

*Missouri
Department
of Transportation*



Paula Gough, P.E., District Engineer

Northeast District
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2007 Missouri Quality Award Winner

December 5, 2008

Mr. Joe Jones
MoDOT Design Division
1320 Creek Trail Dr.
Jefferson City, MO 65109

RE: NE District Route N 2009 Awards for Excellence Nomination

Dear Mr. Jones:

Enclosed please find the application form of the Northeast District nomination of 2009 Awards for Excellence for Route N Montgomery County bridge replacement.

About a decade ago, this project was estimated to cost more than a million dollars. With the implementation of practical design and innovative thinking, the final award was just over \$200,000. By replacing one bridge with a single box culvert that we already owned and using existing material on the right of way to fill in other bridge openings, we were able to truly design this project using practicality, efficiency and safety.

The project embraced the MoDOT values of seeking out ideas that increased our options and providing the best value on a project for the area.

Thank you for considering this project for a 2009 Award for Excellence in the small project category.

Sincerely,

Tom Batenhorst, P.E.
District Design Engineer

2009 APPLICATION FORM

(required for each entry)

Complete this section for (check one): **Small Project** **Large Project**
 Post-Design Solution **Off System Project**

Job No. J3S0490 **Route** N **County / LPA** Montgomery

Description (attach separate sheet if necessary) This project eliminated two Loutre River slough bridges and made use of Commission-owned, precast reinforced concrete box culvert sections by building a culvert under one of the bridges, filling in around it, and filling in the other bridge opening. This was made possible by designing the main Loutre River bridge (under a previous job) to carry additional flow, and working with the property owners to slightly increase backwater.

Project Leader Richard Domzalski, P.E. Transportation Project Manager

Key Team Members (include key personnel irrespective of employer-nine individuals maximum)

Ray Jansen, Structural Project Manager Jack Cowden, Design

Denny Lambert, Geologist (retired) Nathan Briggs, Right of Way

Nate Muenks, Environmental/Wetland Dave McEuen, Hydraulics/Drainage

Mike Baxter, Utilities Engineer

Project Budget:

Initial Cost / Estimate \$210,000* **Final Cost / Award** \$215,000

**Original estimate from mid-1990's more than \$1 million*

What would make this entry stand out from the rest of the entries when considering MoDOT's practical design philosophy? (In layman's terms - 200 words or fewer-attach separate sheet if necessary)

When the project was originally conceived more than 10 years ago, it was estimated to cost more than a million dollars. With practical design, innovative thinking and the use of existing resources, we were able to reduce the estimate for the 2007-2011 STIP to \$210,000. There were almost no materials costs on this project. We also saved in right of way costs, but it is not possible to know how much was saved since we never advanced design far enough to determine right of way limits for the original concept.

The original concept for this project, replacing two bridges on new alignment, was completely eliminated. Basically starting over, the team brainstormed new ideas that allowed us to design and build a project. The following are the ideas used in this project: 1) used existing alignment

instead of new; 2) used one box culvert and eliminated a bridge; 3) used existing bridge decks and filled underneath them while flagging traffic instead of building new pavement and detouring traffic; 4) built slopes as flat as the right of way would accommodate (the new slopes are flatter than what existed in the surrounding area); 5) negotiated an on-site wetland mitigation bank; 6) temporarily braced and worked around utility poles instead of relocating them; 7) worked with property owner to change the design in lieu of potential legal issues. We ended up buying a small amount of right of way, but generated material needed for the project and improved drainage of their fields, while settling for little cost.



Bridge that was replaced by a single box culvert (below is AFTER picture).





Bridge that was filled in using materials on existing right of way (below is AFTER picture)



NE1/4 NE1/4 SEC.33

T48N RW
NW1/4 NW1/4 SEC.34

ROUTE	STATE	DISTRICT	SHEET NO.
N	MO	3	4
JOB NO. J3S0490			
CONTRACT ID.			
PROJECT NO.			
COUNTY	MONTGOMERY		DATE

"THIS MEDIA SHOULD NOT BE CONSIDERED A CERTIFIED DOCUMENT."

