ALTERNATE BIDDING HISTORY AND REQUIREMENTS

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ALTERNATE BIDDING HISTORY AND REQUIREMENTS

AGENDA

* Alternate Bidding for Pavement Type Selection
* Special Experimental Program, SEP 14
* Work Plan
* Life-Cycle Cost Analysis
Alternate Bidding for Pavement Type Selection

- INDOT proposed using Alternate Bidding as a way to select Pavement Type
- Missouri and Louisiana had been using this process for years
Special Experimental Program, SEP 14

FHWA considered this contracting process experimental and did not encourage it prior to 2012
* WORK PLAN

* Attract more bidders and competition

* Obtain true cost savings over similar conventional bid projects

* Provide a more competitive market
WORK PLAN

* Hot Mix Asphalt (HMA) has a design life of 20 years
* Portland Cement Concrete Pavement (PCCP) has a 30 design life
* Life Cycle Cost Analysis (LCCA) to evaluate these pavement types over a 50 year analysis period
* All Projects will be Designed utilizing Mechanistic-Empirical Pavement Design Guide (MEPDG)
* LIFE-CYCLE COST ANALYSIS
  * 50 year LCCA Strategy for HMA
  * 50 year LCCA Strategy for PCCP
  * A Present Worth (PW) Factor is Calculated and Applied a Bid Opening
ALTernate Bidding History and Requirements

* 50 year LCCA Strategy for HMA
  * Preventive Maintenance (PM) Treatment
    Crack Seal at years 3, 6, 9, 12, 15, and 18
  * Rehabilitation at Year 20
    Mill and 2 Layer Overlay (Functional)
  * PM, Crack Seal at years 23, 26, 29, and 32
  * PM, Mill and Fill at Year 35
  * PM, Crack Seal at years 38, 41, 44, and 47
  * LCCA Salvage Value at Year 50 = $ 0
ALTERNATE BIDDING HISTORY AND REQUIREMENTS

* 50 year LCCA Strategy for PCCP
  * Preventive Maintenance (PM) Treatment
    Joint Seal at years 8, 16, and 24
  * Rehabilitation at Year 30
    HMA 2 Layer Overlay (Functional)
  * PM, Crack Seal at years 33, 36, and 39
  * PM, Mill and Fill at Year 42
  * PM, Crack Seal at years 45 and 48
  * LCCA Salvage Value at Year 50 = $ 0
ALTERNATE BIDDING HISTORY AND REQUIREMENTS

* SUMMARY

* 2009 First project under SEP 14

* 2010 Eleven more projects

* 2011 Fourteen more projects
ALTERNATE BIDDING HISTORY AND REQUIREMENTS

- 2009 Project on US-31 Kokomo By-pass
  - Eleven (11) bids (6 PCCP and 5 HMA)
  - Three (3) contractors participated in both pavement type bids
  - MEPDG design provided
    - 10 inches of PCCP and 14 inches of HMA
ALTERNATE BIDDING HISTORY AND REQUIREMENTS

* 2009 Project on US-31 Kokomo By-pass

* LCCA provided a PW cost factor of

  * $1,403,938.00 for HMA
  * $ 870,480.00 for PCCP
**2009 US-31 Project Costs**

- **PCCP** $11,273,863.10 + $870,480.00 = $12,144,343.10
- **HMA** $11,098,853.08 + $1,403,938.00 = $12,502,791.08
2009 US-31 Project Costs

- INDOT’s consultant cost of $32,930
- Saved the tax payers approximately $325,518
2009 US-31 Project Primary Reasons Accomplished

- Attract more bidders and competition.
- Obtain true cost savings over similar conventional bid projects.
- Provide a more competitive market.
2010 = 11 Projects

- Six (6) on I-69
- Two (2) on US-31 Kokomo By-pass
- One (1) on SR-25 Hoosier Heartland
- One (1) on US-24 Fort to Port
- One (1) on I-70
2010 Projects Primary Reasons Accomplished

- Attract more bidders and competition.

- Obtain true cost savings over similar conventional bid projects.

- Provide a more competitive market
2010 Projects

Cost savings of $9,219,758 At Bidding
## ALTERNATE BIDDING HISTORY AND REQUIREMENTS

### 2010 Projects

<table>
<thead>
<tr>
<th>Number and Type of Bids</th>
<th>Winning Amount $</th>
<th>Engineer’s Estimate $</th>
<th>% Below Engineer’s Estimate</th>
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<tbody>
<tr>
<td>19 Conventional</td>
<td>285,295,617</td>
<td>345,413,792</td>
<td>17.4</td>
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<tr>
<td>11 Alternate</td>
<td>422,698,033</td>
<td>574,204,558</td>
<td>26.4</td>
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2010 Projects

Winning bid amounts averaged nine percent (9%) more below engineer’s estimate for the alternate bidding process than the conventional bidding process.
2010 Projects

INDOT saved the tax payers approximately $51,000,000
2011 = 14 Projects

* Five (5) on I-69
* Five (5) on US-31 Kokomo By-pass
* One (1) on SR-25 Hoosier Heartland
* One (1) on SR-11
* One (1) on I-65
* One (1) on Dowling St., Kendallville (first LPA)
2011 Projects Primary Reasons Accomplished

- Attract more bidders and competition.
- Obtain true cost savings over similar conventional bid projects.
- Provide a more competitive market
**ALTERNATE BIDDING HISTORY AND REQUIREMENTS**

### 2011 Projects

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</thead>
<tbody>
<tr>
<td>28 Conventional</td>
<td>346,312,239</td>
<td>409,119,925</td>
<td>15.4</td>
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<td>14 Alternate</td>
<td>396,652,688</td>
<td>502,582,279</td>
<td>21.1</td>
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2011 Projects

* Winning bid amounts averaged 5.7% more below engineer’s estimate for the alternate bidding process than the conventional bidding process.

* 3.3% less in 2011 compared to 2010
2011 Projects

* INDOT saved $3,800,000 immediately at the bid openings

* INDOT saved approximately $10,000,000 over the 50 year service life

* INDOT saved the tax payers approximately $28,600,000 5.7% under engineer’s estimate

* INDOT saved the tax payers a total of $42,400,000
QUESTIONS?