

B

Appendix B: Natural Environmental Report



The Corporation of the City of Windsor

Natural Environment Assessment

University Avenue & Victoria Avenue

Municipal Class Environmental Assessment

Project No. B000917

March 14, 2022

SUBMITTED BY CIMA CANADA INC.

55 King Street East

Bowmanville, ON L1C 1N4

T 905 697 4464 F 905 697 0443

cima.ca





Natural Environment Assessment

University Avenue & Victoria Avenue Municipal Class Environmental Assessment

Project No. B000917

PREPARED BY:

Handwritten signature of Casey Little in black ink.

Casey Little
Biologist

VERIFIED BY:

Handwritten signature of Kai Markvorsen in black ink.

Kai Markvorsen
Senior Project Manager

CIMA+
55 King Street East
Bowmanville, Ontario L1C 1N4

March 14, 2022

Table of Contents

Abbreviations	v
1. Introduction and Study Area	1
2. Background Data Review	3
3. Landscape Features and Designations	3
3.1 Ecoregion	4
3.2 Soils and Physiography	4
3.3 Topography	4
3.4 Watershed and Watercourses	4
3.5 Surrounding Land Cover	5
3.6 Provincially Designated Areas	5
3.7 Locally Designated Areas	8
3.8 Conservation Authority Designated Areas	8
4. Legislative and Policy Context.....	8
4.1 Federal Legislation.....	8
4.1.1 Migratory Birds Convention Act	8
4.2 Provincial Legislation	9
4.2.1 Environmental Assessment Act.....	9
4.2.2 Endangered Species Act	9
4.2.3 Conservation Authorities Act	9
4.2.4 Provincial Policy Statement	10
5. Site Specific Assessment.....	11
5.1 Field Investigations	11
5.2 Watercourses, Surface Drainage Features and Aquatic Habitat	11
5.3 Vegetation	11
5.4 Wildlife.....	20
5.4.1 Mammals	20
5.4.2 Birds	20
5.4.3 Amphibians and Reptiles.....	22
5.4.4 Significant Wildlife Habitat	22

5.4.5 Species at Risk Habitat 22

6. Impact Assessment, Environmental Constraints, and Mitigation Measures 24

6.1 Vegetation Cover and Tree Protection 24

6.2 Wildlife, Significant Wildlife Habitat, and Migratory Birds 25

6.3 Species at Risk 26

6.4 Related General Considerations 27

7. Summary and Recommendations / Conclusions 28

7.1 Study Limitations and Constraints 29

8. References 30

List of Tables

Table 1. Summary of Relevant Studies Reviewed..... 3

Table 2. Vegetation Community Classes 13

Table 3. Vascular Plant Inventory 19

Table 4. Bird Observation List..... 21

List of Figures

Figure 1. Study Area Map 2

Figure 2. Existing Land Use Map 7

Figure 3. Ecological Land Classification Map 15

List of Appendices

Appendix A – Records of Correspondence

Appendix B – Photographic Log

Appendix C – Supporting Documents

Abbreviations

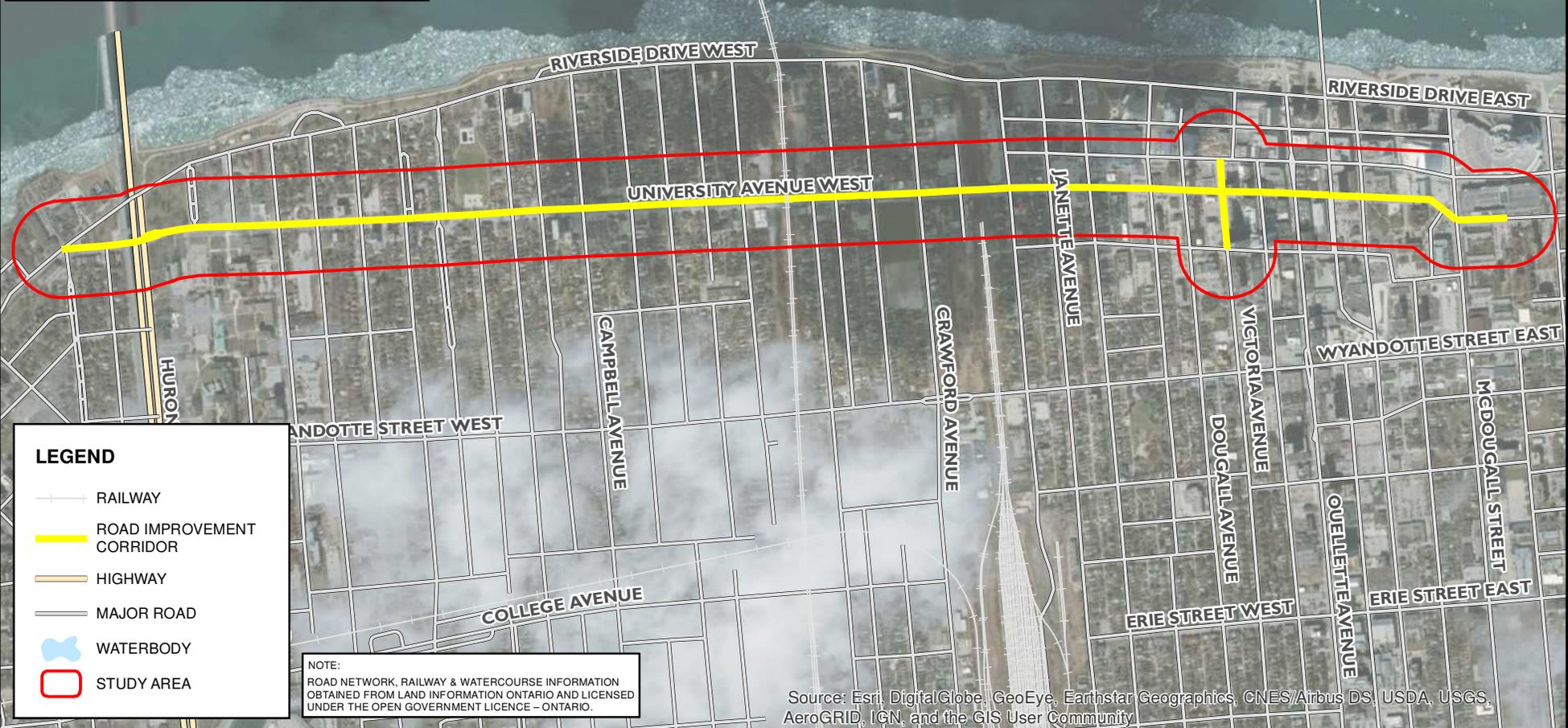
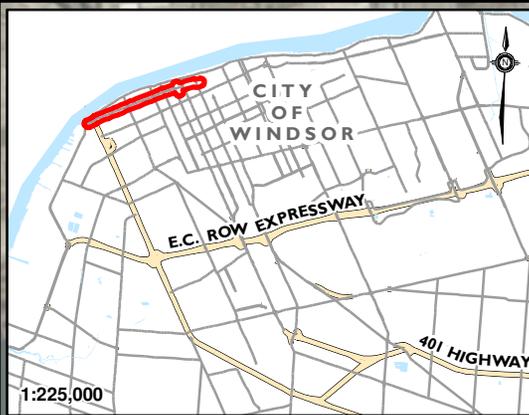
ANSI	Area of Natural and Scientific Interest
CSP	Corrugated Steel Pipe
DA	Designated Area
DFO	Department of Fisheries and Oceans / Fisheries and Oceans Canada
EA	Environmental Assessment
EA Act	Environmental Assessment Act, R.S.O. 1998, c. E. 18
ELC	Ecological Land Classification (Lee et al., 1998, as amended)
ESA	Endangered Species Act, 2007, S.O. 2007, c. 6
ESCP	Erosion and Sediment Control Plan
ERCA	Essex Region Conservation Authority
ESL	Environmentally Sensitive Landscape
GIS	Geographic Information System
LIO	Land Information Ontario
masl	Metres above sea level
mbgs	Metres below ground surface
MNRF	Ministry of Natural Resources and Forestry (now MNDMNRF)
MNDMNRF	Ministry of Northern Development Mines Natural Resources and Forestry
MECP	Ministry of Environment, Conservation and Parks
NHIC	Natural Heritage Information Centre
OBBA	Ontario Breeding Bird Atlas
OP	Official Plan
PPS	Provincial Policy Statement, 2014
PSW	Provincially Significant Wetland
ROW	Right-of-way
SAR	Species at Risk
SARA	Species at Risk Act, S.C. 2002, c. 29
SWH	Significant Wildlife Habitat (as defined by MNRF criteria)

1. Introduction and Study Area

CIMA Canada Inc. (CIMA+) has been retained by the City of Windsor (the 'City') to undertake a Schedule 'C' Municipal Class Environmental Assessment (MCEA) to review the existing and future transportation needs of the University Avenue corridor, assess alternatives and identify the preferred corridor improvements (the 'Project'). The Project is focused on creating attractive complete street corridors by identifying the preferred alternative to optimize the design of the right-of-way (ROW) including reallocating any additional space identified throughout the various Project assessments from surplus vehicle capacity and/or projected efficiencies or reprioritizations. Specifically, the Project includes evaluation of street options to University Avenue West/East between Huron Church Road and McDougall Street, and Victoria Avenue from Chatham Street West to Park Street West including intersections and approaches (herein referred to as the 'Study Area'). Refer to Figure 1 Study Area Map for details.

A Natural Environment Assessment (NEA) is required to document existing conditions, assess potential impacts to any natural heritage features present within the Study Area and provide recommendations and supporting documentation for the MCEA.

Note: A draft Natural Environment Assessment report was originally produced for this project in 2018 based on assessments completed in 2017. This report updates the original assessment considering an updated review of background materials as well as addresses correspondence with regulators.



LEGEND

- RAILWAY
- ROAD IMPROVEMENT CORRIDOR
- HIGHWAY
- MAJOR ROAD
- WATERBODY
- STUDY AREA

NOTE:
ROAD NETWORK, RAILWAY & WATERCOURSE INFORMATION OBTAINED FROM LAND INFORMATION ONTARIO AND LICENSED UNDER THE OPEN GOVERNMENT LICENCE - ONTARIO.

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

CLIENT

SCALE

1:15,000

PROJECT NAME:
**ENVIRONMENTAL ASSESSMENT
UNIVERSITY AVENUE & VICTORIA AVENUE**

SHEET TITLE:
FIGURE 1 - STUDY AREA MAP

PROJECT No: B000917	DESIGNER ---	CLIENT FILE No: --
DRAFTER: B. LEMIEUX	APPROVER ---	DRAWING No: FIG. 1
APPROVER L. CYMBALY	DATE: 9/17/2018	SHEET No: 1 of 1

2. Background Data Review

Available existing natural heritage data relevant to the Study Area was reviewed and included in this assessment. These data sets include:

- Aerial imagery (current and historic)
- Surficial geology mapping (Ontario Geological Survey)
- Data published through wildlife atlases (Ontario Breeding Birds Atlas (OBBA), Ebirds Canada, Great Backyard Bird Count (GBBC), Project FeederWatch Canada, Ontario Reptile and Amphibian Atlas (ORAA), Ontario Butterfly Atlas (OBA), Mammals of Ontario)
- Fish and wildlife data records from the Land Information Ontario (LIO) Natural Heritage Areas database
- Natural heritage features identified through LIO
- Environmental feature mapping in the Official Plan of the City of Windsor
- Data sets provided by Essex Region Conservation Authority (ERCA, the Ministry of Northern Development Mines Natural Resources and Forestry (MNDMNR), and the Ministry of Environment, Conservation and Parks (MECP).

CIMA+ also reviewed relevant and available ecological and physical environment technical studies completed within or directly adjacent to the Study Area. Table 1 summarizes the documents reviewed:

Table 1. Summary of Relevant Studies Reviewed

Document Title	Document Type	Date
Tree Inventory and Assessment Drawings (CIMA+)	Technical Drawings and Data Tables	September, 2018
Draft Arborist Report (CIMA+)	Technical Report	September, 2018
Watershed Characterization – Essex Region Source Protection Area (ERCA)	Technical Report	May, 2011
Characterization of the Essex Region Watershed – Interim Report (ERCA)	Technical Report	April, 2008
Fish Habitat Management Plan for the Essex Region. (ERCA, MNR, DFO)	Technical Report / Planning Document	2005

Pertinent information from the studies listed in Table 1 was included in the assessment.

3. Landscape Features and Designations

Available background information was reviewed to evaluate the landscape context for the Study Area and identify natural heritage features that require further site-specific assessment. The findings are summarized in the following sections.

3.1 Ecoregion

The Study Area is located within Ecoregion 7E (Lake Erie-Lake Ontario) and is part of the Deciduous Forest Region characterized by diverse vegetation. Approximately 78% of the ecoregion has been converted for agricultural purposes (cropland and pasture), and more than 7% of the remaining lands have been developed for urban settlement and road networks. Of the remaining forest remnants, dense deciduous forest covers 10.3%, sparse deciduous forest covers 1.0%, and mixed deciduous forest covers 0.8% of the ecoregion (Crins et al., 2009).

3.2 Soils and Physiography

Ecoregion 7E is underlain by Silurian and Devonian limestone bedrock whereby the topography is generally flat and overlain by deep undulating deposits of ground moraine. Most substrates in the ecoregion are comprised of calcareous mineral material with a minor component of the landscape composed of organic materials, which are glaciolacustrine deposits left over from historical lakes. The predominant substrates in the ecoregion include Gray Brown Luvisols and Gleysols (Crins et al., 2009).

The Essex Region predominantly consists of a relatively flat clay plain except for some sandy areas, primarily in the southern portion of the Region (ERCA, 2011). The Study Area is specifically located in a clay plain known as the Bevelled Till Plain (Ontario Geological Survey Map P.2715, Chapman and Putnam, 1984).

3.3 Topography

Local topography of lands within the Study Area is generally flat characterized by gentle slopes in either direction from approximately the centre of the site (Cameron Avenue) moving from 187 metres above sea level (masl) to 184 masl at the eastern Study Area limit (McDougall Street) and a gentle slope from 187 to 181 masl in an easterly direction to the western Study Area limit at Huron Church Road.

Watercourses throughout the City of Windsor have been significantly altered since the time of settlement in the area. Two bridges cross valley depressions in the Study Area. Slopes associated with these areas are vegetated, and historical or existing railway lines occupy the base of the valleys (180 masl), while portions of these greenspaces have been converted into municipal parks since this time; see Section 5.3 and Figures 2 and 3 for details.

3.4 Watershed and Watercourses

The Study Area is located within the Essex Region Watershed under the administrative jurisdiction of the Essex Region Conservation Authority (ERCA). The Essex Region Watershed is approximately 1,681 square kilometres in size, sharing the eastern boundary with the Lower Thames Valley Conservation Authority. The Essex Region Watershed consists predominantly of relatively flat clay plain with some sandy areas located primarily in the southern portion of the Region. Three major sub-watersheds cross the region. These major drainage areas outlet to

Lake St. Clair, the Detroit River and Lake Erie, respectively and have been further divided into approximately 28 sub-watersheds comprised of streams and rivers that have been heavily modified through surface and sub-surface drainage to encourage agricultural development (ERCA, 2011). The Study Area falls within the Windsor Area Drainage Subwatershed which covers an area of 46.8km² (ERCA, 2011).

CIMA+ reviewed provincial, regional and municipal GIS databases and maps including reviews of Land Information Ontario / NHIC / Topo, Fish ON-Line, ERCA publicly available and requested data, watershed studies, as well as official plan schedules. No watercourses have been identified within the Study Area.

3.5 Surrounding Land Cover

The Study Area is located in an urban environment predominantly developed with mixed use developments, with areas dominated by low- and high- density residential developments, commercial, institutional and recreational lands. Undeveloped lands across the Study Area are limited to greenspaces including four municipal parks, and natural lands surrounding a railway corridor. See Figure 2. Existing Land Use Map for details.

3.6 Provincially Designated Areas

Reviews of the MNRF natural heritage / resources maps obtained through the LIO database were completed to identify the presence or absence of any provincially Designated Areas (DAs). Provincial DAs include significant natural heritage features covered under the Provincial Policy Statement (2020).

CIMA+ also sent out a formal information request to the MNRF (now MNMNR) and MECP on July 15, 2021, prior to the Public Information Centre for the Project, to confirm the presence or absence of provincial DAs in the Study Area and obtain additional information on restricted Species at Risk (SAR) records, fisheries records, or other data on file concerning lands and watercourses within the Study Area (see Appendix A - Records of Correspondence for details). Pertinent information has been incorporated throughout the report.

SIGNIFICANT WOODLANDS

General woodland locations have been mapped/identified by the Province in several areas across the Study Area (NHIC/LIO GIS database records; See Figure 2 for location details). However, designation of Significant Woodlands is at the discretion of local planning authorities and are typically identified in planning documents. No Significant Woodlands have been identified in the Study Area, in the city, or in ERCA planning documents; see Section 3.7 for details.

AREAS OF NATURAL AND SCIENTIFIC INTEREST (ANSI)

No ANSIs are present within or directly adjacent to the Study Area. The nearest ANSI is the Prairie Remnants (Ojibway Park) Life Science ANSI located greater than 4 km south of the Study Area.

SIGNIFICANT WILDLIFE HABITAT (SWH)

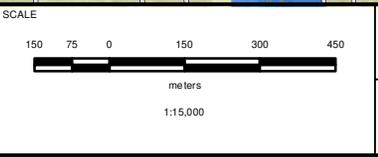
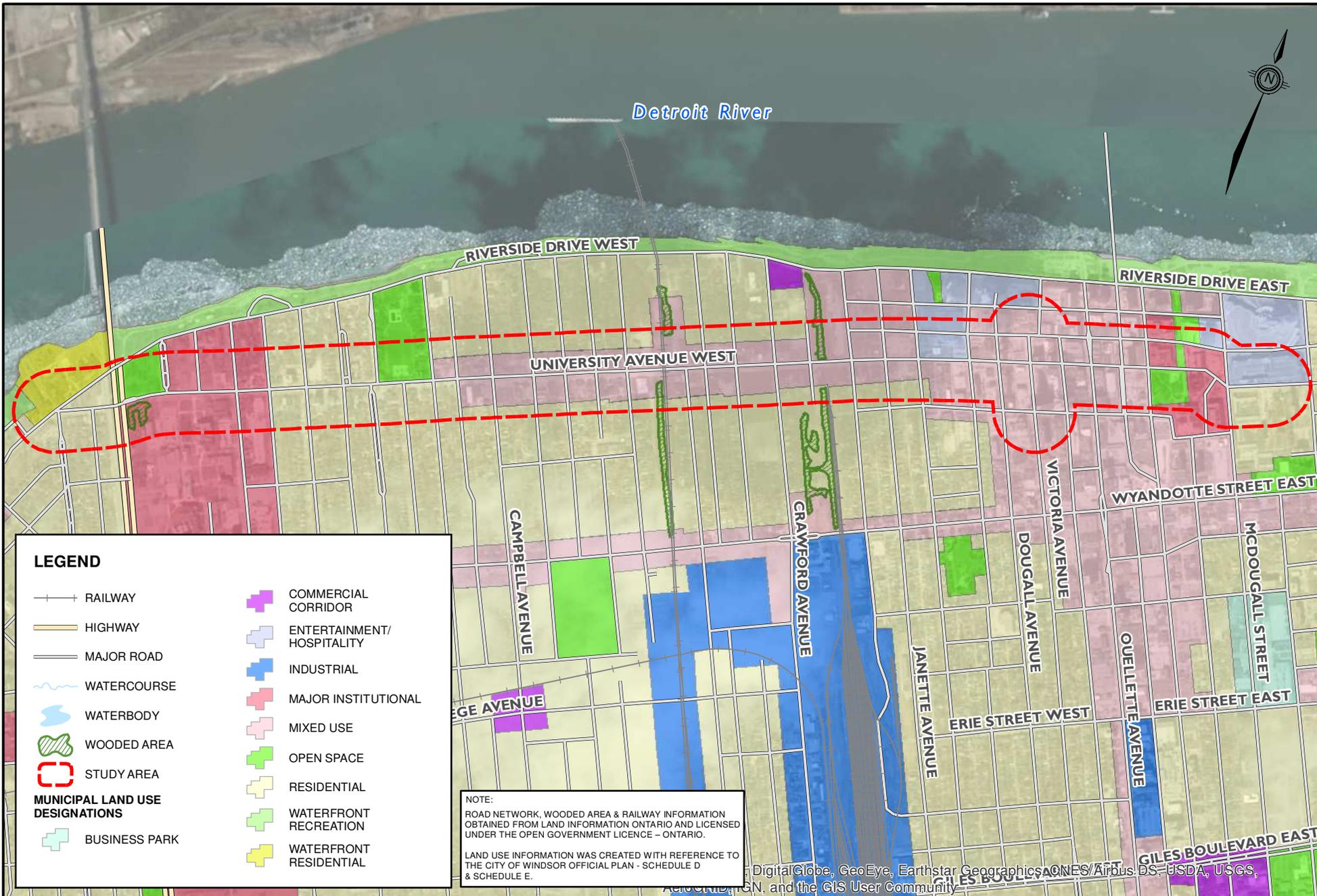
No SWH records were identified through agency correspondence or the background review. See Section 5.4.4 for further discussion regarding SWH based on the results of the field assessment.

PROVINCIALY SIGNIFICANT WETLANDS (PSW)

No PSWs are present within the Study Area. The nearest PSW is the South Cameron Wetland Complex located approximately 3 km south of the Study Area.

SPECIES AT RISK (SAR)

The MNDMNR and MECP identified that SAR are known to be present in the general vicinity of the Study Area. Further investigation was included in the assessment.



PROJECT NAME:
**ENVIRONMENTAL ASSESSMENT
UNIVERSITY AVENUE & VICTORIA AVENUE**

SHEET TITLE:
**EXISTING CONDITIONS - LAND USE
& DESIGNATED AREAS MAP**

PROJECT No:
B000917

DRAFTER:
S. ELLIOTT

APPROVER:
L. CYMBALY

DATE:
9/19/2018

CLIENT FILE No:

DRAWING No:
FIG. 2

SHEET No:
1 of 1

Map created using DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

3.7 Locally Designated Areas

Local DAs include additional natural heritage features or areas identified for conservation or recreational value such as Environmentally Sensitive Landscapes or Areas (ESLs, ESAs), significant woodlands, or locally significant wetlands as outlined and described in municipal Official Plans (OPs).

Review of the Essex Region Conservation Authority planning documents and natural heritage management plans, did not identify the presence of any natural heritage features within the Study Area which might meet local or provincial DA criteria of ecological significance.

Reviews of the City of Windsor's OP and associated schedules did not identify the presence of any natural heritage related DAs within the Study Area. Only Community and Regional Parks were present in the Study Area.

3.8 Conservation Authority Designated Areas

The Study Area is located within the Essex Region Watershed under the jurisdiction of the ERCA. The Study Area is not located within ERCA regulation boundaries; the regulation limit surrounding the Detroit River ends at approximately Riverside Drive West and no other watercourses are present within or directly adjacent to the Study Area.

No existing natural areas or areas with restoration opportunities were identified by ERCA in the Study Area.

4. Legislative and Policy Context

The type of work proposed combined with the results of the background review determines the legislation and policy context for the Natural Environment Assessment. Accordingly, the following sections outline the regulatory framework that applies to the Study Area.

4.1 Federal Legislation

4.1.1 Migratory Birds Convention Act

The *Migratory Birds Convention Act* (S.C. 1994, c.22) regulates the protection and conservation of migratory birds as populations and individuals and protects their nests. The Act applies to any areas that provide potential for nesting habitat of migratory birds.

Section 6 of the Migratory Bird Regulations made under the Act states that no person shall disturb, destroy, or take a nest, egg, nest shelter, eider duck shelter or duck box of a migratory bird except under authority of a permit.

- Portions of the Study Area may provide nesting opportunities for migratory birds; therefore, the provisions of this Act apply.

4.2 Provincial Legislation

4.2.1 Environmental Assessment Act

The Environmental Assessment Act (R.S.O. 1990, c.E-18) provides a mechanism for review and assessment of potential environmental impacts of public sector projects. The Act applies to any plan, project or activity carried out by, or on behalf of, a public body.

Under the Act, “environment” is comprised of natural, social, cultural, and economic components.

- A Natural Environment Assessment is required to define and assess impact on the natural component of the environment.

4.2.2 Endangered Species Act

The *Endangered Species Act* (S.O. 2007, c.6) prohibits any person from killing or damaging the habitat of species that are listed on the Species at Risk (SAR) in Ontario list. Under O. Reg. 242/08 of the Act, there are a number of exemptions related to particular species and activities. If a proposed undertaking is covered under one of the exemptions, a streamlined notification process applies. If none of the exemptions apply, a permit under section 17(1) of the Act is required.

- The MNMNR and MECP have identified potential for SAR in the Study Area; therefore, the provisions of this Act apply.

It should be noted that as of April 1st, 2019, the responsibility for SAR under the ESA was transferred from the MNRF to MECP.

4.2.3 Conservation Authorities Act

The *Conservation Authorities Act* (R.S.O. 1990, c. C.27) was enacted to provide for the organization and delivery of programs and services that further the conservation, restoration, development, and management of natural resources in watersheds in Ontario. Under Section 21 of the Act, Conservation Authorities have the power to study and investigate the watersheds of their jurisdictions and to determine programs whereby the natural resources of the watershed may be conserved, restored, developed, and managed.

- The Study Area is within the jurisdiction of the Essex Region Conservation Authority (ERCA); therefore, Section 21 of the Act applies.

The Act also states that Conservation Authorities have the power to develop watershed management plans, work with private landowners for conservation projects, implement flood control measures, own, and operate Conservation Areas, and create regulations pertaining to water bodies and flooding.

- No portion of the Study Area is located within the ERCA regulation boundaries; therefore, the provisions set out by *Ontario Regulation (O. Reg.) 158/06: Essex Region Conservation Authority Regulation of Development, Interference with Wetlands and Alterations to Shorelines and Watercourses*, do not apply to the Project.

4.2.4 Provincial Policy Statement

The Provincial Policy Statement (PPS) 2014 was issued under Section 3 of the *Planning Act* (R.S.O. 1990, as amended May 1, 2020). The PPS is applicable province-wide to all planning decisions.

The following policies are relevant to the Study Area:

2.1.7 Development and site alteration shall not be permitted in habitat of endangered species and threatened species except in accordance with provincial and federal requirements

2.1.8 Development and site alteration shall not be permitted on adjacent lands to natural heritage features unless the ecological function of the adjacent lands has been evaluated and it has been demonstrated that there will be no negative impacts on the natural features or on the ecological functions

The Ontario Natural Heritage Reference Manual for the Provincial Policy Statement defines adjacent lands as:

- 120 m from provincially significant wetlands
- 50 m from significant woodlands, significant valley lands, significant wildlife habitat, significant portions of habitat for threatened or endangered species, significant ANSIs
- 30 m from fish habitat
- The results of the background review did not identify the presence of any previously recognized provincial DAs within the Study Area.
- A Natural Environment Assessment is required to assess the presence and potential impact to any features within the Study Area, which are covered under the PPS but have not been previously identified (e.g. significant wildlife habitat, habitats of endangered or threatened species, etc.).

5. Site Specific Assessment

5.1 Field Investigations

CIMA+ conducted field investigations on July 5, and July 6, 2018 to evaluate existing ecological conditions within the Study Area. The field program included the following surveys:

- Full vascular plant inventories
- Existing habitat assessments, including ecological community characterization completed in general accordance with MNRF Ecological Land Classification (ELC) for Southern Ontario standard procedures and protocols
- Breeding bird survey in general accordance with Ontario Breeding Bird Atlas (OBBA) standard procedures and protocols
- Incidental wildlife and wildlife habitat observations (auditory, visual, tracks, scat, burrows, nests, etc.) throughout the Study Area
- Technical evaluation of ecological features within the Study Area which may be impacted by the Project

A photographic record of the field investigations is found in Appendix B.

5.2 Watercourses, Surface Drainage Features and Aquatic Habitat

The results of the background review did not identify the presence of watercourses, or other surficial drainage features in the Study Area.

The results of the field investigations confirmed that drainage across the Study Area is directed to subsurface utility structures via catch-basins; no roadside ditches or watercourses were observed in the Study Area. No pools of standing water, evidence of high water table, wetlands or other biotic or abiotic features indicating permanent or intermittent aquatic or wetland habitat, was observed in the Study Area at the time of the site investigations.

5.3 Vegetation

Lands within the Study Area were assessed to determine the presence or absence of any vegetation species of conservation concern and evaluate habitat conditions. For the purposes of this study, greenspace is defined as any area where vegetation (whether natural or anthropogenically developed) is established on the landscape.

