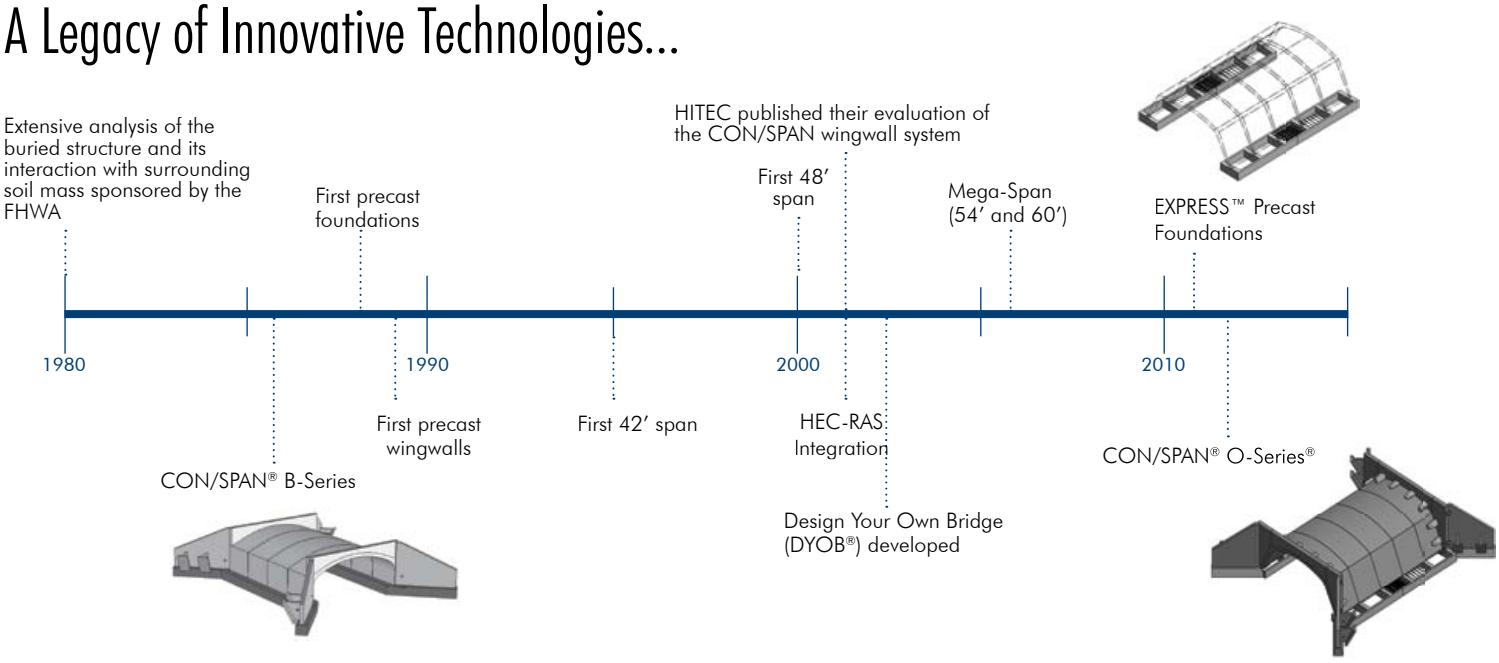
