A woman with dark hair, wearing a grey jacket, is leaning over a laptop. Her hands are on the keyboard, and she has a stressed or overwhelmed expression, with her mouth slightly open and eyes looking down. The background is a bright blue wall.

What's On the BRG Internet Webpage?

By: Alanna Bettis, P.E.

How to Get There

**Method One: Start at TxDOT Internet
Home Page**

<http://www.dot.state.tx.us/>

How to Get There

Texas Department of Transportation Home Page - Windows Internet Explorer

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TxDOT
on a Mission to Modernize

Home Page Banner Text Alternative

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- May 27 TxDOT Update Newsletter
- Alternately-Financed Projects Approved for Funding
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- Texas Awarded \$15 Million for High-Speed Rail
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125 East 11th Street, Austin, Texas 78701
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http://www.dot.state.tx.us/business/

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Business with TxDOT

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- Metropolitan Planning Organizations
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- SB 792 Report on Private Participation in Toll Projects

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- Americas 2020 International Trade & Transportation Summit
- 2010 Transportation Planning Conference
- 2011 Texas Aviation Conference
- 2010 Environmental Coordinators' Conference
- 2010 Auto Burglary and Theft Prevention Conference
- 2009 Ports and Waterways Conference
- 6th Annual Texas Transportation Forum
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Bridge Information

TxDOT provides assistance at the local and regional levels in all aspects of planning, design, construction and maintenance of bridges. The Department also develops policies for a safe and comprehensive state bridge system.

Note: The link to the [Shop Drawings](#) page has changed. Please update your bookmarks.

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How to Get There

Method Two:

The screenshot shows a Google search for "txdot bridge" in a Windows Internet Explorer browser. The search results page displays several links related to bridge standards, information, and division. A red box highlights the "Bridge Information" result, and a red arrow points to it from the right.

Bridge Information ✓
The following firms have indicated they will reproduce plans and ...
[www.txdot.gov/business/contractors/bridge/default.htm](#) - Cached - Similar

Bridge Standards (English) ✓
Bridge Railing Standard Drawings (English). PDF Icon - 71.72KB - Click Here to View
memoi08e.pdf_04-16-03. TxDOT New Cast-In-Place Concrete Slab Span Std ...

Bridge Inspection Manual: TxDOT Bridge Inspection Personnel ✓
Greater detail is given in the Human Resources Manual describing the various ...
onlinemanuals.txdot.gov/txdotmanuals/.../txdot_bridge_inspection_personnel.htm -
Cached - Similar

Bridge Design Manual: Evolution of the TxDOT Bridge Division ✓
May 1, 2009 ... The purpose of this manual notice is to advise user of the ...
onlinemanuals.txdot.gov/txdotmanuals/.../evolution_of_the_txdot_bridge_division.htm -
Cached - Similar

Bridge Division ✓
The Bridge Division aids TxDOT's districts by providing in-house expertise in all aspects of
structural planning, design, review, construction and ...
[www.dot.state.tx.us/about_us/administration/divisions/brg.htm](#) - Cached

TxDOT to replace bridge on FM 121 ✓
May 2, 2011 ... The bridge is over Buck Creek and the project is being done with federal funds,
said TxDOT spokesman Tray Turner. ...
[www.heralddemocrat.com/hd/TxDOT-construction-zone](#) - Cached

TxDOT: No damage to Austin bridge hit by 18-wheeler | kvue.com Austin ✓
Jun 2, 2011 ... Texas Department of Transportation officials say a bridge at 183 and State
Highway 71 was not badly damaged after an accident involving an ...
[www.kvue.com/.../TxDOT-No-damage-to-bridge-hit-by-18-wheeler-123030418.html](#) - Cached

PCI - TxDOT Bridge Replacement ?
2006 Bridge Replacement Projects, Bexar, Guadalupe, Kendall, Wilson, and Comal Counties,
Tx (TxDOT - San Antonio District). DSC_0470 ...
[www.pozcam.com/Projects/06Bridge/Index.html](#) - Cached - Similar

TxDOT to close FM 740 bridge in Forney - Jonathan D. Blundell ✓
Jul 21, 2010 ... We missed the public meeting, but we've just found out that TxDOT will be
closing the FM 740 bridge near the intersection with FM 460, ...
[casadeblundell.com/.../txdot-to-close-fm-740-bridge-in-forney/](#) - Cached

