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Partnering for Alternative Delivery Projects

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Training Objectives

- **Understanding Process Differences**
  - CMAR/CMGC & Design Build
- **Embracing Process Improvements**
  - **Project Scoping**
    - Early communication with the team
    - Understanding the process impacts
  - **Partnering**
    - Bringing the construction team on board
- **Specific Lessons Learned from ADOT**

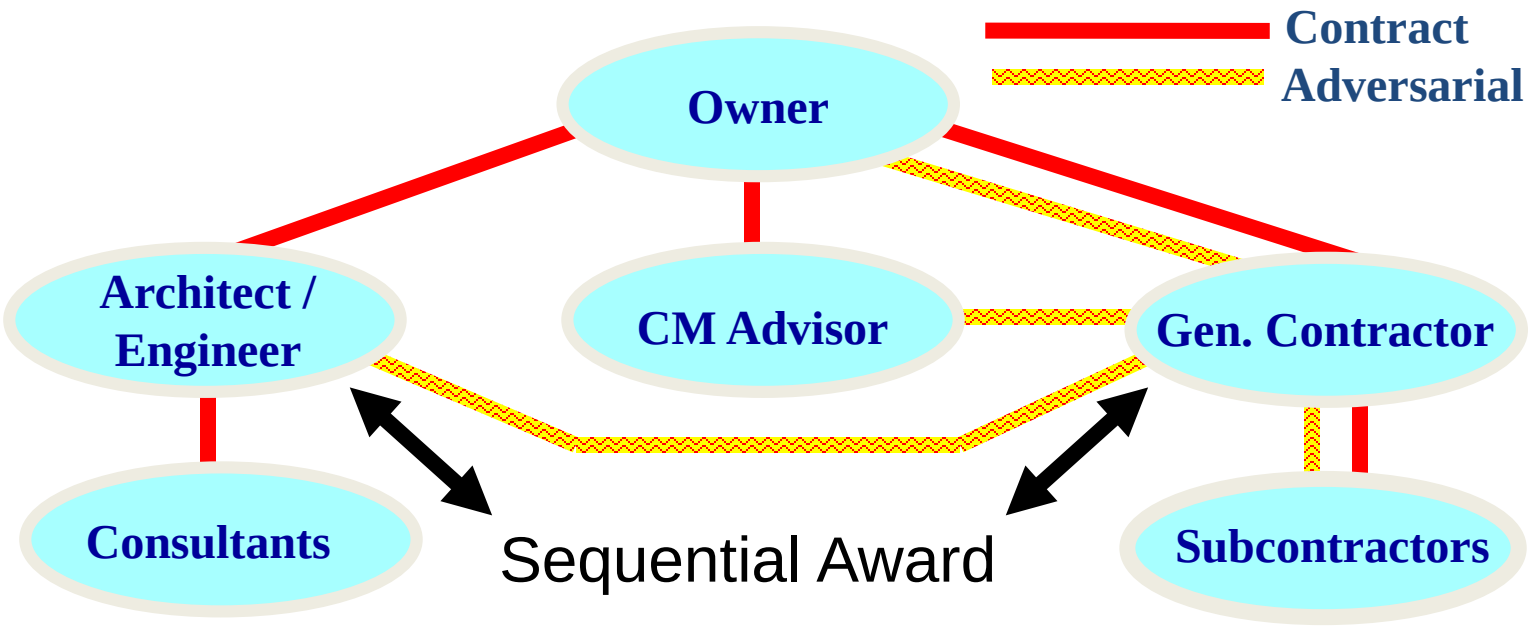
APDM Experiences

- How much experience does your organization have with DB and/or CMAR, CMGC, GCCM?
- What challenges have you had?
- Have you adopted Partnering with these types of projects?

Project Delivery Methods & Processes

Delivery Method	Qualifications Based Selection	Price Competition Selection
Design Bid Build:	None or Pre-Qualified Select Bidders' List and then Price	Low Bid
Design Build:	QBS only & Negotiated Contract	QBS & Design Competition & Price
Construction Manager Risk:	QBS only & Negotiated Contract Opt. out at GMP	None
Job Order Contracting	QBS only & Negotiated Contract	QBS & Coefficient Competition

Design Bid Build Process



- Architect/Engineer (Qualifications Based Selection)
  - Design services
  - Management of bid process
  - Construction administration
- General Contractor / Subcontractor (Low Bid)
  - Construction

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Known Issues with Design-Bid-Build

