



# Transportation Synthesis Report

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## Fraud/Collusion Detection Systems

*Prepared for*  
**Bureau of Highway Construction**  
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*Transportation Synthesis Reports (TSRs) are brief summaries of currently available information on topics of interest to WisDOT technical staff in highway development, construction and operations. Online and print sources include NCHRP and other TRB programs, AASHTO, the research and practices of other state DOTs, and related academic and industry research.*

### **REQUEST FOR REPORT**

WisDOT Bureau of Highway Construction is broadly reviewing approaches to detecting and preventing fraud and collusion in the bidding process for highway construction projects. National trends and successful state practices are of interest to BHC. The RD&T Program was asked to survey these and provide a starting point for further study, with particular attention to the Decision-Support System module of the AASHTO Trns•port software product.

### **SUMMARY**

The most common fraud and collusion schemes in the highway construction bidding process involve bid rigging and the abuse of DBE status. While fraud detection may entail sophisticated computer-based investigations of the practices of various parties in the bidding process, it also requires a reconsideration and re-appreciation of existing policies.

The most prominent computer-based approach to detection entails the use of Trns•port, a product sponsored by AASHTO. National transportation bodies offer a variety of instructive papers and seminars on detecting bid fraud. Currently, experts treat both bid rigging and DBE status abuse mostly as management and policy problems, requiring more regulatory energy within existing or enhanced policy frameworks, as well as a cultural shift within transportation agencies to embrace existing standards.

### **TRNS•PORT**

An AASHTOWare product, Trns•port helps officials manage a variety of functions related to contracting. One of the modules, BMS/DSS (Decision-Support System), can be used to detect fraud. The software requires considerable training; an overview of the BMS/DSS module can be seen at <http://www.cloverleaf.net/products/dss/index.shtml>.

The Trns•port users group site at <http://tug.cloverleaf.net/default.htm> includes listervs, schedules of conferences and workshops, and more.

So far, **37 states, Washington D.C., and the Canadian province of New Brunswick**, participate in the Trns•port users group. To contact software users, find links at <http://tug.cloverleaf.net/StateReps.htm>. It is by no means clear if all or any use the BMS/DSS (Decision-Support System) for fraud detection. DOT officials in **South Carolina** took heat in September for failing to use the fraud detection capabilities of its software. See <http://www.thestate.com/mld/thestate/news/local/4180308.htm>.

**Alaska.** The state transportation department recently held a demo workshop of the software; see <http://www.dot.state.ak.us/stwddes/research/assets/agenda/trnsport.html>. The Alaska contact is Gary Eddy at 907-465-6951 or [gary\\_eddy@dot.state.ak.us](mailto:gary_eddy@dot.state.ak.us).

Info Tech, producer of Trns•port, offers several three-day fraud detection seminars annually, teaching the use of computer skills in detecting fraud. Phone 352-381-4400, e-mail [info@infotechfl.com](mailto:info@infotechfl.com), or see <http://www.infotechfl.com/products/trnsport.shtml>.

### **FRAUDULENT BIDDING PRACTICES**

Fraud in bidding takes a variety of forms. These resources offer overviews and descriptions of various fraudulent practices related to highway construction.

**FHWA.** In a briefing, “**Fraud Prevention – Suspension/Debarment**” (Feb. 28, 2002)—<http://www.fhwa.dot.gov/construction/washto02/fraud.htm>—the FHWA categorizes various types of fraud: *Cost Mis-Charging for Materials and Labor*, including intentional under-estimation of costs during the bid-submission process; *Specifications* that favor certain contractor parties; *Conflicts of Interest*, including firms hired for developing specifications that enjoy close affiliations with certain contractors; *Collusive Bidding and Price Fixing*, signaled by repeated awards of contracts, alternating high and low bids from the same contractor; *Questionable Documentation from Contractors*, including altered records, falsified pre-qualification documents, and false DBE status. Contact: Jerry Yakowenko, 202-366-1562.

**FHWA.** *Contract Administration Core Curriculum Participant’s Manual and Reference Guide 2001.* [http://www.fhwa.dot.gov/programadmin/contracts/cor\\_IIIB.htm](http://www.fhwa.dot.gov/programadmin/contracts/cor_IIIB.htm). The manual addresses bid rigging practices like complementary bids, territorial allocation, joint ventures and bid rotation.