Greenspace throughout the Study Area was observed to include the following features:

1. Ornamental trees, manicured lawn, and cultural landscaping features (e.g. garden beds, shrub hedgerows or otherwise streetscaping features) are present within the University Avenue East/West and Victoria Avenue right-of-way (ROW).

2. Ornamental trees, manicured lawn, and cultural landscaping features associated with properties directly adjacent to the ROW. These built environments include urban developments on public and private lands associated with residential, commercial, institutional, and recreational developments, as outlined on Figure 2. Existing Land Use Map.
3. Four municipally managed parks span the Study Area: (1) Assumption Park; (2) Barron Memorial Skateboard Park; (3) Gateway Public Park, and; (4) Senator David A. Croll Park. These parks include cultural landscaping features and areas of actively managed Kentucky Blue Grass (*Poa pratensis*) groundcover, as well as un-managed naturalized components. See Table 2. Vegetation Community Classes and Figure 3. Ecological Land Classification Map for details.
4. Undeveloped deciduous forested lands located between Salter Avenue and Caron Avenue, see Table 2. Vegetation Community Classes and Figure 3. Ecological Land Classification Map for details.

The assessment included detailed biological inventories and vegetation community characterization. An Arborist Report prepared by CIMA+ (September 2018) under separate cover details tree and landscaping vegetation species, locations, and associated condition assessments for trees within and overhanging into the road ROWs. See Appendix C Supporting Documents for full species list, tree numbers, and associated location drawings.

Greenspaces outside of the ROW were classified in general accordance with the Ontario Ecological Land Classification system standard procedures and protocols (Lee et al., 1998, as amended). Seven (7) ecological community classes were identified across the Study Area. A summary of community class findings is outlined in Table 2. Vegetation Community Classes. The locations of the various vegetation communities present within the Study Area are outlined in Figure 3. Ecological Land Classification Map. A full vascular plant list, including species' provincial rarity rankings is presented in Table 3. Vascular Plant Inventory.

Table 2. Vegetation Community Classes

ELC Code	ELC Ecosite Description	Dominant Species	Notes
CGL-2	Constructed Green Lands – Parkland	Species across 3 actively managed parkland areas are dominated by tree species which have either been historically, or recently planted. There is no subcanopy or naturalized groundcover associated with lands which have been delineated under the CGL-2 class. The ground has been established with actively managed Kentucky Blue Grass. Tree species in the CGL-2 classified areas include, but are not limited to: Horse Chestnut, Sugar Maple, Austrian Pine, White Spruce, Colorado Spruce, Norway Maple, Freeman’s Maple, Little Leaf Linden, Tulip Tree, Red Oak, Catalpa, Honey Locust, Crabapple, Callery Pear, Hackberry, and Schubert Cherry.	There are four municipal public parks present across the Study Area. Given the dominance of continuous anthropogenic land management practices and history of green infrastructure development (planted/landscaped ornamental species), the CGL-2 ecological community class applies to (1) Assumption Park, (2) Senator David A. Croll Park, and; (3) portions of Gateway Public Park (central portion surrounding trail system and international gardens area to the north, near Riverside Drive West).
CVS-3	Constructed Institutional – Religious Institution	Tree species across this cultural feature include, but are not limited to: London Planetree, Austrian Pine, Colorado Spruce, Sugar Maple, Freeman’s Maple, and Black Walnut. There is no subcanopy or naturalized groundcover associated with lands which have been delineated under the CVS-3 class. The ground has been established with actively managed Kentucky Blue Grass (lawn).	This area has been mapped by the province as Woodlands (LIO database). Canopy cover across portions of these lands (owned by a local catholic church) are established with >75% deciduous tree species (FOD), however, these lands would not classify as a natural forest ecosystem – it is a cultural feature, that is actively managed by a religious institution.
CGL-4	Constructed Green Lands - Recreational	There is no canopy, subcanopy or naturalized groundcover associated with lands which have been delineated under the CGL-4 class. The ground has been established with actively managed Kentucky Blue Grass (lawn – sports field).	These lands are recreational land use, including a skateboard park to the south, a soccer field in the centre and a community center with pool facility located at the north end of the property.

ELC Code	ELC Ecosite Description	Dominant Species	Notes
FOD	Deciduous Forest	Canopy species across these features include, but are not limited to: Tree of Heaven, Catalpa, White Poplar, Manitoba Maple, Green Ash, Slippery Elm, Swamp White Oak, Balsam Poplar, White Elm, Norway Maple, White Ash, Red Oak, Hackberry, Sugar Maple, Black Walnut. Subcanopy species included Crabapple, Prickly Rose, Manitoba Maple saplings, occasional White Mulberry. Groundcover was established with Orchard Grass, asters and goldenrods, Field Bindweed, English Plantain, Common Dandelion, Bird's Foot Trefoil, Wild Carrot, Wild Red Raspberry, Common Burdock, Chicory, Yarrow, Virginia Creeper, Riverbank Grape, Canada Thistle, Smooth Brome and various Poa sp.	<p>Naturalized portions of Gateway Public Park, and undeveloped lands located between Salter Avenue and Caron Avenue (previous railway line extension) have been classed as FOD. ELC was not established down to vegetation type because tree canopy composition was diverse, and dominance varied with location within the ecosite (clusters).</p> <p>A gravel pathway was noted running the length of this ecosite in the approximate centre of the greenspace.</p>
CVI-1	Constructed - Transportation	Undeveloped lands adjacent to the existing and historical railway line path in this area, was established with similar species, as noted in the FOD class (as listed above), where canopy cover was established 5-10 meters away from the path and existing transportation infrastructure. While similar species were noted in this ecosite, a shift in dominance was noted in disturbance tolerant and invasive exotic species including observations of larger proportions of Norway Maple, Tree of Heaven and Manitoba Maple with associates of Catalpa and Black Walnut.	University Avenue East/West and Victoria Avenue are classified as CVI-1 within the Study Area. A gravel pathway was noted running underneath the bridge and up to the existing railway line tracks and associated infrastructure. Several trains were observed to be parked in this area at the time of the site investigations.
CVR-2	High Density Residential	Majority of the Study Area is dominated by residential properties. These areas include single family homes, attached homes, and apartment buildings. Planted ornamental trees and shrubs were observed in these areas as well as manicured lawns planted with Kentucky Blue Grass	n/a
CVC-1	Business Sector	Areas east of Wellington Avenue are dominated by commercial businesses comprised of restaurants, convenience stores, gas stations, retail shops, and banks.	n/a



LEGEND

- BREEDING BIRD COUNT STATIONS
- RAILWAY
- STUDY AREA

ECOLOGICAL LAND CLASSIFICATION

- CVS-3: CONSTRUCTED INSTITUTIONAL - RELIGIOUS INSTITUTION
- CGL-2: GREEN LANDS - PARKLAND

NOTE:
ROAD NETWORK, WOODED AREA & RAILWAY INFORMATION OBTAINED FROM LAND INFORMATION ONTARIO AND LICENSED UNDER THE OPEN GOVERNMENT LICENCE – ONTARIO.

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

		<p>SCALE</p> <p>14,000</p>	<p>PROJECT NAME: ENVIRONMENTAL ASSESSMENT UNIVERSITY AVENUE & VICTORIA AVENUE</p>		<p>PROJECT No: B000917</p>	<p>CLIENT FILE No: --</p>
			<p>SHEET TITLE: ECOLOGICAL LAND CLASSIFICATION MAP</p>		<p>DRAFTER: S. ELLIOTT</p>	<p>DESIGNER: ---</p>
			<p>APPROVER: L. CYMBALY</p>		<p>APPROVER: ---</p>	<p>SHEET No: 1 of 1</p>
			<p>DATE: 9/28/2018</p>			



LEGEND

- BREEDING BIRD COUNT STATIONS
- RAILWAY
- STUDY AREA

ECOLOGICAL LAND CLASSIFICATION

- CGL-4: CONSTRUCTED GREEN LANDS - RECREATION
- FOD: DECIDUOUS FOREST
- CGL-2: CONSTRUCTED GREEN LANDS - PARKLAND

NOTE:
ROAD NETWORK, WOODED AREA & RAILWAY INFORMATION OBTAINED FROM LAND INFORMATION ONTARIO AND LICENSED UNDER THE OPEN GOVERNMENT LICENCE - ONTARIO.

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

		<p>SCALE</p> <p>14,000</p>	<p>PROJECT NAME: ENVIRONMENTAL ASSESSMENT UNIVERSITY AVENUE & VICTORIA AVENUE</p>		<p>PROJECT No: B000917</p>	<p>CLIENT FILE No: --</p>
			<p>SHEET TITLE: ECOLOGICAL LAND CLASSIFICATION MAP</p>		<p>DRAFTER: S. ELLIOTT</p>	<p>DESIGNER: ---</p>
		<p>APPROVER: L. CYMBALY</p>		<p>APPROVER: ---</p>	<p>DATE: 9/26/2018</p>	<p>SHEET No: 1 of 1</p>



Greenspace Slated For Development



PROJECT NAME:
**ENVIRONMENTAL ASSESSMENT
UNIVERSITY AVENUE & VICTORIA AVENUE**

SHEET TITLE:
ECOLOGICAL LAND CLASSIFICATION MAP

PROJECT No:
B000917

DRAFTER:
S. ELLIOTT

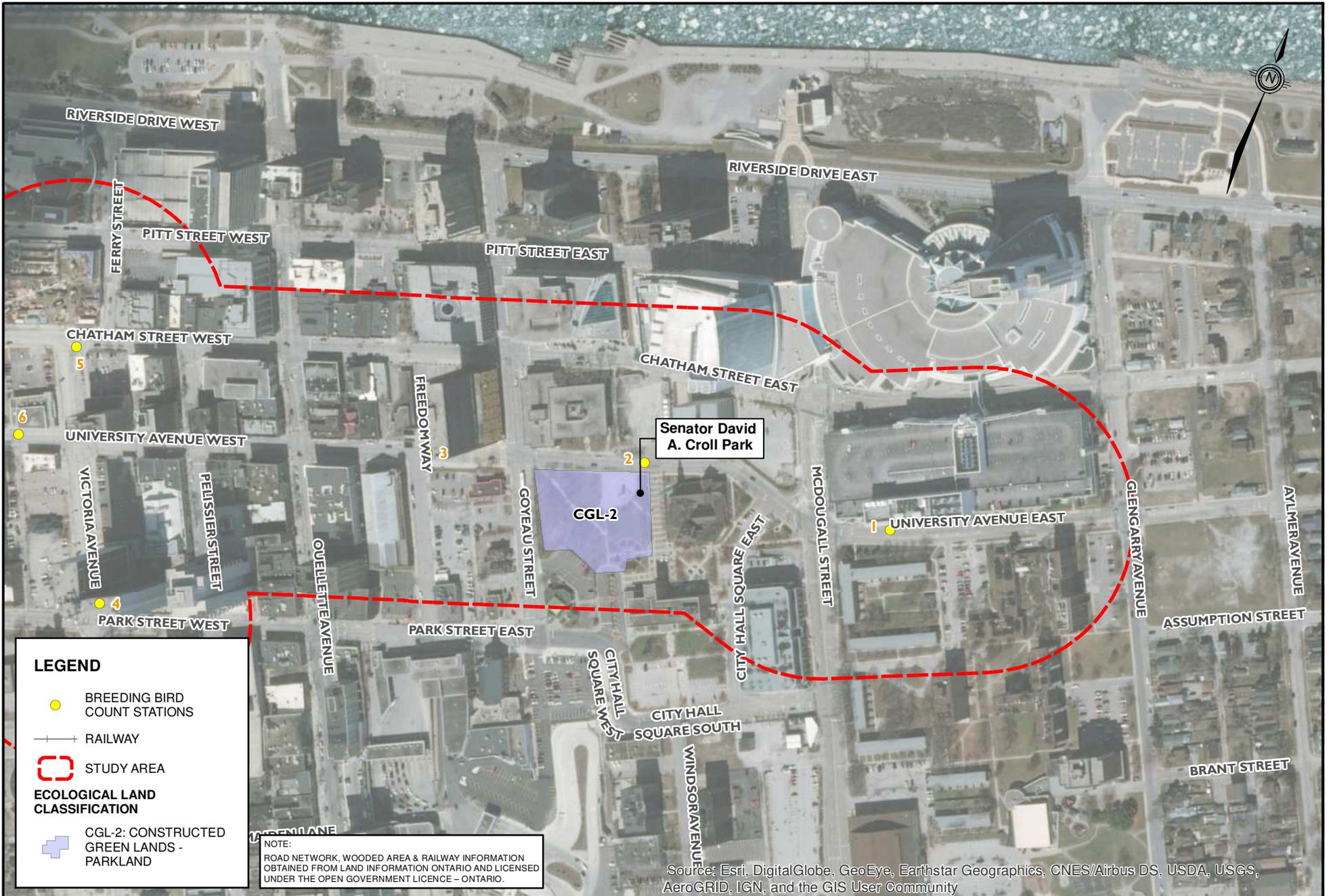
APPROVER:
L. CYMBALY

DATE:
9/26/2018

CLIENT FILE No:
--

DRAWING No:
FIG. 3C

SHEET No:
1 of 1



LEGEND

- BREEDING BIRD COUNT STATIONS
- RAILWAY
- STUDY AREA

ECOLOGICAL LAND CLASSIFICATION

- CGL-2: CONSTRUCTED GREEN LANDS - PARKLAND

NOTE:
ROAD NETWORK, WOODED AREA & RAILWAY INFORMATION OBTAINED FROM LAND INFORMATION ONTARIO AND LICENSED UNDER THE OPEN GOVERNMENT LICENCE - ONTARIO.

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

		<p>SCALE</p> <p>14,000</p>	<p>PROJECT NAME: ENVIRONMENTAL ASSESSMENT UNIVERSITY AVENUE & VICTORIA AVENUE</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td colspan="2">PROJECT No: B000917</td> <td colspan="2">CLIENT FILE No: --</td> </tr> <tr> <td>DRAFTER: S. ELLIOTT</td> <td>DESIGNER: ---</td> <td colspan="2">DRAWING No: FIG. 3D</td> </tr> <tr> <td>APPROVER: L. CYMBALY</td> <td>APPROVER: ---</td> <td colspan="2" rowspan="2">SHEET No: 1 of 1</td> </tr> <tr> <td colspan="2">DATE: 9/26/2018</td> </tr> </table>	PROJECT No: B000917		CLIENT FILE No: --		DRAFTER: S. ELLIOTT	DESIGNER: ---	DRAWING No: FIG. 3D		APPROVER: L. CYMBALY	APPROVER: ---	SHEET No: 1 of 1		DATE: 9/26/2018	
	PROJECT No: B000917		CLIENT FILE No: --															
DRAFTER: S. ELLIOTT	DESIGNER: ---	DRAWING No: FIG. 3D																
APPROVER: L. CYMBALY	APPROVER: ---	SHEET No: 1 of 1																
DATE: 9/26/2018																		
			<p>SHEET TITLE: ECOLOGICAL LAND CLASSIFICATION MAP</p>															

Table 3 - Vascular Plant Inventory

FUNCTIONAL GROUP	FAMILY	SCIENTIFIC NAME	COMMON NAME	E STATUS	S RANK	N RANK	G RANK	PROVINCIAL STATUS	COSEWIC STATUS	FEDERAL STATUS
Trees/Shrubs	Aceraceae	<i>Acer negundo</i>	Manitoba Maple	-	S5	N5	G5	-	-	-
	Aceraceae	<i>Acer palmatum</i>	Japanese Maple	-	-	-	-	-	-	-
	Aceraceae	<i>Acer platanoides</i>	Norway Maple	SE5	SNA	NNA	GNR	-	-	-
	Aceraceae	<i>Acer rubrum</i>	Red Maple	-	S5	N5	G5	-	-	-
	Aceraceae	<i>Acer saccharinum</i>	Silver Maple	-	S5	N5	G5	-	-	-
	Aceraceae	<i>Acer saccharum</i>	Sugar Maple	-	S5	N5	G5	-	-	-
	Aceraceae	<i>Acer x freemanii</i>	(<i>Acer rubrum</i> X <i>Acer saccharinum</i>)	-	SNA	NNA	GNA	-	-	-
	Betulaceae	<i>Betula papyrifera</i>	Paper Birch	-	S5	N5	G5	-	-	-
	Bignoniaceae	<i>Catalpa speciosa</i>	Northern Catalpa	SE1	SNA	NNA	G4?	-	-	-
	Celastraceae	<i>Euonymus alatus</i>	Winged Euonymus	SE2	SNA	NNA	GNR	-	-	-
	Cupressaceae	<i>Juniperus virginiana</i>	Eastern Red Cedar	-	S5	N5	G5	-	-	-
	Cupressaceae	<i>Thuja occidentalis</i>	Eastern White Cedar	-	S5	N5	G5	-	-	-
	Fabaceae	<i>Cercis canadensis</i>	Eastern Redbud	-	SX	NX	G5	-	-	-
	Fabaceae	<i>Gleditsia triacanthos</i>	Honey-locust	-	S2?	N2	G5	-	-	-
	Fabaceae	<i>Gymnocladus dioica</i>	Kentucky Coffee-tree	-	S2	N2	G5	THR	THR	THR
	Fagaceae	<i>Fagus sylvatica</i>	European Beech	-	-	-	-	-	-	-
	Fagaceae	<i>Quercus bicolor</i>	Swamp White Oak	-	S4	N4	G5	-	-	-
	Fagaceae	<i>Quercus robur</i>	English Oak	SE1	SNA	NNA	GNR	-	-	-
	Fagaceae	<i>Quercus rubra</i>	Northern Red Oak	-	S5	N5	G5	-	-	-
	Hippocastanaceae	<i>Aesculus hippocastanum</i>	Horse Chestnut	SE2	SNA	NNA	GNR	-	-	-
	Juglandaceae	<i>Juglans nigra</i>	Black Walnut	-	S4?	N4	G5	-	-	-
	Magnoliaceae	<i>Liriodendron tulipifera</i>	Tulip Tree	-	S4	N4	G5	-	-	-
	Magnoliaceae	<i>Magnolia sp.</i>	Magnolia	-	-	-	-	-	-	-
	Moraceae	<i>Morus alba</i>	White Mulberry	SE5	SNA	NNA	GNR	-	-	-
	Oleaceae	<i>Fraxinus americana</i>	White Ash	-	S4	N5	G5	-	-	-
	Oleaceae	<i>Fraxinus pennsylvanica</i>	Green Ash	-	S4	N5	G5	-	-	-
	Oleaceae	<i>Syringa reticulata</i>	Japanese Tree Lilac	SE1	SNA	NNA	GNR	-	-	-
	Oleaceae	<i>Syringa vulgaris</i>	Common Lilac	SE5	SNA	NNA	GNR	-	-	-
	Pinaceae	<i>Abies concolor</i>	White Fir	-	-	-	-	-	-	-
	Pinaceae	<i>Picea glauca</i>	White Spruce	-	S5	N5	G5	-	-	-
	Pinaceae	<i>Picea pungens</i>	Colorado Spruce	-	-	-	-	-	-	-
	Pinaceae	<i>Pinus nigra</i>	Black Pine/Austrian Pine	SE3	SNA	NNA	GNR	-	-	-
	Plantaginaceae	<i>Plantago lanceolata</i>	English Plantain	SE5	SNA	NNA	G5	-	-	-
	Platanaceae	<i>Platanus x acerifolia</i>	London Planetree	-	-	-	-	-	-	-
	Rosaceae	<i>Amelanchier laevis</i>	Smooth Serviceberry	-	S5	N5	G5	-	-	-
	Rosaceae	<i>Malus pumila</i>	Common Apple	SE4	SNA	NNA	G5	-	-	-
	Rosaceae	<i>Malus sp.</i>	Crabapple	-	-	-	-	-	-	-
	Rosaceae	<i>Prunus virginiana 'Schubert'</i>	Shubert Cherry	-	-	-	-	-	-	-
	Rosaceae	<i>Pyrus calleryana</i>	Callery Pear	-	-	-	-	-	-	-
	Rosaceae	<i>Rosa acicularis</i>	Prickly Rose	-	S5	N5	G5	-	-	-
	Rosaceae	<i>Rubus idaeus ssp. idaeus</i>	Common Red Raspberry	SE1	SNA	NNR	G5T5	-	-	-
	Rosaceae	<i>Spiraea sp.</i>	Spiraea	-	-	-	-	-	-	-
	Salicaceae	<i>Populus alba</i>	White Poplar	SE5	SNA	NNA	G5	-	-	-
	Salicaceae	<i>Populus deltoides</i>	Eastern Cottonwood	-	S5	N5	G5	-	-	-
	Simaroubaceae	<i>Ailanthus altissima</i>	Tree-of-heaven	SE5	SNA	NNA	GNR	-	-	-
	Taxaceae	<i>Taxus sp.</i>	Yew	-	-	-	-	-	-	-
	Tiliaceae	<i>Tilia cordata</i>	Little-leaf Linden	SE1	SNA	NNA	GNR	-	-	-
Ulmaceae	<i>Celtis occidentalis</i>	Common Hackberry	-	S4	N4	G5	-	-	-	
Ulmaceae	<i>Ulmus americana</i>	American Elm	-	S5	N5	G5	-	-	-	
Ulmaceae	<i>Ulmus rubra</i>	Slippery Elm	-	S5	N5	G5	-	-	-	
Vines	Vitaceae	<i>Parthenocissus quinquefolia</i>	Virginia Creeper	-	S4?	N4N5	G5	-	-	
Vines	Vitaceae	<i>Vitis riparia</i>	Riverbank Grape	-	S5	N5	G5	-	-	
Graminoides	Poaceae	<i>Dactylis glomerata</i>	Orchard Grass	SE5	SNA	NNA	GNR	-	-	-
	Poaceae	<i>Digitaria ischaemum</i>	Smooth Crabgrass	SE5	SNA	NNA	GNR	-	-	-
	Poaceae	<i>Phleum pratense</i>	Common Timothy	SE5	SNA	NNA	GNR	-	-	-
	Poaceae	<i>Phragmites australis ssp. australis</i>	European Reed	SE5	SNA	NNA	G5T5	-	-	-
	Poaceae	<i>Poa pratensis</i>	Kentucky Bluegrass	-	S5	N5	G5	-	-	-
Forbs	Apiaceae	<i>Daucus carota</i>	Wild Carrot	SE5	SNA	NNA	GNR	-	-	-
	Asteraceae	<i>Achillea millefolium</i>	Common Yarrow	SE	SNA	N5	G5	-	-	-
	Asteraceae	<i>Arctium minus</i>	Common Burdock	SE5	SNA	NNA	GNR	-	-	-
	Asteraceae	<i>Aster sp.</i>	Aster	-	-	-	-	-	-	-
	Asteraceae	<i>Cichorium intybus</i>	Chicory	SE5	SNA	NNA	GNR	-	-	-
	Asteraceae	<i>Cirsium arvense</i>	Canada Thistle	SE5	SNA	NNA	G5	-	-	-
	Asteraceae	<i>Senecio vulgaris</i>	Common Ragwort	SE5	SNA	NNA	GNR	-	-	-
	Asteraceae	<i>Solidago canadensis</i>	Canada Goldenrod	-	S5	N5	G5	-	-	-
	Asteraceae	<i>Solidago canadensis var. canadensis</i>	Canada Goldenrod	-	S5	N5	G5T5	-	-	-
	Asteraceae	<i>Solidago sp.</i>	Goldenrod	-	-	-	-	-	-	-
	Asteraceae	<i>Taraxacum officinale</i>	Common Dandelion	SE5	SNA	N5	G5	-	-	-
	Brassicaceae	<i>Alliaria petiolata</i>	Garlic Mustard	SE5	SNA	NNA	GNR	-	-	-
	Brassicaceae	<i>Barbarea vulgaris</i>	Bitter Wintercress	SE5	SNA	NNA	GNR	-	-	-
	Convolvulaceae	<i>Convolvulus arvensis</i>	Field Bindweed	SE5	SNA	NNA	GNR	-	-	-
	Fabaceae	<i>Lotus corniculatus</i>	Garden Bird's-foot Trefoil	SE5	SNA	NNA	GNR	-	-	-
	Fabaceae	<i>Medicago lupulina</i>	Black Medic	SE5	SNA	NNA	GNR	-	-	-
	Fabaceae	<i>Trifolium pratense</i>	Red Clover	SE5	SNA	NNA	GNR	-	-	-
	Fabaceae	<i>Trifolium repens</i>	White Clover	SE5	SNA	NNA	GNR	-	-	-
	Fabaceae	<i>Vicia cracca</i>	Tufted Vetch	SE5	SNA	NNA	GNR	-	-	-

TABLE LEGEND

PROVINCIAL STATUS: Species at Risk Ontario - current status as defined by the Endangered Species Act (ESA, S.O. 2007)

COSEWIC STATUS: Current status defined by the Committee on the Status of Endangered Wildlife in Canada

FEDERAL STATUS: Current status as defined by the Species at Risk Act (R.S.O., 2002)

E STATUS: EXOTIC STATUS RANK (ON)

S RANK: SUBNATIONAL STATUS RANK

G RANK: GLOBAL STATUS RANK

N RANK: NATIONAL STATUS RANK

END = Endangered

THR = Threatened

SC = Special Concern

SE = Status Exotic (ON)

NAR = Not at Risk

Ranking System

SX, NX, or GX/TX: Presumed Extinct

SH, NH, or GH/TH: Possibly Extinct

S1, N1 or G1/T1: Critically Imperiled

S2, N2, or G2/T2: Imperiled

S3, N3, or G3/T3: Vulnerable

S4, N4 or G4/T4: Apparently Secure

S5, N5, or G5/T5: Secure

SU, NU or GU/TU: Unrankable

SNR, NNR, or GNR/TNR: Unranked

S#S#, N#N#, or G#G#: Range Rank

N RANK and G RANK Definitions

Presumed Extirpated: Species or community is believed to be extirpated from the nation or state/province. Not located despite intensive searches of historical sites and other appropriate habitat, and virtually no likelihood that it will be rediscovered.

Possibly Extirpated (Historical): Species or community occurred historically in the nation or state/province, and there is some possibility that it may be rediscovered. Its presence may not have been verified in the past 20-40 years. A species or community could become NH or SH without such a 20-40 year delay if the only known occurrences in a nation or state/province were destroyed or if it had been extensively and unsuccessfully looked for. The NH or SH rank is reserved for species or communities for which some effort has been made to relocate occurrences, rather than simply using this status for all elements not known from verified extant occurrences.

Critically Imperiled: Critically imperiled in the nation or state/province because of extreme rarity (often 5 or fewer occurrences) or because of some factor(s) such as very steep declines making it especially vulnerable to extirpation from the state/province.

Imperiled: Imperiled in the nation or state/province because of rarity due to very restricted range, very few populations (often 20 or fewer), steep declines, or other factors making it very vulnerable to extirpation from the nation or state/province.

Vulnerable: Vulnerable in the nation or state/province due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors making it vulnerable to extirpation.

Apparently Secure: Uncommon but not rare; some cause for long-term concern due to declines or other factors.

Secure: Common, widespread, and abundant in the nation or state/province.

Unranked: Nation or state/province conservation status not yet assessed.

Unrankable: Currently unrankable due to lack of information or due to substantially conflicting information about status or trends.

Range Rank: A numeric range rank (e.g., S2S3) is used to indicate any range of uncertainty about the status of the species or community. Ranges cannot skip more than one rank (e.g., SU is used rather than S1S4).

5.4 Wildlife

5.4.1 Mammals

The Study Area falls within Ecoregion 7E (Lake Simcoe-Rideau). Representative mammalian fauna in this region includes White-tailed Deer (*Odocoileus virginianus*), Northern Raccoon (*Procyon lotor*), Striped Skunk (*Mephitis mephitis*), Virginia Opossum (*Didelphis virginiana*), and Woodchuck (*Marmota monax*).

Eastern Cottontail (*Sylvilagus floridanus*), and Grey Squirrel (*Sciurus carolinensis*) were observed within the Study Area.

No other mammals were observed at the time of the site investigations.

5.4.2 Birds

A review of available bird observation data from Ebirds Canada, Ontario Breeding Bird Atlas (OBBA), Great Backyard Bird Count (GBBC), and Project FeederWatch Canada databases was completed as part of the assessment. Records for 138 species have been observed within 10 km of the Study Area, see Table 4. Bird Observation List for details. MNDMNR and MECP correspondence indicated records for two provincially threatened bird species; Barn Swallow (*Hirundo rustica*) and Chimney Swift (*Chaetura pelagica*) within the area and noted that the likelihood for these species or their habitat to occur within the proposed Project footprint was low, see Appendix A – Records of Correspondence for details. A summary on SAR within the Study Area is discussed in Section 5.4.5 below.

