



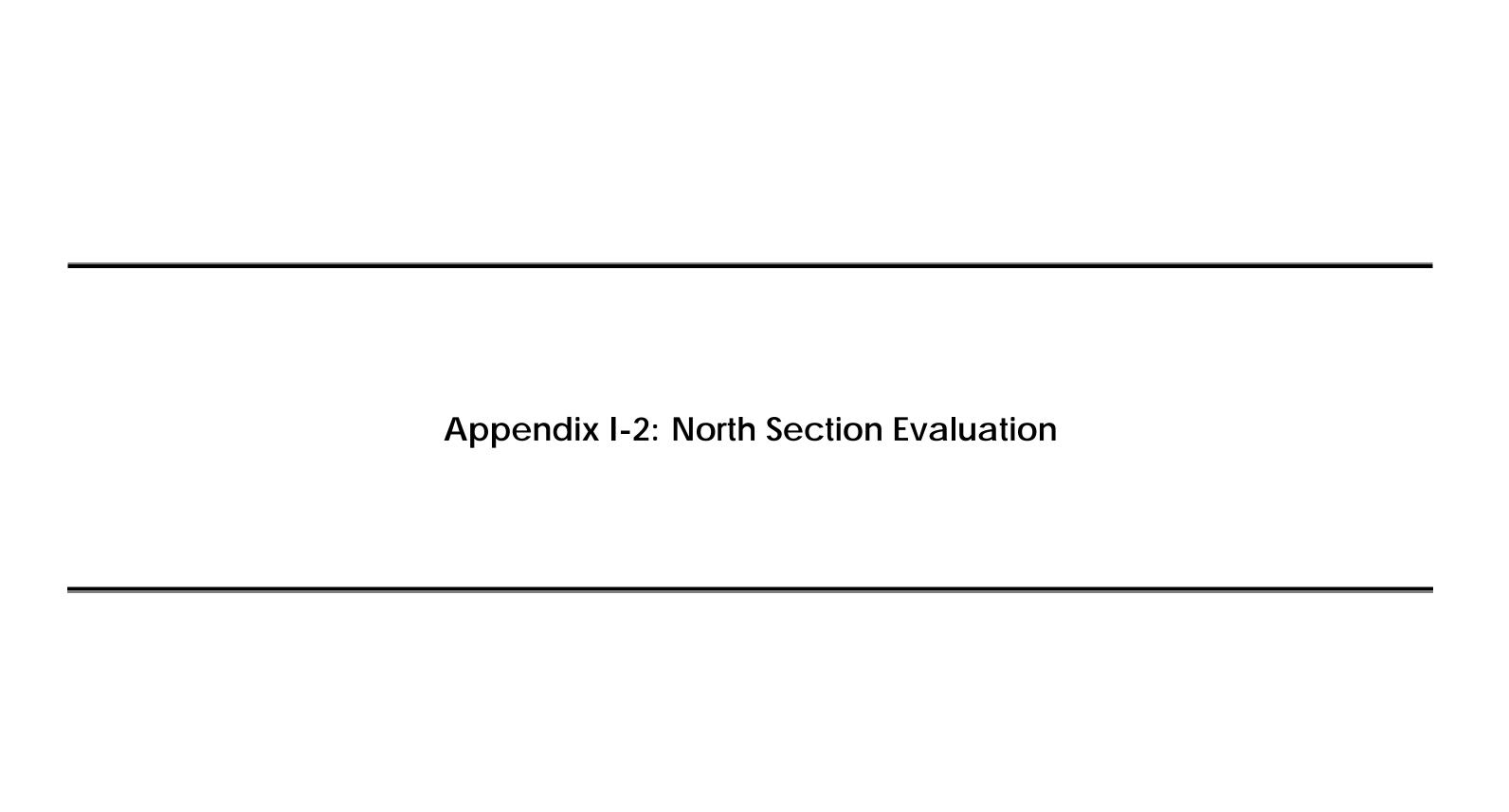
Traffic Operations	
Traffic Operations	<ul> <li>Interchange configuration provides high traffic capacity and minimal traffic conflicts</li> </ul>
Geometrics	Accommodates the highway exits on large radius ramps located in advance of the structure
	No left-turns from Laird Road are required—left turns are from the highway ramp exits only
	Exits from Laird Road to the highway are free-flow movements that are consistently to the right
Access	
Access to and from Highway 6	<ul> <li>Provides access to and from Highway 6 via Laird Road Interchange</li> </ul>
	<ul> <li>Closes the existing at-grade intersections on Highway 6 at Clair Road and at Maltby Road</li> </ul>
	<ul> <li>Can accommodate a Southgate Drive Extension if required and initiated by the City of Guelph</li> </ul>
Constructability	
Construction Issues	<ul> <li>Uses conventional construction techniques that have long-term stability</li> </ul>
Natural Environment	
Vegetation removal	<ul> <li>No vegetation removal required</li> </ul>
Effects on natural areas	<ul> <li>No effects on natural areas</li> </ul>
Social Environment	
Residents and Businesses Displaced	Displaces one residence on Laird Road, however, residence would be displaced with future expansion of Hanlon Creek Business Park
	This interchange configuration is compatible with the approved Draft Plan of Subdivision for the Hanlon Business Park located on the west side of the highway
Potential Noise Impacts	<ul> <li>No major increases in noise levels are anticipated</li> </ul>
	<ul> <li>Noise increases can be mitigated through standard mitigation measures</li> </ul>
Impacts on Community and Recreation Features, including	<ul> <li>Improves pedestrian and cyclist access across Hanlon Expressway via grade separation at Laird Road</li> </ul>
Trails	<ul> <li>Impacts existing trail system east of Hanlon Expressway near Laird Road interchange</li> </ul>
	<ul> <li>Impacts proposed trail system west of Hanlon Expressway along Laird Road</li> </ul>
Property requirements	<ul> <li>Minor property requirements in northeast quadrant of Laird Road and Hanlon Expressway – Fairfield Inn</li> </ul>
	<ul> <li>Property impacts to vacant property in northwest quadrant of Laird Road and Hanlon Expressway</li> </ul>
	<ul> <li>Property impacts to vacant property and Ontario College Application Services (OCAS) in southeast quadrant of Laird Road and Hanlon Expressway</li> </ul>
	Property requirements in southwest quadrant of Laird Road and Hanlon Expressway result in displacement of residence
Cultural Environment	
Impact on Existing Built Heritage or Cultural Features	Built heritage residence on McWilliams Road potentially affected by vibration and dust during construction
Potential Impact on Archaeological Resources	Area of archaeological potential on west side of Hanlon Expressway; to be confirmed through additional Stage 2 archaeological assessment; archaeological resources uncovered during construction would be mitigated through
	provisions of the Ontario Heritage Act
Applied Environment	
Waste Disposal Sites or Potentially Contaminated Sites	<ul> <li>No impact on waste disposal sites or potentially contaminated sites</li> </ul>
Cost	
Estimated Total Construction Cost	<ul> <li>Second highest comparative cost</li> </ul>



Traffic Operations	Evaluation commany 7 mornante 2
Traffic Operations	Interchange configuration provides lower traffic capacity and minimal traffic conflicts
Geometrics	The highway exits require successive and closely spaced decision points to separate westbound and eastbound traffic  The highway exits require successive and closely spaced decision points to separate westbound and eastbound traffic
	<ul> <li>Highway traffic exits the highway on a small radius loop, which reduces the capacity and safety of the interchange</li> </ul>
	<ul> <li>All highway traffic destined for Laird Road exit on a free-flow ramp (i.e. no stop is required at Laird Road)</li> </ul>
	<ul> <li>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</li> </ul>
	Left-turn storage lanes are required on Laird Road
Access	
Access to and from Highway 6	<ul> <li>Provides access to and from Highway 6 via Laird Road Interchange</li> </ul>
	<ul> <li>Closes the existing at-grade intersections on Highway 6 at Clair Road and at Maltby Road</li> </ul>
	Can accommodate a Southgate Drive Extension if required and initiated by the City of Guelph
Constructability	
Construction Issues	<ul> <li>Uses conventional construction techniques that have long-term stability</li> </ul>
Natural Environment	
Vegetation removal	<ul> <li>No vegetation removal required</li> </ul>
Effects on natural areas	<ul> <li>No effects on natural areas</li> </ul>
Social Environment	
Residents and Businesses Displaced	Displaces one residence on Laird Road, however, residence would be displaced with future expansion of Hanlon Creek Business Park  The property of the propert
· ·	Displaces Fairfield Inn
	<ul> <li>Interchange configuration is not compatible with the approved Draft Plan of Subdivision for the Hanlon Business Park located on the west side of the highway</li> </ul>
Potential Noise Impacts	No major increases in noise levels are anticipated  No major increases in noise levels are anticipated
·	<ul> <li>Noise increases can be mitigated through standard mitigation measures</li> </ul>
Impacts on Community and Recreation Features, including	<ul> <li>Improves pedestrian and cyclist access across Hanlon Expressway via grade separation at Laird Road</li> </ul>
Trails	<ul> <li>Impacts existing trail system east of Hanlon Expressway near Laird Road interchange</li> </ul>
	<ul> <li>Impacts proposed trail system west of Hanlon Expressway along Laird Road</li> </ul>
Property Requirements	Property requirements in northeast quadrant of Laird Road and Hanlon Expressway result in displacement of Fairfield Inn  Property requirements in northeast quadrant of Laird Road and Hanlon Expressway result in displacement of Fairfield Inn
	Property impacts to vacant property in northwest quadrant of Laird Road and Hanlon Expressway
	<ul> <li>Property impacts to vacant property and Ontario College Application Services (OCAS) in southeast quadrant of Laird Road and Hanlon Expressway</li> </ul>
	Property requirements in southwest quadrant of Laird Road and Hanlon Expressway result in displacement of residence
Cultural Environment	
Impact on Existing Built Heritage or Cultural Features	Built heritage residence on McWilliams Road potentially affected by vibration and dust during construction  Built heritage residence on McWilliams Road potentially affected by vibration and dust during construction
Potential Impact on Archaeological Resources	Area of archaeological potential on west side of Hanlon Expressway; to be confirmed through additional Stage 2 archaeological assessment; archaeological resources uncovered during construction would be mitigated through
,	provisions of the Ontario Heritage Act
Applied Environment	
Waste Disposal Sites or Potentially Contaminated Sites	No impact on waste disposal sites or potentially contaminated sites
Cost	
Estimated Total Construction Cost	Highest comparative cost



	Evaluation commany 7 mornanto e
Traffic Operations	
Traffic Operations	<ul> <li>Interchange configuration provides lower traffic capacity</li> <li>Drivers on Laird Road are required to share the entrance ramps, which increases the number of conflicts points and reduces the capacity of the interchange</li> </ul>
Geometrics	<ul> <li>Accommodates the highway exits on large radius ramps located in advance of the structure</li> <li>Exits from Laird Road are simple and exit moves are in the same direction as the freeway destination direction</li> <li>All connections between Laird Road and the exit and entrance ramps must be accomplished as turning movements at intersections (i.e. no direct ramps)</li> <li>Left-turn storage lanes are required on Laird Road</li> </ul>
Access	
Access to and from Highway 6	<ul> <li>Provides access to and from Highway 6 via Laird Road Interchange</li> <li>Closes the existing at-grade intersections on Highway 6 at Clair Road and at Maltby Road</li> <li>Can accommodate a Southgate Drive Extension if required and initiated by the City of Guelph</li> </ul>
Constructability	
Construction Issues	<ul> <li>Uses conventional construction techniques that have long-term stability</li> <li>Requires the construction of a road extension through an environmentally sensitive area, including Hanlon Creek</li> </ul>
Natural Environment	
Vegetation removal	<ul> <li>No vegetation removal required</li> </ul>
Effects on natural areas	No effects on natural areas
Social Environment	
Residents and Businesses Displaced	<ul> <li>Displaces one residence on Laird Road, however, residence would be displaced with future expansion of Hanlon Creek Business Park</li> <li>Interchange configuration is not compatible with the approved Draft Plan of Subdivision for the Hanlon Business Park located on the west side of the highway</li> <li>Properties in the northeast quadrant are impacted by the ramp (i.e. Fairfield Inn)</li> </ul>
Potential Noise Impacts	<ul> <li>No major increases in noise levels are anticipated</li> <li>Noise increases can be mitigated through standard mitigation measures</li> </ul>
Impacts on Community and Recreation Features, including	■ Improves pedestrian and cyclist access across Hanlon Expressway via grade separation at Laird Road
Trails	<ul> <li>Impacts existing trail system east of Hanlon Expressway near Laird Road interchange</li> <li>Impacts proposed trail system west of Hanlon Expressway along Laird Road</li> </ul>
Property Requirements	<ul> <li>Minor property requirements in northeast quadrant of Laird Road and Hanlon Expressway – Fairfield Inn</li> <li>Property impacts to vacant property in northwest quadrant of Laird Road and Hanlon Expressway</li> <li>Property impacts to vacant property in southeast quadrant of Laird Road and Hanlon Expressway</li> <li>Property requirements in southwest quadrant of Laird Road and Hanlon Expressway result in displacement of residence</li> </ul>
Cultural Environment	
Impact on Existing Built Heritage or Cultural Features	Built heritage residence on McWilliams Road potentially affected by vibration and dust during construction  Built heritage residence on McWilliams Road potentially affected by vibration and dust during construction
Potential Impact on Archaeological Resources	<ul> <li>Area of archaeological potential on west side of Hanlon Expressway; to be confirmed through additional Stage 2 archaeological assessment; archaeological resources uncovered during construction would be mitigated through provisions of the Ontario Heritage Act</li> </ul>
Applied Environment	
Waste Disposal Sites or Potentially Contaminated Sites Cost	No impact on waste disposal sites or potentially contaminated sites
Estimated Total Construction Cost	Lowest comparative cost





