

# Management Systems for Mega Projects

June 5, 2012

## Federal Level Management and Reporting

The IPD Project Delivery Team provides assistance to transportation agencies in delivering complex transportation improvements and oversees specific procedures mandated by Congress to help enhance cost estimating, financial planning, and project management practices for all major projects with a total project cost of \$500 million or more receiving Federal funding. Throughout the project delivery process, access to accurate and updated cost estimates is essential to legislative bodies and transportation officials as they make strategic decisions on advancing projects. The processes overseen by the IPD Project Delivery Team assist in maintaining and disseminating accurate and realistic cost estimates. The Office of IPD also offers technical assistance to help agencies overcome project delivery challenges.

The delivery of large transportation projects involves a myriad of processes and requires a high level of coordination among all stakeholders. Transportation agencies often play a significant role in the implementation of a project from its inception to its construction, with responsibilities that include: estimating and controlling costs; ensuring the fulfillment of environmental and Federal requirements; obtaining adequate financing and the overall managing of the various parties involved in bringing the project to a successful completion. For Major Projects, which are defined by the FHWA as projects requiring Federal assistance that are over \$500 million in cost, the processes and Federal requirements involved in project delivery become more complex, rendering it more challenging, but ever more important, for the process to be well-managed.

## Project Management Plans

FHWA Project Management Plans site -

[http://www.fhwa.dot.gov/ipd/project\\_delivery/tools\\_programs/project\\_management\\_plans/](http://www.fhwa.dot.gov/ipd/project_delivery/tools_programs/project_management_plans/)

## Federal Financial Plans

FHWA Financial Plans site - [http://www.fhwa.dot.gov/ipd/project\\_delivery/tools\\_programs/financial\\_plans/](http://www.fhwa.dot.gov/ipd/project_delivery/tools_programs/financial_plans/)

## Cost Estimating and Risk Assessments

List of risk register items for consideration



risk register  
items.xlsx

FHWA Cost Estimating Site - [http://www.fhwa.dot.gov/ipd/project\\_delivery/tools\\_programs/cost\\_estimating/](http://www.fhwa.dot.gov/ipd/project_delivery/tools_programs/cost_estimating/)

FHWA Risk Management Site - [http://www.fhwa.dot.gov/ipd/project\\_delivery/resources/risk\\_management/](http://www.fhwa.dot.gov/ipd/project_delivery/resources/risk_management/)

## FHWA Cost Estimate Reviews

FHWA Cost Estimate Review guidelines



**FHWA Cost Estimate Review guide.**

The [FHWA project delivery site](#) contains resources and guidance for risk management, cost estimating, and financial plans for Majors projects.

The WisDOT [Mega Projects Guidelines](#) site contains general Mega/Majors project guidance.

The [WisDOT Estimating Tools](#) site contains the Major Projects Cost Estimating Tool and guidance.

## **Department Level Management and Reporting**

Projects that meet the definition of a Federal Major Project report on a monthly basis to the Department’s Oversight Team. Other High Profile projects that utilize some of the Mega Project reporting and management tools may also report out at the Oversight Meeting.

This Department-level meeting provides an opportunity for all parts of the organization that play a role in Mega and identified High Profile Projects to share information on budget, schedule, work completed and planned, significant issues and risks, public involvement and legislative communication and coordination, and disadvantaged business enterprise and labor initiatives. These meetings provide an opportunity to discuss potential disputes, political issues, public concerns and other potentially sensitive issues. This format is a significant tool to effectively, efficiently and consistently manage these projects.

Managing mega and other high profile projects, as defined, means that the modal divisions (DTSD and DTIM), OPFB and FHWA need to work in collaboration from initial project identification through the completion of construction, and the close-out of the project’s finances.

A typical agenda and monthly executive level report have been developed to assist the Oversight Team with fulfilling its mission.

The Department’s Oversight Team is made up of:

- Chairperson:** Secretary
- Meeting Facilitator:** Deputy Administrator – Division of Transportation Systems Development
- Members:** Deputy Secretary, Executive Assistant, DTSD Administrator, DTSD Deputy Administrators, DTIM Administrator, OPBF Director, FHWA Administrator, Region Directors and Deputy Directors with Mega projects or other significant projects.
- Typical Attendees:** Oversight Members, Mega Project Chiefs, Bureau Director DTIM BHSP
- Projects Included:** Federal Major or Mega Projects and other high profile projects or programs that warrant a higher level of department level discussion.
- Meeting Frequency:** The meetings are generally held the first Friday of each month from 9-11 a.m. Meetings are held in Madison at Hill Farms, in the Secretary’s office.
- Typical Agenda & Reports:** Executive level reports and meeting materials are generally submitted to the Oversight Team the Friday prior to the meeting. The agenda and handouts are submitted by the Division Administrator’s office or their designee (current SE Region Director). See Attachment.

