# QUANTITY SHEETS

CONTRACT NO. 2018-4023

BOOK 2 OF 2

Ministry Of Transportation

Ontario

# INDEX

**W.P. No. 4169-15-00**

**Contract No. 2018-4023**


| Sheet No. | Description |
|---|---|
| | |
| | CONTRACT DRAWINGS (BOOK 1 OF 2) |
| | |
| | Title Sheet (Key Plan) |
| | |
| | Index Sheet |
| | |
| | Part A: WP 4415-01-01 - Highway 401 Underpass at County Road 31 |
| | |
| | GRADING |
| | |
| 1-4 | Alignment Data |
| | |
| 5-6 | Detour Alignment Data |
| | |
| 7 | Staging Typicals |
| | |
| 8-20 | Construction Staging |
| | |
| 21-22 | Detour Removals |
| | |
| 23-25 | Advance Notification/Warning/Detour Route TC-64 Signing |
| | |
| 26-28 | Removals |
| | |
| 29-31 | New Construction |
| | |
| 32-37 | Profiles |
| | |
| 38-39 | Typical Sections |
| | |
| 40-41 | Miscellaneous Details |
| | |
| 42 | Structural Excavation and Backfill |
| | |
| 43-44 | Soils Data |
| | |
| 45-47 | Pavement Markings |
| | |
| 48-49 | Ground Mounted Signs |
| | |
| | ELECTRICAL |
| | |
| 50-53 | Electrical Layout |
| | |
| 54 | Wiring Diagram |
| | |
| 55-56 | Temporary Electrical Work |
| | |
| 57 | Temporary Wiring Diagram |
| | |
| 58-59 | Electrical Removals |
| | |

| Sheet No. | Description |
|---|---|
| | STRUCTURAL |
| | |
| 60 | General Arrangement |
| | |
| 61 | Borehole Locations and Soil Strata |
| | |
| 62 | Construction Staging |
| | |
| 63 | Removals |
| | |
| 64 | Foundation Layout |
| | |
| 65 | Pier Footing Reinforcement |
| | |
| 66 | Abutment Details and Reinforcement |
| | |
| 67 | Wingwalls |
| | |
| 68 | Pier Details and Reinforcement |
| | |
| 69 | Prestressed Girders and Bearings |
| | |
| 70 | Prestressed Girders Details |
| | |
| 71 | Deck Details |
| | |
| 72-74 | Deck Reinforcement |
| | |
| 75 | Parapet Wall |
| | |
| 76 | Railing for Parapet |
| | |
| 77 | 6000mm Approach Slab |
| | |
| 78 | Expansion Joint and Sleeper Slab |
| | |
| 79 | Expansion Joint Details |
| | |
| 80 | Details of Concrete Slope Paving |
| | |
| 81 | Standard Details |
| | |
| 82 | Electrical Embedded Work |
| | |
| | |
| | |
| | CONTRACT DRAWINGS (BOOK 2 OF 2) |
| | |
| | Part B: WP 4445-02-01 - Highway 401 Underpass at Flagg Road |
| | |
| | GRADING |
| | |
| 1 | Alignment Data |

# INDEX

**W.P. No. 4169-15-00**

**Contract No. 2018-4023**


| Sheet No. | Description |
|---|---|
| | |
| 2-4 | Construction Staging |
| | |
| 5-7 | Advance Notification/Warning/Detour Route TC-64 Signing |
| | |
| 8-9 | Removals |
| | |
| 10-11 | New Construction |
| | |
| 12-15 | Profiles |
| | |
| 16-18 | Typical Sections |
| | |
| 19 | Miscellaneous Details |
| | |
| 20 | Structural Excavation and Backfill |
| | |
| 21-22 | Soils Data |
| | |
| 23 | Pavement Markings and Signing |
| | |
| 24 | Ground Mounted Signs |
| | |
| | STRUCTURAL |
| | |
| 25 | General Arrangement |
| | |
| 26 | Borehole Locations and Soil Strata |
| | |
| 27 | Removals |
| | |
| 28 | Foundation |
| | |
| 29 | Pier Footing Reinforcement |
| | |
| 30 | Abutment Details and Reinforcement |
| | |
| 31 | Wingwalls |
| | |
| 32 | Pier Details and Reinforcement |
| | |
| 33 | Prestressed Girders and Bearings |
| | |
| 34 | Prestressed Girder Details |
| | |
| 35 | Deck Details |
| | |
| 36-37 | Deck Reinforcement |
| | |
| 38 | Parapet Wall |
| | |
| 39 | Railing for Parapet |
| | |

| Sheet No. | Description |
|---|---|
| 40 | 6000mm Approach Slab |
| | |
| 41 | Expansion Joint and Sleeper Slab |
| | |
| 42 | Strip Seal Expansion Joint Type 'C' Details |
| | |
| 43 | Sequence of Expansion Joint Installation |
| | |
| 44 | Details of Concrete Slope Paving |
| | |
| 45-46 | Standard Details |
| | |
| | |
| | |
| | QUANTITY SHEETS (BOOK 1 OF 2) |
| | |
| | Index Sheet |
| | |
| | Part A: WP 4415-01-01 - Highway 401 Underpass at County Road 31 |
| | |
| 1-33 | Grading Items |
| | |
| 34-38 | Electrical Items |
| | |
| 39-41 | Structural Items |
| | |
| | |
| | |
| | QUANTITY SHEETS (BOOK 2 OF 2) |
| | |
| | Index Sheet |
| | |
| | Part B: WP 4445-02-01 - Highway 401 Underpass at Flagg Road |
| | |
| 1-16 | Grading Items |
| | |
| 17-19 | Structural Items |

# QUANTITIES - MISCELLANEOUS 1

**W.P. No. 4169-15-00**

**Contract No. 2018-4023**

SHEET 1

| Location and Position | *Clearing* | | *Grubbing* | | | | | | | | | | References |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sub - Totals Brought Forward: | | | | | | | | | | | | | |
| Flagg Road | | | | | | | | | | | | | |
| 9+894 - 9+984; 15.6 LT - 7.1 LT | 490 | | 490 | | | | | | | | | | |
| 9+957 - 9+973; 6.5 RT- 11.3 RT | 66 | | 66 | | | | | | | | | | |
| 10+037 - 10+050; 16.2 RT - 7.8 RT | 81 | | 81 | | | | | | | | | | |
| 10+045 - 10+069; 6.8 LT - 22.5 LT | 254 | | 254 | | | | | | | | | | |
| Sub - Totals Carried Forward: | 891 | | 891 | | | | | | | | | | |
| | (P) | | (P) | | | | | | | | | | |
| TOTALS | 891 | | 891 | | | | | | | | | | |
| UNIT | m2 (P) | | m2 (P) | | | | | | | | | | |
| ITEM No. | 118 | | 119 | | | | | | | | | | |
| Reference | | | | | | | | | | | | | |

