





OFFICIAL PLAN

**ENVISIONING OUR CITY: 2041** 

### **Envisioning Brantford - Municipal Comprehensive Review**

Part 3: Preferred Settlement Area Boundary Expansion and Preliminary Land Use and Transportation Plan

### **APPENDICES**

DRAFT - April 2019













## Appendix 1: Evaluation Matrix for Land Use and Transportation Scenarios in North Brantford

#### **APPENDIX 1: Evaluation Matrix for Land Use and Transportation North Options**

■ Most Preferred ■ Moderately Preferred ■ Least Preferred

Criteria	Options				
Agriculture	Option 1A	Option 1B	Option 2A	Option 2B	
Criteria 1: Loss of Agricultural Infrastructure measures					
Number of agricultural business/processors identified in the Agricultural Portal and/or Golden Horseshoe Food and Farming Alliance and/or fieldwork database in the Secondary Plan Areas.	One on-farm sales business identified on Powerline Road.	One on-farm sales business identified on Powerline Road.	One on-farm sales business identified on Powerline Road.	One on-farm sales business identified on Powerline Road.	
Criteria 2: Potential Conflict with Agricultural Operations					
Amount of potential developable area within the MDS arcs	MDS conflicts with the 3 barns located outside of the option area, affects a total area of approximately 16 ha.	MDS conflicts with the 3 barns located outside of the option area, affects a total area of approximately 16.1 ha.	MDS conflicts with the 4 barns located outside of the option area, affects a total area of approximately 25.5 ha.	MDS conflicts with the 4 barns located outside of the option area, affects a total area of approximately 25.5 ha.	
Ability to phase or mitigate MDS impacts	Given trends to decreased livestock production, phasing should be of assistance as fewer livestock result in smaller MDS arcs. MDS should be re-measured at the time of the creation of a Plan of Subdivision.	Given trends to decreased livestock production, phasing should be of assistance as fewer livestock result in smaller MDS arcs. MDS should be remeasured at the time of the creation of a Plan of Subdivision.	One barn located on Park Rd. North, outside of the option area, accounts for approximately 60% by area of the option lands with MDS conflict. This conflict will be difficult to mitigate. Given trends to decreased livestock production, phasing should be of assistance as fewer livestock result in smaller MDS arcs. MDS should be remeasured at the time of the creation of a Plan of Subdivision.	One barn located on Park Rd. North, outside of the option area, accounts for approximately 60% by area of the option lands with MDS conflict. This conflict will be difficult to mitigate. Given trends to decreased livestock production, phasing should be of assistance as fewer livestock result in smaller MDS arcs. MDS should be remeasured at the time of the creation of a Plan of Subdivision.	

3. Presence/size of existing separation buffers between agriculture uses and Secondary Plan Area	Small sections of lands to the east and the west lack a Natural Heritage System buffer.	Small sections of lands to the east and the west lack a Natural Heritage System buffer.	Small sections of lands to the east and the west lack a Natural Heritage System buffer. The entire North boundary of the central part of option 2, located between King George Road and Park Rd. North, lacks a Natural Heritage System buffer.	Small sections of lands to the east and the west lack a Natural Heritage System buffer. The entire North boundary of the central part of option 2, located between King George Road and Park Rd. North, lacks a Natural Heritage System buffer.
Transportation	Option 1A	Option 1B	Option 2A	Option 2B
Criteria 1: Appropriate access and connectivity to new urban areas				
Connectivity to arterial corridors     and Highway 403	Very good access to the arterial road network (Powerline Road, Paris Road, King George Road, and Wayne Gretzky Parkway).  No new connectivity/access to Highway 403.	Very good access to the arterial road network (Powerline Road, Paris Road, King George Road, and Wayne Gretzky Parkway).  Increased connectivity to Highway 403 via "Garden Avenue extension".	Very good access to the arterial road network (Powerline Road, Paris Road, King George Road, and Wayne Gretzky Parkway).  No new connectivity/access to Highway 403.	Very good access to the arterial road network (Powerline Road, Paris Road, King George Road, and Wayne Gretzky Parkway).  Increased connectivity to Highway 403 via "Garden Avenue extension".
Constraints to connectivity and access (e.g. physical features)	East-west collector road north of Powerline Road provides excellent access opportunity for higher density neighbourhood corridor.  Excellent access for E7 employment block.  Access to Block C10 possible but constrained by proximity to grade separated rail crossing (including vertical and horizontal alignment issues).	Focus of high density use along Powerline Road less desirable from access perspective for higher density neighbourhood corridor (direct access to arterial should be limited, only able to develop north side of roadway).  Circuitous access for E7 employment block.  Access to Block C10 possible but constrained by proximity to grade separated rail crossing (including vertical and horizontal alignment issues), as well as limited to accessing arterial road (collector road network to control access will be difficult to achieve. Rank 4	East-west collector road north of Powerline Road provides excellent access opportunity for higher density neighbourhood corridor.  Excellent access for E7 employment block.  Excellent access to Block C6 collector road network provide greater to east, west, and south into C5 block.	Focus of high density use along Powerline Road less desirable from access perspective for higher density neighbourhood corridor (direct access to arterial should be limited, only able to develop north side of roadway).  Circuitous access for Block E7 employment block.  Excellent access to Block C6 collector road network provides greater to east, west, and south into C5 block.
Criteria 2: Appropriate transportation capacity is maintained				
Ability of the existing/planned transportation and transit capacity to accommodate new trips	<ul><li>Existing facilities:</li><li>Good capacity along Powerline Road,</li><li>Good capacity along Lynden</li></ul>	<ul> <li>Existing facilities:</li> <li>Good capacity along Powerline Road,</li> <li>Good capacity along Lynden Road</li> </ul>	<ul> <li>Existing facilities:</li> <li>Good capacity along Powerline Road,</li> <li>Good capacity along Lynden</li> </ul>	<ul> <li>Existing facilities:</li> <li>Good capacity along Powerline Road,</li> <li>Good capacity along Lynden Road</li> </ul>

	Road and Garden Avenue,  Limited Capacity of King George Rd. south of Powerline.  Future facilities:  Wayne Gretzky Parkway extension provides good opportunity as a major arterial road.  East-west collector road provides very good capacity for local trips	<ul> <li>and Garden Avenue,</li> <li>Capacity of King George Rd. south of Powerline limited and more appropriate as a Major Arterial.</li> <li>Future facilities:</li> <li>Wayne Gretzky Parkway extension provides good opportunity for interregional travel (i.e. Trips to/from north of City)</li> <li>East-west collector road provides very good capacity for local trips</li> <li>Additional capacity connecting to Highway 403 via "Garden Avenue extension"</li> </ul>	Road and Garden Avenue,  Limited Capacity of King George Rd. south of Powerline.  Future facilities:  Wayne Gretzky Parkway extension provides good opportunity as a major arterial road and local trips (to/from Block C6)  East-west collector road provides very good capacity for local trips  Block C6 collector roads provide good capacity opportunities for local trips	<ul> <li>and Garden Avenue,</li> <li>Capacity of King George Rd. south of Powerline limited and more appropriate as a Major Arterial.</li> <li>Future facilities:         <ul> <li>Wayne Gretzky Parkway extension provides good opportunity for inter-regional travel (i.e. Trips to/from north of City) and local trips (to/from Block C6)</li> <li>East-west collector road provides very good capacity for local trips</li> <li>Block C6 collector roads provide good capacity opportunities for local trips</li> <li>Additional capacity connecting to Highway 403 via "Garden Avenue extension"</li> </ul> </li> </ul>
Availability of opportunities to expand capacity if needed	Good potential to expand:  Powerline Road  Lynden Road  Golf Road  Park Road N  Wayne Gretzky Parkway Limited/No potential to expand:  King George Road (Hwy 24) Opportunity to expand capacity via extension of:  Wayne Gretzky Parkway corridor	Good potential to expand:  Powerline Road  Lynden Road  Golf Road  Park Road N  Wayne Gretzky Parkway Limited/No potential to expand:  King George Road (Hwy 24) Opportunity to expand capacity via extension of:  Garden Ave corridor  Wayne Gretzky Parkway corridor	Good potential to expand:  Powerline Road  Lynden Road  Golf Road  Park Road N  Wayne Gretzky Parkway Limited/No potential to expand:  King George Road (Hwy 24) Opportunity to expand capacity via extension of:  Wayne Gretzky Parkway corridor	Good potential to expand:  Powerline Road  Lynden Road  Golf Road  Park Road N  Wayne Gretzky Parkway Limited/No potential to expand:  King George Road (Hwy 24) Opportunity to expand capacity via extension of:  Garden Ave corridor  Wayne Gretzky Parkway corridor
Criteria 3: Transit service can be maximized				
Ability of the potential transit network to serve the most future residents	Expansion of transit coverage can be accommodated easily for most of the future development blocks.  Exception is Block C10, which is less desirable from a transit service perspective.	Expansion of transit coverage can be accommodated easily for most of the future development blocks.  Exception is Block E7, which is less desirable from a transit service perspective.	Expansion of transit coverage can be accommodated easily.	Expansion of transit coverage can be accommodated easily for most of the future development blocks.  Exception is Block E7, which is less desirable from a transit service perspective.

Environment	Option 1A	Option 1B	Option 2A	Option 2B
Criteria 1: Potential impact of proposed land uses and transportation network on the NHS				
Ability to integrate NHS with compatible land uses such as parks, schools, condominium common element space, and low density residential	Some ability – majority of parks/schools are not associated with the NHS.	Some ability – majority of parks/schools are not associated with the NHS.	Some ability – majority of parks/schools are not associated with the NHS.	Some ability- majority of parks/schools are not associated with the NHS.
Number of potential road crossings of the NHS	East-west collector road north of Powerline Road crosses over headwater drainage features (~ 5) and watercourses (5).  The Memorial Road extension, south of the proposed community park (CP), occurs along a degraded and entrenched channel. The Ivanhoe Road extension occurs at a relatively wide and deep ravine. This may result in an extension of existing stormwater pipes.	East-west collector road north of Powerline Road crosses over headwater drainage features (~ 5) and watercourses (4).  The Memorial Road extension, south of the proposed community park (CP), occurs along a degraded and entrenched channel. The Ivanhoe Road extension occurs at a relatively wide and deep ravine. This may result in an extension of existing stormwater pipes.  The proposed extension of Garden Avenue crosses two (2) well established watercourses: Silver Creek (entrenched) and Jones Creek (sinuous planform in wide defined valley). Additionally, three (3) headwater features will be spanned by the proposed road.	Location of road network, and therefore the number of watercourse crossings in both Options 2A and 2B are identical - headwater feature (~5), watercourse (6).  The Memorial Road extension, south of the proposed community park (CP), occurs along a degraded and entrenched channel. The Ivanhoe Road extension occurs at a relatively wide and deep ravine. This may result in an extension of existing stormwater pipes.  The proposed road crossing over Jones Creek (east of King George Road, west of Park Road) appears to be appropriately located.	Location of road network, and thus number of watercourse crossings in both Options 2A and 2B are identical headwater feature (~5), watercourse (6).  The Memorial Road extension, south of the proposed community park (CP), occurs along a degraded and entrenched channel. The Ivanhoe Road extension occurs at a relatively wide and deep ravine. This may result in an extension of existing stormwater pipes.  The proposed road crossing over Jones Creek (east of King George Road, west of Park Road) appears to be appropriately located.  The proposed extension of Garden Avenue crosses two (2) well established watercourses: Silver Creek (entrenched) and Jones Creek (sinuous planform in wide defined valley). Additionally, three (3) headwater features will be spanned by the proposed road.

	Roads generally avoid sensitive NHS features. Re-alignment would be required in some locations to avoid NHS features.	Roads generally avoid sensitive NHS features. Re-alignment would be required in some locations to avoid NHS features.	Roads generally avoid sensitive NHS locations. Re-alignment would be required in some locations to avoid NHS features.	Roads generally avoid sensitive NHS locations. Re-alignment would be required in some locations to avoid NHS features.
3. Ability of roads to cross the NHS in less sensitive locations		This option includes additional road crossings (i.e., proposed Garden Avenue extension) compared to Options 1A and 1B. These crossings occur at more sensitive watercourses (i.e., Silver Creek (incised into native material/valley setting or entrenched) and Jones Creek (highly sinuous, valley setting); both are located in NHS.	Additional road crossing over Jones Creek (east of King George Road, west of Park Road) appropriately located at a less geomorphically sensitive location.	Additional road crossing over Jones Creek (east of King George Road, west of Park Road) appropriately located at a less geomorphically sensitive location.  This option includes additional road crossings (i.e., proposed Garden Ave extension) compared to Options 1A and 1B. These crossings occur at more sensitive watercourses (i.e., Silver Creek (incised into native material/valley setting or entrenched) and Jones Creek (highly sinuous, valley setting); both are located in NHS.
Ability of road to avoid wetland feature	Roads generally avoid sensitive wetland features. Re-alignment would be required in some locations to avoid wetland interference.	Roads generally avoid sensitive wetland features. Re-alignment would be required in some locations to avoid wetland interference.	Roads generally avoid sensitive wetland features. Re-alignment would be required in some locations to avoid wetland interference.	Roads generally avoid sensitive wetland features. Re-alignment would be required in some locations to avoid wetland interference.

