

IV. Lane Rentals

A. PURPOSE

The lane rental concept is used to encourage contractors to minimize road-user impacts. The contractor is required to pay a rental fee for closing lanes or shoulders during construction. Mn/DOT established a rental fee rate which is dependant on the number and time lanes are closed. The contractors are required to submit their proposed lane rental times with their bids. Similar to the A+B method, the amount of the total lane-rental charges a contractor proposes can be combined with the cost for the work items to determine the successful bidder.

During the project, the fee is assessed for the time that the contractor occupies or obstructs part of the roadway and is deducted from the monthly payments. If a contractor exceeds the proposed time within their bid, they are assessed a penalty in the amount of the rental fee rate. Often, the contractor is awarded an incentive for any un-used hours of their bid.

B. PROJECT TYPES

The lane rental concept has been applied to six (6) projects since 2000. Listed below are the project types.

District	SP	Letting	Hwy	Project Type	Bid Cost
1	6915-122	6/11/2004	53	BIT MILL AND OVERLAY, CULVERTS, SIGNAL	\$ 4,582,093
1	5915-125	4/22/2005	53	GRADING, BIT PAVING, SIGNALS, BRIDGE	\$ 12,449,548
2	0416-39	5/21/2004	197	BITUMINOUS OVERLAY	\$ 176,605
METRO	6212-9276	6/25/2004	36	BRIDGE PAINTING	\$ 439,379
METRO	6212-9212	11/19/2004	36	BRIDGE PAINTING	\$ 395,549
METRO	2724-115	3/25/2005	55	BITUMINOUS MILL AND SURFACING	\$ 948,739

Table 6 – Lane Rental Project Types

The lane rental concept has been applied using different methods on several of these projects. Listed below are the types of applications that several districts have applied to the lane rental concept.

- Reduce Impacts to Intersections (TH 55 Metro)
- Reduce flagging operations time (TH 53 in District 1)
- Reduce long-term (24 hour) lane closures (TH 36 Project in Metro)
- Reduce lane closures on multi-lane highways (TH 53 in District 1)



TH 53 in District 1 (SP 5915-125)



TH 53 in District 1 (SP 5915-125)



C. Establishing Fees

Mn/DOT established hourly roadway fees for lane and shoulder closures. The fees often included peak hour peak, non-peak hour and weekend work restrictions. Fees are developed from roadway user costs.

On SP 6915-122, District 1 established a Lane Rental Working Fund of \$160,000 for the project. The contractors were not required to bid the number of hours for this project. Each time the contractor used a lane rental (depending on the time and location), the lane rental fee was subtracted from the Lane Rental Working Fund. At the end of the project, any amount remaining in the Lane Rental Working Fund would be paid as an incentive to the contractor. A negative amount would result in a disincentive deduct from the contract payment.

On SP 2724-115, the metro district applied the lane rental concept to the impact on signal systems. Rather than have the contractor bid a lane or shoulder closure, the contractor bid on the number of signal system impacts with the bituminous pavement project in south Minneapolis.

D. IMPACTS ON BIDS AND INCENTIVES

Listed below is a summary of the low bid awards for the six project using lane rentals.

District	SP	Hwy	Project Type	Bid Cost	Lane Rental	Paid Incentive
1	6915-122	53	BIT MILL AND OVERLAY, CULVERTS, SIGNAL	\$ 4,582,093	\$ 160,000	\$ 40,000
1	5915-125	53	GRADING, BIT PAVING, SIGNALS, BRIDGE	\$ 12,449,548	\$ 100,000	TBD
2	0416-39	197	BITUMINOUS OVERLAY	\$ 176,605	\$ 9,800	0
METRO	2784-304	494	MAJOR RECONSTRUCTION - DESIGN/BUILD	\$ 135,639,711	TBD	TBD
METRO	6212-9276	36	BRIDGE PAINTING	\$ 439,379	\$ 13,200	\$ 3,700
METRO	6212-9212	36	BRIDGE PAINTING	\$ 395,549	\$ 80,300	\$ 26,300
METRO	2724-115	55	BITUMINOUS MILL AND SURFACING	\$ 948,739	\$ 89,250	\$ 38,500

