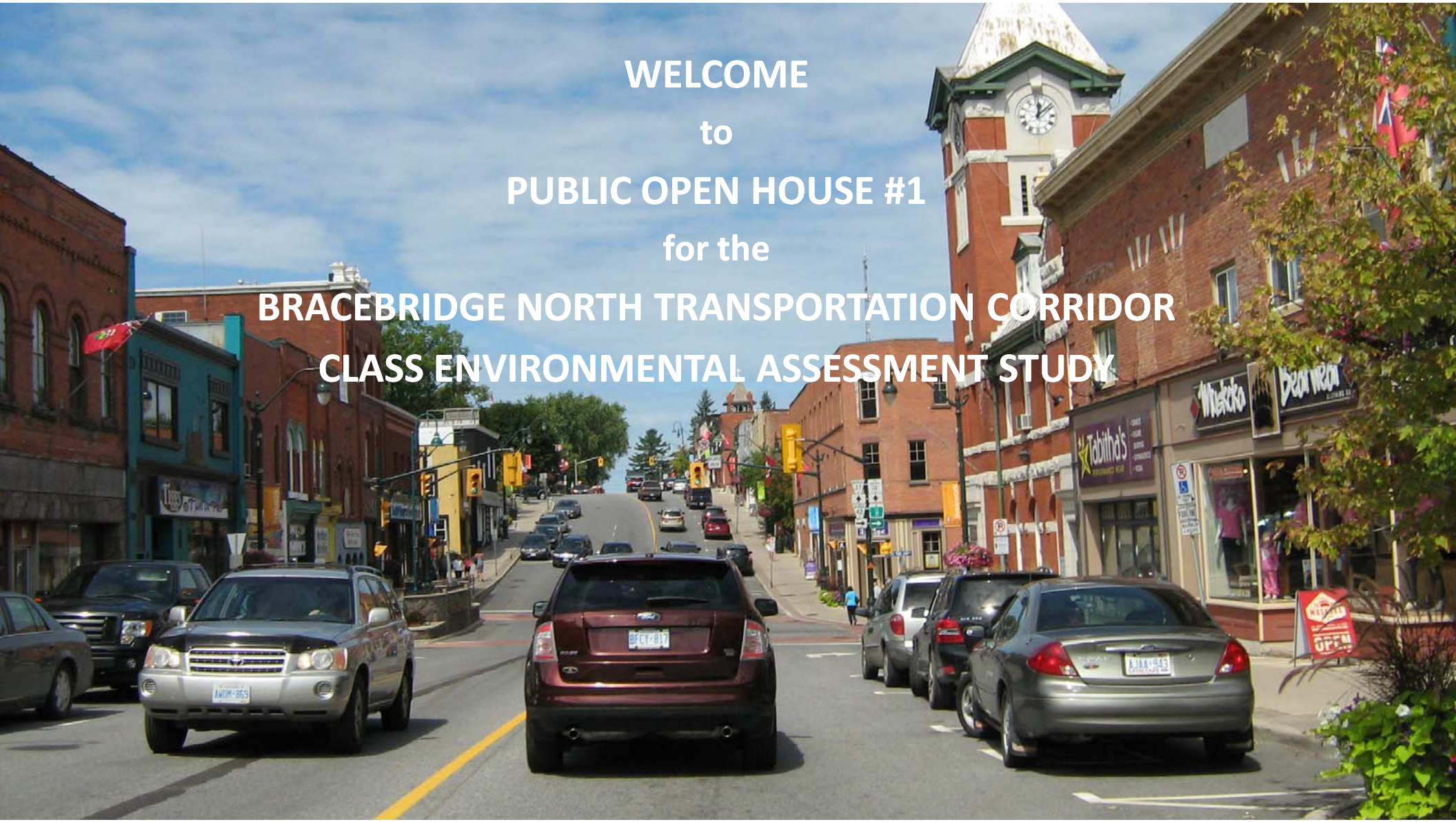
THE DISTRICT MUNICIPALITY OF MUSKOKA

Managing Our Legacy Together



WELCOME

to

PUBLIC OPEN HOUSE #1

for the

BRACEBRIDGE NORTH TRANSPORTATION CORRIDOR

CLASS ENVIRONMENTAL ASSESSMENT STUDY

AECOM

Introduction and Background

- This study for the proposed Bracebridge North Transportation Corridor (BNTC) was initiated in January 2012
- The class environmental assessment (EA) process will involve developing, assessing, and evaluating alternatives
- Previous studies completed for the District Municipality of Muskoka (DMM) have recommended new transportation corridors north and west of Bracebridge
- MTO plans to convert Highway 11 to interchange access only
  - MTO EA Study was completed in 2011
  - The Recommended Plan in the approved Transportation Environmental Study Report (TESR) includes a bridge over Highway 11 at High Falls Road and an east service road between Alpine Ranch Road and the Cedar Lane interchange
  - During the MTO study, DMM noted their preference for a new interchange that would serve the future Bracebridge North Transportation Corridor (BNTC)
  - MTO noted that DMM must complete an EA Study for the BNTC in order to have the connection as a consideration for the future design of Highway 11
  - Timeline for Highway 11 construction is in the 20-30 year range