Water	Option 1A	Option 1B	Option 2A	Option 2B
Criteria 1: Configure new water and wastewater services to integrate with existing trunk network				
	North residential lands can be easily serviced through extension to existing system.	North residential lands can be easily serviced through extension to existing system.	North residential lands can be easily serviced through extension to existing system.	North residential lands can be easily serviced through extension to existing system.
Ability to integrate with existing	Northwest employment lands difficult to connect to existing system, require a highway crossing watermain.	Northwest employment lands difficult to connect to existing system, require a highway crossing watermain.	Block C6 residential lands require looped trunk watermain extension.	Block C6 residential lands require looped trunk watermain extension.
water and wastewater trunk network	East employment easy to connect to existing system.	East employment more difficult to connect to existing system, require a rail crossing watermain.	Northwest employment lands difficult to connect to existing system, require a highway crossing watermain.	Northwest employment lands difficult to connect to existing system, require a highway crossing watermain.
			East employment easy to connect to existing system.	East employment more difficult to connect to existing system, require a rail crossing watermain.
	New water tower needed to support operation of north lands (~7.5 ML) requiring the decommissioning of King George ET and consolidation of water storage in PD2/3.	New water tower needed to support operation of north lands (~7.5 ML) requiring the decommissioning of King George ET and consolidation of water storage in PD2/3.	New water tower needed to support operation of north lands (~7.5 ML) requiring the decommissioning of King George ET and consolidation of water storage in PD2/3.	New water tower needed to support operation of north lands (~7.5 ML) requiring the decommissioning of King George ET and consolidation of water storage in PD2/3.
Upgrades to existing water and wastewater network needed to support growth areas	Upsizing of King George Road watermain from Tollgate PS (~600 or 750 mm).	Upsizing of King George Road watermain from Tollgate PS (~600 or 750 mm).	Upsizing of King George Road watermain from Tollgate PS (~600 or 750 mm).	Upsizing of King George Road watermain from Tollgate PS (~600 or 750 mm).
	Upsizing of Lynden Road/ Fairview Drive watermain (400 mm).	Upsizing of Lynden Road/ Fairview Drive watermain (400 mm).	Upsizing of Lynden Road/ Fairview Drive watermain (400 mm).	Upsizing of Lynden Road/ Fairview Drive watermain (400 mm).
	Upsizing of Park Road watermain where currently 300 mm (400 mm).	Upsizing of Park Road watermain where currently 300 mm (400 mm).	Upsizing of Park Road watermain where currently 300 mm (400 mm).	Upsizing of Park Road watermain where currently 300 mm (400 mm).

Criteria 2: To limit impacts on infrastructure implementation, phasing, and servicing flexibility	Option 1A	Option 1B	Option 2A	Option 2B
Impacts on the trunk infrastructure requirements, including infrastructure sizing, configuration, and requirements for new facilities	New elevated tank is required in north lands (~7.5 ML), south of Jones Creek.  Requires a highway, rail, and creek crossing trunk watermain.  Internal trunk watermain needs (600 mm) to be along new collector road which is along Neighbourhood Corridor.  Internal trunk watermain (300 mm) in east residential and employment lands.  Use of Pressure Reduction Valve (PVRs) and Check Valves were appropriate.	New elevated tank is required in north lands (~7.5 ML), south of Jones Creek.  Requires a highway, two rail, and creek crossing trunk watermain.  Internal trunk watermain needs (600 mm) to be along new collector road which is not along Neighbourhood Corridor or along already constructed Powerline Road.  Internal trunk watermain (300 mm) in east residential and employment lands.  Use of PRVs and Check Valves were appropriate.	New elevated tank is required in north lands (~7.5 ML), north of Jones Creek.  Requires a highway, rail, and creek crossing trunk watermain.  Internal trunk watermain needs (300 mm) to be along new collector road which is along Neighbourhood Corridor.  Additional looped trunk watermain needs (300 mm) north of Jones Creek.  Internal trunk watermain (300 mm) in east residential and employment lands.  Use of PRVs and Check Valves were appropriate.	New elevated tank is required in north lands (~7.5 ML), north of Jones Creek.  Requires a highway, two rail, and creek crossing trunk watermain.  Internal trunk watermain needs (300 mm) to be along new collector road which is not along Neighbourhood Corridor or along already constructed Powerline Road.  Additional looped trunk watermain needs (300 mm) north of Jones Creek Internal trunk watermain (300 mm) in east residential and employment lands.  Use of PRVs and Check Valves were appropriate.
2. Impact on Infrastructure phasing	Relative ease phasing north residential lands due to available trunk capacity.  Difficulty phasing northwest employment lands due to extension of trunk watermain.  Relative ease phasing east lands.	Relative ease phasing north residential lands due to available trunk capacity.  Difficulty phasing northwest employment lands due to extension of trunk watermain.  Additional rail crossing to service east employment lands.	Relative ease phasing north residential lands closest to Powerline Road due to available trunk capacity.  Difficulty phasing residential lands north of Jones Creek which require the extension of the watermain through the expansion lands.  Difficulty phasing northwest employment lands due to extension of trunk watermain.  Relative ease phasing east lands.	Relative ease phasing north residential lands closest to Powerline Road due to available trunk capacity.  Difficulty phasing residential lands north of Jones Creek which require the extension of the watermain through the expansion lands.  Difficulty phasing northwest employment lands due to extension of trunk watermain.  Additional rail crossing to service east employment lands.
3. Impacts on servicing flexibility	Increased operational flexibility with new elevated tank.  Increase operational flexibility through servicing of north employment land by Northwest PS.	Increased operational flexibility with new elevated tank.  Increase operational flexibility through servicing of north employment land by Northwest PS.	Increased operational flexibility with new elevated tank.  Increase operational flexibility through servicing of north employment land by Northwest PS.	Increased operational flexibility with new elevated tank.  Increase operational flexibility through servicing of north employment land by Northwest PS.

Criteria 3- Cost to provide additional infrastructure	Option 1A	Option 1B	Option 2A	Option 2B
1. Capital Costs	*Excludes internal local servicing costs and upgrades to existing trunk network (Internal to existing urban boundary).	*Option 1b expected to be have marginally higher cost than Option 1a ~\$1M more costly.  *Excludes internal local servicing costs and upgrades to existing trunk network (Internal to existing urban boundary).	*Excludes internal local servicing costs and upgrades to existing trunk network (Internal to existing urban boundary)	*Option 2b expected to be have marginally higher cost than Option 2a  ~\$1M more costly  *Excludes internal local servicing costs and upgrades to existing trunk network (Internal to existing urban boundary)
2. Lifecycle Costs	\$35-45M (50 year O&M).  Slightly lower lifecycle costs than Option 2 due to shorter watermain length.  *Excludes O&M cost related to existing facilities and any required upgrades to existing infrastructure.	\$35-45M (50 year O&M).  Slightly lower lifecycle costs than Option 2 due to shorter watermain length.  *Option 1b expected to be have marginally higher cost than Option 1a.  *Excludes O&M cost related to existing facilities and any required upgrades to existing infrastructure.	\$40-50M (50 year O&M).  Slightly higher lifecycle costs than Option 1 due to longer watermain length.  *Excludes O&M cost related to existing facilities and any required upgrades to existing infrastructure.	\$40-50M (50 year O&M).  Slightly higher lifecycle costs than Option 1 due to longer watermain length.  *Option 2b expected to be have marginally higher cost than Option 2a.  *Excludes O&M cost related to existing facilities and any required upgrades to existing infrastructure.

Wastewater	Option 1A	Option 1B	Option 2A	Option 2B
Criteria 1: Configure new water and wastewater service to integrate with existing trunk network				
	North Community lands (East of Park Road) & Block C10 serviced via gravity connection.	North Community lands (East of Park Road) & Block C10 serviced via gravity connection.	North Community lands (East of Park Road) serviced via gravity connection.	North Community lands (East of Park Road) serviced via gravity connection.
Ability to integrate with existing	North Employment lands requires long trunk and highway crossing.	North Employment lands requires long trunk and highway crossing.	North Employment lands requires long trunk and highway crossing.	North Employment lands requires long trunk and highway crossing.
water and wastewater trunk network	East Employment lands required pump station and forcemain with rail crossing.	East Employment lands required pump station and forcemain with rail crossing.	East Employment lands required pump station and forcemain with rail crossing.	East Employment lands required pump station and forcemain with rail crossing.
	Maximizes areas serviced via gravity.	Maximizes areas serviced via gravity (Less than 1A).	Increase area serviced via pump station.	Increase area serviced via pump station (Greater than 2A).
	Upsizing of Lynden Road sewer needed to support East Lands.	Upsizing of Lynden Road sewer needed to support East Lands.	Upsizing of Lynden Road sewer needed to support East Lands.	Upsizing of Lynden Road sewer needed to support East Lands.
Upgrades to existing water and wastewater network needed to support growth areas	Upsizing of Coulbeck Trunk between Lynden Rd and Henry St.	Upsizing of Coulbeck Trunk between Lynden Rd and Henry St.	Upsizing of Coulbeck Trunk between Lynden Rd and Henry St.	Upsizing of Coulbeck Trunk between Lynden Rd and Henry St.
	Upgrades at Empey pump station.	Upgrades at Empey pump station.	Upgrades at Empey pump station.	Upgrades at Empey pump station.

Criteria 2: To limit impacts on infrastructure implementation, phasing, and servicing flexibility	Option 1A	Option 1B	Option 2A	Option 2B
Impacts on the trunk     infrastructure requirements,     including infrastructure sizing,     configuration, and requirements     for new facilities	Trunk sewer and pump stations along new east-west collector road.  Park Road Intensification corridor drains by gravity to Coulbeck Rd.  Block C10 supported by gravity sewer connection.	Trunk sewer and pump stations along new east-west collector road.  Block C10 supported by gravity sewer connection.  Intensification corridor on King George will require servicing via pump station resulting in slightly higher costs than Option 1A.	Trunk sewer and pump stations along new east-west collector road.  Block C6 requires additional pump stations and force main.  Park Road Intensification corridor drains by gravity to Coulbeck Rd.	Trunk sewer and pump stations along new east-west collector road.  Block C6 requires additional pump stations and force main.  Intensification corridor on King George will require servicing via pump station resulting in slightly higher costs than Option 1A.
2. Impact on Infrastructure phasing	Available capacity to support some growth via Coulbeck Rd. and Lynden Rd. sewer before triggering upgrades.  Block C10 can make direct gravity connection.  Block C8 may require pumping station to support servicing, with direct connection to Coulbeck Rd. Trunk North Employment lands requires extending trunk sewer to Oak Park.	Available capacity to support some growth via Coulbeck Rd. and Lynden Rd. sewer before triggering upgrades.  Block C10 can make direct gravity connection.  Block C8 may require pumping station to support servicing, with direct connection to Coulbeck Rd. Trunk.  North Employment lands requires extending trunk sewer to Oak Park.	Available capacity to support some growth via Coulbeck Rd. and Lynden Rd. sewer before triggering upgrades.  North Employment lands requires extending trunk sewer to Oak Park.  Block C6 requires extension of trunk network - Coulbeck Rd. to Park Rd. + Pump station and forcemain crossing of Jones Creek.  Potential oversizing of Block C6 infrastructure to support future growth.	Available capacity to support some growth via Coulbeck Rd. and Lynden Rd. sewer before triggering upgrades.  North Employment lands requires extending trunk sewer to Oak Park.  Block C6 requires extension of trunk network - Coulbeck Rd. to Park Rd. + pump station and forcemain crossing of Jones Creek.  Potential oversizing of Block C6 infrastructure to support future growth.
3. Impacts on servicing flexibility	Maximizes area that can be serviced via gravity  Consideration for ultimate buildout needed.	Maximizes area that can be serviced via gravity.  Consideration for ultimate buildout needed.	Increases area requiring pumping.  Potential oversizing of Block C6 infrastructure to support future growth Consideration for ultimate buildout needed.	Increases area requiring pumping.  Potential oversizing of Block C6 infrastructure to support future growth.  Consideration for ultimate buildout needed.

