NRCAN
Date Created: July 28, 2015

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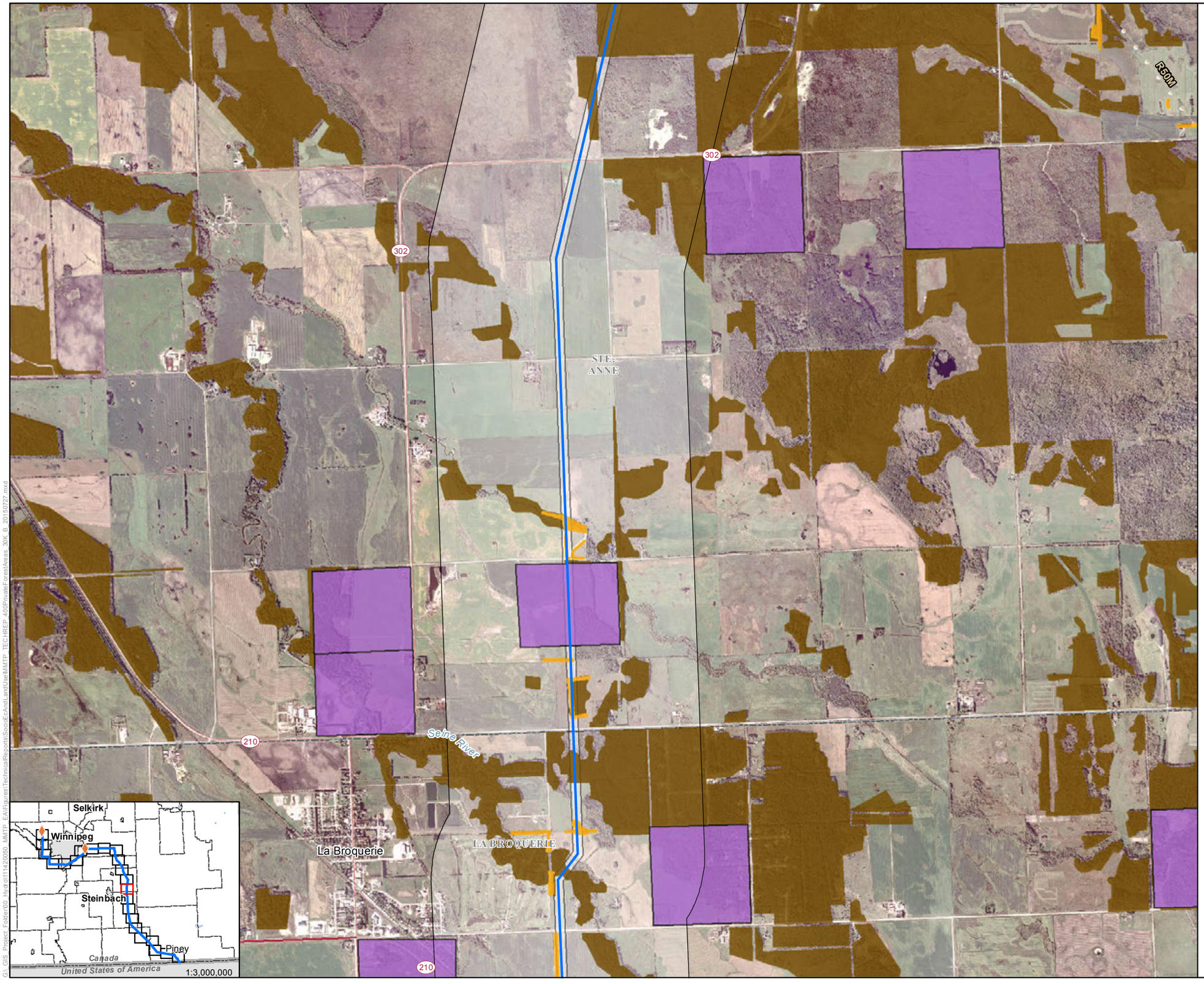
Private Land Forest Areas

Map 16-300-13

G:_GIS_Project_Folder\00_Hydro\111420050_MMTP_EA\Figures\TechnicalReports\SocioEcAndLandUseMMTP_TECHREP_400PrivateForestAreas_30K_B_20150727.mxd



Manitoba Hydro

Manitoba-Minnesota Transmission Project

Project Infrastructure

- Final Preferred Route (FPR)

Infrastructure

- Existing 230kV Transmission Line

Private Forest Land Areas

- Trees For Tomorrow [1]
- Shelterbelt [2]
- Manitoba Forestry Association Woodlot Locations [3]
- Private Forest Land - Provincial Forest Inventory [4]

Assessment Area

- Project Development Area (PDA)
- Forestry Local Assessment Area

Landbase

- Community
- Railway
- Trans Canada
- Provincial Highway
- Provincial Road
- Rural Municipality

Source:
1. Trees for Tomorrow Planting Sites (2008-2010), 2010, Manitoba Conservation Forestry Branch.
2. Private Land Forest Value, 2014, Maskwa.
3. Woodlot Locations, 2013, Manitoba Forestry Association (MFA).
4. Forest Resource Inventory, 1979-1999 Manitoba Conservation and Water Stewardship.

Coordinate System: UTM Zone 14N NAD83
Data Source: MBHydro, ProvMB, NRCAN
Date Created: July 28, 2015

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Private Land Forest Areas

Map 16-300-14

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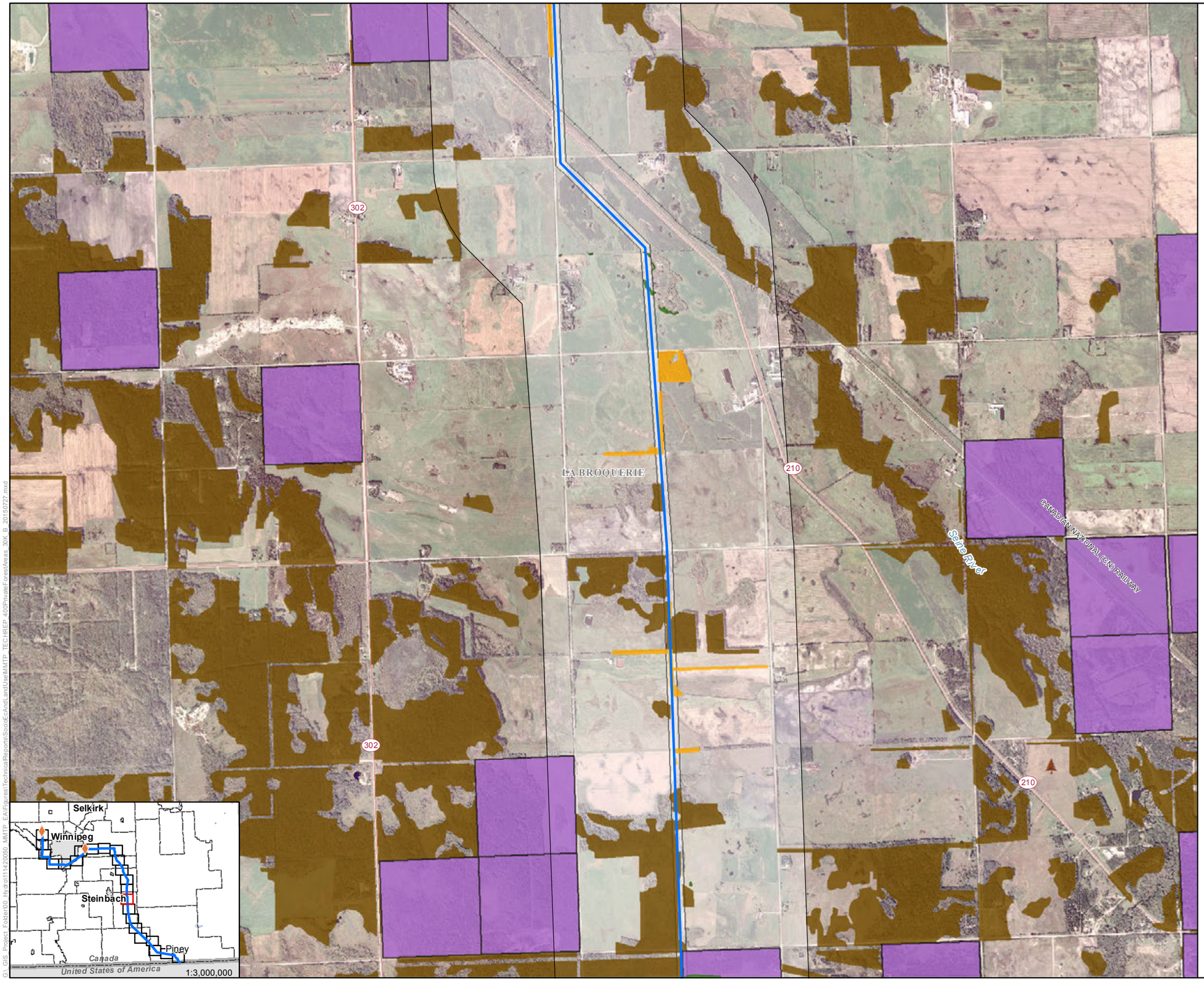

Manitoba Hydro

Manitoba-Minnesota Transmission Project

Project Infrastructure

- Final Preferred Route (FPR)

Private Forest Land Areas

- Trees For Tomorrow [1]
- Shelterbelt [2]
- Private Forest Land - Photo Interpretation [2]
- Manitoba Forestry Association Woodlot Locations [3]
- Private Forest Land - Provincial Forest Inventory [4]

Assessment Area

- Project Development Area (PDA)
- Forestry Local Assessment Area

Landbase

- Community
- Railway
- Trans Canada
- Provincial Highway
- Provincial Road
- Rural Municipality

Source:
1. Trees for Tomorrow Planting Sites (2008-2010), 2010, Manitoba Conservation Forestry Branch.
2. Private Land Forest Value, 2014, Maskwa.
3. Woodlot Locations, 2013, Manitoba Forestry Association (MFA).
4. Forest Resource Inventory, 1979-1999, Manitoba Conservation and Water Stewardship.

Coordinate System: UTM Zone 14N NAD83
Data Source: MBHydro, ProvMB, NRCAN
Date Created: July 28, 2015

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0 0.25 0.5 Miles

1:30,000

Private Land Forest Areas

Map 16-300-15

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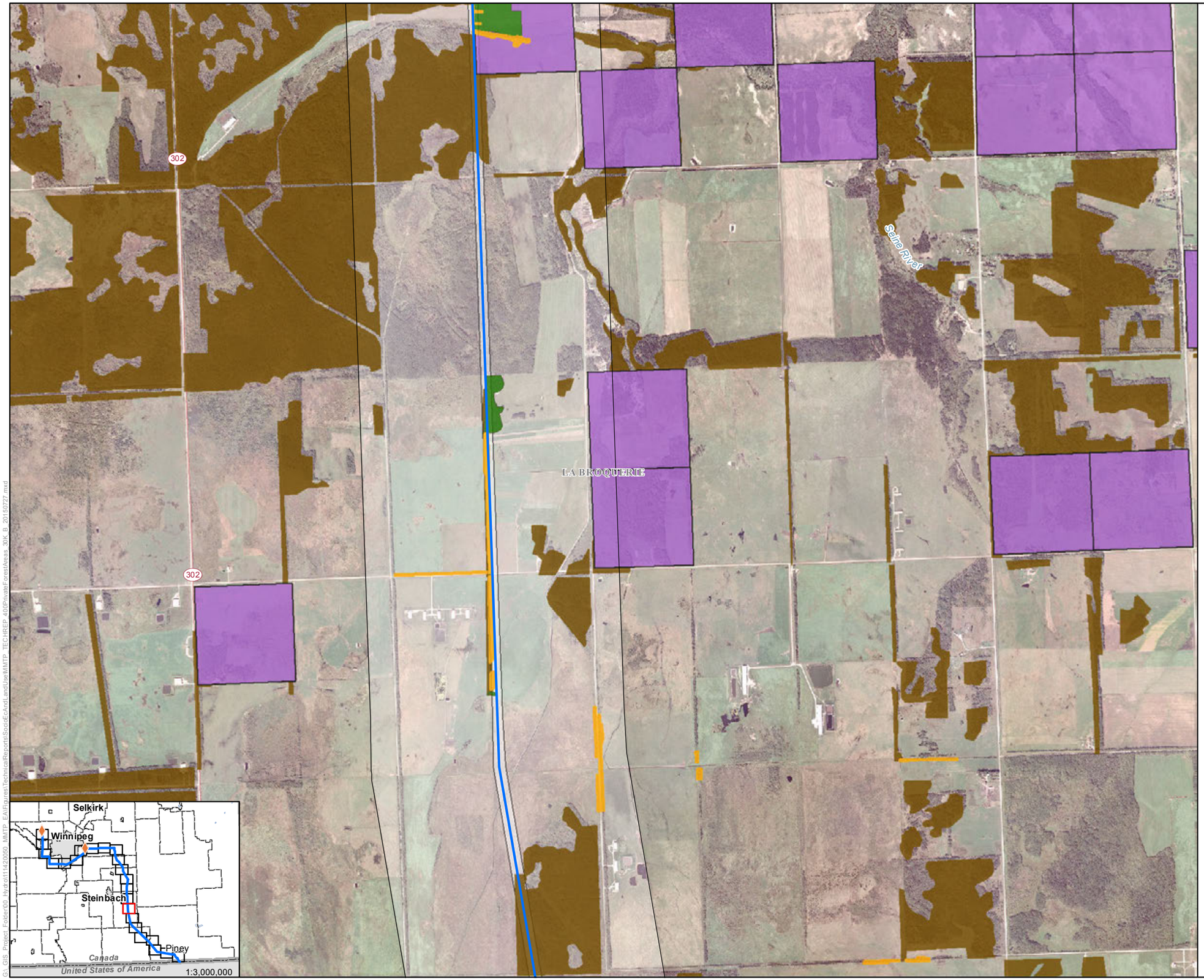


Manitoba Hydro

Manitoba-Minnesota Transmission Project

Project Infrastructure

- Final Preferred Route (FPR)

Private Forest Land Areas

- Shelterbelt [2]
- Private Forest Land - Photo Interpretation [2]
- Manitoba Forestry Association Woodlot Locations [3]
- Private Forest Land - Provincial Forest Inventory [4]

Assessment Area

- Project Development Area (PDA)
- Forestry Local Assessment Area

Landbase

- Community
- Railway
- Trans Canada
- Provincial Highway
- Provincial Road
- Rural Municipality

Source:
1. Trees for Tomorrow Planting Sites (2008-2010), 2010, Manitoba Conservation Forestry Branch.
2. Private Land Forest Value, 2014, Maskwa.
3. Woodlot Locations, 2013, Manitoba Forestry Association (MFA).
4. Forest Resource Inventory, 1979-1999, Manitoba Conservation and Water Stewardship.