CHKD. _____

APPR. _____

DATE _____

MINISTRY OF TRANSPORTATION - ONTARIO

Clearing and Grubbing

# QUANTITIES - GRADING

**W.P. No. 4169-15-00**

**Contract No. 2018-4023**

SHEET 2

MINISTRY OF TRANSPORTATION - ONTARIO

| Description | *Earth Excavation (Grading)* | Reference | | | Reference |
|---|---|---|---|---|---|
| Sub - Totals Brought Forward: | | | | | |
| Flagg Road | | | | | |
| | | | | | |
| 9+677 - 9+968 | | | | | |
| Cut/Fill | 1,038 | | | | |
| Fill Stripping | 634 | | | | |
| | | | | | |
| 10+044 - 10+400 | | | | | |
| Cut/Fill | 1,401 | | | | |
| Fill Stripping | 1,103 | | | | |
| | | | | | |
| Zeron Road | | | | | |
| | | | | | |
| 9+940 - 9+966 | | | | | |
| Cut/Fill | 313 | | | | |
| Fill Stripping | 21 | | | | |
| | | | | | |
| 10+003 - 10+060; | | | | | |
| Cut/Fill | 312 | | | | |
| Fill Stripping | 49 | | | | |
| | | | | | |
| Highway 401 EBL | | | | | |
| | | | | | |
| 22+209 - 22+280; 24.5 - 26 RT | | | | | |
| RT Shoulder | 36 | | | | |
| Sub - Totals Carried Forward: | 4,907 | | | | |
| | (P) | | | | |
| TOTALS | 4,907 | | | | |
| UNIT | m3 (P) | | | | |
| ITEM No. | 120 | | | | |

| | | |
|---|---|---|
| Total Stripping | | 1942 |
| Stripping Available | 50% | 971 |
| Top Soil Required | | 602 |
| Stripping Balance | | 369 |

Remarks: Volume adjustment factor for earth have been applied to quantities shown.

Reference

CHKD. _____

APPR. _____

DATE _____

Grading

# QUANTITIES - MISCELLANEOUS 1

**W.P. No. 4169-15-00**

**Contract No. 2018-4023**

SHEET 3

MINISTRY OF TRANSPORTATION - ONTARIO

| Location and Position | *Granular Sealing (m2) [Hand Sprayed] [Sealant Type II]* | | *Tack Coat [Upper Binder Course]* | *Tack Coat [Lower Binder Course]* | | *Asphalt Spillways* | | | | | | | References |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sub - Totals Brought Forward: | | | | | | | | | | | | | |
| Flagg Road | | | | | | | | | | | | | |
| 9+952; 5.5 LT | | | | | | 2 | | | | | | | |
| 9+952; 5.5 RT | | | | | | 2 | | | | | | | |
| 9+799 - 9+953; RT | 169 | | | | | | | | | | | | |
| 9+834 - 9+953; LT | 131 | | | | | | | | | | | | |
| 9+968 - 10+044, CL | | | 636 | 119 | | | | | | | | | |
| 10+060 - 10+254; LT | 213 | | | | | | | | | | | | |
| 10+060 - 10+232; RT | 189 | | | | | | | | | | | | |
| 10+059; 5.5 LT | | | | | | 2 | | | | | | | |
| 10+059; 5.5 RT | | | | | | 2 | | | | | | | |
| Highway 401 EBL | | | | | | | | | | | | | |
| 22+165 - 22+280;RT | | | 120 | | | | | | | | | | |
| 22+209 - 22+280; RT | 78 | | 105 | 105 | | | | | | | | | |
| Highway 401 WBL | | | | | | | | | | | | | |
| 22+190 - 22+305; LT | | | 116 | | | | | | | | | | |
| 22+207 - 22+257; LT | 55 | | 75 | | | | | | | | | | |
| Sub - Totals Carried Forward: | 835 | | 1,052 | 224 | | 8 | | | | | | | |
| | (P) | | 1,052 (P) | 224 (P) | | (P) | | | | | | | |
| TOTALS | 835 | | | 1,276 | | 8 | | | | | | | |
| UNIT | m2 (P) | | m2 (P) | m2 (P) | | m (P) | | | | | | | |
| ITEM No. | 121 | | | 122 | | 123 | | | | | | | |
| Reference | | | | | | | | | | | | | |