Criteria 3: Cost to provide additional infrastructure	Option 1A	Option 1B	Option 2A	Option 2B
1. Capital Costs	*Excludes internal local servicing costs and upgrades to existing trunk network (Internal to existing urban boundary)	*Option 1b expected to be have marginally higher cost than Option 1a ~\$1M more costly  *Excludes internal local servicing costs and upgrades to existing trunk network (Internal to existing urban boundary)	*Excludes internal local servicing costs and upgrades to existing trunk network (Internal to existing urban boundary)	*Option 2b expected to be have marginally higher cost than Option 2a ~\$1M more costly  *Excludes internal local servicing costs and upgrades to existing trunk network (Internal to existing urban boundary)
2. Lifecycle Costs	\$85-95M (50 year O&M)  Lower lifecycle costs than Option 2 due to smaller number of pump stations  *Excludes O&M cost related to existing facilities and any required upgrades to existing infrastructure	\$85-95M (50 year O&M)  Lower lifecycle costs than Option 2 due to smaller number of pump stations  *Option 1b expected to be have marginally higher cost than Option 1a  *Excludes O&M cost related to existing facilities and any required upgrades to existing infrastructure	\$100-110M (50 year O&M)  Higher lifecycle costs than Option 1 due to greater number of pump stations  *Excludes O&M cost related to existing facilities and any required upgrades to existing infrastructure	\$100-110M (50 year O&M)  Higher lifecycle costs than Option 1 due to greater number of pump stations  *Option 2b expected to be have marginally higher cost than Option 2a *Excludes O&M cost related to existing facilities and any required upgrades to existing infrastructure

Stormwater	Option 1A	Option 1B	Option 2A	Option 2B
Criteria 1: Impacts on Natural Heritage Systems and Watercourse Stability				
Impacts on Natural Heritage     System	Storm ponds are located outside of the NHS. Ponds are generally located at the upper end of headwater drainage features. Consider relocating selective ponds to existing drainage outlets to major watercourses. Challenging outfall for Park Rd. North southerly SWM pond. Ponds can be located within NHS buffer.	Storm ponds are located outside of the NHS. Ponds are generally located at the upper end of headwater drainage features. Consider relocating selective ponds to existing drainage outlets to major watercourses. Challenging outfall for Park Rd. North southerly SWM pond. Ponds can be located within NHS buffer.	Storm ponds are located outside of the NHS. Ponds are generally located at the upper end of headwater drainage features. Consider relocating selective ponds to existing drainage outlets to major watercourses. Challenging outfall for Park Rd. North southerly SWM pond. Ponds can be located within NHS buffer.	Storm ponds are located outside of the NHS. Ponds are generally located at the upper end of headwater drainage features. Consider relocating selective ponds to existing drainage outlets to major watercourses. Challenging outfall for Park Rd. North southerly SWM pond. Ponds can be located within NHS buffer.
2. Impacts on watercourse stability	SWM pond proposed to outlet near Memorial Road extension into entrenched and channel already impacted by upstream uncontrolled discharge; this may further impact creek form and processes. Enhancement of existing stormwater runoff at Powerline Road recommended. Likewise, exacerbated channel conditions along Jones Creek will need to be managed.	SWM pond proposed to outlet near Memorial Road extension into entrenched and channel already impacted by upstream uncontrolled discharge; this may further impact creek form and processes. Enhancement of existing stormwater runoff at Powerline Road recommended. Likewise, exacerbated channel conditions along Jones Creek will need to be managed.	In addition to Options 1A and 1B, one additional SWM facility will discharge into Jones Creek.	In addition to Options 1A and 1B, one additional SWM facility will discharge into Jones Creek.
Criteria 2: Land use suitability to address local stormwater servicing needs				
Suitability of land use to address local stormwater servicing needs	Residential lands in the East (north of Lynden Rd) has no direct outlet location; require extending storm sewer through Brant County to achieve a stormwater outlet.	Residential lands in the East (north of Lynden Rd) has no direct outlet location; require extending storm sewer through Brant County to achieve a stormwater outlet.	Fill/Grading of Block C6 will be required to simplify stormwater servicing and minimize the number of ponds and outfalls.	Fill/Grading of Block C6 will be required to simplify stormwater servicing and minimize the number of ponds and outfalls.

Criteria 3: Impacts on infrastructure phasing and servicing flexibility	Option 1A	Option 1B	Option 2A	Option 2B
Impacts on the trunk infrastructure requirements, including infrastructure sizing, configuration, and requirements for new facilities	Ponds to service Block C8 and Block C10 to be smaller than ponds required to service Block C6	Ponds to service Block C8 and Block C10 to be smaller than ponds required to service Block C6	Ponds to service Block C6 to be larger than ponds required to service Block C8 and Block C10	Ponds to service Block C6 to be larger than ponds required to service Block C8 and Block C10
Impacts on infrastructure phasing	No significant restrictions on stormwater infrastructure phasing. Flexibility to service development area.	No significant restrictions on stormwater infrastructure phasing. Flexibility to service development area.	No significant restrictions on stormwater infrastructure phasing. Flexibility to service development area.	No significant restrictions on stormwater infrastructure phasing. Flexibility to service development area.
3. Impacts on servicing flexibility	No significant restrictions on stormwater infrastructure phasing. Flexibility to service development area.	No significant restrictions on stormwater infrastructure phasing. Flexibility to service development area.	No significant restrictions on stormwater infrastructure phasing. Flexibility to service development area.	No significant restrictions on stormwater infrastructure phasing. Flexibility to service development area.

Land Use	Option 1A	Option 1B	Option 2A	Option 2B
Criteria 1: Create walkable communities				
Proportion of units within 400 metres of a park	86% of units within 400 metres of a park.	91% of units within 400 metres of a park.	88% of units within 400 metres of a park.	93% of units within 400 metres of a park.
Proportion of units within 500 metres to commercial services (Neighbourhood Centres)	58% units within 500 metres of a Neighbourhood Centre.	62% of units within 500 metres of a Neighbourhood Centre.	83% of units within 500 metres of a Neighbourhood Centre.	58% units within 500 metres of a Neighbourhood Centre.
Mix of densities on collector and arterial roads to promote walking and transit	Proposed Land Use allows for a mix of densities along proposed east-west collector, which will promote walkability along spine of community.	Mostly Neighbourhood Residential Land Use adjacent to proposed east-west collector. Proposed Land Use allows for a mix of densities along the Powerline Rd., but mostly backlotting along south side of Powerline Rd. Less ability to promote walkability.	Proposed Land Use allows for a mix of densities along proposed east-west collector including collector north of Jones Creek, which will promote walkability along spine of community.	Mostly Neighbourhood Residential Land Use adjacent to proposed eastwest collector. Proposed Land Use allows for a mix of densities along the Powerline Rd., but mostly backlotting along south side of Powerline Rd. Less ability to promote walkability.
4. Elementary schools are located centrally within their catchment area (catchment based on a 5-10 min walk)	Mostly Centrally located. Most easterly school should be shifted to the west  West of King George Rd./ South of Powerline Rd. not serviced by an elementary school.	Proposed elementary school are centrally located throughout the plan  West of King George Rd./ South of Powerline Rd. not serviced by an elementary school.	Mostly centrally located. Centre school should shift north to serve more of the Neighborhood residential.  West of King George Rd./ South of Powerline Rd. not serviced by an elementary school.	Mostly centrally located. Centre school should shift north to serve more of the Neighborhood residential.  West of King George Rd./ South of Powerline Rd. not serviced by an elementary school.
Criteria 2: Create new Neighbourhoods with a sense of place				
Neighbourhood Centres are located in a viable location to create a focal area	Neighbourhood Centres along eastwest collector are viable locations for mixed use neighbourhood centres which will be neighbourhood focal points provided they are located at the intersection of two major collector roads. The Neighbourhood Centre north of the golf course will be less viable due to minor function of the north-south collector. A location at Balmoral Drive and Powerline Road may be more valuable as in Option 1B.	Neighbourhood Centers located along Powerline Road would be viable commercial locations but the locations at Memorial Drive and Powerline Road and Brantwood Park Drive and Powerline not as centrally located to serve as a neighbourhood focal points.	west collector are viable locations for mixed use neighbourhood centres	Neighbourhood Centers located along Powerline Road would be viable commercial locations but the locations at Memorial Drive and Powerline Road and Brantwood Park Drive and Powerline not as centrally located to serve as a neighbourhood focal points. The Neighbourhood Centre in Block C6 is located in a viable location along King George Road except it is not centrally located to provide a focal area.

Criteria 3: Provide for Housing choice	Option 1A	Option 1B	Option 2A	Option 2B
Mix of housing in each     neighbourhood	Proposed Land Use allows for a mix of housing within each neighbourhood but higher density intensification corridor within the Central neighbourhood.	Proposed Land Use allows for a mix of housing within each neighbourhood but higher density intensification corridor within the Central neighbourhood.	Proposed Land Use allows for a mix of housing within each neighbourhood but higher density intensification corridor within the Central neighbourhood. Option 2A provides a greater mix in Block C6 than option 2B.	Proposed Land Use allows for a mix of housing within each neighbourhood but higher density intensification corridor within the Central neighbourhood.
Ability to integrate with adjacent neighbourhoods	Collector road northerly extensions and road stubs provide for integration. Block C10 cut off and limited potential for integration.	Collector road northerly extensions and road stubs provide for integration.  Block C10 cut off and limited potential for integration.	Collector road northerly extensions and road stubs provide for integration. Block C6 connected through central north-south collector and King Geroge Rd. and Wayne Gretsky extension.	Collector road northerly extensions and road stubs provide for integration. Block C6 connected through central north-south collector and King Geroge Rd. and Wayne Gretsky extension.
3. Ability to provide for a compatible transition to existing residential (Low, Medium or high)	Neighbourhood Residential provides compatible relation along Powerline Rd. although residential mostly backlotted on south side.  West of Balmoral Dr. compatible with low density residential to south but Neighbourhood Residential interface with employment on north side of Powerline Road not as compatible.  In Block C10, Neighbourhood Corridor not as compatible with adjacent existing low density residential.  Minor changes to preferred option can address the compatibility issues.	Neighbourhood Corridor not as compatible to low density residential on south side of Powerline Rd., but residential mostly backlotted on south side and arterial road and hydro corridor provide transition.  West of Balmoral Dr. compatible with low density residential to south. Neighbourhood Corridor interface with employment on north side of Powerline Road is more compatible.  In Block C10, Neighbourhood Residential is more compatible with adjacent existing low density residential.  Minor changes to preferred option can address the compatibility issues.	Neighbourhood Residential provides compatible relation along Powerline Rd. although residential mostly backlotted on south side.  West of Balmoral Dr. compatible with low density residential to south but Neighbourhood Residential interface with employment on north side of Powerline Road not as compatible.  Minor changes to preferred option can address the compatibility issues.	Neighbourhood Corridor not as compatible to low density residential on south side of Powerline Rd., but residential mostly backlotted on south side and arterial road and hydro corridor provide transition.  West of Balmoral Dr. compatible with low density residential to south.  Neighbourhood Corridor interface with employment on north side of Powerline Road is more compatible.

Criteria 4: Provide a range of employment opportunities	Option 1A	Option 1B	Option 2A	Option 2B
Ability to maximize exposure	Maximizes exposure along arterial	Maximizes exposure along arterial and	Maximizes exposure along arterial and	Maximizes exposure along arterial and
along the highway and arterial	and Hwy 403.	Hwy 403.	Hwy 403.	Hwy 403.
roads for prestige employment				
(Low, Medium or high)				
Employment Supportive Areas	The three Employment Supportive	Two of the Employment Supportive	The three Employment Supportive	Two of the Employment Supportive
are centrally located within	areas are centrally located within the	areas are not as centrally located within	areas are centrally located within the	areas are not as centrally located
employment areas	employment areas and Paris Road	the employment areas.	employment areas and Paris Road	within the employment areas.
	location is currently designated for		location is currently designated for	
	commercial.		commercial.	

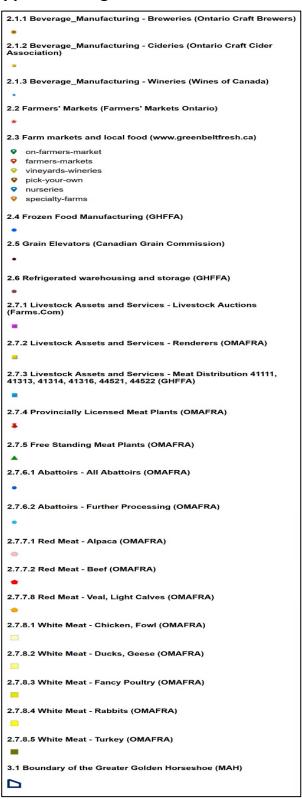
### Appendix 2: MDS Published Literature Reference List

#### **Appendix 2:** MDS Published Literature Reference List

- Government of Ontario. 2014. Provincial Policy Statement. Queen's Printer for Ontario.
- Ontario Ministry of Agriculture, Food and Rural Affairs. 2017. *The Minimum Distance Separation (MDS) Document.* Queen's Printer for Ontario.
- Ontario Ministry of Agriculture, Food and Rural Affairs. 2017. AgriSuite. Ontario Agricultural Planning Tools Suite. Software.
- Ontario Ministry of Agriculture, Food and Rural Affairs. 2019. *Agricultural Information Atlas*. <a href="http://www.giscoeapp.lrc.gov.on.ca/web/OMAFRA/EMB/AIA/Viewer/viewer.html">http://www.giscoeapp.lrc.gov.on.ca/web/OMAFRA/EMB/AIA/Viewer/viewer.html</a>
- Sokolow, Alvin D., Sonja Verea Hammond, Maxwell Norton, and Evan E. Schmidt. 2010. California communities deal with conflict and adjustment at the urban-agricultural edge. <a href="http://californiaagriculture.ucanr.org">http://californiaagriculture.ucanr.org</a>.
- Sokolow, Alvin D. No date. California's Edge Problem: Urban Impacts on Agriculture. Chapter 12.
- Statistics Canada. Various dates. Census for Agriculture livestock data 1981 to 2016.