Coordinate System: UTM Zone 14N NAD83
Data Source: MBHydro, ProvMB, NRCAN
Date Created: July 28, 2015

N

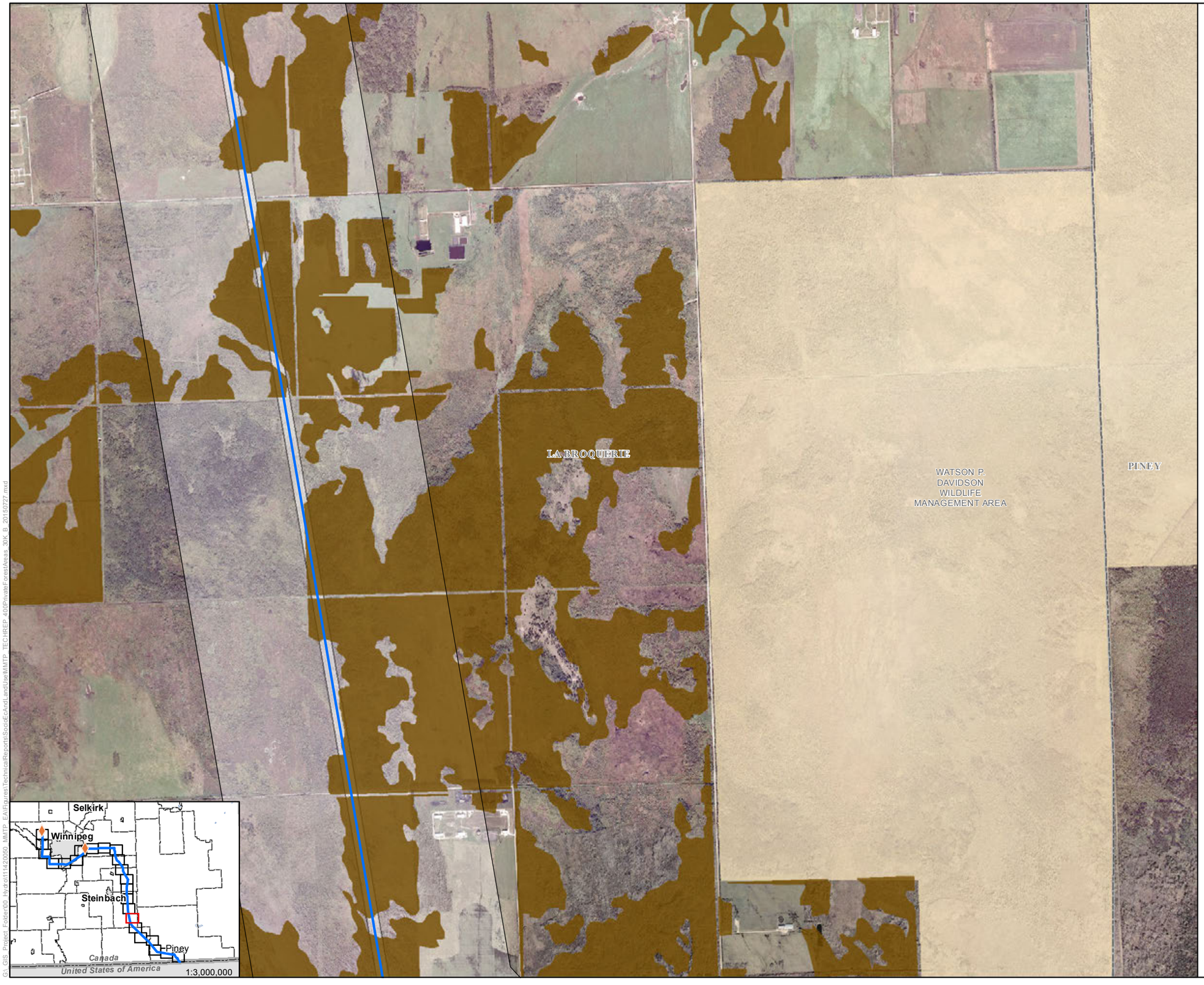
0 0.5 1 Kilometres
0 0.25 0.5 Miles

1:30,000

Private Land Forest Areas

Map 16-300-16

G:\ GIS_Project_Folder\00_Hydro\11420050_MMTP_EA\Figures\TechnicalReports\SocialEcAndLandUse\MMTP_TECHREP_400PrivateForestAreas_30K_B_20150727.mxd



Manitoba Hydro

Manitoba-Minnesota Transmission Project

Project Infrastructure

- Final Preferred Route (FPR)

Private Forest Land Areas

- Private Forest Land - Provincial Forest Inventory [4]

Assessment Area

- Project Development Area (PDA)
- Forestry Local Assessment Area

Landbase

- Community
- Railway
- Trans Canada
- Provincial Highway
- Provincial Road
- Wildlife Management Area
- Rural Municipality

Source:
1. Trees for Tomorrow Planting Sites (2008-2010), 2010, Manitoba Conservation Forestry Branch.
2. Private Land Forest Value, 2014, Maskwa.
3. Woodlot Locations, 2013, Manitoba Forestry Association (MFA).
4. Forest Resource Inventory, 1979-1999, Manitoba Conservation and Water Stewardship.

Coordinate System: UTM Zone 14N NAD83
Data Source: MBHydro, ProvMB, NRCAN
Date Created: July 28, 2015

N

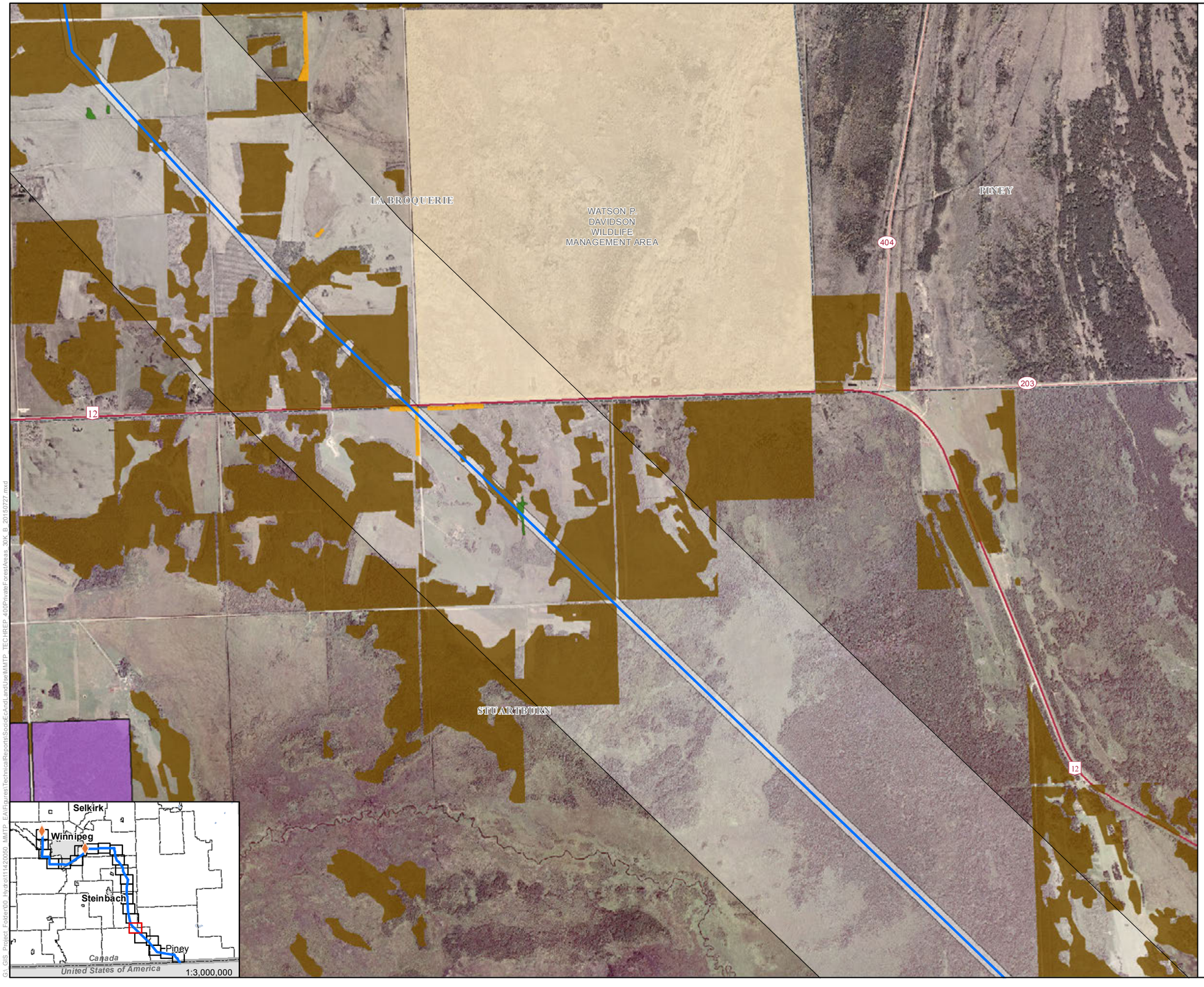
0 0.5 1 Kilometres
0 0.25 0.5 Miles

1:30,000

Private Land Forest Areas

Map 16-300-17

G:\ GIS_Project_Folder\00_Hydro\111420050_MMTP_EAV\Figures\TechnicalReports\SocioEcAndLandUse\MMTP_TECHREP_400PrivateForestAreas_30K_B_20150727.mxd



Manitoba Hydro

Manitoba-Minnesota Transmission Project

Project Infrastructure

- Final Preferred Route (FPR)

Private Forest Land Areas

- Shelterbelt [2]
- Private Forest Land - Photo Interpretation [2]
- Manitoba Forestry Association Woodlot Locations [3]
- Private Forest Land - Provincial Forest Inventory [4]

Assessment Area

- Project Development Area (PDA)
- Forestry Local Assessment Area

Landbase

- Community
- Railway
- Trans Canada
- Provincial Highway
- Provincial Road
- Wildlife Management Area
- Rural Municipality

Source:
1. Trees for Tomorrow Planting Sites (2008-2010), 2010, Manitoba Conservation Forestry Branch.
2. Private Land Forest Value, 2014, Maskwa.
3. Woodlot Locations, 2013, Manitoba Forestry Association (MFA).
4. Forest Resource Inventory, 1979-1999, Manitoba Conservation and Water Stewardship.

