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# Memorandum

<b>To/Attention</b>	Municipality of Meaford	<b>Date</b>	2021-05-17
<b>From</b>	IBI Group	<b>Project No</b>	124140
<b>cc</b>			
<b>Subject</b>	<b>Meaford Transportation Master Plan Road Classification</b>		

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## 1 Background

A road classification system establishes a hierarchy of roads according to their physical and functional characteristics and the type of service they are intended to provide to the public. Benefits of implementing an expansion of this existing system include:

- Establishing design standards for reflecting short- and long-term needs of roads;
- Establishing standards for functional characteristics such as land access, traffic volume thresholds, level of service (LOS), speed limits, accommodation of cyclists and pedestrians, and parking provisions;
- Directing the flow of heavy vehicles and truck traffic to the most appropriate roads;
- Improved coordination and planning of land use and transportation developments;
- Prioritized levels of street maintenance based on the role of streets in the municipal network;
- Setting appropriate speed limits based on street geometry, function and abutting land use; and
- Preserving the intended service function of planned roadways and promoting a safer environment with operational integrity.

This document outlines industry best practices, reviews Meaford's existing classification hierarchy and those of peer communities and adjacent municipalities and outlines the development of an updated road classification framework.

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The road classification hierarchy recommended in this document does not impact Minimum Maintenance Standards (O. Reg. 239/02), which is a separate classification is utilized for identifying minimum levels of ongoing maintenance for municipal roads.

## 2 Existing Road Classification Hierarchy

The existing road classification in the Municipality of Meaford is provided in Section D2 and Schedule C and C-1 of the Municipality of Meaford Official Plan (November 2014). The Official Plan includes the following established definitions for road classifications that apply to both urban and rural locations.

- **Provincial Roads:** Highways 26 and 6/10 is a primary transportation route between Central Ontario and Owen Sound as well as northern Bruce and Grey Counties. Development abutting Highways 26 and 6/10 is subject to the requirements of the Ministry of Transportation, except within a Connecting Link, where the Municipality has jurisdiction. The Connecting Link acts as a local road.
- **County Roads:** These roads serve a regional role by carrying traffic through the Municipality or from the Municipality to neighbouring municipalities. Special setbacks apply to development abutting a county road. Generally, no building or structure shall be located closer to any county road than as set out by the County of Grey. All development abutting county roads are subject to the jurisdiction of Grey County.
- **Local Roads:** Local roads are those roads which carry traffic from the provincial and county road system and from the arterial roads to individual properties.

The Municipality has jurisdiction regarding provision of access/entrances along local roads. The location of access driveways should not create a traffic hazard because of their concealment by a curve, grade, or other visual obstruction. Access driveways may be limited in number and design so as to minimize the dangers to vehicular and pedestrian traffic. Access policies may be developed by the Transportation Services Department.

- **Other Types of Roads:** The other types of roads in the Municipality include:
  - a) private roads which cross private property to access a lot;
  - b) unopened road allowances;
  - c) unassumed roads;
  - d) roads that are owned and maintained by a public authority for only a part of the year; and

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- e) private roads located on municipal property and on private property (unopened road allowances) maintained by residents.

### Observations

The Official Plan merely distinguishes between provincial, county and municipal jurisdiction for the roads or road allowances in Meaford. The existing classification system does not provide any level of differentiate between in-service roads in the Municipality’s jurisdiction. All local roads, whether urban or rural, are treated the same for the purposes of the existing hierarchy. There are no distinctions made based on traffic volume, levels of access, intended purpose of the road, etc. As Meaford continues to grow and its transportation network becomes more complex and more multi-modal, a finer-grained road classification system is more appropriate than the existing hierarchy.

## 3 Peer Review and Best Practices

Integrating Meaford’s road classification system with neighbouring municipalities is essential. Road hierarchy should be relatively consistent as roads cross the boundaries into adjacent communities. Exhibit 3.1 presents road classification systems in use in the five municipalities, all within Grey County, that abut Meaford.

