

**Table 1: SYNOPSIS OF ALIGNMENT EVALUATION FINDINGS
SEGMENT 'B' WEST**

Objectives And Goals	Alternative B1: Hwy 7: Jane-Centre St. and Jane St./Hydro ROW to York U.	Alternative B2: Jane St./Hydro ROW to York U. & north-east in Hydro ROW - Centre St.	Alternative B3: Jane-Steeles-York U.-Keele and Hwy 7 to Centre St.
Improve Mobility • Inter-regional transit connectivity • System expansion flexibility • Speed, safety, ride comfort • Service quality and reliability • Station catchment • Convenience of access	• Circuitous route to York U. for trips from the east reduces Hwy 7 service daily boardings by 7-10%. • Transfer required to connect future 407BRT service to Hwy 7 service origins/destinations east of Jane St. • Alignment geometry good, station access reasonable. • Major road intersections may affect system reliability	• Circuitous route to VCC from the east but direct route to York U. from the east maximizes Hwy 7 boardings • Connects Hwy 7 and Vaughan N-S link service directly to future 407BRT service at Jane interchange. • Alignment geometry fair, some stations less accessible. • Better system reliability due to fewer road intersections	• Circuitous route to VCC from the east but direct route to York U. maximizes Hwy 7 boardings • Connects Hwy 7 and Vaughan N-S link service directly to future 407BRT service at Jane interchange. • Alignment geometry fair, station access good • Major road intersections may affect system reliability
Protect & Enhance Social Environment • Effects on communities • Road traffic and pedestrian circulation • Public safety and security • Noise and vibration • Effects on cultural resources • Community vistas and street aesthetics	• Alignment largely in road ROW minimizes effects on community features • Alignment largely in major road median requires more mitigation of traffic/access impact and safety concerns • Adverse noise and vibration effects are minimized • Median transitway will have minimal effect on vistas and no effect on cultural resources	• Alignment in Hydro ROW will have a minor effect on public open space • Alignment partially in Hydro ROW reduces traffic/access impact but intersections still result in safety concerns • Adverse noise and vibration effects are minimized • Median and Hydro ROW transitway will have minimal effect on vistas and no effect on cultural resources	• Alignment in road median has minimal effect on community features • Alignment entirely in road median requires most mitigation of traffic/access impact and safety concerns • Noise and vibration effects likely unnoticeable at the few residential areas • Median transitway will have minimal effect on vistas. Black Creek cultural resources on route
Protect Natural Environment • Effect on aquatic ecosystems • Effect on terrestrial ecosystems • Effect on Local Air Quality • Effect on Hydro-geological conditions	• Potential for minor effects on aquatic ecosystems due to widening of the road over 7 crossings • Potential for some effects on terrestrial ecosystems • Some potential for minor effects on air quality but few receptors	• Has the least adverse effect on aquatic ecosystems with only 3 widening of crossings • Has no effects on terrestrial ecosystems • Lower potential for adverse effects on hydrological and geological conditions • Potential for minor effects on air quality but few receptors	• Potential for minor effects on aquatic systems due to widening of the road over 6 crossings • Most potential for minor effects on air quality and more receptors
Promote Smart Growth / Economic Development • Regional/Mun. Plans and Urban Structure • Access to community facilities • Effect on business activities • Goods movement • Promote transit-oriented development	• Conforms best with planning policies and provides good access to community facilities • Provides positive effects on business activities but affects access to businesses • Provides the best opportunities for transit-oriented-development around stations and along the corridor	• Does not conform as well with planning policies and some stations are remote from community facilities • Offers least interference with business activities but also minimal potential for increased business activities • Provides the least opportunity for transit-oriented-development around stations and along the corridor	• Conforms well with planning policies and provides good access to community facilities • Optimized for positive effects on business activities at stations and within the corridor • Provides good opportunities for transit-oriented-development and some redevelopment

Maximize Cost-effectiveness of rapid transit - Effect on Capital Costs - Property required - Effect on operating and maintenance costs	- Capital cost +/- \$170 million plus slightly higher vehicle fleet cost due longer route - Minimal property cost, some Hydro easement cost 7.3 km route results in slightly higher O&M costs	- Capital cost +/- \$144 million plus lowest vehicle fleet cost - Hydro easement cost to be carried 6.7 km route yields lowest O&M costs	- Capital cost +/- \$165 mill. plus higher vehicle fleet cost due to longest route - Minimal property cost 8.2 km route results in marginally higher O&M costs
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**Table 1: SYNOPSIS OF ALIGNMENT EVALUATION FINDINGS
SEGMENT 'B' EAST**

