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Decorative Streetscape Solutions

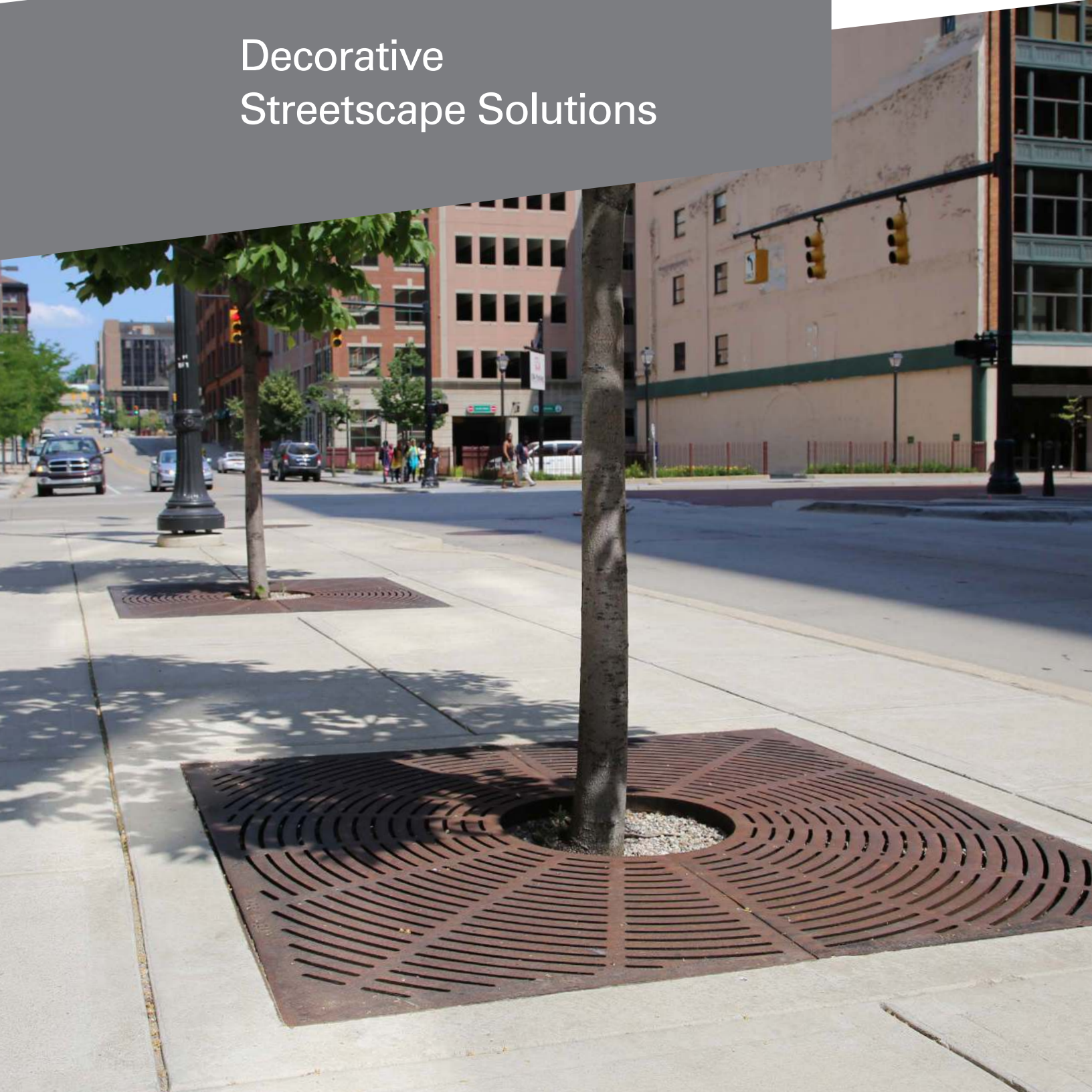


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Tree Grates

Complement Your Streetscape



Cast Iron... The Natural Choice.

Cast iron grating is strong, durable, and stands up to harsh environmental conditions. In its natural state, gray iron develops a pleasant, dark brown patina as it ages. Cast iron is inherently resistant to corrosion from natural elements, and will last for many years in its original state.

Tree grates are made in the USA and contain a minimum of 85% recycled materials. Hundreds of tons per day of waste ferrous materials, including old car parts, appliances, and obsolete farm equipment are recycled to produce castings for your infrastructure.

Tree Grates

Decorative tree grates by EJ are the perfect blend of form and function. Available in many styles and designs, they promote healthier trees by offering air and rainwater a path to the roots, while providing a flat, ADA (Americans with Disabilities Act) compliant pedestrian surface.

Tree grates blend artistic form with function to protect tree roots, manage stormwater and maintain neat, orderly and safe sidewalks. Protect your investment in green infrastructure and maximize benefits to your community by promoting healthy tree growth and longevity. Cast iron tree grates are made to last and adapt to your trees as they grow. Choose the correct size tree grate and removable center rings so your trees can reach their full potential.

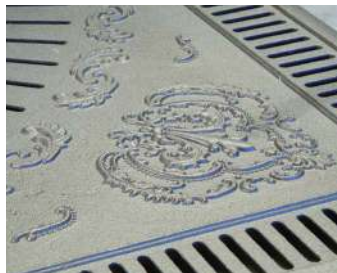
Styles Available



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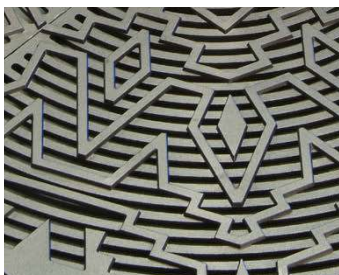
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Tree Grate Features and Options

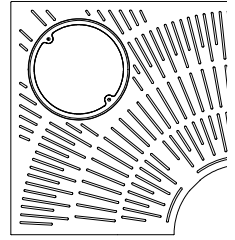
Identify and Customize

Customize your grates with the name of your municipality, corporation, or development. Add your motto, logo or insignia to further strengthen your identity. Custom sizes, sub-grade lighting, tree guards, and matching ADA trench grating are just a few of the options available. We can help you design a tree grate that will be uniquely yours.



Access Port Options

Illuminate the beauty of your trees at night. Several of our tree grate designs offer an access port option allowing for the installation of sub-grade lighting units, staking, or a watering well. Use direct lighting to create a special atmosphere and provide more light to surrounding areas. Size can be plasma cut to fit any size well light.



Tree Guard Bolting Tabs

Some of our tree grates are equipped with tree guard bolting tabs for easy and secure installation of tree guards.



Security Bolting Feature

EJ has developed a hassle-free way to ensure solid, long lasting security. Compatible with standard hex bolts or special security designs, our EON LOCK® design — an innovative approach to bolted tree grates, provides a reliable and permanent fastening solution.



Security bolting with plastic caps



Security bolting



Security underside bolting

ADA Compliant Tree Grates

EJ has numerous tree grates and trench grates designed to comply with ADA standards. The guidelines specify that grating, whether tree grates or trench grating, located in pedestrian walkways shall not allow passage of a sphere more than 1/2" (13 mm) in diameter. Additionally, if grating has elongated openings, the long dimension is to be perpendicular to the dominant direction of travel.



Retrofit tree grates

EJ offers a tree grate solution for retrofit applications. For a perfect fit, simply cut the concrete to the recommended size and set the tree grate in the hole. This tree grate can also be used in new construction by forming the hole to size and eliminating the need to cut the concrete (see page 27).



Expandable Tree Openings

Remove or replace the center ring as your tree grows

Plan ahead and your streetscape will remain beautiful for decades!

Among the offerings of available tree grate features are numerous models with optional center ring inserts, which can be removed later to accommodate for tree growth.

The removable center rings are a convenient way to adjust (expand) the tree grate opening diameter as the tree trunk grows in width. As you plan ahead for plantings and tree pit maintenance of the streetscape, order your grate with one or more of the optional rings. Later, you may remove or swap out a ring to increase the size of the opening during a higher growth phase as the tree matures.

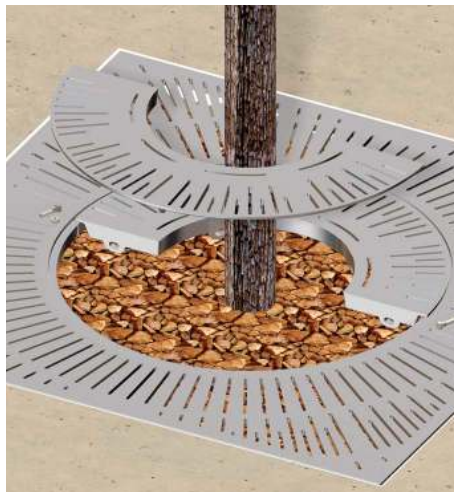
Another situation for which the rings are beneficial is when changing out an older growth tree. If you need to remove an existing tree and re-plant with another, insert a ring to the grate so that the opening is a more appropriate fit for your new tree. Over time, as the young tree grows, remove the ring to expand the opening diameter again when needed.



Center rings can be removed later to accommodate for tree growth.



Poor size selection for the tree opening results in an unfinished look, significantly crowds the tree, and impairs proper tree growth.



A 16" (406 mm) removable center ring is used when planting a young tree. This helps protect the vulnerable tree.



A 24" (610 mm) removable center ring is inserted in the grate to accommodate tree growth for a maturing tree.

