

Bridge Design Software

► TxDOT Software

► 3rd Party Software

3rd Party Software

▶ RISA-3D

▶ SAP2000

▶ PCA Column

▶ STLBRIDGE LRFD

▶ MathCAD / Excel

▶ Descus I and II

▶ ANSYS

▶ Etc.

TxDOT Software

► Developed and Maintained by TxDOT

■ Available from TxDOT Website



TEXAS DEPARTMENT OF TRANSPORTATION



Home >> Services

Services

We provide a variety of services to our customers. You can find information about these services through our four audience pages – Citizen, Business, Government and Travel – as well as our site map and search engine. You can also find the same information based on our organizational structure by selecting from the list below or to the right.

- ▶ Citizen
- ▶ Business
- ▶ Government
- ▶ Travel
- ▶ FAQs

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- Printer-Friendly
- Enlarge Font
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Tools & Plug-Ins

Divisions

- Aviation
- **Bridge**
- Construction
- Design
- Environmental Affairs
- Finance
- General Services
- Government and Business Enterprises
- Government and Public Affairs
- Human Resources
- Information Systems
- Maintenance
- Motor Carrier
- Motor Vehicle
- Public Transportation
- Right of Way
- Texas Turnpike Authority
- Traffic Operations

Offices

- Business Opportunity Programs (DBE/HUB/SBE)
- Civil Rights
- General Counsel
- International Relations
- Public Information
- Research and Technology Implementation

Other Resources

- Local Information (Districts)
- Forms
- Publications

Services

- ▶ Aviation
- ▶ **Bridge**
- ▶ Business Opportunity Programs
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- ▶ Right of Way
- ▶ Texas Turnpike

Bridge Division - Microsoft Internet Explorer

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TEXAS DEPARTMENT OF TRANSPORTATION

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Home >> Services >> Bridge Division

Bridge Division

Our Bridge Division provides assistance at the local and regional levels with in-house expertise in all aspects of structural planning, design, review, construction and inspection of bridges. The division also develops policies for the design, construction and maintenance of a safe and comprehensive state bridge system.

Please join us for the 2007 [Design and Bridge Conference](#).

Bridge Construction and Maintenance

- Specifications
- Technical Advisories
- Shop Drawings
- Proprietary Repair Materials for Structural Concrete
- Curing Mats for Concrete
- Welding Certifications

Project Development

- PWP/EMP Program
- Historic Bridge Preservation Program
- Texas Bridge Unit Cost Tables

Bridge Design

- Superstructure Design Recommendations
- Superstructure Design Examples and Spreadsheets
- Substructure Design Recommendations
- Substructure Design Examples and Spreadsheets
- Other Design Recommendations
- Other Design Examples and Spreadsheets
- LRFD Bridge Design FAQs

Bridge Guides

- ▶ Bridge
- ▶ Bridge Construction & Maintenance
- ▶ Project Development
- ▶ Geotechnical Services
- ▶ Bridge Design
- ▶ Bridge Guides
- ▼ Other Resources
 - ▶ Bridge Standard Drawings
 - ▶ Bridge Manuals
 - ▶ Load Restricted Bridges
 - ▶ Engineering Software
 - ▶ Historic Suspension Bridges
 - ▶ Bats & Bridges Project
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► Developed and Maintained by TxDOT

■ Available from TxDOT Website

■ Google "TxDOT Engineering Software"

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- Google "TxDOT Engineering Software"

