

The Regional Municipality of York

Committee of the Whole
Transportation Services
June 16, 2022

Report of the Commissioner of Public Works

Amendment to Agreement for Consultant Services Highway 404 Mid-Block Crossing North of 16th Avenue City of Richmond Hill and City of Markham

1. Recommendations

1. Council approve an amendment to the current agreement between the Region and GHD Limited for a new mid-block crossing over Highway 404, north of 16th Avenue, to add new contract administration and site inspection services required during construction of the new road, and increase the contract price, within the Capital Spending Authority, by \$4,527,968 from \$2,275,797.31 to \$6,803,765.31, excluding HST.
2. Council approve an extension of the agreement between the Region and GHD Limited to provide consultant services for an additional two years, expiring on December 21, 2028, to include new contract administration and site inspection services during construction,

2. Summary

This report seeks Council approval to increase the contract price of the agreement with GHD Limited for detailed design of a new mid-block crossing over Highway 404, north of 16th Avenue. Additional fees are required to increase scope of engineering consultant services to include contract administration and site inspection services during construction of the new road. A location map is included as Attachment 1.

As additional fees being requested exceed staff authority provided in the Region's Procurement Bylaw, Council approval is required.

Key Points:

- The Region is leading, in partnership with Cities of Richmond Hill and Markham, Highway 404 mid-block crossing north of 16th Avenue project, which will provide relief to local and Regional arterial roads and Highway 404, and support area development applications and active transportation

- GHD Limited has been retained by the Region to provide engineering consultant services for detailed design and tender package preparation for Highway 404 mid-block crossing north of 16th Avenue
- In [2019](#), under the Roads Capital Acceleration Reserve Fund, Council recognized Highway 404 mid-block crossing north of 16th Avenue as a priority growth-related roads project and authorized advancing the start from 2028 to 2022
- During detailed design, overall complexity of the project delivery significantly increased due to factors related to the provincial Highway 404 widening project, active development applications in the area and environmental requirements and constraints
- Increasing scope of services for GHD Limited's assignment to provide contract administration and site inspection services during construction of Highway 404 mid-block crossing north of 16th Avenue will ensure continuity of consultant services, help mitigate potential construction cost increases and reduce risks to the Region and Cities of Richmond Hill and Markham

3. Background

The Region is committed to delivering improvements in Highway 404 corridor benefitting road users, area residents and businesses

In [2012](#), a mid-block crossings study for Highway 404 was carried out. Following the study, the Region has taken on a greater role in delivery of mid-block crossings by undertaking environmental assessment studies for three mid-block crossings over the highway, north of 16th Avenue, Major Mackenzie Drive and Elgin Mills Road.

In 2018, the Region, in partnership with Cities of Richmond Hill and Markham, completed the mid-block crossing north of Highway 7 (known as Norman Bethune Avenue) and ramp extension (known as Aristotle Avenue).

The Region has partnered again with Cities of Richmond Hill and Markham and is currently leading Highway 404 mid-block crossing north of 16th Avenue project, including land acquisition, utility relocation, and design and implementation of the construction contract.

GHD Limited is currently undertaking detailed design for Highway 404 mid-block crossing north of 16th Avenue

In late 2016, GHD Limited began detailed design for Highway 404 mid-block crossing north of 16th Avenue, from Leslie Street in Richmond Hill to Woodbine Avenue in Markham. The project includes reconstructing Orlando Drive and Vogell Road in City of Richmond Hill and reconfiguring and extending Markland Avenue and raising Cachet Woods Drive in City of Markham. Additionally, a new 80-metre, two-span bridge over Highway 404 and a 60-metre, single-span bridge over Rouge River is planned. While the roads east and west of Highway 404 bridge will be owned by Cities of Markham and Richmond Hill, the bridge over the

highway will be owned by MTO. The bridge over Rouge River will be owned by City of Markham.

Detailed design is nearing completion and consultation with external agencies for approvals, permits and agreements continue. The project requires a comprehensive construction contract to address many complexities related to adjacent contracts, development and environmental requirements and constraints.