Foreign position		Evaluation Summary Attendance
Provides group level of service and adjournmental productive control p	Traffic Operations	
Municipal Road Volumes  Assignment Closury in Traffic Yourse yould lead to get a process of the state of the process	Intersection Levels of Service	
Discovage Section 1-276   Vestilating Setting College Colleg		
Verdering GSP Division - 14 - 12 - 12 - 12 - 12 - 12 - 12 - 12	Municipal Road Volumes	
Contains Co		■ Downey Road west of Niska Road = -7%
Scotlands Dies to between Configil Avenue and Store Rood — 20% Scotlands Dies between Stores Rood and Collang Avenue and Store Rood Indies Collang Avenue and Store Rood Indies Collang Avenue and Store Rood Indies Collang Rood Rood Indies Indies Collang Rood Indies Rood In		■ Woodland Glen Drive = +4%
Southletin Deve Services (South End of College Annan — 1.5%		■ College Avenue west of Highway 6 = +12%
Southletin Deve Services (South End of College Annan — 1.5%		Scottsdale Drive between Kortright Avenue and Stone Road = +20%
Content   Cont		
Access to and from Highway 6  Date and provide class can be from the case the notification of the replant of before the case the notification of the replant of the provide class and provide class and office the replant of the class of the replant of the replant of the class of the replant o	Geometrics	
Acces to and from Highway 6  Acces to and from Highway 6  - Poordes direct secons to and from the som in Kornight Road - Does not provide access to and from the som in Kornight Road - Does not provide a Cested to and from the som in Kornight Road - Does not provide a Cested to and from the som in Kornight Road - Does not provide to a College, and Inspired, 5 between Kornight Road and Stone Road because of the interchange configuration of Stone Road - Does not provide to a College, Annea Education - Control to College Annea Education - Control to College Annea Education - Control to College Annea Education - C		
Access to and from Highway 6  Provides affect access to and from Highway 6 vo Stone Road Intendencings Does not provide access to and from Highway 6 vo Stone Road Intendencing Does not provide access to and from Highway 6 vo Stone Road Intendencing Does not provide access to and from Highway 6 vo Stone Road Intendencing Does not provide access to and the early shall be a supplementation to technique deal of Highway 6 between Kortight Road and Stone Road because of the intendencing configuration of Stone Road Does not provide a stone and and intended by the City of Guelph  Construction Intended Provided Access to the Construction Intendencing Inten	Access	7 in the following from Conta Road to Figure 1
Description from the continuence of the interchange configuration at Stone Road  Does not provide once to add from the south of Kontright Road  Does not provide for College Annua Enterior  Construction for the College Annua Enterior  Construction for the College Annua Enterior  Construction for the College Annua Enterior  Tourism Construction for the College Annua Enterior  Tourism Construction for the College Annua Enterior  Tourism College		Provides direct access to and from Highway 6 via Stone Road Interchange
Contractability  Contractor is provided for a College Annual Education if required and initiated by the City of Guelph  Contractor is provided for a College Annual Education if required and initiated by the City of Guelph  Contractor is provided for a College Annual Education if required and initiated by the City of Guelph  Contractor is provided to the College Annual Education in College An	Access to did from Flighway o	
Does not provide for a College Avenue Scientism. Construction live Requests the most commodate of Stime Road Scientism. I impliced and initiated by the City of Guelph Request the most commodate of Stime Road and all sizes placed.  Construction Issues  Vegetation among a Uses commodated in the Road Scientism. I stime Road Scientism.  Vegetation management Vegetation manage		
Contractability Construction is Steme Read Education in Inspired and initiated by the City of Guidph Regulater the most animated of additional and all additional animals of the City of Guidph for Education Management (Construction Inspired and Steme Read Construction Inspired and Steme Read Construction Inspired and Steme Read Construction Inspired Inspire		
Requirements		
Construction Bissos		
Control Control Susses   Uses conventional construction techniques that have long-term slobility	Control de	Requires the most amount of additional out-of-way-travel
Many regetation removal removal removal removal required of John Gamble Park at Kortright Road   Vegetation removal required of John Gamble Park at Kortright Road   Vegetation removal required at John Gamble Park at Kortright Road and Hanlan Expressway lands owned by the City of Guelaht for future Hanlan Expressway improvements		
Vegetation removal   Minor respectation removal required of 15 and 3% quadrants of Stone Road and Hanlon Expressway, lands owned by the City of Guelph for future Hanlon Expressway improvements		Uses conventional construction techniques that have long-term stability
Vegetation removal required at \$\tilde{\text{E}}\$ and \$\text{SW}\$ quadrants of \$\tilde{\text{Stand My quadrants}}\$ de \$\tilde{\text{My quadrants}}\$ de \$\t		
Fifects on Holland Crack	Vegetation removal	
Fifted son Hunlon Creek   Does not impact the Honlon Creek		
Displacement of one residence on Downey Road		
Residents and Businesses Displaced  Displacement of one residences on Honin Road between Stone Road and Flanders Road Displacement of seven residences on Honin Road between Stone Road and Flanders Road Displacement of three residences on Stone Road Potential Noise Impacts  No major increases in noise levels are artificated through standard militigation measures Impacts on Community and Racreation Features, including Trails  Removes Kortright Road access to John Gamble Park Direct access to YMCA/PWCA from the Honinon Expressway is not provided Impacts on Some impacts to existing trail visit exists and wast of Hanion Expressway in an artificial expression of the Park Interves pedestrian and cyclist access across Hanion Expressway in an artificial expression of the Park Interves pedestrian and cyclist access across Hanion Expressway in an artificial expression of the Park Interves pedestrian and cyclist access across Hanion Expressway in an artificial expression of the Park Interves pedestrian and cyclist access across Hanion Expressway in an artificial expression of the Park Interves pedestrian and cyclist access across Hanion Expressway in an artificial expressway interventions Interves pedestrian and cyclist access across Hanion Expressway in an artificial expressway interventions Interves pedestrian and cyclist access across Hanion Expressway in an artificial expressway interventions Interves pedestrian and cyclist access across Hanion Expressway in an artificial expressway interventions Interves pedestrian and cyclist access across Hanion Expressway in an artificial expressway interventions Interves pedestrian and cyclist access across Hanion Expressway and College Avenue  Uniterves pedestrian and cyclist access to Activity and expression of Hanion Expressway and College Avenue  But the frage or Cultural Features  No import on area of archaeological potential  Noise Disposal Sites or Potentially Contaminated Sites  Uniterves pedestrian and cyclist access to Access and the Access and the Access and the Access		Does not impact the Hanlon Creek
Displacement of lawer nesidences on Stone Road and Flanders Road		
Potential Noise Impacts Impacts on Community and Recreation Features, including Trails and increases can be mitigated through standard mitigation measures  Impacts on Community and Recreation Features, including Trails and the Control of Community and Recreation Features, including Trails and the Control of Community and Recreation Features, including Trails and the Control of C	Residents and Businesses Displaced	
Potential Noise Impacts  Impacts on Community and Recreation Features, including Trails  Removes Korright Road access to John Gemble Park Direct access to YMCA/YWCA from the Hanlon Expressway is not provided Improves pedestrian and cyclist access caross Hanlon Expressway via grade separations Some impacts to existing trail system east and west sides of Hanlon Expressway or act Stone Road interchange Trail Inclocations required on east and west sides of Hanlon Expressway or act Stone Road interchange Impact on Existing Built Heritage for Cultural Features Potential Impact on Archaeological Resources Applied Environment  Waited Disposal Sites or Potentially Contaminated Sites Unlifty Impacts  No impact on waste disposal sites or potentially Contaminated Sites Unlifty Impacts  No molecular in resistance and inclosure sweet, 200 m sonitary sewer Union Gas Pumping Station  No impact on severe, 200 m sonitary sewer Union Gas Pumping Station		
Noise increases can be mitigated through standard mitigation measures   Removes Kortright Road access to John Gamble Park		Displacement of three residences on Stone Road
Removes Kortright Road access to John Gamble Park	Potential Noise Impacts	No major increases in noise levels are anticipated
Direct access to YMCA/YVAC from the Hanlon Expressway is not provided   Improves pedestrian and cyclist access across Hanlon Expressway via grade separations   Some impacts to existing trail system east and west of Hanlon Expressway according to the property Requirements   Lands in the SW, SE, and NE quadrants at Stone Road are owned by the City of Guelph for future Hanlon Expressway improvements   Lands in the SW, SE, and NE quadrants at Stone Road are owned by the City of Guelph for future Hanlon Expressway improvements   Minor property impacts to Guelph Limestone Quarry in the NW quadrant of Hanlon Expressway and College Avenue	·	Noise increases can be mitigated through standard mitigation measures
Direct access to YMCA/YVAC from the Hanlon Expressway is not provided   Improves pedestrian and cyclist access across Hanlon Expressway via grade separations   Some impacts to existing trail system east and west of Hanlon Expressway according to the property Requirements   Lands in the SW, SE, and NE quadrants at Stone Road are owned by the City of Guelph for future Hanlon Expressway improvements   Lands in the SW, SE, and NE quadrants at Stone Road are owned by the City of Guelph for future Hanlon Expressway improvements   Minor property impacts to Guelph Limestone Quarry in the NW quadrant of Hanlon Expressway and College Avenue	Impacts on Community and Recreation Features, including	Removes Kortright Road access to John Gamble Park
Improves pedestrian and cylist access across Hanlon Expressway via grade separations   Some impacts to existing trail system east and vest of Hanlon Expressway are Zollege Avenue   Trail relocations required on east and west sides of Hanlon Expressway are Zollege Avenue   Lands in the SW, SE, and NE quadrants at Stone Road are owned by the City of Guelph for future Hanlon Expressway improvements   Lands in the SW, SE, and NE quadrants at Stone Road are owned by the City of Guelph for future Hanlon Expressway improvements   Impact on Existing Built Heritage or Cultural Features   Built heritage farmhouse, located on College Avenue east of Hanlon Expressway and College Avenue   Propertial Impact on Archaeological Resources   Built heritage farmhouse, located on College Avenue east of Hanlon Expressway, potentially affected by vibration and dust during construction		
Some impacts to existing trail system east and west of Hanlon Expressway near Stone Road interchange Trail relocations required on east and west sides of Hanlon Expressway at College Avenue  Lands in the SW, SE, and NE quadrants at Stone Road are owned by the City of Guelph for future Hanlon Expressway improvements  Lands in the SW, SE, and NE quadrants at Stone Road are owned by the City of Guelph for future Hanlon Expressway improvements  Minor property impacts to Guelph Limestone Quarry in the NW quadrant of Hanlon Expressway and College Avenue  Cultural Environment  Impact on Existing Built Heritage or Cultural Features  Built heritage farmhouse, located on College Avenue east of Hanlon Expressway, potentially affected by vibration and dust during construction  Potential Impact on Archaeological Resources  No impact on area of archaeological potential  Applied Environment  Municipal Water Supply Wells  Proposed City of Guelph municipal water supply well in SE quadrant of intersection of Hanlon Expressway and Stone Road  Waste Disposal Sites or Potentially Contaminated Sites  Utility Impacts  Impacts:  800 m Union Gas line  250 m underground Guelph Hydro, 1800 m overhead Guelph Hydro, 800 m overhead Ontario Hydro  900 m watermain, 200 m storm sewer, 200 m sanitary sewer  Union Gas Pumping Station		
Property Requirements  - Lands in the SW, SE, and Ne guadrants at Stone Road are owned by the City of Guelph for future Hanlon Expressway improvements  - Lands in the SW, SE, and Ne guadrants at Stone Road are owned by the City of Guelph for future Hanlon Expressway improvements  - Minor property impacts to Guelph Limestone Quarry in the NW quadrant of Hanlon Expressway and College Avenue  - Cultural Environment  - Impact on Existing Built Heritage or Cultural Features  - Built heritage farmhouse, located on College Avenue east of Hanlon Expressway, potentially affected by vibration and dust during construction  - Potential Impact on Archaeological Resources  - No impact on area of archaeological potential  - Proposed City of Guelph municipal water supply well in SE quadrant of intersection of Hanlon Expressway and Stone Road  - No impact on water disposal sites or potentially contaminated sites  - No impact on water disposal sites or potentially contaminated sites  - No impact on water disposal sites or potentially contaminated sites  - Stone underground Guelph Hydro, 1800 m overhead Guelph Hydro, 800 m overhead Ontario Hydro - 900 m watermain, 200 m storm sewer, 200 m sanitary sewer  - Union Gas Pumping Station		Some impacts to existing trail system east and west of Hanlon Expressway near Stone Road interchange
Property Requirements  Lands in the SW, SE, and NE quadrants at Stone Road are owned by the City of Guelph for future Hanlon Expressway improvements  Minor property impacts to Guelph Limestone Quarry in the NW quadrant of Hanlon Expressway and College Avenue  Impact on Existing Built Heritage or Cultural Features  Potential Impact on Archaeological Resources  Applied Environment  Municipal Water Supply Wells  Proposed City of Guelph municipal water supply well in SE quadrant of intersection of Hanlon Expressway and Stone Road  Waste Disposal Sites or Potentially Contaminated Sites  Utility Impacts  Impacts:  8 00 m Union Gas line  2 250 m underground Guelph Hydro, 1800 m overhead Guelph Hydro, 800 m overhead Ontario Hydro  9 900 m watermain, 200 m storm sewer, 200 m sanitary sewer  Union Gas Pumping Station		Trail relocations required on east and west sides of Hanlon Expressway at College Avenue
Cultural Environment  Impact on Existing Built Heritage or Cultural Features  Potential Impact on Archaeological Resources  No impact on area of archaeological petential  Applied Environment  Municipal Water Supply Wells  Waste Disposal Sites or Potentially Contaminated Sites  Utility Impacts  Built heritage farmhouse, located on College Avenue east of Hanlon Expressway, potentially affected by vibration and dust during construction  Proposed City of Guelph municipal water supply well in SE quadrant of intersection of Hanlon Expressway and Stone Road  No impact on waste disposal sites or potentially Contaminated Sites  Utility Impacts  800 m Union Gas line  250 m underground Guelph Hydro, 1800 m overhead Guelph Hydro, 800 m overhead Ontario Hydro  900 m watermain, 200 m storm sewer, 200 m sanitary sewer  Union Gas Pumping Station	Property Requirements	
Cultural Environment  Impact on Existing Built Heritage or Cultural Features Potential Impact on Archaeological Resources Applied Environment  Municipal Water Supply Wells Proposed City of Guelph municipal water supply well in SE quadrant of intersection of Hanlon Expressway and Stone Road  Waste Disposal Sites or Potentially Contaminated Sites Utility Impacts  Waste Disposal Sites or Potentially Contaminated Sites Utility Impacts  Union Gas Pumping Station  Expression of Hanlon Expressway and Stone Road  Union Gas Pumping Station  Union Gas Pumping Station		
Impact on Existing Built Heritage or Cultural Features  Potential Impact on Archaeological Resources  No impact on area of archaeological potential  Applied Environment  Municipal Water Supply Wells  Waste Disposal Sites or Potentially Contaminated Sites  Utility Impacts  Built heritage farmhouse, located on College Avenue east of Hanlon Expressway, potentially affected by vibration and dust during construction  Potentially affected by vibration and dust during construction  No impact on area of archaeological potential  Proposed City of Guelph municipal water supply well in SE quadrant of intersection of Hanlon Expressway and Stone Road  No impact on waste disposal sites or potentially contaminated sites  Utility Impacts  Boo m Union Gas line  So m underground Guelph Hydro, 1800 m overhead Guelph Hydro, 800 m overhead Ontario Hydro  900 m watermain, 200 m storm sewer, 200 m sanitary sewer  Union Gas Pumping Station	Cultural Environment	Times, proposity imposite to Costific annothing quantum of trainent Expressivaly and Control of
Potential Impact on Archaeological Resources  Applied Environment  Municipal Water Supply Wells  Waste Disposal Sites or Potentially Contaminated Sites  Utility Impacts  800 m Union Gas line 250 m underground Guelph Hydro, 1800 m overhead Guelph Hydro, 800 m overhead Ontario Hydro 900 m watermain, 200 m storm sewer, 200 m sanitary sewer Union Gas Pumping Station		Built heritage farmhouse, located on College Avenue east of Hanlon Expressway, potentially affected by vibration and dust during construction.
Applied Environment  Municipal Water Supply Wells  Proposed City of Guelph municipal water supply well in SE quadrant of intersection of Hanlon Expressway and Stone Road  Waste Disposal Sites or Potentially Contaminated Sites  Utility Impacts  Impacts: 800 m Union Gas line 250 m underground Guelph Hydro, 1800 m overhead Guelph Hydro, 800 m overhead Ontario Hydro 900 m watermain, 200 m storm sewer, 200 m sanitary sewer Union Gas Pumping Station  Cost		
Municipal Water Supply Wells  Waste Disposal Sites or Potentially Contaminated Sites  Utility Impacts  Impacts:  800 m Union Gas line 250 m underground Guelph Hydro, 1800 m overhead Guelph Hydro, 800 m overhead Ontario Hydro 900 m watermain, 200 m storm sewer, 200 m sanitary sewer Union Gas Pumping Station		- 10 impact on area of area of orginal potential
Waste Disposal Sites or Potentially Contaminated Sites  Utility Impacts    No impact on waste disposal sites or potentially contaminated sites    Impacts:		Proposed City of Guelph municipal water supply well in SE guadrant of intersection of Hanlon Expressway and Stone Road
Utility Impacts  800 m Union Gas line 250 m underground Guelph Hydro, 1800 m overhead Guelph Hydro, 800 m overhead Ontario Hydro 900 m watermain, 200 m storm sewer, 200 m sanitary sewer Union Gas Pumping Station		
<ul> <li>800 m Union Gas line</li> <li>250 m underground Guelph Hydro, 1800 m overhead Guelph Hydro, 800 m overhead Ontario Hydro</li> <li>900 m watermain, 200 m storm sewer, 200 m sanitary sewer</li> <li>Union Gas Pumping Station</li> </ul>		
<ul> <li>250 m underground Guelph Hydro, 1800 m overhead Guelph Hydro, 800 m overhead Ontario Hydro</li> <li>900 m watermain, 200 m storm sewer, 200 m sanitary sewer</li> <li>Union Gas Pumping Station</li> </ul>	Uniny impacts	
<ul> <li>900 m watermain, 200 m storm sewer, 200 m sanitary sewer</li> <li>Union Gas Pumping Station</li> </ul>		
■ Union Gas Pumping Station  Cost		
Cost		
		■ Union Gas Pumping Station
Estimated Total Construction Cost  ■ Second Towest comparative cost		
	Estimated Total Construction Cost	Second lowest comparative cost



	Evaluation Summary Allerhative 2
Traffic Operations	
Intersection Levels of Service	<ul> <li>Provides good level of service at the ramp terminal intersections on Stone Road</li> </ul>
	<ul> <li>Provides good level of service at the ramp terminal intersections on Kortright Road</li> </ul>
	Provides good level of service at all adjacent municipal road intersections
Municipal Road Volumes	Anticipated Changes in Traffic Volumes (peak hour):
	■ Downey Road west of Niska Road = +1%
	■ Woodland Glen Drive = +12%
	■ College Avenue west of Highway 6 = +10%
	■ Scottsdale Drive between Kortright Avenue and Stone Road = no change
	■ Scottsdale Drive between Stone Road and College Avenue = +4%
Geometrics	■ Interchange configuration provides high traffic capacity with direct exit ramps from Highway 6
	<ul> <li>All movements from Stone Road to Highway 6 are free-flow</li> </ul>
	Provides a non-standard (partial) interchange at Downey Road/Kortright Road
	■ A left-turn movement is required from Downey Road westbound to access Highway 6 southbound
Access	
Access to and from Highway 6	<ul> <li>Provides direct access to and from Highway 6 via Stone Road Interchange</li> </ul>
	<ul> <li>Provides access to and from the south at Kortright Road</li> </ul>
	<ul> <li>Cannot accommodate a "service road" on the east side of Highway 6 between Kortright Road and Stone Road because of the interchange configuration at Stone Road</li> </ul>
	Does not provide for a College Avenue Extension  Output  Does not provide for a College Avenue Extension
	Can accommodate a Stone Road Extension if required and initiated by the City of Guelph
	Requires the second least amount of additional out-of-way-travel
Constructability	
Construction Issues	Uses conventional construction techniques that have long-term stability  Uses conventional construction techniques that have long-term stability
Natural Environment	
Vegetation removal	Vegetation removal required at John Gamble Park at Kortright Road  Output  Description: The Control of Contro
	Vegetation removal required at SE and SW quadrants at Stone Road and Hanlon Expressway; lands owned by the City of Guelph for future Hanlon Expressway improvements
Effects on natural areas	No effects on natural areas  Detaction via an invariate to Handan Construction  The state of th
Effects on Hanlon Creek Social Environment	Potential minor impacts to Hanlon Creek during construction
Residents and Businesses Displaced	Displacement of one residence on Downey Road
Residents and businesses Displaced	<ul> <li>Displacement of seven residences on Hanlon Road between Stone Road and Flanders Road</li> </ul>
	Displacement of three residences on Stone Road  Displacement of three residences on Stone Road
Potential Noise Impacts	No major increases in noise levels are anticipated  No major increases in noise levels are anticipated
Folential Noise impacts	<ul> <li>Noise increases can be mitigated through standard mitigation measures</li> </ul>
Impacts on Community and Recreation Features, including	Removes approximately 50% of John Gamble Park
Trails	Removes Kortright Road access to John Gamble Park
Truis	<ul> <li>Direct access to YMCA/YWCA is provided to and from the south from the Hanlon Expressway</li> </ul>
	<ul> <li>Improves pedestrian and cyclist access across Hanlon Expressway via grade separations; users are required to cross through a partial interchange on Kortright Road</li> </ul>
	Some impacts to existing trail system east and west of Hanlon Expressway near Stone Road interchange
	Trail relocations required on east and west sides of Hanlon Expressway at College Avenue  Trail relocations required on east and west sides of Hanlon Expressway at College Avenue
Property Requirements	Lands in the SW, SE, and NE quadrants at Stone Road are owned by the City of Guelph for future Hanlon Expressway improvements
Tropony responsitions	<ul> <li>Minor property impacts to Guelph Limestone Quarry in the NW quadrant of Hanlon Expressway and College Avenue</li> </ul>
Cultural Environment	
Impact on Existing Built Heritage or Cultural Features	Built heritage farmhouse, located on College Avenue east of Hanlon Expressway, potentially affected by vibration and dust during construction
Potential Impact on Archaeological Resources	Area of archaeological potential at SW quadrant of intersection at Downey Road and Hanlon Expressway; to be confirmed through additional Stage 2 archaeological assessment; archaeological resources uncovered during
3	construction would be mitigated through provisions of the Ontario Heritage Act
Applied Environment	
Municipal Water Supply Wells	Proposed City of Guelph municipal water supply well in SE quadrant of intersection of Hanlon Expressway and Stone Road
Waste Disposal Sites or Potentially Contaminated Sites	No impact on waste disposal sites or potentially contaminated sites
Utility Impacts	Impacts:
	■ 800 m Union Gas line
	■ 250 m underground Guelph Hydro, 1800 m overhead Guelph Hydro, 800 m overhead Ontario Hydro
	■ 900 m watermain, 200 m storm sewer, 200 m sanitary sewer
	■ Union Gas Pumping Station
Cost	
Estimated Total Construction Cost	Second highest comparative cost





	Evaluation Summary Alternative S
Traffic Operations	
Intersection Levels of Service	<ul> <li>Provides good level of service at the ramp terminal intersections on Stone Road</li> </ul>
	Provides good level of service at all adjacent municipal road intersections
Municipal Road Volumes	Anticipated Changes in Traffic Volumes (peak hour):
·	Downey Road west of Niska Road = +13%
	■ Woodland Glen Drive = -74%
	<ul> <li>College Avenue west of Highway 6 = +18%</li> </ul>
	<ul> <li>Scottsdale Drive between Kortright Avenue and Stone Road = -1%</li> </ul>
	<ul> <li>Scottsdale Drive between Stone Road and College Avenue = +3%</li> </ul>
Geometrics	Interchange configuration provides high traffic capacity with direct exit ramps from Highway 6
Comonica	All movements from Stone Road to Highway 6 are free-flow
Access	7 til movemenia nom alone rodd to Highway o die nee-now
Access to and from Highway 6	Provides direct access to and from Highway 6 via Stone Road Interchange
Access to and from Flighway o	Does not provide access to and from the south at Kortright Road  Tourish the south at Kortright Road
	Cannot accommodate a "service road" on the east side of Highway 6 between Kortright Road and Stone Road because of the interchange configuration at Stone Road
	Provides for a College Avenue Extension
	Can accommodate a Stone Road Extension if required and initiated by the City of Guelph
C I du	<ul> <li>Requires the second most amount of additional out-of-way-travel</li> </ul>
Constructability	
Construction Issues	<ul> <li>Uses conventional construction techniques that have long-term stability</li> </ul>
	Requires the construction of a road extension through an environmentally sensitive area, including Hanlon Creek
Natural Environment	
Vegetation removal	Minor vegetation removal required at John Gamble Park at Kortright Road
	<ul> <li>Vegetation removal required at SE and SW quadrants at Stone Road and Hanlon Expressway; lands owned by the City of Guelph for future Hanlon Expressway improvements</li> </ul>
Effects on natural areas	<ul> <li>Impacts Kortright Waterfowl Park and potential impacts to Speed River Wetland Complex associated with College Avenue Extension</li> </ul>
Effects on Hanlon Creek	Does not impact the Hanlon Creek
Social Environment	
Residents and Businesses Displaced	Displacement of one residence on Downey Road
*	Displacement of seven residences on Hanlon Road between Stone Road and Flanders Road
	Displacement of three residences on Stone Road
Potential Noise Impacts	No major increases in noise levels are anticipated  No major increases in noise levels are anticipated
The second secon	Noise increases can be mitigated through standard mitigation measures  Noise increases can be mitigated through standard mitigation measures
Impacts on Community and Recreation Features, including	Removes Kortright Road access to John Gamble Park
Trails	Direct access to YMCA/YWCA from the Hanlon Expressway is not provided  The standard access to YMCA/YWCA from the Hanlon Expressway is not provided
Tivilo	Improves pedestrian and cyclist access across Hanlon Expressway via grade separations  Improves pedestrian and cyclist access across Hanlon Expressway via grade separations
	Some impacts to existing trail system east and west of Hanlon Expressway near Stone Road interchange
	Trail relocations required on east and west sides of Hanlon Expressway at College Avenue
Property Requirements	Lands in the SW, SE, and NE quadrants at Stone Road are owned by the City of Guelph for future Hanlon Expressway improvements
Troperty requirements	<ul> <li>Lands in the SW, SE, and NE quadrants at Stone Road are owned by the City of Guelph for future Hanlon Expressway Improvements</li> <li>Minor property impacts to Guelph Limestone Quarry in the NW quadrant of Hanlon Expressway and College Avenue</li> </ul>
Cultural Environment	- Millior property impacts to Guelph Limestone Quarty in the 1999 quadrant of Harrion Expressway and College Avenue
	Built heritage farmhouse, located on College Avenue east of Hanlon Expressway, potentially affected by vibration and dust during construction
Impact on Existing Built Heritage or Cultural Features	
Potential Impact on Archaeological Resources	No impact on area of archaeological potential
Applied Environment	
Municipal Water Supply Wells	Proposed City of Guelph municipal water supply well in SE quadrant of intersection of Hanlon Expressway and Stone Road
Waste Disposal Sites or Potentially Contaminated Sites	No impact on waste disposal sites or potentially contaminated sites
Utility Impacts	Impacts:
	■ 800 m Union Gas line
	■ 250 m underground Guelph Hydro, 1800 m overhead Guelph Hydro, 800 m overhead Ontario Hydro
	■ 900 m watermain, 200 m storm sewer, 200 m sanitary sewer
	<ul> <li>Union Gas Pumping Station</li> </ul>
Cost	
Estimated Total Construction Cost	Fourth highest comparative cost
Other Considerations	
Municipal/Local Resident Input	College Avenue Extension not supported by the City of Guelph or local residents
Monicipal/ Local Resident Inpol	1 - College Avenue Extension not supported by the City of Obelph of focul residents