Exhibit 3.1: Adjacent Municipalities’ Road Classification Comparison

Jurisdiction	Source	Road Classification
City of Owen Sound	Jan 2017 Official Plan 6.1.3 Roads	Provincial Highway/Connecting Links County Roads Arterial Roads Collector Roads Local Roads
Municipality of Grey Highlands	Sep 2017 Official Plan Schedule D Transportation	Provincial Highway County Road Municipal Road Seasonal Road
Town of The Blue Mountains	Jun 2016 Official Plan D2.2 Roads in The Town	Highway 26 and connecting links County Roads Major Collector Roads Minor Collector Roads Local Roads Local Heritage Roads Seasonal Roads Private Roads

Jurisdiction	Source	Road Classification
Township of Chatsworth	Jul 2018 Comprehensive Zoning By-law	Provincial Highways County Roads Municipal Roads
Township of Georgian Bluffs	Feb 2016 Official Plan 2.9.3 Road Classification	Provincial Highways Arterial Roads (County Roads) Collector Roads Local Roads Private Roads

Of these municipalities, the Township of Chatsworth and the Municipality of Grey Highlands do not have a formal road classification system beyond a jurisdictional division. The City of Owen Sound, the Town of The Blue Mountains and the Township of Georgian Bluffs have developed a more detailed approach to road hierarchy. Georgian Bluffs identifies all county roads as performing an arterial road function and divides its municipal roads into collector and local road status. The Blue Mountains expands on this by splitting collector roads into major and minor designations. Owen Sound, meanwhile, added a municipal arterial road level between municipal collector and county road.

The study also reviewed selected peer communities in Ontario with populations and geography more like Meaford. They present a similar divide as the adjacent municipalities. Kincardine, like Georgian Bluffs assigns the arterial label to all county roads, while dividing municipal roads into collector and local designations. South Dundas, meanwhile uses a system more like Meaford's existing system, with no differentiation among municipal roads. The road classification systems are summarized in Exhibit 3.2.

Exhibit 3.2: Peer Communities Road Classification Comparison

Jurisdiction	Source	Road Classification
Municipality of Kincardine	Mar 2015 Official Plan F3 Classification	Provincial Highways Arterial Roads (County Roads) Collector Roads Local Roads
South Dundas	Jul 2018 SDG Official Plan 4.3.6 Transportation	Provincial Highways County Roads Local Roads Private Roads

As Meaford continues to grow and become more interconnected with its neighbours, the adoption of a system similar to that of Georgian Bluffs, Kincardine and The Blue Mountains would be appropriate.

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## Best Practices

The Transportation Association of Canada (TAC) publishes the Geometric Design Guide for Canadian Roads. The latest update was June 2017. Chapter 2 (Design Control, Classification and Consistency) provides guidelines for how to structure a road classification system and the various characteristics associated with each road class. This document is widely used by Canadian municipalities and is an important starting point for developing a road classification system in Meaford. It represents best practices in this area that can be adjusted to fit local settings more appropriately.

## 4 Recommendations

Meaford is recommended to adopt a more detailed road classification system in line with those of neighbouring Georgian Bluffs and The Blue Mountains by differentiating its municipal roads into collector and local classes. The recommended road classification system also differentiates between rural and urban roads in Meaford to better reflect the major differences in their function and purpose. The Meaford urban boundary is the line of demarcation between urban and rural classes.

### Recommended Road Classification

The following presents a high-level definition for each recommended road classification. Integrating Goods Movement

The collector road network is intended to, with the county and provincial roads, form the truck route network. The Municipality should develop road use by-laws to restrict trucks from local roads unless required for a pick-up or delivery; and monitor truck traffic to determine if a dedicated goods movement network is appropriate for the future. The benefits and costs of having a separate goods movement system include ensuring the road network performs more efficiently and safely from both a traffic operations and road safety perspective.

