

Traffic Management Plan - Glen Road

Date: June 12, 2018
To: Toronto and East York Community Council
From: Acting Director, Transportation Services, Toronto and East York District
Wards: Ward 27, Toronto Centre - Rosedale

SUMMARY

As the Toronto Transit Commission (TTC) operates a transit service on Glen Road, City Council approval of this report is required.

Transportation Services, Toronto and East York District on behalf of Councillor Kristyn Wong-Tam, the Rosedale community and Toronto and East York Community Council was directed to conduct a comprehensive review of traffic and pedestrian safety on Glen Road, between Beaumont Road and Summerhill Avenue in order to inform the design of the road reconstruction project for Glen Road, slated for summer/fall of 2018.

As a result of our review, the proposed recommendations for safety improvements include:

- replacement of the existing all-way stop control with the installation of a pedestrian crossover on Glen Road at Bin-Scarth Avenue;
- a plan to improve pedestrian crossing locations through the use of curb extensions, Tactile Walking Surface Indicators, and pavement markings;
- a plan to facilitate route navigation, guidance and lane position for cyclists through the use of "sharrow" pavement markings;
- a plan to install advance "School Area" and "Playground Ahead" signs;
- a plan to reduce the speed limit from 40 km/h to 30 km/h on Glen Road, between Elm Avenue and Summerhill Avenue; and
- a plan to include Glen Road in the "Watch Your Speed Program".

The installation of the pedestrian crossover will be a part of a pilot program to review locations for a new type of pedestrian crossover that was recently approved for use in the Province of Ontario and is being introduced as part of the Vision Zero Road Safety Plan. The civil road modifications, signage installation, pavement markings and speed limit reduction will be implemented in conjunction with the road reconstruction project to narrow the roadway and improve the public realm.

RECOMMENDATIONS

The Acting Director, Transportation Services, Toronto and East York District recommends that:

1. City Council amend the existing all-way stop control at Glen Road and Roxborough Drive, to be in effect at Glen Road and Roxborough Drive (south intersection).
2. City Council approve the installation of a pedestrian crossover on Glen Road at Bin-Scarath Road.
3. City Council rescind the compulsory stop controls for southbound and northbound traffic on Glen Road at Bin-Scarath Road.
4. City Council delete the existing 40 km/h speed limit on Glen Road, between Elm Avenue and Summerhill Avenue.
5. City Council delete the existing 30 km/h speed limit on Glen Road, between Summerhill Avenue and the north end of Glen Road.
6. City Council amend the existing 30 km/h speed limit on Glen Road, between Maple Avenue and Elm Avenue, to be in effect between Dale Avenue and the north end of Glen Road.

FINANCIAL IMPACT

The cost associated with the Glen Road reconstruction project is about \$5.2 million, which includes approximately \$450,000 for intersection improvement initiatives.

Pedestrian crossover installation costs, in the estimated amount of \$40,000.00, and the installation of the speed limit and warning signs are included within the Transportation Services 2018 Operating Budget.

DECISION HISTORY

At its meeting on October 17, 2017, Toronto and East York Community Council, on behalf of the Ward Councillor, directed Transportation Services to conduct a comprehensive review of traffic and pedestrian safety on Glen Road, as well as to obtain stakeholder feedback with recommendations to inform the reconstruction of Glen Road between Beaumont Road and Summerhill Avenue. Item TE27.93 and Council's decision document can be found at:

<http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2017.TE27.93>

At its meeting on May 2, 2017, Toronto and East York Community Council approved Item 24.81, a motion submitted by the Ward Councillor to authorize the installation of an all-way stop control at the intersection of Glen Road and Bin-Scarth Road. Council decision can be found at:

<http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2017.TE24.81>

COMMENTS

Transportation Services, on behalf of the Ward Councillor and the Rosedale community, and in response to Item TE27.93 was requested to review measures to enhance pedestrian and traffic safety on Glen Road, between Beaumont Road and Summerhill Avenue. Particularly with regards recommendations for the removal of the all-way stop control on Glen Road at Bin-Scarth Road, reducing excessive vehicular speeds, and soliciting feedback with regards to the future road design of Glen Road.

Existing Conditions

Glen Road, between Beaumont Road and Summerhill Avenue is designated as a two-way north/south collector road, and is approximately 0.75 km in length. It consists of a two-lane cross-section, with one lane per direction. It has a posted speed limit of 40 km/h, and a daily two-way traffic volume of approximately 5,000 vehicles. The pavement width of approximately 7.3 to 9.8 metres, Municipal sidewalks are provided on both sides of the road, and heavy trucks are prohibited on Glen Road.

Parking is prohibited at all times on the east side of the road; and prohibited from 7:00 a.m. to 9:00 a.m., Monday to Friday, on the west side of the road, and maximum three-hour parking at all other times exists within the study area.

TTC service on Glen Road, between South Drive and Summerhill Avenue is provided by the "82 Rosedale" transit bus which operates two-way transit buses between South Drive and Highland Avenue. Eastbound transit buses operate one-way northbound on Glen Road, eastbound and northbound on Douglas Drive, westbound on the east/west portion on Glen Road, westbound on Summerhill Avenue to MacLennan Avenue. Transit buses then travel through the community eventually making an eastbound right-turn onto Glen Road at Highland Avenue.

The limits of the road reconstruction, as shown on Drawing Nos. 421G-3096 to 421G-3103, dated June 2018 consists of seven intersecting roadways (Beaumont Road, Highland Avenue, Bin-Scarth Road, Whitney Avenue/Edgar Avenue, Roxborough Drive, Douglas Drive and Summerhill Avenue). Three intersections are currently all-way stop controlled and four intersections have stop controls on the side street.

Glen Road is situated within the Rosedale Community and is comprised of single family residential homes. Whitney Park is located on the west side of Glen Road, between Edgar Avenue and Roxborough Drive, Rosedale United Church (159 Roxborough Drive) is located at the southeast corner of Glen Road and Roxborough Drive, and the Gradale Academy, a private school for pre-school to elementary students is located with the church.