CHKD. _____

APPR. _____

DATE _____

Granular Sealing / Tack Coat / Asp. Spillways

# QUANTITIES - HOT MIX AND GRANULAR

**W.P. No. 4169-15-00**

**Contract No. 2018-4023**

SHEET 4

MINISTRY OF TRANSPORTATION - ONTARIO

| Description | Superpave 12.5 - 40 mm Lift Thickness Surface Course | Superpave 12.5 - 40 mm Lift Thickness Binder Course | Superpave 12.5 - 50 mm Lift Thickness Surface Course | Superpave 12.5 - 50 mm Lift Thickness Binder Course 1 | Superpave 12.5 - 50 mm Lift Thickness Binder Course 2 | | Granular A [Base] | Granular B, Type 1 [Subbase] | Granular B, Type 1 [Fill] | Granular B, Type II [Structural Backfill] | | | | | | References |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sub - Totals Brought Forward: | | | | | | | | | | | | | | | | |
| Flagg Road | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| 9+677 - 9+968 | | | | | | | | | | | | | | | | |
| Roadway | | | 1,954 | | | | 1,804 | 4,338 | | | | | | | | |
| Shoulder | | | 459 | | | | 34 | | | | | | | | | |
| Embankment Fill | | | | | | | | | 641 | | | | | | | |
| | | | | | | | | | | | | | | | | |
| North Approach Slab | 59 | | | 59 | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| Bridge Deck | 636 | 636 | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| South Approach Slab | 59 | | | 59 | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| Flagg Road | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| 10+044 - 10+400 | | | | | | | | | | | | | | | | |
| Roadway | | | 2,309 | | | | 2,213 | 9,715 | | | | | | | | |
| Shoulder | | | 557 | | | | 41 | | | | | | | | | |
| Embankment Fill | | | | | | | | | 3,566 | | | | | | | |
| | | | | | | | | | | | | | | | | |
| Structural Backfill | | | | | | | | | | 3,520 | | | | | | |
| | | | | | | | | | | | | | | | | |
| Zeron Road | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| 9+940 - 9+966 | | | | | | | | | | | | | | | | |
| Roadway | | | 473 | | | | 467 | 801 | | | | | | | | |
| Shoulder | | | 66 | | | | 10 | | | | | | | | | |
| Embankment Fill | | | | | | | | | 1 | | | | | | | |
| | | | | | | | | | | | | | | | | |
| 10+003 - 10+060 | | | | | | | | | | | | | | | | |
| Roadway | | | 509 | | | | 515 | 801 | | | | | | | | |
| Shoulder | | | 67 | | | | 10 | | | | | | | | | |
| Embankment Fill | | | | | | | | | 22 | | | | | | | |
| | | | | | | | | | | | | | | | | |
| Highway 401 WB | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| 22+190 - 22+305; 2.0 - 2.0 LT | | | | | | | | | | | | | | | | |
| LT Shoulder | 116 | | | 116 | | | | | | | | | | | | |
| Sub - Totals Carried Forward: | 870 | 636 | 6,394 | 234 | 0 | | 5,094 | 15,655 | 4,230 | 3,520 | | | | | | |
| | (P) | (P) | (P) | (P) | (P) | | | | | | | | | | | |
| TOTALS | | | | | | | | | | | | | | | | |
| UNIT | m2 (P) | m2 (P) | m2 (P) | m2 (P) | m2 (P) | | t | t | t | t | | | | | | |
| ITEM No. | | 124 | | 125 | | | 126 | | 127 | 128 | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| Reference | | | | | | | | | | | | | | | | |

Remarks:

CHKD. _____

APPR. _____

DATE _____

Hot Mix and Granular

# QUANTITIES - HOT MIX AND GRANULAR

**W.P. No. 4169-15-00**

**Contract No. 2018-4023**

SHEET 5

| Description | Superpave 12.5 - 40 mm Lift Thickness Surface Course | Superpave 12.5 - 40 mm Lift Thickness Binder Course | Superpave 12.5 - 50 mm Lift Thickness Surface Course | Superpave 12.5 - 50 mm Lift Thickness Binder Course 1 | Superpave 12.5 - 50 mm Lift Thickness Binder Course 2 | | Granular A [Base] | Granular B, Type 1 [Subbase] | Granular B, Type 1 [Fill] | Granular B, Type II [Structural Backfill] | | | | | | References |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sub - Totals Brought Forward: | 870 | 636 | 6,394 | 234 | 0 | | 5,094 | 15,655 | 4,230 | 3,520 | | | | | | |
| 22+207 - 22+257; 11.8 - 13.3 LT | | | | | | | | | | | | | | | | |
| RT Shoulder | 75 | | | 75 | 75 | | 318 | | | | | | | | | |
| Highway 401 EB | | | | | | | | | | | | | | | | |
| 22+165 - 22+280; 14.1 - 14.3 RT | | | | | | | | | | | | | | | | |
| LT Shoulder | 120 | | | 120 | | | | | | | | | | | | |
| 22+209 - 22+280; 24.5 - 26 RT | | | | | | | | | | | | | | | | |
| RT Shoulder | 105 | | | 105 | | | 270 | | | | | | | | | |
| Sub - Totals Carried Forward: | 1,170 | 636 | 6,394 | 534 | 75 | | 5,682 | 15,655 | 4,230 | 3,520 | | | | | | |
| | 1,170 (P) | 636 (P) | 6,394 (P) | 534 (P) | 75 (P) | | | 15,655 | 4,230 | | | | | | | |
| TOTALS | | 1,806 | | 7,003 | | | 5,682 | | 19,885 | 3,520 | | | | | | |
| UNIT | m2 (P) | m2 (P) | m2 (P) | m2 (P) | m2 (P) | | t | t | t | t | | | | | | |
| ITEM No. | | 124 | | 125 | | | 126 | | 127 | 128 | | | | | | |
| Reference | | | | | | | | | | | | | | | | |

Remarks:

CHKD. _____

APPR. _____

DATE _____

MINISTRY OF TRANSPORTATION - ONTARIO

Hot Mix and Granular

# QUANTITIES - MISCELLANEOUS 1

**W.P. No. 4169-15-00**

**Contract No. 2018-4023**

SHEET 6

| Location and Position | *Concrete Curb and Gutter [OPSD 600.010] [Straight]* | | *Concrete Gutter Outlets [OPSD 605.030]* | | *150mm mm Pipe Subdrain [Subdrain Perforated PVC]* | *150mm mm Pipe Subdrain [Subdrain Non-Perforated CSP Outlet]* | *Rodent Gates* | | | | | | References |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sub - Totals Brought Forward: | | | | | | | | | | | | | |
| Flagg Road | | | | | | | | | | | | | |
| 9+953; 4.4 LT | | | 1 | | | | | | | | | | |
| 9+953; 4.4 RT | | | 1 | | | | | | | | | | |
| 9+955 - 9+968; 4.2 LT - 4.5 LT | 13 | | | | | | | | | | | | |
| 9+955 - 9+968; 4.2 RT - 4.5 RT | 13 | | | | | | | | | | | | |
| 9+973, North Abutment | | | | | 41 | 5 | 2 | | | | | | |
| 10+039, South Abutment | | | | | 45 | 5 | 2 | | | | | | |
| 10+044 - 10+057; 4.5 LT - 4.2 LT | 13 | | | | | | | | | | | | |
| 10+044 - 10+057; 4.5 RT - 4.2 RT | 13 | | | | | | | | | | | | |
| 10+058; 4.4 LT | | | 1 | | | | | | | | | | |
| 10+058; 4.4 RT | | | 1 | | | | | | | | | | |
| Sub - Totals Carried Forward: | 52 | | 4 | | 86 | 10 | | | | | | | |
| | (P) | | (P) | | 86 (P) | 10 (P) | | | | | | | |
| TOTALS | 52 | | 4 | | | 96 | 4 | | | | | | |
| UNIT | m (P) | | each (P) | | m (P) | m (P) | each | | | | | | |
| ITEM No. | 129 | | 130 | | | 131 | | | | | | | |
| Reference | | | | | | | | | | | | | |