### Appendix 3: Agricultural Businesses and Processors

#### **Appendix 3: Agricultural Businesses and Processors**



# Appendix 4: MDS Assumptions and Results Summary Options in Tutela Heights

#### **Appendix 4: MDS Assumptions and Results Summary**

Barn complex number	Barn Area (m2)	1 Barn 2 Area (m2)	Barn Total Area (m2)	Animal	Manure System	MDS (n	n
						Barn	Manure
1			461.2475	cattle	Solid, outside, no cover, 18 to 30% DM, with uncovered liquid runoff storage	339	356
2			1211.05	cattle	Solid, outside, no cover, 18 to 30% DM, with uncovered liquid runoff storage	476	489
3			103.411	horses	Solid, outside, no cover, 18 to 30% DM, with uncovered liquid runoff storage	162	183
3b			444.1665	horses	Solid, outside, no cover, 18 to 30% DM, with uncovered liquid runoff storage	219	238
4			1094.454	cattle	Solid, outside, no cover, 18 to 30% DM, with uncovered liquid runoff storage	460	473
5			192.2297	cattle	Solid, outside, no cover, 18 to 30% DM, with uncovered liquid runoff storage	263	281
6			158.7989	horses	Solid, outside, no cover, 18 to 30% DM, with uncovered liquid runoff storage	169	190
7			419.6668	cattle	Solid, outside, no cover, 18 to 30% DM, with uncovered liquid runoff storage	331	347
8			529.18	cattle	Solid, outside, no cover, 18 to 30% DM, with uncovered liquid runoff storage	356	372
9			1373.74	horses	Solid, outside, no cover, 18 to 30% DM, with uncovered liquid runoff storage	307	325
10			208.94	horses	Solid, outside, no cover, 18 to 30% DM, with uncovered liquid runoff storage	180	200
11			1252.02	chickensx2	in barn	342	342
12			719.27	dairy	Solid, outside, no cover, 18 to 30% DM, with uncovered liquid runoff storage	397	457
11+12	2404.04	719.27				463	517
13			418.84	horses	Solid, outside, no cover, 18 to 30% DM, with uncovered liquid runoff storage	216	235

Barn complex number	Barn 1 Area (m2)	Barn 2 Area (m2)	Barn Total Area (m2)	Animal	Manure System	MDS (n	n
14	347.53	836.16	1183.69	cattle dairy	Solid, outside, no cover, 18 to 30% DM, with uncovered liquid runoff storage	464	518
15			231.89	horses	Solid, outside, no cover, 18 to 30% DM, with uncovered liquid runoff storage	185	205
16			1085.63	chickens	in barn	267	267
<mark>18</mark>	<mark>1816.22</mark>	370.03	<b>2186.25</b>	cattle	Solid, outside, no cover, 18 to 30% DM, with uncovered liquid runoff storage	<mark>585</mark>	<mark>596</mark>
19			339.84	horses	Solid, outside, no cover, 18 to 30% DM, with uncovered liquid runoff storage	210	230
20			242.36	cattle	Solid, outside, no cover, 18 to 30% DM, with uncovered liquid runoff storage	285	302
21			385.58	cattle	Solid, outside, no cover, 18 to 30% DM, with uncovered liquid runoff storage	324	341
22			548.6	cattle	Solid, outside, no cover, 18 to 30% DM, with uncovered liquid runoff storage	361	377
23			859.61	cattle	Solid, outside, no cover, 18 to 30% DM, with uncovered liquid runoff storage	422	437
24			467.19	cattle	Solid, outside, no cover, 18 to 30% DM, with uncovered liquid runoff storage	342	358
<mark>25</mark>	l		301.99	cattle	Solid, outside, no cover, 18 to 30% DM, with uncovered liquid runoff storage	<mark>307</mark>	<mark>324</mark>
26	437.71	321.41	759.12	cattle	Solid, outside, no cover, 18 to 30% DM, with uncovered liquid runoff storage	405	420
<mark>27</mark>	l		358.92	horses	Solid, outside, no cover, 18 to 30% DM, with uncovered liquid runoff storage	<mark>205</mark>	<mark>225</mark>
27b	411.74	833.13	1244.87	chickens	in barn	284	284
<b>27</b> c	704.12	363.89	1952.1	chickens, cattle	in barn	385	400
28			197.04	horses	Solid, outside, no cover, 18 to 30% DM, with uncovered liquid runoff storage	180	200
29			744.93	horses	Solid, outside, no cover, 18 to 30% DM, with uncovered liquid runoff storage	249	268

Barn complex number	Barn 1 Area (m2)	Barn 2 Area (m2)	Barn Total Area (m2)	Animal	Manure System	MDS (m	
29b	544.77	126.96	671.73	horses	Solid, outside, no cover, 18 to 30% DM, with uncovered liquid runoff storage	240	259
<mark>29c</mark>	I		414.29	horses	Solid, outside, no cover, 18 to 30% DM, with uncovered liquid runoff storage	<b>216</b>	235
30			560.87	horses	Solid, outside, no cover, 18 to 30% DM, with uncovered liquid runoff storage	231	250
31	764.76	764.76	2689.93	horses	Solid, outside, no cover, 18 to 30% DM, with uncovered liquid runoff storage	370	386
32	I		472.72	cattle	Solid, outside, no cover, 18 to 30% DM, with uncovered liquid runoff storage	343	359

# Appendix 5: Evaluation Matrix for Land Use and Tutela Heights Options

### **APPENDIX 5: Evaluation Matrix for Land Use and Transportation Tutela Heights Options**

■ Most Preferred ■ Moderately Preferred ■ Least Preferred

Criteria	Options					
Agriculture	Tutela Heights Option 1	Tutela Heights Option 2				
Criteria 1: Loss of Agricultural Infrastructure measures						
Number of agricultural business/processors identified in the Agricultural Portal and Golden Horseshoe Food and Farming Alliance database in the Secondary Plan Areas.	None. Agricultural business/processors are identified in the existing Brantford urban settlement area.	None. Agricultural business/processors are identified in the existing Brantford urban settlement area.				
Criteria 2: Potential Conflict with Agricultural Operations						
Amount of potential developable area within the MDS arcs	One area to the west affects developable area.	One area to the west affects developable area.				
Ability to phase or mitigate MDS impacts	Given trends to decreased livestock production phasing should be of assistance. MDS should be re-measured at the time of the creation of a Plan of Subdivision.	Given trends to decreased livestock production phasing should be of assistance.  MDS should be re-measured at the time of the creation of a Plan of Subdivision.				
Presence/size of existing separation buffers between agriculture uses and Secondary Plan Area	Lands on the boundary to the west lack a Natural Heritage System buffer. The Secondary Plan will need to address transition along this boundary.	Lands on the boundary to the east and the west lack a Natural Heritage System buffer. The Secondary Plan will need to address transition along this boundary.				

Transportation	Tutela Heights Option 1	Tutela Heights Option 2
Criteria 1: Appropriate access and connectivity to new urban areas		
Connectivity to arterial corridors and Highway 403	Good access to Mt. Pleasant Road and Phelps Road (County Road 18). Connection to Phelps Road provides better connectivity to Highway 403.	Good access to Mt. Pleasant Road and Phelps Road(County Road 18). Connection to Phelps Road provides better connectivity to Highway 403.
Constraints to connectivity and access (e.g. physical features)	Road crossing (proposed collector road) across the headwater drainage features in the southeast corner of the Neighbourhood Residential lands. A potential road crossing over Phelps Creek may be required.	Road crossing (proposed collector road) across the headwater drainage features in the southeast corner of the Neighbourhood Residential lands. A potential road crossing over Phelps Creek may be required.
Criteria 2: Appropriate transportation capacity is maintained.		
Ability of the existing/planned transportation and transit capacity to accommodate new trips	Limited capacity along Mt Pleasant Road. Good capacity along Phelps Road. Important that development connects to east road infrastructure.	Limited capacity along Mt Pleasant Road. Good capacity along Phelps Road. Important that development connects to east road infrastructure.
Availability of opportunities to expand capacity if needed	Mt Pleasant Road expansion potential is limited. Extension of Conklin Road improves connectivity to Tutela Heights.	Mt Pleasant Road expansion potential is limited. Extension of Conklin Road improves connectivity to Tutela Heights.
Criteria 3: Transit service can be maximized		
Ability of the potential transit network to serve the most future residents	Expansion of transit coverage can be accommodated easily. Potential transit service along Mount Pleasant Street and Conklin Road better supported by Neighbourhood Corridor lands along these roads.	Expansion of transit coverage can be accommodated easily. Neighbourhood Corridor lands not contiguous in all locations with potential transit service.

Environment	Tutela Heights Option 1	Tutela Heights Option 2
Criteria 1: Potential impact of proposed land uses and transportation network on the NHS		
Ability to integrate NHS with compatible land uses such as parks, schools, condominium common element space, and low density residential	Opportunity to integrate parks with NHS.	Opportunity to integrate parks with NHS.
Number of potential road crossings of the NHS	Two potential headwater drainage feature crossings and one watercourse crossing.	Two potential headwater drainage feature crossings and one watercourse crossing.
Ability of roads to cross the NHS in less sensitive locations	Limited ability – Conklin Road extension fragments NHS.	Limited ability – Conklin Road extension fragments NHS.
Ability of road to avoid wetland feature	Roads generally avoid sensitive wetland features.	Roads generally avoid sensitive wetland features.

Water	Tutela Heights Option 1	Tutela Heights Option 2
Criteria 1: Configure new water and wastewater service to integrate with existing trunk network		
Ability to integrate with existing water and wastewater trunk network	Easy integration into existing network at Mount Pleasant St and Conklin Rd.	Easy integration into existing network at Mount Pleasant St and Conklin Rd.
Upgrades to existing water and wastewater network needed to support growth areas	Upsizing of watermains in Brantford on Mount Pleasant St and Conklin Rd Upsizing of watermains on Mount Pleasant St, Conklin Rd, and Tutela Heights Rd.	Upsizing of watermains in Brantford on Mount Pleasant St and Conklin Rd. Upsizing of watermains on Mount Pleasant St, Conklin Rd, and Tutela Heights Rd.
Criteria 2: To limit impacts on infrastructure implementation, phasing, and servicing flexibility		
Impacts on the trunk infrastructure requirements, including infrastructure sizing, configuration, and requirements for new facilities	Additional facilities are not required.	Additional facilities are not required.
Impact on Infrastructure phasing	Trunk loop on Mount Pleasant St required to support growth.	Trunk loop on Mount Pleasant St required to support growth.
3. Impacts on servicing flexibility	Maintained servicing flexibility with no additional facilities.  Increased fire flows but decreased pressures from existing level of service.	Maintained servicing flexibility with no additional facilities.  Increased fire flows but decreased pressures from existing level of service.
Criteria 3: Cost to provide additional infrastructure		
1. Capital Costs	\$20-30 M  *Excludes internal local servicing and upgrade costs	\$20-30 M  *Excludes internal local servicing and upgrade costs
2. Lifecycle Costs	\$10-15M (50 year O&M)  *Excludes O&M cost related to existing facilities and any required upgrades to existing infrastructure	\$10-15M (50 year O&M)  *Excludes O&M cost related to existing facilities and any required upgrades to existing infrastructure

Wastewater	Tutela Heights Option 1	Tutela Heights Option 2	
Criteria 1: Configure new water and wastewater service to integrate with existing trunk network			
Ability to integrate with existing water and wastewater trunk network	Easy integration into existing network at Gilkison and gravity trunk to WWTP	Easy integration into existing network at Gilkison and gravity trunk to WWTP	
Upgrades to existing water and wastewater network needed to support growth areas	No upgrades required (serviced via a new sewer with direct connection to trunk)	No upgrades required (serviced via a new sewer with direct connection to trunk)	
Criteria 2: To limit impacts on infrastructure implementation, phasing, and servicing flexibility			
Impacts on the trunk infrastructure requirements, including infrastructure sizing, configuration, and	New PS required to service lands south of Mount Pleasant St. (Pump Station marginally larger than in Option 2)	New PS required to service lands south of Mount Pleasant St. (Pump Station marginally smaller than in Option 1)	
requirements for new facilities	New sewer on Gilkison to tie into existing system (675 mm)	New sewer on Gilkison to tie into existing system (675 mm)	
Impact on Infrastructure phasing	Lands north of Mount Pleasant St can be serviced via gravity as soon as trunk constructed	Lands north of Mount Pleasant St can be serviced via gravity as soon as trunk constructed	
2. Impact on impact details	PS construction required to service lands south of Mount Pleasant St	PS construction required to service lands south of Mount Pleasant St	
	Maximizes population that can be serviced via gravity	Increases population requiring pumping	
3. Impacts on servicing flexibility	Consideration for ultimate buildout needed	Consideration for ultimate buildout needed	
Criteria 3: Cost to provide additional infrastructure			
	\$10-20 M	\$10-20 M	
Capital Costs	*Excludes internal local servicing and upgrade costs	*Option 2 expected to have marginally higher cost than Option 1 ~\$1M more costly	
		*Excludes internal local servicing and upgrade costs	
	\$10-20M (50 year O&M)	\$10-20M (50 year O&M)	
2. Lifecycle Costs	Lower lifecycle costs than Landuse Option 2 due to smaller pump station *Excludes O&M cost related to existing facilities and any required upgrades to existing infrastructure	Higher lifecycle costs than Land Use Option 1 due to larger pump station *Excludes O&M cost related to existing facilities and any required upgrades to existing infrastructure	

Stormwater	Tutela Heights Option 1	Tutela Heights Option 2
Criteria 1: Impacts on Natural Heritage Systems and Watercourse Stability		
Impacts on Natural Heritage System	Ponds are located outside of the NHS. Ponds can be located within NHS buffer.	Ponds are located outside of the NHS. Ponds can be located within NHS buffer.
2. Impacts on watercourse stability	Two SWM ponds located along one HDF feature which may require additional SWM controls to avoid adverse effects to feature and receiving watercourse.  Higher density residential lands in Option 1 may cause slightly higher sediment loading which is less preferred but can be mitigated.	Two SWM ponds located along one HDF feature which may require additional SWM controls to avoid adverse effects to feature and receiving watercourse.
Criteria 2: Land use suitability to address local stormwater servicing needs		
Suitability of land use to address local stormwater servicing needs	Suitable	Suitable
Criteria 3: Impacts on infrastructure phasing and servicing flexibility		
Impacts on infrastructure phasing	No impact	No impact
2. Impacts on servicing flexibility	No impacts on flexibility	No impacts on flexibility
Criteria 4: Cost to provide additional infrastructure		
Capital costs	\$6 M	\$6 M
2. Lifecycle costs	Similar to other options	Similar to other options

Land Use	Tutela Heights Option 1	Tutela Heights Option 2
Criteria 1: Create walkable communities		
Proportion of units within 400 metres of a park	80% of units within 400 metres of a park.	70% of units within 400 metres of a park
Mix of densities on collector and arterial roads to promote walking and transit	Contains a greater mix of uses along Conklin Road and Mount Pleasant Street.	Mix of densities is higher on interior collector road, which is less preferred.
Criteria 2: Create new Neighbourhoods with a sense of place		
Neighbourhood Centres are located in a viable location to create a focal area	No Neighbourhood Centres are delineated. Tutela Heights contains no centre or focal point. The Neighbourhood Corridor at Conklin Road and Mount Pleasant Street could provide a focal point if a broader mix of uses were introduced in the preferred option.	No Neighbourhood Centres are delineated and no focal point is proposed.
Criteria 3: Provide for Housing choice		
Mix of housing in each neighbourhood	Provides a slightly greater range of low rise housing with neighbourhood corridors.	Provides a range of low rise housing but less than Option 1.
Criteria 4: Integration with adjacent built form and uses		
Ability to integrate with adjacent neighbourhoods	Integrates well with adjacent neighbourhoods through road extensions and adjacent residential development.	Integrates well with adjacent neighbourhoods through road extensions and adjacent residential development.
Ability to provide for a compatibly transition to existing residential	Provides compatible interface with Transitional Residential but only one lot depth.	Provides compatible interface with Transitional Residential, which is surrounded by existing suburban residential lots. This land use arrangement may provide a better relationship to the large estate lots and create residential enclave.