Transportation Services investigated opportunities for engineering and traffic countermeasures on Glen Road, between Beaumont Road and Summerhill Avenue, which include:

- road alternations to narrow, normalize, and extend the curb and sidewalk areas;
- installation of the new Provincially approved pedestrian crossover;
- a reduction in the speed limit from 40 km/h to 30 km/h on the entirety of the road; and
- including Glen Road into the City's "Watch Your Speed" program.

Road Alternation

As part of the road reconstruction work planned for Glen Road, between Beaumont Road and Summerhill Road in summer/fall of 2018, staff noted opportunities to implement a number of road and public realm improvements which include:

- Narrowing the road width and reallocating the right-of-way to increase the sidewalk width. Currently, Glen Road has a pavement width of about 7.3 to 9.8 metres, the road width will be narrowed to 7.3 metres between north of Beaumont Road and Roxborough Drive (north intersection), and 8.5 metres between Roxborough Drive (north intersection) and Summerhill Avenue. A reduction in the road width promotes slower vehicle speeds and increases comfort and safety for pedestrians.
- A reduction in the intersection curb radii. The curb radii is the curved section of the roadway where two roads intersect. Glen Road, at all seven intersecting roads will have smaller curve radii resulting in a reduction in the speed motorists turn, shorter pedestrian crossing distances, pedestrian visibility, and increased right-of-way or sidewalk space for pedestrians to wait and cross.
- Intersection normalization; the intersection of Glen Road at Roxborough Drive and Whitney Avenue/Edgar Avenue are considered to be offset, skewed and complicated to navigate. Through the reconstruction process, both of these roadways will be reconfigured to intersect Glen Road at a ninety degree angle which will increase visibility and shorten the crossing distance for pedestrians, as well as reduce vehicle turning speeds.
- Installation of curb extensions/bump-outs; Glen Road, between Roxborough Drive (south intersection) and Summerhill Avenue will have reduced pavement widths at the intersections by extending the curb into the roadway. This civil improvement will reduce the crossing distance for pedestrians, increase visibility of pedestrians to motorists that are waiting to cross, improve sightlines by prohibiting motorists from parking in close proximity to the intersection, physically narrow the roadways, and ultimately reduce driver speeds.

- Installation of shared lane "sharrow" pavement markings. Glen Road is designated a 'Quiet Street' cycle route, through the use of "sharrow" pavement markings, the lane positioning of cyclists will improve driver expectations of the road and will be added to complement the cycle signage.
- Installation of Tactile Walking Surface Indicators (TWSI) surfacing indicators at pedestrian crossing locations. The sidewalk tactiles will be implemented at all street corners within the construction limits and is utilized to provide persons with low or no vision with warning and guidance at crossing locations.

Installation of the above civil improvements will help to create better sightlines at the intersections, reduce the risk and severity of a collision, shorten pedestrian crossing distances, improve driver expectation, increase motorists' compliance of the posted speed limit, and provide more wider and comfortable sidewalk space for pedestrians.

Pedestrian Crossing Protection

A number of area residents have communicated their concerns with respect to noncompliance of the existing all-way stop controlled intersection at Glen Road at Bin-Scarth Road since its adoption by Toronto East York Community Council in May of 2017. Generally, unwarranted all-way stop controls decrease the compliance of motorists coming to a complete stop at the control measure, increase acceleration upon exiting an intersection, and increase driver frustration.

In an effort to continue to facilitate east/west pedestrian crossing at the intersection, staff recommend the removal of the all-way stop control and installation of a Level 2 pedestrian crossover at the intersection of Glen Road and Bin-Scarth Road.

Bin-Scarth Road is classified as a two-way east/west local road, with a pavement width of 7.4 metres, and municipal sidewalks on both sides of the road. It has a posted speed limit of 30 km/h, and a daily two-way traffic volume of approximately 600 vehicles.

Collision statistics provided by the Toronto Police Services for the three-year period ending December 31, 2017 disclosed one angled collision reported at Glen Road and Bin-Scarth Road prior to the installation of the all-way stop control. The collision did not involve a pedestrian or could be attributed to excessive vehicle speeds.

The Province of Ontario recently approved the use of different levels of pedestrian crossovers, which have lower installation criteria requirements. These types of pedestrian crossovers use alternate signage and pavement marking treatments, and also utilize rapid flashing beacons. This type of pedestrian crossover is generally intended to be applied to lower volume streets, such as Glen Road at Bin-Scarth Road.

The new types of pedestrian crossovers have not been previously installed in the City of Toronto. Transportation Services is currently undertaking a pilot project through Vision Zero to test their effectiveness and appropriateness by installing one of these types of pedestrian crossovers in each of the four Community Council areas.

This installation will assist pedestrian crossings and enhance safety for all road users. Installation is planned to occur later this year and follow-up studies will be undertaken to test their effectiveness. If required, enhancements will be undertaken to ensure the pedestrian crossover is operating optimally. As such, staff recommends the installation of this type of pedestrian crossover at the intersection of Glen Road and Bin-Scarath Road.

The installation of the pedestrian crossover differs from a stop controlled intersection as it establishes the right-of-way for pedestrians, and the associated by-law requires motorists to stop and wait until a pedestrian has completely crossed the roadway before proceeding through the intersection. The flashing beacons and pavement markings will also enhance the visibility of the crossing location. The pedestrian crossover coupled with the narrowed road designed to reduce vehicular speeds will provide a safer environment and designated place for pedestrians to cross Glen Road.

30 km/h Speed Limit Reduction

Transportation Services is requesting approval to reduce the speed limit from 40 km/h to 30 km/h on Glen Road, between Elm Avenue and Summerhill Avenue.

The implementation of the 30 km/h and 40 km/h speed limits will promote a reduced operating speed on the entire roadway, as well as create a distinct 30 km/h speed limit zone between Bin-Scarath Road and Summerhill Avenue within the limits of the school zone. Along with the road alterations, these changes should address the residents' concerns with regards to vehicle speeds on Glen Road.

