

**MoDOT PROJECTS
2008 APPLICATION FORM**
(required for each entry)

Job No. J0P0591J **Route** 67 **County** Saint Francois

STIP Description (Scoping or Construction, state which STIP) _____

2007-2011 STIP: Construct interchange ramp to provide northbound access to Route 67

Is the submittal for the entire project or just a portion of the project? Please explain: _____

Entire project: The 591J project was programmed to address an access issue that was unable to be resolved in the 591F interchange project due to an adherence to traditional design concepts and a lack of available resources.

Project Manager (could have both) **MoDOT** Andy Meyer **Consultant** _____

Key core team members as approved by the MoDOT PM (may include consultants) (limit of 9)

David Wyman Connie Roe Dale Kinneman

Michael Harris Matt Malone John Tutt

Sherry Glastetter Angela Wilson Tim Richmond

Project Contacts: **District** Andy Meyer **Consultant** _____

Project Budget:

Conceptual budget \$ N/A **Initial STIP Budget** \$ 999 (573 const + 426 R/W)

Final STIP budget \$ 999 (573 const + 426 R/W) **Award amount** \$ 885 (518 const + 387 R/W)

Other : J0P0519F estimated total cost for ramp: 2,200 (1,000 construction + 1,200 R/W)

Value Engineering study during design? yes no (if yes) **Project Stage** _____

Total VE savings implemented \$ _____ **VE Contact Person** _____

Construction-stage VE (VECP)? yes no (if yes) **Explain** _____

Total VECP savings \$ _____ **VECP Contact Person** _____

What would make this entry stand out from the rest of the entries when considering MoDOT's practical design philosophy? (In layman's terms - 100 words or fewer) Traditional design concepts would have led to a "diamond" ramp or "folded" ramp at this location. These approaches were investigated during the 591F project and disregarded due to their construction cost, property impacts, and conflicts with the nearest interchange. The decision was made to not provide northbound access to 67 at this location. The public was not pleased with this reduction in function and requested it be addressed before the median crossings were allowed to close. The "J-hook" design adopted in 591J compliments both Rte 67 & 32 interchanges and reduces impacts to a manageable level that allowed construction to proceed and northbound access to be provided. A practical solution to a previously unsolvable problem.

Send entries to: MoDOT Design Division, ATTN: Jay Bestgen
1320 Creek Trail Dr., Jefferson City, Missouri 65109

ALL ENTRIES MUST BE RECEIVED NO LATER THAN CLOSE OF BUSINESS ON DECEMBER 15, 2007.



MEMORANDUM

Missouri Department of Transportation Design District 10

TO: Jay Bestgen
Assistant State Design Engineer

FROM: Andy Meyer
Transportation Project Manager

DATE: December 10, 2007

SUBJECT: 2008 Awards for Excellence in Practical Design
Submittal – J0P0591J, Route 67, St. Francois Co.

Please find attached District 10's submittal of the above referenced project for consideration. The project addressed a need for northbound access at the previously constructed Maple Street interchange (J0P0591F) in Farmington.

Project History

The 591 series of projects are intended to provide controlled access to the Route 67 corridor in St. Francois County.

J0P0591F, constructed in 2005, provided controlled access to Route 67 at Maple Street and re-connected a city facility that had been severed by the construction of the directional ramp providing access to southbound Route 67 from westbound Route 32. During the design phase of the project, several alternates were considered to provide northbound access to Route 67 from Maple Street. (SEE FIGURE 1)

The first alternate considered was a traditional diamond ramp in the northeast quadrant, which was discarded as a viable design due to potential impacts to the adjacent Auffenberg auto dealership and an unacceptable proximity to the northbound off-ramp at Route 32. This alternate ramp design, including right of way and construction, was estimated at \$2,500,000.

The second alternate considered was a folded diamond ramp in the southwest quadrant, which was discarded as a viable design due to the potential displacement of an adjacent residence and the presence of a large quantity of rock excavation at this location. This alternate ramp design, including right of way and construction, was estimated at \$2,200,000.

Because J0P0591F was a cost share project with Farmington, there were limited resources available, and access to Route 67 from Route 32 was nearby, we constructed a facility that did not provide a ramp for northbound access to Route 67.

J0P0591G, constructed in 2006, provided an outer road system between Parkway Drive and Maple Street and allowed the removal of 6 median crossings. During meetings leading up to the removal of the median crossings, the public overwhelmingly conveyed their concern that at the south end of the outer road system (Maple Street) there was no direct access to northbound Route 67. In order to address this issue with the public, including vocal adjacent business owners, we agreed to construct a northbound on-ramp at Maple Street and committed to having it open to traffic by the end of 2006 in order to coincide with the removal of the crossovers.