# Appendix 6: Public Information Centre 5 "What We Heard" Summary Report

### CITY OF BRANTFORD OFFICIAL PLAN

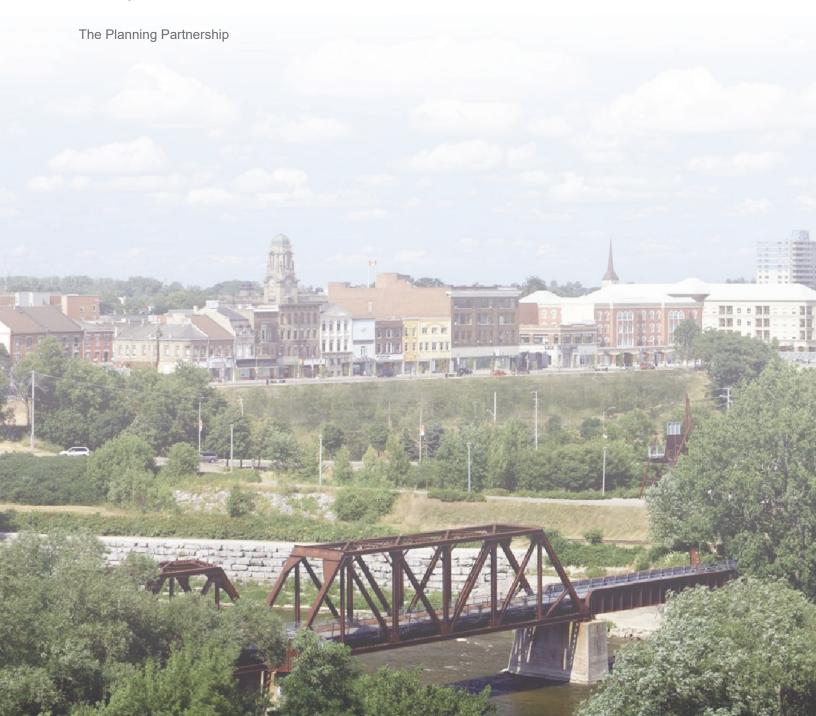


**ENVISIONING OUR CITY: 2041** 

### WHAT WE HEARD

#### **Public Information Centre #5**

January 17, 2019





### Introduction

The City of Brantford is undertaking three studies to guide future development to 2041 and to take into account the Boundary Expansion Lands transferred from Brant County to the City in January 2017:

- 1. Official Plan Review
- 2. Master Servicing Plan Update
- 3. Transportation Master Plan Update

The fifth Public Information Centre took place on Thursday, January 17, 2019 from 6:00-8:30 p.m. at the Brantford and District Civic Centre Auditorium.

### Approximately 120 people attended.

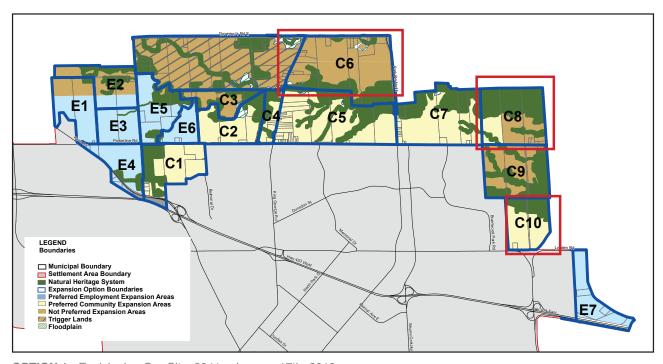
The purpose of the Public Information Centre was to present two Settlement Area expansion options with land use concepts for the North Expansion Area and Tutela Heights.

The Public Information Centre included a presentation and table group discussions to receive input on the Settlement Area expansion options and land use concepts. People were also invited to speak to members of the team regarding servicing and transportation.

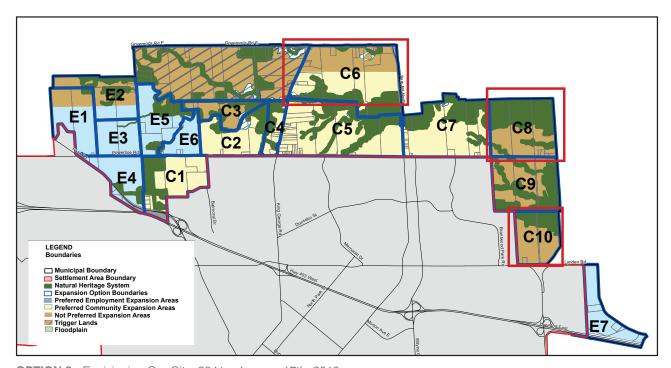
Input from the Public Information Centre is summarized in this report.

### **TABLE GROUP DISCUSSION #1**

Options 1 and 2 illustrate choices for expansion in Areas C6, C8, and C10



OPTION 1 - Envisioning Our City: 2041 - January 17th, 2019



OPTION 2 - Envisioning Our City: 2041 - January 17th, 2019

## Input received on Discussion Topic #1

# What do you prefer: Option 1 or 2, and why?

#### **OPTION 1**

Reduces risk of NHS rules, option 2 may create issues

Better use of 'blocked areas.' Spreads out the density of future population/ expansion

C10 is too close to Highway 403

#### **OPTION 2**

Provides more variation and options for the future

More options – better traffic/ transportation flow to Gretzky Pkwy

Less restriction/restrictive growth potential in North expansion land, improved community growth, and traffic flow opportunities

Allows for consideration for transportation, and Natural Heritage System control at same time as growth

Better transportation options, and services available

506 and 508 King George residential or commercial (not rural)

Provides more option for the future

Allows for developers and services to have a surplus of land rather than a shortage



More accessibility in relation to future employment, residential, and commercial lands

More advantages for maximizing traffic growth and community growth in the future

Better allocation and diversity for growth and community expansion

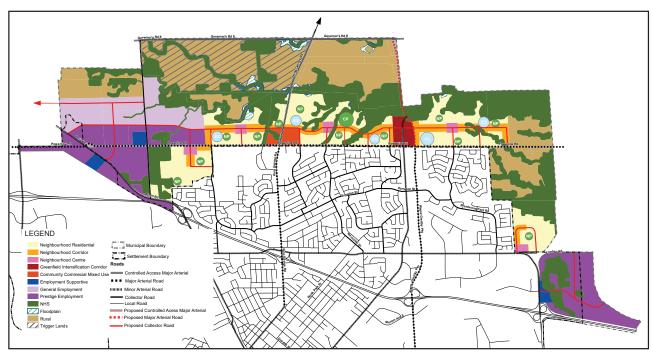
C10 should not be residential because it is on the rail line

C10 is too noisy right now with the train, and is to far from downtown Brantford

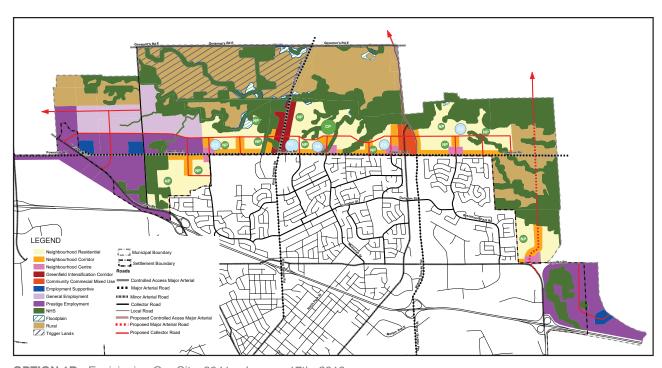
Use all of C6, finishing down to Governors Rd on King George Rd, and Park Rd to Governors Rd

## **TABLE GROUP DISCUSSION #2**

Options 1A and 1B reflect answers for questions 1, 2, and 3



OPTION 1A - Envisioning Our City: 2041 - January 17th, 2019



OPTION 1B - Envisioning Our City: 2041 - January 17th, 2019

## Input received on Discussion Topic #2

## Looking at Parks and Schools, which do you prefer, and why?

#### **OPTION 1A**

Better transportation, especially for Garden Ave

C6 stay transition land

#### **OPTION 1B**

Better transportation, especially for Garden Ave

The section on Powerline Rd between Memorial Dr and Old Farm Rd; City owned land, should be for schools, banks, hospitals, and community centres

Looking at Employment Supportive and Prestige Employment, which do you prefer, and why?

### **OPTION 1A**

It relates to the Employment Supportive best, with easy access off of Highway 403 and Powerline Rd

It's good to split Employment Support on both Paris Rd and Powerline Rd

#### **OPTION 1B**

No comments received

Looking at Greenfield Intensification Corridor, Neighbourhood Corridor, and Neighbourhood Centre, which do you prefer, and why?

#### **OPTION 1A**

Further away from farms

Prefer this land use Corridor. Powerline Rd has too much infrastructure to deal with (Hydro Line)

Intensification along Powerline Rd does not make sense (what's already built across the street)

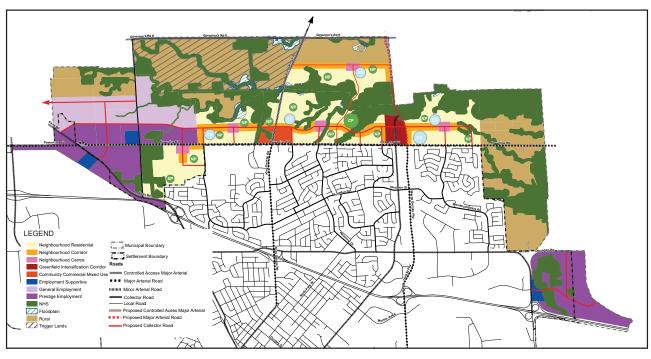
Do not like Greenfield Intensification Corridor along Highway 24. Roadway should be a "thru" road, not a stop/start etc. Remain Highway 24 as an access artery.

#### **OPTION 1B**

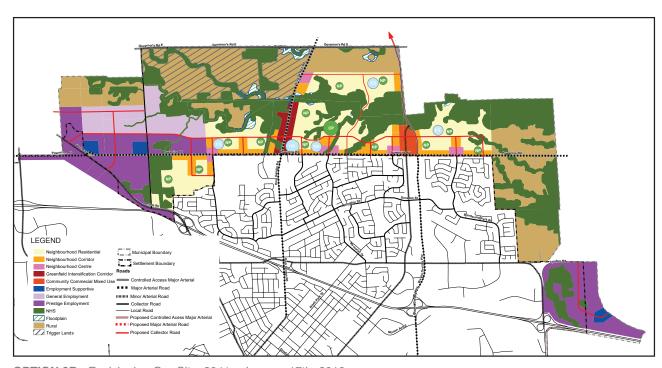
Neighbourhood Corridor is on a new road (use all of C6)

### **TABLE GROUP DISCUSSION #2**

Options 2A and 2B reflect answers for questions 1, 2, and 3



OPTION 2A - Envisioning Our City: 2041 - January 17th, 2019



OPTION 2B - Envisioning Our City: 2041 - January 17th, 2019

# Looking at Parks and Schools, which do you prefer, and why?

#### **OPTION 2A**

Re-purposing and halting Powerline Rd for roadwork and servicing will waste time

Money, also for organizing and planning services for schools will require more access and alternative routes

King George Rd doesn't need more access

#### **OPTION 2B**

Do not put Garden Ave through the wetlands

Looking at Employment Supportive and Prestige Employment, which do you prefer, and why?

#### **OPTION 2A**

The Employment Supportive works well

Makes sense to have employment support on both Paris Rd and Powerline Rd

Takes the load away from Powerline Rd traffic

Prefer this road pattern

#### **OPTION 2B**

Less environmental impact to Greenlands area. Concerned about the type of employment development allowed south of Lynden Rd. Immediately across the road on agricultural land, 347 Lynden Rd. One country road width of protection is not enough of a buffer Looking at Greenfield Intensification Corridor, Neighbourhood Corridor, and Neighbourhood Centre, which do you prefer, and why?

