
Appendix E: Public Information Centre Materials

Public Information Centre 1

**Planning, Preliminary Design and Environmental Assessment Study
Highway 6 (Hanon Expressway) Improvements**

Public Information Centre 1

WELCOME

Welcome to the first Public Information Centre (PIC) for the Planning, Preliminary Design, and Environmental Assessment Study for the upgrading of the Hanon Expressway from 0.5 kilometres south of Malby Road to the Speed River.

PURPOSE OF PUBLIC INFORMATION CENTRE

The purpose of this Public Information Centre is to:

- Display and seek input on interchange and access alternatives for College Avenue, Stone Road, Kotright Road, Laird Road, Clair Road and Malby Road;
- Display and seek input on the environmental conditions in the study area (i.e. natural, social, economic and cultural);
- Seek input on the evaluation criteria and process to be used to identify a preferred plan; and
- Answer questions about the study.

STUDY PROCESS

The study is following the 'Group B' process under the Class Environmental Assessment (EA) for Provincial Transportation Facilities (2000), which is an approved process for projects of this type. The study will be documented in a Transportation Environmental Study Report (TESR) that will be made available for public review.

WHAT'S NEXT

Input received at this PIC will be used to analyze alternative solutions and develop a preferred plan. A second PIC is scheduled for the fall of 2007 and will provide the public with an opportunity to comment on the preferred plan and preliminary design recommendations.

At the end of the study a Transportation Environmental Study Report will be prepared and made available for a 30-day public review period. Both the second PIC and the public review period will be announced in local newspapers and on the project website.

YOUR INPUT IS IMPORTANT

Through communication and interaction, public involvement provides an opportunity for you to help shape the decisions made in a study. Project information and updates are available at www.hanonimprovements.ca.

You can provide your comments by filling out a comment sheet and either dropping it in the comment sheet box at today's meeting or by mailing it to:

Maya Caron, Environmental Planner, MCIP, RPP
Santec Consulting Ltd., 1400 Rymal Road East, Hamilton, ON L9W 3N9
Tel. (905) 381-3218, Fax (905) 385-3534
Email: maya.caron@santec.com

Please submit your comments before June 7, 2007.

Freedom of Information and Protection of Privacy Act

Comments and information regarding this study are being collected to satisfy the requirements of the Environmental Assessment Act, and in accordance with the Freedom of Information and Protection of Privacy Act. With the exception of personal information, all comments will become part of the public record.

Highway 6 (Hanon Expressway) Improvements
From Malby Road to the Speed River
GWP 3002-05-00

Evaluation Process

Process

The evaluation process will be used to:

- Identify an overall improvement plan that accommodates future traffic and safety demand
- Determine the best locations and configurations for:
 - Interchanges
 - Municipal Road Connections
 - Grade Separations
 - Road Closures

A comparative analysis of the alternatives will be undertaken for each evaluation criterion. The alternatives will be ranked according to how well each alternative is judged to satisfy the evaluation criteria.

Goal

- To select an improvement plan for Highway 6 (Hanon Expressway) from south of Malby Road to the Speed River that: provides safe operations; accommodates local access to the surrounding area; is cost-effective; and minimizes the impacts to the natural, social and cultural environments.

This will be achieved by applying each of the evaluation criteria to each of the alternatives.

Project Background

1969

The Ministry completed a Functional Planning Study for the Hanlon Expressway from Clair Road northerly to Woodlawn Road. This study identified that the Expressway would serve as a major north-south link connecting Highway 401 to Highway 7.

1972

The Hanlon Expressway was constructed to relieve traffic on Guelph's arterial road system. Shortly after, studies looked at alternatives with the ultimate long-term goal of converting the Hanlon Expressway to a freeway with interchanges.

1994

MTO completed an *Environmental Study Report* and *Preliminary Design Report* for the upgrading of the Hanlon Expressway from 0.9 km south of the Speed River to 0.3 km south of Woodlawn Avenue. The report included upgrading the north section of the Hanlon Expressway to a freeway with interchanges.

2000

MTO constructed the Hanlon Expressway interchange at Wellington Street

2004

A *Traffic Operations Study* was carried out for the Hanlon Expressway to assess existing and future traffic operations of the existing at-grade intersections. The *Traffic Operations Study* identified many intersections with poor operations. Future need for upgrading the at-grade intersections to grade-separations (i.e., flyovers) or interchanges was identified.

2007

MTO initiates this Environmental Assessment and Preliminary Design Study. The purpose is to address the operations of the intersections and improve overall operations along the Hanlon by upgrading the Hanlon Expressway from south of Maltby Road to the Speed River, to a freeway with access restricted to interchange locations only.

Highway 6 (Hanlon Expressway) Improvements Environmental Assessment Process



Preliminary Evaluation Criteria

Traffic Operations

- Accommodates projected traffic demand
- Supports and enhances provincial highway function
- Reduces the number of collisions
- Overall design standard consistent with *Geometric Standards for Ontario Highways, Interchanges and Connecting Roads*

Access

- Supports existing and future growth and development
- Supports the municipal road network
- Complements future municipal road improvements

Constructability

- Existing traffic flow and operations accommodated during construction
- Uses conventional construction techniques

Natural Environment

- Ecological features, including wetlands, greenbelts, watercourses, wildlife habitat, surfacewater and groundwater

Social Environment

- Residents and businesses displaced
- Property requirements
- Compatible with City of Guelph and Wellington County Official Plans
- Views of highway / landscape for adjacent residents
- Noise and air quality
- Community and recreational facilities, including trails

Cultural Environment

- Registered and identified Built Heritage Features and Cultural Landscapes
- Archaeological resources

Applied Environment

- Waste disposal sites or potentially contaminated sites

Cost

- Cost, including construction, utility relocation and property

Interim Improvements

The following interim improvements are planned. These improvements are not part of this study but are required to maintain safe traffic movement until the interchanges are constructed.

2007

Minor repaving at the following intersections: College Avenue, Stone Road, and Paisley Avenue.

2007

The City of Guelph has completed a Municipal Environmental Assessment for improvements at Clair Road and Laird Road to support the first phase of the Huron Creek Business Park. The improvements include traffic signals and intersection improvements at the Clair Road Intersection, and intersection improvements at the Laird Road intersection.

2008 - 2010

Intersection improvements including traffic signals and the addition of turning lanes (if necessary) at all intersections through the corridor.

EXISTING ENVIRONMENTAL CONDITIONS

FOR HIGHWAY 6 (HANLON EXPRESSWAY) IMPROVEMENTS From Maltby Road to the Speed River GWP 3002-05-00

This project includes identifying existing environmental conditions in the study area, evaluating alternatives based on environmental (natural, social, cultural, and applied) impacts, and identifying impacts and proposing mitigation measures for the Recommended Plan.

The project team includes specialists in the areas of noise, land use/agriculture, fisheries and aquatics, terrestrial resources and vegetation, archaeology, built heritage and cultural landscapes, waste management and contamination, and noise. Existing environmental conditions are currently being established in the study area and are displayed on the Existing Environmental Conditions Plan.

Please let the project team know if you can provide any additional information about existing environmental features in the study area.

FEATURES OF THE EXISTING ENVIRONMENT INCLUDE:

NATURAL

- Two Provincially Significant Wetlands:
 - Hanlon Creek Swamp Wetland Complex – the Hanlon Creek is a coldwater watercourse and is designated as an Environmentally Significant Area and a Major Open Space Feature by the City of Guelph
 - Speed River Wetland Complex – the Speed River is a warmwater watercourse and is designated as an Environmentally Significant Area Major Open Space Feature by the City of Guelph
- Six rare animal species
- Open Space Linkages and Greenways
- One woodlot > 1 ha

SOCIAL

- Lands zoned as Agricultural and Rural Industrial by the County of Wellington
- Lands zoned as Industrial (South Industrial Lands, Hanlon Creek Business Park and Hanlon Business Park), Park/Open Space, Agricultural, Commercial, and Residential by the City of Guelph
- Lands zoned as Primary Agricultural, Secondary Agricultural, and Core Greenlands by the Township of Puslinch
- Recreational and community features, including the YMCA and the trails network
- Schools, including College Heights Secondary School

CULTURAL

- Areas of high archaeological potential (i.e. near watercrossings)
 - Built Heritage Resources (listed in the City of Guelph's Heritage Structures Inventory and the Puslinch Historical Society)
- | | |
|--|---|
| > 386 College Ave. W, Janeville, c. 1854 | > 475 McWilliams (set to be demolished) |
| > 204 College Ave. W, c. 1870 | > 264 Crawley Rd., c. 1850 |
| > 35 Niska Rd., Hanlon Farm, c. 1870 | > 372 Crawley Rd., c. 1890 |
| > 148 Downey Rd. | |

APPLIED

- Downey Road Groundwater Well (production and observation well)
- Guelph Limestone

RELATED PROVINCIAL PROJECTS

HIGHWAY 6 (HANLON EXPRESSWAY) IMPROVEMENTS
from South of Maltby Road to the Speed River
GWP 3002-05-00

LEGEND

EXISTING ROADWAY



EXISTING INTERCHANGE



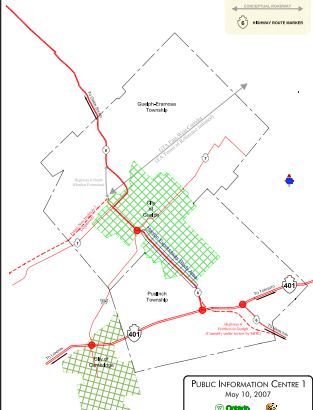
EXISTING ROADWAY



CONCEPTUAL ROADWAY



HIGHWAY ROUTE MARKER



PUBLIC INFORMATION CENTRE 1

May 10, 2007



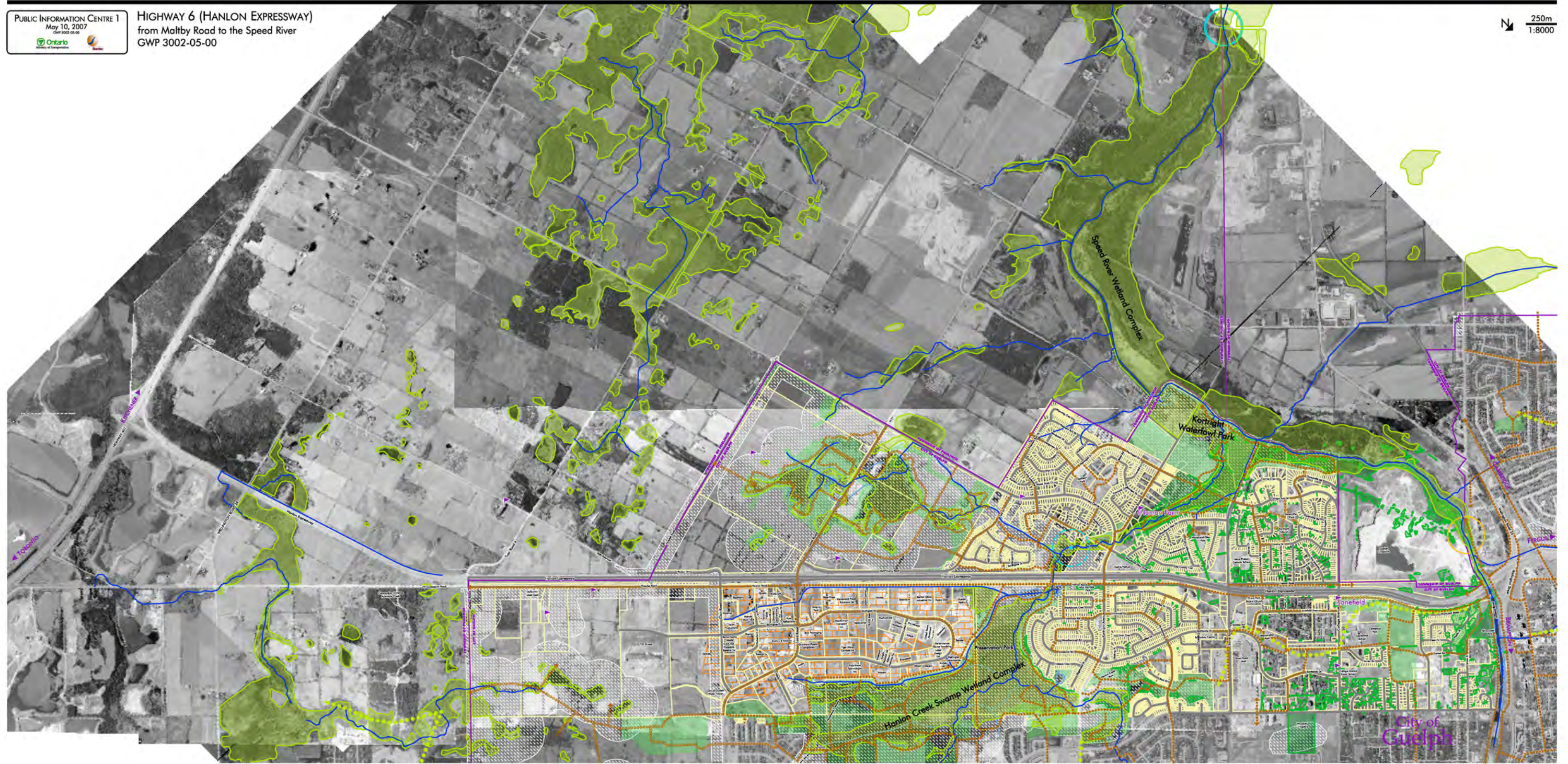
EXISTING ENVIRONMENTAL CONDITIONS

PUBLIC INFORMATION CENTRE 1
May 10, 2007
GWP 3002-05-00

HIGHWAY 6 (HANLON EXPRESSWAY)
from Maltby Road to the Speed River
GWP 3002-05-00

-  Greenbelt
-  Wetland
-  Open Areas
-  Municipal Boundary
-  Drainage
-  Hydrology
-  Land Use
-  Aggregate Resource Areas
-  Archeological Potential
-  Water Quality Monitoring Station
-  Groundwater Well
-  Sewage Treatment Plant
-  Roads
-  Trails
-  Open Space Links
-  Built Heritage Feature

250m
1:8000



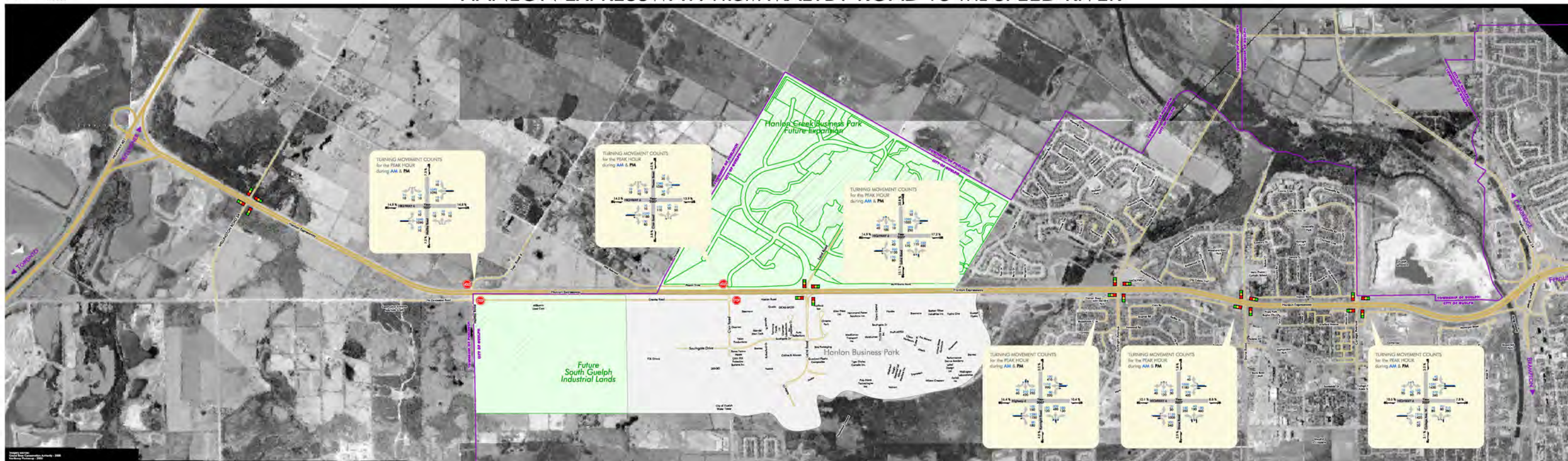
City of Guelph

Ground Data Collection: 2005-2006
Aerial Photography: 2005
GIS: 2006
Map Design: 2006
Map Production: 2006

Existing Transportation Conditions

N 250m
 1:8000

HANLON EXPRESSWAY: FROM MALTBY ROAD TO THE SPEED RIVER



FUNCTION

The Hanlon Expressway (Highway 6):

- is a vital link within the provincial highway network
- is intended to serve as a higher order highway, providing long-distance and regional connections
- is a major arterial within the City of Guelph

ISSUES

- multiple at-grade intersections limit the volume of traffic which can be safely accommodated
- local and regional importance of the Hanlon Expressway will increase as the City of Guelph experiences continued growth along with the neighbouring communities and municipalities
- increased demand on the existing system will result in traffic congestion, delays and deteriorating safety conditions
- improvements to intersection configurations and traffic control signals will not meet the needs of long-term traffic and safety demands

SOLUTION

Identify an improvement plan to continue the upgrading of Hanlon Expressway to a full freeway with interchanges, that:

- addresses operational and safety issues
- is cost effective
- addresses growth and development, both existing and future
- integrates with the municipal road network and provides reasonable local access
- is consistent with the City of Guelph's Transportation Master Plan and Official Plan
- is consistent with Ontario's Places to Grow Act, which identifies Guelph as an "Urban Growth Centre"
- minimizes impacts to the natural, social, and cultural environments

Potential Interchange Locations

250m
 1:8000

HANLON EXPRESSWAY: FROM MALTBY ROAD TO THE SPEED RIVER



SOUTH
 predominantly rural land use

CENTRAL
 predominantly commercial land use

NORTH
 predominantly residential land use

Wellington Road 34

- Highway 6, Freelon to Guelph Environmental Assessment Study recommended an interchange between Wellington Road 34 and Maltby Road and a flyover at Wellington Road 34
- The Environmental Assessment Study is currently under review by the Ministry of the Environment
- The Wellington Road 34 interchange is not part of this study

Maltby Road

- Maltby Road can be closed at the Hanlon Expressway since an extension of Southgate Drive through the proposed South Guelph Industrial lands and the adjacent interchange would provide future access to the area
- An interchange cannot be provided at Maltby Road because of its proximity to a future interchange at Wellington Road 34
- Entrance/exit ramps from both interchanges would overlap without sufficient space for weaving areas
- Overlapping interchange ramps are not acceptable because highway safety is compromised

Clair Road

- Clair Road can be closed at the Hanlon Expressway since an extension of Southgate Drive through the proposed South Guelph Industrial lands and the adjacent interchange at Laird Road would provide future access to the area
- An interchange cannot be provided at Clair Road because of its proximity to a possible interchange at Laird Road

Laird Road

- Previous planning studies and the Hanlon Business Park Development Plan identified an interchange at Laird Road to provide access to the Hanlon Business Park and its proposed expansion to the east and west
- The City of Guelph Official Plan identified a future interchange at Laird Road

Kortright Road

- Predominant travel pattern is to and from the north
- Kortright Road/Downey Road are residential collectors in the City of Guelph road network
- A full interchange cannot be provided at Kortright Road because of the proximity of a possible interchange at Stone Road
- The entrance/exit ramps to the north would overlap with the ramps at a possible Stone Road interchange, without sufficient space for weaving areas
- Overlapping interchange ramps are not acceptable because highway safety is compromised
- A full interchange at Kortright Road would have significant property requirements

Stone Road

- A full interchange can be provided at Stone Road
- Stone Road is a major east-west arterial road in the City of Guelph road network with potential for future expansion (Stone Road Extension) and an increased role in the urban and regional transportation system
- Property requirements are minimal because there is sufficient space available at this location for an interchange

College Avenue

- An interchange cannot be provided at College Avenue because it is too close to the existing Wellington Street interchange
- The interchange entrance/exit ramps to the north would overlap with the existing ramps at the Wellington Street interchange, without sufficient space for weaving areas
- Overlapping interchange ramps are not acceptable because highway safety is compromised - a preliminary safety analysis indicates that predicted accidents would increase significantly if these ramps overlap
- Interchange entrance/exit ramps to the south would also overlap with ramps at a possible Stone Road interchange
- An interchange at College Avenue would have significant property requirements

A single interchange between Wellington Road 34 and Maltby Road

A single interchange at Laird Road

A single interchange at Stone Road
 (A partial interchange at Kortright Avenue is also being considered to address municipal needs)

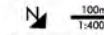
INTERCHANGE LOCATIONS CARRIED FORWARD FOR FURTHER CONSIDERATION

Central

INTERCHANGE ALTERNATIVES

Note:
At this stage of the study the advantages and disadvantages are preliminary only. Background information will be added to the evaluation process later in the study, as additional information is obtained (such as environmental field data, geotechnical investigations, etc.)

Advantages ← PRELIMINARY → Disadvantages



1 Laird Road Parclo A Configuration

Clair Road Closed

Possible Work by City of Guelph: Laird Road Realigned Southgate Drive Extension

The possible municipal road extensions are illustrated schematically. The City of Guelph has identified these road extensions in its Official Plan. The city will undertake further study and a Municipal Class Environmental Study for each of these possible road extensions.

- Accommodates the freeway exits on large radius ramps located in advance of the structure
- Interchange configuration provides high traffic capacity and minimal traffic conflicts
- Interchange is a standard configuration with inherent safety features
- No left turns from Laird Road are required – left turns are from the freeway ramp terminals only
- Exits from Laird Road to the freeway are free-flow movements that are consistently to the right
- Freeway ramp terminal locations allow for adequate sight-distance across the structure
- Preferred interchange configuration for design consistency along the Highway 6 (Hanlon Expressway) corridor
- The Parclo A-4 configuration is compatible with the approved Draft Plan of Subdivision for the Hanlon Business Park located on the west side of the freeway

- Traffic exiting from the freeway must stop at an intersection (ramp terminal) before entering Laird Road
- Requires more property than a diamond configuration
- Higher construction cost than a diamond configuration



2 Laird Road Parclo B Configuration

Clair Road Closed

Possible Work by City of Guelph: Laird Road Realigned Southgate Drive Extension

The possible municipal road extensions are illustrated schematically. The City of Guelph has identified these road extensions in its Official Plan. The city will undertake further study and a Municipal Class Environmental Study for each of these possible road extensions.

