

Alternate Pavement Bidding

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Alternate Pavement Bidding

Alternate pavement bidding involves the bidding of two equivalent pavement designs in order to determine the most economical solution to the owner.



Alternate Pavement Bidding

Key Steps and Issues for an Alternate Pavement Bid (APB) Process:

- Establish Pavement Type Selection Team
- Determine Suitability of Project for APB
- Establish Performance Standards
- Determine Type of Work
- Establish Equivalent Pavement Designs
- Define LCCA Requirements
- Account for Bid Adjustment Method



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Establish Pavement Type Selection Team

- Provide a clear understanding of the pavement design and selection process
- Address issues or concerns regarding APB
- Recommend that all parties, i.e., FHWA, Industry, and Contractors are involved

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Determine Suitability of Project for APB

- Establish types of projects that will qualify as potential APB
- Does the project's scope meet the requirements of an APB project?
- Can future maintenance needs for the agency be an issue?
- Maintenance and Protection of traffic should NOT be a factor in APB



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Determine Suitability of Project for APB

- Maintenance and Protection of Traffic during the construction should not be used as a reason to NOT consider APB process



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Establish Performance Standards

- **New Pavements**
 - *What IRI Criteria*
- **Existing Pavements**
 - *Distress Criteria*
 - *Existing IRI and post-construction IRI*



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Determine Type of Work

New Construction

- Analysis Period

*Illinois, Georgia and Colorado use 40 years;
Nebraska and Washington use 50 years*

- Design life – (yrs.)

	<i>Conc.</i>	<i>HMA</i>
<i>Iowa, Conn. and Louisiana:</i>	<i>40</i>	<i>20</i>
<i>Minn.</i>	<i>30</i>	<i>30</i>
<i>S. Carolina</i>	<i>20</i>	<i>15</i>



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Determine Type of Work

Rehabilitation

- Should be treated similarly to New Construction
- Analysis Period must be established
- No pavement type should be excluded
- LCCA is still a core requirement

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Establish Equivalent Pavement Designs

- Equivalent pavement design for different pavement types
- Design procedure must be the same
- Specifications have to be applicably equivalent
- Pavement design exceptions should NOT be allowed on APB projects



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Define LCCA Requirements

- Agency Costs
 - Is the agency considering all issues affecting construction costs?
- Initial Costs
 - Initial construction costs should include all items for each alternate, not just pavement items



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Define LCCA Requirements

Maintenance Costs

- Annual Maintenance Costs incurred through work to sustain a prescribed level of service
- Assure that the level of maintenance service is equivalent as appropriate for each pavement
- The annual maintenance cost should come from the state's Maintenance data base
- Or PMS data (typically maint. work is not captured here)



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Define LCCA Requirements

User Delay Costs

- What types of user delay costs
- Ensure that it is used in the analysis



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Define LCCA Requirements

Salvage Costs

- Assumptions for both salvage lives must be quantified equally
- Depending on type of construction being considered, many states do not account for salvage value



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Define LCCA Requirements

Discount Rate

- Is second only to initial cost in its sensitivity in the outcome of an LCCA
- Lower discount rates typically benefit HMA
- Discount Rates should be determined from the OMB reports
- DR should also be considered in the user delay costing process



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Account for Bid Adjustment Method

- $A + B$
- $A + B + C$
- **C** is usually a product of the following example:

C = User Delay Cost + (periodic) Rehab Cost + Annual Maintenance Cost

C is added to the actual bid amount



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Questions



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