#### **OPTION 2A**

Dovetails and flows well with Brant Country expansion to the North, but adjust your residential border all the way North to Governors Rd

Makes more sense to keep development South of Natural Heritage area

Move park to Parkway area

### **OPTION 2B**

Better to extend Wayne Gretzky Pkwy as restricted access than to extend King George. (Use all of C6)

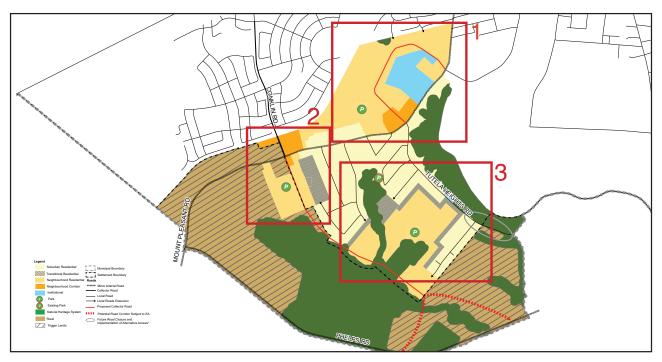
We want Neighbourhood Corridor on option 2A because of Powerline Rd restrictions (towers and new Powerline Rd rebuild) Powerline Rd can't take more density

Want to keep natural areas with no Intensification Corridors.



## **TABLE GROUP DISCUSSION #3**

Option 1 and 2 illustrate choices for Tutela Heights, look at areas 1, 2 & 3: Neighbourhood Residential, Transitional Residential, Neighbourhood Corridor



OPTION 1 - Envisioning Our City: 2041 - January 17th, 2019



OPTION 2- Envisioning Our City: 2041 - January 17th, 2019

## Input received on Discussion Topic #3

# Which Options do you prefer, and Why?

#### **OPTION 1**

Meets intensification targets a bit better

Concerning road closure on Tutela Heights Rd, an effective immediate solution to the problem of road stability would be to reduce heavy truck traffic down that road.

Property west of Davern Rd should remain as estate lots for future development

### **OPTION 2**

There is more Transitional Residential, while keeping in line with existing neighbourhood

Neighbourhood Corridor adjacent to the cemetery which provides separation

Flexibility preferred as to the location of the new Collector Rd opposite Gilkison

Support medium density in Neighbourhood Corridor (towns, stacked towns, and walk up apartments)

Better residential flow

In Zone 1, to the right of bottom left corner across from Park (P) an additional Neighbourhood Corridor added as well, high density







### **Notice of Public Information Centre**



CITY OF BRANTFORD

OFFICIAL PLAN

**ENVISIONING OUR CITY: 2041** 

Notice of Public Information Centre
Official Plan Review
Settlement Area Expansion and Land Use Options for the
Boundary Adjustment Lands

Thursday January 17<sup>th</sup>, 2019 6:00pm Brantford and District Civic Centre Auditorium 69 Market St. S., Brantford

The City of Brantford is creating a new Official Plan to guide growth and development to the year 2041. The new Official Plan will account for the Boundary Adjustment Lands that were transferred from Brant County to the City in 2017, and conform to the Province of Ontario's 2017 Growth Plan for the Greater Golden Horseshoe. The process will determine how much of the Boundary Adjustment Lands are to be included within the City's urban Settlement Area. A Master Plan will then establish land uses, environmental management and design guidance for those lands, as well as the infrastructure requirements in co-ordination with updates to the City's Transportation Master Plan and Master Servicing Plan.

#### How will the City's Expansion Lands Grow and Develop?

#### We Want to Hear from You!

At this meeting two Settlement Area expansion options will be on display along with land use concepts for the North Expansion Area and Tutela Heights. A presentation about the options and concepts for each area will be provided. Following the presentation, you will be invited to share your thoughts on the options working in small table groups. Community input is an important contribution to the ongoing evaluation of the options and identification of a preferred direction for the North Expansion Area and Tutela Heights.



#### FOR MORE INFORMATION, PLEASE CONTACT

**LEARN MORE AT** 

Alan Waterfield, Senior Policy Planner 519-759-4150 ext.5163 <u>AWaterfield@brantford.ca</u> Joshua Schram, Policy Planner 519-759-4150 ext.5873 JSchram@brantford.ca Brantford.ca/OfficialPlan

Individual or Company	Comment Summary	Response
1 GSP Group and MTE Consulting assisting TSTL (Brantford) Building Corp February 19, 2019	<ul> <li>Concern with the lack of recognition that parts of the urban expansion area are already developed and are unlikely to re-develop within the 2041-time horizon.</li> <li>Concerned that no contingency factor has been included in the land needs calculations, which recognize that some properties do not develop in a timely way. As well, with more detailed planning the City will find areas of natural features that will require more land than originally contemplated.</li> <li>Majority of land is farmed and from an agricultural perspective, there is little difference across the band north of Powerline Road.</li> <li>In the case of the two tributaries found in Blocks C7 and C8, these farm drain channels pose little impediment to development, and the two blocks should be rated the same.</li> <li>Sanitary sewer provision should be considered where the limits are drawn with respect to the eastern edge of the urban expansion in the two options. With reasonable amounts of grading and filing, the majority of the 177 Powerline Road can be serviced by gravity given the invert of the Coulbeck Road trunk sewer.</li> <li>The Part 2 report states that to service Block C8 would require services to cross environmental features. For these reasons, Block C8 ranked lower. Disagree and urge the City to consider the 177 and 211 Powerline Road as part of the C7 block and in the first stage of urban development.</li> <li>Disagree with the Part 2 report stating that Block C8 will likely requires more complex servicing solutions and possibly more ponds.</li> <li>Prudent for the City to delete lands west of Highway 24 as this land must drain eastward all the way to the Coulbeck sewer and add lands to the west portion of Block C8.</li> <li>Boundary between Blocks C7 and C8 do not follow a hard 'edge' and splits 211 Powerline Road into two blocks. The limits of Block C8 should be revised.</li> </ul>	<ul> <li>and impact on Agri-food networks. This has been done.</li> <li>All tributaries have been assessed in this stage as to whether they are streams or Headwater Drainage Features and if the latter whether they should be maintained.</li> <li>The preliminary trunk servicing approach is based on existing ground elevations and identified natural heritage system. There will be opportunity to optimize the local servicing approach through the development approval process. Extent of the sanitary servicing to the eastern built limits will be dependant on the preferred land use option.</li> <li>Agreed a portion of the 177 Powerline Road, can likely be serviced via</li> </ul>

2	George Lou Karmiris January 19, 2019	<ul> <li>Stantec's concept plan for this property reconfigured the drainage easement to go along the front of Powerline Road. City should keep the drainage easement going along the front of their property opposed to down the side of each property.</li> <li>City owned lands should be used for all the community facilities – schools, parks etc.</li> <li>The drainage feature is a watercourse. A Headwater Drainage Feature Assessment is being completed as part of the Subwatershed Study. Drainage features may be realigned and relocated as feasible according to the Headwater Drainage Feature Assessment.</li> <li>The drainage feature is a watercourse. A Headwater Drainage Feature Assessment is being completed as part of the Subwatershed Study. Drainage features may be realigned and relocated as feasible according to the Headwater Drainage Feature Assessment.</li> <li>The draft Preferred Land Use plan proposes a Community Park on City owned lands.</li> </ul>
3	IBI Group on behalf of Annspel Holdings Limited February 26, 2019	<ul> <li>Consideration should be given to extending the Neighbourhood Corridor on the southern side of the future Collector Road and potentially adjacent to Balmoral Drive.</li> <li>Transition from existing residential pre-Growth Plan densities to ensure compatibility and size of property where there isn't a mix of residential densities</li> <li>The proposed road from Powerline Road and Balmoral Drive in Option 2A and Option 2B should be situated to avoid the existing residence on the west side of Balmoral Drive and consider the location of the Driveway to Northridge Golf Course</li> <li>The proposed neighbourhood park within Options 2A and 2B located north of the future Collector Road should be located in the adjacent lands given that there is an existing park south within the built lands.</li> <li>GRCA Permit would be required if overland channel is proposed to be removed through the development approval process</li> <li>Recommend obtaining input as to the number, location and land requirements for schools from the School Boards prior to the finalization of the Secondary Plan.</li> <li>The draff Preferred Land Use plan provides for Neighbourhood Corridor on the south side of Powerline Road, west of the golf course, as a transition to the Prestige Employment area and along parts of the future collector road and the future extension of Balmoral Drive.</li> <li>That graff Preferred Land Use plan provides for Neighbourhood Corridor on the south side of Powerline Road, west of the golf course, as a transition to the Prestige Employment area and along parts of the future collector road and the future extension of the future collector road and the future extension of the future collector road and the future extension of the future collector road and the future extension of Balmoral Drive.</li> <li>There is no existing residence. It is a pipeline station.</li> <li>Balmoral Drive and the future extension of Smith's Lane is a driveway on the golf course.</li> <li>The draff Pr</li></ul>
4	Brantford Homebuilders' Association February 27 2019	finalization of the Secondary Plan.  There may be an opportunity for a portion of the property to be developed by extending existing municipal water and wastewater servicing.  Recommend that the City plan municipal infrastructure beyond the 20-year planning horizon of year 2041.  Request City provides detailed analysis for the municipal infrastructure required to support the plan, the cost, how it will be funded and the proposed timing.  Support additional Employment Area lands needs to accommodate future forecast.  Support additional employment lands and additional housing opportunities in the core, developed areas and greenfield areas.  Concern expressed on whether the Alternative Intensification target can be achieved.  Request that the City continues to monitor the performance of the policy framework and specifically with achieving the targets of the Plan after the Official Plan is approved.

		<ul> <li>Support the proposed density and mix of housing types for the new Designated Greenfield lands.</li> <li>Recommend the Official Plan provide direction to future Official Plan reviews that the additional lands (Boundary Lands not required for the 2041 planning horizon and Trigger lands) would be reviewed for the future expansion of the Urban Boundary.</li> <li>Recommend the City define sufficient time and date to provide comments from public, landowners and stakeholders following each PIC or the release of new information</li> </ul>	<ul> <li>This comment will be considered in preparing the next draft of the Official Plan.</li> <li>Comment noted on better communication for future commenting periods</li> </ul>
5	IBI Group and Walter Fedy on behalf of 2577909 Ontario Inc. and GLK Brantford Holdings Inc. February 27, 2019	<ul> <li>Not all criteria should be considered and weighed equally in ranking of the Community Expansion Blocks.</li> <li>Ranking system is very subjective and was never really explained.</li> <li>Further reconsideration of the weighted criteria should be completed for 'combined' area'.</li> <li>It is our observation that decisions are being made without the benefit of field work and technical information related to transportation and infrastructure.</li> </ul>	<ul> <li>Weighting was not used as the policy directions in the Growth Plan and PPS for settlement expansion all equally apply.</li> <li>The MCR Part 2 Report provides a detailed overview of each Blocks ability to meet the criteria and measures which explains how a Block was ranked.</li> <li>The evaluation of Options 1 and 2 in the MCR Part 3 Report provides detailed evaluation of key growth management criteria.</li> <li>Field work was conducted for both natural heritage features and headwater drainage features. Servicing infrastructure and transportation infrastructure were both evaluated in Stage 4 with further detailed municipal servicing analysis in Stage 6.</li> </ul>
		<ul> <li>Consideration should have been given to ensure that the preferred urban boundary was identified first before land use decisions are being made.</li> <li>Agree with City that it is appropriate to include the subject lands within both Options for the use of Community Expansion Area.</li> <li>Option 2 is preferred as it would ensure public ownership of Jones Creek, better integrates into the new expanded community and provides for better servicing corridors and connectivity.</li> <li>Support principle of having an east-west Proposed Collector Road.</li> <li>Prefer Neighbourhood Corridor to be provided on both sides of the Proposed Collector Road system and adjacent to Powerline Road.</li> <li>Request clarification of the permitted land uses and regulation for the Neighbourhood Centre and permit a broader list of uses including mixed use buildings and apartments.</li> <li>Plan should speak to requiring preparation of Urban Design Guidelines.</li> <li>Question whether the Natural Heritage Systems designation is appropriate for the existing Municipal Drain.</li> <li>GRCA mapping identifies drainage features as Regulated Area. Further additional work should be completed to determine the appropriate approach for protection and mitigation.</li> </ul>	<ul> <li>Land use options helped to assess in greater detail the transportation network and the municipal servicing solutions in Stage 6.</li> <li>Neighbourhood Corridor in both locations would result in a higher unit mix of townhouses than was proposed in the MCR Part 1 Report.</li> <li>The MCR Part 3 Report sets out policy directions for the Neighbourhood Centre which is proposed to permit a broad range of uses.</li> <li>Urban Design Guidelines are being prepared as part of Stage 6.</li> <li>With respect to the existing drainage features, study is ongoing to determine opportunities (e.g., relocation, mitigation) and constraints for future management of both headwater and watercourse features in the area. Preliminary headwater feature management opportunities have</li> </ul>
		<ul> <li>Consideration should be given to relocation/ reforming of features in poor conditions for overall improvements. Drainage provides opportunity for bank stabilization and greater erosion and sediment control (i.e. Jones Creek).</li> </ul>	<ul> <li>been identified. A Headwater Drainage Feature Assessment is being completed as part of the Subwatershed Study in Stage 6.</li> <li>Drainage features may be realigned and relocated as feasible according to the Headwater Drainage Feature Assessment.</li> </ul>