CIMA+ observed 32 bird species throughout the duration of the field investigations which included point counts taken from the ROW across the length of the Study Area with additional stations located within the various greenspaces, as outlined in Figure 2. Existing Land Use Map and Figure 3. Ecological Land Classification Map. Point counts were taken in the first week of July 2018 in the morning hours. Visual and auditory observations outside of the point count stations were also noted, while walking the length the Study Area. The results of survey are included in Table 4. Bird Observation List. Furthermore, all trees which may be impacted by the Project were inspected for active and inactive nesting structures.

One swallow species was observed flying over the Study Area at the time of breeding bird survey. Due to distance, the exact species could not be distinguished. No avifauna nests were observed within the trees or lawn greenspaces established within or directly adjacent to the ROW.

TABLE 4. BIRD OBSERVATION LIST

FAMILY	SCIENTIFIC NAME	COMMON NAME	S RANK	G RANK	N RANK	EXOTIC STATUS	PROVINCIAL STATUS	COSEWIC STATUS	FEDERAL STATUS	OBSERVATION SOURCE; EBIRDS	OBSERVATION SOURCE; PROJECT FEEDERWATCH	OBSERVATION SOURCE; OBBA	OBSERVATION SOURCE; GBBC	OBSERVATION SOURCE; CIMA+
Accipitridae	<i>Accipiter cooperii</i>	Cooper's Hawk	S4	G5	N5B,N4N	-	NAR	NAR	-	x	x			
Accipitridae	<i>Accipiter striatus</i>	Sharp-shinned Hawk	S5	G5	N5B,N5N	-	NAR	NAR	-	x				
Accipitridae	<i>Buteo jamaicensis</i>	Red-tailed Hawk	S5	G5	N5B	-	NAR	NAR	-	x				x
Accipitridae	<i>Haliaeetus leucocephalus</i>	Bald Eagle	S2N,S4B	G5	N5B,N5N	-	SC	NAR	-	x				
Alaudidae	<i>Eremophila alpestris</i>	Horned Lark	S5B	G5	N5B,N5N	-	-	-	-	x				
Anatidae	<i>Aix sponsa</i>	Wood Duck	S5	G5	N5B,N5N	-	-	-	-	x				
Anatidae	<i>Anas crecca</i>	Green-winged Teal	S4	G5	N5B,N5N	-	-	-	-	x				
Anatidae	<i>Anas platyrhynchos</i>	Mallard	S5	G5	N5B,N5N	-	-	-	-	x		x	x	
Anatidae	<i>Anas rubripes</i>	American Black Duck	S4	G5	N5B,N5N	-	-	-	-	x				
Anatidae	<i>Aythya affinis</i>	Lesser Scaup	S4	G5	N5B,N5N	-	-	-	-	x				
Anatidae	<i>Aythya americana</i>	Redhead	S2B,S4N	G5	N5B,N5N	-	-	-	-	x				
Anatidae	<i>Aythya collaris</i>	Ring-necked Duck	S5	G5	N5B,N5N	-	-	-	-	x				
Anatidae	<i>Aythya marila</i>	Greater Scaup	S4	G5	N5B,N5N	-	-	-	-	x				
Anatidae	<i>Aythya valisineria</i>	Canvasback	S1B,S4N	G5	N5B,N4N	-	-	-	-	x				
Anatidae	<i>Branta canadensis</i>	Canada Goose	S5	G5	N5B,N5N	-	-	-	-	x			x	
Anatidae	<i>Bucephala albeola</i>	Bufflehead	S4	G5	N5B,N5N	-	-	-	-	x				
Anatidae	<i>Bucephala clangula</i>	Common Goldeneye	S5	G5	N5B,N5N	-	-	-	-				x	
Anatidae	<i>Clangula hyemalis</i>	Long-tailed Duck	S3B	G5	N5B,N5N	-	-	-	-	x				
Anatidae	<i>Cygnus columbianus</i>	Tundra Swan	S4	G5	N5B,N3N4N	-	-	-	-	x				
Anatidae	<i>Cygnus olor</i>	Mute Swan	SNA	G5	NNA	SE	-	-	-	x				
Anatidae	<i>Lophodytes cucullatus</i>	Hooded Merganser	S5B,S5N	G5	N5B	-	-	-	-	x				
Anatidae	<i>Melanitta americana</i>	Black Scoter	S4B,S4N	G5	N5B,N4N	-	-	-	-	x				
Anatidae	<i>Melanitta fusca</i>	White-winged Scoter	S4B,S4N	G5	N5B,N5N	-	-	-	-	x				
Anatidae	<i>Melanitta perspicillata</i>	Surf Scoter	S4B,S4N	G5	N5B,N5N	-	-	-	-	x				
Anatidae	<i>Mergus merganser</i>	Common Merganser	S5B,S5N	G5	N5B,N5N	-	-	-	-	x			x	
Anatidae	<i>Mergus serrator</i>	Red-breasted Merganser	S4B,S5N	G5	N5B,N5N	-	-	-	-	x				
Anatidae	<i>Oxyura jamaicensis</i>	Ruddy Duck	S4B,S4N	G5	N5B	-	-	-	-	x				
Apodidae	<i>Chaetura pelagica</i>	Chimney Swift	S4B,S4N	G4G5	N4B	-	THR	THR	THR	x		x		
Ardeidae	<i>Ardea alba</i>	Great Egret	S2B	G5	N3B	-	-	-	-	x				
Ardeidae	<i>Ardea herodias</i>	Great Blue Heron	S4	G5	N5B	-	-	-	-	x				
Ardeidae	<i>Nycticorax nycticorax</i>	Black-crowned Night-heron	S3B,S3N	G5	N4N5B	-	-	-	-	x				
Bombycillidae	<i>Bombycilla cedrorum</i>	Cedar Waxwing	S5B	G5	N5	-	-	-	-	x				x
Calcariidae	<i>Calcarius lapponicus</i>	Lapland Longspur	S3B	G5	N5B,N5N	-	-	-	-	x				
Caprimulgidae	<i>Chordeiles minor</i>	Common Nighthawk	S4B	G5	N4B	-	SC	THR	THR	x				
Cardinalidae	<i>Cardinalis cardinalis</i>	Northern Cardinal	S5	G5	N5	-	-	-	-	x	x			
Cardinalidae	<i>Passerina caerulea</i>	Blue Grosbeak	SNA	G5	NNA	-	-	-	-	x				
Cardinalidae	<i>Passerina cyanea</i>	Indigo Bunting	S4B	G5	N5B	-	-	-	-	x				
Cardinalidae	<i>Pheucticus ludovicianus</i>	Rose-breasted Grosbeak	S4B	G5	N5B	-	-	-	-	x				
Cardinalidae	<i>Piranga olivacea</i>	Scarlet Tanager	S4B	G5	N5B	-	-	-	-	x				
Cathartidae	<i>Cathartes aura</i>	Turkey Vulture	S5B	G5	N5B	-	-	-	-	x				x
Certhiidae	<i>Certhia americana</i>	Brown Creeper	S5B	G5	N5	-	-	-	-	x				
Charadriidae	<i>Charadrius vociferus</i>	Killdeer	S5B,S5N	G5	N5B	-	-	-	-	x				x
Columbidae	<i>Columba livia</i>	Rock Pigeon	SNA	G5	NNA	SE	-	-	-	x		x	x	x
Columbidae	<i>Zenaidura macroura</i>	Mourning Dove	S5	G5	N5	-	-	-	-	x	x	x		x
Corvidae	<i>Corvus brachyrhynchos</i>	American Crow	S5B	G5	N5B,N5N	-	-	-	-	x				x
Corvidae	<i>Corvus corax</i>	Common Raven	S5	G5	N5	-	-	-	-					x
Corvidae	<i>Cyanocitta cristata</i>	Blue Jay	S5	G5	N5	-	-	-	-	x	x			x
Falconidae	<i>Falco columbarius</i>	Merlin	S5B	G5	N5B,N5N	-	NAR	NAR	-	x				
Falconidae	<i>Falco peregrinus</i>	Peregrine Falcon	S3B	G4	N3N4B,N3N	-	SC	NAR	SC	x				
Falconidae	<i>Falco sparverius</i>	American Kestrel	S4	G5	N5B	-	-	-	-	x				
Fringillidae	<i>Acanthis flammea</i>	Common Redpoll	S4B	G5	N5B,N5N	-	-	-	-	x				
Fringillidae	<i>Haemorhous mexicanus</i>	House Finch	SNA	G5	N5	SE	-	-	-	x				x
Fringillidae	<i>Haemorhous purpureus</i>	Purple Finch	S4B	G5	N5B,N5N	-	-	-	-	x				x
Fringillidae	<i>Spinus pinus</i>	Pine Siskin	S4B	G5	N5	-	-	-	-	x				x
Fringillidae	<i>Spinus tristis</i>	American Goldfinch	S5B	G5	N5B,N5N	-	-	-	-	x				x
Gaviidae	<i>Gavia immer</i>	Common Loon	S5B,S5N	G5	N5B,N5N	-	NAR	NAR	-	x				
Hirundinidae	<i>Hirundo rustica</i>	Barn Swallow	S4B	G5	N4N5B	-	THR	THR	THR	x		x		
Hirundinidae	<i>Petrochelidon pyrrhonota</i>	Cliff Swallow	S4B	G5	N5B	-	-	-	-	x				
Hirundinidae	<i>Progne subis</i>	Purple Martin	S3S4B	G5	N5B	-	-	-	-	x				

TABLE 4. BIRD OBSERVATION LIST

FAMILY	SCIENTIFIC NAME	COMMON NAME	S RANK	G RANK	N RANK	EXOTIC STATUS	PROVINCIAL STATUS	COSEWIC STATUS	FEDERAL STATUS	OBSERVATION SOURCE; EBIRDS	OBSERVATION SOURCE; PROJECT FEEDERWATCH	OBSERVATION SOURCE; OBBA	OBSERVATION SOURCE; GBBC	OBSERVATION SOURCE; CIMA+
Hirundinidae	<i>Riparia riparia</i>	Bank Swallow	S4B	G5	N5B	-	THR	THR	THR	x				
Hirundinidae	<i>Stelgidopteryx serripennis</i>	Northern Rough-winged Swallow	S4B	G5	N5B	-	-	-	-	x				
Hirundinidae	<i>Tachycineta bicolor</i>	Tree Swallow	S4B	G5	N5B	-	-	-	-	x				
Icteridae	<i>Agelaius phoeniceus</i>	Red-winged Blackbird	S4	G5	N5B,N5N	-	-	-	-	x	x			
Icteridae	<i>Icterus galbula</i>	Baltimore Oriole	S4B	G5	N5B	-	-	-	-	x				
Icteridae	<i>Molothrus ater</i>	Brown-headed Cowbird	S4B	G5	N5B	-	-	-	-	x	x			x
Icteridae	<i>Quiscalus quiscula</i>	Common Grackle	S5B	G5	N5B	-	-	-	-	x	x			x
Icteridae	<i>Sturnella magna</i>	Eastern Meadowlark	S4B	G5	N4B	-	THR	THR	THR	x				
Laridae	<i>Chroicocephalus philadelphia</i>	Bonaparte's Gull	S4B,S4N	G5	N5B,N5N	-	-	-	-	x				
Laridae	<i>Hydroprogne caspia</i>	Caspian Tern	S3B	G5	N3N4B	-	NAR	NAR	-	x				
Laridae	<i>Larus argentatus</i>	Herring Gull	S5B,S5N	G5	N5B,N5N	-	-	-	-	x				x
Laridae	<i>Larus delawarensis</i>	Ring-billed Gull	S5B,S4N	G5	N5B,N5N	-	-	-	-	x				
Laridae	<i>Larus fuscus</i>	Lesser Black-backed Gull	SNA	G5	N4N	-	-	-	-	x				
Laridae	<i>Larus hyperboreus</i>	Glaucous Gull	S4N	G5	N5B,N5N	-	-	-	-	x				
Laridae	<i>Larus marinus</i>	Great Black-backed Gull	S2B	G5	N5B,N5N	-	-	-	-	x				
Laridae	<i>Sterna forsteri</i>	Forster's Tern	S2B	G5	N4B	-	DD	DD	-	x				
Laridae	<i>Sterna hirundo</i>	Common Tern	S4B	G5	N5B	-	NAR	NAR	-	x				
Mimidae	<i>Dumetella carolinensis</i>	Gray Catbird	S4B	G5	N5B	-	-	-	-	x				x
Mimidae	<i>Toxostoma rufum</i>	Brown Thrasher	S4B	G5	N5B	-	-	-	-	x				
Pandionidae	<i>Pandion haliaetus</i>	Osprey	S5B	G5	N5B	-	-	-	-	x				x
Paridae	<i>Poecile atricapillus</i>	Black-capped Chickadee	S5	G5	N5	-	-	-	-	x	x			x
Parulidae	<i>Geothlypis philadelphia</i>	Mourning Warbler	S4B	G5	N5B	-	-	-	-	x				
Parulidae	<i>Geothlypis trichas</i>	Common Yellowthroat	S5B	G5	N5B	-	-	-	-	x				
Parulidae	<i>Oreothlypis peregrina</i>	Tennessee Warbler	S5B	G5	N5B	-	-	-	-	x				
Parulidae	<i>Oreothlypis ruficapilla</i>	Nashville Warbler	S5B	G5	N5B	-	-	-	-	x				
Parulidae	<i>Protonotaria citrea</i>	Prothonotary Warbler	S1B	G5	N1B	-	END	END	END	x				
Parulidae	<i>Seiurus aurocapilla</i>	Ovenbird	S4B	G5	N5B	-	-	-	-	x				x
Parulidae	<i>Setophaga coronata</i>	Yellow-rumped Warbler	S5B	G5	N5B	-	-	-	-	x				
Parulidae	<i>Setophaga magnolia</i>	Magnolia Warbler	S5B	G5	N5B	-	-	-	-	x				
Parulidae	<i>Setophaga palmarum palmarum</i>	Western Palm Warbler	S5B	G5T5	N5B	-	-	-	-	x				
Parulidae	<i>Setophaga petechia</i>	Yellow Warbler	S5B	G5	N5B	-	-	-	-	x				x
Parulidae	<i>Setophaga pinus</i>	Pine Warbler	S5B	G5	N5B	-	-	-	-	x				
Parulidae	<i>Setophaga ruticilla</i>	American Redstart	S5B	G5	N5B	-	-	-	-	x				x
Parulidae	<i>Setophaga striata</i>	Blackpoll Warbler	S4B	G5	N5B	-	-	-	-	x				
Parulidae	<i>Setophaga tigrina</i>	Cape May Warbler	S5B	G5	N5B	-	-	-	-	x				
Parulidae	<i>Setophaga virens</i>	Black-throated Green Warbler	S5B	G5	N5B	-	-	-	-	x				
Passerellidae	<i>Junco hyemalis</i>	Dark-eyed Junco	S5B	G5	N5B,N5N	-	-	-	-	x	x		x	
Passerellidae	<i>Melospiza melodia</i>	Song Sparrow	S5B	G5	N5B,N5N	-	-	-	-	x				x
Passerellidae	<i>Passerella iliaca</i>	Fox Sparrow	S4B	G5	N5B	-	-	-	-	x				
Passerellidae	<i>Pipilo chlorurus</i>	Green-tailed Towhee	SNA	G5	NNA	-	-	-	-	x				
Passerellidae	<i>Spizella passerina</i>	Chipping Sparrow	S5B	G5	N5B	-	-	-	-	x	x			x
Passerellidae	<i>Spizella pusilla</i>	Field Sparrow	S4B	G5	N4B	-	-	-	-	x				
Passerellidae	<i>Zonotrichia albicollis</i>	White-throated Sparrow	S5B	G5	N5B	-	-	-	-	x				x
Passerellidae	<i>Zonotrichia leucophrys</i>	White-crowned Sparrow	S4B	G5	N5B	-	-	-	-	x	x			
Passeridae	<i>Passer domesticus</i>	House Sparrow	SNA	G5	NNA	SE	-	-	-	x	x	x	x	x
Phalacrocoracidae	<i>Phalacrocorax auritus</i>	Double-crested Cormorant	S5B	G5	N5B	-	NAR	NAR	-	x				x
Phasianidae	<i>Phasianus colchicus</i>	Ring-necked Pheasant	SNA	G5	NNA	SE	-	-	-	x				
Picidae	<i>Colaptes auratus</i>	Northern Flicker	S4B	G5	N5	-	-	-	-	x				x
Picidae	<i>Melanerpes carolinus</i>	Red-bellied Woodpecker	S4	G5	N4	-	-	-	-	x	x			
Picidae	<i>Melanerpes lewis</i>	Lewis's Woodpecker	SNA	G4	N2	-	-	-	-	x				
Picidae	<i>Picoides pubescens</i>	Downy Woodpecker	S5	G5	N5	-	-	-	-	x		x		
Picidae	<i>Picoides villosus</i>	Hairy Woodpecker	S5	G5	N5	-	-	-	-	x				
Picidae	<i>Sphyrapicus varius</i>	Yellow-bellied Sapsucker	S5B	G5	N5B	-	-	-	-	x				
Podicipedidae	<i>Podiceps auritus</i>	Horned Grebe	S1B,S4N	G5	N5B	-	SC	SC	SC	x				
Podicipedidae	<i>Podilymbus podiceps</i>	Pied-billed Grebe	S4B,S4N	G5	N5B	-	-	-	-	x				
Rallidae	<i>Fulica americana</i>	American Coot	S4B	G5	N5B	-	NAR	NAR	-	x				
Regulidae	<i>Regulus calendula</i>	Ruby-crowned Kinglet	S4B	G5	N5B	-	-	-	-	x				
Regulidae	<i>Regulus satrapa</i>	Golden-crowned Kinglet	S5B	G5	N5	-	-	-	-	x				
Scolopacidae	<i>Actitis macularius</i>	Spotted Sandpiper	S5	G5	N5B	-	-	-	-	x				

FAMILY	SCIENTIFIC NAME	COMMON NAME	S RANK	G RANK	N RANK	EXOTIC STATUS	PROVINCIAL STATUS	COSEWIC STATUS	FEDERAL STATUS	OBSERVATION SOURCE; EBIRDS	OBSERVATION SOURCE; PROJECT FEEDERWATCH	OBSERVATION SOURCE; OBBA	OBSERVATION SOURCE; GBBC	OBSERVATION SOURCE; CIMA+
Scolopacidae	<i>Calidris alpina</i>	Dunlin	S4B,S5N	G5	N5B,N5N	-	-	-	-	X				
Scolopacidae	<i>Calidris melanotos</i>	Pectoral Sandpiper	SHB,S5N	G5	N5B	-	-	-	-	X				
Scolopacidae	<i>Calidris pusilla</i>	Semipalmated Sandpiper	S3B,S4N	G5	N4B	-	-	-	-	X				
Scolopacidae	<i>Limnodromus griseus</i>	Short-billed Dowitcher	S3B,S4N	G5	N5B	-	-	-	-	X				
Scolopacidae	<i>Tringa melanoleuca</i>	Greater Yellowlegs	S4B,S4N	G5	N5B	-	-	-	-	X				
Sittidae	<i>Sitta carolinensis</i>	White-breasted Nuthatch	S5	G5	N5	-	-	-	-	X				
Strigidae	<i>Bubo scandiacus</i>	Snowy Owl	SNA	G5	N5B,N5N	-	NAR	-	-	X				
Sturnidae	<i>Sturnus vulgaris</i>	European Starling	SNA	G5	NNA	SE	-	-	-	X	X	X		X
Troglodytidae	<i>Thryothorus ludovicianus</i>	Carolina Wren	S4	G5	N4	-	-	-	-	X				
Troglodytidae	<i>Troglodytes aedon</i>	House Wren	S5B	G5	N5B	-	-	-	-	X				X
Turdidae	<i>Catharus guttatus</i>	Hermit Thrush	S5B	G5	N5B	-	-	-	-	X				
Turdidae	<i>Catharus ustulatus</i>	Swainson's Thrush	S4B	G5	N5B	-	-	-	-	X				
Turdidae	<i>Turdus migratorius</i>	American Robin	S5B	G5	N5B,N5N	-	-	-	-	X	X			X
Tyrannidae	<i>Contopus virens</i>	Eastern Wood-pewee	S4B	G5	N4N5B	-	SC	SC	SC	X				
Tyrannidae	<i>Empidonax minimus</i>	Least Flycatcher	S4B	G5	N5B	-	-	-	-	X				
Tyrannidae	<i>Sayornis phoebe</i>	Eastern Phoebe	S5B	G5	N5B	-	-	-	-	X				
Vireonidae	<i>Vireo gilvus</i>	Warbling Vireo	S5B	G5	N5B	-	-	-	-	X				X
Vireonidae	<i>Vireo olivaceus</i>	Red-eyed Vireo	S5B	G5	N5B	-	-	-	-	X				
Vireonidae	<i>Vireo philadelphicus</i>	Philadelphia Vireo	S5B	G5	N5B	-	-	-	-	X				
Vireonidae	<i>Vireo solitarius</i>	Blue-headed Vireo	S5B	G5	N5B	-	-	-	-	X				

TABLE LEGEND

PROVINCIAL STATUS: Species at Risk Ontario - current status as defined by the Endangered Species Act (ESA, S.O. 2007)

COSEWIC STATUS: Current status defined by the Committee on the Status of Endangered Wildlife in Canada

FEDERAL STATUS: Current status as defined by the Species at Risk Act (R.S.O., 2002)

E STATUS: EXOTIC STATUS RANK (ON)

S RANK: SUBNATIONAL STATUS RANK

G RANK: GLOBAL STATUS RANK

N RANK: NATIONAL STATUS RANK

END = Endangered

THR = Threatened

SC = Special Concern

SE = Status Exotic (ON)

NAR = Not at Risk

Ranking System

SX, NX, or GX/TX: Presumed Extinct

SH, NH, or GH/TH: Possibly Extinct

S1, N1 or G1/T1: Critically Imperiled

S2, N2, or G2/T2: Imperiled

S3, N3, or G3/T3: Vulnerable

S4, N4 or G4/T4: Apparently Secure

S5, N5, or G5/T5: Secure

SU, NU or GU/TU: Unrankable

SNR, NNR, or GNR/TNR: Unranked

S#S#, N#N#, or G#G#: Range Rank

N RANK and G RANK Definitions

Presumed Extirpated: Species or community is believed to be extirpated from the nation or state/province. Not located despite intensive searches of historical sites and other appropriate habitat, and virtually no likelihood that it will be rediscovered.

Possibly Extirpated (Historical): Species or community occurred historically in the nation or state/province, and there is some possibility that it may be rediscovered. Its presence may not have been verified in the past 20-40 years. A species or community could become NH or SH without such a 20-40 year delay if the only known occurrences in a nation or state/province were destroyed or if it had been extensively and unsuccessfully looked for. The NH or SH rank is reserved for species or communities for which some effort has been made to relocate occurrences, rather than simply using this status for all elements not known from verified extant occurrences.

Critically Imperiled: Critically imperiled in the nation or state/province because of extreme rarity (often 5 or fewer occurrences) or because of some factor(s) such as very steep declines making it especially vulnerable to extirpation from the state/province.

Imperiled: Imperiled in the nation or state/province because of rarity due to very restricted range, very few populations (often 20 or fewer), steep declines, or other factors making it very vulnerable to extirpation from the nation or state/province.

Vulnerable: Vulnerable in the nation or state/province due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors making it vulnerable to extirpation.

Apparently Secure: Uncommon but not rare; some cause for long-term concern due to declines or other factors.

Secure: Common, widespread, and abundant in the nation or state/province.

Unranked: Nation or state/province conservation status not yet assessed.

Unrankable: Currently unrankable due to lack of information or due to substantially conflicting information about status or trends.

Range Rank: A numeric range rank (e.g., S2S3) is used to indicate any range of uncertainty about the status of the species or community. Ranges cannot skip more than one rank (e.g., SU is used rather than S1S4).

5.4.3 Amphibians and Reptiles

No herpetofauna species were directly observed at the time of the site investigations. No nests, eggs, egg shells, carapaces, tracks, scat, skins or otherwise evidence of herpetofauna presence was observed at the time of the site investigations.

No ponds, watercourses, surface water drainage features, wetlands or pooled water was observed in the Study Area at the time of the site investigations nor through the results of the background review and pre-consultation phase. No amphibian or aquatic reptile habitat is present in the Study Area where improvements are proposed. No snake or otherwise terrestrial reptile habitat which may occur in adjacent greenspaces to the Project ROWs (e.g. forested lands as outlined in Figure 3. Ecological Land Classification Map) will be impacted by proposed undertakings.

5.4.4 Significant Wildlife Habitat

In accordance with the Provincial Policy Statement (2014) and the MNR's Significant Wildlife Habitat Technical Guide (2000), Significant Wildlife Habitat (SWH) is generally defined as areas where animals and other organisms live, and find adequate amounts of food, water, shelter, and space needed to sustain their populations. SWH can be considered ecologically important in terms of features, functions, representation or amount, or contributing to the quality and diversity of an identifiable geographic area or Natural Heritage System. Specific wildlife habitats of concern may include areas where species concentrate at a vulnerable time; areas of rare or specialized habitat; habitats of species of conservation concern, or animal movement corridors.

Based on the results of the site investigations, wildlife habitat within the Study Area does not meet the criteria for provincial significance.

5.4.5 Species at Risk Habitat

Kentucky Coffee Tree (*Gymnocladus dioicus*) is a provincially Threatened species. One (1) Kentucky Coffee Tree was observed on the south side of University Avenue just east of Vista Place (see Tree # 145 on Sheet TI-2 of the Tree Inventory Site Plan in Appendix C for details). This small tree (DBH 8 cm) was not naturally occurring; it was actively planted on private property, south of the sidewalk.

Cucumber Tree (*Magnolia acuminata*) is a provincially Endangered species. Two (2) Magnolia trees were observed on the south side of University Avenue just west of Cameron Avenue (see Tree # 194 and #195 on Sheet TI-5 of the Tree Inventory Site Plan in Appendix C for details). Given the tree characteristics observed and the time of year the survey was completed, identification down to species level was not confirmed. These small trees (DBH 13 cm each) were not naturally occurring; they were actively planted in the ROW.

In accordance with the *Endangered Species Act* (ESA, 2007) and associated regulations (Ontario Regulation 242/08), vegetation species that have been cultivated and actively planted on the landscape are not subject to protection under the Act unless they have been planted as part of a compensation plan associated with a permit authorization under the ESA.

Correspondence with MECP noted records of two (2) SAR plants within the City of Windsor's limits; Willowleaf Aster (*Symphotrichum praealtum*), and Dense Blazing Star (*Liatris spicata*). Habitat for these species is not present within the Study Area.

No other listed vegetation species covered under the *Endangered Species Act* (2007) were observed within the Study Area at the time of the site investigations. No additional vegetation species of conservation concern (provincially, regionally or locally rare species) were observed within the Study Area at the time of the site investigations.

Based on the results of the background review, there are a number of provincially listed SAR bird observations recorded within 10 km² of the Study Area; Bald Eagle (*Haliaeetus leucocephalus*), Chimney Swift, Common Nighthawk (*Chordeiles minor*), Peregrine Falcon (*Falco peregrinus*), Barn Swallow, Bank Swallow (*Riparia riparia*), Eastern Meadowlark (*Sturnella magna*), Prothonotary Warbler (*Protonotaria citrea*), Horned Grebe (*Podiceps auratus*) and Eastern Wood-pewee (*Contopus virens*). Suitable habitat for these species in the Study Area was not observed. Direct correspondence with the MNRF notes that SAR habitat within the Project footprint is highly unlikely.

As noted in Section 5.4.2, MNDMNR and MECP correspondence indicated records for two provincially threatened bird species; Barn Swallow and Chimney Swift within the area and noted that the likelihood for these species or their habitat to occur within the proposed Project footprint was low, see Appendix A – Records of Correspondence for details. Barn Swallows are known to occasionally nest in culverts, bridges or other artificial structures. Similarly, Chimney Swift are known to nest in artificial structures which provide protection against external environmental elements (e.g., building chimneys). All artificial structures (lamp posts, fences, etc.) and both bridges were inspected during the site investigations; no Barn Swallows, Chimney Swifts, or other signs of wildlife nesting were observed within the Study Area at the time of the site investigation.

Comments received by MECP, and staff at the Ojibway Prairie Complex noted the presence of Butler's Gartersnake (*Thamnophis butleri*) in the old railway corridor near Caron Avenue, as well as in Gateway Park. MECP also noted that Eastern Foxsnake – Carolinian population (*Pantherophis gloydi*) regulated habitat falls within the Study Area. No SAR snakes were observed in the Study Area during the survey period.

No SAR species protected under the ESA, or other species of conservation concern, were observed in the Study Area during the survey period. Mitigation measures have been recommended to account for disturbance to local wildlife which may be utilizing adjacent greenspaces.

