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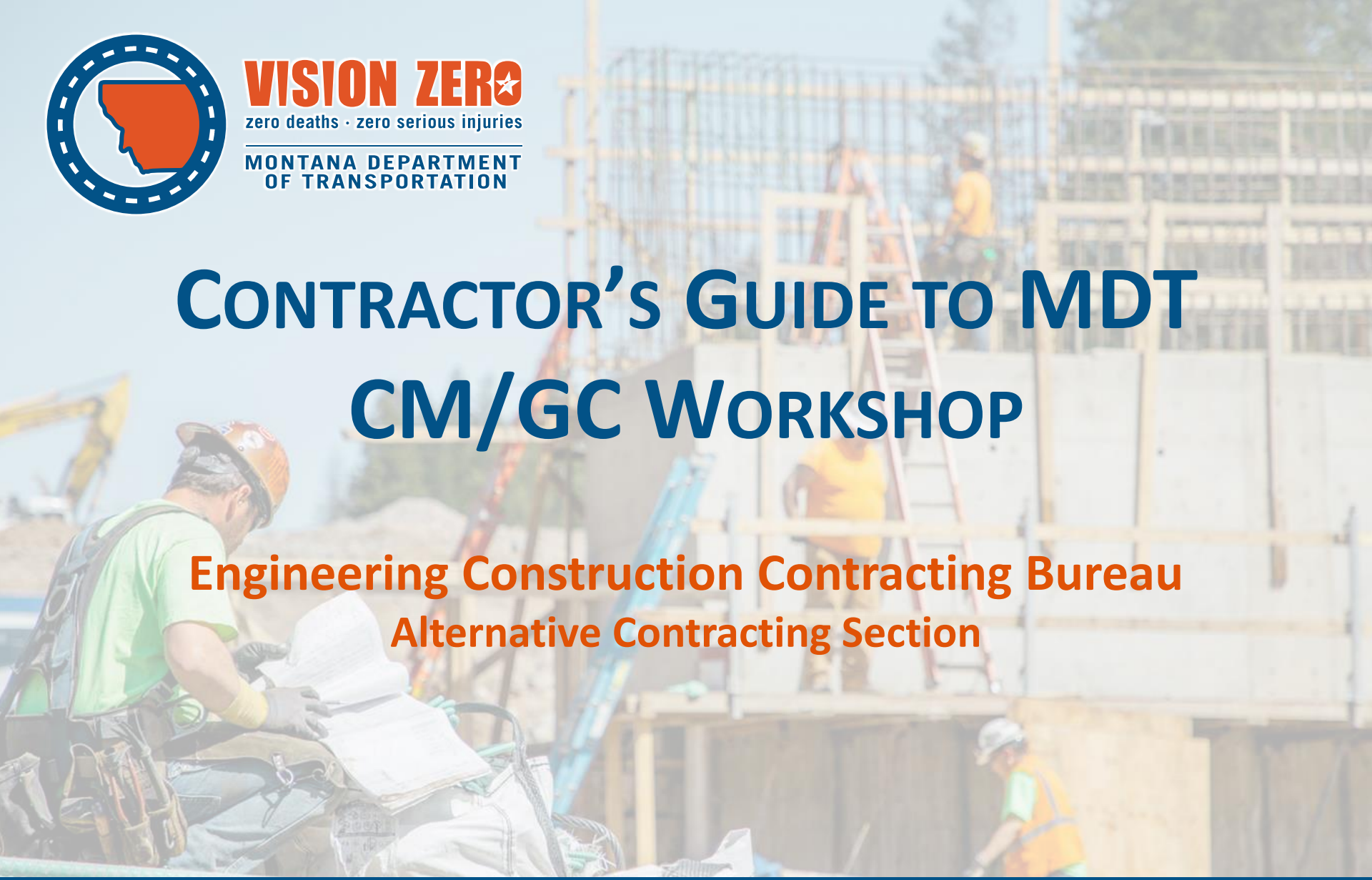
CONTRACTOR'S GUIDE TO MDT CM/GC WORKSHOP

Engineering Construction Contracting Bureau

Alternative Contracting Section



December 16, 2020

- Please mute your phone or microphone
- Questions and answers after the presentation
- Put written questions in chat box during presentation or raise your hand after the presentation for verbal questions
- This meeting is being recorded for future reference and will be posted to MDT's Alternative Contracting WEB link
- We will take a 5-minute break during the presentation
- PDH: Include first and last name under participant name

Brandon Graff

Beth Kappes

Lucia Olivera

Erik Miller

John Pavsek

Chris Wilson

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Workshop Outline

- CM/GC Fundamentals
- Partnering
- Roles and Responsibilities of the CM/GC Team Members
- The Design Decision-Making Process
- Risk Identification and Management
- Understanding MDT Design Development Scheduling Process
- Cost Estimating, Estimate Reconciliation, and the Independent Cost Estimator
- Early Work Packages
- CM/GC Contractor Procurement Process
- Elements of a Good SOQ, Technical Proposal & Interview
- Status of Current and Upcoming CM/GC Projects
- Lessons Learned
- Question and Answers

U.S. Department of Transportation
Federal Highway Administration

Every Day Counts
Innovation for a Nation on the Move

Mobility · Safety · Quality · Environment · Shortening Project Delivery

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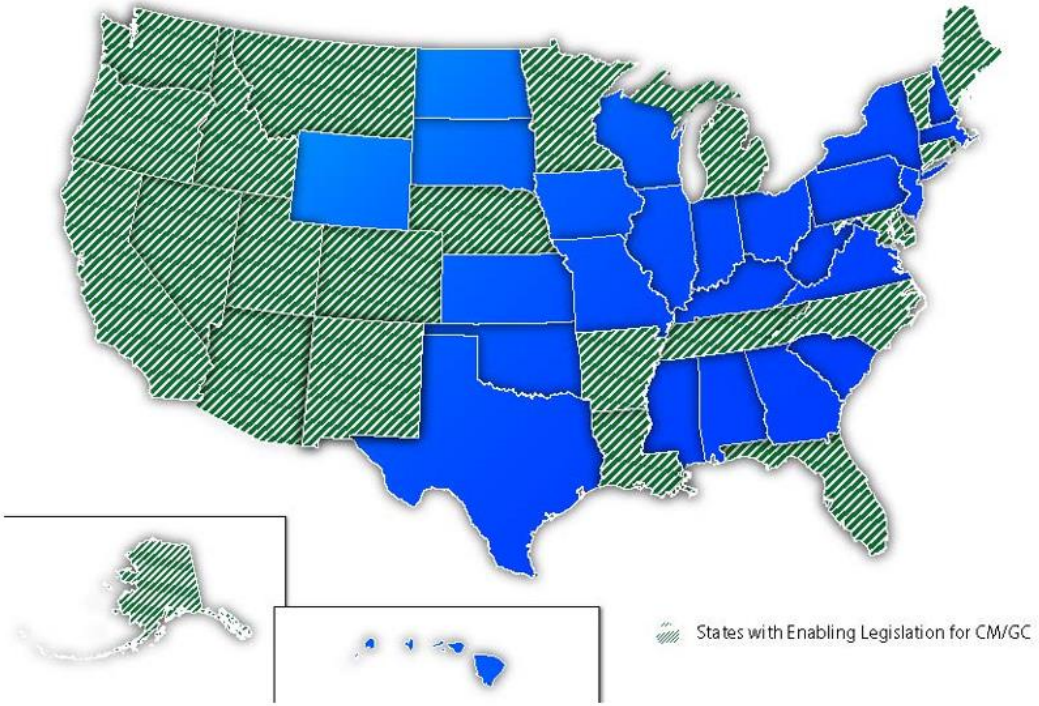
1.2: State of the Practice

States with Legislative Authority to use CM/GC



Source: FHWA

CM/GC Program Fundamentals

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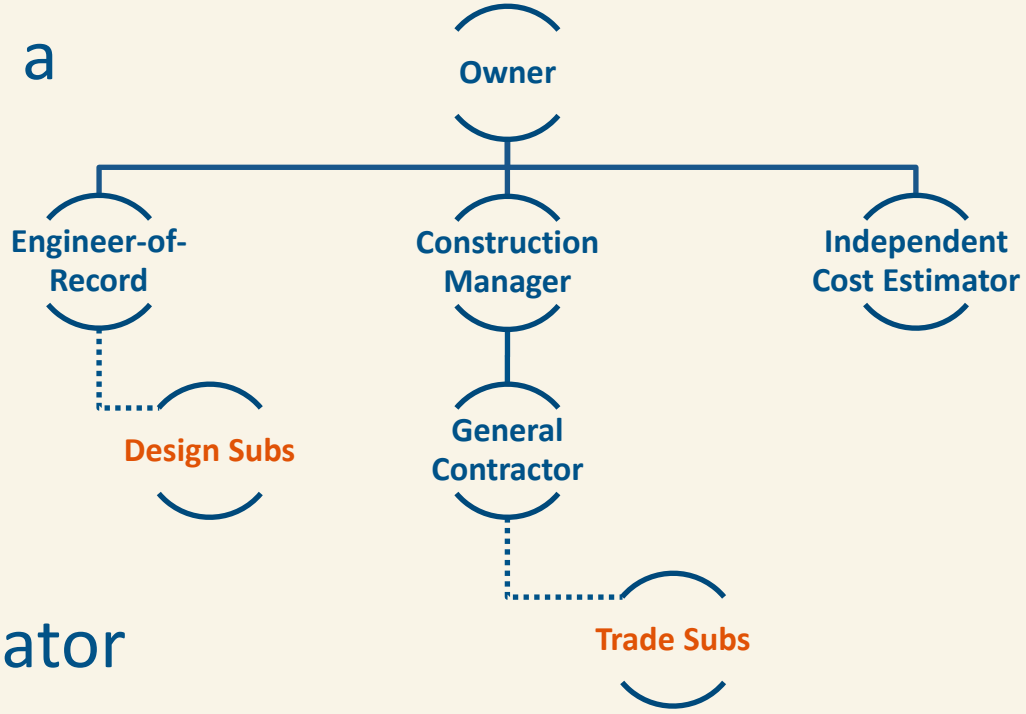
WHAT IS CM/GC?