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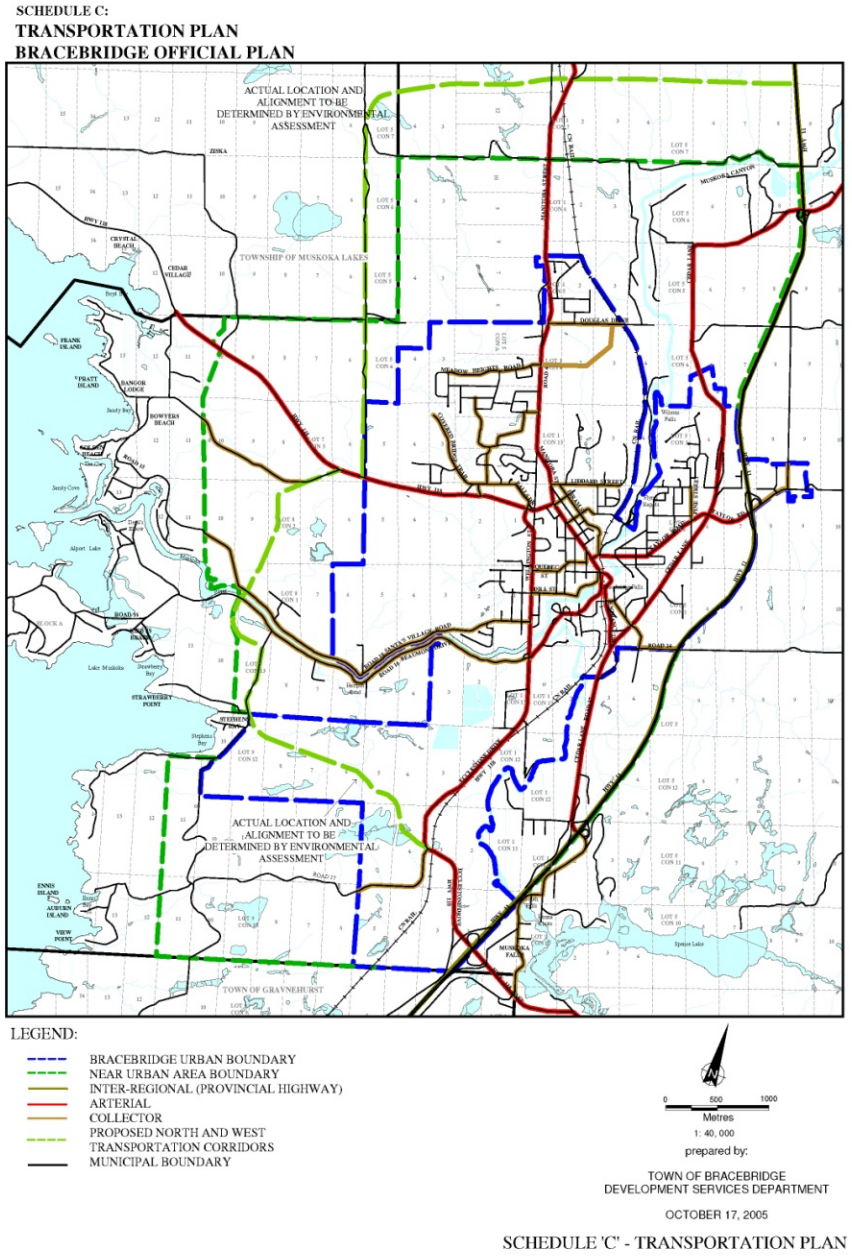
Study Background

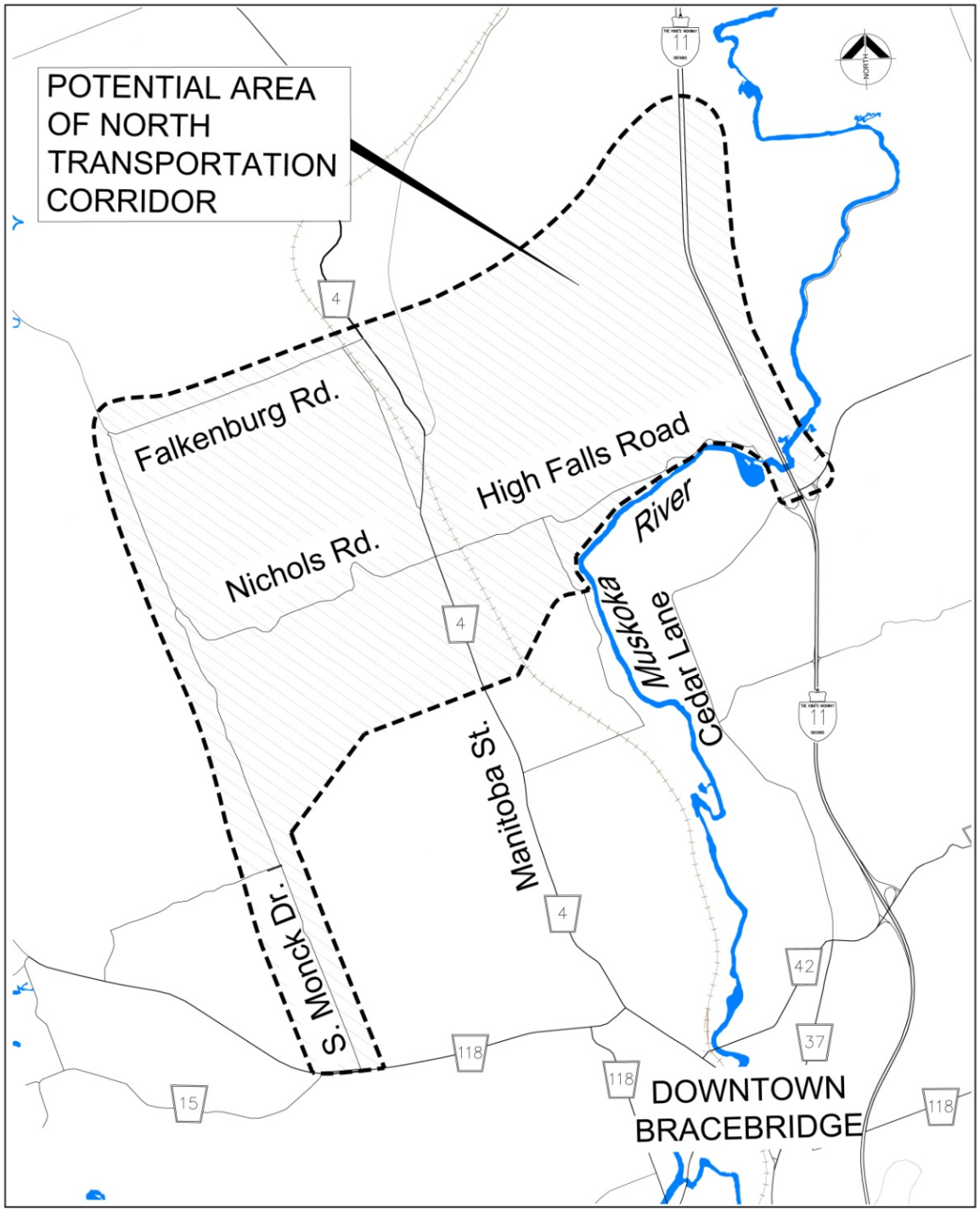
- BNTC is identified in the Official Plan
  - A new corridor will shift traffic travelling between Muskoka Road 118 and Highway 11 away from downtown streets
  - A new route provides an opportunity to address traffic operations, safety and level of service issues and concerns
  - BNTC will support planned growth in Bracebridge and facilitate travel to and from the north