Ordering/Application Example

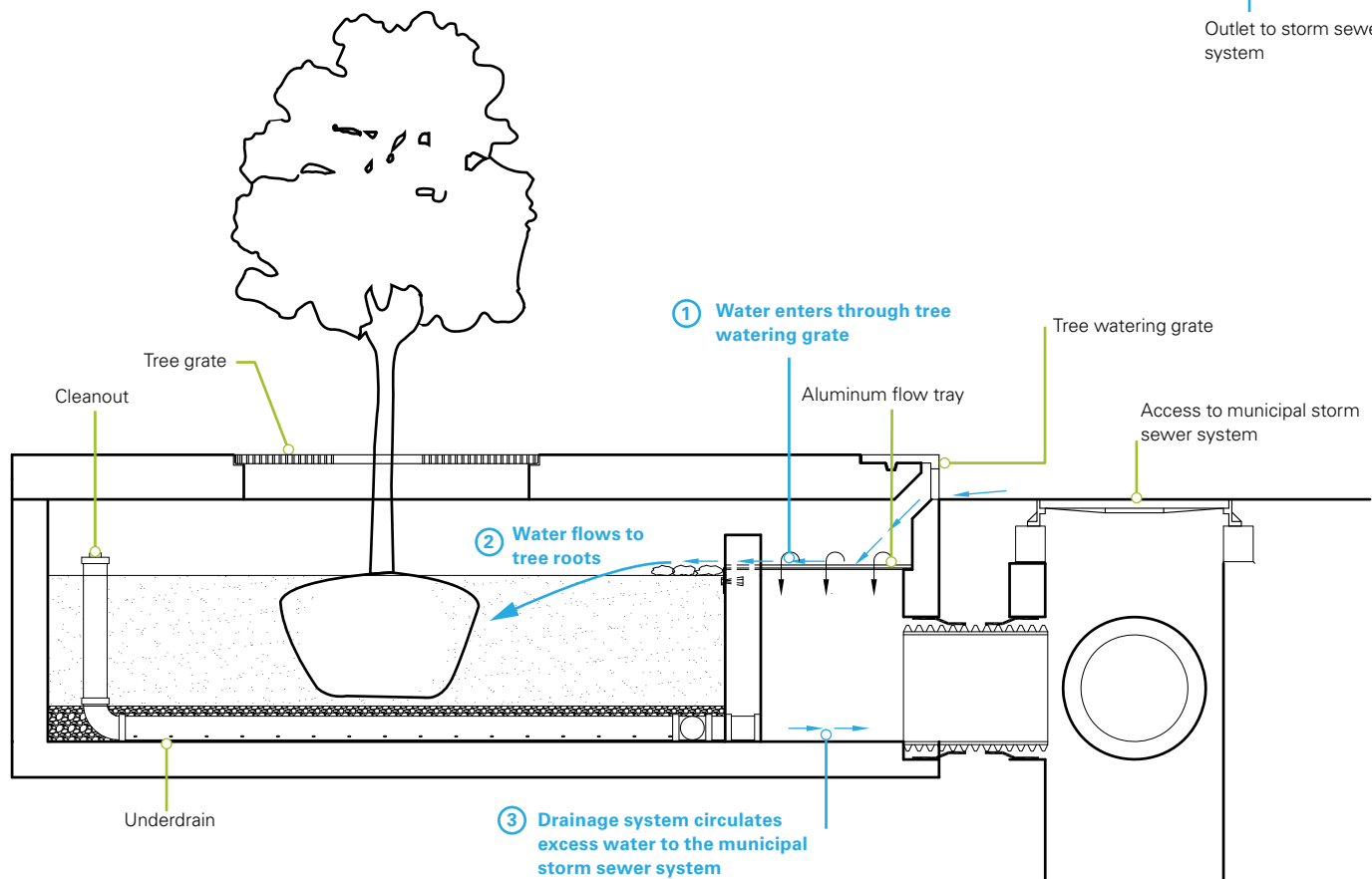
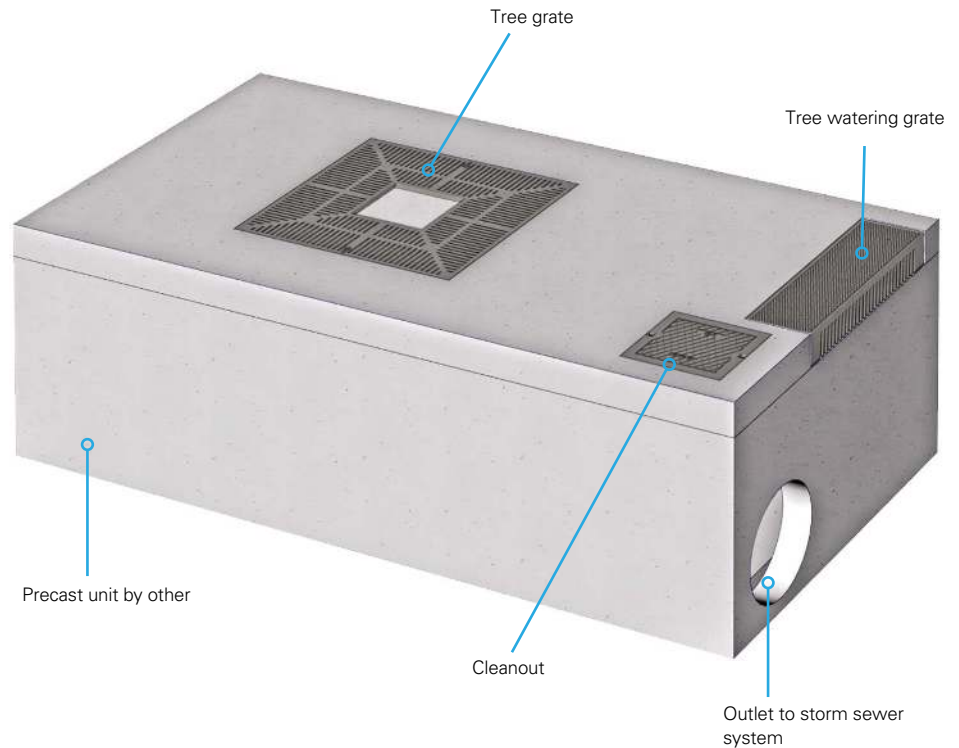
The 8692 Provence series 48" x 72" (1219 x 1829 mm) rectangular grate has a standard 30" (762 mm) diameter tree opening. To narrow the tree opening to a diameter of 18" (457 mm), order the 8692 30-18D center ring, and install it by placing the two half-rings on to the inner lip of the standard opening, and bolt them together to form the complete ring. To narrow the tree opening to a diameter of 24" (610 mm), order the 8692 30-24D center ring, and install/bolt together in the same manner to complete the ring. Later on, either ring is removable or replaceable to create the desired size opening and accommodate for the growth of your tree.

Complement Your Green Infrastructure Project with Products by EJ

Tree Watering Grates

Tree watering grates along curb lines allow road runoff to be directed to tree pits. The water is then distributed to street trees through underground watering systems.

This approach provides water to the tree, reduces watering costs for cities, and allows filtering of pollutants. This method takes advantage of the natural ability of trees to absorb and filter stormwater and reduces the threat of CSOs (combined sewer overflows) to water bodies. Tree watering grates can be used in combination with tree grates to promote healthy street tree growth.



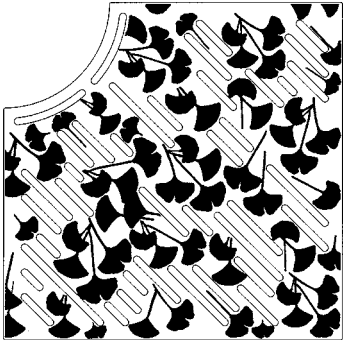
Note: Example installation, EJ products can be used with cast-in-place or precast systems. EJ does not endorse a specific precast system.

GINKGO

The Ginkgo tree, which naturally flourishes in urban environments, is the inspiration for the Ginkgo design.



Ginkgo Tree Grate	
Grate Size	48" (1219 mm) square
Series Number	8581
Tree Opening Options	15" (381 mm) dia.
Number of Pieces	4
Options	Matching trench grate



Patented



Ginkgo Trench Grate

FOLIAGE

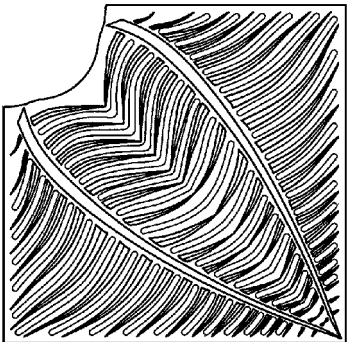
Strikingly attractive palm fronds in the Foliage will give a warm, luxuriant feel to your streetscape.



Clarendon Hills, Illinois

Foliage Tree Grate

Grate Size	Series Number	Tree Opening Options	No. of Pieces	Options
60" (1524 mm) square	8582	18" (457 mm) dia.	4	Security bolting
72" (1829 mm) square	8926	18", 24" (457, 610 mm) dia.	2	Security bolting



Patented

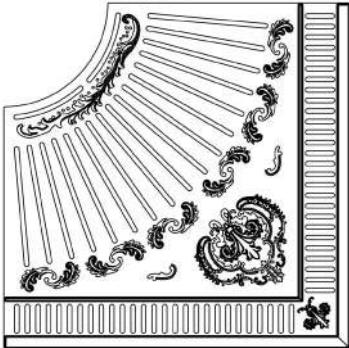
CHELSEA

The Chelsea is reminiscent of the Victorian era. The ornate floral designs will remind you of a vintage English garden.



East Jordan, Michigan

Chelsea Tree Grate	
Grate Size	60" (1524 mm) square
Series Number	8583
Tree Opening	18" (457 mm) dia.
Options	
Number of Pieces	4
Options	Special lettering



Patented



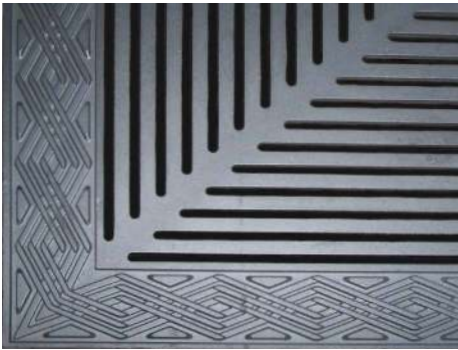
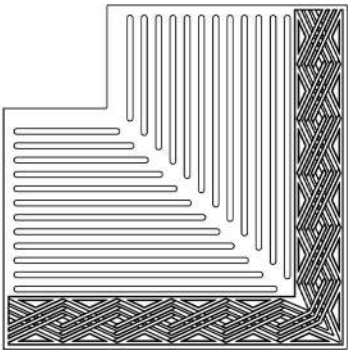
METROPOLIS

The Metropolis design conveys a big city vibe with its contemporary style and will fit within any urban area.



Nashville, Tennessee

Metropolis Tree Grate	
Grate Size	60" (1524 mm) square
Series Number	8584
Tree Opening Options	18" (457 mm) square
Number of Pieces	4



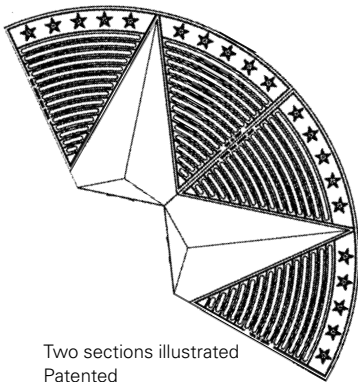
PATRIOT

True to its roots, the Patriot displays great American pride.



