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# Lessons Learned CMR Design Assist



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## Presenters

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- Design Assist Projects
- Advantages / Disadvantages
- Contract Timing
- Project Types
- Trades to consider
- RFP content
- Design Process
- Cost Analysis



- 4 projects
  - Renovation - \$15M – Construction Complete
  - Renovation - \$13M – Construction Complete
  - Renovation - \$59M – Design
  - New Construction - \$5M – Design/Bidding





## Advantages

Better Construction Documents  
Reduce Conflicts and RFI's  
Enhanced Collaboration  
Reduce Change Orders  
Earlier Cost Certainty  
Schedule Assistance  
Design Assistance  
Value Engineering  
Cost Estimating  
Constructability  
Leverage BIM

## Disadvantages

Selecting the Right Contractor  
Concern for Design Errors  
Adds Cost During Design  
Pricing Not Competitive



- Consider contracting early in the schematic design stage
- Consider the complexity, coordination, and scope of the project
- Contract timing could vary for trades based on project





- Design Assist is not for every project
- Heavy MEP projects seem to fit well
- Projects with unique scopes of work



- Any trade can be Design Assist
- Depends on scope of work for the project
- MEP trades can have the highest impact

**MEP**

● Mechanical ● Electrical ● Plumbing



- Pre-construction fee (lump sum)
- Pre-Construction Personnel Cost (Hourly Rates)
- Construction Fee (Change order fee%)
- General Conditions
- Shop Burden
- Tools
- BIM
- Type of Contract (cost plus, lump sum, etc) – convert?





- RFP can include a bid or estimate for the work
- Understand the difference between a bid and estimate
- Pre-Con Services and construction should be clearly separated on the RFP response



- Returned to owner! 😊
- How is shared savings handled in the RFP? DA, CMR, OWNER





## Design Meeting Attendees

- Owner Rep/Project Mgr.
- A/E
- CMR Project Manager
- DA Project Manager
- DA BIM Manager
- CMR Estimator
- DA Superintendent





## BIM, DA and Design

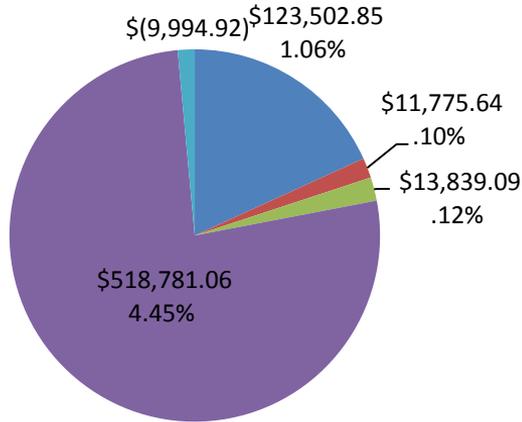
- A/E, CMR and DA contractors working together on design
- Coordination underway during design and reduction in changes during construction





# Cost Analysis

## CMR - DA



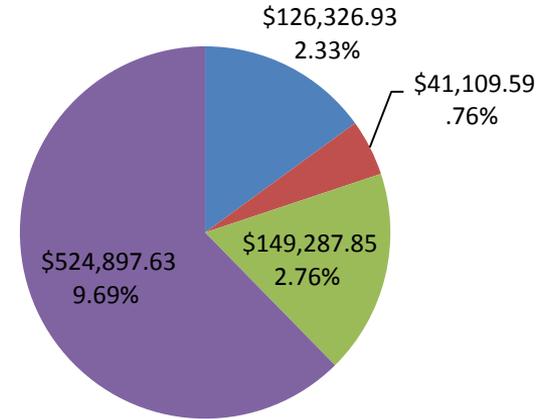
■ Differing ■ Error ■ Omission ■ Owner Request - Other ■ VE

DC – 2x

Error – 7X

Omission – 23X

## Multi-Prime

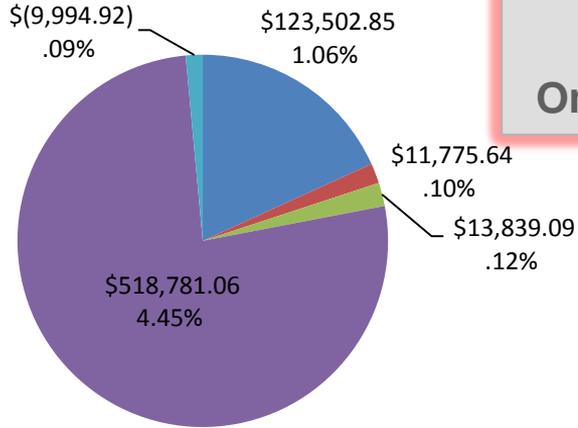


■ Differing Condition ■ Error A/E ■ Omission A/E ■ Owner Request Other

- \$156,000 CMR Contingency Return
- \$300,000 DA Buyout
- \$119,318 Bid Savings
- \$575,318



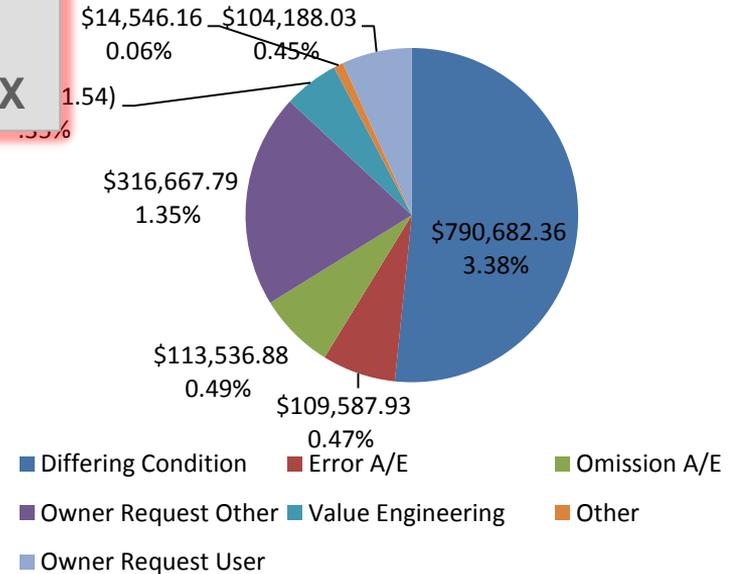
### CMR - DA



■ Differing ■ Error ■ Omission ■ Owner Request - Other ■ VE

DC – 3x  
 Error – 5X  
 Omission – 4X

### CMR



■ Differing Condition ■ Error A/E ■ Omission A/E  
 ■ Owner Request Other ■ Value Engineering ■ Other  
 ■ Owner Request User

- \$156,000 CMR Contingency Return
  - \$300,000 DA Buyout
  - \$119,318 Bid Savings
- \$575,318**



## Change Orders

CMR – DA.....	76
CMR – DA.....	32
CMR.....	279
Multi-Prime.....	417



## Contingency

CMR – DA.....	5.74%
CMR – DA.....	6.17%
CMR.....	6.55%
Multi-Prime.....	15.5%



# Team





# Questions/Answers