6. Impact Assessment, Environmental Constraints, and Mitigation Measures

This section analyzes the results of the existing natural heritage components identified from the desktop review (i.e., information and consultation) and field observation. The analysis is to determine where the Project interacts with those components, what environmental constraints are applicable and to identify measures to eliminate, avoid or mitigate those impacts. Potential direct and indirect impacts have been considered during site preparation and construction and operation of the roadway improvements (Appendix C - Design Plates of the Preferred Alternative).

The Project is being undertaken to optimize the ROW to improve safety, operational efficiency, placemaking/implementation of green infrastructure, and provision of space for utility and sewer infrastructure. The preferred alternative (Appendix C) is not within the footprint of any valued ecosystem components and impacts to the natural heritage resources located at (1) the crossing over the CPR tracks between Caron Avenue and Salter Avenue and (2) the crossing over the Detroit River Tunnel Company lands (Gateway Park) between Wellington Avenue and Cameron Avenue, are not anticipated. However, construction has the potential to cause ecological impacts to optimize the ROW utility for transportation and subsurface servicing infrastructure which will include some vegetation clearing and grading activities.

6.1 Vegetation Cover and Tree Protection

As the Project is in a highly urbanized area impacts are anticipated to occur within greenspaces predominantly limited to manicured cultural landscape features, such as maintained lawns and planted street trees and shrubs. As a result, it is anticipated that most impacts will be associated with site preparation, demolition, and construction activities.

Vegetation removal is anticipated to occur in advance of construction to facilitate access, grading, and to provide set up and laydown space, etc. These impacts will occur within the existing residential and commercial lands along University Avenue East/West and Victoria Avenue. The exact extent of the tree removal is unknown currently.

The following general mitigation measures are proposed to mitigate potential impacts to trees within the Study Area:

- Develop a Tree Protection Plan which identifies locations to be preserved.
- Vegetation removal will be minimized and clearly delineated on construction drawings.
- The root system, trunk or branches of any tree not designated for removal will be protected from damage.
- In the event of accidental damage to trees, or unexpected vegetation removal, vegetation shall be replaced / restored with native species.
- Material or equipment will not be placed within the critical root zone of any tree.
- The existing grade will not be raised/lowered within the critical root zone without approval.

- Signs, notices, or posters will not be attached to any tree.
- Exhaust fumes from equipment will not be directed towards any tree's canopy; and
- Construction vehicles will have designated access routes from and to the construction area.

6.2 Wildlife, Significant Wildlife Habitat, and Migratory Birds

Several wildlife species were documented through background data review and have been confirmed through field investigations. Wildlife and associated habitat observed within the Study Area was typical of a disturbed setting and based on field observation common species are expected to be present within these habitat features all with secure habitats in Ontario. No significant wildlife habitat has been identified within the proposed construction footprint.

Several bird species have been previously recorded in the Study Area and the street trees provide suitable breeding bird habitat. Vegetation removal planned as part of the proposed roadway improvements has the potential to impact migratory birds and their nesting activities unless planned in accordance with the appropriate timing windows.

Project construction has the potential to directly impact the CVI_1, CVR_1, and CVC_1 ecosites. Use of heavy machinery, increased human presence, noise and light pollution, soil compaction, stockpiled earth, and sedimentation of existing terrestrial habitat has the potential to indirectly impact common wildlife and wildlife habitat in adjacent areas. However, with proper implementation of avoidance and mitigations such as site clearing outside of the active season, and proper isolation of the construction areas, these impacts are anticipated to be temporary and methods to restore the disturbed areas post-construction should be implemented.

The following mitigation measures are proposed to avoid or mitigate impacts to breeding birds, wildlife, and associated wildlife habitat:

- Removal of any woody vegetation and/or existing infrastructure will not occur during the breeding bird season from April 15 - August 31 inclusive, unless a qualified biologist has searched the site for nests and concluded that no nests are present, no more than 2 days prior to clearing. If nests are found, a protective buffer around the location will be required until such time that the nest is abandoned.
- If work must occur during the peak activity period for snakes, exclusion fencing shall be installed adjacent to natural areas prior to the peak activity period (April 1) and shall be properly maintained and monitored for the duration of construction. The goal of exclusion fencing is to prevent or minimize the risk of harm to herpetofauna and their nests and/or eggs by physically preventing them from entering the work areas at any time prior to and during construction.
 - Fence installation shall be consistent with the methods prescribed in the Reptile and Amphibian Exclusion Fencing: Best Practices (MNRF, 2013).
 - Inspect protective exclusion measures daily and after each rain event to ensure their integrity and continued function.
- Removal of natural vegetation will be minimized and clearly delineated on construction drawings.

- Workforce will be educated on potential wildlife which could occur in the vicinity of the work area and measures to avoid wildlife.
- Harassment and/or harm to wildlife during construction is prohibited.
- When possible, work will be completed during daylight hours. If nighttime lights are used, they will be installed to illuminate the work area only to minimize impacts to nighttime activities of wildlife.
- Vehicles and equipment will have the appropriate mufflers installed.
- Vehicle and equipment engine idling will be minimized.
- Construction vehicles will have designated access routes from and to the construction area.
- Stockpiled materials will be surrounded by sediment control fencing to prevent usage by wildlife.
- Existing access roads will be used as much as possible and speed limits will be clearly posted on site access and construction roads to minimize the potential for wildlife road mortality; and
- If an unexpected, rare plant or animal species are encountered, construction activities will be halted, and MECP will be contacted to provide advice on additional mitigation measures or permits which may be required.

6.3 Species at Risk

At this time, no SAR or their habitats have been identified in the buildable area within the Project limits; however, there is potential for SAR (i.e., birds, and snakes) to travel through the Study Area during construction activities, therefore, standard wildlife mitigation recommended in Section 6.2 will be implemented.

To ensure compliance under Section 9 and/or Section 10 of the ESA, and to protect SAR and SAR habitat during development and operations of the proposed project activities, the following general mitigation measures are recommended:

- A worker awareness program shall be provided to all on-site personnel that includes species at risk identification and habitat characteristics and provides general species-specific guidance with respect to appropriate actions to be taken whenever these species are encountered.
- A daily pre-construction search of the machinery and the work area shall be implemented to identify presence of species at risk, as animals may be found hiding or basking around equipment, rocks, debris piles etc.
- If endangered or threatened species are observed in or near the study area, work shall stop immediately, a photograph shall be taken of the species (if possible) and the SAR shall be allowed to move out of the work area on its own. The MECP shall be notified (as required).
- Consultation with MNRF and MECP should be completed upon detailed design to confirm permitting and approval requirements.

6.4 Related General Considerations

Construction activities may impact air quality because of noise, fugitive dust or vehicle/equipment exhaust. This potential impact could affect terrestrial species and their associated habitat. The following mitigation measures are proposed to avoid or mitigate impacts:

- Dust Management Plan will be developed by the contractor prior to construction.
- All equipment and vehicles will be equipped with dust collectors and mufflers as appropriate.
- During concrete removal, tarps will be used to contain airborne dust particles.
- Water will be applied, at a minimum, daily, to all inactive disturbed surface areas. Water will be applied more frequently if required to prevent the visible emissions of fugitive dust.
- Water will be applied to all unpaved roads used for vehicular traffic at a frequency enough to prevent the visible emissions of fugitive dust.
- Clean gravel with low fines content will be chosen as material to top unpaved roads. Unpaved roads will be regularly graded and maintained to avoid wash boarding and rutting that can increase fugitive dust emissions.
- All loads on haul trucks will be covered.
- During very windy conditions, material handling/transfer activity that generates fugitive dust will be avoided or reduced. If it is not possible to reschedule the activity, increased application of water for dust suppression may be used.
- A sprinkler or spray system will be considered for areas requiring frequent wetting.
- Water will be applied to all open stockpiles daily when there is evidence of wind driven fugitive dust.
- Wetted stockpiles will be surrounded with sediment and erosion control measures (i.e., fencing).
- Materials with the potential to generate dust will be sprayed with water 15 minutes prior to handling and/or at points of transfer.
- Disturbed areas will be re-vegetated following a re-vegetation plan which will utilize native shrubs and trees, based on local conditions, to promote the quick re-growth of a natural habitat and minimize fugitive dust.

7. Summary and Recommendations / Conclusions

This NEA provides an analysis of the potential impacts to the valued ecosystem components that may result from the proposed roadway improvements located along University Avenue East/West and Victoria Avenue. Based on the preferred alternative (Appendix C) project construction is proposed solely within the CVC_1, CVR_1, and CVC_1 ecosites where no impacts are anticipated to the natural heritage features (i.e., located at the crossing over the CPR tracks between Caron Avenue and Salter Avenue and the crossing over the Detroit River Tunnel Company lands (Gateway Park) between Wellington Avenue and Cameron Avenue) identified within the Study Area. However, there are some minor and temporary impacts anticipated within the Study Area as a result of the Project. A summary of the ecological features and functions identified within the Study Area which may be impacted by this development include the following:

- Damage or loss of trees and vegetation during construction.
- Potential loss of migratory bird nest, eggs and nestling due to tree cutting, vegetation clearing or building demolition activities.
- Temporary disruption to wildlife and potential SAR within and adjacent to Study Area during construction activities.
- Changes in air quality including of noise, fugitive dust or vehicle/equipment exhaust.

Consultation with MNDMNR and MECP should be completed as part of detailed design to confirm permitting and approval requirements, and whether additional surveying is required.

It is anticipated that the preferred alternative selected will result in the fewest impacts to the natural environment as it will occur on already developed lands associated with existing roadways, intersections, residential and commercial lands, as well as creating attractive complete street corridors.

This NEA provides recommended avoidance techniques and mitigation measures for implementation in the design and construction of the proposed alternative. Our assessment of the potential for impacts to the natural heritage features within the Study Area is based on the application of these avoidance techniques and mitigation measures. It is our professional opinion that the proposed development will have no significant negative impacts on the natural heritage features or their ecological functions if all mitigation measures provided within this report are followed.

7.1 Study Limitations and Constraints

CIMA+ completed diligent and reasonable research in the conduct of this evaluation, with respect to the recognized laws and standards of practice.

The facts presented in this report are strictly limited to the period of investigation. The conclusions presented in this report are based on the available information and documents, the observations made during the Site visit and the information obtained from communications with various contacts. The interpretation presented in this report is limited to this data.

CIMA+ is not responsible for erroneous conclusions due to voluntary abstention or the non-availability of pertinent information. Any opinion expressed in relation to legal or regulatory conformity is technical and should not be, in any case, considered as legal advice.

8. References

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- Government of Ontario. Endangered Species Act, S.O. 2007, c. 6. Last amended on June 29, 2008. Accessed via: <https://wwwWestontario.ca/laws/statute/07e0>

A

Appendix A

Records of Correspondence



From: Mike Nelson
To: [Lauren Cymbaly](#)
Cc: [Jennifer Haslett](#); [Jaime Garcia](#); [Planning](#)
Subject: RE: Data Request - University and Victoria Ave, Windsor MCEA_B000917
Date: Tuesday, May 8, 2018 12:51:01 PM
Attachments: [ERCA comments, May 8, 2018.pdf](#)

Good afternoon Lauren,

Please see ERCA response attached.



Michael Nelson
Watershed Planner
360 Fairview Avenue West, Suite 311, Essex, Ontario, N8M 1Y6
Telephone: 519-776-5209 extension 347
Email: mnelson@erca.org
Website: essexregionconservation.ca

From: Lauren Cymbaly <Lauren.Cymbaly@cima.ca>
Sent: Thursday, May 3, 2018 3:12 PM
To: [Planning](#) <planning@ERCA.org>
Cc: [Jennifer Haslett](#) <Jennifer.Haslett@cima.ca>; [Jaime Garcia](#) <Jaime.Garcia@cima.ca>
Subject: Data Request - University and Victoria Ave, Windsor MCEA_B000917

Good afternoon,

We have been retained by the City of Windsor to complete a Municipal Class Environmental Assessment for road improvements to University Avenue West and Victoria Avenue. Specifically, the Study Corridors include University Ave West/East between Huron Church Road and McDougall Street and a unique cross-street – Victoria Avenue from Chatham Street West to Park Street West, please see attached Study Area Map for details.

The project is being undertaken optimize the right-of-way to improve safety, operational efficiency, placemaking/green infrastructure, and space for utility and sewer infrastructure. As such, we are requesting any natural heritage data (such as fisheries data, ELC data, watershed/subwatershed reports, etc.) the ERCA may have on file as relevant to this project for inclusion in the Natural Environment Assessment.

If you have any questions regarding the request or Project, please don't hesitate to contact us anytime.

Kind regards,
Lauren

Lauren Cymbaly, M.E.S.
Environmental Professional

CIMA+
Partners in Excellence

55 King Street East
Bowmanville Ontario L1C 1N4
CANADA
Tel: 905 697-4464 ext. 6931



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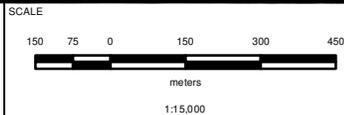
DETROIT RIVER



LEGEND

- | | | | |
|--|---------------------------|---|--------------|
|  | STUDY AREA |  | ROAD NETWORK |
|  | ROAD IMPROVEMENT CORRIDOR |  | MAJOR ROAD |
|  | WATERBODY |  | HIGHWAY |
|  | RAILWAY | | |

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



PROJECT NAME:
**ENVIRONMENTAL ASSESSMENT
UNIVERSITY AVENUE & VICTORIA AVENUE**

SHEET TITLE:
FIGURE 1 - STUDY AREA MAP

PROJECT No: B000917	DESIGNER ---	CLIENT FILE No: ---
DRAFTER: B. LEMIEUX	APPROVER ---	DRAWING No: 1
APPROVER: L. CYMBALY	DATE: 5/3/2018	SHEET No: 1 of 1



regs@erca.org
P.519.776.5209
F.519.776.8688

360 Fairview Avenue West
Suite 311, Essex, ON N8M 1Y6

May 08, 2018

CIMA+
55 King Street East
Bowmanville Ontario L1C 1N4

Dear Lauren Cymbaly,

RE: Road improvements to University Avenue and Victoria Avenue - Class EA Municipal
Class EA Request For Information

This letter is in response to our receipt and review of the following Request For Information for the Road improvements to University Avenue and Victoria Avenue - Class EA. We have reviewed the Study Area Map for sources and records of natural heritage data that ERCA has on file. I can confirm that we have no available mapping or relevant natural heritage data in this study area.

I would advise that the province of Ontario may have relevant natural heritage data through searching their Land Information Ontario (LIO) data portal.

The two general areas within the Study Area that ERCA would recommend investigating further would be (1) the crossing over the CPR tracks between Caron Avenue and Salter Avenue and (2) the crossing over the Detroit River Tunnel Company lands (Gateway Park) between Wellington Avenue and Cameron Avenue. These two areas are linear (north-south) features that may support natural heritage resources.

Per our Board approved policies, I would also request that any reports of any natural heritage investigations be submitted to the City of Windsor, ERCA, the Aylmer District office of the Ministry of Natural Resources and Forestry, and the Natural Heritage Information Centre (NHIC). More information on the submission standards for the NHIC are found online through this link: <https://www.ontario.ca/page/report-rare-species-animals-and-plants>. The intent of this is to ensure that any relevant natural heritage data that is obtained under an Environmental Assessment process is available to be used for other studies, initiatives, and processes (e.g., land use planning decisions under the Planning Act).

The other observation about the study area is that the delineation of the Significant Groundwater Recharge Area (SGRA) extent in the City of Windsor ends immediately to the west of the study area (map attached). I would recommend that should green infrastructure options be considered in this area that the SGRA be fully evaluated as a component of the review of options during this study.

We look forward to the next steps in the environmental assessment process. Please keep our office advised of any further requests for input and comment.



May 08, 2018

Please do not hesitate to contact me directly should you have any questions,

A handwritten signature in blue ink that reads "Mike Nelson".

Michael Nelson, Watershed Planner

C: Planning@erca.org

Encl. Study Area Map showing SGRA and 2 locations for natural heritage inventory

Study Area - Environmental Assessment



Legend

- City Assessment
 - Regional Assessment (ARN) Ownersh
 - Ownership Parcels (PIN)
 - 1:100 yr Flood Line
 - Limit of Regulated Area
- Significant Groundwater Recharge Ar
- 2
 - 4
 - 6

Location



Notes

Areas highlighted show potential areas to focus natural heritage inventory and extent of SGRA.

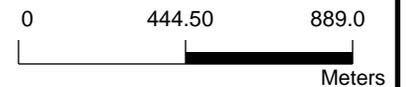


THIS MAP IS INTENDED FOR INTERNAL USE ONLY.

All data copyright 2018. Data provided by ERCA or its partners under license.

Data herein is provided on an 'as is' basis and is for visual reference only. Map not to be used for navigation or plan of survey.

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1: 20,000



5/8/2018

From: ESA-Aylmer (MNRF)
To: [Lauren Cymbaly](#)
Cc: [Jennifer Haslett](#); [Jaime Garcia](#)
Subject: RE: Data Request - City of Windsor MCEA University and Victoria Ave_B000917
Date: Tuesday, July 3, 2018 2:09:04 PM

Good afternoon Lauren (cc. Jennifer and Jaime):

The Ministry of Natural Resources and Forestry (MNRF) understands that CIMA+ is conducting an environmental assessment for the City of Windsor's road improvement project proposed at University Avenue West and Victoria Avenue in the City of Windsor, Essex County, as identified in the information provided.

MNRF provides the following natural heritage information in response to your request.

-
Species at Risk (SAR)

The Species at Risk in Ontario (SARO) List (<https://www.ontario.ca/laws/regulation/080230>) is Ontario Regulation 230/08 issued under the *Endangered Species Act, 2007* (ESA). The ESA came into force on June 30, 2008, and provides both species protection (under section 9) and habitat protection (under section 10) to species listed as endangered or threatened on the SARO List.

An initial SAR (Endangered and Threatened species) screening has been completed for the above-noted property.

There are no known occurrences of SAR on the property; however, there are known occurrences of SAR in the general project area with the potential to occur on the property, including:

- ¾ [Eastern Foxsnake \(Carolinian Population\)](#) (endangered), with species and regulated habitat protection. **Please note that this project is within the regulated habitat of this species.**
- ¾ [Butler's Gartersnake \(endangered\)](#), with species and general habitat protection.
- ¾ [Barn Swallow \(threatened\)](#), with species and general habitat protection.
- ¾ [Chimney Swift \(threatened\)](#), with species and general habitat protection.
- ¾ [Eastern Flowering Dogwood \(endangered\)](#), with species and general habitat protection.

Please note that this is an initial screening for SAR and the absence of an element occurrence does not indicate the absence of species. The province has not been surveyed comprehensively for the presence or absence of SAR and MNRF data relies on observers to report sightings of SAR. Field assessments by a qualified professional may be necessary if there is a high likelihood for SAR species and/or habitat to occur within the project footprint and potentially be impacted.

Based on the information provided for this project, MNRF considers there to be low likelihood for the above-noted species and/or habitat to occur within the proposed project footprint.

It is important to note the following:

- The Committee on the Status of Species at Risk in Ontario (COSSARO) meets regularly to evaluate new species for listing and/or re-evaluate species already on the SARO List.
- As a result, species designations may change and changes may occur in both species and habitat protection which could affect the level of protection they receive under the ESA 2007 and whether proposed projects may have adverse effects on SAR.
- Habitat protection provisions for a species may change if a species-specific habitat regulation comes into effect.

If an activity or project will result in adverse effects to endangered or threatened species and/or their habitat, additional action would need to be taken in order to remain in compliance with the ESA. Additional action could be applying for an authorization under section 17(2)(c) of the ESA, or completing an online registry for an ESA regulation and following the rules in regulation if the project is eligible

(<http://www.ontario.ca/environment-and-energy/natural-resources-approvals>). Questions about the registry process should be directed to MNR's Registry and Approval Services Centre at 1-855-613-4256 or at mnr.rasc@ontario.ca. Please be advised that applying for an authorization does not guarantee approval and the process can take several months.

Please be advised that it is your responsibility to be aware of and comply with all relevant federal or provincial legislation, municipal by-laws or other agency approvals.

If you have any questions or require additional information, please feel free to contact me.

Regards,

Karissa Reischke | Management Biologist
Ministry of Natural Resources and Forestry (Aylmer District)
(519) 773-4751 Karissa.Reischke@Ontario.ca
615 John St. N. Aylmer, ON N5H 2S8

From: Lauren Cymbaly [mailto:Lauren.Cymbaly@cima.ca]
Sent: May 3, 2018 3:15 PM
To: ESA-Aylmer (MNR) <ESA.Aylmer@ontario.ca>
Cc: Jennifer Haslett <Jennifer.Haslett@cima.ca>; Jaime Garcia <Jaime.Garcia@cima.ca>
Subject: Data Request - City of Windsor MCEA University and Victoria Ave_B000917

Good afternoon,

We have been retained by the City of Windsor to complete a Municipal Class Environmental Assessment for road improvements to University Avenue West and Victoria Avenue. Specifically, the Study Corridors include University Ave West/East between Huron Church Road and McDougall Street and a unique cross-street – Victoria Avenue from Chatham Street West to Park Street West, please see attached Study Area map for details.

The project is being undertaken to optimize the right-of-way to improve safety, operational efficiency, placemaking/green infrastructure, and space for utility and sewer infrastructure. As such, we are requesting any SAR occurrence data the MNR may have on file as relevant to this project for inclusion in the Natural Environment Assessment.

As outlined in the Aylmer District Species at Risk Screening Process Technical Bulletin, please see below for the required information as part of this request:

- Proponent information (name, mailing address, and email address);

We are the delegate consultants requesting the information on behalf of the City of Windsor.

Mailing address:

400 City Hall Square East,

Windsor, Ontario
N9A 7K6

If you require the specific City staff contact(s) in charge of this project to process the request, just let us know.

- Property location and mapping (municipal address and/or lot and concession);

The project location is situated along University Avenue West and Victoria Avenue in Windsor Ontario. Specifically, the Study Corridors include University Ave West/East between Huron Church Road and McDougall Street and a unique cross-street – Victoria Avenue from Chatham Street West to Park Street West, please see attached Study Area Map for details.

- Digital photos of the property, including the vegetation on-site, if available;

None available at this time.

- General description of all proposed activities and extent of development footprint (e.g. residential, driveway, vegetation clearing). Maps / site layout drawings are beneficial;

The project is being undertaken optimize the right-of-way to improve safety, operational efficiency, placemaking/implementation of green infrastructure, and provision of space for utility and sewer infrastructure. The Project may encompass some vegetation clearing and grading activities to optimize the ROW utility for transportation and subsurface servicing infrastructure. Please see attached Study Area map for details noting that for due diligence purposes, the Study Area for the purposes of this request is defined at a 120m radius from the Study Corridors, however, the expected area of impact is anticipated to be much smaller. We don't have any more information to provide at this stage as we are still in the early phases of the project.

- Current state of vegetation, property maintenance/management (e.g. frequency of mowing), and recent property landscape history/changes (within the last five years);

The Project is located in a highly urbanized area; adjacent lands are mixed-use residential and commercial. Based on aerial imagery analysis, greenspace is predominantly limited to manicured cultural landscape features.

- Timing and duration of proposed activities;

The Natural Environment Assessment report is scheduled for completion by mid-June 2018, field investigations will commence in spring 2018. The ESR is scheduled for completion by mid-June 2019.

- Copies of past correspondence with MNRF about the property, if applicable; and,

None related to this project at this time.

- Status of municipal planning or Environmental Assessment process, if any.

The Notice of Project will be issued in upcoming weeks.

If you have any questions regarding the above or require any additional information to process this request, please don't hesitate to contact us anytime. If there are changes to the project or schedule, we will be in touch.

Best regards,
Lauren

Lauren Cymbaly, M.E.S.
Environmental Professional

CIMA+
Partners in Excellence

55 King Street East
Bowmanville Ontario L1C 1N4
CANADA
Tel: 905 697-4464 ext. 6931



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Casey Little

To: Casey Little
Subject: RE: City of Windsor - University Avenue & Victoria Avenue EA - Notice of PIC #2

From: Species at Risk (MECP) <SAROntario@ontario.ca>
Sent: February 15, 2022 11:11 AM
To: Kate Barclay <Katherine.Barcly@cima.ca>
Subject: RE: City of Windsor - University Avenue & Victoria Avenue EA - Notice of PIC #2

EXTERNAL EMAIL

Hello Kate,

Thank you for circulating information on the City of Windsor's University Avenue and Victoria Avenue Municipal Class Environmental Assessment to Species at Risk Branch, Ministry of Environment, Conservation and Parks (MECP). I apologize for the delay in response. Species at Risk Branch experiences a large volume of requests relating to the *Endangered Species Act, 2007* (ESA).

Please see the attached Draft "Client's Guide to Preliminary Screening for Species at Risk". This guide is a resource for clients seeking to understand if their activity is likely to impact species at risk or their habitat, and if they are likely to trigger the need for an authorization under ESA. MECP is available to assist with the identification of species at risk and/or protected habitat under the ESA that have the potential to be impacted by the project, following the completion of a preliminary screening outlined in the guide.

As a note, a number of species at risk occur within the City of Windsor, including (but not limited to):

- Butler's Gartersnake (endangered) – receives species and general habitat protection. This species is known to occur in the study area.
- Eastern Foxsnake – Carolinian population (endangered) – receives species and regulated habitat protection. The study area falls within regulated habitat for this species.
- Species at risk plants (e.g. Willowleaf Aster, Dense Blazing Star) – receives species and general habitat protection.
- Species at risk birds (e.g. Chimney Swift, Barn Swallow) – receive species and general habitat protection.

MECP understands that detailed designs and project timelines are not currently available. Future consultation with MECP is recommended, following the completion of field assessments, to determine if authorization under the *Endangered Species Act, 2007* will be required for any of the project components.

Regards,

Kathryn Markham
Management Biologist
Permissions and Compliance Section, Species at Risk Branch
Ministry of the Environment, Conservation and Parks

From: Kate Barclay <Katherine.Barcly@cima.ca>
Sent: July 15, 2021 11:55 AM

Cc: jhagan@citywindsor.ca; Windsor University Ave <WindsorUniversityAve.EA@cima.ca>

Subject: City of Windsor - University Avenue & Victoria Avenue EA - Notice of PIC #2

CAUTION -- EXTERNAL E-MAIL - Do not click links or open attachments unless you recognize the sender.

Good Morning,

Please see attached Notice of Public Information Centre (PIC) #2 for the City of Windsor University Avenue & Victoria Avenue Municipal Class Environmental Assessment Study. The PIC is scheduled to occur on July 27, 2021 and will be held virtually on Zoom. Information about how to attend the virtual PIC is included on the attached notice.

If you have any questions regarding the study or the PIC, please do not hesitate to contact either Project Manager listed on the notice.

Thank you,

KATE BARCLAY, EIT
EIT / Transportation

T 289-288-0287 ext. 6862 F 289-288-0285
400-3027 Harvester Road, Burlington, ON L7N 3G7 CANADA



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B

Appendix B Photographic Log



Site Location		
University Avenue, City of Windsor, Ontario		
Photo #	Date	Cardinal Direction
1	07/06/2018	N
Description		
View of municipal parkland (Assumption Park) and associated features located at the north-west end of the Study Area.		



Site Location		
University Avenue, City of Windsor, Ontario		
Photo #	Date	Cardinal Direction
2	07/06/2018	SE
Description		
View of the interior landscape associated with Assumption Park. All trees were inspected for active nesting structures or otherwise wildlife habitat evidence.		



Site Location		
University Avenue, City of Windsor, Ontario		
Photo #	Date	Cardinal Direction
3	07/06/2018	S
Description		
View of catholic church (Our Lady of the Assumption Catholic Parish) and associated landscape features, located on the south side of University Avenue West at the west end of the Study Area.		



Site Location		
University Avenue, City of Windsor, Ontario		
Photo #	Date	Cardinal Direction
4	07/06/2018	E
Description		
View of landscape features within and adjacent to the Right-of-Way associated with University Avenue West, at the west end of the Study Area (adjacent to the church).		



Site Location		
University Avenue, City of Windsor, Ontario		
Photo #	Date	Cardinal Direction
5	07/06/2018	N
Description		
View of the north side of Gateway Park and associated cultural and natural heritage features.		



Site Location		
University Avenue, City of Windsor, Ontario		
Photo #	Date	Cardinal Direction
6	07/06/2018	S
Description		
View of the south side of Gateway Park and associated cultural and natural heritage features.		



Site Location		
University Avenue, City of Windsor, Ontario		
Photo #	Date	Cardinal Direction
7	07/06/2018	SW
Description		
View of undeveloped lands located on the south side of University Avenue West between Oak Street and Crawford Avenue.		



