

# PRICE + TIME BIDDING

## *Executive Summary*

UDOT bids Time on construction projects to reduce user costs by encouraging contractor innovation to get projects completed in a reduced time frame.

### **A. Design Phase**

The following is a summary of the necessary steps to implement Price + Time Bidding during the project design phase. Please see the attached guideline document for details related to each item:

1. Determine User Cost
  - Determine if multiple construction phases or additives are necessary.
  - Identify unique traffic control or maintenance of traffic issues.
  - Contact the Traffic Management Division during the first funded year of a project. Calculations may also be requested for concept level estimates at Region discretion.
  - Adjust traffic control, maintenance of traffic, and construction restrictions and methods as necessary to reduce user costs and construction related delays.
  - Discount user costs based on project needs.
  - Use liquidated damages to bid time if the project impact is off corridor or has an AADT less than 10,000. A user cost calculation is not required.
2. Establish construction restrictions. Restrictions are important to define when the contractor can and cannot work. These restrictions should be tailored to the project needs and to provide opportunities for contractor innovation.
3. Estimate contract schedule. Determine minimum and maximum number of days to define a bidding range. Reduce the estimated schedule by 35% to 50% to establish the minimum days. Verify that specifications related to cure time, paving limitations, invasive weed control, etc. can be met if the minimum is bid. Provide an adequate range for innovation, and consider construction restrictions.
4. Establish the total maximum incentive. The maximum incentive should be large enough to encourage the contractor to complete the project quickly.

5. Develop Plans and Special Provisions. Modify special provisions to meet project needs. The following special provisions should be included in each project. Review each special provision carefully and modify applicable sections for each project.
  - Section 00221S (Bidding Contract Time)
  - Section 00515M (Contract Award and Execution)
  - Section 00555M (Prosecution and Progress)
  - Section 00570M (Definitions)
  - Section 00725M (Scope of Work)
6. Enter necessary information into PDDBS. This information includes the time bid items with the designer's calendar day time estimates for each time bid item. The incentive amount is included as a non bid item for budgeting purposes.
7. Resources. There is support available for P+T bidding. Contact project estimate support at (801) 965-4708 with questions.
8. There could be occasional exceptions to using P+T bidding on all projects. Project teams submit written justification to the region program manager with reasons to waive P+T bidding. The program manager obtains final written approval from the region director.

## Construction Phase – Guidance for Resident Engineers

It is very important to use the baseline construction schedule described in the 2008 Standard Specifications, Prosecution and Progress, Section 00555, Part 1.10. This schedule is an important communication tool that should be used at each progress meeting. It is important to ask the contractor at each meeting if there are any schedule updates. The contractor has 7 calendar days to provide written notice of a delay according to Article 1.16 of Section 00555 Prosecution and Progress. Compare each revised schedule to the previous version and discuss changes with the contractor. Coordinating on these issues frequently during the project will enhance partnering and communication.

Baseline Construction Schedule Review: A thorough, timely review of the Contractor's baseline CPM schedule file and narrative is required on all contracts, and becomes critical on Price+Time contracts.

Construction Schedule Update Review: Review CPM schedule updates for important changes that could introduce new risks to the schedule. Prosecution and Progress, Section 00555, Part 1.11 Paragraph D explains that the Engineer schedules progress meetings to discuss potential delays. Holding these meetings regularly enables the Engineer and contractor to discuss schedule changes and delays as they happen. These meetings also provide an opportunity for the Engineer to request revised schedules.

Value Engineering Change Proposals (VECPs): The Contractor is not compensated for time savings due to a VECP above the maximum incentive specified in 00221S Bidding Contract Time. Obtain a revised schedule from the contractor for each submitted VECP that proposes changes to contract time. Verify that the VECP involves critical path items when a time change is requested. Evaluate increased user costs by multiplying the additional days requested with the VECP by the time related cost rate shown in 00221S Bidding Contract Time. VECPs that do not have a project cost savings to contract pay items that exceed increased user costs due to the VECP should not be considered.

