

## Memorandum

DATE:	April 9, 2021
TO:	Dave Miliner
FROM:	Dustin Lyttle & Taylor Kramp
RE:	Dundalk Industrial Lands Preliminary Construction and Servicing Costs
FILE:	M5616B

### Introduction:

The following is a brief summary of the expected design and construction costs of the Dundalk Industrial Park Road (Eco Parkway extension) and the assumptions and inclusions made.

The estimated costs associated with the roads and drainage are based on the desired road alignment as established within the Dundalk Industrial Road Municipal Class EA and standard road cross section. These costs have been discretized into four parts as follows:

- Part A: Roads & Drainage – Highway 10 Intersection Improvements
- Part B: Roads & Drainage – Highway 10 to Existing Eco Parkway
- Part C: Roads & Drainage – Round-About
- Part D: Roads & Drainage – Existing Eco Parkway Improvements

The estimated expected servicing costs are based on the assumed needs of the lands fronting the Eco Parkway extension which have been discretized into the following three parts.

- Part E: Servicing – Sanitary Sewers
- Part F: Servicing – Sewage Pumping Station & Forcemain
- Part G: Servicing – Watermain

Additionally, we have prepared the attached figures which correlate with the expected servicing and road construction limits and assumptions described herein.

### Part A: Roads & Drainage – Highway 10 Intersection Improvements

The following estimated costs consist of the design and construction of the necessary improvements anticipated at the proposed intersection of Highway 10 and the Eco Parkway extension. Although the details of this design are subject to Ministry of Transportation (MTO) approval, we anticipate that additional turn lanes and signalization will be required.

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<b>Table 1</b> <b>Part A: Roads &amp; Drainage</b> <b>Highway 10 Intersection Improvements</b>	
<b>Description</b>	<b>Cost</b>
Intersection Improvements	\$600,000
Signalization	\$250,000
<b>Sub-Total</b>	<b>\$850,000</b>
Engineering (10%)	\$85,000
Contingency (10%)	\$85,000
Bonding & Construction Layout	\$100,000
<b>Total Part A</b>	<b>\$1,120,000</b>

#### **Part B: Roads & Drainage – Highway 10 to Existing Eco Parkway**

The following estimated costs are those associated with the design and construction of a new rural road that travels from Highway 10 to the southern end of the proposed round-about and from the western end of the proposed round-about to the connection to the existing Eco Parkway. These costs are based on and include a standard rural cross section (Figure TYP1), box culvert at the Foley Drain, amphibian crossings as required by the Class EA, multi-use pathway and the partially paved shoulder to accommodate future County requirements.

The costs associated with any utilities or street lighting have not been included.

<b>Table 2</b> <b>Part B: Roads &amp; Drainage</b> <b>Highway 10 to Existing Eco Parkway</b>	
<b>Description</b>	<b>Cost</b>
Roads & Drainage	\$2,110,000
Asphalt Multi-Use Pathway	\$110,000
Partially Paved Shoulder	\$86,000
Foley Drain Crossing	\$150,000
<b>Sub-Total</b>	<b>\$2,456,000</b>
Engineering (5%)	\$123,000
Contingency (5%)	\$123,000
Bonding & Construction Layout	\$125,000
<b>Total Part B</b>	<b>\$2,827,000</b>

#### **Part C: Roads & Drainage – Round-About**

The following estimated costs are those associated with the design and construction of a typical round-about, including illumination, storm sewers, curb and gutters and medians to effectively and safely direct traffic and pedestrians.

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<b>Table 3</b> <b>Part C: Roads &amp; Drainage</b> <b>Round-About</b>	
<b>Description</b>	<b>Cost</b>
Roads & Drainage	\$550,000
<b>Sub-Total</b>	<b>\$550,000</b>
Engineering (10%)	\$55,000
Contingency (10%)	\$55,000
Bonding & Construction Layout	\$60,000
<b>Total Part B</b>	<b>\$720,000</b>

#### **Part D: Roads & Drainage – Existing Eco Parkway Improvements**

The following estimated costs are those associated with the design and construction required to improve the existing Eco Parkway to the updated rural standard, matching the rural section of the proposed Eco Parkway Extension.