Objectives And Goals	Alternative B4: Hwy 7 between Centre St. and Bathurst St. (Hunters Point Rd.)	Alternative B5: Hydro ROW between Centre and Bathurst Sts. (Hunters Point Rd.)	Alternative B6: Centre St. and Bathurst St. to Hwy 7 at Hunters Point Rd.
Improve Mobility - Inter-regional transit connectivity - System expansion flexibility - Speed, safety, ride comfort - Service quality and effectiveness - Station catchment - Convenience of access	- Connects to future 407 BRT service at Bathurst and possibly Dufferin. Good alignment geometry and attracts marginally lower daily boardings than Centre-Bathurst route option. - Development served by stations on north side only - Limited opportunities for station access facilities	407 BRT connection indirect - Good alignment geometry but will attract least daily boardings on Hwy 7 service - Good service reliability due to separation of alignment from major road traffic - Access less convenient due to remoteness from road system	- Connects to future 407 BRT service at Bathurst - Has reasonable alignment geometry and is projected to attract slightly higher daily boardings than other routes. - Higher potential for loss of service reliability due to traffic interference at intersections - Station access very convenient with some opportunity for station drop-off/park and ride
Protect & Enhance Social Environment - Effects on communities - Road traffic and pedestrian circulation - Public safety and security - Noise and vibration - Effects on cultural resources - Community vistas and street aesthetics	- No effect on community interaction or community features - Moderate impact of median transitway on traffic circulation/access - Minimal adverse noise and vibration effects - Some urban design opportunity to improve vistas and no effect on nearby cultural resources	- No effect on community interaction, minor intrusion on public open space - Minimal impact of Hydro ROW transitway on traffic circulation/access - Minimal adverse noise and vibration effects - Minor intrusion on open space vistas and no effect on nearby cultural resources	- Minor effect on community interaction, improves access to community features - Moderate impact of median transitway on traffic circulation/access - Adverse noise and vibration effects likely unnoticeable - Significant urban design opportunity to improve vistas and no effect on nearby cultural resources
Protect Natural Environment - Effect on aquatic ecosystems - Effect on terrestrial ecosystems - Effect on Air Quality - Effect on Hydro-geological conditions	- Has least adverse effect on aquatic ecosystems - Has negligible effects on terrestrial ecosystems - Very low potential effect on air quality - Low potential for adverse effects on hydrological and geological conditions	- Potential for minor effects on aquatic ecosystems - Has negligible effects on terrestrial ecosystems - Low potential effect on air quality - Low potential for adverse effects on hydrological and geological conditions	- Potential for minor effects on aquatic ecosystems - Has negligible effects on terrestrial ecosystems - Highest potential for adverse air quality effects given the number of receptors in prevailing downwind direction - Minor hazardous material risk
Promote Smart Growth / Economic Development - Regional/Mun. Plans and Urban Structure - Access to community facilities - Effect on business activities - Goods movement - Promote transit-oriented development	- Conforms well with planning policies and provides good access to community facilities - Provides some potential for increase in business activities - Provides some opportunities for TODs around stations and along the corridor	- Conforms least with planning policies and does not provides good access to community facilities - Provides the least positive effects on business activities - Provides very little opportunities for TODs and re-development along the corridor	- Conforms very well with planning policies and provides good access to community facilities - Has the best potential for increase in business activity and little effects on business access - Provides most opportunities for TODs and re-development around stations and along the corridor