T (6 0	Evaluation Summary Atternative 4
Traffic Operations	
Intersection Levels of Service	<ul> <li>Provides poor level of service at the ramp terminal intersections on Stone Road</li> </ul>
	Provides good level of service at all adjacent municipal road intersections
Municipal Road Volumes	Anticipated Changes in Traffic Volumes (peak hour):
	■ Downey Road west of Niska Road = -1%
	■ Woodland Glen Drive = -19%
	■ College Avenue west of Highway 6 = +4%
	■ Scottsdale Drive between Kortright Avenue and Stone Road = -43%
	■ Scottsdale Drive between Stone Road and College Avenue = +6%
Geometrics	<ul> <li>Interchange configuration provides lower traffic capacity with loop ramp exits from Highway 6</li> </ul>
	<ul> <li>Movements from Stone Road to Highway 6 are not free-flow</li> </ul>
	East ramp terminal intersection at Stone Road is close to intersection at Scottsdale Drive
Access	
Access to and from Highway 6	Provides direct access to and from Highway 6 via Stone Road Interchange
	Does not provide access to and from the south at Kortright Road
	Provides a "service road" on the east side of Highway 6 between Kortright Road and Stone Road
	Does not provide for a College Avenue Extension
	Can accommodate a Stone Road Extension if required and initiated by the City of Guelph  Can accommodate a Stone Road Extension if required and initiated by the City of Guelph
	Requires the third most amount of additional out-of-way-travel
Constructability	
Construction Issues	<ul> <li>Uses conventional construction techniques that have long-term stability</li> </ul>
	More complex traffic staging and detours would be required at Stone Road because of the new alignment
Natural Environment	
Vegetation removal	Minor vegetation removal required at John Gamble Park at Kortright Road
, and the second	<ul> <li>Vegetation removal required at SE and SW quadrants at Stone Road and Hanlon Expressway; lands owned by the City of Guelph for future Hanlon Expressway improvements</li> </ul>
Effects on natural areas	No effects on natural greas
Effects on Hanlon Creek	Does not impact the Hanlon Creek
Social Environment	
Residents and Businesses Displaced	Displacement of one residence on Downey Road
	<ul> <li>Displacement of five residences in the SW quadrant of Hanlon Expressway at Stone Road, as well as minor property impacts to three residences</li> </ul>
	<ul> <li>Displacement of three residences on Stone Road</li> </ul>
	Displacement of Priory Park Baptist Church and Holiday Inn
Potential Noise Impacts	No major increases in noise levels are anticipated
· otolina i i i otolina i i i otolina	Noise increases can be mitigated through standard mitigation measures
Impacts on Community and Recreation Features, including	Removes Kortright Road access to John Gamble Park
Trails	Direct access to YMCA/YWCA from the Hanlon Expressway is not provided
	Improves pedestrian and cyclist access across Hanlon Expressway via grade separations; users are required to cross through a new intersection with Hanlon Road on Kortright Road
	Some impacts to existing trail system east of Hanlon Expressway near Stone Road interchange
	<ul> <li>Trail relocations required on east and west sides of Hanlon Expressway at College Avenue</li> </ul>
	<ul> <li>Loss of trail link along old Hanlon Road between Kortright Road and Stone Road</li> </ul>
Property Requirements	Minor property impacts to Guelph Limestone Quarry in the NW quadrant of Hanlon Expressway and College Avenue  Output  Description:  Minor property impacts to Guelph Limestone Quarry in the NW quadrant of Hanlon Expressway and College Avenue
Cultural Environment	
Impact on Existing Built Heritage or Cultural Features	Built heritage farmhouse, located on College Avenue east of Hanlon Expressway, potentially affected by vibration and dust during construction
Potential Impact on Archaeological Resources	No impact on area of archaeological potential  No impact on area of archaeological potential
Applied Environment	The impact on allow of all shadelogical policinal
Municipal Water Supply Wells	Proposed City of Guelph municipal water supply well in SE quadrant of intersection of Hanlon Expressway and Stone Road
Waste Disposal Sites or Potentially Contaminated Sites	No impact on waste disposal sites or potentially contaminated sites  No impact on waste disposal sites or potentially contaminated sites
Utility Impacts	Impacts:
Omny impacts	■ 500 m Union Gas line
	250 m underground Guelph Hydro, 1500 m overhead Guelph Hydro, 400 m overhead Ontario Hydro
	1300 m watermain, 600 m storm sewer, 400 m sanitary sewer
	<ul> <li>Union Gas Pumping Station</li> </ul>
Cost	
Estimated Total Construction Cost	Lowest comparative cost
Estimated Total Construction Cost	- Lowest Computative Cost





	Evaluation Summary Allernative 3
Traffic Operations	
Intersection Levels of Service	<ul> <li>Provides poor level of service at the ramp terminal intersections on Stone Road and Kortright Road</li> </ul>
	Provides good level of service at all adjacent municipal road intersections
Municipal Road Volumes	Anticipated Changes in Traffic Volumes (peak hour):
·	■ Downey Road west of Niska Road = +3%
	■ Woodland Glen Drive = -20%
	■ College Avenue west of Highway 6 = +4%
	■ Scottsdale Drive between Kortright Avenue and Stone Road = -50%
	<ul> <li>Scottsdale Drive between Stone Road and College Avenue = +4%</li> </ul>
Geometrics	Interchange configuration provides lower traffic capacity with loop ramp exits from Highway 6
Comercia	Movements from Stone Road to Highway 6 are not free-flow
	<ul> <li>East ramp terminal intersection at Stone Road is close to intersection at Scottsdale Drive</li> </ul>
	Provides a non-standard (partial) interchange at Downey Road/Kortright Road
	A left-turn movement is required from Downey Road westbound to access Highway 6 southbound  Output  Description:  Output  Description:  A left-turn movement is required from Downey Road westbound to access Highway 6 southbound
A	- A tell-turn movement is required from Downey Road westbound to access Flighway o southbound
Access	
Access to and from Highway 6	Provides direct access to and from Highway 6 via Stone Road Interchange
	<ul> <li>Provides access to and from the south at Kortright Road</li> </ul>
	Provides a "service road" on the east side of Highway 6 between Kortright Road and Stone Road
	<ul> <li>Does not provide for a College Avenue Extension</li> </ul>
	<ul> <li>Can accommodate a Stone Road Extension if required and initiated by the City of Guelph</li> </ul>
	<ul> <li>Requires the third least amount of additional out-of-way-travel</li> </ul>
Constructability	
Construction Issues	<ul> <li>Uses conventional construction techniques that have long-term stability</li> </ul>
	<ul> <li>More complex traffic staging and detours would be required at Stone Road because of the new alignment on</li> </ul>
Natural Environment	
Vegetation removal	<ul> <li>Vegetation removal required at John Gamble Park at Kortright Road</li> </ul>
- Sgordmon tomordi	<ul> <li>Vegetation removal required at SE and SW quadrants at Stone Road and Hanlon Expressway; lands owned by the City of Guelph for future Hanlon Expressway improvements</li> </ul>
Effects on natural areas	No effects on natural areas
Effects on Hanlon Creek	Potential minor impacts to Hanlon Creek during construction
Social Environment	Folkman minor impacts to Fidmen Greek during construction
Residents and Businesses Displaced	Displacement of one residence on Downey Road
Residents and businesses Displaced	
	Displacement of five residences in the SW quadrant of Hanlon Expressway at Stone Road, as well as minor property impacts to three residences
	Displacement of three residences on Stone Road  This is a second
D	Displacement of Priory Park Baptist Church and Holiday Inn
Potential Noise Impacts	No major increases in noise levels are anticipated
	<ul> <li>Noise increases can be mitigated through standard mitigation measures</li> </ul>
Impacts on Community and Recreation Features, including	<ul> <li>Minor impacts to John Gamble Park</li> </ul>
Trails	<ul> <li>Removes Kortright Road access to John Gamble Park</li> </ul>
	<ul> <li>Direct access to YMCA/YWCA is provided to and from the south from the Hanlon Expressway</li> </ul>
	<ul> <li>Improves pedestrian and cyclist access across Hanlon Expressway via grade separations; users are required to cross through a partial interchange</li> </ul>
	<ul> <li>Some impacts to existing trail system east of Hanlon Expressway near Stone Road interchange</li> </ul>
	<ul> <li>Trail relocations required on east and west sides of Hanlon Expressway at College Avenue</li> </ul>
	<ul> <li>Loss of trail link along old Hanlon Road between Kortright Road and Stone Road</li> </ul>
Property Requirements	Minor property impacts to Guelph Limestone Quarry in the NW quadrant of Hanlon Expressway and College Avenue
Cultural Environment	
Impact on Existing Built Heritage or Cultural Features	Built heritage farmhouse, located on College Avenue east of Hanlon Expressway, potentially affected by vibration and dust during construction
Potential Impact on Archaeological Resources	Area of archaeological potential at SW quadrant of intersection at Downey Road and Hanlon Expressway; to be confirmed through additional Stage 2 archaeological assessment; archaeological resources uncovered during
- Indiana in past and a state of a state of the state of	construction would be mitigated through provisions of the Ontario Heritage Act
Applied Environment	
Municipal Water Supply Wells	Proposed City of Guelph municipal water supply well in SE quadrant of intersection of Hanlon Expressway and Stone Road
Waste Disposal Sites or Potentially Contaminated Sites	No impact on waste disposal sites or potentially contaminated sites  No impact on waste disposal sites or potentially contaminated sites
Utility Impacts	Impacts:
	• 500 m Union Gas line
	250 m underground Guelph Hydro, 1500 m overhead Guelph Hydro, 400 m overhead Ontario Hydro  1300 m in 1000 m in 100
	■ 1300 m watermain, 600 m storm sewer, 400 m sanitary sewer
	<ul> <li>Union Gas Pumping Station</li> </ul>
Cost	
Estimated Total Construction Cost	<ul> <li>Third lowest comparative cost</li> </ul>