Study Purpose

- Identify a preferred corridor for the BNTC and obtain approval under the Municipal Class EA document
  - Complete a Class EA for a Schedule C project
    - Consider access to Holiday Park Drive, the MNR office on High Falls Road and the Bracebridge Resource Centre
    - Include service roads where necessary
    - Work with the MTO to determine acceptable Highway 11 interchange locations



THE DISTRICT MUNICIPALITY OF MUSKOKA



Study Area

Study Process

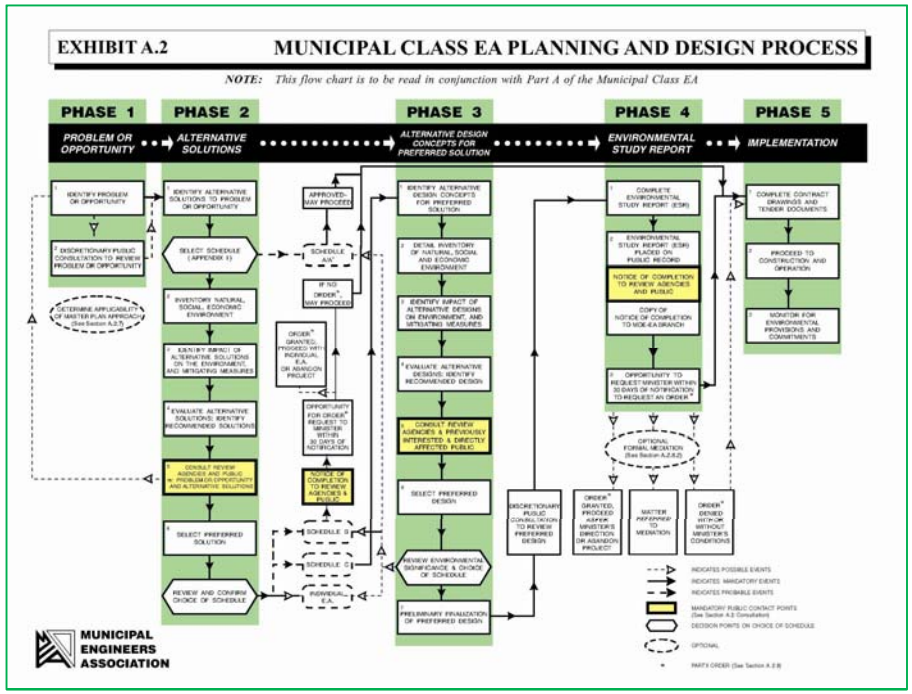
- Phase 1: Problem or Opportunity (Complete)
  - Review existing and future traffic, road and servicing conditions
  - Identify problems and opportunities

We are here

- **Phase 2: Alternative Solutions**
  - Identify alternative solutions
  - Develop and refine evaluation criteria
  - Assess and evaluate Alternative Solutions
  - Present Alternative Solutions at Public Open House (POH) #1
  - Summarize and consider input received at POH#1
  - Finalize selection of Alternative Solution

- Phase 3: Alternative Design
  - Identify alternative design alternatives
  - Refine evaluation criteria
  - Assess and evaluate Alternative Designs
  - Identify the Recommended Plan
  - Present Alternative Designs and Recommended Plan at POH #2
  - Prepare functional design drawings including staging and utilities
  - Obtain approvals in principle from regulatory agencies
  - Develop project cost estimate
  - Develop construction/staging plan

- Phase 4: Environmental Study Report
  - Prepare Environmental Study Report (ESR)
  - Prepare Study Completion Notice
  - Provide ESR for public and agency review



Municipal Class EA, October 2000, as amended in 2007 & 2011

Evaluation Factors

Factors that may be used in the evaluation process include:

- **Transportation**
  - Accommodation of future vehicular travel demand (vehicular delay anticipated in the planning horizon year)
  - Accommodation of pedestrian and cyclist movements (ability to provide for non-auto modes)
  - Travel safety (vehicular and vulnerable road users)
  - Emergency service (affect on response times and accessibility)
  - Transportation network connectivity and compatibility (changes to connectivity, compatibility with other planned infrastructure)
  - Commercial goods movement (affect of travel and accessibility of commercial vehicles to destinations in and beyond Bracebridge)
  - Recreational trails (including snowmobile trails) (affect on existing and planned trails)
- **Natural Environment**
  - Watercourses/fisheries/aquatic habitat (number of cold and warm water watercourses affected; type of habitat affected)
  - Vegetation and woodlots (area of natural vegetation/woodlots affected)
  - Wildlife/terrestrial habitat (area of terrestrial habitat and type of habitat affected)
  - Wetlands (area of wetland affected, type of wetland habitat affected and the potential effect of the impact)
  - Species at Risk (affects on potential habitat for SAR)
- **Socio-cultural Environment**
  - Noise (number of sensitive receptors where the noise may increase by 5 dBA or more)
  - Visual aesthetics (number of properties within 200 m of the corridor with potential views of the corridor)
  - Residential property required (area/number affected)
  - Commercial property required (area/number affected)
  - Compatibility with existing/future land uses/plans (ability to accommodate existing and future land uses and Official Plan policies)
  - Archaeological resources (area of high archaeological potential affected)
  - Heritage resources (affect on heritage properties, infrastructure with historical significance or cultural
- **Economic Environment**
  - Future development potential (affect on accessibility of planned future development areas)
  - Accessibility to existing commercial areas (affect on access to existing commercial areas in Bracebridge and beyond)
- **Engineering**
  - Construction impacts (including road and rail crossings)
  - Utility/service conflicts (including pipeline crossing)
- **Construction Cost**
  - Estimated capital construction cost
  - Estimated utility relocation cost
  - Property acquisition (may be a relative measure using area/number affected as per socio-cultural)

Consultation

We are here

- Public Open Houses (POH)
  - POH #1 – Alternative Solutions
  - POH #2 – Alternative Designs and Recommended Plan
- Website at www.bracebridge-ntc.ca
- Newspaper notices (also posted on website) for
  - Study Commencement, POH #1, POH #2, Study Completion
- Contact letters to agencies and stakeholders for
  - Study Commencement, POH #1, POH #2, Study Completion
- First Nations consultation for
  - Study Commencement, POH #1, POH #2, Study Completion
- Meetings with agencies, First Nations, groups and individuals to obtain input
- Newsletters (available on website) for
  - POH #1, POH #2
- Council presentations for
  - POH #2, Study Completion
- Environmental Study Report (ESR) for formal public review
  - 30-day public review period

Schedule

Task	Timeline
Project Initiation	January 2012
Project Need/Alternative Solutions	Winter-Spring 2012
Existing Conditions	Spring-Summer 2012
Public Open House #1	August 2012
Alternative Routes/Designs	Summer-Fall 2012
Functional Design for Recommended Plan	Fall 2012-Winter 2013
Environmental Study Report (ESR)	Fall 2012-Winter 2013
Public Open House #2	Winter 2013
Final Council Presentation(s)	Winter 2013
ESR Public Review	Spring 2013

Existing Traffic Conditions

Traffic counts for the major roads in the study area were compared to the expected capacity of the road. Locations where the volume to capacity ratio (v/c) is greater than 1.0 indicate that traffic problems may occur. Summer traffic volumes were used in the analysis to be consistent with previous work.

Collision records along major roads in the study area were examined. The data reviewed was from January 2001 to November 2011. Most collision occurrences were within the statistically expected ranges. However, there was a prevalence of collisions under dark conditions and wet pavement conditions along Manitoba Street between Monck Road and Falkenburg Road.

The topography and geology of the area around Bracebridge and the Muskoka River make the construction of roads costly and difficult in the area.

In 2010, MTO completed a Transportation Environmental Study Report (TESR) for the portion of the Highway 11 corridor from Cedar Lane/Muskoka Road 117 to about 1 km north of Alpine Ranch Road. The study evaluated various preliminary design options with the overall goal of eliminating at-grade intersections and entrances to Highway 11 to improve safety.

		Summer Average Weekday (SAWDT)			
Roadway	Historical Growth (%/yr)	PM Peak Hour	Daily	Daily Capacity	Volume to Capacity
High Falls Rd. (MR 50)					
East of MR 4	3.4%	182	1623	9812	0.17
East of Hwy 11	2.2%	175	1597	10040	0.16
Falkenburg Rd. (MR 47)					
West of MR 4	3.7%	55	490	9808	0.05
Manitoba St. (MR 4)					
West of Manitoba St.	1.3%	1128	14030	17413	0.81
South of James St.	1.8%	678	7511	13295	0.57
North of Meadow Heights Dr.	3.4%	538	5722	11700	0.49
North of Moore Rd.	1.0%	271	2904	11787	0.25
Muskoka Road 118 W. / Wellington St. S. (MR 118)					
South of MR 118/MR 4 Intersection	-0.5%	944	11381	14468	0.79
Ball's Flats just west of Wellington St.	0.2%	980	12269	20031	0.61
West of West Mall Rd.	-0.4%	1000	10323	14452	0.71
Taylor Rd. (MR 42)					
West end of Muskoka Rd. Bridge	3.6%	1095	13371	12211	1.10
East of Pine St.	4.9%	936	11171	16708	0.67
Manitoba St./ Muskoka Rd. (MR 37)					
South of Ida St.	0.5%	858	9799	8699	1.13