- The interchange configuration is a standard configuration
- The interchange configuration has minimal traffic conflicts
- All freeway traffic destined for Laird Road enters on a free-flow ramp (i.e. no stop is required at Laird Road)

- The freeway exits require successive and closely spaced decision points to separate westbound and eastbound traffic
- Freeway traffic exits from the freeway on a small radius loop ramp, which reduces the capacity and safety of the interchange
- Drivers on Laird Road are required to share the entrance ramps, which increases the number of conflict points and reduces the capacity of the interchange
- Left-turn storage lanes are required on Laird Road
- Requires more property than a diamond configuration
- Higher construction cost than a diamond configuration
- The Parclo B-4 configuration is not compatible with the approved Draft Plan of Subdivision for the Hanlon Business Park located on the west side of the freeway
- Development lands located in the northeast quadrant are impacted by the loop ramp



3 Laird Road Diamond Configuration

Clair Road Closed

Possible Work by City of Guelph: Laird Road Realigned Southgate Drive Extension

The possible municipal road extensions are illustrated schematically. The City of Guelph has identified these road extensions in its Official Plan. The city will undertake further study and a Municipal Class Environmental Study for each of these possible road extensions.

- The interchange is a standard configuration
- The freeway exits are on large radius ramps located in advance of the structure
- Exits from Laird Road are simple and exit moves are in the same direction as the freeway destination direction
- Speed change lanes through the structure are not required

- All connections between Laird Road and the exit and entrance ramps must be accomplished as turning movements at intersections
- Drivers on Laird Road are required to share the entrance ramps, which increases the number of conflict points and reduces the capacity of the interchange
- Left-turn storage lanes are required on Laird Road
- The Diamond configuration has less capacity than a Parclo B-4 configuration and a Parclo A-4 configuration
- The Diamond configuration is not compatible with the approved Draft Plan of Subdivision for the Hanlon Business Park located on the west side of the freeway
- Development lands located in the northeast quadrant are impacted by the entrance ramp

North

Note:
At this stage of the study the advantages and disadvantages are preliminary only. Background information will be added to the evaluation process later in the study, as additional information is obtained (such as environmental field data, geotechnical investigations, etc.)

INTERCHANGE ALTERNATIVES

Advantages ← PRELIMINARY → Disadvantages



1 Stone Road Parclo A Configuration

Grade Separations at:
Kortright Avenue
College Avenue

Possible Work by City of Guelph:
a: Stone Road Extension
b: Kortright Avenue Partial Interchange
c: College Avenue Extension

The possible municipal road extensions are illustrated schematically. The City of Guelph has identified these road extensions in its Official Plan. The city will undertake further study and a Municipal Class Environmental Assessment Study for each of these possible road extensions.

- Accommodates the freeway exits on large radius ramps located in advance of the structure
- Interchange configuration provides high traffic capacity and minimal traffic conflicts
- Interchange is a standard configuration with inherent safety features
- No left turns from Stone Road are required – left turns are from the freeway ramp terminals only
- Exits from Stone Road to the freeway are free-flow movements that are consistently to the right
- Freeway ramp terminal locations allow for adequate sight-distance across the structure
- Preferred interchange configuration for design consistency along the Highway 6 (Hanlon Expressway) corridor
- Traffic exiting from the freeway must stop at an intersection (ramp terminal) before entering Stone Road
- Requires more property than a Diamond configuration
- Higher construction cost than a Diamond configuration
- Existing residential lands located in the northwest quadrant are impacted by the interchange ramps



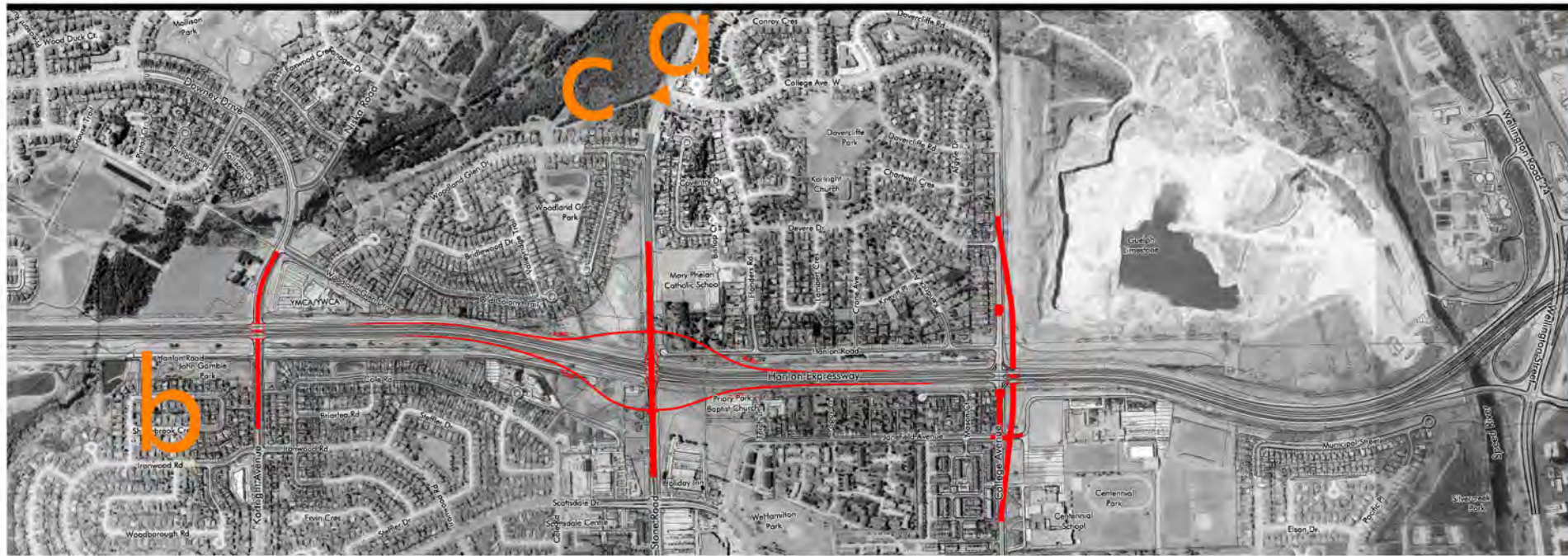
2 Stone Road Parclo B Configuration

Grade Separations at:
Kortright Avenue
College Avenue

Possible Work by City of Guelph:
a: Stone Road Extension
b: Kortright Avenue Partial Interchange
c: College Avenue Extension
d: Hanlon Road Extension

The possible municipal road extensions are illustrated schematically. The City of Guelph has identified these road extensions in its Official Plan. The city will undertake further study and a Municipal Class Environmental Assessment Study for each of these possible road extensions.

- The interchange is a standard configuration
- The interchange configuration provides high traffic capacity with minimal traffic conflicts
- Freeway traffic from the south destined for Stone Road west enters on a free-flow ramp (i.e. no stop is required at Stone Road)
- Freeway traffic from the north destined for Stone Road east enters on a free-flow ramp (i.e. no stop is required at Stone Road)
- Accommodates a possible future Hanlon Road Extension on the east side of the freeway, between Kortright Avenue and Stone Road
- The freeway traffic must exit from the freeway on a small radius loop ramp, which reduces the capacity and safety of the interchange
- Freeway traffic from the north and south must stop at an intersection (ramp terminal) before entering Stone Road east
- Drivers on Stone Road are required to share the entrance ramps, which increases the number of conflict points and reduces the capacity of the interchange
- Left-turn storage lanes are required on Stone Road
- The Parclo B-2 configuration has less capacity than a Parclo B-4 configuration and a Parclo A-4 configuration
- Requires more property than a Diamond configuration
- Higher construction cost than a Diamond configuration
- Existing residential lands located in the southwest quadrant are impacted by the interchange ramps



3 Stone Road Diamond Configuration

Grade Separations at:
Kortright Avenue
College Avenue

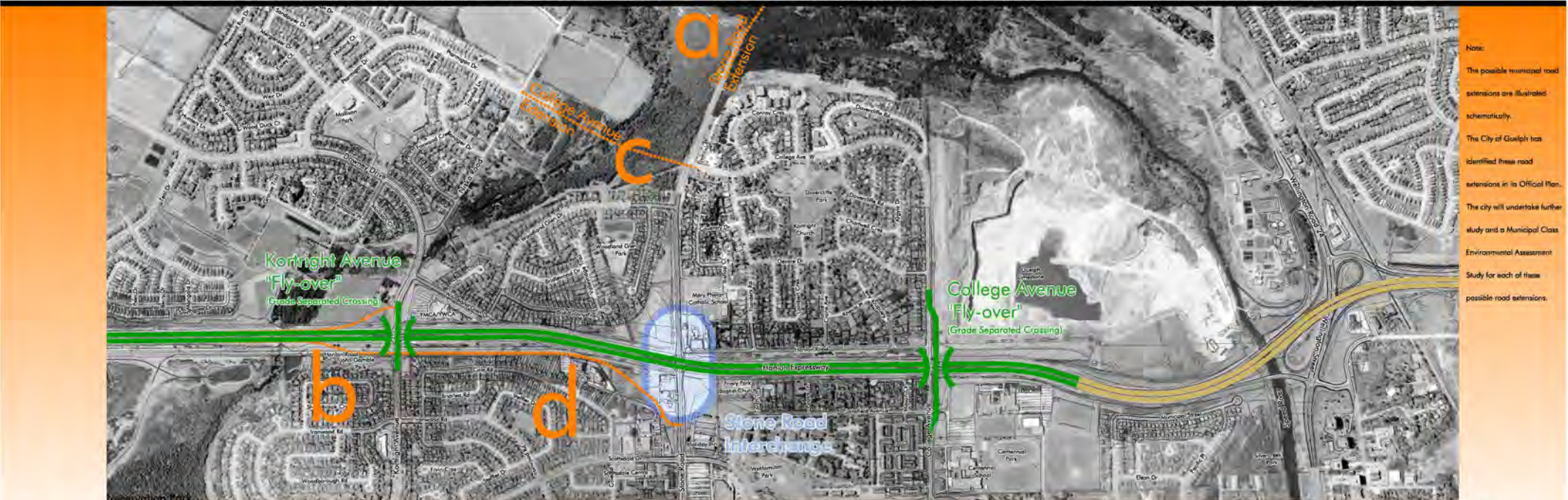
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a: Stone Road Extension
b: Kortright Avenue Partial Interchange
c: College Avenue Extension

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- The interchange is a standard configuration
- The freeway exits are on large radius ramps located in advance of the structure
- Exits from Stone Road are simple and exit moves are in the same direction as the freeway destination direction
- Speed change lanes through the structure are not required
- All connections between Stone Road and the exit and entrance ramps must be accomplished as turning movements at intersections
- Drivers on Stone Road are required to share the entrance ramps, which increases the number of conflict points and reduces the capacity of the interchange
- Left-turn storage lanes are required on Stone Road
- The Diamond configuration has less capacity than a Parclo B-4 configuration and a Parclo A-4 configuration
- Existing residential lands located in the northwest quadrant are impacted by the interchange ramps

Municipal Roads

POSSIBLE IMPROVEMENT SCENARIOS TO COMPLIMENT INTERCHANGE ALTERNATIVES



Note:
The possible municipal road extensions are illustrated schematically.
The City of Guelph has identified these road extensions in its Official Plan.
The city will undertake further study and a Municipal Class Environmental Assessment Study for each of these possible road extensions.



Issues

- | | | | | | |
|---|--|--|---|---|--|
| <ul style="list-style-type: none"> Single interchange location achieves desirable interchange spacing Significant through traffic volumes on existing municipal roads to and from the interchange Stone Road Extension improves access to the Stone Road interchange | <ul style="list-style-type: none"> Additional municipal road access to the Hanlon Expressway is provided at a partial interchange (oriented to the south) at Kortright Avenue Some reduction in through traffic volume on existing municipal roads that parallel the Hanlon Expressway Stone Road Extension improves access to the Stone Road interchange | <ul style="list-style-type: none"> Single interchange location achieves desirable interchange spacing New municipal road connection (College Avenue Extension) is provided on the west side of the Hanlon Expressway between Niska Road and Stone Road Improved municipal road connectivity on the west side of the Hanlon Expressway Reduction in through traffic volumes on existing municipal roads that parallel the Hanlon Expressway Stone Road Extension improves access to the Stone Road interchange | <ul style="list-style-type: none"> Single interchange location achieves desirable interchange spacing New municipal road connection (Hanlon Road Extension) is provided on the east side of the Hanlon Expressway between Kortright Avenue and Stone Road Improved municipal road connectivity on the east side of the Hanlon Expressway Reduction in through traffic volumes on existing municipal roads that parallel the Hanlon Expressway The Hanlon Road Extension makes for a complicated connection at Stone Road, which reduces capacity at the intersection, and makes for a very demanding drive through the interchange Stone Road Extension improves access to the Stone Road interchange | <ul style="list-style-type: none"> Additional municipal road access to the Hanlon Expressway is provided at a partial interchange (oriented to the south) at Kortright Avenue New municipal road connection (Hanlon Road Extension) is provided on the east side of the Hanlon Expressway between Kortright Avenue and Stone Road Improved municipal road connectivity on the east side of the Hanlon Expressway Reduction in through traffic volumes on existing municipal roads that parallel the Hanlon Expressway The Hanlon Road Extension makes for a complicated connection at Stone Road, which reduces capacity at the intersection, and makes for a very demanding drive through the interchange Stone Road Extension improves access to the Stone Road interchange | <ul style="list-style-type: none"> Additional municipal road access to the Hanlon Expressway is provided at a partial interchange (oriented to the south) at Kortright Avenue New municipal road connection (Hanlon Road Extension) is provided on the east side of the Hanlon Expressway between Kortright Avenue and Stone Road New municipal road connection (College Avenue Extension) is provided on the west side of the Hanlon Expressway between Niska Road and Stone Road Improved municipal road connectivity on both sides of the Hanlon Expressway Reduction in through traffic volumes on existing municipal roads that parallel the Hanlon Expressway The Hanlon Road Extension makes for a complicated connection at Stone Road, which reduces capacity at the intersection, and makes for a very demanding drive through the interchange Stone Road Extension improves access to the Stone Road interchange |
|---|--|--|---|---|--|

Public Information Centre 2

Public Information Centre 2

WELCOME

Welcome to the second Public Information Centre (PIC) for the Planning, Preliminary Design, and Environmental Assessment Study for the upgrading of the Hanlon Expressway from 0.5 kilometres south of Maltby Road to the Speed River.

PURPOSE OF PUBLIC INFORMATION CENTRE

The purpose of this Public Information Centre is to:

- Present and discuss the Preferred Plan which includes the closure of the intersections at Maltby Road and Clair Road, an interchange at Laird Road, a partial interchange at Kortrick Road, an interchange at Stone Road, and a grade-separation at College Avenue
- Seek input on the Preferred Plan
- Answer questions about the study

STUDY PROCESS

The study is following the 'Group B' process under the Class Environmental Assessment (EA) for Provincial Transportation Facilities (2000), which is an approved process for projects of this type. The study will be documented in a Transportation Environmental Study Report (TESR) that will be made available for public review.

WHAT'S NEXT

Input received at this PIC will be reviewed and considered in the development of the Preferred Plan.

At the end of the study a Transportation Environmental Study Report will be prepared and made available for a 30-day public review period. The public review period will be announced in local newspapers and on the project website.

YOUR INPUT IS IMPORTANT

Through communication and interaction, public involvement provides an opportunity for you to help shape the decisions made in a study. Project information and updates are available at www.hanlonimprovements.ca.

You can provide your comments by filling out a comment sheet and either dropping it in the comment sheet box at today's meeting or by mailing it to:

Gregg Cooke, P.Eng., Project Manager
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Tel. (905) 381-3227, Fax (905) 385-3534
Email: gregg.cooke@stantec.com

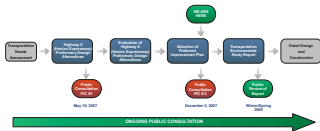
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Environmental Assessment Process

Highway 6 (Hanlon Expressway) Improvements Environmental Assessment Process



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Minor repaving at the following intersections: College Avenue, Stone Road, and Paisley Avenue.

2007

Improvements at Clair Road and Laird Road to support the first phase of the Hanlon Creek Business Park are currently under construction by the City of Guelph. The improvements include traffic signals and intersection improvements at the Clair Road intersection, and intersection improvements at the Laird Road intersection.

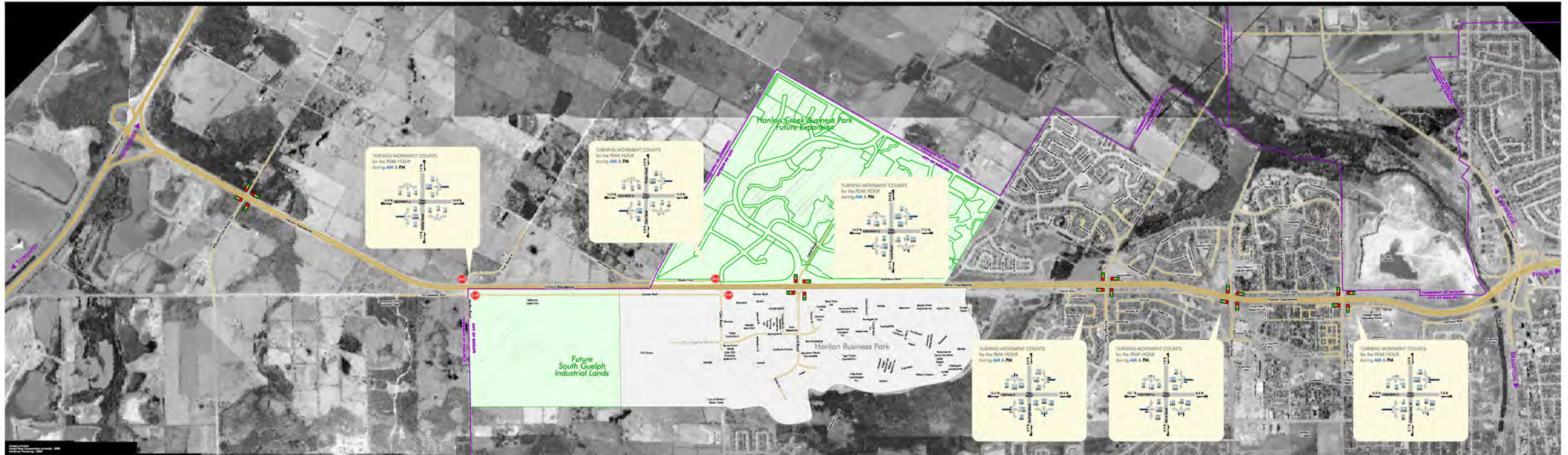
2009 - 2011

Intersection improvements including traffic signals and the addition of turning lanes (if necessary) at intersections within the corridor.

Existing Transportation Conditions

250m
1:8000

HANLON EXPRESSWAY: FROM MALTBY ROAD TO THE SPEED RIVER



FUNCTION

The Hanlon Expressway (Highway 6):

- is a vital link within the provincial highway network
- is intended to serve as a higher order highway, providing long-distance and regional connections
- is a major arterial within the City of Guelph

ISSUES

- multiple at-grade intersections limit the volume of traffic which can be safely accommodated
- local and regional importance of the Hanlon Expressway will increase as the City of Guelph experiences continued growth along with the neighbouring communities and municipalities
- increased demand on the existing system will result in traffic congestion, delays and deteriorating safety conditions
- improvements to intersection configurations and traffic control signals will not meet the needs of long-term traffic and safety demands

SOLUTION

Identify an improvement plan to continue the upgrading of Hanlon Expressway to a full freeway with interchanges, that:

- addresses operational and safety issues
- is cost effective
- addresses growth and development, both existing and future
- integrates with the municipal road network and provides reasonable local access
- is consistent with the City of Guelph's Transportation Master Plan and Official Plan
- is consistent with Ontario's Places to Grow Act, which identifies Guelph as an "Urban Growth Centre"
- minimizes impacts to the natural, social, and cultural environments

EXISTING ENVIRONMENTAL CONDITIONS

-  Greenbelt
-  Municipal Boundary
-  Parcel Fabric
-  Water Quality Monitoring Station
-  Roads
-  Wetland
-  Drainage
-  Aggregate Resource Areas
-  Municipal Groundwater Well
-  Trails
-  Open Space
-  Hydrology
-  Archeological Potential
-  Sewage Treatment Plant
-  Open Space Links
-  Built Heritage Feature

PUBLIC INFORMATION CENTRE 2
December 5, 2007
 

HIGHWAY 6 (HANLON EXPRESSWAY)
from Maltby Road to the Speed River
GWP 3002-05-00

250m
1:8000

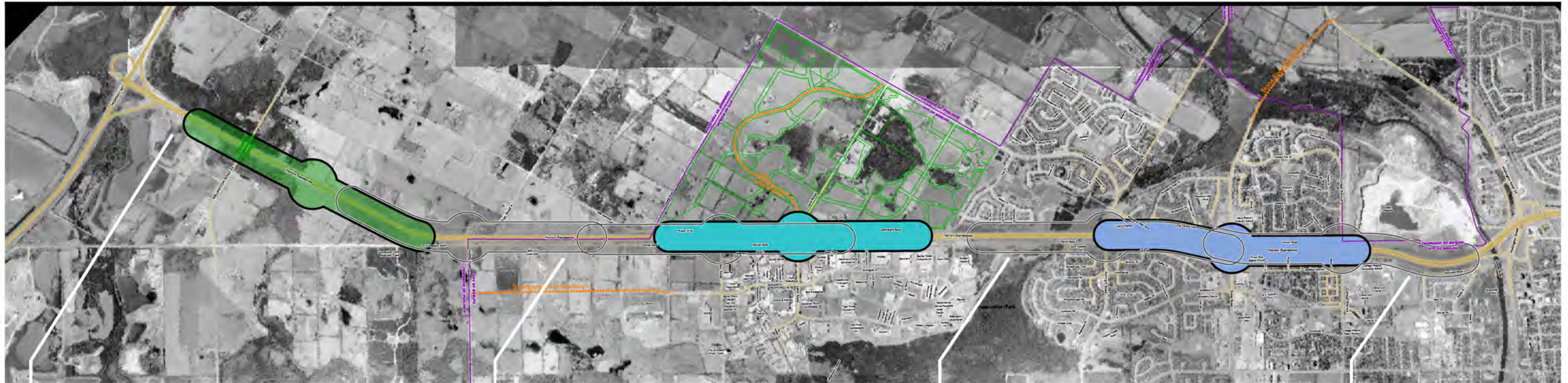


Map Data: City of Guelph, 2007. Aerial Imagery: GeoEye, 2006. GIS: City of Guelph, 2007.