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Protein pool for a large sood hard post are using the recursor on the recursor of the record post of the record	Traffic Operations	
Marcian Services pass and oil avision of all alignor manipule and interaction	Intersection Levels of Service	
And an in the control of the control		Provides good level of service at the ramp terminal intersections on Kortright Road
And an in the control of the control		Provides good level of service at all adjacent municipal road intersections
Security Sec	Municipal Road Volumes	
Section of the Comment of Comme		
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Position from Federal Section of the Control Control Section (Section Section		Movements from Stone Road to Highway 6 are not free-flow
Position from Federal Section of the Control Control Section (Section Section		East ramp terminal intersection at Stone Road is close to intersection at Scottsdale Drive
Access to od from Highway 6  Product size to receive the ord many Harbyay or Access to Access the Access the Access to Access the Acces		
Access to and from Highway 6  Access to confirm Highway 6  Froutide cross to two from the work of charging Notes  Froutide from College From Education  From Educati		
Access to and from Highway 6    Proceeds access to and from Highway 6 was flower flowe	Access	A tell-full movement is required from Downey Road westboomd to access riighway o soomboomd
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Provides for a Cingal Armon Edition of England Control (Control Control Contro	Access to and trom Highway 6	
Provides for a College Anema Servation Contractability Contrac		
Construction   Constructions   Construction   Register the first garder and initiated by the City of Coughs   Register the residence arounce designated and story troops   Construction issues		
Controctolity  Controctor issues  Controctor issues  Description i		Provides for a College Avenue Extension
Controctolity  Controctor issues  Controctor issues  Description i		Can accommodate a Stone Road Extension if required and initiated by the City of Guelph
Construction Busse   Use conventional construction techniques that have long-term stability   Perspect the construction to a road setembne through one environmentally sensitle urea, including Marrian Creek (More controlls which with design and address would the morphised of Shrows Road and controlling Marrian Creek (More controlls with the design and address would the morphised of Shrows Road and controlling Marrian Creek (More controlls with the design and address would the morphised of Shrows Road and controlling Marrian Creek (More Creek) and Shrows Week and Shrows Road and controlling Marrian Creek (More Creek) and Shrows Road and controlling Marrian Creek (More Creek) and Shrows Road and controlling Marrian Creek (More Creek) and Shrows Road and controlling Marrian Creek (More Creek) and Shrows Road and controlling Marrian Creek (More Creek) and Shrows Road and controlling Marrian Creek (More Creek) and Shrows Road and controlling Marrian Creek (More Creek) and Shrows Road Road and Shrows Road Road Road Road Road Road Road Road		
Control Saves   . Uses conventional control from the force langue term of the force langue term of the force langue term of the force or princip term for design and defeated would be respired at 150e of the coloration of the control permitted of the coloration of the force or department on more degrand on the coloration of the force degrand on the coloration of the force degrand on the coloration of the force degrand on the coloration of the coloration	Constructability	Registres the least amount of adamond on of way have
Requires the construction of a road exercision through an environmentally sensitive cree, including frantees: Exercise the construction of a road exercision through an environmental terminal diseases would be required of the road execution of the construction of t		I have conventional construction to hairway that have long town stability.
More complex milks staping and abbox would be required at 15 are Road because of the new alignment an enabling road  Vegetation removal required at 15 and 15 for an interpretation and 15 and 15 and 15 for an interpretation at 15 and	Construction issues	
Note the Newtone Note of Property Requirements  Character Sequence of Property Reports to Property Re		
Vegetion removed   vegetion removed required of Jehn Gemble Plack or Nomith Road   Vegetion removed required of 15 and 15 word open for the Road and Handrino Expresseway, lands owned by the City of Guelph for future Handrin Expresseway improvements (Filects an Handrin Creek   Impacts Korright Widerlowd Plack and potential impacts to 5 geod River Waterland Complex associated with College Awaruse Extension (Filects an Handrin Repressed and the Complex associated with College Awaruse Extension (Filects an Handrin Repressed and the Complex associated with College Awaruse Extension (Filects an Handrin Repressed and the Complex associated with College Awaruse Extension (Filects an Handrin Repressed and Fileds and Handrin Repressed and Handrin Repressed and Fileds and Handrin Repressed		<ul> <li>More complex traffic staging and detours would be required at Stone Road because of the new alignment on existing road</li> </ul>
Vegetation remoral required at \$1 and \$3V quarterns to \$1 \$0 ene Road and Hanlon Expressory; lands corned by the City of Guight for future Hanlon Expressory improvements   Fifted the American School Environment   Fifted Environment School Env	Natural Environment	
Vegetation remoral required at \$1 and \$3V quarterns to \$1 \$0 ene Road and Hanlon Expressory; lands corned by the City of Guight for future Hanlon Expressory improvements   Fifted the American School Environment   Fifted Environment School Env	Vegetation removal	Vegetation removal required at John Gamble Park at Kortright Road
Impacts Korrigat Waarfood Feder and potential impacts to Speed River Wetland Complex associated with College Avenue Extension   Fifteds on Handro Creek		
### Filested in Mondor Creek  **Social Environment  **Readents and Businesses Displaced  **Polential Noise Impacts  **Polential N	Effects on natural greas	
Secial Environment  Residents and Businesses Displaced  Displacement of one residence on Downey Road  Displacement of the residences in the SW quadrant of Infono Epressway at Stone Road, as well as minor properly impacts to three residences  Displacement of the residences in the SW quadrant of Infono Epressway at Stone Road, as well as minor properly impacts to three residences  Displacement of Proper Road Explain Expl		
Residents and Businesses Displaced    Displacement of five residences on Downey Road   Displacement of the residences on Strong Road   Displacement of three residences on Strong Road   Displacement of Price residences in the Strong Park Depts Church and Holiday Inn    Potential Noise Impacts on Community and Recreation Features, including Trails   Displacement of Price access to Window Impacts to John Gamble Park and removes access to the park from Kortright Road		Potential minor impacts to Hanion Creek during construction
Displacement of the residences in the SW quadrant of Hanion Expressway at Stone Road, as well as minor property impacts to three residences  Displacement of Privary Pork Baptiss Church and Holiday Imm  No major increases can be mitigated through standard mitigation measures  Impacts on Community and Recreation Features, including Trails  Impact on Community and Recreation Features, including Trails  Property Requirements  Columnation  Property Requirements  Columnation  Columnation  Applied Environment  Municipal Water Supply Walls  Limitor  Applied Environment  Municipal Water Supply Walls  Proposed City of Guelph Immicipal water supply wall in SE quadrant of Intersection of Hanion Expressway; to be confirmed through additional Stage 2 archaeological assessment, archaeological potential at SW quadrant of Intersection of Hanion Expressway; to be confirmed through additional Stage 2 archaeological assessment, archaeological potential at SW quadrant of Intersection of Union Expressway; to be confirmed through additional Stage 2 archaeological assessment, archaeological resources uncovered during construction  Proposed City of Guelph municipal water supply well in SE quadrant of Intersection of Hanion Expressway; to be confirmed through additional Stage 2 archaeological assessment, archaeological resources uncovered during construction would be mitigated through provisions of the Ontoin Desiressway and Stone Road  **Proposed City of Guelph municipal water supply well in SE quadrant of intersection of Hanion Expressway; to be confirmed through additional Stage 2 archaeological assessment, archaeological resources uncovered during construction would be mitigated through provisions of the Ontoin Desiressway and Stone Road  **Proposed City of Guelph municipal water supply well in SE quadrant of intersection of Hanion Expressway; to be confirmed through additional Stage 2 archaeological assessment, archaeological potential assessment, archaeological potential assessment, archaeological potential assessment archaeologic		
Displacement of three residences on Stone Road	Residents and Businesses Displaced	
Potential Noise Impacts Impacts on Community and Recredition Features, Including Trails Trail		Displacement of five residences in the SW quadrant of Hanlon Expressway at Stone Road, as well as minor property impacts to three residences
Potential Noise Impacts Impacts on Community and Recredition Features, Including Trails Trail		Displacement of three residences on Stone Road
Potential Noise Impacts  No imajor increases in noise levels are anticipated Noise increases and no mitigated through standard mitigation measures  Impact son Community and Recreation Features, including Trails  Noise increases and no mitigated through standard mitigation measures  Direct access to YMCAYWCA' is provided to and from the south from the Honlon Expressway via grade separations; users are required to cross through a partial interchange Trail relocations required on east and west sides of Honlon Expressway via grade separations; users are required to cross through a partial interchange Trail relocations required on east and west sides of Honlon Expressway via College Avenue Loss of trail link along old Honlon Expressway via College Avenue Loss of trail link along old Honlon Expressway via College Avenue Collural Environment Impact on Existing Built Heritage or Cultural Features  Applied Environment Washed Disposal Sites or Potentially Contaminated Sites Utility Impacts  Proposed City of Guelph municipal water supply well in SE quadrant of Intersection of Honlon Expressway and Stone Road  Noise Disposal Sites or Potentially Contaminated Sites Utility Impacts  Proposed City of Guelph municipal water supply well in SE quadrant of Intersection of Honlon Expressway and Stone Road  Noise Disposal Sites or Potentially Contaminated Sites Utility Impacts  Filmode Tool Construction Cost  A Third highest comparative cost  Prince of Construction Cost  Third highest comparative cost		Displacement of Priory Park Baptist Church and Holiday Inn
Nice increases can be mitigated through standard mitigation measures   Nimor impacts to John Gamble Park and removes access to the park from Kotright Road   Nimor impacts to John Gamble Park and removes access to the park from Kotright Road   Nimor impacts to John Gamble Park and removes access to the park from Kotright Road   Nimor impacts to John Gamble Park and removes access to the park from Kotright Road   Nimor impacts to John Gamble Park and removes access to the park from Kotright Road and Form Road   Nimor impacts to existing truth large supervision of Street Road Interchange   Nome impacts to existing truth large supervision of Street Road Interchange   Nome impacts to existing truth large supervision of Street Road Interchange   Nome impacts to Street Road Interchange	Potential Noise Impacts	
Impacts on Community and Recreation Features, including Trails    Minor impacts to John Gamble Park and removes access to the park forom Kortright Road   Direct accesses to YMCAPVACA is provided to and from the south from the Hanhon Expressway   Improves pedestrian and cyclist access across Hanhon Expressway via grade separations; users are required to cross through a partial interchange   Some impacts to existing mild layser meant of Infone Expressway via grade separations; users are required to cross through a partial interchange   Some impacts to existing mild layers and a final for the South for the Hanhon Expressway of College Avenue   Collural Environment	Tolerina rvoise impacis	
Trails    Direct access to YMCA/WCA is provided to and from the south from the Hanlon Expressway   Improves pedestrian and cyclist access across thanlon Expressway via grade separations, users are required to cross through a partial interchange   Some impacts to existing trail system east of Hanlon Expressway and Stone Road interchange   Loss of trail link clong of Hanlon Expressway and College Avenue   Loss of trail link clong of Hanlon Expressway and College Avenue   Loss of trail link clong of Hanlon Expressway and College Avenue   Minor property impacts to Guelph Limestone Quarry in the NW quadrant of Hanlon Expressway, and College Avenue   Minor property impacts to Guelph Limestone Quarry in the NW quadrant of Hanlon Expressway, potentially Repressway and Stone Road Interchange or Cultural Features   Property Requirements		
Improves pedestrian and cyclist access across Hanlon Expressway via grade separations; users are required to cross through a partial interchange   Some impacts to existing trail system east of Hanlon Expressway and College Avenue   Loss of trail link along old Hanlon Road between Kortright Road and Stone Road   Property Requirements	, , , , , , , , , , , , , , , , , , ,	
Some impacts to existing trail system east of Hanlon Expressway near Stone Road interchange Trail relocations required on east and west sides of Hanlon Expressway ard College Avenue Loss of trail link along old Hanlon Road between Kortright Road and Stone Road  Property Requirements  Impact on Existing Built Heritage or Cultural Features Potential Impact on Archaeological Resources  *** Built heritage farmhouse, located on College Avenue east of Hanlon Expressway, potentially affected by vibration and dust during construction  **Area of archaeological potential at SW quadrant of intersection at Downey Road and Hanlon Expressway; to be confirmed through additional Stage 2 archaeological assessment; archaeological resources uncovered during construction would be mitigated through provisions of the Ontario Heritage Act  **Applied Environment  Waste Disposal Sites or Potentially Contaminated Sites  Utility Impacts  Utility Impacts  Impacts:  **Soon municage and underground Guelph Hydro, 1500 m overhead Guelph Hydro, 400 m overhead Ontario Hydro  **1300 m watermain, 600 m storm sever, 400 m sonitary sever  **Union Gas Pumping Station  Cost  **Estimated Total Construction Cost  **Initiating Initiating Initiation  **Trail relocations required on east and between Kortright Road and Stone Road  **Trail relocations**  **No impact on wested disposal sites or potentially contaminated sites  Impacts:  **Initiation Initiation Initi	Trails	
Trail relocations required on east and west sides of Hanlon Expressway at College Avenue   Loss of trail link along old Hanlon Road between Kortright Road and Stone Road   Value Environment		Improves pedestrian and cyclist access across Hanlon Expressway via grade separations; users are required to cross through a partial interchange
Loss of trail link along old Hanlon Road between Kortright Road and Stone Road		Some impacts to existing trail system east of Hanlon Expressway near Stone Road interchange
Property Requirements Cultural Environment  Winor property impacts to Guelph Limestone Quarry in the NW quadrant of Hanlon Expressway and College Avenue  Stating Built Heritage or Cultural Features Potential Impact on Archaeological Resources Potential Impact on Archaeological Resources  Applied Environment  Municipal Water Supply Wells  Proposed City of Guelph municipal water supply well in SE quadrant of intersection of Hanlon Expressway; to be confirmed through additional Stage 2 archaeological assessment; archaeological resources uncovered during construction would be mitigated through provisions of the Ontario Heritage Act  Applied Environment  Municipal Water Supply Wells  Proposed City of Guelph municipal water supply well in SE quadrant of intersection of Hanlon Expressway; to be confirmed through additional Stage 2 archaeological assessment; archaeological resources uncovered during construction would be mitigated through provisions of the Ontario Heritage Act  Applied Environment  Waste Disposal Sites or Potentially Contaminated Sites  Utility Impacts  Impacts:  500 m Union Gas line 250 m underground Guelph Hydro, 1500 m overhead Guelph Hydro, 400 m overhead Ontario Hydro 1300 m watermain, 600 m storm sewer, 400 m sanitary sewer Union Gas Pumping Station  Cost  Estimated Total Construction Cost  Third highest comparative cost  Third highest comparative cost		Trail relocations required on east and west sides of Hanlon Expressway at College Avenue
Property Requirements Cultural Environment  Winor property impacts to Guelph Limestone Quarry in the NW quadrant of Hanlon Expressway and College Avenue  Stating Built Heritage or Cultural Features Potential Impact on Archaeological Resources Potential Impact on Archaeological Resources  Applied Environment  Municipal Water Supply Wells  Proposed City of Guelph municipal water supply well in SE quadrant of intersection of Hanlon Expressway; to be confirmed through additional Stage 2 archaeological assessment; archaeological resources uncovered during construction would be mitigated through provisions of the Ontario Heritage Act  Applied Environment  Municipal Water Supply Wells  Proposed City of Guelph municipal water supply well in SE quadrant of intersection of Hanlon Expressway; to be confirmed through additional Stage 2 archaeological assessment; archaeological resources uncovered during construction would be mitigated through provisions of the Ontario Heritage Act  Applied Environment  Waste Disposal Sites or Potentially Contaminated Sites  Utility Impacts  Impacts:  500 m Union Gas line 250 m underground Guelph Hydro, 1500 m overhead Guelph Hydro, 400 m overhead Ontario Hydro 1300 m watermain, 600 m storm sewer, 400 m sanitary sewer Union Gas Pumping Station  Cost  Estimated Total Construction Cost  Third highest comparative cost  Third highest comparative cost		Loss of trail link along old Hanlon Road between Kortright Road and Stone Road
Cultural Environment Impact on Existing Built Heritage or Cultural Features Potential Impact on Archaeological Resources Proposed City of Guelph municipal water supply well in SE quadrant of intersection of Hanlon Expressway; to be confirmed through additional Stage 2 archaeological assessment; archaeological resources uncovered during construction would be mitigated through provisions of the Ontario Heritage Act  Applied Environment Wunicipal Water Supply Wells Proposed City of Guelph municipal water supply well in SE quadrant of intersection of Hanlon Expressway and Stone Road  Waste Disposal Sites or Potentially Contaminated Sites Utility Impacts Impacts Soon Union Gas line Soon Union Gas line 1300 m watermain, 600 m storm sewer, 400 m sanitary sewer Union Gas Pumping Station  Cost Estimated Total Construction Cost Other Considerations	Property Requirements	
Minipact on Existing Built Heritage or Cultural Features		
Potential Impact on Archaeological Resources  Area of archaeological potential at SW quadrant of intersection at Downey Road and Hanlon Expressway; to be confirmed through additional Stage 2 archaeological assessment; archaeological resources uncovered during construction would be mitigated through provisions of the Ontario Heritage Act  Applied Environment  Municipal Water Supply Wells  Proposed City of Guelph municipal water supply well in SE quadrant of intersection of Hanlon Expressway and Stone Road  No impact on waste disposal sites or Potentially Contaminated Sites  Utility Impacts  Impacts: So on underground Guelph Hydro, 1500 m overhead Guelph Hydro, 400 m overhead Ontario Hydro 1300 m watermain, 600 m storm sewer, 400 m sanitary sewer Union Gas Pumping Station  Cost  Estimated Total Construction Cost  Other Considerations  Third highest comparative cost		Ruilt haritage farmhouse located on College Avenue aget of Hanlon Evergosyay, potentially affected by vibration and dust during construction.
construction would be mitigated through provisions of the Ontario Heritage Act  Applied Environment  Municipal Water Supply Wells  Waste Disposal Sites or Potentially Contaminated Sites  Impacts: Utility Impacts  Impacts:  500 m Union Gas line  250 m underground Guelph Hydro, 1500 m overhead Guelph Hydro, 400 m overhead Ontario Hydro  1300 m watermain, 600 m storm sewer, 400 m sanitary sewer  100 total Construction Cost  Estimated Total Construction Cost  Other Considerations  construction would be mitigated through provisions of the Ontario Heritage Act  Applied Environment  No impact on waste disposal sites or potentially contaminated sites  No impact on waste disposal sites or potentially contaminated sites  Impacts:  1 by Disposal Sites or Potentially Contaminated Sites  2 by Disposal Sites or Potentially Contaminated Sites  3 by Disposal Sites or Potentially Contaminated Sites  4 by Disposal Sites or Potentially Contaminated Sites  4 by Disposal Sites or Potentially Contaminated Sites  4 by Disposal Sites or Potentially Contaminated Sites  5 by Disposal Sites or Potentially Contaminated Si		
Applied Environment  Municipal Water Supply Wells  Waste Disposal Sites or Potentially Contaminated Sites  Utility Impacts  Impacts:  500 m Union Gas line  250 m underground Guelph Hydro, 1500 m overhead Guelph Hydro, 400 m overhead Ontario Hydro  1300 m watermain, 600 m storm sewer, 400 m sanitary sewer  Union Gas Pumping Station  Cost  Estimated Total Construction Cost  Other Considerations	rotential Impact on Archaeological Resources	
Municipal Water Supply Wells  Waste Disposal Sites or Potentially Contaminated Sites  Utility Impacts  Impacts:  500 m Union Gas line  250 m underground Guelph Hydro, 1500 m overhead Guelph Hydro, 400 m overhead Ontario Hydro  1300 m watermain, 600 m storm sewer, 400 m sanitary sewer  1300 m underground Guelph Hydro, 1500 m storm sewer, 400 m sanitary sewer  150st  Cost  Estimated Total Construction Cost  Other Considerations		construction would be mitigated through provisions of the Ontario Heritage Act
Waste Disposal Sites or Potentially Contaminated Sites  Utility Impacts  Impacts:		
Waste Disposal Sites or Potentially Contaminated Sites  Utility Impacts  Impacts:	Municipal Water Supply Wells	Proposed City of Guelph municipal water supply well in SE quadrant of intersection of Hanlon Expressway and Stone Road
Utility Impacts    Impacts:		
<ul> <li>500 m Union Gas line</li> <li>250 m underground Guelph Hydro, 1500 m overhead Guelph Hydro, 400 m overhead Ontario Hydro</li> <li>1300 m watermain, 600 m storm sewer, 400 m sanitary sewer</li> <li>Union Gas Pumping Station</li> </ul> Cost Estimated Total Construction Cost <ul> <li>Third highest comparative cost</li> </ul> Other Considerations		
250 m underground Guelph Hydro, 1500 m overhead Guelph Hydro, 400 m overhead Ontario Hydro 1300 m watermain, 600 m storm sewer, 400 m sanitary sewer Union Gas Pumping Station  Cost  Estimated Total Construction Cost Other Considerations  Third highest comparative cost	July impacts	
■ 1300 m watermain, 600 m storm sewer, 400 m sanitary sewer  ■ Union Gas Pumping Station  Cost  Estimated Total Construction Cost  Other Considerations		
Cost Estimated Total Construction Cost Other Considerations  Union Gas Pumping Station  Third highest comparative cost		
Cost  Estimated Total Construction Cost Other Considerations  Third highest comparative cost		
Estimated Total Construction Cost Other Considerations  Third highest comparative cost		■ Union Gas Pumping Station
Other Considerations	Cost	
Other Considerations		■ Third highest comparative cost
Triumicipaly Local resident import — College Avenue Extension not supported by the City of Guelph of local residents		College Avanue Extension not supported by the City of Gueloh or local residents
	Monicipal/Local Resident Input	- College Avenue Exicusion not supported by the City of Obelph of local residents





T (6 0	Evaluation Summary Atternative 7
Traffic Operations	
Intersection Levels of Service	<ul> <li>Provides good level of service at the ramp terminal intersection on Stone Road</li> </ul>
	<ul> <li>Provides good level of service at the ramp terminal intersections on Kortright Road</li> </ul>
14 15 . 17 . 1	Provides good level of service at all adjacent municipal road intersections
Municipal Road Volumes	Anticipated Changes in Traffic Volumes (peak hour):
	■ Downey Road west of Niska Road = +1%
	■ Woodland Glen Drive = -33%
	■ College Avenue west of Highway 6 = +10%
	■ Scottsdale Drive between Kortright Avenue and Stone Road = -23%
	■ Scottsdale Drive between Stone Road and College Avenue = +4%
Geometrics	<ul> <li>Interchange configuration provides high traffic capacity with direct exit ramps from Highway 6</li> </ul>
	All movements from Stone Road to Highway 6 are free-flow  All movements from Stone Road to Highway 6 are free-flow
	Provides a non-standard (partial) interchange at Downey Road/Kortright Road
	A left-turn movement is required from Downey Road westbound to access Highway 6 southbound
	<ul> <li>Uncommon design that would require additional signing to accommodate the combined exit from Highway 6 northbound</li> </ul>
Access	
Access to and from Highway 6	<ul> <li>Provides direct access to and from Highway 6 via Stone Road Interchange</li> </ul>
	Provides access to and from the south at Kortright Road
	Provides a "service road" on the east side of Highway 6 between Kortright Road and Stone Road by removing the northbound exit ramp at the Stone Road interchange
	<ul> <li>Does not provide for a College Avenue Extension</li> </ul>
	<ul> <li>Can accommodate a Stone Road Extension if required and initiated by the City of Guelph</li> </ul>
	Requires the fourth least amount of additional out-of-way-travel
Constructability	
Construction Issues	<ul> <li>Uses conventional construction techniques that have long-term stability</li> </ul>
Natural Environment	
Vegetation removal	<ul> <li>Vegetation removal required at John Gamble Park at Kortright Road</li> </ul>
	<ul> <li>Vegetation removal required at SE and SW quadrants at Stone Road and Hanlon Expressway; lands owned by the City of Guelph for future Hanlon Expressway improvements</li> </ul>
Effects on natural areas	No effects on natural areas
Effects on Hanlon Creek	Potential minor impacts to Hanlon Creek during construction
Social Environment	
Residents and Businesses Displaced	Displacement of one residence on Downey Road  Displacement of one residence on Downey Road
	Displacement of seven residences on Hanlon Road between Stone Road and Flanders Road  Displacement of seven residences on Hanlon Road between Stone Road and Flanders Road
D. william in	Displacement of three residences on Stone Road
Potential Noise Impacts	No major increases in noise levels are anticipated
	Noise increases can be mitigated through standard mitigation measures
Impacts on Community and Recreation Features, including	Minor impacts to John Gamble Park  Out to Both Control of Control
Trails	Removes Kortright Road access to John Gamble Park
	Direct access to YMCA/YWCA is provided to and from the south from the Hanlon Expressway  Output  Direct access to YMCA/YWCA is provided to and from the south from the Hanlon Expressway  Output  Direct access to YMCA/YWCA is provided to and from the south from the Hanlon Expressway
	Improves pedestrian and cyclist access across Hanlon Expressway via grade separations; users are required to cross through a partial interchange on Kortright Road
	Some impacts to existing trail system east and west of Hanlon Expressway near Stone Road interchange
	Trail relocations required on east and west sides of Hanlon Expressway at College Avenue  Trail relocations required on east and west sides of Hanlon Expressway at College Avenue
D . D	Loss of trail link along old Hanlon Road between Kortright Road and Stone Road  Loss of trail link along old Hanlon Road between Kortright Road and Stone Road
Property Requirements	Lands in the SW, SE, and NE quadrants at Stone Road are owned by the City of Guelph for future Hanlon Expressway improvements
Cultural Environment	Minor property impacts to Guelph Limestone Quarry in the NW quadrant of Hanlon Expressway and College Avenue
	Built heritage farmhouse, located on College Avenue east of Hanlon Expressway, potentially affected by vibration and dust during construction
Impact on Existing Built Heritage or Cultural Features Potential Impact on Archaeological Resources	<ul> <li>Built neritage tarmhouse, located on College Avenue east of Hanlon Expressway, potentially affected by vibration and dust during construction</li> <li>Area of archaeological potential at SW quadrant of intersection at Downey Road and Hanlon Expressway; to be confirmed through additional Stage 2 archaeological assessment; archaeological resources uncovered during</li> </ul>
r oleniiai impaci on Archaeologicai kesources	<ul> <li>Area of archaeological potential at 5W quadrant of intersection at Downey Road and Hanlon Expressway; to be confirmed through additional Stage 2 archaeological assessment; archaeological resources uncovered during construction would be mitigated through provisions of the Ontario Heritage Act</li> </ul>
Applied Environment	Construction would be intitigated infough provisions of the Official Fielinge Act
Municipal Water Supply Wells	Proposed City of Guelph municipal water supply well in SE quadrant of intersection of Hanlon Expressway and Stone Road
Waste Disposal Sites or Potentially Contaminated Sites	No impact on waste disposal sites or potentially contaminated sites
Utility Impacts	Impacts:
Onliny impacts	■ 800 m Union Gas line
	<ul> <li>250 m underground Guelph Hydro, 1800 m overhead Guelph Hydro, 800 m overhead Ontario Hydro</li> </ul>
	<ul> <li>900 m watermain, 200 m storm sewer, 200 m sanitary sewer</li> </ul>
	<ul> <li>Union Gas Pumping Station</li> </ul>
Cost	
Estimated Total Construction Cost	Highest comparative cost
Estimated Total Construction Cost	1 ilginosi comparativo cosi

				RANK			2	1	4	9	5	7	က																
				oros betrigieW			8.95	8.99	8.37	7.88	7.99	7.23	8.78																
				tzoO	2		9.6	0.6	8.9	10.0	6.4	1.9	0.6																
		NORTH SECTION														tnəmnorivn∃ bəilqqA	l		0.01	0.01	0.01	0.01	10.0	10.0	10.0				
S ements				tnemnorivnal Enviton	1		10.0	0.6	10.0	10.0	0.6	0.6	0.6																
= ALTERNATIVE: ressway) Improv )2-05-00			NORTH SECTION	NORTH SECTION	NORTH SECTION	NORTH SECTION	NORTH SECTION	NORTH SECTION	ECTION	ECTION	ECTION	ECTION	ECTION	ECTION	ECTION	ECTION	ECTION	ECTION	ECTION	Social Environment	ε	ch criterion	0.01	8.1	5.7	9.0	0.3	2.5	7.5
EVALUATION OF ALTERNATIVES Highway 6 (Hanlon Expressway) Improvements GWP 3002-05-00									NORTH		Motural Environment	3	Score for each criterion	10.0	8.2	7.6	10.0	8.2	5.9	8.2									
						Constructability	1		10.0	10.0	0.6	0.6	9.0	8.0	10.0														
				Scess	5		7.7	6.6	8.1	8.3	6.7	10.0	9.5																
				Zaffic Operations	9		1.8	2.8	8.4	0.9	9.9	6.3	8.5																
				Alternatives	Relative Criteria Weight		1	2	3	4	5	9	7																

Evaluation Factor: HIGHWAY 6 (NORTH SECTION) - TRAFFIC OPERATIONS

What Represents the Best Improvement Alternative?