Seventy-two hour speed and volume studies were conducted on Glen Road, between Beaumont Road and Binscarth Road on December 5, 2017, and 24-hour speed and volume studies were conducted on Glen Road, between Roxborough Drive and Whitney Avenue on May 23, 2018.

The following table identifies the results of those studies:

Table 1 - Speed and Volume Data

Glen Road	Dir	Speed Limit	Vehicle Speeds		Traffic Volume		
			Operating	Average	AM	PM	24 Hr
Beaumont Road and Binscarth Road	NB	40 km/h	48	40	142	218	2228
	SB		39	39	234	201	2467
Roxborough Drive and Whitney Avenue	NB		38	32	128	246	2141
	SB		45	38	188	214	2229

Results of the vehicle speed studies for Glen Road has confirmed that operating speeds, the speed at which 85% of the motorists are travelling at or below, are less than 48 km/h and average vehicle speeds are less than 40 km/h.

City Council at its meeting on May 5, 2015, approved a city wide policy regarding the implementation requirements for a 30 km/h speed limit. The criteria recommended for the implementation of a 30 km/h speed limit is based on the development of four warrants:

1. Petition (ensures there is a basic level of community support)
2. Road Environment (classification, pavement width, speeds and volumes)
3. School and Cycling Environment (proximity to schools, parks and cycling facilities)
4. Pedestrian and Traffic Environment (existence of sidewalks, parking, geometric design elements)

These warrants are intended to assist staff in determining when to consider a reduction in the speed limit to 30 km/h even in the absence of traffic calming measures.

In applying these criteria, a reduction of the speed limit on Glen Road is justified as follows:

That the speed limit of 40 km/h on Glen Road between Elm Road and Summerhill Avenue be lowered to 30 km/h given that there is an existing private elementary school on the east side of the roadway, as well as future proposed plans to install shared lane "sharrow" pavement markings on the entirety of Glen Road.

In addition to the installation of the 30 km/h speed limit, as a "School Area" sign currently exists in the northbound direction, staff recommends the installation of advanced "School Area" within the school zone for southbound motorists on Glen Road, north of Roxborough Drive, and the installation of "Playground Ahead" signs north and south of Whitney Park.

In summary, Transportation Services recommends the installation of the 30 km/h speed limit on the entirety of Glen Road, pedestrian crossover at Glen Road and Bin-Scarth Road, and installation of advance school area and playground ahead warning signs for Whitney Park and Gradale Academy.

We are also recommending that Glen Road be included in the "Watch Your Speed" program through the use of a digital feedback speed board. This program has been expanded through Vision Zero and can be rotated to various locations along Glen Road.

The above measures are complimentary to the substantial road reconstruction work slated for Glen Road, between Beaumont Road and Summerhill Avenue, and are effective measures in helping to reduce vehicle speeds, improve pedestrian safety and enhance the public realm.

Councillor Kristyn Wong-Tam is aware of the recommendations of this staff report.