Potential Interchange Locations

250m
1:8000

HANLON EXPRESSWAY: FROM MALTBY ROAD TO THE SPEED RIVER



SOUTH
predominantly rural land use

CENTRAL
predominantly commercial land use

NORTH
predominantly residential land use

Wellington Road 34

- Highway 6, Freelton to Guelph Environmental Assessment Study recommended an interchange between Wellington Road 34 and Maltby Road and a flyover at Wellington Road 34
- The Environmental Assessment Study is currently under review by the Ministry of the Environment
- The Wellington Road 34 interchange is not part of this study

Maltby Road

- Maltby Road can be closed at the Hanlon Expressway since an extension of Southgate Drive through the proposed South Guelph Industrial lands and the adjacent interchange would provide future access to the area
- An interchange cannot be provided at Maltby Road because of its proximity to a future interchange at Wellington Road 34
- Entrance/exit ramps from both interchanges would overlap without sufficient space for weaving areas
- Overlapping interchange ramps are not acceptable because highway safety is compromised

Clair Road

- Clair Road can be closed at the Hanlon Expressway since an extension of Southgate Drive through the proposed South Guelph Industrial lands and the adjacent interchange at Laird Road would provide future access to the area
- An interchange cannot be provided at Clair Road because of its proximity to a possible interchange at Laird Road

Laird Road

- Previous planning studies and the Hanlon Business Park Development Plan identified an interchange at Laird Road to provide access to the Hanlon Business Park and its proposed expansion to the east and west
- The City of Guelph Official Plan identified a future interchange at Laird Road

Kortright Road / Downey Road

- Predominant travel pattern is to and from the north
- Kortright Road/Downey Road are residential collectors in the City of Guelph road network
- A full interchange cannot be provided at Kortright Road because of the proximity of a possible interchange at Stone Road
- The entrance/exit ramps to the north would overlap with the ramps at a possible Stone Road interchange, without sufficient space for weaving areas
- Overlapping interchange ramps are not acceptable because highway safety is compromised
- A full interchange at Kortright Road would have significant property requirements

Stone Road

- A full interchange can be provided at Stone Road
- Stone Road is a major east-west arterial road in the City of Guelph road network with potential for future expansion (Stone Road Extension) and an increased role in the urban and regional transportation system
- Property requirements are minimal because there is sufficient space available at this location for an interchange

College Avenue

- An interchange cannot be provided at College Avenue because it is too close to the existing Wellington Street interchange
- The interchange entrance/exit ramps to the north would overlap with the existing ramps at the Wellington Street interchange, without sufficient space for weaving areas
- Overlapping interchange ramps are not acceptable because highway safety is compromised - a preliminary safety analysis indicates that predicted accidents would increase significantly if these ramps overlap
- Interchange entrance/exit ramps to the south would also overlap with ramps at a possible Stone Road interchange
- An interchange at College Avenue would have significant property requirements

A single interchange between Wellington Road 34 and Maltby Road

A single interchange at Laird Road

A single interchange at Stone Road
(A partial interchange at Kortright Avenue is also being considered to address municipal needs)

INTERCHANGE LOCATIONS CARRIED FORWARD FOR FURTHER CONSIDERATION

Central

INTERCHANGE ALTERNATIVES CONSIDERED

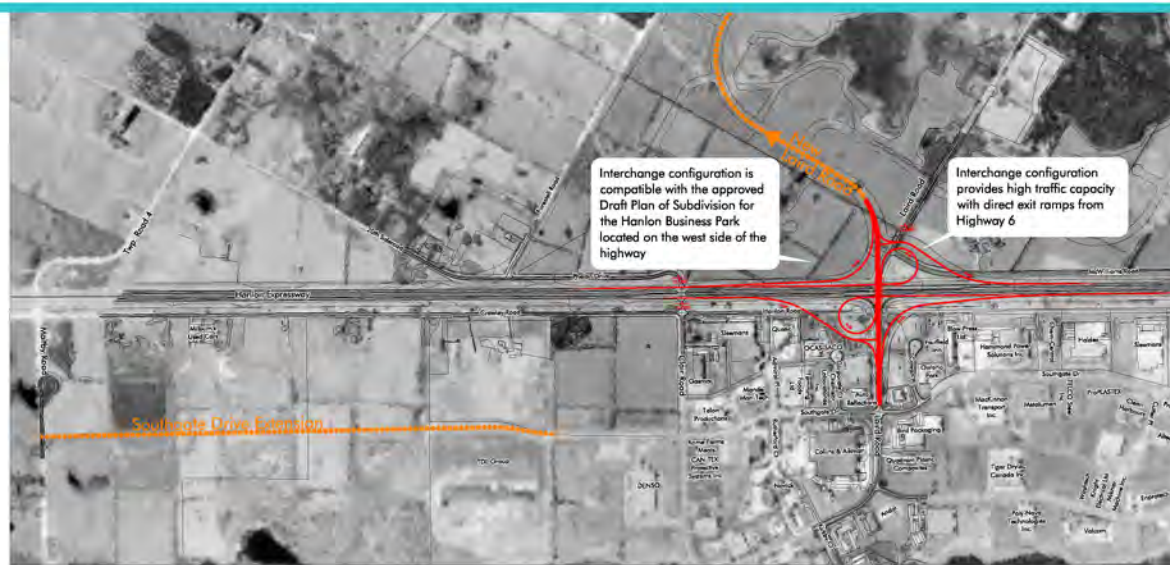
Criteria Weight

1

2

3

1



2



3



Traffic Operations

5



Access

5



Constructability

1



Natural Environment

3



Social Environment

4



Cultural Environment

2



Applied Environment

1



Cost

2



Rank

1st

3rd

2nd

North

INTERCHANGE ALTERNATIVES CONSIDERED

Criteria 1 2 3 4 5 6 7



Traffic Operations	5							
Access	5							
Constructability	1							
Natural Environment	3							
Social Environment	4							
Cultural Environment	2							
Applied Environment	1							
Cost	2							
Rank		2 nd	1 st	4 th	6 th	5 th	7 th	3 rd

Other Alternatives Considered

Was a diamond interchange considered at Stone Road?

A diamond interchange configuration was shown as an alternative for Stone Road at the first Public Information Centre (PIC). Following the PIC and subsequent, more detailed analysis, it was determined that this interchange could not adequately accommodate the anticipated traffic demands.

A diamond interchange requires all traffic entering and exiting the highway to use four ramps (as opposed to six ramps for a Parclo A4 or Parclo B4 interchange). Given the high volumes of traffic anticipated to be using the interchange at Stone Road, significant traffic delays would be experienced, including long delays at the ramp terminal intersections, and long queues that could potentially back onto Highway 6.



Diamond Interchange Alternative as shown at PIC 1

Other Alternatives Considered

Were roundabouts considered?

Following the first Public Information Centre, roundabouts were considered for both the Huron Expressway and at the interchange ramp terminals. However, roundabouts are not considered to be a feasible alternative for the following reasons:

Mainline Highway 6 Roundabouts:

- A three-lane roundabout does not provide adequate operations on Highway 6 (queue lengths on Highway 6 would be greater than 1000 m and average delays would be greater than 5 minutes)
- Roundabouts with three or more circulating lanes are not considered to be as safe as smaller roundabouts and essentially prohibit the movement of pedestrians through the roundabout
- High volumes on Highway 6 (over 50,000 vehicles per day in the future)
- High number of left-turn movements reduce the overall capacity of the roundabout
- High percentage of large trucks on Highway 6 (~10-15%)
- A reduction of the posted speed on Highway 6 would be required, which is not consistent with the overall transportation function of the facility
- A roundabout on Highway 6 does not promote a free-flow movement for Highway 6, which is a provincial facility with the function of connecting Highway 401 and Highway 7

Ramp Terminal Roundabouts:

- Multi-lane roundabouts would be required at the ramp terminals
- The ramp terminal roundabouts do not operate as well as the signalized intersection ramp terminals, and the roundabouts would be approaching their theoretical capacity by the year 2021
- High left-turn volumes (~1,000 vehicles per hour in the peak hour) reduce the overall capacity of the roundabouts
- There are safety concerns for pedestrians at multi-lane roundabouts



Spine Road Interchange ramp terminal roundabout.

Roundabouts are a relatively new and emerging traffic control measure that are gradually being implemented across North America. MTD is actively considering possible locations for a modern roundabout and has recommended the implementation of a single-lane roundabout at an intersection on Highway 33 west of Kingston. A Roundabout Innovation Team has been established to share expertise, research, experience and best practices with other jurisdictions to further the implementation of roundabouts on provincial highways. There is limited experience with high volume, multi-lane roundabouts in North America and research is currently being completed to determine their safety benefits for all road users, including drivers, pedestrians, and cyclists. The Roundabout Innovation Team is currently compiling a list of locations where roundabouts could be considered—as part of that process, intersections along this section of Highway 6 will be added to the list for consideration.

The Preferred Plan includes the following features:

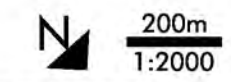
- Closure of the intersection at Maltby Road - access will be provided at the proposed Wellington Road 34 interchange to the south (separate study)
- Closure of the intersection at Clair Road/Phelan Road - access will be provided at the Laird Road interchange
- A full interchange (Parclo A configuration) at Laird Road - Laird Road crosses over the Hanlon Expressway
- A partial interchange (diamond configuration oriented to the south) at Kortright Road/Downey Road - Kortright Road/Downey Road crosses under the Hanlon Expressway
- A full interchange (Parclo A configuration) at Stone Road - Stone Road crosses over the Hanlon Expressway
- Grade-separation at College Avenue - College Avenue crosses under the Hanlon Expressway
- Maintaining the existing four-lane cross-section with an open median on the Hanlon Expressway
- Signalized intersections at all of the interchange ramp terminals
- Potential future noise barriers on the east side of Highway 6 between Kortright Road and College Avenue, and on the west side of Highway 6 from north of the YMCA/YWCA to Stone Road
- Full illumination of the highway and interchanges using conventional lighting, from Kortright Road / Downey Road to Wellington Street
- Partial illumination of the interchange at Laird Road using conventional lighting



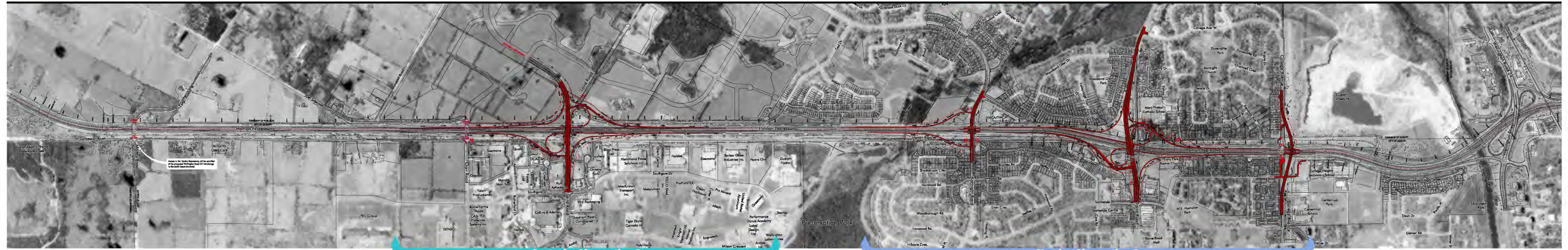
HIGHWAY 6 - HANLON EXPRESSWAY

from Maltby Road to the Speed River

PREFERRED PLAN



HIGHWAY 6 (HANLON EXPRESSWAY) from Maltby Road to the Speed River GWP 3002-05-00



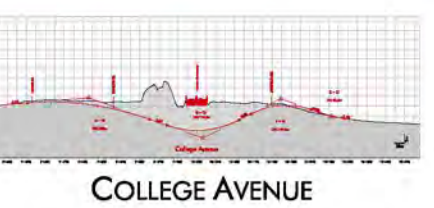
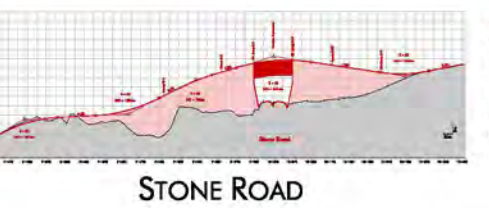
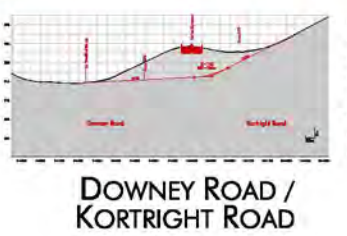
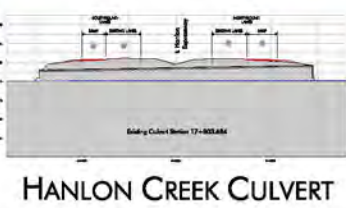
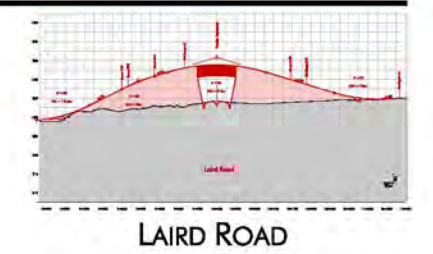
Central - Alternative 1

North - Alternative 2

The Preferred Plan will provide the following benefits:

- The removal of the existing at-grade intersections and traffic signals will significantly improve safety and operations on the Hanlon Expressway
- The removal of the at-grade intersections and traffic signals will provide free-flow traffic on the Hanlon Expressway, which will reduce vehicle idling, trucks stopping, etc., and will facilitate future transit opportunities
- The Preferred Plan provides reasonable local access and minimizes the amount of out-of-way travel
- The Preferred Plan accommodates the potential for a future extension of Stone Road subject to a separate EA for Municipal Roads undertaken by the City
- Direct access to the Kortright Hills area is provided to and from the south from the Hanlon Expressway via the partial interchange at Kortright Road/Downey Road
- The improvements will support planned development and provide economic opportunities adjacent to the Hanlon Expressway
- The Preferred Plan will maintain and enhance the existing connections across the Hanlon Expressway for cyclists and pedestrians by providing grade-separated crossings and provision for dedicated bicycle lanes and sidewalks
- The Preferred Plan utilizes the existing highway corridor, which minimizes additional environmental and property impacts
- It utilizes lands in the SW, SE, and NE quadrants at Stone Road that are owned by the City of Guelph for future Hanlon Expressway improvements
- The Laird Road interchange configuration is compatible with the approved Draft Plan of Subdivision for the Hanlon Business Park located on the west side of the highway
- The Hanlon Expressway improvements will increase the overall capacity of the local transportation network, which could divert vehicle and truck traffic from City Roads such as Edinburgh Road and Gordon Street

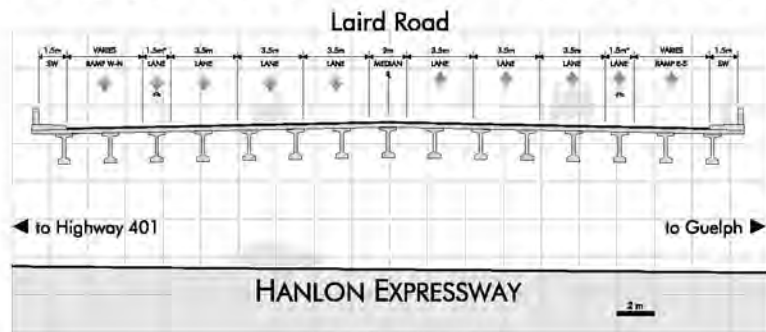
Central Alternative 1 Sideroad Profile



North Alternative 2 Sideroad Profiles

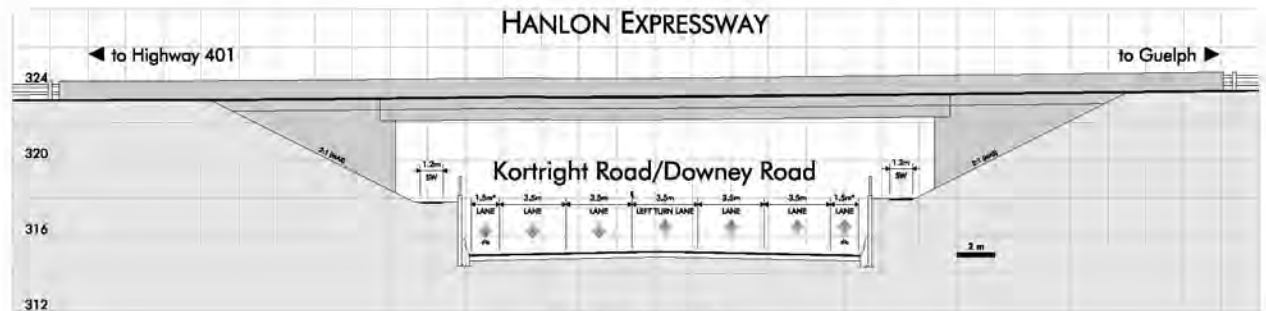
Cross Sections

LAIRD ROAD UNDERPASS



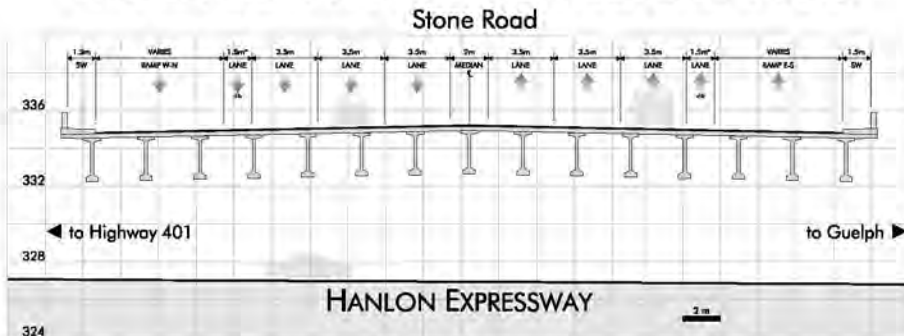
Laird Road travels over Hanlon Expressway
 * Provision for future municipal bicycle lanes

DOWNEY ROAD / KORTRIGHT ROAD OVERPASS



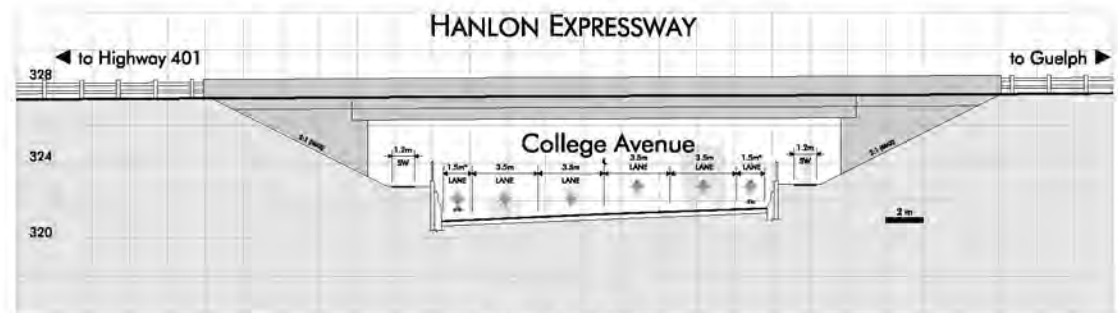
Kortright Road goes under Hanlon Expressway
 * Provision for future municipal bicycle lanes

STONE ROAD UNDERPASS



Stone Road travels over Hanlon Expressway
 * Provision for future municipal bicycle lanes