Txdot bridge specifications ?
"You are quick txdot bridge specifications a lizard," he said. It occurred to her that she was
waiting for some event, some tremendously important event, ...
[ydevxtnvi.cjb.net/hylbh.html](#) - Cached

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Electronic Submission of Shop Drawings

The Bridge Division accepts eligible, [electronically submitted](#) shop drawings for review and Bridge Division approval. Eligible shop drawings conform to requirements identified in the [Guide to Electronic Shop Drawing Submittal](#). Ineligible submittals are returned unreviewed. **Note:** We are currently studying the possibility of [web-based submission](#) of shop plans.

Items Reviewed by the Bridge Division

Submit to the Bridge Division only eligible documents; eligible documents are shop drawings that meet the following criteria:

- They have been designed by TxDOT's Bridge Division, by TxDOT districts if Bridge Division review has been requested by the district, or by a consultant if Bridge Division review has been requested by the district or if the consultant is under contract to the Bridge Division.
- They are for items identified by "1" - "5" in the Division Review Contact column of [this table](#), or they are based on standard drawings dated before June 2004 for sealed expansion joints, armored joints, concrete piling, or concrete panels.

The TxDOT area engineer should communicate submittal requirements summarized in [this table](#) to the Contractor at or before the preconstruction meeting, based on who performed the structural design.

Research Project 5197 Implementation - Shop Plan Handling Exceptions

The [Research Project 5197 Implementation](#) page provides instruction on how to handle shop plan resubmittals and "modified" optional designs associated with the implementation of Research Project 5197 findings.

Optional (Alternate) Designs

As of September 10, 2009, per a Texas Board of Professional Engineers ruling:

- Any shop drawing sheet that contains structural design information that departs from contract plan design values must be sealed, signed and dated by an engineer registered in the state of Texas.

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Guide to Electronic Shop Drawing Submittal

Electronic Submission of Shop Drawings

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Guide to Electronic Shop Drawing Submittal

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Field Change Order Related Revisions

Shop Drawings - Field Change Order Related Revisions

Fabrication Branch reviewers use [Plans Online](#) as their primary source for contract plan reference.

Field Change Order details are not generally available on Plans Online by the time review submittals are being processed. As a result, the Design Engineer must do the following:

- Forward bridge component revision sheets to the Fabrication Branch to ensure timely and accurate reviews.
- Immediately forward to the shop plan reviewer any structural changes that the Engineer of Record wants incorporated in the fabrication item but which are not significant enough to warrant a change order.

Send an email message to any of the [Shop Plan Review Contacts](#) containing the following information :

- District
- County
- Highway
- CSJ
- Project number
- Structure name
- Letting date
- Contractor and fabricator names
- Brief description of the changes
- List of the affected components
- Attach the .dgn, .pdf or .tif files of the revised sheets to the email

This information will be added to a shop plan database and will help improve review times by reducing submission cycles.

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- [Shop Plan Drawings](#)

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Review Tips

Shop Drawings - Review Tips

This page contains a list of common mistakes to avoid. The items are listed in the order that they appear in the review process.

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Submittal Confirmation

The reviewer must email the fabricator or detailing office within 2 business days of receiving a new submittal, confirming reception of a valid submittal. Failure to do so removes one aspect of the process designed to keep all parties informed of the whereabouts and status of submittals, and has led to project delays.

From: (A) CC: (B)

To: (C)

Subject:

Dear Mr. Guemera, (D) **Confirmation Example 1 - Incorrect Submittal**

We received an email from your address that did not have a review file attached or had an attachment of an incorrect type. Attachments must be .pdf or .dat file types to be received into the [BRG_ShopPlanReview](#) inbox and considered for review. In addition, the CSJ did not match active project CSJ's found in TxDOT databases, and you did not CC the District's dedicated shop plan address.

Please re-submit your email with the correct review file attached, and the correct CSJ in the subject line. Verify your CSJ at either of these web addresses:

http://www.txdot.gov/business/contractors_consultants/plans_online.htm QJ,,
<http://www.txdot.gov/instdot/orchart/cmd/cseve/recap/recap.htm> .

