Information Sheet for Bridge Railing Upgrades, Retrofits & Repairs

Thomas C. Stout, P.E.
Overview

• The form
• Documents we’d like to see
• The end of the rail is where the action is
• Damage
• Undocumented modifications
• What you will get from us
• Summary
Ah, the new 2488. Why do we need it?

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<table>
<thead>
<tr>
<th>INFORMATION SHEET FOR BRIDGE RAILING UPGRADES, RETROFITS, &amp; REPAIRS</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Only for work to be performed on existing structures.)</td>
</tr>
<tr>
<td>Use a separate form for each structure.</td>
</tr>
</tbody>
</table>

**Name of Submitter:** ___________________  **Position (Business Title):** ___________________.

**Mailing Address:** ___________________.  **Telephone #:** ___________________.  **Date:** ________

**Due Dates and Changes:**

<table>
<thead>
<tr>
<th>Letting Date:</th>
<th>Target Date:</th>
<th>Ready-To-Let (RTL) Date:</th>
</tr>
</thead>
<tbody>
<tr>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
</tbody>
</table>

[ ] Note that BRCF cannot change to Design/Construction and local jurisdiction without special permission through District Finance.

**NB Structure #:** ___________________.  **Structure Name:** ___________________.

**County:** ___________________.  **Bridge #:** ___________________.  **CSU:** ___________________.

**Highway:** ___________________.  **Change order?**  [ ] Yes  [ ] No

- **Type of retrofit/upgrade or guidance requested (if known):** ___________________.

  - Roadway/structure design speed (if known): _____ (MPH)
  - Roadway/structure posted speed: _____ (MPH)
  - Planned depth of finished overlay (finished riding surface): _____
  - Planned transition type (MBO/P): Crash cushion? Barrier?
  - Other special requirements (Drains? Conduit? Epoxy-coated reinforcing? Etc.)

**Existing Structure Information Required:**

- **Structure identification:** (note that existing structure may have been altered or modified and detail sheets for such work should also be included):
  - [ ] District: [ ] County: [ ] Old CSU: [ ] Highway: [ ]
  - **Inspection File:** [ ] Data Sheet (w/NB number): [ ] Attached  [ ] Not Available
  - [ ] Existing Photos: [ ] Attached  [ ] Not Available
  - [ ] Legible copies of existing plans or (if available) Plans Online CSU: [ ] Attached  [ ] Not Available
  - [ ] Bridge Layout: [ ] Attached  [ ] See Plans Online  [ ] Not Available
  - [ ] Open Details: [ ] Attached  [ ] See Plans Online  [ ] Not Available
  - [ ] Rail Details: [ ] Attached  [ ] See Plans Online  [ ] Not Available
  - [ ] Approach Details: [ ] Attached  [ ] See Plans Online  [ ] Not Available
  - [ ] Approach Slab: [ ] Yes  [ ] No  [ ] [ ] Attached  [ ] See Plans Online  [ ] Not Available

**Field Verification Information required:**

- **Existing railing type:** ___________________.

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MEMORANDUM

TO: District Engineers
FROM: Gregg A. Freeby, P.E.
DATE: February 19, 2013

SUBJECT: New Information Sheet for Bridge Railing Upgrades, Retrofits & Repairs

Form 2488 regarding bridge railing retrofits is now available on the TxDOT Enterprise Forms System (eForms) website. Please use this form when requesting the Bridge Division (BRG) to provide design details for bridge railing upgrades, retrofits or repairs to existing structures.

The purpose of this form is to ensure that all pertinent information required for this specialized and detailed work is provided when a request is first submitted to BRG. The use of this form will expedite the design work, prevent miscommunication about expectations, and assure a quality final product. The information sheet and associated data should be submitted to your district's Bridge Division Project Manager to initiate the design process. If you do not know who your Bridge Division Project Manager is, there is a map and contact information available on BRG’s Crossroads website.

If you have questions or comments concerning this form, please contact your district’s Bridge Division Project Manager.

cc: Directors of Transportation Planning and Development
District Maintenance Engineers
District Bridge Engineers
Area Engineers
Bridge Division
Notice any similarities?
Who are you and where do you live?
Where is it, what is it, and what do I charge my time to?

<table>
<thead>
<tr>
<th>Due Dates and Charges:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Letting Date:</td>
</tr>
<tr>
<td>Target Date:</td>
</tr>
<tr>
<td>Ready-To-Let (RTL) Date:</td>
</tr>
<tr>
<td>Charge numbers for Time Sheet:</td>
</tr>
</tbody>
</table>

(Note that BRG cannot charge to District maintenance and local-let jobs without special permission through District finance.)