## **Division Mega and Major Projects Team**

A monthly meeting of Region Directors, Bureau Directors, Administrator's Office, Mega and Major Project Development Chiefs, DTIM BSHP and BTLR Directors, and FHWA.

The meeting is typically 90 minutes in length, is held the 4<sup>th</sup> Wednesday of the Month from 3-4:30 PM.

Meeting Format:

- Hosted and Facilitated by the Bureau of Project Development. Utilize Van Walling and Gary Whited (as necessary) to facilitate meetings
- Utilizes Division Mega, Major, and High Profile Project PMP Schedule focusing typically on a 30 day and 90 day look ahead
- Has a set agenda, meeting minutes, and utilizes an Issue and Risk Management table
- BPD staffs preparation for the meeting, the meeting, and follow-up actions to the meeting. We expect to utilize UW – CMSC for supporting staff
- Ensures responsible parties are identified for action and decisions are made
- Ensures appropriate topics are shared and addressed at Oversight Committee meetings

Meeting Purpose:

- Identify and resolve project issues and risks that have significant impacts on schedule and resourcing
- Identify and resolve schedule issues and priorities
- Identify and resolve resource issues and priorities
- Identify, discuss, and assign high level policy decisions
- For use in building relationships, understanding mutual issues and concerns, trust, and acceptable resolution of issues between bureaus and regions
- Communication Areas
  - Identify, discuss, and share best practices and successful project components between regions, bureaus, and project teams
  - Identify areas for collaboration
  - Share examples of successful issue resolution at the director-to-director level or below
  - Discuss consistent messaging on division Mega / Major project schedules, budgets, quality, and safe product use
  - Technology transfer

**Example Issues for Meeting.**

- Environmental Document coordination issues
- Significant Policy Issues
- Maintenance considerations
- Resolution of a significant TMP issue on a corridor. Keeping more lanes open vs. use of more extensive mitigation investment.
- Identify, discuss, and assign, consultant solicitation, selection, negotiation, and management issues

**Example Issues for Project Team and Lower Level:**

- Structure Selection
- TOIP implementation
- Routine Design and geometric issues
- Pavement selection
- Real Estate and Utility issues
- DBE / Labor / Small Business initiatives

Note: At times routine issues can be determined to have significant impact to the division and department and should be elevated to the monthly meeting.

Ground Rules:

1. All seek to meet project and program schedules
2. All seek to adhere to existing policies and standards
3. Assign and empower decisions at the lowest appropriate level
4. Support decisions made at the chief, supervisor, staff, and project team level
5. This is not the forum to make specific project decisions
6. Come prepared and on – time for the meetings. Give advanced notice of absence
7. We are not backing up on already resolved issues
8. Respect one another. There are no bad ideas
9. Mega Guidelines dispute resolution process is utilized

## Region, Bureau, and Team Management and Reporting

Extensive planning and organization on an ongoing basis is required to meet the needs for delivering the Mega Project and the Department Oversight Team and to fulfill FHWA requirements.

A team working on a Mega Project will typically have multiple daily or weekly meetings focused on immediate project needs along with issues and risks.

The project team should hold a Change Management and Progress Meeting on a bi-weekly to monthly basis. FHWA, DTSD Bureaus, DTIM, and OPBF should be represented at these meetings when and where appropriate. Topics covered at the meeting should cover components required in the Department's Project Management Plan.

The [Project Management Plan](#) is comprised of the following topics:

1. Project descriptions and scope of work
2. Goals and objectives
3. Project organizational chart, roles and responsibilities
4. Project phases
5. Procurement and contract management
6. Cost budget and schedule
7. Reports – *see list below*
  - o [I-94 NS Executive Summary](#)
  - o [I-39 Executive Summary](#)
  - o [Tri County Executive Summary](#)
  - o [I-794 Hoan Executive Summary](#)
  - o [US-18 Verona Road Executive Summary](#)
  - o [US-41 Executive Summary](#)
  - o [Zoo Interchange Executive Summary](#)
  - o [Zoo Interchange Monthly Report](#)
  - o [US-41 Monthly Report](#)
  - o [I-94 NS Monthly Report](#)
8. Internal and stakeholder communications
9. Project and program management controls – *see list below*
10. Design quality assurance/quality control
11. Construction quality assurance/quality control
12. Environmental monitoring
13. Right of way
14. Safety and security
15. Traffic management
16. Communications/public information
17. DBE Program
18. Title VI Management and Reporting
19. Closeout plan
20. Project documentation

