APPENDIX J

Preliminary Cost Estimates
### Total Cost Summary

<table>
<thead>
<tr>
<th>Description</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>McKay Road Interchange</td>
<td>$27,300,000</td>
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<tr>
<td>Salem &amp; Lockhart Road widening and crossing</td>
<td>$17,800,000</td>
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<td><strong>Total Cost</strong></td>
<td><strong>$45,100,000</strong></td>
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### Unit Costs

<table>
<thead>
<tr>
<th>Material</th>
<th>Source</th>
<th>Unit Costs</th>
<th>Density (Tons/m$^3$)</th>
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<tr>
<td>Asphalt HiCo</td>
<td>$239.40 m$^3$</td>
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<td>Granular A HiCo</td>
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<td>Rock Excavation N/A</td>
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<tr>
<td>Earth Excavation HiCo</td>
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<tr>
<td>Earth Fill HiCo</td>
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### McKay EA - Summary of Cost Estimates - McKay Road Interchange

<table>
<thead>
<tr>
<th>Item</th>
<th>Unit</th>
<th>Unit Cost</th>
<th>Quantity</th>
<th>Cost</th>
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<tbody>
<tr>
<td><strong>Roadway Improvements</strong></td>
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<td></td>
<td></td>
</tr>
<tr>
<td><strong>McKay Road East - Widening</strong></td>
<td></td>
<td></td>
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<tr>
<td>Asphalt</td>
<td>m³</td>
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<td>Earth Fill</td>
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<td><strong>McKay Road Interchange Ramps</strong></td>
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<td><strong>SUBTOTAL 1</strong></td>
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<td></td>
<td></td>
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<td>10%</td>
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<tr>
<td>per leg</td>
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<tr>
<td>McKay Road Overpass Widening</td>
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<td>$8,524,260</td>
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<td><strong>Structure Subtotal</strong></td>
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<td></td>
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<td>Structure Construction Contingency (20% of Structure Total)</td>
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<td>20%</td>
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<td>Engineering (6% of Subtotal 3)</td>
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## McKay EA - Summary of Cost Estimates - Salem Road Crossing

<table>
<thead>
<tr>
<th>Item</th>
<th>Unit</th>
<th>Unit Cost</th>
<th>Quantity</th>
<th>Cost</th>
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</thead>
<tbody>
<tr>
<td><strong>Roadway Improvements</strong></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Salem Road / Lockhart Road - Widening</td>
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</tr>
<tr>
<td>Asphalt</td>
<td>m³</td>
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<td>Granular B</td>
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<td>Earth Excavation</td>
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<tr>
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<td>$2,264,643</td>
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<td></td>
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<td><strong>Illumination</strong></td>
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<tr>
<td></td>
<td>per pole</td>
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<td><strong>SUBTOTAL 2</strong></td>
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<td>Utility Relocations (30% of Subtotal 2)</td>
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<td>Construction Contingency (20% of Subtotal 2)</td>
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<tr>
<td><strong>Structural</strong></td>
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<tr>
<td>Salem Road / Lockhart Road Crossing Structure</td>
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<td></td>
<td></td>
<td>$6,135,240</td>
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<tr>
<td>Retaining Wall / Toe Wall, West of Highway 400</td>
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<td></td>
<td>$387,000</td>
</tr>
<tr>
<td><strong>Structure Subtotal</strong></td>
<td></td>
<td></td>
<td></td>
<td>$6,522,240</td>
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<tr>
<td>Structure Construction Contingency (20% of Structure Total)</td>
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<td>20%</td>
<td>-</td>
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<td>-</td>
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<td><strong>Item-Based Cost Estimates</strong></td>
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<td>Hydro Transmission Corridor Modifications (approximate)</td>
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<tr>
<td><strong>PRELIMINARY PROJECT VALUE COST ESTIMATE:</strong></td>
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<tr>
<td><strong>ROUNDED ESTIMATE</strong></td>
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<td>$17,800,000</td>
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</table>

December 2017
## Preliminary Cost Estimates

**McKay Road Interchange and Salem / Lockhart Road Crossing**  
**Infrastructure Improvements Class EA ESR**  
**December 2017**

### Summary of Cost Estimates - Structures

<table>
<thead>
<tr>
<th>Item</th>
<th>Unit Cost ($/m²)</th>
<th>Area (m²)</th>
<th>Cost ($)</th>
<th>Structure Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>McKay Road Overpass Widening</td>
<td>$2,900</td>
<td>2,939</td>
<td>$8,524,260</td>
<td>NU 2400 Precast Concrete Girder</td>
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<tr>
<td>Salem Road / Lockhart Road Crossing Structure</td>
<td>$2,900</td>
<td>2,116</td>
<td>$6,135,240</td>
<td>CPCI 2300 Concrete Girder</td>
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<tr>
<td>Retaining Wall - Salem Road, west of Highway 400</td>
<td>$3,225</td>
<td>120</td>
<td>$387,000</td>
<td>RSS Wall</td>
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</table>