CONTACT

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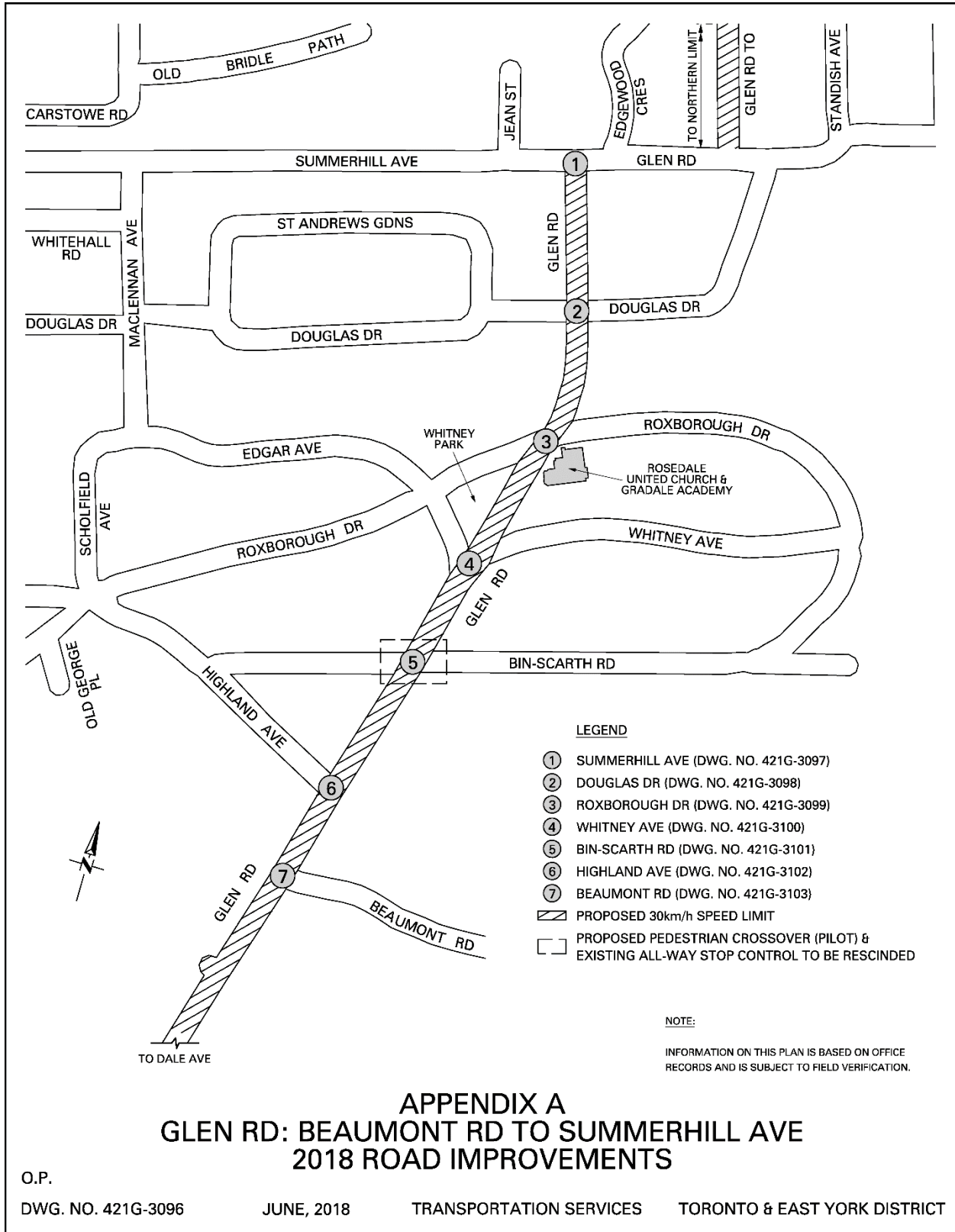
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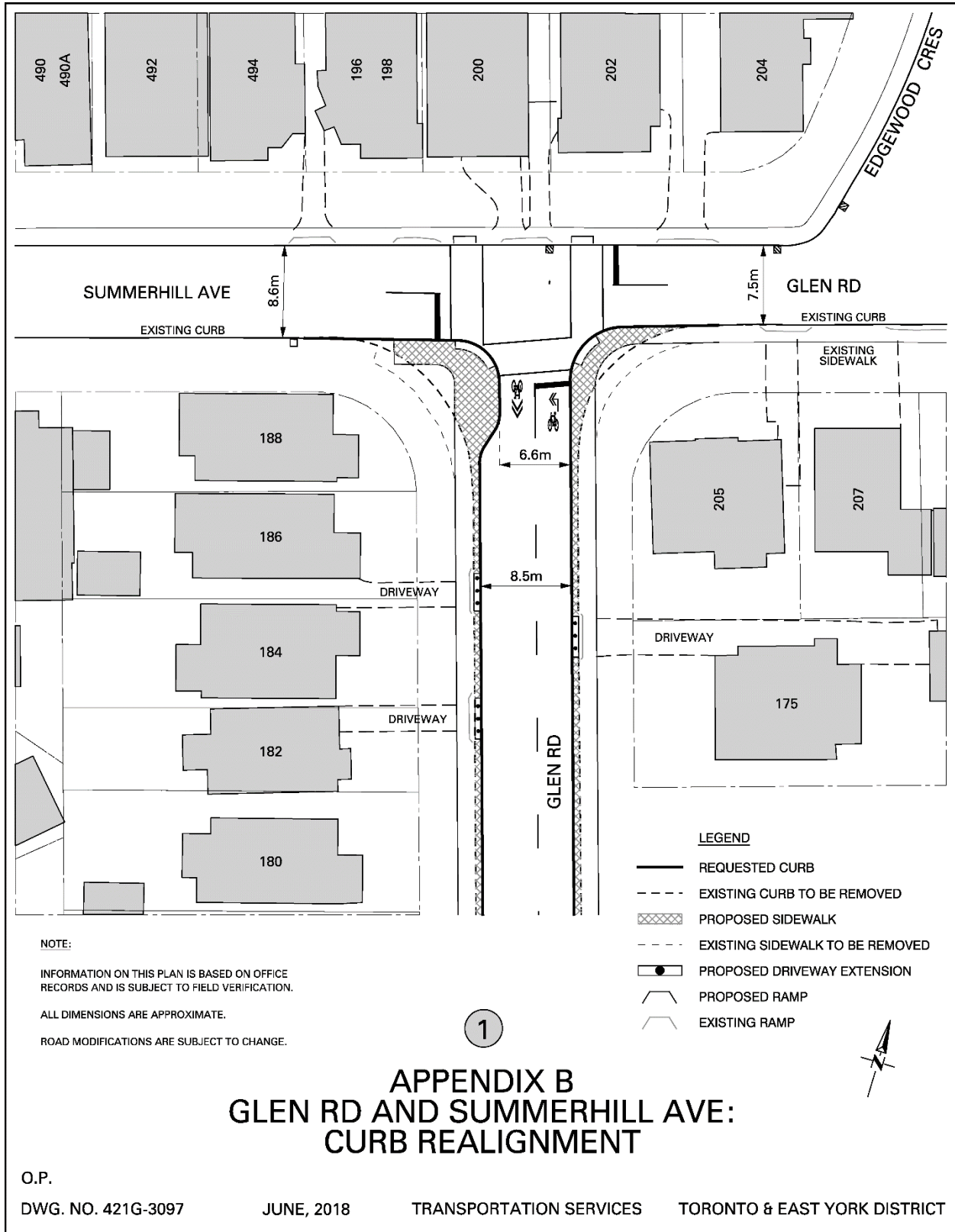
Dave Twaddle, C.E.T.
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Toronto and East York District