- Low bid may not result in the lowest ultimate cost (base level quality, claims, change orders, etc.)
- Constructability challenges
- Risk allocation
- Adversarial relationships
- Higher level of inspection/testing by the agency (perceived)

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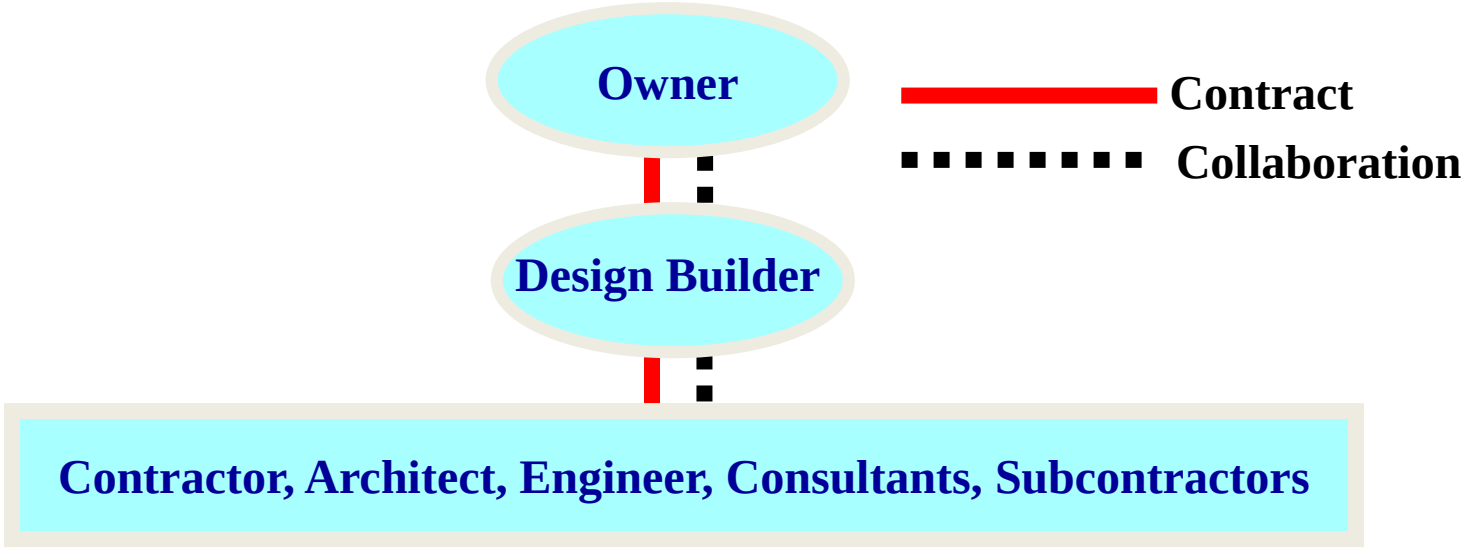
Design Build Process

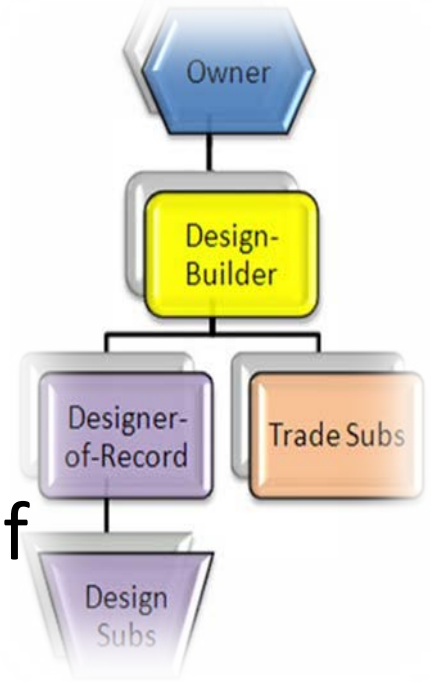


Design Build (QBS or Best Value)

- Design services and construction services
- Management of design services
- Management of bid process & trade subcontracts
- Open book or lump sum

What is Design-Build

- "One Step" or "Two Step" competitive negotiation
- Proposals based on definitive performance criteria
- Uses Request for Proposals instead of Invitation for Bids procedures
- Awards on Best Value basis