Transportation Conditions

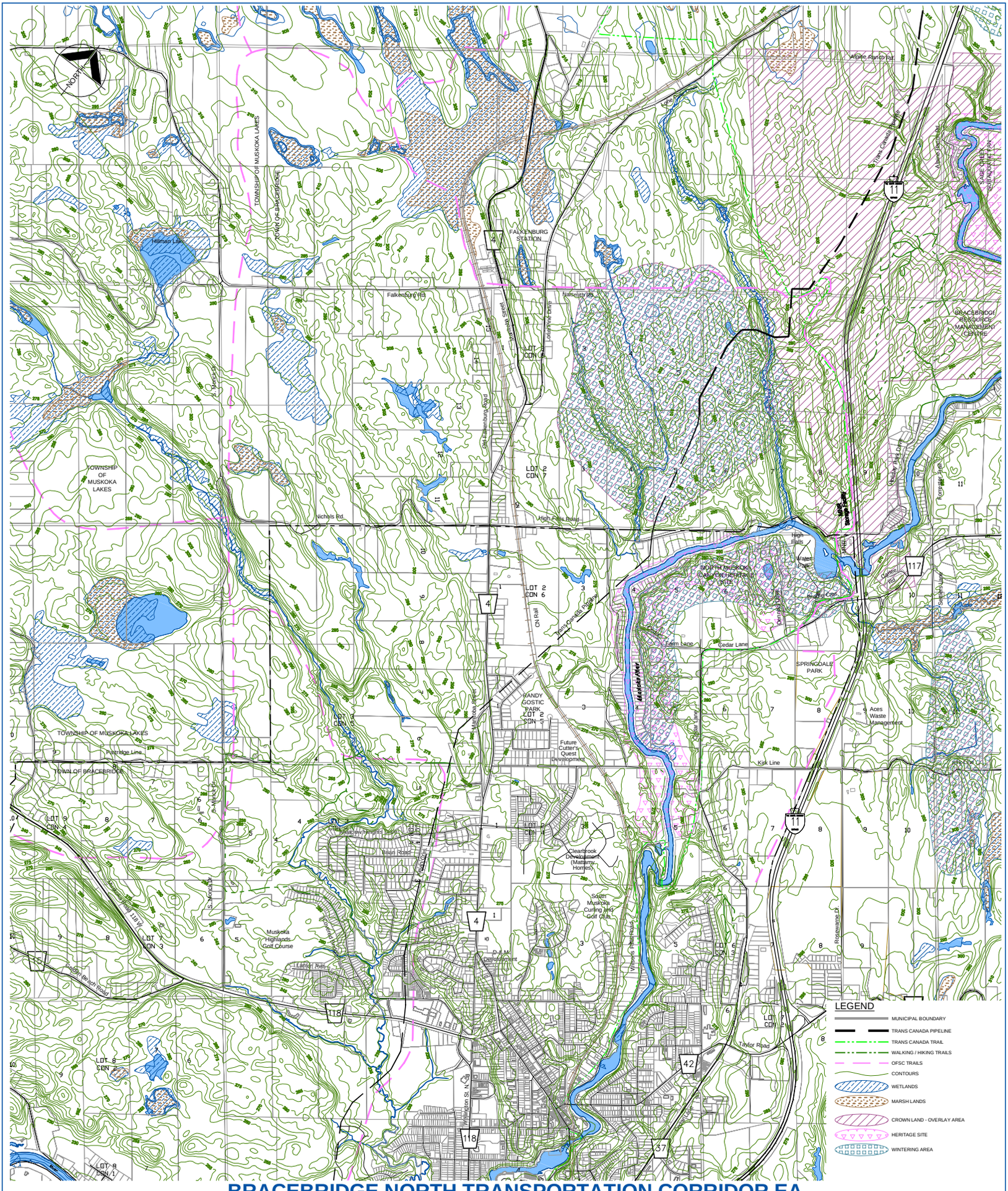
- Traffic growth rates within the study area between 1996 and 2011 varied between -0.8% and 4.9%. A twenty year horizon is typical for most long-term planning studies and growth rates are uncertain over this period. For this reason, the traffic volumes were calculated for growth rates of 1%, 2% and 3% per year.
- On Muskoka Road 42 east of Pine Street, with the projected growth rates of 1%, 2% and 3%, traffic volumes are expected to result in v/c ratios of greater than 1.0 indicating that the capacity of the road has been exceeded by the volume of traffic. When the traffic volumes reach the capacity of the roadway, congestion will occur and it is likely that people will search for an alternative route. This alternative route could be the north corridor.
- At the Taylor Road interchange with Highway 11, the current traffic volumes indicate that over an 8 hour period, 67% of the traffic or 2025 vehicles turn left to head north on Highway 11. It is likely that some of this traffic could shift to the north corridor to access Highway 11. This same phenomenon has been observed on High Falls Road where traffic volumes increased from 500-600 vehicles per day (vpd) in 2008 to 1500 vpd in 2011 after construction of improvements to High Falls Road. This increase in volumes on High Falls Road shows a tendency by drivers to use a northern route to access Highway 11.
- The 1994 Bracebridge Transportation Study predicted a SADT (Summer average daily traffic) volume of 1850 vehicles on the new north transportation corridor road. When the predicted traffic from new development in Bracebridge is added to this traffic volume as well as the number of vehicles that might transfer to the new road corridor to use a road with less traffic, the expected daily traffic on the new road is 5534 vehicles.
- There is a need to maintain access to the Resource Management Centre and MNR offices once the current at-grade accesses to Highway 11 are closed.