Tulsa, Oklahoma

Patriot Tree Grate	
Grate Size	60" (1524 mm) dia.
Series Number	8590
Tree Opening Options	16 3/8" (416 mm) pent.
Number of Pieces	5
Options	Matching trench grate



Patriot Trench Grate

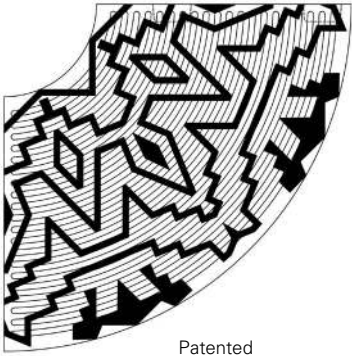
MESA

Various layers of cast iron gives the Mesa its distinctive woven design.



Park Hill, Oklahoma

Mesa Tree Grate	
Grate Size	60" (1524 mm) dia.
Series Number	8591
Tree Opening	16" (406 mm) dia.
Options	
Number of Pieces	4



TRADEMARK

Personalize your streetscape with custom logo designs and special lettering with the Trademark tree grate.



San Diego, California

Trademark Tree Grate	
Grate Size	60" (1524 mm) dia.
Series Number	8592
Tree Opening Options	18" (457 mm) dia.
Number of Pieces	4
Options	Custom logo Special lettering



Sault Ste. Marie, Michigan

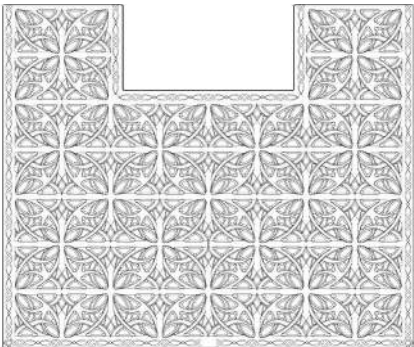
GARLAND

The braided ornaments of the Garland tree grate add a festive decoration to any streetscape.



East Jordan, Michigan

Garland Tree Grate	
Grate Size	36" x 60" (914 x 1524 mm)
Series Number	8698
Tree Opening Options	15" (381 mm) square
Number of Pieces	2
Options	Matching trench grate



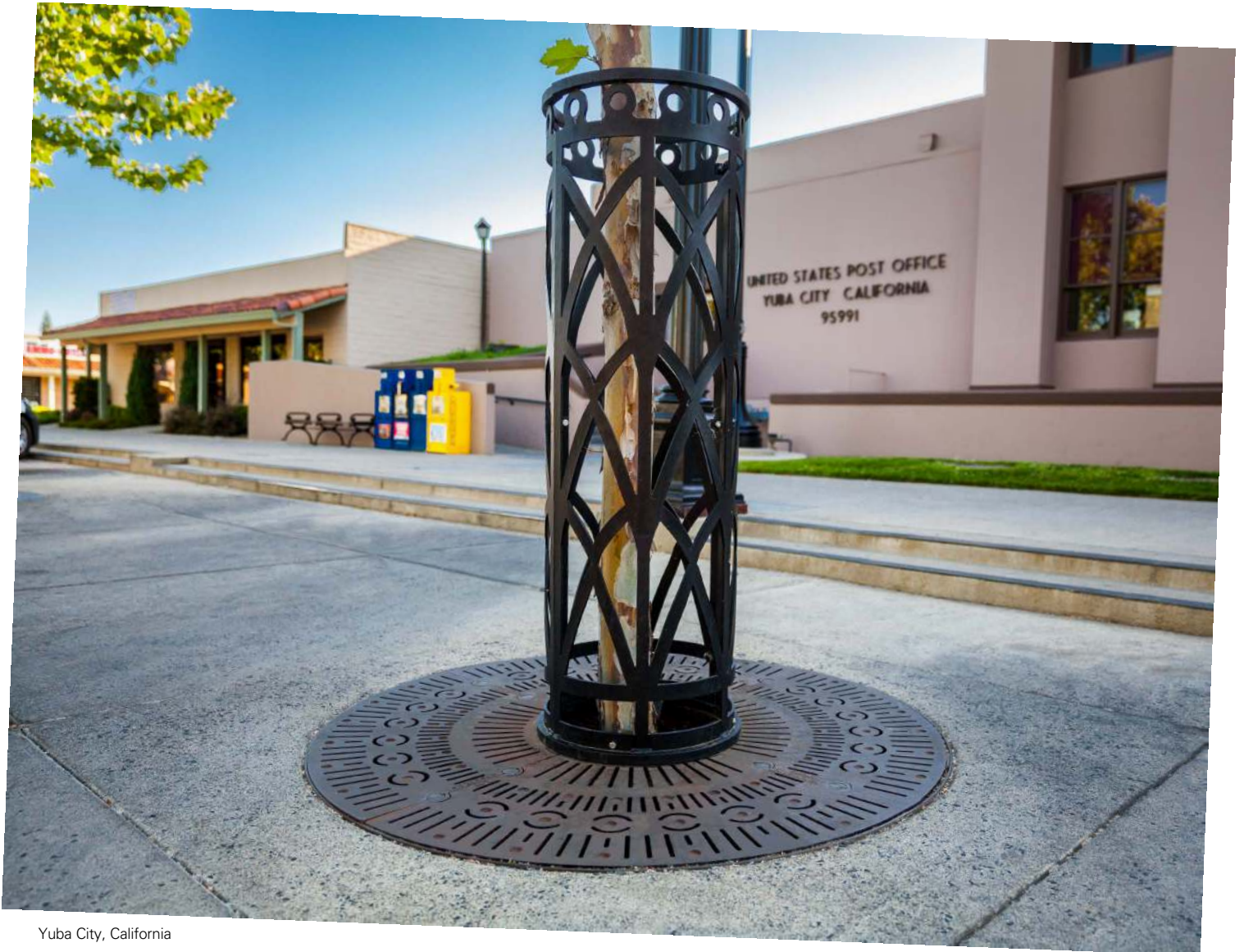
Patented



Garland Trench Grate

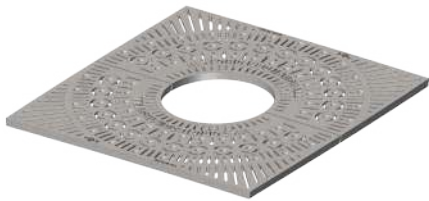
ORBIT

Passersby will gravitate to the clean spaces and elliptical shapes of the Orbit design.

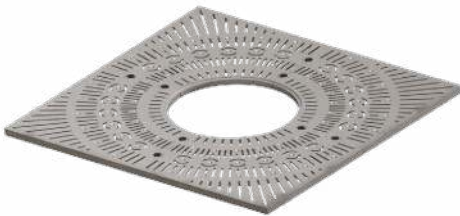


Yuba City, California





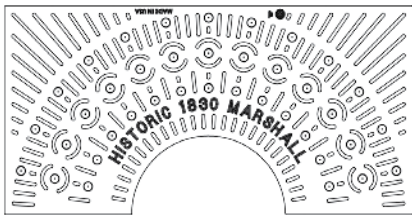
48" (1219 mm) square Orbit (two piece) with 18" (457 mm) diameter opening



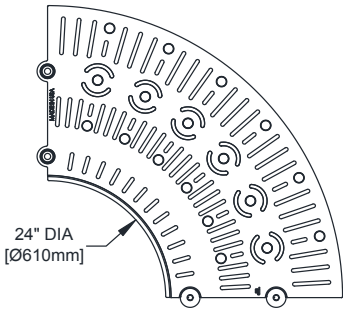
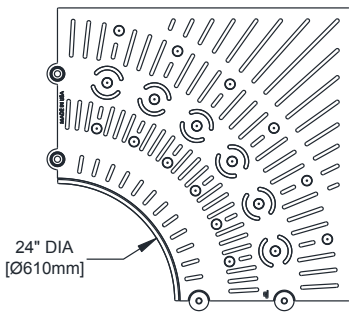
60" (1524 mm) square Orbit (four piece) with 24" (610 mm) diameter opening for removable center



60" (1524 mm) round Orbit (four piece) with 24" (610 mm) diameter opening for removable center



Special lettering is available in a two piece design, with an 18" (457 mm) opening.



18" (457 mm) diameter tree opening with removable center ring to accommodate tree growth — 00858563. Available only on the 24" (610 mm) diameter standard tree opening.



Security bolting



Security bolting with plastic caps

Orbit Tree Grate

Grate Size	Shape	Series No.	Tree Opening Options (Dia.)	No. of Pieces	Options
48" (1219 mm) sq.	Square	8580	18" (457 mm)	2	Custom lettering, security bolting
60" (1524 mm) sq.	Square	8585	18" †, 24" (457, 610 mm)	4	Custom logo, lettering, security bolting, removable center
60" (1524 mm) dia.	Round	8595	18" †, 24" (457, 610 mm)	4	Lettering, security bolting, removable center
60" (1524 mm)	Round/Square	8595/8585	18" †, 24" (457, 610 mm)	4	Custom logo, lettering, security bolting, removable center

† Tree opening dimension is available with or without a removable center ring.

MANHATTAN

Clean, efficient, minimalist lines are highlighted in the matrix of the Manhattan, which elicits aerial views of a thriving urban metropolis.



Commerce City, Colorado

Manhattan Tree Grates

Grate Size	Series Number	Tree Opening Options	No. of Pieces	Options
48" x 72" (1219 x 1829 mm)	8804-2	12", 18" (305, 457 mm)	2	Custom logo, access ports, security bolting
60" (1524 mm) square	8805	12", 18", 30" (305, 457, 762 mm)	2	Custom logo, access ports, security bolting
72" (1829 mm) square	8681	18" (457 mm)	4	Custom logo

NOVA



Grand Haven, Michigan

Nova Tree Grate

Grate Size	Series No.	Tree Opening Options	No. of Pieces	Options	Max. Slot Size
60" (1524 mm)	8655	18" *, 30" (457, 762 mm)	4	Custom logo, special lettering, access port, removable center	1/2" (13 mm)
72" (1829 mm)	8656	18" *, 30" (457, 762 mm)	2	Custom logo, special lettering, access port, removable center	1/4" (6 mm)
36" x 72" (914 x 1829 mm)	8676	12" (305 mm)	2	Custom logo, special lettering, access port	1/2" (13 mm)
36" x 60" (914 x 1524 mm)	8686	16" (406 mm)	2	Custom logo, special lettering, access port	1/2" (13 mm)

*Tree opening dimension is only available by using a removable center ring.