CHKD. _____

APPR. _____

DATE _____

MINISTRY OF TRANSPORTATION - ONTARIO

CGC / CGC Outlets / Pipe Subdrain

# QUANTITIES - PIPE CULVERTS

**W.P. No. 4169-15-00**

**Contract No. 2018-4023**

SHEET 7

| Culvert No | Station | Location and Position | Ext Left | Ext Right | Skew No | End Finish | Depth to Pipe | Pipe Fill Material Bedding | Pipe Fill Material Cover | Pipe Fill Material Backfill | Pipe Joints | Treatment | Inv Elev Upstream | Inv Elev Downstream | *500 mm Pipe Culvert 500+0 S 010000 500+0 C 000022* | *500 mm Pipe Culvert Extension 500+0 S000000 500+0 C 000022* | | | | | References |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | Sub - Totals Brought Forward: | | | | | | | | | | | |
| 1 | 9+723 | Flagg Road - Entrance Culvert | | | | | 0.3 | A | G | G | L | | | | 12 | | | | | | |
| 2 | 9+729 | Flagg Road - Entrance Culvert | | | | | 0.34 | A | G | G | L | | | | 12 | | | | | | |
| 3 | 9+755 | Flagg Road | | | | | 0.95 | A | G | G | L | | 83.10 | 82.99 | 17 | | | | | | |
| 4 | 10+272 | Flagg Road - Entrance Culvert | | | | | 1.35 | A | G | G | L | | | | 23 | | | | | | |
| 4 | 10+272 | Flagg Road - Entrance Culvert | | | | | 2.17 | A | G | G | L | | | | | 8 | | | | | |
| | | | | | | | | | | | | | | Sub - Totals Carried Forward: | 64 | 8 | | | | | |
| | | | | | | | | | | | | | | TOTALS | (P) 64 | (P) 8 | | | | | |
| | | | | | | | | | | | | | | UNIT | m (P) | m (P) | | | | | |
| | | | | | | | | | | | | | | ITEM No. | 132 | 133 | | | | | |

**Pipe Material Code - 6 digits defined as noted below:**

**1st digit = Concrete**
1 - 50-D or HE-A
2 - 65-D or HE-I
3 - 100-D or HE-II
4 - 140-D or HE-III
5 - HE-IV

**2nd digit = PVC/PP**
1 - PVC
2 - PP

**3rd digit = HDPE**
1 - Open Profile
2 - Closed Profile

**4th digit = Galv; 5th digit = Alum, & 6th digit = Polymer Steel**
1 - 1.6 mm thick
2 - 2.0 mm thick
3 - 2.8, 3.0 & 3.18 mm thick
4 - 3.5, 3.81 & 4.0 mm thick
5 - 4.2, 4.45 & 5.0 mm thick
6 - 5.08 & 6.0 mm thick
7 - 5.72 & 7.0 mm thick
8 - 6.35 mm thick

**Note:** '0' for any digit means the pipe material is not acceptable. Higher pipe material code values are also acceptable, unless otherwise stated. Galv. means galvanized coating. Alum means aluminized coated or aluminum alloy materials. Polymer means both laminated and coated steel pipes. Applies to circular and non-circular pipes.

**Pipe Type**
**S -** Smooth inner wall pipe
**C -** Corrugated inner wall pipe

**Pipe Joints**
**S -** Soil tight
**F -** Silt/Fines tight
**L -** Leak tight

**Note:** S joints is specified if no code is entered.

**End Finish (OPSD 801.01 - 02 - 03)**
**SqE -** Square End
**B -** Bevel
**Sk -** Skew End
**SB -** Step Bevel
**ES -** Steel end section

**Note:** All pipes are SqE and symmetrical to CL unless otherwise stated.

**Treatments**
**F -** Frost Treatment
**P -** Pave Invert
**S -** Channel Substrate
**B -** Fish Baffles

**Depth to Pipe** is from the surface downward to top of base pipe opening at midpoint by length unless otherwise stated.

**Pipe Fill Material**
**N -** Native or Granular
**G -** Granular A or B Type I, II or III
**B -** Granular A or B Type II
**A -** Granular A
**U -** Unshrinkable fill

**Notes:** N applies to cover and backfill only.
1 letter specifies material for all pipes.
2 letter codes specifies fill material for rigid and flexible pipes respectively.
G for bedding and N for cover and backfill is specified if no code is entered.
Embedment material for flexible pipes specified in bedding material column.

**Frost Penetration**
Frost Penetration depth - 1.6 m

CHKD. _____
APPR. _____
DATE _____

MINISTRY OF TRANSPORTATION - ONTARIO

Pipe Culverts

# QUANTITIES - MISCELLANEOUS 1

**W.P. No. 4169-15-00**

**Contract No. 2018-4023**

SHEET 8

| Location and Position | *Removal of Asphalt Pavement [100mm - 170mm], [Roadway]* | *Removal of Asphalt Pavement [90mm - 140mm], [Shoulder]* | *Removal of Asphalt Pavement, Partial Depth [50mm - 85mm]* | | *Removal of Asphalt Pavement from Concrete Surfaces on Structures* | | | | | | | | References |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sub - Totals Brought Forward: | | | | | | | | | | | | | |
| Flagg Road | | | | | | | | | | | | | |
| 9+677 - 9+973; 3.6 LT - 2.8 RT | | | 32 | | | | | | | | | | |
| 9+677 - 9+973; 3.6 LT - 4.2 RT | 3,283 | | | | | | | | | | | | |
| 9+973 - 10+037; 4.2 LT - 4.2RT | | | | | 540 | | | | | | | | |
| 10+037 - 10+400; 4.3 LT - 3.4 RT | 2,470 | | | | | | | | | | | | |
| Highway 401 | | | | | | | | | | | | | |
| 20+207 - 20+257; 12 - 10.5 LT | | 75 | | | | | | | | | | | |
| 20+209 - 20+280; 24 - 25.5 RT | | 105 | | | | | | | | | | | |
| 10+395 - 10+395; 3.4 LT - 3.5 RT | | | 34 | | | | | | | | | | |
| Sub - Totals Carried Forward: | 5,753 | 180 | 66 | | 540 | | | | | | | | |
| | 5,753 (P) | 180 (P) | (P) | | (P) | | | | | | | | |
| TOTALS | | 5,933 | 66 | | 540 | | | | | | | | |
| UNIT | m2 (P) | m2 (P) | m2 (P) | | m2 (P) | | | | | | | | |
| ITEM No. | | 134 | 135 | | 136 | | | | | | | | |
| Reference | | | | | | | | | | | | | |

CHKD. _____

APPR. _____

DATE _____

MINISTRY OF TRANSPORTATION - ONTARIO

Rem. of Asp. / Rem. of Asp., P.D.