Coordinate System: UTM Zone 14N NAD83
Data Source: MBHydro, ProvMB, NRCAN
Date Created: July 28, 2015

N

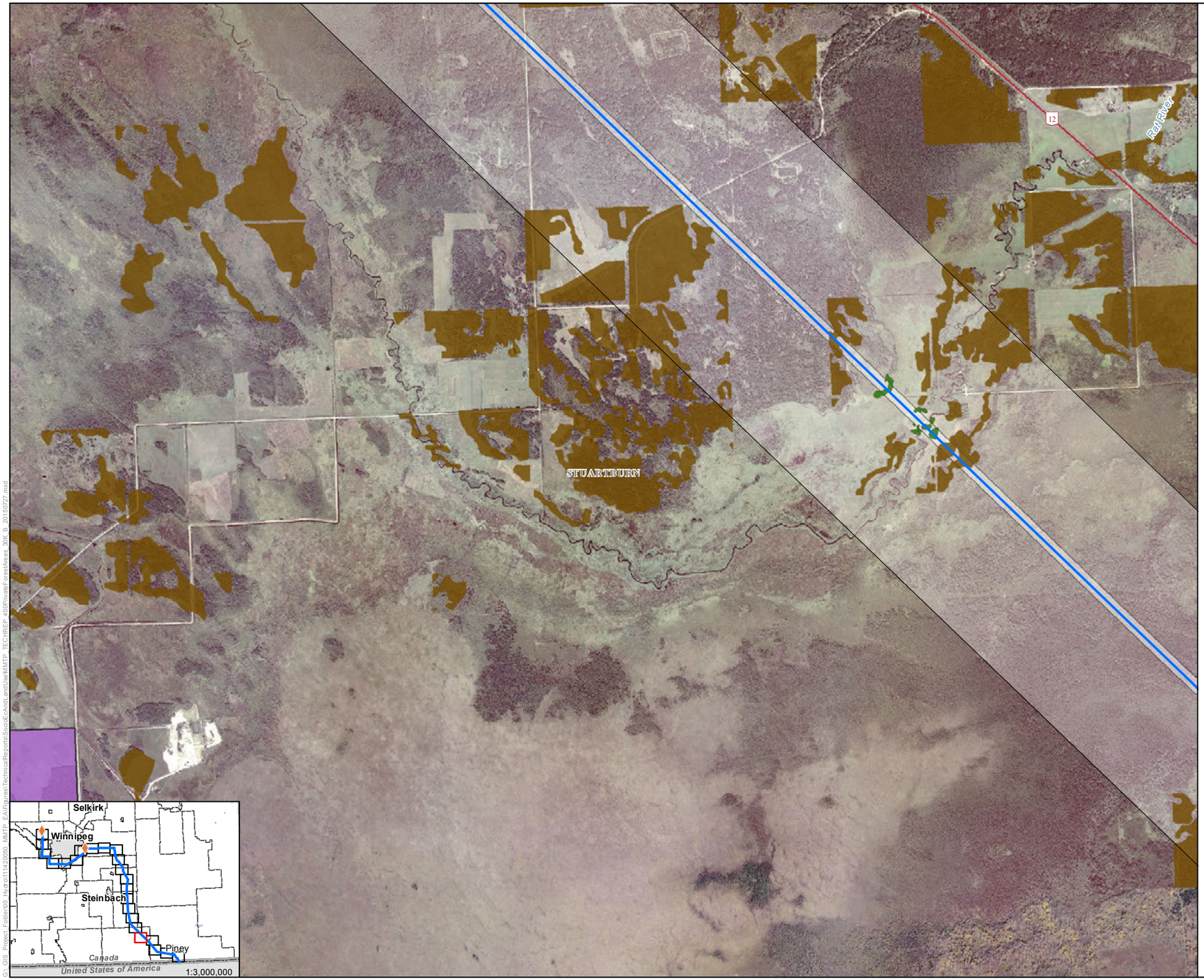
0 0.5 1 Kilometres
0 0.25 0.5 Miles

1:30,000

Private Land Forest Areas

Map 16-300-18

G:\ GIS_Project_Folder\00_Hydro\11142\0050_MMTP_EA\Figures\TechnicalReports\SocioEcAndLandUse\MMTP_TECHREP_400PrivateForestAreas_30K_B_20150727.mxd



Manitoba Hydro

Manitoba-Minnesota Transmission Project

Project Infrastructure

- Final Preferred Route (FPR)

Private Forest Land Areas

- Private Forest Land - Photo Interpretation [2]
- Manitoba Forestry Association Woodlot Locations [3]
- Private Forest Land - Provincial Forest Inventory [4]

Assessment Area

- Project Development Area (PDA)
- Forestry Local Assessment Area

Landbase

- Community
- Railway
- Trans Canada
- Provincial Highway
- Provincial Road
- Rural Municipality

Source:
1. Trees for Tomorrow Planting Sites (2008-2010), 2010, Manitoba Conservation Forestry Branch.
2. Private Land Forest Value, 2014, Maskwa.
3. Woodlot Locations, 2013, Manitoba Forestry Association (MFA).
4. Forest Resource Inventory, 1979-1999, Manitoba Conservation and Water Stewardship.

Coordinate System: UTM Zone 14N NAD83
Data Source: MBHydro, ProvMB, NRCAN
Date Created: July 28, 2015

N

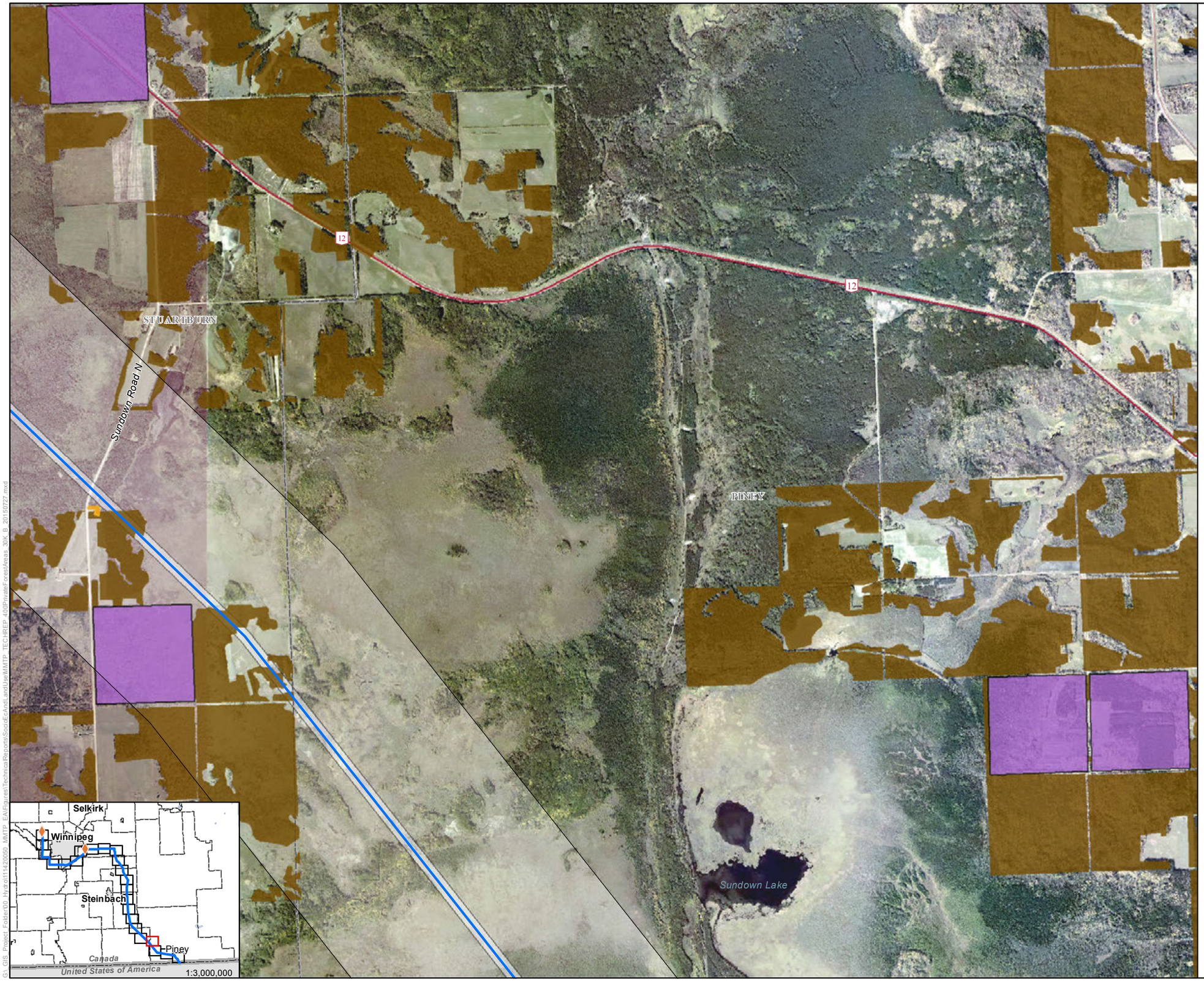
0 0.5 1 Kilometres
0 0.25 0.5 Miles

1:30,000

Private Land Forest Areas

Map 16-300-19

G:_GIS_Project_Folder\00_Hydro\111420050_MMTP_EAV\Figures\TechnicalReports\SocioEcAndLandUse\MMTP_TECHREP_400PrivateForestAreas_30K_B_20150727.mxd



Manitoba Hydro

Manitoba-Minnesota Transmission Project

Project Infrastructure

- Final Preferred Route (FPR)

Private Forest Land Areas

- Trees For Tomorrow [1]
- Shelterbelt [2]
- Manitoba Forestry Association Woodlot Locations [3]
- Private Forest Land - Provincial Forest Inventory [4]

Assessment Area

- Project Development Area (PDA)
- Forestry Local Assessment Area

Landbase

- Community
- Railway
- Trans Canada
- Provincial Highway
- Provincial Road
- Rural Municipality

Source:
1. Trees for Tomorrow Planting Sites (2008-2010), 2010, Manitoba Conservation Forestry Branch.
2. Private Land Forest Value, 2014, Maskwa.
3. Woodlot Locations, 2013, Manitoba Forestry Association (MFA).
4. Forest Resource Inventory, 1979-1999, Manitoba Conservation and Water Stewardship.

Coordinate System: UTM Zone 14N NAD83
Data Source: MBHydro, ProvMB, NRCAN
Date Created: July 28, 2015

N

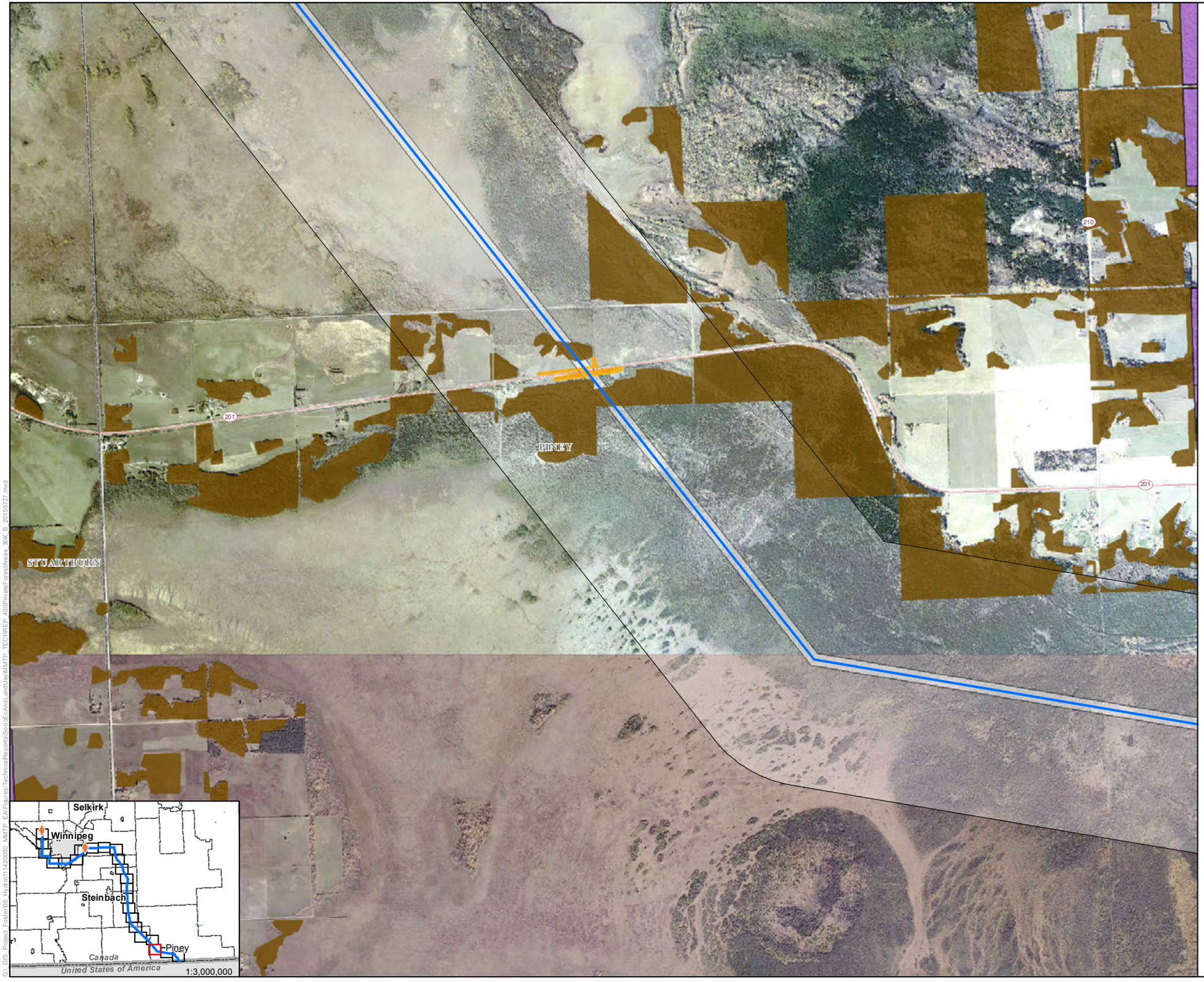
0 0.5 1 Kilometres
0 0.25 0.5 Miles

1:30,000

Private Land Forest Areas

Map 16-300-20

G:\ GIS_Project_Folder\00_Hydro\111420050_MMTP_EAV\Figures\TechnicalReports\SocioEcAndLandUse\MMTP_TECHREP_400PrivateForestAreas_30K_B_20150727.mxd



Manitoba Hydro

Manitoba-Minnesota Transmission Project

Project Infrastructure

- Final Preferred Route (FPR)

Private Forest Land Areas

- Shelterbelt [2]
- Manitoba Forestry Association Woodlot Locations [3]
- Private Forest Land - Provincial Forest Inventory [4]

Assessment Area

- Project Development Area (PDA)
- Forestry Local Assessment Area

Landbase

- Community
- Railway
- Trans Canada
- Provincial Highway
- Provincial Road
- Rural Municipality

Source:
1. Trees for Tomorrow Planting Sites (2008-2010), 2010, Manitoba Conservation Forestry Branch.
2. Private Land Forest Value, 2014, Maskwa.
3. Woodlot Locations, 2013, Manitoba Forestry Association (MFA).
4. Forest Resource Inventory, 1979-1999, Manitoba Conservation and Water Stewardship.

