

A Modified PM/CM at Risk Approach to Project Delivery

The Amtrak ARRA Program

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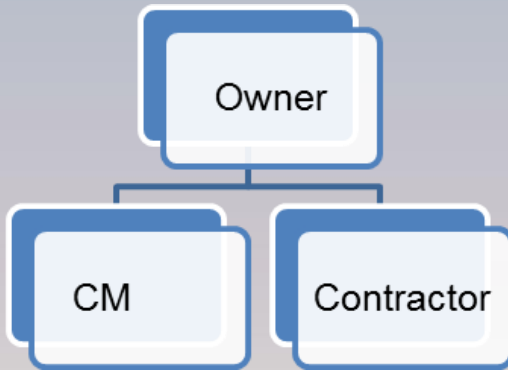
Defining Characteristics of CMaR

- Professional management of all phases of a project
- Centralized responsibility for project delivery
- Collaborative project team
- Gross Maximum Price (GMP)
- Qualifications based selection method
- Contractor does not provide direct construction services
- Transparency regarding costs

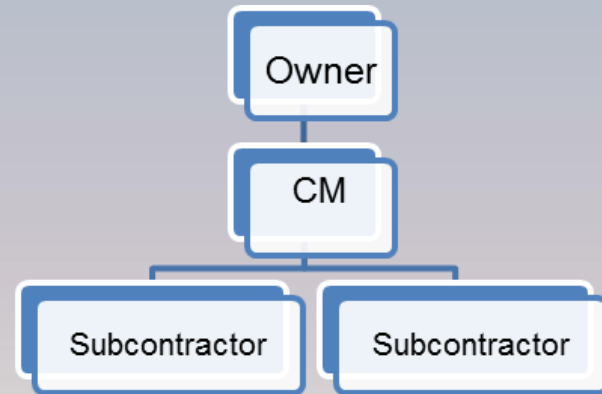
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Traditional



CMaR



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Amtrak's Challenge

- ARRA fund appropriation greatly exceeded Amtrak's planned capital program
- Accelerated delivery
- Large size and geographic compass of capital improvement needs
- Scope of work undetermined
- Insufficient resources to support the program

- **Facilities**

- Utility upgrades
- Wheel truing building/Drop tables
- Maintenance buildings
- Fall Protection
- Car Wash

- **Stations**

- Platforms
- Passenger Station Upgrades

- **ADA**

- Mobility First
- Passenger Information Displays
- ADA Component Upgrades

- **Rail Systems & Electric**

- Positive Train Control
- Substations
- Frequency Converters
- Fiber Optic

- **Other Work**

- Bridge repair & ballast protection
- Security systems
- VHF Radio Network
- Equipment Storage Facilities