		<ul> <li>Environmental features need to be reviewed in greater detail in support of development applications to determine significance.</li> <li>Question if the Neighbourhood Parks are meeting the needs of the</li> </ul> <ul> <li>The Official Plan will require an Environmental Impact Statement (EIS) at the development applications stage to confirm boundaries and significance.</li> <li>at the time a park is developed public input would inform the design</li> </ul>
		community given demographic changes and community demands.  and elements include in the park to reflect the needs of the community
		- City should ensure the School Boards provide comments prior to the selection of the preferred Option.
		- City should evaluate the municipal owned lands and provide intent for these lands.  - City should request transfer of jurisdiction of the partherly section of the purpose of evaluating King Coorge Bood as a Controlled.
		- City should request transfer of jurisdiction of the northerly section of King George Road for consistency with the southern section.  - That was the purpose of evaluating King George Road as a Controlled Access Arterial versus a Major Arterial.
		- Recommend locating proposed Sewage Pumping Station on Powerline Road to prompt reconstruction of Powerline Road.  - The preliminary trunk servicing approach is based on existing ground elevations and identified natural heritage system. Consideration will be
		<ul> <li>Prefer that the watermain be located along Powerline Road to provide options/flexibility for employment lands to the west and provides for looping and redundancy in supply minimizes distance of upgraded watermain required and could be connected to a new water tower.</li> <li>Recommend the proposed location(s) of sanitary pumping station take buildout of development into consideration when determining the</li> </ul> made to minimize the number of sewage pumping stations required such that efficient servicing can be provided. The number and location of sewage pumping stations will be dependant on the preferred land use plan and grading within the development lands. There will be opportunity to optimize the local servicing approach through the development approval process. The provided of the number of sewage pumping stations required such that efficient servicing can be provided. The number and location of sewage pumping stations will be dependant on the preferred land use plan and grading within the development lands. There will be opportunity to optimize the number of sewage pumping stations required such that efficient servicing can be provided. The number and location of sewage pumping stations will be dependant on the preferred land use plan and grading within the development lands. There will be opportunity to optimize the number of sewage pumping stations required such that efficient servicing can be provided. The number and location of sewage pumping stations will be dependant on the preferred land use plan and grading within the development lands. There will be development approach through the development approval process.
		<ul> <li>location, the number pumping stations, and the depth.</li> <li>A single strategically located and designed Sewage Pumping Station could service the C5 lands in addition to lands of C7.</li> <li>A gravity trunk sanitary sewer can be extended west from Coulbeck Road on Powerline Road, which would provide for the lands from the east and west to connect into the Sewage Pumping Station.</li> <li>It is our preference that one Sewage Pumping Station be located adjacent to Powerline Road and more centrally located to maximize the lands that can be serviced.</li> <li>The north lands trunk watermain will be located along the collector road, based on the preferred land use plan, to efficiently convey water to high water use areas. Further, the location of the future elevated tank is subject to an additional study and preferred land use option.</li> <li>C5 and C7 are bisected by watercourses resulting in challenging topography; as such, at minimum one sewage pumping station will be dependent on the preferred land use plan and detailed development layout. Consideration will be made for the Stantec Conceptual Sanitary Catchment Area Plan.</li> </ul>
6	IBI Group on behalf of 1959026 Ontario Inc. February 28, 2019	<ul> <li>Support proposed collector road in Option A, which extends east from Garden Avenue.</li> <li>These lands are suited for large format retail and similar service commercial type uses given their proximity to a 400 series highway and the interchange.</li> <li>Large format retail is not an appropriate land use in Prestige Employment designation. Commercial uses supporting the employment area and employees.</li> </ul>
7	IBI and Stantec on behalf of 1869721 Ontario limited (Kennedy Farm) February 28, 2019	<ul> <li>Agrees that the small western portion of the lands should be designated as Natural Heritage System as shown on the maps.</li> <li>Concerns with the proposed location of the connection of the proposed collector road to Gilkison Street at Mount Pleasant Road, which is located at a bend where visibility could be limited. The collector road connection to Mount Pleasant, better sight lines and fewer grading constraints as it is located in the middle of a greenfield.</li> <li>Options 1 and 2 show the northerly collector road connection with Mount Pleasant aligning with Gilkison Road. The intent was to minimize the number of significant/signalized intersections along Mount Pleasant. This location is technically feasible. In acknowledging the other non-transportation impacts of such an alignment, the draft preferred Land Use plan shows a more northerly connection to Mount Pleasant. The specific alignments of collector roads and connections will be the subject of more detailed traffic and</li> </ul>
		<ul> <li>Consideration should be given to utilize mix of 55% single detached, 40% townhouses and 5% apartments.</li> <li>Consideration should be given to transition from existing residential to</li> <li>engineering at the master plan stage.</li> <li>This unit mix will apply to all further Designated Greenfield Areas.</li> <li>Transition to adjacent residential will be addressed in the Official Plan.</li> </ul>

		<ul> <li>ensure compatibility with the existing development.</li> <li>The Wastewater Option 2 alternative would involve reconstruction of existing Gilkison Street to service lands, which can be an inconvenience to the public and is costlier. Option 1 is preferred.</li> <li>Based on topology, the Kennedy lands and other adjacent lands would provide a stormwater management facility located in the northeast corner of the subject property.</li> </ul>	<ul> <li>Both Tutela Heights options involve new trunk servicing and the likely reconstruction of either Mount Pleasant Street or Gilkison Street; consideration will be made to minimize construction impacts with the preferred alternative.</li> <li>SWM will be designed to suit the preferred land use option. A stormwater management plan will be prepared in Stage 6 of the Study.</li> </ul>
8	IBI Group on behalf of E&J Horvath Farms February 28 2019	<ul> <li>corner of the subject property.</li> <li>Client is fully supportive of either option and remain neutral with respect to preference as long as it continues to include E&amp;J Horvath Farms lands</li> <li>Do not favour any of the options that include the extension of Wayne Gretzky Parkway as a controlled access Major Arterial Road.</li> </ul>	<ul> <li>stormwater management plan will be prepared in Stage 6 of the Study.</li> <li>Comment noted.</li> <li>With respect to King George Road, Park Road, and Wayne Gretzky Parkway, the City is working with the MTO to confirm and protect the flexibility of the transportation network and ensure that the jurisdiction of future corridors aligns appropriately with the function of each</li> </ul>
		<ul> <li>Question the need for a 30m buffer to the Natural Heritage System.</li> <li>Property on the west side of Park Road contains a large open meadow that is currently farmed surrounded by a pine plantation. Request that the manmade pine plantation be removed from any Natural Heritage System Designation.</li> <li>Clients support the Neighbourhood Corridor along the internal collector road (Option 1A and 2A) to support higher densities instead of the use of Powerline Road for higher density purposes along one side (Option</li> </ul>	roadway.  The 30 m buffer is consistent with the draft Official Plan.  The Pine plantation is an integral component of the NHS and can be considered as "significant" woodland, in accordance with the Natural Heritage Reference Manual to the Provincial Policy Statement.  However, the boundary of features will be determined through an EIS.
		<ul> <li>1B and 2B).</li> <li>Recommend the future high-school to be located along King George Corridor as it provides central accessibility.</li> <li>Locations of elementary schools appear to be well balanced.</li> <li>Question need for Park Road to connect to the new Wayne Gretzky Parkway extension. Recommend Park Road terminate at Powerline Road.</li> <li>In the next version of the Secondary Plan, the client hopes to receive density ranges for the land use categories to determine unit counts.</li> <li>Location of stormwater management facilities should be based on an overall servicing master plan and a staging of development with centrally located facilities. The use of temporary treatment facilities should also be considered.</li> <li>Suggest that the Secondary Plan incorporates a cost sharing plan and compensation measures to ensure all landowners fairly contribute to the provision of stormwater management facilities.</li> </ul>	<ul> <li>The school board will be consulted to confirm the preferred location of the High School</li> <li>For Park Road, an extension was identified as a benefit to the system as it eliminates the potential for parallel transfers on Powerline - a condition that exists as part of the existing network at Lynden Road between Wayne Gretzky Parkway and Park Road North.</li> <li>Policy directions are set out in the MCR Part 3 Report including minimum densities for the various designations.</li> <li>A stormwater management plan will be prepared in Stage 6.</li> <li>Temporary SWM facilities will only be considered during development phasing based on timing.</li> <li>A cost sharing policy will be considered in the Official Plan.</li> </ul>
9	IBI Group on behalf of North Powerline Road Development Group February 28, 2019	<ul> <li>Not all criteria should be considered and weighed equally in ranking of the Community Expansion Blocks.</li> <li>Ranking system is very subjective and was never really explained.</li> <li>Further reconsideration of the weighted criteria should be completed for 'combined' area'</li> <li>It is our observation that decisions are being made without the benefit</li> </ul>	<ul> <li>See previous response.</li> <li>See previous response.</li> <li>See previous response.</li> <li>See previous response.</li> </ul>
		of field work and technical information related to transportation and infrastructure.  - Consideration should have been given to ensure that the preferred	- See previous response.

- urban boundary was identified first before land use decisions are being made.
- Concern expressed on whether the Alternative Intensification target can be achieved.
- Request that the City continues to monitor the performance of the policy framework and specifically with achieving the targets of the Plan after the Official Plan is approved.
- Recommend that the City plan municipal infrastructure beyond the 20year planning horizon of year 2041.
- Recommend the Official Plan provide direction to future Official Plan reviews that the additional lands (Boundary Lands not required for the 2041 planning horizon and Trigger lands) would be reviewed for the future expansion of the Urban Boundary.
- Recommend that the City proceed with Option 2. Significant benefit of including lands in C6 including protection of the Jones Creek NHS in public ownership, enhance options to walk and cycle, connection of C5 and C6 through proposed collector road and provides development along King George Road and Park Road.
- Preference is Option 2B for the inclusion of the C6 lands and orientation of the Neighbourhood Corridor to Powerline Road.
- Recommend City works with Province to claim ownership of King George Road from Powerline Road north to Governors Road and classify it as a Major Arterial Road.
- The extension of Park Road North beyond Governor's Road in Option
   2B is discouraged as it will affect farmland
- Discourage the idea of Park Road North replacing the function of Controlled Access Major Arterial on King George and believe the City can utilize Parks Road in a more effective and sustainable matter.
- Support east-west Proposed Collector Roads both south and north of Jones Creek.
- Recommend future extensions of collector roads be shown with arrows.
- Agree that the intersection of King George Road and Powerline Road and the intersection of Park Road North and Powerline Road should be "focal nodes". Request that the range of permitted land uses be clearly defined for the Community Commercial Mixed-use and Greenfield Intensification Corridor.
- Request clarification of the permitted land uses and regulation for the Neighbourhood Centre and permit a broader list of uses including mixed use buildings and apartments.
- Preference for Neighbourhood Centre to be oriented to Powerline Road and King George Road.
- Question if the Neighbourhood Parks are meeting the needs of the community given demographic changes and community demands.
- City should ensure the School Boards provide comments prior to the selection of the preferred Option.

- See previous response.
- See previous response.
- See previous response.
- See previous response.
- Thank you for your input on the preferred option.
- It should be noted that the core NHS is to be protected regardless of ownership and the timing of when the NHS comes into public ownership as development occurs adjacent to it. Both Settlement Area Boundary Expansion Options 1 and 2 provide opportunity for a continuous public ownership and active transportation network along at least the south side of Jones Creek corridor.
- Previous comments from IBI Group indicated that the Neighbourhood Corridor along the Collector Road was preferred.
- King George Road and Wayne Gretzky Parkway will be subject to further detailed study by both the City and the Ministry.

