

Bid Phase (PE)

- Engineering Study
- Preliminary Design
- Final Design/PS&E
- **Bid Phase**



Section #15

New Hampshire
DOT
Department of Transportation

1



Bid Phase

Prior to beginning

- PS&E package approved by NHDOT ✓
- Construction Engineer and Engineer of Record approved by NHDOT ✓
- **“Received Authorization to Solicit Bids”**

or “RATS” work is ineligible!!

New Hampshire
DOT
Department of Transportation

2



5 Bid Phase Steps

- 1) Advertising for Bids
- 2) Bidder Pre-Qualification
- 3) Bid Opening
- 4) Bid Analysis
- 5) Submit to NHDOT for review and approval to award










3




Step #1 - Advertising for Bids

The basics

- The Law – Title 23 CFR 635.112
 - Competitive sealed bidding required** except for Public Interest Findings (previously discussed in Final Design)
- Advertise for a **minimum of 3 weeks** prior to opening

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4


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#1**

Advertising for Bids

Outreach required

- **Can't** just use the local paper
- Newspapers with significant regional or statewide distribution
- Internet (Sponsor's website)
- Contractor agencies / Plan Houses
- Clearly specify date/time of bid opening

Section #26



5


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#1**

Advertising for Bids

Addenda

- Answers all bidder questions in writing as **Addenda** publicly issued to all bidders
- May need to issue revised plans or specifications as part of Addenda
- NHDOT approves addenda prior to issuing
- Bidders need time to respond to Addenda, minimum 5 days
- May need to extend bid opening date

Section #26




6

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#1**


Advertising for Bids

Optional Pre-Bid Meeting

- Public noticed meeting for bidders to view project/ask questions
- Questions during Pre-Bid Meeting answered as written Addenda
- Minutes become part of Addenda if answers were given during meeting



PUBLIC MEETING


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7

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#2**

Step #2 - Bidder Pre-Qualification

Finding responsible bidders



- The bidding process shall include procedures that ensure the contractor is capable of completing the project
- 3 Options:
 - NHDOT's pre-qualified list [Home](#) > [Doing Business with NHDOT](#) > [Contractors](#)
 - Sponsor's own documented procedures
 - Bid documents require references
- NHDOT verifies/approves process

Section #26


8

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#2**

Bidder Pre-Qualification

Pre-Qualification Basics

- Cannot restrict competition
- Cannot give geographical preference
- Shall review contractor's status relative to debarment/suspension on previous federal-aid projects
- Shall disqualify bidders who have a conflict of interest with the Sponsor

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9

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Step #3 - Bid Opening

Process



- 1) Log date and time all bids received
- 2) Safely store sealed bids until time of bid opening
- 3) Open in public forum and read bidders names out loud
- 4) Review each bid initially for basic requirements – is bid signed? and are bonds included?

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10

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#3


Bid Opening

Process continued

- 5) Read all responsive bid amounts out loud (either item by item or total amount)
- 6) Identify lowest **apparent** bidder out loud



Section #26




11

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Step #4 - Bid Analysis


Who does it?

- Sponsor
- Sponsor's attorney if necessary
- Bid Phase Engineer



If low bid is unsatisfactory, then Sponsor may use next lowest bidder ... if NHDOT concurs with Sponsor's justification

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12


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#4**

Bid Analysis

Does it meet all the requirements?

- Verify contractor is **“Responsible”**
(qualified to perform work)
- Verify bid is **“Responsive”**
(filled out correctly)
- Verify Addenda acknowledged
- Verify bonds, insurance, and certifications are documented per the bid documents

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13


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#4**

Bid Analysis

Non-Responsive bid examples:

- Bid without signature
- Bid bonds not included
- Unit bid price missing
- Total bid price missing
- Bid not prepared in ink
- Non-collusion affidavit missing
- Conditions, additions or language that makes the bid ambiguous

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14


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#4**

Bid Analysis

Fatal flaws

- Answering questions without Addenda
- Addenda not uniformly issued
- Zero **responsive bids** received
- Zero **responsible bidders**
- Bidding prior to NHDOT authorization
- Awarding bid prior to NHDOT authorization
- Negotiating bid price with contractor

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15

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#4**


Bid Analysis

Mathematics exercise

- Multiply unit prices x quantities to verify each item's cost
- Add items for overall contract price
- Check numerical numbers vs. written words (written word governs)
- Verify total is still lowest bid

$1+2=4$

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16

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Bid Analysis

Unit Price analysis

- Look for large variations
- Look for unbalanced bids
- Compare **All** bidders unit prices with Engineer's estimated unit prices

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17

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Bid Analysis

Items of Significance

If an individual item cost difference (delta) between an engineer's estimated item and the low bidder (aka "A" bidder) item is large enough, then that item becomes "significant" and shall be further evaluated.