Always include the District's dedicated shop drawing address in the CC field. A list of these addresses can be found on this web page: http://tp.dot.state.tx.us/pub/tdot-info/library/pubs/bus/bridge/Shop_plan_contacts.pdf .

If your email is not intended to be a review submittal, please address other correspondence to Mark Bewley at 512-416-2207 (mbewley@dot.state.tx.us), Pat Coronado at 512-416-2565 (pcoronado@dot.state.tx.us), or Jeff Cotham at 512-416-2187 (jcotham@dot.state.tx.us).

Thank-you!

Dear Mr. Guemera, (E) **Confirmation Example 2 - Correct Submittal**

This reply is to indicate that an email from your address has been received into the [BRG_ShopPlanReview](#) inbox, and that your submittal will be added to our review cue. Submittals with complete pdf plan or Optional Design attachments will be handled in the order that they are received. Emails to this address without attachments in ready to review condition, will not be considered for review.

Attachments when viewed at 1-to-1 scale (for an 11 x 17 sheet) on our monitors, that are found to be illegible without zooming in, will be returned for re-submission without reviewing. (please adhere to TxDOT detailing practices for Bridge Division standard sheets for font sizes (1/16" min height, line weights, etc)

When the reviewers have completed this review, your original email will be replied to, and replies will be sent to all recipients in submittal email's "CC" field, along with the annotated submittal attachment.

For questions or comments concerning your submittal, please email mbewley@dot.state.tx.us.

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Bridge Expansion Joints

Bridge Expansion Joints

Note: The information on this page was updated April 2010.

Approved Header Type Expansion Joint Systems

The following Header Type Bridge Joints with or without sealant are approved for use on TxDOT projects:

Name	Manufacturer	Contact
BASF WABOCRETE II	Mark Huff 3011 Heatherpark Drive Kingwood, TX 77345	Phone: (713) 392-4833
LymTal Iso-Flex 900	Bill Gudgeon & Associates 11409 Dona Villa Dr. Austin, TX 78726	Phone: (713) 859-6314
SSI-XJS	Richard Waters 4021 Benbrook Highway Fort Worth, TX 76116	Phone: (817) 731-7890

Approved Asphalt Plug Joint Systems

The following Asphaltic Plug Expansion Joint Systems are approved for use on TxDOT projects:

Name	Manufacturer	Contact
FlexAble Bridge Joint System	Deery American Corporation. PO Box 4099 Grand Junction, CO 81502	San Kearn Phone: (800) 227-4059
Matrix 502 Asphalt Plug	D.S. Brown Co. 300 E. Cherry St. North Baltimore, OH 45872	Phone: (419) 257-3561
Thorma-Joint	THM 930 KCK Way Cedar Hill, TX 75104	Keith Rainwater Phone: (469) 523-0180 Fax: (469) 523-0181
Wabo-Expandex	BASF 3011 Heatherpark Drive Kingwood, TX 77345	Mark Huff Phone: (713) 392-4833

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Construction Tips

Construction and Materials Tips

The Construction Division publishes construction and materials articles and advisories regularly and on an as-needed basis.

- Bridge
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- Flexible Pavements
- Materials & Pavements Administration
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- Geotechnical, Soils and Aggregates
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Corrosion Protection Measures

▼ Corrosion Protection Measures

In areas of the state where de-icing agents are frequently used during winter storms, it is recommended that additional corrosion protection measures be incorporated into the bridge design and details.

District-specific requirements are available for review.

District Specific Table

RECOMMENDED CORROSION PROTECTION MEASURES

For areas of the state where deicing agents are frequently used during winter storms.

Refer to Corrosion Protection Measures on the TxDOT web site for additional information.

Recommendations are for on-system structures. Off-system structures will require case-by-case measures.