# QUANTITIES - MISCELLANEOUS 1

**W.P. No. 4169-15-00**

**Contract No. 2018-4023**

SHEET 9

MINISTRY OF TRANSPORTATION - ONTARIO

| Location and Position | *Removal of Concrete Curb and Gutter [Roadway]* | | *Abandonment of MH's, CB's, DI's and VC's, Partial-Depth [0.3m - 0.6m]* | *Abandonment of Pipes and Culverts* | *Removal of Pipes and Culverts [400mm - 500mm CSP]* | | *Removal of Cable Guide Rail [3 Cable]* | *Removal of Anchor Blocks* | *Removal of Steel Beam Guide Rail [Single Rail] [Without Channel]* | | | | References |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sub - Totals Brought Forward: | | | | | | | | | | | | | |
| Flagg Road | | | | | | | | | | | | | |
| 9+720 - 9+726; 7.0 - 6.9 LT | | | | | 6 | | | | | | | | |
| 9+725 - 9+731; 6.4 - 6.4 RT | | | | | 6 | | | | | | | | |
| 9+755; CL | | | | | 11 | | | | | | | | |
| 9+853; 5.2 RT | | | | | | | | 1 | | | | | |
| 9+853 - 9+952; 5.2 RT - 5.2 RT | | | | | | | 99 | | | | | | |
| 9+854; 5.5 LT | | | | | | | | 1 | | | | | |
| 9+854 - 9+950; 5.5 LT - 5.1 LT | | | | | | | 96 | | | | | | |
| 9+897 - 9+970; 3.7 LT | 73 | | | | | | | | | | | | |
| 9+897 - 9+970; 3.7 RT | 73 | | | | | | | | | | | | |
| 9+902; 4.5 LT | | | 1 | 6 | | | | | | | | | |
| 9+902; 4.5 RT | | | 1 | 6 | | | | | | | | | |
| 9+936 - 9+970; 6.5 RT - 4.7 RT | | | | | | | | | 34 | | | | |
| 9+950 - 9+970; 5.2 LT - 4.9 LT | | | | | | | | | 20 | | | | |
| 9+952; 5.2 LT | | | | | | | | 1 | | | | | |
| 9+953; 5.6 RT | | | | | | | | 1 | | | | | |
| 10+042 - 10+114; 4.5 LT - 3.5 LT | 72 | | | | | | | | | | | | |
| 10+042 - 10+114; 4.4 RT - 4.1 RT | 72 | | | | | | | | | | | | |
| 10+042 - 10+063; 4.8 RT - 5.1 RT | | | | | | | | | 21 | | | | |
| Sub - Totals Carried Forward: | 290 | | 2 | 12 | 23 | | 195 | 4 | 75 | | | | |
| | (P) | | (P) | (P) | (P) | | (P) | (P) | (P) | | | | |
| TOTALS | | | | | | | | | | | | | |
| UNIT | m (P) | | each (P) | m (P) | m (P) | | m (P) | each (P) | m (P) | | | | |
| ITEM No. | 137 | | 138 | 139 | 140 | | 141 | 142 | 143 | | | | |
| Reference | | | | | | | | | | | | | |

CHKD. _____

APPR. _____

DATE _____

Removals

# QUANTITIES - MISCELLANEOUS 1

**W.P. No. 4169-15-00**

**Contract No. 2018-4023**

SHEET 10

| Location and Position | *Removal of Concrete Curb and Gutter [Roadway]* | | *Abandonment of MH's, CB's, DI's and VC's, Partial-Depth [0.3m - 0.6m]* | *Abandonment of Pipes and Culverts* | *Removal of Pipes and Culverts [400mm - 500mm CSP]* | | *Removal of Cable Guide Rail [3 Cable]* | *Removal of Anchor Blocks* | *Removal of Steel Beam Guide Rail [Single Rail] [Without Channel]* | | | | References |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sub - Totals Brought Forward: | 290 | | 2 | 12 | 23 | | 195 | 4 | 75 | | | | |
| 10+044 - 10+075; 4.9 LT - 6.3 LT | | | | | | | | | 31 | | | | |
| 10+046; 4.1 RT | | | 1 | 1 | | | | | | | | | |
| 10+063 - 10+193; 5.1 RT - 6.3 RT | | | | | | | 130 | | | | | | |
| 10+065 - 10+196; 5.4 LT - 4.7 LT | | | | | | | 131 | | | | | | |
| 10+065; 5.4 LT | | | | | | | | 1 | | | | | |
| 10+065; 5.5 RT | | | | | | | | 1 | | | | | |
| 10+110; 4.1 LT | | | 1 | 1 | | | | | | | | | |
| 10+193; 6.3 RT | | | | | | | | 1 | | | | | |
| 10+196; 4.7 LT | | | | | | | | 1 | | | | | |
| 10+268 - 10+275; 10.5 - 10.1 LT | | | | | 7 | | | | | | | | |
| Highway 401 | | | | | | | | | | | | | |
| 20+207 - 20+257; 13 LT | | | | | | | | | 50 | | | | |
| 20+209 - 20+259; 25.6 RT | | | | | | | | | 50 | | | | |
| Sub - Totals Carried Forward: | 290 | | 4 | 14 | 30 | | 456 | 8 | 206 | | | | |
| | (P) | | (P) | (P) | (P) | | (P) | (P) | (P) | | | | |
| TOTALS | 290 | | 4 | 14 | 30 | | 456 | 8 | 206 | | | | |
| UNIT | m (P) | | each (P) | m (P) | m (P) | | m (P) | each (P) | m (P) | | | | |
| ITEM No. | 137 | | 138 | 139 | 140 | | 141 | 142 | 143 | | | | |
| Reference | | | | | | | | | | | | | |