PLAZA



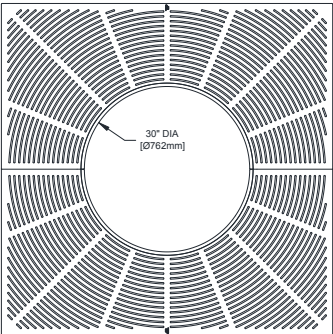
Plaza

Available in a full range of shapes, sizes, and tree openings (size charts to the right and page 21)
Two grates per assembly
Steel frame

Options:
Custom logo, access port, security bolting, removable center rings (options below), end grates (pg. 28 for more information)

Square Plaza

Grate Size (Square)	Series No.	Opening Options (Dia.)	Max. Slot Size
30" (762 mm)	8952	16", 18" (406, 457 mm)	3/8" (10 mm)
36" (914 mm)	8953	16" †, 18" †, 24" †, 30" (406, 457, 610, 762 mm)	1/4" (6 mm)
48" (1219 mm)	8954	16" †, 18" †, 24" †, 30" (406, 457, 610, 762 mm)	1/4" (6 mm)
48" (1219 mm)	V-8954	13", 16" (330, 406 mm)	3/8" (10 mm)
60" (1524 mm)	8955	16" †, 18" †, 24" †, 30" (406, 457, 610, 762 mm)	1/4" (6 mm)
60" (1524 mm) Retrofit	8955R	16" (406 mm)	1/4" (6 mm)
60" (1524 mm)	V-8955	16", 18" (406, 457 mm)	3/8" (10 mm)
72" (1829 mm)	8956	16" †, 18" †, 24" †, 30" (406, 457, 610, 762 mm)	1/4" (6 mm)



60" (1524 mm) square tree grate size with 30" (762 mm) standard tree opening

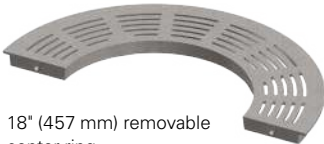
Removable Center Rings

For the 30" (762 mm) standard tree opening, 16" (406 mm), 18" (457 mm), and 24" (610 mm) removable center rings are available to accommodate tree growth. For the 24" (610 mm) standard tree opening a 16" (406 mm) removable center ring is available.

† Tree opening dimension is available with or without a removable center ring.



16" (406 mm) removable center ring



18" (457 mm) removable center ring



24" (610 mm) removable center ring



Rectangular Plaza

Grate Size	Series No.	Opening Options (Dia.)	Max. Slot Size
36" x 60" (914 x 1524 mm)	8953-2	16" †, 18" †, 24" †, 30" (406, 457, 610, 762 mm)	1/4" (6 mm)
36" x 60" (914 x 1524 mm)	8689	16" (406 mm)	1/4" (6 mm)
48" x 72" (1219 x 1829 mm)	8954-2	16" †, 18" †, 24" †, 30" (406, 457, 610, 762 mm)	1/4" (6 mm)
48" x 72" (1219 x 1829 mm)	8691	16" (406 mm)	3/8" (10 mm)
48" x 108" (1219 x 2743 mm)	8954-6	16" †, 18" †, 24" †, 30" (406, 457, 610, 762 mm)	1/4" (6 mm)
60" x 120" (1524 x 3048 mm)	8955-6	16" †, 18" †, 24" †, 30" (406, 457, 610, 762 mm)	1/4" (6 mm)



Round Plaza

Grate Size (Dia.)	Series No.	Opening Options (Dia.)	Max. Slot Size
36" (914 mm)	8973	16" †, 18" †, 24" (406, 457, 610 mm)	1/4" (6 mm)
36" (914 mm)	V-8943	12" (305 mm)	3/8" (10 mm)
48" (1219 mm)	8974	16" †, 18" †, 24" †, 30" (406, 457, 610, 762 mm)	1/4" (6 mm)
48" (1219 mm)	V-8944	13" (330 mm)	3/8" (10 mm)
60" (1524 mm)	8975	16" †, 18" †, 24" †, 30" (406, 457, 610, 762 mm)	1/4" (6 mm)
60" (1524 mm)	V-8945	18" (457 mm)	3/8" (10 mm)
72" (1829 mm)	8976	16" †, 18" †, 24" †, 30" (406, 457, 610, 762 mm)	1/4" (6 mm)



Combination Half Round and Half Square Plaza

Grate Size	Series No.	Opening Options (Dia.)	Max. Slot Size
36" (914 mm)	8973/8953	16" †, 18" †, 24", 30" (406, 457, 610, 762 mm)	1/4" (6 mm)
48" (1219 mm)	8974/8954	16" †, 18" †, 24" †, 30" (406, 457, 610, 762 mm)	1/4" (6 mm)
60" (1524 mm)	8975/8955	16" †, 18" †, 24" †, 30" (406, 457, 610, 762 mm)	1/4" (6 mm)
72" (1829 mm)	8976/8956	16" †, 18" †, 24" †, 30" (406, 457, 610, 762 mm)	1/4" (6 mm)

† Tree opening dimension is available with or without a removable center ring.

SUNRAY

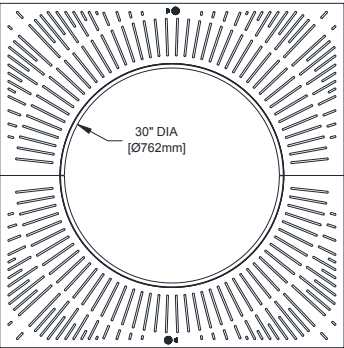


Idaho Falls, Idaho

Sunray

Available in a full range of shapes, sizes, and tree openings (size charts to the right and page 23)
Two grates per assembly (8677 and 8678 are four piece designs)
Steel frame

Options
Custom logo, access port, security bolting,
16" (406 mm), 18" (457 mm), and 24" (610 mm) diameter tree openings with removable center ring to accommodate tree growth. Available only on the 30" (762 mm) and 24" (610 mm) diameter standard tree openings, end grates (see page 28 for more information).



48" (1219 mm) square tree grate size with 30" (762 mm) standard tree opening (shown)

Square Sunray

Grate Size	Series No.	Tree Opening Options	Max. Slot Size
30" (762 mm)	8852	16", 18" (406, 457 mm)	1/4" (6 mm)
36" (914 mm)	8853	16" †, 18" †, 24" †, 30" (406, 457, 610, 762 mm)	1/4" (6 mm)
48" (1219 mm)	8854	16" †, 18" †, 24" †, 30" (406, 457, 610, 762 mm)	1/4" (6 mm)
48" (1219 mm)	8674	18" (457 mm)	1/2" (13 mm)
60" (1524 mm)	8855	16" †, 18" †, 24" †, 30" (406, 457, 610, 762 mm)	1/4" (6 mm)
60" (1524 mm)	8667	18" (457 mm)	3/8" (10 mm)
72" (1829 mm)	8856	16" †, 18" †, 24" †, 30" (406, 457, 610, 762 mm)	1/4" (6 mm)
72" (1829 mm)	8677	18", 30" (457, 762 mm)	1/4" (6 mm)

† Tree opening dimension is available with or without a removable center ring.

Removable Center Rings: 16" (406 mm), 18" (457 mm), 24" (610 mm) diameter tree opening with removable center ring to accommodate tree growth. Available on the 24" (610 mm) and 30" (762 mm) diameter standard tree openings.





Rectangular Sunray

Grate Size	Series No.	Tree Opening Options (Dia.)	Max. Slot Size
36" x 72" (914 x 1829 mm)	8693	18" (457 mm)	1/2" (13 mm)
48" x 96" (1219 x 2438 mm)	8854-4	16" †, 18" †, 24", 30" (406, 457, 610, 762 mm)	1/4" (6 mm)



Illustrating 8678 four piece design. Two piece design available (8876).



Round Sunray

Grate Size (Dia.)	Series No.	Tree Opening Options (Dia.)	Max. Slot Size
30" (762 mm)	8872	16", 18" (406, 457 mm)	1/4" (6 mm)
36" (914 mm)	8873	16" †, 18" †, 24" †, 30" (406, 457, 610, 762 mm)	1/4" (6 mm)
48" (1219 mm)	8874	16" †, 18" †, 24" †, 30" (406, 457, 610, 762 mm)	1/4" (6 mm)
60" (1524 mm)	8875	16" †, 18" †, 24" †, 30" (406, 457, 610, 762 mm)	1/4" (6 mm)
60" (1524 mm)	8668	18" (457 mm)	3/8" (10 mm)
72" (1829 mm)	8876	16" †, 18" †, 24" †, 30" (406, 457, 610, 762 mm)	1/4" (6 mm)
72" (1829 mm)	8678	30" (762 mm)	1/4" (6 mm)

† Tree opening dimension is available with or without a removable center ring.

Combination Half Round and Half Square Sunray

Grate Size	Series Number	Tree Opening Options
30" (762 mm)	8872/8852	16", 18", (406, 457 mm)
36" (914 mm)	8873/8853	16" †, 18" †, 24" †, 30" (406, 457, 610, 762 mm)
48" (1219 mm)	8874/8854	16" †, 18" †, 24" †, 30" (406, 457, 610, 762 mm)
60" (1524 mm)	8875/8855	16" †, 18" †, 24" †, 30" (406, 457, 610, 762 mm)
72" (1829 mm)	8876/8856	16" †, 18" †, 24" †, 30" (406, 457, 610, 762 mm)