Project Scope

The J0P0591J project was assigned to the core team with the parameters that the project should:

- Provide direct northbound access to Route 67
- Cost less than one million dollars (the amount that appeared to be available in the program)
- Be open to traffic in less than a year.

Project Design

The design considered, known as a “J-hook”, consisted of a series of tight radius reverse curves that would quickly direct the user into an acceleration lane on Route 67. The primary goal was to provide a safe merging movement into Route 67 traffic that does not conflict with traffic exiting at Route 32. (SEE FIGURES 2 & 3). The secondary goal, but importantly the one that would allow construction to take place, was to minimize the right of way impacts to adjacent commercial development, including the *Auffenberg Chrysler Center*. The “J-hook” design accomplished this goal because the majority of the facility was constructed as widening within existing Rte 67 right of way.

Property owners that accessed Maple Street from the outer road previously located in the northeast quadrant were provided access from an extension of Sunset Drive. This extension was funded by the City of Farmington as their participation in this project. The extension of Sunset Drive cost approximately \$157,000, which compared favorably with the cost of buying the access rights, estimated at \$716,000.

Project Schedule as attained

- | | | | |
|--------------|----------------------------|--------------|------------------------------|
| • 11/30/2005 | Project assigned | • 03/20/2006 | Right of way plans completed |
| • 01/12/2006 | Public meeting held | • 07/28/2006 | Project letting |
| • 01/24/2006 | Preliminary Plan submitted | • 01/24/2007 | Project open to traffic |

Project Cost Savings

As stated previously, the function of the J0P0591F project was compromised by the elimination of northbound Rte 67 access from Maple Street. This was considered a reasonable decision at the time due to the proximity of available access from Route 32 and the desire to deliver the project within the resources available. The “J-hook” delivered this access within a limited timeframe and at a substantial savings.

Northbound directional on-ramp as estimated in J0P0591F:	\$2,200,000
Northbound “J-hook” as constructed in J0P0591J:	<u>\$885,000</u>
Total Savings:	\$1,315,000