#### The Best Alternative. . . . . . .

- Accommodates projected traffic demands
- Supports and enhances provincial highway function
- Reduces the number of collisions
- Provides overall design standards consistent with Geometric Standards for Ontario Highways, Interchanges, and Connecting Roads

Unit of Measure:	Combined Weighted Measurement
Score:	Highest measurement = 10

Alternative	Α	В	С	Average Score	Rank
1	7.42	6.83	10.00	8.08	4
2	8.23	9.00	8.85	8.68	1
3	7.30	8.00	10.00	8.42	3
4	3.80	9.50	4.62	5.97	7
5	6.13	10.00	3.46	6.52	5
6	5.78	9.67	3.46	6.30	6
7	7.41	9.33	8.85	8.52	2

	A <del>l</del> 1	Alt 2	Alt 3	Alt 4	Alt 5	Alt 6	Alt 7
Ramp Intersections							
Kortright S-E/W		В			В	В	U
Kortright E/W-S		٧			⋖	4	⋖
Stone S-E/W	U	В	C	П	П	Е	
Stone N-E/W	В	В	В	Е	Е	F	O
Municipal Intersections_							
Downey Drive at Woodland Glen Drive	∢	8	٧	٧	B	В	В
Kortright Avenue at Ironwood Road	В	В	В	В	В	В	В
Kortright Avenue at Scottsdale Drive	⋖	В	В	В	В	В	В
Stone Road at Woodland Glen Drive	В	В	В	В	В	В	В
Stone Road at Scottedale Drive	C	ر	ر	C	C	C	ر

5:5	5.5 7.6 6.13	5.0 7.6 5.78	7.3 7.6 7.41	Aunicipal Intersections used for analysis:
	5	9	7	Municipal Intersections use

EVALUATION DATA SHEET	
ıy 6 (Hanlon Expressway) İmprovemer	n
GWP 3002-05-00	

HIGHWAY 6 (NORTH SECTION) - TRAFFIC OPERATIONS (B) Evaluation Factor:

What Represents the Best Improvement Alternative?

Measure:	<ul> <li>Volumes on Municipo</li> </ul>	al Roads (incr	ase/decrease)	
	<ul> <li>Municipal Road Clas</li> </ul>	sifications		
	% change	Score		
	less than 5%	10		
	5-10%	8		
	10-15%	6		
	15-20%	4		
	20-25%	2		
Score:	25% or over	0		
00010.				
	Road Classification	Arterial	3	
		Collector	2	
		Local	1	

		Volumes on M	Municipal Roa	ds		Road Classification			
Alternative	Road	Existing Volume	Projected Volume	% increase	Score	Score	Raw Score	Total Score (B)	Rank
	Downey Road	1080	1002	-7	10	3		•	
	Woodland Glen Drive	425	444	4	10	1			
1	College Avenue	650	728	12	6	2	82	6.83	7
	Scottsdale Drive <sup>1</sup>	650	782	20	2	3			
	Scottsdale Drive <sup>2</sup>	780	820	5	8	3			
	Downey Road	1080	1088	]	10	3			
	Woodland Glen Drive	425	478	12	6	1			
2	College Avenue	650	715	10	6	2	108	9.00	5
	Scottsdale Drive <sup>1</sup>	650	647	0	10	3			
	Scottsdale Drive <sup>2</sup>	780	809	4	10	3			
	Downey Road	1080	1218	13	6	3		8.00	
	Woodland Glen Drive	425	112	-74	10	1	96		
3	College Avenue	650	769	18	4	2			6
	Scottsdale Drive <sup>1</sup>	650	644	-1	10	3			
	Scottsdale Drive <sup>2</sup>	780	803	3	10	3			
	Downey Road	1080	1072	-1	10	3			
	Woodland Glen Drive	425	345	-19	10	1			
4	College Avenue	650	675	4	10	2	114	9.50	3
	Scottsdale Drive <sup>1</sup>	650	372	-43	10	3			
	Scottsdale Drive <sup>2</sup>	780	827	6	8	3			
	Downey Road	1080	1113	3	10	3			
	Woodland Glen Drive	425	341	-20	10	1			
5	College Avenue	650	676	4	10	2	120	10.00	1
	Scottsdale Drive <sup>1</sup>	650	323	-50	10	3			
	Scottsdale Drive <sup>2</sup>	780	808	4	10	3			

		Volumes on M	Aunicipal Roa	ds		Road Classification			
	Downey Road	1080	814	-25	10	3			
	Woodland Glen Drive	425	56	-87	10	1			
6	College Avenue	650	700	8	8	2	116	9.67	2
	Scottsdale Drive <sup>1</sup>	650	307	-53	10	3			
	Scottsdale Drive <sup>2</sup>	780	785	1	10	3			
	Downey Road	1080	1088	1	10	3			
	Woodland Glen Drive	425	285	-33	10	1			
7	College Avenue	650	715	10	6	2	112	9.33	4
	Scottsdale Drive <sup>1</sup>	650	498	-23	10	3			
	Scottsdale Drive <sup>2</sup>	780	809	4	10	3			

<sup>&</sup>lt;sup>1</sup> Between Kortright Avenue and Stone Road

Projected Volumes taken from Feasibility Report (Appendix A, Figure B11)

# EVALUATION DATA SHEET Highway 6 (Hanlon Expressway) Improvements GWP 3002-05-00

Evaluation Factor: HIGHWAY 6 (NORTH SECTION) - TRAFFIC OPERATIONS (C)

What Represents the Best Improvement Alternative?

The Best Alternative. . . . . . .

- Provides overall design standards consistent with Geometric Standards for Ontario Highways, Interchanges, and
- Provides for safe movement of vehicles

Unit of Measure:

Qualitative

No Change = 10

Each negative change = -1

Each positive change = +1

Score:

Highest Score = 10



Alternative	Rationale		Measurement	Score	Rank
	Highway 6 exits are located in advance of	(+1.0)			
	structures	(11.0)			
1	Interchange configuration provides high traffic	(+1.0)	13	10.0	1
•	capacity with direct exit ramps from Highway 6	(11.0)	10	10.0	•
	All movement from Stone Road to Highway 6 are	(+1.0)			
	free-flow	(11.0)			
	Highway 6 exits are located in advance of	(+1.0)			
	structures	(11.0)			
	Provides a non-standard interchange (partial) at	(-1.0)			
	Downey Road/Kortright Road	(-1.0)			
	Interchange configuration provides high traffic	(+1.0)			
2	capacity with direct exit ramps from Highway 6	(11.0)	12	8.8	3
	All movement from Stone Road to Highway 6 are	(+1.0)			
	free-flow	(11.0)			
	A left-turn movement is required from Downey Road				
	westbound to access Highway 6 southbound	(-0.5)			
	o ,				
	Highway 6 exits are located in advance of	(+1.0)			
	structures	(11.0)			
3	Interchange configuration provides high traffic	(+1.0)	13	10.0	1
O	capacity with direct exit ramps from Highway 6	(11.0)	10	10.0	•
	All movement from Stone Road to Highway 6 are	(+1.0)			
	free-flow				
	Highway 6 exits are located beyond the structure	(-1.0)			
	Interchange configuration provides lower traffic	(-1.0)			
	capacity with loop ramp exits from Highway 6	(-1.0)			
4	Movements from Stone Road to Highway 6 are not	(-1.0)	6	4.6	5
	free-flow	(-1.0)			
	East ramp terminal intersection at Stone Road is	(-1.0)			
	close to the intersection at Scottsdale Drive	(-1.0)			

 $<sup>^{2}</sup>$  Between Stone Road and College Avenue

	Local Control of the		Ī		1
	Highway 6 exits are located beyond the structure	(-1.0)			
	Provides a non-standard interchange (partial) at Downey Road/Kortright Road	(-1.0)			
	Interchange configuration provides lower traffic capacity with loop ramp exits from Highway 6	(-1.0)			
5	Movements from Stone Road to Highway 6 are not free-flow	(-1.0)	5	3.5	6
	A left-turn movement is required from Downey Road westbound to access Highway 6 southbound	(-0.5)			
	East ramp terminal intersection at Stone Road is close to the intersection at Scottsdale Drive	(-1.0)			
	Highway 6 exits are located beyond the structure	(-1.0)			
	Provides a non-standard interchange (partial) at Downey Road/Kortright Road	(-1.0)			
	Interchange configuration provides lower traffic capacity with loop ramp exits from Highway 6	(-1.0)			
6	Movements from Stone Road to Highway 6 are not free-flow	(-1.0)	5	3.5	6
	A left-turn movement is required from Downey Road westbound to access Highway 6 southbound	(-0.5)			
	East ramp terminal intersection at Stone Road is close to the intersection at Scottsdale Drive				
	Highway 6 exits are located in advance of structures	(+1.0)			
	Provides a non-standard interchange (partial) at Downey Road/Kortright Road	(-1.0)			
	Interchange configuration provides high traffic capacity with direct exit ramps from Highway 6	(+1.0)			
7	All movement from Stone Road to Highway 6 are free-flow	(+1.0)	12	8.8	3
,	A left-turn movement is required from Downey Road westbound to access Highway 6 southbound	(-0.5)	12	0.0	3
	Provides for a combined exit from Highway 6 Northbound - reducing the number of exits	(+1.0)			
	Uncommon design that would require additional signing to accommodate common exit from Highway 6 Northbound	(-1.0)			

HIGHWAY 6 (NORTH SECTION) - ACCESS Evaluation Factor:

What Represents the Best Alternative?

The Best Alternative . . . . .

Unit of Measure:

Supports existing and future growth and development

Supports the municipal road network

• Complements future municipal road improvements

Quantitative:

Travel distance from neighbourhoods to Highway 6

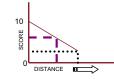
A - Downey Road at Ptarmigan Drive

B - Woodland Glen Drive at Kingswood Gate C - College Avenue at Dovercliffe Road

D - Ironwood Crescent at Hilldale Crescent

E - Scottsdale Drive at Ironwood Crescent F - Scottsdale Drive at Wilsonview Avenue

Shortest travel distance = 10 Score:



Alternative	From	То	Traffic Volume	Distance (km)	Weighted Distance	Score	Rank
	А	Highway 6 Northbound	268	2.8			
	^	Highway 6 Southbound	78	3.0			
	В	Highway 6 Northbound	53	0.9	1		
	D	Highway 6 Southbound	29	0.7			
	С	Highway 6 Northbound	189	1.1	1		
		Highway 6 Southbound	53	0.9			
	D	Highway 6 Northbound	87	1.9	1		
		Highway 6 Southbound	92	2.1	_		
	E	Highway 6 Northbound	202	0.6	1		
		Highway 6 Southbound	195	0.8	_		
	F	Highway 6 Northbound	202	0.8			
1		Highway 6 Southbound	107	1.0	5,455	7.7	7
	Highway 6 Northbound	A	355	2.8	1		
	Highway 6 Southbound		130	2.1			
	Highway 6 Northbound	В	66	3.2	4		
	Highway 6 Southbound	_	28	0.8			
	Highway 6 Northbound	С	189	1.4	4		
	Highway 6 Southbound	-	32	1.0	4		
	Highway 6 Northbound	D	106	2.0	4		
	Highway 6 Southbound	_	87	2.2	4		
	Highway 6 Northbound	- E	320	0.7	4		
	Highway 6 Southbound		299	1.0	4		
	Highway 6 Northbound	- F	321	1.0	4		
	Highway 6 Southbound		165	1.2			
	A	Highway 6 Northbound	268	2.8	- - -		
		Highway 6 Southbound	78	0.8			
	В	Highway 6 Northbound	53	0.9			
		Highway 6 Southbound	29	0.8			
	С	Highway 6 Northbound	189	1.1	4		
		Highway 6 Southbound	53	0.9	4		
	D	Highway 6 Northbound	87	1.9	4		
		Highway 6 Southbound	92	0.9	4		
	E	Highway 6 Northbound	202	0.6	4		
		Highway 6 Southbound	195	0.8	4		
	F	Highway 6 Northbound	202	0.8	4		
2	LE L Z NI JII I	Highway 6 Southbound	107	1.0	4,254	9.9	2
	Highway 6 Northbound	A	355	1.0	4		
	Highway 6 Southbound		130	2.1	4		
	Highway 6 Northbound	В	66	1.0	4		
	Highway 6 Southbound		28	0.8	4		
	Highway 6 Northbound	C	189	1.4	-		
	Highway 6 Southbound		32	0.7	-		
	Highway 6 Northbound	D	106 87	2.2	-		
	Highway 6 Southbound	-		0.7	1		
	Highway 6 Northbound	E	320		1		
	Highway 6 Southbound		299	1.0	-		
	Highway 6 Northbound	F	321	1.0	1		
	Highway 6 Southbound		165	1.2			

	ı	Tue I de la	0.40	0 4	ı		1
	Α	Highway 6 Northbound	268	2.4	ļ		
		Highway 6 Southbound	78	2.1			
	В	Highway 6 Northbound	53	0.9			
	Ь	Highway 6 Southbound	29	0.7			
		Highway 6 Northbound	189	1.1	İ		
	С	Highway 6 Southbound	53	0.9			
		Highway 6 Northbound	87	1.9	ł		
	D	9 /			•		
		Highway 6 Southbound	92	2.1	ļ		
	Е	Highway 6 Northbound	202	0.6			
	_	Highway 6 Southbound	195	0.8			
	_	Highway 6 Northbound	202	0.8	Ī		
	F	Highway 6 Southbound	107	1.0	İ		
3	Highway 6 Northbound	riigiiway o ocomboona	355	2.8	5,159	8.1	6
		- <del> </del> A					
	Highway 6 Southbound		130	2.2	ļ		
	Highway 6 Northbound	В	66	1.2			
	Highway 6 Southbound	J	28	0.8			
	Highway 6 Northbound	C	189	1.4			
	Highway 6 Southbound	C	32	1.0			
	Highway 6 Northbound		106	2.0	İ		
		D	87	2.2			
	Highway 6 Southbound				ł		
	Highway 6 Northbound	E	320	0.7			
	Highway 6 Southbound		299	1.0	ļ		
	Highway 6 Northbound	<u></u> F	321	1.0			
	Highway 6 Southbound	'	165	1.2			
	1	Highway 6 Northbound	268	2.1			
	A	Highway 6 Southbound	78	3.2	İ		
			53	1.3	ł		
	В	Highway 6 Northbound			ł		
		Highway 6 Southbound	29	8.0			
	С	Highway 6 Northbound	189	1.5			
		Highway 6 Southbound	53	1.0			
		Highway 6 Northbound	87	1.9	Ī		
	D	Highway 6 Southbound	92	2.3	İ		
		Highway 6 Northbound	202	0.6	t		
	E	/			ł	8.3	5
		Highway 6 Southbound	195	1.1	5,053		
	F	Highway 6 Northbound	202	0.8			
4	·	Highway 6 Southbound	107	1.3			
4	Highway 6 Northbound	A	355	2.1			
	Highway 6 Southbound	A	130	2.3			
	Highway 6 Northbound		66	1.3	İ		
	Highway 6 Southbound	В	28	0.9			
					ł		
	Highway 6 Northbound	C	189	1.5			
	Highway 6 Southbound		32	1.1	ļ		
	Highway 6 Northbound	D	106	1.9			
	Highway 6 Southbound		87	2.2			
	Highway 6 Northbound	_	320	0.6	İ		
	Highway 6 Southbound	E	299	0.9			
					t		
	Highway 6 Northbound	- <b>├</b> F	321	0.9	1		
	Highway 6 Southbound		165	1.1			
	A	Highway 6 Northbound	268	2.1			
		Highway 6 Southbound	78	0.8	[		
	-	Highway 6 Northbound	53	1.3	Ī		
	В	Highway 6 Southbound	29	0.8	Ī		
		Highway 6 Northbound	189	1.5	†		
	С	Highway 6 Southbound	53		t		
	i	H HOHWOV O SOUTHDOUNG	. 55	1.0	l		
				1.0	†		
	D	Highway 6 Northbound	87	1.9			
	D		87 92	0.9			
		Highway 6 Northbound	87				
	D E	Highway 6 Northbound Highway 6 Southbound	87 92	0.9			
	E	Highway 6 Northbound Highway 6 Southbound Highway 6 Northbound Highway 6 Southbound	87 92 202 195	0.9 0.6 1.1			
		Highway 6 Northbound Highway 6 Southbound Highway 6 Northbound Highway 6 Southbound Highway 6 Northbound	87 92 202 195 202	0.9 0.6 1.1 0.8			
5	E F	Highway 6 Northbound Highway 6 Southbound Highway 6 Northbound Highway 6 Southbound	87 92 202 195 202 107	0.9 0.6 1.1 0.8 1.3	4,316	9.7	3
5	E F Highway 6 Northbound	Highway 6 Northbound Highway 6 Southbound Highway 6 Northbound Highway 6 Southbound Highway 6 Northbound	87 92 202 195 202 107 355	0.9 0.6 1.1 0.8 1.3 1.0	4,316	9.7	3
5	E F Highway 6 Northbound Highway 6 Southbound	Highway 6 Northbound Highway 6 Southbound Highway 6 Northbound Highway 6 Southbound Highway 6 Northbound Highway 6 Southbound	87 92 202 195 202 107 355 130	0.9 0.6 1.1 0.8 1.3 1.0 3.2	4,316	9.7	3
5	E F Highway 6 Northbound	Highway 6 Northbound Highway 6 Southbound Highway 6 Northbound Highway 6 Southbound Highway 6 Northbound Highway 6 Southbound	87 92 202 195 202 107 355 130 66	0.9 0.6 1.1 0.8 1.3 1.0	4,316	9.7	3
5	E F Highway 6 Northbound Highway 6 Southbound	Highway 6 Northbound Highway 6 Southbound Highway 6 Northbound Highway 6 Southbound Highway 6 Northbound Highway 6 Southbound	87 92 202 195 202 107 355 130	0.9 0.6 1.1 0.8 1.3 1.0 3.2	4,316	9.7	3
5	E F Highway 6 Northbound Highway 6 Southbound Highway 6 Northbound Highway 6 Southbound	Highway 6 Northbound Highway 6 Southbound Highway 6 Northbound Highway 6 Southbound Highway 6 Northbound Highway 6 Southbound A  B	87 92 202 195 202 107 355 130 66 28	0.9 0.6 1.1 0.8 1.3 1.0 3.2 1.0 0.9	4,316	9.7	3
5	E  F  Highway 6 Northbound  Highway 6 Southbound  Highway 6 Northbound  Highway 6 Southbound  Highway 6 Northbound	Highway 6 Northbound Highway 6 Southbound Highway 6 Northbound Highway 6 Southbound Highway 6 Northbound Highway 6 Southbound	87 92 202 195 202 107 355 130 66 28	0.9 0.6 1.1 0.8 1.3 1.0 3.2 1.0 0.9 1.5	4,316	9.7	3
5	F Highway 6 Northbound Highway 6 Southbound Highway 6 Northbound Highway 6 Southbound Highway 6 Northbound Highway 6 Southbound	Highway 6 Northbound Highway 6 Southbound Highway 6 Northbound Highway 6 Southbound Highway 6 Northbound Highway 6 Southbound A B C	87 92 202 195 202 107 355 130 66 28 189 32	0.9 0.6 1.1 0.8 1.3 1.0 3.2 1.0 0.9 1.5	4,316	9.7	3
5	F Highway 6 Northbound Highway 6 Southbound Highway 6 Southbound Highway 6 Southbound Highway 6 Northbound Highway 6 Southbound Highway 6 Southbound	Highway 6 Northbound Highway 6 Southbound Highway 6 Northbound Highway 6 Southbound Highway 6 Northbound Highway 6 Southbound A  B	87 92 202 195 202 107 355 130 66 28 189 32	0.9 0.6 1.1 0.8 1.3 1.0 3.2 1.0 0.9 1.5 1.1	4,316	9.7	3
5	F Highway 6 Northbound Highway 6 Southbound Highway 6 Northbound Highway 6 Northbound Highway 6 Northbound Highway 6 Southbound Highway 6 Northbound Highway 6 Southbound Highway 6 Northbound	Highway 6 Northbound Highway 6 Southbound Highway 6 Northbound Highway 6 Southbound Highway 6 Northbound Highway 6 Southbound A B C	87 92 202 195 202 107 355 130 66 28 189 32 106 87	0.9 0.6 1.1 0.8 1.3 1.0 3.2 1.0 0.9 1.5 1.1 0.7 2.2	4,316	9.7	3
5	F Highway 6 Northbound Highway 6 Southbound Highway 6 Northbound Highway 6 Southbound Highway 6 Southbound Highway 6 Southbound	Highway 6 Northbound Highway 6 Southbound Highway 6 Northbound Highway 6 Southbound Highway 6 Northbound Highway 6 Northbound A B C	87 92 202 195 202 107 355 130 66 28 189 32 106 87 320	0.9 0.6 1.1 0.8 1.3 1.0 3.2 1.0 0.9 1.5 1.1 0.7 2.2 0.6	4,316	9.7	3
5	F Highway 6 Northbound Highway 6 Southbound Highway 6 Northbound Highway 6 Northbound Highway 6 Northbound Highway 6 Southbound Highway 6 Northbound Highway 6 Southbound Highway 6 Northbound	Highway 6 Northbound Highway 6 Southbound Highway 6 Northbound Highway 6 Southbound Highway 6 Northbound Highway 6 Southbound A B C	87 92 202 195 202 107 355 130 66 28 189 32 106 87	0.9 0.6 1.1 0.8 1.3 1.0 3.2 1.0 0.9 1.5 1.1 0.7 2.2	4,316	9.7	3
5	F Highway 6 Northbound Highway 6 Southbound	Highway 6 Northbound Highway 6 Southbound Highway 6 Northbound Highway 6 Southbound Highway 6 Northbound Highway 6 Southbound A B C D	87 92 202 195 202 107 355 130 66 28 189 32 106 87 320 299	0.9 0.6 1.1 0.8 1.3 1.0 3.2 1.0 0.9 1.5 1.1 0.7 2.2 0.6 0.9	4,316	9.7	3
5	F Highway 6 Northbound Highway 6 Southbound Highway 6 Northbound Highway 6 Southbound Highway 6 Southbound Highway 6 Southbound	Highway 6 Northbound Highway 6 Southbound Highway 6 Northbound Highway 6 Southbound Highway 6 Northbound Highway 6 Northbound A B C	87 92 202 195 202 107 355 130 66 28 189 32 106 87 320	0.9 0.6 1.1 0.8 1.3 1.0 3.2 1.0 0.9 1.5 1.1 0.7 2.2 0.6	4,316	9.7	3