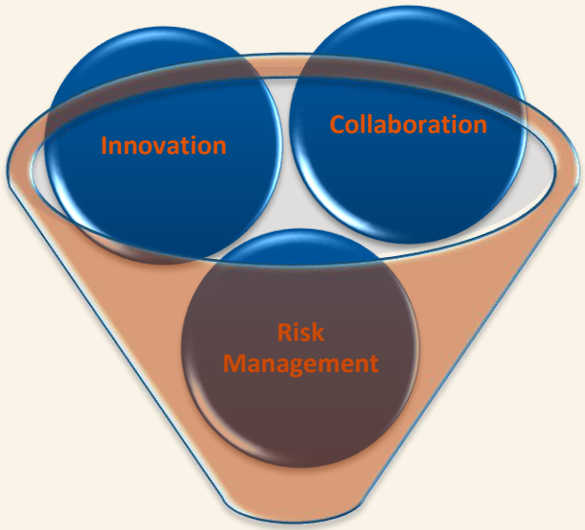
- Two-phase contract with a General Contractor
  - ***Phase 1 – Preconstruction services contract***
  - ***Phase 2 – Construction contract (if awarded)***
- Consultant Design
- Independent Cost Estimator



Expanded MDT Involvement during Design

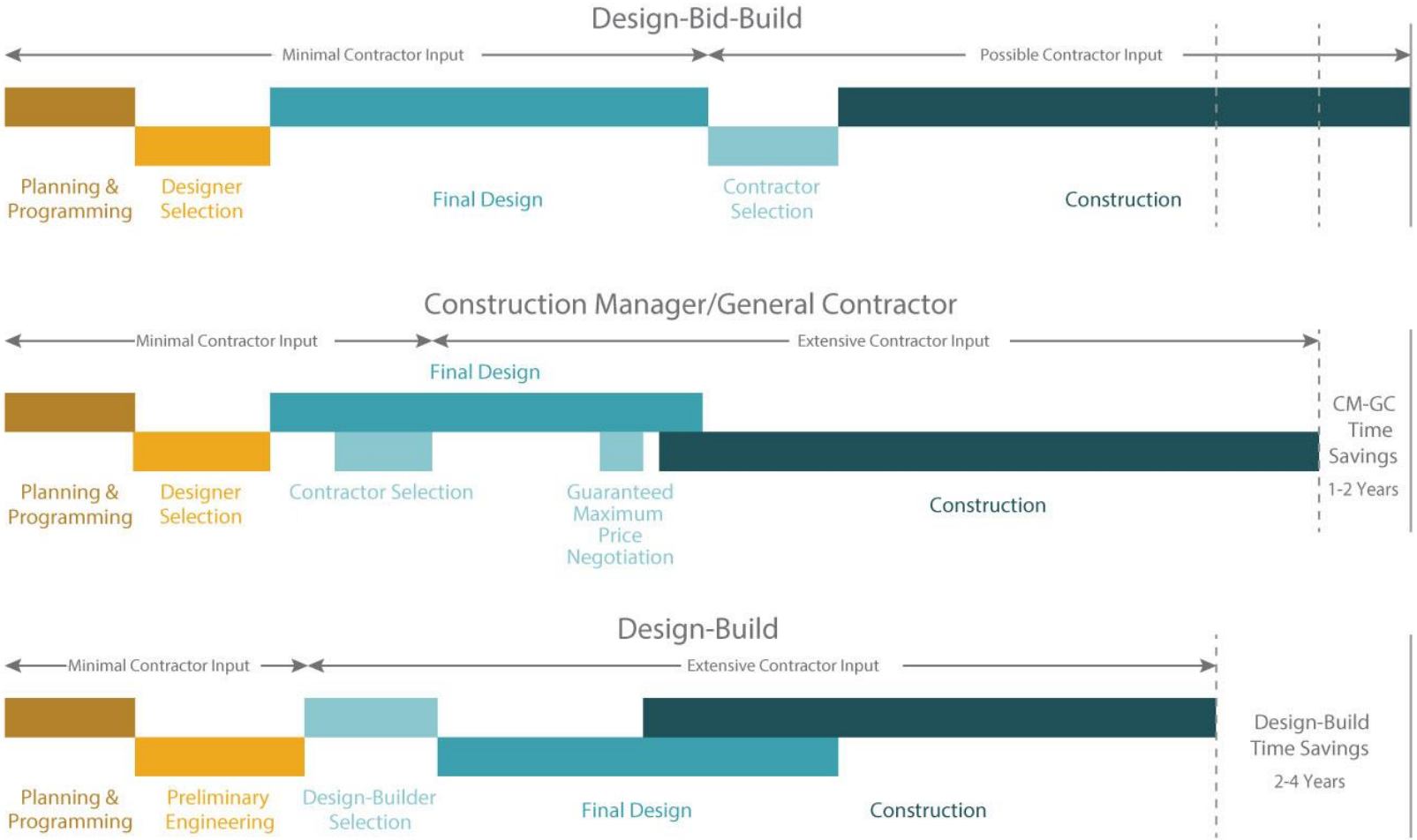
WHY ARE WE USING CM/GC?

- Encourages collaboration and innovation
- Improves Risk Management
  - ***Recognizes and where possible, minimized or eliminated***
  - ***Appropriate party takes on risks that they are best-equipped to manage***
- Reduces errors and omissions
  → less change orders
- Another tool in the toolbox
  - ***Majority of projects will still be delivered Design-Bid-Build***



CM/GC

PROJECT TIME COMPARISON



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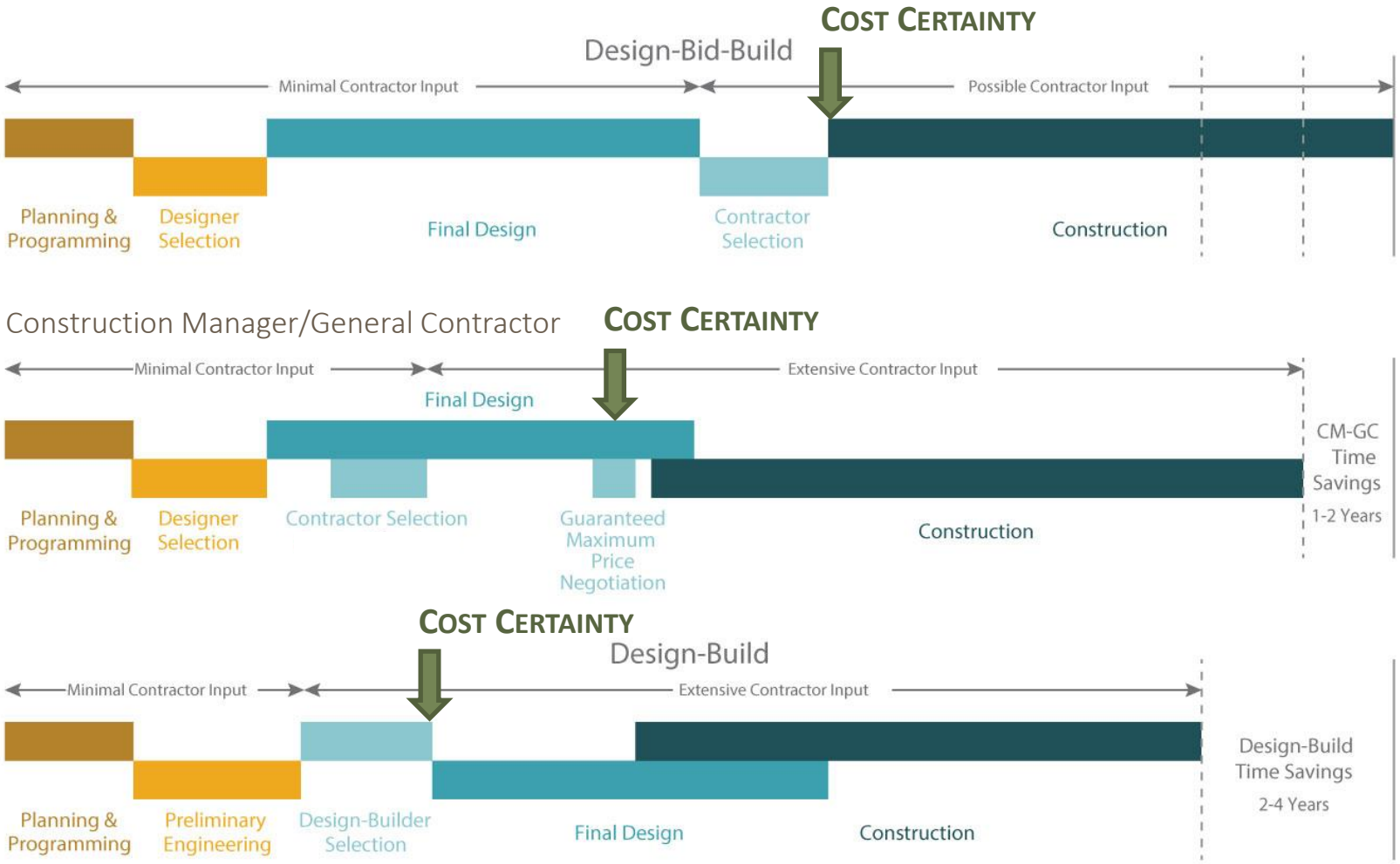
TIMING OF COST CERTAINTY



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Construction Cost Growth

Contract Method	Projects Under $20M	Projects Over $20M
D-B-B	3.4%	6.2%
CM/GC	2.0%	-0.2%
D-B	3.3%	4.4%

*Data from *The Use and Performance of Alternative Contracting Methods on Small Highway Construction Pro*jects – University of Colorado, 2016

Major Project Delays

Contract Method	Projects Under $20M
D-B-B	33%
CM/GC	17%
D-B	29%

*Data from *Quantification of Cost, Benefits and Risk Associated with Alternate Contracting Methods and Accelerated Performance Specifications* – University of Colorado, 2016

CM/GC Project Selection

- 2017 Legislature approved 4 project pilot program (MCA 60.2.119)
  - ***1 Project completed***
  - ***2 Projects under design***
  - ***1 Project selected and will be advertised***

- MDT's "Project Delivery Selection Process"
  - ***Opportunity to manage risk***
  - ***Schedule impacts***
  - ***Cost impacts***
  - ***Project complexity***
  - ***Opportunity for innovation***

PARTNERING

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PARTNERING =
MINDSET + COMMITMENT + PROCESS

- Principles of Partnering:
  - ***Innovation***
  - ***Trust***
  - ***Collaboration***
  - ***Ownership***
  - ***Common Goals***
  - ***Relationships***
  - ***Problem Solving and Discussions***
  - ***Accountability***
  - ***Mutual respect***
- Partnering Goal ⟹ Team goals & individual commitments
- Partnering meeting format