Coordinate System: UTM Zone 14N NAD83
Data Source: MBHydro, ProvMB, NRCAN
Date Created: July 28, 2015

N

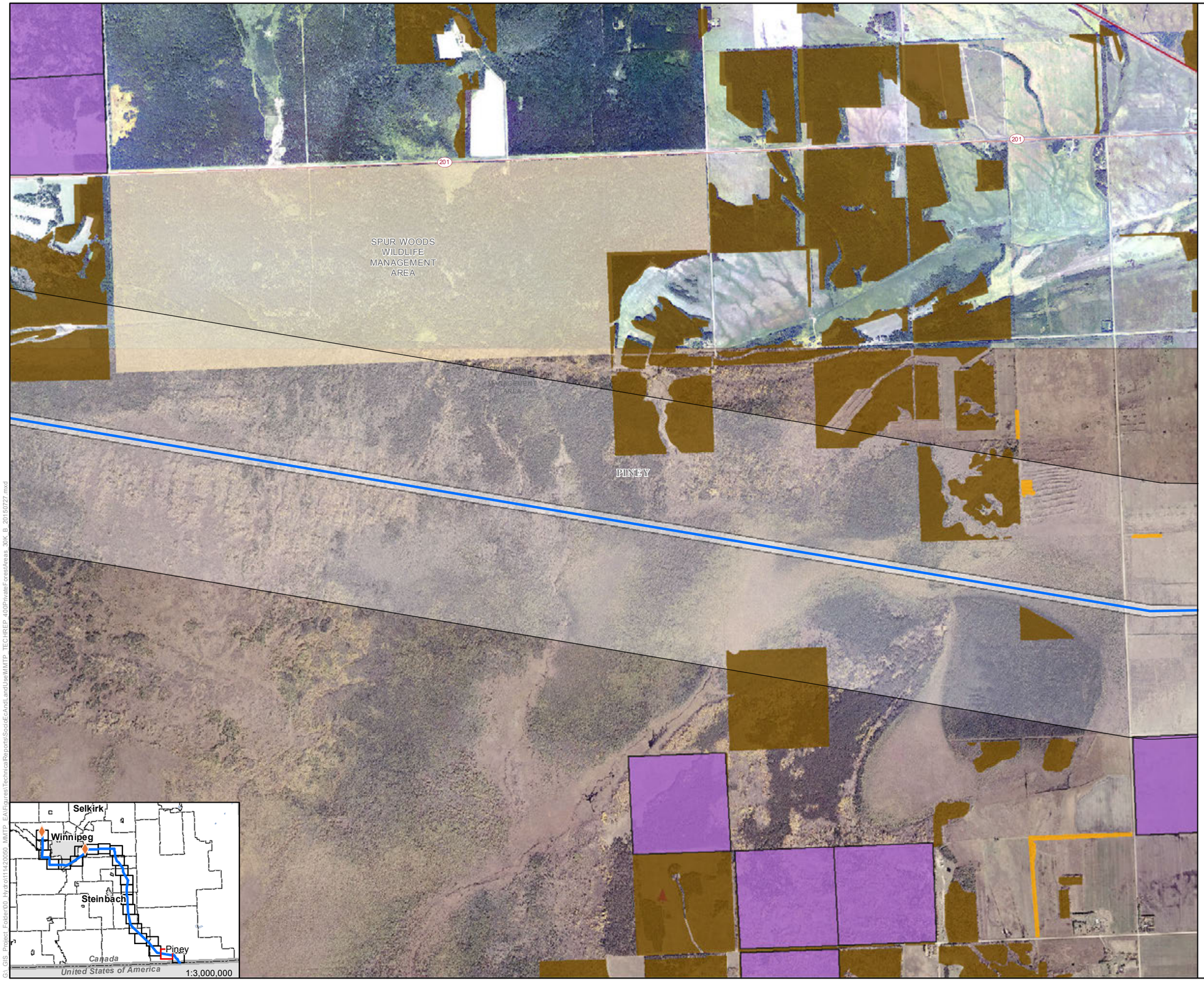
0 0.5 1 Kilometres
0 0.25 0.5 Miles

1:30,000

Private Land Forest Areas

Map 16-300-21

G:\ GIS_Project_Folder\00_Hydro\111420050_MMTP_EA\Figures\TechnicalReports\SocioEcAndLandUse\MMTP_TECHREP_400PrivateForestAreas_30K_B_20150727.mxd



Manitoba Hydro

Manitoba-Minnesota Transmission Project

Project Infrastructure

- Final Preferred Route (FPR)

Private Forest Land Areas

- Trees For Tomorrow [1]
- Shelterbelt [2]
- Manitoba Forestry Association Woodlot Locations [3]
- Private Forest Land - Provincial Forest Inventory [4]

Assessment Area

- Project Development Area (PDA)
- Forestry Local Assessment Area

Landbase

- Community
- Railway
- Trans Canada
- Provincial Highway
- Provincial Road
- Wildlife Management Area
- Rural Municipality

Source:
1. Trees for Tomorrow Planting Sites (2008-2010), 2010, Manitoba Conservation Forestry Branch.
2. Private Land Forest Value, 2014, Maskwa.
3. Woodlot Locations, 2013, Manitoba Forestry Association (MFA).
4. Forest Resource Inventory, 1979-1999, Manitoba Conservation and Water Stewardship.

Coordinate System: UTM Zone 14N NAD83
Data Source: MBHydro, ProvMB, NRCAN
Date Created: July 28, 2015

N

0 0.5 1 Kilometres
0 0.25 0.5 Miles

1:30,000

Private Land Forest Areas

Map 16-300-22

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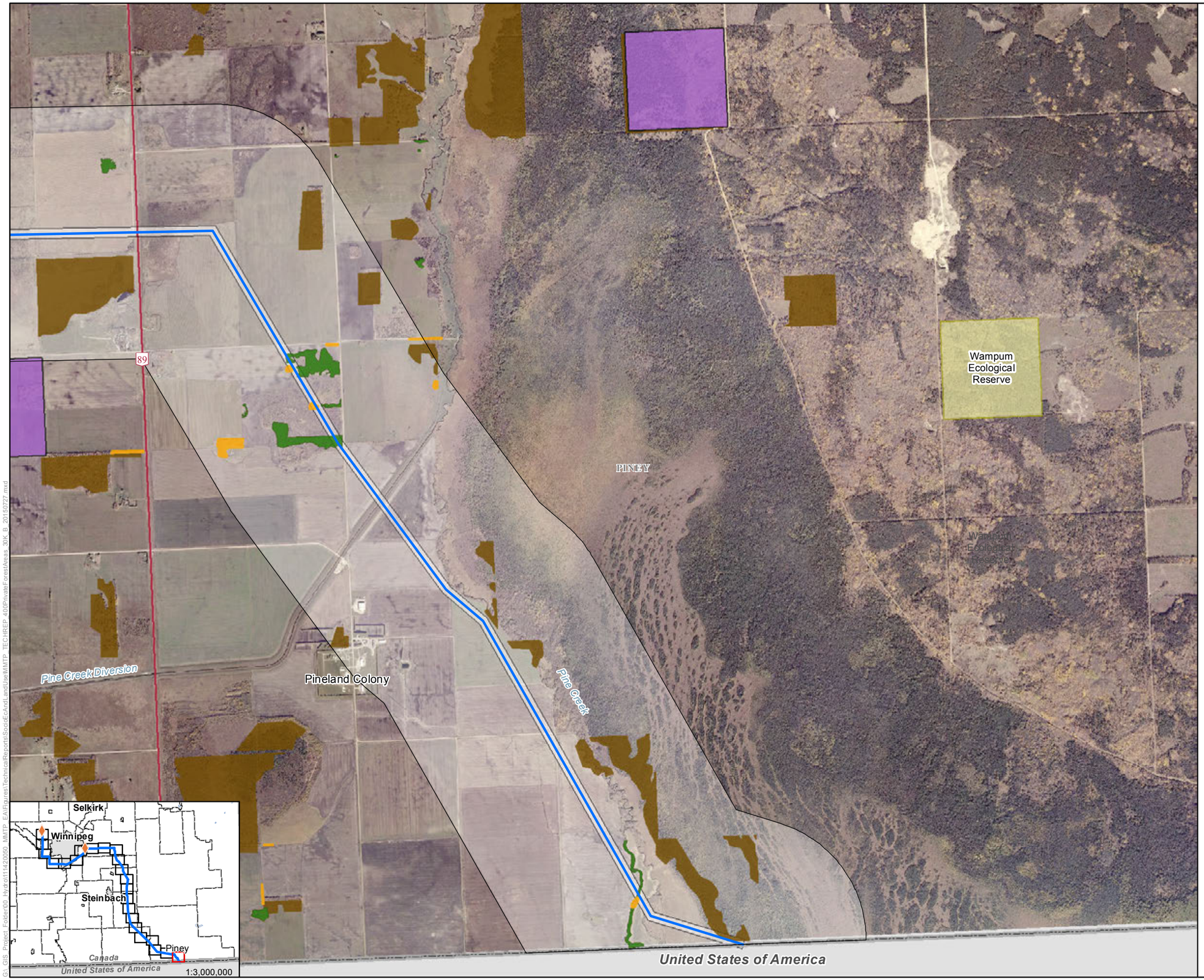


Manitoba Hydro

Manitoba-Minnesota Transmission Project

Project Infrastructure

- Final Preferred Route (FPR)

Private Forest Land Areas

- Shelterbelt [2]
- Private Forest Land - Photo Interpretation [2]
- Manitoba Forestry Association Woodlot Locations [3]
- Private Forest Land - Provincial Forest Inventory [4]

Assessment Area

- Project Development Area (PDA)
- Forestry Local Assessment Area

Landbase

- Community
- Railway
- Trans Canada
- Provincial Highway
- Provincial Road
- Ecological Reserve
- Rural Municipality

Source:
1. Trees for Tomorrow Planting Sites (2008-2010), 2010, Manitoba Conservation Forestry Branch.
2. Private Land Forest Value, 2014, Maskwa.
3. Woodlot Locations, 2013, Manitoba Forestry Association (MFA).
4. Forest Resource Inventory, 1979-1999, Manitoba Conservation and Water Stewardship.

Coordinate System: UTM Zone 14N NAD83
Data Source: MBHydro, ProvMB, NRCAN
Date Created: July 28, 2015

N

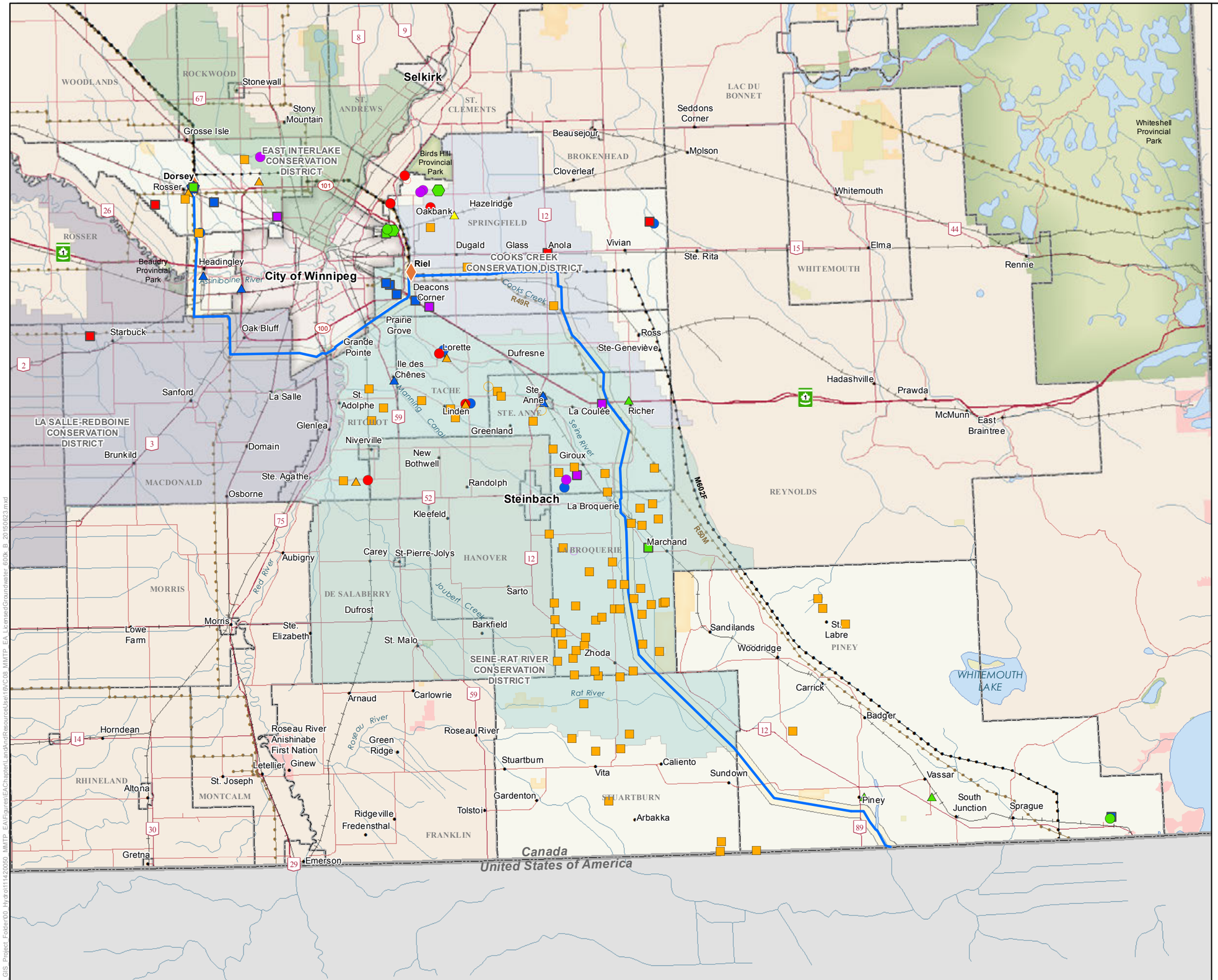
0 0.5 1 Kilometres
0 0.25 0.5 Miles

1:30,000

Private Land Forest Areas

Map 16-300-23

G:\ GIS_Project_Folder\00_Hydro\111420050_MMTP_EA\Figures\TechnicalReports\SocioEcAndLandUse\MMTP_TECHREP_400PrivateForestAreas_30K_B_20150727.mxd



