

STRUCTURES
REFERENCE
GUIDE

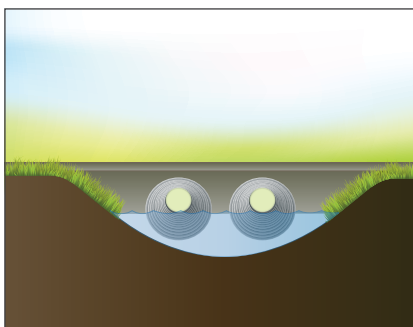
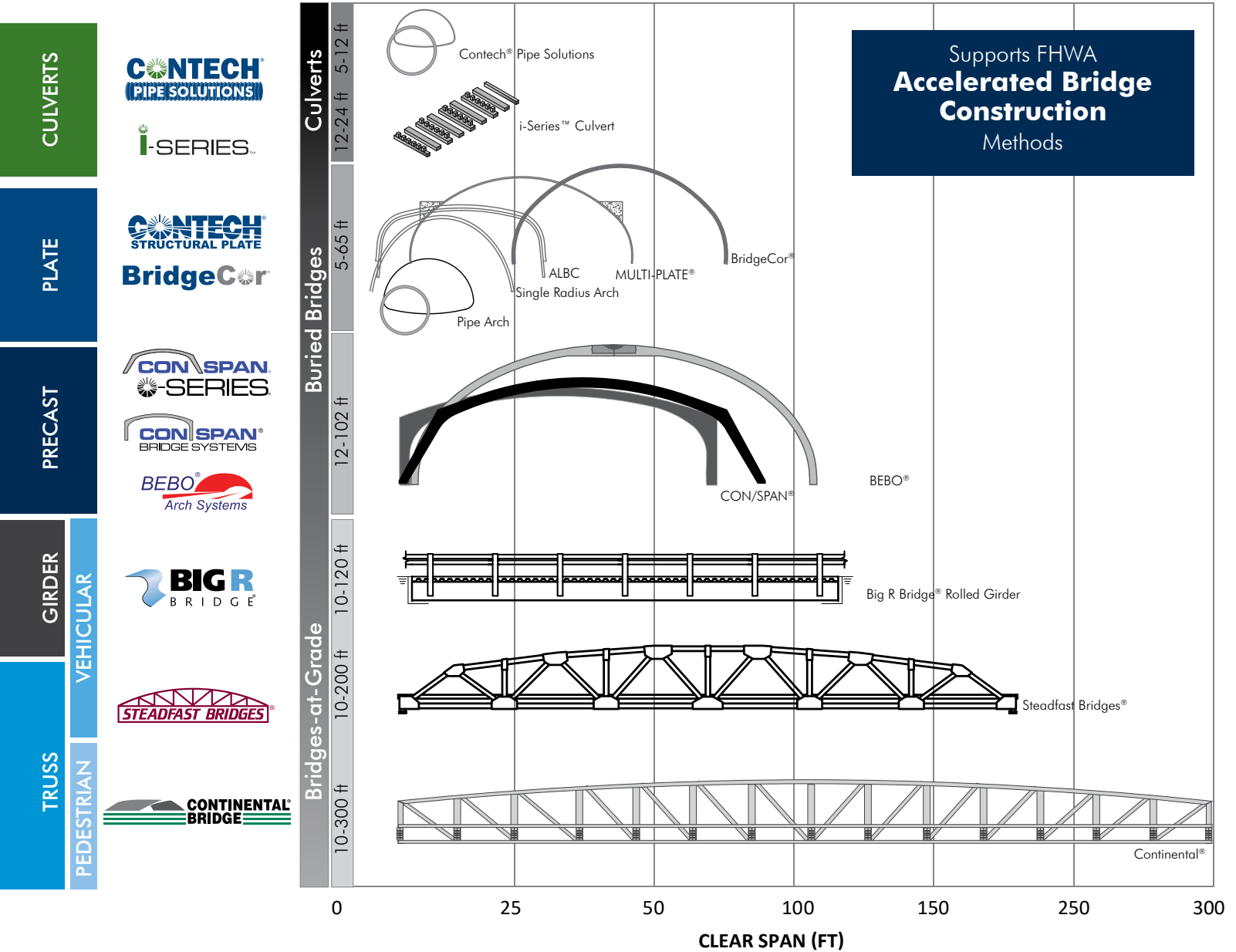
CONTECH[®]
ENGINEERED SOLUTIONS



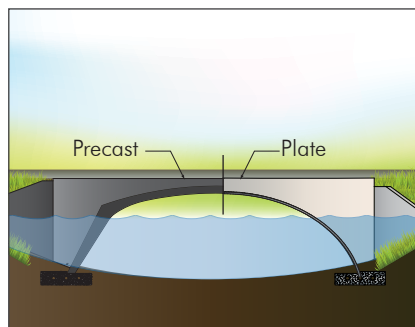
CROSSINGS. CULVERTS. BRIDGES. CONTECH.