Site Location		
University Avenue, City of Windsor, Ontario		
Photo #	Date	Cardinal Direction
8	07/05/2018	S
Description		
View of the bridge and associated features crossing over the CPR railway tracks. Present use of the line is limited to those associated with lands south of the bridge as seen in the background of the photograph.		



Site Location		
University Avenue, City of Windsor, Ontario		
Photo #	Date	Cardinal Direction
9	07/05/2018	N
Description		
View of historic railway line track location and associated deciduous forest present north of the bridge (Photo #8) at University Ave. W. between Salter Avenue and Caron Avenue.		



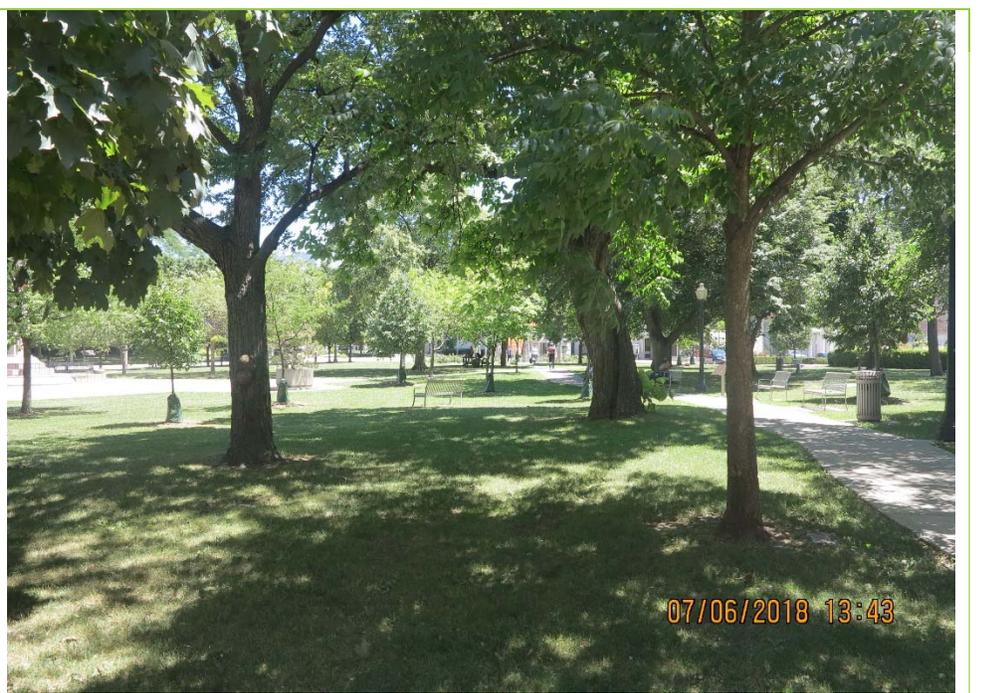
Site Location		
University Avenue, City of Windsor, Ontario		
Photo #	Date	Cardinal Direction
10	07/06/2018	S
Description		
View of railway line track location and associated deciduous forest present south of the bridge (Photo #8) at University Ave. W. between Salter Avenue and Caron Avenue.		



Site Location		
University Avenue, City of Windsor, Ontario		
Photo #	Date	Cardinal Direction
11	07/06/2018	S
Description		
View of the underside of the bridge associated with University Avenue West between Salter Avenue and Caron Avenue. All bridges, culverts and other artificial structures were inspected for Barn Swallow, Chimney Swift other wildlife nesting structures. No nests were observed at the time of the site investigations.		



Site Location		
University Avenue, City of Windsor, Ontario		
Photo #	Date	Cardinal Direction
12	07/06/2018	S
Description		
View of landscape features associated with Senator David A. Croll Park. All trees were inspected for active nesting structures or otherwise wildlife habitat evidence.		

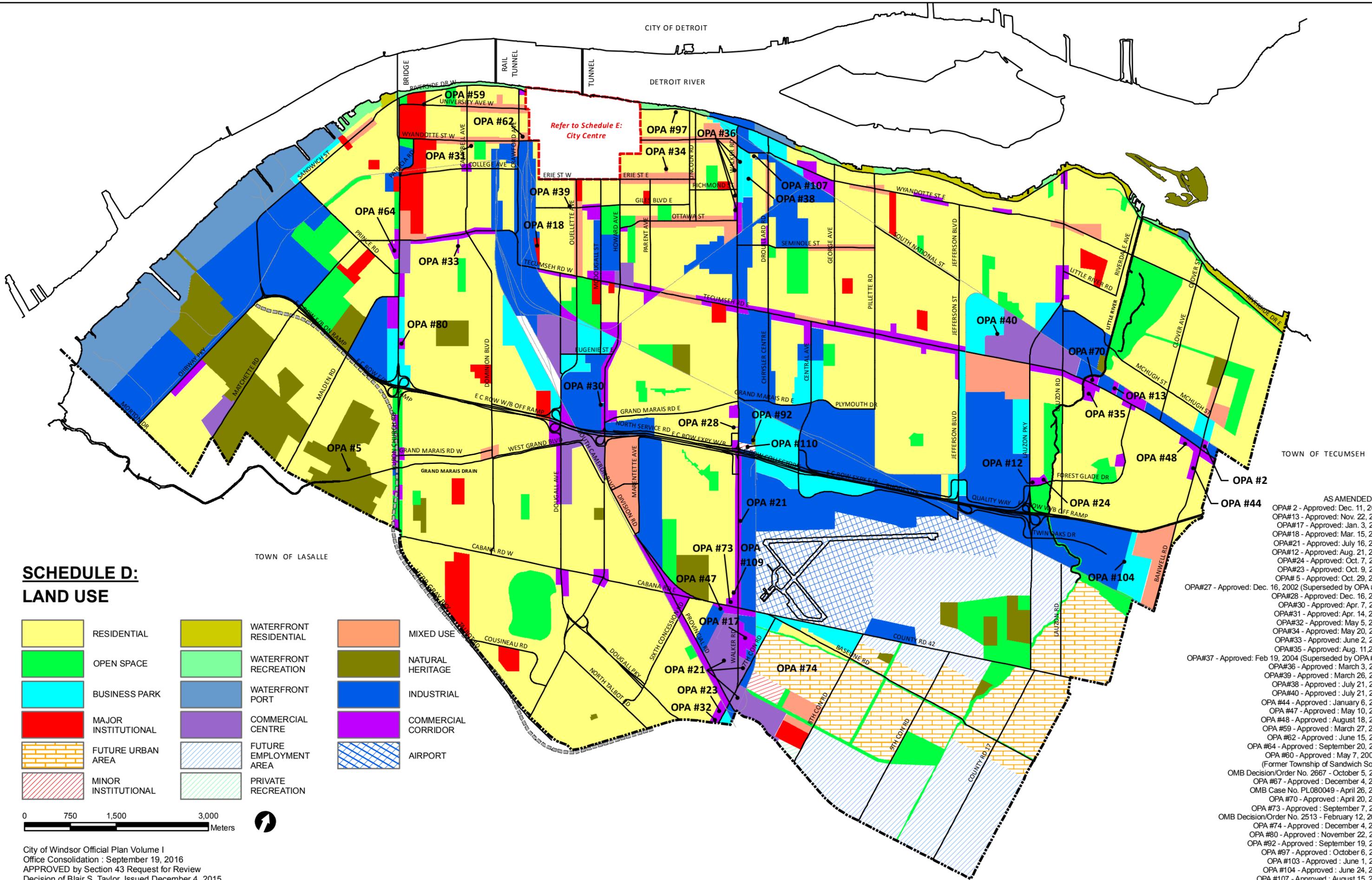


C

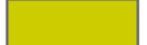
Appendix C

Supporting Documents





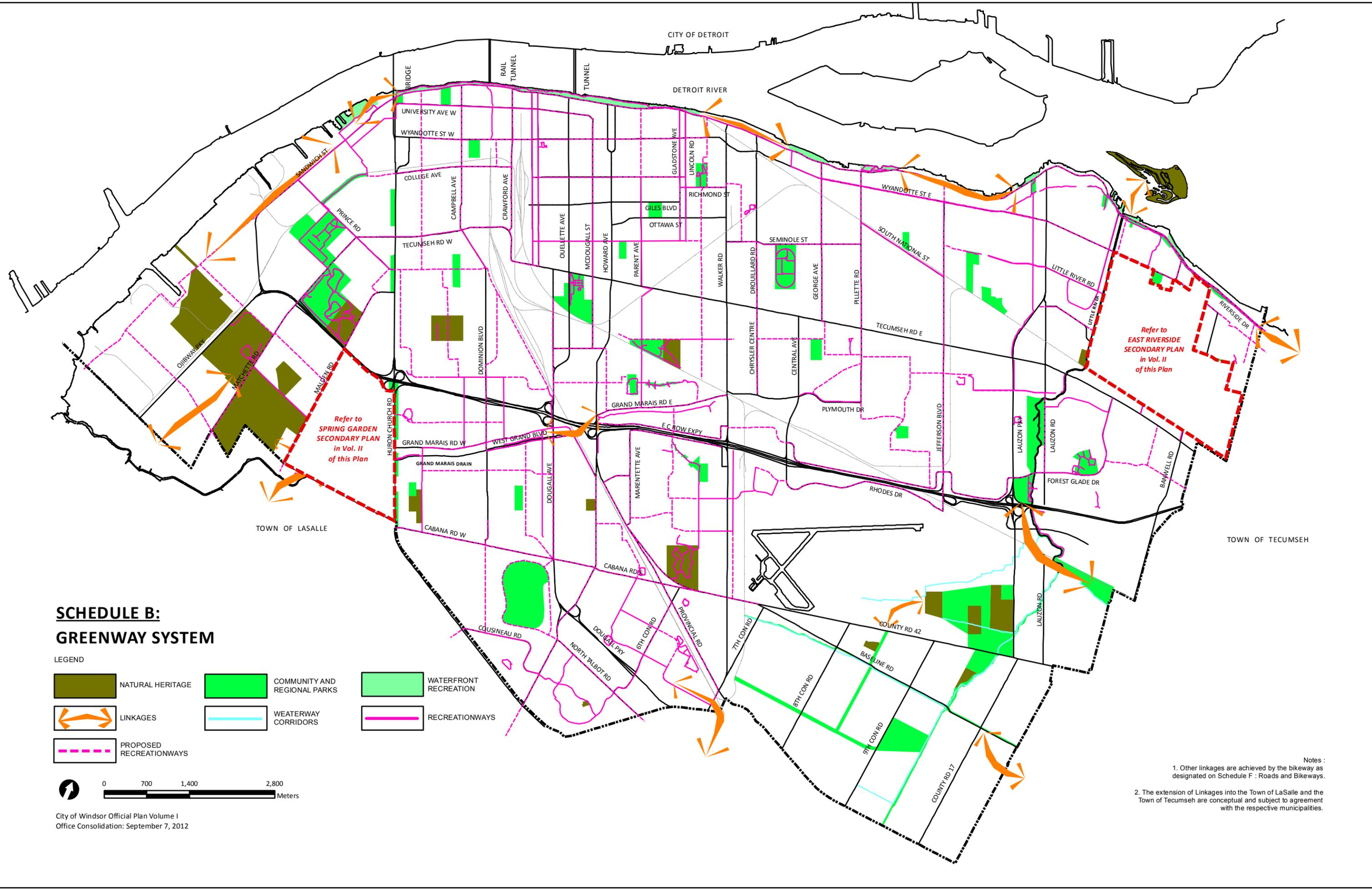
**SCHEDULE D:
LAND USE**

	RESIDENTIAL		WATERFRONT RESIDENTIAL		MIXED USE
	OPEN SPACE		WATERFRONT RECREATION		NATURAL HERITAGE
	BUSINESS PARK		WATERFRONT PORT		INDUSTRIAL
	MAJOR INSTITUTIONAL		COMMERCIAL CENTRE		COMMERCIAL CORRIDOR
	FUTURE URBAN AREA		FUTURE EMPLOYMENT AREA		AIRPORT
	MINOR INSTITUTIONAL		PRIVATE RECREATION		



City of Windsor Official Plan Volume I
Office Consolidation : September 19, 2016
APPROVED by Section 43 Request for Review
Decision of Blair S. Taylor, Issued December 4, 2015
OMB Case No. PL080049 - April 26, 2016

- AS AMENDED BY:
- OPA# 2 - Approved: Dec. 11, 2000
 - OPA#13 - Approved: Nov. 22, 2001
 - OPA#17 - Approved: Jan. 3, 2002
 - OPA#18 - Approved: Mar. 15, 2002
 - OPA#21 - Approved: July 16, 2002
 - OPA#12 - Approved: Aug. 21, 2002
 - OPA#24 - Approved: Oct. 7, 2002
 - OPA#23 - Approved: Oct. 9, 2002
 - OPA# 5 - Approved: Oct. 29, 2002
 - OPA#27 - Approved: Dec. 16, 2002 (Superseded by OPA #40)
 - OPA#28 - Approved: Dec. 16, 2002
 - OPA#30 - Approved: Apr. 7, 2003
 - OPA#31 - Approved: Apr. 14, 2003
 - OPA#32 - Approved: May 5, 2003
 - OPA#34 - Approved: May 20, 2003
 - OPA#33 - Approved: June 2, 2003
 - OPA#35 - Approved: Aug. 11, 2003
 - OPA#37 - Approved: Feb 19, 2004 (Superseded by OPA #40)
 - OPA#36 - Approved: March 3, 2004
 - OPA#39 - Approved: March 26, 2004
 - OPA#38 - Approved: July 21, 2004
 - OPA#40 - Approved: July 21, 2004
 - OPA #44 - Approved: January 6, 2005
 - OPA #47 - Approved: May 10, 2005
 - OPA #48 - Approved: August 18, 2005
 - OPA #59 - Approved: March 27, 2007
 - OPA #62 - Approved: July 15, 2007
 - OPA #64 - Approved: September 20, 2007
 - OPA #60 - Approved: May 7, 2007 - (Former Township of Sandwich South)
 - OMB Decision/Order No. 2667 - October 5, 2007
 - OPA #67 - Approved: December 4, 2015
 - OMB Case No. PL080049 - April 26, 2016
 - OPA #70 - Approved: April 20, 2009
 - OPA #73 - Approved: September 7, 2006
 - OMB Decision/Order No. 2513 - February 12, 2009
 - OPA #74 - Approved: December 4, 2009
 - OPA #80 - Approved: November 22, 2010
 - OPA #92 - Approved: September 19, 2016
 - OPA #97 - Approved: October 6, 2014
 - OPA #103 - Approved: June 1, 2015
 - OPA #104 - Approved: June 24, 2015
 - OPA #107 - Approved: August 15, 2016
 - OPA #109 - Approved: January 9, 2017
 - OPA #110 - Approved: August 22, 2016



**SCHEDULE B:
GREENWAY SYSTEM**

LEGEND

	NATURAL HERITAGE		COMMUNITY AND REGIONAL PARKS		WATERFRONT RECREATION
	LINKAGES		WATERWAY CORRIDORS		RECREATIONWAYS
	PROPOSED RECREATIONWAYS				



Refer to
EAST RIVERSIDE
SECONDARY PLAN
in Vol. II
of this Plan

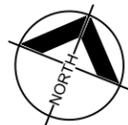
Refer to
SPRING GARDEN
SECONDARY PLAN
in Vol. II
of this Plan

- Notes :
1. Other linkages are achieved by the bikeway as designated on Schedule F : Roads and Bikeways.
 2. The extension of Linkages into the Town of LaSalle and the Town of Tecumseh are conceptual and subject to agreement with the respective municipalities.



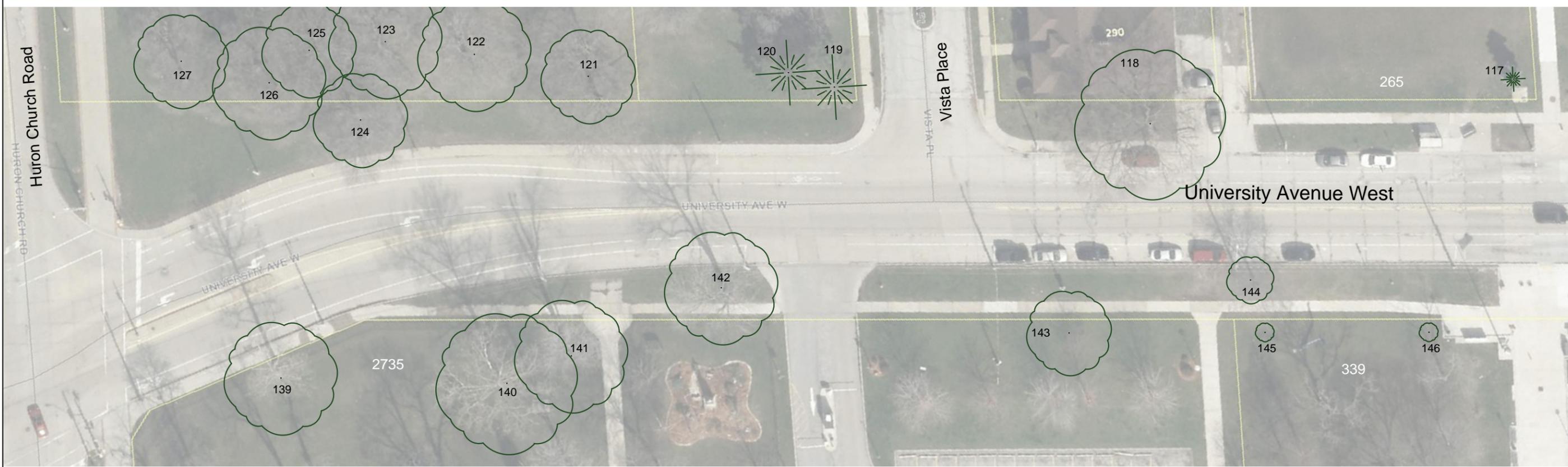
MATCH LINE SEE DRAWING TI-2

Municipal Class Environmental Assessment Study
 University Avenue and Victoria Avenue
Tree Assessment



DATE: 07 2018	CHECKED BY: G. BUNKER
DRAWN BY: L. MAY	APPROVED BY: L. CULLEN
SCALE: 1:500	
STD No.:	

MATCH LINE SEE DRAWING TI-1



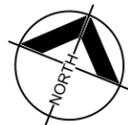
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MATCH LINE SEE DRAWING ABOVE



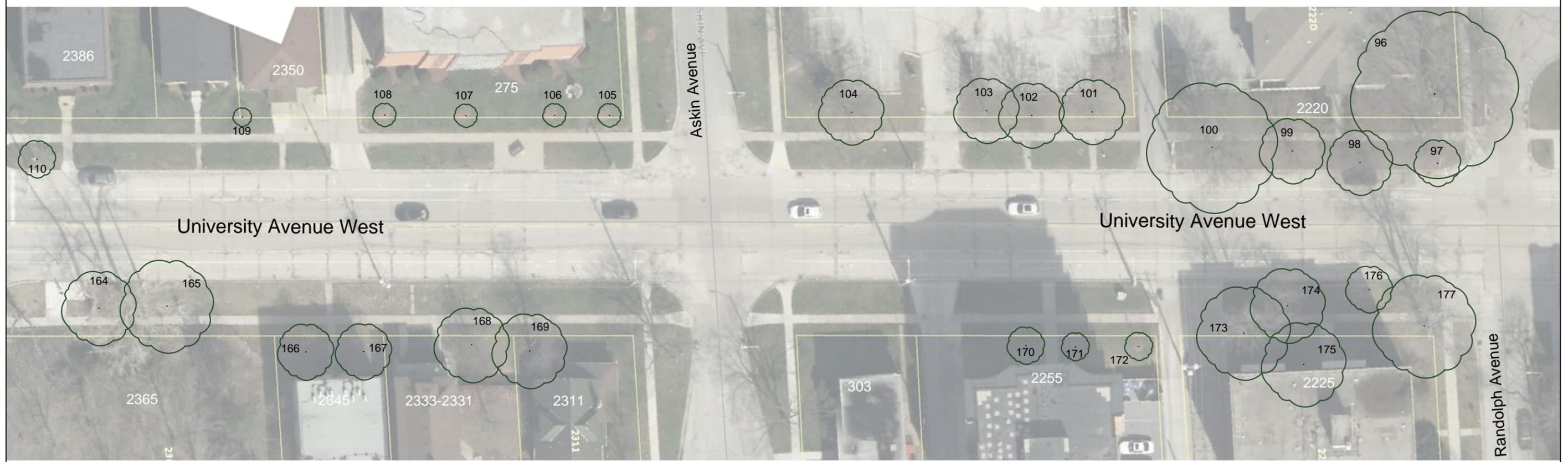
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Municipal Class Environmental Assessment Study
 University Avenue and Victoria Avenue
Tree Assessment



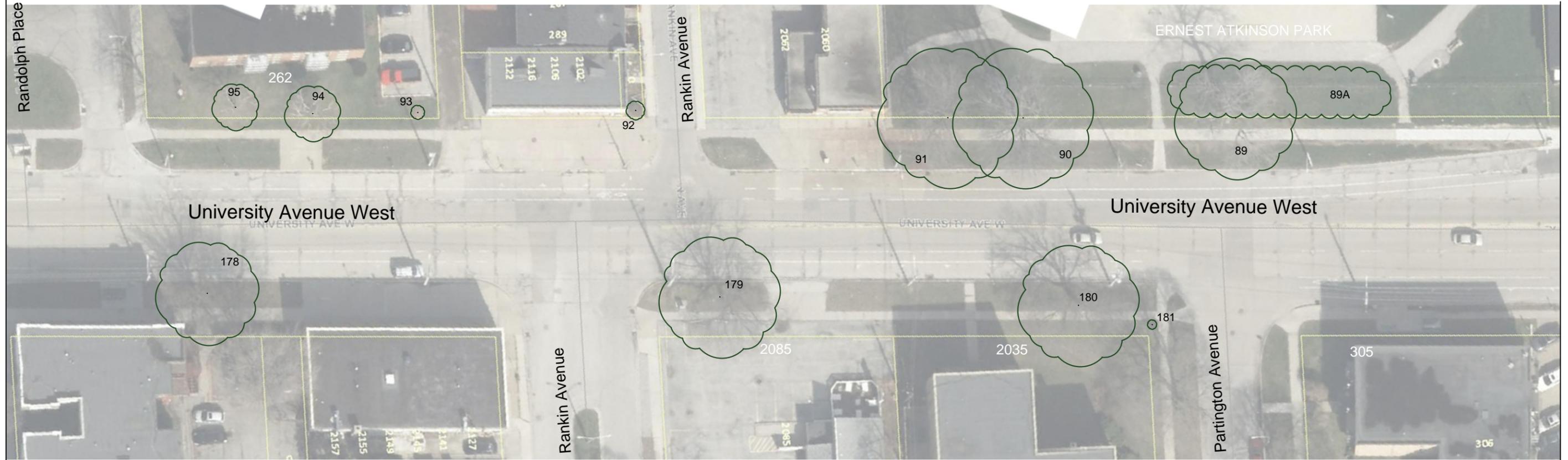
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DRAWN BY: L. MAY	APPROVED BY: L. CULLEN
SCALE: 1:500	
STD No.:	

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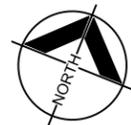
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MATCH LINE SEE DRAWING ABOVE



MATCH LINE SEE DRAWING TI-4

Municipal Class Environmental Assessment Study
 University Avenue and Victoria Avenue
Tree Assessment



DATE: 07 2018	CHECKED BY: G. BUNKER
DRAWN BY: L. MAY	APPROVED BY: L. CULLEN
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STD No.:	

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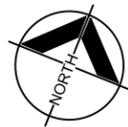
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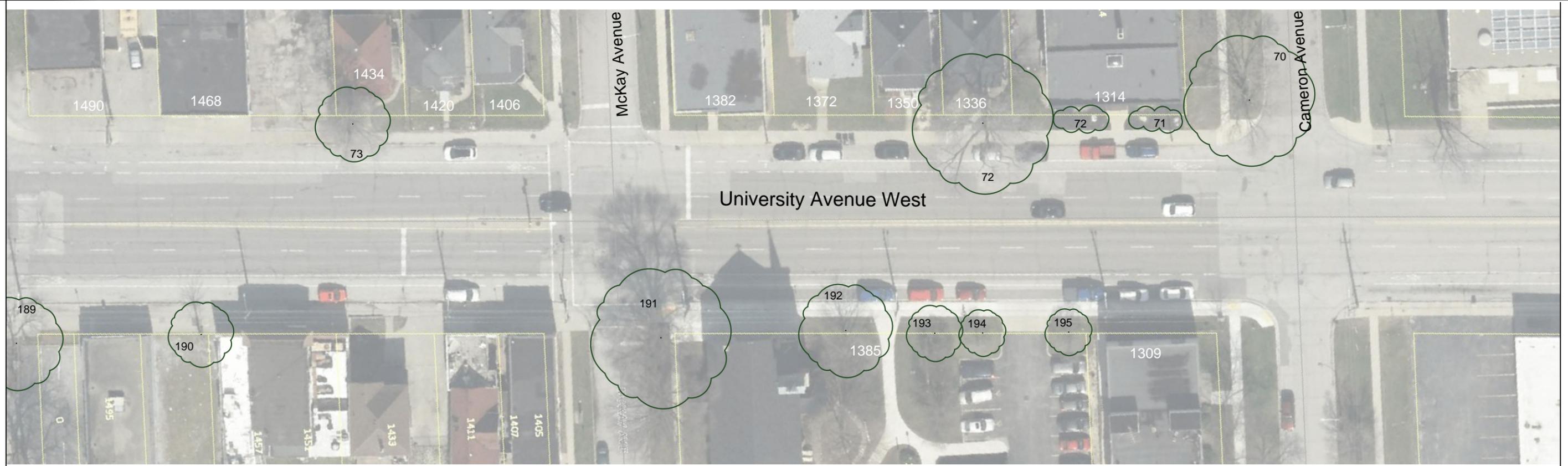
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Municipal Class Environmental Assessment Study
 University Avenue and Victoria Avenue
Tree Assessment



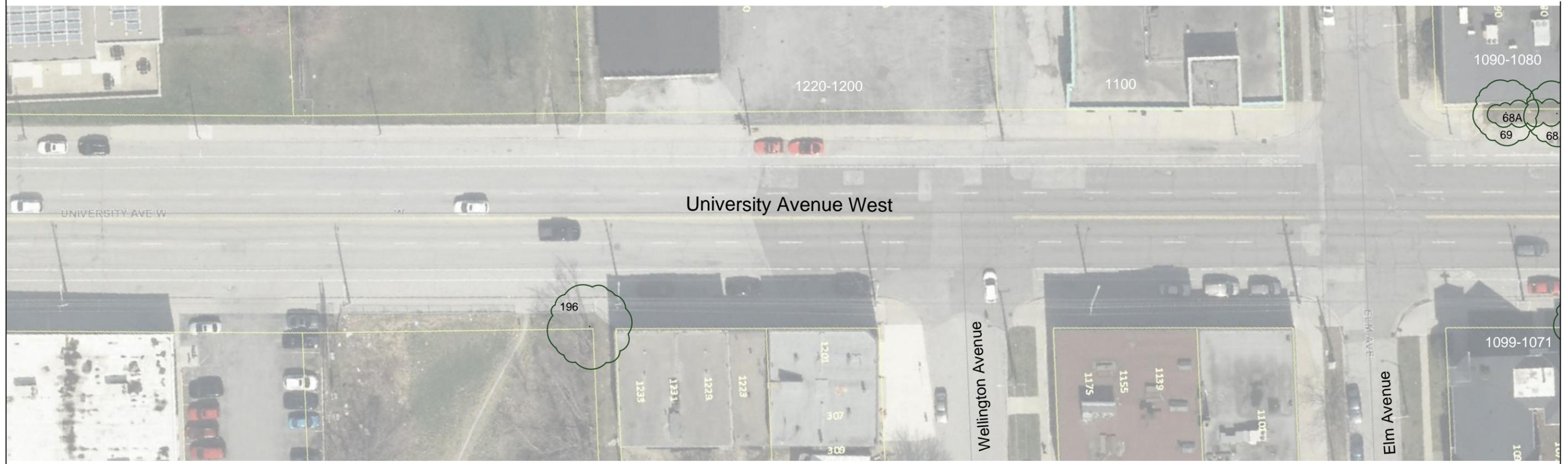
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DRAWN BY: L. MAY	APPROVED BY: L. CULLEN
SCALE: 1:500	
STD No.:	

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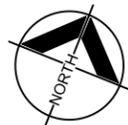
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MATCH LINE SEE DRAWING ABOVE



MATCH LINE SEE DRAWING TI-6

Municipal Class Environmental Assessment Study
 University Avenue and Victoria Avenue
Tree Assessment