JOP0591G
OUTER ROAD PROJECT
UNDER CONSTRUCTION



NO NORTHBOUND
ACCESS TO RTE 67

CONNECTOR RD

MAPLE ST

OUTER RD

SB OFF

SB ON

NB OFF

RTE 67 SB

RTE 67 NB

FIGURE 1
JOP0591J
PRACTICAL DESIGN
SUBMITTAL

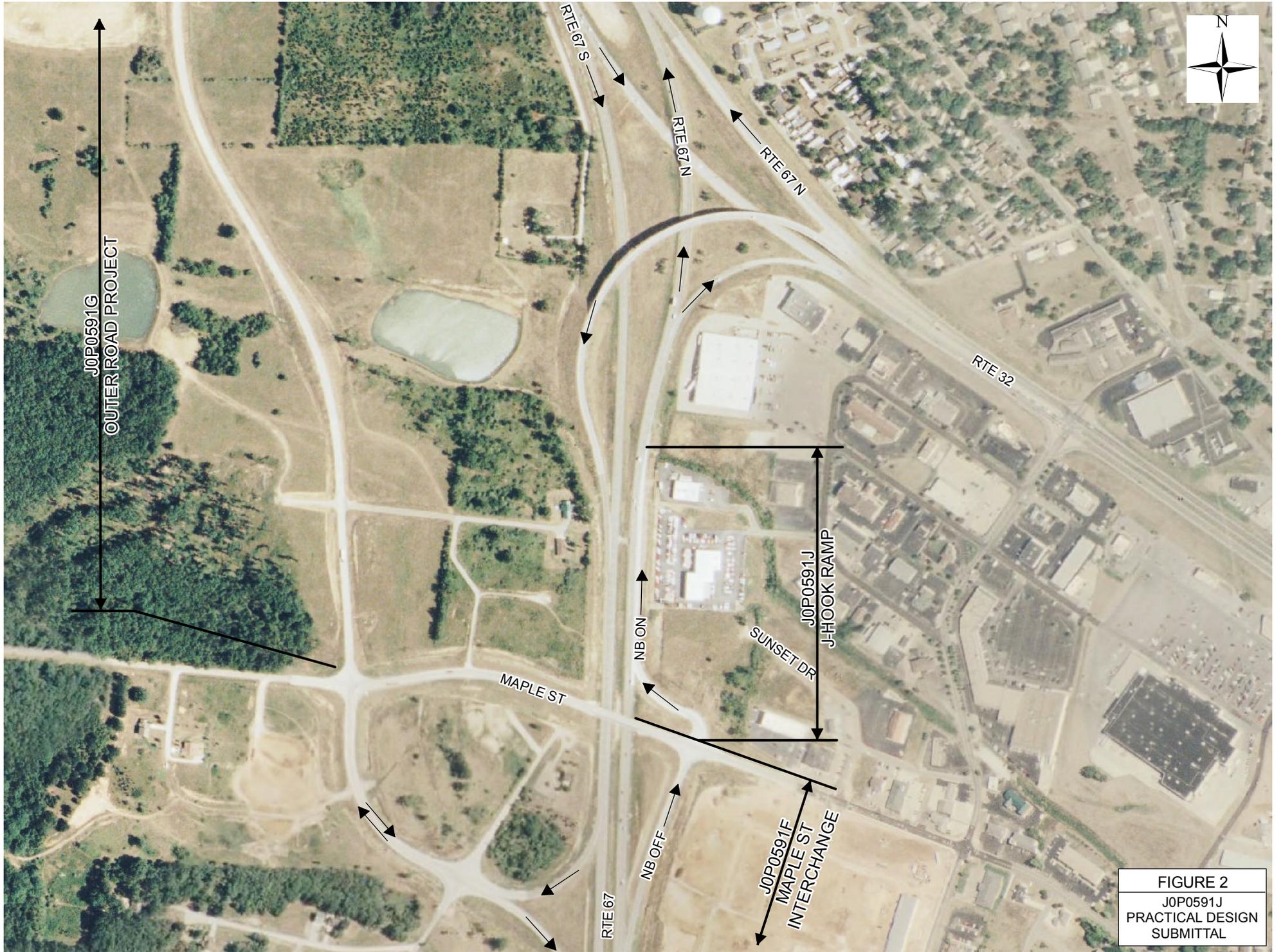
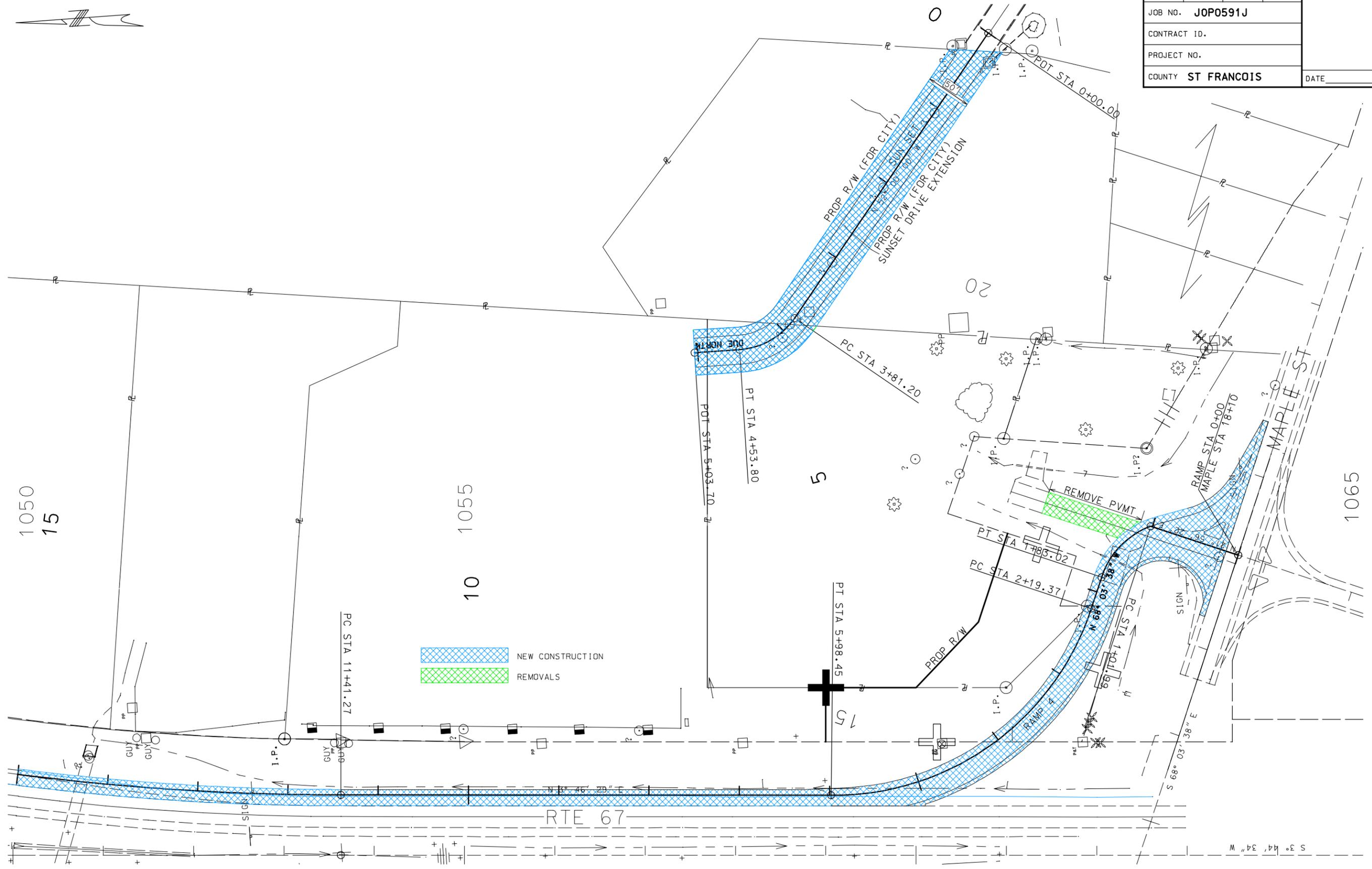