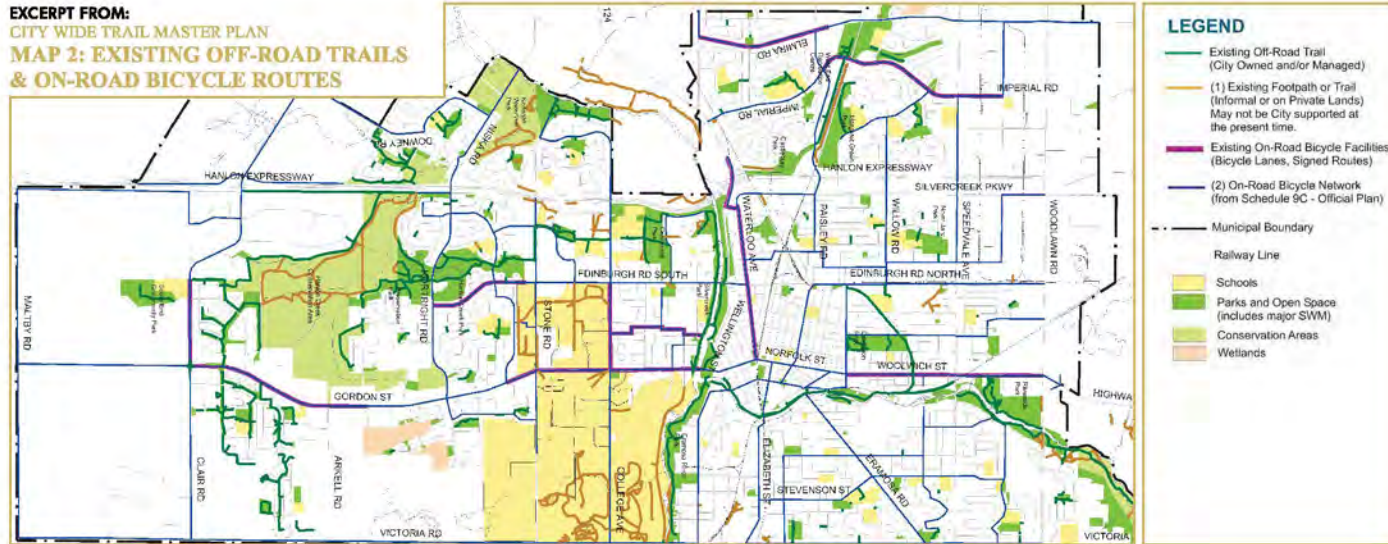
COLLEGE AVENUE OVERPASS



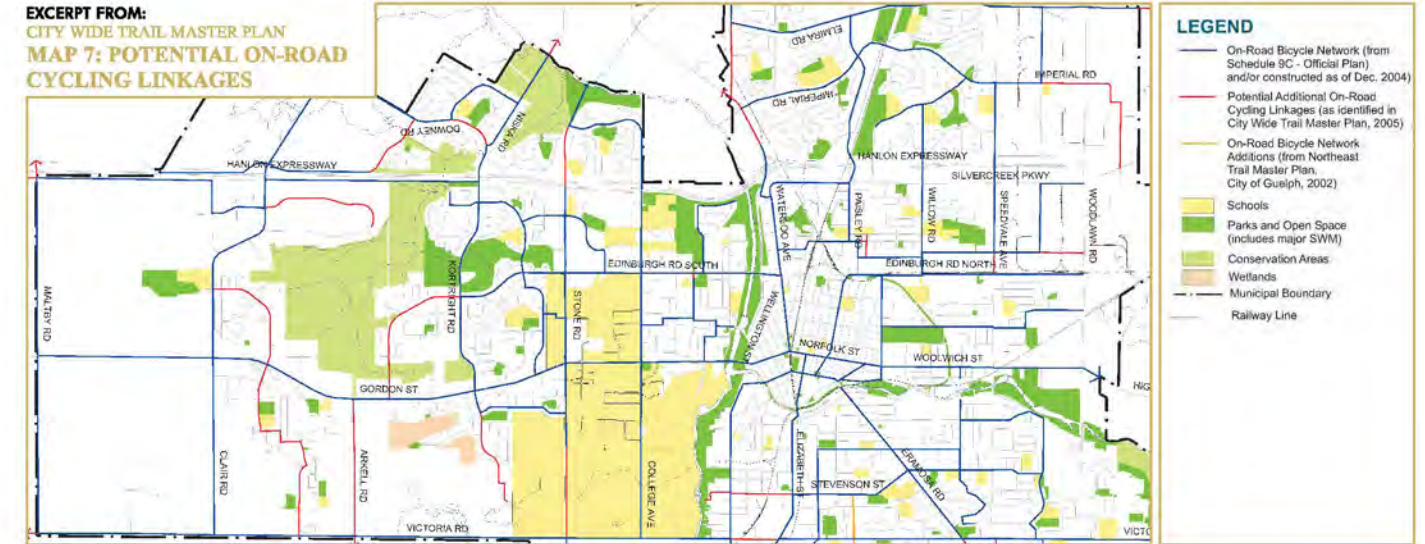
College Avenue travels under Hanlon Expressway
 * Provision for future municipal bicycle lanes

Pedestrian & Cyclist Access

EXCERPT FROM:
CITY WIDE TRAIL MASTER PLAN
MAP 2: EXISTING OFF-ROAD TRAILS
& ON-ROAD BICYCLE ROUTES

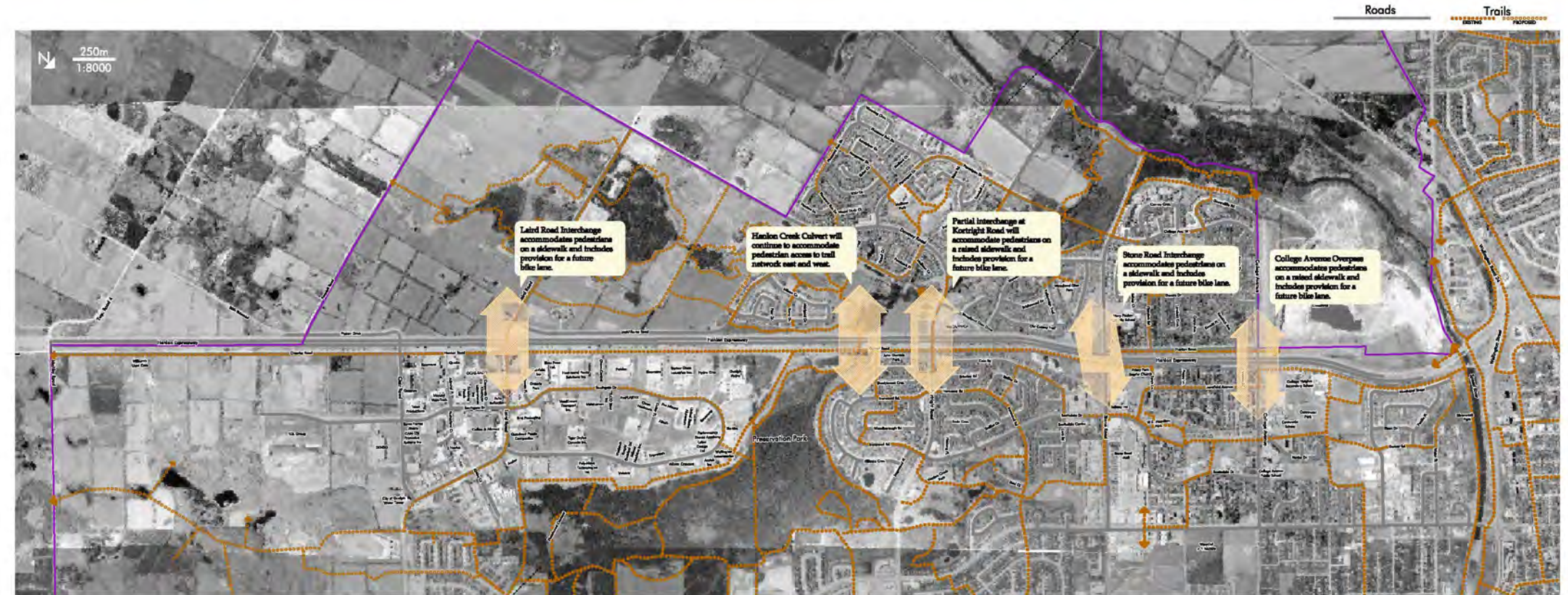


EXCERPT FROM:
CITY WIDE TRAIL MASTER PLAN
MAP 7: POTENTIAL ON-ROAD
CYCLING LINKAGES



The Preferred Plan...

- Improves pedestrian and cyclist access across the Hanlon Expressway by providing grade separated crossings at Laird Road, Kortright Road / Downey Road, Stone Road, and College Avenue
- Accommodates pedestrians and cyclists on elevated sidewalks at College Avenue and Kortright Road / Downey Road, which provides separation from the roadway (i.e. sidewalks will be on raised walls approximately 1-2 metres above the roadway)
- Does not change the existing culvert at Hanlon Creek, which includes a pedestrian walkway to connect the trail network on the east and west sides of the Hanlon Expressway
- Provides bike lanes and sidewalks at all grade separations that are consistent with the City's trail system
- Will require minor relocation of the existing trails at Old Hanlon Road and Stone Road



MTO Noise Policy

New Construction Policy

Policy issues that could have impacts to be resolved when a highway corridor project is proposed that is adjacent to a noise sensitive area (NSA).

Noise Study Steps in MTO Planning and Design Process



70 single or more hour equivalent sound level (SEL) noise level at receptor locations

Exposure (dB) Response

< 70 dB and < 65 dB

None

> 70 dB
or
> 65 dB

- Investigate the feasibility of noise control measures on right of way (ROW), interior or rear yard setbacks within ROW and require to undertake additional measures, and administrative building.
- Noise control measures, where required, are to have a minimum of 2 dB attenuation, over the noise source (a change in noise level less than 2 decibels cannot be perceived).

Feasibility of Mitigation

The determination of whether noise mitigation is provided is based on noise level, economic, and administrative feasibility.

Technical Feasibility is determined if the mitigation is cost-effective, safe, and achieves a 2 dB reduction. Administrative Feasibility determines the cost/performance ratio.

Administrative Feasibility determines the ability to locate the noise mitigation on lands available for development.

MTO Noise Retrofit Program

A program to address noise impacts resulting from adjacent existing features.

Acoustic wall Residential development approval before February 6, 1997

Setbacks Where noise levels at O&A are in excess of 65 dB.

Walls Following a residential noise abatement device placed on a private side property, 50 and 60m setbacks from private drives and roads become available.

Walls, Setbacks? Since this study includes upgrading the Highway 67 exposure to a Controlled Accessway, the distribution of the Highway will be changing in heavily urban, which makes it difficult for the Noise Retrofit Program. This could be carried out independently of the current study for upgrading the Highway exposure.

Grass - in each residential noise level category or 65 dB.

Classroom

- 65 dB - Defined as the use of measurement reflecting noise is generated by the human ear.
- 60 dB - Background sound level (generally about 45 dB in rural areas, 50 dB in suburban areas, and 55 dB in urban areas).
- 70 dB - Required noise levels with respect to noise and have 20 and 25 dB noise volume.
- 75 dB - Noise sensitive areas (private homes, multiple off buildings, hospitals and nursing homes) off an associated O&A individual location reflects exposure to noise.
- 73.5 - Outdoor living area adjacent to an O&A that encompasses outdoor living activities.
- 70 dB - Controlled access medium density housing, built with grade separated crossings and other changes.

Preliminary Noise Study Results

4/4/2003

Final Report has been submitted to the Ministry of Transportation for review. The report is now available for comment.

4/21/2003 Comments: The noise assessment has been submitted to the Ministry of Transportation for review. The report is now available for comment. The report is now available for comment.

Table 1: Noise Level at Receptor Locations

Receptor Location	Category	Exposure (dB)	Response
Receptor 1 (North of Highway 67)	Day of Noise Exposure	65.0 to 67.0	None
Receptor 2 (South of Highway 67)	Day of Noise Exposure	65.0 to 67.0	None
Receptor 3 (East of Highway 67)	Day of Noise Exposure	65.0 to 67.0	None
Receptor 4 (West of Highway 67)	Day of Noise Exposure	65.0 to 67.0	None
Receptor 5 (North of Highway 67)	Day of Noise Exposure	65.0 to 67.0	None
Receptor 6 (South of Highway 67)	Day of Noise Exposure	65.0 to 67.0	None
Receptor 7 (East of Highway 67)	Day of Noise Exposure	65.0 to 67.0	None
Receptor 8 (West of Highway 67)	Day of Noise Exposure	65.0 to 67.0	None

Table 2: Noise Level at Receptor Locations

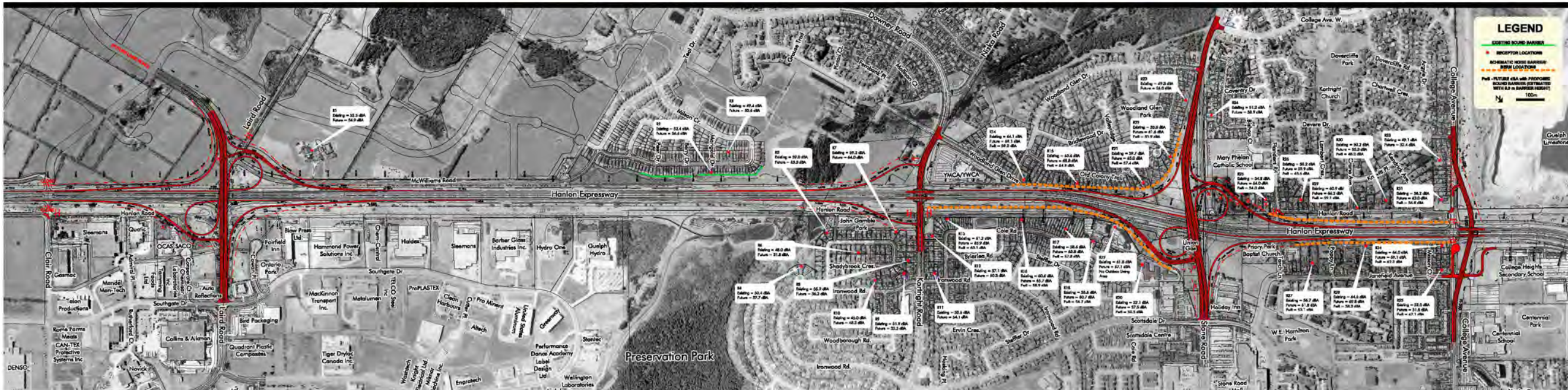
Receptor Location	Category	Exposure (dB)	Response
Receptor 9 (North of Highway 67)	Day of Noise Exposure	65.0 to 67.0	None
Receptor 10 (South of Highway 67)	Day of Noise Exposure	65.0 to 67.0	None
Receptor 11 (East of Highway 67)	Day of Noise Exposure	65.0 to 67.0	None
Receptor 12 (West of Highway 67)	Day of Noise Exposure	65.0 to 67.0	None
Receptor 13 (North of Highway 67)	Day of Noise Exposure	65.0 to 67.0	None
Receptor 14 (South of Highway 67)	Day of Noise Exposure	65.0 to 67.0	None
Receptor 15 (East of Highway 67)	Day of Noise Exposure	65.0 to 67.0	None
Receptor 16 (West of Highway 67)	Day of Noise Exposure	65.0 to 67.0	None

Table 3: Noise Level at Receptor Locations

- The noise levels at the receptor locations are shown in the table above. The noise levels are shown in the table above. The noise levels are shown in the table above.
- The noise levels at the receptor locations are shown in the table above. The noise levels are shown in the table above. The noise levels are shown in the table above.
- The noise levels at the receptor locations are shown in the table above. The noise levels are shown in the table above. The noise levels are shown in the table above.



Receptor Locations and Schematic Noise Barrier/Berm Locations





Related Provincial Projects

Metrolinx
GO Transit
Ontario Northland



Public Information Centre 3

Public Information Centre 3

WELCOME

Welcome to the third Public Information Centre (PIC) for the Planning, Preliminary Design, and Environmental Assessment Study for the upgrading of the Huron Expressway from 0.6 kilometres south of Malley Road to the Speed River.

PURPOSE OF PUBLIC INFORMATION CENTRE

The purpose of this Public Information Centre is to:

- Display and seek input on the interchange and access alternatives for College Avenue, Stone Road, and Northgate Road/Conroy Road (including options developed at the recent Community Workshop)
- Seek input on the evaluation criteria to be used to identify a Preferred Plan
- Present the Preferred Plan for Laird Road, Malley Road, and Clair Road
- Answer questions about the study

STUDY PROCESS

The study is following the "Group B" process under the Class Environmental Assessment (EA) for Provincial Transportation Facilities (2002), which is an approved process for projects of this type.

The study will be documented in a Transportation Environmental Study Report (TESR) that will be made available for public review.

WHAT'S NEXT

Input received at this PIC will be reviewed and considered in the selection of a Preferred Plan.

A fourth PIC will be scheduled for the fall of 2006 to provide the public with an opportunity to comment on the preferred improvements and preliminary design recommendations.

YOUR INPUT IS IMPORTANT

Through consultation and interaction, public involvement provides an opportunity for you to help shape the decisions made in a study. Project information and updates are available at www.hamiltontransportation.ca

You can provide your comments by filling out a comment sheet and either dropping it in the comment sheet box at today's meeting or by mailing it to:

Maya Cohen, MCRP, RPP, Environmental Planner
Slater Consulting Ltd., 1400 Rymal Road East, Hamilton, ON L8N 3N6
Tel: (416) 596-7162, Fax: (505) 335-3534
Email: mayac@slaterconsulting.com

Please submit your comments before July 18, 2006.

Transportation Information and Education Act / Privacy Act

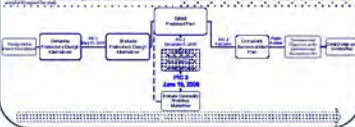
Comments and information regarding this study are being collected to satisfy the requirements of the Environmental Assessment Act, and in accordance with the Freedom of Information and Protection of Privacy Act. With the exception of personal information, all comments will become part of the public record.

Public Information Centre 3

The City of Hamilton Process:

After the Commission of the City and the Metropolitan Council (MCP) has approved the City of Hamilton Study Report (HSR) and the Public Information Centre (PIC) has been held, the City of Hamilton will be required to prepare a Transportation Environmental Study Report (TESR) for the project. The TERS will be made available for public review and comment. The TERS will be used to prepare a Preferred Plan for the project. The TERS will be made available for public review and comment. The TERS will be used to prepare a Preferred Plan for the project.

The City of Hamilton Process:



Additional Studies

TRAFFIC STUDY

The City of Guelph and the Ministry of Transportation have carried out an additional traffic study to confirm the origins and destinations of vehicles that are currently using the municipal road network in the study area. The turning movement counts and origin-destination studies were completed in April 2008 to supplement the City of Guelph's existing transportation model. The counts were conducted during the peak times to capture the large number of vehicles in the area that are generated by educational facilities, including local schools and the University of Guelph, in addition to local traffic. The information is being used to gain a better understanding of existing travel patterns on the west side of Highway 6 from Downey Road to College Avenue. Following this PIC, traffic operations analysis will be completed for each of the alternatives using traffic volumes generated from the adjusted model. Results of this additional traffic study will be considered during the evaluation of the new project alternatives.

Estimated traffic volumes on municipal roads for the Preferred Plan will be displayed at the next PIC.

NOISE STUDY

A Noise Study was carried out in accordance with the MTO Noise Policy (2006). Results of the Noise Study were presented at PIC 2. The Noise Study indicated that provision for noise attenuation (i.e. noise walls or berms) is warranted on both the east and west sides of the Hanlon Expressway between Kortright Road and College Avenue.

Members of the public indicated that they are concerned that the Noise Model does not accurately identify existing noise levels. When a Preferred Plan is confirmed, the Noise Specialist will conduct field measurements in the study area to verify the data obtained in the noise model.

AIR QUALITY ASSESSMENT

An air quality assessment was carried out to determine air quality levels adjacent to the highway based on the proposed change from a highway with signalized intersections to a free-flow freeway. The study was based on the future (2021) predicted traffic volumes and examined the main contaminants of concern for motor vehicles, including carbon monoxide, oxides of nitrogen, inhalable (coarse) particulate matter, respirable (fine) particulate matter, and key volatile organic compounds.

The methodology used for the study is consistent with other roadway projects, is generally accepted by both provincial and federal agencies

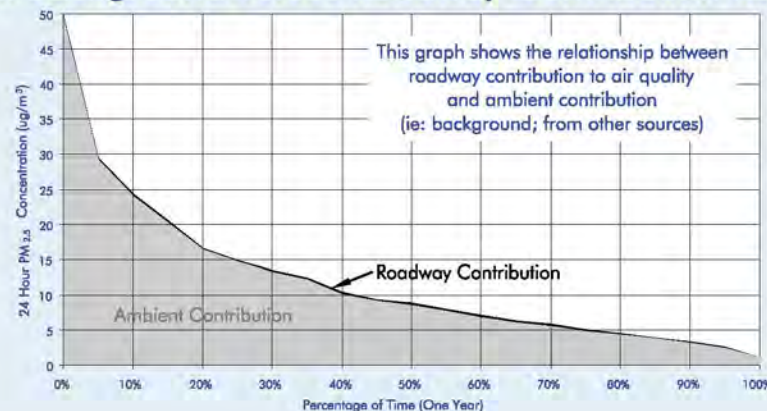
The study indicates that air contaminants emitted from vehicles on Highway 6 will drift downwind and disperse as they travel. Contaminant concentrations depend on a variety of factors, including weather conditions and the distance from the roadway.

(Models used for this study were recently verified with field measurements.)

The following conclusions were identified from the study:

- The maximum predicted cumulative concentrations for all contaminants are below their respective criteria for both the future build and future no-build alternatives
- The maximum concentrations occur infrequently during the year
- The majority of the cumulative concentrations is due to the ambient background
- The majority of background concentration is likely due to transboundary air pollution (MOE, June 2005)
- The future build scenario has slightly higher impacts than the future no-build scenario for all contaminants—mainly due to the decreased separation between vehicles and receptor locations
- The VOC concentrations are predicted to decrease—this is mainly due to the improved free-flow conditions

Ambient Background versus Roadway Contribution Relationship



Project Background

1969

The Ministry completed a Functional Planning Study for the Hurler Expressway from Clair Road northward to Woodlawn Road. This study identified that the Expressway would serve as a major north-south link connecting Highway 401 to Highway 7.

1972

The Hurler Expressway was constructed to relieve traffic on Guelph's arterial road system. Shortly after, studies looked at alternatives with the ultimate long-term goal of converting the Hurler Expressway to a freeway with interchanges.

1994

MTD completed an *Environmental Study Report and Preliminary Design Report* for the upgrading of the Hurler Expressway from 0.8 km south of the Speed River to 0.3 km south of Woodlawn Avenue. The report included upgrading the north section of the Hurler Expressway to a freeway with interchanges.

2000

MTD constructed the Hurler Expressway Interchange at Wellington Street.

2004

A *Traffic Operations Study* was carried out for the Hurler Expressway to assess existing and future traffic operations of the existing at-grade intersections. The *Traffic Operations Study* identified many intersections with poor operations. Future need for upgrading the at-grade intersections to grade-separations (i.e., flyovers) or interchanges was identified.

2007

MTD initiated this Planning, Preliminary Design and Environmental Assessment Study. The purpose is to address the operations of the intersections and improve overall operations along the Hurler by upgrading the Hurler Expressway from south of Melby Road to the Speed River, to a freeway with access restricted to interchange locations only.

Interchange Details

Interchange Details

The following Interim Improvements are not part of this study but are required to maintain safe traffic movement until the Interchanges are constructed.

2017

Minor resurfacing of the following Intersections: College Avenue, Stone Road, and Pebley Avenue.

2018-2020

Improvements at Clair Road and Laird Road to support the first phase of the Hurler Creek Sidelines Park are currently under construction by the City of Guelph. The improvements include traffic signals and intersection improvements at the Clair Road Intersection, and intersection improvements at the Laird Road Intersection.

2019-2021

Intersection improvements including traffic signals and the addition of turning lanes (if necessary) at intersections within the corridor.