Truck at 7th Line and Side Road 7 in Meaford



Source: Google Maps

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Exhibit 4.1 presents further information regarding typical design, functional and operational characteristics of each classification.

The following factors have been considered in developing the street classification system: basic roadway geometry, urban vs rural network needs, goods movement network, traffic management, and roadway services and maintenance. Road classification also provides an opportunity and guidance for the Municipality to consider other factors related to road operations such as: development impacts, private roads and public lanes, active transportation network, sidewalk policies, maintenance/operations, and future roadway linkages.

The definitions below are subject to expansion and modification regarding land use, development and access policies and regulations through the next Official Plan review.

#### **Arterial Roads:**

- **Provincial Roads:** Highways 26 and 6/10 are the primary transportation routes between Central Ontario and Owen Sound as well as northern Bruce and Grey Counties. Development abutting Highways 26 and 6/10 is subject to the requirements of the Ministry of Transportation, except within a Connecting Link, where the Municipality has jurisdiction.
- **County Roads:** These roads serve a regional role by carrying traffic through the Municipality or from the Municipality to neighbouring municipalities. These roads function as arterial roads. Special setbacks apply to development abutting a county road. Generally, no building or structure shall be located closer to any county road than as set out by the County of Grey. All development abutting county roads are subject to the jurisdiction of Grey County.
- **Connecting Link:** Defined by the MTO as a class of roadway that links two segments of provincial highway under the jurisdiction of the municipality. Sykes St is designated a Connecting Link and generally functions as an arterial road, though it also fulfills the function of a main street in the urban area, where access is more important than vehicular throughput.

#### **Collector Roads:**

- Collector roads are further divided into **Rural Collector** and **Urban Collector** roads. They are primarily intended to carry traffic from local roads to the arterial road network (County, provincial and Connecting Link). They are expected to carry higher volumes of traffic than local roads. They are also important pedestrian and cycling links.

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### Local Roads:

- Local roads are further divided into **Rural Local** and **Urban Local** roads. They carry traffic and goods from the provincial and county road system and from the collector roads to individual properties.

### Other Types of Roads:

- Private roads which cross private property to access a lot.
- Unopened road allowances.
- Unassumed roads.
- Roads that are owned and maintained by a public authority for only a part of the year.

## Integrating Goods Movement

The collector road network is intended to, with the county and provincial roads, form the truck route network. The Municipality should develop road use by-laws to restrict trucks from local roads unless required for a pick-up or delivery; and monitor truck traffic to determine if a dedicated goods movement network is appropriate for the future. The benefits and costs of having a separate goods movement system include ensuring the road network performs more efficiently and safely from both a traffic operations and road safety perspective.