FIGURE 2
JOP0591J
PRACTICAL DESIGN
SUBMITTAL

ROUTE 67	STATE MO	DISTRICT 10	SHEET NO. 1
JOB NO. JOP0591J			
CONTRACT ID.			
PROJECT NO.			
COUNTY ST FRANCOIS			DATE



 NEW CONSTRUCTION
 REMOVALS

1050
15

1055
10

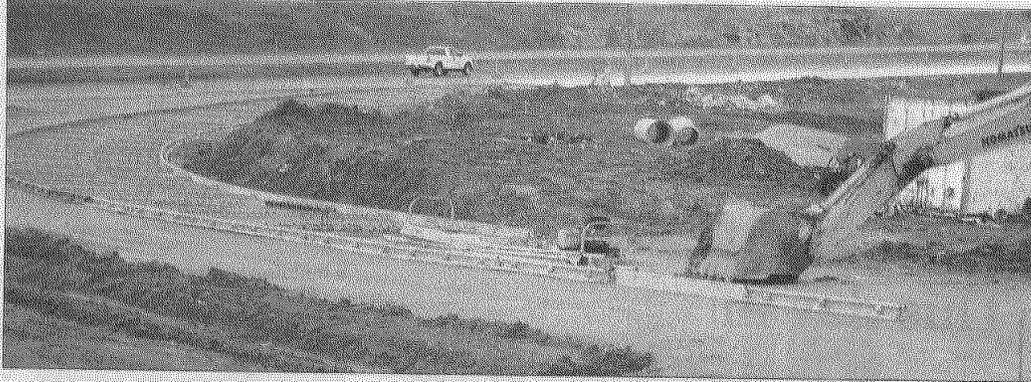
1065

RTE 67

S 3° 44' 34" W



FIGURE 4 - Project open to traffic
JOP0591J
Practical Design Submittal



PAULA BARR / DAILY JOURNAL

Concrete forms are ready for pouring at the new Maple Street ramp to northbound U.S. 67.

MoDOT workers experience slight setback

■ Vehicle drives through soft concrete of new ramp from Maple Street

By PAULA BARR

Daily Journal Staff Writer

Missouri Department of Transportation (MoDOT) workers recently poured one section of concrete for the new ramp from Maple Street to northbound U.S. 67, but they had a slight setback.

"They poured a section of the acceleration lane, then someone drove through it while it was soft," MoDOT Resident Engineer Matt Malone said. "They have to repair that before they can continue."

Curving concrete forms lie in a cleared section of field where the new ramp will descend from Maple Street in Farmington. Workers plan to pour more sections of the new roadway Thanksgiving week.

PLEASE SEE WORKERS / PAGE 2

Workers

CONTINUED FROM PAGE 1

The large construction vehicles were silent Friday. Rainy weather cut short the work week, but MoDOT officials hope the area will be dry enough to continue work on Monday.

The crew has until spring to complete the ramp, but had set an earlier goal for themselves, Malone said. The rain has

slowed their work, however.