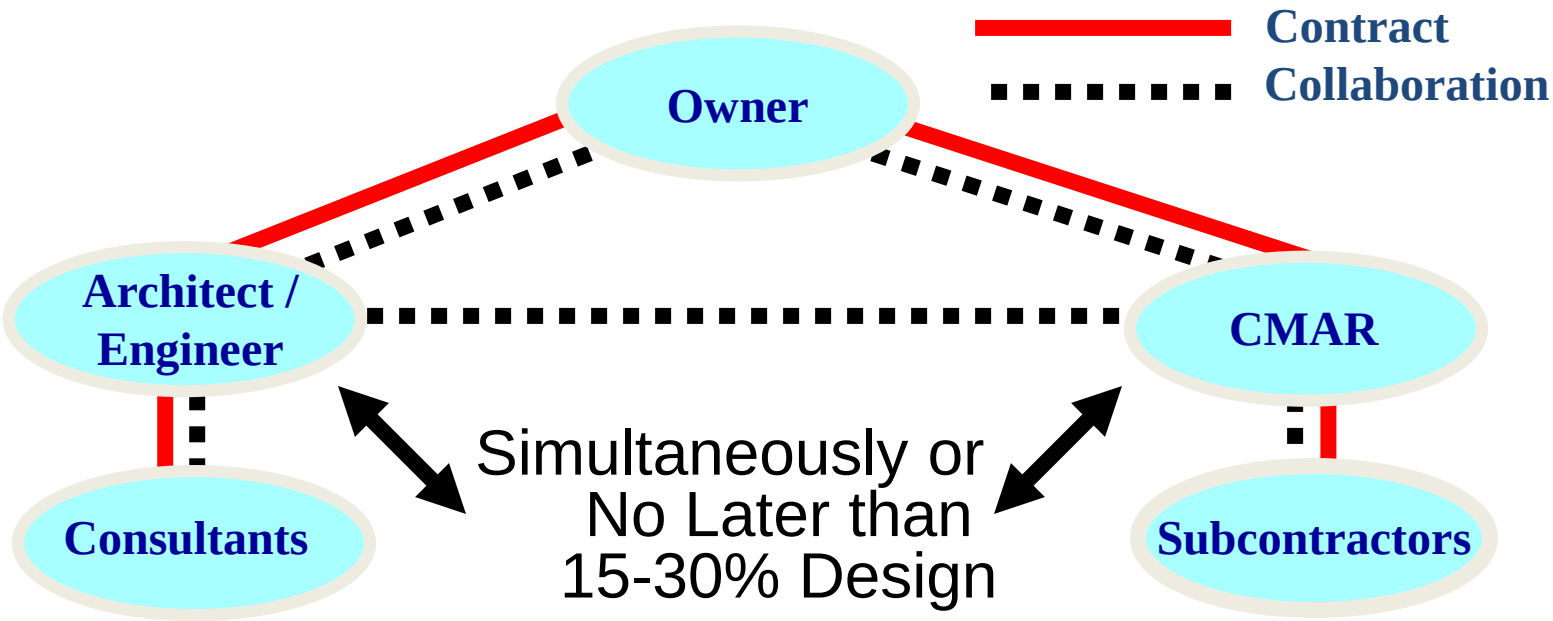
What's Different?

- **Design-Builder**
  - Owns details of design
  - Designer-of-Record (DoR) must design to budget and schedule
  - Responsive to owner needs and preferences
  - Internal contracts are different
  - DoR's client is the Design-Builder NOT the Owner