CHKD. _____

APPR. _____

DATE _____

MINISTRY OF TRANSPORTATION - ONTARIO

Removals

# QUANTITIES - MISCELLANEOUS 1

**W.P. No. 4169-15-00**

**Contract No. 2018-4023**

SHEET 11

MINISTRY OF TRANSPORTATION - ONTARIO

| Location and Position | *Rip-Rap (R-10)* | | *Geotextile (Class II) (Non-woven) (FOS 75-150 micron)* | | | | | | | | | | References |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sub - Totals Brought Forward: | | | | | | | | | | | | | |
| Flagg Road | | | | | | | | | | | | | |
| 9+755 - 9+757; 8.7 - 10.7 LT | 4 | | 7 | | | | | | | | | | |
| 9+755 - 9+757; 8.6 - 10.6 RT | 4 | | 7 | | | | | | | | | | |
| 9+951 - 9+953; 7.3 - 20.4 LT | 26 | | 36 | | | | | | | | | | |
| 9+951 - 9+953; 7.3 - 23.5 LT | 32 | | 44 | | | | | | | | | | |
| 10+059 - 10+061; 7.4 - 21.6 LT | 28 | | 39 | | | | | | | | | | |
| 10+059 - 10+061; 7.4 - 21.6 RT | 28 | | 39 | | | | | | | | | | |
| Sub - Totals Carried Forward: | 122 | | 172 | | | | | | | | | | |
| | (P) | | (P) | | | | | | | | | | |
| TOTALS | 122 | | 172 | | | | | | | | | | |
| UNIT | m2 (P) | | m2 (P) | | | | | | | | | | |
| ITEM No. | 144 | | 145 | | | | | | | | | | |
| Reference | | | | | | | | | | | | | |

CHKD. _____

APPR. _____

DATE _____

Rip Rap / Geotextile

# QUANTITIES - MISCELLANEOUS 1

**W.P. No. 4169-15-00**

**Contract No. 2018-4023**

SHEET 12

MINISTRY OF TRANSPORTATION - ONTARIO

| Location and Position | *Small Signs, Ground Mounted, New* | *Small Signs, Removal* | | *PVMS (Temporary) [English] [Existing Ground]* | *Temporary Traffic Control Signs* | *Road Closing / Restriction Notice Signs (TC-64)* | | *Pavement Marking, Durable [Solid] [White, 60cm]* | | *Communication Plan For Traffic Management* | | | References |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sub - Totals Brought Forward: | | | | | | | | | | | | | |
| Entire Poject | | | | 2 | 100 % | 23 | | | | 100 % | | | |
| Zeron Road | | | | | | | | | | | | | |
| 9+984 RT; Ra-102 | | 1 | | | | | | | | | | | |
| 9+994 RT; STOP BAR | | | | | | | | 72 | | | | | |
| 9+994 RT; Ra-1 | 1 | | | | | | | | | | | | |
| 10+006 LT; STOP BAR | | | | | | | | 90 | | | | | |
| 10+006 LT; Ra-1 | 1 | | | | | | | | | | | | |
| 10+023 RT; Ra-102 | | 1 | | | | | | | | | | | |
| Sub - Totals Carried Forward: | 2 | 2 | | 2 | 100 % | 23 | | 162 | | 100 % | | | |
| | (P) | (P) | | (P) | | (P) | | (P) | | | | | |
| TOTALS | 2 | 2 | | 2 | 100 % | 23 | | 162 | | 100 % | | | |
| UNIT | each (P) | each (P) | | each (P) | lump sum | each (P) | | m (P) | | lump sum | | | |
| ITEM No. | 146 | 147 | | 148 | 149 | 150 | | 151 | | 153 | | | |
| Reference | | | | | | | | | | | | | |

CHKD. _____

APPR. _____

DATE _____

Signage

# QUANTITIES - MISCELLANEOUS 1

**W.P. No. 4169-15-00**

**Contract No. 2018-4023**

SHEET 13

| Location and Position | *Single Rail SBGR [OPSD 912.185]* | *Single Rail SBGR with Channel [OPSD 912.130]* | | *Steel Beam Energy Attenuating Terminal System [50:1 Flare]* | | *Temporary Concrete Barrier* | *Temporary Transition Connection* | | | | | | References |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sub - Totals Brought Forward: | | | | | | | | | | | | | |
| Flagg Road | | | | | | | | | | | | | |
| 9+799 - 9+815; 4.7 RT | | | | 1 | | | | | | | | | |
| 9+815 - 9+948; 4.7 LT | 133 | | | | | | | | | | | | |
| 9+834 - 9+850; 4.7 LT | | | | 1 | | | | | | | | | |
| 9+850 - 9+948; 4.7 RT | 98 | | | | | | | | | | | | |
| 9+948 - 9+968; 4.7 - 5.3 LT | | 21 | | | | | | | | | | | |
| 9+948 - 9+968; 4.7 - 5.3 RT | | 21 | | | | | | | | | | | |
| 10+044 - 10+064; 5.3 - 4.7 LT | | 21 | | | | | | | | | | | |
| 10+044 - 10+064; 5.3 - 4.7 RT | | 21 | | | | | | | | | | | |
| 10+064 - 10+238; 4.7 LT | 174 | | | | | | | | | | | | |
| 10+064 - 10+215; 4.7 RT | 151 | | | | | | | | | | | | |
| 10+215 - 10+232; 4.7 RT | | | | 1 | | | | | | | | | |
| 10+238 - 10+254; 4.7 LT | | | | 1 | | | | | | | | | |
| 10+316 - 10+331; RT | | | | 1 | | | | | | | | | |
| 10+331 - 10+370; 4.7 RT | 39 | | | | | | | | | | | | |
| 10+339 - 10+354; LT | | | | 1 | | | | | | | | | |
| 10+354 - 10+393; 4.7 LT | 39 | | | | | | | | | | | | |
| 10+370 - 10+385; RT | | | | 1 | | | | | | | | | |
| 10+393 - 10+408; LT | | | | 1 | | | | | | | | | |
| Sub - Totals Carried Forward: | 634 | 84 | | 8 | | 0 | 0 | | | | | | |
| | (P) | (P) | | (P) | | (P) | (P) | | | | | | |
| TOTALS | | | | | | | | | | | | | |
| UNIT | m (P) | m (P) | | each (P) | | m (P) | each (P) | | | | | | |
| ITEM No. | 154 | 155 | | 156 | | 157 | 152 | | | | | | |
| Reference | | | | | | | | | | | | | |