It is almost certain that Team Unity will be tested

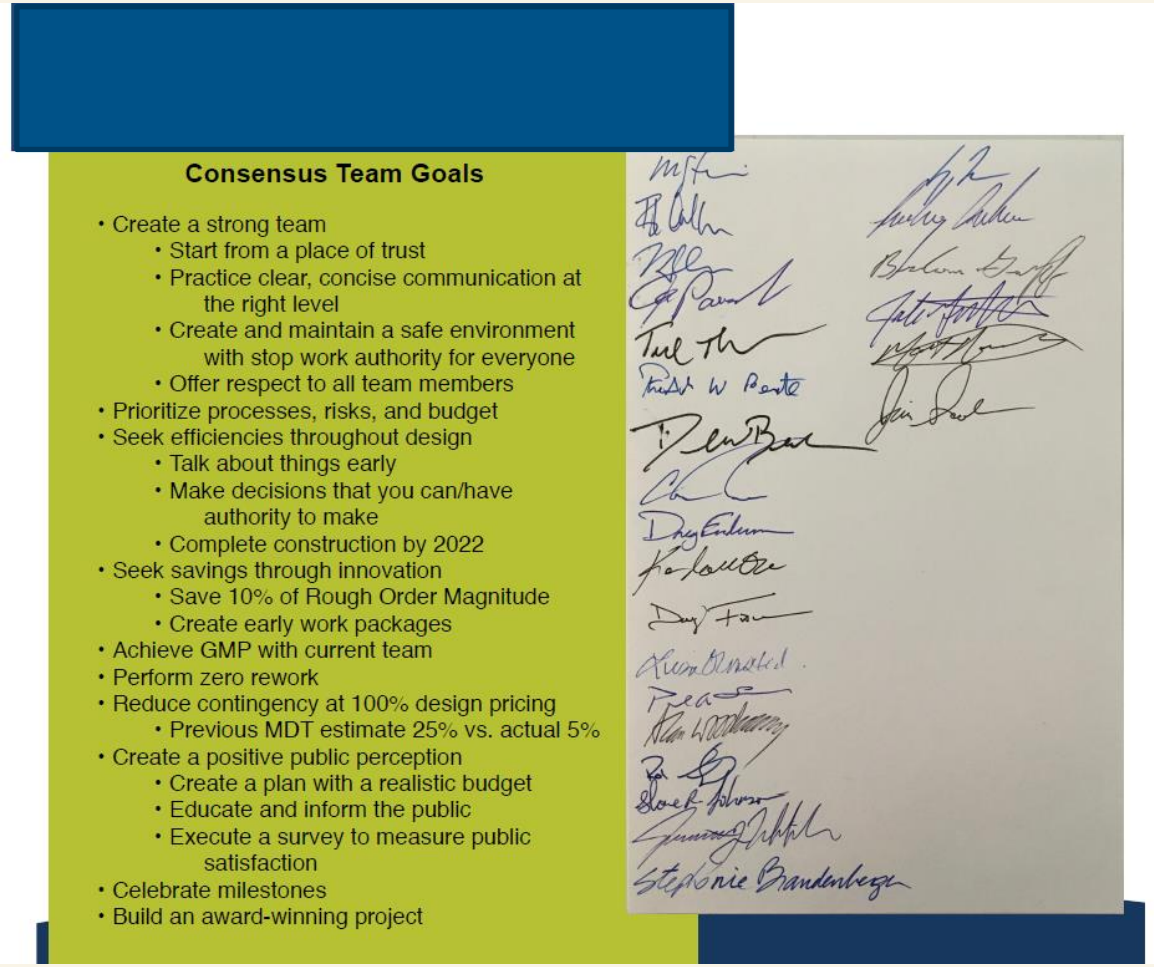
Potential Team Challenges

- Estimates coming in higher than expected
- Understanding MDT Pre-Construction delivery process
- Risk identification and allocation
- GMP outside MDT guidelines
- Requirement for higher level of commitment
- Personality dynamics

Periodic Check-Ins Keep the Team Centered

It Works! But requires Effort

- Requires a cor
- Follow the Pro succeed
- Remind folks t



Roles and Responsibilities of the CM/GC Team Members

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Key Team Members

- MDT Project Leader
- MDT Consultant Design Manager
- Design Consultant Project Manager
- Construction Manager
- MDT Engineering Project Manager (EPM)
- Independent Cost Estimator (ICE)

Key Team Members

- **Project Leader – Alternative Contracting**
  - *General management and project oversite*
  - *Monitor overall project scope, schedule and budget*
  - *Guides the design decision making process = Guides consensus*
  - *Monitors & manages potential conflict resolution*
- **MDT Consultant Design Manager**
  - *Manages Consultant's contract scope and budget*
  - *Manages MDT's Design EPS Schedule*
  - *Consultant Project Manager's main point of contact*
  - *Works with MDT Project Leader in all aspects of the project*
- **Design Consultant Project Manager**
  - *Manages Consultant's contract scope and budget*
  - *Facilitates design-development meetings*
  - *Consultant Project Manager's main point of contact*
  - *Works with MDT Project Leader in all aspects of the project*

Key Team Members

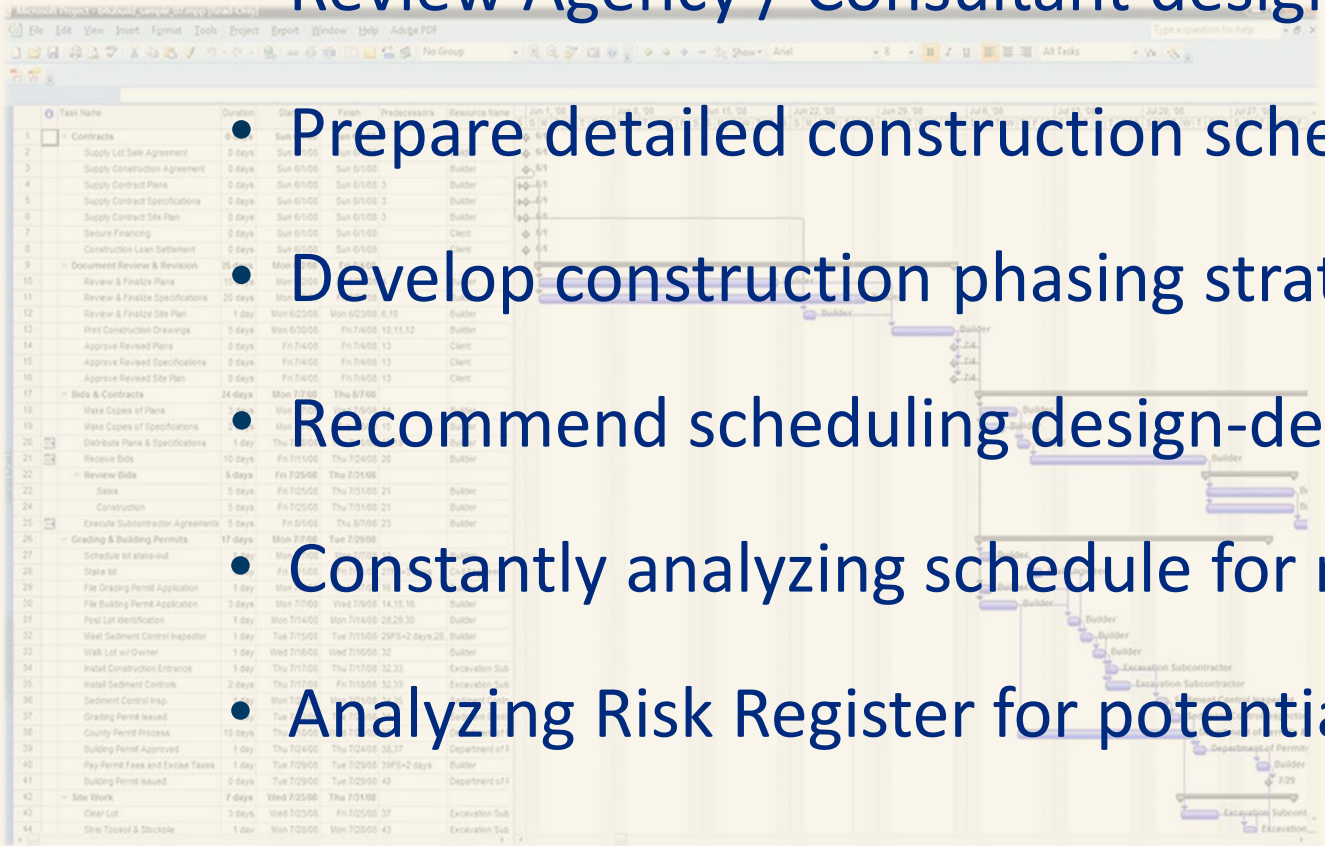
- **Construction Manager (CM)**
  - *Represents the Entire Contractor Team (Including JV and Subs)*
  - *Provides Constructability/Innovation/Design focused expertise*
  - *Identifies and prices risk*
  - *Develops Construction Management Plan*
  - *Manages development of Contractor's production-based estimate*
- **MDT Engineering Project Manager (EPM)**
  - *Responsible for management of the project during construction*
  - *Provides MDT District construction perspective to the CM*
  - *Participates in the design-development discussions*
  - *Provides local knowledge of District challenges*
- **Independent Cost Estimator (ICE)**
  - *Prepares OPCC – production-based estimate*
  - *Collaborates with CM on approach to pricing effort*
  - *Supports with Risk Management identification, allocation and pricing*

CM Design Related Preconstruction Services

- Assist Agency / Consultant design
- Formal design reviews
- Constructability reviews
- Market research/Cost analysis for design decision
- Assist shaping project scope of work
- Options analysis and innovation development

CM SCHEDULE RELATED PRECONSTRUCTION SERVICES

- Review Agency / Consultant design schedules
- Prepare detailed construction schedule
- Develop construction phasing strategy
- Recommend scheduling design-development mtgs
- Constantly analyzing schedule for risk impact
- Analyzing Risk Register for potential schedule impacts



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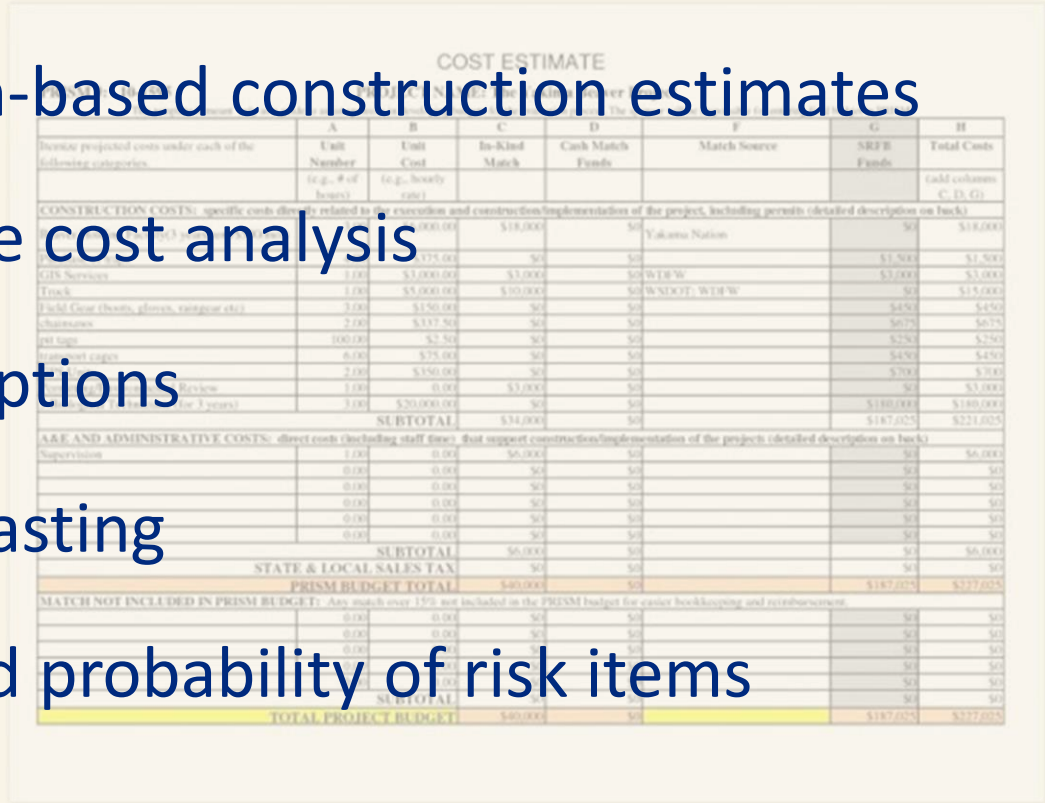
CM Cost Related Preconstruction Services