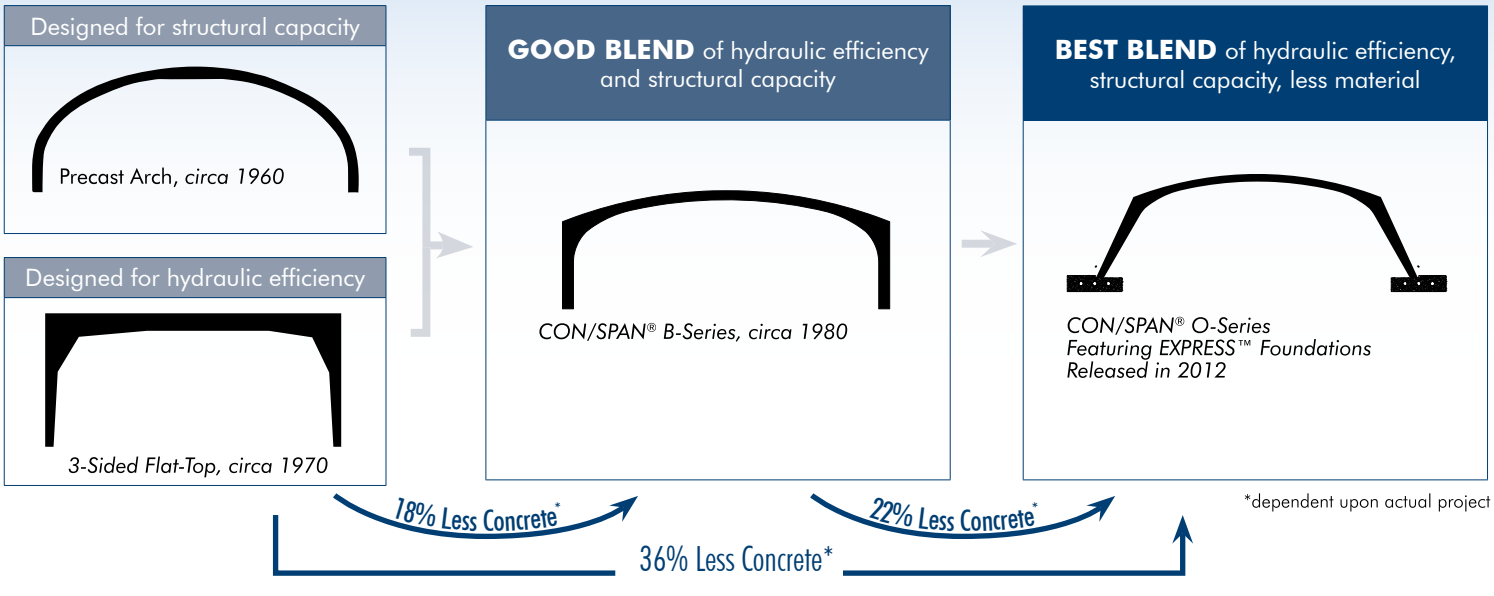
CON/SPAN® O-SERIES®

