

## PART 1 - GENERAL

### 1.1 Work Included --

The scope of the work includes labor, materials, equipment and performance of all work required for installation of PolyGrate™ as suggested by manufacturer's drawings and installation procedures.

### 1.2 Work by Others --

Openings to receive grates are to be provided by others in accordance with instructions of tree grate manufacturer and are indicated on drawings and provisions of the specification.

## PART 2 - PRODUCT

### 2.1 Tree Grates

#### A. Manufacturer

Grates shall be PolyGrate™, plastic tree grates as manufactured by Structural Plastics Corp., Holly, Michigan.

#### B. Material

Grates shall be of high-density polyethylene resins conforming to ASTM D-638.

#### C. Design

Grate pattern shall comply with A.D.A. requirements for equal access. Color, size, and configuration shall be specified by owner/architect.

#### D. Finish

Grates shall be manufactured true to pattern, of uniform quality and size, and free from defects. Surface shall be smooth; free of sharp edges.

### 2.2 Hardware --

#### Fasteners (included)

Grate halves shall be joined together with tamper-resistant bolt package as provided by Structural Plastics Corp., or approved equal. Package to consist of (6) each #16 3/8" x 1-1/4" button head socket-cap screw, stainless; #16 3/8" Tuff Nut, brass; and (12) each 3/8" USS Flat washer, zinc.

## PART 3 - EXECUTION

### 3.1 Inspection --

Proper site preparation and ongoing maintenance will determine performance.

### 3.2 Surface Conditions --

Examine concrete ledge, and/or existing tree pit to receive grate. Correct condition to comply with manufacturer's recommended installation procedure.

### 3.3 Installation

#### A. Opening to Receive Grate

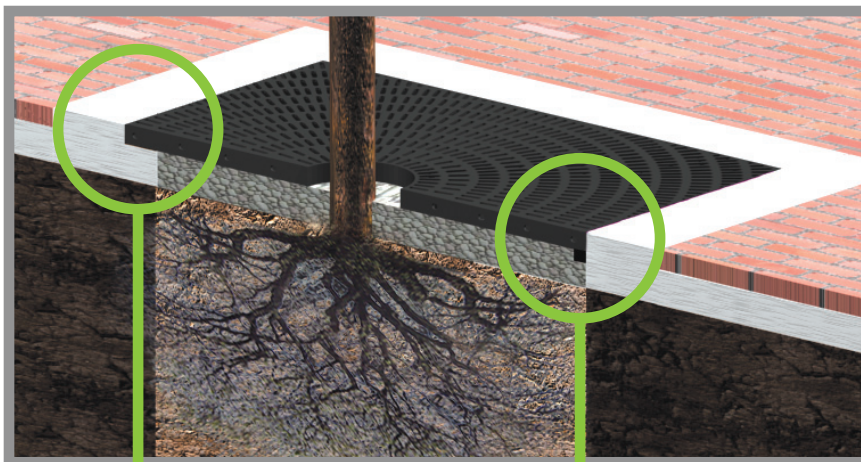
- Concrete Ledge Supported - New Installation (figure 3.3A1)  
Concrete ledge shall be cast in size and configuration of specified tree grate model plus 3/8" expansion allotment. Ledge shall be 2 inches below concrete or tiled surface and extend inward 2 to 3 inches. Ledge must be level and free of bulges and slag.
- PolyGrate Frame Supported - Retro-fit Installation (figure 3.3A2)  
The PolyGrate Frame accessories will come complete with (4) 1 1/2" square pre-drilled plastic frames (42" length for use with 4' PolyGrate™, or 54" length for use with 5' PolyGrate™). Sidewalk preparation should allow 3/8" additional length per side to provide for grate expansion. Attach PolyGrate Frame to sides of poured surface with Tap-Con screws (provided) or other approved concrete fastener. The PolyGrate Frame support ledge should be placed 2" below the surface of the concrete.

#### B. Support and Litter Prevention

Fill space from bottom of tree pit flush to bottom of tree grate with crushed shale or other self-compacting aggregate.

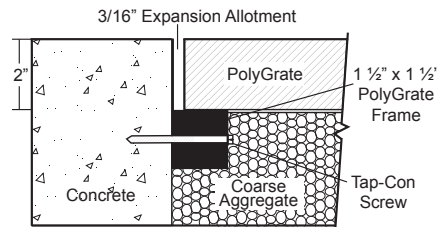
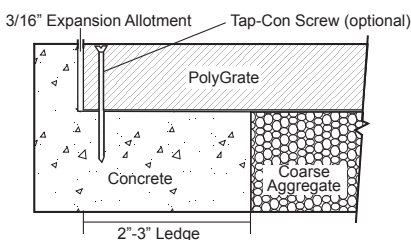
#### C. Join Grate Halves

Bring tree grate halves together around a tree at a height that allows easy access to underside. Join section at pre-formed holes using tamper-resistant bolt package provided by manufacturer, or approved equal. Lower grate into place.



**INSTALLATION WITH CONCRETE SURROUND (3.3A1)**

**INSTALLATION WITH POLYGRATE FRAME (3.3A2)**



## TEST DATA

	ASTM TEST	UNITS	TYPICAL VALUES
<b>RESIN PROPERTIES</b>			
Density	D-1505	g/cc	0.957
Melt Index	D-1238	g/10 min	7
<b>MOLDED PROPERTIES</b>			
Tensile Modulus (1% Secant)	D-638	psi	166000
Tensile at Yield	D-638	psi	4300
Elongation at Break	D-638	%	1400
Flexural Modulus	D-790	psi	194000

The key to any successful landscape project is to budget for ongoing maintenance expenditures, such as grate expansion as your trees mature. For best results and longevity, PolyGrate™ requires that the space between the ground and tree grate bottom be filled with coarse aggregate for all installation applications. This will properly support the grate, prevent accumulation of debris under grate and protect close-to-surface root systems.