- Coordinate with MDT/Engineer regarding bid items
- Prepare production-based construction estimates
- Assist with life-cycle cost analysis
- Costing of design options
- Material cost forecasting
- Determine Cost and probability of risk items


COST ESTIMATE

Itemize projected costs under each of the following categories	A Unit Number (e.g., # of hours)	B Unit Cost (e.g., hourly rate)	C In-Kind Match	D Cash Match Funds	F Match Source	G SRTE Funds	H Total Costs (add columns C, D, G)
CONSTRUCTION COSTS: specific costs directly related to the execution and construction/implementation of the project, including permits (detailed description on back)							
		$18,000.00	$18,000	$0	Yakama Nation	$0	$18,000
		$375.00	$0	$0		$1,500	$1,500
GIS Services	1.00	$3,000.00	$3,000	$0	WDFW	$3,000	$3,000
Track	1.00	$5,000.00	$10,000	$0	WSDOT; WDFW	$0	$15,000
Field Gear (boots, gloves, raingear etc)	3.00	$150.00	$0	$0		$450	$450
chainsaws	2.00	$337.50	$0	$0		$675	$675
pit tags	100.00	$2.50	$0	$0		$250	$250
[illegible] report copies	6.00	$75.00	$0	$0		$450	$450
[illegible]	2.00	$350.00	$0	$0		$700	$700
[illegible] Review	1.00	0.00	$3,000	$0		$0	$3,000
[illegible] (for 3 years)	3.00	$20,000.00	$0	$0		$180,000	$180,000
		SUBTOTAL	$34,000	$0		$187,075	$221,025
A&E AND ADMINISTRATIVE COSTS: direct costs (including staff time) that support construction/implementation of the projects (detailed description on back)							
Supervision	1.00	0.00	$6,000	$0		$0	$6,000
	0.00	0.00	$0	$0		$0	$0
	0.00	0.00	$0	$0		$0	$0
	0.00	0.00	$0	$0		$0	$0
	0.00	0.00	$0	$0		$0	$0
	0.00	0.00	$0	$0		$0	$0
		SUBTOTAL	$6,000	$0		$0	$6,000
		STATE & LOCAL SALES TAX	$0	$0		$0	$0
		PRISM BUDGET TOTAL	$40,000	$0		$187,075	$227,025
MATCH NOT INCLUDED IN PRISM BUDGET: Any match over 15% not included in the PRISM budget for easier bookkeeping and reimbursement							
	0.00	0.00	$0	$0		$0	$0
	0.00	0.00	$0	$0		$0	$0
	0.00	0.00	$0	$0		$0	$0
		SUBTOTAL	$0	$0		$0	$0
		TOTAL PROJECT BUDGET	$40,000	$0		$187,075	$227,025

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CM Administrative Related Preconstruction Services

- Coordinate contract documents
- Assist with 3rd party stakeholder coordination
- Assist with public relations/attend public meetings
- Subcontractor bid packages
- Study labor conditions
- Partnering

The Design Decision Making Process

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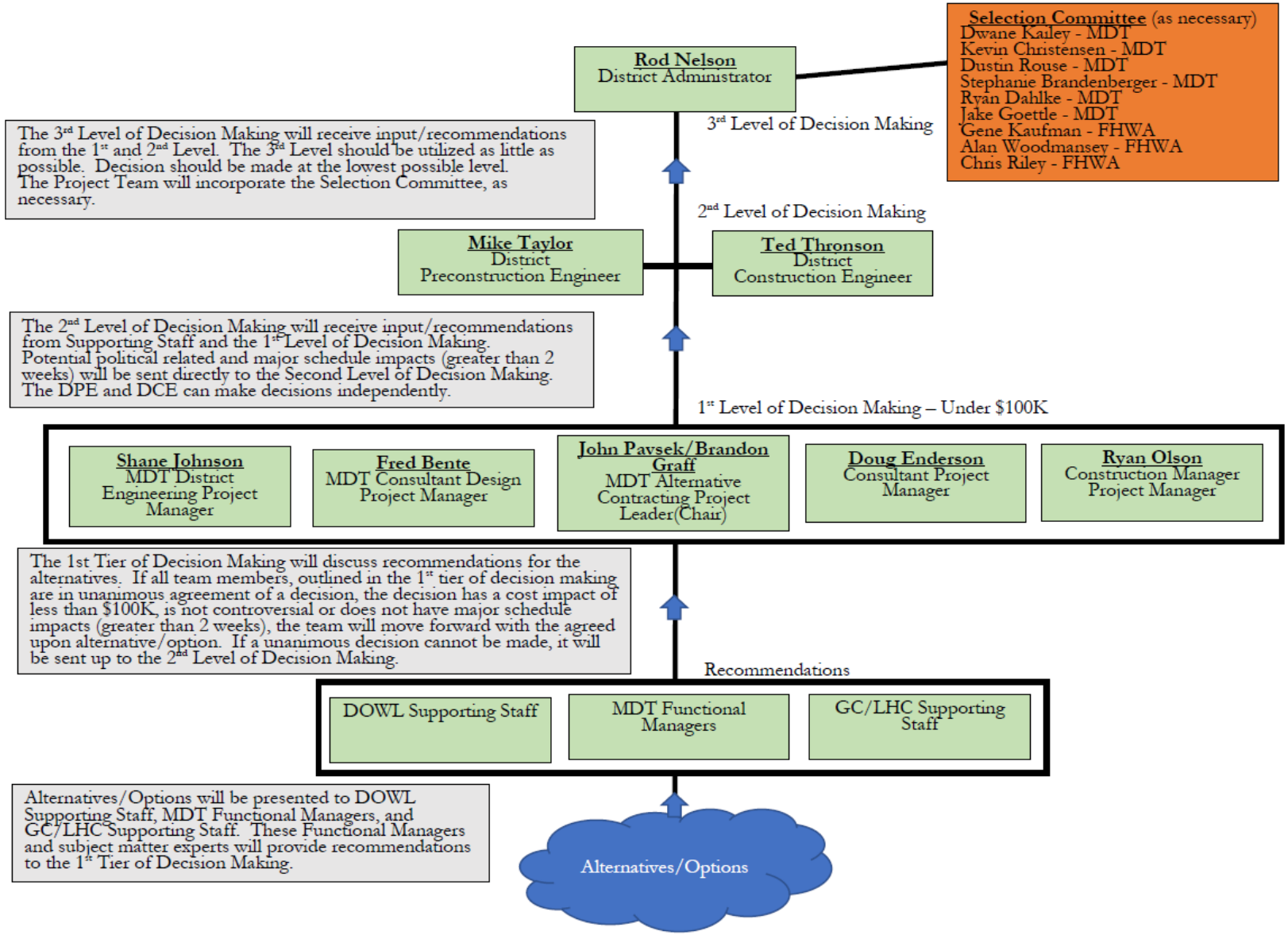

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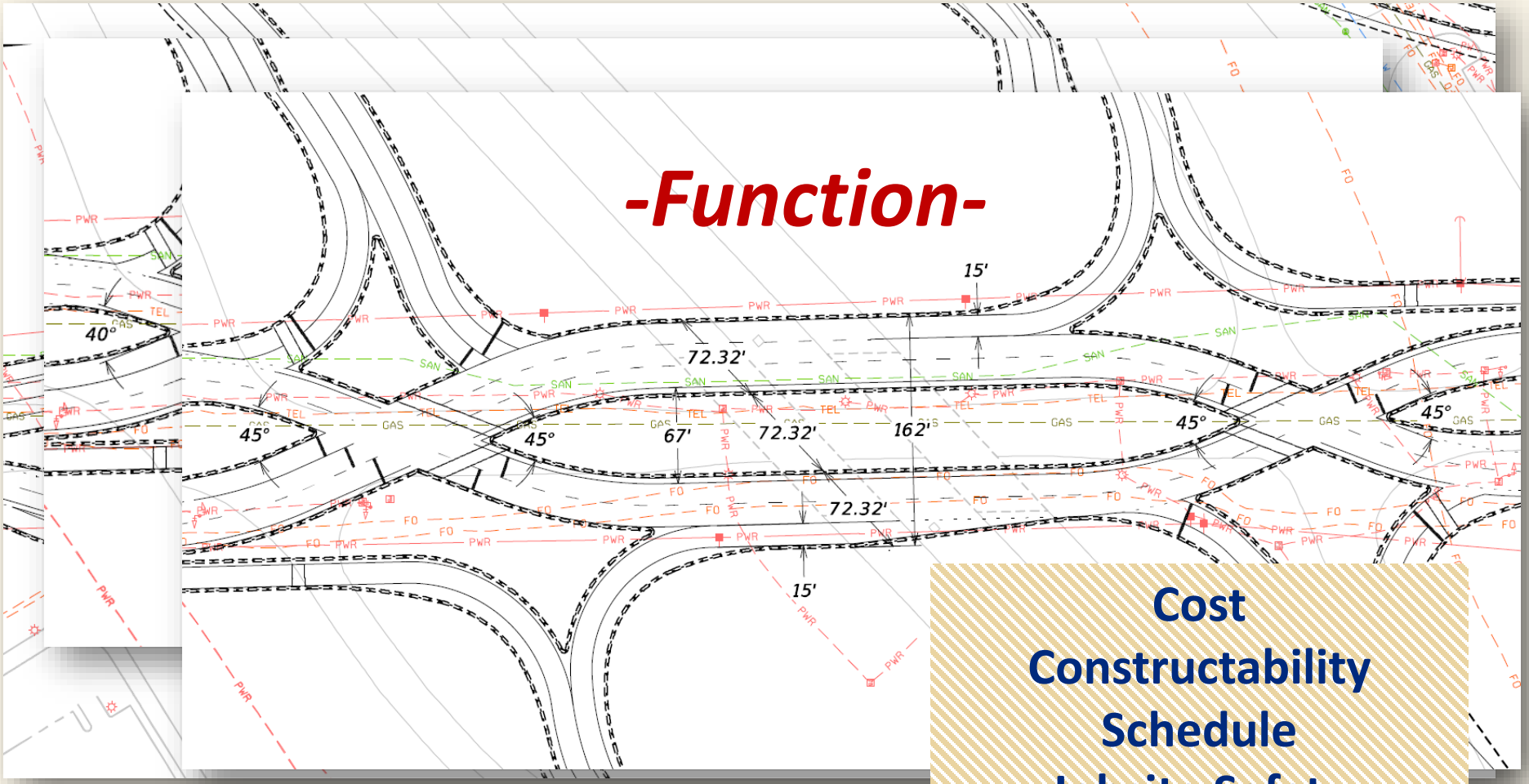
Decision Process Example