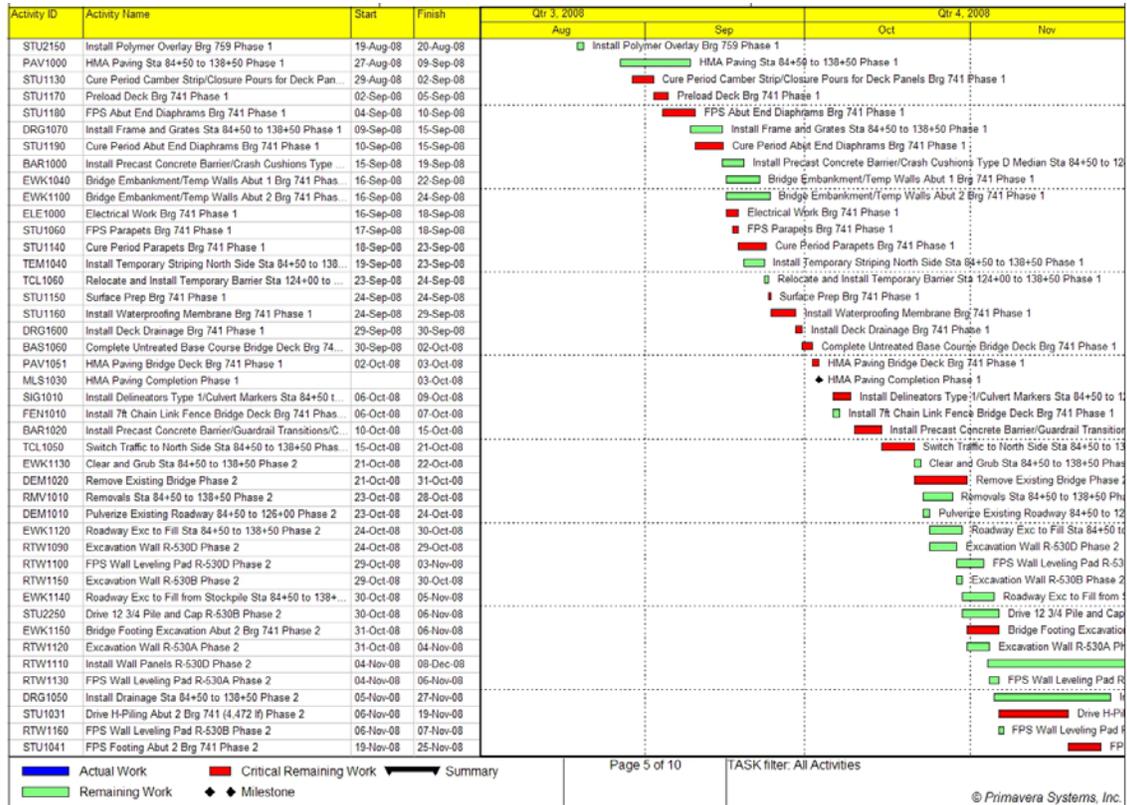
### **Tips:**

- *Review the Contractor's schedule narrative for upcoming changes or missing information that could impact the schedule.*
- *Review and compare the schedule update with the baseline schedule. Some of the important schedule update review items are: the CPM file system settings, activity changes, milestone changes, modified relationships between activities and any activity constraints.*

**Resources:**

- *For CPM baseline and update requirements see 2008 Standard Specifications, Prosecution and Progress, Section 00555, Parts 1.10 and 1.11.*
- *For schedule questions and Primavera training contact the Project Controls Engineer (801) 965-4612.*
- *For Value Engineering Change Proposal (VECP) questions contact the Value Engineering Office at (801) 503-6450.*

The following is an example of what these schedules should look like. The Project Controls Engineer (801) 965-4612 routinely assists with construction schedules and can provide pertinent schedule guidance.



Example Schedule

# PRICE + TIME BIDDING

## *Guidelines*

### **Introduction**

#### **A. Policy**

UDOT Policy 08A-13 states that the Department will bid time using Price + Time (P+T) bidding on construction projects.

#### **B. Definition**

P+T bidding is a method of awarding a project based on both cost and time. Each bid submitted consists of two parts:

- The P portion is the sum bid for the contract work items.
- The T portion is the time in calendar days proposed by the bidder to complete the project or a portion of the project which is multiplied by a daily road user cost determined by the Department.

The contract is awarded based on the sum of the P portion and the T portion of the bid. The contract amount after award is limited to the P portion of the bid. A disincentive provision is incorporated into the contract should the contractor fail to complete the work in the length of time bid. An incentive provision is also included to reward the contractor for early completion.

#### **C. Benefits of P+T**

P+T bidding is consistent with the Department's four themes:

- Accelerate delivery
- Encourage innovation
- Decrease and minimize MOT
- Get a good price

P+T bidding is an effective way to reduce construction induced congestion and delays by allowing the cost of work and time to be balanced through the open competitive bidding process. Benefits of P+T include:

- Minimizes road user costs and driver inconvenience by reducing the duration of construction related congestion.

- Encourages potential contractors to develop well thought out plans in order to competitively bid time to complete a project or project phase.
- Encourages contractors to schedule their operations to maximize the efficiency of their work crews and equipment in order to meet the time bid.
- Encourages contractors to develop innovative ways to reduce construction duration at the lowest cost during bid preparation and construction.
- Reduces congestion related pollution and environmental impacts.

