

**YORK REGION –
STORMWATER MANAGEMENT
REVIEW MEETING MINUTES**

MARCH 16, 2023

TESTON ROAD AREA TRANSPORTATION IMPROVEMENTS IEA: YORK REGION STORMWATER MANAGEMENT REVIEW MEETING

Project:	Individual Environmental Assessment and Preliminary Design for Teston Road Between Highway 400 and Bathurst Street. P-19-218	
Project No.:	1902618.00	
Place:	Teams Meeting	
Date:	March 16, 2023	Time: 3:00 - 4:00 pm
Participants:	Praveen John [PJ] Joel Smith [JS] Andrew Harkness [AH] Martin-Pierre Blouin [MB] Nick Crockford [NC] Ken Luong [KL] Jenny Dai [JD]	Region Project Manager Region Environmental Specialist MH Project Manager MH Deputy Project Manager MH EA Coordinator MH Water Resources Engineer MH Water Resources Engineer
Regrets:	Philip Brandon [PB]	Region Project Coordinator

DISCUSSION	1. Project Introduction	
<ul style="list-style-type: none"> - A. Harkness (MH) welcomed everyone and provided a brief overview of the meeting purpose, project background, and progress to date. - The YR Study Team has recently completed field work including topographic surveys, utilities, and foundation and pavement design investigations. - The project is currently in the preliminary design phase which will be ongoing throughout Spring 2023 to be followed by a focus on agency consultation and a final Open House in Fall 2023 - As part of the preliminary design, MH has developed the preliminary approaches to the ROW SWM strategy and identified opportunities and constraints to inform the preliminary design. 		
ACTION ITEMS	PERSON RESPONSIBLE	
<ul style="list-style-type: none"> - None 	N/A	
DISCUSSION	2. SWM Design Discussion	
<ul style="list-style-type: none"> - J. Dai (MH) presented roll plans with conceptual SWM plan and options for each outlet. Refer to roll plans attached to these minutes. - The SWM report will document that alternatives were reviewed and screened out elements that were not feasible. - The general approach is to implement post-to-pre-development flow controls. - Most of the existing ROW has a rural cross section and the proposed improvements will convert it to an urbanized section. 		

- Generally east of Keele Street is rural, west of Keele Street and Keele Street is urbanized

West Roll Plan (from Keele Street to Dufferin Street):

Outlet 1 & Outlet 2:

- Outlet 1 and outlet 2 present transition section west of Keele Street.
- It is anticipated that the potential impact could be minor. No SWM measure was proposed. Stormwater treatment, if required, will be combined with Outlet 3 drainage.

Outlet 3 (two options):

- ROW from Keele Street to Land Fill Area discharges to a 1200 STM east of Rosanna Cres (Outlet 3).
- Option 1 is construction of a stand-alone SWM pond to service only the ROW and keep external area flows separate, e.g., conveyed to its ultimate downstream outlet following same flow pattern as existing conditions.
- Option 2 is construction of a regional SWM pond to service all runoff from ROW and external areas.
- Both options are situated on lands that are owned by the City of Vaughan.
- York Region advised that Option 1 would be preferred.
- The use of LID features (bio-retention) within the boulevard will be investigated where feasible.

Outlet 4 (three options):

- ROW from Land Fill Area to Dufferin Street discharges to the East Don River (Outlet 4).
- Option 1 is construction of an underground storage facility.
- Option 2 is construction of a SWM pond in the valley. This option will result in a significant terrestrial / vegetation impacts to fit the pond and the access road from the ROW down into the valley.
- P. John advised that York Region preference is to not operate/maintain ponds.
- K. Luong noted that the existing pond/water feature north in the valley cannot be used for SWM purposes.
- York Region advised that Option 1 would be preferred. However, MH should document two options for further consultation with TRCA.
- Underground storage could be designed as one facility to provide quantity control and retention storage (5mm) or can be designed as separate facilities.
- For water quality, an OGS is credited with only 50% TSS removal efficiency.
- It was agreed that the combination of an OGS and 5mm retention would be considered meeting 80% TSS removal efficiency.
- Option 3 involves a small surface treatment facility in the vicinity of the landfill along the north side of the ROW.
- It was agreed that Option 3 is not preferred given the landfill constraints and that this option would not treat the entire ROW area to the outlet.

East Roll Plan (from Dufferin Street to Bathurst Street)

- ROW is a combination of rural and urban section.