CROSSINGS. CULVERTS. BRIDGES. CONTECH.

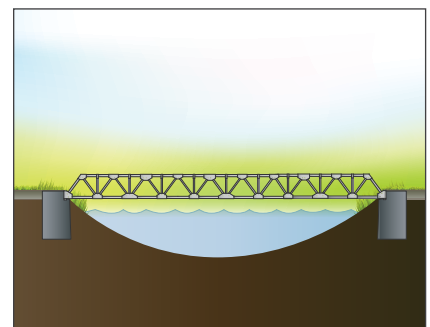
Clear Span Bridges



CULVERT



BURIED BRIDGE



BRIDGE AT-GRADE

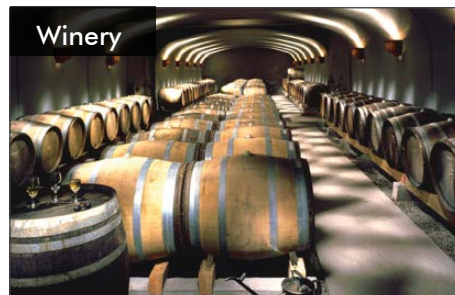
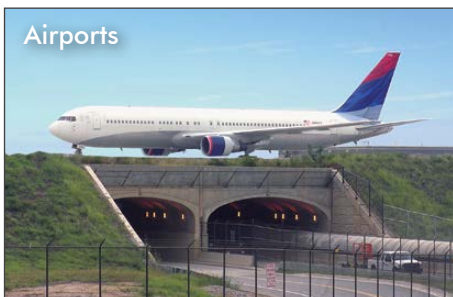
Spanning America since 1931

OVER 90,000 INSTALLATIONS WORLDWIDE!

Contech Engineered Solutions provides a comprehensive array of plate, precast, and truss structures, with the best-known brands available worldwide. Contech bridges - vehicular and pedestrian - fit a wide variety of applications, spanning distances from five to 300 feet and more. These bridge brands include Contech Structural Plate, CON/SPAN®, BEBO®, Continental®, Steadfast Bridges®, and Big R Bridge®.

Experience, innovative thinking and exceptional service have put more than 90,000 Contech bridge installations on the map worldwide.

Markets





Aluminum Structural Plate & Box Culvert



STRENGTH. VERSATILITY. ECONOMY. PLATE.

Strength

Freight Economy

STEEL	6" X 2" CORRUGATION		15" X 5 1/2" CORRUGATION						
	Gage	12	10	8	7	5	3	1	5/16
Thickness	.111	.140	.170	.188	.218	.249	.280	.318	.380

ALUMINUM	9" X 2 1/2" CORRUGATION					
	Thickness	.125	.150	.175	.200	.225

ONE BRIDGE = ONE TRUCK

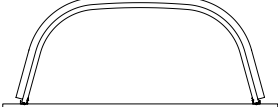
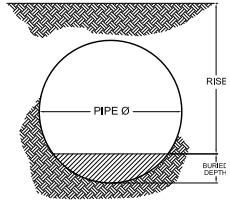
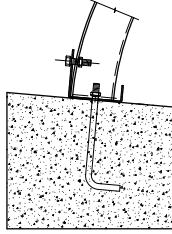
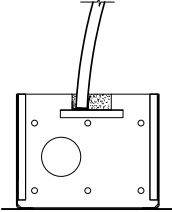


Lightweight. Bolted Plate Construction Process.



STRENGTH. VERSATILITY. ECONOMY. PLATE.














Foundations

FOUNDATION OPTIONS			
Full Invert	Buried Invert	Strip Footing with Channel	EXPRESS® Foundations
			