DATE: 07 2018	CHECKED BY: G. BUNKER
DRAWN BY: L. MAY	APPROVED BY: L. CULLEN
SCALE: 1:500	
STD No.:	

TI-5

MATCH LINE SEE DRAWING TI-5



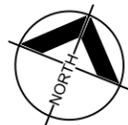
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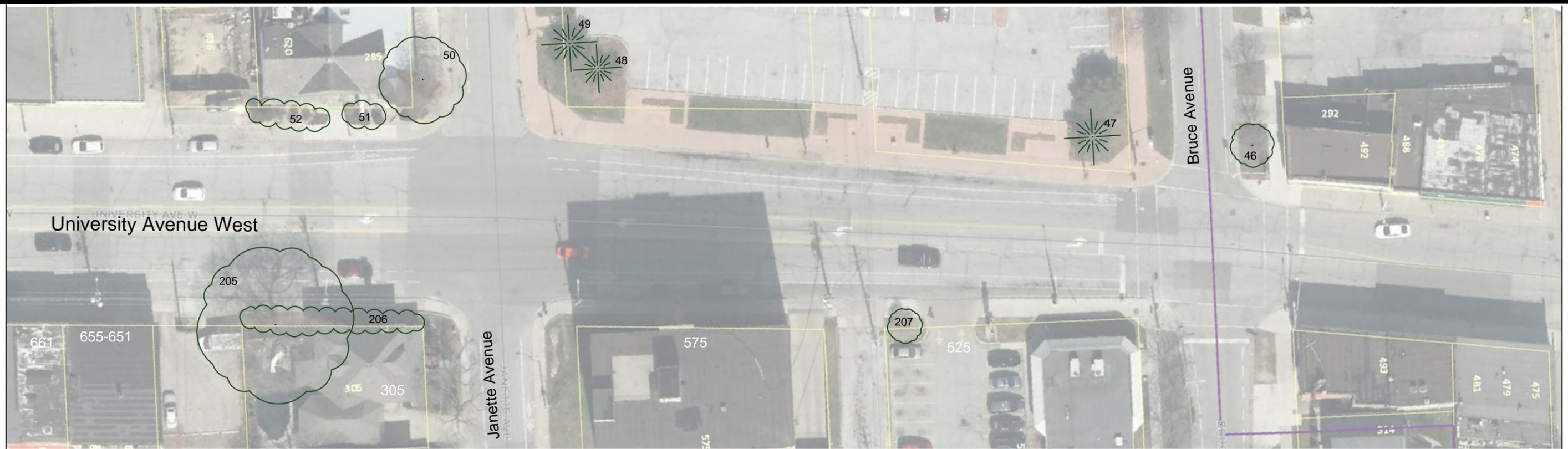
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Municipal Class Environmental Assessment Study
 University Avenue and Victoria Avenue
Tree Assessment



DATE: 07 2018	CHECKED BY: G. BUNKER
DRAWN BY: L. MAY	APPROVED BY: L. CULLEN
SCALE: 1:500	
STD No.:	

MATCH LINE SEE DRAWING TI-6



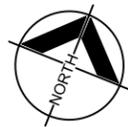
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MATCH LINE SEE DRAWING TI-8

Municipal Class Environmental Assessment Study
 University Avenue and Victoria Avenue
Tree Assessment



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DRAWN BY: L. MAY	APPROVED BY: L. CULLEN
SCALE: 1:500	
STD No.:	

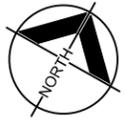


MATCH LINE SEE DRAWING TI-7

MATCH LINE SEE DRAWING TI-9

MATCH LINE SEE DRAWING TI-9

Municipal Class Environmental Assessment Study
 University Avenue and Victoria Avenue
Tree Assessment

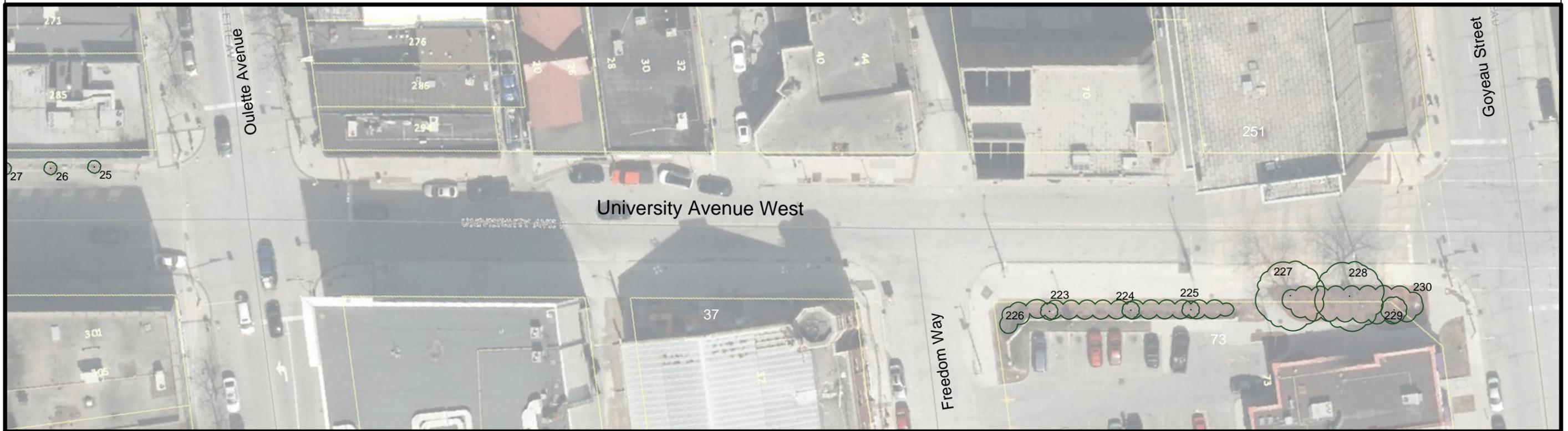


DATE: 07 2018	CHECKED BY: G. BUNKER
DRAWN BY: L. MAY	APPROVED BY: L. CULLEN
SCALE: 1:500	
STD No.:	TI-8

MATCH LINE SEE DRAWING TI-8



MATCH LINE SEE DRAWING TI-8

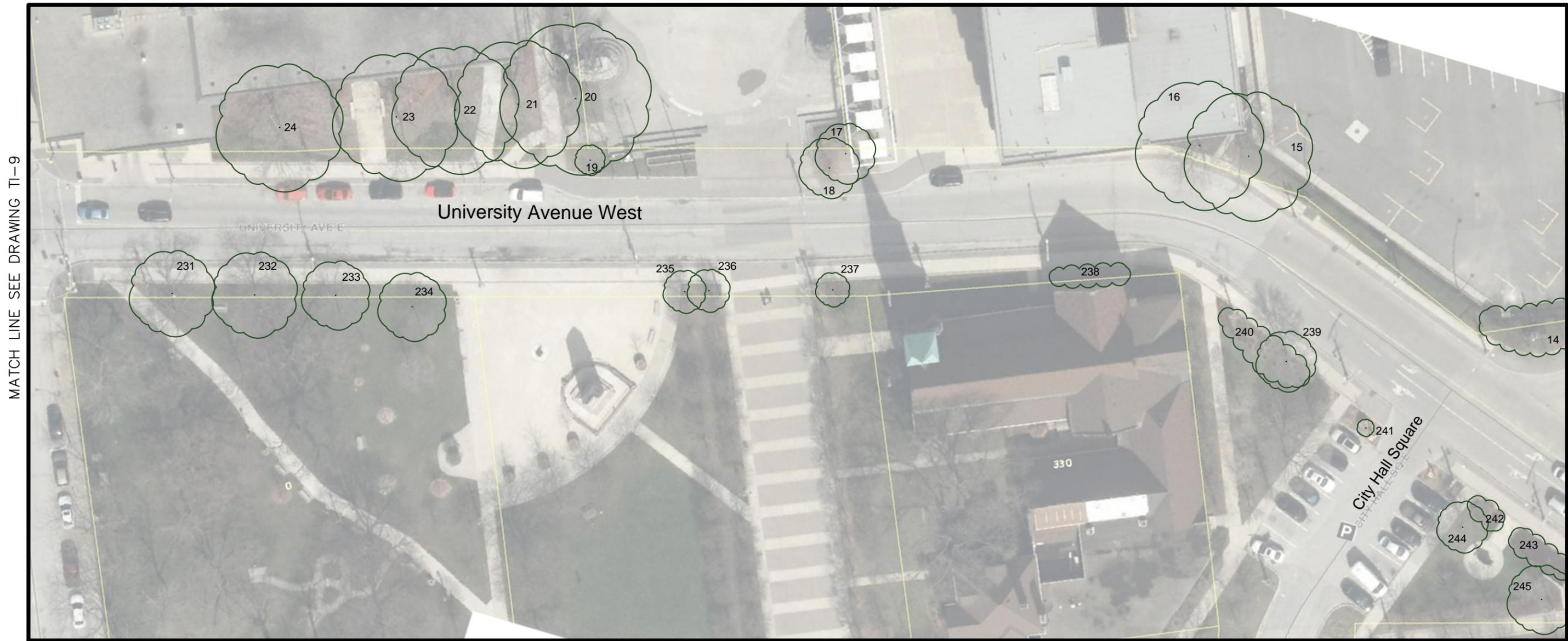


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Municipal Class Environmental Assessment Study
 University Avenue and Victoria Avenue
Tree Assessment



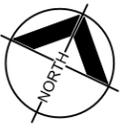
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STD No.:	



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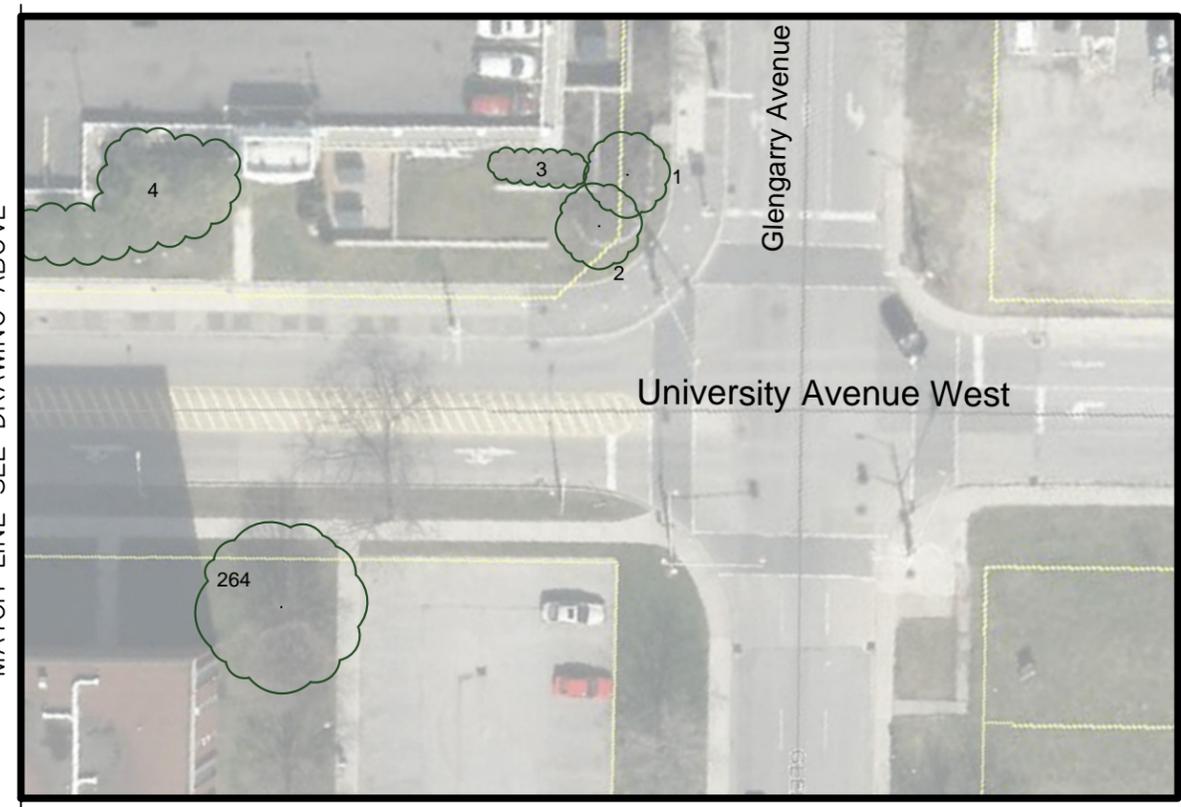
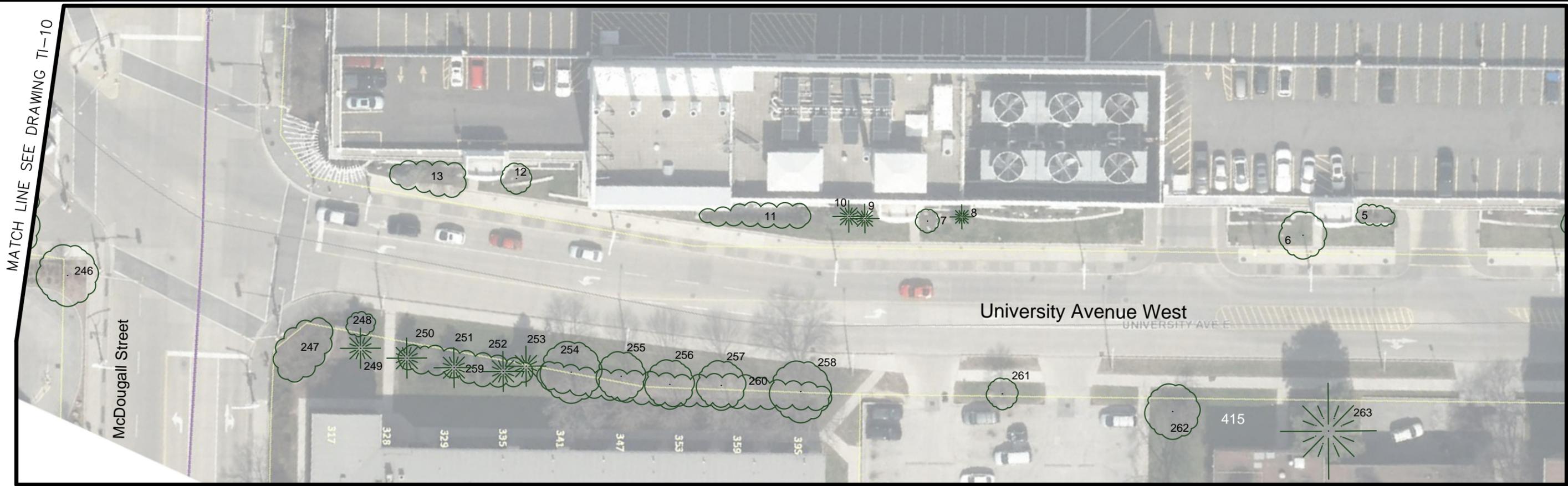
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Municipal Class Environmental Assessment Study
 University Avenue and Victoria Avenue
Tree Assessment



DATE: 07 2018	CHECKED BY: G. BUNKER
DRAWN BY: L. MAY	APPROVED BY: L. CULLEN
SCALE: 1:500	
STD No.:	

TI-10



Municipal Class Environmental Assessment Study
 University Avenue and Victoria Avenue
Tree Assessment



DATE: 07 2018	CHECKED BY: G. BUNKER
DRAWN BY: L. MAY	APPROVED BY: L. CULLEN
SCALE: 1:500	
STD No.: TI-11	

Tree #	Common name	Scientific name	DBH (cm) * approx.	Add'l Stem DBH (cm) * approx.	Spread (m)	Overall Condition (D), (P), (F), (G), or (E)	Structural Defects								Comments	
							GR	COD	NA	INCL	CRB	MBR	DPR	SMD		ADV
41	Japanese maple	<i>Acer palmatum</i>	7	NA	2 to 3	F-G										Burn on leaves
42	White cedar	<i>Thuja occidentalis</i>	4	NA	1	G										2 m tall
43	White cedar	<i>Thuja occidentalis</i>	4	NA	1	G										
44	Schubert cherry	<i>Prunus virginiana</i>	6.5	NA	1	F-G		base								var. 'Schubert'; purple and green reversion
45	White cedar	<i>Thuja occidentalis</i>	4	NA	1	G										
46	Callery pear	<i>Pyrus calleryana</i>	27	NA	8	G		1.3						X		DBH measured at 1 m height; slight lean
47	Austrian pine	<i>Pinus nigra</i>	31	NA	7	G										Sapsucker evidence
48	Austrian pine	<i>Pinus nigra</i>	30	NA	6	F										50% dieback; sapsucker evidence
49	Austrian pine	<i>Pinus nigra</i>	30	NA	7	F										30% dieback; sapsucker evidence
50	Littleleaf linden	<i>Tilia cordata</i>	36	36	10	G		1.4								Overhangs sidewalk, green but severely wilted
51	Group		NA	NA	2	G										Globe white cedar, yew, juniper in raised bed
52	Group		3	NA	1	G										Creeping juniper, potentilla, spirea, Japanese maple, 2 junipers
53	Honey locust	<i>Gleditsia triacanthos</i>	23	NA	5	G								X		Staghorn effect
54	Honey locust	<i>Gleditsia triacanthos</i>	22	NA	7	G								X		
55	Callery pear	<i>Pyrus calleryana</i>	22	5		G	X									DBH measured at 1 m height
56	Callery pear	<i>Pyrus calleryana</i>	34	NA	7	G		1.2						X	X	
57	Callery pear	<i>Pyrus calleryana</i>	30	NA	7	F-G	X									DBH measured at 1 m height
58	Callery pear	<i>Pyrus calleryana</i>	28	NA	8	F-G	X	0.5						X	X	DBH measured at 0.5 m height; mechanical damage
59	Callery pear	<i>Pyrus calleryana</i>	40	NA	10	F-G		1						X	X	DBH measured at 1 m height; mechanical damage
60	Austrian pine	<i>Pinus nigra</i>	31	NA	6	F-G										30% dieback
61	Schubert cherry	<i>Prunus virginiana</i>	17	NA	5	G										var. 'Schubert'
62	Group		NA	NA	1	G										11 boxwood, 4 yew, 6 columnar cedar, spirea, black-eyed Susans, potentilla
63	Group		NA	NA	1	G										Low shrub-form juniper, yew
64	Group		7	NA	1	F-G										4 yew in poor condition, 1 lilac green but wilted
65	Group		5	NA	1	F-G										2 yew, low shrub-form juniper, yucca, lilac green but wilted
66	Common lilac	<i>Syringa vulgaris</i>	7	NA		P-F										Leaf scorch; green but severely wilted
67	Honey locust	<i>Gleditsia triacanthos</i>	26	NA	8	G		2.5						X		Lean, overhanging road 2 m
67A	Group		NA	NA	1-2	G										1 Alberta spruce, 2 m tall, 5 cm DBH; 1 weeping white spruce, 1 m tall
68	Honey locust	<i>Gleditsia triacanthos</i>	26	NA	7	G		2						X		Lean, overhanging road 2 m
68A	Group		NA	NA	1	G										2 yews, 2 creeping junipers, 2 spirea
69	Honey locust	<i>Gleditsia triacanthos</i>	26	NA	7	G		2						X		Lean, overhanging road 2 m
70	Hackberry	<i>Celtis occidentalis</i>	55	NA	14	G		2								
71	Group		NA	NA	1	G										Japanese maple 1.5 m tall, small euonymus shrubs
72	Freeman maple	<i>Acer x freemanii</i>	87	NA	15	G										Overhanging to middle of street
73	Freeman maple	<i>Acer x freemanii</i>	67	NA	8	G										
74	White cedar	<i>Thuja occidentalis</i>	3	NA	1	G										Columnar; adjacent to building
75	White cedar	<i>Thuja occidentalis</i>	3	NA	1	G										Columnar; 3 m tall, 1 m wide
76	White cedar	<i>Thuja occidentalis</i>	3	NA	1	G										Columnar
77	White cedar	<i>Thuja occidentalis</i>	3	NA	1	G										Columnar
78	Group		13	10	8	G								x		Lean

Tree #	Common name	Scientific name	DBH (cm) * approx.	Add'l Stem DBH (cm) * approx.	Spread (m)	Overall Condition (D), (P), (F), (G), or (E)	Structural Defects								Comments	
							GR	COD	NA	INCL	CRB	MBR	DPR	SMD		ADV
79	Group		NA	NA	1	G										4 yew, creeping juniper, 2 Schubert cherry shrubs in landscape bed
80	White cedar	<i>Thuja occidentalis</i>	4	NA	1	G										Corner of picket fence; 1 m wide, 2 m tall
81	Freeman maple	<i>Acer x freemanii</i>	89	NA		G										Wounds with internal decay, structurally sound
82	Group		NA	NA	1	G										4 tree-form junipers 2 m tall and 1 m wide
83	Norway maple	<i>Acer platanoides</i>	30	NA	9	G		3								
84	Honey locust	<i>Gleditsia triacanthos</i>	43	NA	10	G										2 m over road
85	Norway maple	<i>Acer platanoides</i>	26	NA	7	F-G							X			15% die back
86	Honey locust	<i>Gleditsia triacanthos</i>	39	NA	12	G		2					X	X		Lean towards road
87	Honey locust	<i>Gleditsia triacanthos</i>	30	NA	7	F				X			X	X		Bark damage at base, 20% dieback
88	Horse-chestnut	<i>Aesculus hippocastanum</i>	67	NA	9	G		3								Overhanging street by 2 m
89	Freeman maple	<i>Acer x freemanii</i>	87	NA	13	G							X			Overhanging street by 2 m
89A	Group		2	1	0.5	G										11 1.3 m tall saplings: 2 hickory, 1 sycamore, 1 white oak, 1 red oak, 3 hackberry, 3 blue beech
90	Freeman maple	<i>Acer x freemanii</i>	91	NA	15	G		4								Minor bark damage on lower 2 m, overhanging street by 3 m
91	Freeman maple	<i>Acer x freemanii</i>	87	NA	15	G										Minor bark damage on lower 0.2 m, overhanging street by 3m
92	Group		NA	NA	2	G										2 shrubs 3 m wide and 2 m tall
93	Japanese lilac	<i>Syringa reticulata</i>	6	NA	1.5	G										Tree form
94	White birch	<i>Betula papyrifera</i>	30	30	6	F-G		0.5	X	X	X		X			15% dieback, lean towards street
95	White birch	<i>Betula papyrifera</i>	27	NA	5	G		2								
96	Red elm	<i>Ulmus rubra</i>	81	66	18	G		?								Overhanging street by 2 m
97	Littleleaf linden	<i>Tilia cordata</i>	31	NA	5	G		3								Overhanging street by 1 m
98	Littleleaf linden	<i>Tilia cordata</i>	40	NA	7	G		2					X			Overhanging street by 3 m
99	Littleleaf linden	<i>Tilia cordata</i>	38	NA	7	G								X		Some bark decay on street side to 2m Some bark decay on street side 3m
100	Honey locust	<i>Gleditsia triacanthos</i>	65	NA	14	G		4								Overhanging street by 5 m
101	Norway maple	<i>Acer platanoides</i>	24	NA	7	G	X	1.5								
102	Norway maple	<i>Acer platanoides</i>	31	NA	7	G	X									
103	Norway maple	<i>Acer platanoides</i>	31	NA	7	G										
104	Norway maple	<i>Acer platanoides</i>	37	NA	7	G	X	2								
105	Littleleaf linden	<i>Tilia cordata</i>	8	NA	2.5	G										Two 0.2 m wounds on lower trunk with woundwood
106	Littleleaf linden	<i>Tilia cordata</i>	8	NA	2.5	G										
107	Littleleaf linden	<i>Tilia cordata</i>	8	NA	2.5	G										
108	Littleleaf linden	<i>Tilia cordata</i>	8	NA	2.5	G										
109	Common lilac	<i>Syringa vulgaris</i>	NA	NA	2	G										Multistem; 2 m wide and 2 m tall
110	Sugar maple	<i>Acer saccharum</i>	11	NA	4	G							X			A few broken branches; leaf scorch
111	Red oak	<i>Quercus rubra</i>	8	NA	1.5	F-G							X			Significant bark peeling 50% circumference. Staghorn effect. Leader dead.
112	Red oak	<i>Quercus rubra</i>	10	NA	3	F							X			
113	Sugar maple	<i>Acer saccharum</i>	23	NA	5	P							X			90% dieback; split-gill fungus brackets throughout tree, further decline likely
114	Red oak	<i>Quercus rubra</i>	17	NA	4	G										Chlorotic; under overhead wires

Tree #	Common name	Scientific name	DBH (cm) * approx.	Add'l Stem DBH (cm) * approx.	Spread (m)	Overall Condition (D), (P), (F), (G), or (E)	Structural Defects								Comments	
							GR	COD	NA	INCL	CRB	MBR	DPR	SMD		ADV
115	Crabapple	<i>Malus sp.</i>	9	NA	2	G										Chlorotic; under overhead wires
116	Cottonwood	<i>Populus deltoides</i>	89	NA	14	F							X			Broken leader at 6 m height; overhangs street by 1 m; dead fungal conks at base next to asphalt
117	Colorado spruce	<i>Picea pungens</i>	23	NA	3	G										Leader (top 1 m) bending towards road
118	Red elm	<i>Ulmus rubra</i>	82	NA	16	F-G						X		X		Some wounds with woundwood to 2 m. Overhangs street by 6 m.
119	Austrian pine	<i>Pinus nigra</i>	31	NA	8	G										Sapsucker holes
120	Austrian pine	<i>Pinus nigra</i>	33	NA	8	G										Phototropic to street; dieback on other side; sapsucker holes
121	Norway maple	<i>Acer platanoides</i>	61	NA	10	G										Overhangs street by 2 m
122	Norway maple	<i>Acer platanoides</i>	61	NA	12	G										Small cavity at ground to 0.5 m height
123	Norway maple	<i>Acer platanoides</i>	59	NA	12	G										Lion tailing from 4-stem crotch
124	Norway maple	<i>Acer platanoides</i>	57	NA	10	G	X									
125	Norway maple	<i>Acer platanoides</i>	49	NA	10	G										
126	Norway maple	<i>Acer platanoides</i>	76	NA	12	G		2						X		Frass leading into small cavity at base
127	Norway maple	<i>Acer platanoides</i>	49	NA	10	G		2								Buried trunk flare
128	Littleleaf linden	<i>Tilia cordata</i>	35	NA	7	G	x 1.5								X	
129	London planetree	<i>Platanus x acerifolia</i>	54	NA	13	G		2								Overhangs street by 7 m
130	Tree of heaven	<i>Ailanthus altissima</i>	60	NA	12	G		5						X		Overhangs street by 1 m; inside chainlink fence
131	Honey locust	<i>Gleditsia triacanthos</i>	55	NA	13	G							X			
132	Norway maple	<i>Acer platanoides</i>	4	NA	1	G										Immediately adjacent to Bell telephone pedestal
133	Hackberry	<i>Celtis occidentalis</i>	6	NA	1	G										Staked; newly planted with no mulch and exposed feeder roots
134	Silver maple	<i>Acer saccharinum</i>	39	NA	8	G		1.5						X		Some water sprouts pruned and tied back to tree from sidewalk
135	Norway maple	<i>Acer platanoides</i>	18	14	7	G		0.5								
136	Callery pear	<i>Pyrus calleryana</i>	6	NA	1	G`										Staked
137	Callery pear	<i>Pyrus calleryana</i>	6	NA	1	G										Staked
138	Freeman maple	<i>Acer x freemanii</i>	66	NA	12	G		3								
139	London planetree	<i>Platanus x acerifolia</i>	70	NA	12	F-G							X	X		Overhangs street by 3 m just inside fence
140	London planetree	<i>Platanus x acerifolia</i>	75	NA	15	G										Overhangs sidewalk by 1 m
141	Freeman maple	<i>Acer x freemanii</i>	71	NA	12	G										Overhangs street by 3 m
142	Freeman maple	<i>Acer x freemanii</i>	77	NA	12	G		6					X			Overhangs street by 5 m
143	Crabapple	<i>Malus sp.</i>	17	NA	9	G							X	X		
144	Honey locust	<i>Gleditsia triacanthos</i>	35	NA	5	G		2.5								
145	Kentucky coffeetree	<i>Gymnocladus dioicus</i>	8	NA	2	G										
146	European beech	<i>Fagus sylvatica</i>	12	NA	2	G										Weeping
147	Honey locust	<i>Gleditsia triacanthos</i>	43	NA	8	G		4								
148	Honey locust	<i>Gleditsia triacanthos</i>	41	NA	8	G		3								
149	Honey locust	<i>Gleditsia triacanthos</i>	34	NA	8	G		3								Slight lean over sidewalk
150	Norway maple	<i>Acer platanoides</i>	26	NA	9	F		2								
151	Norway maple	<i>Acer platanoides</i>	29	NA	8	F		1.8								
152	Honey locust	<i>Gleditsia triacanthos</i>	44	NA	8	F-G		3								
153	Catalpa	<i>Catalpa speciosa</i>	18	NA	7	G										Slight lean toward sidewalk
154	Catalpa	<i>Catalpa speciosa</i>	23	NA	6	P-F										70% dieback; bark beginning to peel