Manitoba Hydro

Manitoba-Minnesota Transmission Project

Project Infrastructure

- Converter Station (Existing)
- Final Preferred Route (FPR)

Infrastructure

- Existing 500kV Transmission Line
- Existing 230kV Transmission Line

Water Usage (Maximum Annual Volume (1000 m^3))[1]

Agricultural
- No Data
- 0 - 10
- 10 - 100

Industrial
- No Data
- 0 - 10
- 10 - 100
- 100 - 1000
- 1000+

Municipal
- No Data
- 10 - 100
- 100 - 1000

Domestic
- 0 - 10

Irrigation
- No Data
- 10 - 100
- 100 - 1000

Other
- No Data
- 0 - 10
- 10 - 100
- 100 - 1000
- 1000+

Conservation Districts

- Cooks Creek
- East Interlake
- La Salle-Redboine
- Seine-Rat River

Assessment Area

- Land and Resource Use Local Assessment Area
- Land and Resource Use Regional Assessment Area

Landbase

- Community
- Railway
- Trans Canada
- Provincial Highway
- Provincial Road
- City
- First Nation Lands
- Ecological Reserve
- Wildlife Management Area
- Provincial Park
- Rural Municipality

Source:
1. Licensed Surface Water and Groundwater, 2014, Manitoba Conservation and Water Stewardship

Coordinate System: UTM Zone 14N NAD83
Data Source: MBHydro, ProvMB, NRCAN
Date Created: July 20, 2015

N

0 10 Kilometres
0 5 10 Miles

1:600,000

Licensed Surface Water and Groundwater Supply

Map 16-11

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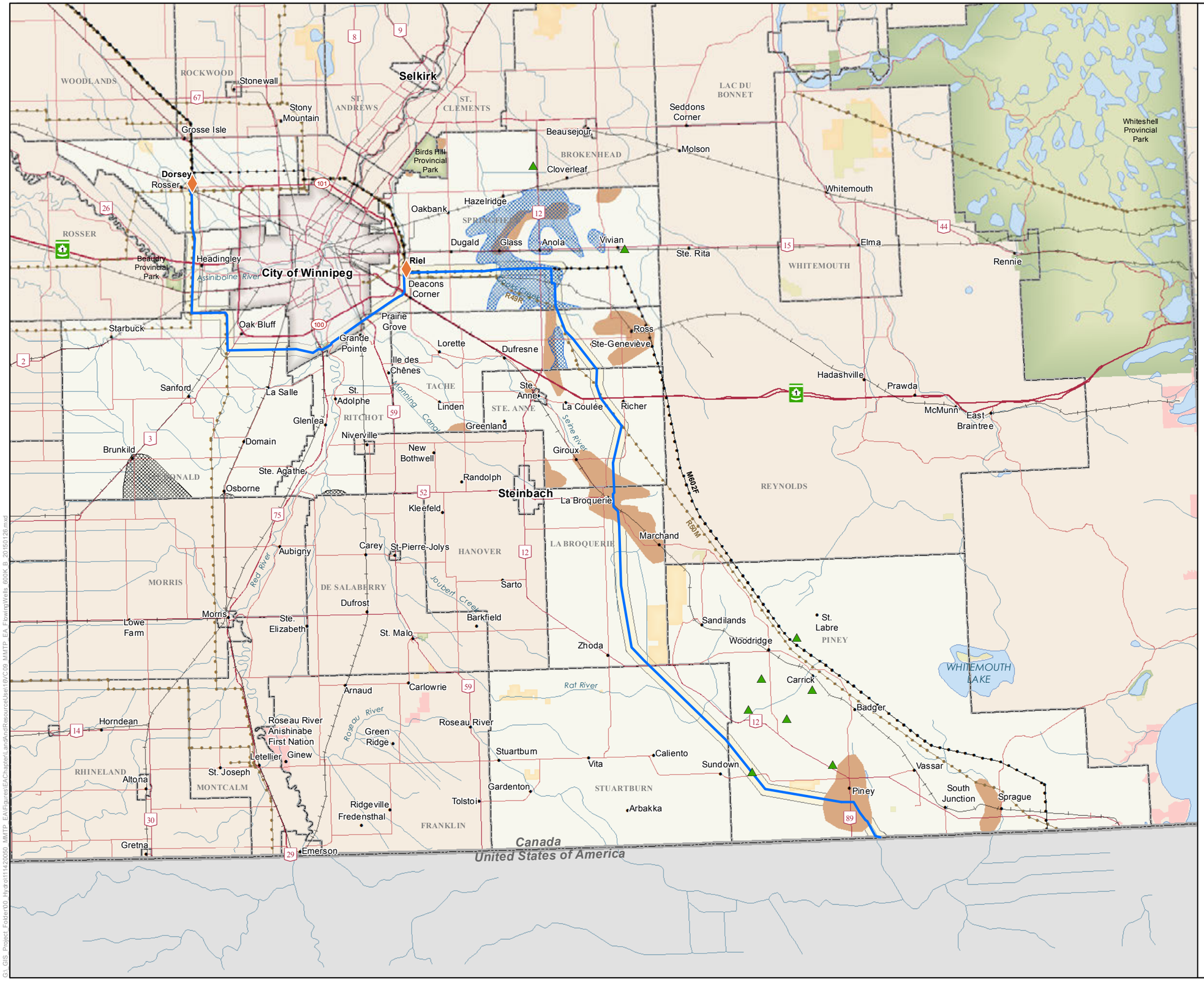

Manitoba Hydro

Manitoba-Minnesota Transmission Project

Project Infrastructure

- Converter Station (Existing)
- Final Preferred Route (FPR)

Infrastructure

- Existing 500kV Transmission Line
- Existing 230kV Transmission Line

Flowing Wells and Springs

- Fresh Water Springs (Rutulis, 1985)
- Flowing Wells - Saline Water (Rutulis, 1985)
- Flowing Wells - Fresh Water (Rutulis, 1990)
- Flowing Wells - Fresh Water (Rutulis, 1985)

Assessment Area

- Land and Resource Use Local Assessment Area
- Land and Resource Use Regional Assessment Area

Landbase

- Community
- Railway
- Trans Canada
- Provincial Highway
- Provincial Road
- City
- First Nation Lands
- Ecological Reserve
- Wildlife Management Area
- Provincial Park
- Rural Municipality

Coordinate System: UTM Zone 14N NAD83
Data Source: MBHydro, ProvMB, NRCAN
Date Created: July 20, 2015

N

0 10 Kilometres
0 5 10 Miles

1:600,000

Flowing Wells and Springs

Map 16-12

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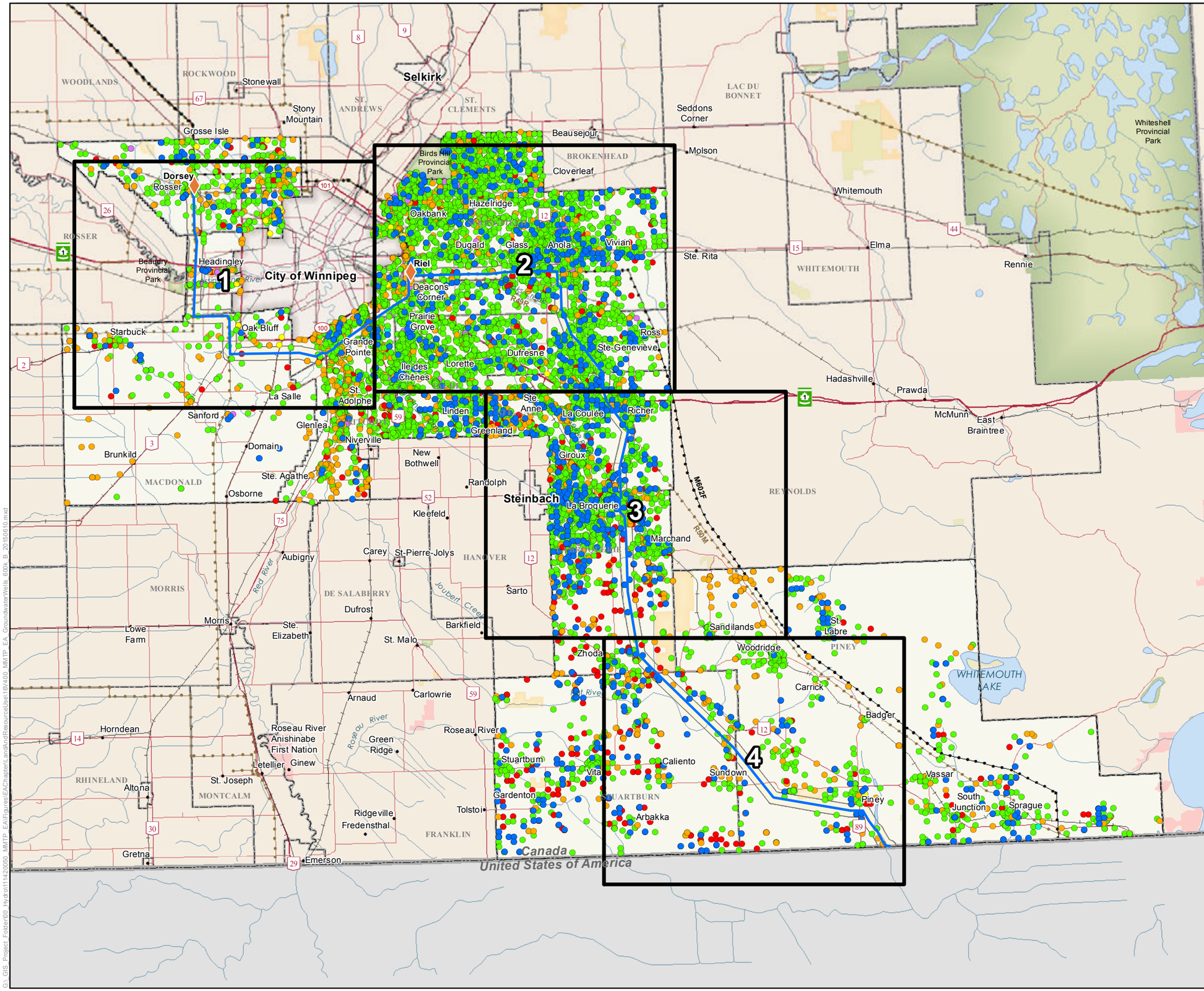
Selkirk
Dorsey
Rosser
Riel
City of Winnipeg
Steinbach
1
2
3
4
WOODLANDS
ROCKWOOD
ST. ANDREWS
ST. CLEMENTS
LAC DU BONNET
BROKENHEAD
ROSSER
WHITEMOUTH
REYNOLDS
MACDONALD
MORRIS
DE SALABERRY
HANOVER
PINEY
RHINELAND
MONTCALM
FRANKLIN
QUARTBURN
Stonewall
Stony Mountain
Grosse Isle
Beausejour
Seddons Corner
Molson
Whitemouth
Elma
Rennie
Ste. Rita
Whiteshell Provincial Park
Birds Hill Provincial Park
Cloverleaf
Hazelridge
Oakbank
Dugald
Glass
Anola
Vivian
Beaudry Provincial Park
Headingley
Deacons Corner
Prairie Grove
Starbuck
Oak Bluff
Grande Pointe
Ile des Chênes
Lorette
Dufresne
Ross
Ste. Geneviève
Hadashville
Prawda
McMunn
East Braintree
La Salle
St. Adolphe
Sanford
Glenlea
Linden
Greenland
Ste. Anne
La Coulée
Richer
Niverville
New Bothwell
Giroux
Brunkild
Domain
Ste. Agathe
Randolph
Osborne
Kleefeld
La Broquerie
Marchand
Aubigny
Carey
St-Pierre-Jolys
Sarto
Dufrost
Barkfield
Sandilands
St. Labre
Lowe Farm
Morris
Ste. Elizabeth
St. Malo
Zhoda
Woodridge
Carrick
Badger
WHITEMOUTH LAKE
Arnaud
Carlowrie
Roseau River
Roseau River Anishinabe First Nation
Green Ridge
Horndean
Letellier
Ginew
Stuartburn
Caliento
Sundown
Vita
Vassar
Altona
St. Joseph
Gardenton
Piney
South Junction
Sprague
Ridgeville
Fredensthal
Tolstoi
Arbakka
Gretna
Emerson
Canada
United States of America
Red River
Roseau River
Joubert Creek
R38M
R49F
M602F
Manitoba Hydro
Manitoba-Minnesota Transmission Project
Project Infrastructure
Converter Station (Existing)
Final Preferred Route (FPR)
Infrastructure
Existing 500kV Transmission Line
Existing 230kV Transmission Line
Groundwater Well Use[1]
Multiple
Multi-Use
Single
Air Conditioning / Geothermal
Domestic
Industrial
Irrigation
Livestock
Other
Map Series Index - 1:150,000
Map Series Tile
Assessment Area
Land and Resource Use Local Assessment Area
Land and Resource Use Regional Assessment Area
Landbase
Community
Trans Canada Highway
Provincial Highway
Provincial Road
City / Town
First Nation Lands
Ecological Reserve
Wildlife Management Area
Provincial Park
Rural Municipality
Watercourse
Waterbody
Source:
1. Groundwater Wells, 2014, Manitoba Conservation and Water Stewardship
Coordinate System: UTM Zone 14N NAD83
Data Source: MBHydro, ProvMB, NRCAN
Date Created: July 20, 2015
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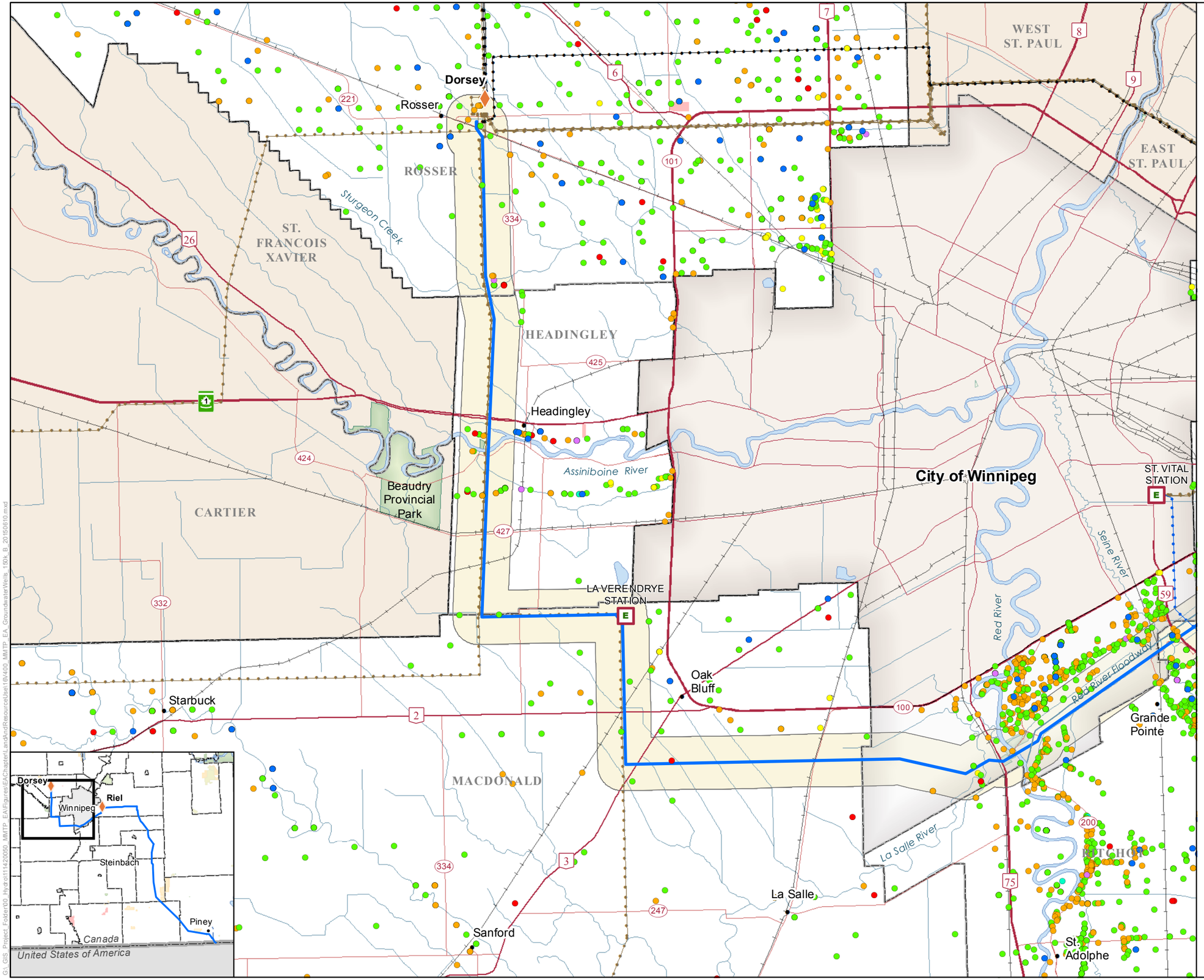
0 5 10 Miles
1:600,000
Index of Map Series
Groundwater Wells
Map Series 16-400