Maximize Cost-effectiveness of rapid transit - Effect on Capital Costs - Property required - Effect on operating and maintenance costs	- Capital cost +/- \$100 million - Minimal property cost - O&M costs marginally higher due to longer alignment	- Capital cost +/- \$90 million - Hydro easement cost - Lowest O&M costs due to alignment being shortest.	- Capital cost +/- \$110 mill. - Minimal property cost - O&M costs marginally higher due to longer alignment.
Table 1: SYNOPSIS OF ALIGNMENT EVALUATION FINDINGS SEGMENT C (MARKHAM)			
Objectives And Goals	Alternative C1: Hwy 7 between Woodbine Ave. and Kennedy Rd.	Alternative C2: Woodbine Ave., Yorktech Dr. to Markham Centre & Kennedy Rd. to Hwy 7	Alternative C3: Hwy 7 from Woodbine Ave. to S. Town Centre Blvd. to Markham Centre & Kennedy Rd. to Hwy 7
Improve Mobility - Inter-regional transit connectivity - System expansion flexibility - Speed, safety, ride comfort - Service quality and effectiveness - Station catchment - Convenience of access	- Indirect service to future Markham Centre reduces daily boardings by 4-5% - Has no direct connection to Stouffville GO service - Good alignment geometry but Hwy 7 traffic activity could affect reliability - Convenient access from residential use north of and mixed-use on Hwy 7	- Provides direct service to future Markham Centre and direct connection to GO Stouffville rail service - Fair alignment geometry on partially exclusive ROW but still requires several at-grade intersections - Station catchment is mainly employment and Markham Centre mixed-use	- Provides direct service to future Markham Centre and direct connection to GO Stouffville rail service - Fair-good alignment geometry requiring several intersections and partial interface with Hwy 7 traffic activity - Convenient access to mixed-uses along most of route
Protect & Enhance Social Environment - Effects on communities - Road traffic and pedestrian circulation - Public safety and security - Noise and vibration - Effects on cultural resources - Community vistas and street aesthetics	- Causes very few adverse community effects after construction - Hwy 7 median location has most traffic interface with greater safety risk - Alignment entirely in Hwy 7 minimizes effect of system noise and vibration and offers good urban design potential - Minimal effect on community vistas	- Some intrusion in river/ creek valleys but few other adverse community effects - No Hwy 7 traffic interface but route requires most intersections - Noise & vibration attenuation may be required in Markham Centre civic mall and river valleys. - Urban design potential mainly in Markham Centre and Kennedy Road.	- Minor intrusion in river valley and few other adverse community effects - Some Hwy 7 traffic interface and several intersections increases safety risk - Noise & vibration attenuation may be required in Markham Centre civic mall - Good urban design potential in Markham Centre, on Kennedy Road and Hwy 7, particularly at Civic Centre
Protect Natural Environment - Effect on aquatic ecosystems - Effect on terrestrial ecosystems - Effect on Air Quality - Effect on Hydro-geological conditions	- Has little adverse effect on aquatic & terrestrial ecosystems - Some potential for minor effect on air quality - Highest number of potentially hazardous material sites	- Potential for some effects on aquatic ecosystems due to the alignment requiring new crossings at Beaver Creek and Apple Creek - Least potential for adverse effect on air quality (fewer receptors) - Few potentially hazardous material sites	- Potential for some effects on aquatic ecosystems due to the alignment requiring bridge widening at Beaver Creek and Apple Creek - Minor potential for adverse air quality effects - Few potentially hazardous material sites
Promote Smart Growth / Economic Development - Regional/Mun. Plans and Urban Structure - Access to community facilities - Effect on business activities - Goods movement - Promote transit-oriented development	- Conforms well with planning policies and provides acceptable access to community facilities, but by-passes Markham Centre - Provides good potential for increase in existing business activities along Hwy 7 - Provides opportunities for higher order uses	- Conforms with planning policies and supports urban structure of Region - Provides good access to community facilities - Serves Markham Centre well, Civic Centre less convenient - Provides some potential for increase in existing business activities (Kennedy, Woodbine) - Provides good opportunities for TODs / higher order use	- Conforms best with planning policies and supports urban structure of Region - Provides very good access to community facilities - Serves both Civic Centre and Markham Centre well - Provides good potential for increase in existing business activities (Hwy 7, Kennedy) - Provides good opportunities for TODs / higher order use

Evaluation Synopsis – Preliminary Preferred Alignment Alternative Attachment 3

Maximize Cost-effectiveness of rapid transit • Effect on Capital Costs • Property required Effect on operating and maintenance costs	• Capital cost +/- \$147 million • Minor property cost • Lowest vehicle and O&M costs due to alignment being shortest.	• Capital cost +/- \$154 million • Property cost for 2.5km ROW • Vehicle and O&M costs marginally higher due to longer alignment	• Capital cost +/- \$156 million • Property cost for 0.6 km ROW • Vehicle and O&M costs marginally higher due to longer alignment.
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