#### **D. Contract Time**

The contractor's bid establishes the contract time. The sample special provision 00221S – Bidding Contract Time Paragraph 1.6G instructs the contractor to account for weather in the bid. The special provision also states that calendar days are used.

##### **Guideline:**

- *Calendar days are used instead of working days on Price + Time bidding projects for the following reasons:*
  - *Reduces disagreements about when a day should not be counted due to inclement weather or adverse conditions since all calendar days are counted.*
  - *Encourages the contractor to find ways to make up for days lost to weather.*
  - *Allows for contractor innovation to complete work during winter months.*
  - *Reduces the opportunity for contractors to misunderstand what constitutes a working day during bidding.*
- *Completion date contracts typically should **not** be used on Price + Time contracts since the number of days the contractor bids and the completion date will conflict. The contractor may be able to finish the project prior to an established completion date. One of the primary goals of Price + Time bidding is to complete projects faster.*

##### **Tips:**

- *Holidays where work is restricted are detailed in 00555 Prosecution and Progress and 00570 Definitions.*
- *The resident engineer can modify the contract time due to a non-compensable delay if abnormal weather or other conditions occur that could not have been reasonably anticipated during the bid. Non-compensable delays are defined in Section 00570*

## Guidelines for Applying P+T to Projects

### 1. Determine User Cost – Action Item

The daily user cost is determined by estimating the user cost associated with the construction and user delay in delivering the project. Contact the Traffic Management Division at (801) 887-3674 as early as possible in the first funded year of a project to obtain user costs.

#### **Tips:**

- *Be prepared to discuss the project's planned maintenance of traffic (MOT), any collected traffic count data, proposed advertising date, and potential project phases to establish user costs based on how the work will be completed with the Traffic Management Division.*
- *Adjust traffic control, maintenance of traffic, and construction restrictions and methods as necessary to reduce user costs and construction related delays. Coordinate changes with the Traffic Management Division to obtain user cost calculation revisions.*
- *Coordinate traffic control and maintenance of traffic with region traffic and safety personnel to get comments and feedback.*
- *Assist local governments to establish MOT and traffic control methods that minimize delays and use typical UDOT practices. This is especially important for local government projects on state routes.*
- *After minimizing user costs through design methods, the region may reduce the maximum user cost value (T portion) provided by the Traffic Management Division. See the Performance Cost Process Memo from the Traffic Management Division posted on the UDOT website for further information.*
- *Daily cost must be sufficient to encourage the contractor to develop innovative ideas, work efficiently, and complete the project in a timely manner, but not so large as to induce undue risk to the contractor. Extreme risk will lead to undesirable bids and possibly a lack of interested bidders.*
- *When preparing projects for P+T bidding, the total T portion of the bid must be large enough to influence the bidding. The time element may have little impact on the overall results of the bidding if a very large project has a very short T portion completion time.*

- **Example:** A \$30,000 T portion (10 days X \$3,000/day) would have minimal effect on a \$20 million project (P portion) due to its small percentage of the total P+T bid. Conversely, a \$1,250,000 T portion (250 days X \$5,000/day) on a \$5 million project (P portion) may provide too much influence on how the bid is structured and how the work proceeds because the relative value of the T portion is so high.
- **Guideline:** Typically, the T portion of the bid shouldn't exceed 10-15% of the total cost of the work to avoid undesirable emphasis on time over the actual cost of the work. Estimating construction time is important so that user costs can be reduced appropriately to meet this guideline and avoid the situations described in the above example. The T portion may be significantly lower than this criteria when using liquidated damages as the daily time cost.

### **Notes for Concept Phase:**

*Account for the maximum time incentive in all concept estimates.*

- *Use 3-5% of the estimated construction costs to estimate the maximum time incentive for concept level estimates on projects with greater than 10,000 AADT when the region determines that an actual calculation is not required to develop a concept estimate.*
- *Contact the Traffic Management Division for projects with greater than 10,000 AADT for a preliminary user cost calculation when the region decides that detailed information is necessary to determine the maximum incentive.*
- *Use the liquidated damages table in Section 00555 based on the construction portion of the concept estimate to determine a daily rate for projects with less than 10,000 AADT. Use this daily rate combined with a preliminary estimate of the number of days a contractor could finish early to determine the maximum incentive to include in the concept estimate.*
- *A User cost calculation request during the concept phase is a valuable resource to determine scope that should be added to the project to reduce user costs. An example is using SPMTs or other ABC technology that would increase construction costs, but reduce user costs. This cost analysis is not necessary for all projects during the concept phase, but should be evaluated on projects determined by each region.*

### **Definitions:**

- **User Costs:** *Costs incurred by the traveling public due to construction activities.*

- **Liquidated Damages:** *A predetermined sum assessed the Contractor. This sum is not considered a penalty, but as liquidated damages due the Department by reason of added cost of engineering, supervision, contract administration, and other items for extra expenditures of public funds for the Contractor's failure to perform as specified.*

Liquidated damage values are used instead of user costs as a daily time value for bidding projects when the project impact is off corridor or has an AADT less than 10,000. Use the liquidated damages table in Section 00555 – Prosecution and Progress to determine the daily charge based on the engineer's estimate. Do not reduce liquidated damage values if they are used as a time value for bidding purposes. Liquidated damages are costs the Department incurs to administer construction contracts.