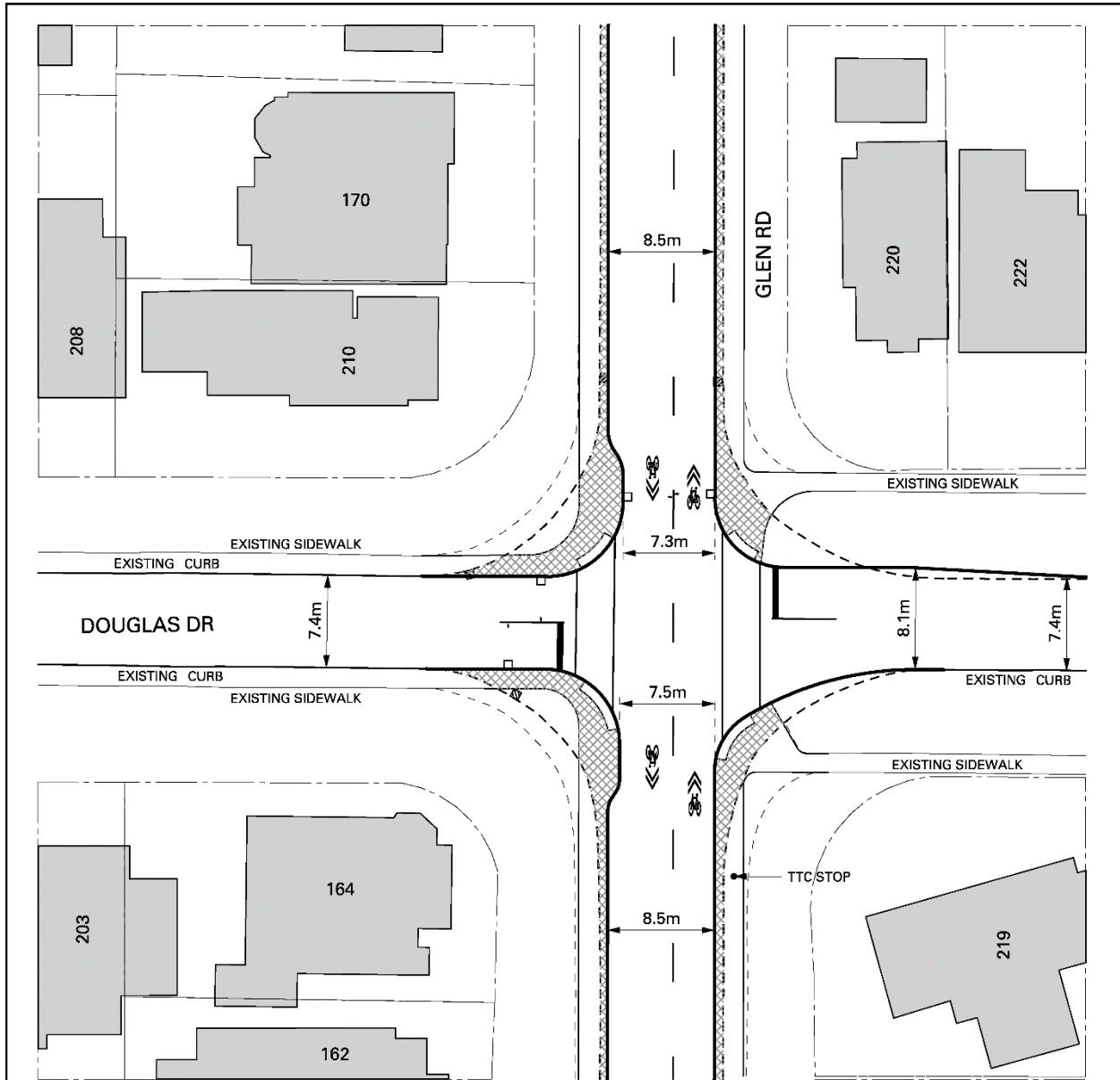
ATTACHMENTS

1. Appendix A, Drawing No. 421G-3096, dated June 2018
Glen Road: Beaumont Road to Summerhill Avenue, 2018 Road Improvements
2. Appendix B, Drawing No. 421G-3097, dated June 2018
Glen Road and Summerhill Avenue: Curb Realignment
3. Appendix C, Drawing No. 421G-3098, dated June 2018
Glen Road and Douglas Drive: Curb Realignment
4. Appendix D, Drawing No. 421G-3099, dated June 2018
Glen Road and Roxborough Drive: Curb Realignment
5. Appendix E, Drawing No. 421G-3100, dated June 2018
Glen Road and Whitney Avenue: Curb Realignment
6. Appendix F, Drawing No. 421G-3101, dated June 2018
Glen Road and Bin-Scarath Road: Curb Realignment
7. Appendix G, Drawing No. 421G-3102, dated June 2018
Glen Road and Highland Avenue: Curb Realignment
8. Appendix H, Drawing No. 421G-3103, dated June 2018
Glen Road at Beaumont Road: Curb Realignment

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LEGEND

- REQUESTED CURB
- - - EXISTING CURB TO BE REMOVED
- ▨ PROPOSED SIDEWALK
- - - EXISTING SIDEWALK TO BE REMOVED
- ∩ PROPOSED RAMP

NOTE:

INFORMATION ON THIS PLAN IS BASED ON OFFICE RECORDS AND IS SUBJECT TO FIELD VERIFICATION.
 ALL DIMENSIONS ARE APPROXIMATE.
 ROAD MODIFICATIONS ARE SUBJECT TO CHANGE.