Truck at 7th Line and Side Road 7 in Meaford



Source: Google Maps

Exhibit 4.1: Typical Characteristics of Each Road Class

Road Characteristics	Arterial Roads			Collector Roads		Local Roads	
	Provincial Highway	County Road	Connecting Link	Urban	Rural	Urban	Rural
<b>Jurisdiction</b>	Province	County	Municipality	Municipality	Municipality	Municipality	Municipality
<b>Land Access / Traffic Service</b>	Traffic movement / land access of equal importance	Traffic movement / land access of equal importance	Traffic movement/land access of equal importance	Traffic movement / land access of equal importance	Traffic movement / land access of equal importance	Land access primary function. Traffic movement secondary consideration	Land access primary function. Traffic movement secondary consideration
<b>Typical Traffic Vol. (AADT)</b>	n/a	n/a	> 5,000	> 1,000	> 1,000	< 1,000	< 1,000
<b>Design Speed</b>	60 – 90 km/h	60 – 90 km/h	50 – 60 km/h	40 – 60 km/h	60 – 90 km/h	40 – 50 km/h	50 – 90 km/h
<b>Posted Speed</b>	50 – 80 km/h	50 – 80 km/h	40 – 60 km/h	40 – 50 km/h	50 – 80 km/h	40 – 50 km/h	40 – 80 km/h
<b>Desirable Connections</b>	Collectors, Connecting Link, County Roads, Provincial Highways	Locals, Collectors, Connecting Link, County Roads, Provincial Highways	Locals, Collectors, County Roads, Provincial Highways	Locals, Collectors, County Roads, Connecting Link	Locals, Collectors, County Roads, Provincial Highways	Locals, Collectors, County Roads, Connecting Link	Locals, Collectors, County Roads, Provincial Highways
<b>Pedestrian Facilities</b>	Sidewalks on both sides within designated urban areas.	Sidewalks on both sides within designated urban areas.	Sidewalks on both sides.	Sidewalks on both sides.	Paved shoulders where warranted.	Sidewalks on one side.	Paved shoulders where warranted.
<b>Cycling Facilities</b>	Paved shoulders where warranted.	Dedicated bike facilities where required.	Dedicated bike facilities where identified in cycling plan.	Dedicated bike facilities where identified in cycling plan.	Paved shoulders where identified in cycling plan.	Signed route (or dedicated bike facilities where warranted) where identified in cycling plan.	Signed route (or paved shoulders where warranted) where identified in cycling plan.
<b>Typical Right-of-Way Width</b>	As per MTO.	As per Grey County.	20 m – 26 m	20 m – 26 m	20 m – 26 m	12 m – 20 m	12 m – 20 m
<b>Parking Provisions</b>	As per MTO.	As per Grey County.	Permitted on one or both sides where desired and feasible.	Permitted on one or both sides where desired and feasible.	Permitted on one or both sides where desired and feasible.	Permitted on one or both sides where desired and feasible.	Permitted on one or both sides where desired and feasible.
<b>Truck Route</b>	Not restricted.	Not restricted.	Not restricted.	Not restricted.	Not restricted.	Restricted.	Restricted.
<b>Traffic Calming</b>	As per MTO.	As per Grey County.	Where warranted	Where warranted	Where warranted	Where warranted	Where warranted

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### Identifying the Collector Road Network

The process to determine which roads should be identified as collector roads involved an analysis of several conditions and how they relate to the typical conditions identified in the road Classification matrix. Considerations included annual average daily traffic (AADT) volumes, annual average daily truck volumes, planned growth and connectivity to the arterial road network. General vehicle traffic volumes and truck traffic volumes are shown in Exhibit 4.2 and Exhibit 4.3, respectively.

