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| Version | Date | Description of Revisions |
| 1 | August 30, 2006 | Approved final document. |
| 2 | October 16, 2007 | Minor revisions by Legal Services. |
| 3 | November 13, 2009 | Modified ‘Related Section’ |
| 4 | June 5, 2012 | Addition of References and Replacement Parts sections on this page |
| 5 | June 29, 2012 | Reformatted to Remove White Space |
| 6 | April 23, 2015 | General Formatting |
| 7 | February 21, 2017 | Addition of Subsection 1.3 which highlights Contractor responsibilities under the Ontario Underground Infrastructure Notification System Act, 2012 (AV) |

NOTE:

This is a CONTROLLED Document. Any documents appearing in paper form are not controlled and should be checked against the on-line file version prior to use.

**Notice:** This Document hardcopy must be used for reference purpose only.

**The on-line copy is the current version of the document.**

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## Related Sections

### [Under "Related Sections", identify other Sections that are related to, and/or dependent on, the work results or information specified elsewhere. The list should be limited to Sections with specific information that the reader might expect to find in this Section, but is specified elsewhere. For example, if hardware for aluminum entrances is specified in the aluminum entrance Section, a cross-reference would be appropriate in the finish hardware Section. The purpose of this cross-referencing is for information only, to aid in finding those other requirements—not to define the scope of the Section.

### Cross-referencing here may also be used to coordinate assemblies or systems whose components may span multiple Sections and which must meet certain performance requirements as an assembly or system.

### Contractor is responsible for coordination of the Work.

### This Section is to be completed/updated during the design development by the Consultant. If it is not applicable to the section for the specific project it may be deleted.]

### [List Sections specifying installation of products supplied but not installed under this Section and indicate specific items.]

### Section [\_\_\_\_\_\_ – \_\_\_\_\_\_\_\_\_\_\_\_]: Execution requirements for ...[item]... specified under this Section.

### [List Sections specifying products installed but not supplied under this Section and indicate specific items.]

### Section [\_\_\_\_\_\_ – \_\_\_\_\_\_\_\_\_\_\_\_]: Product requirements for ...[item]... for installation under this Section.

### [List Sections specifying related requirements.]

### Section [\_\_\_\_\_\_ – \_\_\_\_\_\_\_\_\_\_\_\_]: [Optional short phrase indicating relationship].

### Section 03300 - Cast in Place Concrete

### Section 01300 – Submittals

## References

### ASTM A53/A53M-12, Standard Specification for Pipe, Steel, Black and Hot Dipped, Zinc Coated, Welded and Seamless.

### ASTM A121-13, Standard Specification for Metallic-Coated Carbon Steel Barbed Wire.

### CAN/CSA A23.1-14/A23.2-14, Concrete Materials and Methods of Concrete Construction/Test Methods and Standard Practices for Concrete.

### CAN/CSA O80 Series-15, Wood Preservation.

### CAN/CSA A3000-13, Cementitious Materials Compendium

### Ontario Underground Infrastructure Notification System Act, 2012

## Locates

### The Contractor shall be deemed an “excavator” under the Ontario Underground Infrastructure Notification System Act, 2012, and shall comply with all applicable requirements of the Act.  The Contractor shall obtain locates of underground infrastructure from Ontario One Call prior to commencing an excavation or dig.

## Measurement and Payment

### [The Work outlined in this Section will be measured and paid for at the unit price as indicated in the Bid Form] or [The Work outlined in this Section is included in the Contract Price.] or [The Work outlined in this Section will be measured and paid for at the unit price for Work under Section…….]. [Select appropriate method for each project].

# PRODUCTS

## Materials

### Wire fence:

#### Farm field type: in accordance with standard [Consultant to provide standard].

#### Barbed wire: in accordance with ASTM A121-13.

#### Galvanized steel.

#### Wire size: 2 mm diameter.

#### Barbs: 4 point at 125 mm spacing.

### Gates:

#### Frame: in accordance with ASTM A53/A53M-12, galvanized steel pipe, standard weight, [25] mm outside diameter.

#### Size: as indicated on the Contract Drawings.

#### Joints: electrically welded.

### Timber components: cedar or pressure treated timber.

### Timber posts:

#### Sound, seasoned wood, peeled and with ends cut square or as indicated on the Contract Drawings.

#### Intermediate posts: 2.5 metres long and a minimum of 125 mm in diameter at the small end or as indicated on the Contract Drawings.