► Collaboratively Developed

TxDOT Bridge Design Software

► Abutment MDL

► BGS

► BMCOL51

► CAP18

► CULV5

► PIER

► PSTRS14

► Wincore

Other Engineering Software

► COSB1

► OSB6

► ShopPlanTools

► Signal

► TxBridge

Collaboratively Developed

► PG Super

■ With WSDOT and BridgeSite Software

TxDOT Software Advantages

► Free

► Specialized

► Conforms to TxDOT Policy

► Better End Product in Less Time for Less Money

Software Support Organization

Users

Website

Download Programs and
Get Information

Support

Post Programs
& Support Info

BRG
Division

Identified Bugs,
Maintenance, &
Upgrade Needs

ISD

Modified/Upgraded
Program

Certified/Tested Program
and User Documentation

General Upgrades

► Uniformity

► Installation Packages

► Install Anywhere

► Drag and Drop Execution

► Long Filename Support

► "Support Information" Link

Program Specific Updates

► Abutment Detailing Program

► BGS

► CAP18

► CULV5

► PSTRS14

► PG Super

► Tx Bridge

► Wincore

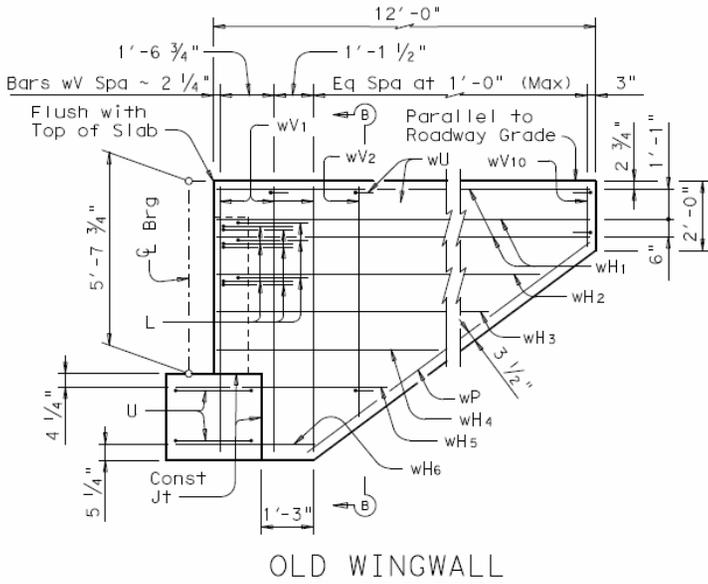
Software Updates

► Abutment Detailing Program

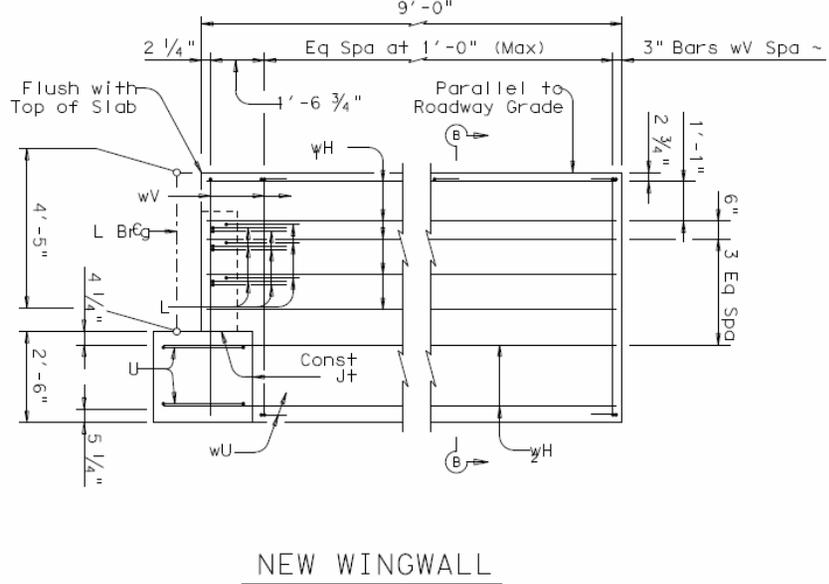
■ In Progress

■ Microstation V8 2004

■ Reflect Current Practices



OLD WINGWALL



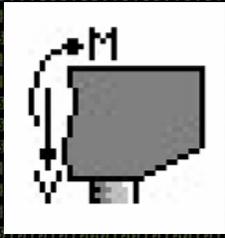
NEW WINGWALL



Software Updates

► BGS – Bridge Geometry System Version 8.17

- Posted in June 2007
- Formerly RDS – Roadway Design System
- Remove Proprietary Modules
- Numerous Bug Fixes and Upgrades
 - Basic Upgrades
 - Removed some outdated input
- Electronic User Guide Coming Soon



Software Updates

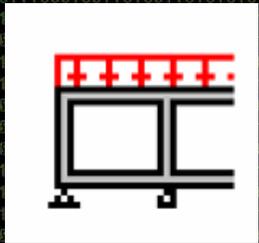
► CAP18 Version 6.0

■ Posted March 2006

■ Modified to work with LRFD Loads without Modification

► 1.2 Multiple Presence Factor

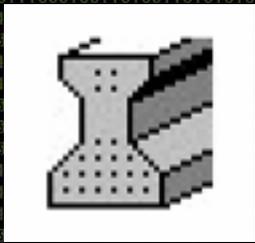
► Added "DW" load with a separate Load Factor