Exhibit 4.2: Annual Average Daily Traffic Volumes

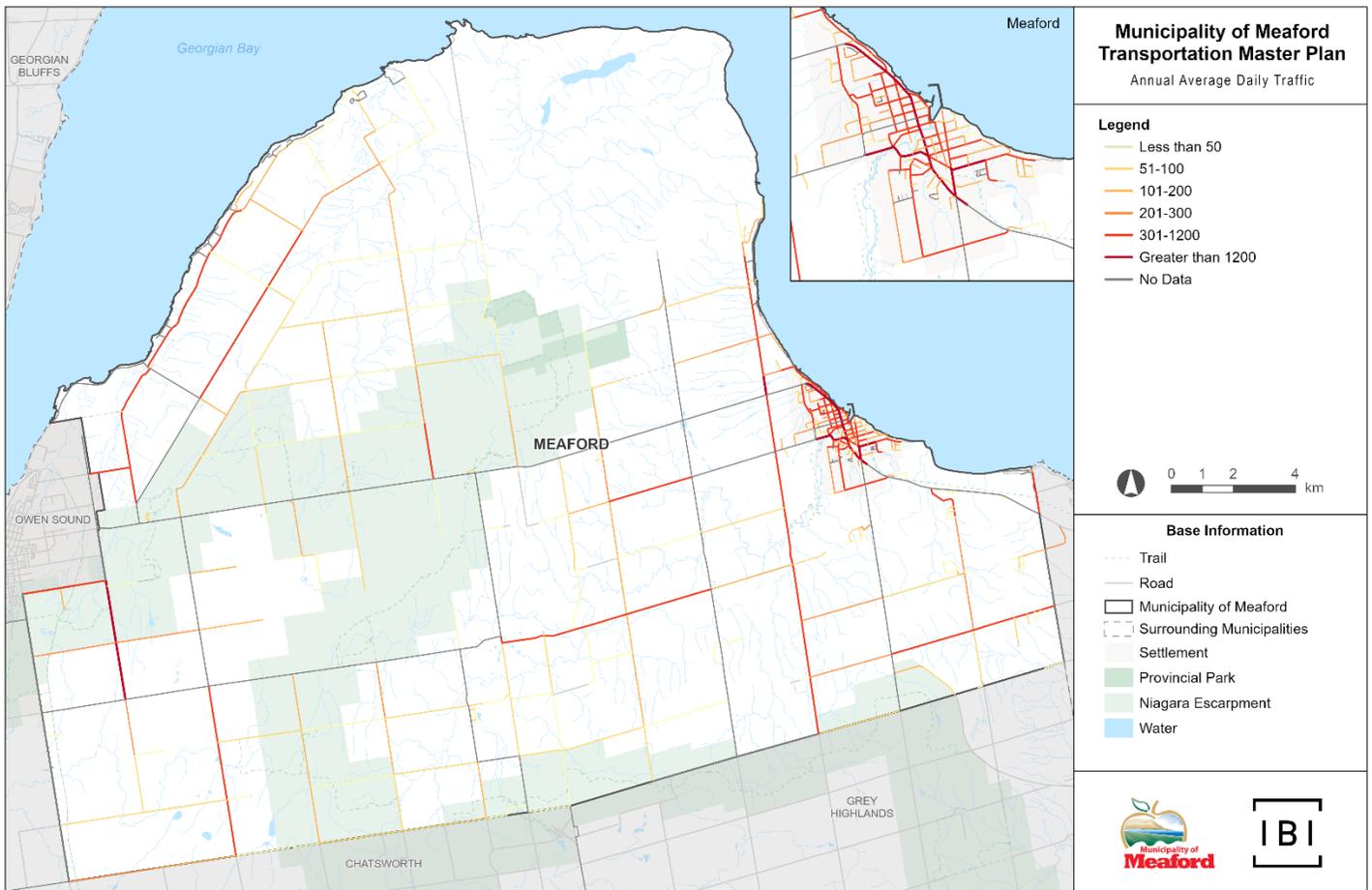
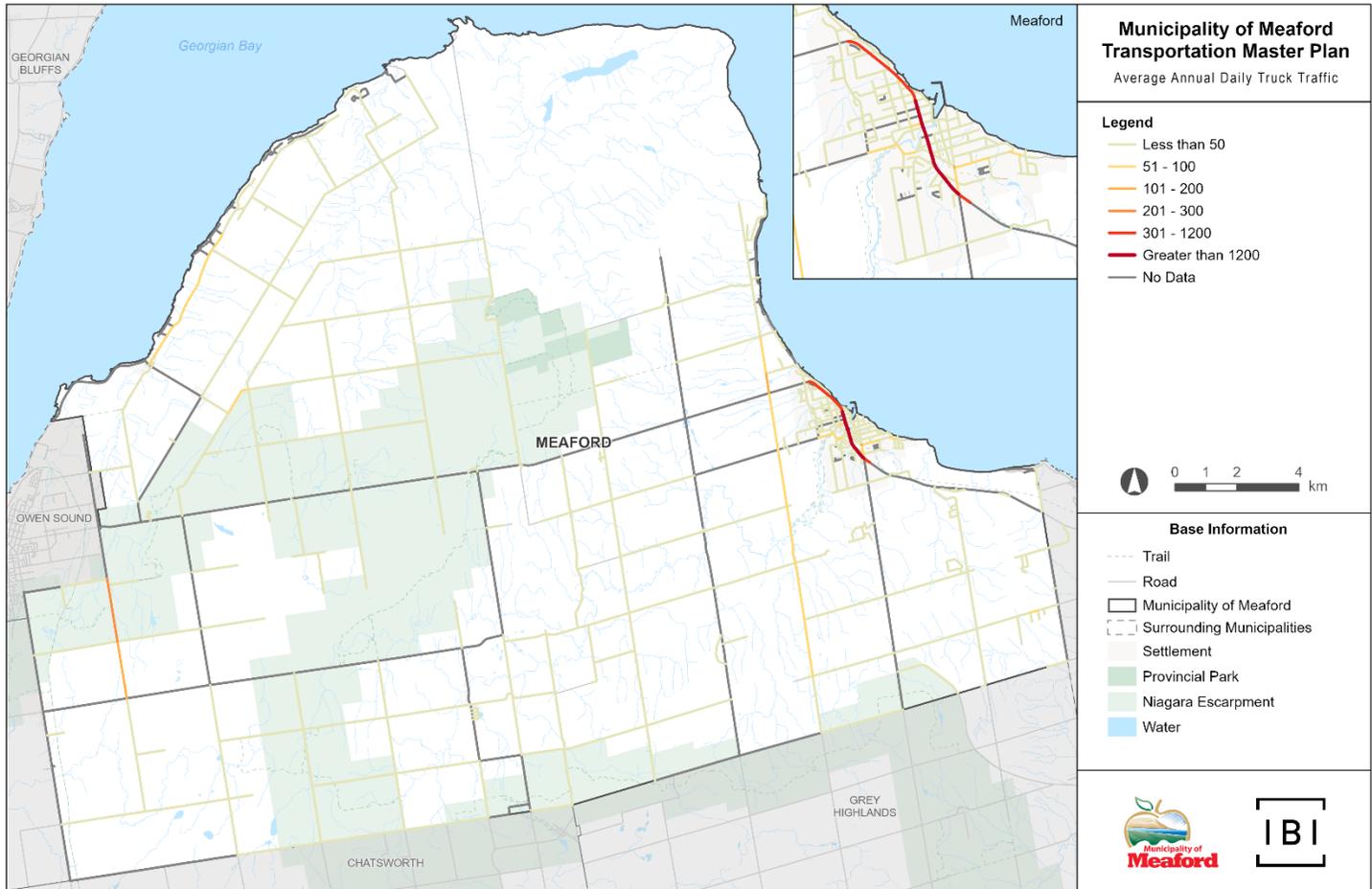