End Treatments



Shape Versatility

SHAPES		STRUCTURE SIZE RANGES - INSIDE SPAN X RISE			
			MULTI-PLATE® 6" x 2" Steel	BridgeCor® 15" x 5.5" Steel	ALSP 9" x 2.5" Aluminum
Round		min.	5'-0"	19'-11"	6'-0"
		max.	26'-0"	50'-6"	21'-0"
Vertical Ellipse		min.	4'-8" x 5'-2"		4'-8" x 5'-2"
		max.	25'-0" x 27'-8"		20'-1" x 22'-3"
Underpass		min.	12'-2" x 11'-0"		12'-1" x 11'-0"
		max.	20'-4" x 17'-9"		20'-5" x 17'-9"
Single Radius Arch		min.	6'-0" x 1'-10"	19'-7" x 9'-9"	5'-0" x 1'-9"
		max.	26'0" x 13'1"	54'-4" x 27'-2"	23'-0" x 11'-11"
Two Radius Arch		min.		18'-5" x 8'-4"	
		max.		50'-7" x 19'-11"	
Horizontal Ellipse		min.	7'-4" x 5'-6"		9'-2" x 6'-8"
		max.	14'-11" x 11'-2"		14'-11" x 11'-2"
Pipe Arch		min.	6'-1" x 4'-7"		6'-7" x 5'-8"
		max.	20'-7" x 13'-2"		21'-11" x 14'-11"
Low-Profile Arch SUPER-SPAN™ / SUPER-PLATE®		min.	19'-5" x 6'-9"		19'-5" x 6'-9"
		max.	45'-0" x 18'-8"		38'-8" x 15'-9"
High Profile Arch SUPER-SPAN™ / SUPER-PLATE®		min.	20'-1" x 9'-1"		20'-1" x 9'-1"
		max.	35'-4" x 20'-0"		35'-5" x 20'-0"
Horizontal Ellipse SUPER-SPAN™ / SUPER-PLATE®		min.	19'-4" x 12'-9"		19'-4" x 12'-9"
		max.	37'-2" x 22'-2"		37'-3" x 22'-2"
Pear-Arch SUPER-SPAN™		min.	23'-11" x 23'-4"		
		max.	30'4" x 25'10"		
Pear SUPER-SPAN™		min.	23'-8" x 25'-5"		
		max.	29'-11" x 31'-3"		
Box Culvert		min.		17'-6" x 6'-10"	8'-9" x 2'-6"
		max.		35'-4" x 13'-11"	35'-3" x 13'-7"

Custom sizes and shapes are available.

Not available.

* For more details on Contech's complete structural plate offering, please consult the current edition of the Structural Plate Design Guide.

CON SPAN
-SERIES Precast Arch Bridge System

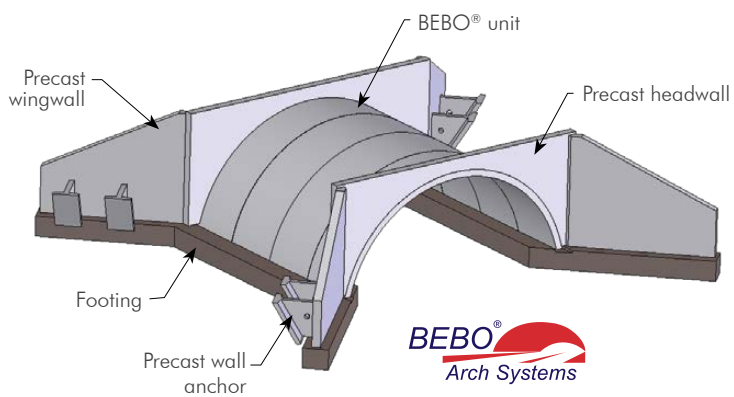
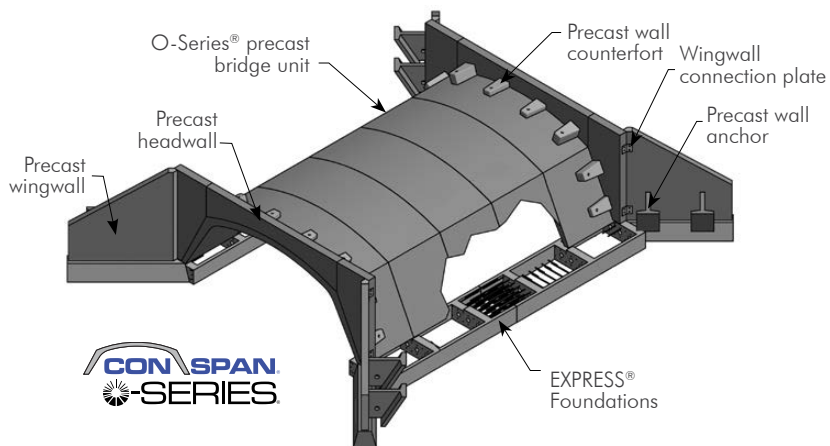


BEBO[®]
Arch Systems Precast Arch Bridge System



MODULAR. EFFICIENT. COMPLETE. PRECAST ARCH.

