Rinker MATERIALS®
A QUIKRETE® COMPANY

Canadian Made

Rinker's Drainage Infrastructure, Culverts and Bridge Solutions

STRENGTH & DURABILITY

RinkerPipe.com

Culverts & Bridge Solutions

Our History

Rinker Materials, a QUIKRETE company is the largest manufacturer of precast products. The company is recognized as an industry leader in product innovation, technical expertise, high-quality products, safety, and customer service.

Rinker Materials employees actively participate in various provincial and local associations, contributing their knowledge and expertise to the development of product specifications and innovative design. Rinker Materials offers a comprehensive range of products, including concrete pipe, precast box culverts, bridge solutions, and various specialty products, making us your single source for infrastructure solutions. Our products are produced using locally sourced materials, contributing positively to our economy.

Circular Pipe

The most common shape manufactured in the pipe industry. It is also the most cost effective. It comes with a water tight rubber gasket joint tested to 15 psi. Unlike competitive products, we can design our pipe to support specified load conditions.

For deep installations, we can design and manufacture a reinforced pipe to handle the increased height of fill. For any design-related inquires, please reach out to our engineering department.

Benefits of Precast Concrete Pipe

- Consistent product that goes through rigorous quality control testing
- Ease of installation
- Sustainable product that provides longer design life than competitive products
- The pipe provides the strength and acts as a conduit for water

Applications

- Jacked or tunneled systems
- Culverts
- Sanitary and storm sewers

Specifications

- CSA A257.2
- OPSS 1820

Diameter (mm)	Length of Pipe (m)	Waterway Area (m^2)	Approximate Mass (m^2)
300	2.29	0.07	502
375	2.29	0.11	678
450	2.29	0.16	882
525	2.29	0.22	1,055
600	2.29	0.29	1,258
675	2.29	0.37	1,553
750	2.29	0.37	1,734
825	2.29	0.55	1,965
900	2.29	0.65	2,292
975	2.29	0.77	2,620
1050	2.44	0.89	3,131
1200	2.44	1.17	3,858
1350	2.44	1.48	4,717
1500	2.44	1.82	4,702
1650	2.44	2.21	5,976
1800	2.44	2.63	6,576
1950	2.44	3.08	7,625
2100	2.44	3.57	8,747
2250	2.44	4.10	10,555
2400	2.44	4.67	11,219
2550	2.44	5.27	12,637
2700	2.44	5.91	14,035
3000	2.44	7.3	18,400

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Elliptical Pipe

In challenging situations when height or width constrains exist due to site conditions, Elliptical pipe is the ideal solution.

Horizontally installed for greater capacity at shallow depths of flow. Vertically installed to handle increased fill heights and providing higher flushing velocities during low flow conditions.

Benefits

- Consistent product that goes through rigorous quality control testing
- East of installation
- Sustainable product that provides longer design life than competitive products
- The pipe is the conduit and the structure
- Solution for low cover situations

Applications

- Culverts
- Storm drains
- Underground stormwater retention structures
- Used in situations of vertical constraints

Specifications

- ASTM C507M
- OPSS 1820
- CSA A257.2

Size Rise x Span (mm)	Diameter (mm)	Waterway Area (m^2)
730 x 1150	900	0.69
855 x 1345	1050	0.95
975 x 1535	1200	120
1095 x 1730	1350	1.54
1220 x 1920	1500	1.92
1340 x 2110	1650	2.30
1465 x 2305	1800	2.74

Box Culverts

OPSS 1821 Box Culverts are available in 9 sizes ranging from 1800 x 900 up to 3000 x 2400mm. Precast Box Culverts are useful in minimum cover and width situations.

Box culvert installations with less than 0.6m of cover will require a distribution slab. Fill heights for Standard OPSS designs range from 0.6m up to 5.5m of cover. Multiple rows of culverts can be installed side by side to accommodate wider spans and increase the overall waterway capacity.

