

May 9, 2016

The Honourable Steven Del Duca
Minister of Transportation
3rd Floor, Ferguson Block
77 Wellesley St. W.
Toronto, ON M7A 1Z8


**RE: 407 TRANSITWAY (KENNEDY ROAD TO BROCK ROAD)
TRANSIT PROJECT ASSESSMENT PROCESS (5.10)**

Dear Mr. Del Duca:

This will confirm that at a meeting held on May 3, 2016, Council of the City of Markham adopted the following resolution:

- “1) That the 407 Transitway (Kennedy Road to Brock Road) Environmental Project Report be endorsed with the following revisions/conditions:
- a) That the 407 Transitway alignment at Kennedy Road be revised, if applicable, upon finalization of Markham Centre Mobility Hub Study and the amendment of the 407 Transitway alignment west of Kennedy Road.
 - b) That the Ministry of Transportation provide for an additional future station at McCowan Road, and include the preliminary design of the station as part of the EA.
 - c) That the Ministry of Transportation work with the City to restrict vehicular access to the Ninth Line Station through the residential neighbourhoods and resolve any traffic issues resulting from the station access from Old Ninth Line.
 - d) Mitigation of noise and other possible impacts to abutting residential properties at the Ninth Line Station.
 - e) That the Ministry of Transportation relocate the Donald Cousens Parkway Station on the east side of Reesor Road, adjacent to the future GO service on the Havelock Subdivision rail line.

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- f) That the Ministry of Transportation address traffic impact due to station location on Markham Road to mitigate vehicular infiltration to residential neighbourhoods.
 - g) That leading edge sustainable measures be implemented to address stormwater, energy conservation, protection of wildlife corridors and bird friendly guidelines.
 - h) That special consideration be demonstrated regarding accessible design for people with disabilities.
 - i) That in the event an ossuary is discovered, the proper Provincial protocols be followed.
 - j) That the Premier of Ontario, Minister of Transportation and Metrolinx be requested to accelerate the program to a 10-15 year time frame, and to consider public-private partnerships and other opportunities to fund the acceleration.
 - k) That an automated state-of-the-art rail transit system be considered as an alternative to the bus transitway.
 - l) That GO Rail commuter service be advanced on the CP Havelock line.
 - m) That the interchange ramps for all directions on the 407 ETR be protected.
 - n) That the completion of residential roads in Legacy as a result of the 9th Line station be included in the 407 Transitway project budget.
 - o) That estimated costing of the project be provided; and,
- 2) That the Ministry of Transportation be requested to review the detailed station and station access design for all stations with City and Regional staff; and,
 - 3) That staff report back at the detailed design stage with further details related to access requirements, financial implications, potential partnership arrangements, transit oriented development opportunities, and any required agreements between Stakeholders; and,
 - 4) That the Ministry of Transportation provide a crossing and alternative alignment for the Rouge Valley Trail Multi-Use Path between Rouge Valley and Ninth Line at the Ministry's cost, when the 407 Transitway is constructed; and,

- 5) That the Federal Government and the Province of Ontario be requested to evaluate the feasibility of a high speed train from Windsor to Montreal; and that the Highway 407 corridor be considered as part of the route alignment for this train service; and,
- 6) That staff be authorized and directed to do all things necessary to give effect to this resolution; and,
- 7) That staff report back to Committee in fall 2016 prior to the Ministry of Transportation finalizing their Transit Project Assessment Process study on the final study recommendations and Markham's comments; and further,
- 8) That the Minister of Transportation, Minister of the Environment and Climate Change, Metrolinx, Infrastructure Ontario, Regional Municipality of York be advised accordingly."

If you have any questions, please contact Alan Brown, Director of Engineering, at 905-477-7000 ext. 7507.

Yours sincerely,



Kimberley Kitteringham
City Clerk

Encl.

Copy to: The Honourable Glen R. Murray, Minister of the Environment & Climate Change
Leslie Woo, Metrolinx
Ehren Cory, Infrastructure Ontario
Denis Kelly, Regional Clerk

SUBJECT: 407 Transitway (Kennedy Road to Brock Road) Transit
Project Assessment Process

PREPARED BY: Alan Brown, Director of Engineering, Ext. 7507
Marija Ilic, Senior Engineer, Ext. 2136

RECOMMENDATION:

- 1) That the April 25, 2016 presentation by the Ministry of Transportation entitled "407 Transitway (Kennedy Road to Brock Road) Transit Project Assessment Process", be received;
- 2) That the 407 Transitway (Kennedy Road to Brock Road) Environmental Project Report be endorsed with the following revisions / conditions:
 - That the 407 Transitway alignment at Kennedy Road be revised, if applicable, upon finalization of Markham Centre Mobility Hub Study and the amendment of the 407 Transitway alignment west of Kennedy Road,
 - That the Ministry of Transportation provide for an additional future station at McCowan Road,
 - That the Ministry of Transportation work with the City to restrict vehicular access to the Ninth Line Station through the residential neighbourhoods and resolve any traffic issues resulting from the station access from Old Ninth Line,
 - Mitigation of noise and other possible impacts to abutting residential properties at the Ninth Line Station,
 - That the Ministry of Transportation relocate the Donald Cousens Parkway Station on the east side of Reesor Road, adjacent to the future GO service on the Havelock Subdivision rail line;
- 3) That the Ministry of Transportation be requested to review the detailed station and station access design for all stations with City and Regional staff;
- 4) That staff report back at the detailed design stage with further details related to access requirements, financial implications, potential partnership arrangements, transit oriented development opportunities, and any required agreements between Stakeholders;
- 5) That the Ministry of Transportation provide a crossing and alternative alignment for the Rouge Valley Trail Multi-Use Path between Rouge Valley and Ninth Line at the Ministry's cost, when the 407 Transitway is constructed;

- 6) That staff be authorized and directed to do all things necessary to give effect to this resolution; and further,
- 7) That the Minister of Transportation, Minister of the Environment and Climate Change, Metrolinx, Infrastructure Ontario, Regional Municipality of York be advised accordingly.

PURPOSE:

To provide Council with comments and staff recommendations on the Ministry of Transportation draft Environmental Project Report for the 407 Transitway (Kennedy Road to Brock Road).

BACKGROUND:

In 2007, Metrolinx was given a mandate by the Province to develop and implement an integrated multi-modal transportation plan for the GTHA. In 2008, Metrolinx's Board of Directors adopted the "Big Move", a plan that outlines a vision for a new regional transportation system, including the 407 Transitway. The Transitway is to be a separate right of way, located parallel to the 407 and includes running way, stations, platforms, parking, passenger pick up and drop off facilities, running from Burlington to Highway 35/115. The Transitway will initially be implemented as bus rapid transit, with an opportunity to convert to light rail transit in the future.

The Ministry of Transportation (MTO) completed an Environmental Assessment (EA) under the Transit Project Assessment Process (TPAP) on the 23km segment of the Transitway along the Highway 407 corridor through York Region, from east of Highway 400 to Kennedy Road. The EA was approved by the Ministry of the Environment in February 2011. MTO recognized that there are ongoing studies within Markham (Langstaff Gateway and Markham Centre) and have addressed the need for an amendment of the Environmental Project Report if there are significant land use changes affecting the transitway alignment and stations in the EA Study. Markham Council requested that MTO and MOE revise the 407 Transitway alignment to minimize the impact on the development blocks in Markham Centre. To-date, there has not been any resolution of this issue, but it is anticipated that the alignment can be resolved with Metrolinx undertaking the Markham Centre Mobility Hub Study.

Further to completion of the EA west of Kennedy Road, MTO has commenced pre-planning activities for the 19km segment east of Kennedy Road to Brock Road in the City of Pickering. This EA consists of the 407 Transitway alignment and evaluation of stations at McCowan Road, Markham Road, Ninth Line, Donald Cousens Parkway and York-Durham Line in the City of Markham.

OPTIONS/ DISCUSSION:

The MTO has identified the preferred Transitway configuration of the alignment and stations (Markham Road, Ninth Line and Donald Cousens), as illustrated in Attachment 'A'.

Transitway Alignment

In accordance with Council report and resolution of June 2010, MTO, Metrolinx, York Region Rapid Transit Corporation are requested to review and report back to Markham Council on potential alternative alignment in Markham Centre.

Staff request that pending the outcome of the final Transitway alignment and Mobility Hub Study in Markham Centre, this Environmental Project Report (Kennedy Road to Brock Road) be amended to address the potential for an alternative alignment of the Transitway in the vicinity of Kennedy Road.

McCowan Road Station

Two station alternatives were considered for evaluation of McCowan Road Station, as illustrated in Attachment 'B-1'. Further to the evaluation process, MTO has selected the "No Station" option due to access difficulties, excessive costs, alignment issues and land availability. In addition, Hydro One is proposing a new line within its corridor which may limit construction of a terminal.

Metrolinx in their "Big Move" study denoted McCowan Road as a potential north-south transit corridor from Markville Mall to Scarborough Town Centre. McCowan Road may become a major transit corridor and City staff recommend that a future station at McCowan Road be provided for and implemented to service area residents / businesses even if it is a smaller station facility.

Markham Road Station

Alternative Markham Road Station locations were proposed on the south east and south west sides of the 407 ETR and Markham Road, as illustrated in Attachment 'B-2'. The preferred location was identified on the west side, north of the Hydro Corridor.

City staff are in general agreement of the location, subject to resolution of the potential environmental impacts.

Ninth Line Station

Two alternatives on the southeast and the southwest side of the 407 ETR and Ninth Line were evaluated, as illustrated in Attachment 'B-3'. The southwest location was identified as the preferred alternative as the site and the site access have been protected for by MTO for this station. The southeast alternative does not provide for sufficient land to accommodate the stations, parking and associated facilities, due to the Rouge River tributary, future 407 ETR Ramp and commercial / retail development to the south.

City staff are in general support of this location subject to implementation of noise protection for the residential community immediately south of the facility, no vehicular access through the residential neighbourhood, as well as identifying and resolving any traffic infiltration issues and impact to the south due to the station access at Ninth Line and Rouge Bank Drive.

Donald Cousens Parkway Station

The MTO evaluated two alternatives east of Reesor Road, south of 407 ETR and adjacent to CP Havelock rail line, with two access points to the sites as shown in Attachment 'B-5'. Through secondary screening, a new station location west of Reesor Road was evaluated and selected by the MTO as the preferred alternative with station access at the intersection of Donald Cousens Parkway and existing driveway for the commercial lands on the west side of Donald Cousens Parkway, as per Attachment 'B-4'. MTO has identified the lands east of Reesor Road for a potential future GO Station and that preferred 407 Transitway facility on the west side of Reesor Road could be extended to the east, if GO Transit passenger service is implemented on the CP Havelock rail line.

It is anticipated that GO service on the Havelock Line may be in place prior to the 407 Transitway. Staff recommend that the station facility be relocated to the east side of Reesor Road as per Attachment 'B-5' to integrate both the future GO and 407 Transitway transit service. Markham's Official Plan has identified the area east of Donald Cousens Parkway, south of the 407 ETR and adjacent to the CP Havelock rail line as a potential Secondary Hub.

York-Durham Line Station

MTO evaluated a commuter station facility on the east and west sides of York-Durham Line, as illustrated in Attachment 'B-6'. Due to lack of local transit connectivity and negligible ridership demand at this location, MTO is not recommending a station at this location. MTO is however protecting the lands on the southwest location.

City staff are in agreement with the protection of lands for a potential future facility.

Rouge Valley Trail Multi-Use Path (MUP)

The City is constructing the Rouge Valley Trail MUP that will provide a trail along the Rouge River east of Markham Road, crossing the 407 ETR and extending easterly towards Ninth Line, as illustrated in Attachment 'C'.

A section of the MUP has been identified to be overlapping with the preferred Transitway alignment. Staff request that MTO provide a crossing and an alternative location for the MUP at their cost, should the Transitway conflict with the constructed MUP.

Implementation

Metrolinx is currently conducting an update of their "Big Move" Regional Transportation Plan. Their study will update and prioritize the transit requirements in the GTA to 2031.