Tree #	Common name	Scientific name	DBH (cm) * approx.	Add'l Stem DBH (cm) * approx.	Spread (m)	Overall Condition (D), (P), (F), (G), or (E)	Structural Defects								Comments	
							GR	COD	NA	INCL	CRB	MBR	DPR	SMD		ADV
155	Catalpa	<i>Catalpa speciosa</i>	33	NA	6	P-F		1.5								70% dieback; bark beginning to peel. Black fungus on bark
156	Norway maple	<i>Acer platanoides</i>	26	NA	8	G	X									
157	Crabapple	<i>Malus sp.</i>	32	22, 26	7	F		1				X		X		40% dieback; poor structure; woundwood
158	Silver maple	<i>Acer saccharinum</i>	32	28, 28	9	F-G		1		X						Pruning evident; heavy chain included in crotch of tree
159	White mulberry	<i>Morus alba</i>	35	NA	9	G										Overhang sidewalk by 2 m
160	Red oak	<i>Quercus rubra</i>	12	NA	3	G										
161	Red oak	<i>Quercus rubra</i>	14	NA	3	G		2								
162	Red oak	<i>Quercus rubra</i>	20	NA	3	P-F										60% dieback; chlorotic
163	Red oak	<i>Quercus rubra</i>	18	NA	3	F										Chlorotic
164	Cottonwood	<i>Populus deltoides</i>	65	NA	8	G										Overhang street by 2 m; lion tailing; grown clear of overhead wires
165	Cottonwood	<i>Populus deltoides</i>	85	NA	10	G		3								Overhang street by 2 m; lion tailing; grown clear of overhead wires
166	Littleleaf linden	<i>Tilia cordata</i>	15	NA	6	G		1.3								DBH measured at 1 m height
167	Littleleaf linden	<i>Tilia cordata</i>	15	NA	6	G		3								
168	English oak	<i>Quercus robur</i>	35	NA	8	G										Overhangs sidewalk by 1 m
169	Catalpa	<i>Catalpa speciosa</i>	33	30	8	G		base								Overhangs sidewalk by 2 m
170	Honey locust	<i>Gleditsia triacanthos</i>	8	NA	4	G										Trunk buried in 0.3 m of mulch
171	Littleleaf linden	<i>Tilia cordata</i>	8	NA	3	G								X		Trunk buried in 0.3 m of mulch
172	Honey locust	<i>Gleditsia triacanthos</i>	8	NA	3	G						X				Trunk buried in 0.3 m of mulch
173	Silver maple	<i>Acer saccharinum</i>	54	NA	10	F										Overhangs sidewalk by 2 m; many surface roots; 40% dieback; bark damage at 1 m in 2 areas
174	Norway maple	<i>Acer platanoides</i>	24	NA	8	G	X									Overhangs street by 2 m
175	Crabapple	<i>Malus sp.</i>	26	21	9	F-G		1				X	X			20% dieback
176	Sugar maple	<i>Acer saccharum</i>	15	NA	5	F										20% dieback
177	Freeman maple	<i>Acer x freemanii</i>	93	NA	11	G		6								
178	Honey locust	<i>Gleditsia triacanthos</i>	56	NA	11	F-G		2				X	X			Pruned to avoid overhead wires; overhangs street by 4 m at 3 m height
179	Honey locust	<i>Gleditsia triacanthos</i>	57	NA	13	F-G		3					X			Pruned similar to Tree 178; overhangs street by 5 m at 3 m height
180	Honey locust	<i>Gleditsia triacanthos</i>	59	NA	13	F-G		3					X			Pruned similar to Tree 178; pruned with no overhang
181	Group		NA	NA	1	G										2 shrubs 1 m wide and 1 m tall
182	Silver maple	<i>Acer saccharinum</i>	98	NA	14	G										Overhangs street by 1 m
183	Common lilac	<i>Syringa vulgaris</i>	NA	NA	3	G										3 m wide and 2 m tall
184	Freeman maple	<i>Acer x freemanii</i>	94	NA	10	G						X	X			Chain included into tree at 1 m height
185	Yew	<i>Taxus sp.</i>	20	17, 18	4	G										Multistem; on property line; 1 m overhang over sidewalk
186	Japanese Maple	<i>Acer palmatum</i>	16	15	5	G		0.2				X				On property line; 1 m overhang over sidewalk
187	Honey locust	<i>Gleditsia triacanthos</i>	31	NA	10	G										
188	Crabapple	<i>Malus sp.</i>	8	NA	2	F		1.5								30% dieback
189	Honey locust	<i>Gleditsia triacanthos</i>	39	NA	10	G								X		Overhangs sidewalk by 2 m; pruned for overhead wires
190	Tree of heaven	<i>Ailanthus altissima</i>	41	24	7	G		base						X		Small co-dominant stem broken at 2 m height
191	Red elm	<i>Ulmus rubra</i>	84	NA	15	G		2						X		

Tree #	Common name	Scientific name	DBH (cm) * approx.	Add'l Stem DBH (cm) * approx.	Spread (m)	Overall Condition (D), (P), (F), (G), or (E)	Structural Defects								Comments	
							GR	COD	NA	INCL	CRB	MBR	DPR	SMD		ADV
192	Norway maple	<i>Acer platanoides</i>	35	NA	10	G										var. 'Crimson King'
193	Japanese lilac	<i>Syringa reticulata</i>	22	NA	6	G										Tree form
194	Magnolia	<i>Magnolia sp.</i>	13	8	5	G										Multistem; crown raised to 2 m
195	Magnolia	<i>Magnolia sp.</i>	13	10, 11	35	G										Multistem; crown raised to 2 m
196	Red Elm	<i>Ulmus rubra</i>	28	NA	9	G								X		Lean towards road
197	Red cedar	<i>Juniperus virginiana</i>	37	NA	7	G										Canopy reaches sidewalk
198	Catalpa	<i>Catalpa speciosa</i>	75	NA	11	G		2.5							X	
199	Group		9	< 10	< 2	G										3 juniper; 2 euonymus; 1 spirea l; 1 Mugho pine; 1 white cedar; 1 multistem white mulberry
200	Group		18	13	4	G		0.5								1 Japanese maple; 1 smokebush; 5 holly; 2 boxwood; 2 spirea; 1 burning bush; 1 nest spruce
201	Group		NA	NA	1	G										3 Alberta spruce 1 m wide and 1.5 m tall
202	Catalpa	<i>Catalpa speciosa</i>	96	NA	11	G		2								Lean over side street, with 3m clearance
203	Callery pear	<i>Pyrus calleryana</i>	34	30	8	F-G		base								Some decay in crotch; woundwood @ 1m; growing through OH wires
204	Norway maple	<i>Acer platanoides</i>	32	NA	10	G		2								
205	Norway maple	<i>Acer platanoides</i>	75	NA	18	G										Overhangs street by 4 m
206	Group		NA	NA	1	G										Japanese barberry; potentilla; 3 euonymus; 1 Alberta spruce; 3 boxwood; 1 burning bush; 1 hydrangea; 1 short white cedar cultivar
207	White mulberry	<i>Morus alba</i>	25	NA	4	G		1.5								Weeping; seams in trunk to 1m height
208	Group		NA	NA	1-2	G										4 junipers; 1 boxwood; 2 white cedars
209	Norway maple	<i>Acer platanoides</i>	18	NA	6	F-G										var. 'Crimson King'; 40% dieback
210	Norway maple	<i>Acer platanoides</i>	19	NA	6	G	X									var. 'Crimson King'
211	Norway maple	<i>Acer platanoides</i>	22	NA	6	G	X									var. 'Crimson King'; woundwood lower scaffold branches
212	Littleleaf linden	<i>Tilia cordata</i>	38	NA	10	G								X		
213	Littleleaf linden	<i>Tilia cordata</i>	36	NA	10	G								X		Overhangs street at 2 m height
214	Littleleaf linden	<i>Tilia cordata</i>	35	NA	10	G										Overhangs street at 2 m height
215	Group		26	15, 18	1.5-3	G										White cedar specimen, (1.5 m wide and 1.5 m tall) euonymus (3 m wide and 1.5 m tall), 2 globe cedar (2 m wide and 1 m tall), cedar (1.5 m wide and 2 m tall)
216	Group	<i>Ailanthus altissima</i>	28	15-28	10	G										4 tree of heaven: 3 have 1 or 2 stems, 1 has 3 stems
217	English oak	<i>Quercus robur</i>	16	NA	2	F-G							X			20% dieback, Christmas lights throughout crown
218	English oak	<i>Quercus robur</i>	12	11	2	F-G										15% dieback, Christmas lights throughout crown
219	English oak	<i>Quercus robur</i>	22	NA	3	G										Christmas lights throughout crown
220	Red oak	<i>Quercus rubra</i>	5	NA		D										Irrigation bag present
221	Hackberry	<i>Celtis occidentalis</i>	5	NA	1	P										Irrigation bag present
222	Honey locust	<i>Gleditsia triacanthos</i>	6	NA	2	G										Irrigation bag present
223	Eastern redbud	<i>Cercis canadensis</i>	10	NA	2	G										DBH measured at 1 m height
224	Eastern redbud	<i>Cercis canadensis</i>	9	NA	2	G										
225	Eastern redbud	<i>Cercis canadensis</i>	11	NA	2	G								X		Girdled

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							GR	COD	NA	INCL	CRB	MBR	DPR	SMD		ADV
226	Group	<i>Euonymus alatus, Spirea sp.</i>	NA	NA	1	G										1 burning bush, 28 spirea
227	Honey locust	<i>Gleditsia triacanthos</i>	39	NA	8	G		2			X					
228	Honey locust	<i>Gleditsia triacanthos</i>	45	NA	8	F-G		2								10% dieback
229	European beech	<i>Fagus sylvatica</i>	10	NA	3	G										Columnar
230	Group		NA	NA	1	G										11 spirea, 22 potentilla
231	Norway maple	<i>Acer platanoides</i>	41	NA	10	F-G	X									Dead leader, 10% dieback
232	Norway maple	<i>Acer platanoides</i>	41	NA	10	G	X									
233	Norway maple	<i>Acer platanoides</i>	24	NA	8	G		2								
234	Honey locust	<i>Gleditsia triacanthos</i>	19	NA	8	G		2								
235	Callery pear	<i>Pyrus calleryana</i>	20	NA	5	G		2								
236	Callery pear	<i>Pyrus calleryana</i>	20	NA	5	G		1.8								
237	Callery pear	<i>Pyrus calleryana</i>	17	NA	4	G										
238	Group	<i>Amelanchier laevis</i>	NA	NA	3	G										4 multistem serviceberry 3 m tall and 3 m wide
239	Callery pear	<i>Pyrus calleryana</i>	37	NA	7	G		1.8	X	X		X				
240	Group		NA	NA	1	G										66 spirea, 10 burning bush all in 1 m tall planter
241	Norway maple	<i>Acer platanoides</i>	10	NA	2	G										
242	Group	<i>Euonymus alatus</i>	NA	NA	1.5	G										2 burning bush 1.5 m tall
243	Group	<i>Spirea sp.</i>	NA	NA	1	G										1 m tall shrubs
244	Callery pear	<i>Pyrus calleryana</i>	20	NA	6	G										
245	Red maple	<i>Acer rubrum</i>	16	NA	8	G										Chlorotic; seam from base to 1.5 m with woundwood
246	Littleleaf linden	<i>Tilia cordata</i>	15	NA	7	G				X	X					6 yews; spirea
247	Group		12	8-12	5	G										5 crabapples with base planting of 50% yews, 50% rose
248	Group	<i>Euonymus alatus</i>	NA	NA	2	G										5 burning bush
249	White spruce	<i>Picea glauca</i>	17	NA	4	G										
250	White spruce	<i>Picea glauca</i>	17	NA	4	G										
251	Colorado spruce	<i>Picea pungens</i>	17	NA	5	G										
252	Colorado spruce	<i>Picea pungens</i>	17	NA	5	G										East lean
253	Colorado spruce	<i>Picea pungens</i>	17	NA	5	G										Lean on east
254	Littleleaf linden	<i>Tilia cordata</i>	54	NA	12	G		4						X		
255	Norway maple	<i>Acer platanoides</i>	29	NA	10	G	X	2								
256	Norway maple	<i>Acer platanoides</i>	31	NA	10	G	X	2								
257	Norway maple	<i>Acer platanoides</i>	27	NA	10	G										
258	Honey locust	<i>Gleditsia triacanthos</i>	56	NA	12	G		2					X			
259	Burning bush	<i>Euonymus alatus</i>	NA	NA	2	G										Hedge under Trees 250-254; 1.5 m tall
260	Group		NA	NA	1	G										Currant hedge and burning bush ending at Tree 258
261	Littleleaf linden	<i>Tilia cordata</i>	23	NA	4	G		2	X	X						Rotting heartwood up to 1 m height
262	Crabapple	<i>Malus sp.</i>	25	NA	7	G		2					X	X		
263	Austrian pine	<i>Pinus nigra</i>	49	NA	12	G										Sapsucker holes
264	Honey locust	<i>Gleditsia triacanthos</i>	47	NA	12	G		3								15% dieback, slight lean southbound

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							GR	COD	NA	INCL	CRB	MBR	DPR	SMD	

Legend - Structural Defects

GR Girdling roots

COD Co-dominant stems

NA Narrow branch angles

INCL Included bark

CRB Crossing branches

MBR Multiple branch attachment at a single location

DPR Decay at pruning wounds

SMD Small dead branches

ADV Adventitious shoots

MATCH PAGE 5 OF 9

MATCH PAGE 7 OF 9



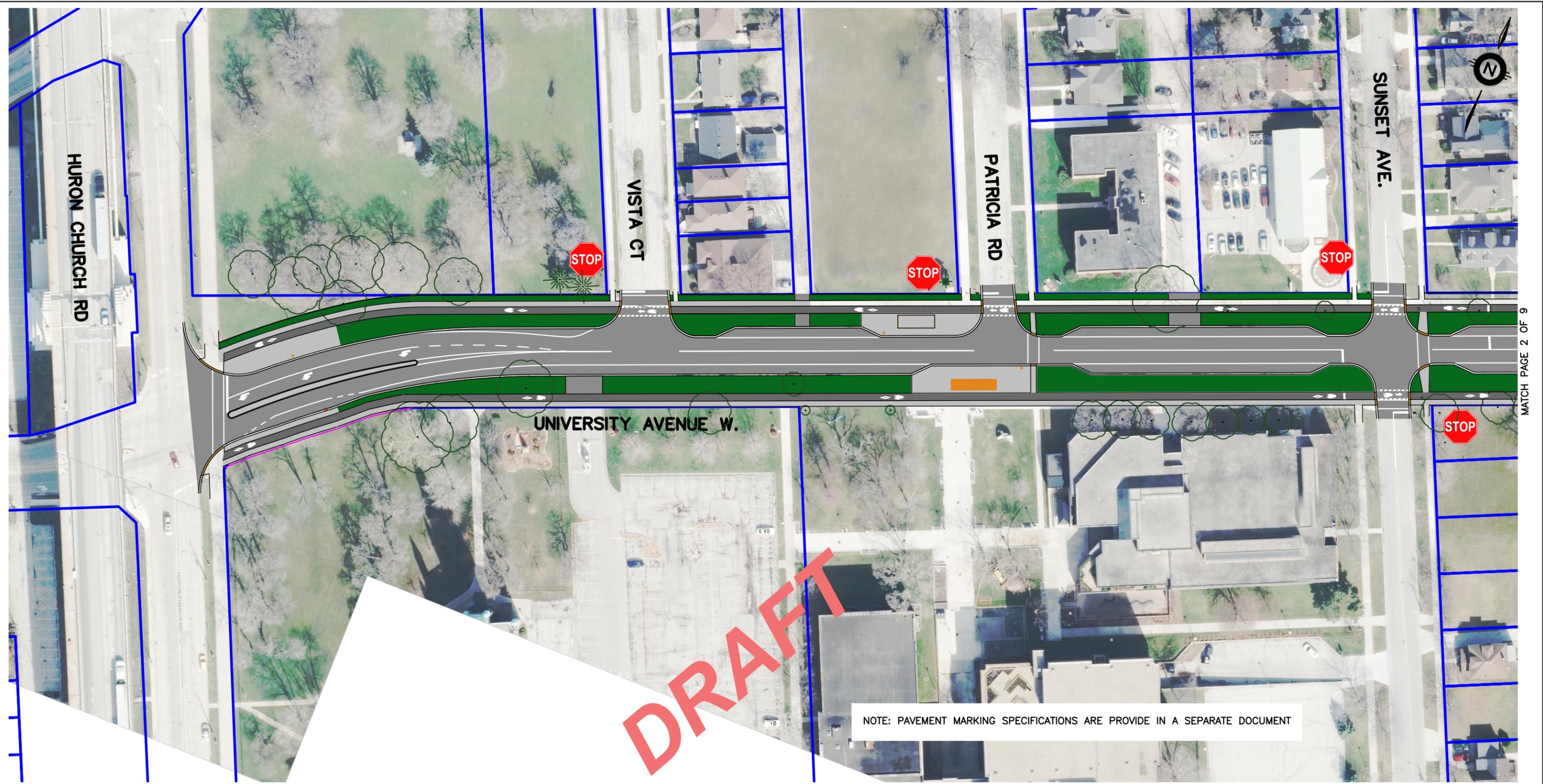
LEGEND

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	EX. PROPERTY LINE		DROPPED CURB
	NEW SIDEWALK		SOD
	CYCLE TRACK		BUS STOP
	PAVEMENT		BUS STOP WITH SHELTER
	NEW CURB/GUTTER		BUS STOP WITH PAD



**UNIVERSITY AVENUE W CLASS EA
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PROJECT #	B000917
SCALE	1:1000
DATE	August 2021
PAGE #	6 of 9



MATCH PAGE 2 OF 9

NOTE: PAVEMENT MARKING SPECIFICATIONS ARE PROVIDE IN A SEPARATE DOCUMENT

LEGEND	
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	EX. PROPERTY LINE
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	CYCLE TRACK
	PAVEMENT
	NEW CURB/GUTTER
	EXISTING SIDEWALK
	DROPPED CURB
	SOD
	BUS STOP
	BUS STOP WITH SHELTER
	BUS STOP WITH PAD

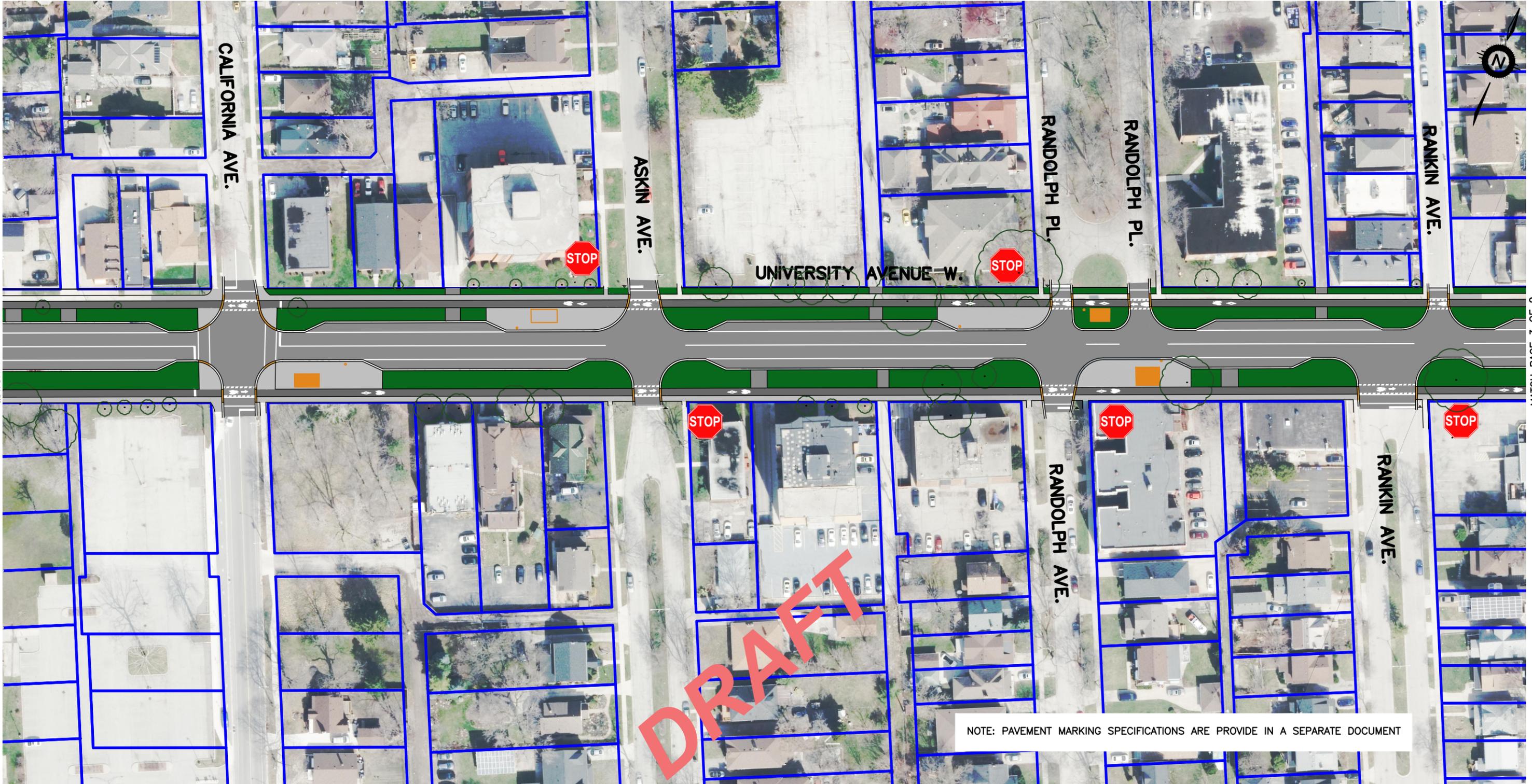


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PROJECT #	B000917
SCALE	1:1000
DATE	June 2021
PAGE #	1 of 9

MATCH PAGE 1 OF 9

MATCH PAGE 3 OF 9



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LEGEND	
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	EX. PROPERTY LINE
	NEW SIDEWALK
	CYCLE TRACK
	PAVEMENT
	NEW CURB/GUTTER
	EXISTING SIDEWALK
	DROPPED CURB
	SOD
	BUS STOP
	BUS STOP WITH SHELTER
	BUS STOP WITH PAD

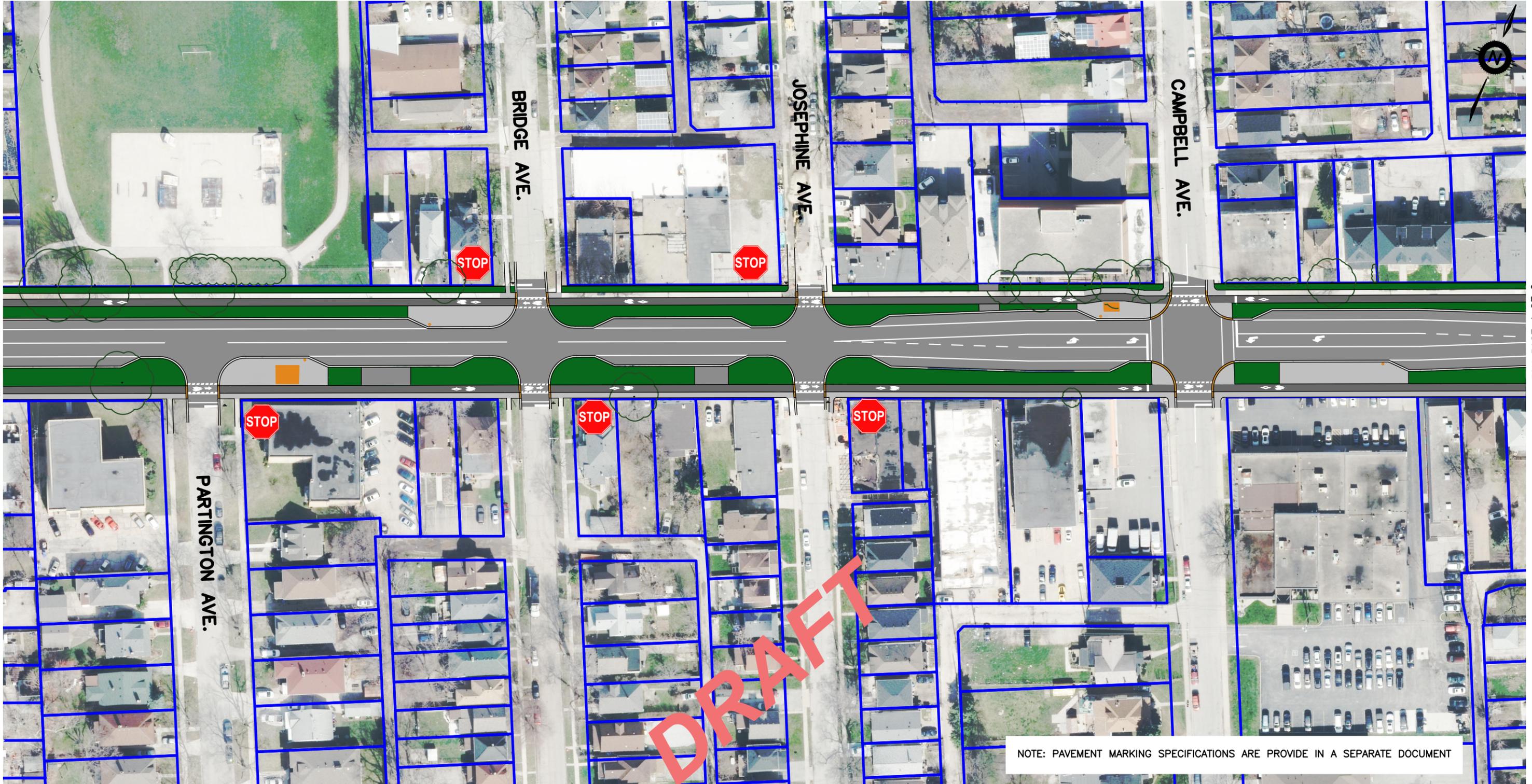


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PROJECT #	B000917
SCALE	1:1000
DATE	June 2021
PAGE #	2 of 9

MATCH PAGE 2 OF 9

MATCH PAGE 4 OF 9



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LEGEND	
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	EX. PROPERTY LINE
	NEW SIDEWALK
	CYCLE TRACK
	PAVEMENT
	NEW CURB/GUTTER
	EXISTING SIDEWALK
	DROPPED CURB
	SOD
	BUS STOP
	BUS STOP WITH SHELTER
	BUS STOP WITH PAD