	A	Highway 6 Northbound	268	2.1			
		Highway 6 Southbound	78	0.8			
	В	Highway 6 Northbound	53	1.3			
	В	Highway 6 Southbound	29	0.8			
	С	Highway 6 Northbound	189	1.5			
	C	Highway 6 Southbound	53	1.0			
		Highway 6 Northbound	87	1.9			
	D	Highway 6 Southbound	92	0.9			
		Highway 6 Northbound	202	0.6			
	E	Highway 6 Southbound	195	1.1			
		Highway 6 Northbound	202	0.8			
	F	Highway 6 Southbound	107	1.3			
6	Highway 6 Northbound	riigiiway o sooiiibooiia	355	1.0	4,199	10.0	1
		A	130	2.3			
	Highway 6 Southbound						
	Highway 6 Northbound	В	66 28	1.0			
	Highway 6 Southbound		_	0.9			
	Highway 6 Northbound	С	189	1.5			
	Highway 6 Southbound		32	1.1			
	Highway 6 Northbound	D	106	0.7			
	Highway 6 Southbound		87	2.2			
	Highway 6 Northbound	E	320	0.6			
	Highway 6 Southbound		299	0.9			
	Highway 6 Northbound	F	321	0.9			
	Highway 6 Southbound		165	1.1			
	A	Highway 6 Northbound	268	2.0			
		Highway 6 Southbound	78	0.8			
	В	Highway 6 Northbound	53	0.9			
	В	Highway 6 Southbound	29	0.8			
	С	Highway 6 Northbound	189	1.1			
	C	Highway 6 Southbound	53	0.9			
	D	Highway 6 Northbound	87	1.9			
	В	Highway 6 Southbound	92	0.9			
	Е	Highway 6 Northbound	202	0.6			
	_	Highway 6 Southbound	195	0.8			
	F	Highway 6 Northbound	202	0.8			
7	'	Highway 6 Southbound	107	1.0	4,420	9.5	4
/	Highway 6 Northbound	A	355	1.0	4,420	9.5	4
	Highway 6 Southbound	^	130	1.3			
	Highway 6 Northbound	В	66	0.9			
	Highway 6 Southbound	В	28	0.8			
	Highway 6 Northbound	С	189	2.3			
	Highway 6 Southbound	1	32	1.0			
	Highway 6 Northbound	2	106	0.7			
	Highway 6 Southbound	D	87	2.2			
	Highway 6 Northbound	-	320	0.7			
	Highway 6 Southbound	E	299	1.0			
	Highway 6 Northbound	-	321	2.0			
	Highway 6 Southbound	- F	165	1.2			
L		1					

GWP 3002-05-00

Evaluation Factor: HIGHWAY 6 (NORTH SECTION) - CONSTRUCTABILITY

What Represents the Best Alternative?

The Best Alternative . . . . . .

• Accommodates existing traffic flow and operations during construction

Uses conventional construction techniques

Unit of Measure:

Qualitative:

No major constructability issues = 10

Each negative construction issue = -1

Each positive construction issue = +1

Score: Highest measurement = 10

10 MEASUREMENT ID

Alternative	Rationale		Measurement	Score	Rank
1	Uses conventional construction techniques		10	10	1
ı	that have long-term stability	-	10	10	l
2	Uses conventional construction techniques		10	10	1
2	that have long-term stability		10	10	ı
	Uses conventional construction techniques				
	that have long-term stability		_		
3	Requires the construction of a road		9	9	4
	extension through an environmentally	(-1)			
	sensitive area, including Hanlon Creek				
	Uses conventional construction techniques			9	
1	that have long-term stability		9		1
4	Traffic issues at Stone Road because of the	(_1)		/	4
	new alignment on existing road	(-1)			
	Uses conventional construction techniques			9	
5	that have long-term stability		9		1
J	Traffic issues at Stone Road because of the	(-1)	/	/	4
	new alignment on existing road	(-1)			
	Uses conventional construction techniques				
	that have long-term stability				
	Requires the construction of a road				
6	extension through an environmentally	(-1)	8	8	7
	sensitive area, including Hanlon Creek				
	Traffic issues at Stone Road because of the	/ 1)			
	new alignment on existing road	(-1)			
7	Uses conventional construction techniques		10	10	1
/	that have long-term stability		10	10	I

# EVALUATION DATA SHEET Highway 6 (Hanlon Expressway) Improvements GWP 3002-05-00

Evaluation Factor: HIGHWAY 6 (NORTH SECTION) - NATURAL ENVIRONMENT

What Represents the Best Alternative?

The Best Alternative . . . . . .

• Has the least impact on ecological features including wetlands, greenbelts, watercourses, wildlife habitat, surface water and

Unit of Measure: Combined Weighted Measurement

Score: Highest total score = 10

10			
뀚			
SCORE		/ :	
٠,	/	ı :	
0	MEAS	UREMENT	

Alternative	Rationale		Measurement	Score	Rank
Allemanye	Minor vegetation removal at John		Measurement	Score	Kulik
_	Gamble Park	(-0.5)			_
1	Vegetation removal at Stone Road (SE		8.5	10.0	1
	and SW quadrants)	(-1.0)			
	Vegetation removal at John Gamble	( 1 0)			
2	Park	(-1.0)			
	Potential minor impacts during	( 1 0)	7.0	8.2	3
Z	construction at Hanlon Creek	(-1.0)	7.0	0.2	3
	Vegetation removal at Stone Road (SE	(-1.0)			
	and SW quadrants)	(-1.0)			
	Minor vegetation removal at John	(-0.5)			
3	Gamble Park	( 0.0)			
	Vegetation removal at Stone Road (SE	(-1.0)	6.5	7.6	6
	and SW quadrants)	(,			
	Impacts Kortright Waterfowl Park and	(-2.0)			
	Speed River Wetland Complex	, ,			
4	Minor vegetation removal at John	(-0.5)			
	Gamble Park Vegetation removal at Stone Road (SE		8.5	10.0	1
	and SW quadrants)	(-1.0)			
	Vegetation removal at John Gamble				
	Park	(-1.0)			
_	Vegetation removal at Stone Road (SE				
5	and SW quadrants)	(-1.0)	7.0	8.2	2
	Potential minor impacts during	( 1 0)			
	construction at Hanlon Creek	(-1.0)			
	Vegetation removal at John Gamble	/ 1 0\			
	Park	(-1.0)			
	Vegetation removal at Stone Road (SE	(-1.0)			
6	and SW quadrants)	(-1.0)	5.0	5.9	3
O	Impacts Kortright Waterfowl Park and	(-2.0)	5.0	3.7	3
	Speed River Wetland Complex	( 2.0)			
	Potential minor impacts during	(-1.0)			
	construction at Hanlon Creek	()			
	Vegetation removal at John Gamble	(-1.0)			
	Park	, ,			
7	Vegetation removal at Stone Road (SE	(-1.0)	7.0	8.2	2
	and SW quadrants)				
	Potential minor impacts during construction at Hanlon Creek	(-1.0)			
	construction at Hanton Creek				

Evaluation Factor: HIGHWAY 6 (NORTH SECTION) - SOCIAL ENVIRONMENT

What Represents the Best Alternative?

The Best Alternative . . . . .

- Has the least number of residents and businesses displaced or impacted
- Has the least amount of property required
- Is compatible with the City of Guelph and Country of Wellington Official Plans
- Minimizes impacts to adjacent dwellers and views of the highway
- Minimizes noise and air quality impacts
- Minimizes impacts to community and recreational facilities, including trails

Unit of Measure:	Qualitative	
Score:	Highest total score = 10	10 W S S S S S S S S S S S S S S S S S S

Alternative	Rationale	Rationale		Score	Rank
	Displacement of 8 residences	(-4.0)			
	Direct access from Hanlon				
	Expressway to YMCA/YWCA not	(-2.0)			
1	provided		8.0	10.0	1
	Impacts to trail system at Stone Road				
	on east and west side of Hanlon	(-1.0)			
	Expressway				
	Displacement of 8 residences	(-4.0)			
	Direct access from Hanlon	( 2 0)			
	Expressway to YMCA/YWCA only to	(-1.0)			
	and from the south				
	Removes approximately 50% of John	(-1.0)			
	Gamble Park Significant change in character of	` ′			
	= =				
2	Hanlon Road affecting the backyards	(-1.0)	6.5	8.1	2
	of several residences on Shadybrook				
	Crescent Pedestrians and cyclists must cross	-			
	through a partial interchange on	(-0.5)			
	Kortright Road	(-0.5)			
	Impacts to trail system at Stone Road				
	on east and west side of Hanlon	(-1.0)			
	Expressway	( 1.0)			
	Displacement of 8 residences	(-4.0)			
	Direct access from Hanlon				
	Expressway to YMCA/YWCA not	(-2.0)			
	provided	, ,			
3	Impacts to trail system at Stone Road		6.0	7.5	3
3	on east and west side of Hanlon	(-1.0)	0.0	7.5	3
	Expressway	' '			
	College Avenue Extension not				
	supported by City of Guelph or local	(-2.0)			
	residents				

	Displacement of 6 residences	(-3.0)			
	Minor property impacts to 3 residential properties	(-1.0)			
	Displacement of Priory Park Church and Holiday Inn	(-2.0)			
	Direct access from Hanlon Expressway to YMCA/YWCA not provided	(-2.0)			
4	Pedestrians and cyclists must cross through an intersection on Kortright Road	(-0.5)	4.0	5.0	5
	Impacts to trail system at Stone Road on east side of Hanlon Expressway	(-0.5)			
	Significant change in character of Hanlon Road affecting the backyards of several residences on Cole Road	(-1.0)			
	Loss of trail link on old Hanlon Road between Kortright Road and Stone Road	(-1.0)			
	Displacement of 6 residences	(-3.0)			
	Minor property impacts to 3 residential properties	(-1.0)			
	Displacement of Priory Park Church and Holiday Inn	(-2.0)			
	Direct access from Hanlon Expressway to YMCA/YWCA only to and from the south	(-1.0)			
	Minor impacts to John Gamble Park	(-0.5)			
5	Change in character of Hanlon Road affecting the backyards of several residences on Shadybrook Crescent	(-0.5)	4.0	5.0	5
	Pedestrians and cyclists must cross through a partial interchange on Kortright Road	(-0.5)			
	Impacts to trail system at Stone Road on east side of Hanlon Expressway	(-0.5)			
	Significant change in character of Hanlon Road affecting the backyards of several residences on Cole Road	ting the backyards (-1.0)			
	Loss of trail link on old Hanlon Road between Kortright Road and Stone Road	(-1.0)			

	Displacement of 6 residences	(-3.0)			
6	Minor property impacts to 3	` ′			
	residential properties	(-1.0)			
	Displacement of Priory Park Church and Holiday Inn	(-2.0)			
	Direct access from Hanlon Expressway to YMCA/YWCA only to and from the south	(-1.0)			
	Minor impacts to John Gamble Park	(-0.5)			
	Change in character of Hanlon Road affecting the backyards of several residences on Shadybrook Crescent	(-0.5)			
	Pedestrians and cyclists must cross through a partial interchange on Kortright Road	(-0.5)	2.0	2.5	7
	Impacts to trail system at Stone Road on east side of Hanlon Expressway	(-0.5)			
	Loss of trail link on old Hanlon Road between Kortright Road and Stone Road	(-1.0)			
	Significant change in character of Hanlon Road affecting the backyards of several residences on Cole Road	(-1.0)			
	College Avenue Extension not supported by City of Guelph or local residents	(-2.0)			
	Displacement of 8 residences	(-4.0)			
	Direct access from Hanlon Expressway to YMCA/YWCA only to and from the south	(-1.0)			
	Service Road on east side of Highway 6 enhances access to YMCA/YWCA	(+0.5)			
	Minor impacts to John Gamble Park	(-0.5)			
_	Change in character of Hanlon Road affecting the backyards of several residences on Shadybrook Crescent	(-0.5)	4.0		
7	Pedestrians and cyclists must cross through a partial interchange on Kortright Road	(-0.5)	6.0	7.5	3
	Impacts to trail system at Stone Road on east and west side of Hanlon Expressway	(-1.0)			
	Significant change in character of Hanlon Road affecting the backyards of several residences on Cole Road	(-1.0)			
	Loss of trail link on old Hanlon Road between Kortright Road and Stone Road	(-1.0)			

Evaluation Factor: HIGHWAY 6 (NORTH SECTION) - CULTURAL ENVIRONMENT

What Represents the Best Alternative?

The Best Alternative . . . . . .

- Has the least impact to registered and identified Built Heritage and Cultural Landscape Sites
- Minimizes impacts to archaeological resources

I lout at Magazura.	Quantitative: N = number of sites	
Score:	No impact = 10 Impacts one site = -1	10 IMPACT

Alternative	Rationale		Score	Rank
1	No built heritage, cultural, or archaeological resources affected	-	10.0	1
2	Area of archaeological potential affected in SW quadrant at intersection with Downey Road	(-1)	9.0	4
3	No built heritage, cultural, or archaeological resources affected	-	10.0	1
4	No built heritage, cultural, or archaeological resources affected	-	10.0	1
5	Area of archaeological potential affected in SW quadrant at intersection with Downey Road	(-1)	9.0	4
6	Area of archaeological potential affected in SW quadrant at intersection with Downey Road	(-1)	9.0	4
7	Area of archaeological potential affected in SW quadrant at intersection with Downey Road	(-1)	9.0	4

#### EVALUATION DATA SHEET

#### Highway 6 (Hanlon Expressway) Improvements GWP 3002-05-00

Evaluation Factor: HIGHWAY 6 (NORTH SECTION) - APPLIED ENVIRONMENT

What Represents the Best Alternative?

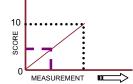
The Best Alternative . . . . . .

- Effects of municipal water supply wells
- Effects on waste disposal sites or potentially contaminated sites
- Utility Impacts

Unit of Measure:	Qualitative: No change = 10 Each impacts = -1

Score:

Highest measurement = 10



Alternative	Rationale		Measurement	Score	Rank
1	Potential impacts to new municipal water supply well in SE quadrant at Stone Road	(-1)	9	10.0	1
2	Potential impacts to new municipal water supply well in	(-1)	9	10.0	1
3	Potential impacts to new municipal water supply well in SE quadrant at Stone Road	(-1)	9	10.0	1
4	Potential impacts to new municipal water supply well in SE quadrant at Stone Road	(-1)	9	10.0	1
5	Potential impacts to new municipal water supply well in SE quadrant at Stone Road	(-1)	9	10.0	1
6	Potential impacts to new municipal water supply well in SE quadrant at Stone Road	(-1)	9	10.0	1
7	Potential impacts to new municipal water supply well in SE quadrant at Stone Road	(-1)	9	10.0	1

EVALUATION DATA SHEET Highway 6 (Hanlon Expressway) Improvements GWP 3002-05-00					
Evaluation Factor:	HIGHWAY 6 (NORTH SECTION) - COST				
	What Represents the Best Alternativ	re?			
The Best Alternative					
<ul> <li>Minimizes the total of</li> </ul>	cost including construction, utility relocations and proper	ty			
Unit of Measure:	Quantitative: Cost (\$)				
Score:	Lowest cost = 10	10 WOOS OCOST			
Alternative	Rationale	Measurement	Score	Rank	
1		\$ 29,100,000	9.6	2	
2		\$ 31,000,000	9.0	6	

3

5

6

\$ 30,000,000

\$ 27,900,000

\$ 29,600,000

\$ 30,500,000

\$ 31,000,000

9.3

10.0

9.4

9.1

9.0

3

5

#### EVALUATION OF ALTERNATIVES Highway 6 (Hanlon Expressway) Improvements GWP 3002-05-00

#### NORTH SECTION - Community Workshop Weighting

Alternatives	Traffic Operations	Access	Constructability	Natural Environment	Social Environment	Cultural Environment	Applied Environment	Cost	Weighted Score	RANK
Relative Criteria Weight	17	19	6	18	20	7	6	7		
		•		Score for ea	ch criterion		•	•		
1a	9.5	10.0	9.1	8.6	8.8	9.5	7.8	9.1	9.14	4
1b	9.5	9.8	9.1	7.4	8.5	9.0	7.8	8.6	8.75	6
2a	10.0	9.8	9.1	9.7	10.0	9.5	10.0	9.6	9.79	1
3a	9.6	9.8	9.1	8.0	9.7	9.5	10.0	9.6	9.36	3
<b>4</b> a	9.0	10.0	5.5	6.9	9.1	10.0	10.0	6.9	8.59	7
5a	10.0	9.9	10.0	9.4	9.1	9.5	7.8	9.3	9.49	2
6a	9.1	9.6	10.0	10.0	6.2	9.5	10.0	10.0	8.96	5

#### EVALUATION OF ALTERNATIVES Highway 6 (Hanlon Expressway) Improvements GWP 3002-05-00

#### NORTH SECTION - Original Weighting

Alternatives	Traffic Operations	Access	Constructability	Natural Environment	Social Environment	Cultural Environment	Applied Environment	Cost	Weighted Score	RANK
Relative Criteria Weight	22	22	4	13	17	9	4	9		
				Score for ea	ch criterion					
1a	9.5	10.0	9.1	8.6	8.8	9.5	7.8	9.1	9.26	4
1b	9.5	9.8	9.1	7.4	8.5	9.0	7.8	8.6	8.91	6
2a	10.0	9.8	9.1	9.7	10.0	9.5	10.0	9.6	9.80	1
3a	9.6	9.8	9.1	8.0	9.7	9.5	10.0	9.6	9.45	3
4a	9.0	10.0	5.5	6.9	9.1	10.0	10.0	6.9	8.75	7
5a	10.0	9.9	10.0	9.4	9.1	9.5	7.8	9.3	9.56	2
6a	9.1	9.6	10.0	10.0	6.2	9.5	10.0	10.0	9.00	5

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#### **EVALUATION DATA SHEET**

## Highway 6 (Hanlon Expressway) Improvements GWP 3002-05-00

Evaluation Factor: HIGHWAY 6 (NORTH SECTION) - TRAFFIC OPERATIONS

What Represents the Best Improvement Alternative?