Manitoba Hydro

Manitoba-Minnesota Transmission Project

Project Infrastructure

- Converter Station (Existing)
- Final Preferred Route (FPR)

Infrastructure

- Electrical Station
- St. Vital Transmission Complex (V95L)
- Existing 500kV Transmission Line
- Existing 230kV Transmission Line

Groundwater Well Use

Multiple
- Multi-Use

Single
- Air Conditioning / Geothermal
- Domestic
- Industrial
- Irrigation
- Livestock
- Other

Assessment Area

- Land and Resource Use Local Assessment Area
- Land and Resource Use Regional Assessment Area

Landbase

- Community
- Trans Canada Highway
- Provincial Highway
- Provincial Road
- City / Town
- First Nation Lands
- Rural Municipality
- Ecological Reserve
- Wildlife Management Area
- Provincial Park
- Watercourse
- Waterbody

Coordinate System: UTM Zone 14N NAD83
Data Source: MBHydro, ProvMB, NRCAN
Date Created: June 25, 2015

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1:150,000

Groundwater Wells

Map 16-400-01

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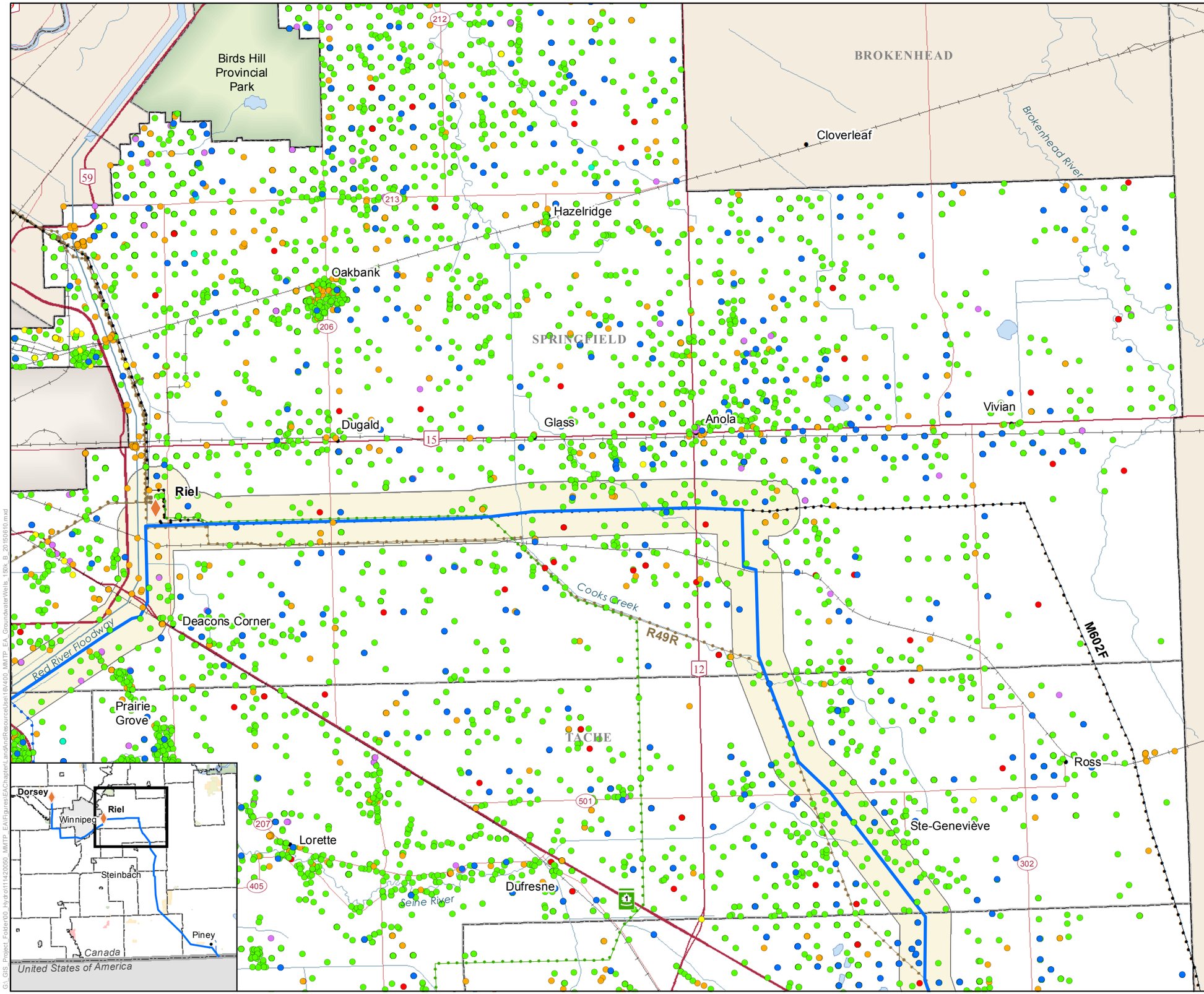

Manitoba Hydro

Manitoba-Minnesota Transmission Project

Project Infrastructure

- Converter Station (Existing)
- Final Preferred Route (FPR)

Infrastructure

- Bipole III Transmission Line (Approved)
- St. Vital Transmission Complex (V95L)
- Existing 500kV Transmission Line
- Existing 230kV Transmission Line

Groundwater Well Use

Multiple
- Multi-Use

Single
- Air Conditioning / Geothermal
- Domestic
- Industrial
- Irrigation
- Livestock
- Other

Assessment Area

- Land and Resource Use Local Assessment Area
- Land and Resource Use Regional Assessment Area

Landbase

- Community
- Trans Canada Highway
- Provincial Highway
- Provincial Road
- City / Town
- First Nation Lands
- Rural Municipality
- Ecological Reserve
- Wildlife Management Area
- Provincial Park
- Watercourse
- Waterbody

Coordinate System: UTM Zone 14N NAD83
Data Source: MBHydro, ProvMB, NRCAN
Date Created: July 20, 2015

N

0 2 4 Kilometres
0 1.5 3 Miles

1:150,000

Groundwater Wells

Map 16-400-02

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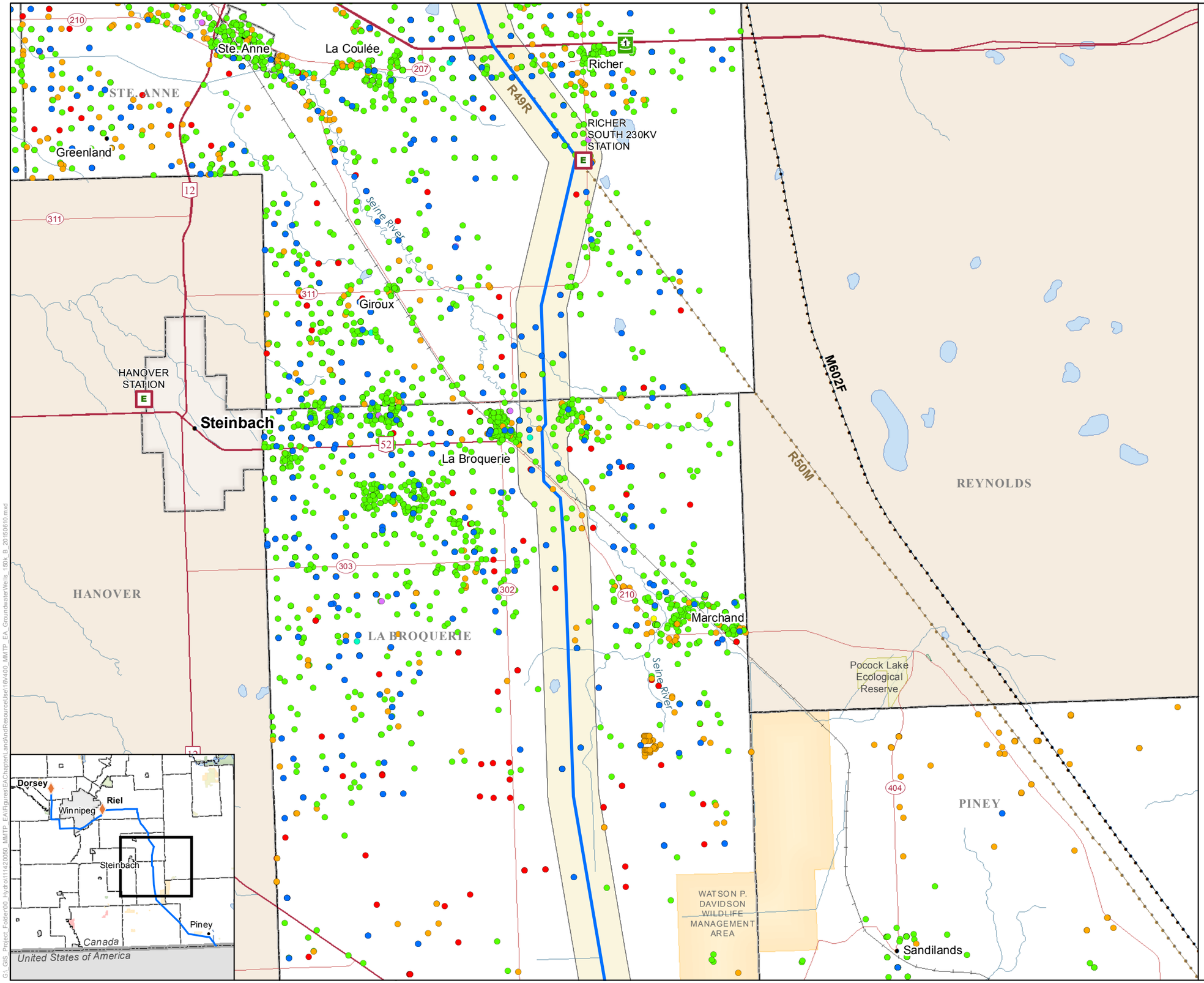

