Materials Use and Cost

<table>
<thead>
<tr>
<th>Category</th>
<th>Material Description</th>
<th>Units</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aggregate/Earthwork</td>
<td>Select Granular Borrow</td>
<td>Ton</td>
<td></td>
</tr>
<tr>
<td>Aggregate/Earthwork</td>
<td>Aggregate, All classes</td>
<td>Ton</td>
<td></td>
</tr>
<tr>
<td>Aggregate/Earthwork</td>
<td>Millings, Bituminous</td>
<td>Ton</td>
<td></td>
</tr>
<tr>
<td>Aggregate/Earthwork</td>
<td>Topsoil Borrow</td>
<td>Cubic Yard</td>
<td></td>
</tr>
<tr>
<td>Aggregate/Earthwork</td>
<td>Common Borrow – Loose Volume</td>
<td>Cubic Yard</td>
<td></td>
</tr>
<tr>
<td>Apron – Aluminized Safety</td>
<td>4:1 - 6:1 Diamter/SPAN:___&quot;</td>
<td>Each</td>
<td></td>
</tr>
<tr>
<td>Apron – Aluminized Steel</td>
<td>Flared Apron includes coupling band</td>
<td>Each</td>
<td></td>
</tr>
<tr>
<td>Apron – Concrete</td>
<td>Flared Apron Safety Apron 4:1 - 6:1 Diamter/SPAN:___&quot;</td>
<td>Each</td>
<td></td>
</tr>
<tr>
<td>Apron – Poly</td>
<td>Polyethylene (HDPE) Apron Diamter:___&quot;</td>
<td>Each</td>
<td></td>
</tr>
<tr>
<td>Apron – Steel Safety</td>
<td>4:1 - 6:1 Diamter/SPAN:___&quot;</td>
<td>Each</td>
<td></td>
</tr>
<tr>
<td>Cement and Grout</td>
<td>Concrete, Ready Mix $150 CY Use for Concrete Pavement</td>
<td>Cubic Yard</td>
<td></td>
</tr>
<tr>
<td>Cement and Grout</td>
<td>Foam, 2 Part Expanding, Tot Gals APart A and Part B</td>
<td>Gallon</td>
<td></td>
</tr>
<tr>
<td>Cement and Grout</td>
<td>Cement Grout</td>
<td>Cubic Yard</td>
<td></td>
</tr>
<tr>
<td>Cement and Grout</td>
<td>Cement, Portland, 41 lb Bag</td>
<td>Bag</td>
<td></td>
</tr>
<tr>
<td>Erosion Control</td>
<td>Fiber Blanket:</td>
<td>Sq Yard</td>
<td></td>
</tr>
<tr>
<td>Erosion Control</td>
<td>Bioroll Diamter: 6&quot; 9&quot; 12&quot;</td>
<td>Linear Foot</td>
<td></td>
</tr>
<tr>
<td>Erosion Control</td>
<td>Silt Fence</td>
<td>Linear Foot</td>
<td></td>
</tr>
<tr>
<td>Erosion Control</td>
<td>Floating Silt Curtain</td>
<td>Linear Foot</td>
<td></td>
</tr>
<tr>
<td>Erosion Control</td>
<td>Rip Rap (all classes)</td>
<td>Ton</td>
<td></td>
</tr>
<tr>
<td>Erosion Control</td>
<td>Geotextile Fabric</td>
<td>Sq Foot</td>
<td></td>
</tr>
<tr>
<td>Grate</td>
<td>Apron Safety/Trash Grates Diameter/SPAN:___&quot;</td>
<td>$100 Lot</td>
<td></td>
</tr>
<tr>
<td>Internal Band</td>
<td>Internal Pipe Joint Sealing Band</td>
<td>Each</td>
<td></td>
</tr>
<tr>
<td>Pavement</td>
<td>Bituminous Pavement – All Classes</td>
<td>Ton</td>
<td></td>
</tr>
<tr>
<td>Pipe – Aluminized Steel</td>
<td>Round Arch Inside Diameter/SPAN:___&quot;</td>
<td>Linear Foot</td>
<td></td>
</tr>
<tr>
<td>Pipe – Concrete</td>
<td>Round Arch Gasketed Inside Diameter/SPAN:___&quot;</td>
<td>Linear Foot</td>
<td></td>
</tr>
<tr>
<td>Pipe – Concrete</td>
<td>Pipe Ties</td>
<td>Each</td>
<td></td>
</tr>
<tr>
<td>Pipe – Corrugated Steel</td>
<td>Round Arch Inside Diameter/SPAN:___&quot;</td>
<td>Linear Foot</td>
<td></td>
</tr>
<tr>
<td>Pipe – HDPE Liner</td>
<td>Press-On Joint Threaded Joint Outside Diameter:___&quot;</td>
<td>Linear Foot</td>
<td></td>
</tr>
<tr>
<td>Pipe – Poly Dual Wall</td>
<td>Polyethylene Dual Wall Pipe (HDPE) Inside Diameter/SPAN:___&quot;</td>
<td>Linear Foot</td>
<td></td>
</tr>
<tr>
<td>Pipe – Polymeric Coated Steel</td>
<td>Round Arch Inside Diameter/SPAN:___&quot;</td>
<td>Linear Foot</td>
<td></td>
</tr>
<tr>
<td>Pipe – Polyethylene</td>
<td>Inside Diameter:___&quot;</td>
<td>Linear Foot</td>
<td></td>
</tr>
<tr>
<td>Pipe – Tapered Sleeve</td>
<td>Smooth Tapered Metal Pipe Sleeve</td>
<td>Each</td>
<td></td>
</tr>
<tr>
<td>Pipe Coupling Band</td>
<td>External Coupling Band 12&quot; Wide 24&quot; Wide Diameter/SPAN:___&quot;</td>
<td>Each</td>
<td></td>
</tr>
</tbody>
</table>