- Agree Arrows have been added to the draft Preferred Land Use plan.
- Policy directions are set out in the MCR Part 3 Report for the various designations.
- See previous response.
- Neighbourhood Centres are intended to be smaller mixed use areas with commercial uses servicing the neighbourhood. Powerline Road location does not provide as central a location. King George Road is identified as an Intensification Corridor which provides for higher density residential and more substantive commercial uses.
- at the time a park is developed public input would inform the design

		- Environmental features need to be reviewed in greater detail in support of development applications to determine significance.	and elements include in the park to reflect the needs of the community - See previous response.
		- Consideration should be given to relocation/ reforming of features in	- See previous response.
		poor conditions for overall improvements. Drainage provides	Coo providuo response.
		opportunity for bank stabilization and greater erosion and sediment	- See previous response.
		control (i.e. Jones Creek).	· ·
		- The principal of maximizing the public ownership of the core Natural Heritage System be a priority.	- See previous response.
		<ul> <li>Prefer that the watermain be located along Powerline Road to provide options/flexibility for employment lands to the west and provides for looping and redundancy in supply</li> <li>Question whether the proposed water tower should be located further north along Hwy 24 closer to Governors Road.</li> <li>Recommend that one sewage pumping station be located adjacent to Powerline Road and more centrally located in order to maximize the lands that can be serviced.</li> <li>Also note that the proposed sewage pumping station located on the City of Brantford owned lands (within C5), appears to pump up to the Wayne Gretzky Parkway extension. Is the Coulbeck sanitary sewer to be extended westerly to Wayne Gretzky Parkway, or should the force main extend directly to the Coulbeck sanitary sewer at its current terminus?</li> <li>Question the need for four sewage pumping stations with respect to C6.</li> <li>Question whether the Natural Heritage Systems designation is</li> </ul>	<ul> <li>The recommended location of the north lands trunk watermain will be identified following more detailed evaluation as part of the Secondary Plan. It is anticipated that the trunk watermains will be located along the intensification corridor, based on the preferred land use option, to efficiently convey water to high water use areas</li> <li>Sighting of the Water Tower will be subject to a Schedule B Municipal Class Environmental Assessment, and will consider technical, financial, social-cultural, and environmental factors.</li> <li>The preliminary trunk serving approach is based on exiting ground elevations and identified natural heritage system. Consideration will be made to minimize the number of sewage pumping stations required such that efficient servicing can be provided. The number and location of sewage pumping stations will be dependant on the preferred land use plan and grading within the development lands. There will be opportunity to optimize the local servicing approach through the development approval process.</li> <li>Regarding the connection of the forcemain to the Coulbeck sewer. It is</li> </ul>
		<ul> <li>appropriate for the existing drainage ditch.</li> <li>Recommend that the municipal drainage ditch to be relocated to the east property limits. This will allow for physical improvements to the municipal drainage ditch while providing flexibility to the City lands to the east by avoiding development fragmentation of City lands and adjacent lands.</li> </ul>	anticipated that the Coulbeck sewer can be extended to roughly 500 m west of Park Rd. This is where the forcemain from the sewage pumping station in C5 is proposed to be tied in.  - See previous response.  - See previous response.
10	IBI and Walter Fedy on behalf of	Not all criteria should be considered and weighed equally in ranking of	- See previous response.
	Allan and Gary Norris	the Community Expansion Blocks.	
		- Ranking system is very subjective and was never really explained.	- See previous response.
	February 28, 2019	<ul> <li>Further reconsideration of the weighted criteria should be completed for 'combined' area'.</li> </ul>	- See previous response.
		<ul> <li>It is our observation that decisions are being made without the benefit of field work and technical information related to transportation and infrastructure.</li> </ul>	- See previous response.
		<ul> <li>Consideration should have been given to ensure that the preferred urban boundary was identified first before land use decisions are made.</li> <li>Option 2 is preferred as it includes Block C6.</li> </ul>	- See previous response.
		Option 2B is preferred for the orientation of the Neighbourhood Corridor.	- Thank you for your input on the preferred option.

- P cc - Q - C - C - C	Support having an east-west Proposed Collector Road. Preference for the Neighbourhood Corridor to be on both sides of the collector road and also adjacent to Powerline Road. Question if the Neighbourhood Parks are meeting the needs of the community given demographic changes and community demands. Dity should ensure the School Boards provide comments prior to the celection of the preferred Option. The School in C5 should be more central.	-	See previous response.  at the time a park is developed public input would inform the design and elements include in the park to reflect the needs of the community
CC - C SE CE - C	community given demographic changes and community demands.  City should ensure the School Boards provide comments prior to the selection of the preferred Option. The School in C5 should be more		
- C	Citial.		See previous response.
	City should evaluate the municipal owned lands and provide intent for hese lands.	-	See previous response.
of	Environmental features need to be reviewed in greater detail in support of development applications to determine significance.		See previous response.
po Op	Consideration should be given to relocation/ reforming of features in coor conditions for overall improvements. Drainage provides apportunity for bank stabilization and greater erosion and sediment control (i.e. Jones Creek).	_	See previous response.
- TI H - C K - R - P fo u <sub>1</sub> to - R	The principal of maximizing the public ownership of the core Natural Heritage System be a priority.  City should request transfer of jurisdiction of the northerly section of King George Road for consistency with the southern section.  Recommend locating proposed Sewage Pumping Station on Powerline Road to prompt reconstruction of Powerline Road.  Prefer that the watermain be located along Powerline Road to provide or efficient use of existing infrastructure, minimizes distance of appraded watermain required and could be connected to a new water ower.  Recommend that one sewage pumping station be located adjacent to Powerline Road and more centrally located in order to maximize the lands that can be serviced.		See previous response. It should be noted that the core NHS is to be protected regardless of ownership and the timing of when the NHS comes into public ownership as development occurs adjacent to it. Both Settlement Area Boundary Expansion Options 1 and 2 provide opportunity for a continuous public ownership and active transportation network along at least the south side of Jones Creek corridor.  See previous response See previous response. See previous response. See previous response.
Welton & Innes G.P. Inc. (associated with the Sorbara Group of Companies).  February 28, 2019  E  au  as  - B  "n  - M  pa  of	The re-evaluation provided in MSH's document focuses on Block C10 and the criteria which when applied to the block are not ranked as most-preferred" in the Part 2 Evaluation Matrix recognizing that C10 is anked "most preferred" for the majority of the Criteria.  The MSH document recommends that the City's Detailed Evaluation Matrices and correspondingly the Community Area Expansion Evaluation Matrix be updated to reflect the adjustments to the valuation and rankings of the various Blocks against the Principles and Criteria as recommended in the document.  Block C10 based on the analysis by BA Group should be ranked as most preferred" for all transportation criteria.  Municipal servicing can be extended directly to Block C10 without bassing through other Expansion Blocks, whereas servicing of some other Expansion Blocks must be sequenced as the Expansion Blocks levelop. As such development of Block C10 can be achieved	-	The more detailed evaluation and criteria included in the MCR Part 3 Report addresses the points made regarding more detailed evaluation and updated criteria to properly inform confirmation of the preferred option.  Block C10 is adjacent to existing transit service on Lynden/Garden, but the penetration of service into the block via a collector road in the form of a crescent, is not considered optimal. Areas where service could be logically extended while maintaining a good route penetration from operational perspective were considered to be preferred While it is agreed that there is a good opportunity to provide an Active Transportation connection into the existing westerly neighbourhood, this is the only feature that is considered "easy". A northern connection through the NHS for any facility (Road, Transit) will have significant impacts and costs. Using Lynden Road as a connection is problematic because of the limited potential for vehicle access (limited

The ranking of Block C10 as "Constrained" in terms of the number of known archaeological resources is based on inaccuracies in the material on which the rankings are based and also does not reflect the fact that there have been changes in Provincial criteria, which no longer necessitate a Stage 3 assessment for the lands in Block C10. Further is appears to penalize the property because archaeological assessment has already been conducted.	<ul> <li>Block C10 is considered a feasible opportunity from a Transportation perspective but it has constraints which do limit its full potential.</li> <li>Municipal servicing of Block C10 will be subject to the available capacity within the existing systems. Should capacity upgrades in the existing networks be required, upgrades will need to consider the Citywide servicing strategy and make allowances for servicing of all lands within the City's Municipal Boundary. Consideration for phased development, to allow for partial development before triggering infrastructure upgrades, will be made.</li> <li>The servicing review carried out in the MCR Report Part 2; consisted of a high level servicing review based on existing ground elevation, the identified natural heritage system, and existing water and wastewater system capacities. Further, the servicing assessment for individual blocks included considerations of the City wide servicing strategy needs; which includes allowances for the servicing of all lands within the City's Municipal Boundary.</li> <li>A portion/all of Block C10 can likely be serviced via direct extensions of the existing water and wastewater systems; however, any servicing strategy and supporting system upgrades would need to account for the provisions such as the future extension of services to Block C9 and/or issues related to system security and looping.</li> <li>The more detailed evaluation and criteria of the potential land use options is included in the MCR Part 3 Report. This includes a more detailed servicing review of the potential expansion areas to more clearly define likely servicing needs, costs, and constraints.</li> <li>Overall, none of the stormwater constraints identified within the potential development blocks were found to significantly limit the development potential within the expansion lands, and that any of the</li> </ul>
	blocks included considerations of the City wide servicing strategy needs; which includes allowances for the servicing of all lands within the City's Municipal Boundary.  - A portion/all of Block C10 can likely be serviced via direct extensions
	strategy and supporting system upgrades would need to account for the provisions such as the future extension of services to Block C9 and/or issues related to system security and looping.  The more detailed evaluation and criteria of the potential land use
	detailed servicing review of the potential expansion areas to more clearly define likely servicing needs, costs, and constraints.  - Overall, none of the stormwater constraints identified within the
	development potential within the expansion lands, and that any of the potential constraints could be addressed through typical stormwater management features; with certain areas likely requiring more stringent management targets. As such, stormwater management was not determined to be a limiting or significant component in overall
	evaluation of the development blocks.  - In regards to the comment that the archaeology evaluation penalizes properties which have already been subject to an archaeological assessment, this is only the case for Blocks where an archaeological assessment has identified sites with Cultural Heritage Value or Interest
	(CHVI) and where the archaeological assessment report recommends further work be conducted prior to clearance for development. It is not necessarily a constraint but rather the recognition that this property may carry higher costs to a developer related to mitigating the archaeological site before being approved for development.

12	Waterous Holden Amey Hitchon solicitors for Aragon Amusements Inc.  March 1, 2019	<ul> <li>Request that the entirety of Aragon Amusements property is to be preferred.</li> <li>Lands are not impacted by any natural heritage features and are not affected by floodline, wetlands or woodlots.</li> <li>Subject lands are near County employment lands and to 403 interchanges.</li> </ul>	- The northern portion of the property is affected by natural heritage features and is more difficult to service and was not included for the reasons set out in the MCR Part 2 Report.
13	Caraszma Developments	- Part of the North Powerline Road Development Group.	- Thank you for your input on the preferred option.
	March 4, 2019	<ul> <li>Prefers Option 2B.</li> <li>Believe the city evaluation characterized the block for what the city knew and may not have correctly or sufficiently characterized when</li> </ul>	- See previous response.
		<ul> <li>considering the cumulative impact of developing an urban boundary/</li> <li>Recommend the City takes over jurisdiction of King George Road within the city limits.</li> </ul>	- See previous response.
		- Park Road should remain a City owned road and not be extended north of Governors Road.	- See previous response.
		<ul> <li>Consideration for the Proposed Pumping Station location to be along the Park Road public access as the area of St. George is currently set expand.</li> </ul>	- See previous response.
		<ul> <li>Stantec's work has reduced the number of pumping stations while maximizing the areas that each would serve.</li> <li>Inclusion of C5 and C6 collectively provides the opportunity for a</li> </ul>	- Consideration will be made for the Stantec Conceptual Sanitary Catchment Area Plan.
		complete neighbourhood that is reflective in size to existing neighbourhoods within the city that are bounded by arterial roads.  - C6 is the largest and least fragmented by environmental features and provides the opportunity for the least amount of constraints	- Thank you for your input on the preferred option.
14	Walton Global Investments LTD.	- Portion of parcels under the same legal description and ownership are split between Trigger Area and Settlement Area boundary, potentially affecting attractiveness of the residential opportunity in Tutela Heights.	- The Trigger Lands were established under Municipal Boundary Adjustment Agreement. It is the intent of the Agreement approved by both Councils that the Trigger lands would be the last lands to develop,
	March 11, 2019	<ul> <li>Believe there is a strong basis for additional growth and an expanded settlement boundary in the Tutela Heights area.</li> <li>Tutela Heights should be seen as a unique "suburban infill" opportunity</li> </ul>	notwithstanding the ability to make adjustments. The Trigger Lands are not required at this time or in advance of other lands not added to the Settlement Area that are not subject to the Trigger Lands provision.
		<ul> <li>within Brantford</li> <li>Tutela Heights could benefit from the certainty of all lands having a Settlement Boundary Designation and being removed from the Trigger Lands designation. If portion of the lands remain trigger lands it can enable the delivery of a comprehensively designated and cohesive community as an objective of all stakeholders</li> </ul>	The request to include all of Tutela Heights at this time would be a major adjustment not in keeping with the intent of the Trigger Lands provision.
		- Mapping of the NHS areas should be updated to reflect the existing agricultural use on the subject lands the disturbed lands as a result of agricultural activity. This would be accomplished by deleting that portion of the NHS identified on the airphoto south of the settlement area located on the larger of the two middle parcels.	- The NHS lands in question have been identified by the Province as part of the Growth Plan Natural Heritage System.
		Areal extent of Transitional Residential in the Draft Tutela Heights     Option is too extensive and possibility unwarranted due to the given edge conditions of the adjacent developments, the housing form and	- The Transitional Residential land use designation is not the same as the Suburban Residential and is a transition of larger urban lots, but not of the size of Suburban Residential lots. It provides a compatible

		the existing parcel fabric. Infilling and/or redevelopment of the existing residential areas can create opportunities for a wider range of housing forms and increase density.	interface with the larger Suburban Residential lots. The Transitional Residential designation provide the opportunity to introduce an upscale executive residential development in Brantford. The MCR Part 3 Report provides proposed policy directions on the density in the Transitional Residential designation.
15	Langford Conservancy	<ul> <li>Due to the recently proposed Amendment No. 1 to the Growth Plan, it is recommended that the Envisioning Brantford Plan not proceed until</li> </ul>	- The Official Plan is not intended to be adopted until early 2020.  Amendment 1 is anticipated to be in place by then and Envisioning
	Summary based on analysis	Amendment No. 1 has been approved by the City	Brantford will need to conform to it.
	undertaken by Kevin Eby	- Population growth in Brantford for the period of 2011 to 2016 has been	- The City has not control over the population numbers in the Growth
		43% lower than anticipated. Based on this it is predicted that the	Plan to which it must implement.
	February 8, 2019	actual growth numbers to 2041 will be much lower. Recommended the	
		Province review the population forecast with the actual population growth numbers for Brantford.	