Benefits of Box Culverts

- Provides a larger waterway for higher flow capacity
- The use of precast box culverts accelerates installation that means less impacts to traffic and the general public
- Can be designed with baffles or channels
- Box culverts can be utilized for water storage systems

Applications

- Extension of existing box culvert
- Groundwater recharge or stormwater retention systems
- Livestock, pedestrian or golf cart crossings
- Short-span highway bridges
- To replace existing open channels or ditches, enabling land to be used productively
- Utility Tunnels

Size (mm)	Design Earth Cover (mm)	Waterway Area (m^2)
1800 x 900	0.6 to 5.5	1.54
1800 x 1200	0.6 to 5.5	2.08
2400 x 1200	0.6 to 3.6	2.80
2400 x 1500	0.6 to 3.6	3.52
2400 x 1800	0.6 to 3.6	4.24
3000 x 1500	0.6 to 3.6	4.38
3000 x 1800	0.6 to 3.6	5.28
3000 x 2100	0.6 to 3.6	6.18
3000 x 2400	0.6 to 3.6	7.08

Specifications

- Canadian Highway Bridge Design Code CSAS6 and CSA A23.4
- OPSS 1821

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Custom Culverts

Custom precast Box Culverts are designed to meet the unique requirements of each project.

Benefits

- Allows for rapid installation that results in reduced overall project costs
- Custom design options to fit within the right of way, curve a stream and allows for vertical or horizontal adjustment

Applications

- Culverts
- Pedestrian crossings (Vertical)
- Storm drains
- Underground Stormwater retention structures
- Used in situations of vertical constraints

Specifications

- Canadian Highway Bridge Design Code - CSA S6 and CSA A23.4

Box Culverts with Spans Greater Than 3000mm	
Span x Rise (mm)	**Waterway Area (m^2)**
3600 x 1800	6.3
3600 x 2400	8.5
3600 x 3000	10.6
3600 x 3600	12.8
4200 x 1800	7.4
4200 x 2400	9.9
4200 x 3000	12.4
4200 x 3600	14.9
4800 x 1800	8.5
4800 x 2400	11.3
4800 x 3000	14.2
4800 x 3600	17.1
4800 x 1800	9.5
5400 x 2400	12.8
5400 x 3000	16.0
5400 x 3600	19.3
6000 x 1800	10.6
6000 x 2400	14.2
6000 x 3000	17.8
6000 x 3600	21.4

Notes:
- Slab and wall thickness will vary with depth of cover and soil conditions.
- Designed to CHBDC CSA S6 and manufactured to CSA A23.4.
- For custom box sizes or special designs please contact our Engineering Department.

QuickSpan

What sets QuickSpan apart from the other products is its open-bottom design. This feature allows the natural creek bed to remain undisturbed during installation, minimizing environmental impact.

For installations requiring deeper cover, please contact us to determine if a precast solution is feasible. QuickSpan footings can be either precast or cast-in-place and are typically installed within a day. Rinker Materials is proud to participate in the CPCQA Plan Pre-Qualification Certification Program, ensuring quality and compliance.

Benefits

- Built for speed of installation and versatility of application
- Low impact on the environment - often used over stream beds and in environmentally sensitive areas
- Units assembled quickly to reduce costs due to road closures, or ecological damage when installed in environmentally sensitive areas

Applications

- Culvert extensions or new culverts
- New or replacement of highway bridges
- Storage facilities
- Storm drains
- Utility or pedestrian tunnels