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APPENDIX C GLEN RD AND DOUGLAS DR: CURB REALIGNMENT

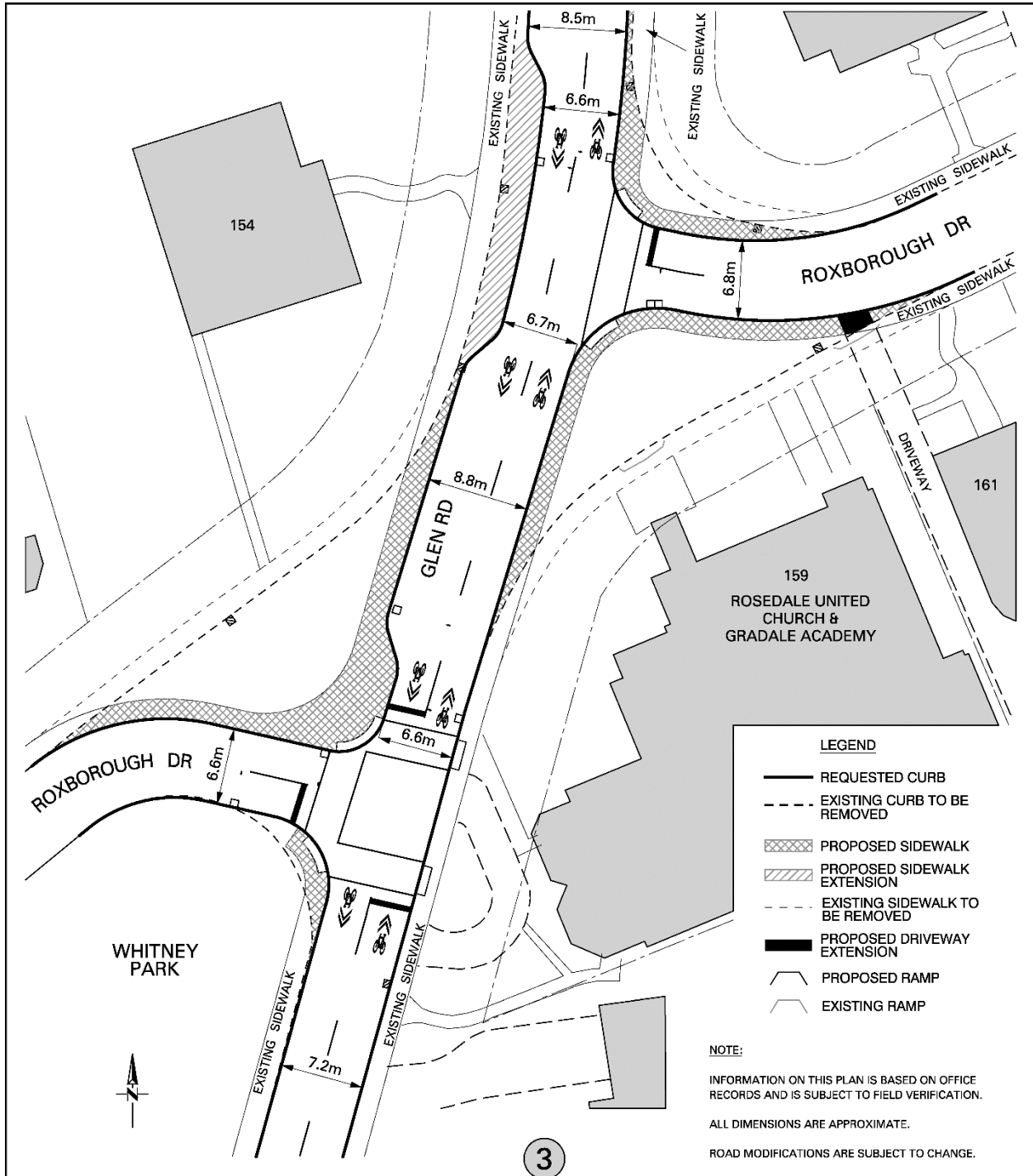
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DWG. NO. 421G-3098