**Liquidated damages still apply to all projects as defined in Section 00555**

**Prosecution and Progress in addition to user costs.** This maintains a distinction between the incentive/disincentive for user costs and the liquidated damages charged for contract administration costs as defined above. The contractor is assessed disincentive based on user costs or liquidated damages for not completing milestones in the time bid, and liquidated damages to cover administrative costs when substantial completion is not achieved within the maximum calendar days specified..

**2. Establish Construction Restrictions – Action Item**

If the contract contains work hour restrictions, milestone dates or other time restrictions, consideration must be given to the location of these requirements. Restrictions in various special provisions, on different plan sheets, and in several specifications often lead to confusion.

**Tips:**

- *Consider project needs when determining time restrictions. Try to allow contractor options to work additional time to get projects completed quickly.*
- *Combine time and other restrictions in the Prosecution and Progress 00555M special provision under limitations of operations.*
- *Define milestone dates in the Bidding Contract Time 00221S special provision.*
- *Indicate any unusual conditions or restrictions the contractor may be required to work under, such as prohibiting jack hammering, pile driving or heavy equipment operation during the night due to noise problems.*
- *Include times when the contractor is not allowed to do any work with the other restrictions.*

- *Define any work that can or cannot be done during winter months as necessary.*
- *Placing excessive restrictions on projects can prevent contractor innovation.*
- *Providing too much time freedom on small projects can increase construction, inspection, and administration costs. It probably is not worth the additional cost to allow 24 hour a day work on a small landscaping project. It may be appropriate to reduce restrictions as much as possible on a high priority project where user costs are high. Establish the appropriate balance between accelerating schedule and cost as a project team. Work closely with the project team and the construction group to determine appropriate restrictions or allowances.*

### **3. Estimate Contract Schedule – Action Item**

Designers can establish a reasonable estimate for the time by working with an experienced Resident or District Engineer to develop a realistic critical path method construction schedule. This will ensure that the estimated time is achievable, and that any other time related contract provisions are incorporated and consistent, i.e., utility schedule, railroad involvement, seasonal limitations, work restrictions, etc. The season of the year in which the project will be constructed should also be considered.

#### **Tips:**

- *Look at production rates and quantities to determine a schedule.*
- *Evaluate similar projects to assist in determining the necessary days to complete the project.*
- *Experienced Resident Engineers are an excellent resource for establishing durations of various items of work.*
- *See figure 3 at the end of the guidelines for an example of entering the time estimate into PDBS.*
- *Consider material procurement time. Contact suppliers for information and specify that the contractor bid this time, or provide for a flexible start date to provide time for material procurement.*
- *Other resources include:*
  - *Project estimate support (801-965-4708) has access to resources that can help determine a baseline construction schedule.*

- *There are on call resources available to assist with estimates.*

A baseline contract time estimate helps the design team coordinate the project with the construction season and schedule advertisement to accommodate construction duration. It also enables evaluation of the contractor bids to determine if they are unbalanced. Time estimates are included in the PDBS estimate.

**Guideline:**

- *Do not put one day in the estimate for the time portion of a bid item unless one day is the estimate to complete that item. Entering the actual time estimate provides data that can be used to help estimate future projects and compare estimates to contractor bids. The time (innovative contracting) portion of the estimate is not included in the grand total and does not count against project value or funding. See the figures below for an example of total calculation in a PDBS estimate.*

**Engineer's Estimate**  
**Utah Department of Transportation**

Project Number: ADDITIVE	Road Length: mi
Name of Project:	Pavement Surface Width: ft
Version #: 1	Route:
County:	Ref Post Begin:
Region:	Ref Post End:
Unit of Measure: CSI - INCH/POUND	Contract Method: Design Bid Build
Concept:	Designed By: DAVID OSBORN
	Checked By:
	Bid Open Date:

Engineer's Estimates are UDOT CONFIDENTIAL until the project is awarded and should be kept within the limits of the project team until such time.