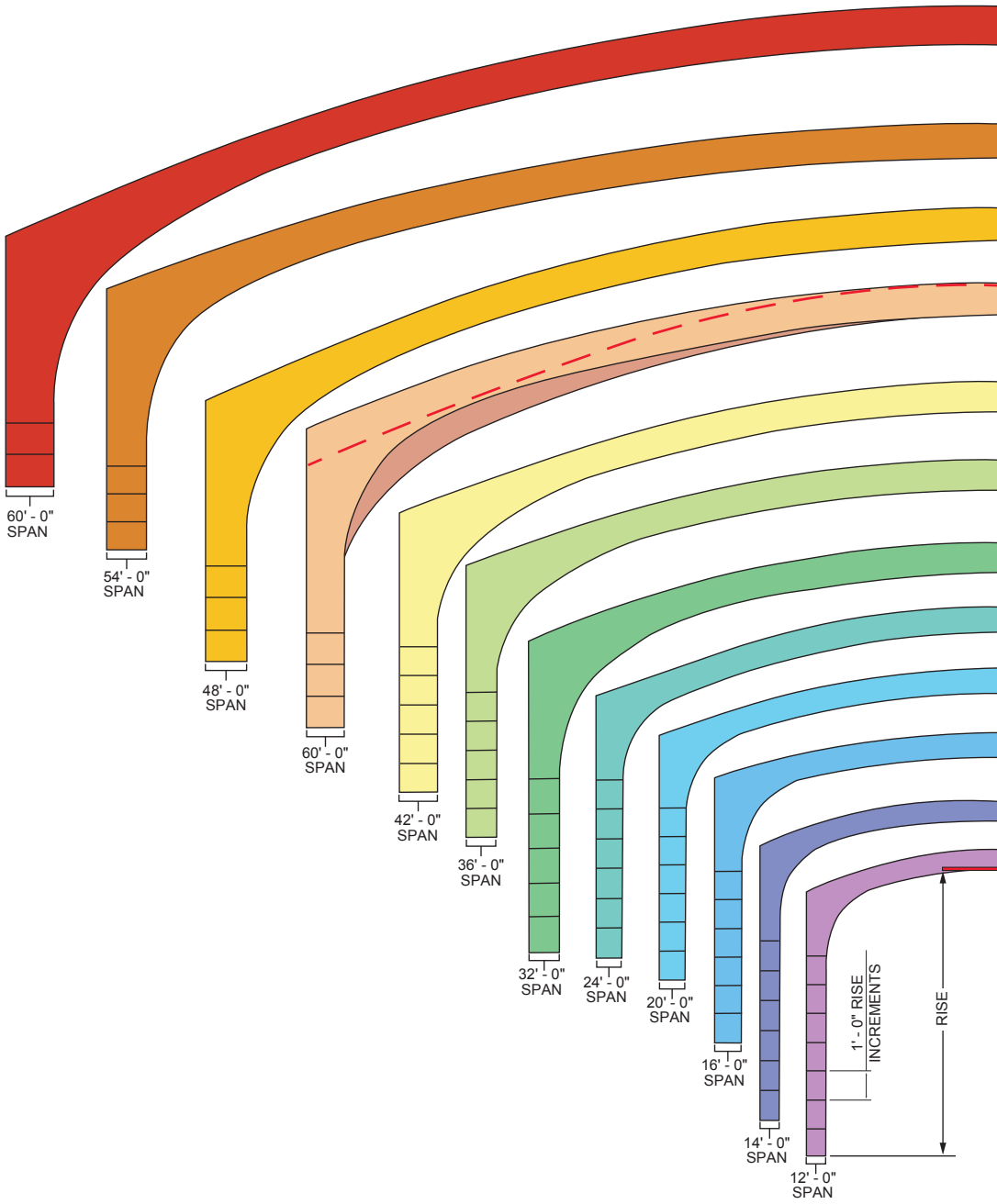
Specifications

- Canadian Highway Bridge Design Code - CSA S6 and CSA A23.4

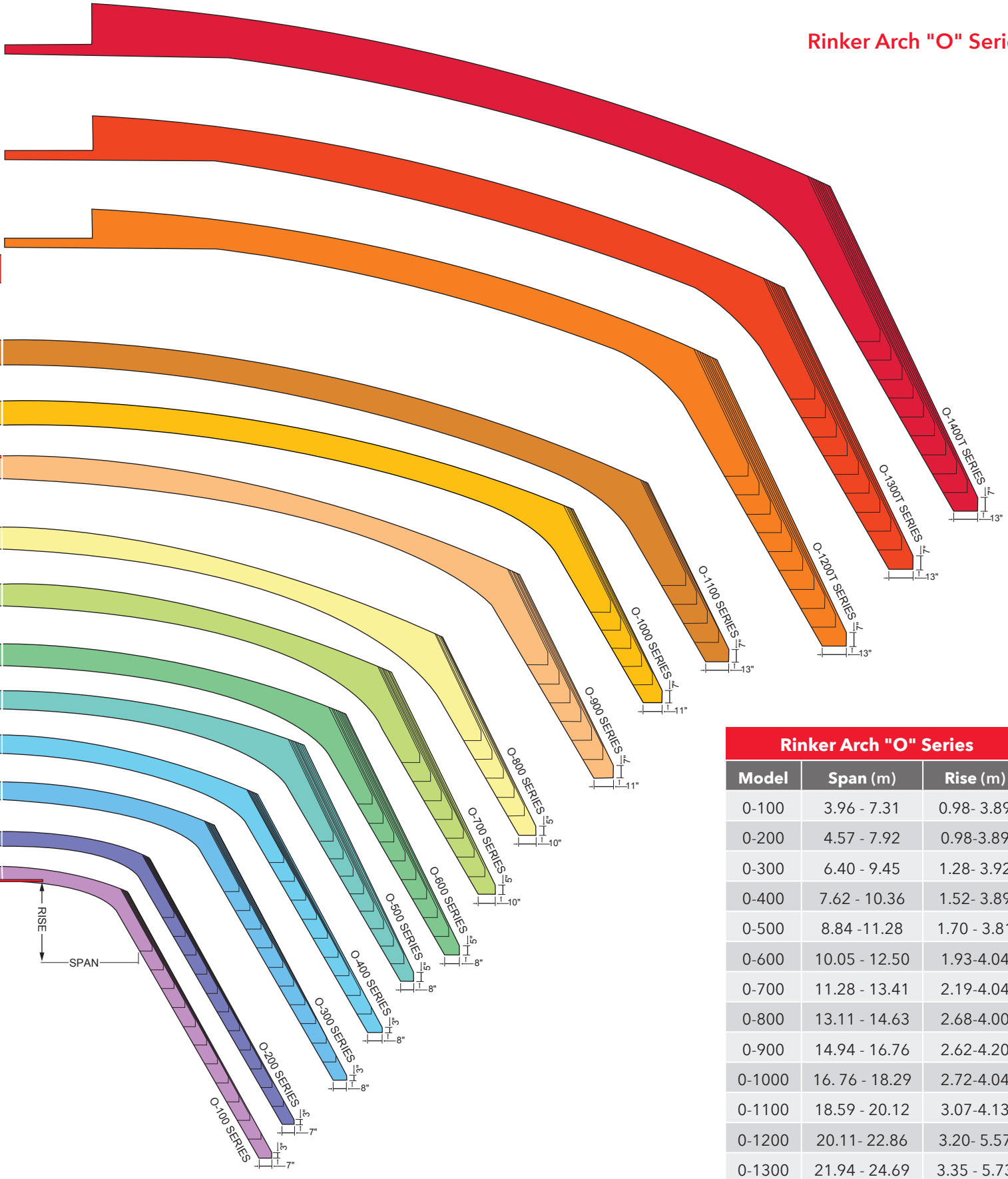
QuikSpan	
Clear Span (m)	3.659 - 12.192
Clear Height (m)	0.610 - 3.048
Laying Length (m)	1.00 - 2.44

Rinker Arch

Rinker Materials Arch	
Clear Span (m)	3.657 - 12.801
Clear Height (m)	1.250 - 4.000
Laying Length (m)	1.219 - 2.438



Rinker Arch "O" Series



Rinker Arch "O" Series		
Model	**Span (m)**	**Rise (m)**
0-100	3.96 - 7.31	0.98- 3.89
0-200	4.57 - 7.92	0.98-3.89
0-300	6.40 - 9.45	1.28- 3.92
0-400	7.62 - 10.36	1.52- 3.89
0-500	8.84 -11.28	1.70 - 3.81
0-600	10.05 - 12.50	1.93-4.04
0-700	11.28 - 13.41	2.19-4.04
0-800	13.11 - 14.63	2.68-4.00
0-900	14.94 - 16.76	2.62-4.20
0-1000	16. 76 - 18.29	2.72-4.04
0-1100	18.59 - 20.12	3.07-4.13
0-1200	20.11- 22.86	3.20- 5.57
0-1300	21.94 - 24.69	3.35 - 5.73
0-1400	23. 77 - 26.52	4.01-6.39

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Rinker Arch

The Rinker Arch and Rinker Arch "O" Series delivers a strong and aesthetically pleasing solution for various applications. There versatile systems can be used with precast or cast in place footings.