Reports that the Project Team should utilize include:

- A. Executive summary development for Oversight Committee
- B. Activities and deliverables

- C. Issues/action items
- D. Schedule
- E. Cost
- F. Quality
- G. Other status reports, such as DBE/minority participation and contractor safety

Project and Program Management Controls the project team should utilize include:

- A. Risk management plan
- B. Scope management plan
- C. Scheduling software
- D. Cost tracking software
- E. Project metrics
- F. Contracting strategies (new and innovative)
- G. Value engineering, value analysis, constructability reviews
- H. Contractor outreach meetings
- I. Partnering
- J. Change order/extra work order procedures
- K. Claims management procedure
- L. Other programs, such as Owner Controlled Insurance Programs (OCIP)

Many of these tools and practices are defined in more detail in the section on Mega Project Best Practices and on the [FHWA website](#).

## **DBE and Small Business Responsibilities, Management, and Reporting**

The Department has federal and state responsibilities on all of its improvement program projects to fulfill Disadvantaged Business Enterprise (DBE) and Small Business Enterprise responsibilities. The Office of Business Opportunity & Equity Compliance (OBOEC) in DTSD oversees and manages these responsibilities for the Department.

For all types of projects, but particularly High Profile and Mega projects, the staff involved are encouraged to become more aware and participate in DBE and Small Business efforts.

Selected High Profile and Mega projects may have project specific activities that for some or all of these areas.

OBOEC carries out a number of ongoing responsibilities for the department that cover all programs. These include:

### **Inclusive DBE Goal Setting Technique:**

Utilize the industry stakeholders participating in the business committee to seek input on DBE goals that balance supply, demand, and community expectations with project needs. Analysis team and technical subcommittee, use project engineer data to analyze and estimate realistic opportunity for DBE participation. This is done through the Department's Transportation Advisory Committee (TRANS-AC), and the Department's Transportation Consultant Advisory Committee (TRANS-CAC). Individual goal setting is sometimes done on high profile and mega projects.

### **DBE Firm Pre-Assessment:**

The DBE office offers DBE firms the opportunity for 'Early Intervention Assessment' to identify potential problem areas and customize training and resources in advance of contracting opportunity. Participation is not mandatory but recommended.

### **Encouraging Formalized Partnering Relationships:**

This is often done through the TRANS-AC and TRANS-CAC groups but can also be done at the individual mega project level.

- **Mentoring Connections Arrangements:** 6-month informal networking relationship, participation is monitored but no DBE credit granted.
- **Mentor Protégé Agreement:** a formal document outlining the agreement between the mentor (prime contractor) and protégé (a DBE subcontractor) to develop DBE firm capacity. The agreement is submitted to Wisconsin

Department of Transportation (WisDOT) for approval for predetermined DBE goal attainment. Usually 3 years in duration.

- **Joint Venture Agreements:** a formal, legally-binding agreement, between firms creating a venture desiring to compete on a single project for its duration. Agreement requires an LLC designation, clarification of responsibility, liability, and staff on the advice/review of legal counsel. DBE credit is assigned based on work performed by DBE certified firm and reaffirmed before project is awarded.

### **Bullseye Marketing Strategy:**

Bullseye Marketing strategies are utilized informally when and as the opportunities are identified.

- (1) Mail/email contract information to list of firms pre-advertisement outlining when and where to find opportunity
- (2) Mail/email project information, resources once advertised; advise where to find plans
- (3) Distribute list of potential primes (plan holders list) to DBE firms for solicitation

## **Strategies for Supplemental DBE Contracting Opportunities**

### **Contract Unbundling**

Design and/or project team breaks projects down to smallest pieces possible identified as “separate project IDs”, assesses level of risk (low, medium, high) associated with maintaining small size referred to as “unbundled” to right size the contract package to stimulate business opportunity for both nontraditional and traditional participants in road construction contracting.

### **Creating Stand-Alone Projects:**

- a. Contract packages unbundled because the work areas have a significant pool of ready, willing and able firms for competition. These unbundled packages are let separately to stimulate opportunity for smaller, nontraditional businesses to compete as prime contractors. Goal is to create new, small business primes
- b. Previously identified contracts: landscaping, fencing, advanced traffic control, security, raze & removal

### **Creating Mandatory Subcontracts:**

Work items in a contract are identified as mandatory subcontract items based on the size of the contract, specialty work areas that WisDOT traditionally utilizes, and a significant pool of firms exist to compete for the work. Goal is to increase WisDOT competition and firm capacity as subcontracting.