Cost
Constructability
Schedule
Jobsite Safety
Function

Risk Identification and Management

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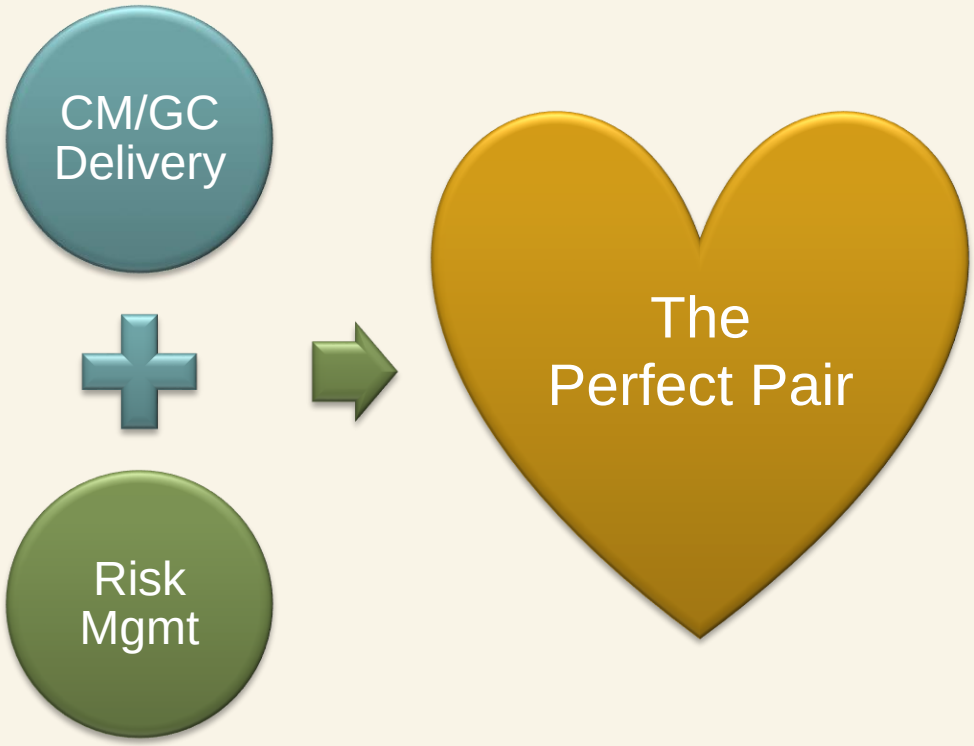
CM/GC Risk Management: WHY??

- Contractual misallocation of risk has been found to be the leading cause of construction disputes in the US
  (2006 publication by FHWA)
- In general, project risks are on the rise…
  - Increased traffic volumes
  - Need to minimize traffic disruptions
  - More stringent environmental, community, and safety requirements
  - Increased material costs

    (as identified by Executive Director of NCHRP)

CM/GC Risk Management: WHY?

- Project risk is a big factor in evaluating the applicability of CM/GC delivery
- CM/GC is well-suited for highly complex projects where owner input is needed
- Expanded project team = better risk ID and allocation



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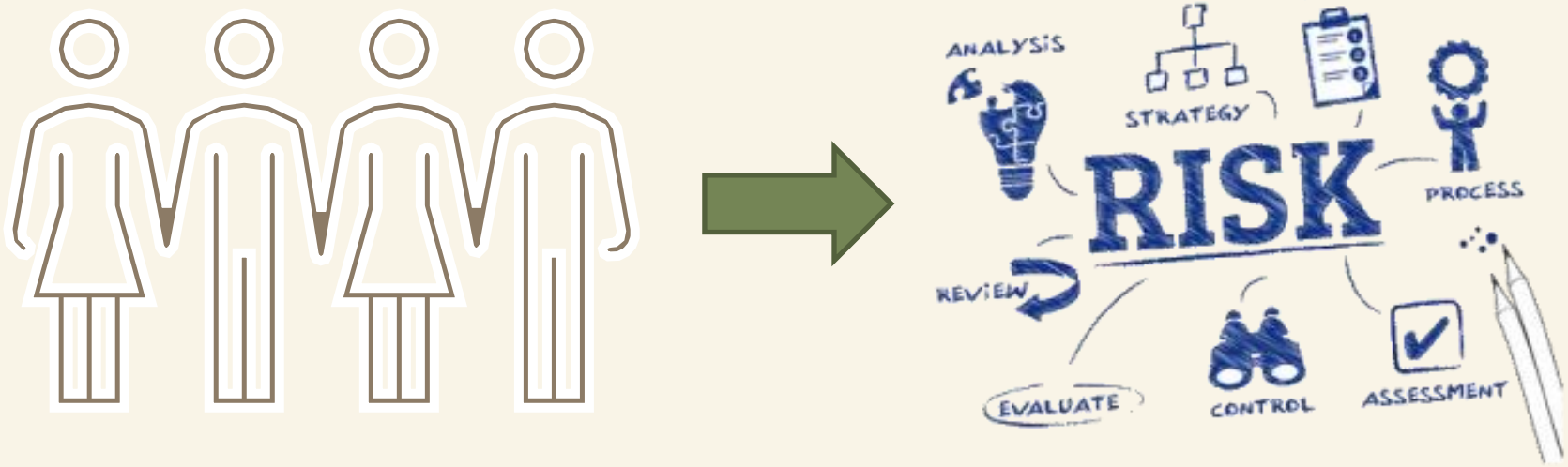
CM/GC Risk Management: WHO??

- The Owner, Engineer, Contractor and ICE all actively participate in the risk management process



CM/GC Risk Management: WHAT??

- Risk Management Process
  - Detailed effort that encompasses all phases and aspects of project
  - Goal is to keep the risk management process as tangible and scientific as possible
  - Varying level of complexity when it comes to risk analysis methods
    - MDT is currently using a simplified approach

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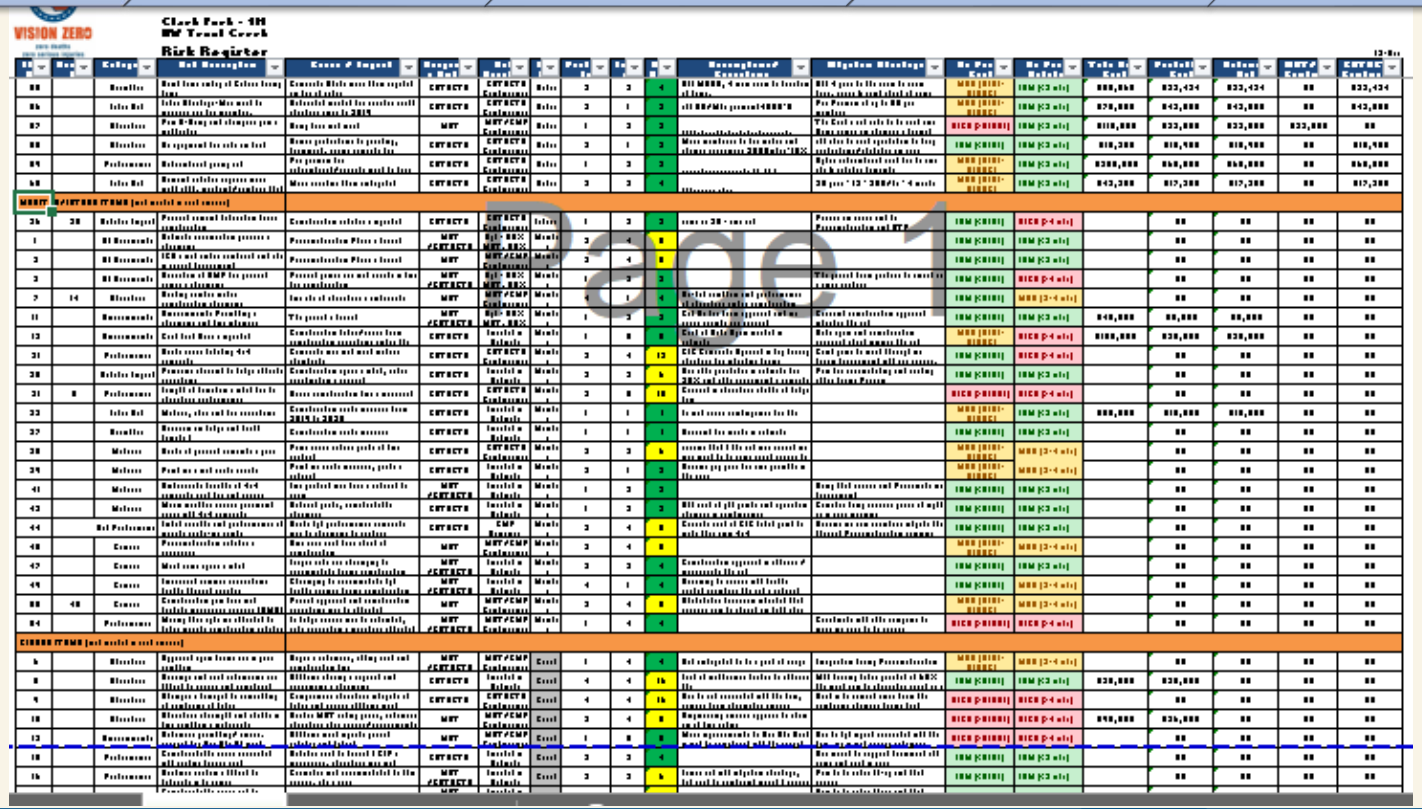
CM/GC Risk Management: WHAT??

Identification → **Assess & Analyze** → **Develop Mitigation Plan** → **Monitor & Implement** → **Measure & Control**



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CM/GC Risk Management: WHAT??

Example Risk Statement:

- Detailed project-specific risks that identify “if-then” scenarios

Risk Description	Cause / Impact
Structural steel repairs are more extensive than anticipated	Construction time is extended, and repair costs are increased

CM/GC Risk Management: WHAT??

Example Risk Assessment / Analyze:

- Determine the probability and impact of risk – Delphi Technique
- Utilize the probability and impact to determine the resulting risk score
- Risk score can help prioritize risk mitigation efforts

Risk Probability (0-5)	Risk Impact (0-5)	Risk Score = P x I
2	5	10 moderate

CM/GC Risk Management: WHAT??