Bid Items							
Detail	Alt Group	Alt #	Description	Additive #	Quantity	Unit	Amount
<b>185 - ADDITIVE TIME AND/OR LAINE RENTAL</b>							
	0	0					
Number	Item Number	Description	Additive #	Quantity	Unit	Unit Price	Amount
16	00221001*	Contract Time Additive #02	Additive #02:	4	Cal d	\$2,000.00	\$8,000.00
Subtotal:							\$18,000.00
Funding:							
	100.00%	\$0.00					
Base Bid Items Total:							\$1,684,750.00
Additive Bid Items Total:							\$111,000.00

The Contract Amount does not include the contract time value.

Subtotal (Contract Amount):	\$1,795,750.00
Innovative Contracting, Time and Lane Rental:	\$115,500.00
Total Bid Items Engineers Estimate:	\$1,911,250.00
Bid Amount for Award Consideration:	\$1,911,250.00

3/15/2010 Page 4 of 7

**Figure 1 – Contract Amount**

Engineer's Estimate		Utah Department of Transportation			
Project Number: ADDITIVE	Road Length: mi				
Name of Project:	Pavement Surface Width: ft				
Version #: 1	Route:				
County:	Ref Post Begin:				
Region:	Ref Post End:				
Unit of Measure: CSI - INCHPOUND	Contract Method: Design Bid Build	Designed By: DAVID OSBORN			
Concept:	Checked By:				
	Bid Open Date:				
Engineer's Estimates are UDOT CONFIDENTIAL until the project is awarded and should be kept within the limits of the project team until such time.					
Non-Bid Items					
Detail	Alt Group	Alt #	Description		
<b>79 - NON BID: INCENTIVES</b>	0	0	Incentives		
Number	Item Number	Description	Quantity Unit	Unit Price	Amount
	00000607*	Lane Rental Incentive	1 Lump	\$5,000.00	\$5,000.00
Subtotal:					\$15,000.00
Funding:					
	100.00%	\$0.00			
State Force Account:					\$0.00
State Furnished:					\$0.00
Adjusting Utilities:					\$0.00
Construction Engineering:					\$0.00
Miscellaneous Non-Bid:					\$185,000.00
Preliminary Engineering:					\$0.00
Right of Way:					\$0.00
Non-Bid Items Total :					\$185,000.00
Bid Items Total:					\$1,795,750.00
Non-Bid Items Total:					\$185,000.00
Grand Total:					\$1,980,750.00

The Grand Total does not include the contract time value.

**Figure 2 – Grand Total**

**A. Determining Minimum Time – Action Item**

Consider to what extent, and at what cost, construction can be compressed from a normal construction schedule. Normal construction time is generally based on a highly qualified contractor working five days a week, eight hours a day. Base accelerated time on the performance of the same contractor working extended or extra shifts with additional workers and crews for six or seven days a week. The use of a continuous seven-day workweek is generally undesirable and may require unreasonable contractor or Department resources.

The minimum duration for the T portion time period should be based on an accelerated work schedule. A minimum should be established for the following reasons:

- Enables determination if bid is unbalanced, or unreasonably low.
- Excessively low time bids can create unnecessary pressure from the contractor on the Resident Engineer.
- It is necessary to consider the standard specifications for cure times, asphalt paving window, invasive weed control, etc. The minimum time bid allowed should provide the specified time to complete these items.
- Provides time for material procurement.
- Enables the project team to plan for items of work to be completed in the appropriate time of year. For example paving that needs to be done between April and October, or irrigation work that would need to be completed during the winter months.
- Provides adequate time to achieve quality work.

Currently, each time bid item requires a minimum time of at least one day. Contact project estimate support at (801) 965-4708 if a project absolutely requires that the contractor have the opportunity to bid zero days.

**Tips:**

- *Consider reducing the estimated time by 35 to 50 percent to establish the minimum calendar days. The minimum duration for the T portion should include minimum number of days necessary in the specifications for items of work like concrete cure time or invasive weed control. It should also include estimated time to clear ROW and utility limitations.*
- *Remember that it takes time to get a contract signed.*
  - *For example, if a project needs to be completed by mid October, and is advertised in August, 90 calendar days is too large a minimum time since there are only approximately 60 days from advertisement until the middle of October.*
  - *It can take up to 6 weeks to get a signed contract and issue Notice to Proceed. The average project takes 3-4 weeks from notice of award to Notice to Proceed.*
- *Remember the limitations on HMA placement described in Section 02741 Hot Mix Asphalt (HMA).*
- *Avoid stating a fixed NTP date in the special provisions. A delayed bid opening or delays in contract processing can delay NTP and necessitate change orders.*

## **B. Determining Maximum Time – Action Item**

The maximum time available to complete a project can be determined by first establishing the calendar date the project must be complete. This could be the end of the construction season or before a critical holiday or business opening. Generally contractors will bid time well below the maximum time, so this date functions mainly as an upper bound to ensure a level playing field for all bidders.