Owner

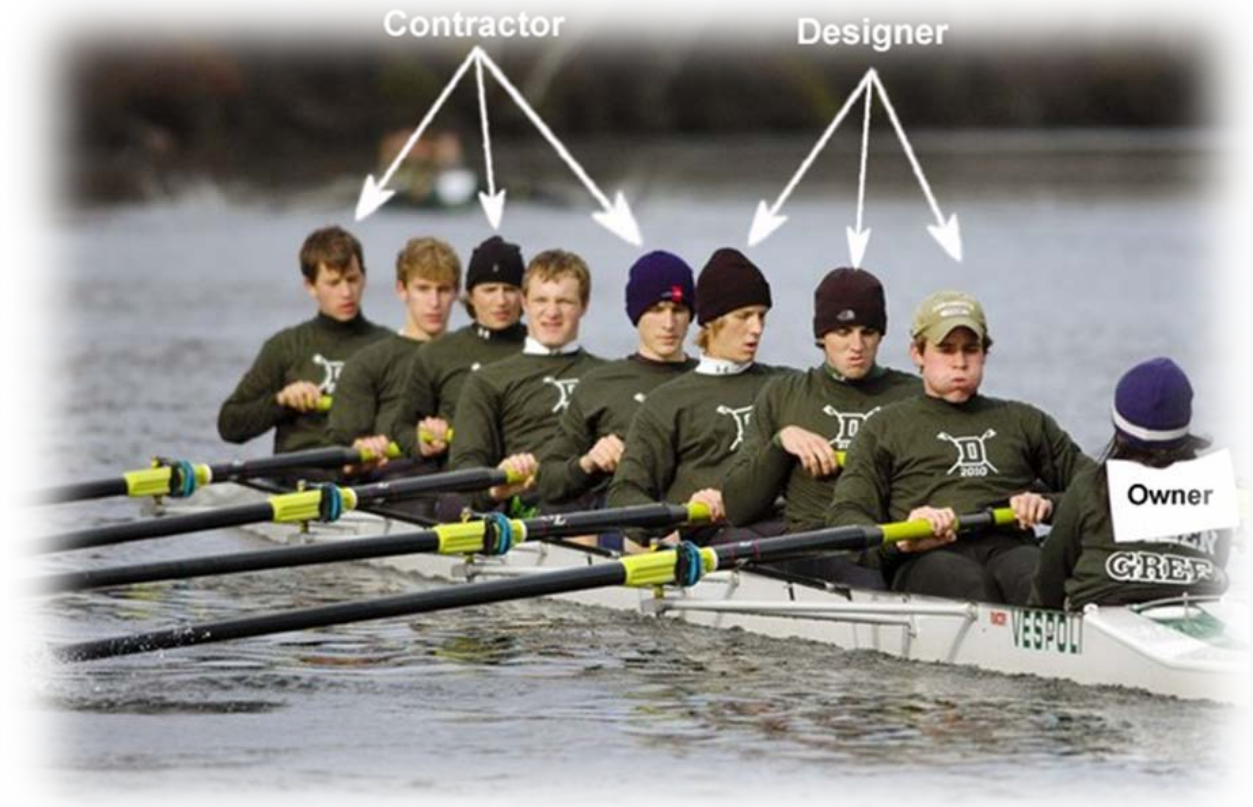
- Design compliance review
- Need dedicated design assets available to the field
- Performance-based
- Higher level of trust required

CMAR/CMGC/GCCM Process



- Architect/Engineer (Qualifications Based Selection)
  - Design services with active CMAR participation
  - Some construction administration
- Construction Manager at Risk (QBS + Negotiated Contract)
  - Preconstruction services & construction services
  - Management of bid process & trade subcontractors
  - “Open Book” philosophy
  - Finance services, maintenance services, operations services, and other related services may be included.

CMAR/CMGC/GCCM Contracting



CMGC is an integrated team approach to the planning, design and construction of highway projects

Old Thinking – New Thinking

Design Bid Build

- Any Problem With Design = $ Profit
- Make the Problem Bigger = $$ More Profit

Alternate Delivery Methods

- Any Problem With Design = $ Lost Profit
- Develop Quick Resolution = Fewer $ Lost

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Keys to Success

- Teamwork and Partnering
- Common Goals and Objectives
- Proactive Leadership By the Owner
- Clear Communication and Timely Issue Resolution
- Shared Commitment
- Trust, Trust, Trust
- Being Willing to Work Differently
- Not Being Afraid to Ask for Help

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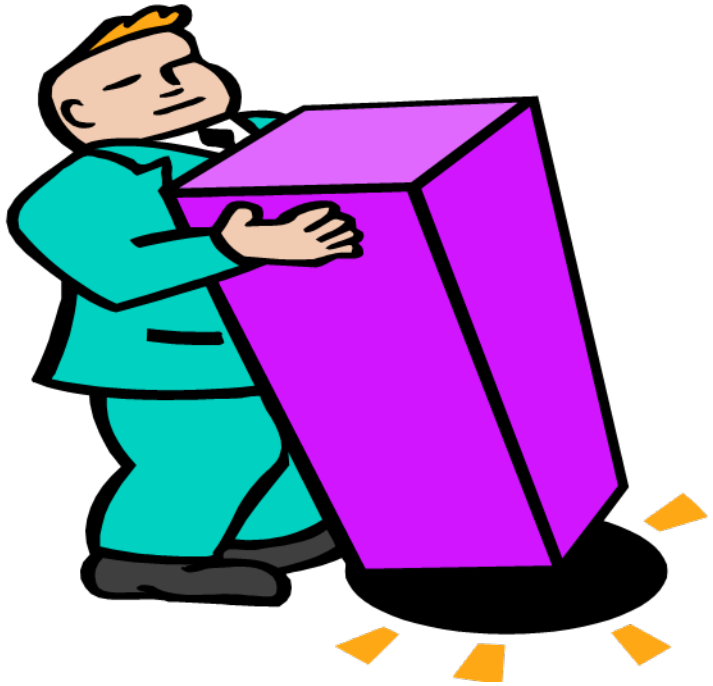
Alternative Delivery Projects