Example Mitigation Plan:

- To better-determine condition of existing structural steel, perform additional site investigation and testing

  AND/OR…

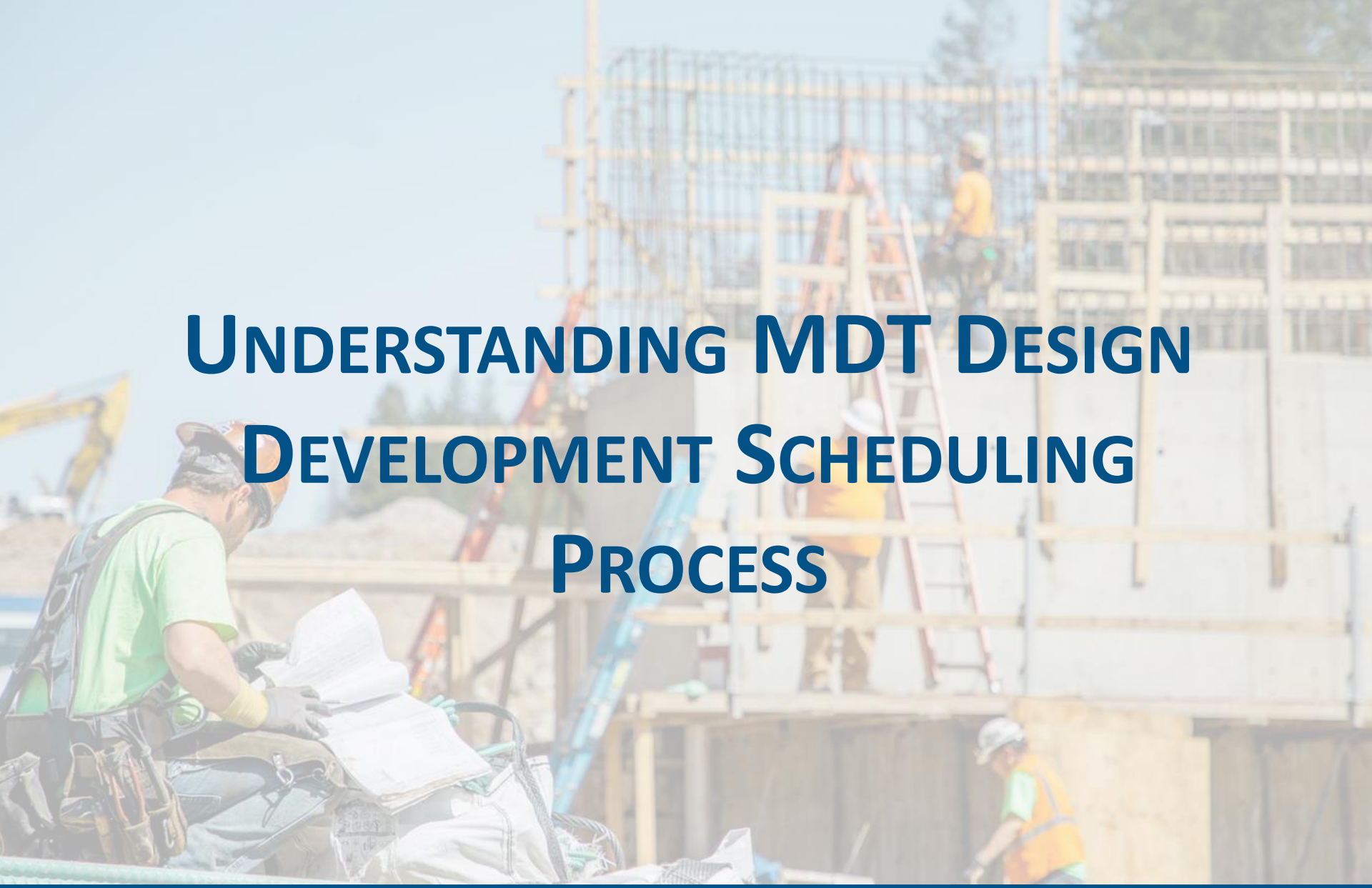
- Define an allowance to cover the cost, if this risk should it occur:

Pay Item	Amount	Description
CM/GC Contingency	$125,908	Refer to special provision for conditions on when this fund can be accessed, payment is administered like Misc. Work

CM/GC Risk Management: WHEN??

Example Risk Follow-up:

- Continue to evaluate and update risk assessment and mitigation plan throughout the life of the project (design and construction)
  - Deck coring and top flange inspection provides more information and allows you to reduce probability of risk
- Continue to update and revise contingency cost estimate
  - Updated material pricing, detailed plan for steel rehab/replacement documented in special provision



Understanding MDT Design Development Scheduling Process

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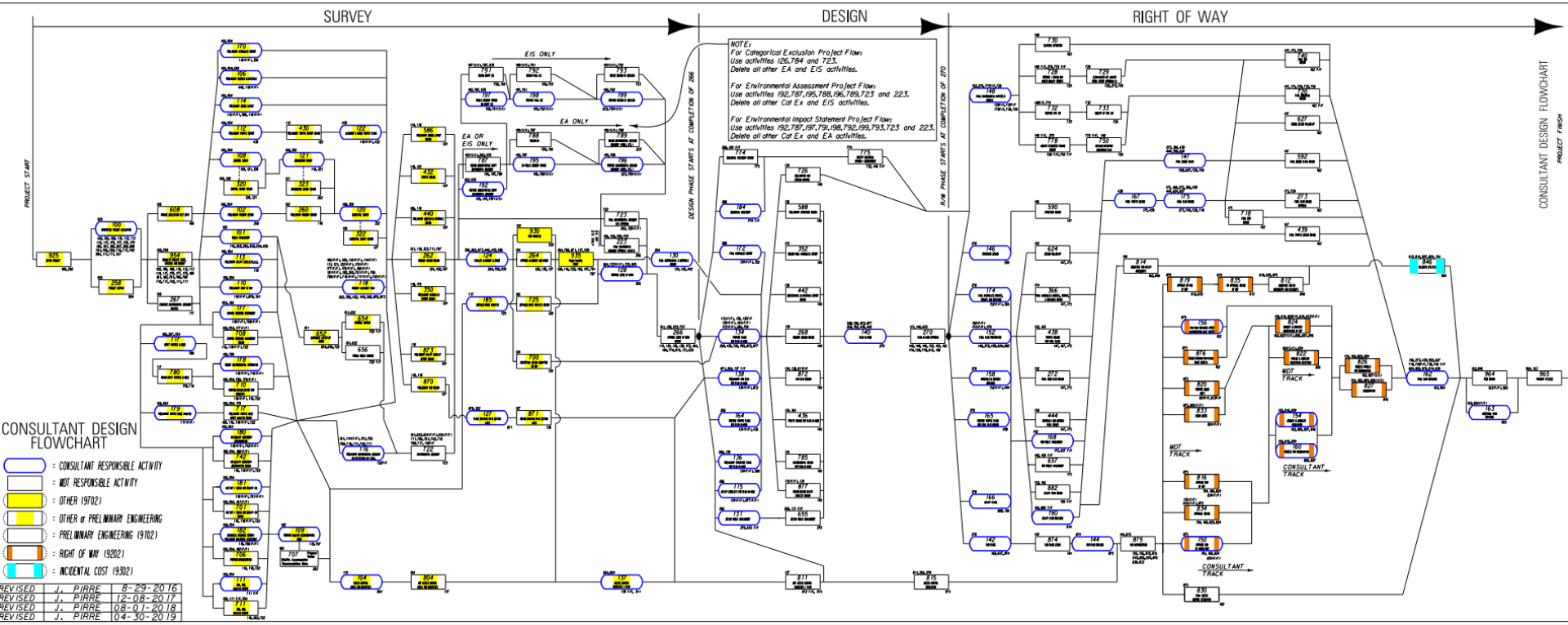
CM/GC Preconstruction Schedule

- MDT utilizes existing/typical consultant design project framework, but looks to adapt that standard process to fit project and team specific needs…



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CM/GC Preconstruction Schedule

- Added CM/GC activities occurring at each major plan development milestone…

BREAK

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Cost Estimating, Reconciliation & the ICE

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Estimating Overview

- Estimating Milestones
- Estimate Activities For Milestones
- Role of the ICE
- Production Based Estimating

Estimating Milestones

- 10-30% = Rough Order of Magnitude (ROM)
- 30% = Alignment and Grade Review (AGR)
- 60% = Plan-in-Hand (PIH)
- 90% = Final Plans
- 100% = Plans, Specs, and Estimate (PS&E)
  - GMP Negotiations & Off Ramp
  - Guaranteed Maximum Price (GMP) submittal

Estimate Activities For Milestones

- First look at full plan set
- Contractor will conceptualize construction phasing and impacts
  - Make suggestions to enhance constructability

- Purpose of Meeting is to make sure ICE, Engineer, and Contractor are on the same estimating grounds.
- Cost Estimate Narrative/Instructions
  - Where do I carry Indirect, Risk, Contingency, etc.?
- Information Sharing
- Means and Methods for Construction
  - Opportunity to Innovate!

- Estimate development duration will depend on project schedule.
- Contractor, ICE, and Engineer will submit estimates.
  - ICE and MDT will have opportunity to review all estimates.
  - ICE estimate will be blind.

- Occurs the day before Estimate Reconciliation meeting(s)
- First look at comparison spreadsheet
- Identify Work Groups (or D groups) where Estimate Reconciliation will need to be focused.
- ICE, Engineer, and Contractor will have opportunity to modify estimates and resubmit.

