

**DIVISION 4.5  
CITY OF SARNIA  
RESTORATION  
STANDARDS**

**2023**

<b>RESTORATION STANDARDS.....</b>	<b>1</b>
<b>A. MATERIALS.....</b>	<b>4</b>
1. CONCRETE.....	4
2. HOT MIX ASPHALT.....	4
3. GRANULAR MATERIALS.....	4
4. TOPSOIL.....	4
5. SOD.....	4
6. SEED.....	4
6. FERTILIZER.....	5
<b>B. CONSTRUCTION METHODS.....</b>	<b>6</b>
1. TEMPORARY DRIVEWAY RESTORATION.....	6
2. REPAIRS TO DRIVEWAYS AND WALKWAYS.....	6
i) General.....	6
ii) Asphalt Driveways.....	6
iii) Concrete Driveways.....	6
iv) Temporary Road Repairs.....	7
v) Unpaved Driveways.....	7
vi) Walkways.....	7
4. DRIVEWAY ENTRANCE RAMPS, COMBINED SIDEWALK CURB AND GUTTER.....	7
5. ACCESSIBLE RAMPS.....	7
6. EXCAVATION FOR PROPOSED GRASS BOULEVARDS.....	8
7. TOPSOIL, FERTILIZER AND SOD.....	8
8. SEED.....	9
8. TREE REMOVAL.....	9
9. SAFETY AND CLEANUP.....	9
10. DAMAGE TO PUBLIC OR PRIVATE PROPERTY.....	10
11. FINAL CLEAN-UP.....	10
<b>C. TESTING PROCEDURES.....</b>	<b>12</b>
i) Concrete.....	12
ii) Asphalt.....	12

iii) Granular Material.....	12
iv) Topsoil.....	12
v) Sod .....	12
vi) Fertilizer .....	12

## **A. MATERIALS**

### **1. CONCRETE**

Concrete, formwork, and associated materials for sidewalks, driveways and curbs and gutters shall be as per Standard Specification ""Concrete Sidewalks, Curbs, Gutters and Driveways.""

### **2. HOT MIX ASPHALT**

Asphalt for driveways, walkways, etc. shall be as per Standard Specifications "Roads and Driveways."

### **3. GRANULAR MATERIALS**

Granular materials shall be as per Standard Specification "Roads and Driveways."

### **4. TOPSOIL**

Topsoil shall be screened, nursery grade and as per OPSS 802.05.01

### **5. SOD**

Sod shall be as per OPSS 803.05.01

### **6. SEED**

The seed mix to be used for this item shall be as follows:

55% Creeping Red Fescue

27% Canada Blue Grass

15% Perennial Rye Grass

3% White Dutch Clover

## **6. FERTILIZER**

Fertilizer shall be uniformly applied to all services which are to be sodded at a rate of 5 kg of fertilizer per 100 square meters of surface area and shall be incorporated into surfaces by raking, disking or harrowing. Fertilizer shall be applied not more than 48 hours before the sod is placed and shall be standard commercial fertilizer (16-8-8) and a minimum of 30% nitrogen being slow release. Chemical fertilizers shall be as per OPSS 803.05.03.

**B. CONSTRUCTION METHODS**

**1. TEMPORARY DRIVEWAY RESTORATION**

All driveways shall be excavated and temporarily restored with Granular "A" material to give access to private properties as soon as possible to the satisfaction of the City Engineer.

**2. REPAIRS TO DRIVEWAYS AND WALKWAYS**

**i) General**

This clause shall apply to all driveways and walkways, both on the road allowance and on private property. In general, driveways and walkways shall be restored with the same surface material as existed before construction, that is, asphalt, concrete or crushed stone, but the decision as to the material used for restoration shall be made by the City Engineer.

Damage to existing driveways shall be kept to a minimum. The area of any existing driveway to be removed shall be agreed upon with the City Engineer before the work proceeds. Damage to driveways outside the agreed areas shall be repaired at the Contractor's expense.

**ii) Asphalt Driveways**

Asphalt driveways shall be repaired as specified for asphalt driveway construction as specified in Standard Specification "Roads and Driveways."

**iii) Concrete Driveways**

Concrete driveways shall be repaired as per Standard Specification "Concrete Sidewalks, Curbs and Driveways" and shall be saw-cut in a neat straight line parallel to the sidewalk before removal as determined by the City Engineer.

**iv) Temporary Road Repairs**

Where a Contractor installs servicing to a site, it shall be his responsibility to permanently restore the road immediately on completion of the underground work. If this is not possible as approved by the City Engineer, the Contractor must temporarily restore the cut with a 25 mm HL3 asphalt surface (cold mix if hot mix not available) until the permanent restoration can be completed. Permanent restoration must be completed as soon as possible. All costs for the above, including the removal of the temporary asphalt will be borne by the contractor.

**v) Unpaved Driveways**

Unpaved driveways shall be repaired using compacted Granular "A". Unless otherwise indicated, 150 mm thickness of Granular "A" 100% crushed limestone will be used.

**vi) Walkways**

The above requirements for driveways shall also apply to walkways.

**4. DRIVEWAY ENTRANCE RAMPS, COMBINED SIDEWALK CURB AND GUTTER**

Driveway entrance ramps in combined sidewalk and curb and gutter construction shall be constructed as shown on the standard drawings 119-F and 122-F at the locations of existing driveways or as directed by the City Engineer.

**5. ACCESSIBLE RAMPS**

Accessible ramps shall be constructed as shown on the standard drawings at the locations shown on the road drawings or where required by the City Engineer. Tactile warning Plates to be installed in the sidewalk ramps as required in Standard Specifications "Concrete Sidewalk, Curb, Gutter and Driveways".