CHKD. _____

APPR. _____

DATE _____

MINISTRY OF TRANSPORTATION - ONTARIO

SBGR / SBEATS / TCB

# QUANTITIES - MISCELLANEOUS 1

**W.P. No. 4169-15-00**

**Contract No. 2018-4023**

SHEET 14

| Location and Position | *Single Rail SBGR [OPSD 912.185]* | *Single Rail SBGR with Channel [OPSD 912.130]* | | *Steel Beam Energy Attenuating Terminal System [50:1 Flare]* | | *Temporary Concrete Barrier* | *Temporary Transition Connection* | | | | | | References |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sub - Totals Brought Forward: | 634 | 84 | | 8 | | 0 | 0 | | | | | | |
| Highway 401 WB | | | | | | | | | | | | | |
| 22+200 - 22+295; 11 - 13 LT | | | | | | 95 | | | | | | | |
| 22+210 - 22+295; 2.0 LT - CL | | | | | | 85 | | | | | | | |
| 22+207 - 22+257;13.8 LT | 50 | | | | | | | | | | | | |
| 22+295; 13 LT | | | | | | | 1 | | | | | | |
| 22+295; CL | | | | | | | 1 | | | | | | |
| Highway 401 EB | | | | | | | | | | | | | |
| 22+175; 12.5 RT | | | | | | | 1 | | | | | | |
| 22+175; 25.6 RT | | | | | | | 1 | | | | | | |
| 22+175 - 22+265; 12.6 - 14.4 RT | | | | | | 90 | | | | | | | |
| 22+175 - 22+290; 25.6 - 23.8 RT | | | | | | 115 | | | | | | | |
| 22+209 - 22+280; 26.5 RT | 50 | | | | | | | | | | | | |
| Sub - Totals Carried Forward: | 734 | 84 | | 8 | | 385 | 4 | | | | | | |
| | (P) | (P) | | (P) | | (P) | (P) | | | | | | |
| TOTALS | 734 | 84 | | 8 | | 385 | 4 | | | | | | |
| UNIT | m (P) | m (P) | | each (P) | | m (P) | each (P) | | | | | | |
| ITEM No. | 154 | 155 | | 156 | | 157 | 152 | | | | | | |
| Reference | | | | | | | | | | | | | |

CHKD. _____

APPR. _____

DATE _____

MINISTRY OF TRANSPORTATION - ONTARIO

SBGR / SBEATS / TCB

# QUANTITIES - MISCELLANEOUS 1

**W.P. No. 4169-15-00**

**Contract No. 2018-4023**

SHEET 15

MINISTRY OF TRANSPORTATION - ONTARIO

| Location and Position | *Topsoil from Stockpiles* | *Seed and Erosion Control Blanket Standard Roadside Mix Seeding* | *Light-Duty Silt Fence Barriers* | *Straw Bale Flow Check Dams* | | | | | | | | | References |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sub - Totals Brought Forward: | | | | | | | | | | | | | |
| Flagg Road | | | | | | | | | | | | | |
| 9+672 - 9+720; 4.9 - 12.4 LT | | | 50 | | | | | | | | | | |
| 9+671 - 9+726; 4.9 - 12.4 RT | | | 56 | | | | | | | | | | |
| 9+726 - 9+758; 12.5 - 7.3 LT | | | 33 | | | | | | | | | | |
| 9+731 - 9+765; 12.3 - 7.8 RT | | | 33 | | | | | | | | | | |
| 9+677 - 10+400 | 602 | 12,033 | | | | | | | | | | | |
| 9+780 - 9+981; 17.3 - 22.2 LT | | | 202 | | | | | | | | | | |
| 9+780 - 9+983; 15.3 - 23.8 RT | | | 202 | | | | | | | | | | |
| 10+032 - 10+271; 22.6 - 27.9 LT | | | 234 | | | | | | | | | | |
| 10+029 - 10+250; 12.4.4 -33.8 RT | | | 249 | | | | | | | | | | |
| 10+279 - 10+400; 26.1 - 5.1 LT | | | 131 | | | | | | | | | | |
| 10+258 - 10+400; 36.2 - 4.8 RT | | | 160 | | | | | | | | | | |
| Highway 401 | | | | | | | | | | | | | |
| 22+159; 5.1 RT | | | | 1 | | | | | | | | | |
| 22+201; 17 LT | | | | 1 | | | | | | | | | |
| 22+259; 18.5 LT | | | | 1 | | | | | | | | | |
| 22+285; 31.0 RT | | | | 1 | | | | | | | | | |
| 22+307; 6.0 RT | | | | 1 | | | | | | | | | |
| Zeron Road | | | | | | | | | | | | | |
| Sub - Totals Carried Forward: | 602 | 12,033 | 1,350 | 5 | | | | | | | | | |
| | | (P) | (P) | (P) | | | | | | | | | |
| TOTALS | | | | | | | | | | | | | |
| UNIT | m3 | m2 (P) | m (P) | each (P) | | | | | | | | | |
| ITEM No. | 158 | 159 | 160 | 161 | | | | | | | | | |
| Reference | | | | | | | | | | | | | |

CHKD. _____

APPR. _____

DATE _____

Topsoil / Seed and Erosion Control

# QUANTITIES - MISCELLANEOUS 1

**W.P. No. 4169-15-00**

**Contract No. 2018-4023**

SHEET 16

| Location and Position | *Topsoil from Stockpiles* | *Seed and Erosion Control Blanket Standard Roadside Mix Seeding* | *Light-Duty Silt Fence Barriers* | *Straw Bale Flow Check Dams* | | | | | | | | | References |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sub - Totals Brought Forward: | 602 | 12,033 | 1,350 | 5 | | | | | | | | | |
| 10+015 - 10+060; 10.8 - 8.2 RT | | | 45 | | | | | | | | | | |
| 10+009 - 10+060; 17.6 - 8.7 LT | | | 51 | | | | | | | | | | |
| Sub - Totals Carried Forward: | 602 | 12,033 | 1,446 | 5 | | | | | | | | | |
| | | (P) | (P) | (P) | | | | | | | | | |
| TOTALS | 602 | 12,033 | 1,446 | 5 | | | | | | | | | |
| UNIT | m3 | m2 (P) | m (P) | each (P) | | | | | | | | | |
| ITEM No. | 158 | 159 | 160 | 161 | | | | | | | | | |
| Reference | | | | | | | | | | | | | |