Evaluation Criteria Weighting

The goal of the evaluation process is to identify a Preferred Improvement Plan that provides safe operations, accommodates local access, is cost-effective and minimizes impacts to the natural, social, and cultural environments. Evaluation criteria that address the key issues raised in the discussion during the process of preparing a Preferred Improvement Plan were presented to the public for review at PIC 1 and used in the evaluation of project alternatives that led to the selection of the PIC 1 Preferred Plan. Evaluation criteria are independent variables, each of which may contribute a positive or negative influence on the use of some or all of the alternatives. Criteria must be relevant, valid and relevant to the study area. Generally, more weight is given to criteria that are considered to be more important or significant. The evaluation indicators listed below help define what is actually being assessed. The Community Feedback questions were added to review the evaluation criteria and their indicators, and their weights according to their importance, and discuss potential changes to the evaluation criteria and their weights. Both the program's PIC 1 weighting and the Workshop Group's weighting are displayed below. Please review the weighting and identify your preferred weighting to your councilor at work. After the PIC, the project team will review the agreement on the weighting of evaluation criteria and finalize the weighting for each criterion before evaluating the project alternatives.

Evaluation Criterion	Indicators	Program Weighting	Preferred Weighting from Community Workshop
Public Operations	<ul style="list-style-type: none"> Accommodates projected traffic demand Supports and addresses priority of highway function Reduces the number of collisions Provides acceptable traffic operations on rural jurisdictions and/or intersections Provides an overall design standard consistent with Ontario standards for Ontario highways, interchanges and connecting roads 	22	17
Access	<ul style="list-style-type: none"> Supports existing and future growth and development Supports the municipal road network Complements future municipal road improvements 	22	14
Natural Environment	<ul style="list-style-type: none"> Minimizes or avoids impacts to ecological features, including wetlands, grasslands, watercourses, wildlife habitat, surface water and groundwater Minimizes number of parcels lost to access right-of-way 	15	18
Local Environment	<ul style="list-style-type: none"> Minimizes property requirements Is compatible with City of Guelph and Wellington County Official Plans Minimizes impacts to noise or quality of life Minimizes noise and air quality impacts Accommodates community and environmental objectives, including noise 	17	20
Cultural Environment	<ul style="list-style-type: none"> Minimizes or avoids impacts to registered and identified Built Heritage Features and Cultural Landscapes and archaeological resources 	9	7
Constructability	<ul style="list-style-type: none"> Accommodates existing utility lines and operations during construction Uses conventional construction techniques 	4	6
Applied Investments	<ul style="list-style-type: none"> Minimizes or avoids impacts to existing approved sites or provincially designated sites 	4	6
Cost	<ul style="list-style-type: none"> Minimizes cost, including construction, utility relocation and property requirements 	9	7



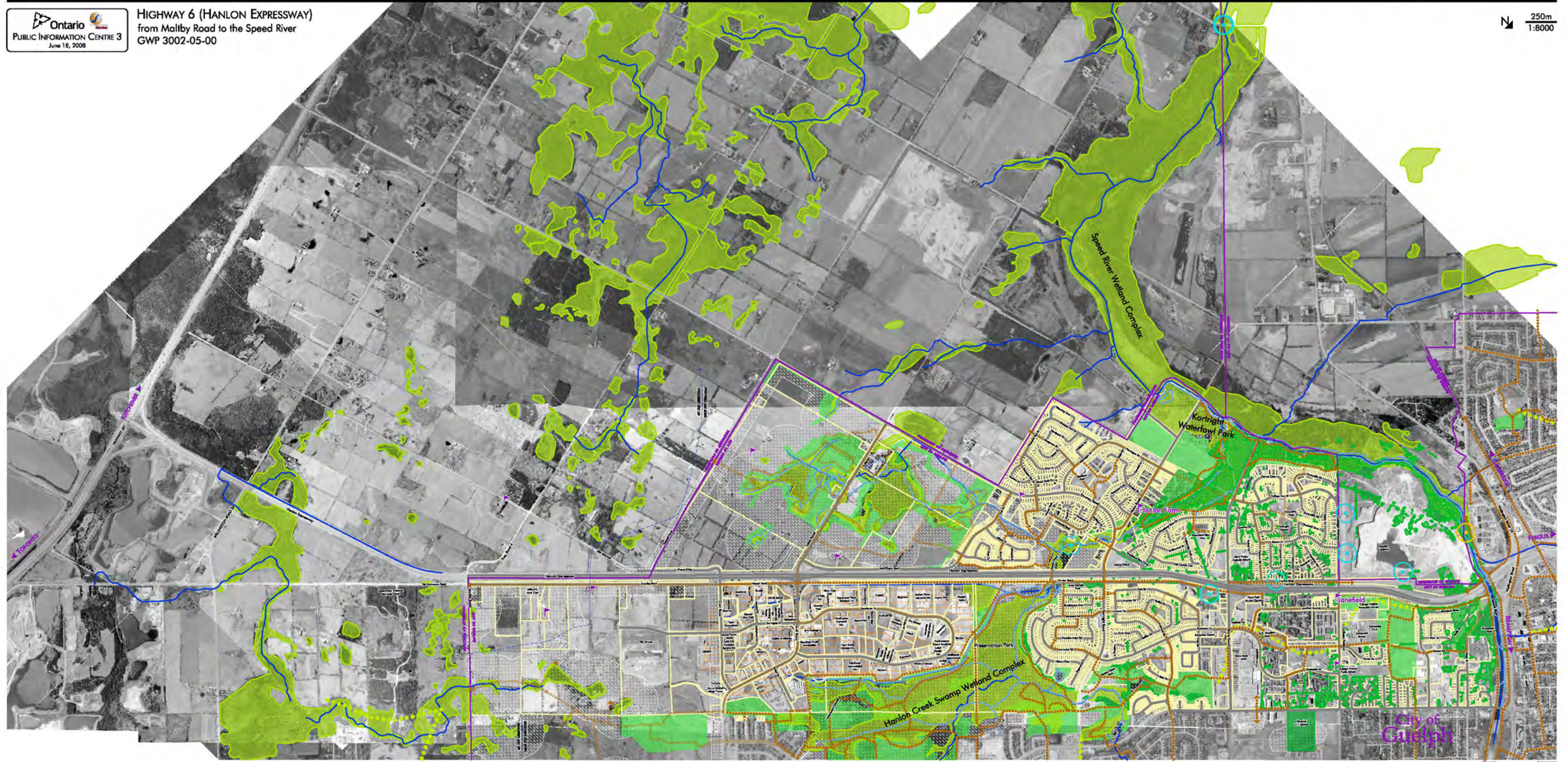
EXISTING ENVIRONMENTAL CONDITIONS

Ontario
PUBLIC INFORMATION CENTRE 3
June 18, 2008

HIGHWAY 6 (HANLON EXPRESSWAY)
from Maltby Road to the Speed River
GWP 3002-05-00

-  Greenbelt
-  Wetland
-  Open Space
-  Municipal Boundary
-  Drainage
-  Hydrology
-  Parcel Fabric
-  Aggregate Resource Areas
-  Archeological Potential
-  Water Quality Monitoring Station
-  Municipal Groundwater Well
-  Sewage Treatment Plant
-  Roads
-  Trails
-  Open Space Links
-  Built Heritage Feature

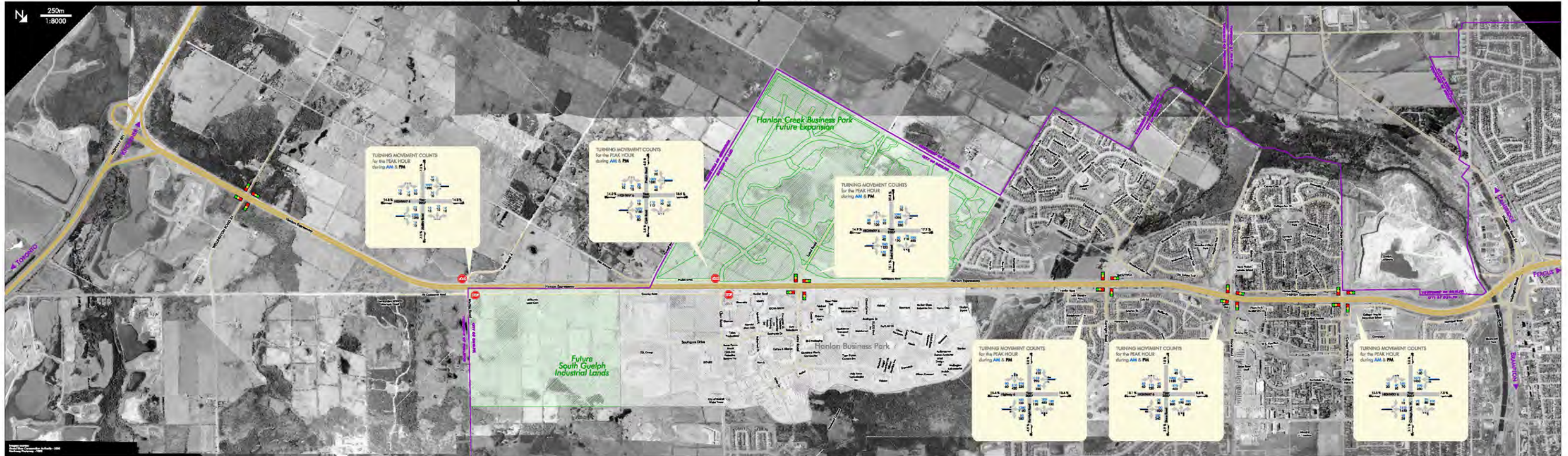
250m
1:8000



Map Data: City of Guelph, 2008. Aerial Imagery: GeoEye, 2006. Data Source: City of Guelph, 2008.

Existing Transportation Conditions

HIGHWAY 6 (HANLON EXPRESSWAY): FROM MALTBY ROAD TO THE SPEED RIVER



FUNCTION

Highway 6 (The Hanlon Expressway):

- is a vital link within the provincial highway network
- is intended to serve as a higher order highway, providing long-distance and regional connections
- is a major arterial within the City of Guelph

ISSUES

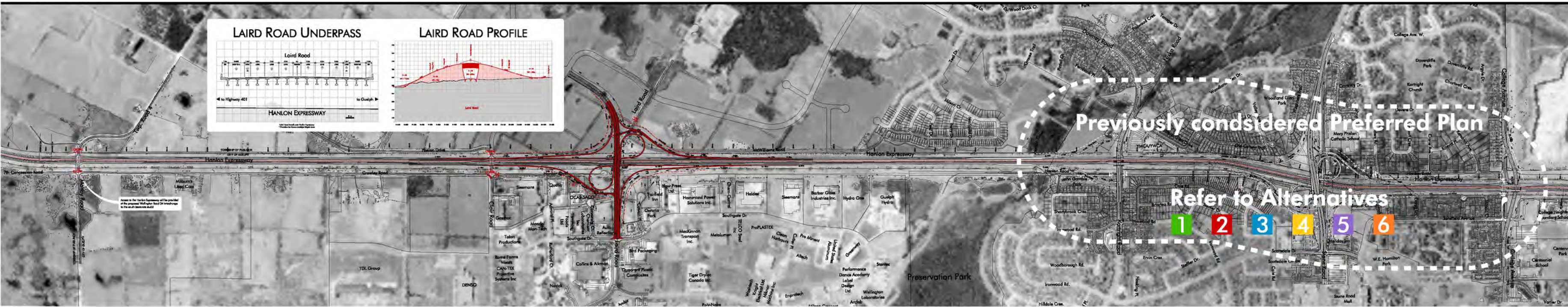
- multiple at-grade intersections limit the volume of traffic which can be safely accommodated
- local and regional importance of the Hanlon Expressway will increase as the City of Guelph experiences continued growth along with the neighbouring communities and municipalities
- increased demand on the existing system will result in traffic congestion, delays and deteriorating safety conditions
- improvements to intersection configurations and traffic control signals will not meet the needs of long-term traffic and safety demands

SOLUTION

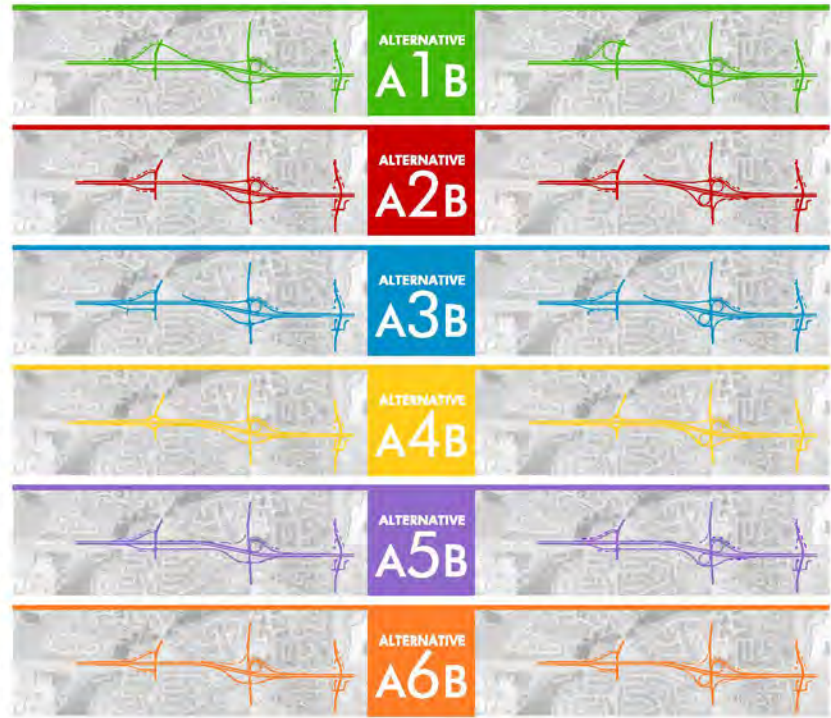
Identify an improvement plan to continue the upgrading of Hanlon Expressway to a full freeway with interchanges, that:

- addresses operational and safety issues
- is cost effective
- addresses growth and development, both existing and future
- integrates with the municipal road network and provides reasonable local access
- is consistent with the City of Guelph's Transportation Master Plan and Official Plan
- is consistent with Ontario's Places to Grow Act, which identifies Guelph as an "Urban Growth Centre"
- minimizes impacts to the natural, social, and cultural environments

Central Section Preferred Plan



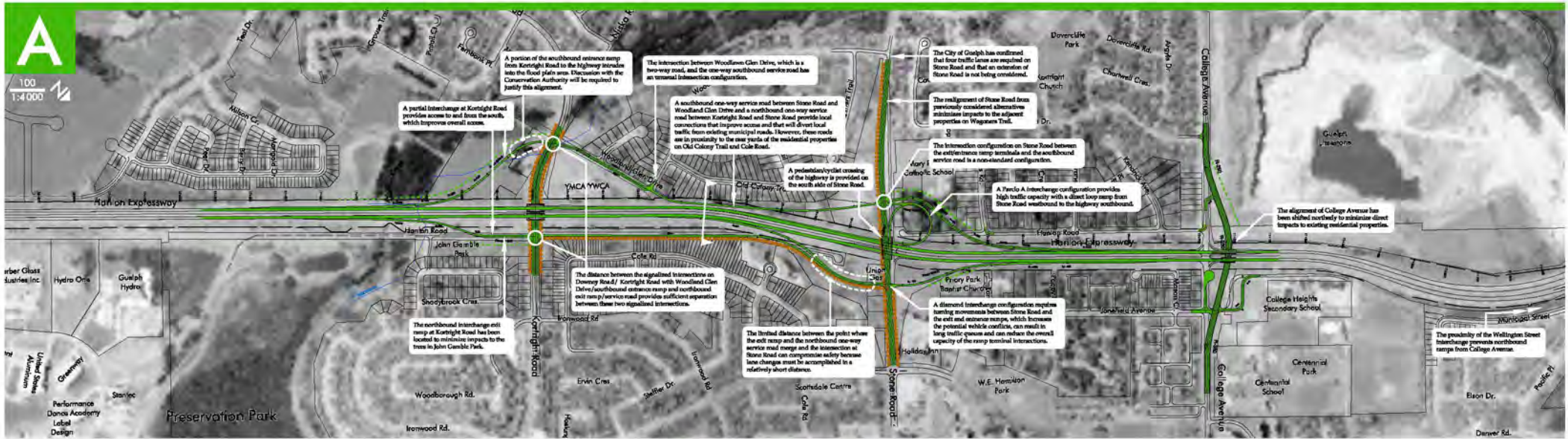
North Section Alternatives



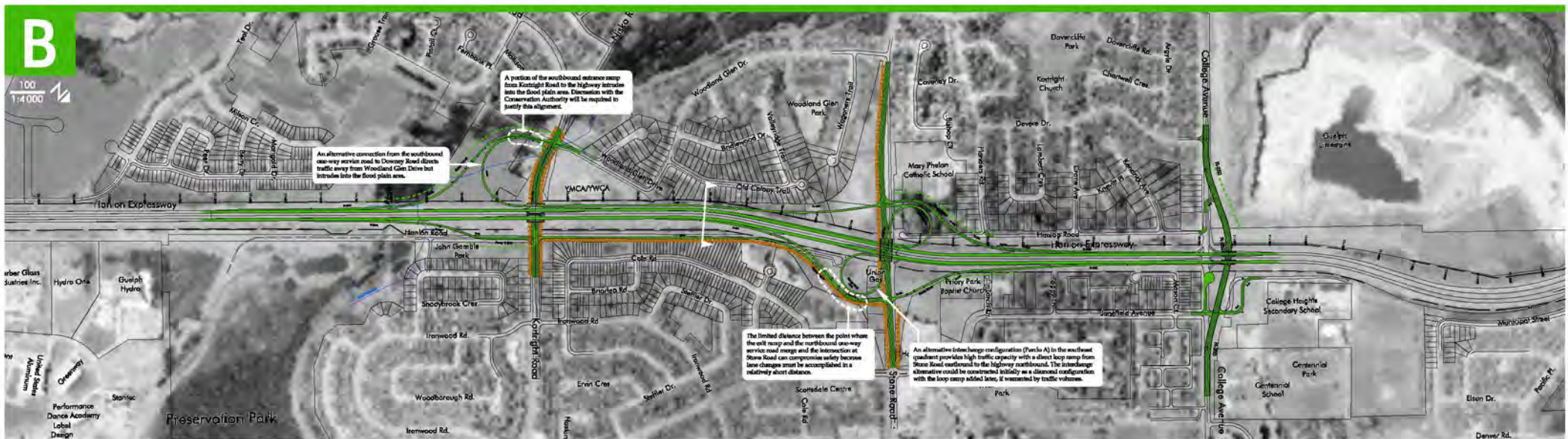
WORKSHOP ALTERNATIVE 1

One-way southbound service road on the west side
 One-way northbound service road on the east side

HIGHWAY 6 (HANLON EXPRESSWAY)
 from Maltby Road to the Speed River
 GWP 3002-05-00

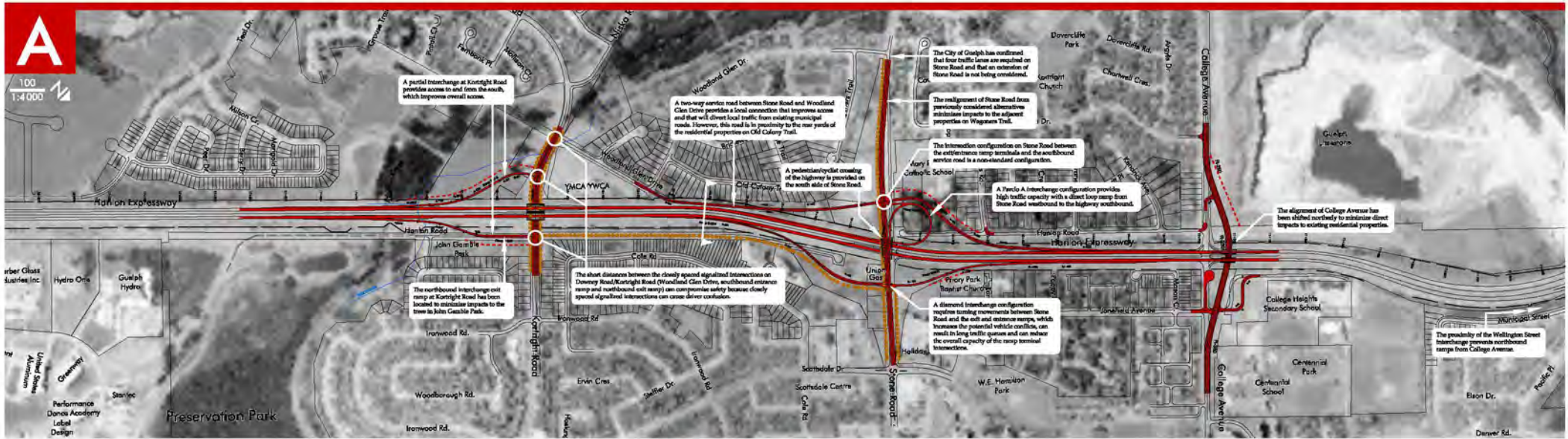


Cross Section

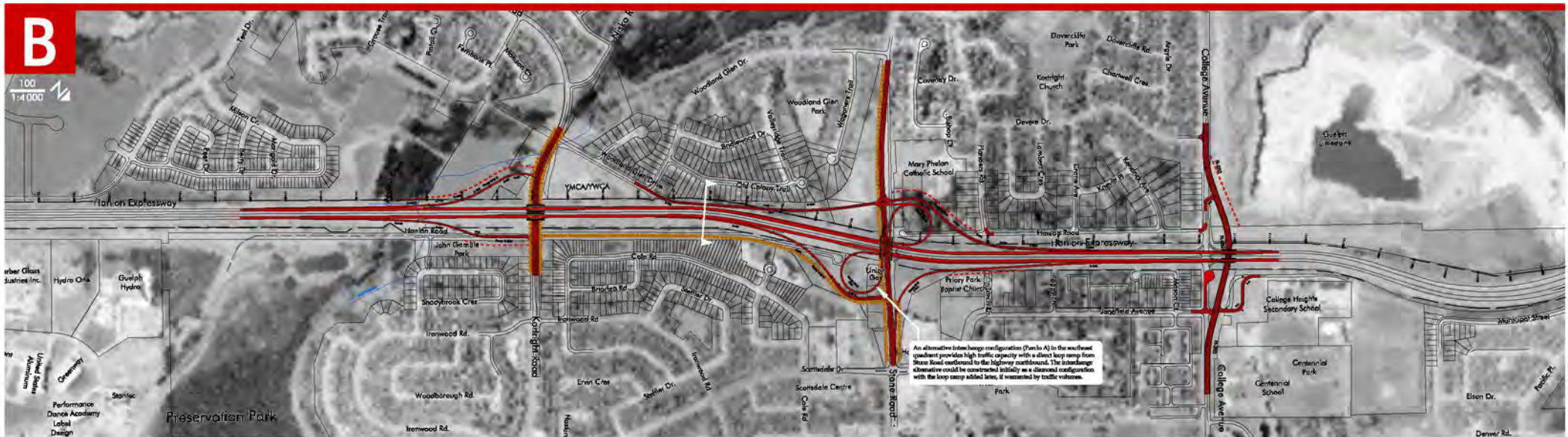
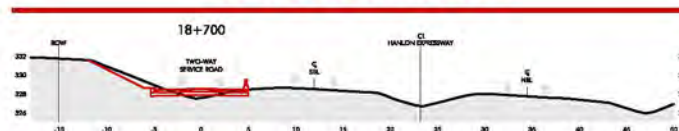