District Name	HPC Bridge Slabs & Rails	HPC Sub-structure	Epoxy Coated Reinf. Bridge Slabs & Rails	Epoxy Coated Reinf. Sub-structure	^a Increased clear cover for bridge slabs	^b Increased clear cover for sub-structure	Class II (Penetrating) Concrete Surface Treatment	Waive Air Entrainment? (Bridge Slab & Rails)	Waive Air Entrainment? (Sub-structure)	Corrosion Inhibiting Admixtures (Prestressed only)
ABL	Y	Y	Y	Y	Y	See note A	Y	N	Y	N
AMA	Y	Y	Y	Y	Y	See note A	Y	N	N	Y
ATL	Y	Y	Y	Y	Y	See note A	Y	N	Y	N
AUS	N	N	N	N	N	See note A	Y	Y	Y	N
BMT	N	N	N	N	N	See note A	Y	Y	Y	N
BRY	N	N	N	N	N	See note A	Y	Y	Y	N
BWD	Eastland and Stephens counties only.	Eastland and Stephens counties only.	Eastland and Stephens counties only.	Eastland and Stephens counties only.	Eastland and Stephens counties only.	See note A	Y	N	Y	N
CHS	Y	Y	Y	Y	Y	See note A	Y	N	N	Y
CRP	N	N	N	N	N	See note A	Y	Y	Y	N
DAL	Y	Y	Y	N	Y	See note A	Y	N	Y	N
ELP	Y	Y	N	N	Y	See note A	Y	Y	Y	N
FTW	Y	Y	Y	N	Y	See note A	Y	N	Y	N
HOU	N	N	N	N	N	See note A	See Note C	Y	Y	N
^c LBB	Y	Y	Y	Y	Y	See note A	Y	N	N	Y
LFK	N	N	N	N	N	See note A	Y	Y	Y	N
LRD	N	N	N	N	N	See note A	Y	Y	Y	N
ODA	Andrews, Martin, Midland and Ector counties only.	N	Andrews, Martin, Midland and Ector counties only.	N	N	See note A	Y	N	Y	N
PAR	N	N	N	N	N	See note A	Y	Y	Y	N
PHR	N	N	N	N	N	See note A	Y	Y	Y	N
SAT	N	N	N	N	N	See note A	See Note C	Y	Y	N
SJT	Coke, Concho, Glasscock, Irion, Reagan, Runnels, Sterling, Tom Green counties & structures located on IH10.	N	Coke, Concho, Glasscock, Irion, Reagan, Runnels, Sterling, Tom Green counties & structures located on IH10.	N	N	See note A	Y	N	Y	N
TYL	N	N	N	N	N	See note A	Y	Y	Y	N
WAC	N	N	N	N	N	See note A	Y	Y	Y	N
WFS	Y	Y	Y	Y	Y	See note A	Y	N	N	Y
YKM	N	N	N	N	N	See note A	See Note C	Y	Y	N

Notes: Y indicates Districtwide application of the specific recommendation.

^a Consider increased clear cover for substructure elements on a case-by-case basis at the discretion of the District.

^b In addition, LBB requires epoxy waterproofing on bent caps, abutment caps, and abutment backwalls located under bridge expansion joints.

^c Provide Class I instead of Class II concrete surface treatment for this District.

^d Use for custom designs only. Do not apply when using the bridge standard drawings.

Corrosion Protection Measures

▼ Corrosion Protection Measures

In areas of the state where de-icing agents are frequently used during winter storms, it is recommended that **additional corrosion protection measures** be incorporated into the bridge design and details.

District-specific requirements are [available for review](#).

Corrosion Protection Measures

Corrosion Protection Measures

The most commonly used corrosion protection measures are:

▼ High Performance Concrete (HPC)

Description:

The permeability of HPC is significantly lower than that of ordinary concrete. Lower permeability concrete reduces the ability of chlorides to attack the reinforcing steel and cause corrosion.

The current statewide Special Provision to Item 421, Hydraulic Cement Concrete, covers the requirements for HPC.

Action:

The designer must indicate on the plans which elements require HPC. There are specific Bid Items for HPC.