Still Trying to Fit Alternative Delivery Into Traditional Design/Bid/Build



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Partnering Needs to Change

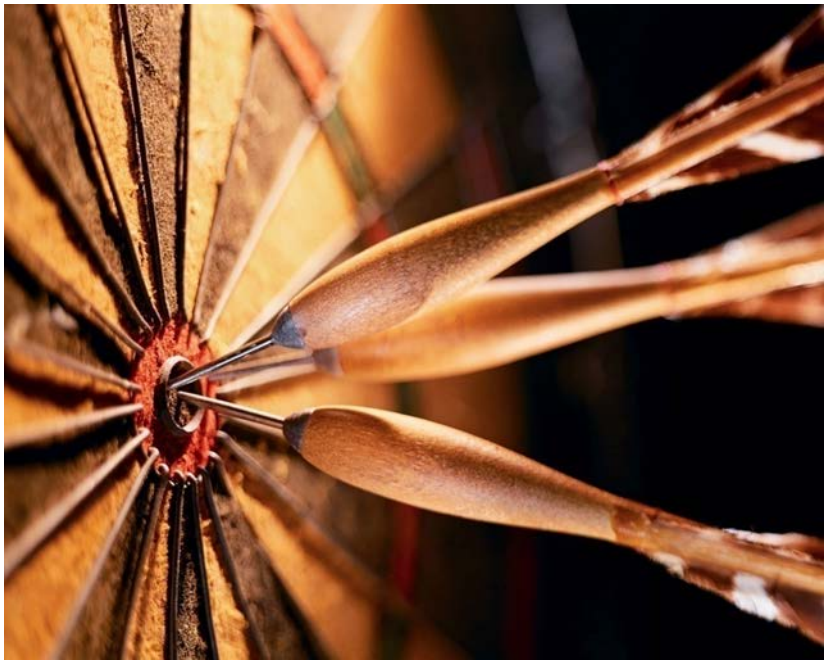
- Design Phase for D/B - Scoping
- Pre-construction Phase for CMAR/CMGC/GCCM - Scoping
- Construction Phase
- Close-out (Lessons Learned) for Design and Construction

Project Scoping – New Methods, New Approach

- At the very beginning of the project
- ½ to1-day in length – usually lasts ¾ day
- Helps to focus on process expectations
- Breaks down barriers
- Builds the team
- Creates understanding
- Reduces frustration
- Opens lines of communication

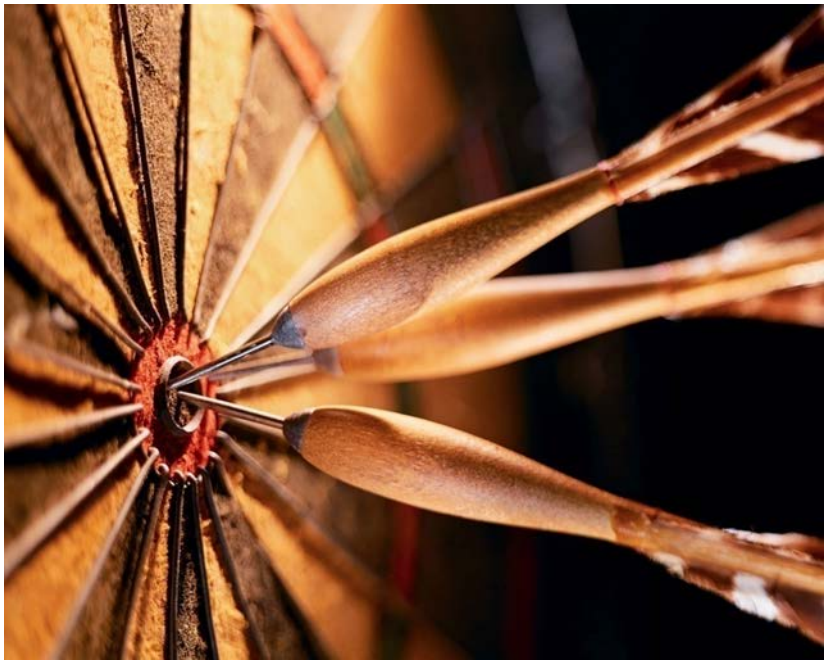
Determine Project Needs

- **Complexity**
- **Stakeholders**
- **Scope of Work**
- **Special Needs**
  - Schedule
  - Public Impact
  - Means and Methods
  - Traffic Control