Staff do not foresee the construction of the 407 Transitway east of Kennedy Road for at least 20 years. A 407 transit service in the form of GO bus service in mixed 407 ETR traffic may be the initial phase.

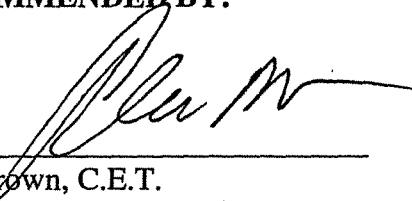
ALIGNMENT WITH STRATEGIC PRIORITIES:

The planning and construction of the 407 Transitway align with Growth Management, Transportation / Transit and Environment initiatives. The provision of the 407 Transitway is critical in achieving these strategic objectives.


BUSINESS UNITS CONSULTED AND AFFECTED:

The Planning Department has reviewed this report and comments have been incorporated.

RECOMMENDED BY:



Alan Brown, C.E.T.
Director, Engineering



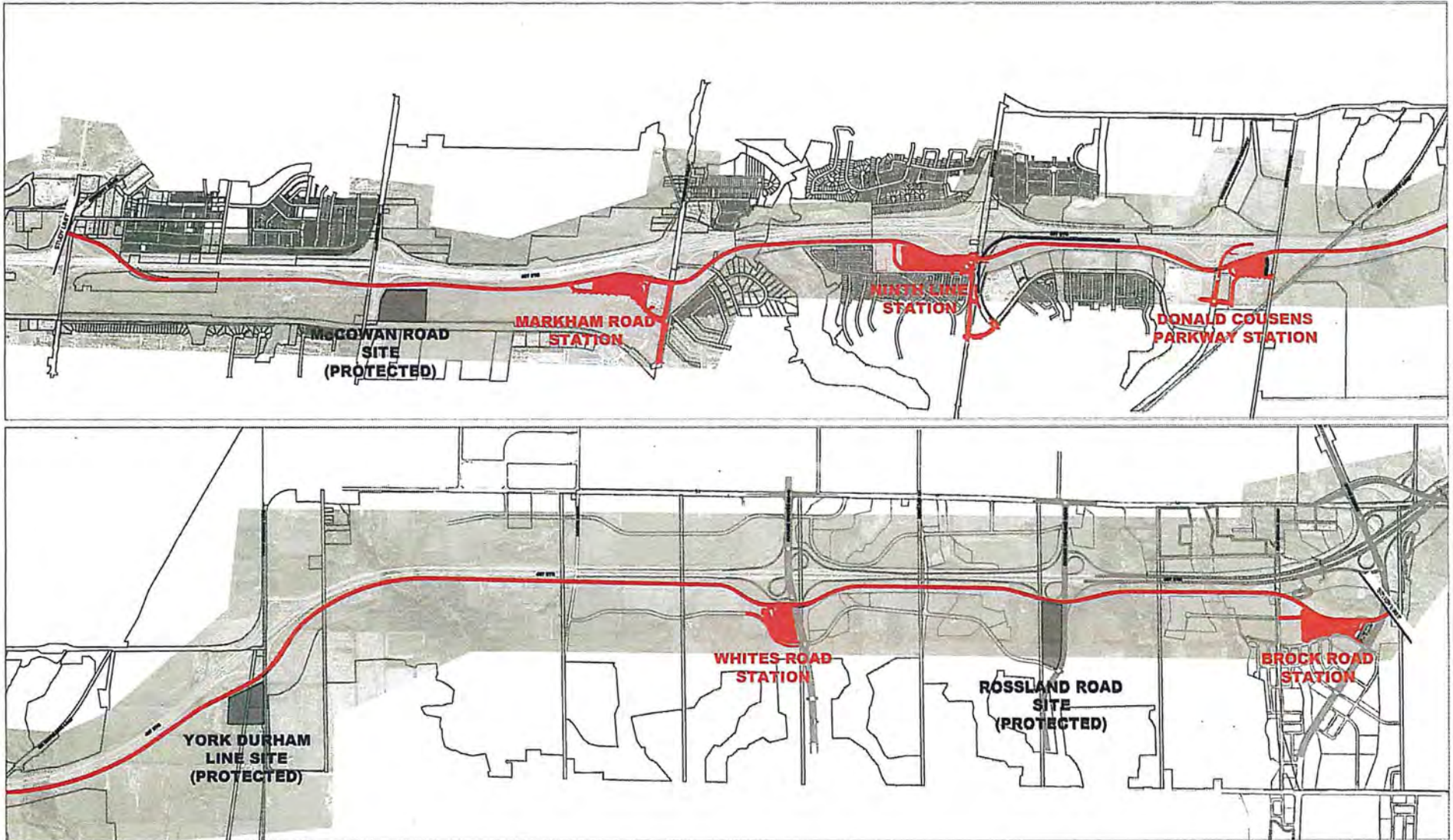
Jim Baird, M.C.I.P., R.P.P.
Commissioner, Development

ATTACHMENTS:

Attachment 'A' – Preferred Alternative - Transitway Configuration and Stations

Attachment 'B' – Station Site Alternatives

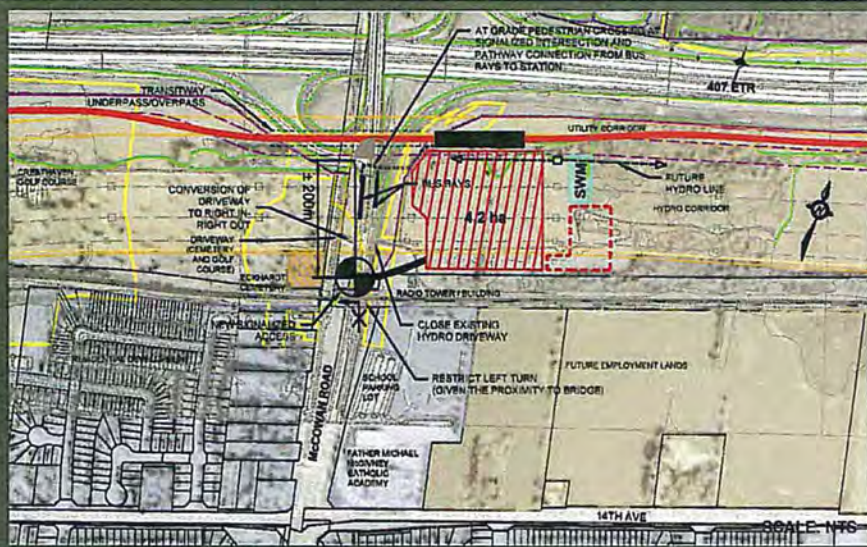
Attachment 'C' – Rouge Valley Trail Multi-Use Path



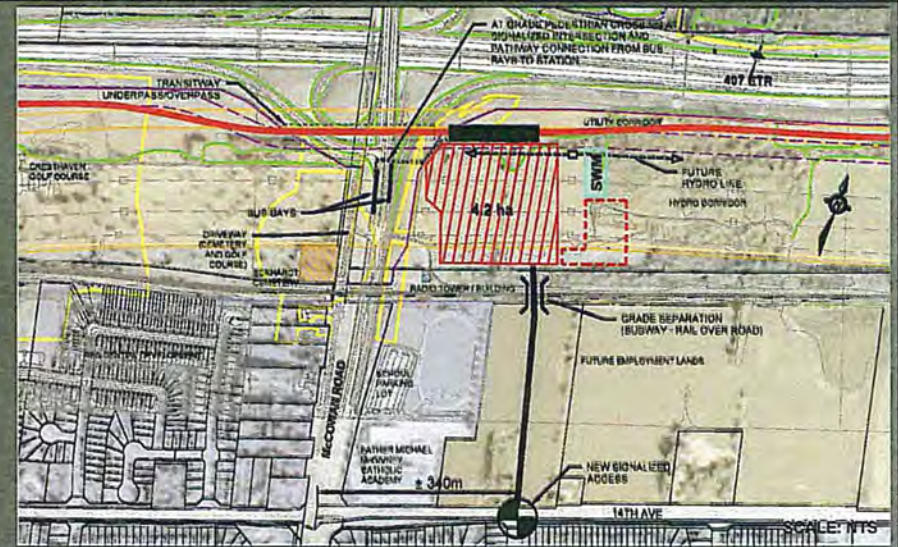
McCowan Road Station – Site Alternatives ATTACHMENT 'B-1'



NOT PREFERRED



NOT PREFERRED



INITIAL RECOMMENDATION AS A RESULT OF EVALUATION

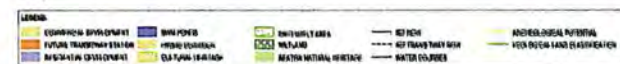
NO STATION AT THIS LOCATION

LAND AVAILABILITY LIMITATIONS; POTENTIAL SIGHT RESTRICTIONS AND EXCESSIVE COSTS OF VEHICULAR ACCESS OPTIONS; UN-FEASIBLE PEDESTRIAN ACCESS; PROXIMITY OF ADJACENT STATIONS

EVALUATION CRITERIA	SE ALTERNATIVE 1	
Natural Environment	Watercourse located east of station site	GOOD
Social Environment	Station site is located within the hydro corridor under 500kv lines, precluding the possibility of including a bus loop on the station site.	POOR
	Access Rd impacts hydro lands and large retaining wall structure required adjacent to rail line Significant impacts expected to traffic in the area during construction of Transitway facilities	POOR
Cultural Environment	No Impacts anticipated	GOOD
Transitway Operation	Alignment: Large tunnel or viaduct structure required to cross McCowan Rd and Highway 407 ramps	POOR
	Implementation: Hydro regulations prohibit buses stopping under the 500kv lines; consequently, staged implementation with buses operating on Highway 407 is not possible	POOR
Accessibility	Vehicular: Access from McCowan Rd., due to signalling spacing standards, needs to be placed adjacent to the railway bridge, resulting in driver sight line concerns.	POOR
	Pedestrian: Pedestrian access would require a crossing at the signal with un-controlled crossing of the S-E ramp which is undesirable due to serious safety concerns. Vertical structure and tunneled or bridged walkway not considered feasible due to excessive cost. Transit connectivity: On street bus stops would be required with same pedestrian access implications as there is no possibility for bus accessing the station site.	POOR
Site Area	Sufficient space available for park and ride, provided it is located under the Hydro corridor; however, land available between the Hydro Corridor and the Transitway is insufficient to accommodate a bus loop.	POOR
Constructability	Complicated construction due to proximity of railroad and presence of hydro corridor	POOR
Construction Cost	Very high.	POOR



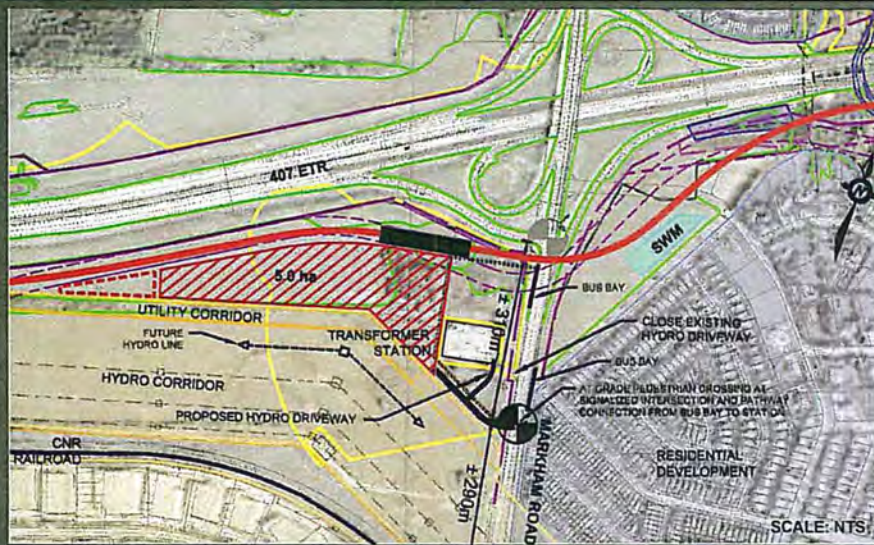
EVALUATION CRITERIA	SE ALTERNATIVE 2	
Natural Environment	Same as SE Alternative 1	GOOD
Social Environment	Station site is located within the hydro corridor under 500kv lines, precluding the possibility of including a bus loop on the station site.	POOR
	Access crosses a planned commercial development; it requires a bridge to cross the railway; and crosses under the hydro towers. Significant impacts expected to traffic in the area during construction of Transitway facilities	POOR
Cultural Environment	Same as SE Alternative 1	GOOD
Transitway Operation	Same as SE Alternative 1	POOR
	Vehicular: Long access Rd. 700 m. from 14th Ave.	POOR
Accessibility	Pedestrian: Pedestrian access would require a crossing at the signal with un-controlled crossing of the S-E ramp which is undesirable due to serious safety concerns. Vertical structure and tunneled or bridged walkway not considered feasible due to excessive cost.	POOR
	Transit connectivity: On street bus stops would be required with same pedestrian access implications as there is no possibility for bus accessing the station site.	POOR
Site Area	Same as SE Alternative 1	POOR
Constructability	Same as SE Alternative 1	POOR
Construction Cost	Very High	POOR