- **1. Bridge Slabs & Rails** - When indicated, specify Class "S" (HPC) for bridge slabs and Class "C" (HPC) for all concrete bridge railing elements.
 - This includes all cast-in-place superstructure concrete such as concrete slab & girder (Pan formed) spans, cast-in-place slab spans, box culverts that require Class "S" concrete in the top slab, as well as slabs cast on top of box beams, slab beams, or double tees.
 - When using HPC in the bridge slab, also specify HPC in the bridge approach slab if present.
 - HPC in the Prestressed Concrete Panels (PCP's) used in bridge deck construction is not required.
- **2. Substructure** - When indicated, specify Class "C" (HPC) for all substructure elements.
 - Applies to all abutments, bent caps and columns regardless of their locations relative to bridge expansion joints.
 - The use of HPC in piling, drilled shafts or buried footings is not recommended.
- **3. Prestressed concrete beams** - The current statewide Special Provision to Item 424 requires concrete mixes that are effectively the same as HPC mixes in all precast concrete beams. Therefore, specifically requiring the use of HPC in precast concrete beams is not necessary.

Corrosion Protection Measures

RECOMMENDED CORROSION PROTECTION MEASURES

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District Name	HPC Bridge Slabs & Rails	HPC Sub-structure	Epoxy Coated Reinf. Bridge Slabs & Rails	Epoxy Coated Reinf. Sub-structure	° Increased clear cover for bridge slabs	° Increased clear cover for sub-structure	Class II (Penetrating) Concrete Surface Treatment	Waive Air Entrainment? (Bridge Slab & Rails)	Waive Air Entrainment? (Sub-structure)	Corrosion Inhibiting Admixtures (Prestressed only)
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ATL	Y	Y	Y	Y	Y	See note A	Y	N	Y	N
AUS	N	N	N	N	N	See note A	Y	Y	Y	N
BMT	N	N	N	N	N	See note A	Y	Y	Y	N
BRY	N	N	N	N	N	See note A	Y	Y	Y	N
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CHS	Y	Y	Y	Y	Y	See note A	Y	N	N	Y
CRP	N	N	N	N	N	See note A	Y	Y	Y	N
DAL	Y	Y	Y	N	Y	See note A	Y	N	Y	N
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FTW	Y	Y	Y	N	Y	See note A	Y	N	Y	N
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PHR	N	N	N	N	N	See note A	Y	Y	Y	N
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TYL	N	N	N	N	N	See note A	Y	Y	Y	N
WAC	N	N	N	N	N	See note A	Y	Y	Y	N
WFS	Y	Y	Y	Y	Y	See note A	Y	N	N	Y
WOM	N	N	N	N	N	See note A	See Note C	Y	Y	N

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Prestressed Concrete I-Beams and I-Girders

Materials

For recommended concrete strengths, see "Prestressed Concrete Design" information under the "General Recommendations" section above.

Structural Analysis

- You need not increase section properties of the beam to account for the transformed area of strands or mild steel.
- For the calculation of live load distribution factors, modular ratio, n , may conservatively be taken as 1.0.

Design Criteria - For grade separation structures, use the same beam depth for the full length of structure for economies of scale and aesthetic reasons. Stream crossing structures may have different types and sizes of beams for purposes of economy. Optimize beam spacing in each span. Maintaining a constant beam spacing for the full length of structure is not necessary. Selection of the proper type beam for a span is a matter of economics; calculate relative costs using current average bid prices for beams and slab.

- [Recommended Span Lengths for I Beams](#)
- [Recommended Span Lengths for I Girders](#)

Software

Use [PGSuper](#) for beam design. Refer to [PGSuper Design Guide](#) for further guidance. Alternatively, use [this spreadsheet](#) to calculate live load distribution factors and [PSTRS14](#) for beam design.

Detailing

On the plans for each design, show optional design parameters for maximum top flange stress, bottom flange stress, and ultimate moment due to all design loads. The fabricator will retain the option to use other strand arrangements, including straight strand patterns, stress relieved strand, or 0.6-in. diameter strand, if design parameters are satisfied by the prestress and concrete strength selected.

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Design Resources

For additional information on LRFD bridge design as implemented by TxDOT, consult the following resources:

- *LRFD Bridge Design Manual*
- Design Software Programs
- LRFD Frequently Asked Questions

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Concrete Deck Slabs on Stringers

[Concrete Deck Slab on Stringers Design Example](#) (Not working templates. PDF files presented in MathCAD format)

- [Slab Design Example](#)

Prestressed Concrete I Beams and I Girders

- [Distribution Factor Spreadsheet](#)
- [Haunch Design Example](#)

Prestressed Concrete U Beams

- [Distribution Factor Spreadsheet](#)