**Structure Subtotal**  
$15,046,500

**Structure Construction Contingency (15% of Structure Total)**  
15%  
$2,256,975

**Structure Subtotal**  
$17,303,475

Unit Cost of $2,900 for Prestressed Concrete Members (CPCI / NU), Source: MTO Parametric Estimating Guideline 2016
### Summary of Cut and Fill Volumes

<table>
<thead>
<tr>
<th>Location</th>
<th>Total Fill (m³)</th>
<th>Earth Cut (m³)</th>
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<tbody>
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<td><strong>McKay Road East Widening</strong></td>
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</tr>
<tr>
<td>Highway 400 to Eastern Limits</td>
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<tr>
<td>Highway 400 to Western Limits</td>
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<tr>
<td><strong>Subtotal</strong></td>
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<td>4,006</td>
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<tr>
<td><strong>McKay Road East Interchange at Highway 400</strong></td>
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<tr>
<td>N-EW Ramp</td>
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<td>W-S Ramp</td>
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<td>E-N Ramp</td>
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<td>E-S Ramp</td>
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<td>S-EW Ramp</td>
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<td>87,370</td>
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<td><strong>Salem Road Widening</strong></td>
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<tr>
<td>Salem Road from Highway 400 to Veterans Drive</td>
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<td>18,936</td>
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<td><strong>Subtotal</strong></td>
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<td>18,936</td>
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<td><strong>Lockhart Road Widening</strong></td>
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<td>Lockhart Road from Highway 400 to Saunders Road</td>
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<td>5,107</td>
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<td><strong>Subtotal</strong></td>
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<tr>
<td><strong>Total Volume</strong></td>
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Note: Surplus earth material will be utilized in slope flattening and landscaping. Details to be confirmed in subsequent design phases.
### McKay Road Interchange and Salem / Lockhart Road Crossing
#### Infrastructure Improvements Class EA ESR
December 2017

<table>
<thead>
<tr>
<th>Location</th>
<th>McKay Road East Widening</th>
<th></th>
<th>McKay Road East Interchange at Highway 400</th>
<th>Salem / Lockhart Road Widening, from Saunders Road to Veteran's Drive</th>
<th>Salem Road / Lockhart Road Crossing over Highway 400</th>
<th>Fill / Cut required on approaches to crossing</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>m³</td>
<td>Tons</td>
<td>m³</td>
<td>Tons</td>
<td>m³</td>
<td>Tons</td>
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<td>McKay Road East</td>
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<td>2,221.96</td>
<td>5,226.05</td>
<td>4,737.70</td>
<td>10,422.94</td>
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<tr>
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<td>N-EW Ramp</td>
<td>1,399.07</td>
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<td>10,032.14</td>
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<td>9,831.50</td>
<td>4,180.06</td>
<td>10,032.14</td>
<td>9,221.91</td>
<td>20,288.20</td>
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<tr>
<td>Salem Road / Lockhart Road Crossing over Highway 400</td>
<td>Fill / Cut required on approaches to crossing</td>
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<td></td>
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<td></td>
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</tr>
<tr>
<td>Subtotal</td>
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<td>Total Volume</td>
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Note: Surplus earth material will be utilized in slope flattening and landscaping. Details to be confirmed in subsequent design phases.
<table>
<thead>
<tr>
<th>Location</th>
<th>Average Cost per Intersection Leg</th>
<th>No. of Intersection Legs</th>
<th>Estimated Cost</th>
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<tbody>
<tr>
<td>McKay Interchange Ramp Terminals</td>
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<tr>
<td>East Ramp Terminal</td>
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<td>$180,000.00</td>
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<td>Salem Road</td>
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<td><strong>Total Cost</strong></td>
<td></td>
<td></td>
<td><strong>$540,000.00</strong></td>
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</tbody>
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<table>
<thead>
<tr>
<th>Location</th>
<th>Description</th>
<th>Average Cost Per Pole</th>
<th>No. of Poles</th>
<th>Estimated Cost</th>
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<tbody>
<tr>
<td>McKay Interchange Ramps - Highway 400 Exit Terminals</td>
<td>Single lane exit ramp, freeway to sideroad</td>
<td>$30,000</td>
<td>3</td>
<td>$90,000.00</td>
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<td>S-E/W Ramp Exit Terminal</td>
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<tr>
<td><strong>Total Cost</strong></td>
<td></td>
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<td></td>
<td><strong>$570,000.00</strong></td>
</tr>
</tbody>
</table>

Source: MTO's Parametric Estimating Guide 2016. Partial illumination utilized during 6-lane Highway 400 condition. Cost of illumination of ultimate configuration to be confirmed in later design phases, with the widening of Highway 400.