<table>
<thead>
<tr>
<th>NBI Structure #:</th>
<th>Structure Name:</th>
</tr>
</thead>
<tbody>
<tr>
<td>County:</td>
<td>D/D/O/R:</td>
</tr>
<tr>
<td>CSJ:</td>
<td>Project:</td>
</tr>
<tr>
<td>Highway:</td>
<td>Change order?</td>
</tr>
<tr>
<td></td>
<td>○ Yes ○ No</td>
</tr>
</tbody>
</table>

- Type of retrofit/upgrade or guidance requested (if known)
  - Roadway/structure design speed (if known): ______ (MPH)
  - Roadway/structure posted speed: ______ (MPH)
  - Planned depth of finished overlay (finished riding surface?): ______
  - Planned transition type (MBGF? Crash cushion? Barrier?):
  - Other special requirements (Drains? Conduit? Epoxy-coated reinforcing? Etc.)
May we please have all this stuff? (really, we need it)

Existing Structure Information Required:

- **Structure Identification** (Note that existing structure may have been widened or modified and detail sheets for such work should also be included)
  - District: ____________________  County: ____________________  Old CSJ: _________  Highway: _________

- **Inspection File**
  - Data Sheet (with NBI number):  ○ Attached  ○ Not Available
  - Existing Photos:  ○ Attached  ○ Not Available

- **Legible copies of existing plans or (if available) Plans Online CCSJ**
  - Bridge Layout:  ○ Attached  ○ See Plans Online  ○ Not Available
  - Span Details:  ○ Attached  ○ See Plans Online  ○ Not Available
  - Abutment Details:  ○ Attached  ○ See Plans Online  ○ Not Available
  - Rail Details:  ○ Attached  ○ See Plans Online  ○ Not Available
  - Approach Details:  ○ Attached  ○ See Plans Online  ○ Not Available
  - Approach Slab:  ○ Yes  ○ No  If yes,  ○ Attached  ○ See Plans Online  ○ Not Available
We’re working on the rail so we must know everything about it.

Field Verification Information required:

- Existing railing type: ____________________________

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- Height of existing railing (Measure railing according to the BRIDGE RAILING MANUAL directions. See PLAN VIEW OF STRUCTURE detail herein for additional information. Note that if height varies more than 1” along the railing, more complete information will be required.)

  - Average rail height
    - Left Side (looking up Station): ____________________________
    - Right Side (looking up Station): ____________________________

- Rail terminal block heights (end of railing generally on a wing wall)
  - NW Corner: ____________________________
  - NE Corner: ____________________________
  - SW Corner: ____________________________
  - SE Corner: ____________________________
Yes, we need this too

- Slab information (Depth? Overhang? Curb?)
- Abutment information (wingwalls, etc.)
- Joint information
- Existing overlay depth at face of rail (Will it remain? Will removal notes be required?)
- Location of nearby road crossing (including driveways and rail roads)
- Non-recorded changes to structure? (often to rail transitions, to adjacent ditches, and to riprap drainage swales)
- Photographs, using a flash to clarify details in shadows, of existing rail conditions (see PLANVIEW OF STRUCTURE detail herein)
  - Photos and descriptive listing attached  ○ Yes  ○ No
  - Existing approach slab (and curb, drainage swales, etc.) conditions:
    - Items crossed by structure (RR? Roadway? Stream?)
Who do you send it to?
Photos, please

PLAN VIEW OF STRUCTURE
Perspective is everything
Yes, the end of the rail...
...is where...
...the action is,
and all four corners...
...may be...
...different
We need to know about drains
We need to know how much ACP you plan to use
MBGF and side slopes do matter
Much of the work...
…done on existing rails…
…is undocumented
What we do depends on what is out there
We have to go from there...
...to here to make sure everything works together
Stuff gets broke (and burned)…
…and not just in the rail
The damaged concrete has got to go and finding it is high-tech.
Even though the rail damage…
...often occurs at mid-span...
…we still need to see the end of the rail
Sometimes, something in a photo…
...will POP out at us
What you can expect from us in return...
...are easy to read sheets...
...that you can build from
Summary

• Fill in the 2488 form as completely as possible and send it to your BRG PM
• Attach the existing plans for the whole bridge, not just the rail
• Take lots of photos, label them, and convey their orientation
Summary

• Understand that much of the information we need is at the end of the rail
• Realize that old rail probably has undocumented work on it
• Even though rail damage is at mid-span, we still need information on the rail ends
Questions?

• TxDOT Bridge Division
  – Thomas Stout, Design Branch Leader (512-416-2228)
  – Jim Pitzer, Transportation Specialist (and rail wizard) (512-416-2244)