The arch sections are quick and easy to install, units can be assembled quickly to reduce costs, or ecological damage when installed in environmentally sensitive areas.

Benefits of the Rinker Arch

- Arch is designed according to the Canadian Highway Design Code and the CSA S6 standards
- The arch spans are build for quick and easy installation for diverse installations
- Arch spans are low impact on the environment and often used in environmentally sensitive areas
- Units can be assembled quickly to reduce costs associated with road closures

Applications

- Highway bridges and culverts
- Material storage or utility storage structures
- Pedestrian crossings

Rinker Arch

- Replacement of channels or ditches to allow land to be used productively above
- Open bottom environmental sensitive areas

Specifications

- Canadian Highway Bridge Design Code - CSA S6

Bebo Bridge

The BEBO arch system is comprised of precast concrete arches and are available with precast or cast in place footings. The system uses the fundamentals of soil-structure interaction to achieve superior strength and stability. With 12-to-102-foot spans, BEBO can be installed quickly to minimize disruptions to traffic and keep project deadlines on track.

Benefits

- Allows for rapid installation that results in reduced overall project costs
- Custom design options to fit within the right of way, curve a stream and allows for vertical or horizontal adjustment
- Designed to meet site specific requirements and complies with standards

Applications

- Culverts
- Pedestrian crossings (Vertical)
- Storm drains
- Underground stormwater retention structures
- Used in situations of vertical constraints

Specifications

- Canadian Highway Bridge Design Code - CSA S6 and CSA A23.4

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Bridge Deck Panels

Full depth deck panels are a viable, cost effective and time saving alternatives to cast-inplace deck panels and may be used for both vehicular and pedestrian traffic rated bridges. Unlike partial depth deck panels, full-depth deck panels are designed to support the design traffic loading without additional toppings.

Applications

- Bridge Deck Rehabilitation
- New Bridge Construction

Advantages

- Accelerated Bridge Construction (ABC) Reduced Construction Time-precast concrete products arrive to site ready to be installed
- Reduced Costs-use of full-depth precast panels do not require the use form-work and save on curing time
- Improved Product Quality-fabrication of full-depth precast panels are carried out in a controlled environment with strict quality assurance programs in place
- Better Crack Control-proper layout of reinforcing and control of temperature provided better crack control in precast panels
- Reduced Weight-optimization of design and construction allows for the use of thinner sections
- Durable Products-high quality products confirmed by quality control and assurance processes lead to durable products

Specifications

- Design: CSA S6 Canadian Highway Bridge Design code
- Fabrication: OPSS 904: Construction Specification for Concrete Structures

Precast Accessories

Precast Footings

Precast footings offer convenient and efficient solutions for various structures. Precast footings are manufactured in a controlled setting and provide durable and reliable footings for our bridge solutions. Precast footings offer advantages, such as faster installation and reduced construction time.

Headwalls and Wingwalls

Headwalls and Wingwalls are produced to finish and secure the ends of pipe, box culverts and bridge sections. They are designed to function together with the conduit to provide a sound, functional and permanent structure.