Outlet 5 (two options):

- Runoff from the Dufferin /Teston intersection discharges to a storm sewer along Dufferin Street (Outlet 5).
- Small area west of Dufferin Street and is conveyed to the future Dufferin Street storm sewer.
- Option 1: re-direct the catchment area to valley but would be a change to the existing drainage patterns.
- Option 2: maintains connection to the Dufferin Street storm sewer, as this is a small catchment, no SWM measures are proposed.

Outlet 6 (two options):

- ROW area outlets to an existing culvert, east of Dufferin Street. The culvert requires extension under proposed conditions.
- Option 1 is construction of underground storage, e.g. superpipe required on either side of the culvert for quantity control and OGS for quality control. Outlet is shallow so limited opportunities to further improve upon quality control or meet retention storage.
- Option 2 is construction of an enhanced swale on the south side of the ROW. This option can achieve quantity/quality control and retention storage and would be less costly than the underground storage.
- However, this option would be subject to grading constraints due to the large hill/back slope along the south side of the ROW. This option will have property impacts/property acquisition and terrestrial/vegetation impacts.
- Keep Option 2 for further evaluation, YR to look into property owner details.

Outlet 7 (only one option):

- Outlet to valley, existing West Tributary culvert outlet.
- Need a swale to intercept external area along north ROW.
- The only feasible option is to adopt underground storage (for water quantity control and retention storage) and OGS (for water quality control).
- J. Smith emphasized that the West Tributary supports Redside Dace habitat.
- This option would bypass roadway drainage from the existing 1050 mm sewer. Information related to the 1050mm sewer along Via Romano Blvd is to be requested from the City of Vaughan.

Outlet 8 (two options):

- There is an existing large sewer (City of Vaughan) from the existing subdivision (north of ROW) conveying flows to Outlet 8 (minor system outlet and connection to another City storm sewer which flows south through an existing subdivision).
- May need a separate sewer for Teston Rd ROW.
- Option 1 keep existing storm sewer connection but will need to verify downstream sewer capacity and existing pond capacity. Storm sewer and pond design information needed from the City.
- Option 2 is to adopt underground storage (for water quantity control and retention storage) and OGS (for water quality control), implement post-to-pre- flow controls.
- An alternative option would involve re-directing flows westward towards the watercourse but would be treated as a flow diversion.

Outlet 9 (only one option):

- The only feasible option is to adopt underground storage (for water quantity control and retention storage) and OGS (for water quality control).
- Downstream outlet crossing Bathurst Street is piped and additional information is required to assess downstream sewer capacity.
- Also consider directing ROW flows east towards the watercourse on the east side of Bathurst Street.
- Some coordination needed to coordinate drainage/SWM design with the Elgin Mills Road widening project, which is also being undertaken by MH.