- Open book pricing for CM and Engineer
  - ICE tab is blind
- Comparison Spreadsheet and Meeting Discussion Example (next slide)

Constructability Review | Approach to Price | Submit Estimate | Pre-Estimate Reconciliation | **Estimate Reconciliation** | Post Reconciliation Estimate

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CM/GC Project
60% Estimate Reconcilliation

DATE:

BID ITEM #	ITEM DESCRIPTION	QTY	UNIT	CONTRACTOR ESTIMATE: MH	Labor Cost Total	Construction Equipment Cost Total	Supplies Total Cost	Materials Total Cost	Subcontract Total Cost	Unit Price	Total Price	CON vs. ICE COMPARISON
GGREGATES / EMBANKMENT ITEMS		1	LS									
301020252	BRIDGE END BACKFILL-TYPE 1	19,000.00	CY							$10.00	$190,000.00	greater than 15%
301020340	CRUSHED AGGREGATE COURSE	43,371.00	CY							$20.00	$867,420.00	less than 5%
301020625	AGGREGATE TREATMENT	157,592.00	SY							$30.00	$4,727,760.00	5-15%
203020310	SPECIAL BORROW-NEAT LINE	24,446.00	CY							$40.00	$977,840.00	5-15%
	AGGREGATES / EMBANKMENT ITEMS TOTALS										**$6,763,341.07**	less than 5%
LANT MIX BITUMINOUS SURFACE ITEMS		1	LS									
401020300	HYDRATED LIME	748.00	TN							$10.00	$7,480.00	less than 5%
402020368	EMULSIFIED ASPHALT CRS-2P	281.00	TN							$20.00	$5,620.00	less than 5%
409000000	FINAL SWEEP AND BROOM	7.00	MILE							$30.00	$210.00	less than 5%
409000020	COVER-TYPE 2	157,592.00	SY							$40.00	$6,303,680.00	less than 5%
401020045	PLANT MIX SURF GR S-3/4 IN	53,414.00	TN							$40.00	$2,136,560.00	greater than 15%
402020092	ASPHALT CEMENT PG 64-28	2,884.00	TN							$30.00	$86,520.00	less than 5%
402020315	EMULSIFIED ASPHALT-TACK COAT	31,518.00	GAL							$20.00	$630,360.00	greater than 15%
402020320	EMULSIFIED ASPHALT-FOG SEAL	11,819.00	GAL							$10.00	$118,190.00	greater than 15%
	PLANT MIX BITUMINOUS SURFACE ITEMS TOTALS										**$9,288,620.00**	5-15%
VALL ITEMS		1	LS									
209010125	STRUCTURE EXC TYPE 2	33,305.00	CY							$10.00	$333,050.00	less than 5%
209010165	TEMPORARY SHORING	7,500.00	SF							$20.00	$150,000.00	less than 5%
614010010	RETAINING WALL - J2 WALL	690.00	LF							$30.00	$20,700.00	less than 5%
614010011	DESIGN, CONSTRUCT MSE WALLS	1,886.00	SY							$40.00	$75,440.00	less than 5%
614010046	DSGN & CNST MSE WALL-MODULAR BLOCK	150.00	SY							$30.00	$4,500.00	5-15%
	REMOVE CONCRETE RETAINING WALL	220.00	LF							$20.00	$4,400.00	less than 5%
	WALL ITEM TOTALS										**$588,090.00**	less than 5%
ONCRETE BARRIER ITEMS		1	LS									
605000000	CONCRETE BARRIER RAIL TRANSITION	9.00	EA	0.00	0.00	0.00	0.00	0.00	0.00	$0.00	$0.00	greater than 15%

Comparison | Percent Change | ICE Estimate (BLIND)

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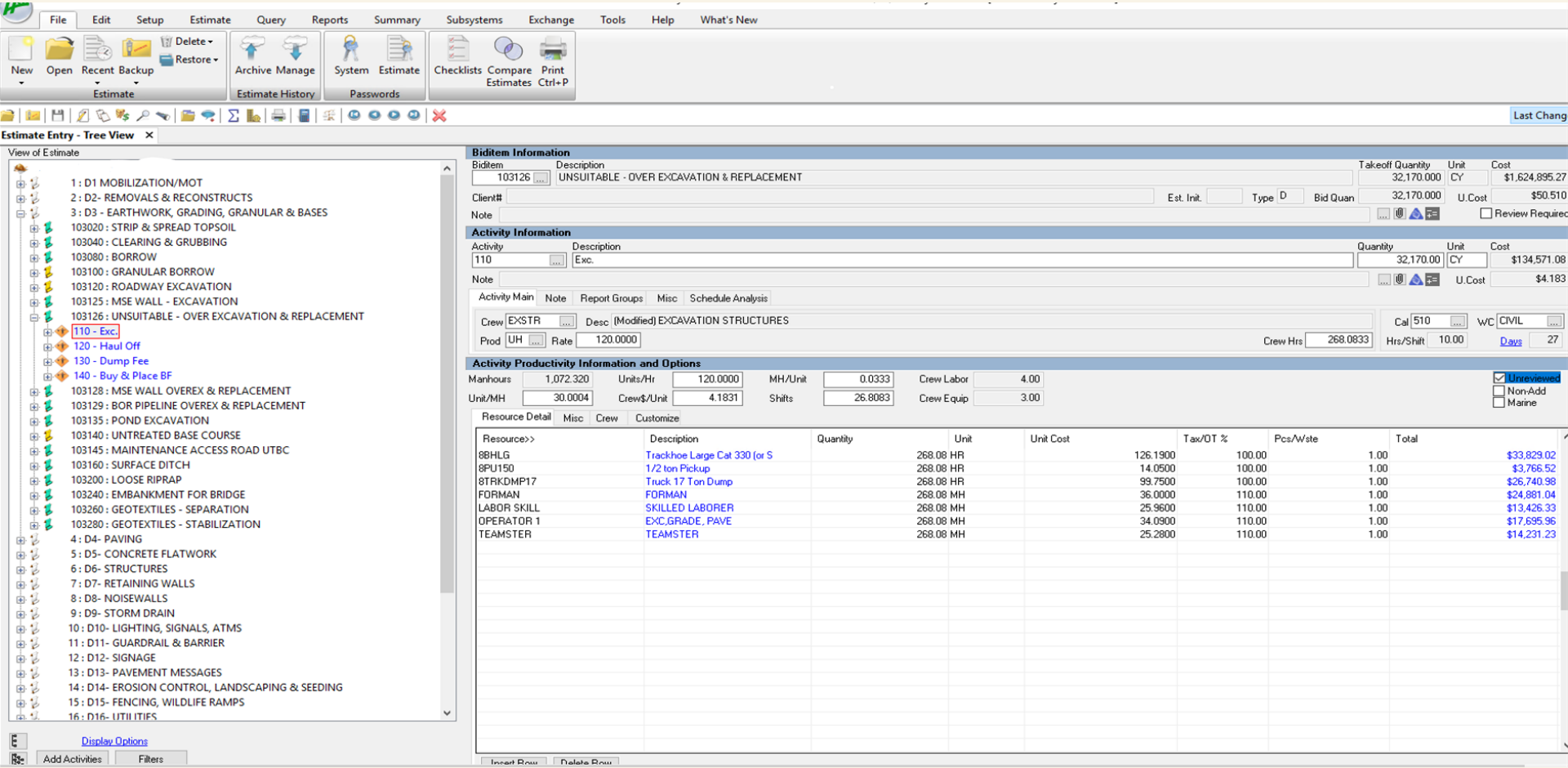
- Submit Post Post-Reconciliation Estimate
  - Modifications to Estimate based on Estimate Reconciliation Discussion

Role of the ICE

- Foster Team Environment
- Fair Market Pricing
- Bring additional experience to the project team
- Assist in risk mitigation
- Assist team in developing innovation
- Help team accomplish goals

PRODUCTION BASED ESTIMATING



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Early Work Packages

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Early Work Package

- EWP should be used to reduce project risk
- EWP(s) considered if it provides clear schedule or constructability advantage
- EWP must be severable
- EWP based on fully-developed design documents
- Must save time, reduce inconvenience, and/or reduce construction costs
- EWP GMP subject to cost guidelines, i.e., < 110% of ICE

CM/GC Contractor Procurement Process

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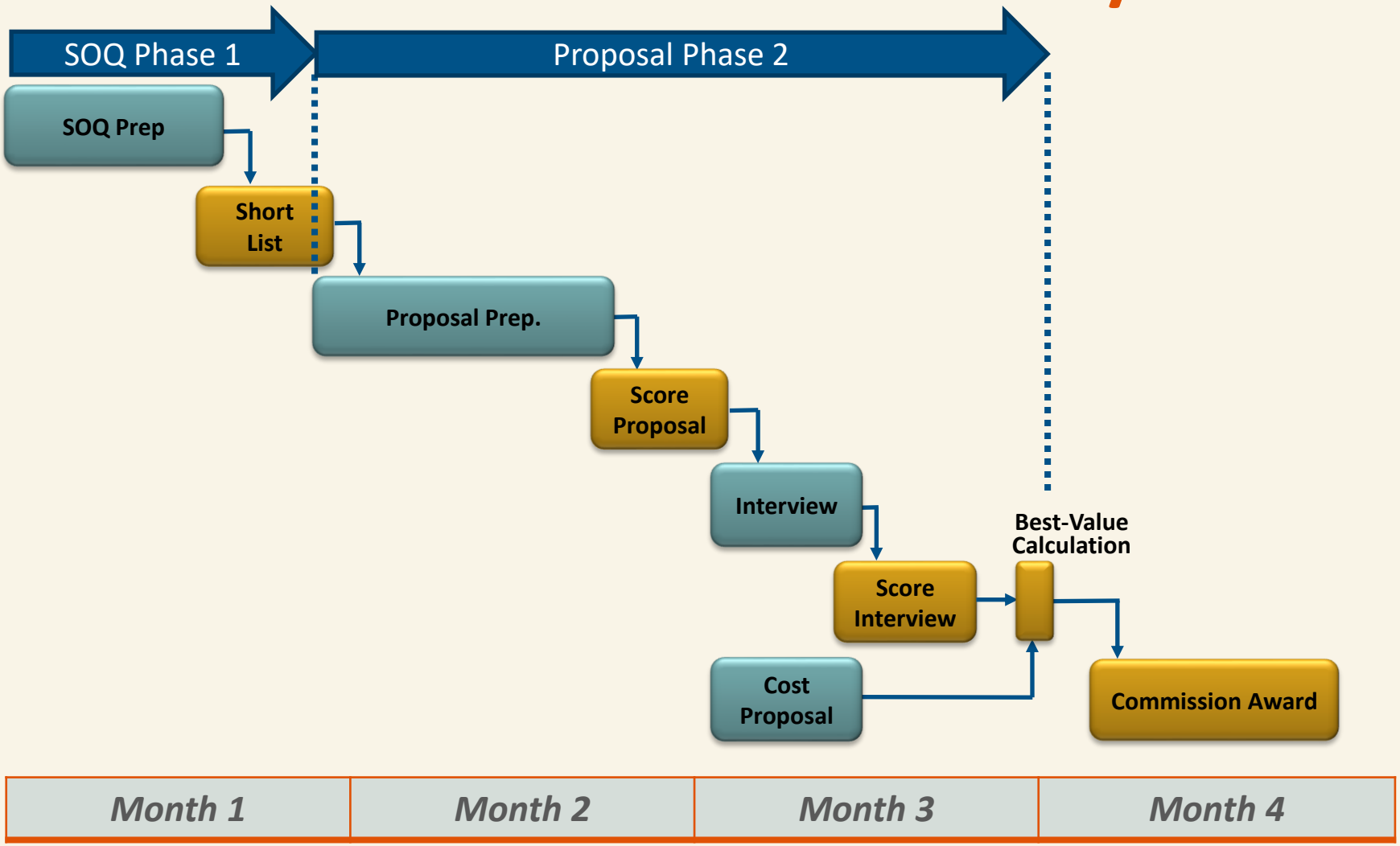
HIRING THE CM/GC (MCA 18-2-503)

- Two phase process
  - Request For Qualifications (RFQ) → State Of Qualifications (SOQ)
  - Request For Proposal (RFP) → Technical Proposal (TP)

- By law, MDT must consider project costs when awarding project

  CHALLENGE:
  - Very limited design information available at time of Contractor RFQ/RFP
  - We require a fixed fee markup price as a part of their proposal