Modular Components



Installation

PRECAST FOUNDATIONS



PRECAST ARCH UNITS



PRECAST HEADWALLS



CURVED ALIGNMENT



TWIN LEAF CONSTRUCTION

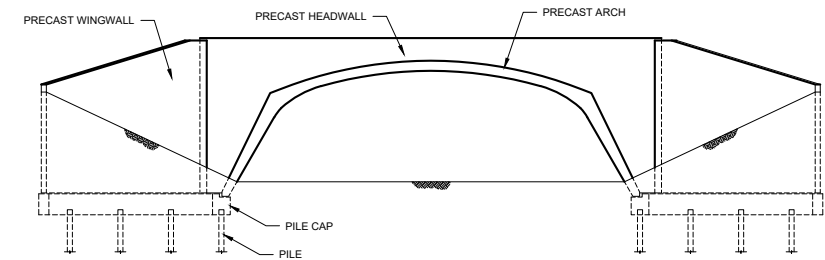
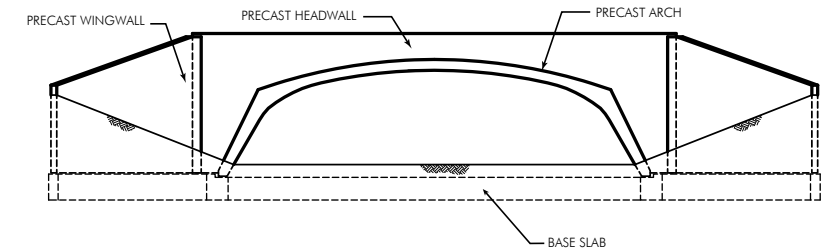
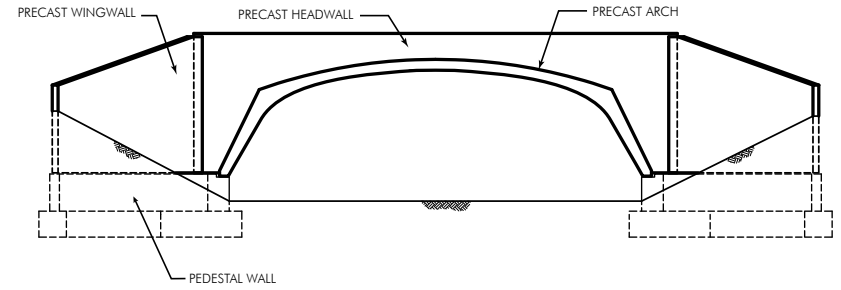
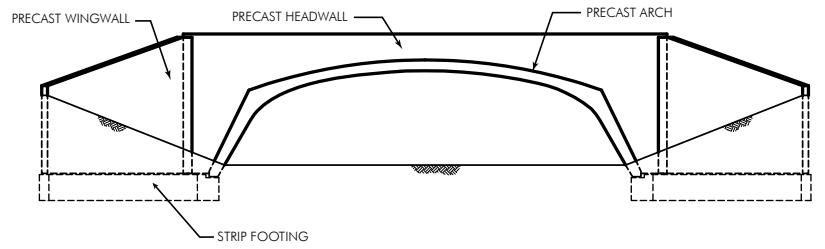


PRECAST WINGWALLS

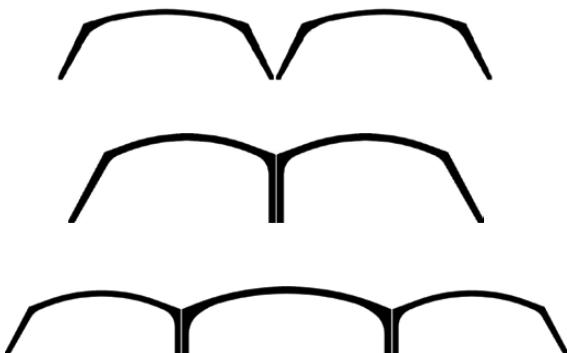


MODULAR. EFFICIENT. COMPLETE. PRECAST ARCH.