Additional Material

<table>
<thead>
<tr>
<th>Category</th>
<th>Material Description and Units</th>
<th>Quantity</th>
<th>Total Direct Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Additional Material</td>
<td>Fill in description and units and describe in comments</td>
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<td></td>
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</tbody>
</table>

Culvert Cost – Maintenance Data Collection Form – January 2018

<table>
<thead>
<tr>
<th>Repair ID:</th>
<th>____________________________</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydinfra ID:</td>
<td>____________________________</td>
</tr>
<tr>
<td>Full Name:</td>
<td>____________________________</td>
</tr>
<tr>
<td>Date Started:</td>
<td>____________________________</td>
</tr>
<tr>
<td>Date Completed:</td>
<td>____________________________</td>
</tr>
<tr>
<td>Repair Status:</td>
<td>Pending Complete</td>
</tr>
<tr>
<td>Comment:</td>
<td>____________________________</td>
</tr>
<tr>
<td>Distict:</td>
<td>____________________________</td>
</tr>
<tr>
<td>Repair Made:</td>
<td>Trench New Pipe Slipline Replace Aprons Reset Extension Joint Repair Hole Repair Paved Invert Fill Voids Cleaning Ditch Cleaning Ice Removal Beavers Abandon Only Remove Only Other: ____________________________ None</td>
</tr>
<tr>
<td>RCA Work Order #:</td>
<td>____________________________</td>
</tr>
<tr>
<td>Culvert Type:</td>
<td>____________________________</td>
</tr>
<tr>
<td>Pre-repair Condition:</td>
<td>1-Like New 2-Fair 3-Poor 4-Very Poor 0-Unknown</td>
</tr>
<tr>
<td>Fill over Pipe (feet):</td>
<td>____________________________</td>
</tr>
<tr>
<td>Repaired Shape:</td>
<td>Round Arch Elliptical Other</td>
</tr>
<tr>
<td>Repaired Material (Inside of Pipe after Repair):</td>
<td>Concrete Corp. Steel (CSP) Aluminized Steel Corp. Plastic (HDPE) PVC Polypropylene SRPE Other Pipe Liner PVC Liner HDPE Liner Metal Liner Cured-in-Place Liner Other</td>
</tr>
<tr>
<td>Repaired Length (ft.):</td>
<td>____________________________</td>
</tr>
<tr>
<td>Total Length (ft.):</td>
<td>____________________________</td>
</tr>
<tr>
<td>Repaired Condition:</td>
<td>1-Like New 2-Fair 3-Poor 4-Very Poor 0-Unknown</td>
</tr>
<tr>
<td>Route System &amp; Number:</td>
<td>____________________________</td>
</tr>
<tr>
<td>Route Reference Point:</td>
<td>____________________________</td>
</tr>
<tr>
<td>Left or Right (Side Culvert Location):</td>
<td>L  R</td>
</tr>
<tr>
<td>Clean Done:</td>
<td>Major (more than 4 hours Labor) Minor (4 hours or less Labor) None</td>
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</table>
## Resource and Cost Data