Problems and Opportunities

- Problems
  - Limited downtown capacity. The route between the Taylor Road interchange on Highway 11 and MR 118 is nearing capacity.
  - Limited existing connectivity across the Muskoka River. Because the river is a barrier, travel is limited to bridge locations.
  - Need to maintain access to areas adjacent to Highway 11 when direct highway access is closed.
- Opportunities
  - Enhance connections to Highway 11
  - Build a road alignment to current arterial standards
  - Provide an alternative route for traffic from new developments and improve connections to new developments







BRACEBRIDGE NORTH TRANSPORTATION CORRIDOR EA

District Municipality of Muskoka

ENVIRONMENTAL CONSTRAINTS

August, 2012 Scale: 1:10,000

AECOM

THE DISTRICT MUNICIPALITY OF MUSKOKA

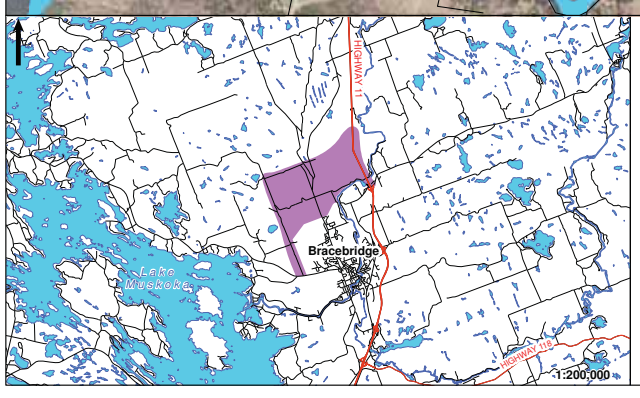
Environmental Conditions – Terrestrial

- The Bracebridge North Transportation Corridor study area is located on the Ontario Shield in the Georgian Bay Ecoregion 5E.
- Forest habitat, which comprises a majority of the north half of the study area, consists of a variety of forest communities including:
  - sugar maple forest;
  - white pine, red maple, and eastern hemlock mixed forest; and
  - trembling aspen, white spruce and white pine mixed forest.
- A total of 14 wetland areas were identified within the study area.
- Bobolink, a threatened species under Ontario Species at Risk Act, was observed in a hayfield located in the southern half of the study area adjacent Monck Road.
- Significant wildlife habitat that is present within the forested northern half of the study are includes:
  - colonial bird nesting sites (great blue heron rookery);
  - winter deer yard; and
  - habitat for area sensitive species.

FALKENBURG RD
LONE PINE DR
HIGHWAY 11
Falkenbridge Station
W7
W11
W13
W5
W12
W6
OLD FALKENBURG RD
W10
Blue Heron Colony
W4
W3
NICHOLS RD
W9
HIGH FALLS RD
W14
REGIONAL RD 117
MANITOBA ST
SOUTH MONCK DR
W2
DOUGLAS DR
MEADOW HEIGHTS DR
Bobolink Habitat
REGIONAL RD 118
GOLDEN BEACH RD
BLENDALE RD
North Branch Muskoka River
W1
WELLINGTON ST N
South Muskoka Memorial Hospital
MONCK RD
ONTARIO ST
SPENCER ST
MUSKOKA RD
FINCH RD

Species at Risk Habitat
Bobolink
Nesting Bobolink were observed in a hayfield west of Monck Road. Bobolink nesting habitat typically consists of hayfields/grasslands greater than 5 ha in size (OMNR, 2000).
Significant Wildlife Habitat
Blue Heron Colony
Information provided by the Muskoka Heritage Trust indicate that there may be a Great Blue Heron Rookery on the Upjohn Nature Reserve within/near wetland W4. Factors which are considered when evaluating the importance of a nesting colony include the rarity of the nesting species, the size of the colony and the historical use of the colony (OMNR, 2000).
Winter Deer Yard
The Ontario Ministry of Natural Resources has identified a Winter Deer Yard in the North East half of the study area. Typical characteristics of Winter Deer Yards include a core area that is mainly coniferous trees with a canopy cover of greater that 60% (OMNR, 2000). Deer typically display high site fidelity to Winter Deer Yards and do not adapt well to moving to a new yard (OMNR, 2000).
Interior Forest Habitat
A majority of the habitat in the North half of the study area contains Interior Forest Habitat as defined by the Ministry of Natural Resources Significant Wildlife Habitat Guide. Interior forest habitat is typically defined as forest habitat that is 100 m from any edge habitat and greater than 30 ha in size (OMNR, 2000). Interior Forest Habitat plays an important role for a variety of mammal and bird species which require large tracts of uninterrupted habitat for their long-term survival.
References
OMNR. 2000. Significant wildlife technical guide. 151p.