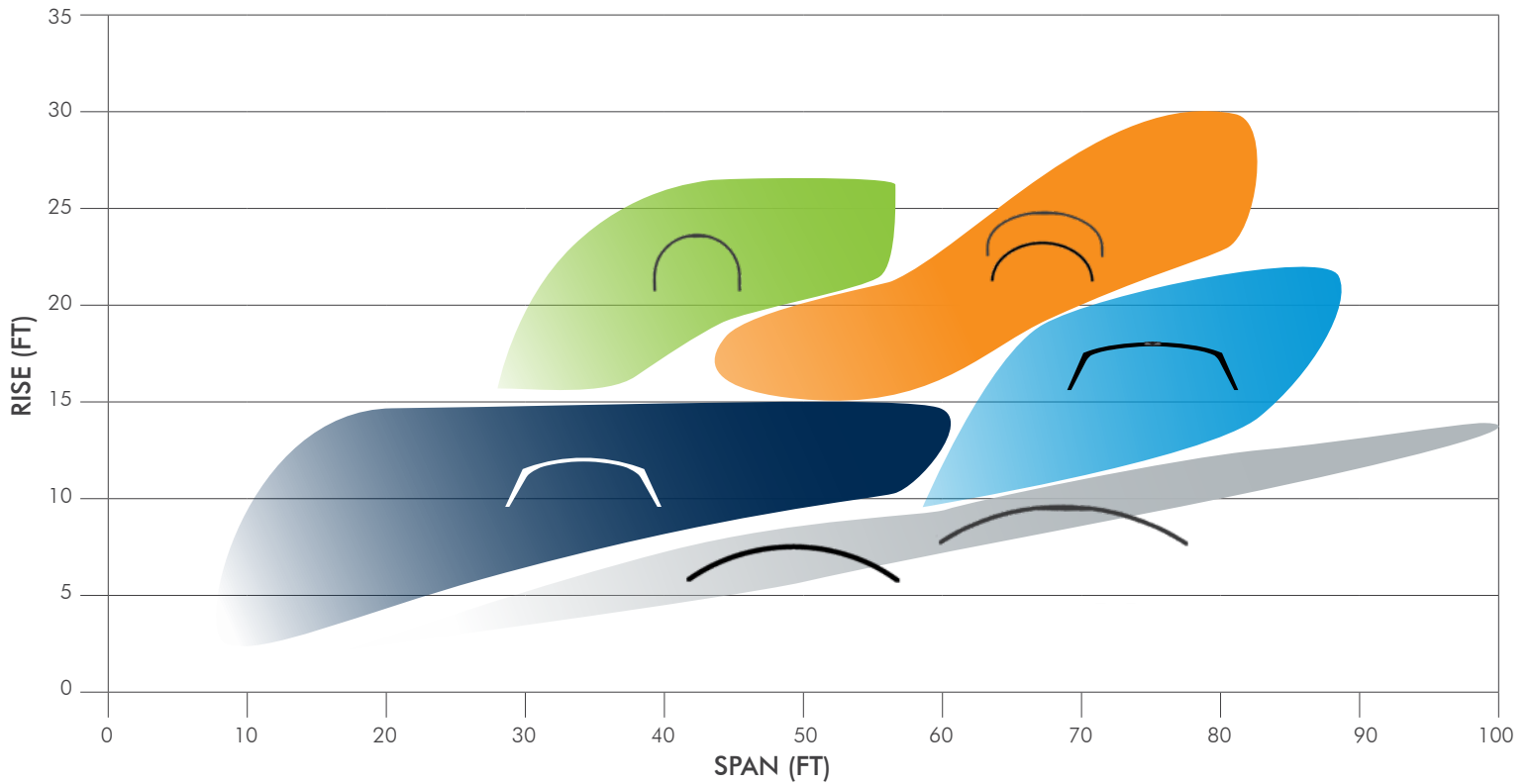
Foundations
















Multiple cell configurations



Shape Versatility

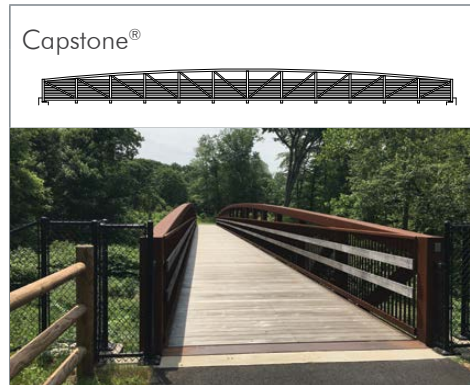


STRUCTURE			APPLICATIONS	SPAN RANGE (FT)	RISE RANGE (FT)	WATERWAY RANGE (SF)	
CON/SPAN®		O-Series®		Hydraulics, clear spans, grade separations	13 - 65	3.23 - 13.77	33 - 685
		O-Series® Twin Leaf		Longer span hydraulics, clear spans, grade separations	66 - 87	10.50 - 20.95	550 - 1442
BEBO®		C-Series Twin Leaf		Grade separation, high rise, high covers	29.33 - 54	11.33 - 26.33	260 - 1140
		E-Series		Arch shape, clearance box, aesthetics	11.17 - 47.75	3.5 - 13.5	28 - 479
		E-Series Twin Leaf		High rise, large span, grade separation	53.58 - 84	14 - 29.83	588 - 2076
		T-Series		Low clearance crossings	22 - 62	2.60 - 9	39 - 377
		T-Series Twin Leaf		Large spans with good soil conditions	64 - 102	7.42 - 13.67	340 - 982
			 Available for limited applications.				

* For additional shape information, please consult the Precast Waterway Charts Overview.



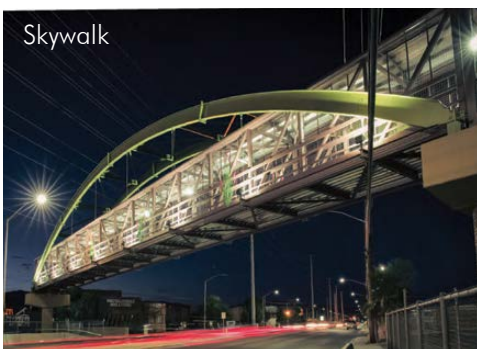
Continental® Pedestrian Truss Styles*



*Custom styling is available to make your project a reality (e.g. skywalks, cable-stayed bridges).