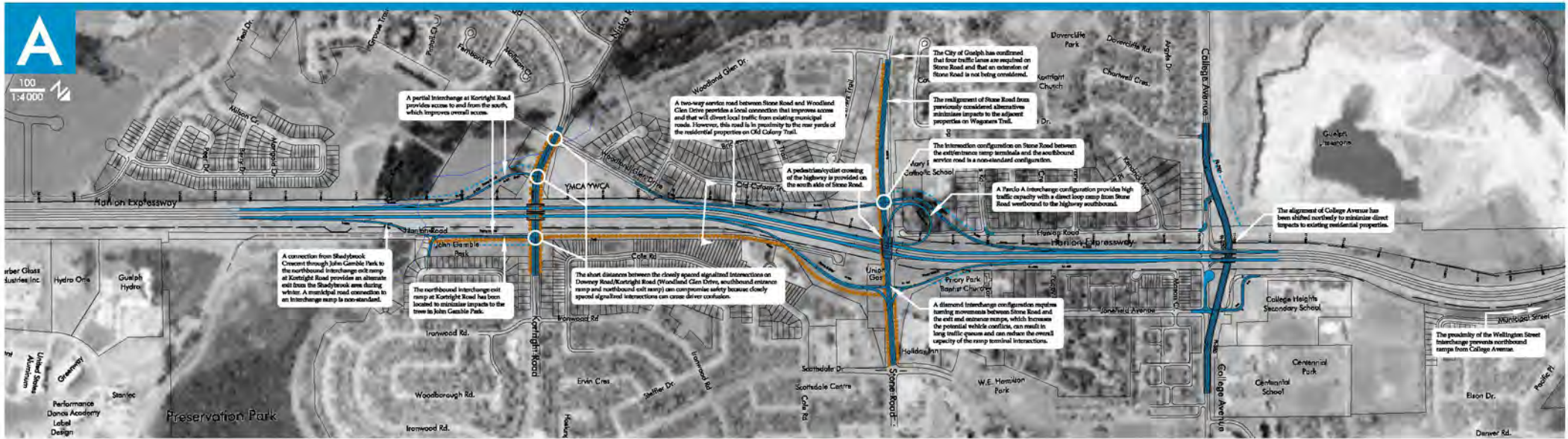
WORKSHOP ALTERNATIVE 2

Two-way service road on the west side

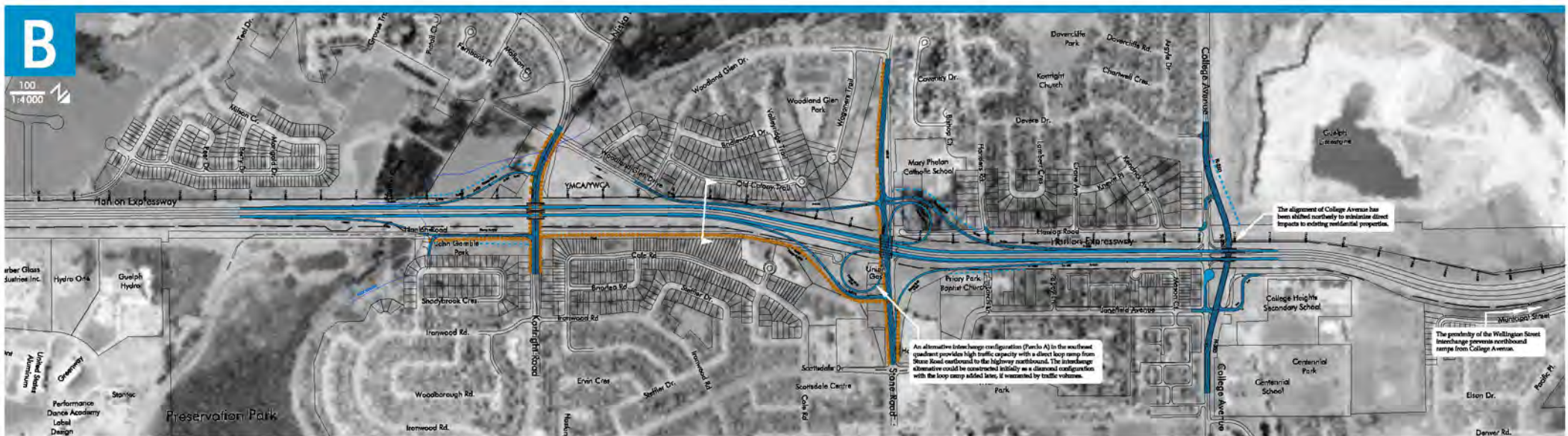
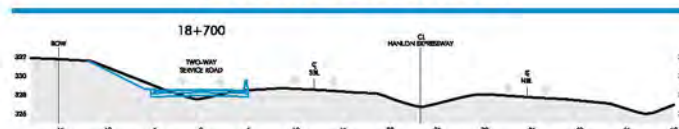


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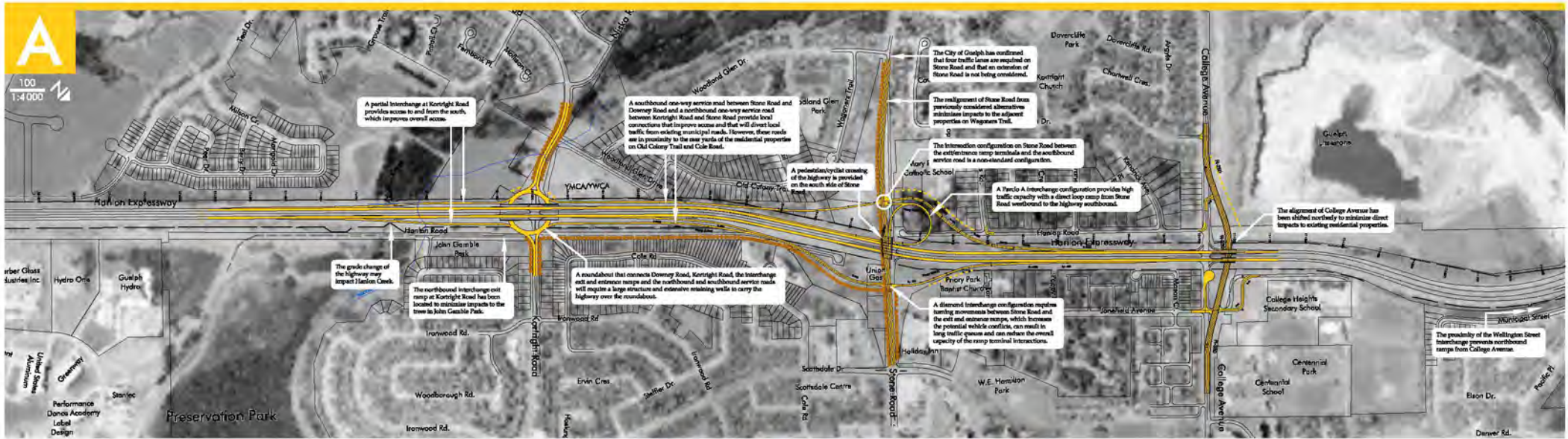
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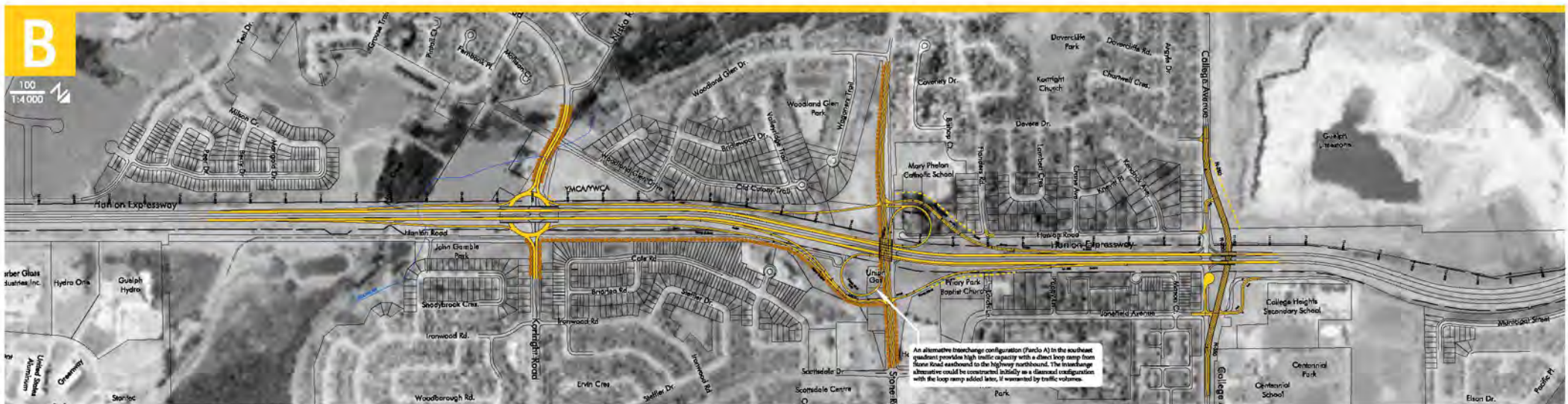
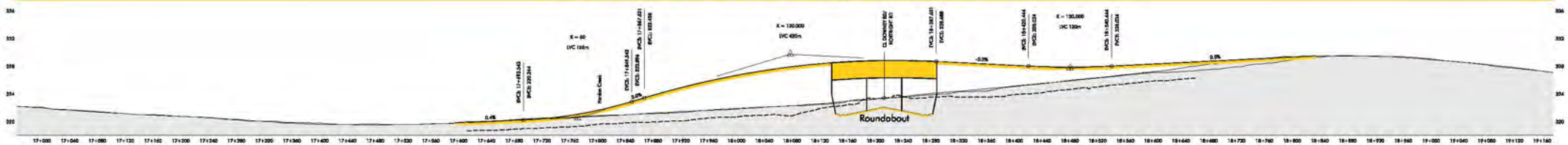
WORKSHOP ALTERNATIVE 4

One-way southbound service road on the west side
One-way northbound service road on the east side
Roundabout connection between roads and ramps

HIGHWAY 6 (HANLON EXPRESSWAY)
from Maltby Road to the Speed River
GWP 3002-05-00



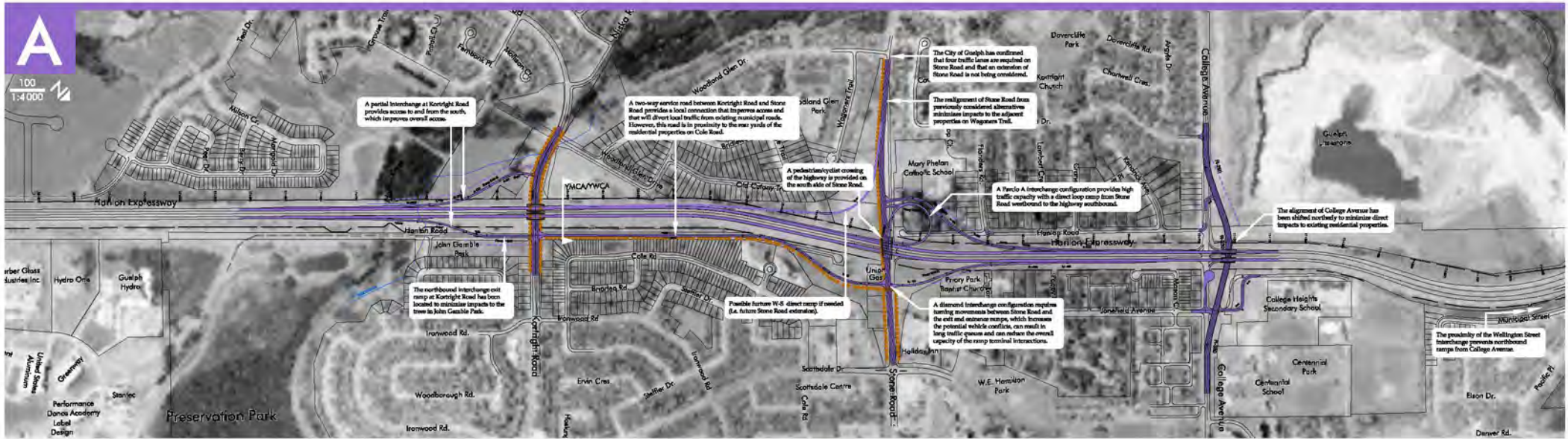
Roundabout Overpass Profile



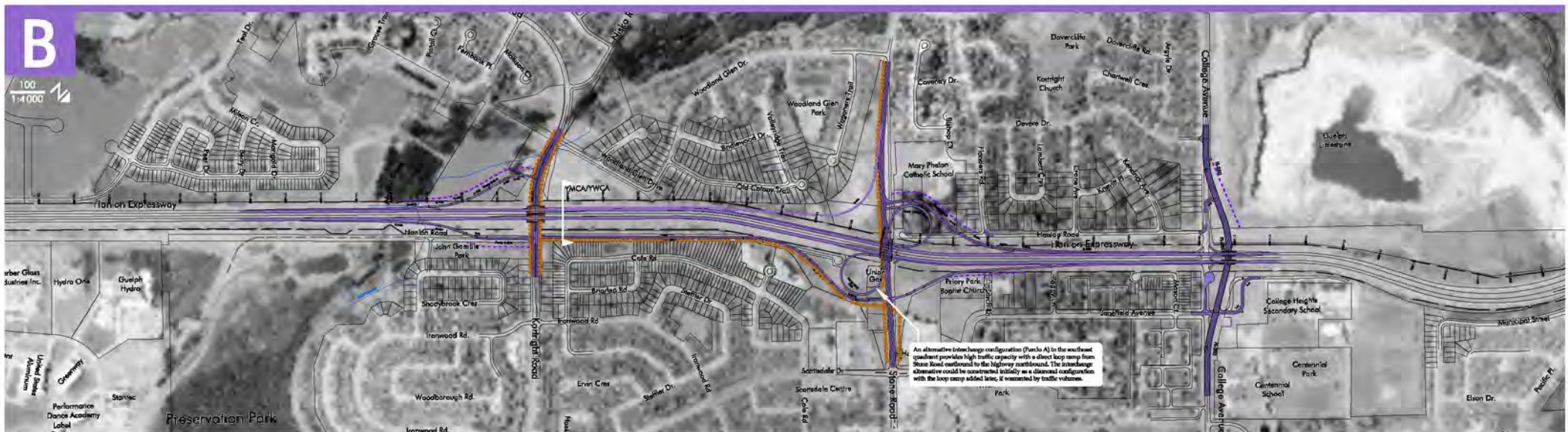
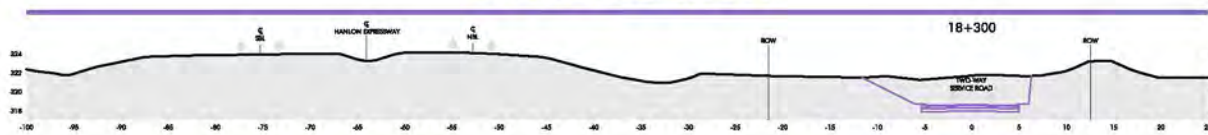
ALTERNATIVE 5

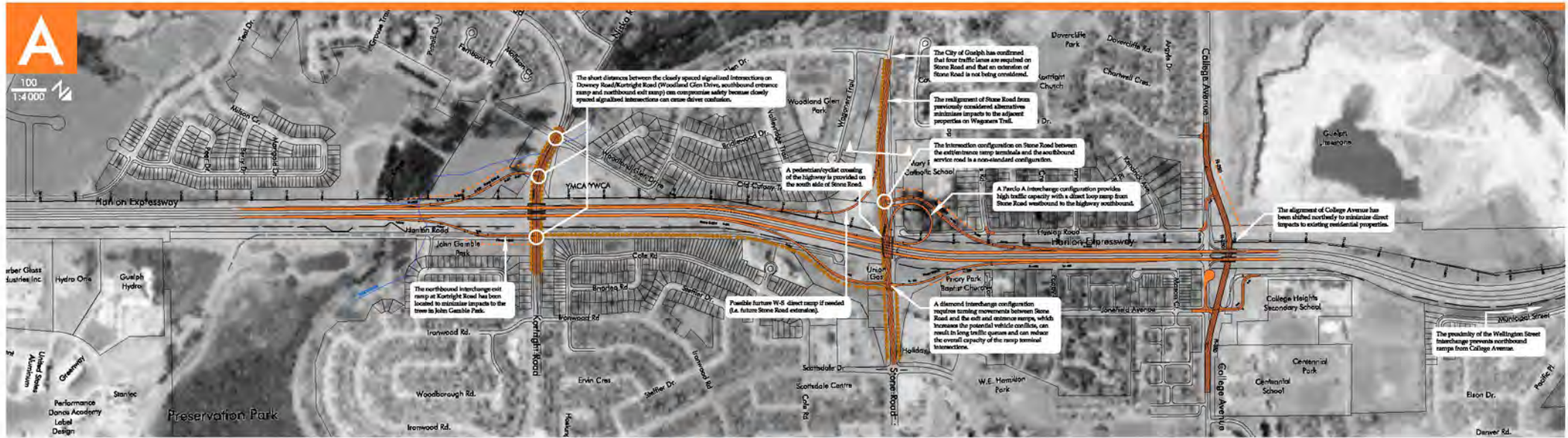
Developed based on Alternative 7 from PIC 2
 Two-way service road on the east side

HIGHWAY 6 (HANLON EXPRESSWAY)
 from Maltby Road to the Speed River
 GWP 3002-05-00

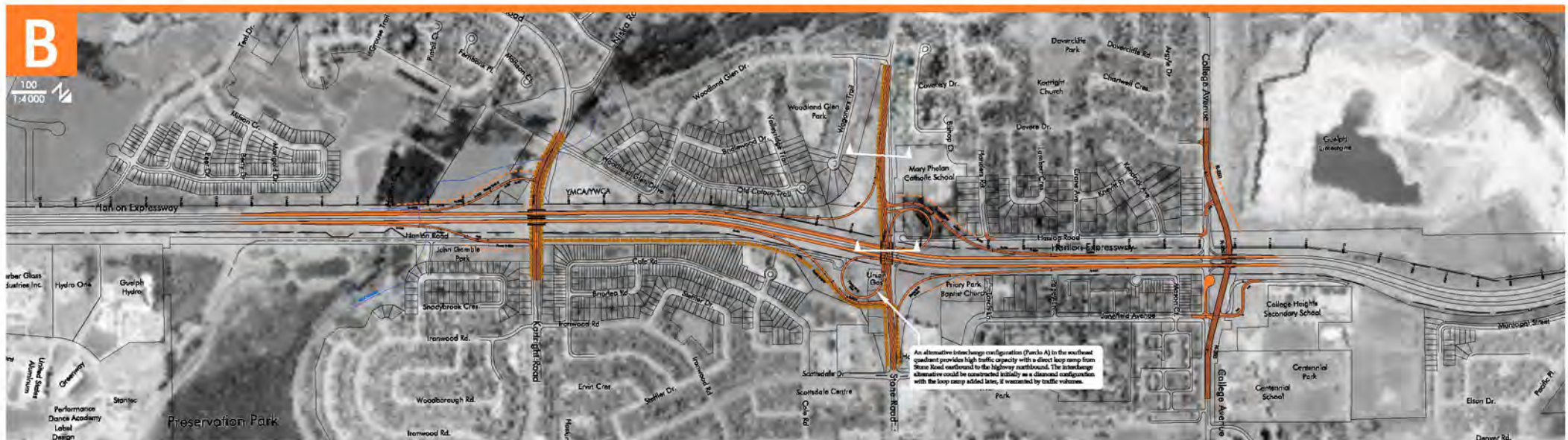
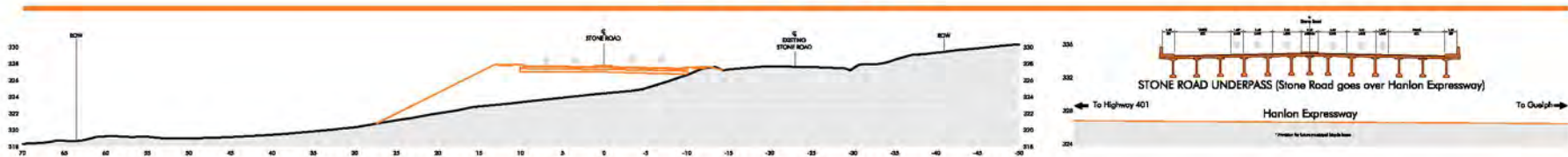