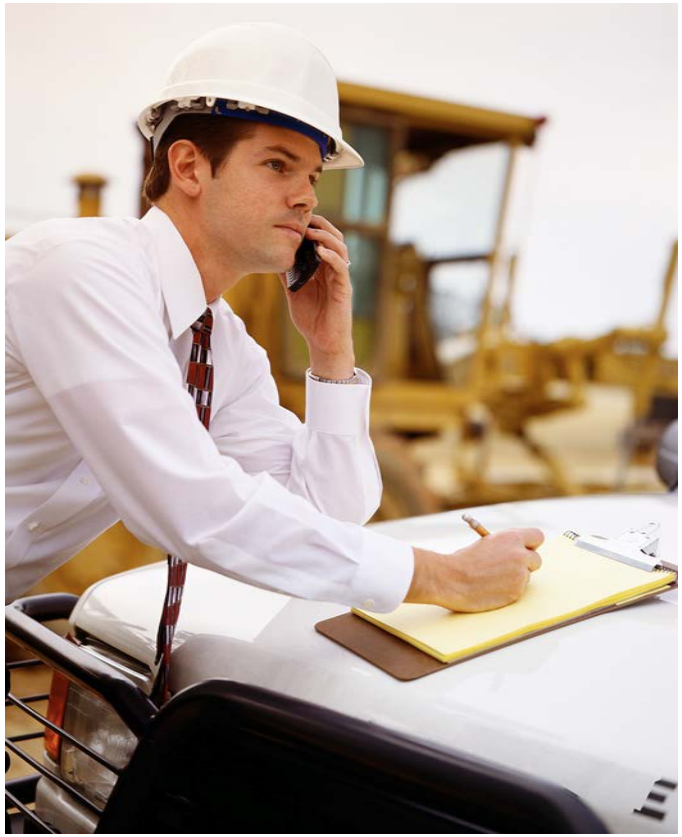
Determine Project Needs

- **Special Needs**
  - Right of Way
  - Environmental
  - Permits
  - Public Involvement versus Public Information



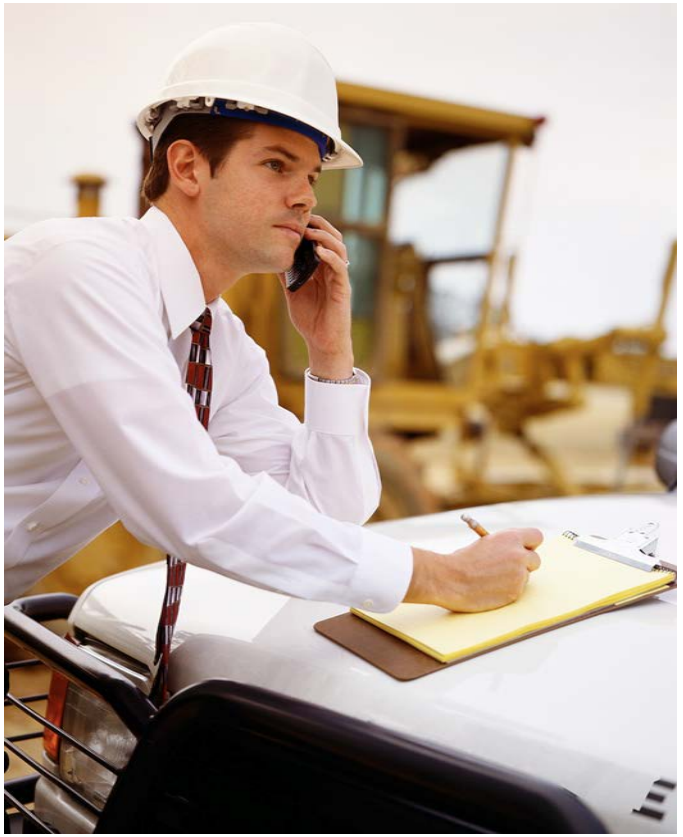
Scoping Workshop Approach

- **Determine Participants**
  - Design team leads
  - Pre-construction contractor team and construction PM
  - Stakeholder partners
  - Right of Way
  - Environmental
  - Public Involvement/ Information
  - Agency review team leads
  - Resident Engineer



Scoping Workshop Approach

- **Why the…..**
  - Construction PM
  - Resident Engineer



Workshop Topics

- Expectations of the process being used
  - CMGC, CMAR, GCCM
  - Design/Build
- EXERCISE
  - What expectations do you believe you would have for CMGC/CMAR/GCCM?
  - What expectations do you believe you would have for D/B?