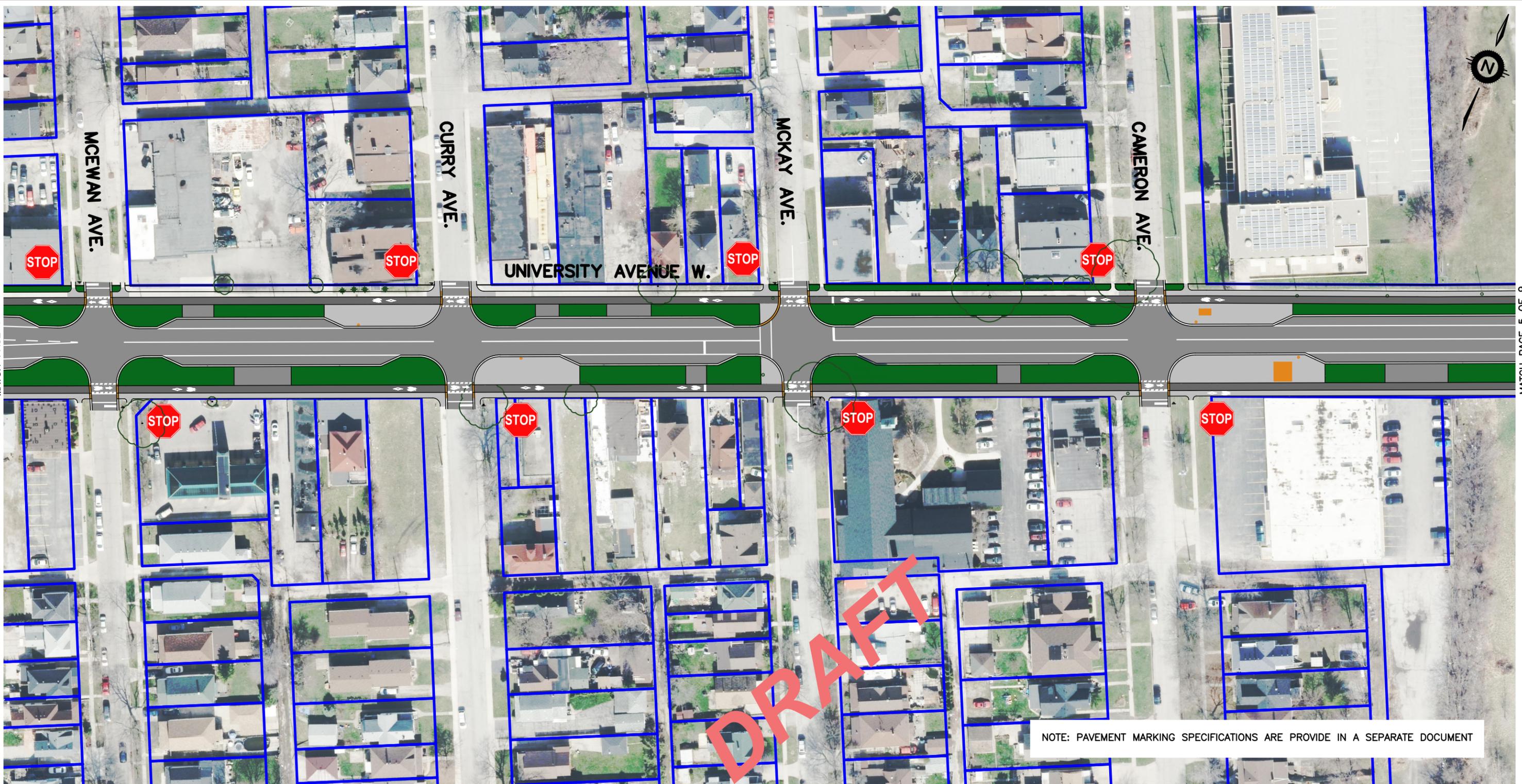


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PROJECT #	B000917
SCALE	1:1000
DATE	June 2021
PAGE #	3 of 9

MATCH PAGE 3 OF 9

MATCH PAGE 5 OF 9



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LEGEND	
	PROP. PROPERTY LINE
	EX. PROPERTY LINE
	NEW SIDEWALK
	CYCLE TRACK
	PAVEMENT
	NEW CURB/GUTTER
	EXISTING SIDEWALK
	DROPPED CURB
	SOD
	BUS STOP
	BUS STOP WITH SHELTER
	BUS STOP WITH PAD

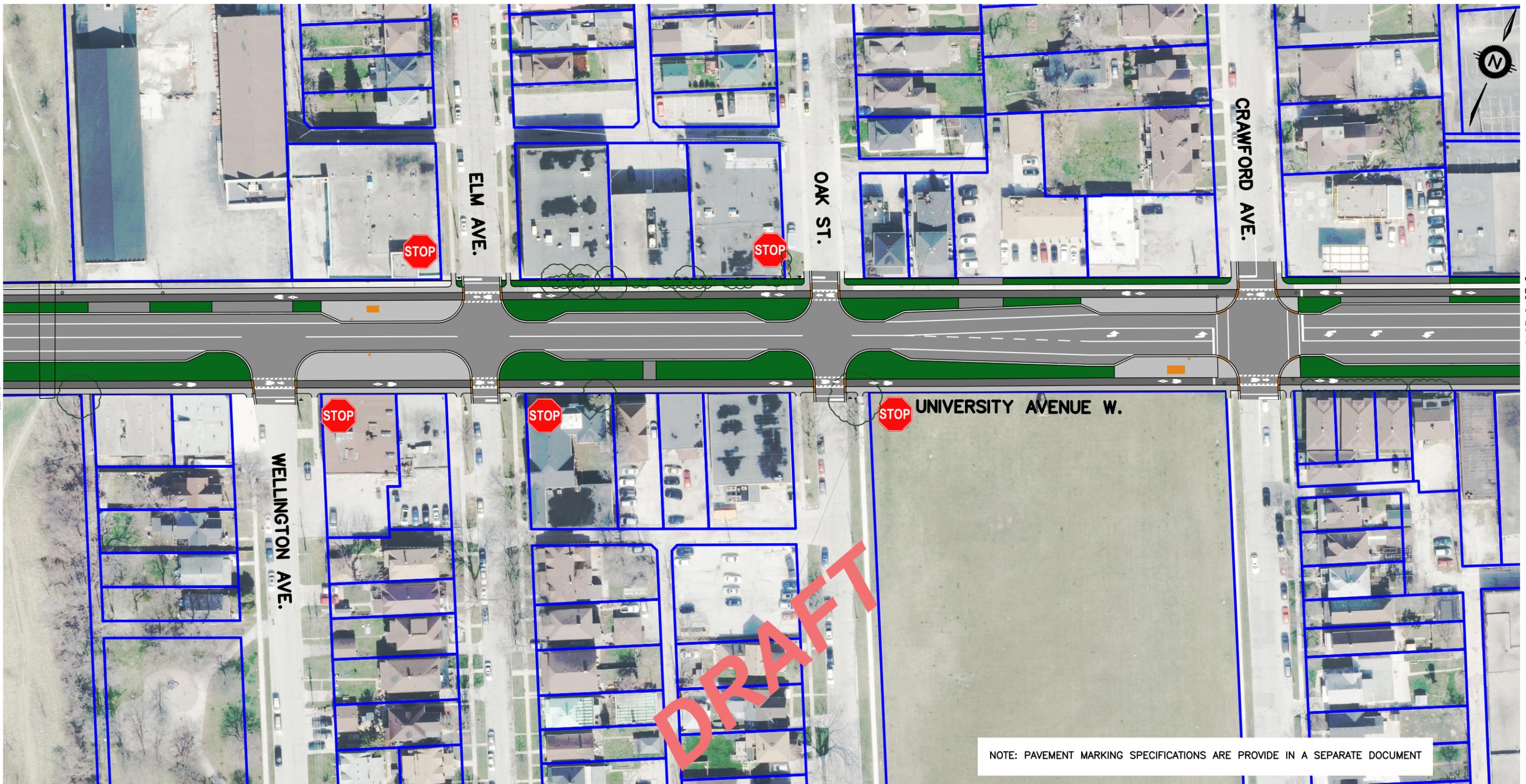


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PROJECT #	B000917
SCALE	1:1000
DATE	June 2021
PAGE #	4 of 9

MATCH PAGE 4 OF 9

MATCH PAGE 6 OF 9



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LEGEND	
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	EX. PROPERTY LINE
	NEW SIDEWALK
	CYCLE TRACK
	PAVEMENT
	NEW CURB/GUTTER
	EXISTING SIDEWALK
	DROPPED CURB
	SOD
	BUS STOP
	BUS STOP WITH SHELTER
	BUS STOP WITH PAD

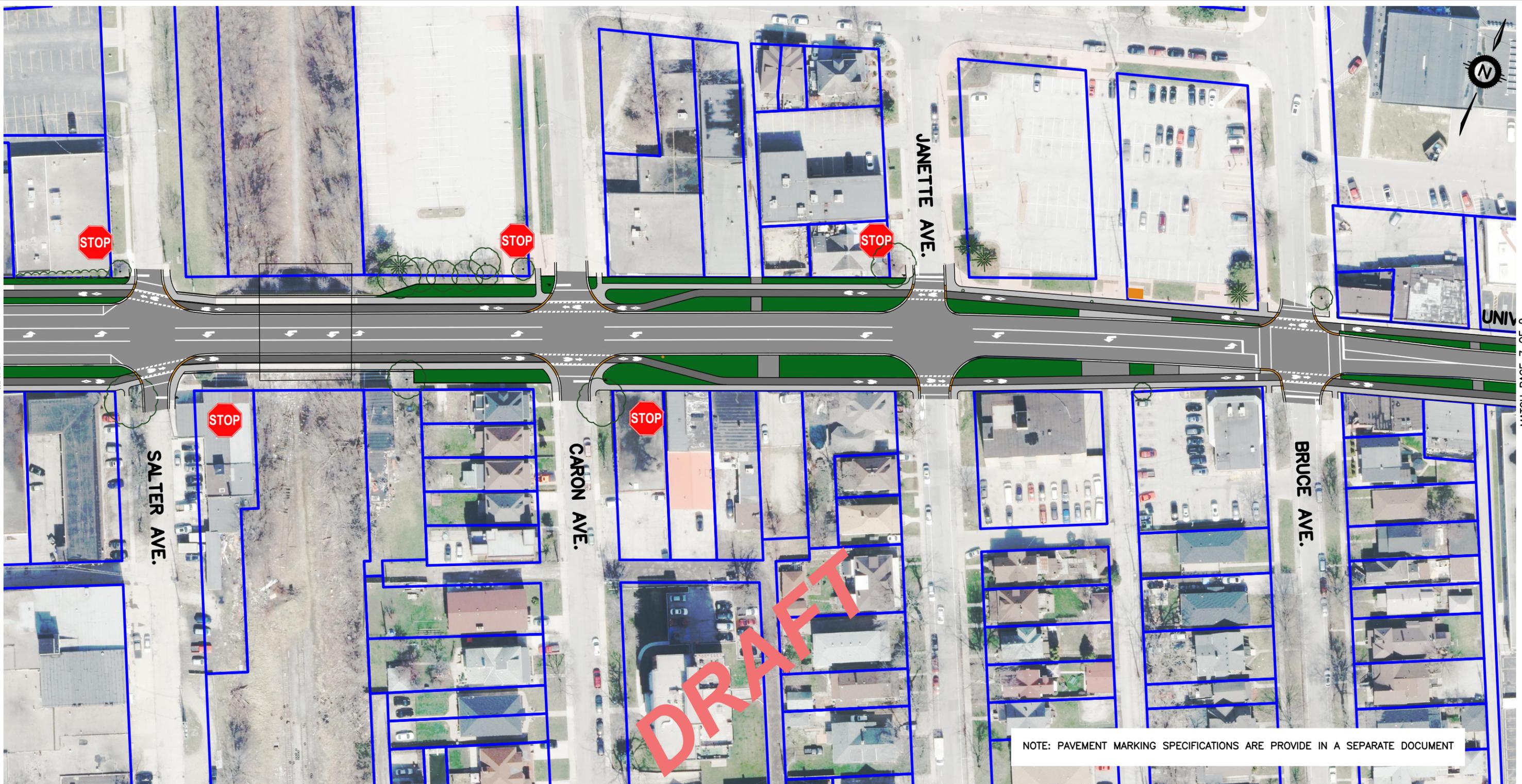


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PROJECT #	B000917
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DATE	June 2021
PAGE #	5 of 9

MATCH PAGE 5 OF 9

MATCH PAGE 7 OF 9



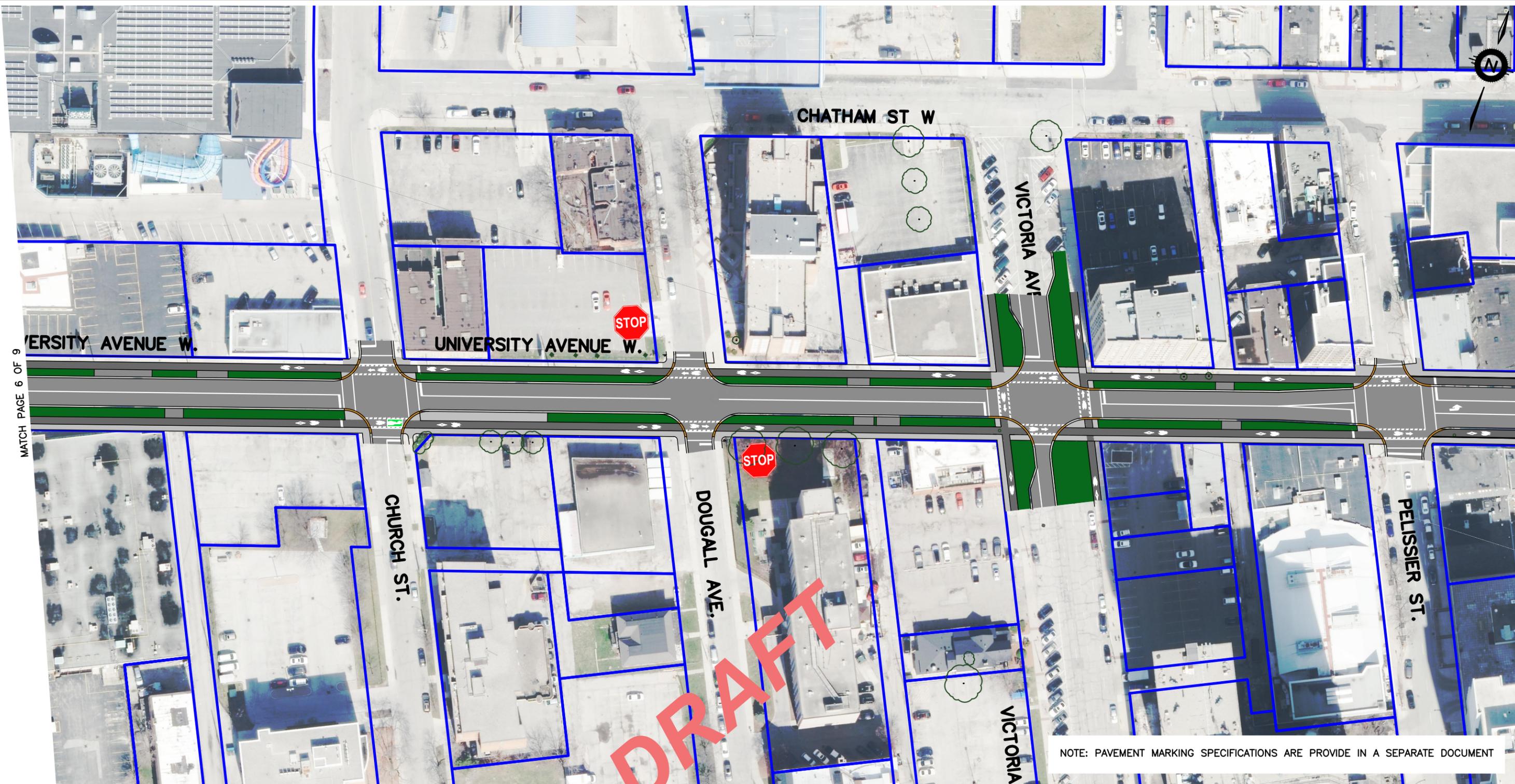
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LEGEND	
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	EX. PROPERTY LINE
	NEW SIDEWALK
	CYCLE TRACK
	PAVEMENT
	NEW CURB/GUTTER
	EXISTING SIDEWALK
	DROPPED CURB
	SOD
	BUS STOP
	BUS STOP WITH SHELTER
	BUS STOP WITH PAD



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PROJECT #	B000917
SCALE	1:1000
DATE	June 2021
PAGE #	6 of 9



MATCH PAGE 6 OF 9

MATCH PAGE 8 OF 9

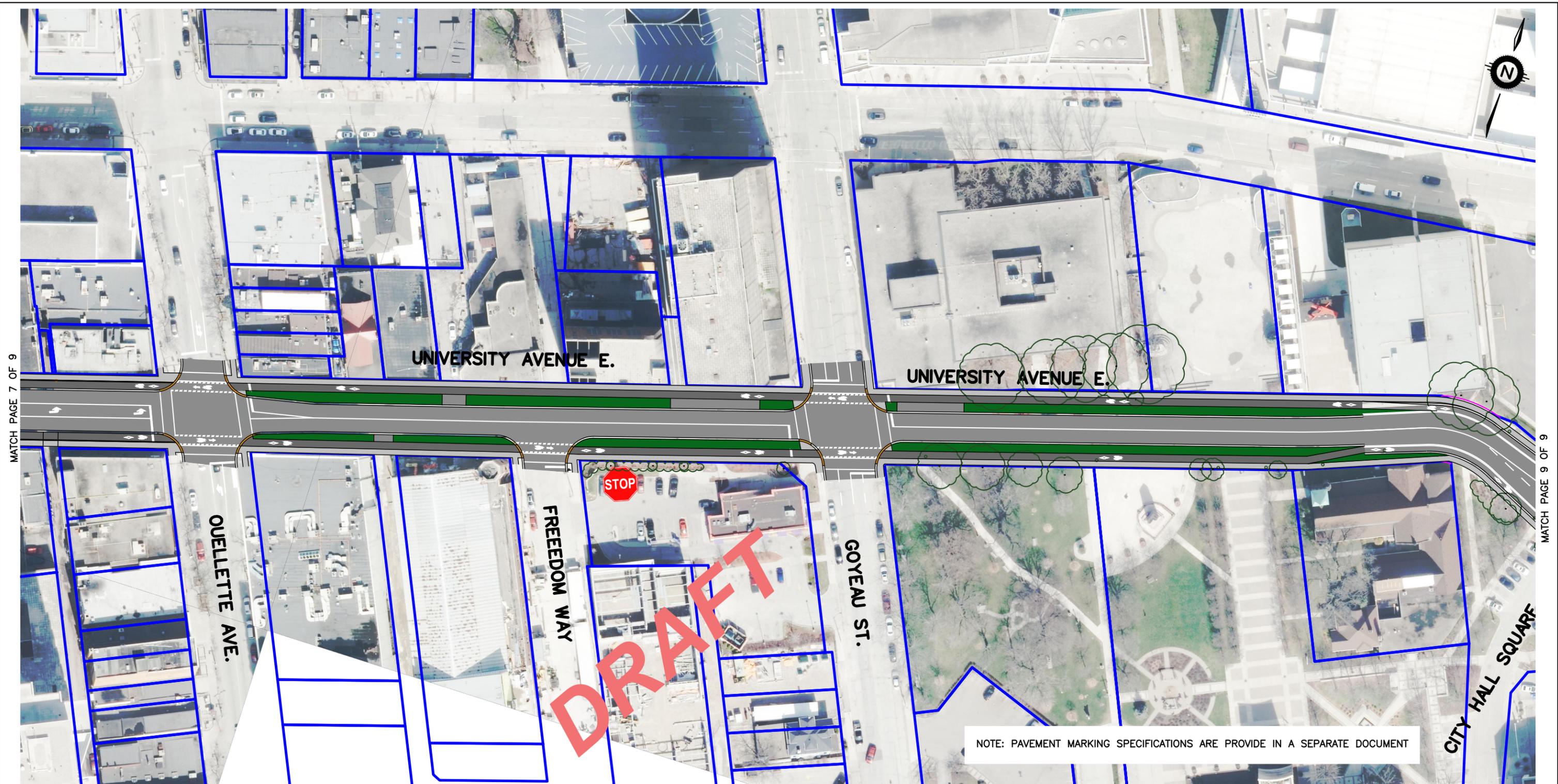
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	EX. PROPERTY LINE
	NEW SIDEWALK
	CYCLE TRACK
	PAVEMENT
	NEW CURB/GUTTER
	EXISTING SIDEWALK
	DROPPED CURB
	SOD
	BUS STOP
	BUS STOP WITH SHELTER
	BUS STOP WITH PAD



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PROJECT #	B000917
SCALE	1:1000
DATE	June 2021
PAGE #	7 of 9



MATCH PAGE 7 OF 9

MATCH PAGE 9 OF 9

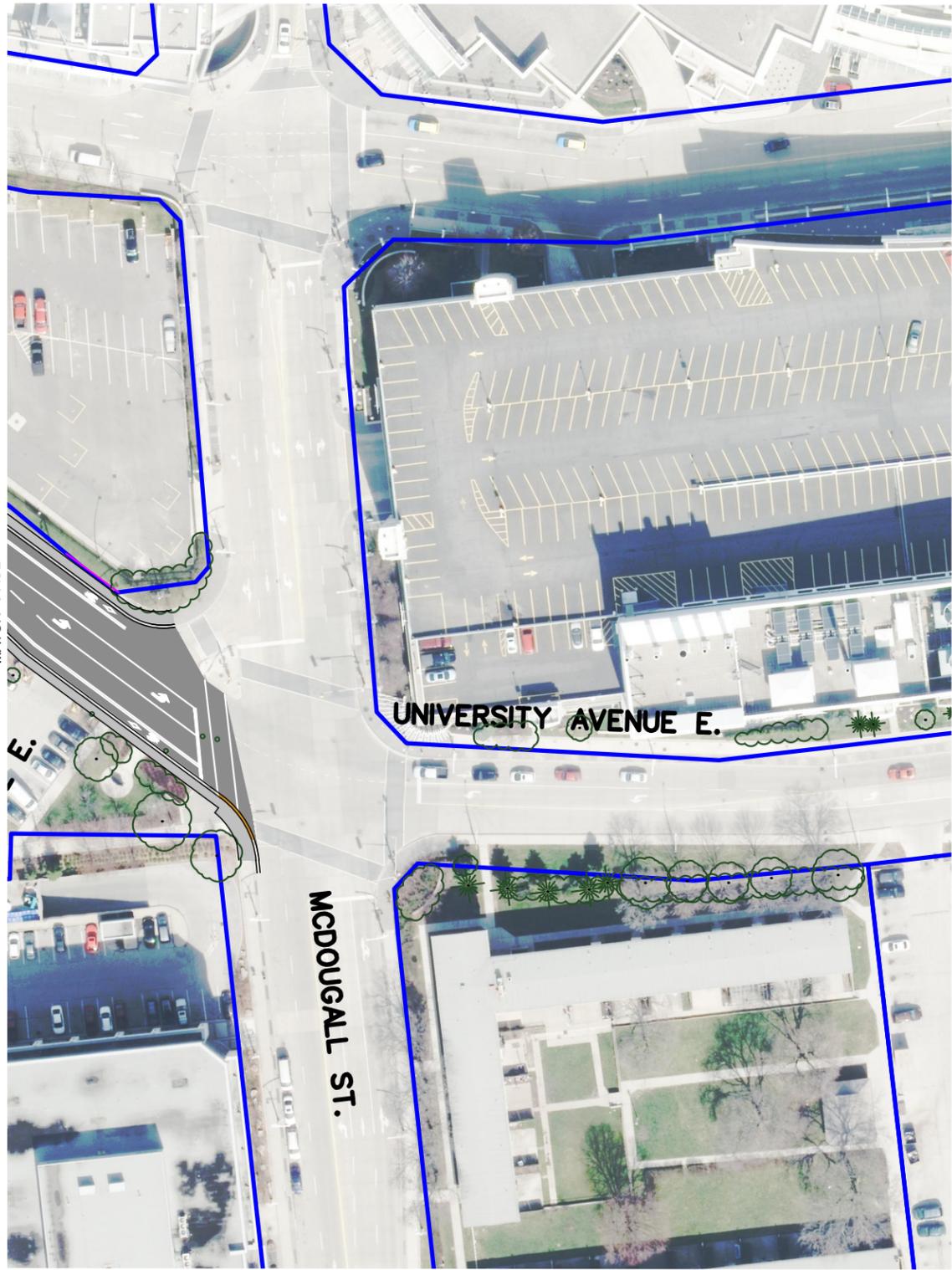
LEGEND	
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	EX. PROPERTY LINE
	NEW SIDEWALK
	CYCLE TRACK
	PAVEMENT
	NEW CURB/GUTTER
	EXISTING SIDEWALK
	DROPPED CURB
	SOD
	BUS STOP
	BUS STOP WITH SHELTER
	BUS STOP WITH PAD



**UNIVERSITY AVENUE W CLASS EA
FROM HURON CHURCH RD TO MCDOUGALL ST**
CITY OF WINDSOR
PREFERRED DESIGN

PROJECT #	B000917
SCALE	1:1000
DATE	June 2021
PAGE #	8 of 9

MATCH PAGE 8 OF 9



DRAFT

NOTE: PAVEMENT MARKING SPECIFICATIONS ARE PROVIDE IN A SEPARATE DOCUMENT

LEGEND

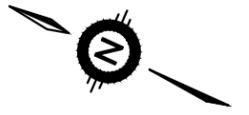
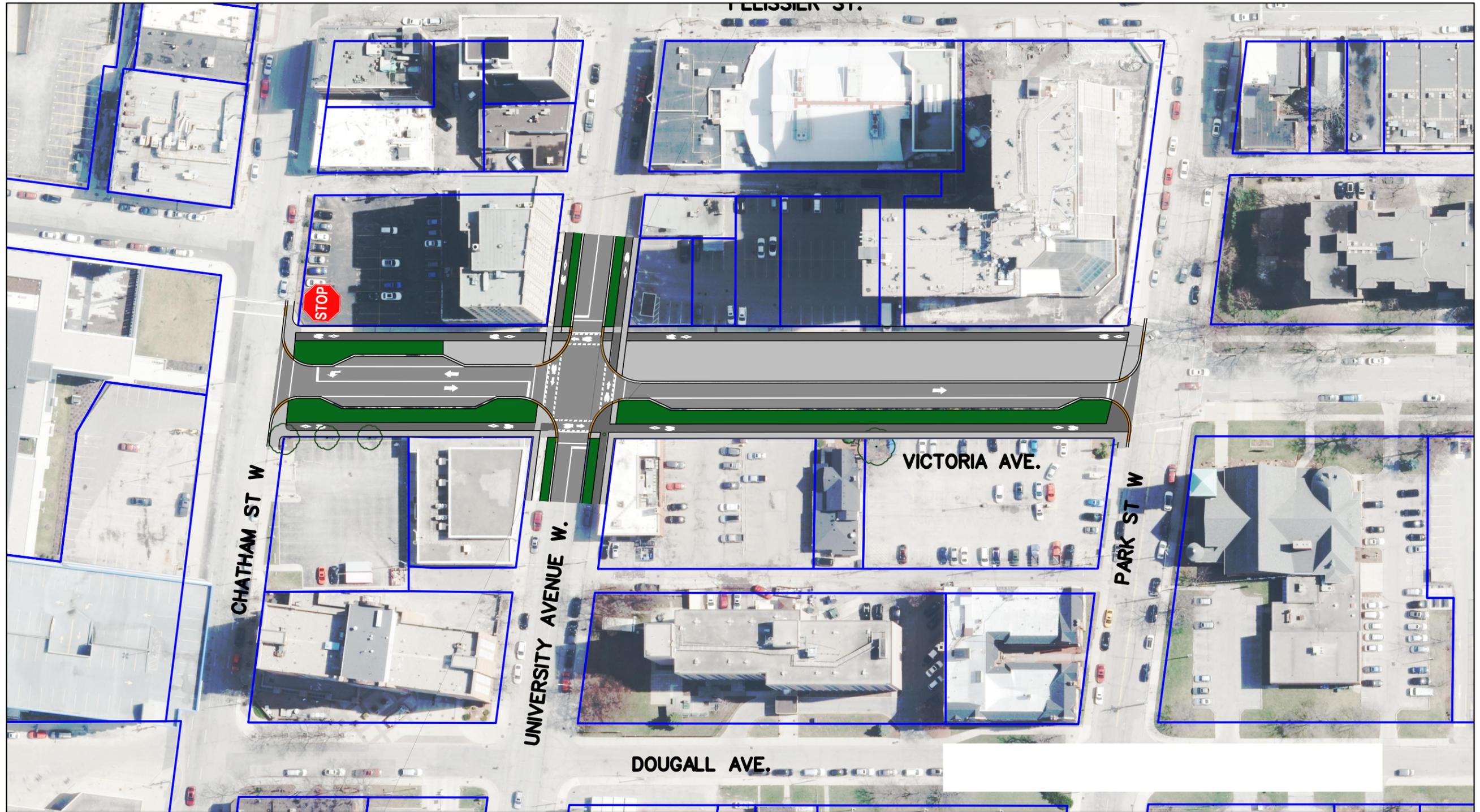
-  PROP. PROPERTY LINE
-  EX. PROPERTY LINE
-  NEW SIDEWALK
-  CYCLE TRACK
-  PAVEMENT
-  NEW CURB/GUTTER

-  EXISTING SIDEWALK
-  DROPPED CURB
-  SOD
-  BUS STOP
-  BUS STOP WITH SHELTER
-  BUS STOP WITH PAD



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PROJECT #	B000917
SCALE	1:1000
DATE	June 2021
PAGE #	9 of 9



LEGEND



**VICTORIA AVENUE
FROM CHATHAM ST TO PARK ST**
CITY OF WINDSOR
PREFERRED DESIGN

PROJECT #	B000917
SCALE	1:1000
DATE	June 2021
PAGE #	1 of 1

SUBMITTED BY CIMA CANADA INC.

55 King Street East

Bowmanville, ON L1C 1N4

T 905 697 4464 F 905 697 0443

cima.ca