### **Tips:**

- *Consider increasing the estimated time by 25 to 35 percent to establish the maximum calendar days.*
- *Excessively low estimates for a maximum number of days to complete a project or milestone may discourage potential bidders from bidding by placing too much risk on the contractor to accomplish the work in an unreasonable time frame.*

Enter minimum and maximum time into the matrix in table 1 of special provision 00221S Bidding Contract Time.

## **4. Establish the Maximum Incentive – Action Item**

The 00221S Bidding Contract Time special provision contains an incentive/disincentive clause.

- **Maximum incentive:** Enter maximum of all time based incentives paid under P+T provisions into the PDBS engineer's estimate for project budgeting reasons. The maximum incentive must be greater than \$0. (*See figure 4 at the end of the guidelines for an example*). The maximum incentive should be large enough to provide contractor motivation to complete the project quickly.
- **Maximum disincentive:** None, so the contract should provide for disincentives to continue unlimited until the specified work is complete.

### **Tips:**

- **Maximum number of incentive days for each time segment:** *Recommend limiting to around 10-20% of the number of total days estimated by the engineer (rounded to the nearest whole day).*
  - *Example: If the estimated time is 30 days, then three to six days is a reasonable maximum number of incentive days.*

- Maximum sum of all time based incentives for a single contract:  
*Recommend limiting to a maximum 10% of the engineer's estimated contract amount. This cap limits the number of days of incentive payment.*
  - *Example: If the engineer's estimated contract amount is \$1,000,000 then \$100,000 (or 10%) is a reasonable maximum for all time based incentives.*
- *Using engineering judgment, correlate the two previous recommendations to develop a maximum incentive that feels right and meets the needs of the project.*
- *The maximum incentive is accounted for in the estimate and against the project value or funding since the incentive is actual money that can be paid to the contractor. This is different from the value added to the contractor's bid based on the time value of a day since that value represents societal costs, but the contractor is not actually paid from the project funding for each day they bid. See the PDBS entry section for how the incentive is placed in the estimate.*

## **5. Develop Plans and Special Provisions – Action Item**

### **A. Identify Potential Stakeholder Issues and Third Party Conflicts**

It is critical that input on be gathered from all affected parties (e.g., local officials, regional functional groups, businesses, schools, utility companies, railroads, etc.) when using P + T bidding. It is also essential that designers work closely with the region construction group regarding schedules, plans, and special provisions. This stakeholder involvement helps resolve issues and minimize construction delays.

The goal of P+T bidding is to minimize construction time. Every undetermined issue and conflict creates the possibility for time delays during construction that increase construction time and necessitate modifications to the contract time.

**Tips:** *To minimize delays from utility, railroad or other third party work within the T portion:*

- *If possible, make arrangements to have this third party work done prior to the start of T portion work. If this is not possible, include special provisions in the contract describing the time frames and limitations for any utility, railroad, or other third party agreement. Verify that these time frames are consistent with the description of T portion work and the designer's schedule to avoid introducing additional risk to the project.*

- *Underground utilities within the T portion should be located with the highest possible degree of accuracy if there is contract work that could potentially interfere with these utilities. Evaluate whether the risk warrants a higher level of Subsurface Utility Engineering (SUE). Additional information about SUE can be found on the FHWA website at <http://www.fhwa.dot.gov/programadmin/sueindex.cfm>*
- *Pre-design field reviews are essential since "as built" plans or old construction plans may not be reliable, due to maintenance operations or field changes not recorded on the plans.*
- *A construction prebid meeting may be held to discuss the incentive/disincentive phase and any unusual features of the project with prospective bidders, but is not required.*

## **B. Flexible Start Time - Optional**

It may be desirable to allow a flexible contract start time. A flexible start date allows the contractor the opportunity to maximize resources and time between all their projects. It can also allow contractors time to order materials or begin fabricating steel prior to the beginning of contract time. The contract must clearly define what constitutes the start and the completion of the T portion work. See Section 00555M Prosecution and Progress on the UDOT website for an example of using a flexible start date.

## **C. P+T Bidding Variations**

There are limitless combinations of possibilities to use P+T bidding on projects. There are simple projects that only have one time component. Additive bidding can also be used in conjunction with P+T bidding. Complex multiphase projects can utilize P+T bidding to accomplish smaller milestones within the overall project. The key is to keep it as simple as possible and still meet the needs of the project. Only use multiple phases if there are separate needs for different segments of the project. See the 00221S – Bidding Contract Time special provision for examples and modify as necessary to meet the needs of specific projects.

### **i. Simple Projects**

These projects involve bidding one time component. This time component is usually from notice to proceed until substantial completion. This works well for small projects with a limited number of bid items and short construction schedules.