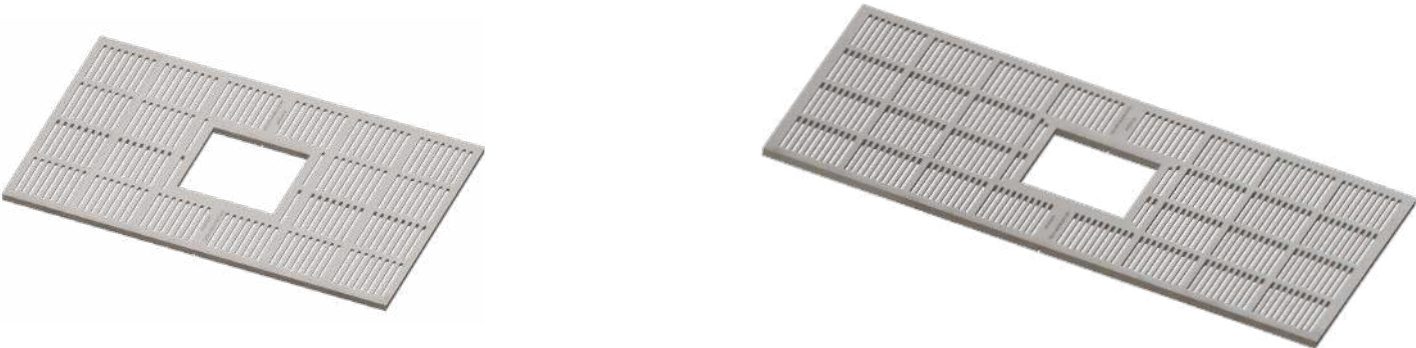
BOARDWALK



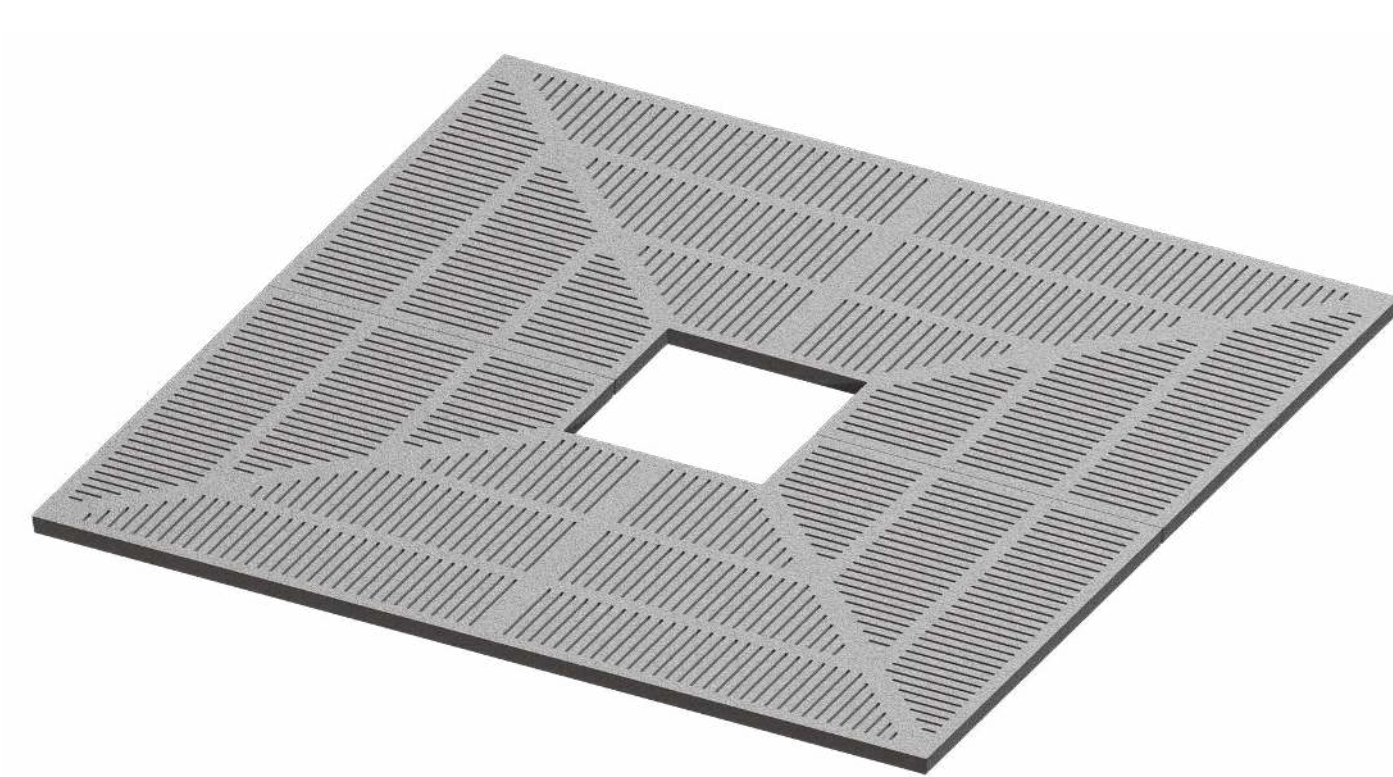
Richmond, California

Boardwalk Tree Grate

Grate Size	Series Number	Tree Opening Options	No. of Pieces	Options
48" x 96" (1219 x 2438 mm)	8679	18" (457 mm) square	2	Access port, security bolting
48" x 72" (1219 x 1829 mm)	8684	18" (457 mm) square	2	Security bolting



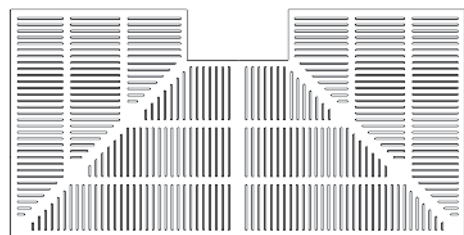
PRISM



Prism Tree Grate

Grate Size	Series Number	Tree Opening Options	No. of Pieces	Options
48" (1219 mm) square	8884	16", 22" (406, 559 mm)	2	Custom logo, access port, security bolting
60" (1524 mm) square	8885	16" *, 24" (406, 610 mm)	2	Custom logo, access port, security bolting, removable center
72" (1829 mm) square	8886	18" *, 24", 36" (457, 610, 914 mm)	2	Custom logo, access port, security bolting, removable center

*Tree opening dimension is only available by using a removable center ring.

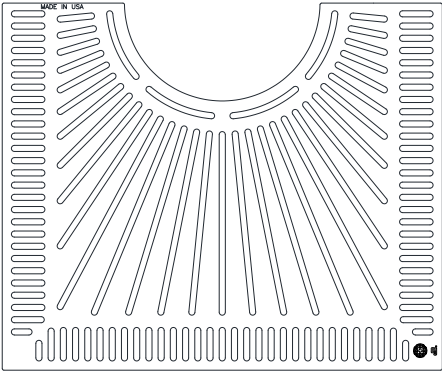


RIO

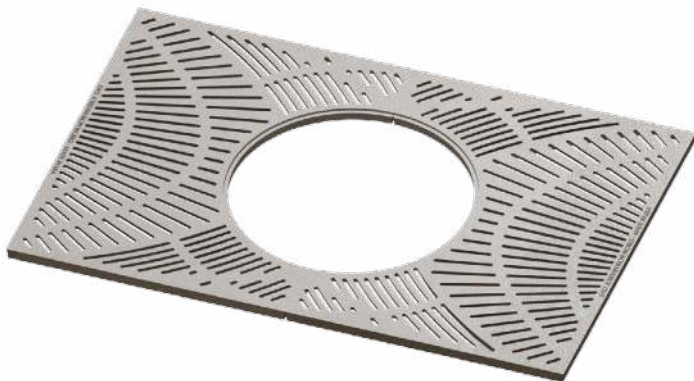


Detroit, Michigan

Rio Tree Grate	
Grate Size	36" x 60" (914 x 1524 mm)
Series Number	8687
Tree Opening Options	16" (406 mm) dia.
Number of Pieces	2
Options	Security bolting



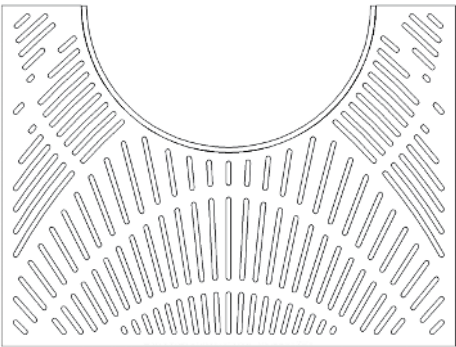
PROVENCE



Provence Tree Grate

Grate Size	48" x 72" (1219 x 1829 mm)
Series Number	8692
Tree Opening Options	18" *, 24" *, 30" (457, 610, 762 mm) dia.
Number of Pieces	2
Options	Access ports, removable center ring

*Tree opening dimension is only available by using a removable center ring.



RETROFIT TREE GRATES

EJ offers a tree grate solution for retrofit applications.

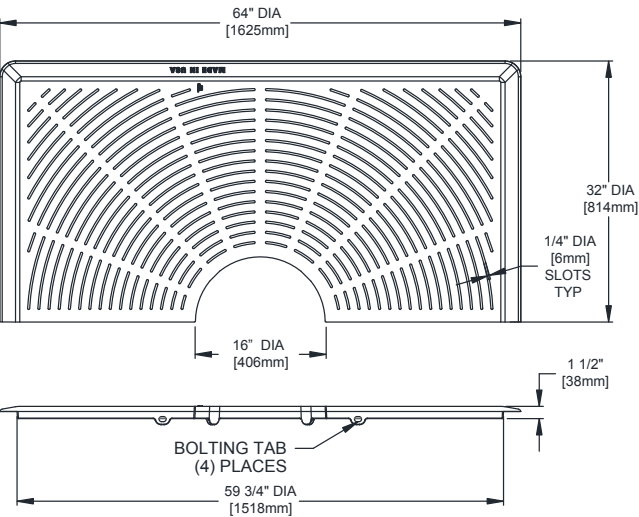
For a perfect fit, simply cut the concrete to the recommended size and set the tree grate in the hole. This tree grate can also be used in new construction by forming the hole to size and eliminating the need to cut the concrete.



Close up section view of the retrofit tree grate. No frame required.

Retrofit Tree Grate

Grate Size	60" (1524 mm) square
Series Number	8955R
Tree Opening Options	16" (406 mm) dia.
Number of Pieces	2
Options	Special lettering Custom logo Security bolting



Tree Grate Frames

Tree grate frame options vary depending on the solution needed for your application. Most new tree grate installations utilize the frame option with anchor bars to secure the durable steel frame to the newly poured concrete. For tree grate restorations, EJ offers two different retrofit frame options to help you adjust the level of your tree grate to the ground surface.

Tight, secure, and level tree grate installations are simple with our one-piece and multi-piece frame options. Some tree grate designs may require a frame with a center support. Contact your Sales Representative for more specific information.



Atlanta, Georgia



Standard for new concrete – Eight standard 1/2" x 4" (13 x 102 mm) concrete square anchor bars in frame for new concrete



Standard for pavers – Eight standard 3/8" x 4" (10 x 102 mm) concrete anchor bars in frame used with pavers in surrounding area.



Retrofit for saw cut concrete – For retrofit applications in saw cut concrete or existing curb (leg up frame orientation).



Custom applications – Custom tree grate frames are available to match your local specification. Contact your Sales Representative for more information.

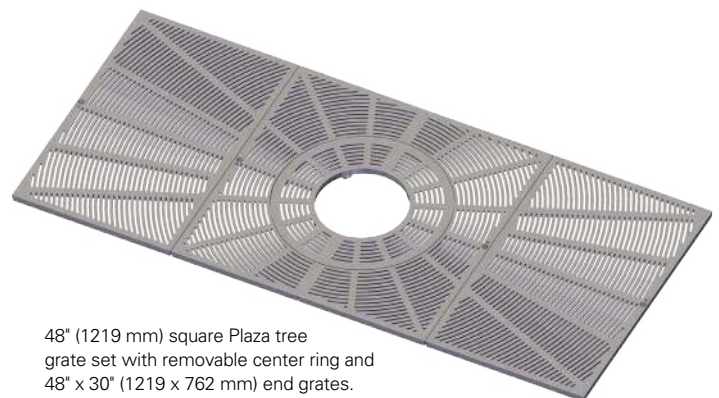
End Grates

Each modular system combines a square EJ tree grate with two end grates. The larger sizes contribute to tree health and longevity by providing more underground space for roots to grow. The optional removable center rings provide for essential trunk and root collar expansion as the tree matures.