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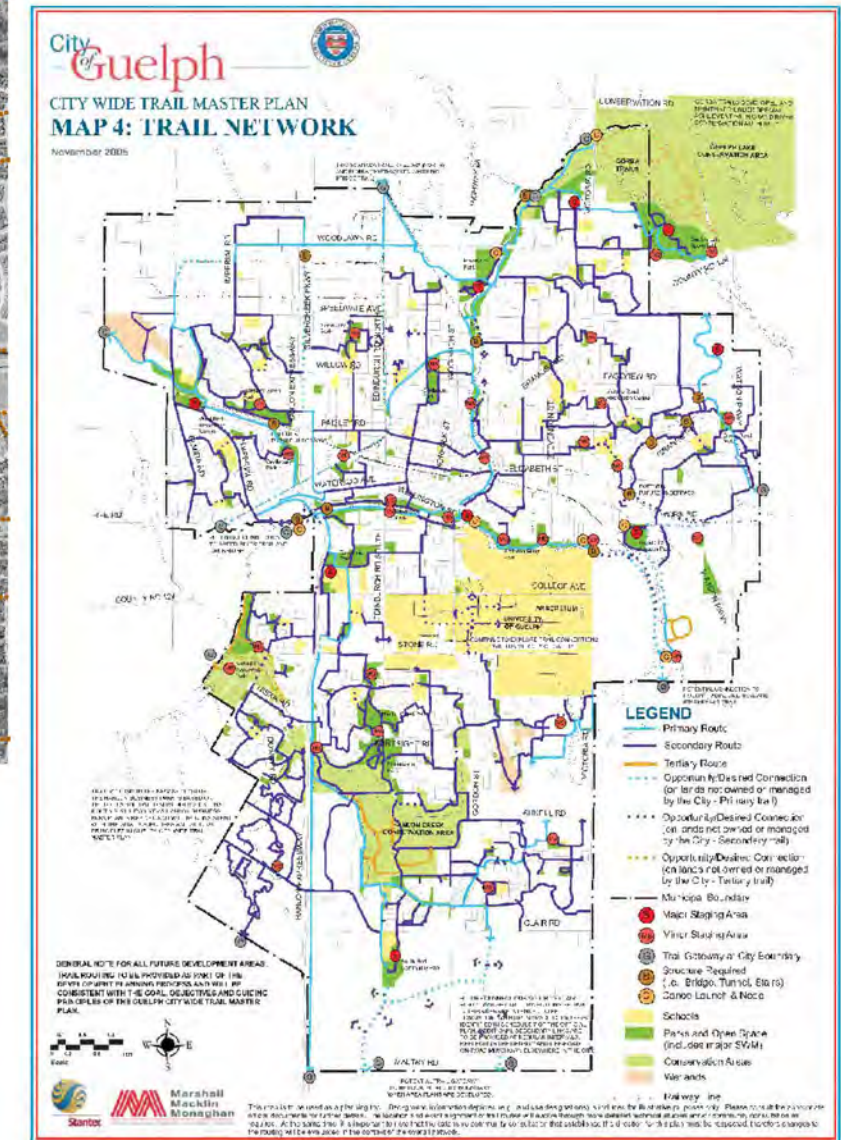
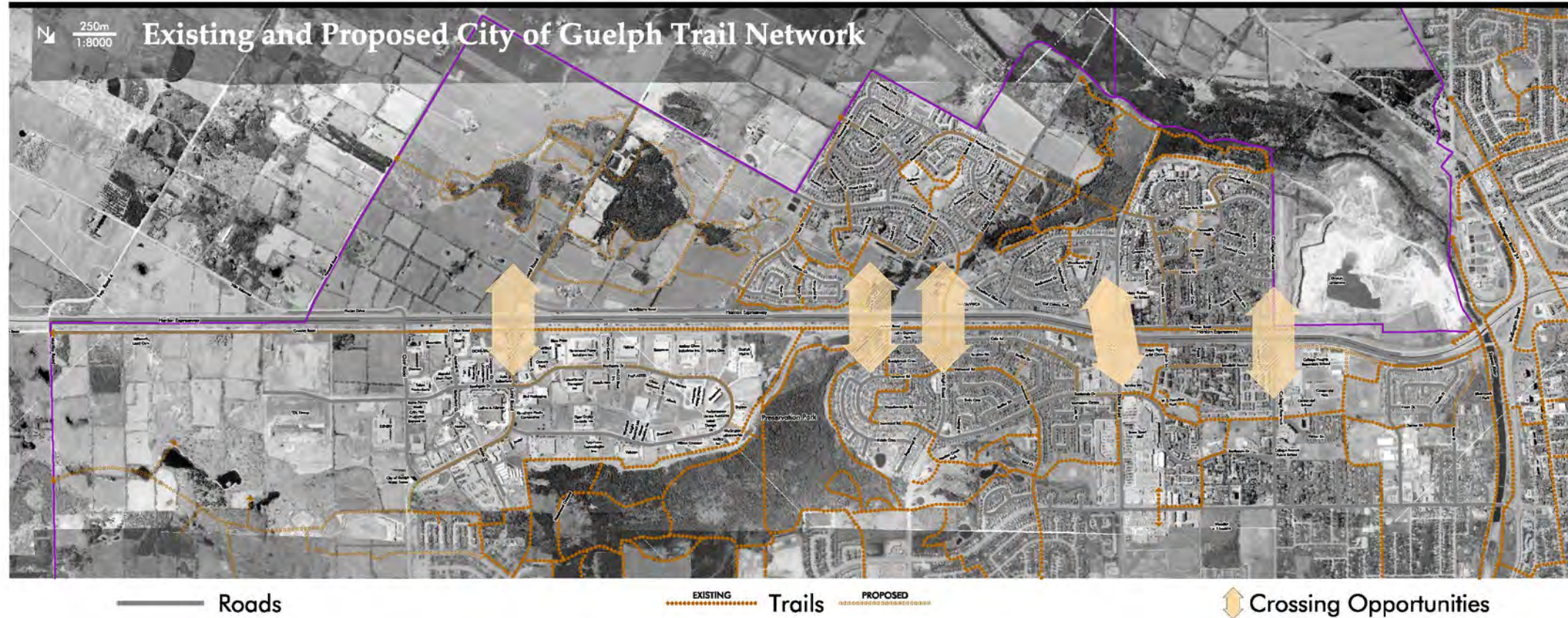




Cross Sections



Pedestrian & Cyclist Access



REGIONAL MUNICIPALITY of WATERLOO



CITY of KITCHENER

The Ministry of Transportation of Ontario (MTO) has successfully worked with other municipalities to incorporate their bicycle, trail and pedestrian infrastructure facilities into MTO projects.

Community Workshop

At Public Information Centre 2, and at the January 2008 City of Guelph Special Council Meeting, members of the public and City of Guelph Councillors expressed concern regarding the Preferred Plan that was presented for improvements to the north section of Highway 6.

In response to these concerns, the Ministry of Transportation (MTO) and City of Guelph held a Community Workshop to develop and consider possible alternative solutions for improvements to the Hanlon Expressway between Kortright Road and College Avenue.



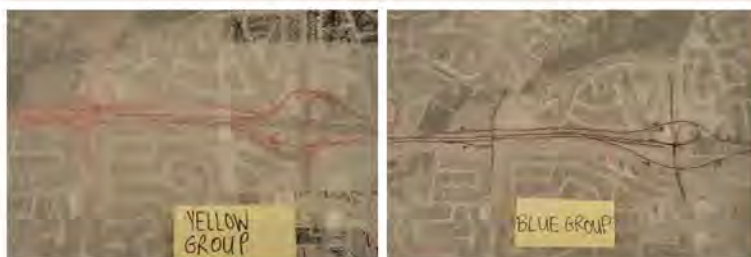
COMMUNITY WORKSHOP

The Community Workshop was held in May 2008. Workshop participants were identified by the City of Guelph and City Councillors. Representatives were selected from adjacent neighbourhoods, neighbourhood groups and from interest groups and agencies to collaborate with the MTO, the City and Stantec in a focused workshop setting. The purpose of the workshop was to:

- Gain a common understanding of the context (broad policy and physical site conditions) within which improvements to Highway 6 are being considered
- Gain a common understanding of the scope of possible alternatives
- Develop various alternatives for improvements to the crossings at Kortright Road, Stone Road, and College Avenue

Workshop participants convened three times to achieve these goals: a kick-off session to provide background information and context for the workshop; a day-long workshop to review evaluation criteria and weighting and develop alternative improvement plans; and a follow-up session to further refine the alternatives that were developed.

The workshop groups developed four alternatives for consideration. These and new alternatives that were developed by the project team are being presented for your review today.



STONE ROAD EXTENSION

The Stone Road extension is a municipal planning initiative that has been identified in a number of regional planning documents, including the City's Official Plan and the Guelph-Wellington Transportation Study. The Preferred Plan presented in December 2007 was selected to accommodate the future Stone Road extension. However, the City has recently indicated that they will consider alternatives that do not include a Stone Road Extension. Updated traffic projections reflecting this change have been identified. Alternatives that do not accommodate a future Stone Road extension were considered at the community workshop and are being presented at this PIC.

Public Information Centre 4

Public Information Centre 4

WELCOME

Welcome to the fourth Public Information Centre (PIC) for the Planning, Preliminary Design, and Environmental Assessment Study for the upgrading of the Huron Expressway from 0.2 kilometre south of Matty Road to the Speed River.

The study is following the "Group B" process under the Class Environmental Assessment (EA) for Provincial Transportation Facilities (2003), which is an approved process for projects of this type.

PURPOSE OF PUBLIC INFORMATION CENTRE

The purpose of this Public Information Centre is to:

- Present the evaluation of the North Section alternatives displayed at PIC 3
- Present and discuss the Preferred Plan
- Answer questions about the study

WHAT'S NEXT

Input received at this PIC will be reviewed and considered in the confirmation of a Recommended Plan.

The study will be documented in a Transportation Environmental Study Report (TESR) that will be made available for public review.

YOUR INPUT IS IMPORTANT

Through communication and interaction, public involvement provides an opportunity for you to help shape the decisions made during this study. Project information and updates are available at www.fastlaneproject.mtc.ca

You can provide your comments by filling out a comment sheet and either dropping it in the comment sheet box at today's meeting or by mailing it to:

Maya Cairns, MScP, RPP, Environmental Planner
Stantec Consulting Ltd., 100-401 Wellington Street West, Toronto, ON M5W 1E7
Tel: (416) 598-7362, Fax: (416) 595-0630
Email: publicinfo@transportation.mtc.ca

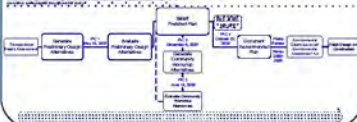
Please submit your comments before November 29, 2008.

PROCESSED UNDER THE ACCESS TO INFORMATION ACT / PROCÉDÉ TRAITÉ EN VERTU DE LA LOI SUR L'ACCÈS À L'INFORMATION

Comments and information regarding this study are being collected to satisfy the requirements of the Environmental Assessment Act, and in accordance with the Freedom of Information and Protection of Privacy Act, with the exception of personal information. All comments will become part of the public record.

Fast Lane Project Your Comments Are Important to Our Planning Process

What is a Public Information Centre (PIC)?
A Public Information Centre (PIC) is an opportunity for you to provide your input on the project. The PIC is a key part of the project's public involvement process. It is a chance for you to provide your input on the project and to discuss the project with other members of the public. The PIC is a key part of the project's public involvement process. It is a chance for you to provide your input on the project and to discuss the project with other members of the public. The PIC is a key part of the project's public involvement process. It is a chance for you to provide your input on the project and to discuss the project with other members of the public.





Related Provincial Projects

2011-2014 Provincial Budget



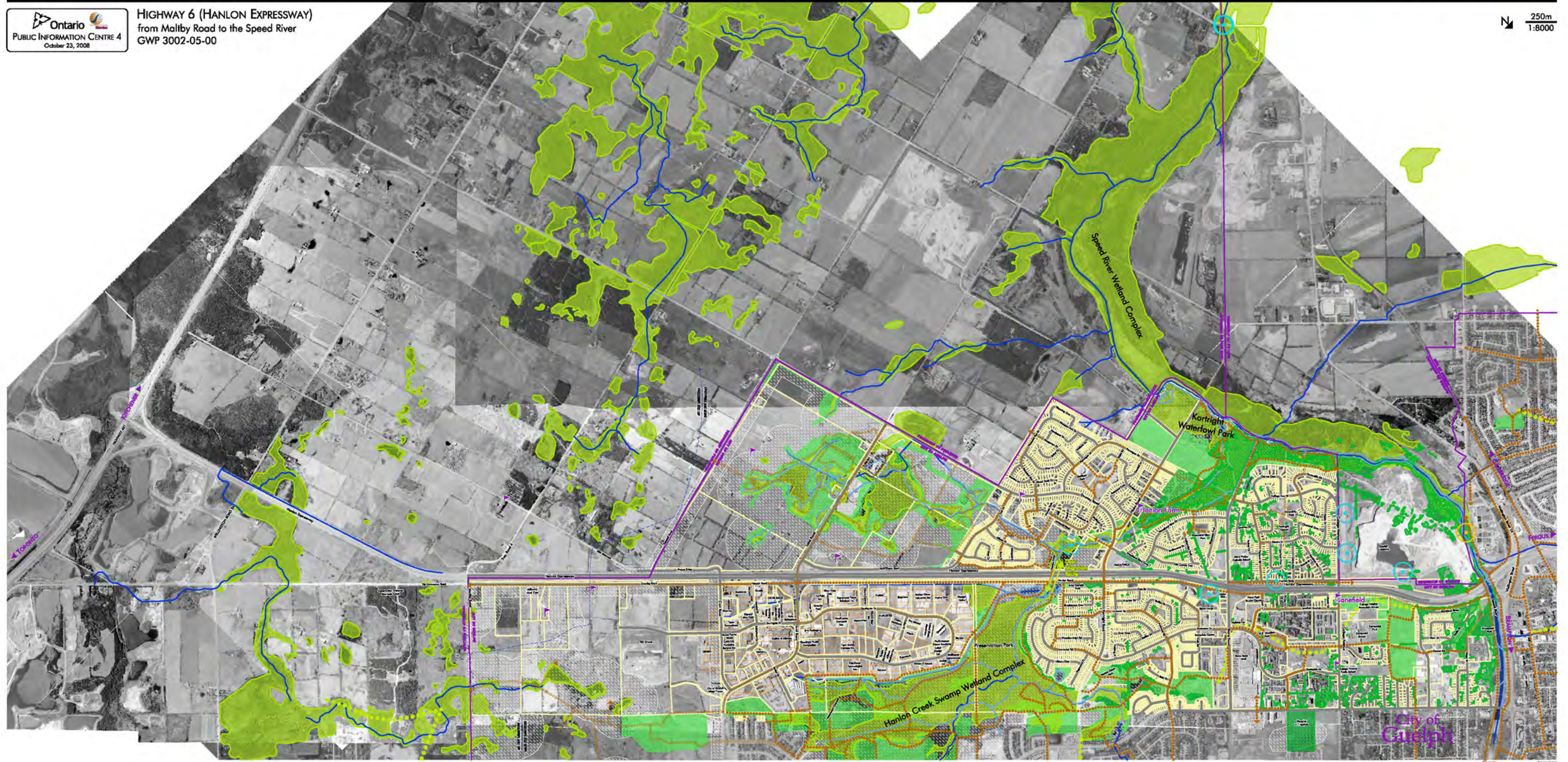
EXISTING ENVIRONMENTAL CONDITIONS

Ontario
PUBLIC INFORMATION CENTRE 4
October 23, 2008

HIGHWAY 6 (HANLON EXPRESSWAY)
from Maltby Road to the Speed River
GWP 3002-05-00

-  Greenbelt
-  Wetland
-  Open Space
-  Municipal Boundary
-  Drainage
-  Hydrology
-  Parcel Fabric
-  Aggregate Resource Areas
-  Archeological Potential
-  Water Quality Monitoring Station
-  Municipal Groundwater Well
-  Sewage Treatment Plant
-  Roads
-  Trails
-  Open Space Links
-  Built Heritage Feature

250m
1:8000



Environmental Update

At Public Information Centre 3 and at the May 2008 Community Workshop, the project team committed to carrying out additional environmental investigations for the Preferred Plan, including:

- Air Quality Study
- Noise Monitoring
- Groundwater overview for the Kortright Road/Downey Road area.

The project team has carried out these activities as part of the identification of the Preferred Plan that is displayed at this Public Information Centre. Environmental mitigation methods will be confirmed in the final *Transportation Environmental Study Report (TESR)*.

CITY OF GUELPH INITIATIVES

The City of Guelph is carrying out Phase II of their Natural Heritage Strategy, including an update to the City's natural heritage mapping. No additional locally or regionally significant natural features have been identified within the Hanlon Expressway study area as part of this process. The Natural Heritage Strategy has confirmed a deer migration movement corridor across Highway 6 at Hanlon Creek. However, the Preferred Plan does not include any changes to Highway 6 in the vicinity of the identified crossing location.

In response to local interest, the City of Guelph is considering initiating a comprehensive air quality monitoring program.

Please contact the City of Guelph for additional information regarding the above initiatives.

AIR QUALITY

An air quality assessment was carried out to determine air quality levels adjacent to the highway based on the proposed change from a highway with signalized intersections to a free-flow freeway. Predicted air contaminant concentrations were compared to provincial and federal criteria established by regulatory authorities such as the MOE. These authorities typically base their criteria on the potential for human health effects.

Predicted results of the air quality assessment for the Hanlon Expressway were all within provincial and federal guidelines.

In general, reducing idling or start/stop conditions provides the best improvement to air emissions. Current provincial initiatives include continued increased emphasis on integrated approaches to land use planning and transportation planning. Further improvements to public transportation, reductions in greenhouse gasses, and the introduction of federal fuel efficiency standards for motor vehicles are all part of the overall strategy to improve air quality for Ontario residents.

GROUNDWATER & HANLON CREEK FLOODPLAIN

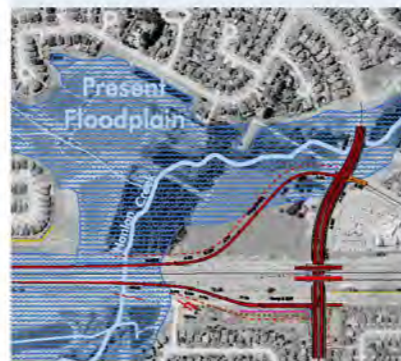
The location of the Grand River Conservation Authority's floodplain was considered during the development and evaluation of project alternatives.

The project team has met with the Ministry of Natural Resources and the Grand River Conservation Authority to confirm that they could accept a southbound ramp at Kortright Road/Downey Road that had minor encroachment into the Hanlon Creek floodplain.

A groundwater specialist has carried out a localized groundwater overview of the Preferred Plan in the vicinity of Kortright Road/Downey Road.

The results of the Groundwater Overview indicate that the groundwater supplying the Downey Road well does not have a significant hydraulic connection to the shallow groundwater system. As a result, roadway construction activities at Kortright Road/Downey Road and Highway 6, including dewatering of the overburden aquifer

(if required during construction), will not affect the quality and quantity of water available at the Downey Road well. Stormwater management for the proposed improvements will be managed in accordance with Grand River Conservation Authority and City of Guelph policies.



NOISE

This project's Noise Study was carried out in accordance with the current MTO Noise Policy (2006). The study indicates that noise walls or berms are warranted on both sides of Highway 6, between Kortright Road and College Avenue. In response to concerns from the public, the project noise specialist conducted field measurements in September 2008 to verify the results obtained from the noise model. Monitoring was carried out at eight locations and data was obtained for a 72-hour period. Traffic monitoring was carried out simultaneously to confirm traffic volumes and noise sources.

The following conclusions were drawn from the noise monitoring:

- Traffic data is consistent with the data used in the Noise Model
- Measured sound levels at all eight (8) locations are consistent with the originally predicted sound levels, in terms of acoustic significance (+/- 1.5 dBA)
- Noise walls/berms are warranted on the east and west side of Highway 6 between Kortright Road / Downey Road and College Avenue

The results of the noise monitoring, as compared to the sound levels obtained from the noise model, are displayed on the plan below. Preliminary locations for noise walls/berms are displayed on the Preferred Plan. These barriers are warranted under MTO Noise Policy by either a >5 dBA predicted increase in the noise level, or a predicted future noise level of >65 dBA.



At Public Information Centre 3 (PIC 3) and at the May 2008 Community Workshop, the project team committed to carrying out additional traffic investigations for the Preferred Plan. This included:

- origin and destination studies and intersection turning movement counts to supplement the existing City of Guelph Transportation Model.
- review the suitability of a diamond interchange on the east side of Highway 6 at Stone Road.
- review the number of lanes required for Stone Road west of the interchange.

The project team has carried out these activities as part of the evaluation of the PIC 3 alternatives and the identification of the Preferred Plan.

STONE ROAD INTERCHANGE

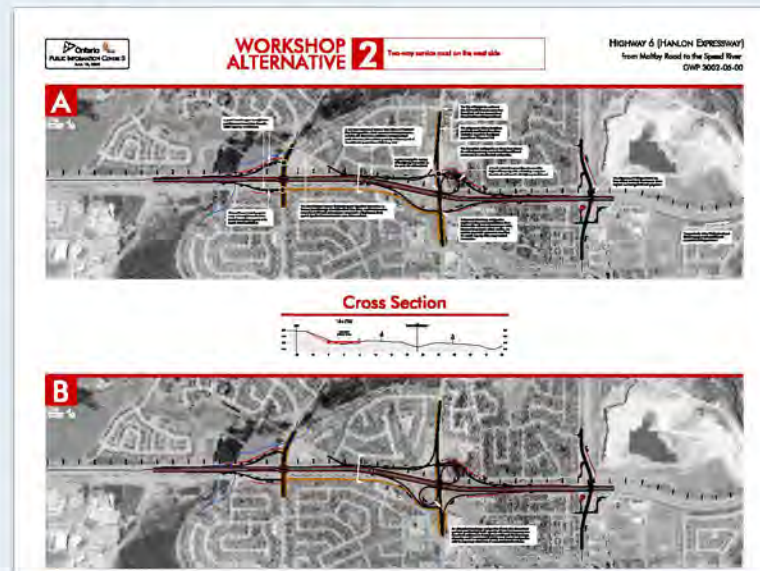
At the third Public Information Centre, two versions of each alternative were shown:

- a partial diamond interchange configuration on the east side of Highway 6
- a full Parclo A interchange configuration at Stone Road

A diamond interchange configuration requires turning movements between Stone Road and the exit and entrance ramps, which increases the potential for vehicle conflicts, can result in long traffic queues, and can reduce the overall capacity of the ramp terminal intersections.

The transportation modelling that was completed indicates that the partial diamond interchange configuration on the east side of Highway 6 at Stone Road can adequately accommodate future traffic projections, and a full Parclo A configuration is not required. As such, only the alternatives that provided a diamond interchange configuration on the east side of Highway 6 were carried forward to a full evaluation (see Evaluation of Alternatives display).

In addition to being able to accommodate future projected peak hour traffic volumes, providing a diamond interchange configuration on the east side of Highway 6 improves pedestrian and cyclist comfort levels at the interchange.



