PRIVATIZATION OF MAINTENANCE OPERATIONS

Bob McCullouch – Purdue University

Good News

- Winter is almost over.
- Peyton Manning is the Colts QB.
- Charles Barkley is fixing his golf swing.
- Brian Williams of NBC
- INDOT Operations is doing a great job!
JTRP Project – Performance-Based Contracting for Roadway Maintenance Operations

- What is PBC? “Use of private companies to perform maintenance activities and standards to evaluate performance.” Still a contentious and controversial subject.
- U.S. activities
- Findings
- Recommendations
- Conclusions

How does PBC work?

Performance Standards

<table>
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<tr>
<th>Category</th>
<th>Description</th>
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Assessments and Payment

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<td>0.675</td>
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- Perform all routine/ordinary maintenance to include removing channel drift, stabilizing, erosion, cutting, removing and disposing of vegetation, brush and trees that are on, adjacent to, or under bridges.
- Maintain bridge slope protection as designed.
- Drainage systems are clean and functioning as designed.
- Channel and/or Slope Protection components are free of vegetation.
- Any erosion and/or scour has been stabilized.
North Carolina

- Requested by legislation in 2005, not mandated.
- The legislation was prompted by PBC lobbyists.
- Use “Best Value and Best and Final Offer” approach for selecting a contractor.
- One contract, started on July 1, 2007, 131 road miles on rural and urban interstates.

Snow and Ice Removal

- Developed two types of contracts.
  - Contractor provides truck equipped with spreader and plow. NCDOT provides material. Contractor is reimbursed on hourly basis.
  - Contractor bids on outfitting truck and NCDOT sets the hourly rate. A 5 year contract, so contractor reimbursed 20% annually for the equipment. Brine distribution is included in the contract.
Assessments

- Baseline – used to establish initial system condition and develop engineer’s estimate.
- Semi-annual assessments, done at any time during the 6 month period.
- 300 random segments provide 95% confidence level.
- 9 – 2 person teams.
- Annual training program for crews.
- Contractor pay is determined by assessments.

Costs

- Bid amount - $7200/lane mile.
- NCDOT was spending approximately $4300/lane mile but at a lower LOS.
- NCDOT is spending approximately $850,000 annually on contractor risk, bonding, and profit.
- INDOT is spending approximately $4,400 per lane mile on interstates, includes snow and ice removal.
- NCDOT is spending approximately $250,000 annually on assessments.
Virginia DOT

- Started in 1997 on the interstate system.
- Named the Turnkey Asset Maintenance Services (TAMS)
- By July 2009 all interstate maintenance by TAMS.
- No layoffs but reduction of approximately 2000 employees through attrition. Approximately 5700 employees in Maintenance.

FDOT

- Contracts called Asset Management (AM)
- Started in 2000 by state statute.
- Maintenance forces reduced by 25% through attrition.
- Best value approach used – 70% technical proposal and 30% cost proposal.
- In 1994, FDOT performed 60% of maintenance work and contracted out 40%. In 2008, 20% of maintenance performed in-house, 40% through AM, and 40% with traditional contracts.
- Currently 28 AM contracts for a total of $102 annually.
FDOT Cost Data

Starting in 98-99 in-house costs have decreased by approximately $20 million while contract maintenance costs have increased by more than $159 million. The overall maintenance budget has increased by $140.9 million. So FDOT is performing more maintenance through AM.

A geographic contract in the Chipley District was completed July 2008. It was a seven year contract for $33 million that consisted of 925 lane miles. The average cost per lane per year is $5096.

Other States

- Massachusetts tried one contract in the 90s and experienced problems. No other contracts have occurred.
- Oklahoma In 2001 started two contracts, a March 2002 snowstorm performance caused the contracts to be terminated.
- Texas – Random contracts have been tried with mixed results.
Findings

- PBC contracts are generally not cost effective for geographic contracts.
- Facility specific PBC contracts (e.g. rest areas) have proven to be cost effective.
- PBC contracts have not handled snow and ice events well.
- PBC requires a new organization at the central and district offices.
- Indiana contracting community is interested in performing maintenance activities.
- Snow and Ice contracts are a viable option.

PBC Organization and Activities

- PBC Administrator – central office
  - Contract development (initial one – 18 months)
  - Contract administration (part time)
- LOS program
  - Needed for evaluating current network condition
  - Needed for establishing contract criteria.
  - Needed for assessments.
- Contract supervisor and inspectors
  - Typically two inspectors used. Annual costs of $150,000.
PBC Advantages

- Encourages innovation in equipment and methods.
- Improved incident management.
- In some cases lower costs. Facility contracts.
- More flexibility in negotiating subcontracts and developing subs.
- Less DOT forces needed.

PBC Disadvantages

- Loss of in-house resources and capabilities.
- Agencies reach a point of no recovery.
- Does not perform well in extreme weather events.
- Costs increase. Some agencies have shifted resources to cover this increase resulting in LOS reductions in other areas.
- Contractor performance issues.
Cost Analysis

Costs are $/lane mile

<table>
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<tr>
<th>State Agency</th>
<th>In-house (S&amp;I)</th>
<th>In-house (No S&amp;I)</th>
<th>PBC (S&amp;I)</th>
<th>PBC (No S&amp;I)</th>
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* Interstate costs
** Mixed Interstate and other categories
N.A. – not available

PBC Contracts

- Best value is the preferred type. Require legislation.
- Initial contract development can take 18 months and involve up to 10 individuals.
- Identify and define liability and risk terms.
- Living contract.
- Prices are set for the contract duration. On the flip side, when maintenance budgets are being cut, agencies do not have the flexibility to cut PBC contracts.
Findings

- Major Moves will add approximately 1940 lane miles to the existing network. The Stimulus program could add more. Assuming “interstate miles” and based on current lane mile costs, annual maintenance costs will increase by $8.5 million.
- Additional snow routes will be required.
- INDOT needs to develop a maintenance plan to deal with this.
- City of Indianapolis bids out activities and not segments. In-house forces can bid for the services.

Summary

- PBC is a proven approach toward using private contractors.
- PBC cost savings cannot be proven. In a lot of cases costs have increased.
- Lost of the "ownership feeling".
- INDOT contractors are concerned about liability.
- Contractors can be utilized more, even in winter operations.
- A hybrid approach.
  - State forces supplemented by private contractors.
  - Analyze the subcontracting capabilities in your district.
  - Determine what items can benefit from subcontracting.
    - For example: guardrail and cable barrier repair
**INDOT Maintenance Plan**

1. Increase resources – equipment, material, and personnel. Highly unlikely. *(Additional funding)*
2. Increase maintenance subcontracts including snow and ice removal activities. *(Additional funding)*
3. Implement a PBC program that includes winter operations. *(Additional Funding)*
4. Reduced Level of Service across the network including snow and ice activities.

**Bottom Line**

- INDOT forces are stretched due to reductions and increasing network. Last twenty years INDOT numbers have gone from 7500 to 4400.
- Efficiencies are being investigated.
- Work with ICA (Indiana Constructors Association) to identify subcontracting options.
  - Due to higher costs and performance issues, PBC geographic contracts are not recommended!
  - Budgets increases are necessary or reduction in LOS is inevitable, including snow and ice removal.
Questions and Comments