Delta's to determine which bid items are "Significant":

- \$15,000 for Contracts less than or equal to \$2,000,000
- \$25,000 for contracts between \$2,000,001 - \$5,000,000
- \$50,000 for contracts between \$5,000,001 - \$10,000,000
- \$75,000 for contracts between \$10,000,001 - \$20,000,000
- \$100,000 for contracts greater than \$20,000,001

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18

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Bid Analysis


Items of Significance - Continued

Brief example LPA project:

- \$1,200,000 = Contract Value, therefore
- \$15,000 = Significant Item threshold (previous slide)
- 3 bid items were determined to be significant:

Item #	Item Name	Quantity	Unit	A Bidder Unit Cost	A Bidder Item Cost	Engineer Item Cost (PS&E)	Sig Items Delta > \$15K
304	Gravel	2,500	Cubic Yard	\$32/yd	\$80,000	\$50,000	+\$30,000
403	Hot Bit Asphalt	500	Ton	\$60/Ton	\$30,000	\$50,000	-\$20,000
603	Drainage Pipe	400	Feet	\$115/FT	\$46,000	\$20,000	+\$26,000

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19

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Bid Analysis

Items of Significance - Continued

For each "significant" item, compare A bidder to engineer and average of other bidders:

Item #	Item Name	Engineers Estimate	A Bidder Item Price	B Bidder Item Price	C Bidder Item Price	A Bidder Delta to PS&E	A bidder Delta to Avg. of other Bidders
304	Gravel	\$50,000	\$80,000	\$86,000	\$90,000	+\$30,000	-\$8,000
403	Hot Bit Asphalt	\$50,000	\$30,000	\$50,000	\$56,000	-\$20,000	-\$23,000
603	Drainage Pipe	\$20,000	\$45,000	\$24,000	\$26,000	+\$25,000	+20,000

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20

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Bid Analysis Unit Price analysis

Compare Unit Costs with Similar Projects

Previous Projects	Sidewalk Length	Construction Cost	Cost per Foot
Henniker	3,189 ft	\$452,705	\$142 / FT
Ashland	3,300 ft	\$649,049	\$197 / FT
Durham	923 ft	\$308,769	\$335 / FT
Brookline	5,361 ft	\$599,236	\$112 / FT
Total	12,773 ft	\$2,009,759	Weighted Avg \$157 / FT

How does the current bid unit cost per foot compare to the weighted average unit cost per foot?

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21

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Step #5 – Submit to NHDOT Prepare recommendation to award letter including:

- Summary of Bid Process/Advertisement
- Summary of Bid Analysis
- Bid Item Tabulation for all bidders including Engineer's estimate
- Summary of Items of Significance
- Copy of the low bidders bid form
- Sponsor's letter head request to award to lowest responsible and responsive bidder



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22

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Submit to NHDOT

NHDOT reviews:

- "Request to Award" Letter
- Advertising Documents
- Bid Documents
- Addenda
- Bid Analysis
- Bid Tabulation
- Overall Costs (Bid, CE, Testing) compared to authorized amount



Section #26



23


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Submit to NHDOT


Know your limits

- Low bid cost
- + Add alternates cost (if applicable)
- + Construction Engineering (CE) cost
 - ❖ Material Testing cost (sub-contractor to CE)
- + Engineer of Record costs during CON Phase

Must be less than PS&E authorized amount



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24

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Submit to NHDOT

If insufficient funds, then NHDOT Project Manager must:

- Ask NHDOT **Program Manager** if additional funds are available?
- Seek authorization of additional funds from **FHWA** (if available)
- Seek assurance from the **Sponsor** that any **matching funds** necessary will be available for the increase

Section #26



25


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Submit to NHDOT

If NHDOT concurs with Bid Analysis and Request to Award:

- NHDOT issues a written notice of approval to award low bid construction contract
- Construction (CON) phase begins the date of this NHDOT letter
- PE is over – no more PE charges can be incurred! (they can be reimbursed after, but not incurred)
- **Engineer of Record tasks still occur during the Construction Phase under a separate scope of work (Pre-Con, answer questions, Form 4 analysis, etc...)**



Section #26


26



5 Bid Phase Steps

Re-Cap:

- 1) Advertising for Bids
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27



End of Bid Phase

Project Status

- Project Agreement ✓
- Consultant Selection (QBS) ✓
- Scope and Fee ✓
- Engineering Study ✓
- NEPA Complete Memo ✓
- Preliminary Design ✓
- Final Design ✓
- PS&E Plans & Certifications ✓
- Construction Engineer ✓
- Low Bid Award ✓
- Preconstruction Meeting is scheduled ✓



28



The slide features a green header bar at the top. In the top left corner, there is a logo consisting of a white square with a black outline containing a black silhouette of the state of New Hampshire and the letters "BP" in bold black font. In the top right corner, the text "Bid Phase" is written in a bold green font and underlined. The center of the slide is dominated by the text "Questions ?" in a large, bold, black font. Below this, on the left side, is a circular seal with a black border, the word "RECOMMEND" repeated twice around the perimeter, and a central graphic of a hand giving a thumbs-up. To the right of this seal, the text "Next Up: Office of Inspector General (OIG)" is written in a bold green font. In the bottom right corner, the New Hampshire Department of Transportation logo is displayed, featuring the text "New Hampshire" in a script font above "DOT" in a bold green font, with "Department of Transportation" in a smaller font below it.