#### Corner, end, gate and anchor posts: 2.7 metres long and a minimum of 200 mm in diameter at the small end or as indicated on the Contract Drawings.

#### Straight, free from splits, shakes and excessive knots.

#### Existing knots should be trimmed flush with the surface.

#### Cleats for anchoring corner, gate, end and anchor posts: 38 mm x 140 mm x 910 mm.

#### Braces for end, corner and gate posts: 89 mm x 89 mm x 3 m long.

#### Posts are to be treated in accordance with CAN/CSA O80 Series-15.

### Steel posts: [Indicate on drawings types and dimensions of steel components.]

#### Corner, end, gate and intermediate posts, projection arm with clips, corner and gate post braces, gate posts as indicated on the Contract Drawings.

#### Galvanizing: zinc coating, a minimum of 92 g/m2 of the surface area.

#### Concrete mixes and materials: in accordance with Section 03300 - Cast In Place Concrete.

##### Nominal coarse aggregate size: 20 mm.

##### Compressive strength: 20 MPa minimum at 28 Days.

### Organic zinc rich coating: in accordance with [Consultant to provide appropriate standard].

# EXECUTION

## Grading

### Level the ground along the fence line in order that the bottom wire of the fence between posts can be maintained at not more than 150 mm above the ground.

## Erection of Fence

### Erect the fence along the lines as indicated on the Contract Drawings.

### Installation of posts:

#### Space intermediate posts at 5 metres.

#### Space corner, end and gate posts 3 metres from the adjacent post.

#### Locate and erect gate posts as indicated on the Contract Drawings.

#### Install posts true to line and plumb with 1.5 metre of post projecting above the ground.

### Fencing with wood posts:

#### Excavate post holes to the dimensions indicated on the Contract Drawings and by methods approved by the Consultant.

#### The slant of post tops is to be perpendicular to the fence line and facing outward.

#### Install cleats for anchoring at corner, gate, end and anchor posts as indicated on the Contract Drawings.

#### Embed in concrete as indicated on the Contract Drawings.

#### Backfill around posts and compact to the same density as the surrounding ground. Dispose of surplus material as directed by the Consultant.

#### Install braces at end, corner and gate posts as indicated on the Contract Drawings. Join braces into posts and spike securely.

#### Erect wires and stretch to have uniform tension. Splice wires with standard wire splices.

#### Attach top wires to posts with a minimum of two staples. Fasten other wires to posts and cross braces with at least one staple. Staple wires securely on end, anchor and gate posts.

#### Stretch two strands of barbed wire along the tops of posts and double staple on posts.

### Fencing with steel posts:

#### Install steel posts to the depths as indicated on the Contract Drawings.

#### Set the following items in concrete:

##### End, corner and gate posts.

##### Intermediate posts adjacent to end, corner and gate posts.

##### Intermediate posts every 60 metres along the fence line.

##### Ends of braces for corner, end and gate posts.

#### Brace corner, end and gate posts as indicated on the Contract Drawings.

#### Clamp a studded steel projection arm to each post as indicated on the Contract Drawings.

#### Erect woven and barbed wire as indicated on the Contract Drawings.

#### Stretch wires to have uniform tension. Splice wires with standard wire splices.

#### Attach wires to posts and projection arms with approved metal clips.

## Installation of Gates

### Install gates in the locations as indicated on the Contract Drawings.

### Install gates in a manner which prevents over stress on the gate posts when the gates are open. Install on level ground with a ground clearance of 100 mm.

### Locate the anchor pipe for the drop bolt, and install the pipe flush with the road surface.

## Cleaning

### Clean and trim areas disturbed by operations. Dispose of surplus material.

## Touch-up

### Clean damaged painted wood and metal surfaces with a wire brush to remove loose and cracked coatings. Apply two coats of the same paint to damaged areas.

### Clean damaged galvanized surfaces with a wire brush to remove loose and cracked coatings. Apply two coats of an organic zinc rich coating.

**END OF SECTION**