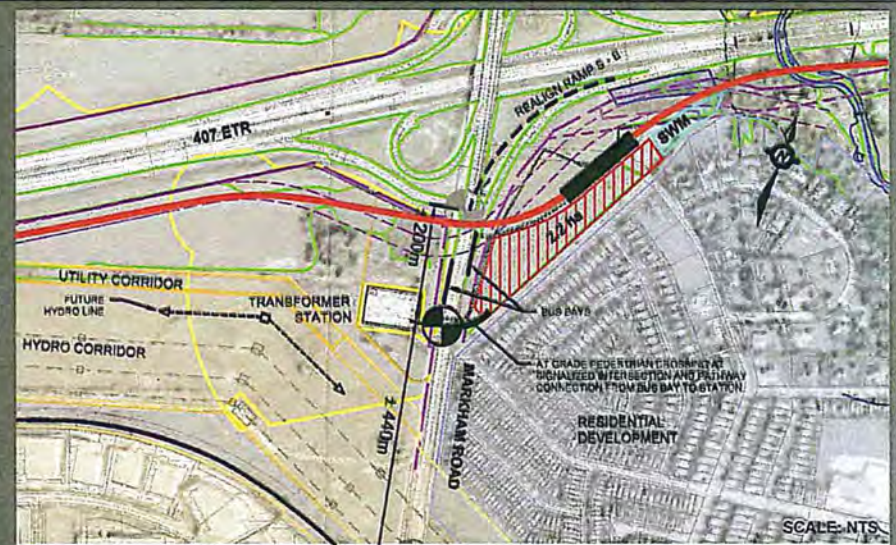
Markham Road Station – Site Alternatives ATTACHMENT 'B-2'



PREFERRED



NOT PREFERRED



INITIAL RECOMMENDATION AS A RESULT OF EVALUATION

SUFFICIENT LAND AVAILABLE AND POTENTIAL FOR EXPANSION ON WEST SIDE WHILE INSUFFICIENT LAND TO ACCOMMODATE COMPLETE STATION FACILITY ON THE EAST; NO ENVIRONMENTAL CONSTRAINTS ON WEST SIDE WHILE PRESENCE OF RESIDENTIAL DEVELOPMENT SOUTH OF EAST SITE.

EVALUATION CRITERIA	SW ALTERNATIVE	
Natural Environment	Potential impacts to wetlands north of transformer station, to be further evaluated.	Yellow
Social Environment	Station site is located just north of the hydro corridor under 500kV lines, within lands designated for transportation and utilities. Hydro One will need to agree to partial usage of their corridor.	Yellow
Cultural Environment	Area of potential archaeological interest.	Yellow
Transitway Operation	Alignment: Meets design standards, Underpass alignment minimizes grades separation at station. Implementation: Staged implementation of Transitway will be possible with buses operating on Highway 407.	Green
Accessibility	Vehicular: Desirable intersection spacing. Site will be served by new signalized access located midway between 14 th Avenue and the Highway 407 ramp. Markham Hydro transformer station access will be combined with station access. Pedestrian: Station platform is located within 150m of Markham Rd. Pedestrians will cross Markham Rd at a traffic signal. Transit connectivity: A bus loop can be accommodated on site. Transit stops along Markham Rd and pedestrian connection, from the stops would be provided.	Green
Site Area	Sufficient space available for parking lot (5.0 ha). Additional (expansion) parking could be provided within the hydro corridor.	Green
Constructability	Markham Rd and 407 S-E ramp will be impacted during construction. Proper construction staging will be developed to minimize effects.	Green
Construction Cost	Medium	Yellow

EVALUATION CRITERIA	SE ALTERNATIVE	
Natural Environment	Rouge River located immediately east of station site. Potential hydrological impacts.	Yellow
Social Environment	Station is located within lands designated for transportation and utilities. Increased noise impacts to adjacent residential neighbourhood. It would require a noise barrier. Site access impacts Highway 407 S-E Ramp (it would require tightening of ramp geometry).	Red
Cultural Environment	No impacts anticipated	Green
Transitway Operation	Alignment: Meets design standards, Underpass alignment minimizes grades separation at station. Implementation: Staged implementation of Transitway will be possible with buses operating on Highway 407.	Green
Accessibility	Vehicular: Minimum intersection spacing provided. Site will be served by new signalized access located 200m south of Highway 407 interchange. Pedestrian: Station platform is located within 200m of Markham Rd. Pedestrians would cross Markham Rd at a traffic signal. Transit connectivity: Limited land availability will restrict potential bus loop. Transit stops along Markham Rd and pedestrian connection from the stops would be provided.	Red
Site Area	Site area is significantly constrained by residential development to the south and the Rouge River to the east (2.2 ha available). Space available is insufficient to accommodate required parking-lot size with no possibility of any future expansion.	Yellow
Constructability	Markham Rd and Highway 407 S-E ramp will be impacted during construction.	Red
Construction Cost	Medium	Yellow

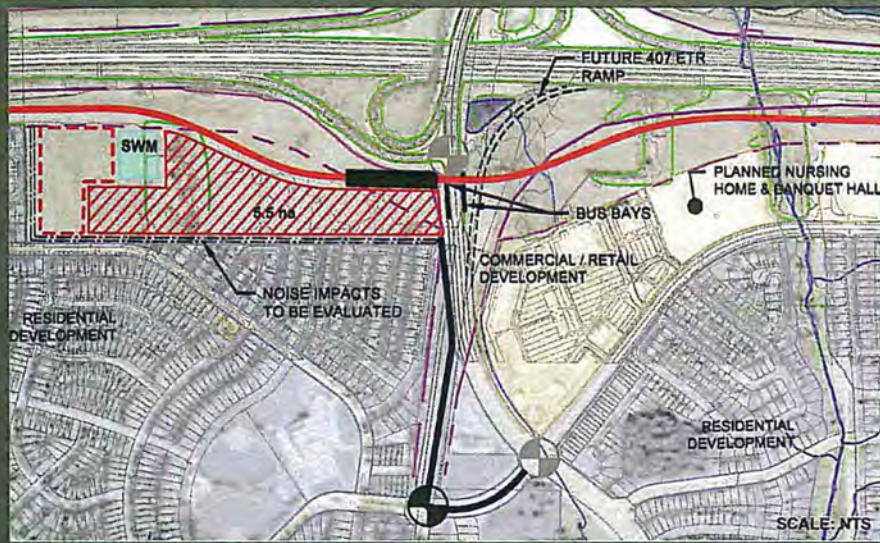


Ninth Line Station – Site Alternatives

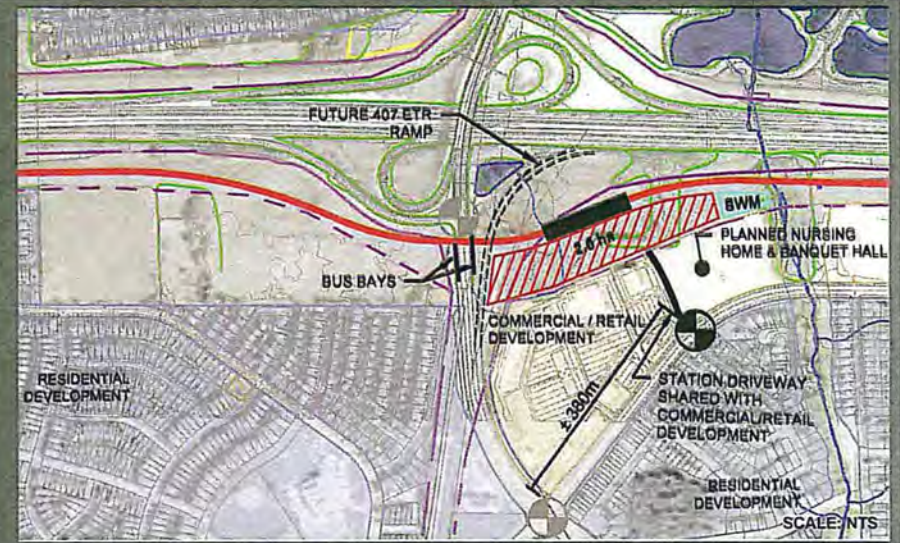
ATTACHMENT 'B-3'



PREFERRED



NOT PREFERRED



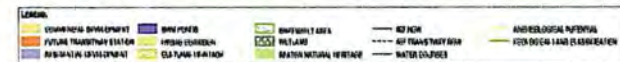
INITIAL RECOMMENDATION AS A RESULT OF EVALUATION

SW ALTERNATIVE
 PROTECTED LAND AND RIGHT OF WAY FOR ACCESS ROAD SEPARATED FROM LOCAL ROADS; SUFFICIENT LAND AVAILABLE AND POTENTIAL FOR EXPANSION ON WEST SIDE WHILE INSUFFICIENT LAND FOR A COMPLETE STATION FACILITY ON THE EAST; POTENTIAL SOCIAL EFFECTS ON BOTH SITES DUE TO PRESENCE OF RESIDENTIAL DEVELOPMENT ON THE WEST, AND FUTURE MEDICAL CENTRE ON THE EAST – MITIGATION MEASURES TO BE ASSESSED.

EVALUATION CRITERIA	SW ALTERNATIVE	
Natural Environment	No significant impacts anticipated	Green
Social Environment	Station site is located within lands protected for the Transitway station (per Markham Official Plan). Potential noise impacts to be assessed during field investigations. Traffic infiltration avoided by not providing a vehicular connection from local roads within the residential area	Red
Cultural Environment	No impacts anticipated	Green
Transitway Operation	Alignment: Meets design standards, Underpass alignment minimizes grades separation at station. Implementation: Staged implementation with the Transitway operating on Highway 407 is feasible for westbound service. For eastbound service, it will be feasible providing the Highway 407 S-E Ramp is constructed. This stage would involve significant out-of-the-way travel.	Yellow
Accessibility	Vehicular: Site access will be provided using the Old Ninth Line corridor which has been protected for station access; travel distance from Ninth Line = 700 metres. Traffic signals will likely be required at the intersection of Old Ninth Line and Copper Creek Dr. Pedestrian: Short walking distance from Ninth Line to station platform (i.e. 100m). Pedestrians will be required to cross Ninth Line at traffic signals. Avoids conflict with future 407 ETR S-E Ramp. Potential for walkway from residential neighbourhood. Transit connectivity: A bus loop can be accommodated on site. Transit stops along Ninth Line, and pedestrian connection from the stops will be provided.	Yellow
Site Area	Sufficient space available for parking lot (5.5 ha). Additional area for parking available to the west of the site.	Green
Constructability	No major concerns.	Green
Construction Cost	Medium	Yellow