PEDESTRIAN. SIGNATURE. AESTHETIC.

Continental® Signature Designs





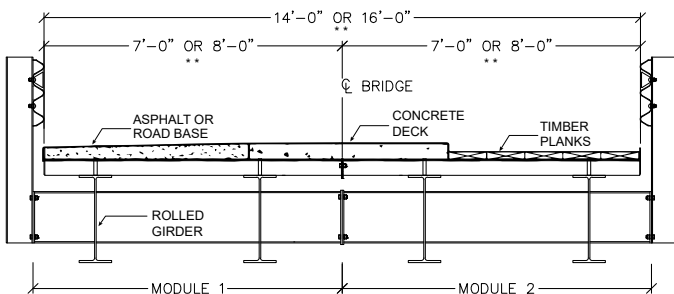
Big R EXPRESS® Modular Bridges

STANDARD FEATURES

- Single lane, modular bridge with a longitudinal splice
- Heavy duty loading (AASHTO HL-93 and U-80 off-highway trucks)
- Weathering steel structural members in stock
- 4.25" 9-gage galvanized Big R Bridge Deck
- Precast sills available
- Available in standard EXPRESS sizes
 - » Drawings typically available in one week
 - » Generally, ready to ship in one month

EXPRESS ATTRIBUTES	BRIDGE WIDTHS			
	12'	14'	*16'	18'
Standard Spans (5' Incr.)	30' - 60'	30' - 80'	30' - 80'	30' - 60'
Number of Rolled Girders	3	4	4	5
Number of Modules	1	2	2	2
Longitudinal Splice	No	Yes	Yes	Yes

*Seasonal stock typically available in 40', 50' and 60' spans.



** 12' Bridges come in one - 3 girder module
18' Bridges come in one - 3 girder module & one - 2 girder module



VEHICULAR. ROLLED GIRDERS.

Big R Site-Specific Modular Bridges

CUSTOMIZABLE TO MEET ANY SITE NEEDS

ANY SPAN & WIDTH



DESIGN ACCOMMODATES

- AASHTO LRFD
- HL-93 vehicular loading
- State DOT requirements
- Customer-specified vehicle loads
- Any rail or decking type
- Shipped in 2 or 3 beam modules

GUARDRAIL OPTIONS



DECK TYPES



INSTALLATION AND ASSEMBLY OPTIONS



COMPONENT/KIT ASSEMBLY
ALSO AVAILABLE AS A
CONSTRUCTION OPTION

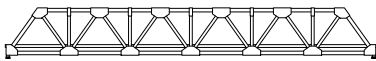


Vehicular Truss Bridges

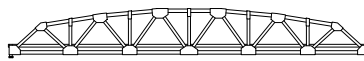


Steadfast Bridges® Vehicular Truss Styles

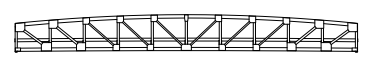
Colonial® Flat



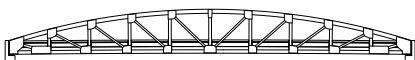
Colonial®



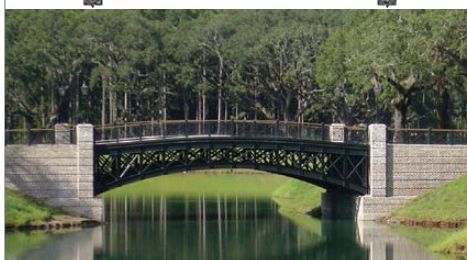
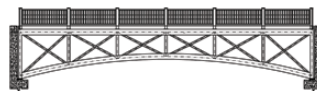
Capstone®



Keystone®



Archway®



Efficient. Economical. Timeless Designs.



Deck, Finish & Rail Options

DECK



Wood



Cast-in-Place



Asphalt



Steel Grate or FRP

FINISH



Weathering Steel



Painted Steel



Galvanized Steel*



TrussCoat® Duplex Coating

RAIL



Mesh Panels/Wood Rub Rail



Vertical Picket/Pipe Handrail



Thrie-Beam**

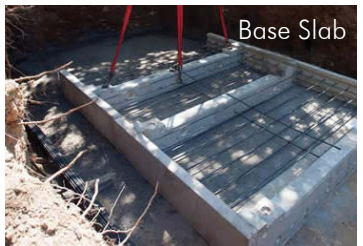


W-Beam**

*Exclusive 35-year galvanneal rust free warranty for vehicular truss. **Available for vehicular truss options only.

EXPRESS®

Foundations Speed of precast. Economy of cast-in-place.



STEEL

EXPRESS®

Foundations Efficiencies of steel. Economy of cast-in-place.