Modular tree grates from EJ can be used in conjunction with structural soil and suspended pavement systems to allow tree root penetration and maintain soil aeration under paved surfaces.

Modular tree grates allow for large sizes of:

- 4' x 8' (1219 x 2438 mm)
- 4' x 9' (1219 x 2743 mm)
- 4' x 10' (1219 x 3048 mm)
- 4' x 12' (1219 x 3658 mm)
- 5' x 8' (1524 x 2438 mm)
- 5' x 10' (1524 x 3048 mm)



48" (1219 mm) square Plaza tree grate set with removable center ring and 48" x 30" (1219 x 762 mm) end grates.

Specification

General

This specification is applicable for gray iron tree grate castings. All castings shall be manufactured in the United States of America by E.J. All manufacturers shall be approved suppliers prior to supplying castings.

Materials

Gray iron castings shall be manufactured from iron conforming to ASTM A48, Class 35B. The iron material used in products provided shall have a minimum recycled material content of 85%.

Manufacture

Castings shall be of uniform quality, free from sand holes, gas holes, shrinkage, cracks, and other surface defects. Castings shall be ground smooth and well cleaned by shot blasting. Castings shall be furnished unpainted or as specified by the purchaser.

Certification

A foundry certification shall be furnished to the purchaser stating that the products supplied are in accordance with this specification.

Marking

Each casting shall be identifiable and show, at a minimum, the following: name of the producing foundry, country of manufacture (such as "Made in USA"), individual part number, and cast or heat date. Castings shall include all lettering as shown on the drawings.

Tree Frames and Guards

Tree grate frames and guards shall be made in the USA and manufactured from fabricated steel.

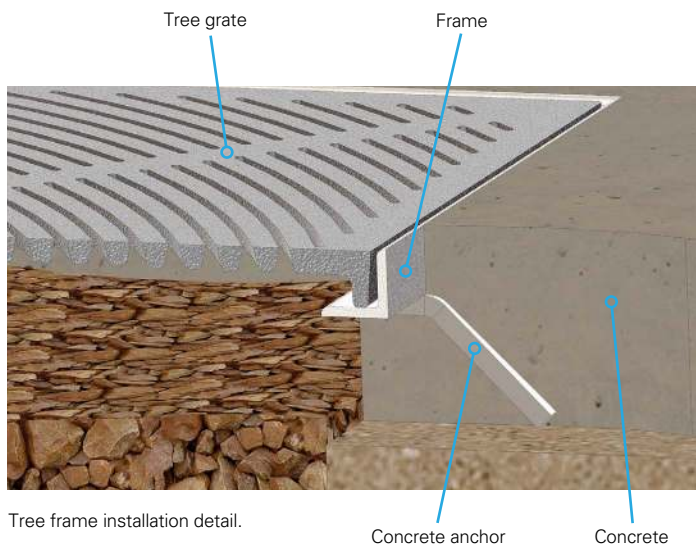
ADA Compliant Tree Grates

Castings are designed to comply with ADA (Americans with Disabilities Act) standards. The guidelines specify that grating, whether tree grates or trench grating, located in pedestrian walkways shall not allow passage of a sphere more than 1/2" (13 mm) in diameter. Additionally, if grating has elongated openings, the long dimension is to be perpendicular to the dominant direction of travel.

Installation

Tree Grate Installation Tips

1. Tree grate frames are available in one-piece or in sections. Please note that when installing around an existing tree, the frame must be supplied in multiple sections and assembled at the job location. Be sure to order the proper frame for the application.
2. A drawing that shows basic overall and inside frame dimensions should be made available prior to installation.
3. If the frame requires assembly, tighten the bolts so that the frame pieces remain level and true during installation. Multi-piece tree frames must be bolted together securely with all mating edges flush with the inside seat of the frame.
4. Square or rectangular tree grate frames must be held square while forming.
5. Measure from corner to corner; the frame should be square to within 1/8" (3 mm).
6. Inside dimensions of tree frames are designed 1/4" (6 mm) larger than outside dimensions of the associated tree grates. These inside dimensions must be maintained during installation.
7. On tree frames with center supports, use a straight edge to align supports flush with frame seat.
8. When installing tree grates and frames be sure to set the frame at the proper grade. Frames shall be formed to remain plumb, level, and square. It is recommended that spreaders,

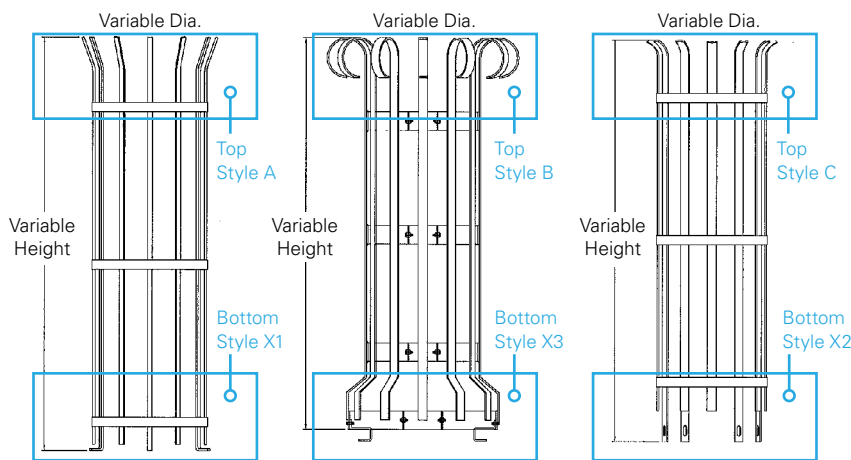


9. Confirm that all fasteners (nuts, bolts, etc.) are securely tightened before final concrete pour.

Steel Tree Guards

Tree guards are fabricated from hot rolled steel in several different styles, diameters, and heights. Tree guards are fabricated in two halves, with welded connections between vertical and horizontal bars. The two halves are easily assembled and bolted together after placement around the tree.

Tree guards are supplied standard with a flat black Rustoleum® finish, but are also available powder coated, or e-coated. Standard powder coat colors are Brick Red, Yellow and Black. To specify a custom color, provide the RAL number. Custom designs can also be fabricated to meet your specifications. Our marketing and engineering team is available to help with any of your design needs.



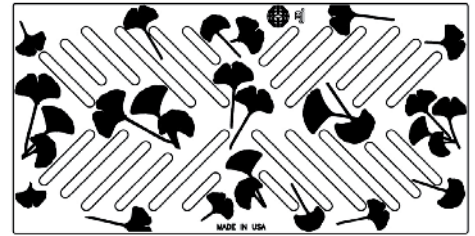
Custom fabricated tree guards

Artistic Trench Grates

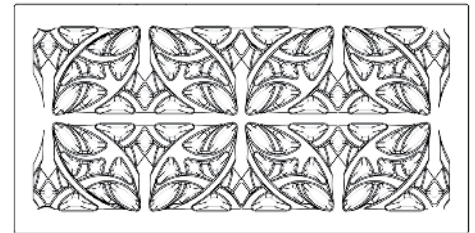
Surface drainage for dynamic public spaces require a unique solution. Make an impression with our cast iron ADA designer trench grates.

Patterns that coordinate with our exclusive tree grates are cast in 24" (610 mm) lengths, 1-1/2" (38 mm) seat. Optional 6950 cast iron frames are available in 24" (610 mm), 36" (914 mm) and 48" (1219 mm) lengths.

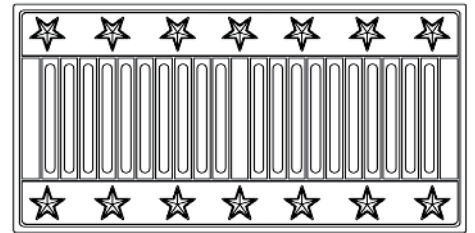
For security, bolted trench grate units are assembled in 24" (610 mm) sections using stainless steel 1/2" (12.7 mm) hex bolts and special lock washers. Call for additional widths.



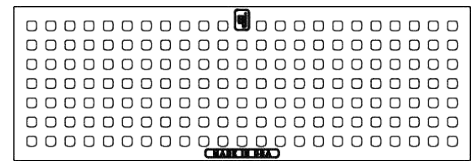
6883 Ginkgo 12" x 24" (305 x 610 mm)



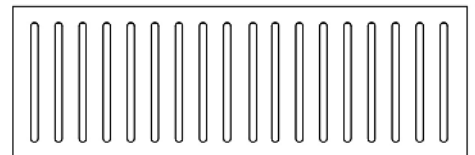
6873 Garland 12" x 24" (305 x 610 mm)



6893 Patriot 12" x 24" (305 x 610 mm)



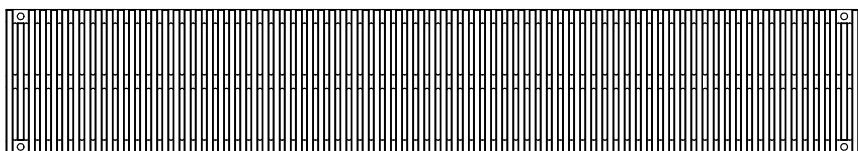
6898M Manhattan 8" x 24" (203 x 610 mm)



V7381 Trench Grate 8" x 24" (203 x 610 mm)

Artistic Trench Grates Series

Series Name	Size	Series	Options	Load Rating
Garland	12" x 24" (305 x 610 mm)	6873	Security bolting	Medium duty
Ginkgo	12" x 24" (305 x 610 mm)	6883	Security bolting	Heavy duty
Manhattan	4" x 24" (102 x 610 mm)	6896M	–	Non-traffic
Manhattan	6" x 24" (152 x 610 mm)	6897M	–	Non-traffic
Manhattan	8" x 24" (203 x 610 mm)	6898M	–	Non-traffic
Patriot	12" x 24" (305 x 610 mm)	6893	Security bolting	Heavy duty
Pedestrian	8" x 24" (203 x 610 mm)	V7381	Security bolting	Heavy duty
Pedestrian	8" x 48" (203 x 1219 mm)	6861M	Security bolting	Heavy duty
Pedestrian	9" x 36" (229 x 914 mm)	6932M	Security bolting	Heavy duty
Pedestrian	10" x 24" (254 x 610 mm)	V7382	Security bolting	Heavy duty
Pedestrian	12" x 24" (305 x 610 mm)	V7383	Security bolting	Heavy duty
Pedestrian	14" x 24" (356 x 610 mm)	V7384	Security bolting	Heavy duty
Pedestrian	17" x 24" (432 x 610 mm)	V7385	Security bolting	Heavy duty
Pedestrian	20" x 24" (508 x 610 mm)	V7386	Security bolting	Heavy duty



6861M Trench Grate 8" x 48" (203 x 1219 mm)

Pedestrian Drainage Grates

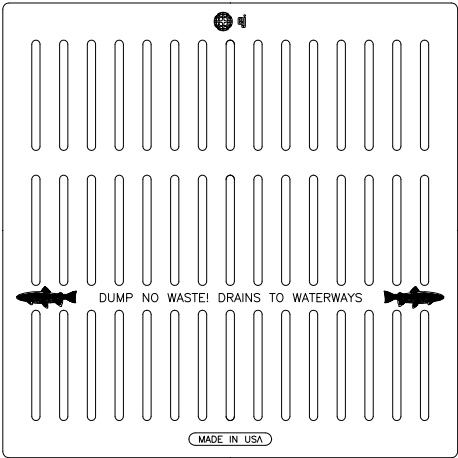
Complete your street with ADA compliant drainage grates from EJ. Available in a range of load ratings and sizes to fit any location, pedestrian drainage grates from EJ provide durability and a maximum slot size of 1/2" (13 mm) in compliance with ADA requirements.