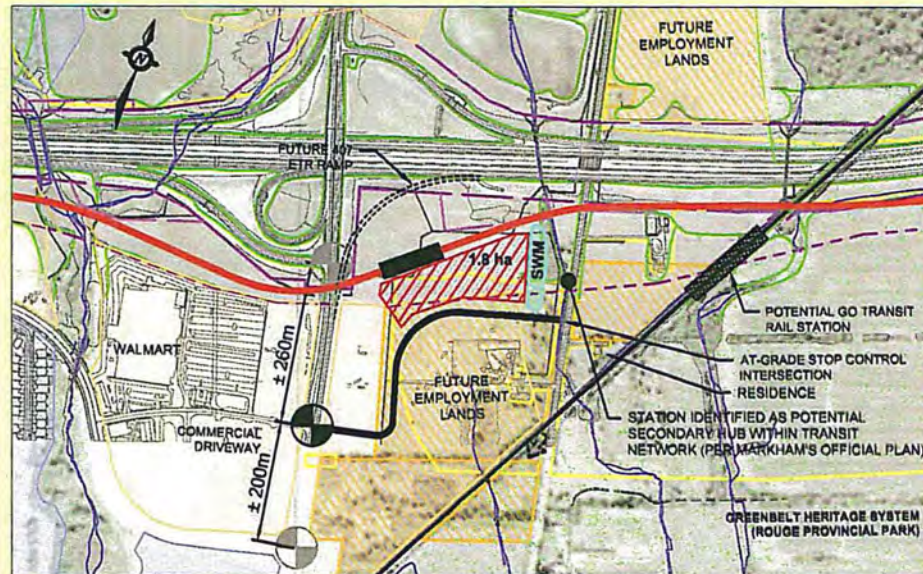
EVALUATION CRITERIA	SE ALTERNATIVE	
Natural Environment	A tributary of the Rouge River, runs to the east of the potential station site.	Yellow
Social Environment	Station driveway will need to be combined with the existing driveway to the Boxgrove Medical Arts Centre and will encroach into the commercial lands located further to the west. Potential noise impacts to be assessed during field investigations.	Yellow
Cultural Environment	No impacts anticipated	Green
Transitway Operation	Alignment: Meets design standards however overpass alignment likely required due to creek located to the east of the station platform. Overpass alignment would significantly increase alignment complexity and cost. Implementation: Same as SW Alternative. Vehicular: Site access will be provided via Copper Creek Drive (approx. 380m east of Ninth Line).	Red
Accessibility	Pedestrian: Pedestrian access from Ninth Line to station platform (i.e. 200m) will conflict with future 407 ETR S-E Ramp requiring a level, free flow crossing of the ramp. Transit connectivity: Limited land availability will restrict potential bus loop. Transit stops along Ninth Line, and pedestrian connection from the stops would be provided.	Yellow
Site Area	Site area is significantly constrained by commercial development to the south and the Rouge River tributary to the east (2.6 ha available). Space available is insufficient to accommodate required parking-lot size and has no expansion potential.	Red
Constructability	Impact will depend on when the Highway 407 S-E Ramp is built.	Yellow
Construction Cost	Medium	Yellow

GOOD POOR



SE ALTERNATIVE

PREFERRED LOCATION
BY MTO
CITY PREFERRED
LOCATION - SEE
ATTACHMENT 'B-5'



RECOMMENDATION AS A RESULT OF EVALUATION
SE ALTERNATIVE

ESSENTIAL REASONS: East site viable for implementation of station. It provides opportunity to extend facility to the east of Reesor Road if GO Transit implements passenger service on the CP Havelock corridor.

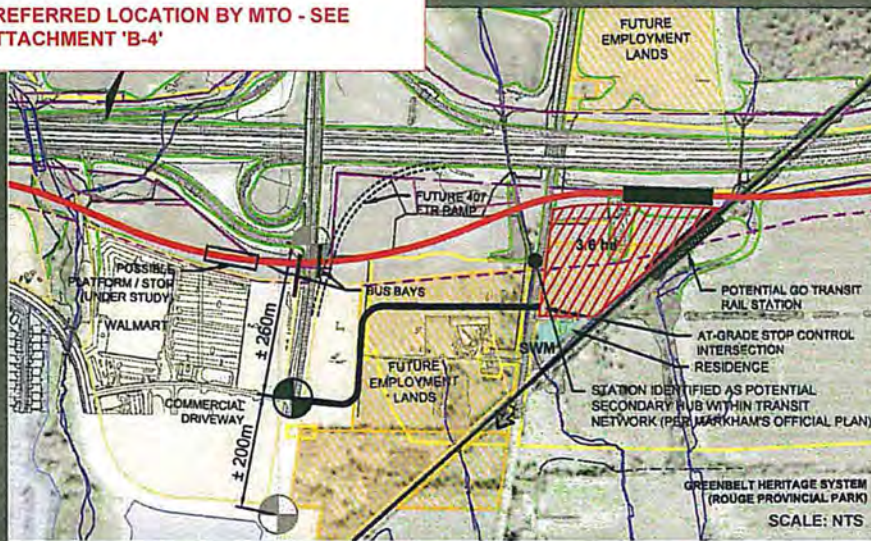
Donald Cousens Station – Site Alternatives ATTACHMENT 'B-5'



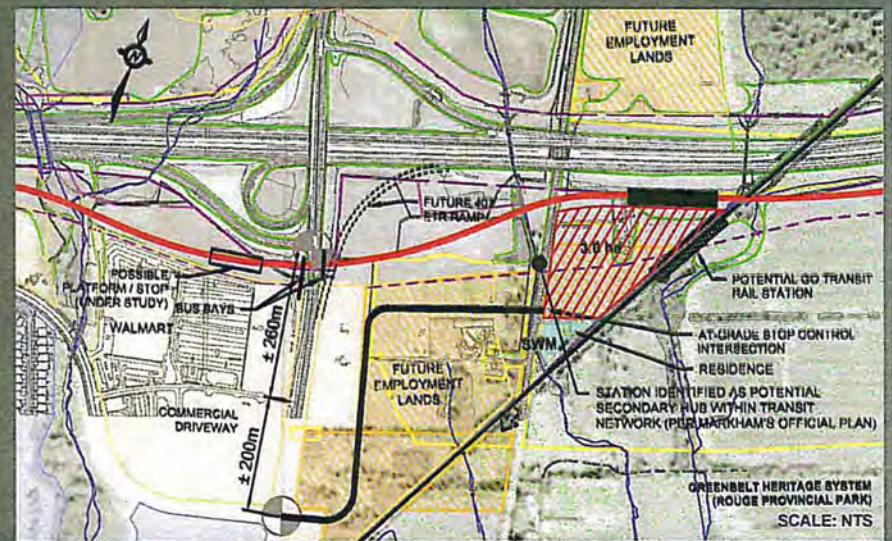
PREFERRED LOCATION BY THE CITY

PREFERRED LOCATION BY MTO - SEE ATTACHMENT 'B-4'

PREFERRED



NOT PREFERRED



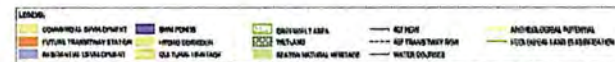
INITIAL RECOMMENDATION AS A RESULT OF EVALUATION

SE ALTERNATIVE 1

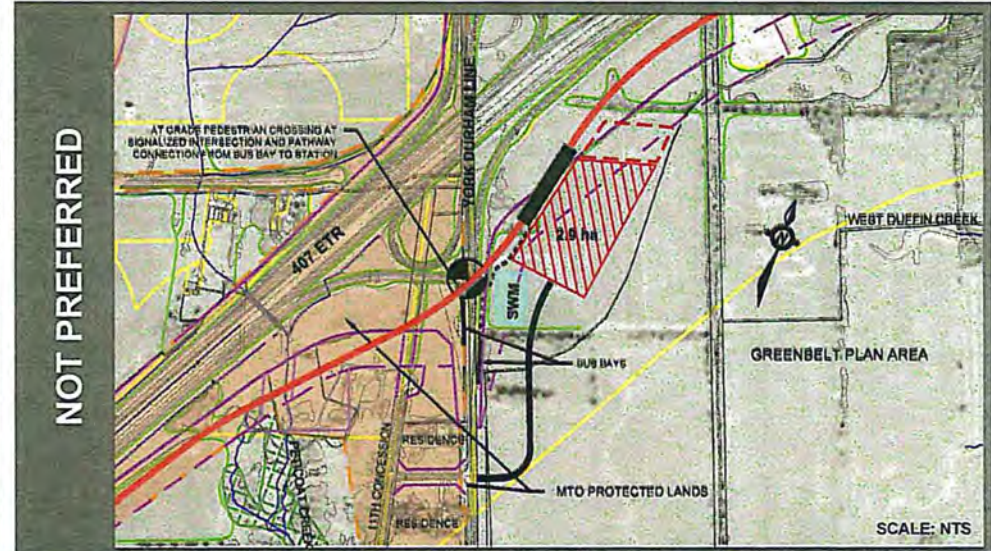
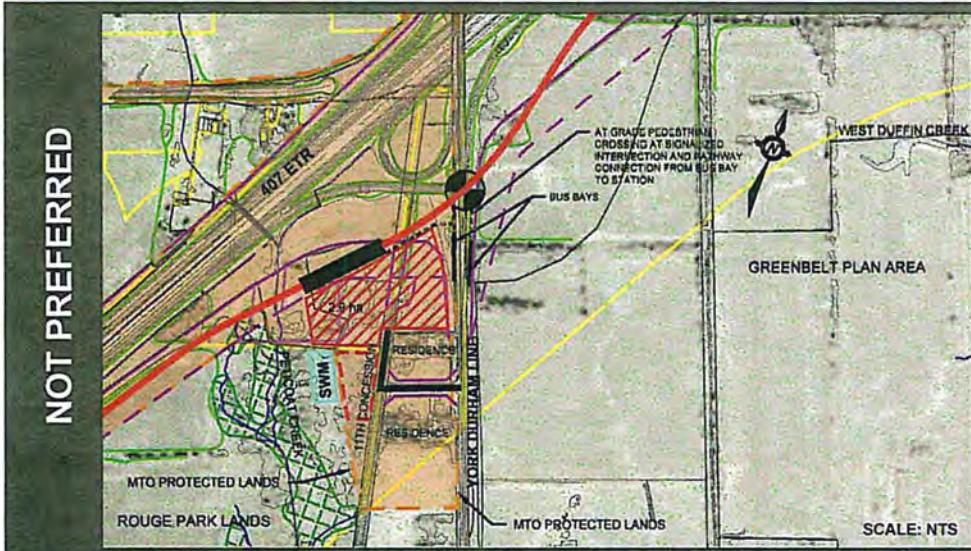
THE STATION FACILITY ADJACENT TO THE CP RAILWAY LINE WILL BE CONSTRUCTED ONLY IF GO TRANSIT IMPLEMENTS PASSENGER SERVICE ALONG THE CP CORRIDOR; A POTENTIAL INTERIM TRANSITWAY STOP ON THE WEST SIDE OF DONALD COUSENS IS UNDER STUDY.