CHKD. _____

APPR. _____

DATE _____

MINISTRY OF TRANSPORTATION - ONTARIO

Topsoil / Seed and Erosion Control

# QUANTITIES - STRUCTURE

31X-0203

W.P. No. 4169-15-00

Contract No. 2018-4023



| 4445-02-01 Structural 1 | *Removal of Bridge Structure* | *Removal of Bridge Footings* | *Protection System* | *Management and Disposal of Materials Containing Asbestos* | *Earth Excavation for Structure* | *Dewatering Structure Excavation* | *Concrete in Footings* | *Concrete in Substructure [(35 mpa)]* | *Concrete in Deck* | *Concrete in Parapet Walls* | *Concrete in Approach Slabs* | *Concrete in Slope Paving* | | | | References |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LUMP SUM | | | | | | | | | | | | | | | | |
| Flagg Road Bridge Replacement | | | | | | | | | | | | | | | | |
| | 100 % | | | | | | | | | | | | | | | |
| | | 67 | | | | | | | | | | | | | | |
| | | | 100 % | | | | | | | | | | | | | |
| | | | | 100 % | | | | | | | | | | | | |
| | | | | | 1,760 | | | | | | | | | | | |
| | | | | | | 100 % | | | | | | | | | | |
| | | | | | | | 80.50 | | | | | | | | | |
| | | | | | | | | 100 % | | | | | | | | |
| | | | | | | | | | 100 % | | | | | | | |
| | | | | | | | | | | 100 % | | | | | | |
| | | | | | | | | | | | 100 % | | | | | |
| | | | | | | | | | | | | 100 % | | | | |
| | 100 % | 67 | 100 % | 100 % | 1,760 | 100 % | 80.50 | 100 % | 100 % | 100 % | 100 % | 100 % | | | | |
| | | | | | (P) | | (P) | | | | | | | | | |
| TOTALS | 100 % | 67 | 100 % | 100 % | 1,760 | 100 % | 80.5 | 100 % | 100 % | 100 % | 100 % | 100 % | | | | |
| UNIT | lump sum | m3 | lump sum | lump sum | m3 (P) | lump sum | m3 (P) | lump sum | lump sum | lump sum | lump sum | lump sum | | | | |
| ITEM No. | 162 | 163 | 164 | 165 | 166 | 167 | 168 | 169 | 170 | 171 | 172 | 173 | | | | |

Remarks:

CHKD. _____

APPR. _____

DATE _____

# QUANTITIES - STRUCTURE

**W.P. No. 4169-15-00**

**Contract No. 2018-4023**

SHEET 18

| 4445-02-01 Structural 2 | *Reinforcing Steel Bar* | *Stainless Steel Reinforcing Bar* | *Parapet Wall Railing* | *Prestressed Concrete Girders NU 1200 Fabrication* | *Prestressed Concrete Girders NU 1200 Delivery* | *Prestressed Concrete Girders NU 1200 Installation* | *Bridge Deck Waterproofing* | *Form and Fill Grooves* | *Membrane Reinforcement* | *Deck Joint Assemblies, Installation* | *Bearings* | *Access to Work Area, Work Platform and Scaffolding* | *Working Slab* | *CSP For Integral Abutment* | | References |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LUMP SUM | | | | | | | | | | | | | | | | |
| Flag Road Bridge Replacement | | | | | | | | | | | | | | | | |
| | 100 % | | | | | | | | | | | | | | | |
| | | 100 % | | | | | | | | | | | | | | |
| | | | 140 | | | | | | | | | | | | | |
| | | | | 100 % | | | | | | | | | | | | |
| | | | | | 100 % | | | | | | | | | | | |
| | | | | | | 100 % | | | | | | | | | | |
| | | | | | | | 100 % | | | | | | | | | |
| | | | | | | | | 38.00 | | | | | | | | |
| | | | | | | | | | 19.00 | | | | | | | |
| | | | | | | | | | | 100 % | | | | | | |
| | | | | | | | | | | | 100 % | | | | | |
| | | | | | | | | | | | | 100 % | | | | |
| | | | | | | | | | | | | | 100 % | | | |
| | | | | | | | | | | | | | | 100 % | | |
| | 100 % | 100 % | 140 | 100 % | 100 % | 100 % | 100 % | 38.00 | 19.00 | 100 % | 100 % | 100 % | 100 % | 100 % | | |
| | | | (P) | | | | | (P) | (P) | | | | | | | |
| TOTALS | 100 % | 100 % | 140 | 100 % | 100 % | 100 % | 100 % | 38.00 | 19.00 | 100 % | 100 % | 100 % | 100 % | 100 % | | |
| UNIT | lump sum | lump sum | m (P) | lump sum | lump sum | lump sum | lump sum | m (P) | m (P) | lump sum | lump sum | lump sum | lump sum | lump sum | | |
| ITEM No. | 174 | 175 | 176 | 177 | 178 | 179 | 180 | 181 | 182 | 183 | 184 | 185 | 186 | 187 | | |

Remarks:

CHKD. _____

APPR. _____

DATE _____

MINISTRY OF TRANSPORTATION - ONTARIO

4445-02-01 Structural 2

# QUANTITIES - STRUCTURE

**W.P. No. 4169-15-00**

**Contract No. 2018-4023**

SHEET 19

| 4445-02-01 Structural 3 | *Bird Nesting Preventative Measures* | *Supply Equipment for Drilled-In Tube Piles* | *Drilled-In Tube Piles* | | | | | | | | | | | | | References |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LUMP SUM | | | | | | | | | | | | | | | | |
| Flagg Road Bridge Replacement | | | | | | | | | | | | | | | | |
| | 100 % | | | | | | | | | | | | | | | |
| | | 100 % | | | | | | | | | | | | | | |
| | | | 408 | | | | | | | | | | | | | |
| | 100 % | 100 % | 408 | | | | | | | | | | | | | |
| TOTALS | 100 % | 100 % | 408 | | | | | | | | | | | | | |
| UNIT | lump sum | lump sum | m | | | | | | | | | | | | | |
| ITEM No. | 188 | 189 | 190 | | | | | | | | | | | | | |

Remarks:

CHKD. _____

APPR. _____

DATE _____

MINISTRY OF TRANSPORTATION - ONTARIO

4445-02-01 Structural 3