"They had hoped to have finished by end of year, but I don't know," he added. "They might still do it if the weather cooperates."

MoDOT, in conjunction with Farmington, built the Maple Street project last year, but did not construct a northbound ramp. Financial resources, property acquisition and the proximity to the Highway 32 exit from northbound U.S. 67 were among the reasons the department did not build a ramp, according to MoDOT officials.

When the department announced a year ago that it would go ahead with the initial plan to close all six crossovers at one time, officials agreed to would move up construction for the Fairgrounds interchange and build the northbound ramp.

The ramp will enter U.S. 67 about 800 feet from the Highway 32 exit. That will provide adequate space for an acceleration lane to let vehicles enter the highway from Maple Street without interfering with vehicles exiting onto Highway 32.

FIGURE 5 – Project experiences setback due to accident during construction, opens to traffic by 1/24/2007.



Project Summary

0P0591J

Transportation Planning

2217 St. Marys Blvd.
P.O. Box 270
Jefferson City, MO 65102
Phone (573) 526-8058 Fax (573) 526-8052

Project Manager: ANDY MEYER
(Award Month): 8

Status: 5-APPROVED
(Award Year): 2006

Stage: AWARDED
SFY / (STIP SFY): 2007

Route Name	Begin Log	End Log	Begin County	TMA	Travelway ID
US 67 S	96.072	96.215	St. Francois	N	15

System	Func. Class	NHS	AADT	Confl.
Primary	Freeway	Y	6,477	N

Purpose And Need	Construct interchange ramp to provide northbound access to Rte. 67
Reason And Remarks	Cost participation by City of Farmington.
Detailed Description	Construct interchange ramp to provide northbound access to Rte. 67
Location	0.5 mile south of Rte. 32 at Maple Street Interchange.

Funding Package 1:	92- 15 YEAR PLAN	Federal Oversight:	No	Primary Category:	6- MAJOR PROJECTS (DIST)
Funding Package 2:		Fed. Funding Category:	N- NHS	Secondary Category:	C- SYSTEM EXPANSION
Bonding SFY:		Capitalization Code:	1-C- CAPITALIZED	Work Type 1:	F- FREEWAY
Adv. Const/Payback:	No	Adv. RW Year:	0	Subwork Type:	
Work Miles:	0.2	Bridge Count:	0	Work Type 2:	
Parcel Count:	3	Track:	No	Work Type 3:	
Award Month:	8	Award Year:	2006	Const. Award Cost:	518
Better Roads Brighter Future:	No	Tip Number:			

Cost Estimate Breakdown

<u>Grading/Drain.</u> 160	<u>Base Surface</u> 269	<u>Bridge Est.</u> 0	<u>Misc.</u> 125	<u>Contract Est.</u> 554	<u>PE Spent</u> 25	<u>ACT RW Spent</u> 367	
				<u>Constr. Conting.</u> 11	<u>Const. Est.</u> 565		
				<u>Utilities</u> 8			
				<u>Non Contract</u> 0	<u>Const. Cost</u> 573		
				<u>R/W Acquisition</u> 0			
<u>R/W Incident.</u> 50	<u>Prelim. Engr.</u> 0	<u>Constr. Engr.</u> 39	<u>Ttl Incidental</u> 89		Appr. STIP	<u>% Diff.</u>	
				<u>Incent./Disincent.</u> 0	<u>Const. Cost</u> 0	10,000.0%	
				<u>Prog. Est. Ttl.</u> 89	<u>RW Acquisition</u> 0	0.0%	
					<u>Pri. Ttl.</u> 1,151		
						<u>Lane Miles</u> 0.29	<u>Cost/Mile</u> 1,937.06

Project Costs

	Prior	2006	2007	2008	2009	2010	2011	2012	2013	Future	Prg Ttl	Total
Preliminary Engineering	0	63	0	0	0	0	0	0	0	0	0	63
Right Of Way	0	426	0	0	0	0	0	0	0	0	0	426
Construction	0	0	573	0	0	0	0	0	0	0	0	573

FFOS

Construction (Local)	0	0	85	0	0	0	0	0	0	0	0	85
Right Of Way (Local)	0	0	72	0	0	0	0	0	0	0	0	72

Project ID: 8945
Let By: Central Office
Work District: 10
Length: 0.171
Est. Submittal Date: Feb 10, 2006

Planning Org	Federal District	Senate District	House District
SE REG PLAN & ECON DEV COMM	8	3	106