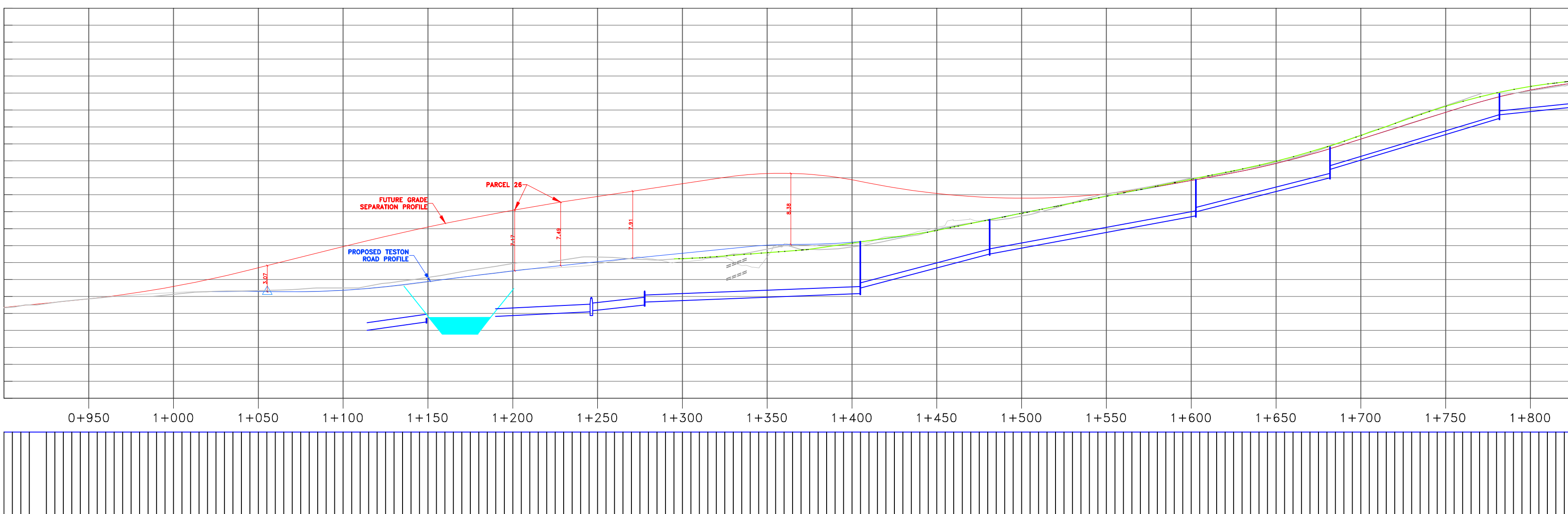
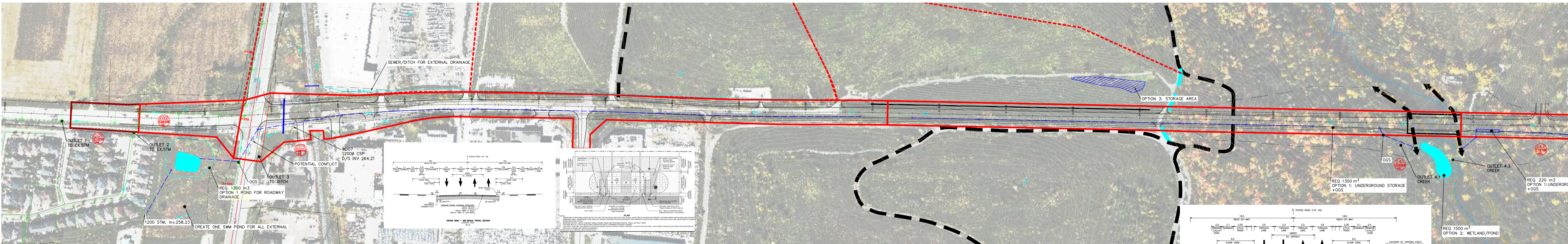
Miscellaneous commentary:

- Existing geotechnical information is not currently available so there are no indicators if groundwater levels are a constraint to proposed underground infiltration facilities.
