

# JOINT TRANSPORTATION RESEARCH PROGRAM

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## Project Management Training

### Introduction

In 2005, the Indiana Department of Transportation (INDOT) went through a complete reorganization of its operations going from centralized to decentralized (District) management. This reorganization gave Districts autonomy to manage construction projects with one exception: all added capacity projects are managed in the central office by the office of project management. Following in 2006, INDOT initiated a program called "Major Moves." This is a ten-year major road building program that was funded partially through a \$4 billion lease of the Indiana Toll Road. Through Major Moves, annual new construction will go from \$213 million in fiscal year 2006 to \$1.2 billion in fiscal year 2009. These two factors caused INDOT to change their approach toward managing design and construction.

INDOT formed a project management section. This section started in the central office and has expanded to the six districts within the state. Each project is managed by a project manager (PM) from conception to completion. A PM is assigned to a project when a scope, schedule, and budget have been defined. One of the first decisions for the PM is to select either a consultant or in-house design team. Typically, a PM in the central office has 7-8 projects which are corridor specific and not individual construction projects. The construction cost for these 7-8 projects total between \$500 million to \$1 billion. District project managers have more projects that are smaller and less complicated.

Individuals in the project management section required new skills that created a need for training. This project determined what skills were needed for project management, developed training materials and classes, and delivered the training.

### Findings

One of the first steps was to define the training requirements for a project manager.

With these needs identified, a search was then done to determine the best and most efficient source for collecting and developing appropriate content for INDOT. Numerous sources were investigated, and it was discovered that WASHDOT had developed similar training for their employees.

WASHDOT was contacted and asked if INDOT could use these materials for an introductory course on project management. Permission was granted, and this content was used and customized for INDOT.

Three other courses were developed and delivered, and they are described in the implementation section. This training curriculum has improved the skill set and provided guidance for what INDOT project managers do and how to properly manage projects.

### Implementation Recommendations

With an understanding of training requirements and the types of training resources available, INDOT decided to develop their own content. A training consultant worked with a committee comprised of INDOT and university personnel to develop the curriculum and content for the Project Management Process and Advance Project Management courses. The training curriculum developed was for Project Scheduling and the Project Management Process. These two courses were delivered by the consultant.

Another course, Advanced Project Management, was developed and delivered by another consultant with oversight and review from a project committee.

A third course, Advanced Construction CPM Scheduling, was developed and delivered in a similar manner. A fourth course, Constructability Review and Change Order Process, was developed in 2010 and delivered at the Civil Engineering Professional Development Seminar at Purdue University.

This training content will be available through INDOT Employee Development. Training material is available at the website: <http://rebar.ecn.purdue.edu/INDOTpm/home.aspx>

## References

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McCullouch, B., & Land, W. Project Management Training. Publication FHWA/IN/JTRP-2011/13. Joint Transportation Research Program, Indiana Department of Transportation and Purdue University, West Lafayette, Indiana, 2011. DOI: 10.5703/1288284314626

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