### Labor Hours by Classification

<table>
<thead>
<tr>
<th>Labor Classification</th>
<th>Sum hours for Class</th>
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<tbody>
<tr>
<td>Laborer TA TG TGS TOS1 TOS2 TOS3 TOS4</td>
<td>Yes No</td>
</tr>
<tr>
<td>Laborer TA TG TGS TOS1 TOS2 TOS3 TOS4</td>
<td>Yes No</td>
</tr>
<tr>
<td>Laborer TA TG TGS TOS1 TOS2 TOS3 TOS4</td>
<td>Yes No</td>
</tr>
<tr>
<td>Laborer TA TG TGS TOS1 TOS2 TOS3 TOS4</td>
<td>Yes No</td>
</tr>
<tr>
<td>Laborer TA TG TGS TOS1 TOS2 TOS3 TOS4</td>
<td>Yes No</td>
</tr>
<tr>
<td>Laborer TA TG TGS TOS1 TOS2 TOS3 TOS4</td>
<td>Yes No</td>
</tr>
<tr>
<td>Laborer TA TG TGS TOS1 TOS2 TOS3 TOS4</td>
<td>Yes No</td>
</tr>
</tbody>
</table>

### Additional Labor Description

Fill in description and units and describe in comments

<table>
<thead>
<tr>
<th>Quantity</th>
<th>Total Direct Cost</th>
</tr>
</thead>
</table>