- TRCA expects 1 m separation between the seasonally high GW table and the bottom of the infiltration facility.

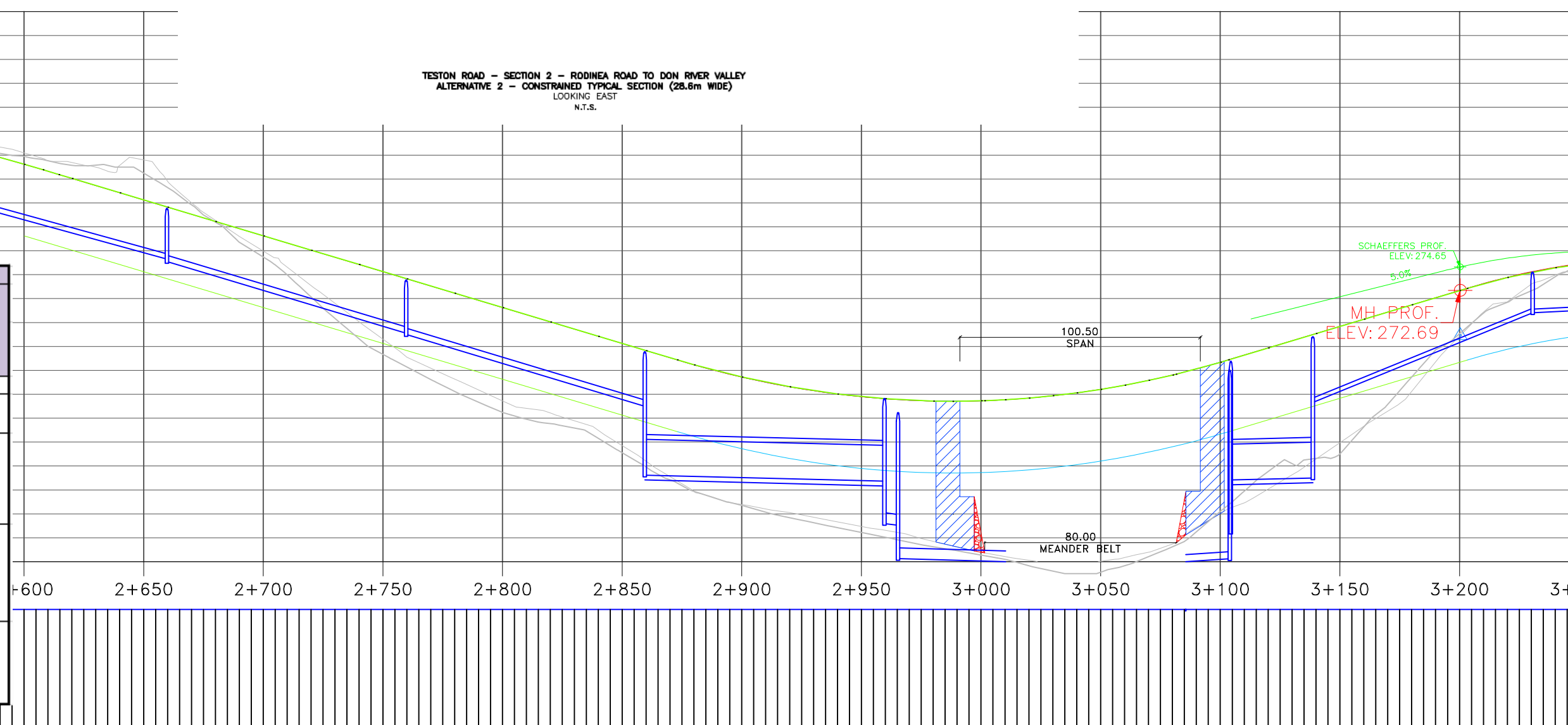
ACTION ITEMS	PERSON RESPONSIBLE
- MH to advance SWM design and have information ready for next TRCA meeting	K. Luong (MH)