2019, Council approved advancing timing for Highway 404 mid-block crossing north of 16th Avenue, from 2028 to 2022

In 2019, through the Roads Capital Acceleration Reserve Fund, Council recognized the Highway 404 mid-block crossing north of 16th Avenue as one of the priority growth-related roads projects and authorized advancing start from 2028 to 2022. Due to project complexities, it was reprogrammed during the 2022 budget process to begin construction in 2023. Utility relocations are underway, and staff are preparing to tender the construction contract for later this year. Construction is expected to occur over three years.

Mid-block crossing north of 16th Avenue is being coordinated with numerous other projects in the area

GHD Limited has coordinated with existing and expanding developments in Cities of Markham and Richmond Hill, including expansion of the Region's Transit Facility at 55 Orlando Avenue. In addition, coordination with seven other proposed or active site plan applications has occurred since the start of this work, with many of these applications being high priority developments.

MTO is currently improving Highway 404 from Highway 407 to Major Mackenzie Drive, scheduled to be completed late summer 2023. It is essential to coordinate delivery of these projects to minimize impact and disruption to travellers and the community.

4. Analysis

GHD Limited is approved by Ministry of Transportation to provide engineering consultant services and was retained by the Region to undertake detailed design

Only consultants qualified by MTO are permitted to complete work within the Ministry's 'Controlled Access Highway'. GHD Limited is approved to provide engineering consultant services.

GHD Limited was retained by the Region to undertake detailed design services only, which were competitively procured through the Region's request for proposal procurement process. GHD Limited's continued involvement to provide a new scope of work involving contract administration and site inspection services during construction of Highway 404 mid-block crossing north of 16th Avenue, would benefit the Region and local municipalities.

Design of the new mid-block crossing is being coordinated with the Ministry of Transportation improvement contract for Highway 404, currently underway

Coordination between the Region and MTO is currently underway to pre-build the centre pier of the mid-block crossing road as part of the current MTO contract. This will reduce duplication of expenditures, future work and impacts to those travelling on Highway 404. GHD Limited has been integral in coordinating with MTO and having them provide contract administration and site inspection services would ensure greater compliance of the prebuild centre pier during construction.

Construction work requires ongoing coordination with Buttonville Airport, federal agencies, utility companies and development proposals

GHD Limited has been working to obtain concurrence from federal aviation authorities to ensure the bridge, lighting and other requirements do not permanently affect operations of the airport. Temporary impacts will occur during construction with mitigation measures incorporated into the construction contract; however, coordination with Buttonville Airport, Transport Canada and Nav Canada will need to be seamless during construction to ensure the least impact to operation of the airport. Having GHD Limited provide contract administration and site inspection services in addition to existing detailed design work would significantly increase the level of this coordination with federal agencies and Buttonville Airport.

GHD Limited has been working with utility companies and Regional staff on development-related coordination that will occur during construction of the mid-block crossing. Relocation of utilities on Cachet Woods, including co-ordinating servicing to adjacent development applications, is essential for contract development and construction. GHD Limited has been integral to advancing this work and their familiarity would be beneficial as the Region's consultant for contract administration and site inspection in helping mitigate timing risks and reduce impacts of work during construction.

Environmental requirements have changed and require continuity to see through to final approval and permitting

GHD Limited's experience has been integral to environmental design of the project, including evaluation of more than six bridge designs over Rouge River, and developing low impact development plans to enhance natural environment features adjacent and near the river. Variations in policies are requiring changes in design and those impacting staging and construction (delivery) of the entire project. GHD Limited's contract administration and site inspection and design teams have been working towards finalizing a contract package and given the ongoing variability, this needs to continue to create efficiencies in addressing challenges timely to mitigate delays in tendering and construction start.