“**AASHTO, DOT Inspector General Co-Sponsor Conference to Combat Transportation Fraud,**” AASHTO Quarterly Magazine, vol. 78 (3), Fall 2000, pp. 26-27. [www.transportation.org/publications/quarterly.nsf/By+Category+Public/A96922595F061510862569E40080DE5F/\\$FILE/AASHTO\\_Quarterly\\_Fall\\_2000.pdf?OpenElement](http://www.transportation.org/publications/quarterly.nsf/By+Category+Public/A96922595F061510862569E40080DE5F/$FILE/AASHTO_Quarterly_Fall_2000.pdf?OpenElement). This describes varieties of fraud, most pertaining to the bidding process. The abstract names bid-rigging “the most familiar form of contracting crime. It involves abuse of the low-bid system to eliminate the competition that is meant to deliver taxpayers the necessary work for the lowest cost through collusion among the prospective competitors. In recent years, the OIG has obtained convictions for systematic shorting of supplies used in road building, abuse of the government’s special system to aid disadvantaged business contractors, and giving and receiving bribes to obtain contracts. From time to time, the problem is plain old embezzlement.”

**2002 National Fraud Conference on Highway Construction and Public Transportation,** St. Louis, May 2002. <http://www.transportation.org/fraudconference/agenda.htm>. This site names presenters and summarizes lectures, but offers no texts or transcripts. Best practices panels were held, and key issues included bid rigging and fraud schemes such as abuse of minority or disadvantaged business enterprise (DBE) status.

- For the text of Transportation Secretary Norman Mineta’s opening address, May 16, 2002, see <http://www.dot.gov/affairs/051602sp2.htm>.
- “Best Practices for Fraud Prevention/Detection on Federal-aid Highway and Public Transit Construction Projects,” moderated by Gary Lewis, Program Director, USDOT-OIG, Fort Worth, Texas; [lewisg@oig.dot.gov](mailto:lewisg@oig.dot.gov) or 817-978-3318.
- “Best Practices for Bid Collusion Detection for States and Public Transportation Agencies,” co-moderated by Sharon Schulte, Inspector General, Missouri DOT. In lieu of transcripts, contact Schulte at [schuls@mail.modot.state.mo.us](mailto:schuls@mail.modot.state.mo.us) or 573-751-8653.

**Virginia DOT.** This June 1988 report—<http://tug.cloverleaf.net/PDFFiles/virginia.pdf>—clearly describes “anti-competitive-market behavior” and bid rigging in construction, including the motivation, rationale, feasibility, and effectiveness. Signs of collusion and bid rigging include coordinated pricing or production, usually formal or explicit, with or without the knowledge of a trade organizations. Bid rotation, the cooperative allocation by sellers via complementary bidding, proves more common and feasible when few players are in the market, less so with many businesses in market.

### **DBE FRAUD**

**Kentucky** created in May 2002 an Office of Inspector General (OIG) in response to an extortion and DBE scandal on a bridge maintenance project. See <http://www.kytc.state.ky.us/News/RevisedPRRCReport.pdf>. This report describes criminal behavior and organizational responses to fraud vulnerability. Suggestions focus on reorganizations within transportation department units, document security measures, and training resources for the DBE Program. Recommendations include: creation of an OIG, policy and procedure review, suspension of research and development in order to inventory bridge maintenance needs, firmer control of contractor-transportation agency relationships, eradication of lump sum projects for large bridge maintenance, and reorganization of document management procedures for DBE regulatory compliance. The report also calls for a cultural shift within the department to view the DBE Program as a useful process rather than as a bureaucratic impediment.

**Iowa.** [http://www.dot.state.ia.us/contracts/dbe\\_program.pdf](http://www.dot.state.ia.us/contracts/dbe_program.pdf). Iowa's document on its DBE Program, written in 1999, updated in 2000, discusses fraud issues in Subpart F (p.23): Monitoring, Compliance, and Enforcement.

**Maryland.** Maryland DOT has a fraud hotline for reporting suspected abuse of the Minority and Disadvantaged Business Enterprise Program: [http://www.mdot.state.md.us/MBE\\_Program/fraud](http://www.mdot.state.md.us/MBE_Program/fraud).

### **RESEARCH IN PROGRESS**

NCHRP Synthesis Report 34-05, *Management of Disadvantaged Business Enterprise Issues in Construction*. This project focuses on overall DBE management with some attention to compliance and fraud. To read a project summary, go to <http://www4.nas.edu/trb/synthesis.nsf/All+Projects/Synthesis+34-05>.