Prestressed Slab Beams, Decked Slab Beams and Double-Tee Beams

- [Distribution Factor Spreadsheet](#)

Prestressed Concrete I Beam and U Beam Research Study 0-4751

- [Project Summary](#)
- [Vol. I - Parametric Study](#)
- [Vol. II - Design Example](#)

Prestressed Concrete Box Beams

[Distribution Factor Spreadsheet](#)

Cast-in-Place Concrete Slab Spans

[CIP Concrete Slab Span Design Example](#)

Straight Plate Girders

[Simple Span Plate Girder Design Example](#)

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Inverted Tee Reinforced Concrete Caps

- [Design Example](#) (Not working templates. PDF files presented in MathCAD format)

Rectangular Reinforced Concrete Caps

- [Design Example](#) (Not working templates. PDF files presented in MathCAD format)

Column for Single Column Bent

- [Design Example](#) (Not working templates. PDF files presented in MathCAD format)

Two Shaft Footing

- [Design Example Using Strut-and-Tie Method](#) (Not working templates. PDF files presented in MathCAD format)

Spreadsheets

- [Shear Design](#)

Foundation Loads

- [Abutment Pile Loads Calculation](#)

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Bridge Information

TxDOT provides assistance at the local and regional levels in all aspects of planning, design, construction and maintenance of bridges. The Department also develops policies for a safe and comprehensive state bridge system.

Note: The link to the [Shop Drawings](#) page has changed. Please update your bookmarks.

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Geotechnical Resources

Date	Title	Format
04/07	Approved Concrete Block Retaining Wall Systems	
01/06	Approved MSE Panel Systems	
05/06	Drilled Shaft Design Examples	
	Loss of Backfill in Mechanically Stabilized Earth	
05/06	Mechanically Stabilized Earth (MSE) Wall Design Example	
05/06	Piling Design Examples	
01/04	Proprietary Retaining Wall System Review	
05/06	Spread-Footing Wall Design Example	
05/06	Tied-Back Wall Design Examples	

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Railroad Information

Bridge: Railroad Information

Below is a listing of links to documents containing railroad-related bridge information from TxDOT.

Union Pacific-BNSF Guidelines

Title	Format
Guidelines (Annotated by TxDOT)	
Comments	

Railroad Requirements for TxDOT Construction (Plan Sheets)

Title	PDF	DGN
Instruction Sheet		
Bridge		DGN
Non-Bridge		DGN

Procedures for Railroad Grade Separation Projects that Remove an Active Warning Device

Title	Format
Procedures	
Theoretical Structure	
Railroad 5 Percent Cost Estimate	

Other

Title	Format
Railroad Grade Separations Exhibit "A" Preparation Guide	
Union Pacific Railroad Checklist for Overhead Structures	

More Information

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Bridge Unit Cost Tables

Bridge Unit Cost Tables

The table below contains the fiscal year project costs for bridges.

Title	Format
2010 Bridge Unit Costs	
2009 Bridge Unit Costs	

Bridge Unit Cost Tables

FY 2010 Average % Breakdown of Overall Project Costs for Bridges

System	Structure %	Mobilization %	Removal %	Approach, etc. %
Off-System Bridges	65.0%	8.4%	3.5%	23.1%
Off-System Culverts	54.8%	7.2%	3.6%	34.3%
On-System Bridges	58.2%	8.0%	4.4%	29.4%
On-System Culverts	52.1%	10.0%	2.9%	35.0%