Workshop Topics

- Establish communication plans for design
- Establish roles and responsibilities for participants during the design phase only
  - Owner
  - Design team
  - Contractor
  - Stakeholders

Workshop Topics

- Roles and responsibilities
  - This helps all key organizations understand what expectations are tied to what they are required to do
  - This should be a detailed discussion

Owner's Role

The Owner or an Empowered Agent Must Be Part of the Team

- Design and Construction

In the 'Old Game', the Owner:

- Interacted with the Designer and,
- Reacted to the Builder,

In the 'New Game', the Owner has to

Lead the Team!

Owner's Role

At a minimum the Owner Must Provide:

- Full Information about the Project
- Well defined expectations
- A Clear Statement of the Owners Needs and Requirements = Scope!
- Expeditious Review and Approval of Design and Construction Matters Throughout the Project
- Willingness to allow innovation
- Clear Communication Channels Among Parties through an Active, Responsible Representative

These are not strengths for the typical Owner

Design Professional

- May or may not have an independent relationship with Owner
- When using CMGC, Designer contracts with the Owner but must interact positively with the Contractor during the Design Phase
- These are Unfamiliar Roles!
- May need to have a different focus, depending on GMP approach and potentially an Accelerated Schedule
- Must Maintain a Difficult Professional Balance

Contractor D/B

- Responsible for 100% design and construction
- Management and communication of the project schedule
- Understand owner's cash flow limitations

Contractor In CMGC/CMAR/GCCM

- Willingness to share their expertise in a timely manner, detailed approaches, at the Right time
- Be engaged throughout the design process
- Able to provide conceptual, accurate, cost estimating
- Understanding the definition of a “GMP”
- Understanding and willing to provide “open books”
- Value engineering during the design process not during the construction process

Contractor In CMGC/CMAR/GCCM

- Identify challenges, propose solutions, mitigate risks as much as possible, proactively during design process instead of reactively during construction
- Helping the owner and designer understand cost and schedule impacts throughout the design process

Contractor In CMGC/CMAR/GCCM

- Understanding that they can no longer look to the owner or designer to fix mistakes during construction (constructability & bidablity reviews)

Roles

EXERCISE – identify specific roles and responsibilities in a CMAR/CMGC/GCCM project

- **Owner**
- **Contractor**
- **Designer**

Workshop Topics

- Design reviews
  - Process discussion; identify the submittals (i.e. 30%, 60%, 90% and final)
  - Comment reconciliation process
    - D/B – Need to discuss “what if”
    - CMAR/CMGC – Not paying attention to contractor comments
  - Turn-around /responsiveness
  - Over the shoulder in D/B
  - Early release for construction documents in D/B

Workshop Topics

- Value engineering (D/B is different)
- Risk analysis
- Constructability and bidability reviews (CMAR/CMGC/GCCM)
  - Expectations of the contractors role and responsibility
  - Define the terms
- Environmental process
- Other special issues/concerns identified during the pre-workshop phase

Workshop Topics

- Budget Management
  - Contingencies, Allowances, Risk Pool (CMGC/CMAR/GCCM)
    - Define what these mean, what they will be used for and how they will be used
  - Defining Change Orders (Now vs. Later)
    - What is a change
  - Define what cost models/estimates are to be provided
    - What is included (risk or no risk)
  - Define when cost models/estimates to be provided
    - CMAR/CMGC/GCCM
    - D/B – 2-step process
  - Discuss reconciliation process
    - Agreement on bid items – when
    - Define what can be discussed (legislated)
  - GMP Discussion
    - At what stage
    - Negotiation approach/concerns/timing

Workshop Topics

- Schedule Management
  - Identifying Who is Developing and Managing the Schedule (CMAR/CMGC/GCCM)
    - Does this include the designer's schedule?
    - Have we accommodated review times?
  - Who Drives the Schedule in Design/Build?

Workshop Topics

- Schedule impacts (phasing opportunities)
  - Long lead items
  - Resource challenges
  - Utilities conflicts/impacts
  - Permit challenges
  - Environmental challenges
  - CMARCMGC– multiple/severable GMPs
  - Early release for construction documents – D/B

Workshop Topics

- Establish overall project goals
- Subcontractor involvement during design (CMGC)
- Establish a design issue resolution process
  - It's not about adversarial issues
  - Many times it's about responsiveness and design preferences
- EXERCISE – What would the rules look like?