With a history of innovation and experience, Contech has taken precast buried bridge systems to the next level with the optimization of the **CON/SPAN® O-Series®**. Requiring less concrete per open area than any other precast buried bridge structure, the O-Series is the ideal blend of hydraulic efficiency and structural capacity.

A Legacy of Innovative Technologies...

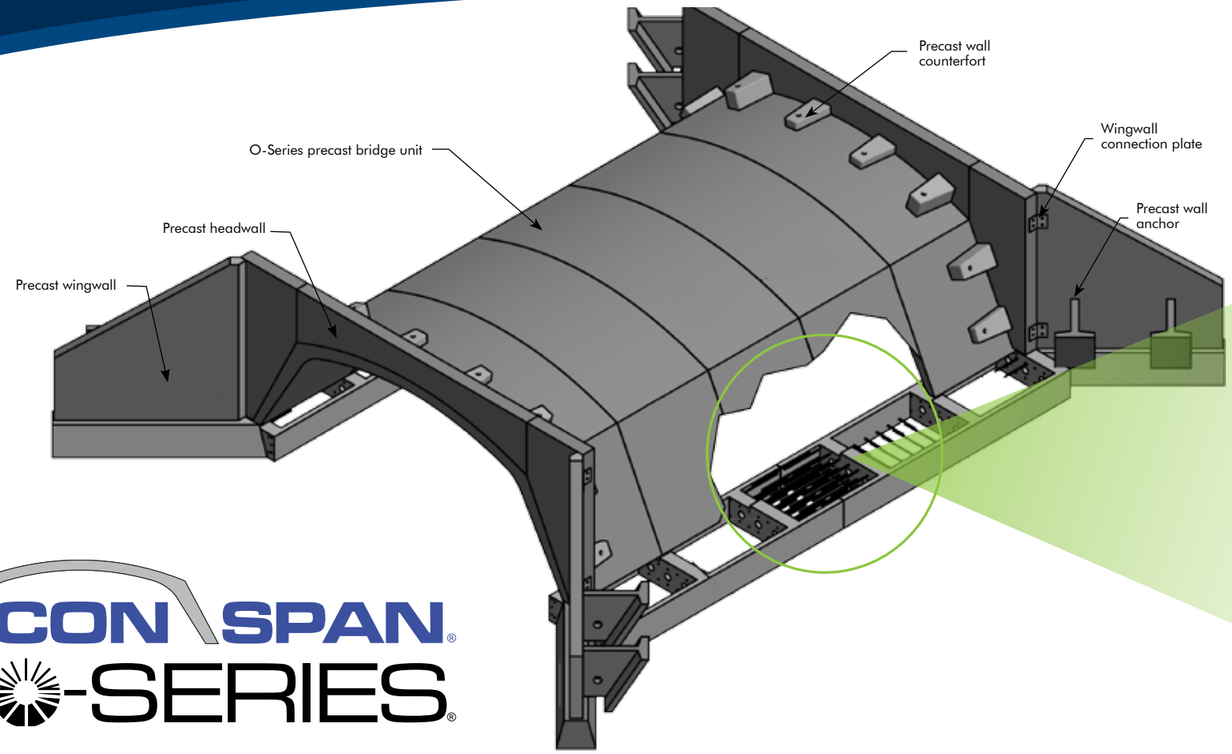


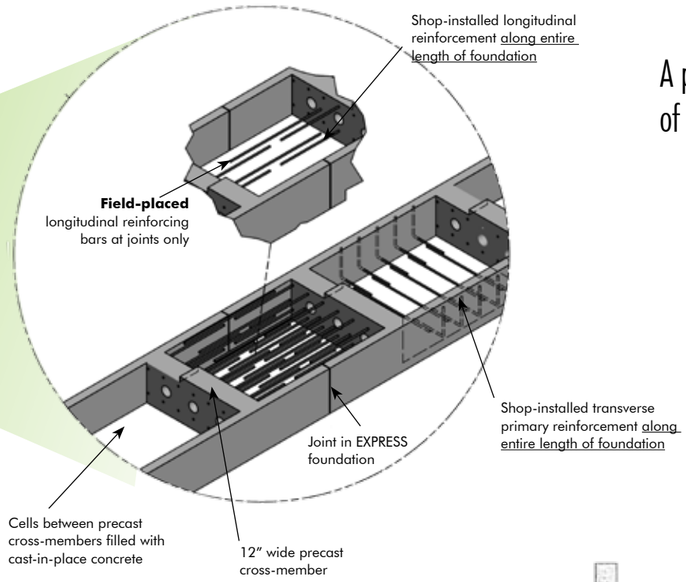
Taken to the Next Level of Optimization...



*dependent upon actual project

EXPRESS™ Foundations





CON SPAN® O-SERIES®

A precast foundation system that blends the speed of precast with the economy of cast-in-place

Benefits to You

- Provides ease and speed of installation
- Alleviates hazardous working conditions
- Trapezoidal foundation reduces wingwall concrete quantities
- Minimal reinforcement to be placed on site
- Pick weights and sizes customized to your equipment

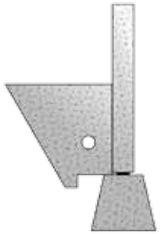
Construction Process

1. Excavate and prepare foundation subgrade
2. Unload and place precast foundation sections
3. Place minimal reinforcing at joints to provide foundation continuity
4. Set precast bridge units, headwalls and wingwalls
5. Fill cells with cast-in-place concrete
6. Seal joints, grout wingwalls and backfill

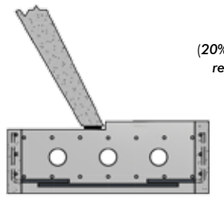
Features & Benefits of the Optimized Series

- Complete system – precast foundations, units, headwalls and wingwalls
- Rapid installation
- Material savings – concrete and steel
- Lighter piece weights or longer lay lengths for most projects
- Cost savings
- Outward horizontal reactions – one-sided keyway, reduced forming and grouting
- Maximized clear span and clear distance between footings
- Lower maintenance cost
- Proven design methodology
- Total reliability