It is highly recommended to use one time component or phase for projects using liquidated damages for the daily time value. This is to avoid over charging the contractor for liquidated damages which are intended to recover the cost of engineering, supervision, contract administration for exceeding contract time. Liquidated damages as detailed in Section 00570 Definitions and Section 00555 Prosecution and Progress are calculated based on overall contract value.

## **ii. Additive Bidding**

P+T bidding can be used with additive bidding. Additive bidding is a method to bid a project so that a portion of the work that can be awarded within the project budget, while allowing for additional work to be awarded if favorable bids are received.

- Include an entry for each incremental additive in the 02221S (Bidding Contract Time) special provision. Currently, each additive requires a minimum time of one day. Contact project estimate support at (801) 965-4708 if a project absolutely requires that the contractor have the opportunity to bid zero days.
- Include a PDBS time bid item for each additive (*see figure 3 at the end of the guidelines for an example*).
- Refer to the Additive Bidding Guidelines available on the UDOT website for information about additive bidding. This document is located at: <http://udot.utah.gov/main/f?p=100:pg:0:::::V,T:,1920>

## **iii. Complex Projects**

These projects involve bidding more than one time component. Typically these are larger projects. An example would be a large roadway project where a certain segment of the project must be completed prior to the overall completion of the project.

It is critical that the disincentives for each phase **do not** duplicate each other. There should not be a possibility to double charge the contractor disincentive for a day due to phasing.

*Tip: It should be clear in the 00221S – Bidding Contract Time special provision how the contract time will be calculated from table 1. The contractor and the construction division must be able to determine exactly how many calendar days are in the contract by reading the special provision. According to 00555 Prosecution and Progress, Article 1.15 Contract time begins 10 days after the date of the Notice to Proceed. Modify this section as necessary to accommodate different start times. The contract time is from the beginning of contract time until substantial completion. This may be accomplished by summing all the days in the table, or only certain entries. Clarify with a note how this calculation is made.*

#### **iv. Lane Rental**

Lane rental is a tool that can be used in conjunction with P+T bidding. Lane rental is used when a lane will need to be closed as a part of the construction process. The purpose of lane rental is to encourage the contractor to minimize the amount of time that lanes are closed. Lane rental disincentives must **not** duplicate time disincentives. Coordinate with the Traffic Management Division at (801) 887-3674 to determine lane rental costs. See separate additional guidance for Lane Rental located on the UDOT web page.

*Tip: Lane rental can also be used for major traffic disruptions such as a bridge closure because closing a bridge constitutes closing of lane(s).*

#### **D. Information Required With P+T Submission**

Special Provisions for P+T bidding:

- Section 02221S (Bidding Contract Time)
- Section 00515M (Contract Award and Execution)
- Section 00555M (Prosecution and Progress)
- Section 00570M (Definitions)
- Section 00725M (Scope of Work)

Modify these generic special provisions to fit individual projects. Blanks should be filled in and suggested narratives are highlighted.

*Tip: Time related items are bid items, but not traditional pay items like HMA or curb and gutter where the contractor is paid for each unit. The contractor is not compensated for each day bid. The only payment is the possible incentive. Time is therefore not included in the measurement and payment.*

#### **6. Enter Necessary Information into PDBS – Action Item**

The following are examples of PDBS entry for Time.

Project Development Business System (PRD3)

File Edit Sub Systems Estimate Window Help

Engineer's Estimate

select project ADDITIVE Version 1: Estimate Edit Only Rights Estimate Setup

Detail	Description	DBE Goal	Alt Bid Grp #	Alt Bid #	Funding	Total
112 - ADDITIVE BIDDING	Additive #01: Side Street Paving		0	0		\$26,000.00
112 - ADDITIVE BIDDING	Additive #02: Additional Mainline Paving		0	0		\$65,000.00
180 - TIME AND/OR LANE RENTAL			0	0		\$97,500.00
185 - ADDITIVE TIME AND/OR LANE REN			0	0		\$18,000.00
						\$2,096,250.00

Enter maximum, minimum, and estimated time.

Item #	Description	Min Days	Max Days	Est. Qty	UOM	Lump Qty	Lump Uom	Unit Price	Extended Price
00221000*	Contract Time Segment 1	20	60	30	Cal d	0		\$2,000.00	\$60,000.00
00221001*	Contract Time Segment 2	15	40	25	Cal d	0		\$1,500.00	\$37,500.00

Multiple items can be entered. They can be named to fit the project. These names should match the table in special provision 00221S – Bidding Contract Time so that the bidder can correlate the table and items in PDBS. Remember to increase the Item Number by 1 for each phase. All non additive time items are included in this detail.