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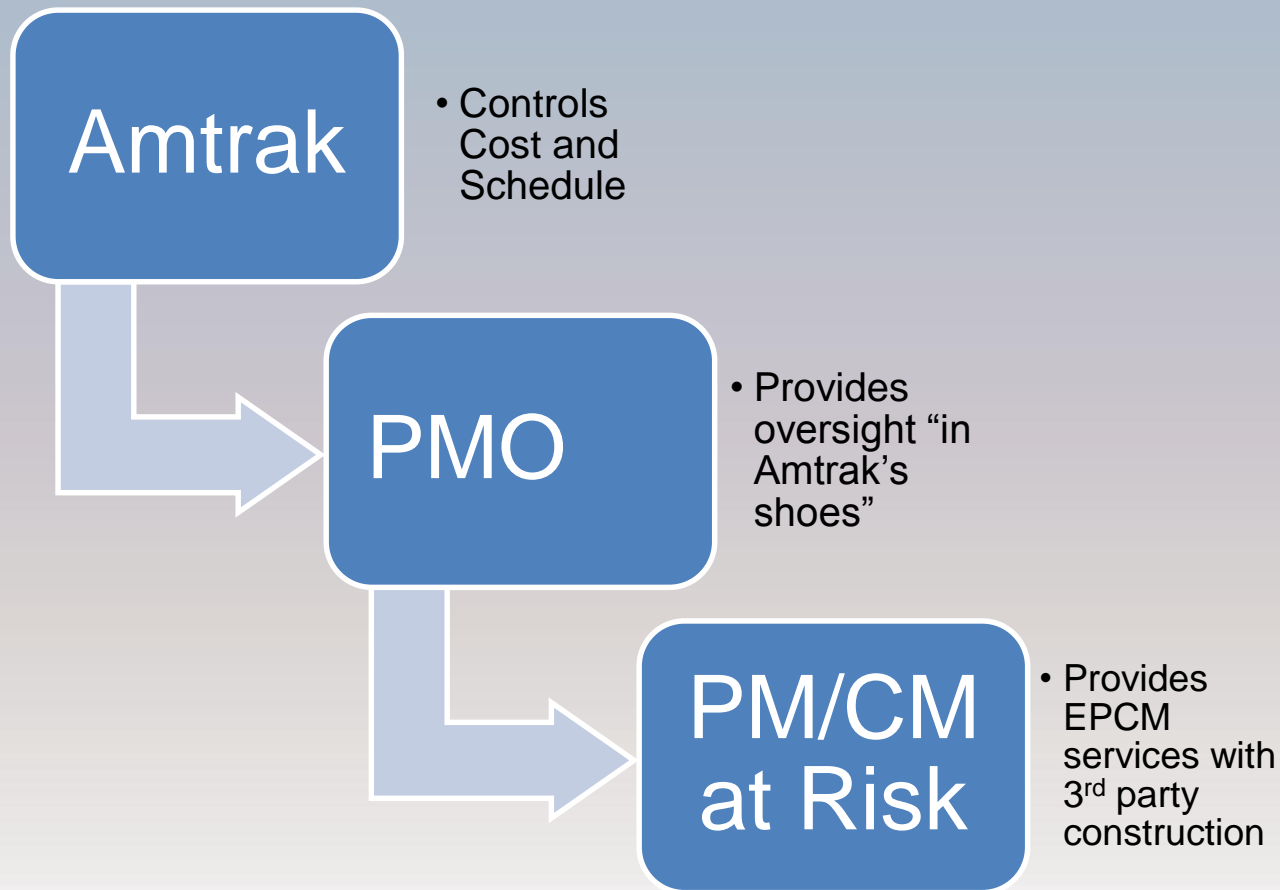
Amtrak's Approach

- Competitive RFP
- Scope include Engineering, Procurement, Construction Management (EPCM)
- Flexible Contract
 - For projects already designed by Amtrak, Amtrak conducted the procurements, and Jacobs provided construction management services
 - For projects that Amtrak had not yet designed, Jacobs provided a full range of design, procurement and construction services
- Construction costs determined after award via competitive proposals

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Amtrak's Organizational Model



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Key Contract Provisions

- Core Team Budget Cap
- Design/CM Services capped at % of construction value
- CCIP Insurance
- Construction competitively procured and performed by 3rd party subcontractors
- Subcontractors paid through bank disbursement account
- GCs were paid based upon % of completion in accordance with approved Schedule of Values
- 20% SBE and 5% DBE participation goals
- Amtrak's boilerplate Design/Build contract provisions were basis of agreement

Owner Controls Design & Cost

Amtrak issued
Authorization to
Proceed (ATP)
with design

Amtrak provided
design &
constructability
assumptions

Amtrak
approved BOD

Amtrak
reviewed 65%
design

Amtrak
approved 95%
design and IFB
documents

Amtrak
approved
procurement
bundling
strategies,
individual
contract
procurement
plans and IFB
packages

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Approval Process

Procurement

Authorized Subcontract Award

Approved all Subcontract change orders for time or cost

Construction

Approved declaration of substantial and final completion

Project Controls

Jacobs managed project control system. All correspondence/decisions/contracts were fully documented. Amtrak had financial control and approves all invoices.

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Amtrak's Unique Approach to CMaR

- No GMP - instead, Amtrak controlled staffing levels
- Rates and fees were capped at a percentage of final construction cost
- Construction bids were openly competitive and subject to owner approval
- Contractor performed full range of both PM/CM services including design, and CM Only services

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Benefits of PM/CM at Risk Approach

- Provides full range of resources
- Single point of responsibility
- Rapid Mobilization
- Shared risk
- Owner maintains control over scope and project finances
- Manage, measure, and ensure the required quality during the design and construction phase of project.
- Consistent overall program approach
 - program management system
 - insurance program
 - safety and quality
- Uniform project delivery through owner approved work processes
- Integrated program-wide cost loaded master schedule



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THANK YOU

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