Manitoba Hydro

Manitoba-Minnesota Transmission Project

Project Infrastructure
- Final Preferred Route (FPR)

Infrastructure
- Electrical Station
- Existing 500kV Transmission Line
- Existing 230kV Transmission Line

Groundwater Well Use
Multiple
- Multi-Use

Single
- Air Conditioning / Geothermal
- Domestic
- Industrial
- Irrigation
- Livestock
- Other

Assessment Area
- Land and Resource Use Local Assessment Area
- Land and Resource Use Regional Assessment Area

Landbase
- Community
- Trans Canada Highway
- Provincial Highway
- Provincial Road
- City / Town
- First Nation Lands
- Rural Municipality
- Ecological Reserve
- Wildlife Management Area
- Provincial Park
- Watercourse
- Waterbody

Coordinate System: UTM Zone 14N NAD83
Data Source: MBHydro, ProvMB, NRCAN
Date Created: July 20, 2015

N

0 2 4 Kilometres
0 1.5 3 Miles

1:150,000

Groundwater Wells

Map 16-400-03

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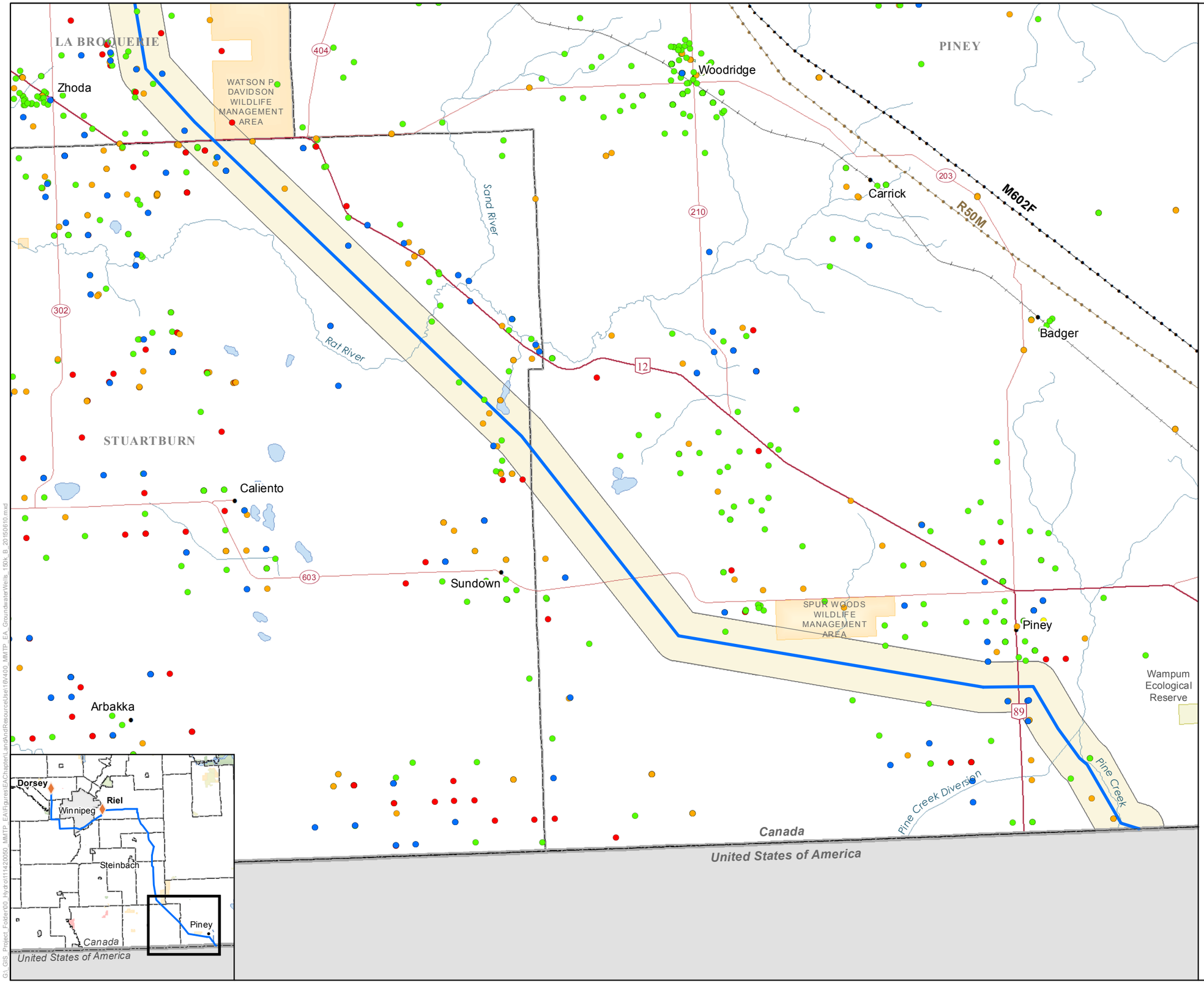

Manitoba Hydro

Manitoba-Minnesota Transmission Project

Project Infrastructure
- Final Preferred Route (FPR)

Infrastructure
- Existing 500kV Transmission Line
- Existing 230kV Transmission Line

Groundwater Well Use
Multiple
- Multi-Use

Single
- Air Conditioning / Geothermal
- Domestic
- Industrial
- Irrigation
- Livestock
- Other

Assessment Area
- Land and Resource Use Local Assessment Area
- Land and Resource Use Regional Assessment Area

Landbase
- Community
- Trans Canada Highway
- Provincial Highway
- Provincial Road
- City / Town
- First Nation Lands
- Rural Municipality
- Ecological Reserve
- Wildlife Management Area
- Provincial Park
- Watercourse
- Waterbody

Coordinate System: UTM Zone 14N NAD83
Data Source: MBHydro, ProvMB, NRCAN
Date Created: July 20, 2015

N

0 2 4 Kilometres
0 1.5 3 Miles

1:150,000

Groundwater Wells

Map 16-400-04

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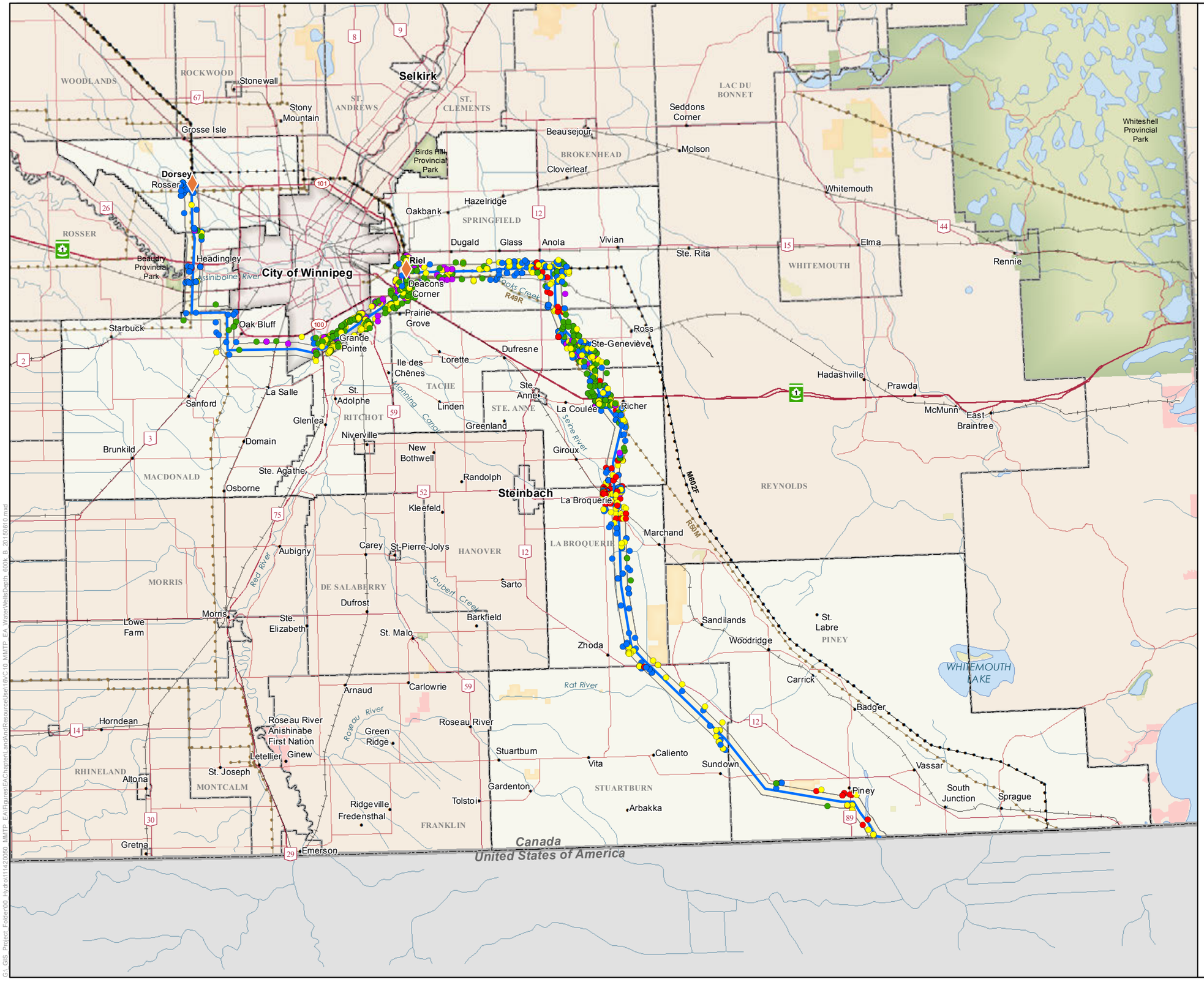


Manitoba Hydro

Manitoba-Minnesota Transmission Project

Project Infrastructure

- Converter Station (Existing)
- Final Preferred Route (FPR)

Infrastructure

- Existing 500kV Transmission Line
- Existing 230kV Transmission Line

Water Wells[1]

Depth to Groundwater (meters)

- Less than 0 (Above-ground)
- 0 - 5
- 5 - 10
- > 10
- No Data

Assessment Area

- Land and Resource Use Local Assessment Area
- Land and Resource Use Regional Assessment Area

Landbase

- Community
- Trans Canada Highway
- Provincial Highway
- Provincial Road
- City / Town
- First Nation Lands
- Rural Municipality
- Ecological Reserve
- Crown Land
- Wildlife Management Area
- Provincial Park
- Watercourse
- Waterbody

Source:
1. Groundwater Wells, 2014, Manitoba Conservation and Water Stewardship

Coordinate System: UTM Zone 14N NAD83
Data Source: MBHydro, ProvMB, NRCAN
Date Created: July 20, 2015