### **Outreach to lateral certifying agencies:**

Examine other agencies that certify minority, female, or small businesses for potential WisDOT DBE Firm Certification. Review contractor lists for firms that perform WisDOT work to encourage them to apply for DBE Certification. Conduct certification workshops for interested firms

### **Project related meetings include structured networking for prime and subcontractors:**

This is done at various conferences and at project meetings as, where, and when appropriate (ex. Pre-Bid meetings, or consultant solicitation meetings).

- *Speed Networking:* a timed, facilitated, rotational exercise that allows DBE firms ‘face time’ with numerous primes in a single setting. DBE firms market themselves while primes clarify subcontracting needs. The goal is to network, educate, and personalize DBE firms (and program). Anticipated result is a follow-up meeting that leads to a subcontract or partnership.
- *Mosaic Exercise:* facilitated, small group discussion including Prime, DOT, community, DBE and labor stakeholders to brainstorm responses to predetermined questions to generate strategies for inclusion and best practices.

### **DBE Contracting Update:**

- Email newsletter to keep the community informed about upcoming project opportunities
- Maintain tallies of DBE participation and labor participation for review and accountability.

### **DBE Certification workshops and individual assistance:**

Explains certification requirements and process to potential DBE firms and provides referral to DBE resources that can assist or support potential DBE firms with the application submittal.

### Expedited DBE certification:

Firms who identify themselves as seeking DBE certification to compete on WisDOT mega projects will be prioritized for certification review. The standard 3-month processing time is cut to 6 weeks and certification staff will confirm that firms are in process if prime inquires.

### Civil Rights and Compliance Tracking System (CRCS):

- WisDOT DBE staff hosts contractor training for the Certified Electronic Payroll portion of CRCS. They learn about entering payments to first tier subcontractors and all DBE firms.
- System allows subcontractors to confirm receipt of payments to and from the prime.
- Contractors enter certified electronic payrolls into the system documenting and tracking employees' hours, wages and demographics, giving WisDOT just-in-time labor participation data.

### Development & Inclusion of Contract Specifications:

- **DBE condition of award:** WisDOT requires prime contractors to submit their DBE percentage when they submit their bid. When recognized as low bid, the prime contractor has 48 hours to submit their DBE commitment before the contract is awarded.
- **Additional Special Provisions (ASP) 1:** The prime contractor receives a \$5.00 payment per hour for every TrANS graduate hired for up to two years from their hiring date and for TrANS graduates who become apprentices for their entire length of their apprenticeship.
- **Contractors must use the Civil Rights and Compliance Tracking System (CRCS)** to submit electronic certified payrolls and payments to first tier and all DBE Subcontractors (ASP 7).

### Training Workshops:

- DBE Certification: Inform prospective contractors how to qualify for DBE status.
- WisDOT bidding process: Highway Construction Contract Information Site (HCCI), which helps navigate contractors and DBE firms through the project advertisement and award.
- How to bid & quote as a Subcontractor and/ Prime:
  - Contractor's perspective: describes what they look for when receiving bid or quotes.
  - WisDOT perspective: how to bid DOT projects.
- Civil Rights and Compliance Tracking System (CRCS): Describes/explains to contractors how to enter their payrolls and payments for 1<sup>st</sup> tier subcontractors and all DBE.
- Trucking guidelines (federal & state): Explains to trucking firms which laws apply for DBE trucking credit.
- DBE bonding workshops: Educates DBE firms in bonding requirements and issues.
- Certified Electronic Payroll Training: Provides instruction on requirements and use of electronic payrolls

The Division continually evaluates the need for and opportunities for providing training.

## Title VI Responsibilities Management and Reporting

### General Responsibilities

The Wisconsin Department of Transportation (WisDOT) has federal Title VI obligations on mega projects, major projects, and high-profile projects. To assure Title VI compliance throughout the various stages of each individual federally-funded and state-funded project, WisDOT in partnership with the Federal Highway Administration (FHWA) has organized a Title VI Program with service under the following definitions:

Title VI is a touchstone for several Nondiscrimination Authorities. It is not restricted to any specific issue or any particular program. Title VI issues may emerge at any stage of a Project with potentially far-reaching consequences. Title VI assures that no person in the United States shall on the grounds of race, color, disability or national origin be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal financial assistance.