Wetlands
W1 – Meadow Marsh
This wetland is located along Watercourse 1 in the southwest corner of the study area adjacent Highway 118 and Monck Road. Some of the more common plant species that were observed in this wetland include reed canary grass, a variety of sedge species, broadleaf cattail and fowl meadow grass.
W2 – Thicket Swamp
This wetland is located along Monck Road adjacent the western edge of the study area. Some of the more common plant species that were observed in this wetland include speckled alder, sandbar willow, pussy willow, black ash, red maple and a variety of sedge species.
W3 – Meadow Marsh / Thicket Swamp
This wetland is located along Watercourse 2. To the West of Monck Road the habitat consists of meadow marsh and to the East the habitat consists of thicket swamp. Some of the more common plant species that were observed in this wetland include bluejoint grass, speckled alder, sandbar willow, pussy willow, red maple, white birch, meadowsweet and woolgrass.
W4 – Open Water / Thicket Swamp / Meadow Marsh
The majority of this wetland is located on the Upjohn Nature Reserve near the corner of Monck Road and Nicholls Road. Information provided by the Muskoka Heritage Trust indicate that there may be a Great Blue Heron Rookery within/near this wetland as well as marsh St. John's wort, which is a locally rare species. Some of the more common plant species that are were observed in this wetland include bluejoint grass, woolgrass and a mixture of shrub willow and sedge species.
W5 – Open Water / Meadow Marsh / Thicket Swamp / Coniferous Swamp
This wetland is located in the North West Corner of the Study along Monck Road and Falkenburg Road. The majority of this wetland is a meadow marsh / coniferous swamp / open water with thicket swamp fringing the edge of these communities and the watercourses that drain it. Some of the more common plant species that were observed within this community include speckled alder, bluejoint grass, Joe-pye weed and a variety of shrub willow and sedge species.
W6 – Open Water / Thicket Swamp
This wetland is located North of Nichols Road and West of Manitoba Street. Aerial photo interpretation of this habitat indicates that it contains open water and thicket swamp habitat. Some of the more common plant species that were observed within this community along Nichols Road include bluejoint grass, Joe-pye weed, broadleaf cattail, and a variety of shrub willow and sedge species.
W7 – Thicket Swamp
This wetland is located in the near the north boundary of the study area along Falkenburg Road and the rail road tracks which intersect the study area. Some of the more common plant species that were observed within this community include speckled alder, sandbar willow, pussy willow, black ash, red maple and a variety of sedge species.
W8 – Open Water
This wetland is located in the near the north boundary of the study area north of Naismith Road. Aerial photo interpretation of this wetland indicates that it contains an open water pond fringed by a meadow marsh community.
W9 – Open Water / Meadow Marsh / Thicket Swamp
This wetland is located north of High Falls Road and west of Manitoba Street. Aerial photo interpretation of this habitat indicates that it contains open water and thicket swamp habitat.
W10 – Meadow Marsh / Thicket Swamp
This wetland is located north of High Falls Road and west of Manitoba Street. It is a narrow meadow marsh / thicket swamp community that is associated with watercourse 3. Some of the more common plant species that were observed within this community along Falkenburg Road include speckled alder and a variety of shrub willow species.
W11 – Meadow Marsh
This wetland is located at the northern edge of the study area West of Lone Pine Drive. Some of the more common plant species that were observed within this community include bluejoint grass, purple-stemmed aster, red maple and a variety of shrub willow and sedge species.
W12 – Open Water / Meadow Marsh / Thicket Swamp
This wetland is located centrally in the study area between Highway 11 and Lone Pine Drive. Arieal photo interpretation of this wetland indicates that it contains meadow marsh habitat.
W13 – Open Water / Meadow Marsh / Thicket Swamp
This wetland is located west of Highway 11 near the eastern edge of the study area along watercourse 4. Some of the more common plant species that were observed in this wetland include bluejoint grass, speckled alder, sandbar willow, pussy willow, red maple, white birch, meadowsweet and woolgrass.
W15 – Thicket Swamp
This wetland is North of High Falls Road near the Ontario Ministry of Natural Resources Bracebridge Office. Some of the more common plant species that were observed in this wetland along Monck Road include sandbar willow, pussy willow, black ash, red maple, Joe-pye weed and a variety of sedge species.



- Hospital
- Highways
- Roads
- Railways
- Watercourses
- Study Area
- Winter Deer Yard
- Bird Habitat
- Waterbodies
- Wetlands

Terrestrial Conditions

Datum: NAD '83 UTM Zone 17N
Source: LIO

August 2012

1:16,000

0 0.5 1 2
Kilometers

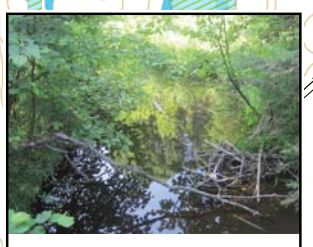
AECOM

Environmental Conditions – Aquatic

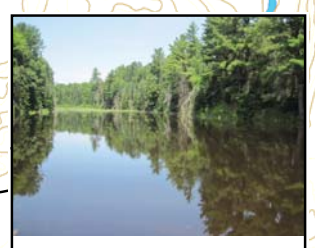
- The Bracebridge North Transportation Corridor study area is located in the North Branch subwatershed of the Muskoka River Watershed.
- The Muskoka watershed contains predominately cool and cold water fish species.
- There are a mix of wetlands, beaver ponds and both permanent and intermittent streams.
- There are 4 permanent watercourses that likely provide fish habitat within the study area.
- There were two un-mapped watercourses located near Highway 11 and the OFSC Trails towards the eastern limit of the study area. Both were flowing at the time of the investigation.
- Several intermittent channels convey seasonal flow and provide connectivity between wetlands and beaver ponds.
- Muskoka River is located adjacent to study area and is the receiving water body of all four watercourses in the study area.

Watercourse #2 - Originates on west side of Monck Road and flows in a south easterly direction, eventually discharging into the Muskoka River. Defined channel approximately 6 m wide, very slow moving at time of investigation. Substrates consist of gravel, sand and silt, good instream habitat provided by pools, aquatic vegetation and overhanging riparian shrubs.

Watercourse #3 - Originates north of the study area and flows in a southerly direction towards the Muskoka River. At the time of the investigation the north reach of the watercourse contained only small pools of water and no flow. The watercourse was flowing where it crosses High Falls Road.

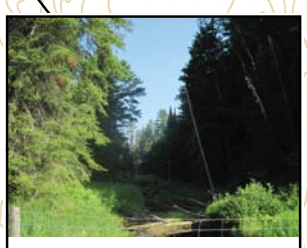


Watercourse #4 - Originates north of the study area and flows in a southerly direction towards the Muskoka River. The watercourse near the top of the study area meanders through a wetland and a series of beaver ponds. The lower reach of the watercourse flows through a defined steep river valley prior to discharging into the Muskoka River.