#### The Best Alternative. . . . . . .

- Accommodates projected traffic demands
- Supports and enhances provincial highway function
- Reduces the number of collisions
- Provides overall design standards consistent with Geometric Standards for Ontario Highways, Interchanges, and Connecting Roads

Unit of Measure:	Combined Weighted Measurement
Scoring:	Average Score = Average of Scores A, B, and C (from next set of data sheets)  Normalized Score = The normalized score provides a ranking of the project alternatives based on the "best" alternative for this criterion. The "best" alternative (highest average score) receives a normalized score of 10.00. The remaining alternative scores are divided by the highest score then multiplied by 10 to determine the normalized score, which provides a relative comparison between the alternatives.  Rank: Based on Normalized Score

Alternative	A	В	С	Average Score	Normalized Score	Rank
1a	9.31	10.00	8.00	9.09	9.51	4
1b	9.52	9.70	8.00	9.06	9.47	5
2a	10.00	9.10	9.50	9.52	9.96	2
3a	10.00	9.10	8.50	9.19	9.61	3
4a	8.79	10.00	7.00	8.59	8.98	7
5a	9.83	9.40	9.50	9.57	10.00	1
6a	10.00	6.00	10.00	8.66	9.05	6

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	Alt 1a	Alt 1b	Alt 2a	Alt 3a	Alt 4a	Alt 5a	Alt 6a	Preferred Plan
amp Intersections								
ortright S-E/W	В	В	Α	A	ပ	٧	∢	
ortright E/W-S	В	Α	Α	Α	ပ	٨	∢	
one S-E/W	В	В	٧	٧	В	В	∢	
one N-E/W	В	В	В	В	В	В	В	
unicipal Intersections								
owney Drive at Woodland Glen Drive	*	*	Α	Α	А	А	٨	
one Road at Scottsdale Drive	В	В	В	В	В	В	В	

9.01	:	Municipal Intersections used for analysis:	Downey Drive at Woodland Glen Drive
)	:	Municipal II	- Downey

A 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	\$ \$	**************************************	**************************************	**************************************	9 + K	Prefe
		80 10	2		8	
Kortright S-E/W B B	٨	٧	ပ	∢	4	
Kortright E/W-S B A	٨	Α	ပ	∢	∢	
Stone S-E/W B B	∢	٨	В	В	٨	
Stone N-E/W B B	В	В	В	В	В	
Municipal Intersections						
Downey Drive at Woodland Glen Drive * * *	٨	Α	Α	Α	Α	
Stone Road at Scottsdale Drive B	В	В	В	В	В	
* The operation of this intersection was not included since the E/W-S ramp terminal has been combined with this	E/W-S ramp	terminal h	as been cor	nbined with	this	

**EVALUATION DATA SHEET** Highway 6 (Hanlon Expressway) Improvements GWP 3002-05-00 Evaluation Factor: HIGHWAY 6 (NORTH SECTION) - TRAFFIC OPERATIONS (B)

The Best Alternative. . . . . . .

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Accommodates projected traffic demand

Unit of Measure:	<ul> <li>Volumes on Municipal</li> </ul>	Roads (increase/d	ecrease)		
	<ul> <li>Municipal Road Classi</li> </ul>	fications			
Measurement:	% change	Measurement			
	0% or less (negative)	10			
	less than 10%	9			
	10-20%	7			
	20-30%	5			
	30-40%	3			
	40-50%	1			
	50% or over	0			
	Road Classification	Arterial	3		
		Collector	2		
		Local	1		

What Represents the Best Improvement Alternative?

Raw Measurement = Sum of % change measurement \* road classification factor for each alternative

Normalized Score = The normalized score provides a ranking of the project alternatives based on the "best" alternative for this criterion. The "best" alternative (highest measurement) receives a normalized score of 10.00. The remaining alternative measurements are divided by the highest measurement then multiplied by 10 to determine the normalized score, which provides a relative comparison between the alternatives.

Rank: Based on Normalized Score

		Volumes on Mu	nicipal Road	ds		Road Classification			
Alternative	Road	Existing Conditions <sup>2</sup>	Projected Volume	% increase	Measurement	Factor	Raw Measurement	Normalized Score (B)	Rank
	Downey Road	1100	1000	-9	10	3			
1a	Kortright Avenue	800	800	0	10	3	100	10.00	1
Id	Woodland Glen Drive	150	100	-33	10	1	100	10.00	'
	Scottsdale Drive <sup>1</sup>	350	350	0	10	3			
	Downey Road	1100	1000	-9	10	3			
1b	Kortright Avenue	800	825	3	9	3	97	9.70	3
ID	Woodland Glen Drive	150	150	0	10	1	97	9.70	3
	Scottsdale Drive <sup>1</sup>	350	350	0	10	3			
	Downey Road	1100	1000	-9	10	3			
2a	Kortright Avenue	800	650	-19	10	3	91	9.10	5
Za	Woodland Glen Drive	150	100	-33	10	1	91		5
	Scottsdale Drive <sup>1</sup>	350	400	14	7	3			
	Downey Road	1100	1000	-9	10	3			
0 -	Kortright Avenue	800	650	-19	10	3	1 04	0.40	_
3a	Woodland Glen Drive	150	100	-33	10	1	91	9.10	5
	Scottsdale Drive <sup>1</sup>	350	400	14	7	3			
	Downey Road	1100	1000	-9	10	3			
4-	Kortright Avenue	800	750	-6	10	3	100	40.00	1
4a	Woodland Glen Drive	150	150	0	10	1	100	10.00	'
	Scottsdale Drive <sup>1</sup>	350	350	0	10	3			
	Downey Road	1100	900	-18	10	3			1
_	Kortright Avenue	800	875	9	9	3	1	0.40	١.
5a	Woodland Glen Drive	150	175	17	7	1	94	9.40	4
	Scottsdale Drive <sup>1</sup>	350	350	0	10	3			
	Downey Road	1100	800	-27	10	3			1
	Kortright Avenue	800	800	0	10	3	1	0.00	l _
6a	Woodland Glen Drive	150	275	83	0	1	60	6.00	7
	Scottsdale Drive <sup>1</sup>	350	700	100	0	3	1		

<sup>&</sup>lt;sup>1</sup> Between Kortright Avenue and Stone Road

Projected Volumes taken from City of Guelph TransCAD modelling (August 2008)

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<sup>2</sup> Estimated volumes from model (2031 Do Nothing) - includes Highway 7 improvements, Highway 6 Freelton-Guelph By-Pass, Highway 6 improvements north of Wellington Street, no Laird Road interchange

# EVALUATION DATA SHEET Highway 6 (Hanlon Expressway) Improvements GWP 3002-05-00 Evaluation Factor: HIGHWAY 6 (NORTH SECTION) - TRAFFIC OPERATIONS (C) What Represents the Best Improvement Alternative?

- The Best Alternative. . . . .
- Provides overall design standards consistent with Geometric Standards for Ontario Highways, Interchanges, and
- Provides for safe movement of vehicles

Ur	nit of Measure:	Qualitative
		No Change = 10
		Each negative feature = -1
		Each positive feature = +1
		Measurement = Base Score of 10 plus/minus scores for alternative features
Sc	coring:	Normalized Score = The normalized score provides a ranking of the project alternatives based on the "best" alternative for this criterion. The "best" alternative (highest measurement) receives a normalized score of 10.00. The remaining alternative measurements are divided by the highest measurement then multiplied by 10 to determine the normalized score, which provides a relative comparison between the alternatives.

	Rank: Based on Normalized Score				
Alternative	Rationale		Measurement	Normalized	Rank
	Highway 6 exits are located in advance of	(+1.0)		Score	
	structures Combines the intersections of E/W-S Ramp on	(+1.0)			
	Kortright with Woodland Glen Provides one-way service roads - which can lead	( 1.0)			
	to driver confusion and impact safety	(-1.0)			
1a	Service roads are located in close proximity to	(-1.0)	8	8.0	5
	Highway 6 (maintenance, safety) Requires the merge of the east side service road	(40)			
	and the S-E/W ramp at Stone Road	(-1.0)			
	Requires an uncommon intersection configuration at Woodland Glen and the west	(-1.0)			
	side service road	(,			
	Highway 6 exits are located in advance of structures	(+1.0)			
	Combines the intersections of E/W-S Ramp on	(14.0)			
	Kortright with Woodland Glen	(+1.0)			
	Provides one-way service roads - which can lead to driver confusion and impact safety	(-1.0)			
1b	Service roads are located in close proximity to	(-1.0)	8	8.0	5
	Highway 6 (maintenance, safety)	(-1.0)			
	Requires a non-conventional loop for the service road	(-1.0)			
	Requires the merge of the east side service road	(-1.0)			
	and the S-E/W ramp at Stone Road Highway 6 exits are located in advance of	, ,			
	structures	(+1.0)		9.5	
2a	Service roads are located in close proximity to	(-1.0)	10		2
	Highway 6 (maintenance, safety) Requires 3 closely spaced signalized	(0.5)			
	intersections on Downey Road/Kortright Road	(-0.5)			
	Highway 6 exits are located in advance of structures	(+1.0)			
	Service roads are located in close proximity to	(-1.0)			
3a	Highway 6 (maintenance, safety) Requires 3 closely spaced signalized		9	8.5	4
Ja	intersections on Downey Road/Kortright Road	(-0.5)	J	0.5	7
	Requires an uncommon connection from	(10)			
	Shadybrook to the S-E/W ramp at Kortight Road	(-1.0)			
	Highway 6 exits are located in advance of	(+1.0)			
	structures Provides one-way service roads - which can lead				
	to driver confusion and impact safety	(-1.0)			
4a	Service roads are located in close proximity to Highway 6 (maintenance, safety)	(-1.0)	7	7.0	7
	Requires a roundabout - a non-conventional	(-1.0)			
	traffic control design				
	Requires the merge of the east side service road and the S-E/W ramp at Stone Road	(-1.0)			
	Highway 6 exits are located in advance of	(+1.0)			
	structures Requires a combined northbound exit				
5a	(Kortight Avenue and Stone Road)	(-1.0)	10	9.5	2
	Requires 3 closely spaced signalized	(-0.5)			
	intersections on Downey Road/Kortright Road Highway 6 exits are located in advance of				
6a	structures	(+1.0)	10	10.0	1
Va	Requires 3 closely spaced signalized intersections on Downey Road/Kortright Road	(-1.0)	10	10.0	'

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# EVALUATION DATA SHEET Highway 6 (Hanlon Expressway) Improvements GWP 3002-05-00 Evaluation Factor: HIGHWAY 6 (NORTH SECTION) - ACCESS What Represents the Best Alternative?

The Best Alternative . . . . .

Unit of Measure:

Scoring:

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

Quantitative:

Travel distance between neighbourhoods and Highwy 6

- A Downey Road at Hazelwood Drive
  - B Woodland Glen Drive at Old Colony Trail
  - C College Avenue at Dovercliffe Road
  - D Ironwood Crescent at Hilldale Crescent
    E Scottsdale Drive at Ironwood Crescent
  - F Scottsdale Drive at Wilsonview Avenue

Highway 6 Northbound - Station 11+000

Highway 6 Southbound - Station 17+000

Weighted Distance = Sum of Traffic Volume \* Distance for each alternative

Normalized Score = The normalized score provides a ranking of the project alternatives based on the "best" alternative for this criterion. The "best" alternative (lowest weighted distance) receives a normalized score of 10.00. The lowest weighted distance is divided by the other weighted distances then multiplied by 10 to determine the normalized score, which provides a relative comparison between the alternatives.

Rank: Based on Normalized Score

Alternative	From	То	Traffic	Distance	Weighted	Normalized	Rani		
7	7.10		Volume	(km)	Distance	Score	Itali		
	А	Highway 6 Northbound	268	2.72					
	A	Highway 6 Southbound	78	1.73					
	В	Highway 6 Northbound	53	2.41					
	Р	Highway 6 Southbound	29	1.71					
	С	Highway 6 Northbound	189	2.20					
	C	Highway 6 Southbound	53	3.51	1				
	-	Highway 6 Northbound	87	2.64	1				
	D	Highway 6 Southbound	92	2.19	1				
	_	Highway 6 Northbound	202	1.78	1				
	E	Highway 6 Southbound	195	2.50					
	_	Highway 6 Northbound	202	1.78					
	F	Highway 6 Southbound	107	3.48					
1a	Highway 6 Northbound		355	1.83	8,560	10.0	1		
	Highway 6 Southbound	A	130	2.44					
	Highway 6 Northbound		66	1.88					
	Highway 6 Southbound	В	28	1.74					
	Highway 6 Northbound		189	3.45					
	Highway 6 Southbound	С	32	2.01					
				1.82					
	Highway 6 Northbound	D	106						
	Highway 6 Southbound		87	2.90					
	Highway 6 Northbound	E	320	2.13					
	Highway 6 Southbound		299	2.05					
	Highway 6 Northbound	F	321	3.03					
	Highway 6 Southbound		165	2.05					
	Α	Highway 6 Northbound	268	2.72	_				
	• •	Highway 6 Southbound	78	1.73					
	В	Highway 6 Northbound	53	2.41					
		Highway 6 Southbound	29	1.71					
	С	Highway 6 Northbound	189	2.20					
		Highway 6 Southbound	53	3.26					
	D	Highway 6 Northbound	87	2.64					
		Highway 6 Southbound	92	2.19					
	Е	Highway 6 Northbound	202	2.13					
		Highway 6 Southbound	195	2.05					
	F	Highway 6 Northbound	202	3.03					
16	F	Highway 6 Southbound	107	2.05	0.742	0.0	6		
1b	Highway 6 Northbound		355	1.83	8,742	9.8	ь		
	Highway 6 Southbound	A	130	2.89	1				
	Highway 6 Northbound	D.	66	1.88	1				
	Highway 6 Southbound	В	28	2.22	1				
	Highway 6 Northbound		189	3.45					
	Highway 6 Southbound	С	32	2.01	1				
	Highway 6 Northbound	_	106	1.82	1				
	Highway 6 Southbound	D	87	3.37	1				
	Highway 6 Northbound		320	2.13	1				
	Highway 6 Southbound	E	299	2.05					
	Highway 6 Northbound		321	3.03	•				
	II HUHWAY O MOHIDOUNG	F	JZ I	3.03	<u> </u>				

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A B C D E F Highway 6 Northbound Highway 6 Southbound Highway 6 Southbound Highway 6 Northbound Highway 6 Northbound Highway 6 Northbound	Highway 6 Northbound Highway 6 Southbound Highway 6 Northbound Highway 6 Northbound Highway 6 Northbound Highway 6 Southbound Highway 6 Southbound Highway 6 Southbound Highway 6 Northbound Highway 6 Southbound	268 78 53 29 189 53 87 92 202 195	2.63 1.76 2.41 1.74 2.20 3.51 3.09 2.01			
B C D E F Highway 6 Northbound Highway 6 Southbound Highway 6 Northbound Highway 6 Southbound Highway 6 Southbound Highway 6 Southbound	Highway 6 Southbound Highway 6 Northbound Highway 6 Southbound Highway 6 Southbound Highway 6 Southbound Highway 6 Northbound Highway 6 Southbound	78 53 29 189 53 87 92 202	1.76 2.41 1.74 2.20 3.51 3.09			
C D E Highway 6 Northbound Highway 6 Southbound Highway 6 Northbound Highway 6 Southbound Highway 6 Southbound	Highway 6 Northbound Highway 6 Southbound Highway 6 Southbound Highway 6 Southbound Highway 6 Northbound Highway 6 Southbound	53 29 189 53 87 92 202	2.41 1.74 2.20 3.51 3.09			
C D E Highway 6 Northbound Highway 6 Southbound Highway 6 Northbound Highway 6 Southbound Highway 6 Southbound	Highway 6 Southbound Highway 6 Northbound Highway 6 Southbound Highway 6 Northbound Highway 6 Southbound Highway 6 Northbound Highway 6 Southbound Highway 6 Southbound Highway 6 Southbound Highway 6 Southbound	29 189 53 87 92 202	1.74 2.20 3.51 3.09			
D  E  F  Highway 6 Northbound Highway 6 Southbound Highway 6 Northbound Highway 6 Southbound Highway 6 Southbound Highway 6 Southbound	Highway 6 Northbound Highway 6 Southbound Highway 6 Northbound Highway 6 Southbound Highway 6 Northbound Highway 6 Southbound Highway 6 Northbound Highway 6 Southbound Highway 6 Southbound	189 53 87 92 202	2.20 3.51 3.09			
D  E  F  Highway 6 Northbound Highway 6 Southbound Highway 6 Northbound Highway 6 Southbound Highway 6 Southbound Highway 6 Southbound	Highway 6 Southbound Highway 6 Northbound Highway 6 Southbound Highway 6 Northbound Highway 6 Southbound Highway 6 Northbound Highway 6 Southbound Highway 6 Southbound	53 87 92 202	3.51 3.09		l l	
E F 2a Highway 6 Northbound Highway 6 Southbound Highway 6 Northbound Highway 6 Southbound Highway 6 Southbound	Highway 6 Northbound Highway 6 Southbound Highway 6 Northbound Highway 6 Southbound Highway 6 Northbound Highway 6 Southbound A	87 92 202	3.09		1	
E F 2a Highway 6 Northbound Highway 6 Southbound Highway 6 Northbound Highway 6 Southbound Highway 6 Southbound	Highway 6 Southbound Highway 6 Northbound Highway 6 Southbound Highway 6 Northbound Highway 6 Southbound	92 202		1	1	
F  2a  Highway 6 Northbound Highway 6 Southbound Highway 6 Northbound Highway 6 Southbound Highway 6 Southbound	Highway 6 Northbound Highway 6 Southbound Highway 6 Northbound Highway 6 Southbound	202			1	
F  2a  Highway 6 Northbound Highway 6 Southbound Highway 6 Northbound Highway 6 Southbound Highway 6 Southbound	Highway 6 Southbound Highway 6 Northbound Highway 6 Southbound				1	
F  2a  Highway 6 Northbound Highway 6 Southbound Highway 6 Northbound Highway 6 Southbound Highway 6 Southbound	Highway 6 Northbound Highway 6 Southbound	195	2.13		1	
2a Highway 6 Northbound Highway 6 Southbound Highway 6 Northbound Highway 6 Southbound	Highway 6 Southbound		2.32		1	
2a Highway 6 Northbound Highway 6 Southbound Highway 6 Northbound Highway 6 Southbound	А	202	3.03		1	
Highway 6 Northbound Highway 6 Southbound Highway 6 Northbound Highway 6 Southbound	A	107	2.05	0.740	9.8	4
Highway 6 Southboun Highway 6 Northbound Highway 6 Southboun	<b>-</b>   A	355	1.83	8,710	9.0	4
Highway 6 Northbound Highway 6 Southboun		130	2.44		1	
Highway 6 Southboun		66	1.88		1	
	В	28	2.22		1	
nighway o Northbound		189	3.45		1	
11: 1 00 111	C				1	
Highway 6 Southboun		32	2.01		1	
Highway 6 Northbound	D	106	1.82		1	
Highway 6 Southboun		87	2.90		1	
Highway 6 Northbound	E	320	2.13	]	i	1
Highway 6 Southboun		299	2.05		i	1
Highway 6 Northbound	F	321	3.03		i	1
Highway 6 Southboun	¬ -	165	2.05		i	1
	Highway 6 Northbound	268	2.63			
A	Highway 6 Southbound	78	1.76	1	i	1
	Highway 6 Northbound	53	2.41	1	l	1
В	Highway 6 Southbound	29	1.74	1	i	1
	<u> </u>				1	
С	Highway 6 Northbound	189	2.20		1	
	Highway 6 Southbound	53	3.51			
D	Highway 6 Northbound	87	3.09		1	
	Highway 6 Southbound	92	2.01		1	
E	Highway 6 Northbound	202	2.13			
_	Highway 6 Southbound	195	2.32		1	
_	Highway 6 Northbound	202	3.03		1	
F	Highway 6 Southbound	107	2.05	0.740	0.0	
3a Highway 6 Northbound	i i	355	1.83	8,710	9.8	4
Highway 6 Southboun	A	130	2.44	1	1	
Highway 6 Northbound		66	1.88		1	
Highway 6 Southboun	В	28	2.22		1	
					1	
Highway 6 Northbound	С	189	3.45		1	
Highway 6 Southboun		32	2.01		1	
Highway 6 Northbound	D	106	1.82		1	
Highway 6 Southboun		87	2.90		1	
Highway 6 Northbound	E	320	2.13		1	
Highway 6 Southboun	_	299	2.05			
Highway 6 Northbound	F	321	3.03		i	1
Highway 6 Southboun		165	2.05		i	1
	Highway 6 Northbound	268	2.72			
A	Highway 6 Southbound	78	1.73	1	i	1
_	Highway 6 Northbound	53	2.41	1	i	1
В	Highway 6 Southbound	29	1.71	1	i	1
	Highway 6 Northbound	189	2.20	1	i	1
C	Highway 6 Southbound	53	3.51	1	i	1
-				1	i	1
D	Highway 6 Northbound	87	2.64		i	1
	Highway 6 Southbound	92	2.19		i	1
E	Highway 6 Northbound	202	1.78		i	1
_	Highway 6 Southbound	195	2.50		i	1
F	Highway 6 Northbound	202	1.78		i	1
4a	Highway 6 Southbound	107	3.48	8,560	10.0	1
Highway 6 Northbound	A	355	1.83	0,000	10.0	· '
Highway 6 Southboun	^	130	2.44		i	1
Highway 6 Northbound		66	1.88		i	1
Highway 6 Southboun	В	28	1.74		l	1
Highway 6 Northbound		189	3.45	1	i	1
Highway 6 Southboun	C	32	2.01	1	i	1
Highway 6 Northbound		106	1.82	1	i	1
Highway 6 Southboun	D	87	2.90	1	i	1
~ *	İ				l	1
Highway 6 Northbound	<u> —</u> Е	320	2.13		i	1
Highway 6 Southboun		299	2.05		i	1
Highway 6 Northbound	— F	321	3.03		l	1
Highway 6 Southboun	1	165	2.05		<u> </u>	1