Provide safe walking and biking surfaces and equal access for all modes of transportation, while accommodating drainage requirements on your site. Made of recycled iron or steel, EJ grates are manufactured in the USA under strict quality control guidelines. Optional lettering reminds users to protect local waterways.

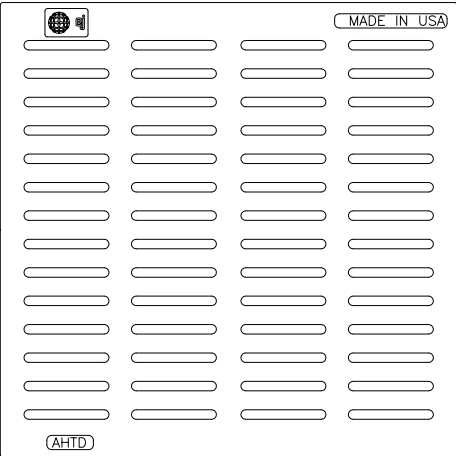


Pedestrian Drainage Grates

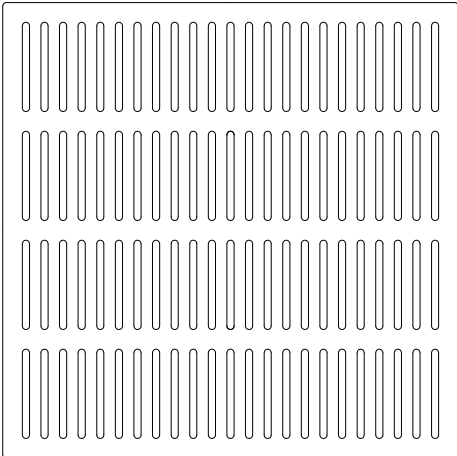
Size	Load rating	Series number
27 1/2" (699 mm) square	Heavy duty	5110M5HD
24" (610 mm) square	Heavy duty	5424
32" (813 mm) square	Heavy duty	V5630-80
37 1/2" (953 mm) square	Heavy duty	V5636-80
23 3/4" x 35 3/4" (603 x 908 mm)	Heavy duty	V5660-80
19 3/4" (502 mm) square	Heavy duty	V5720-80
24" (610 mm) square	Heavy duty	V5724-80
25 3/4" (654 mm) square	Heavy duty	V5726-80
32" (813 mm) square	Heavy duty	V5732-80
38 1/4" (972 mm) square	Heavy duty	V5736-80
44" (1118 mm) dia.	Medium duty	1843M2
13 5/8" (346 mm) square	Heavy duty	8201M



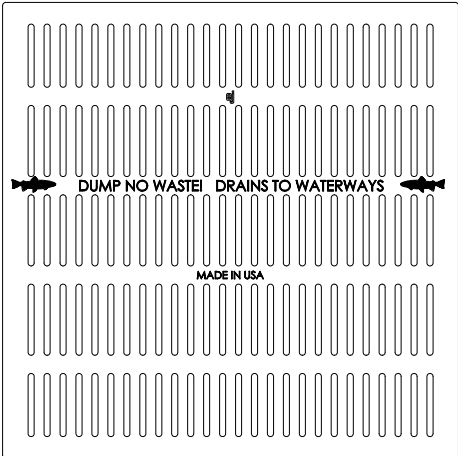
5110M5HD



5424



V-5630-80



V5636-80

Infill Floor Doors

Infill floor doors by EJ provide a sturdy, durable way to seamlessly integrate your paver or concrete design across the site. Maintain the flow and identity of streetscapes, campus, or park landscapes. Infill hatches accommodate pavers of varying heights or concrete to match your creativity.

Like the outstanding quality and longevity of non-traffic aluminum hatches by EJ, our infill hatches utilize superior grade stainless steel hardware.

With a variety of security locking options, you can be sure that your underground infrastructure will remain undisturbed. The smooth and durable stainless steel pneumatic spring lift assist enables easy opening. The hold open arm or optional safety grate ensures safe working conditions.

Infill hatches are currently available in a variety of sizes.



Infill Floor Doors					
Clear open	Outside dimension	Infill depth	Infill material	Load rating	Part number
24" x 24" (610 x 610 mm)	32" (813 mm) square	1" (25 mm)	Pavers or Concrete	Non-traffic, Pedestrian	H24241619
30" x 30" (762 x 762 mm)	38" (966 mm) square	1" (25 mm)	Pavers or Concrete	Non-traffic, Pedestrian	H30301614
30" x 36" (762 x 914 mm)	38" x 44" (965 x 1118 mm)	2" (51 mm)	Concrete	Unintended Vehicular Traffic	H30365007
36" x 60" (914 x 1524 mm)	44" x 68" (1118 x 1728 mm)	1 1/2" (38 mm)	Pavers or Concrete	Non-traffic, Pedestrian	H36601712
36" x 72" (914 x 1829 mm)	44" x 80" (1118 x 2032 mm)	1 1/2" (38 mm)	Pavers or Concrete	Non-traffic, Pedestrian	H36721706

Note: Standard sizes listed. Contact your local Sales Representative for additional options and sizes.

Product Lines

Street Castings

- Manhole Frames and Covers
- Curb Inlets and Frames
- Utility Castings
- Airport and Port Authority Castings
- Tree Grates
- Trench Grates
- Drainage Grates
- DURALAST® Detectable Warning Plates

Fabricated Products

- Grating
- Riser Rings
- INFRA-RISER® Adjustment Risers
- Aluminum Access Hatches
- Custom Fabrications

Water Products

- WaterMaster® Fire Hydrants
- FlowMaster® RW Gate Valves
- Valve Boxes
- Meter Boxes

Innovative Access Solutions

- Captive Hinge Grates/Covers
- ERGO® and ERGO® XL Access Assemblies
- Ductile Hinged Hatch Access Assemblies
- 5624 Heavy Duty Hinged Grates
- SELFLEVEL® Access Assemblies
- REVOLUTION® Access Assemblies
- ERMATIC® Modular Covers
- MULTILEAF™ Hinged Covers
- CAMPRESSION® Access Assemblies
- Composite Access Solutions

Innovative Features

- LOCKEO® Security Feature
- Mechanical Strut Lift Assist
- Cam Lock
- EON LOCK® Designs
- EPIC® Pick Bar
- MPIC® Multi-tool Pick Bar



CAMPRESSION, DURALAST, EON LOCK, EPIC, ERGO, ERMATIC, HINGECO, INFRA-RISER, MPIC, REVOLUTION, SAFE HATCH, and SELFLEVEL are registered trademarks of EJ Group, Inc.

MULTILEAF is a trademark of EJ Group, Inc.

Environmentally Friendly

EJ is committed to continuous environmental improvement. Our castings contain over 85% recycled content and our foundries meet some of the most stringent environmental regulations in the world.

MACT Standards

Our foundries meet the Environmental Protection Agency's new air quality Maximum Achievable Control Technology (MACT) standards. The MACT rules require stack testing along with additional record keeping and reporting on several air pollution control systems.

Reclaimed Sand and Foundry Sand

Over 90% of our green sand is reclaimed daily and reused in our molding process. Foundry sands are recycled for use in cement production at nearby facilities.

Reuse

One of the best ways to reduce any environmental impact is to dispose of less waste. Heated air once lost to the environment is now captured and reused in the melting process, significantly reducing energy consumption.

Universal Waste

EJ participates in the safe management of all wastes. Paper, plastic, cardboard, and numerous universal wastes, including computers, lamps and batteries, are collected and properly recycled.

Coatings

EJ recommends specifying iron castings in the natural, uncoated state to minimize unnecessary environmental impact. Cast iron has higher concentrations of carbon and silicon than steel, which provides substantial resistance to corrosion.

Powder coating can be performed at an additional cost. Standard powdercoat colors are Brick Red, Yellow, and Black. To specify a custom color, provide the RAL number. Black asphaltic water based coating is also available for iron castings at no additional cost.



Messaging

Environmentally friendly messaging helps protect our waterways. Castings read "Dump No Waste! Drains to Waterways" accompanied by a fish image. These permanently cast messages and environmentally friendly designs serve as an enduring reminder against dumping into our waterways.



Recycled Tires

Recycled tires make up the majority of our INFRA-RISER® multi-purpose rubber composite adjustment risers. Boasting 92% recycled content, this environmentally friendly product also reduces unwanted storm water infiltration into sanitary sewer systems.



Scrap Metal

Thousands of tons of scrap metals, that otherwise may be strewn across the countryside or dumped in landfills, are recycled annually and turned into usable infrastructure products. Products produced at our foundries are 100% recyclable.

[Post-consumer and post-industrial scrap metals are recycled into castings that build your infrastructure.](#)



Slag

EJ makes use of the by-products from the melt process whenever possible. One of these by-products, referred to as "slag", is known to other industries as "calcium stabilizer" because of its high calcium content and lack of metallic compounds. It is reused in other industries to replace fine aggregate in products such as asphalt and concrete. During harsh winter months, county road commissions use this for sanding roads to improve vehicle traction.

DURALAST® DETECTABLE WARNING PLATES

DURALAST Detectable Warning Plates serve as a warning device for the visually impaired of the approaching street. Engineered to outlast the sidewalk, this long-lasting cast iron product withstands rigorous urban conditions, such as snow plows, street cleaning machines, and vehicular traffic. Lower your maintenance and product life cycle costs by using cast iron DURALAST Detectable Warnings—your ADA compliant and environmentally friendly solution.