### Equipment Use

<table>
<thead>
<tr>
<th>Category</th>
<th>Equipment Charge Class &amp; Description</th>
<th>Charge Units</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tractor-Loaders</td>
<td>725 Bi-Directional Tractor W/Attach Over 100HP Versatile</td>
<td>Hour</td>
<td></td>
</tr>
<tr>
<td>Tractor-Loaders</td>
<td>726 Tractor -Loader-Backhoe 2 WD</td>
<td>Hour</td>
<td></td>
</tr>
<tr>
<td>Tractor-Loaders</td>
<td>727 Skid Steer Loader 30HP</td>
<td>Hour</td>
<td></td>
</tr>
<tr>
<td>Tractor-Loaders</td>
<td>750 Crawler Tractor Loaders</td>
<td>Hour</td>
<td></td>
</tr>
<tr>
<td>Trailer-Trailers</td>
<td>480 Semi Type TRUX 20-50T LowBoy ET</td>
<td>Hour</td>
<td></td>
</tr>
<tr>
<td>Trailer-Trailers</td>
<td>481 Belly Dump End or Live Floor</td>
<td>Hour</td>
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</tr>
<tr>
<td>Trailer-Trailers</td>
<td>482 Pull type Trailer 10-15 ton</td>
<td>Hour</td>
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<tr>
<td>Trailer-Trailers</td>
<td>483 Trailer 6-8Ton</td>
<td>Hour</td>
<td></td>
</tr>
<tr>
<td>Trucks</td>
<td>160 Truck, SUV, Full-Size, 2 Wheel Drive</td>
<td>Mile</td>
<td></td>
</tr>
<tr>
<td>Trucks</td>
<td>161 Truck, SUV, Full-Size, 4 Wheel Drive</td>
<td>Mile</td>
<td></td>
</tr>
<tr>
<td>Trucks</td>
<td>171 Truck, SUV, Mid-Size, 4 Wheel Drive</td>
<td>Mile</td>
<td></td>
</tr>
<tr>
<td>Trucks</td>
<td>180 Pickup 5 Ton</td>
<td>Mile</td>
<td></td>
</tr>
<tr>
<td>Trucks</td>
<td>182 Pickup 5 Ton 4 Wheel drive</td>
<td>Mile</td>
<td></td>
</tr>
<tr>
<td>Trucks</td>
<td>183 Pickup 5 Ton Extended Cab</td>
<td>Mile</td>
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</tr>
<tr>
<td>Trucks</td>
<td>184 Pickup 5 Ton Extended Cab W/4 WD</td>
<td>Mile</td>
<td></td>
</tr>
<tr>
<td>Trucks</td>
<td>190 Pickup 6 Ton</td>
<td>Mile</td>
<td></td>
</tr>
<tr>
<td>Trucks</td>
<td>191 Pickup % Ton 4 Wheel Drive</td>
<td>Mile</td>
<td></td>
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<tr>
<td>Trucks</td>
<td>200 Pickup Compact</td>
<td>Mile</td>
<td></td>
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<tr>
<td>Trucks</td>
<td>250 Truck 1 Ton Dump</td>
<td>Mile</td>
<td></td>
</tr>
<tr>
<td>Trucks</td>
<td>254 Truck 1 Ton Utility</td>
<td>Mile</td>
<td></td>
</tr>
<tr>
<td>Trucks</td>
<td>255 Truck 1 Ton 4 Wheel Drive</td>
<td>Mile</td>
<td></td>
</tr>
<tr>
<td>Trucks</td>
<td>280 1-1/2 Ton Truck With Aerial Ladder</td>
<td>Mile</td>
<td></td>
</tr>
<tr>
<td>Trucks</td>
<td>300 1-1/2 Ton-2 Ton Truck</td>
<td>Mile</td>
<td></td>
</tr>
<tr>
<td>Trucks</td>
<td>310 1-1/2 Ton 2 Ton Dump Truck</td>
<td>Mile</td>
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<tr>
<td>Trucks</td>
<td>320 1-1/2 Ton 3 Ton with Special Equipment (Sign Truck etc)</td>
<td>Mile</td>
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<tr>
<td>Trucks</td>
<td>330 2-1/2 Ton-3 Ton Dump</td>
<td>Mile</td>
<td></td>
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<tr>
<td>Trucks</td>
<td>332 2-1/2 Ton -3 Ton Stake</td>
<td>Mile</td>
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<tr>
<td>Trucks</td>
<td>350 57M LB Chassis Cab Tandem Axle Truck</td>
<td>Mile</td>
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<tr>
<td>Trucks</td>
<td>352 Tandem Axle Truck T</td>
<td>Mile</td>
<td></td>
</tr>
<tr>
<td>Trucks</td>
<td>354 Tandem Diesel Truck With Log Loader</td>
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</tr>
<tr>
<td>Trucks</td>
<td>395 Large Crewet &amp; Sweeper Cleaner</td>
<td>Mile</td>
<td></td>
</tr>
</tbody>
</table>

### Equipment Description and Units

Fill in description and units and describe in comments

<table>
<thead>
<tr>
<th>Total Direct Cost</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Category</th>
<th>Equipment Description &amp; Units</th>
<th>Quantity</th>
</tr>
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<tbody>
<tr>
<td>Additional Equipment</td>
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<tr>
<td>Additional Equipment</td>
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<td></td>
</tr>
<tr>
<td>Additional Equipment</td>
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<td></td>
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</tbody>
</table>

* If MnDOT Equipment is not listed, enter Unit ID and look up Equipment Charge Class to match.

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