Limited English Proficiency (LEP) is an issue that falls under National Origin of Title VI. An LEP person is defined as a person who does not speak English as a primary language and has limited ability to read, write or understand English. Failure to provide LEP persons services or meaningful access may constitute national origin discrimination.

The Americans with Disabilities Act (ADA) provides that persons with bona fide disabilities be provided with meaningful access to program services and information, and/or be provided with reasonable accommodations that they may obtain equal benefits and privileges of those who are able.

Environmental Justice provides for continuous monitoring of social, economic, and environmental impacts on minority and low-income communities. It enhances efforts to assure nondiscrimination in federal programs affecting human health and the environment, and promotes meaningful opportunities for access to public information, and for public participation in matters relating to minority and low-income communities and their environment.

### **Title VI in the Planning Process**

Public involvement is required at the Planning Stage to forestall future problems. Public involvement should be performance-oriented and not process-oriented, communication must always be a two-way street. It is very important that public concerns and views are considered in decision-making. All plans must be tailored to fit local conditions and ensure involvement of the transportation disadvantaged. An effective public involvement and participation program may contain the following issues:

- Recognition of specific and prominent community issues and circumstances
- Availability of mechanisms for eliciting and soliciting minority involvement
- Availability of and accessibility to information for all impacted minority and low-income communities
- Multiple mechanisms for involving the public
- Openness and complete accessibility to process
- Coordination with Indian Tribal Governments
- Off-setting impacts across investments

### **Special, Economic and Environmental Effects (SEE)**

This phase continues where project planning ends. Consideration of alternatives and examination of social, economic, and environmental effects preclude that a project analysis team perform an analysis, the degree to which is open and collaborative, based on potential impacts, and influences decisions in the public interest. Factors of SEE include:

- It is not an environmental document
- It may determine that the project will have no significant individual or cumulative SEE impacts
- It can impact decisions on location and design
- Decision documents include CE, FONSI, and the ROD

### **Title VI and Project Development**

The data-gathering process in the Project Development Phase is critical. Were the appropriate number of public hearings conducted? Were they held as open forums? Were there adequate identification of social, economic, and environmental impacts? Was consideration given to increase access to facilities and services, upgrading affected communities or creating positive change in the tax base and property values?

Adverse impact in the Project Development Phase involves diminished access to facilities and services, disruptions of community cohesion, disruptions of people, businesses and farms. There should be at this stage budgeting for equitable mitigation. Examples of mitigation include:

- Restoration of circulation and pedestrian and pedestrian patterns
- Relocation assistance and advisory services, replacement housing and moving payments for displaced families and businesses

- Aesthetic and visual improvements
- Traffic signalization and street lighting improvements
- Employment, training, and contracting opportunities
- Noise barriers and buffer zones
- Landscaping

## **Title VI and Right-of-Way**

Title VI aspects of Right-of-Way involve appraisal reviews, negotiations, and acquisitions. It also involves nondiscrimination in such aspects as relocation assistance and payments and property management. Appraisals provide a basis for payment on estimates of fair market value. Negotiations may be highly sensitive and must take into consideration all fair market conditions. Acquisition of properties through fair negotiations requires agencies to make full amount offers on amounts believed to be just compensation. Coercion is strictly prohibited. Relocation and assistance payments require written agreements and notices including full disclosure of agency policies, provision of agency services, and appropriate notice timelines. Property management involves property leased or rented acquired for highway purposes and careful and judicious selection of management firms and demolition contractors. Common Title VI issues in Right-of-Way include:

- Use of Fee Appraisers
- Selection of Comparables
- Adjustments to subjects without bias
- Accelerated or advanced condemnation
- Offer of less than approved appraisal amount
- Degree of relocation services provided
- Selection of replacement housing
- Determination of rent amounts
- Maintenance of rental property

## **Title VI and Construction**

Construction and Title VI issues cover the broad spectrum from plan preparation, specifications, and estimates to final inspection and acceptance. The agency advertises for bids and then awards contracts to the lowest bidder. After sub-contract approvals, the work begins and under Title VI, there are multiple issues that involve implementation of the DBE Program, monitoring of work, and the implementation of mitigation measures. Title VI issues in Construction include:

- Safety through construction zones
- Noise and air impacts
- Employment and contracting goals
- Prequalification, bonding, licensing requirements
- Approval of subcontracts
- Approval of plan changes and supplemental agreements
- Suspension or termination of contracts
- Withholding payments of de-certification