Workshop Topics

- Determine partnering approach for the remainder of the project
  - Design follow-up
  - Construction
  - Lessons learned for design
- Determine team maintenance approach for design
  - How will we manage our partnering relationship

Partnering for Construction

Why Partner formally, we've been working on this Job for several months?

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Partnering for Construction

Do I Really Need a Hug Now?

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Partnering for Construction

- **Construction Workshops**
  - Phasing – Early packages (prior to construction beginning)
    - Shorter and more focused approach (2-4 hour workshops are appropriate)
  - Standard construction partnering (1/2 workshops are appropriate)
    - Prior to construction beginning
  - Standard follow-up workshops (2 to 4-hour workshops are appropriate)
    - At the agreed times or as needed

Workshop Approach

- **Phased Approach - Construction**
  - Topics for Discussion (Agenda items)
    - Understand communication plan/process related to the element(s) of work
    - Identify any additional goals related to the element(s) of work
    - Specific issues/concerns related to the element(s) of work
    - Develop a specific conflict resolution plan

Workshop Approach

- **Standard Construction Approach - Topics for discussion (Agenda)**
  - Review expectations of the CMGC or Design/ Build process now that the project is in construction
  - Discuss other roles and responsibilities during the construction process
  - Review and modify, as needed, goals developed during the design workshop

Workshop Approach

- Discuss relevant issues and concerns of the project
- Establish construction conflict management plan
- Schedule issues
- Weekly maintenance program
- Follow-up workshops

We're Not Done Yet

- **Follow-up Workshops**
  - Seasonal changes
  - Major team member changes
  - Phased approach (D/B)
  - Severable packages (CMGC)
- **Close-out Workshops**
  - 60-days prior to project completion
  - Lessons Learned
    - Selection process
    - Design phase (Additional items)
    - Construction phase
    - Partnering approach

Lessons Learned

- Process improvements from ADOT's perspective
- Lessons learned from several APDM workshops

Recent Lessons Learned

- **Design/Build**
  - The **right** agency team members are necessary and included at the right time
  - Make sure the ATC process is working effectively
    - What is private and what should be shared as a change with all proposers
    - Use one-in-one sessions for preliminary discussions prior to submission of ATCs
    - Multiple one-on-one ad ATC sessions should be considered
    - Decision-makers involved in the process
    - Document the process so that all understand the basis for decisions
    - Timely responses

Recent Lessons Learned

- **Design/Build**
  - The selection criteria have been shared and followed
    - Focus on fairness and equality
  - The selection panels include individuals with an understanding of D/B
  - Performance-based specifications versus prescriptive specifications (allow for innovation)
  - Ambiguities and conflicts in the design plans provided during the RFP stage
    - Hierarchy of documents provided
    - Plans versus bidding documents

Recent Lessons Learned

- Experience of specialty subcontractors should be considered
- During design, specifications versus guidelines with plan reviews “May”, “Shall”, “Should”, “Requirements”, and “Guidelines”
- No urgency from agency in managing schedule
- Avoid “match existing”
- Agency wants versus what is allowable
- Decision-makers involved in the over-the-shoulder review process
- Improved QA/QC process in construction
- Partnering is imperative to success

Recent Lessons Learned

- **CMAR/CMGC**
  - Understanding the CMAR/CMGC process versus hard bid projects (roles, responsibilities and attitudes)
  - Much of the challenges appear to be in the pre-construction services phase
    - No urgency between designer and agency for design schedules
    - Contractor understanding their role and being engaged
    - Contractor doing an adequate job in constructability review
    - Transitioning from pre-construction to construction
    - Level of design needed for construction
    - Cost estimate challenges; comparing engineer's estimate, contractor's, and ICE

Recent Lessons Learned

- The effectiveness of the ICE related to understanding construction costs
- Contractor needs to develop a detailed schedule during preconstruction, not after award

– Once in construction, treating the project as if it is a low bid (attitudes, behaviors)

– Partnering is imperative to success

Conclusion

- Using the term “Team Scoping” in lieu of “Partnering” will help to reduce the confusion during pre-construction and design phases
- This requires a very different approach during pre-construction and design
- Ensure that your facilitator understands the differences and knows what needs to be discussed and the questions that need to be asked

Questions

About the Speakers

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