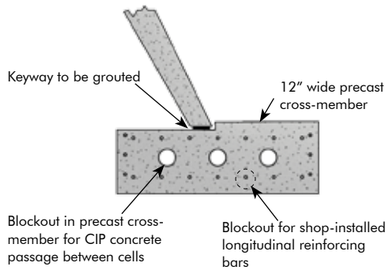
Design Challenges »	CLEAR SPANNING • Clear span required = 25′ • Required rise = 4′ min / 10′ max • Structure length = 24′ • No hydraulic rqmts, clear-span only			HYDRAULICS • Clear span required = 25′ • Waterway required = 190 sf • Structure length= 72′ • Roadway to stream invert = 13′		
	O-Series	**B-Series**	**% Diff**	**O-Series**	**B-Series**	**% Diff**
Shape	0425	-		0327	-	
Span (ft)	25	28	-11%	27	28	-4%
Rise (ft)	5	6	-17%	9.4	8	18%
WW Area (sf)	-	-		194	195	
Concrete (tons/ft)	1.96	2.84	-31%	2.46	3.14	-22%
Steel (lb/ft)	108	211	-49%	137	227	-40%
Piece lay length (ft)	8	6	33%	8	6	33%
Trucks loads (total pieces)	3	4	-25%	9	12	-25%
Weight (tons/unit)	15.68	17.04	-8%	21.12	18.84	12%



Cross section of wingwall foundation (***20% material savings versus rectangular foundation***)



Example: 6′x2′ foundation
- ***27% Precast***
- ***73% CIP Concrete Fill***



ACCELERATED BRIDGE CONSTRUCTION

ABC is bridge construction that uses innovative planning, design, materials and construction methods in a safe and cost-effective manner to reduce the onsite construction time that occurs when building new bridges or replacing and rehabilitating existing bridges.

ABC improves

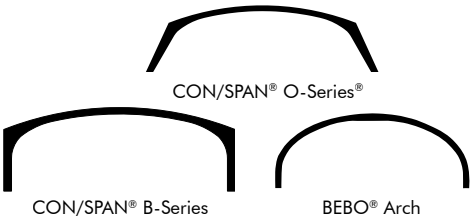
- Site constructability
- Total project delivery time
- Work-zone safety for the traveling public

ABC reduces

- Traffic impacts
- Onsite construction time
- Weather-related time delays

CON SPAN® O-SERIES® + EXPRESS™ Foundations = ABC

Application Optimization

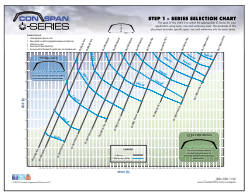
Wetlands & Clear Spanning Optimization	Hydraulic Optimization	Clearance Box/Grade Separation Optimization
		
 CON/SPAN® O-Series®	 CON/SPAN® O-Series®	 CON/SPAN® O-Series® CON/SPAN® B-Series BEBO® Arch
Maximizing span for sensitive environmental conditions.	**Maximizing** waterway and span area for hydraulic efficiency.	**Minimizing** excess materials, while closely matching clearance diagram.

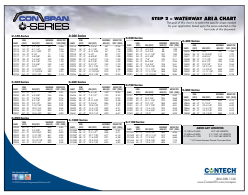
Contech. Your Project Partner.

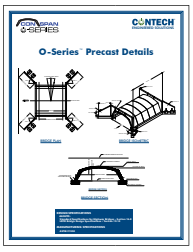
Experience the value of Contech's products and extensive technical support. Our proven innovative approach and engineering resources can help you discover the most economical solution for your site without compromising your expectations for safety, reliability and performance.

CONTECH can provide design tools and info to help optimize your project:

- Series Selection Chart
- Waterway Area Charts
- O-Series Drawing Details
- Hydraulic Coordinates for HEC-RAS and HY-8
- Wetted Perimeter Charts
- Vertical and Horizontal Foundation Reactions







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