EVALUATION CRITERIA	SE ALTERNATIVE 1	
Natural Environment	Station site located adjacent to the Greenbelt Natural Heritage System and the Rouge Provincial Park.	Yellow
Social Environment	It impacts two residential properties east of Reesor Rd (further assessment will be done). If GO Transit provides future commuter rail service between Toronto and the Peterborough area on the Havelock railway corridor, the station will serve as a transfer hub.	Yellow
Cultural Environment	Station will impact the designated heritage property located on the east side of Reesor Rd (a detailed heritage assessment and review of mitigation opportunities will be undertaken).	Red
Transitway Operation	Alignment: Elevated platform required as alignment must cross over rail line. Implementation: Staged implementation with Transitway buses operating on Highway 407 will be feasible; however, will involve significant out-of-way travel.	Yellow
Accessibility	Vehicular: Site access from Donald Cousens Pkwy would be provided by new road (approximately 0.8 km) directly opposite Walmart and integrated with the road network of the proposed business park / employment lands between Donald Cousens Pkwy and Reesor Rd. It provides for minimum signal spacing along Donald Cousens Pkwy (200m) Pedestrian: Lengthy walking distance from Donald Cousens Pkwy (approx. 800 metres), A Transitway stop west of Donald Cousens to provide a more convenient pedestrian access is being evaluated. Transit Connectivity: Bus loop may be accommodated on site however diversion from Donald Cousens Pkwy (approx. 0.8 km) will increase delays for passengers not transferring to Transitway. A Transitway stop just west of Donald Cousens (currently under review) may be an alternative to connect transit users to the Transitway.	Yellow
Site Area	Parking lot and bus loop can be accommodated, providing effects to the heritage property can be mitigated.	Yellow
Constructability	No major concerns.	Green
Construction Cost	High: long access; measures to mitigate effects to the heritage property	Red

EVALUATION CRITERIA	SE ALTERNATIVE 2	
Natural Environment	Same as SE Alternative 1.	Yellow
Social Environment	Same as SE Alternative 1.	Yellow
Cultural Environment	Same as SE Alternative 1.	Red
Transitway Operation	Same as SE Alternative 1.	Yellow
Accessibility	This Station Alternative only differs from SE Alternative 1 in respect to accessibility: Vehicular: Site to be served by new access road (approx. 1.0 km) connecting to Donald Cousens Pkwy directly to the Walmart parking lot. Provides for desirable signal spacing along Donald Cousens Pkwy. Pedestrian: Lengthy walking distance from Donald Cousens Pkwy (approx. 1000 metres), A Transitway stop just west of Donald Cousens Pkwy to provide a more convenient pedestrian access is being evaluated. Transit Connectivity: Same as SE Alternative 1.	Red
Site Area	Same as SE Alternative 1.	Yellow
Constructability	Same as SE Alternative 1.	Green
Construction Cost	Same as SE Alternative 1.	Red



York Durham Line Station – Site Alternatives ATTACHMENT 'B-6'



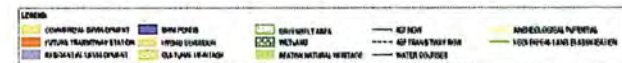
NO STATION AT THIS LOCATION

INITIAL RECOMMENDATION AS A RESULT OF EVALUATION

- LIMITED AVAILABLE LAND ON WEST SIDE; AND PROPERTY PRIVATELY OWNED ON EAST SIDE; NO TRANSIT CONNECTIVITY OPPORTUNITIES AS NO CURRENT OR PROPOSED TRANSIT SERVICE ON YORK/DURHAM LINE; NEGLIGIBLE RIDERSHIP DEMAND AT THIS LOCATION; SITE FOR SW ALTERNATIVE OWNED BY MTO WILL BE PROTECTED FOR POTENTIAL FUTURE ACCESS TO PARK LANDS

EVALUATION CRITERIA	SW ALTERNATIVE	
Natural Environment	Station site located adjacent to the Locust Hill Wetland and National Rouge Park.	Red
Social Environment	Station site located adjacent to residential properties. Station could serve as parking area and transit access to the Rouge Provincial Park.	Yellow
Cultural Environment	Area of archaeological potential. Further investigation will be undertaken.	Yellow
Transitway Operation	Alignment: Due to interchange configuration, station platform cannot be placed close to arterial without significantly impacting land on the east side of station Implementation: Staged implementation with Transitway buses operating on Highway 407 would be feasible.	Yellow
Accessibility	Vehicular: Site access would be provided via 11th Concession Rd. Length of access road is approximately 200 metres. Pedestrian: Pedestrian crossing would be accommodated at ramp intersection. Transit connectivity: No current or proposed transit service along York/Durham Line.	Yellow
Site Area	Area could accommodate parking lot; however, there is limited flexibility for expansion as the station is surrounded by Rouge Park Lands.	Red
Constructability	No significant concerns.	Green
Construction Cost	Low	Green

EVALUATION CRITERIA	SE ALTERNATIVE	
Natural Environment	Station site located within Protected Countryside lands, adjacent to Duffins Creek Agricultural Preserve.	Red
Social Environment	Impact to privately owned rural land. No opportunity to provide parking and transit access to the Rouge Provincial Park.	Red
Cultural Environment	Area of archaeological potential. Further investigation will be undertaken	Yellow
Transitway Operation	Alignment: Due to interchange configuration station, platform cannot be placed close to arterial without significantly impacting land on west side of station lands designated for the Rouge Provincial Park Implementation: Staged implementation with Transitway buses operating on Highway 407 would be feasible.	Yellow
Accessibility	Vehicular: Site access will be provided opposite to 11th Concession Rd. Length of access road is approximately 300 metres. Pedestrian: Pedestrian crossing would be accommodated at ramp intersection. Transit connectivity: No current or proposed transit service along York/Durham Line.	Yellow
Site Area	Area could accommodate parking lot; however, there is limited flexibility for expansion as the station is within Greenbelt Lands.	Red
Constructability	No significant concerns.	Green
Construction Cost	Low	Green



407 TRANSITWAY

KENNEDY ROAD TO BROCK ROAD
TRANSIT PROJECT ASSESSMENT PROCESS



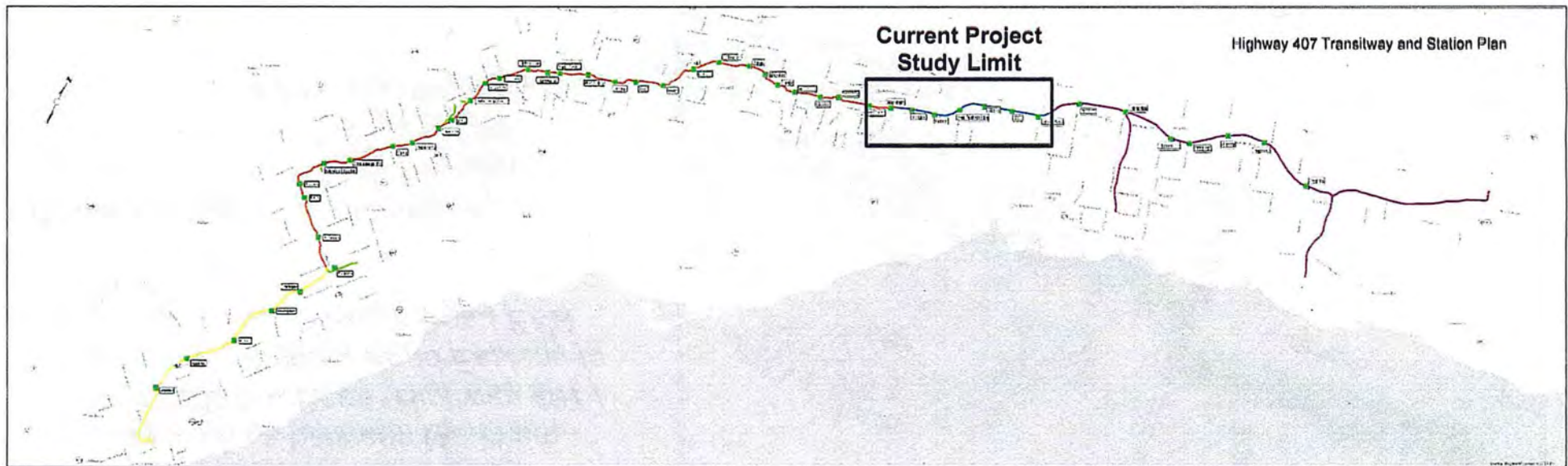
MARKHAM DSC PRESENTATION

PROJECT WEBSITE: 407Transitway.com



- General Description of the 407 Transitway
- 407 Transitway East of Kennedy Road to East of Brock Road
- 407 Transitway Objectives
- Project Schedule
- Transit Project Assessment Process
- Consultation
- Ridership Forecast
- Service Concept
- Identification and Evaluation of Alternatives
- Preferred Alternative
- Station Layouts
- Environmental Assessment Approach and Methodology
- Environmental Studies and Findings
- Implementation Strategy
- Questions

General Description of the 407 Transitway

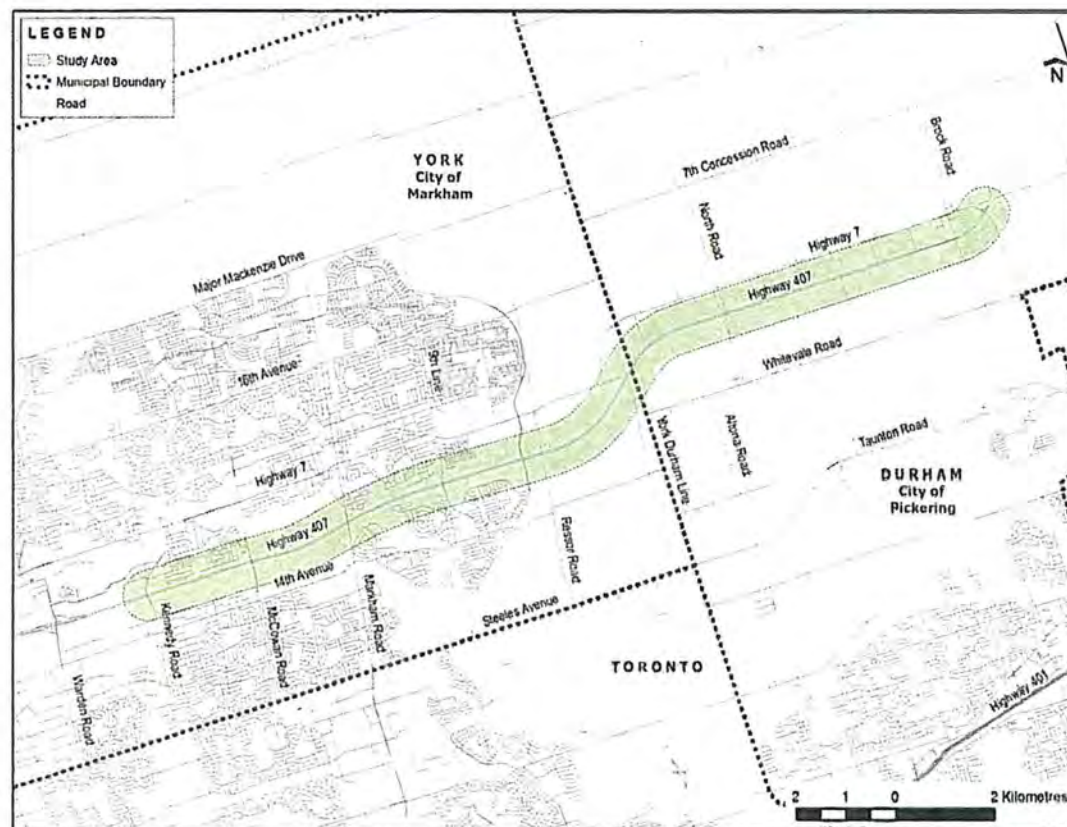


- Exclusive fully grade separated rapid transit (BRT or LRT) parallel to HWY 407
- Burlington to Oshawa – 150 km, up to 50 surface stations
- Current Project – East of Kennedy Road to East of Brock Road – 19 km, 5 stations

407 Transitway East of Kennedy Road to East of Brock Road



- 19 Kilometers
- 5 Stations
- Approved EA for the runningway already in place between Markham Road and Brock Road (*Highway 407 / Transitway Markham Road Easterly to Highway 7 East of Brock Road EAR 1997*)
- Study re-examines runningway alignment and the station locations based on 407 Transitway Design Guidelines and ridership forecasts