Applications

- Act as retaining walls to stabilize embankments
- Guide flows into or out of culverts
- Prevent erosion around the culvert ends
- Improve the appearance of the culvert ends. Ask us about specific textures or patterns for an architectural finish

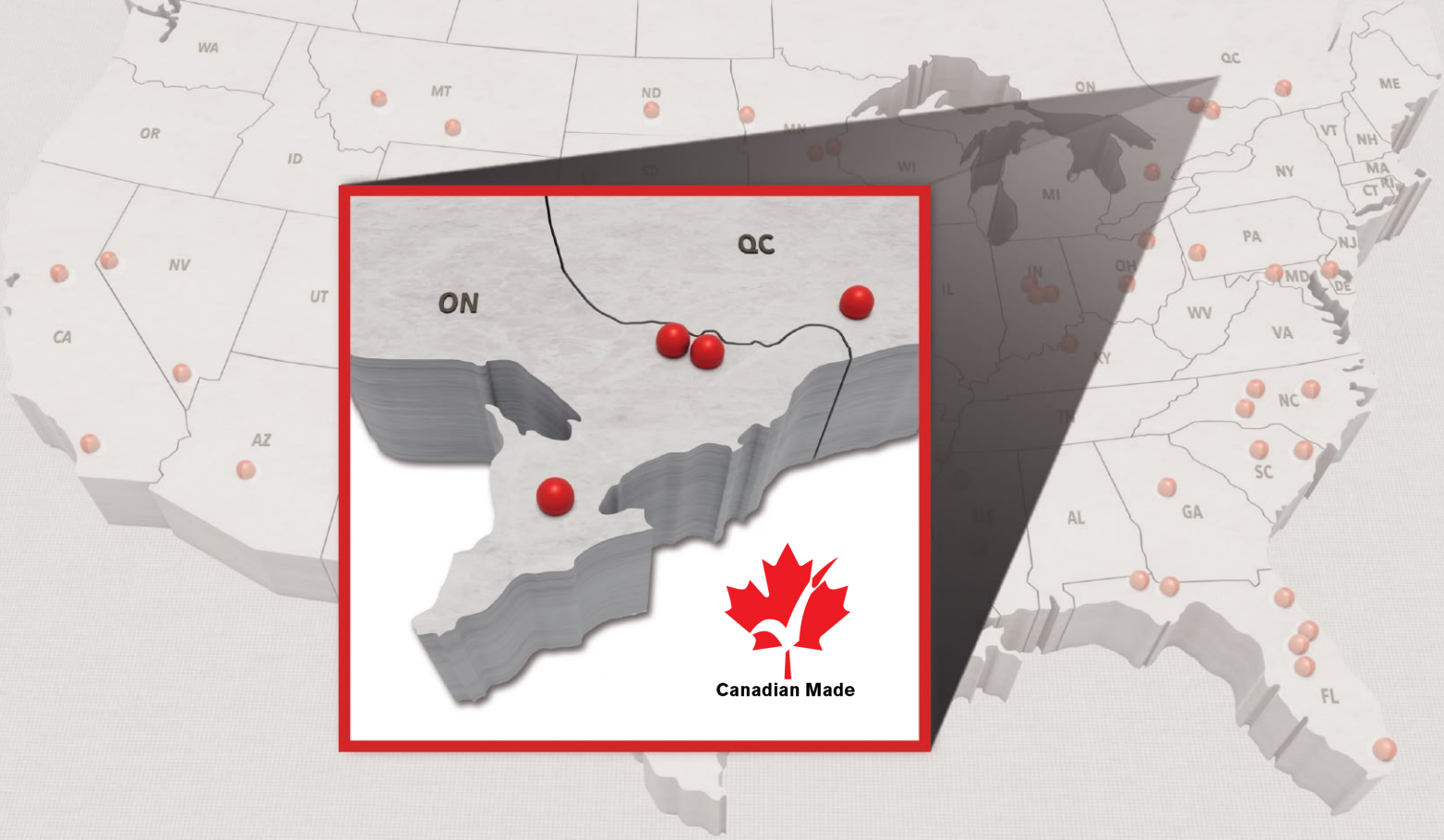
4500 x 2400 Custom Box

Culvert complete with precast fish weirs.

Rinker Arch and Retaining Walls

Quickspan 4900 x 1800

Precast Bridge Deck



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Cambridge
2099 Roseville Road
Cambridge, On N1R 5S3

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LEARN MORE

Allow our broad range of cost-effective customizable products to bring value to your next project.

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