Line/Sheet From Station From Offset To Station To Station

Use Quantity: 30

Figure 3a – PDBS Entry of Time

Project Development Business System (PRD3)

File Edit Sub Systems Estimate Window Help

Engineer's Estimate

select project ADDITIVE Version 1: Estimate Edit Only Rights Estimate Setup

Detail	Description	DBE Goal	Alt Bid Grp #	Alt Bid #	Funding	Total
112 - ADDITIVE BIDDING	Additive #01: Side Street Paving		0	0		\$26,000.00
112 - ADDITIVE BIDDING	Additive #02: Additional Mainline Paving		0	0		\$65,000.00
180 - TIME AND/OR LANE RENTAL			0	0		\$97,500.00
185 - ADDITIVE TIME AND/OR LANE REN			0	0		\$18,000.00
						\$2,096,250.00

Link Additive Time items to additive number for bid evaluation.

Item #	Description	Additive #	Min Days	Max Days	Est. Qty	UOM	Lump Qty	Lump Uom	Unit Price	Extended Price
00221000*	Contract Time Additive #01	Additive #01	1	13	5	Cal d	0		\$2,000.00	\$10,000.00
00221001*	Contract Time Additive #02	Additive #02	1	10	4	Cal d	0		\$2,000.00	\$8,000.00

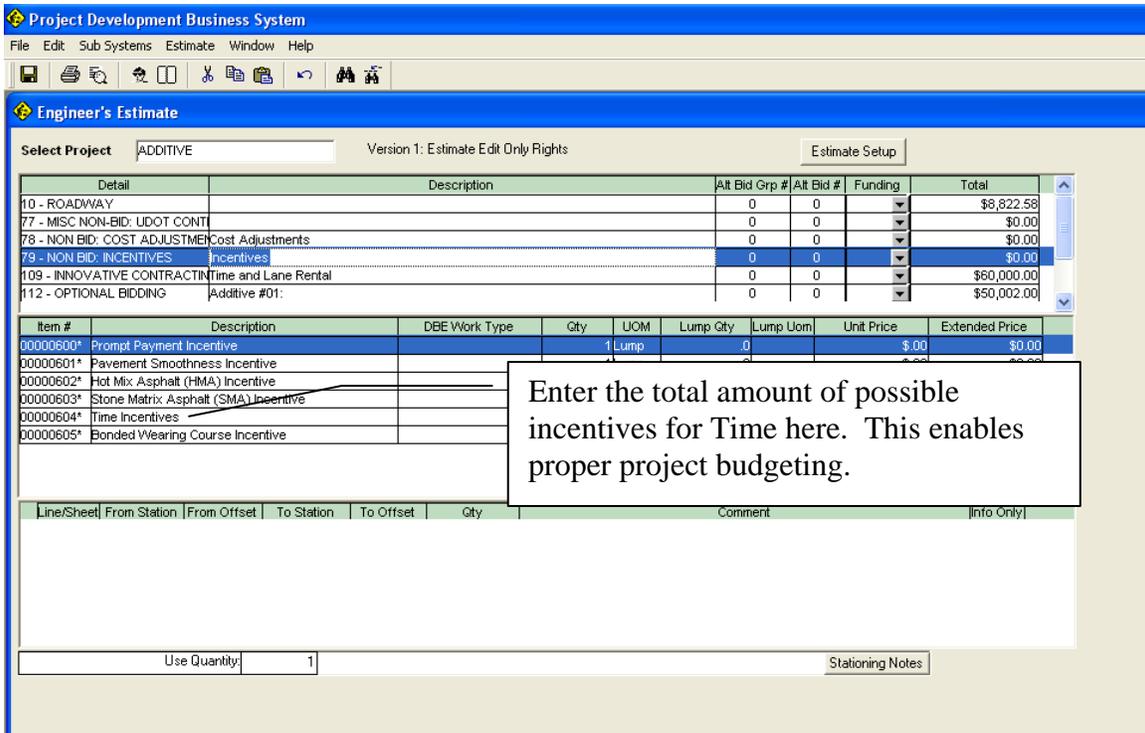
Additive time items are entered in detail 185. The base bid time items are included in detail 180 as shown above in Figure 3a.

Line/Sheet From Station From Offset To Station To Station

Use Quantity: 5

Stationing Notes

Figure 3b – PDBS Entry of Time - Additives



**Figure 4 – PDBS Entry of Maximum Time Incentives**

## 7. Resources

### A. General P+T Support Contact - Information

For support in implementing P+T on your project or for questions addressing situations when P+T may not appear to be beneficial for your project, please contact project estimate support at (801) 965-4708.

### B. P+T for CMGC Projects

Contact Innovative Contracting at (801) 964-4505 for current information and support.

## 8. Waivers

There could be occasional exceptions to using P+T bidding on all projects. Project teams submit written justification to the region program manager with reasons to waive P+T bidding. The program manager obtains final written approval from the region director.