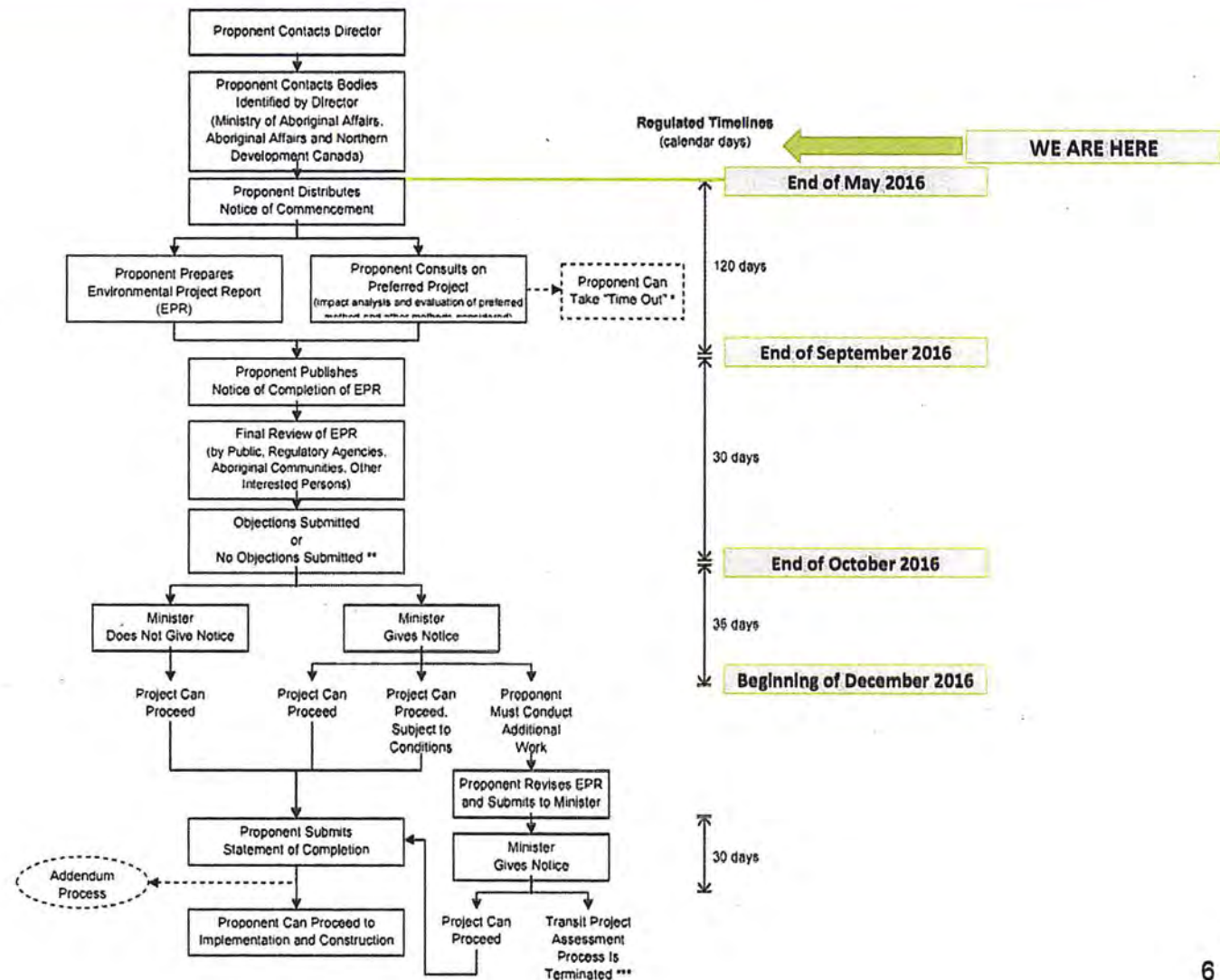
- Enhance east-west cross-regional mobility (fast, safe, cost effective transportation mode along the GTA north corridor)
- Connects future regional express rail
- Improve transit accessibility to major nodes (City Centres; Universities/Colleges)
- Offer transit transfer, park and ride, passenger pick up and drop off, and opportunities along the 407 Corridor
- Reduce automobile dependence and GHG emissions



Transit Project Assessment Process (TPAP)



TPAP – Fast Track Environmental Assessment for Provincial Transit Projects



Project Schedule

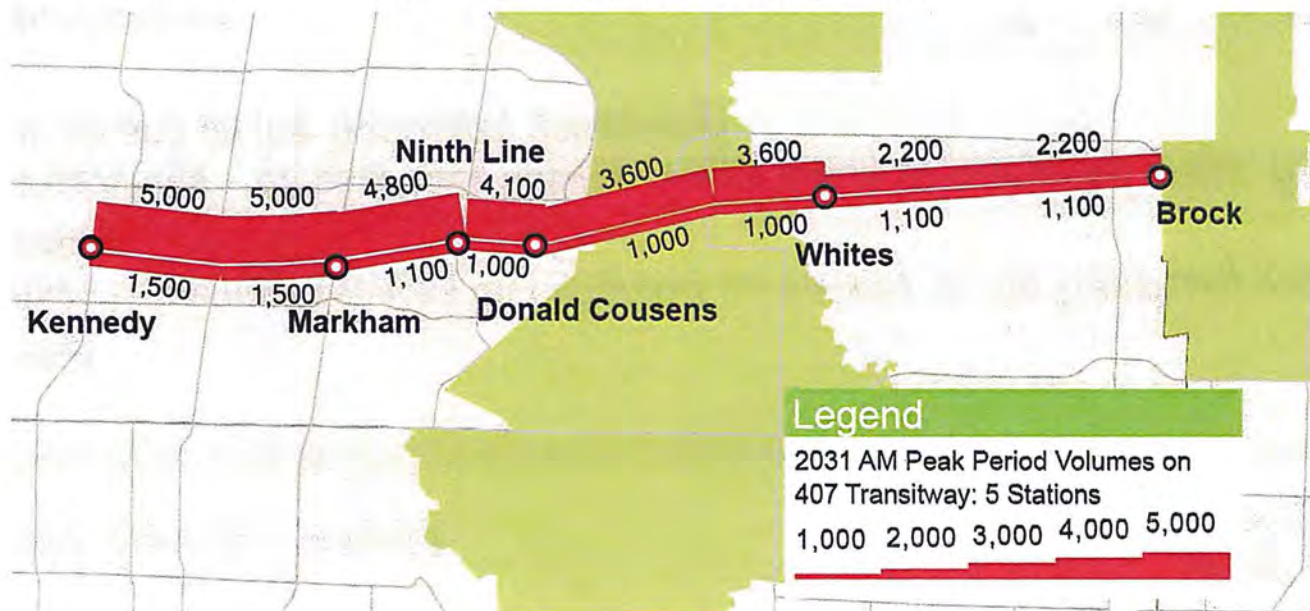


Milestone	Date
Study Initiation	May, 2014
Ridership Study and Existing Conditions Reports	August, 2014
Development of Planning Alternatives	December, 2014
TRG 1 – Project Introduction; Initial Findings	February, 2015
PIC 1 - Project Introduction; Initial Findings	April, 2015
Detailed Field Investigations	Summer and Fall, 2015
Confirmation of Technically Preferred Alternative	December, 2015
Preliminary Design	February, 2016
Environmental Assessment of Preferred Alternative	February, 2016
Draft EPR to MTO	March, 2016
TRG 2 – Presentation of Draft EPR	April, 2016
Draft EPR to MOECC and Stakeholders	April, 2016
TPAP Notice of Commencement	Early June, 2016
PIC 2 - Findings and Conclusions of TPAP	Mid June, 2016
Final EPR; TPAP Notice of Completion	October, 2016
TPAP Statement of Completion	December, 2016

- **Consultation To Date**
 - **Agency Consultation**
 - Initial contact letters sent to agencies and Aboriginal communities
 - Meetings with Agencies to introduce the project and contact requesting for background information
 - Presentation of Existing Conditions and Planning Alternatives to Technical Resource Group (TRG)
 - Meetings with Municipalities and Parks Canada during preparation of Draft EPR
 - **Aboriginal Communities**
 - 15 Aboriginal Communities were contacted.
 - Public Information Centre #1 held in April 2015
- **Future Consultation**
 - Technical Resource Group (TRG) mid April 2016
 - Notice of Commencement of Transit Project Assessment Process end of May 2016
 - Public Information Centre #2 mid June 2016
 - Notice of Completion of Environmental Project Report in September 2016

Ridership Forecasts (excluding Kennedy Station)

- **2031 AM Peak Period Riders (3 hours)**
 - Total Boardings 7,110
 - Total Station Boardings 3,760
- **2031 AM Peak Period Ridership at Peak Load Point (3 hours)**
 - Westbound, East of Kennedy Station 5,000
 - Westbound, East of Yonge Station (Central Section) 14,500
- Higher reliance on park and ride and interlining access than the Central Section
 - Riders are flexible as long as speeds are competitive.