Dist: Participants/Invitees

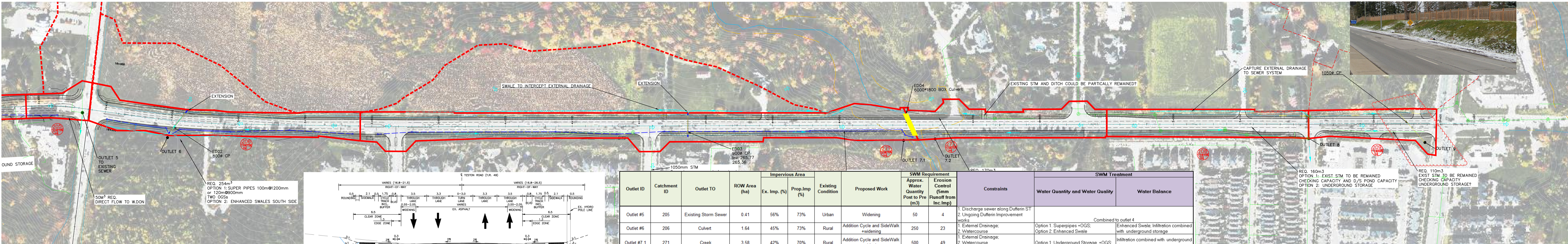
ROLL PLAN WEST



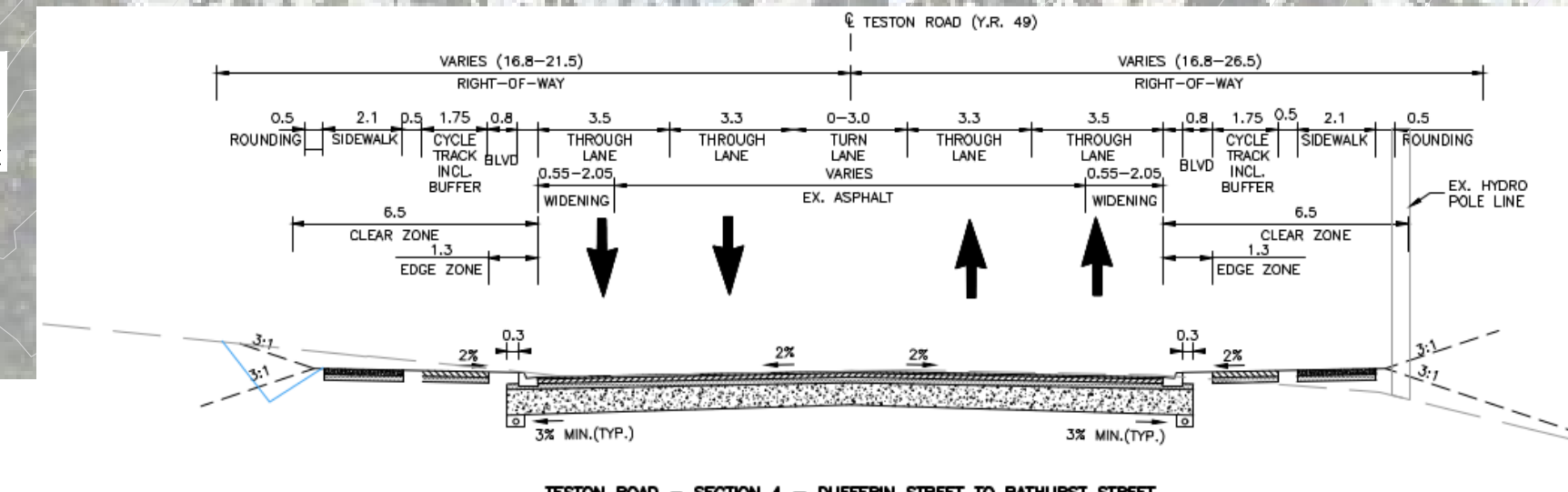
Outlet ID	Catchment ID	Outlet TO	ROW Area (ha)	Impervious Area		Existing Condition	Proposed Work	SWM Requirement		Constraints	SWM Treatment	
				Ex. Imp. (%)	Prop. Imp (%)			Approx. Water Quantity Post to Pre (m3)	Erosion Control (5mm Runoff from Inc. Imp)		Water Quantity and Water Quality	Water Balance
Outlet #1	201	Existing Storm Sewer	0.41	54%	54%	Urban	Transition	n/a	-	-	N/A	N/A
Outlet #2	202	Existing Storm Sewer	0.8	44%	50%	Urban	Transition	40	3	-	Combined to outlet 3	
Outlet #3	203	Ditch, Then Sewer	4.48	32%	71%	Local road	Widening/New Road	1300	89	1. Future Grade Separation 2. External Drainage 3. Discharge to Sewer system 4. Railway drainage 5. Utility	Option 1: New Wet Pond +OGS Option 2: One combined detention area	Bio Retention Cells along Blvd
Outlet #4.1	241	Creek	3.1	0%	66%	No road	New Road	1300	103	1. Don River 2. Valley 3. Landfill	Option 1: Underground Storage +OGS; Option 2: Wetland/Pond adjacent TRCA's Floodplain Option 3: Detention area Northwest of new bridge	Infiltration combined with underground storage
Outlet #4.2	242	Creek	0.72	5%	70%	No road	New Road	220	23	1. Don River 2. Valley	Option 1: Underground Storage +OGS; Option 2: OGS + Wetland/Pond west of Don	Infiltration combined with underground storage



ROLL PLAN EAST



INJ



Outlet ID	Catchment ID	Outlet TO	ROW Area (ha)	Impervious Area		Existing Condition	Proposed Work	SWM Requirement Approx. Water Quantity Post to Pre (m ³)	Erosion Control (5mm Runoff from Inc. Imp)	Constraints	SWM Treatment	
				Ex. Imp. (%)	Prop. Imp (%)						Water Quantity and Water Quality	Water Balance
Outlet #5	205	Existing Storm Sewer	0.41	56%	73%	Urban	Widening	50	4	1. Discharge sewer along Dufferin ST 2. Ongoing Dufferin Improvement works	Combined to outlet 4	
Outlet #6	206	Culvert	1.64	45%	73%	Rural	Addition Cycle and SideWalk +widening	250	23	1. External Drainage; 2. Watercourse	Option 1: Superpipes +OGS; Option 2: Enhanced Swale	Enhanced Swale; Infiltration combined with underground storage
Outlet #7.1	271	Creek	3.58	42%	70%	Rural	Addition Cycle and SideWalk +widening	500	49	1. External Drainage; 2. Watercourse 3. WM 900 EB	Option 1: Underground Storage +OGS;	Infiltration combined with underground storage
Outlet #7.2	272	Creek	1.33	47%	72%	Rural	Addition Cycle and SideWalk	170	17	1. External Drainage; 2. Watercourse 3. WM 900 EB	Option 1: Superpipe +OGS;	Enhanced Swale;
Outlet #8	208	Existing Storm Sewer	1.23	49%	73%	Urban/Rural	Addition Cycle and SideWalk	160	15	1. External Drainage; 2. Discharge to STM 3. Limited room	Option 1: Checking capacity of D/S Sewer and D/S Pond Capacity Option 2: Underground Storage	
Outlet #9	209	Culvert/Closed system	0.9	59%	69%	Urban/Rural	Addition Cycle and SideWalk	110	5	1. Discharge to closed system; 2. Utility 3. Limited room	Underground Storage;	Infiltration combined with underground storage