Exhibit 4.3: Annual Average Daily Truck Volumes



The recommended collector road network is presented in Exhibit 4.4. The collector road corridors are:

**Urban Collectors:**

- St. Vincent St (Sykes St S to Bridge St)
- Bridge St / Trowbridge St E (St. Vincent St to Sykes St N)
- Pearson St / Ridge Rd (Grey Road 12 (Nelson St) to Highway 26)

**Rural Collectors:**

- Sydenham Lakeshore Dr (Sideroad 33 / Grey Road 15 to Sideroad 23)
- 2nd Concession N (Highway 26 to Sideroad 27)
- 10th Concession (Owen Sound border to Grey Road 18)
- Gerald Shortt Pkwy / Sideroad 10 (Grey Road 18 / 1st Concession to Grey Road 12)

Exhibit 4.4: Recommended Road Classification Map

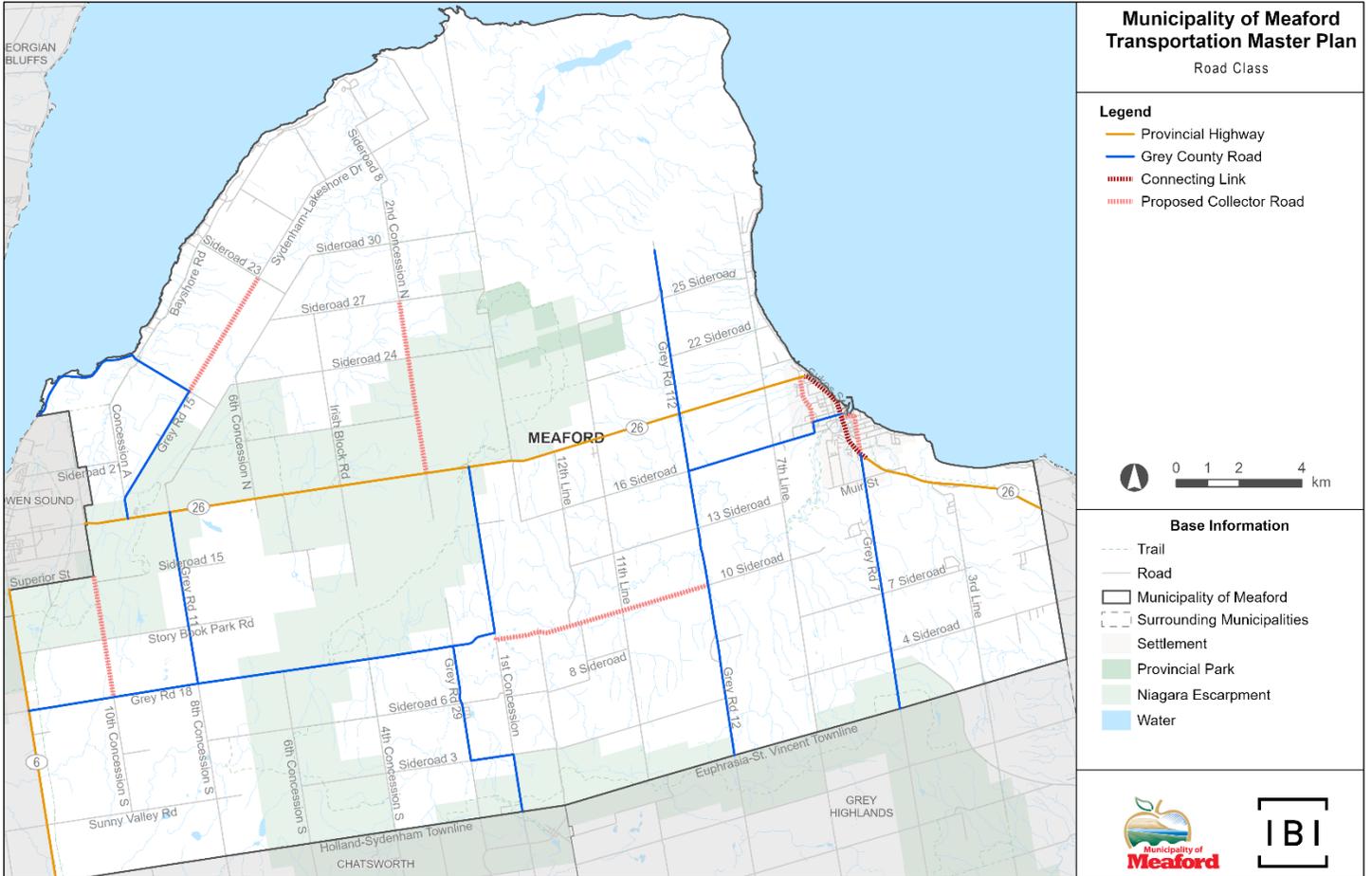
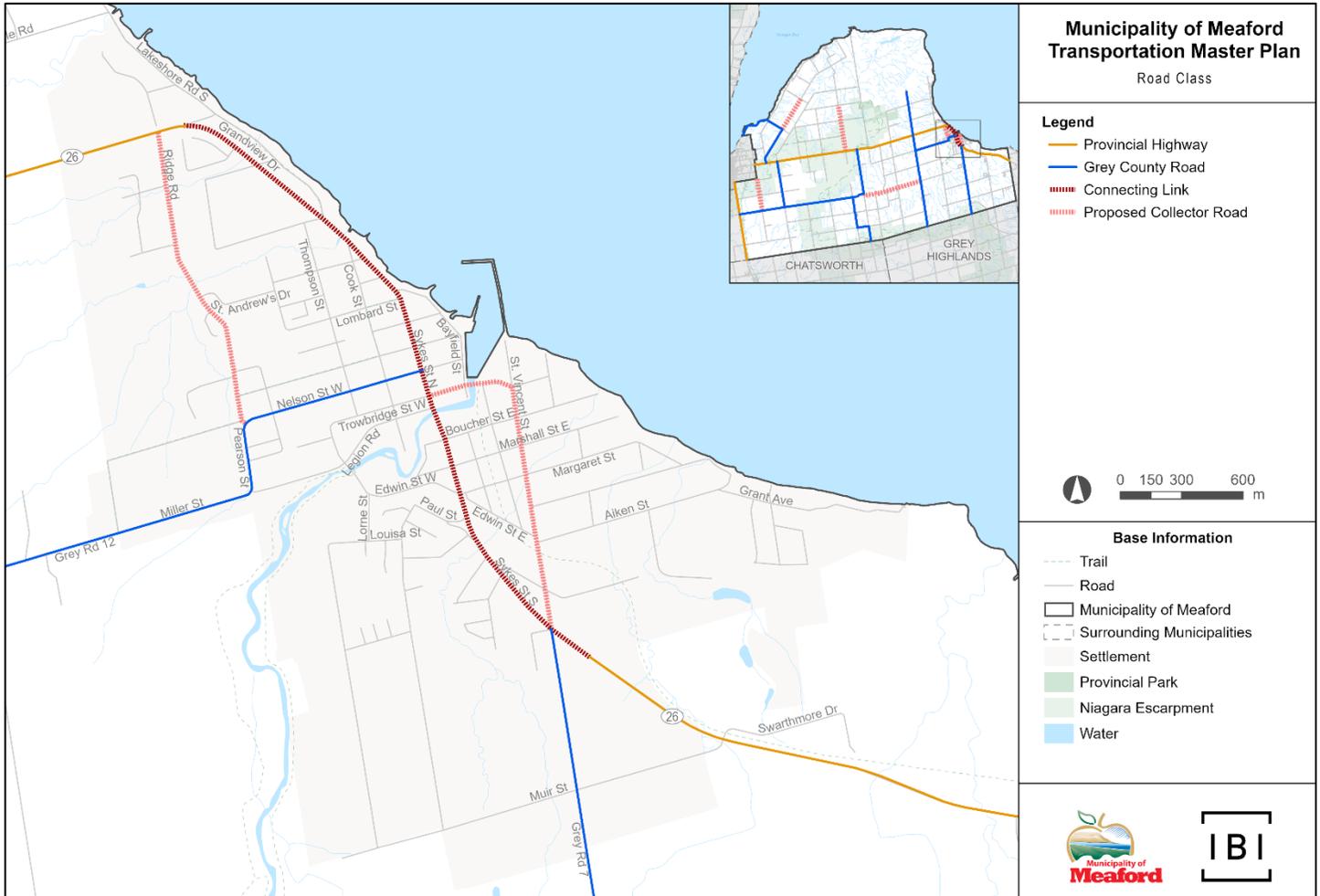


Exhibit 4.5: Recommended Road Classification Map – Urban Area



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## **5 Conclusion**

Meaford's road classification system has been expanded to divide the municipal road system into urban and rural road classes and collector and local road classes. The collector road network, along with the provincial and county roads, forms the desired goods movement network. The new road classification system integrates with and complements the systems in adjacent municipalities and adhere to industry best practices.