The costs associated with any geotechnical investigations, material testing, utilities and/or purchasing of property to accommodate the wider road have not been included.

<b>Table 4</b> <b>Part D: Roads &amp; Drainage</b> <b>Existing Eco Parkway Improvements</b>	
<b>Description</b>	<b>Cost</b>
Roads & Drainage	\$440,000
Partially Paved Shoulder	\$37,000
<b>Sub-Total</b>	<b>\$477,000</b>
Engineering (10%)	\$50,000
Contingency (5%)	\$30,000
Bonding & Construction Layout	\$65,000
<b>Total</b>	<b>\$622,000</b>

#### **Part E: Servicing – Sanitary Sewers**

To service the lands surrounding the Eco Parkway extension, the estimated costs associated with design and construction of the gravity sanitary sewers have been included. These costs include the necessary sanitary sewers and manholes however these costs do not include those associated with providing the service laterals as the detailed design and expected servicing arrangement has not been established.

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<b>Table 5</b> <b>Part E: Servicing</b> <b>Sanitary Sewers</b>	
<b>Description</b>	<b>Cost</b>
Sewers	\$501,400
Manholes	\$206,400
<b>Sub-Total</b>	<b>\$707,800</b>
Engineering (5%)	\$35,000
Contingency (5%)	\$35,000
Bonding & Construction Layout	\$60,000
<b>Total Part A</b>	<b>\$837,800</b>

#### **Part F: Servicing – Sewage Pumping Station**

The topography of the lands fronting on the Eco Parkway Extension are not conducive to gravity sewage conveyance to the existing infrastructure. Therefore, it is expected that a Sewage Pumping Station (SPS) will be required. The costs associated with the design and construction of the SPS have been included, based on the preliminary service area of **141** Acres that is a mix of Industrial, Commercial and Residential lands, as previously discussed. Additionally, a provision of contingency has been included.

Additionally, the associated costs of the design, supply and install of a sanitary forcemain have been included based on the expected sanitary flows. At this time, it is assumed the forcemain will follow the proposed road alignment.

Details regarding the serviceability of the lands north of the site will need to be considered when additional details are known. However, the depth of the sewers within the Industrial Road will be set with the intent of allowing service to those lands.

Note: At this time, it is our understanding that the design and construction of a SPS will require a Schedule B, Municipal Class EA be initiated.

<b>Table 6</b> <b>Part F: Servicing</b> <b>Sewage Pumping Station &amp; Forcemain</b>	
<b>Description</b>	<b>Cost</b>
Sewage Pumping Station	\$1,877,000
Forcemain	\$896,250
<b>Sub-Total</b>	<b>\$2,773,250</b>
Engineering (10%)	\$280,000
Contingency (10%)	\$280,000
Bonding & Construction Layout	\$100,000
<b>Total Part B</b>	<b>\$3,433,250</b>

## Part G: Servicing – Watermain

Additionally, to service the lands surrounding the Eco Parkway extension, we have included the estimated costs associated with the design and construction of watermain. These costs include the provision of watermain, valves and hydrants however does not include the costs associated with service laterals as the detailed design and expected servicing layout required has not been established.