Table 7 – Lane Rental Impact on Bids and Incentives

- Four of the projects were awarded to the low cost bidder and lane rental did not impact the award of the contract.
- On SP 6915-122, Mn/DOT established Lane Rental Working Fund of \$160,000 for the project and contractors were not required to bid the lane rental time.
- On the I-494 Design-Build project, lane rental is only being applied during the pavement marking warranty period. If the contractor needs to perform corrective action after the permanent pavement markings are placed, a lane rental fee will be assessed.
- On SP 2724-115, the contractor with the fourth highest cost for work items was awarded the contract. This contract bid substantially less time than the other contractors and was awarded the contract using the A+B theory.
 - The contractor bid mostly weekend work in a condensed schedule. Other contractor bid some weekday work with higher lane rental fees.
 - The lane rental bids were in order of low bid:
 - \$89,250 (119 hours)
 - \$182,500 (268 hours)
 - \$170,250
 - \$220,000 (314 hours)
 - \$179,000 (217 hours)
- On SP 6212-9276, the awarded contractor bid twice the amount of time as the second bidder, but was awarded the contract due to the cost savings associated with the work item “A” portion of the bid.



E. IMPACTS ON SAFETY

The impact of safety needs to be addressed with all projects, especially on projects with accelerated schedules. Contractors set-up lane closures not only to protect the traveling public, but to protect the safety of their workers. There was some concern regarding contractor taking more safety risks to reduce lane rental costs. This included working at nights instead of the day and reducing buffers distances between operating equipment/workers and the traveling public.

To combat the potential safety issues, District 1 provided guidelines to the contractor on when lane closures would be required. The plans included details on the distance and height of drop-offs adjacent to traffic, backfilling requirements, and minimal work zone safety areas required. Attached in Appendix D is the plan sheet that District 1 included in their TH 53 project.

F. Impacts on Quality

Similar to the comments received on the A+B projects, many field staff believed that the lane rental concept may have reduced the quality of work. Lane rentals work was often done at night when lower rental fees occurred. The increased rate of production may have also compromised some quality of work. The extended work hours also placed on strain on Mn/DOT and contractor personnel.

G. BENEFITS ON LANE RENTALS

Many field personnel observed many benefits of using the lane rental tool:

- Contractors were faster at taking down lane closures
- Contractors were required to think more about reducing contract time during the bidding process
- Inspectors saw a reduction in lane closures were no/minimal amount of work was being done
- Incentives for limited lane rentals encouraged contractors to reduce lane closure times.

H. LESSONS LEARNED

Many field personnel also provided input on the difficulties of administering lane rentals:

- In some cases, the extra work was occurring along with the normal construction operations that made it difficult to assess if lane rental charges should be invoked.
- On a moving operation, it was sometimes difficult to monitor the lane rental impacts. For example, the TH 55 mill/overlay project had different lane rental charges on the number of intersections impacted.
- Further guidance in specifications on turn lane closures needs to be addressed.

I. CONCLUSIONS

- Lane rental is an effective tool to reduce the amount of lane closures on projects.
- Without good specifications and enforcement, the use of lane closures may decrease safety. To reduce lane rental expenses, contractors may be hesitant to install lane closures when they may be needed to protect workers and/or motorists.
- Awarding incentives for early completion also helped reduce lane closure impacts.
- Some field personnel believe that lane rentals may also decrease quality of work. Contractors will work more night hours when lane rental times are typically lower.

J. RECOMMENDATIONS

- Develop guidelines for using lane rentals on Mn/DOT and local projects.
- Continue to monitor lane rental use on Mn/DOT projects.