

PROJECT DELIVERY ACADEMY

Project Advertising and Construction: Module-5

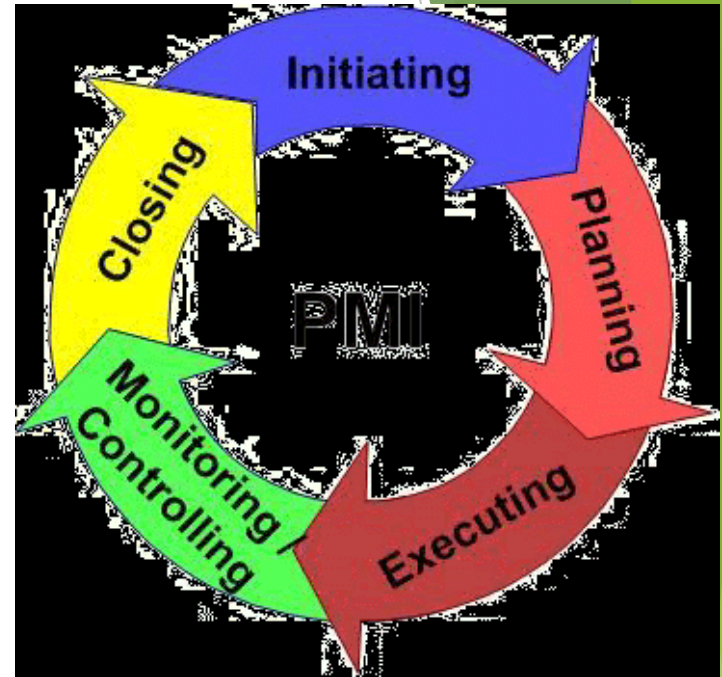
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Contracts and Specifications

May 19, 2021

Project Life Cycle

- ▶ Initiation
- ▶ Planning
- ▶ Design
- ▶ Construction
- ▶ Operations & Maintenance



What is the role/function of C&S?

- ▶ What does C&S do?
- ▶ How much time do we invest in advertising a project?
- ▶ How much time we spend on reviewing design submittals?
- ▶ How much time spend on post-advertisement activities?

What is the function of C&S?

► What does C&S do?

- Review PS&E :Biddable, Awardable, Constructible
- FHWA guidance states that plans and specifications must describe the location and design features and the construction requirements in sufficient detail to allow accurate bids, to facilitate construction and enable the State to control the contract.
- Cost estimating/ Build engineer's estimate
- Initiate FHWA authorization package for the project
- Submit - DBE Goal Request
- Advertise project

What is the function of C&S?

- ▶ Address/answer contractors questions and concerns during bidding period
- ▶ Issue addendums if needed
- ▶ Open Bids
- ▶ Review Bid Tabulations
- ▶ Write justifications, if needed
- ▶ Make award/rejection recommendation to STB
- ▶ Work on bid protests with SEO

What is the function of C&S?

- Biddable:
 - Errors, omissions, conflicts
 - Uncertainty, quantified
- Awardable:
 - Unbalanced Bid
 - ▶ "A bid is mathematically unbalanced if the bid is structured in such a way that a price does not really reflect the actual price for the item. Some has a nominal price others have inflated prices.
 - ▶ "A bid is materially unbalanced if there is a reasonable doubt that award to the bidder submitting the mathematically unbalanced bid will result in the lowest ultimate cost to the Department
- Constructible:
 - Clear and feasible construction techniques

Importance of Proper Design, Construction and Monitoring:



Incorporate information from other ADOT Groups through Clearances:

- ▶ Before a project can be authorized and advertised, it must be cleared by Utility & Railroads Group, the Right of Way Group, and the Environmental Planning Group.
- ▶ Requirements from these clearances are incorporated into the project Special Provisions.
- ▶ Use of Conditional Clearances

C&S's Challenges:

- ▶ **Post advertisement activities are ignored**
- ▶ **Addendum**
 - Look towards District/Designer/PM
 - Postpone the project
 - Schedule messed up
- ▶ **Late Changes at Stage IV or later**
- ▶ **Communication gap between C&S and others**
- ▶ **Comments are not addressed**
- ▶ **MDR not available at Stage III**
- ▶ **Conditional Clearances**

Specifications:

- ▶ Provide written direction to contractors
- ▶ Constitute most important documents to inform the contractor of the work to be performed
- ▶ Agency established conditions and restrictions concerning work performance
- ▶ Quality and quantity measurement for the work to be performed
- ▶ Compensation for the work
- ▶ Standard, stored, and item specifications

Specifications:

- ▶ Project Specific General Requirements
- ▶ Start of Construction (Fixed/ Quick Start/Typical)
- ▶ Contract Time (WDs /CDs)/End of Construction (Fixed)
- ▶ Applicable Liquidated Damages
- ▶ Hours of Operation (typical shifts, day or night)
- ▶ Holidays and Special Events
- ▶ Full Closure, Lane Closures, Detour
- ▶ Coordination with other ongoing projects in the Area
- ▶ Designated Staging Area/ Material Source Restrictions
- ▶ Access Road

Contracts and Specifications:

- **Advertises construction projects**

 - State funded

 - Federally funded

 - Local Public Agency projects

 - Mixed Funds (Eligibility)

- **Does not Advertise**

 - Procurement Projects

 - Certification Acceptance Agency projects

Estimate Construction Costs:

- **Prepare Engineer's Estimate of Construction Costs**



**Required for all Federal Aid projects.
Essential for:**

- **Cost-based estimating**
- **Contacting materials sources**
- **Estimate for Budget/Program, Fund Obligation and Final Adjustments prior to Bid Open.**

Estimate Construction Costs:

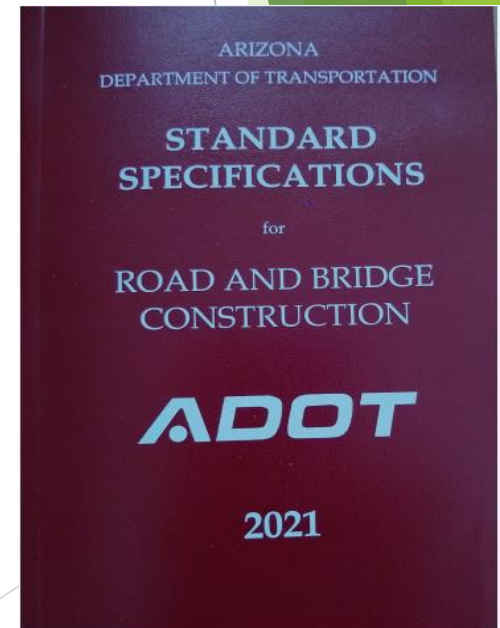
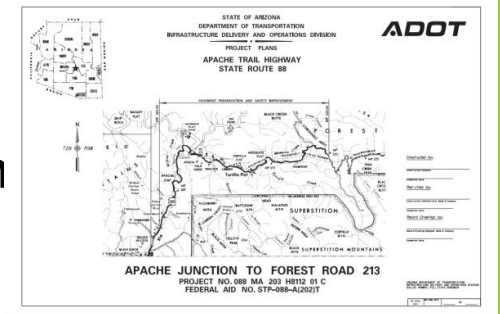
Force Account Items:

- Should be used only when unable to quantify/unknown
- Must be documented
- Use should be minimum and refrain from miss-use it
- Price upon consulting with experienced team members



Hierarchy of Project Documents:

- ▶ **Supplemental Agreements**
Generated in the field by the Resident Engineer
 - **Special Provisions**
 - **Project Plans**
 - **Standard Drawings**
 - **Standard Specifications - The Blue Book**



Justification of Award of Contract or Rejection of Bids:

If the apparent low bid is more than 10% above or 15% below the Engineer's Estimate, C&S prepares a Justification Memo.

The memo is:

- Written to the State Engineer
- Explains the differences between the low bid and Engineer's Estimate
- Recommends:
 - ▷ Award to the low bidder,
 - ▷ Rejection of low bid and award to second low bidder, or
 - ▷ Rejection of all bids

Execute Construction Contracts:

- ▶ Prepare and execute construction contracts in accordance with the Department's requirements, rules, and regulations, and the special provisions for the project
- ▶ Ten days for contractor
- ▶ Ten days for the Department
- ▶ Challenges - inquiries from Stakeholders
- ▶ Quick start

Contractor Prequalification:

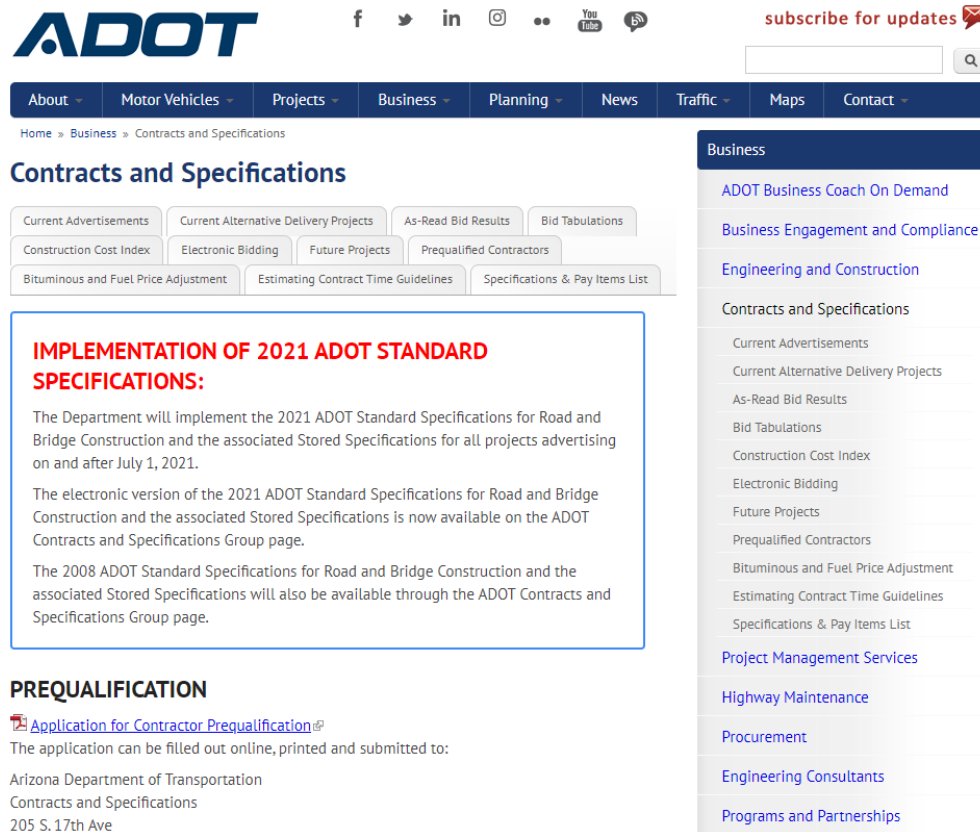
ADOT prequalifies contractors for a maximum programmed amount and for the type of work.

See the link below for ADOT's Prequalification Application:

<https://azdot.gov/business/contracts-and-specifications>

Subscribe for updates:

<https://azdot.gov/business/contracts-and-specifications>



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Contracts and Specifications

Current Advertisements Current Alternative Delivery Projects As-Read Bid Results Bid Tabulations Construction Cost Index Electronic Bidding Future Projects Prequalified Contractors Bituminous and Fuel Price Adjustment Estimating Contract Time Guidelines Specifications & Pay Items List


IMPLEMENTATION OF 2021 ADOT STANDARD SPECIFICATIONS:

The Department will implement the 2021 ADOT Standard Specifications for Road and Bridge Construction and the associated Stored Specifications for all projects advertising on and after July 1, 2021.

The electronic version of the 2021 ADOT Standard Specifications for Road and Bridge Construction and the associated Stored Specifications is now available on the ADOT Contracts and Specifications Group page.

The 2008 ADOT Standard Specifications for Road and Bridge Construction and the associated Stored Specifications will also be available through the ADOT Contracts and Specifications Group page.

PREQUALIFICATION

 [Application for Contractor Prequalification](#)

The application can be filled out online, printed and submitted to:

Arizona Department of Transportation
Contracts and Specifications
205 S. 17th Ave

Business

- ADOT Business Coach On Demand
- Business Engagement and Compliance
- Engineering and Construction
- Contracts and Specifications
 - Current Advertisements
 - Current Alternative Delivery Projects
 - As-Read Bid Results
 - Bid Tabulations
 - Construction Cost Index
 - Electronic Bidding
 - Future Projects
 - Prequalified Contractors
 - Bituminous and Fuel Price Adjustment
 - Estimating Contract Time Guidelines
 - Specifications & Pay Items List
- Project Management Services
- Highway Maintenance
- Procurement
- Engineering Consultants
- Programs and Partnerships

When Projects Are Not Done Properly:

https://youtu.be/w_yoVcVFtAY

How C&S Contribute to Deliver Projects:

- ▶ Work on developing realistic estimate to make sure program amount is adequate.
- ▶ Through in depth review ensure quality of the bid documents that resulted in fare bidding.
- ▶ Ensure Federal requirements are met for all Federally funded projects.
- ▶ Initiate construction fund obligation process.
- ▶ Advertise the projects, which is an item for agency performance measurement.
- ▶ Complete the project award process to transition to implementation phase.

Contracts and Specifications Group

602-712-7221



PROJECT DELIVERY ACADEMY

Project Advertising and Construction:

Contracts and Specifications
Questions and Comments:

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**Thank you for
Your time and Attention
and Stay Safe.**