ADA Compliant

- Natural finish meets color contrast requirements
- Slip resistant textured surface — Greater than 0.8 coefficient of friction
- DOT approved (contact your local sales representative for specification approvals)
- Bolting ensures compliance during installation

Durable and Cost Effective

- Over 500 times more durable than composite
- Engineered to outlast the sidewalk — long-lasting and corrosion resistant
- Easy to install
- Maintenance free

Product Testing

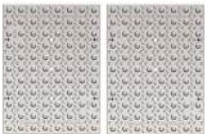
Maintenance free cast iron detectable warnings are designed to fully comply with the American Disabilities Act Accessibility Guidelines (ADAAG). Contact your EJ Sales Representative for other independent laboratory tests and research studies.



DURALAST detectable warning plates are ADA compliant. Their durability helps ensure compliance for years to come.

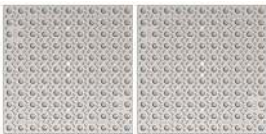
Standard Sizes		Radial Sizes	
Size	Product No.	Size	Product Number
18" x 24" (457 x 610 mm)	00700561	10' (3048 mm)	00700611
24" x 24" (610 x 610 mm)	00700571	15' (4572 mm)	00700615
30" x 24" (762 x 610 mm)	00700721	17.5' (5334 mm)	00700617
		20' (6096 mm)	00700621
		25' (7620 mm)	00700625
		30' (9144 mm)	00700631
		35' (10,668 mm)	00700635

3' (914 mm) Ramp
00700561C01



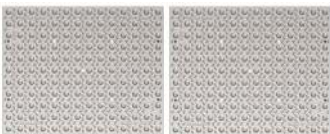
18" x 24" 18" x 24"
457 x 610 mm 457 x 610 mm

4' (1219 mm) Ramp
00700571C01



24" x 24" 24" x 24"
610 x 610 mm 610 x 610 mm

5' (1524 mm) Ramp
00700721C01



30" x 24" 30" x 24"
762 x 610 mm 762 x 610 mm

Test Results		
Physical properties	Results	Specification
Slip Resistance	1.10 Dry / 1.06 Wet	ASTM C-1028
Wear Resistance (abrasion)	7333	ASTM C-501-84
Impact Resistance	>238 Newtons	ASTM D-1709
Adhesion to Concrete (Bond Strength)	>5000 lbs (2268 kg)	ASTM C-482
Tensile Strength	35,000 psi (241 MPa)	ASTM A-48
Design Compliance	Fully Compliant	ADAAG



Radial plates are designed to fit your unique curb line.

Tree Grate Sizes

Round Tree Grates

Grate Size (Dia.)	Series Name	Series No.	Tree Opening Options (Dia.)	Standard Frame*
36" (914 mm)	Plaza	8973	16", 18", 24" (406, 457, 610 mm)	48903012
36" (914 mm)	Plaza	V-8943	12" (305 mm)	48903012
36" (914 mm)	Sunray	8873	16", 18", 24" (406, 457, 610 mm)	48913012
48" (1219 mm)	Plaza	8974	16", 18", 24", 30" (406, 457, 610, 762 mm)	48944010
48" (1219 mm)	Plaza	V-8944	13" (330 mm)	48944010
48" (1219 mm)	Sunray	8874	16", 18", 24", 30" (406, 457, 610, 762 mm)	48944010
60" (1524 mm)	Mesa	8591	16" (406 mm)	00859010
60" (1524 mm)	Orbit	8595	18", 24" (457, 610 mm)	00868312
60" (1524 mm)	Patriot	8590	16" (406 mm)	00859010
60" (1524 mm)	Plaza	8975	16", 18", 24", 30" (406, 457, 610, 762 mm)	00868312
60" (1524 mm)	Plaza	V-8945	18" (457 mm)	00868312
60" (1524 mm)	Sunray	8668	18" (457 mm)	00868312
60" (1524 mm)	Sunray	8875	16", 18", 24", 30" (406, 457, 610, 762 mm)	00868312
60" (1524 mm)	Trademark	8592	18" (457 mm)	00859010
72" (1829 mm)	Plaza	8976	16", 18", 24", 30" (406, 457, 610, 762 mm)	00897610
72" (1829 mm)	Sunray	8678	30" (762 mm)	00867810
72" (1829 mm)	Sunray	8876	16", 18", 24", 30" (406, 457, 610, 762 mm)	00897610

Rectangular Tree Grates

Grate Size	Series Name	Series No.	Tree Opening Options (Dia.)	Standard Frame*
36" x 60" (914 x 1524 mm)	Garland	8698	15" (381 mm) square	00868910
36" x 60" (914 x 1524 mm)	Nova	8686	16" (406 mm)	00868910
36" x 60" (914 x 1524 mm)	Plaza	8689	16" (406 mm)	00868910
36" x 60" (914 x 1524 mm)	Plaza	8953-2	16", 18", 24", 30" (406, 457, 610, 762 mm)	00868910
36" x 60" (914 x 1524 mm)	Rio	8687	16" (406 mm)	00868910
36" x 72" (914 x 1829 mm)	Nova	8676	12" (305 mm)	00868810
36" x 72" (914 x 1829 mm)	Sunray	8693	18" (457 mm)	00868810
48" x 72" (1219 x 1829 mm)	Boardwalk	8684	18" (457 mm) square	00869110
48" x 72" (1219 x 1829 mm)	Plaza	8954-2	16", 18", 24", 30" (406, 457, 610, 762 mm)	00869110
48" x 72" (1219 x 1829 mm)	Plaza	8691	16" (406 mm)	00869110
48" x 72" (1219 x 1829 mm)	Provence	8692	18", 24", 30" (457, 610, 762 mm)	00869110
48" x 96" (1219 x 2438 mm)	Boardwalk	8679	18" (457 mm) square	00869410
48" x 96" (1219 x 2438 mm)	Sunray	8854-4	16", 18", 24", 30" (406, 457, 610, 762 mm)	00869410
48" x 108" (1219 x 2743 mm)	Plaza	8954-6	16", 18", 24", 30" (406, 457, 610, 762 mm)	48954111
60" x 120" (1524 x 3048 mm)	Plaza	8955-6	16", 18", 24", 30" (406, 457, 610, 762 mm)	TF6012020A

* Part numbers shown are for standard tree grate frames with an anchor, for use in new concrete installation. Additional frame options are available upon request.

Tree Grates Sizes

Square Tree Grates

Grate Size	Series Name	Series No.	Tree Opening Options (Dia.)	Standard Frame*
30" (762 mm)	Plaza	8952	16", 18", 24" (406, 457, 610 mm)	48912012
30" (762 mm)	Sunray	8852	16", 18" (406, 457 mm)	48912012
36" (914 mm)	Plaza	8953	16", 18", 24", 30" (406, 457, 610, 762 mm)	48913012
36" (914 mm)	Sunray	8853	16", 18", 24", 30" (406, 457, 610, 762 mm)	48913012
48" (1219 mm)	Ginkgo	8581	15" (381 mm)	00858110
48" (1219 mm)	Orbit	8580	18" (457 mm)	48954010
48" (1219 mm)	Plaza	8954	16", 18", 24", 30" (406, 457, 610, 762 mm)	48954010
48" (1219 mm)	Plaza	V-8954	13", 16" (330, 406 mm)	48954010
48" (1219 mm)	Prism	8884	16", 22" (406, 559 mm)	48954010
48" (1219 mm)	Sunray	8674	18" (457 mm)	48954010
48" (1219 mm)	Sunray	8854	16", 18", 24", 30" (406, 457, 610, 762 mm)	48954010
60" (1524 mm)	Chelsea	8583	18" (457 mm)	00858210
60" (1524 mm)	Foliage	8582	18" (457 mm)	00858210
60" (1524 mm)	Manhattan	8805	12", 18" (305, 457 mm)	00868210
60" (1524 mm)	Metropolis	8584	18" (457 mm) square	00858410
60" (1524 mm)	Orbit	8585	18", 24" (457, 610 mm)	00868210
60" (1524 mm)	Plaza	8955	16", 18", 24", 30" (406, 457, 610, 762 mm)	00868210
60" (1524 mm)	Prism	8885	16", 24" (406, 610 mm)	00868210
60" (1524 mm)	Sunray	8667	12", 18" (305, 457 mm)	00868210
60" (1524 mm)	Sunray	8855	16", 18", 24", 30" (406, 457, 610, 762 mm)	00868210
60" (1524 mm)	Plaza-Retrofit	8955R	16" (406 mm)	n/a
60" (1524 mm)	Plaza	V-8955	16", 18" (406, 457 mm)	00868210
72" (1829 mm)	Foliage	8926	18", 24" (457, 610 mm)	00868010
72" (1829 mm)	Manhattan	8681	18" (457 mm)	00868110
72" (1829 mm)	Nova	8656	18", 30" (457, 762 mm)	00868010
72" (1829 mm)	Plaza	8956	16", 18", 24", 30" (406, 457, 610, 762 mm)	00868010
72" (1829 mm)	Prism	8886	24", 36" (610, 914 mm)	00868010
72" (1829 mm)	Sunray	8677	18", 30" (457, 762 mm)	00867710
72" (1829 mm)	Sunray	8856	16", 18", 24", 30" (406, 457, 610, 762 mm)	00868010

Combination Half Round and Half Square Tree Grates

Grate Size	Series Name	Series No.	Tree Opening Options (Dia.)	Standard Frame*
30" (762 mm)	Plaza	8972/8952	16", 18" (406, 457 mm)	00897215
36" (914 mm)	Plaza	8973/8953	16", 18", 24", 30" (406, 457, 610, 762 mm)	00897315
36" (914 mm)	Sunray	8873/8853	16", 18", 24", 30" (406, 457, 610, 762 mm)	00897315
48" (1219 mm)	Plaza	8974/8954	16", 18", 24", 30" (406, 457, 610, 762 mm)	48954106
48" (1219 mm)	Sunray	8874/8854	16", 18", 24", 30" (406, 457, 610, 762 mm)	48954106
60" (1524 mm)	Orbit	8595/8585	18", 24" (457, 610 mm)	00868215
60" (1524 mm)	Plaza	8975/8955	16", 18", 24", 30" (406, 457, 610, 762 mm)	00868215
60" (1524 mm)	Sunray	8875/8855	16", 18", 24", 30" (406, 457, 610, 762 mm)	00868215
72" (1829 mm)	Plaza	8976/8956	16", 18", 24", 30" (406, 457, 610, 762 mm)	00867715
72" (1829 mm)	Sunray	8876/8856	16", 18", 24", 30" (406, 457, 610, 762 mm)	00867715

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