JUNE, 2018

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APPENDIX D
GLEN RD AND ROXBOROUGH DR: CURB REALIGNMENT

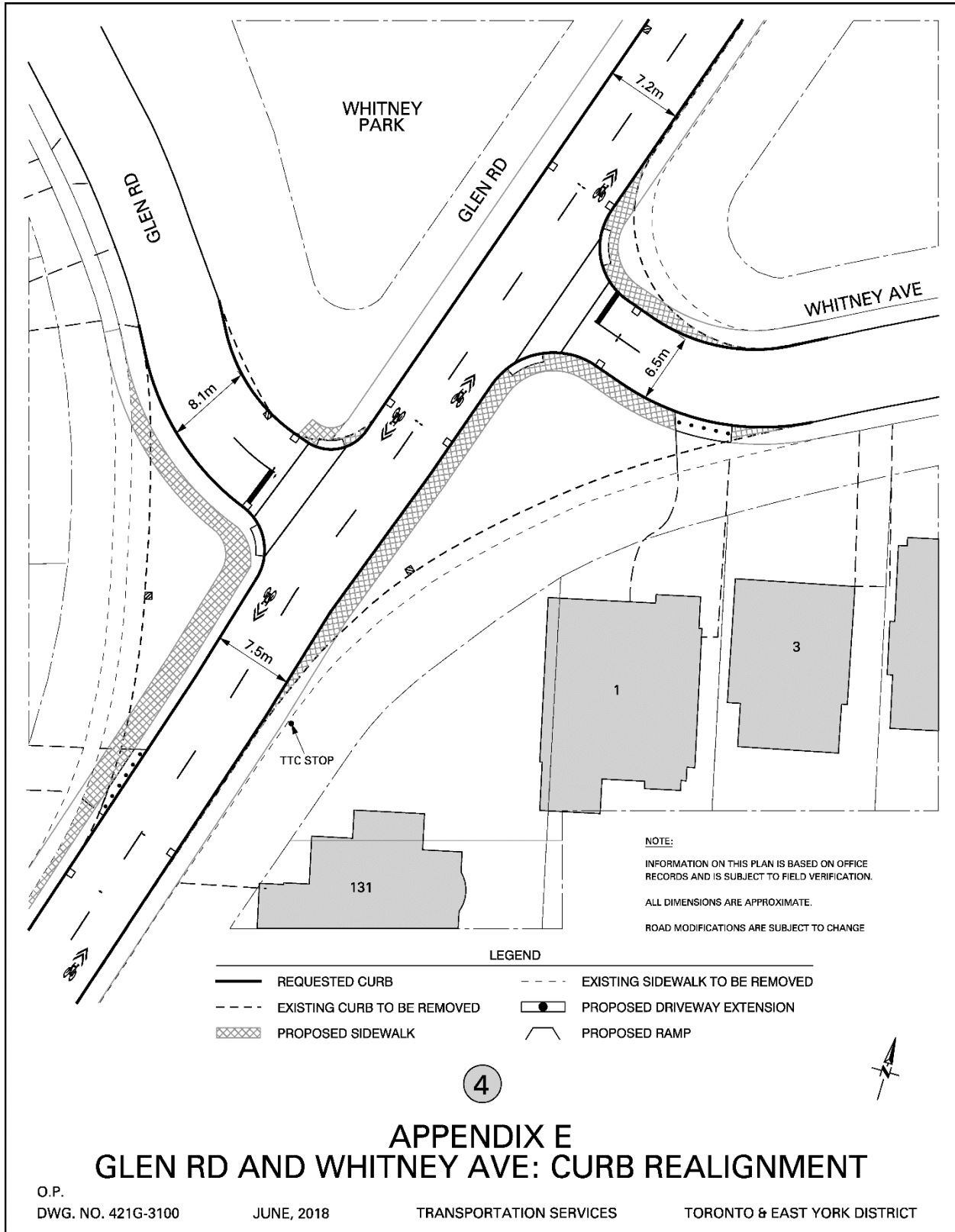
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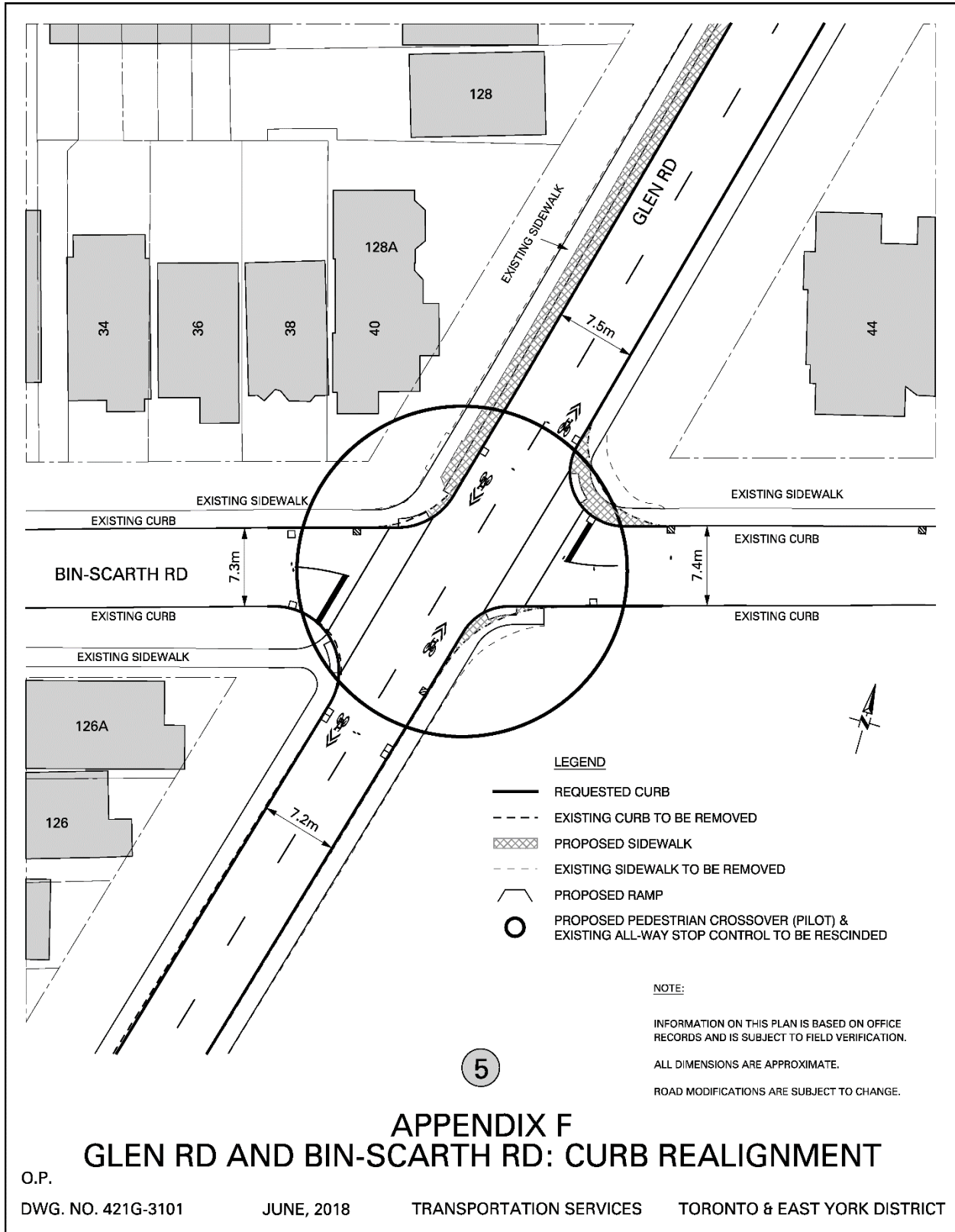
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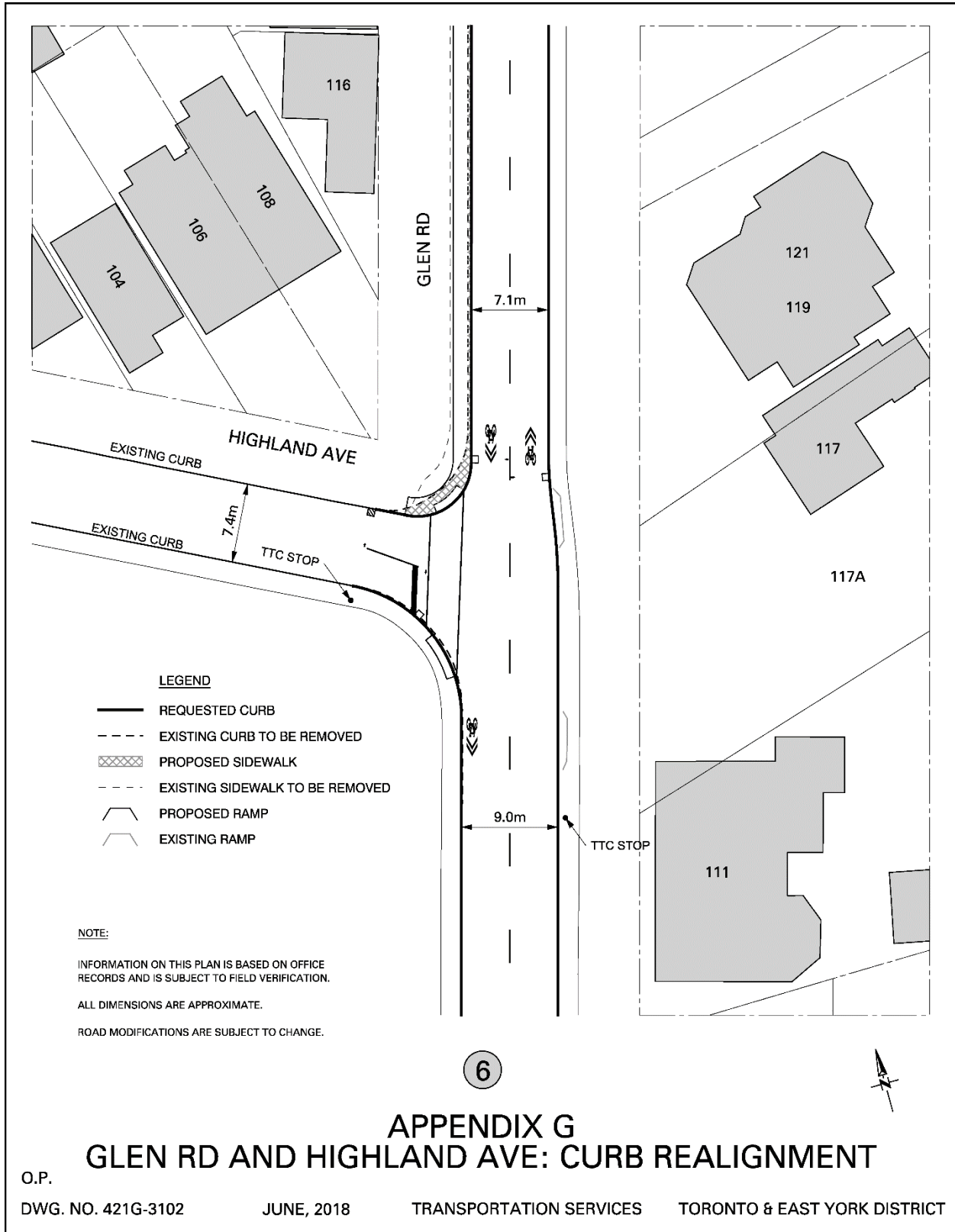