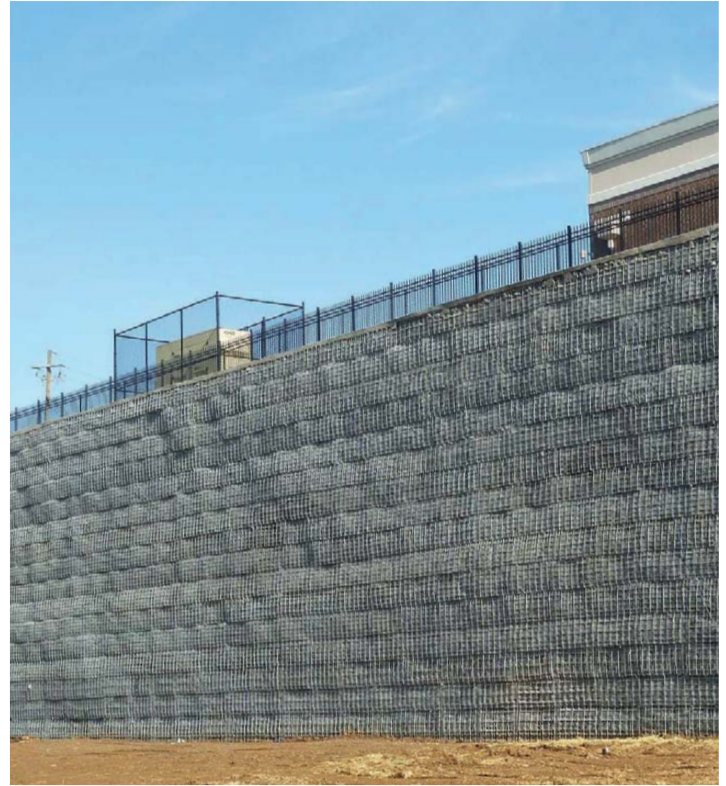


All precast EXPRESS Foundations are applicable to plate, precast, truss, and girder bridge solutions.
Steel EXPRESS Foundations are available for strip footing foundations for truss, girder and plate structures.

WALL SYSTEMS.



Vist-A-Wall® Wire Walls.



Vist-A-Wall Wire Walls are available as temporary or permanent solutions.

Vist-A-Wall® Precast Panel MSE Wall System



Featuring the Grid-Strip™ Soil Reinforcement System.

ArmorFlex®

ARTICULATING CONCRETE BLOCKS



Closed-Cell Block



Open-Cell Block



SPEED OF INSTALLATION

A-Jacks®

CONCRETE ARMOR UNITS



A-Jacks Unit

HARD ARMOR - SOFT AESTHETICS



BEFORE



AFTER



INVERT PROTECTION



CHANNEL LINING



DAM OVERTOPPING



FOOTING PROTECTION



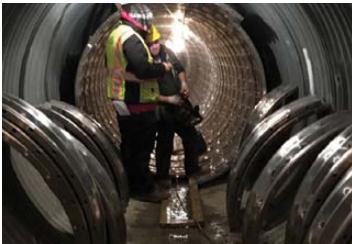
PIER PROTECTION



OUTLET PROTECTION

SPECIALTY PRODUCTS.

Contech Tunnel Liner Plate



Bin-Wall



Marine Bin-Wall



Bin-Wall/Blast Wall



Bridge Plank



Metric Sheeting

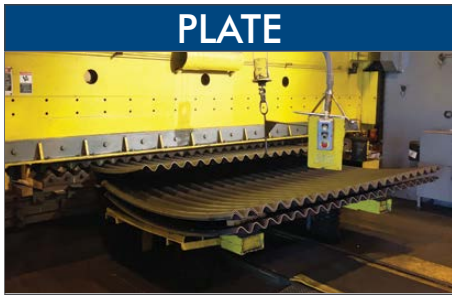


Cattle Guards



PROCESS – DESIGN SUPPORT. PREFABRICATION. INSTALL.

FABRICATION



PLATE



PRECAST



TRUSS & GIRDERS

FOUNDATIONS



EXPRESS Foundations

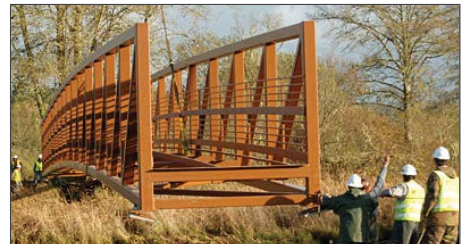
- Strip footings
- Pedestal walls
- Deep foundations
- Base slab