		lini on al	222	0.70	ı		Т	
	Α	Highway 6 Northbound	268	2.72				
		Highway 6 Southbound	78	1.76				
	В	Highway 6 Northbound	53	2.41				
		Highway 6 Southbound	29	1.74				
	С	Highway 6 Northbound	189	2.20				
		Highway 6 Southbound	53	3.51				
	D	Highway 6 Northbound	87	2.64				
		Highway 6 Southbound	92	2.01				
	E	Highway 6 Northbound	202	1.78				
		Highway 6 Southbound	195	2.50				
	F	Highway 6 Northbound	202	1.78				
5a	'	Highway 6 Southbound	107	3.48	8,632	9.9	3	
Ja	Highway 6 Northbound	Α	355	1.83	0,032	9.9	3	
	Highway 6 Southbound		130	3.00				
	Highway 6 Northbound	В	66	1.88				
	Highway 6 Southbound	T B	28	2.22				
	Highway 6 Northbound	0	189	3.44	1			
	Highway 6 Southbound	C	32	2.01	1			
	Highway 6 Northbound	D	106	1.82	1			
	Highway 6 Southbound		87	2.91				
	Highway 6 Northbound		320	2.13				
	Highway 6 Southbound	E	299	2.05	1			
	Highway 6 Northbound	F 321	321	3.03				
	Highway 6 Southbound	† F	165	2.05	1			
	A	Highway 6 Northbound	268	3.23				
	A	Highway 6 Southbound	78	1.76				
	В	Highway 6 Northbound	53	2.41	]			
	В	Highway 6 Southbound	29	1.74				
	С	Highway 6 Northbound	189	2.20				
	C	Highway 6 Southbound	53	3.51				
	D	Highway 6 Northbound	87	2.88				
	D	Highway 6 Southbound	92	2.01				
	Е	Highway 6 Northbound	202	2.13				
	E	Highway 6 Southbound	195	2.32	1			
	F	Highway 6 Northbound	202	3.03	1			
	F	Highway 6 Southbound	107	2.05	0.050	0.0	_	
6a	Highway 6 Northbound		355	1.83	8,952	9.6	7	
	Highway 6 Southbound	A	130	3.04				
	Highway 6 Northbound		66	1.88	1			
	Highway 6 Southbound	- В	28	2.22	1			
	Highway 6 Northbound		189	3.45	1			
	Highway 6 Southbound	C	32	2.01	1			
	Highway 6 Northbound	_	106	1.82	1			
	Highway 6 Southbound	D	87	3.15	1			
	Highway 6 Northbound	_	320	2.13				
	<u> </u>	E	299	2.05				
	Highway 6 Southbound				-			
	Highway 6 Southbound Highway 6 Northbound	_						
	Highway 6 Southbound Highway 6 Northbound Highway 6 Southbound	F	321 165	3.03 2.05				

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# EVALUATION DATA SHEET Highway 6 (Hanlon Expressway) Improvements GWP 3002-05-00 Evaluation Factor: HIGHWAY 6 (NORTH SECTION) - CONSTRUCTABILITY What Represents the Best Alternative? The Best Alternative . . . . . . • Accommodates existing traffic flow and operations during construction • Uses conventional construction techniques Unit of Measure: | Qualitative: | No major constructability issues = 10 | | Each negative construction issue = -1 | | Each positive construction issue = +1 | | Measurement = Base Score of 10 plus/minus scores for alternative issues

provides a relative comparison between the alternatives.

Rank: Based on Normalized Score

Scoring:

Normalized Score = The normalized score provides a ranking of the project alternatives based on the "best" alternative for this criterion. The "best" alternative (highest measurement)

the highest measurement then multiplied by 10 to determine the normalized score, which

receives a normalized score of 10.00. The remaining alternative measurements are divided by

	141111 24004 011 101111411204 00010				
Alternative	Rationale	Measurement	Score	Rank	
	Uses conventional construction techniques	(+1)			
1a	Requires the construction of the west side service road adjacent to Highway 6	(-1)	10	9.1	3
	Uses conventional construction techniques	(+1)			
1b	Requires the construction of the west side service road adjacent to Highway 6	(-1)	10	9.1	3
	Uses conventional construction techniques	(+1)			
2a	Requires the construction of the west side service road adjacent to Highway 6	(-1)	10	9.1	3
	Uses conventional construction techniques (+1)				
3a	Requires the construction of the west side service road adjacent to Highway 6	(-1)	10	9.1	3
	Uses conventional construction techniques	(+1)			
	Requires the construction of the west side and east side service roads adjacent to Highway 6	(-2)			
4a	Requires raising Highway 6 to accommodate the roundabout which would require significant staging and detours	(-2)	6	5.5	7
	Requires the construction of two very long structures	(-1)			
5a	Uses conventional construction techniques	(+1)	11	10.0	1
6a	Uses conventional construction techniques	(+1)	11	10.0	1

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#### **EVALUATION DATA SHEET** Highway 6 (Hanlon Expressway) Improvements GWP 3002-05-00 HIGHWAY 6 (NORTH SECTION) - NATURAL ENVIRONMENT **Evaluation Factor:** What Represents the Best Alternative? The Best Alternative . . . . . . Has the least impact on ecological features including wetlands, greenbelts, watercourses, wildlife habitat, surface water and groundwater Qualitative: No impact = 0 Minor impact = -0.5Unit of Measure: Moderate impact = -1.0 Major Impacts = -2.0 **Measurement** = Base Score of 10 plus/minus scores for alternative impacts Normalized Score = The normalized score provides a ranking of the project alternatives based on the "best" alternative for this criterion. The "best" alternative (highest measurement) receives a normalized Scoring: score of 10.00. The remaining alternative measurements are divided by the highest measurement then multiplied by 10 to determine the normalized score, which provides a relative comparison between the alternatives. Rank: Based on Normalized Score Normalized **Alternative** Rationale Measurement Rank Score Potential minor impacts during construction at the Highway 6 Hanlon (-0.5)Creek culvert Minor vegetation removal at John Gamble (-0.5)1a 7.5 8.6 Vegetation removal between Highway 6 (-0.5)and Old Colony Trail Vegetation removal between Highway 6 (-0.5)and Cole Road (-0.5)Intrusion into Hanlon Creek Floodplain Minor encroachment into Hanlon Creek

(-0.5)

(-0.5)

(-0.5)

(-0.5)

(-0.5)

(-1.0)

6.5

PSW for service road connection to

Potential minor impacts during construction at the Highway 6 Hanlon

Creek culvert

and Old Colony Trail

and Cole Road

1b

Woodland Glen and southbound Highway

Minor vegetation removal at John Gamble

Vegetation removal between Highway 6

Vegetation removal between Highway 6

Intrusion into Hanlon Creek Floodplain

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7.4

	Potential minor impacts during	(-0.5)			
	construction at Hanlon Creek	(-0.0)			
2a	Minor vegetation removal at John Gamble	(-0.5)	8.5	9.7	2
	Park	(-0.5)	0.0	5.7	_
	Tree removal between Highway 6 and Old	(-0.5)			
	Colony Trail	(-0.5)			
	Impacts Hanlon Creek PSW (culvert	(-1.5)			
	extension to east)	(-1.5)			
	Potential minor impacts during	(-0.5)			
3a	construction at Hanlon Creek	(-0.5)	7.0	8.0	5
Ja	Minor vegetation removal at John Gamble	(-0.5)	7.0	0.0	3
	Park	(-0.5)			
	Vegetation removal between Highway 6	(-0.5)			
	and Old Colony Trail	(-0.5)			
	Potential minor impacts during	(-0.5)			
4a	construction at Hanlon Creek	(-0.5)			
	Impacts Hanlon Creek PSW (culvert	(-2.5)			
	extension to west and east)	(-2.5)	6.0	6.9	7
+a	Minor vegetation removal at John Gamble	(-0.5)	(-0.5)		,
	Park	(-0.0)			
	Vegetation removal between Highway 6	(-0.5)			
	and Old Colony Trail	(-0.5)			
	Potential minor impacts during	(-0.5)			
	construction at Hanlon Creek	(-0.0)			
	Minor vegetation removal at John Gamble	(-0.5)			
5a	Park	(-0.5)	8.25	9.4	3
Ja	Vegetation removal between Highway 6	(-0.5)	0.23	J. <del>4</del>	3
	and Cole Road	(-0.5)			
	Minor vegetation removal between	-0.25			
	Highway 6 and Old Colony Trail	-0.20			
6a	Potential minor impacts during	(-0.5)			
	construction at Hanlon Creek	(-0.5)			
	Minor vegetation removal at John Gamble	(-0.5)	8.75	10.0	1
0a	Park	(-0.5)	0.70	10.0	'
	Minor vegetation removal between	-0.25			
	Highway 6 and Old Colony Trail	-0.25			

#### **EVALUATION DATA SHEET** Highway 6 (Hanlon Expressway) Improvements GWP 3002-05-00 **Evaluation Factor:** HIGHWAY 6 (NORTH SECTION) - SOCIAL ENVIRONMENT What Represents the Best Alternative? The Best Alternative . . . . . . Has the least number of residents and businesses displaced or impacted Has the least amount of property required Is compatible with the City of Guelph and Country of Wellington Official Plans Minimizes impacts to adjacent dwellers and views of the highway Minimizes noise and air quality impacts Minimizes impacts to community and recreational facilities, including trails Qualitative: No impact = 0 Unit of Measure: Minor impact = -0.5 Moderate impact = -1.0 Major Impacts = -2.0 **Measurement** = Base Score of 15 plus/minus scores for alternative impacts **Normalized Score** = The normalized score provides a ranking of the project alternatives based on the "best" alternative for this criterion. The "best" alternative (highest measurement) receives a Scoring: normalized score of 10.00. The remaining alternative measurements are divided by the highest measurement then multiplied by 10 to determine the normalized score, which provides a relative comparison between the alternatives. Rank: Based on Normalized Score Rationale **Alternative** Measurement **Normalized Score** Rank Displacement of 8 residences (-4.0)Property requirements (-0.5)Access from YMCA/YWCA provided via two one-way service (-0.5)roads One-way service roads east and west of the highway impact the character of the backyards of 60 (-2.0)properties (38 duplexes at Cole 1a 7.50 8.8 5 Road and 22 properties at Old Colony Trail) Two-way service road on west side of Highway 6 impacts the character -0.25 of an additional 5 properties at the west end of Woodland Glen

(-0.3)

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Removes Old Hanlon Road

connection to Kortright Road

	Dioplesement of Cresidences	( 4 0)	1							
	Displacement of 8 residences	(-4.0)								
	Property requirements	(-0.5)								
	Access from YMCA/YWCA	( O E)								
	provided via two one-way service roads	(-0.5)								
	One-way service roads east and									
1b	west of the highway impact the		7.3	8.5	6					
l lb	character of the backyards of 60	(-2.0)	1.3	6.5	0					
	properties (38 duplexes at Cole	, ,								
	Road and 22 properties at Old									
	Colony Trail)									
	Removes Old Hanlon Road	(-0.3)								
	connection to Kortright Road	<u> </u>								
	Minor increase in traffic on	(-0.5)								
	Kortright Road	, ,								
	Displacement of 8 residences	(-4.0)								
	Property requirements	(-0.5)								
	Access from YMCA/YWCA									
	provided via two-way service road	-								
	on west side of Highway 6									
	Two-way service road west of the									
	highway has potential to impact the	(-1.0)								
	character of the backyards of 22									
2a	properties at Old Colony Trail		8.50	10.0	1					
	Two-way service road on west side									
	of Highway 6 impacts the character	-0.25								
	of an additional 5 properties at the		-0.25	-0.25						
	west end of Woodland Glen									
	Removes Old Hanlon Road									
	connection to Kortright Road	(-0.3)								
	Minor increase in traffic on									
	Scottsdale Drive	(-0.5)								
	Displacement of 8 residences	(-4.0)								
	Property requirements	(-0.5)								
	Access from YMCA/YWCA	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \								
	provided via two-way service road	_								
	on west side of Highway 6									
	Two-way service road west of the									
	highway has potential to impact the	, ,								
	character of the backyards of 22	(-1.0)								
	properties at Old Colony Trail		0.5-		-					
3a			8.25	9.7	2					
	Two-way service road on west side									
	of Highway 6 impacts the character	-0.25								
	of an additional 5 properties at the									
	west end of Woodland Glen									
	Minor increase in traffic on	(0.5)								
	Scottsdale Drive	(-0.5)								
	Impacts parking area adjacen to	(0.5)								
	Old Hanlon Road	(-0.5)								
		(-0.5)								

	Displacement of 8 residences	(-4.0)					
	Property requirements	-					
	Access from YMCA/YWCA						
	provided via two one-way service	(-0.5)					
	roads	, ,					
	One-way service roads east and						
	west of the highway have potential						
4-	to impact the character of the	(45)	7.8	0.4	0		
4a	backyards of 60 properties (38	(-1.5)	7.8	9.1	3		
	duplexes at Cole Road and 22						
	properties at Old Colony Trail)						
	Removes Old Hanlon Road	( 0 0)					
	connection to Kortright Road	(-0.3)					
	Roundabout impacts pedetrian /						
	cyclist comfort for access across	(-1.0)					
	Highway 6 at Kortright Road	, ,					
	Displacement of 8 residences	(-4.0)					
	Property requirements	(-0.5)					
	Access to YMCA/YWCA provided	(-0.5)					
	via two-way service road on the						
	east side of Highway 6						
	Two-way service road east of the						
5a	highway impacts the character of	(-1.0)	( <sub>-</sub> 1 0)	(-1.0)	7.8	9.1	3
Ja	the backyards of 38 duplexes at		7.0	9.1	3		
	Cole Road						
	Removes Old Hanlon Road	(-0.3)					
	connection to Kortright Road	(-0.3)					
	Minor increase in traffic on						
	Woodland Glen and Kortright Road	(-1.0)					
	,						
	Displacement of 8 residences	(-4.0)					
	Property requirements	(-0.5)					
	Direct access from Hanlon						
6a	Expressway to YMCA/YWCA only	(-1.0)					
	to and from the south		<b>5</b> 0	0.0	-		
	Significant increase in traffic on	(-2.0)	5.3	6.2	7		
	Woodland Glen	(=:0)					
	Significant increase in traffic on	(-2.0)					
	Scottsdale Drive	` -/					
	Removes Old Hanlon Road	(-0.3)					
	connection to Kortright Road	( /					

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HIGHWAY 6 (NORTH SECTION) - CULTURAL ENVIRONMENT **Evaluation Factor:** 

What Represents the Best Alternative?

The Best Alternative . . . . . .

- Has the least impact to registered and identified Built Heritage and Cultural Landscape Sites

Minimizes impacts to archaeological resources

Unit of Measure:	Qualitative:  No impact = 0  Minor impact = -0.5  Moderate impact = -1.0  Major Impacts = -2.0
	Measurement = Base Score of 10 plus/minus scores for alternative impacts  Normalized Score = The normalized score provides a ranking of the project alternatives based on the "best" alternative for this criterion. The "best" alternative (highest measurement) receives a normalized score of 10.00. The remaining alternative measurements are divided by the highest measurement then multiplied by 10 to determine the normalized score, which provides a relative comparison between the alternatives.  Rank: Based on Normalized Score

Alternative	Rationale	ionale		Normalized Score	Rank
1a	Area of archaeological potential affected in SW quadrant at intersection with Downey Road	-0.5	9.5	9.5	2
1b	Area of archaeological potential affected in SW quadrant at intersection with Downey Road	-1.0	9	9.0	7
2a	Area of archaeological potential affected in SW quadrant at intersection with Downey Road	-0.5	9.5	9.5	2
3a	Area of archaeological potential affected in SW quadrant at intersection with Downey Road	-0.5	9.5	9.5	2
4a	Area of archaeological potential affected in SW quadrant at intersection with Downey Road	-	10	10.0	1
5a	Area of archaeological potential affected in SW quadrant at intersection with Downey Road	-0.5	9.5	9.5	2
6a	Area of archaeological potential affected in SW quadrant at intersection with Downey Road	-0.5	9.5	9.5	2

#### **EVALUATION DATA SHEET** Highway 6 (Hanlon Expressway) Improvements GWP 3002-05-00

HIGHWAY 6 (NORTH SECTION) - APPLIED ENVIRONMENT **Evaluation Factor:** What Represents the Best Alternative?

The Best Alternative . . . . . .

- Effects of municipal water supply wells
- Effects on waste disposal sites or potentially contaminated sites
- Utility Impacts

Unit of Measure:	No impact = 0 Minor impact = -0.5 Moderate impact = -1.0 Major Impacts = -2.0
	Measurement = Base Score of 10 plus/minus scores for alternative impacts  Normalized Score = The normalized score provides a ranking of the project alternatives based on the "best" alternative for this criterion. The "best" alternative (highest measurement) receives a normalized score of 10.00  The remaining alternative measurements are divided by the highest measurement then multiplied by 10 to

The remaining alternative measurements are divided by the highest measurement then multiplied by 10 to

determine the normalized score, which provides a relative comparison between the alternatives.

	Rank: Based on Normalized Score					
Alternative	Rationale		Measurement	Normalized Score	Rank	
	Potential impacts to Union Gas facility in SE quadrant at Stone Road	(-1)				
1a	Potential impacts to two hydro towers for east service road	(-1)	7	7.8	5	
	Impacts to City of Guelph watermain for east service road	(-1)				
	Potential impacts to Union Gas facility in SE quadrant at Stone Road	(-1)				
1b	Potential impacts to two hydro towers for east service road	(-1)	7	7.8	5	
	Impacts to City of Guelph watermain for east service road (-1)					
2a	Potential impacts to Union Gas facility in SE quadrant at Stone Road	(-1)	9	10.0	1	
3a	Potential impacts to Union Gas facility in SE quadrant at Stone Road	(-1)	9	10.0	1	
4a	Potential impacts to Union Gas facility in SE quadrant at Stone Road	(-1)	9	10.0	1	
	Potential impacts to Union Gas facility in SE quadrant at Stone Road	(-1)				
5a	Potential impacts to two hydro towers for east service road	(-1)	7	7.8	5	
	Impacts to City of Guelph watermain for east service road	(-1)				
6a	Potential impacts to Union Gas facility in SE quadrant at Stone Road	(-1)	9	10.0	1	

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EVALUATION DATA SHEET Highway 6 (Hanlon Expressway) Improvements GWP 3002-05-00						
Evaluation Factor:	HIGHWAY 6 (NORTH SECTION) - COST					
	What Represents the Best Alterna	tive?				
The Best Alternative .						
<ul> <li>Minimizes the tota</li> </ul>	I cost including construction, utility relocations and pr	operty				
Unit of Measure:	Quantitative: Cost (\$)					
Measurement = Total Preliminary Cost Estimate  Normalized Score = The normalized score provides a ranking of the project alternatives based on the "best" alternative for this criterion. The "best" alternative (lowest measurement) receives a normalized score of 10.00. The measurement is divided by the other measurements then multiplied by 10 to determine the normalized score, which provides a relative comparison between the alternatives.  Rank: Based on Normalized Score						
Alternative	Rationale	Measurement	Normalized Score	Rank		
1a		\$ 54,400,000	9.1	5		
1b		\$ 58,000,000	8.6	6		
2a		\$ 51,500,000	9.6	2		
3a		\$ 51,800,000	9.6	3		
4a		\$ 72,200,000	6.9	7		
5a		\$ 53,200,000	9.3	4		
6a		\$ 49,600,000	10.0	1		

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