## **6. EXCAVATION FOR PROPOSED GRASS BOULEVARDS**

When the sidewalk and curb and gutter construction is complete, the Contractor, where directed by the City Engineer, shall excavate the remaining material from the area between the sidewalks and the curb and gutter. The excavation shall be to a depth of 125mm (5") below a straight line extending from the sidewalk to the top of the curb and shall be smooth and evenly graded over the whole area. Excavated material shall be disposed off site at the Contractor's expense.

## **7. TOPSOIL, FERTILIZER AND SOD**

The Contractor shall be required to place 100mm (4") of topsoil, fertilizer and a layer of sod between driveways from the sidewalk to the curb and gutter; and disturbed areas behind the sidewalk, and other areas as directed by the City Engineer. Placing of sod shall be done to suit trees and tree roots. No work shall be done on private property without prior consent from the City Engineer.

Fertilizer shall be uniformly applied to all services which are to be sodded at a rate of 5 kg of fertilizer per 100 square meters of surface area and shall be incorporated into surfaces by raking, disking or harrowing. Fertilizer shall be applied not more than 48 hours before the sod is placed and shall be standard commercial fertilizer (8-32-16) and a minimum of 30% nitrogen being slow release. Chemical fertilizers shall be as per OPSS 571.05.03.

Sod shall be placed right against any boundaries or obstacles and full sized pieces shall be trimmed as necessary to ensure a tight fit. Grouping small pieces to cover a space will not be allowed. After the sod has been laid, it shall be rolled to compact and level it and the topsoil. The final result shall be a layer of sod that is a smooth evenly graded surface without gaps, humps or hollows.



## **8. SEED**

The seed shall be applied at a rate of 100 kg/Ha. The fertilizer to be used shall be 8-32-16 and applied at a rate of 350 kg/Ha.

The seed shall be placed in early spring to June 10<sup>th</sup>, or August 1<sup>st</sup> to September 15<sup>th</sup>. The seed should be placed with a mechanical seeder, i.e. Brillion; hydro-seeding the slopes will be considered. The seeding operation must be immediately followed with a baled straw and asphalt emulsion type of mulch.

The Contractor will be responsible to water and maintain the sod for a period of 30 days after it was laid. At the end of that time, the sod will be inspected and shall be green and succulent and showing evidence of rooting into the underlying soil. Any sod which fails to meet these requirements will be replaced at the Contractor's expense and subject to another 30 day maintenance expense.

## **8. TREE REMOVAL**

The only trees which can be removed are those designated for removal by the contract drawings or specifications and/or which both the City Engineer and the City Arborist have given approval for the removal of. No other trees will be removed or have limbs or roots cut or trimmed or damaged in any fashion. Minor damage to trees will be repaired by the City Arborist at the Contractor's expense. Major damages to branches, trunks, root, etc. of a tree as determined by the City Arborist will require removal of this tree and replacement with a 100 mm caliper tree of a kind to be chosen by the City, all at the contractor's expense.

## **9. SAFETY AND CLEANUP**

Safety and cleanup of work sites are of great concern to the City because of the potential to cause public discontent and hazard when they are delayed or done poorly. The Contractor must clean

up his work as a daily, on-going process so that all work sites are kept clean and safe at all times. At no time may cleanup be allowed to "collect" for a period of time.

The City requires that the Contractor clean up at all sites prior to weekends and holidays in order to minimize hazards and complaints.

The Contractor shall provide barricades and/or fencing such as to provide a physical barrier that will separate the work site from the general public, including the visually impaired. All sidewalk and road crossings inside and outside the fenced construction area designated for pedestrians must always be made accessible for persons with disabilities.

All costs for safety and cleanup are to be included in the unit rate that applies to the work involved.

## **10. DAMAGE TO PUBLIC OR PRIVATE PROPERTY**

The Contractor must take care to ensure that he does not damage City sidewalks, asphalt, curbs, gutters, grassed areas or any other City property not marked by the City Engineer for removal. Special care must be taken by the Contractor to not damage any private property of any sort, including buildings, vehicles, fences, driveways, walkways, landscaping and grassed areas. Included in this damage would be stabilizer marks and tire tread depressions in grassed areas.

When any such damage occurs to City or private property, the damage must be repaired to the satisfaction of the City Engineer and the cost for these repairs will be at the expense of the Contractor.

## **11. FINAL CLEAN-UP**

The work site within the limits of construction must be thoroughly cleaned before the work will be declared complete by the City Engineer. Cleaning will include, but not be limited to, sweeping all sidewalks, roads, driveways and gutters, cleaning out all catchbasins and manholes, cleaning all sewers of construction

debris, removing excess asphalt from all manhole lids and valve box covers, removing concrete from around nuts on curb stops, replacing screws on sanitary cleanout caps that are concrete filled and removing any and all excess material and construction traffic control signs.

## **C. TESTING PROCEDURES**

### **i) Concrete**

Concrete shall be as per Standard Specification "Concrete sidewalks, Curbs, Gutters and Driveways".

### **ii) Asphalt**

Asphalt shall be as per Standard Specification "Driveways and Roads".

### **iii) Granular Material**

Granular Materials shall be as per Standard Specification "Driveways and Roads" and Standard Specification "Concrete Sidewalks, Curbs, Gutters and Driveways".

### **iv) Topsoil**

Topsoil shall be as per OPSS 802.05.01

### **v) Sod**

Sod shall be as per OPSS 803.05.01

### **vi) Fertilizer**

Chemical fertilizers shall be as per OPSS 803.05.03