Adding new scope for construction administration and site inspection services during construction would provide service continuity and seamless project coordination

GHD Limited's project experience and familiarity with stakeholders, including local municipal staff, regional, provincial and federal agencies, and private stakeholders, would provide consultant continuity and allow seamless project coordination during construction. Adding this new work scope would help mitigate potential construction cost increases and reduce risks to the Region and Cities of Richmond Hill and Markham

The Region will enter into an agreement with Ministry of Transportation to complete the mid-block crossing within their jurisdiction

A legal agreement will be required to deliver a new bridge over Highway 404. The Region is working towards securing approvals for all work within the controlled access highway limits relative to the Region. The Commissioner of Public Works, through delegated authority, will enter into an agreement with MTO for the associated works. The Region will pay for all improvements within MTO's jurisdiction to support the Region's plans. MTO will own the bridge and be responsible for maintenance.

The Region will enter into an agreement with Cities of Richmond Hill and Markham for cost sharing of the project, including future maintenance

A legal agreement will be required for the overall project outlining responsibilities for all three municipal parties, including cost sharing project delivery to completion. The agreement will also outline maintenance requirements of local municipalities for snow clearing and minor repairs to MTO bridge over Highway 404. The Commissioner of Public Works, through delegated authority, will enter into a joint agreement with the Cities of Richmond Hill and Markham for associated works.

5. Financial

GHD Limited would require additional funding to provide new services during construction of Highway 404 mid-block crossing

Consultant services are required for contract administration and site inspection during construction of the mid-block crossing. GHD Limited is well-positioned to provide these services.

For GHD Limited to provide these new services during construction, their agreement would need to be amended to provide contract administration and site inspection services in the amount of \$4,527,968, excluding HST. This addition would increase the contract price within the Capital Spending Authority, from \$2,275,797.31 to a total cost of \$6,803,765.31, excluding HST. A summary of the costs is shown in Table 1.

Table 1
Contract Administration and Site Inspection Services Costs

Work Component	Amount
Project Management	\$ 191,400
Contract Administration	2,674,193
Inspection Services Including Warranty Closeout	1,121,667
Schedule Management	98,208
Specialty Inspections	442,500
Total	\$4,527,968

Through negotiations with GHD Limited, staff have reviewed the request for fees, compared these with rates in the current assignment and against other similar consultant assignments, and consider GHD Limited’s request for this new work scope to be fair and reasonable. The total cost for the new contract administration and site inspection services during construction is 8.8% of the approved \$51.3 million 2022 budget for capital construction. Recent experiences with engineering services during construction as a percent of capital for similar projects indicate that 8.8% represents good value for money to the Region in advancing construction of this priority, growth-related roads project.

Highway 404 mid-block crossing north of 16th Avenue has a total project cost of \$94.5 million from inception to completion. The work will be funded from 100% development charges and is included in approved 10-Year Transportation Capital Budget.

6. Local Impact

This project provides improved access opportunities and benefits to road users, residents and businesses, and potential future development areas along the corridor in Cities of Markham and Richmond Hill.

Staff consulted with Cities of Markham and Richmond Hill about delivery of this project, and both support the Region moving it forward.

7. Conclusion

GHD Limited has been retained by the Region to provide only detailed design and tender package preparation for Highway 404 mid-block crossing north of 16th Avenue. Adding new scope to their assignment would allow them to provide contract administration and site

inspection services. This recommended approach would ensure continuity of consultant services, seamless coordination and assist in mitigating additional costs and risks to the Region.

This report seeks Council approval for an amendment to the current agreement with GHD Limited by an amount of \$4,527,968, increasing the total from \$2,275,797.31 to \$6,803,765.31, excluding HST, and extending the agreement to include new contract administration and site inspection services, for an additional two years, expiring December 21, 2028.

For more information on this report, please contact Salim Alibhai, Director, Capital Planning and Delivery at 1-877-464-9675 ext. 75229. Accessible formats or communication supports are available upon request.

Recommended by:



Erin Mahoney, M. Eng.
Commissioner of Public Works

Approved for Submission:



Bruce Macgregor
Chief Administrative Officer

May 27, 2022
Attachment (1)
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