CITY OF GUELPH TRANSPORTATION MODEL

In order to supplement the existing City of Guelph Transportation Model, origin-destination and intersection turning movement counts were conducted in April 2008. The counts were conducted during the peak times to capture the large number of vehicles in the area that are generated by educational facilities, including local schools and the University of Guelph, in addition to local traffic.

The information was used to gain a better understanding of existing travel patterns on the west side of Highway 6 between Downey Road and College Avenue, and to assist in predicting future peak hour traffic volumes on local roads for each of the alternatives.

Based on the results of the modelling, future (2031) projected peak hour traffic volumes have been determined. Future-Do-Nothing projected traffic volumes (i.e. no improvements to Highway 6 within the study area) and future projected volumes for each of the alternatives are provided on the Evaluation of Alternatives display.

STONE ROAD

Based on comments received at the third Public Information Centre, there were questions relating to the number of through lanes required on Stone Road west of Highway 6. A four-lane road was displayed at the third Public Information Centre, and the project team agreed to review the lane requirements.

Based on the results of the modelling, four through lanes (i.e. two lanes in each direction) are required on Stone Road through the interchange to accommodate the traffic volumes entering and exiting the highway. West of the interchange, projected volumes are expected to decrease sufficiently that only two through lanes (i.e. one lane in each direction) are required.

The transition from four lanes to two lanes will be located beyond the limits of the interchange but before the intersection at Stone Road and Woodland Glen Drive, as shown on the Preferred Plan display. The traffic modelling was based on the assumption that Stone Road will not be extended to the west.

The Evaluation Process

EVALUATION PROCESS

The goal of the evaluation process is to identify an improvement plan for the Hanlon Expressway that is cost-effective, provides safe operations, and provides reasonable local access, while minimizing the effects on the environment. This is accomplished by identifying evaluation criteria along with their relative importance, and then ranking the overall scores of the design alternatives.

▼ Identify Criteria



Evaluation Criteria are established through:

- public input
- similar projects
- provincial guidelines
- existing conditions

▼ Weigh Criteria



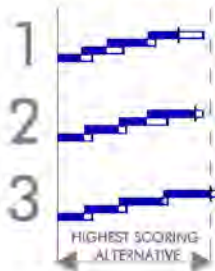
Each criterion is assigned a weight factor that best reflects its relative importance.

▼ Score Alternatives



All preliminary design alternatives are measured and given a score based on the degree to which each is judged to satisfy the evaluation criteria.

▼ Rank Alternatives



The sum of the weighted scores provides a total score for each alternative. This is the basis for ranking the alternatives and identifying the... **Preferred Plan**

EVALUATION CRITERIA

Project Team
Community Workshop
Public Information Centre 3

CATEGORY	INDICATORS	WEIGHT FACTOR
Traffic Operations	• Provides for safe movement of vehicles	22%
	• Accommodates projected traffic demand	17%
	• Supports and enhances provincial highway function	17%
	• Reduces the number of collisions	
	• Provides acceptable traffic operations on municipal roads and at intersections	
Access	• Supports existing and future growth and development	22%
	• Supports the municipal road network	19%
	• Complements future municipal road improvements	18%
Natural Environment	• Minimizes or avoids impacts to ecological features, including wetlands, greenbelts, watercourses, wildlife habitat, surface water and groundwater	13%
		18%
		15%
Social Environment	• Minimizes number of residents and businesses displaced	17%
	• Minimizes property requirements	20%
	• Is compatible with City of Guelph and Wellington County Official Plans	21%
	• Minimizes changes to views of highway / landscape	
	• Minimizes noise and air quality impacts	
Cultural Environment	• Minimizes or avoids impacts to registered and identified Built Heritage Features and Cultural Landscapes and archaeological resources	9%
		7%
		8%
Constructability	• Accommodates existing traffic flow and operations during construction	4%
	• Uses conventional construction techniques	6%
		7%
Applied Environment	• Minimizes or avoids impacts to waste disposal sites or potentially contaminated sites	4%
	• Minimizes utility impacts	6%
	• Minimizes effects on municipal water supplies and wells	5%
Cost	• Minimizes cost, including construction, utility relocation and property requirements	9%
		7%
		7%

Evaluation of Alternatives



The concepts for the six alternatives presented at the third public information centre are similar from a transportation perspective. Each alternative has the following common elements:

- Partial Interchange at Kortright Road/Downey Road
- Full interchange at Stone Road
- Grade-separation at College Avenue
- Noise mitigation east and west of Highway 6 between Kortright Road / Downey Road and College Avenue
- Pedestrian / cyclist routes accommodated

The primary difference in the alternatives was local access, and specifically how the movement of traffic is accommodated on the west side of Highway 6 between Downey Road and Stone Road. This was accomplished by considering a range of service road options (i.e. no service road, one-way service road, and two-way service road). Given that the key components of each alternative are similar (i.e. the common elements), the focus of the evaluation was on the differences in local access between the alternatives.

Listed below are advantages and disadvantages, focused on the elements that are different for each alternative:



1A One-way southbound service road on the west side
One-way northbound service road on the east side

ADVANTAGES

- The single intersection on Downey Road with both the E/W-S Ramp and Woodland Glen Drive consolidates traffic movements at one location which is desirable
- The service roads on both sides of Highway 6 provide desirable local connections between Downey Road/Kortright Road and Stone Road and direct traffic away from local neighbourhood streets
- The service roads between Downey Road/Kortright Road and Stone Road would be constructed within the existing provincial and municipal right-of-ways
- The noise barriers on both sides of Highway 6 provide an acoustic and visual barrier between the adjacent neighbourhoods and Highway 6 and the Service Roads

DISADVANTAGES

- The unusual intersection configuration between the southbound one-way service road and Woodland Glen Drive could result in wrong way traffic on the service road
- The merge of the northbound service road with the S-E/W ramp at Stone Road increases the potential for vehicle conflicts on the ramp which can compromise safety
- There is a minor intrusion into the Hanlon Creek floodplain
- The East Service Road impacts the hydro corridor and watermain



1B One-way southbound service road on the west side
One-way northbound service road on the east side

ADVANTAGES

- The single intersection on Downey Road with the E/W-S Ramp, West Service Road and Woodland Glen Drive consolidates traffic movements at one location which is desirable
- The service roads on both sides of Highway 6 provide desirable local connections between Downey Road/Kortright Road and Stone Road and direct traffic away from local neighbourhood streets
- The service roads between Downey Road/Kortright Road and Stone Road would be constructed within the existing provincial and municipal right-of-ways
- The noise barriers on both sides of Highway 6 provide an acoustic and visual barrier between the adjacent neighbourhoods and Highway 6 and the Service Roads

DISADVANTAGES

- The merge of the northbound service road with the S-E/W ramp at Stone Road increases the potential for vehicle conflicts on the ramp which can compromise safety
- The West Service Road has a non-conventional loop ramp connection to Downey Road
- There is a significant intrusion into the Hanlon Creek floodplain
- The West Service Road has minor impacts to the Hanlon Creek Provincially Significant Wetland
- The East Service Road impacts the hydro corridor and watermain



2 Two-way service road on the west side
Preferred Plan

ADVANTAGES

- The two-way West Service Road provides a desirable local connection between Downey Road/Kortright Road and Stone Road and directs traffic away from local neighbourhood streets
- The service road between Downey Road and Stone Road would be constructed within the existing provincial and municipal right-of-ways
- The noise barriers on both sides of Highway 6 provide an acoustic and visual barrier between the adjacent neighbourhoods and Highway 6 and the Service Road

DISADVANTAGES

- The two closely spaced signalized intersections on Downey Road can cause driver confusion and compromise safety—this concern can be addressed by combining the intersections at a single location



3 Two-way service road on the west side
Modified S-E/W ramp at Kortright Road provides alternate exit

ADVANTAGES

- The two-way West Service Road provides a desirable local connection between Downey Road/Kortright Road and Stone Road and directs traffic away from local neighbourhood streets
- The service road between Downey Road and Stone Road would be constructed within the existing provincial and municipal right-of-ways
- The noise barriers on both sides of Highway 6 provide an acoustic and visual barrier between the adjacent neighbourhoods and Highway 6 and the Service Road

DISADVANTAGES

- The two closely spaced signalized intersections on Downey Road can cause driver confusion and compromise safety—this concern can be addressed by combining the intersections at a single location
- The uncommon connection from Shadybrook to the S-E/W ramp at Kortright Road increases the potential for vehicle conflicts on the ramp which can compromise safety
- There are impacts to the Hanlon Creek Provincially Significant Wetland (east side culvert extension)
- The parking area adjacent to Old Hanlon Road is impacted



4 One-way southbound service road on the west side
Roundabout connection between roads and ramps

ADVANTAGES

- The service roads on both sides of Highway 6 provide desirable local connections between Downey Road/Kortright Road and Stone Road and direct traffic away from local neighbourhood streets
- The service roads between Downey Road/Kortright Road and Stone Road would be constructed within the existing provincial and municipal right-of-ways
- Noise barriers on both sides of Highway 6 provide an acoustic and visual barrier between the adjacent neighbourhoods and Highway 6 and the Service Roads

DISADVANTAGES

- The large roundabout is a non-conventional traffic control design in Ontario at interchanges
- The merge of the northbound service road with the S-E/W ramp at Stone Road increases the potential for vehicle conflicts on the ramp which can compromise safety
- There are significant and expensive construction staging and detours required to raise Highway 6 to accommodate the roundabout
- There are impacts to the Hanlon Creek Provincially Significant Wetland (east and west side culvert extensions)



5 Developed based on Alternative 7 from PIC 2
Two-way service road on the east side

ADVANTAGES

- A one-way East Service Road provides a desirable local connection between Downey Road/Kortright Road and Stone Road and directs traffic away from local neighbourhood streets
- The service road between Kortright Road and Stone Road would be constructed within the existing provincial and municipal right-of-ways
- The noise barriers on both sides of Highway 6 provide an acoustic and visual barrier between the adjacent neighbourhoods and Highway 6 and the Service Road

DISADVANTAGES

- A combined Kortright Road/Downey Road and Stone Road northbound exit can cause driver confusion and will add a significant amount of traffic to the intersection of the ramp with Kortright Road
- The two closely spaced signalized intersections on Downey Road can cause driver confusion and compromise safety—this concern can be addressed by combining the intersections at a single location
- The East Service Road impacts the hydro corridor and watermain



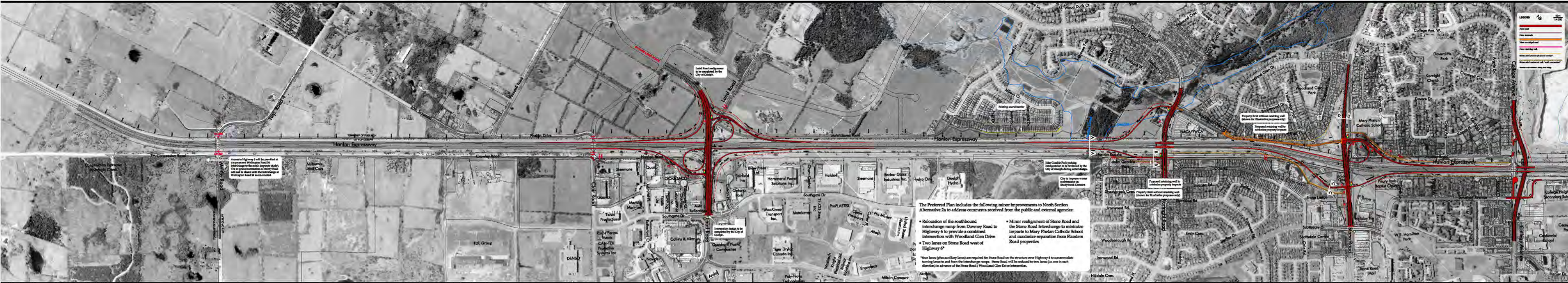
6 Developed based on the Preferred Plan from PIC 2
No service roads

ADVANTAGES

- New municipal roads are not required

DISADVANTAGES

- The two closely spaced signalized intersections on Downey Road can cause driver confusion and compromise safety—this concern can be addressed by combining the intersections at a single location
- There would be a significant volume of additional traffic to local roads on the west side of Highway 6



The Preferred Plan includes the following minor improvements to North Section Alternative 2a to address comments received from the public and external agencies:

- Relocation of the southbound interchange ramp from Downey Road to Highway 6 to provide a combined intersection with Woodland Glen Drive
- Two lanes on Stone Road west of Highway 6
- Minor realignment of Stone Road and the Stone Road interchange to minimize impacts to Mary Phelan Catholic School and maximize separation from Flanders Road properties

*Four lanes (plus auxiliary lanes) are required for Stone Road on the structure over Highway 6 to accommodate turning lanes to and from the interchange ramps. Stone Road will be reduced to two lanes (i.e. one in each direction) in advance of the Stone Road / Woodland Glen Drive intersection.

The Preferred Plan includes:

- TRAFFIC OPERATIONS & SAFETY:**
- Closure of the intersections at Maltby Road, Clair Road / Phelan Road, Laird Road, Kortright Road / Downey Road, Stone Road and College Avenue.
 - A Parclo A4 interchange at Laird Road
 - A grade-separated crossing and partial interchange at Kortright Road / Downey Road (ramps to and from the south)
 - A grade-separated crossing and full interchange (Parclo A / Diamond) at Stone Road
 - A grade-separated crossing at College Avenue
 - Signalized intersections at all of the interchange ramp terminals
 - Full illumination of the highway and interchanges from Kortright Road / Downey Road to Wellington Street*
 - Partial illumination of the Laird Road interchange

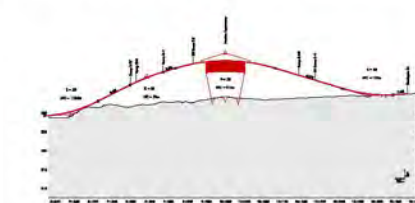
- NATURAL ENVIRONMENT:**
- A tight diamond ramp from Highway 6 northbound to Kortright Road to minimize impacts to John Gamble Park

- SOCIAL ENVIRONMENT:**
- Future noise barriers (i.e. wall or berm) east and west of Highway 6 between Kortright Road / Downey Road and College Avenue*
 - A partial diamond interchange on the east side of the Stone Road interchange to improve pedestrian and cyclist comfort levels at the interchange
 - Bike lanes and pedestrian sidewalks at Laird Road, Kortright Road / Downey Road, Stone Road and College Avenue*
 - Minor trail relocations at the proposed grade separations at Kortright Road / Downey Road, Stone Road, and College Avenue*

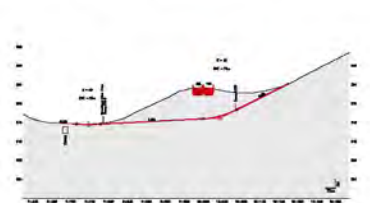
- ACCESS:**
- Full access at Laird Road
 - Partial access to and from the south at Kortright Road / Downey Road
 - Full access at Stone Road
 - A two-way service road on the west side of Highway 6 between Stone Road and Woodland Glen Drive to improve local access

- APPLIED ENVIRONMENT:**
- Relocation of Union Gas facility at Stone Road
 - Utility Relocations

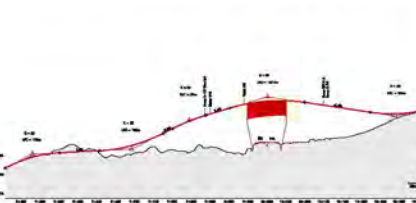
*Final details will be determined during detail design.



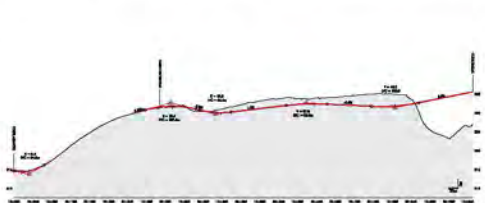
LAIRD ROAD



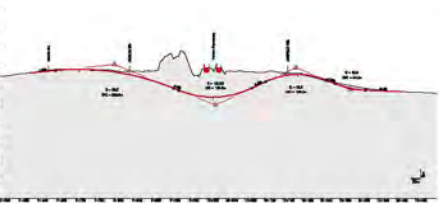
DOWNEY ROAD / KORTRIGHT ROAD



STONE ROAD



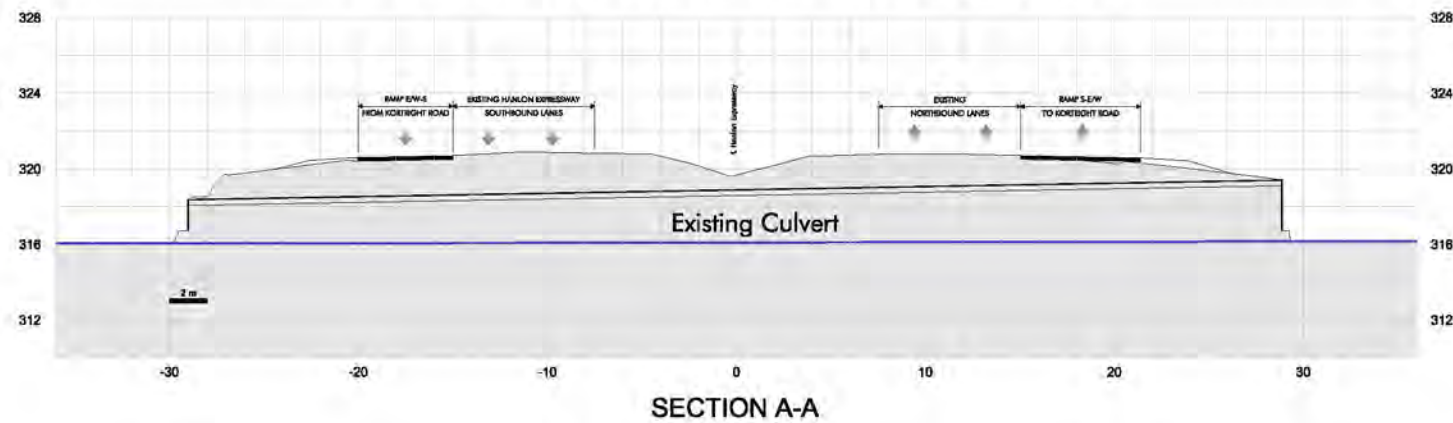
WEST SERVICE ROAD



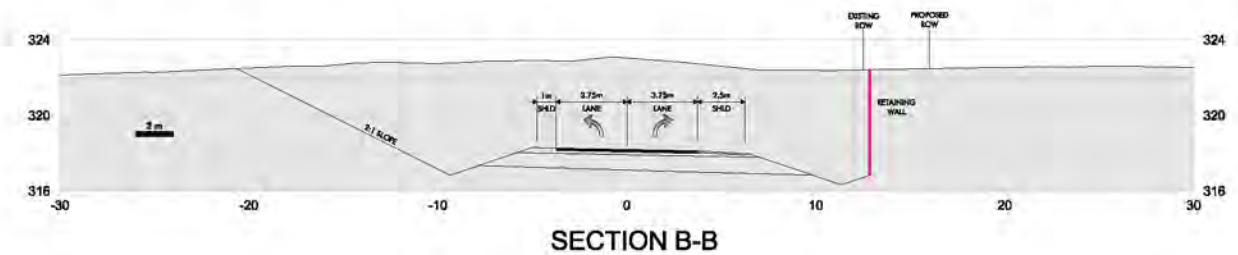
COLLEGE AVENUE

Road Cross Sections

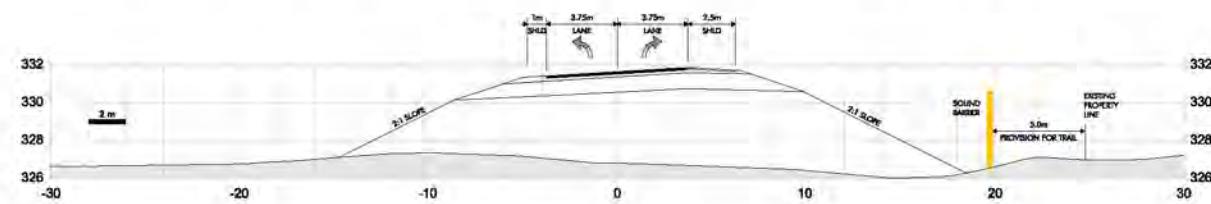
HANLON CREEK CULVERT



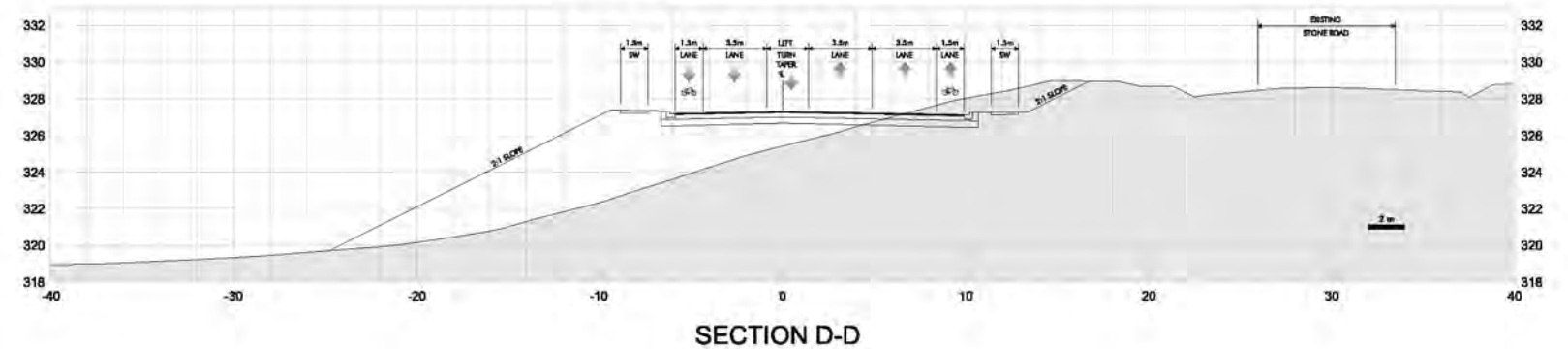
RAMP S-EW AT KORTRIGHT ROAD



RAMP S-EW AT STONE ROAD



STONE ROAD



West Service Road Plan and Cross Sections