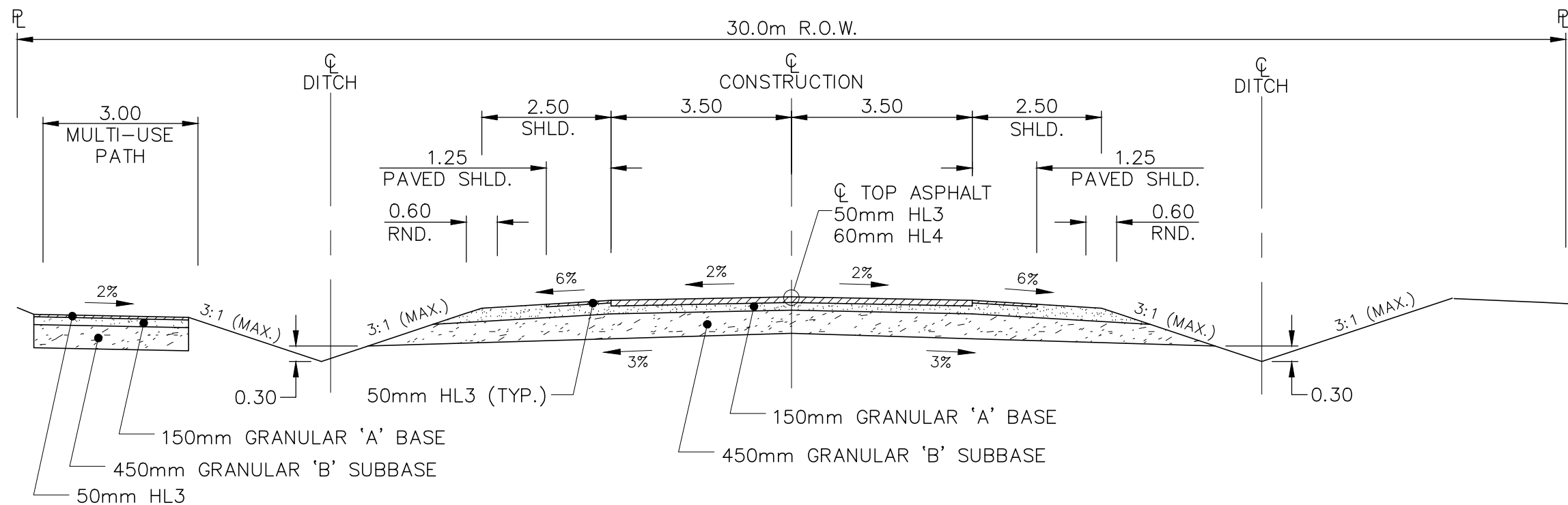
<b>Table 7 Part G: Servicing Watermain</b>	
<b>Description</b>	<b>Cost</b>
Watermain & Valves	\$828,365
Hydrants	\$154,875
<b>Sub-Total</b>	<b>\$983,240</b>
Engineering (5%)	\$140,000
Contingency (5%)	\$140,000
Bonding & Construction Layout	\$75,000
<b>Total Part B</b>	<b>\$1,338,240</b>

### Summary of Expected Costs:

<b>Table 8 Eco Parkway Extension &amp; Improvements Total Estimated Design &amp; Construction Cost</b>	
<b>Description</b>	<b>Cost</b>
Part A - Highway 10 Intersection Improvements	\$850,000
Part B - Highway 10 to Existing Eco Parkway	\$2,456,000
Part C - Round-About	\$550,000
Part D - Existing Eco Parkway	\$477,000
Part E - Sanitary Sewers	\$707,800
Part F - Sewage Pumping Station & Forcemain	\$2,773,250
Part G - Watermain	\$983,240
<b>Sub-Total</b>	<b>\$8,797,290</b>
Total Engineering Cost	\$768,000.0
Total Contingency	\$748,000.0
Total Bonding & Construction Layout	\$585,000.0
<b>Total Estimated Design &amp; Construction Cost (Excluding HST)</b>	<b>\$10,898,290</b>

The above cost estimates are preliminary, and may change as design progresses or additional specifics are known. Details regarding the individual unit costs are available if requested.

If you have any questions, please contact us.



STANDARD RURAL CROSS-SECTION  
N.T.S.

INDUSTRIAL ACCESS ROAD  
DUNDALK, ON  
TOWNSHIP OF SOUTHGATE

DRAWN BY: S.A.W.

DATE: FEBRUARY 2021

SCALE: N.T.S.



FIGURE No.

TYP1