175

180

185

190

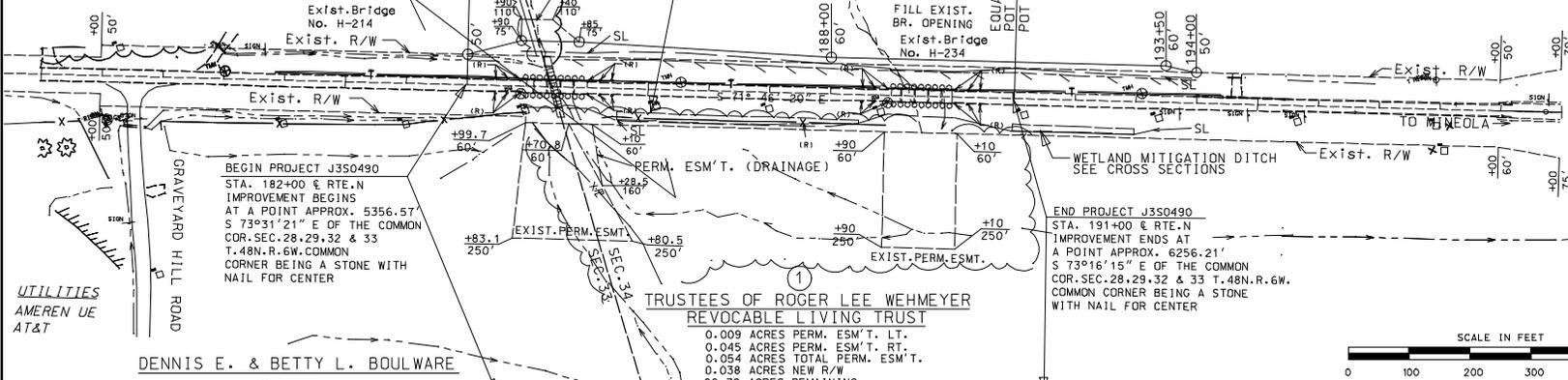
195

200

R/W LIMITS FOR THIS PROJECT EXTEND FROM STA. 182+02.37 TO STA. 194+00

ANY WORK INDICATED ON THE PLANS THAT EXTENDS BEYOND THE PROJECT LIMITS IS CONSIDERED INCIDENTAL TO AND A PART OF THE CONSTRUCTION OF THIS PROJECT.

BEARINGS SHOWN ARE INDEPENDENT.



BEGIN PROJECT J3S0490
 STA. 182+00 & RTE. N
 IMPROVEMENT BEGINS
 AT A POINT APPROX. 5356.57
 S 73°31'21" E OF THE COMMON
 COR. SEC. 28, 29, 32 & 33
 T. 48N. R. 6W. COMMON
 CORNER BEING A STONE WITH
 NAIL FOR CENTER

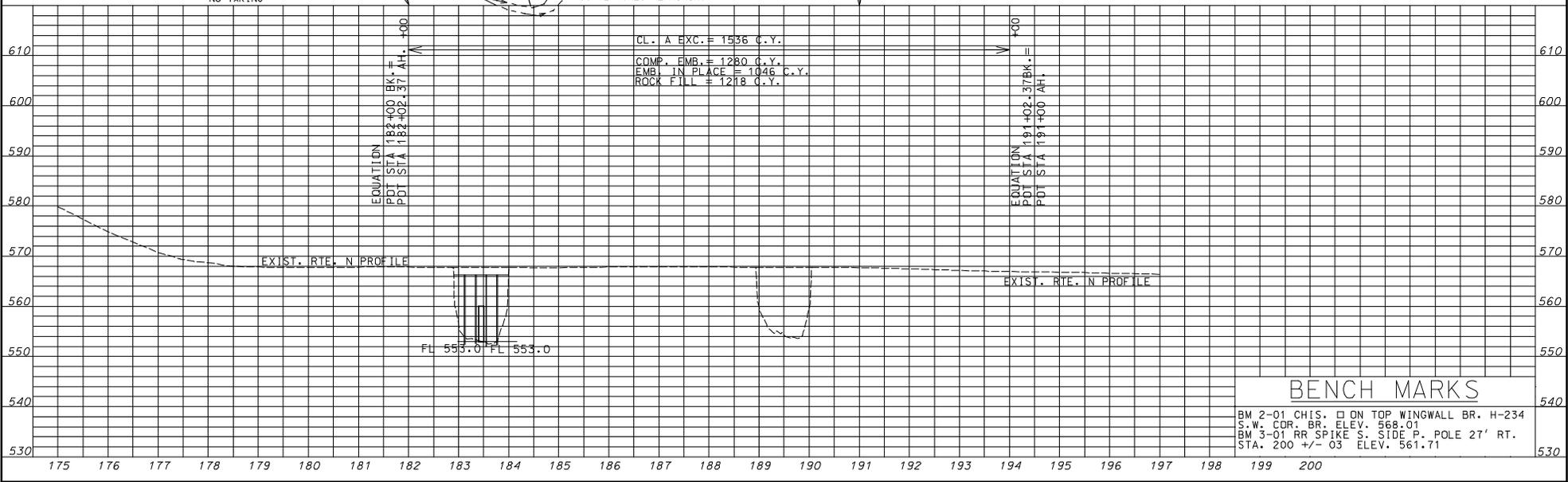
END PROJECT J3S0490
 STA. 191+00 & RTE. N
 IMPROVEMENT ENDS AT
 A POINT APPROX. 6256.21'
 S 73°16'15" E OF THE COMMON
 COR. SEC. 28, 29, 32 & 33
 T. 48N. R. 6W.
 COMMON CORNER BEING A STONE
 WITH NAIL FOR CENTER

TRUSTEES OF ROGER LEE WEHMEYER
 REVOCABLE LIVING TRUST
 0.009 ACRES PERM. ESM'T. LT.
 0.045 ACRES PERM. ESM'T. RT.
 0.054 ACRES TOTAL PERM. ESM'T.
 0.038 ACRES NEW R/W
 88.72 ACRES REMAINING

GRAHAM CAVE FARMS, INC.
 0.049 ACRES PERM. ESM'T
 0.34 ACRES NEW R/W
 29.23 ACRES REMAINING

UTILITIES
AMEREN UE
AT&T

DENNIS E. & BETTY L. BOULWARE



BENCH MARKS

BM 2-01 CHIS. □ ON TOP WINGWALL BR. H-234
 S.W. COR. BR. ELEV. 568.01
 BM 3-01 RR SPIKE S. SIDE P. POLE 27' RT.
 STA. 200 +/- 03 ELEV. 561.71