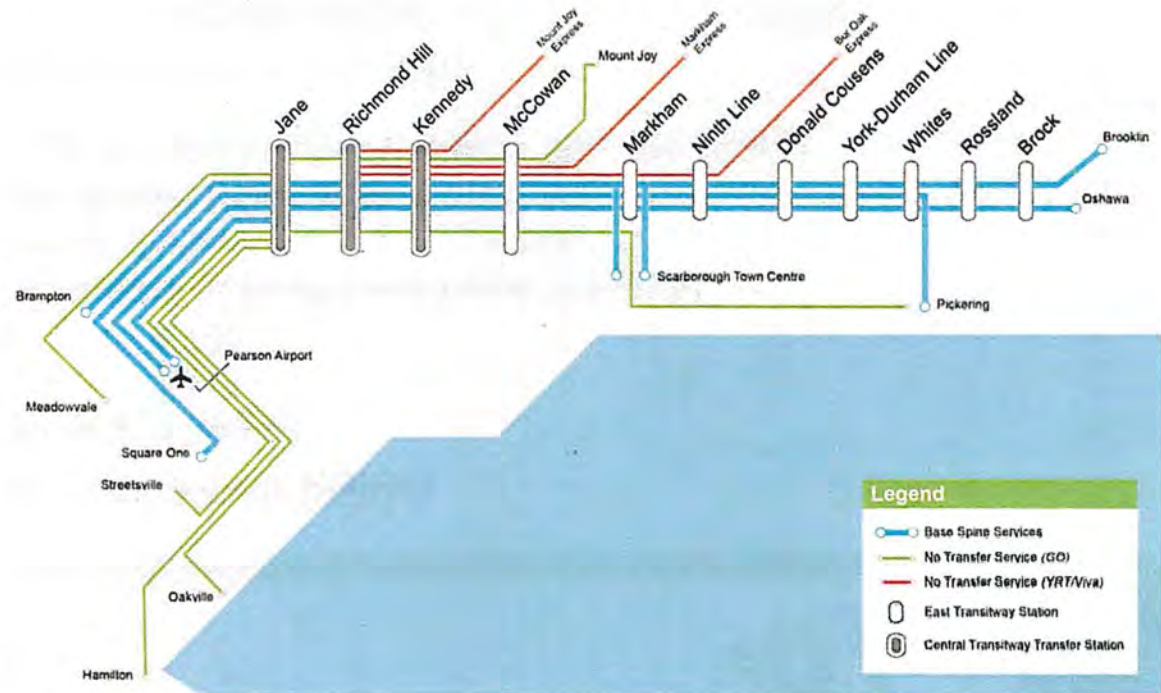


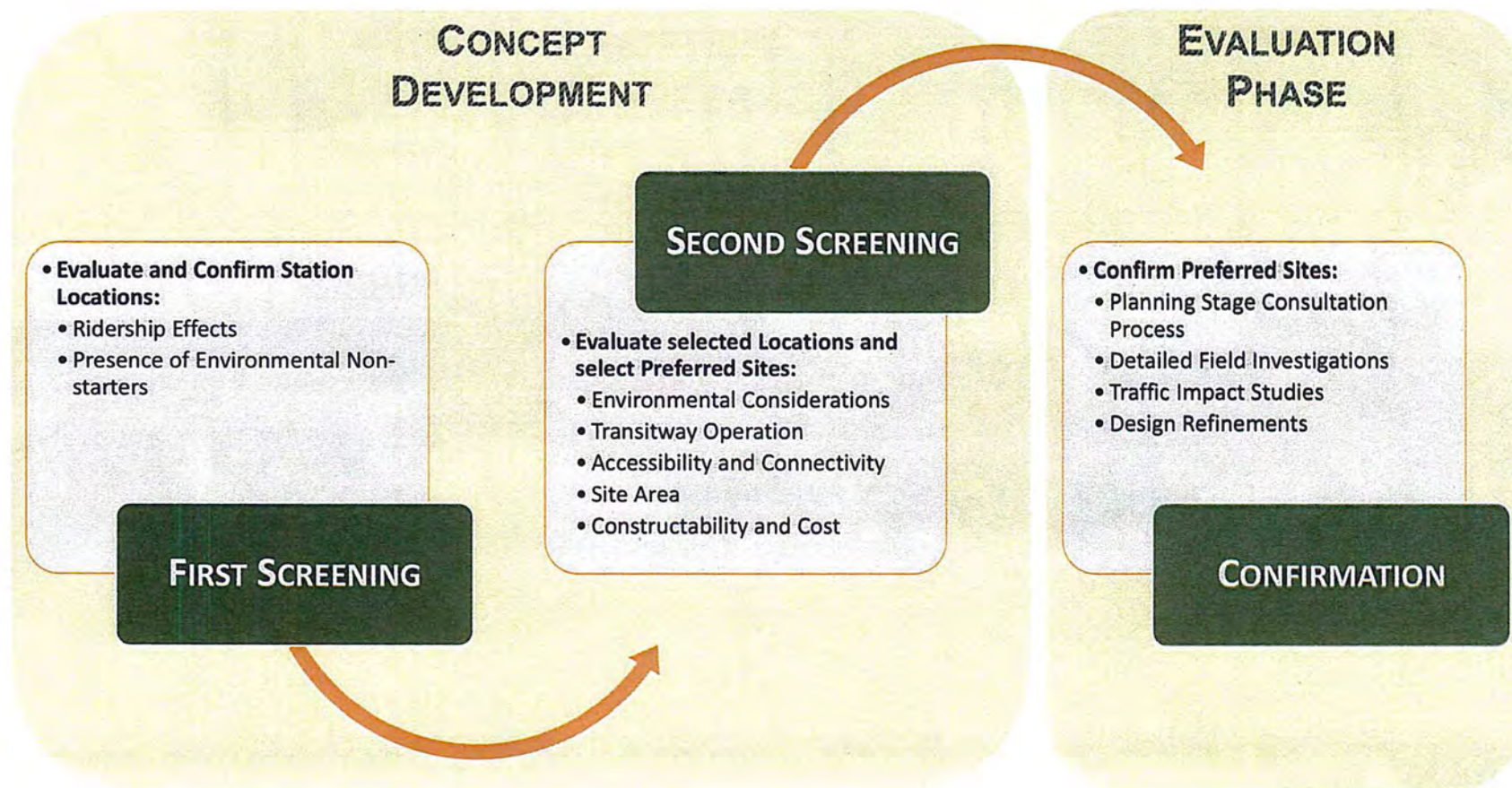
Service Concept

- **Spine services** – line haul services that operates exclusively on the Transitway including some express services
- **No-transfer services** – on-seat rides between major nodes or residential areas. Routes include portions both on and off the Transitway (interlining)

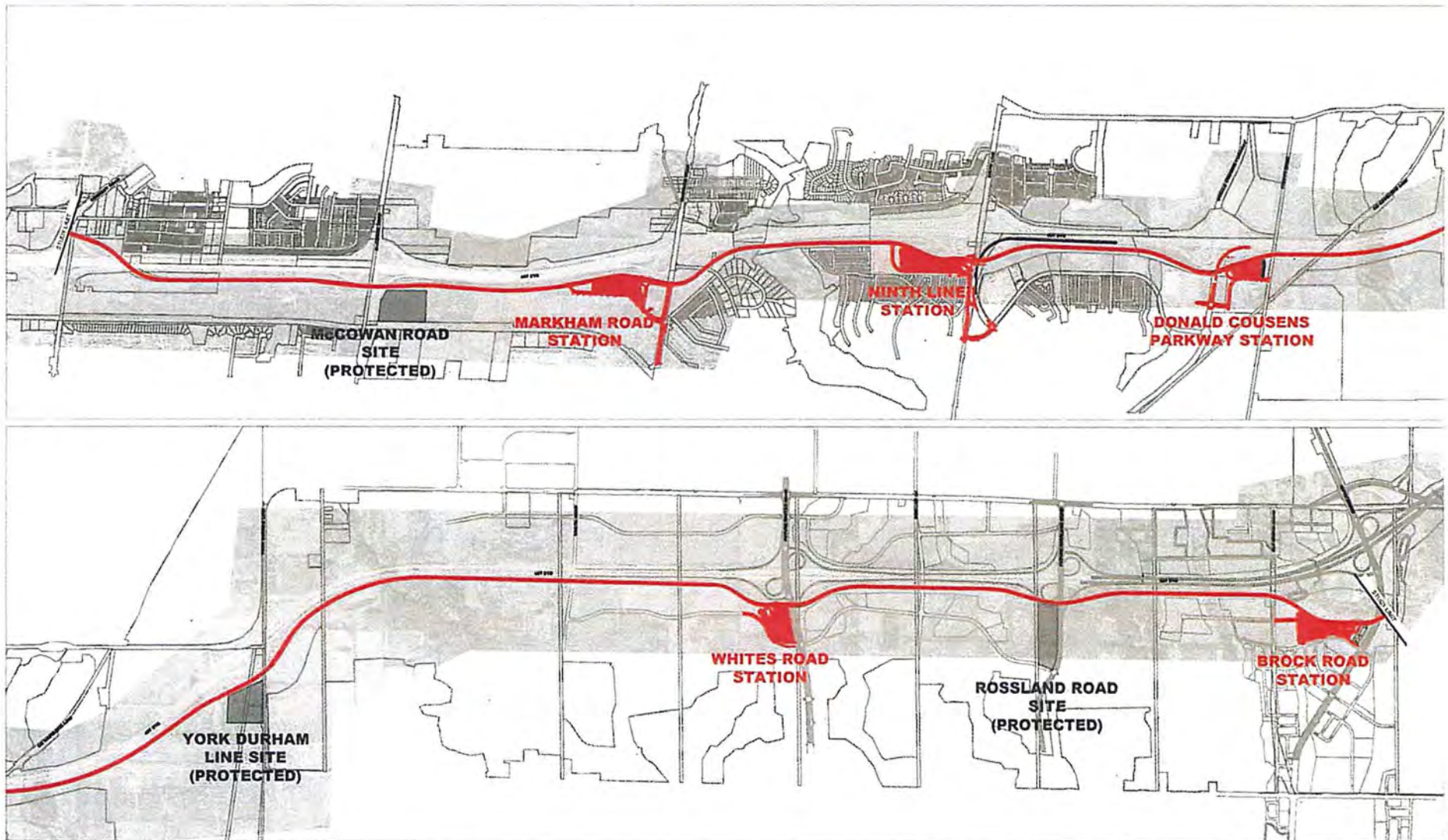
York nodes serviced by Transitway

- Urban Growth Centre (Markham)
- Employment Centres (Markham Centre, Main Street Markham BIA, south of the 407 in Scarborough)
- Residential Areas of Markham (Mount Joy, Quantztown, Unionville, Milliken)

