



Projects First-Round Winner
Innovations Challenge

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Prepared by Transportation Planning
Missouri Department of Transportation

Guardrail Cable Contract Reconnaissance



Description

Guardrail Cable Contract Reconnaissance was developed to use a construction contractor to perform reconnaissance on guardrail or guard cable damage and incorporate this required recon into the contract. Damaged guardrail and guard cable is identified quicker and being repaired sooner and is no longer dependent on maintenance forces having to identify the damage and then having the MoDOT employee visit the site to mark out materials and write the work order. This innovation evolved over time – originally it was ‘added’ to the contract at prices agreed based on labor and equipment necessary. The second iteration included in the contract with bi-weekly payments specified. The most recent iteration included the recon at no direct payment. The bidder would include the recon costs in its bid factors, spread amongst all the bid items – and thus if a K# was assigned, ultimately this cost recovered. See Job Special Provision on the back of this page – key parts highlighted.

Benefit

The estimated weekly recon cost for guardrail was \$700, guard cable recon \$700. The estimated biweekly recon cost was \$850 for guardrail and \$850 for guard cable. The total cost was \$4,500 bimonthly or \$108,000 per year in recon costs. The current contract provides for recon at no additional costs. Therefore, the \$108,000 is distributed in the factor/other repair items and typically recoverable. For example, of the \$2.473M billed in 2015, \$1.752M was recovered (70% recover) = cost savings of \$76,504. Since the burden of identifying, documenting, itemizing, reporting all the damage repair locations is shared by the contractor this saves time for our employees. MoDOT only provides the QA and reviews sites, photographs and documentation. Work is simplified since MoDOT employees spend less time on the recon and can better manage the contract. Safety is improved since repair turnaround is much quicker.

Materials and Labor

Staff time was spent writing Job Special Provisions and training on expectations with contractors. Costs were minimal.

For More Information Contact:

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Additional photos or videos can be seen by accessing the Innovations Challenge SharePoint page at: <http://sharepoint/systemdelivery/TP/Documents/InnovationsChallenge.aspx>.

PP. WEEKLY AND BI-WEEKLY RECONNAISSANCE

- 1.0 The contractor shall perform inspections for damage to the guardrail and guard cable of the routes below on a weekly or bi-weekly schedule based on the route. If damage has occurred to the guardrail or guard cable the contractor shall perform the following activities:
1. Document the damage discovered utilizing the Guardrail and Guard Cable Itemized Repair worksheet. The damage location, direction and detail shall be recorded on the work sheet.
 2. Itemize the repairs to be made using bid items and descriptions consistent with the contract. These bid items shall be the initial estimate for repair, adjustments to this estimate may be made during work order generation or upon discovery of additional damage in the field.
 3. Provide a minimum of two (2), high resolution color digital photographs, documenting the discovered damage, for each itemized repair worksheet.
 4. Damaged area or item shall be prominently painted at the limits of the repair utilizing Fluorescent Pink marking paint. This will provide recognition that the damage has been identified and a work order is in progress.
 5. A No Damage Report shall be filled out and submitted when a route is inspected and no damage is discovered.
- 1.1 All documentation generated during each day of inspection shall be submitted to the Project Office by 9:00 a.m. the next business day. This information shall be submitted electronically via email to the Project Office for timely generation of work orders for repair.

The Project Office shall reserve the right to make adjustments on work orders, based on information provided from the inspection, and determine the priority of repair (Emergency or Non- Emergency), timing of the repair (Day, Night, Weekend) and any additional work required consistent with the contract.

The contractor will be notified of the need for work by written notice on a location by location basis.

- 1.2 The following routes shall be inspected weekly for damaged guardrail and guard cable:

Platte County:

I-29 from the I-29/I-35 Split to the Buchanan County line
I-435 from the Missouri River to the Clay County Line
I-635 from the Missouri River to I-29
MO 152 from I-435 West Junction to the Clay County Line

Clay County:

I-35 from the I-29/I-35 Split to the Clinton County Line
US 69 from I-35 to the Clinton County Line
MO 152 from Platte County Line to I-35
US 169 from I-70 to the Clinton County Line

Jackson County:

I-70 from the Kansas State Line to the Lafayette County Line
I-35 from the Kansas State Line to the Clay County Line
I-670 from the Kansas State Line to I-70
US 71 from I-70 to Cass County Line
I-470 from US 71 to I-70
US 50 from I-470 to the Johnson County Line

Cass County

US 71 from the Jackson County Line to the Bates County Line

- 1.3 The following routes shall be inspected Bi-Weekly (once every 2 weeks) for damaged guardrail and guard cable:

Platte County

MO 45 from I-435 to I-29
MO 9 from MO 45 to the Jackson County Line

Clay County

MO 210 from I-35 to the Ray County Line.
MO 291 from the Jackson County Line to I-435

Jackson County

MO 291 from Clay County Line to the Cass County Line
US 24 from MO 291 to the Lafayette County Line
US 40 from the I-70W. Junction to Route AA MO 350 from I-435 to I-470
MO 7 from US 24 to the Cass County Line
MO 150 from Kansas State Line to MO 7

Cass County

MO 291 from the Jackson County Line to US 71
MO 7 from the Jackson County Line to the Henry County Line
MO 58 from Route D to the Johnson County Line

- 1.4 Basis of Payment. There will be no direct payment for compliance with this reconnaissance provision.