N

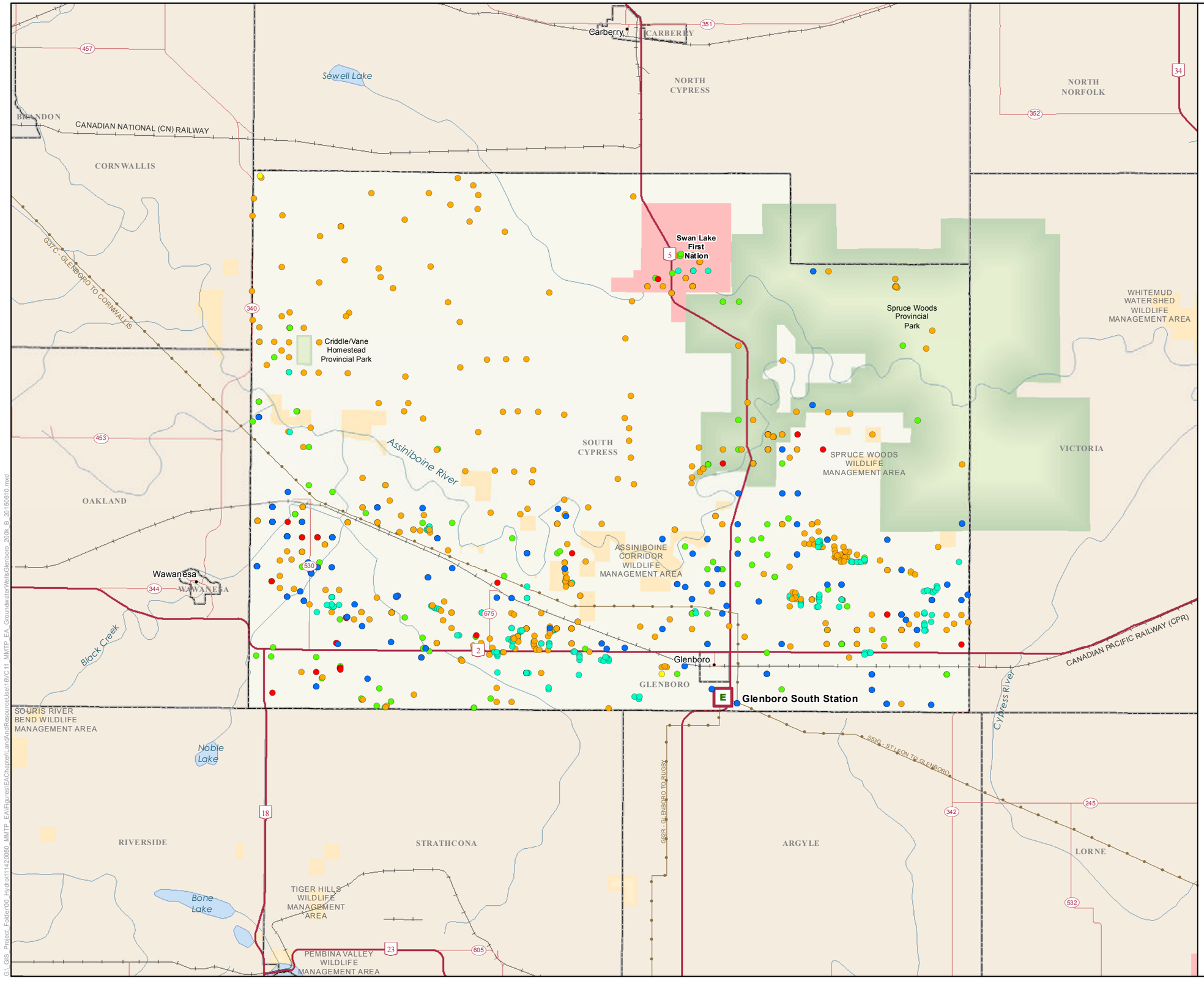
0 10 Kilometres
0 5 10 Miles

1:600,000

Depth to Groundwater in Wells

Map 16-13

G:_GIS_Project_Folder\00_Hydro\11420050_MMTP_EA\Figures\EAChapter\LandandResourceUse\16\C10_MMTP_EA_WaterWellsDepth_600k_B_20150610.mxd



Manitoba Hydro

Manitoba-Minnesota Transmission Project

Infrastructure

- Electrical Station
- Existing Transmission Line

Groundwater Well Use[1]

Multiple
- Multi-Use

Single
- Air Conditioning / Geothermal
- Domestic
- Industrial
- Irrigation
- Livestock
- Other

Landbase

- Community
- Provincial Highway
- Provincial Road
- Railway
- City / Town
- First Nation
- Wildlife Management Area
- National/Provincial Park
- Rural Municipality

Source:
1. Groundwater Wells, 2014, Manitoba Conservation and Water Stewardship

Coordinate System: UTM Zone 14N NAD83
Data Source: MBHydro, ProvMB, NRCAN
Date Created: July 20, 2015

N

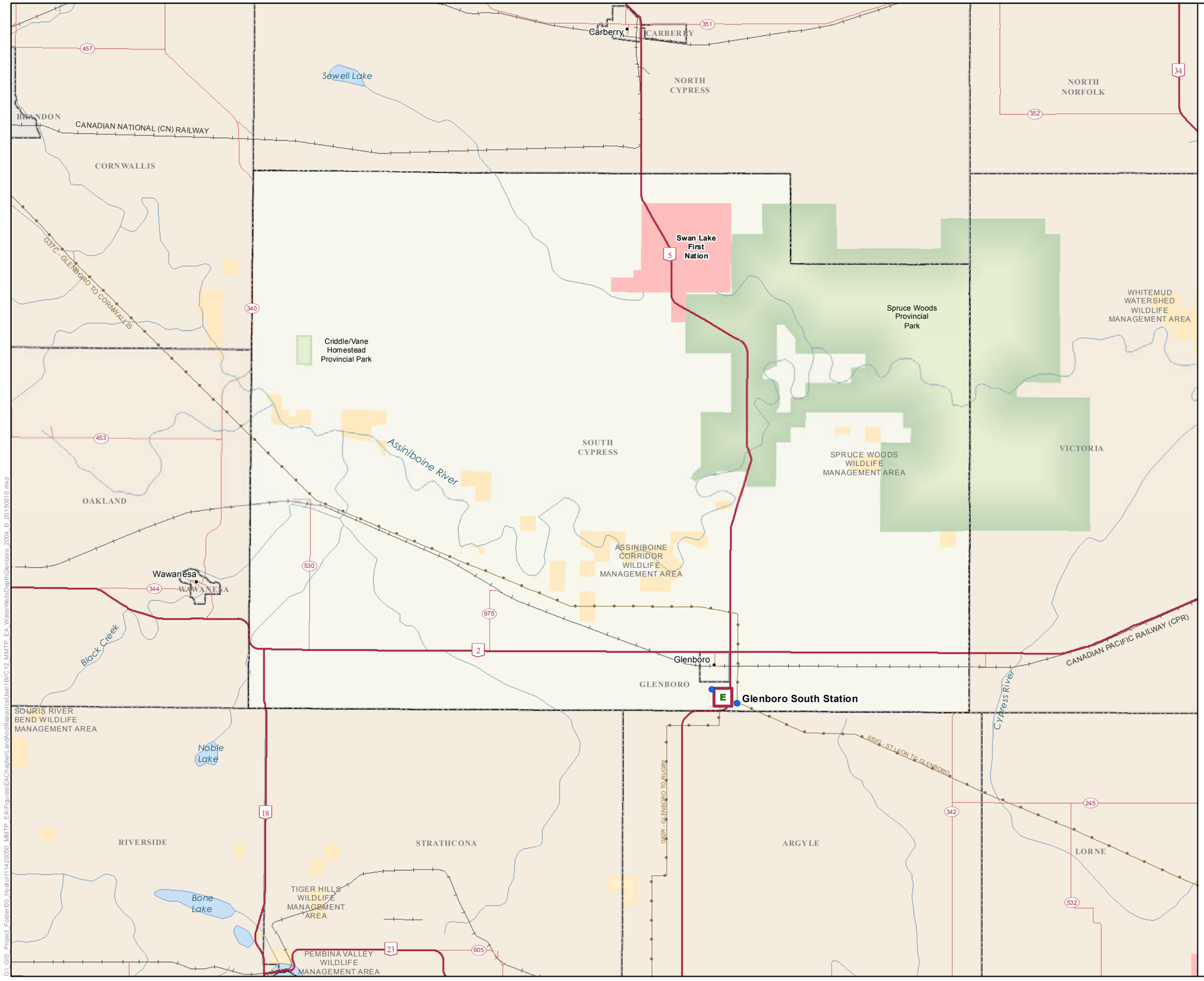
0 5 Kilometres
0 2.5 5 Miles

1:200,000

Glenboro South Station Groundwater Wells

Map 16-14

G:_GIS_Project_Folder\00_Hydro\111420050_MMTP_EA\Figures\EA\Chapter\LandAndResourceUse\16\C11_MMTP_EA_GroundwaterWellsGlenboro_200k_B_20150610.mxd



Manitoba Hydro

Manitoba-Minnesota Transmission Project

Infrastructure

- Electrical Station
- Existing Transmission Line

Water Wells[1]

Depth to Groundwater

- Less than 0 (Above-ground)
- 0 - 5
- 5 - 10
- > 10
- No Data

Landbase

- Community
- Provincial Highway
- Provincial Road
- Railway
- City / Town
- First Nation
- Wildlife Management Area
- National/Provincial Park
- Rural Municipality

Source:
1. Groundwater Wells, 2014, Manitoba Conservation and Water Stewardship

Coordinate System: UTM Zone 14N NAD83
Data Source: MBHydro, ProvMB, NRCAN
Date Created: July 20, 2015

N

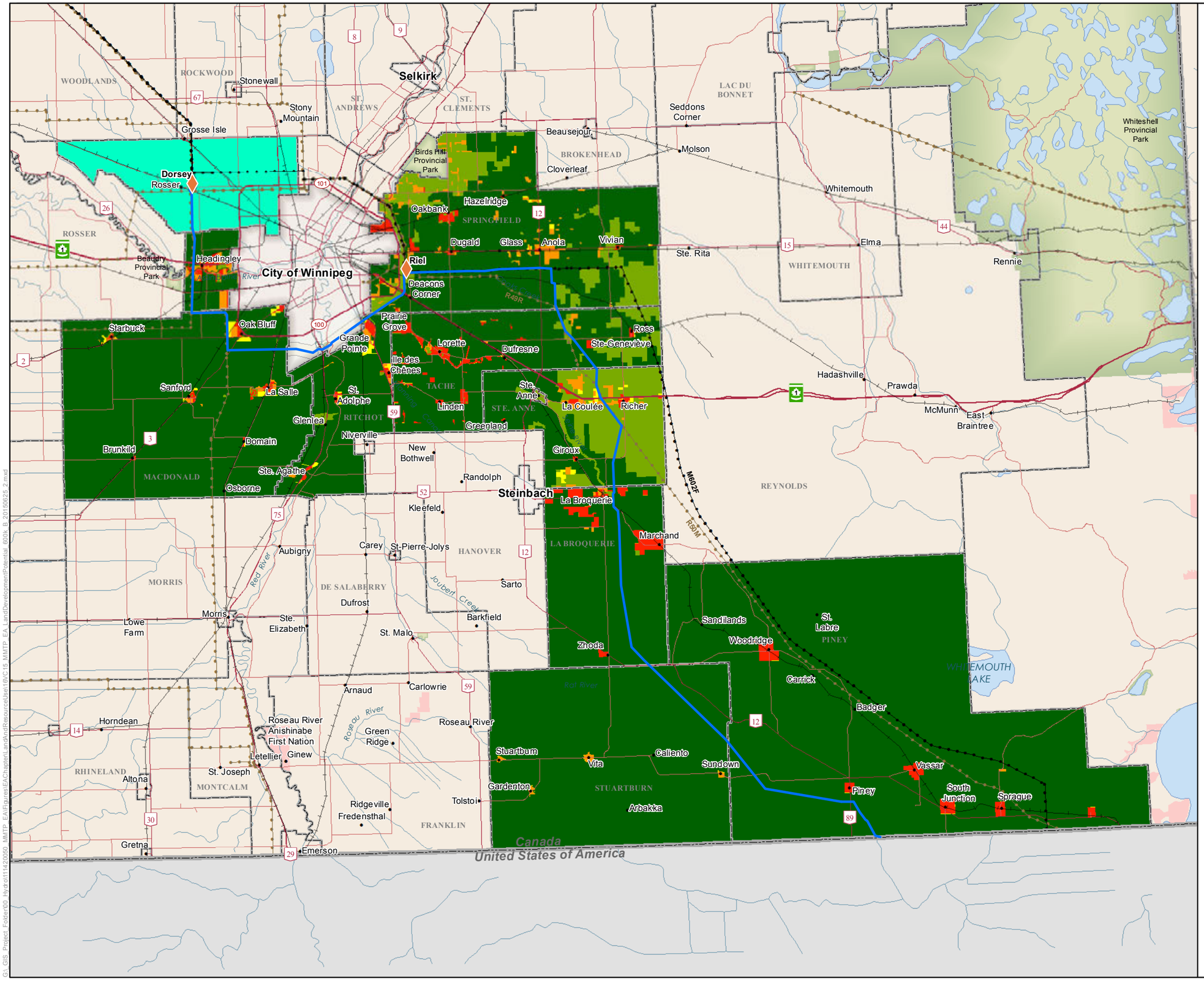
0 5 Kilometres
0 2.5 5 Miles

1:200,000

Glenboro South Station Depth to Groundwater in Wells

Map 16-15

G:_GIS_Project_Folder\00_Hydro\111420050_MMTP_EA\Figures\EA\Chapter\LandAndResourceUse\16\C12_MMTP_EA_WaterWellsDepthGlenboro_200k_B_20150610.mxd



Manitoba-Minnesota Transmission Project

Project Infrastructure

- Converter Station (Existing)
- Final Preferred Route (FPR)

Infrastructure

- Existing 500kV Transmission Line
- Existing 230kV Transmission Line

Development Potential[1]

- 1 (Low)
- 1.5 (Low-Medium)
- 2 (Medium)
- 2.5 (Medium-High)
- 3 (High)
- Zoning By-Law Unavailable

Assessment Area

- Land and Resource Use Local Assessment Area
- Land and Resource Use Regional Assessment Area

Landbase

- Community
- Railway
- Trans Canada
- Provincial Highway
- Provincial Road
- City
- First Nation Lands
- Provincial Park
- Rural Municipality

Source:
1. Development Potential, 2014, MMM Group

Coordinate System: UTM Zone 14N NAD83
Data Source: MBHydro, ProvMB, NRCAN
Date Created: July 20, 2015

N

0 10 Kilometres
0 5 10 Miles

1:600,000

Land Development Potential

Map 16-16

G:\ GIS_Project_Folder\00_Hydro\11142005\0_MMTP_EA\Figures\EA\Chapter\LandAndResourceUse\16\C15_MMTP_EA_LandDevelopmentPotential_600k_B_20150825_2.mxd