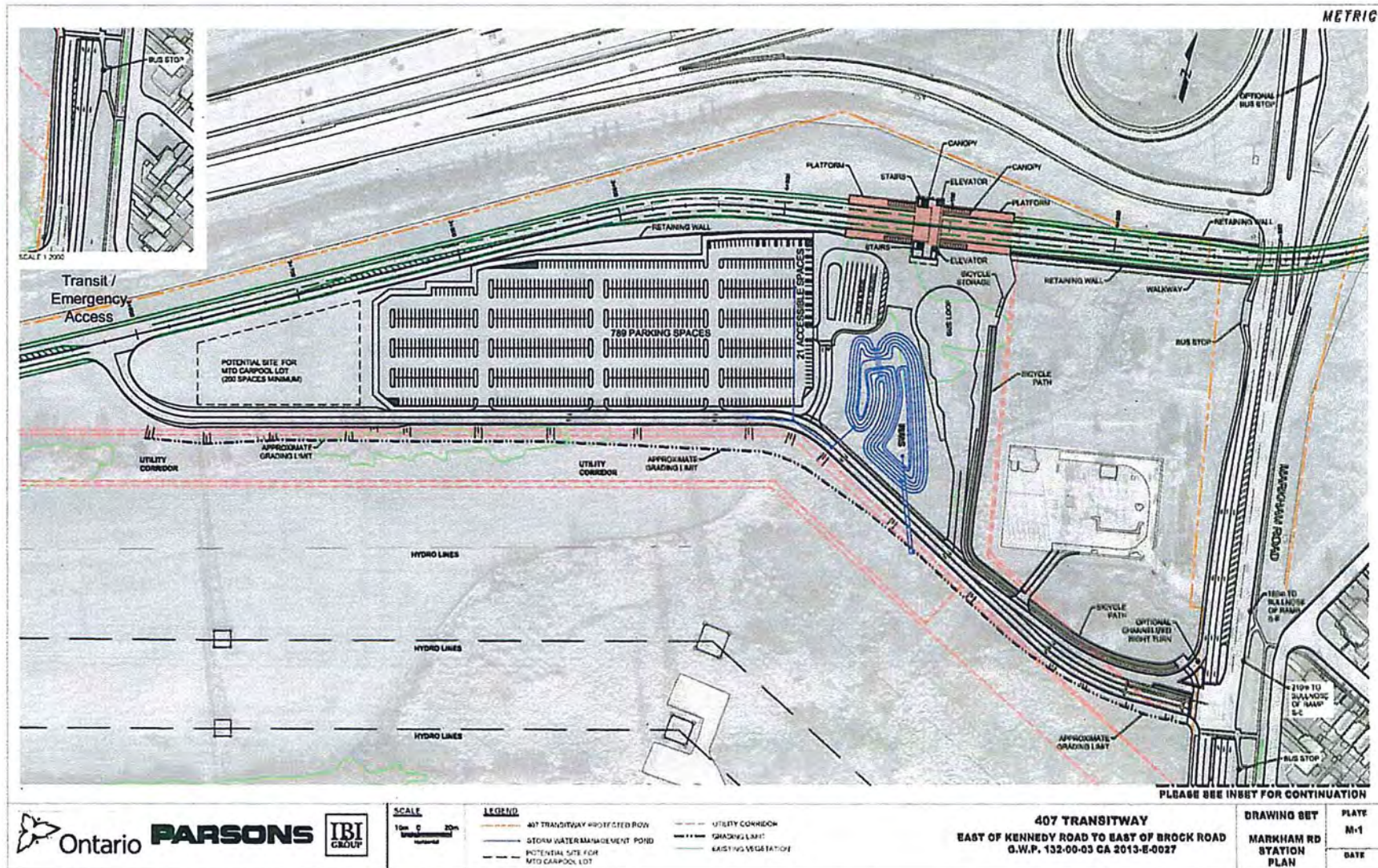




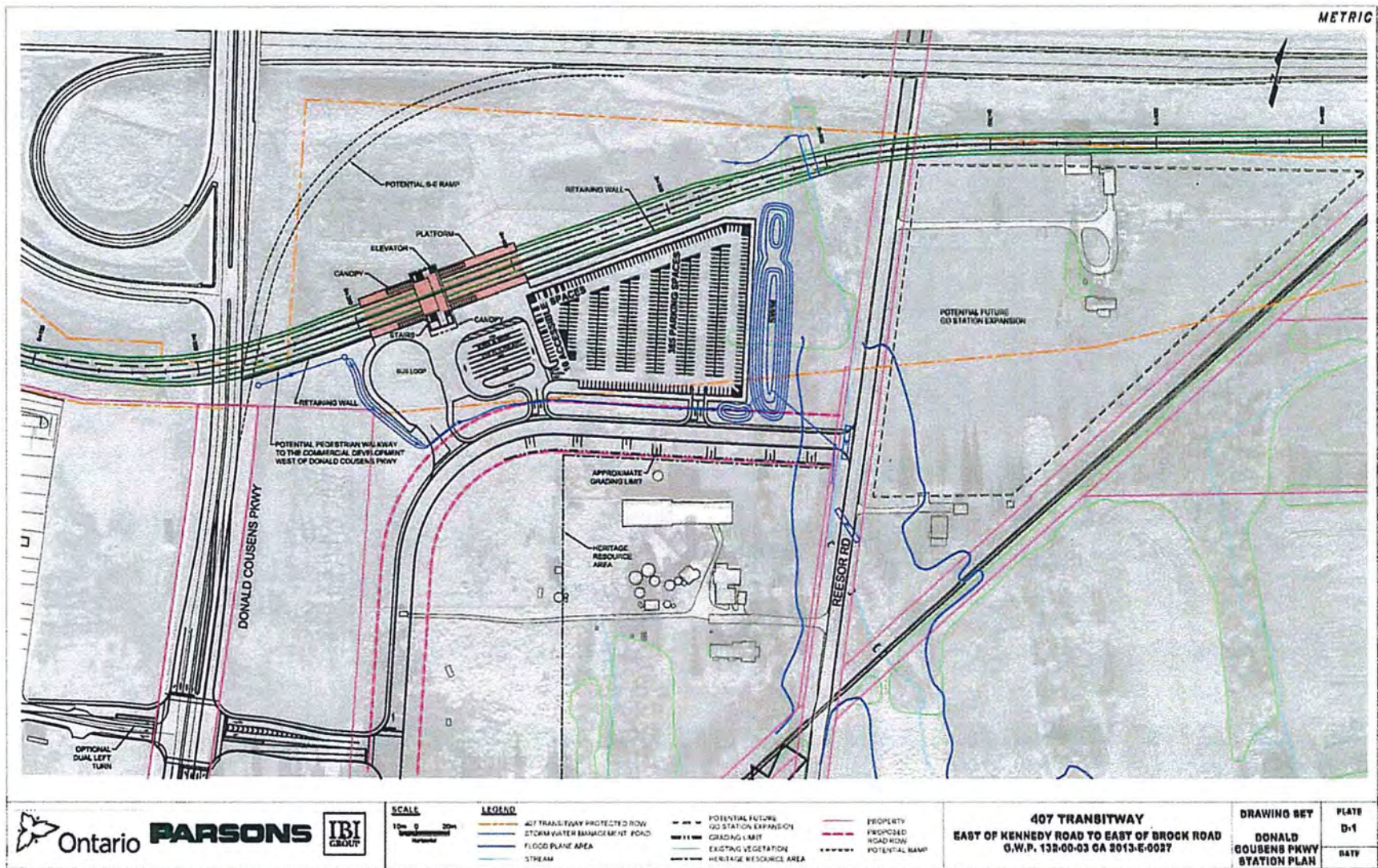
Preferred Alternative



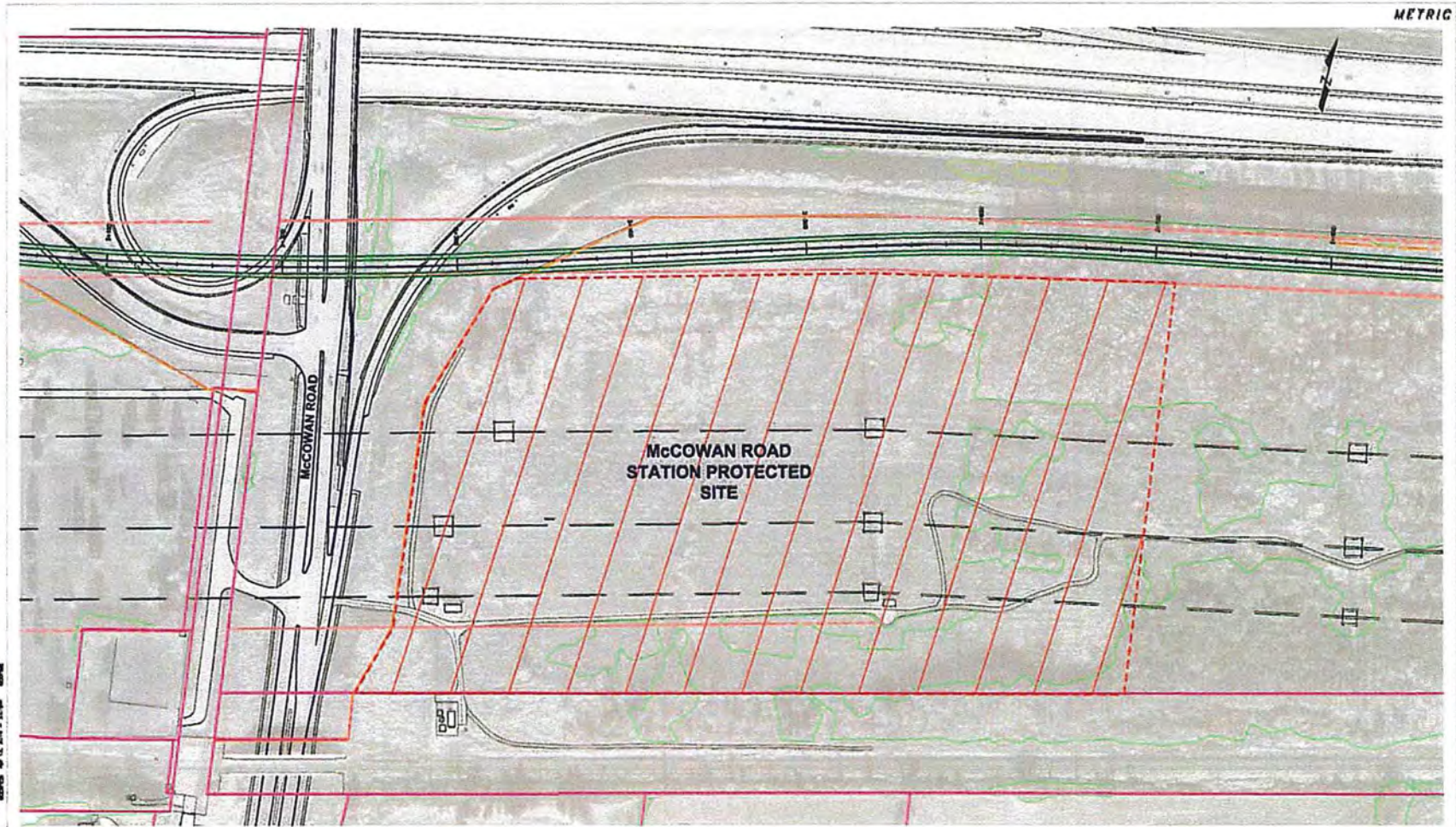
Preferred Alternative Markham Road Station



Preferred Alternatives Donald Cousens Station



Protected Sites McCowan Road



METRIC

DRAWING NO. 407TRANSITWAY/STATION SITES (PARTIAL) - McCowan Rd. Station Protected Sites
 DATE: 04/11/2013 11:23AM
 SCALE: AS SHOWN
 DRAWN BY: J. BROWN
 CHECKED BY: J. BROWN



PARSONS



SCALE
 10m @
 1:10000
 20m

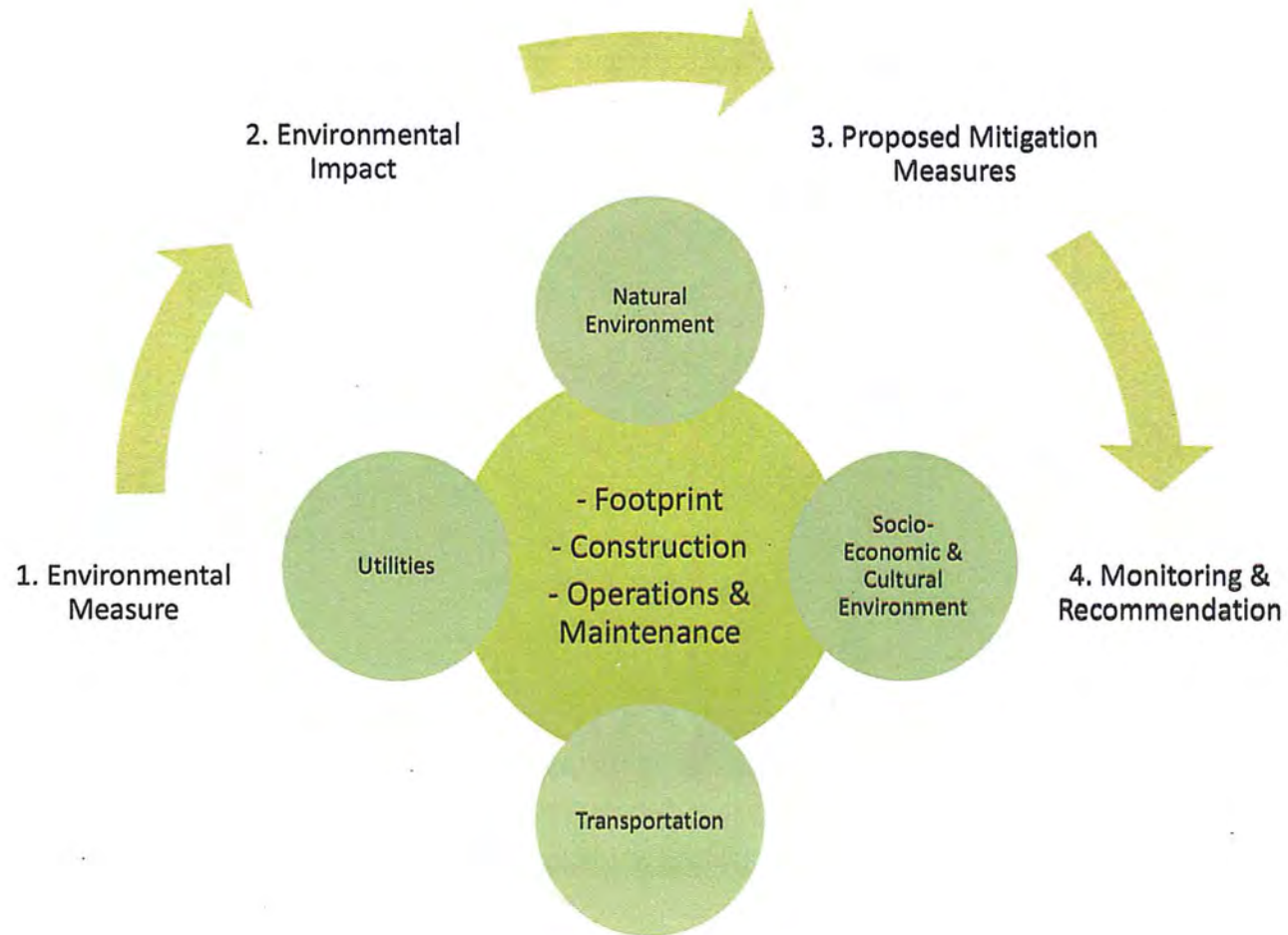
LEGEND

- 407 TRANSITWAY PROTECTED ROW
- PROPERTY
- PROTECTED SITE
- UTILITY CORRIDOR
- EXISTING VEGETATION

407 TRANSITWAY
 EAST OF KENNEDY ROAD TO EAST OF BROCK ROAD
 O.W.P. 152-00-03 CA 2013-E-0027

DRAWING SET
 McCowan Rd
 STATION
 SITE

PLATE
 No.1
BATH



Environmental Technical Studies on the Preferred Transitway Configuration including field investigations conducted in 2015:

- Natural Sciences (fisheries and terrestrial)
- Archaeology
- Cultural Heritage
- Noise
- Air Quality
- Groundwater
- Contaminated Property and Waste
- Hydrology



Major Environmental Findings

- Markham Road Station
 - Wetland southwest quadrant of Markham Road and Highway 407 interchange – Avoided.
 - Potential for a Huron-Wendat ossuary to exist – A licensed archaeologist will monitor during construction.
- Donald Cousens Station - Cultural Heritage Features
 - Two properties on Reesor Road are designated under the *Ontario Heritage Act*, Part IV and one property is listed by the City of Markham as cultural heritage resource. – Avoided by preferred alternative.
 - Heritage Impact Assessment was completed for the two properties designated under the *Ontario Heritage Act*.
- Ninth Line Station
 - Traffic concerns of residents of subdivision adjacent to Station. Traffic management measures are being proposed to mitigate station traffic. Station at site protected by IO for Transitway station.

Implementation Potential Implementation Strategy



- Factors: Funding; Congestion on 407 ETR
- 1. Construct stations at key locations. ie: Markham Rd; Donald Cousens Pkway; Brock Rd; while buses operate on 407 ETR.
- 2. Construct runningway along future congested ETR segments. Ie: Kennedy Rd. Markham Rd.
- 3. Construct remaining stations and runningway in response to ridership growth and traffic congestion



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