Watercourse #4 - Beaver Dam located on watercourse, facing north.

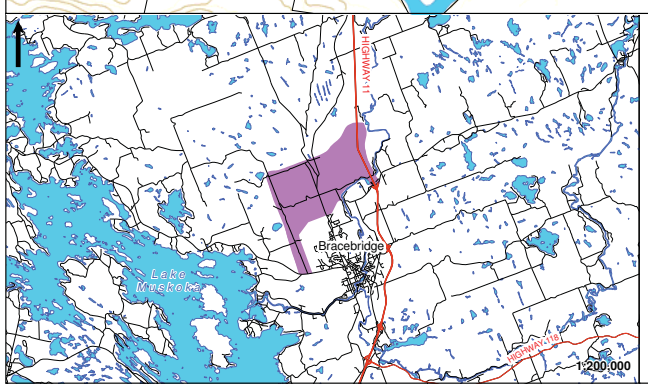
View of un-mapped watercourse near OFSC trail.



Watercourse #4 - View of watercourse facing north from High Falls Road.

Watercourse #1 - Originates in a wetland located west of Monck Road and flows in south-westerly direction. Narrow channel meandering through the wetland, very low water levels at time of investigation.

Falkenbridge Station
LONE PINE DR
HIGHWAY 11
FALKENBURG RD
OLD FALKENBURG RD
NICHOLS RD
HIGH FALLS RD
REGIONAL RD 117
MANITOBA ST
SOUTH MONCK DR
CEDAR LANE
DOUGLAS DR
MEADOW HEIGHTS DR
ROSEWARNE DR
GLENDALE RD
WELLINGTON ST N
North Branch Muskoka River
GOLDEN BEACH RD
REGIONAL RD 118
South Muskoka Memorial Hospital
MONCK RD
TAYLOR RD
ONTARIO ST
SPENCER ST
SANTAS VILLAGE RD
MUSKOKA RD
FRASERBURG RD
FINCH RD



- Hospital
- Highways
- Roads
- Major Contours (10m)
- Minor Contours (5m)
- Watercourses
- Railways
- Study Area
- Waterbodies
- Wetlands

Aquatic Conditions

Datum: NAD '83 UTM Zone 17N
Source: LIO

August 2012

1:16,000

0 0.5 1 2
Kilometers

AECOM

Assessment and Evaluation of Alternative Solutions

- The alternative solutions considered are:
  - Do nothing
  - Improve existing routes through realignment, intersection improvements, removing parking, widening
  - Build a new road corridor

Evaluation Criteria	Do Nothing	Improve Existing Routes	New Corridor
Is it technically feasible?	• Yes • The current situation is functioning.	• No • There is little right-of-way space available through the downtown area to widen existing roads. (Manitoba St., Taylor Road). • Existing roads such as Cedar Lane, and High Falls Road have challenging geometric features that cannot easily be improved.	• Yes • A new corridor is technically challenging from the perspective of topography and natural features. • A new crossing of the pipeline is required. • There is an opportunity to introduce a grade separation of the rail line.
Will it improve traffic operations? **Will it improve the Town's connections to Highway 11?**	• No • Traffic operations will deteriorate as Bracebridge continues to grow. • No new connection to Highway 11.	• Potentially • Traffic operations could potentially be improved marginally if the technical challenges were able to be overcome. • Connections to Highway 11 are not improved with this option.	• Yes • Traffic operations through Bracebridge and in the vicinity of the north corridor will be improved with the new corridor construction. • A new interchange with Highway 11 is feasible with the new corridor.
Are the impacts to the natural, social and other environmental features largely mitigatable?	• No • There are no impacts to the natural environment • Impacts to the social environment include increased noise levels along existing roads. • Economic impacts would include congestion along downtown streets, which would lead people to avoid the area.	• No • There would be significant impacts to properties, homes and businesses adjacent to the road corridors to be widened. The character of Bracebridge would be impacted. • Removing on-street parking would impact adjacent businesses. • Natural features adjacent to or crossing the road corridors would be impacted (watercourse crossings, edge vegetation).	• Potentially. A detailed mitigation plan will be required. • Improved traffic will encourage people to visit downtown, a positive effect. • The construction of a new corridor will have impacts on the natural environment (new watercrossings, loss of wetlands, vegetation and habitats). • Some impacts to rural properties and hunt camps are possible.
Summary	Does not address the problem or the opportunities. Does not support future growth in Bracebridge.	Technical challenges and significant environmental impacts make this alternative undesirable.	This alternative addresses the problem and the opportunities. The adverse impacts will need to be examined in detail and eliminated or reduced to the extent feasible.
RECOMMENDATION	Carry Forward for comparison purposes	Do not carry forward	**CARRY FORWARD AS THE PREFERRED SOLUTION**

Next Steps

- Consider and document comments received from the public, external agencies and interest groups
- Complete seasonal field work
- Develop route alternatives
- Develop design alternatives
- Assess and evaluate route alternatives and alternative designs
- Identify preferred alternative and design
- Hold Public Open House #2

Thank you for Attending

We encourage you to provide your comments in writing

All information/comments received will be maintained on file for use during the study and may be included in study documentation. With the exception of personal information, all comments will become part of the public record.

Comment sheets are available. Please deposit completed comment sheets in the box provided or mail/fax/e-mail your comments to the address shown on the bottom of the comment sheet by **September 6, 2012**.

If you would like to receive future study notices, please fill out a comment sheet requesting that your name be added to the project mailing list.