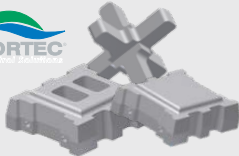
TRANSPORTATION



ERECTION/
ASSEMBLY



SYSTEM
ELEMENTS



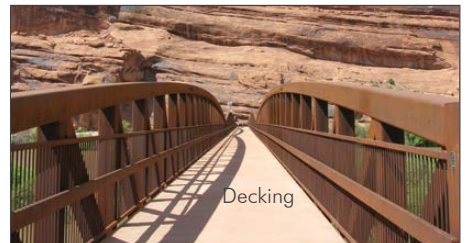
Scour Protection



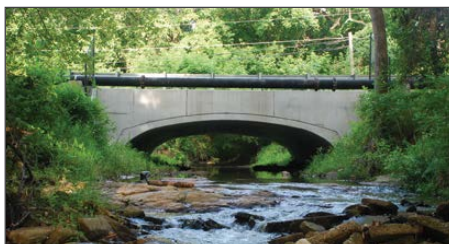
END TREATMENTS

- CON/SPAN® Anchorwall
- Aluminum Headwall
- Welded Wire Wall

BACKFILLING



COMPLETION



Options & Support Specific to Your Project Needs



CONSIDERATIONS FOR ENGINEER OF RECORD		SOLUTION DEVELOPMENT & DESIGN SUPPORT	
Site Design		Structure Selection	<input checked="" type="checkbox"/>
Soil Borings		Structure Siting and Layout	<input checked="" type="checkbox"/>
Soil Bearing Recommendations		Engineer's Estimate	
Hydraulic Analysis		Photo Simulation	<input checked="" type="checkbox"/>
Scour Analysis		DYOB Concept	<input checked="" type="checkbox"/>
Scour Countermeasures		Proposal Drawings	<input checked="" type="checkbox"/>
Permitting		Contract Drawings	<input checked="" type="checkbox"/>
Inspections		Specifications	<input checked="" type="checkbox"/>
INSTALLATION SUPPORT		Foundation Reactions	
Preconstruction Meeting		Foundation Design	<input checked="" type="checkbox"/>
Logistics Coordination		Hydraulic Coordinates	
Structure Onsite Installation Assistance		Scour References	<input checked="" type="checkbox"/>
Contech Support Available		Approval Assistance	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> Engineer of Record May Provide		Fabrication Drawings	

DYOB® (DESIGN YOUR OWN BRIDGE)

DYOB® Design Your Own Bridge

To get started, choose a structure type:

DYO ALBC	DYO Plate	DYO Precast	DYO Truss

www.ContechES.com/dyob

DRAWINGS & TECHNICAL SUPPORT

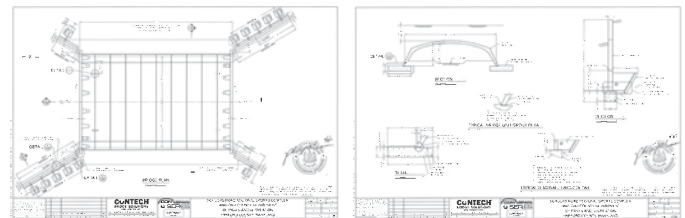


PHOTO SIMULATION



CONTECH[®]

ENGINEERED SOLUTIONS

Contech[®] Engineered Solutions provides innovative, cost-effective site solutions to engineers, contractors and developers on projects across North America. Our portfolio includes bridges, drainage, erosion control, retaining wall, sanitary sewer and stormwater management products.



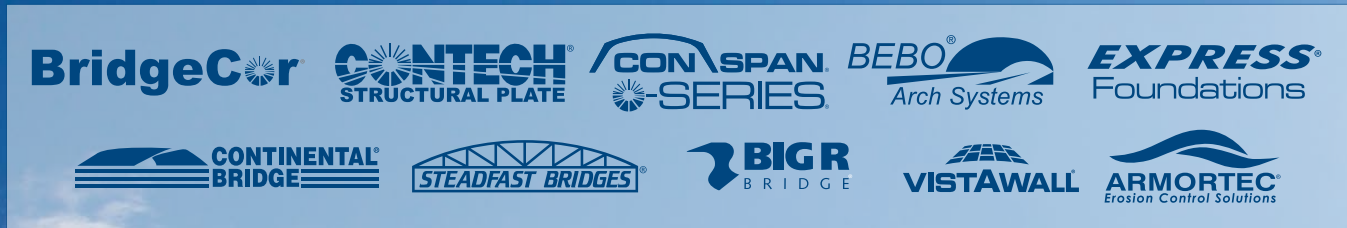
STORMWATER SOLUTIONS



PIPE SOLUTIONS



STRUCTURE SOLUTIONS



For more information, call one of Contech's Regional Offices located in the following cities:

Corporate Office - Ohio (Cincinnati)	513-645-7000
California (Roseville)	800-548-4667
Colorado (Denver)	720-587-2700
Florida (Orlando)	321-348-3520
Maine (Scarborough)	207-885-9830
Maryland (Baltimore)	410-740-8490
Oregon (Portland)	503-258-3180
Texas (Dallas)	972-590-2000

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