Software Updates

► CULV5 Version 1.8

- In Progress
- Bug Fixes and Basic Upgrades
- Analysis Methods/Assumptions
- Culvert Loading Research Project



Software Updates

► PSTRS 14 Version 4.1

- Posted April 2007

- Basic Upgrades

- Bug Fixes

- Additional Capabilities

- Added Slab Beams and HT Beams

- $f'_c \geq f'_ci +$ "Input Value"

- Modulus of Rupture = "Input Value" * SQRT(f'_c)



Software Updates

► PGSuper – Version 2.0

- Posted August 1st, 2007 (WSDOT Website)
- TxDOT Design Algorithm (for Harped Beams)
- Multi-Span Capability
- Online Library and Templates
- Custom TxDOT Output Report
- User Input E Values
- Improved Execution Speed
- Many More

► PGSuper – Version 2.X

Software Updates

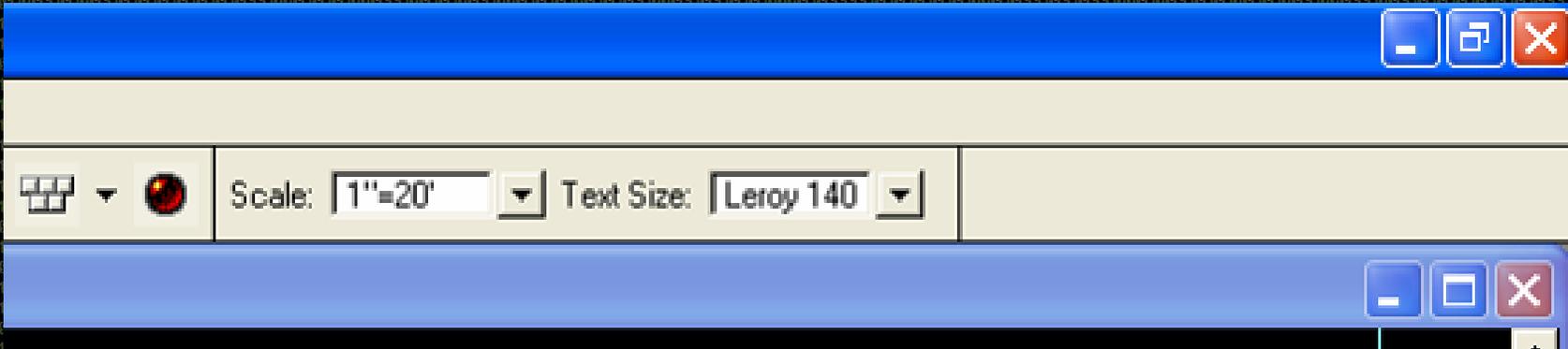
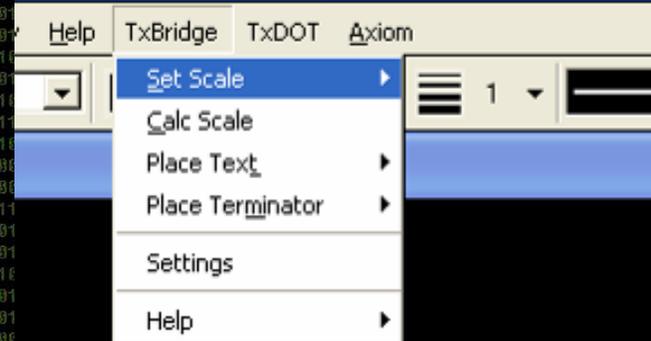
(2D - V8 DGN) - MicroStation V8 2004 Edition

► TxBridge Version 1.4

- Posted April 2007

- Microstation V8 2004

- Added a Toolbar – Displays Drawing Scale and Active Text Size





Software Updates

- ▶ Wincore 3.1
- Posted August 2005
- Bug Fixes
- Microstation V8

Future Enhancements

► Graphical User Interface (GUI)

■ Execution Console

► Simple Interface to Load Input File

► Launch Editor

► Execute Program

► List and Open Output Files

■ Data Input

► Enormous Undertaking

► Little Value Compared to Effort Required

Contact Info

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