FY 2010 Average Unit Cost

System	Structure Type	Number Bridges	Deck Area (sq.ft.)	Low Bid Structure Cost*	Average Unit Cost** (\$/sq.ft.)
<i>Off Culvert</i>					
	Culverts	41	87,450	\$ 5,142,462	\$ 58.80
<i>Off Span</i>					
	Concrete Girder "Pan" (CG-PN)	2	5,828	\$ 274,703	\$ 47.13
	Girder Prestressed "Box" Beam (GP-BX)	8	27,139	\$ 2,111,527	\$ 77.80
	Girder Prestressed Decked Slab Beam (GPDSD)	4	8,450	\$ 893,825	\$ 105.78
	Girder Prestressed "I" Beam (GP-I)	19	65,170	\$ 4,567,870	\$ 70.09
	Girder Prestressed "I" Beam "Texas Shape" (GPITX)	1	28,800	\$ 1,114,371	\$ 38.69
	Prestressed Concrete Slab Beam (PCSB)	59	365,860	\$ 20,589,563	\$ 56.28
	Concrete Slab (SLAB)	5	38,896	\$ 1,571,700	\$ 40.41
	Girder Prestressed "T" Beam (GP-T)	1	1,690	\$ 257,079	\$ 152.12
	Girder Steel "I" Beam (GS-I)	1	8,034	\$ 795,328	\$ 99.00
<i>Off Span Totals</i>					
	Off Span Totals	100	549,867	\$ 32,175,966	\$ 58.52
<i>On Culvert</i>					
	Culverts	57	349,801	\$ 13,851,975	\$ 39.60
<i>On Span</i>					
	Girder Prestressed "Box" Beam (GP-BX)	4	21,047	\$ 1,469,393	\$ 69.81
	Girder Prestressed "I" Beam (GP-I)	116	2,631,698	\$ 129,837,263	\$ 49.34
	Girder Prestressed "I" Beam "Texas Shape" (GPITX)	49	1,176,816	\$ 61,508,646	\$ 52.27
	Girder Prestressed "U" Beam (GP-U)	30	969,465	\$ 48,213,730	\$ 49.73
	Girder Prestressed Segmental (GPSEG)	2	89,373	\$ 9,754,877	\$ 109.15
	Prestressed Concrete Slab Beam (PCSB)	33	789,456	\$ 38,695,577	\$ 49.02
	Concrete Slab (SLAB)	1	5,040	\$ 366,026	\$ 72.62
	Concrete Girder Pan Form (CG-PN)	1	13,207	\$ 704,529	\$ 53.35
	Girder Steel "I" Beam (GS-I)	13	324,714	\$ 14,693,443	\$ 45.25
	Girder Steel Trapezoidal (GS-TR)	7	173,472	\$ 22,472,530	\$ 129.55
	Structural Steel Truss (STRTR)	1	6,096	\$ 743,462	\$ 121.96
<i>On Span Totals</i>					
	On Span Totals	257	6,200,384	\$ 328,459,477	\$ 52.97

Project Development

Project Development

- Railroad Information
- Bridge Unit Cost Tables
- Participation-Waived/Equivalent-Match Project Program (PWP/EMP)
- Report on Texas Bridges

Report on Texas Bridges

Report on Texas Bridges

Title	Format
2008 Report on Texas Bridges	
2006 Report on Texas Bridges	
2004 Report on Texas Bridges	
2003 Report on Texas Bridges	
2002 Report on Texas Bridges	

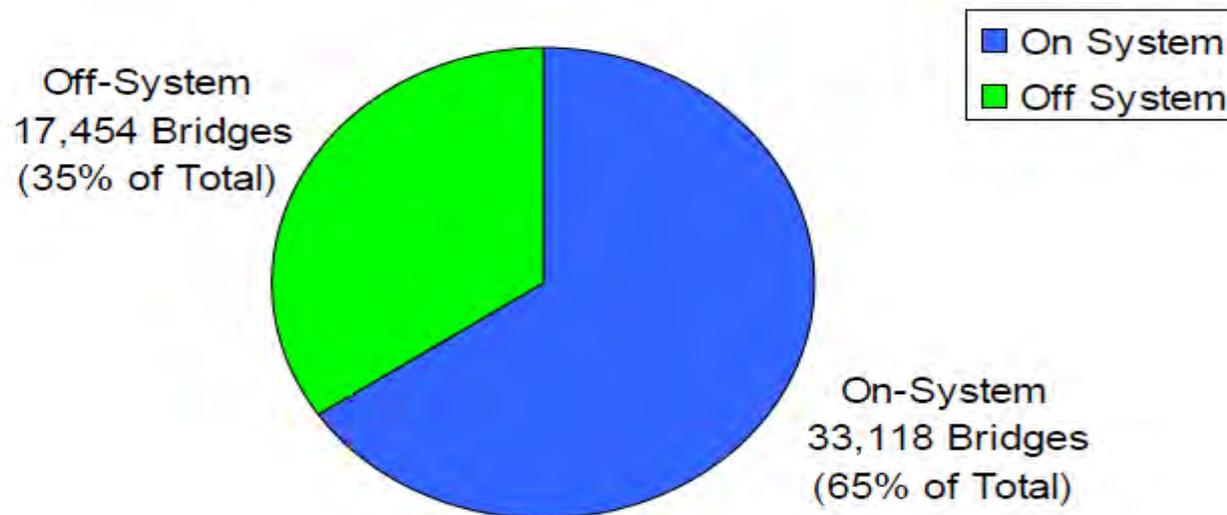
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Report on Texas Bridges