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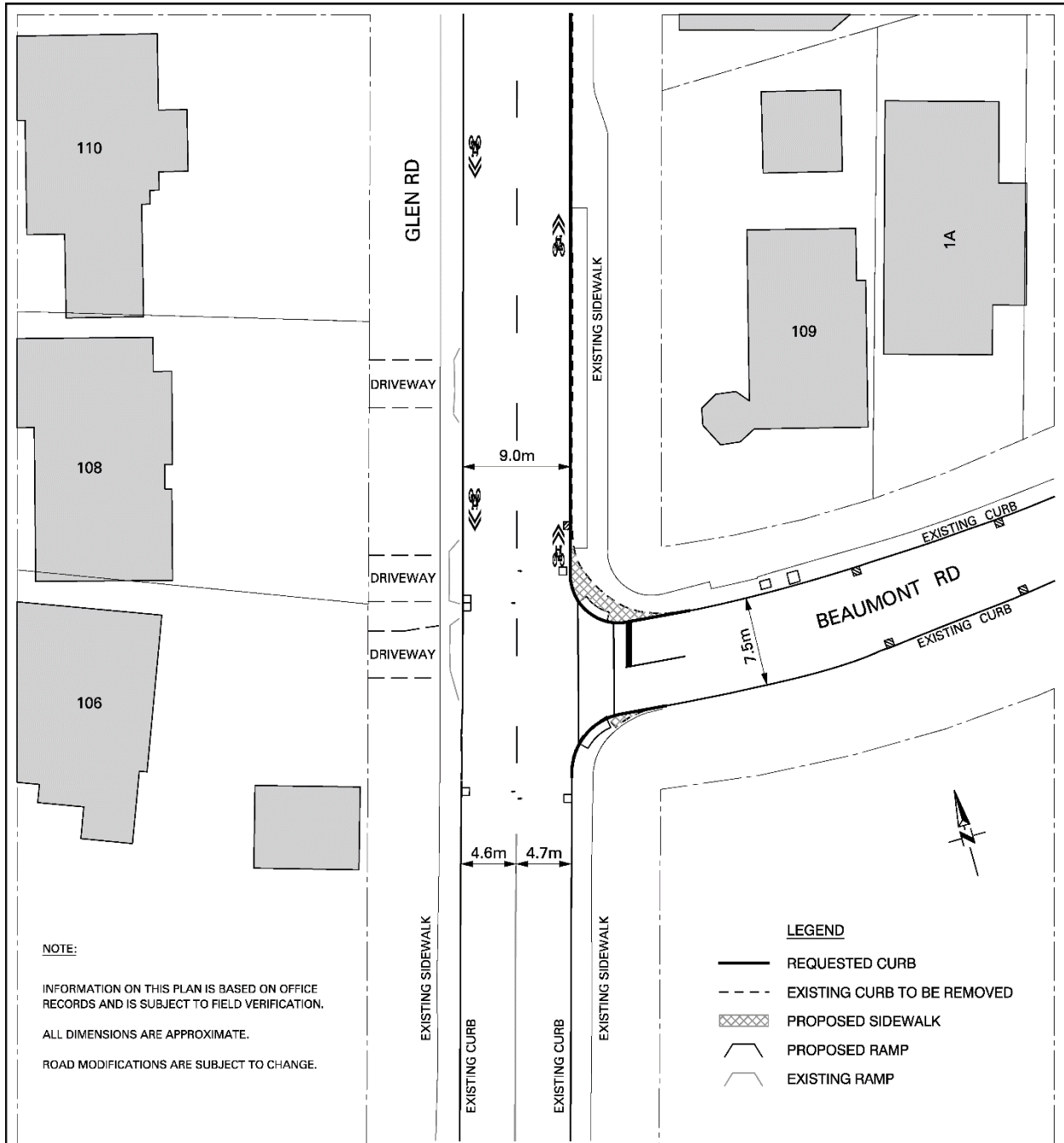
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APPENDIX H GLEN RD AT BEAUMONT RD: CURB REALIGNMENT

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 DWG. NO. 421G-3103 JUNE, 2018 TRANSPORTATION SERVICES TORONTO & EAST YORK DISTRICT