On- and Off-system Bridges. Texas has 50,572 bridges at the time of the writing of this report. This constitutes approximately 1/12th of the nation's entire inventory of bridges and approximately 80% more bridges than any other state. The following figure shows the number of on- and off-system bridges in Texas.

Count of On- and Off-System Texas Bridges as of September 2008 (50,572 Total)



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Bridge Information

TxDOT provides assistance at the local and regional levels in all aspects of planning, design, construction and maintenance of bridges. The Department also develops policies for a safe and comprehensive state bridge system.

Note: The link to the [Shop Drawings](#) page has changed. Please update your bookmarks.

Construction and Maintenance

- [Bridge Specifications](#)
- [Shop Drawings](#)
- [Bridge Expansion Joints](#)
- [Proprietary Concrete Repair Materials](#)
- [Curing Mats for Concrete Structures](#)
- [Construction Tips](#)
- [Welding Certifications](#)

Geotechnical Services

- [Geotechnical Field Testing](#)
- [Retaining Wall Information](#)
- [Soil and Bedrock Information](#)
- [Geotechnical Design Examples](#)

Design

- [Bridge Standards](#)
- [Superstructure Design Information](#)
- [Substructure Design Information](#)
- [Other Design Information](#)
- [Steel Bridge Design Preferred Practices](#)
- [LRFD Bridge Design FAQs](#)

Project Development

- [Railroad Information](#)
- [Bridge Unit Cost Tables](#)
- [Participation-Waived/Equivalent-Match Project Program \(PWP/EMP\)](#)
- [Report on Texas Bridges](#)

Other

- [Webinars](#)

Other

Other

- Webinars

Webinar Presentations

Bridge Presentations Webinar

Feb. 25, 2011

Time	Title	Presenter	Format
9 a.m.	Opening Remarks	Amy Eskridge, P.E., BRG	
9:05 a.m.	Remediation of Bridge Scour using Jet Grouting	Sean Yoon, P.E., BRG- Geotechnical	
9:30 a.m.	Fatigue Repair of the I-345 Bridges	Yuan Zhao, P.E., BRG- Design	
10:00 a.m.	Using Precast Panels at Ends of Spans	Jamie Griffin, P.E., BRG-Design	
10:30 a.m.	Corrosion Protection Measures for Bridges	Lloyd Wolf, P.E., BRG- Design	
11:00 a.m.	Accessing Bridge Information through PonTex	Alan Kowalik, P.E., BRG-Field Operations	
11:30 a.m.	Use of PGSuper by TxDOT	Taya Retterer, P.E., BRG-Design	

Aug. 20, 2010

Time	Title	Presenter	Format
9 a.m.	Opening Remarks: Does This Count Toward PDHs?	Amy Eskridge, P.E., BRG	
9:05 a.m.	Excavations for Multi-Shaft Footings	Marcus Galvan, P.E., BRG-Geotechnical	
9:25 a.m.	Actions to Address Bridges with Unknown Foundations for Scour	John Delphia, P.E., BRG-Geotechnical	
9:50 a.m.	Margaret Hunt Hill Bridge	Heather Gilmer, P.E., CST-Materials and Pavements	
10:20 a.m.	Lateral Vibration of a TxDOT Pedestrian Bridge (Video)	Dean Van Landuyt, P.E., BRG-Design	
10:40 a.m.	Specification Changes and Their Effect on Plan Details	Brian Merrill P.E., BRG- Construction	
11:05 a.m.	PonTex Update	Tom Yarbrough P.E., BRG-Bridge Management	
11:30 a.m.	P6 for Bridge Projects	Michelle Veale, P.E., BRG-Project Development	



I am
bored

Questions?