THE PROCESS - HIRING THE CM/GC



Elements of a Good SOQ and Proposal

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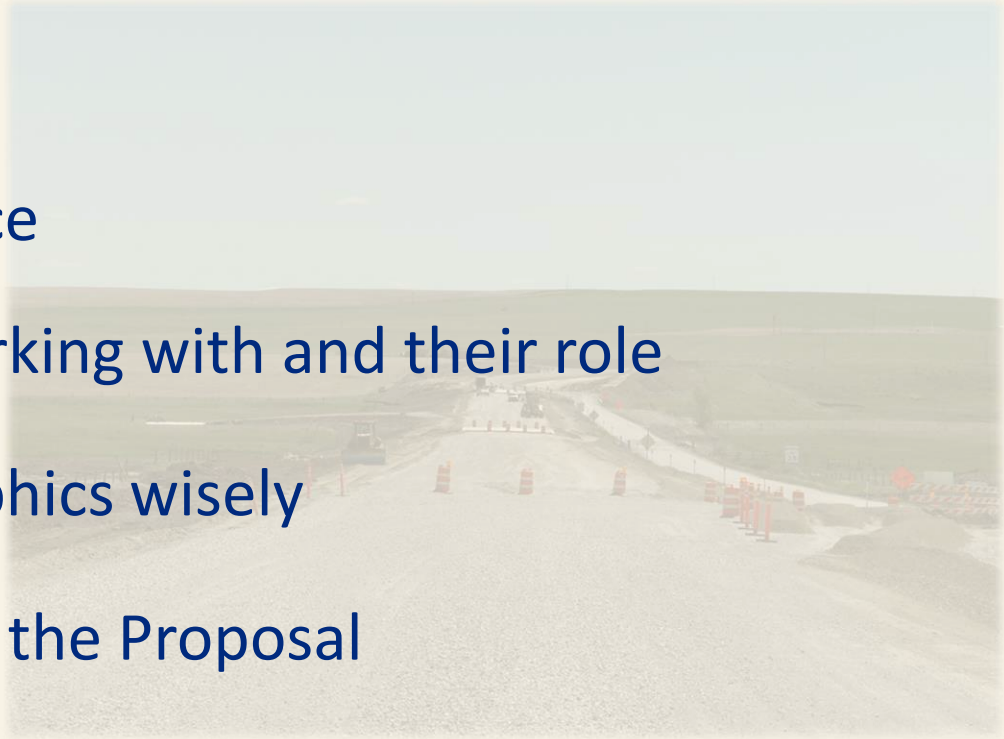
THE STATEMENT OF QUALIFICATIONS

- The parts of the SOQ:
  - Transmittal Letter
  - The Team/Key Members – *25% Weighted Value*
  - CM/GC and Related Projects – *25% Weighted Value*
  - Understanding and Approach – *50% Weighted Value*
- MDT Shortlists all Firms under Pilot Program
- Currently share ranking to give Firms ability to make Go/No-Go decision

THE STATEMENT OF QUALIFICATIONS

- Staffing – Use tables, simple org charts, staff interface
- What are the team members contribution to the project
- Follow the RFQ and RFP
- Draw off similar experience
- Know who you will be working with and their role
- Use photos/matrices/graphics wisely
- The SOQ is the outline for the Proposal



PROPOSAL SECTION I – PROJECT TEAM

- The cover letter – opportunity to list strengths
- Work from an outline
- Avoid being wordy – "Just the Facts"
- The Organization Chart
- Matrices can be very useful
- Be consistent within and across proposal sections
- Pick good projects – tie to team
- Section I weighted at *10%* of the written proposal

SECTION II – STRATEGIC PROJECT APPROACH

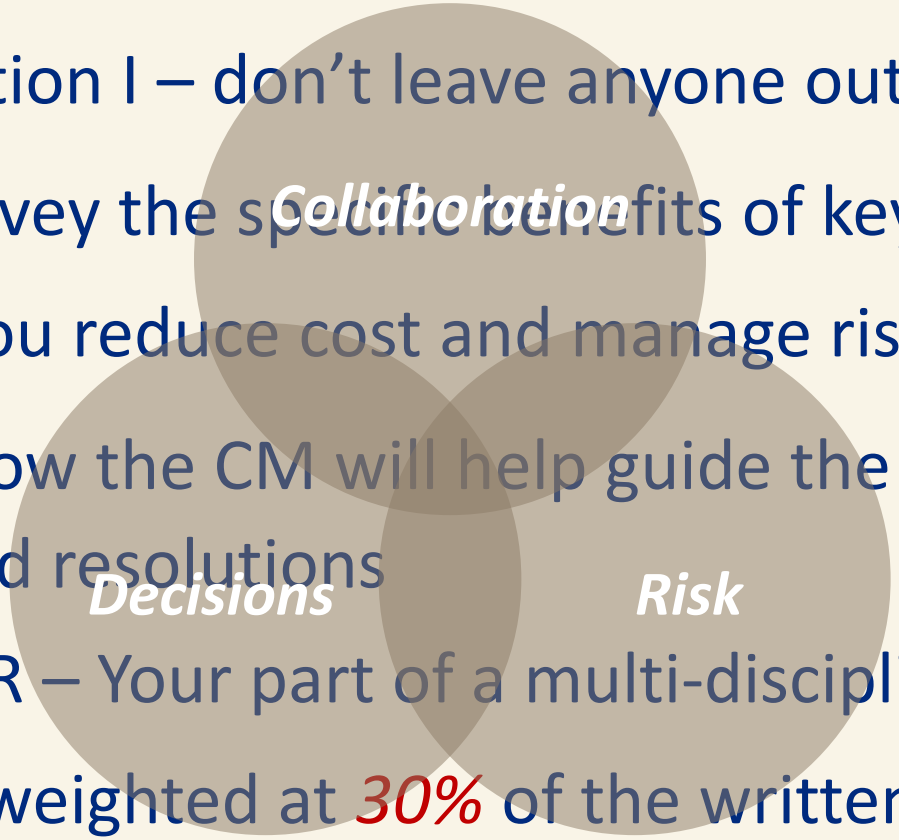
- Follow the RFP organization
- Address what is important to MDT - the Silver Bullet
- Tables and graphics can be very useful
- Clearly address the project goals and challenges
- It is helpful to illustrate you've done this before
- Tie approach to design milestones
- How are you going to manage risk and innovations
- Be creative with ideas – don't limit yourselves
- Discuss collaboration with MDT, Consultant & ICE

SECTION II – STRATEGIC PROJECT APPROACH (CONT)

- Consider how you will address early work packages
- Can you provide value added services or tools?
- Do not neglect safety
- MDT is interested in how you manage quality
- Typical cross sections/graphics/designs are valuable if done right
- Section II weighted at *40%* of the written proposal

SECTION III – APPROACH TO CM/GC PROJECT DELIVERY PROCESS

- Hit on the three main points-Collaboration/Risk/Decisions
- Mirror Section I – don't leave anyone out
- Clearly convey the specific benefits of key staff
- How will you reduce cost and manage risk? Explain
- Describe how the CM will help guide the decision analysis and resolutions
- REMEMBER – Your part of a multi-disciplined team
- Section III weighted at *30%* of the written proposal



SECTION IV – PROJECT INNOVATIONS AND RESOURCES

- Be creative and open minded
- Generate a metric that gauges impacts of the innovation
- Provide examples and outcomes if possible
- How is your team structured to brainstorm/ evaluate/ track innovations
- Are innovations right for this site and conditions?
- Section IV weighted at *20%* of the written proposal

Elements of a Good Interview

THE INTERVIEW

- Know the interview format
- Be relaxed: Practice - Practice - Practice
- You will be our partner – start with this interview
- Avoid one person dominating d
- Clean handoffs – don't interrup
- Be cognizant of your body langu
- Be intentional with graphics/fig
- Consider value-added participants

THE INTERVIEW (CONTINUED)

- Discuss the project challenges and your approach
- Address the key elements of your proposal – expand
- Avoid badmouthing past clients, subs, engineers
- Tell us how you communicate internally and with the team
- Key words have value – transparency, communication, problem solving, own risk, etc.
- Know your virtual platform
- Ask us questions
- Show excitement!

The Selection Process

CM/GC Total Proposal & Interview Scoring

120000 Total Score Available

REVIEW COMMITTEE MEMBER	COMPANY													
	Contractor A							Contractor B						
	Technical Proposal				Interview			Technical Proposal				Interview		
SCORING CRITERIA NO.	*1*	*2*	*3*	*4*	*1*	*2*	*3*	*1*	*2*	*3*	*4*	*1*	*2*	*3*
Reviewer 1	7.0	8.0	8.0	8.5	9.8	10.0	9.8	9.5	9.0	9.5	8.8	7.6	7.3	7.4
Reviewer 2	8.0	7.5	7.0	8.0	9.2	9.2	8.9	9.0	8.9	9.0	9.5	8.0	7.4	7.4
Reviewer 3	7.5	7.9	7.5	7.8	9.0	9.0	8.7	9.0	8.8	9.0	9.2	8.0	8.0	7.5
Reviewer 4	6.0	6.5	7.5	8.0	9.2	9.3	9.5	9.2	9.5	9.5	8.0	8.8	8.0	8.0
Reviewer 5	7.0	7.0	6.5	6.8	9.5	9.0	9.0	8.5	9.0	8.5	8.6	7.0	6.5	6.0
Reviewer 6	8.0	8.0	7.3	8.0	9.5	9.5	9.5	10.0	10.0	9.0	9.0	8.0	7.0	8.0
Reviewer 7	7.0	7.3	6.5	7.2	9.8	9.8	9.8	7.5	8.2	8.0	8.0	7.5	7.3	7.5
Reviewer 8	8.0	6.5	6.2	7.3	9.5	9.5	9.5	10.0	9.5	9.0	9.5	8.0	7.0	7.5
TOTAL/CRITERIA =	58.5	58.7	56.5	61.6	75.5	75.3	74.7	72.7	72.9	71.5	70.6	62.9	58.5	59.3
TOTAL SCORE =	96,130							102,110						
PERCENT =	80.11%							85.09%						
RANKING	2							1						
	2.0	1.5	1.8	1.7	0.8	1.0	1.1	2.5	1.8	1.5	1.5	1.8	1.5	2.0

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CM/GC Price Scoring

PROPOSER	Construction Phase Multiplier (%)	Average Multiplier (%)	Closest to the Average Score	
Contractor A	10.00	10.8	0.9921	2
Contractor B	9.65		0.9886	3
Contractor C	11.50		0.9929	1
Contractor D	12.00		0.9879	4

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CM/GC Best Value Scoring

PROPOSER	Technical Proposal and Interview Score	Construction Phase Multiplier Closest to Average Score	Best Value Score
Contractor A	96130	19.8400	460.89
Contractor B	102110	19.7700	463.47
	Total possible points for Proposal and Interview:		120000
	Proposal and Interview Weight		80
	Price Proposal Weight		20

Status of Current and Upcoming CM/GC Projects

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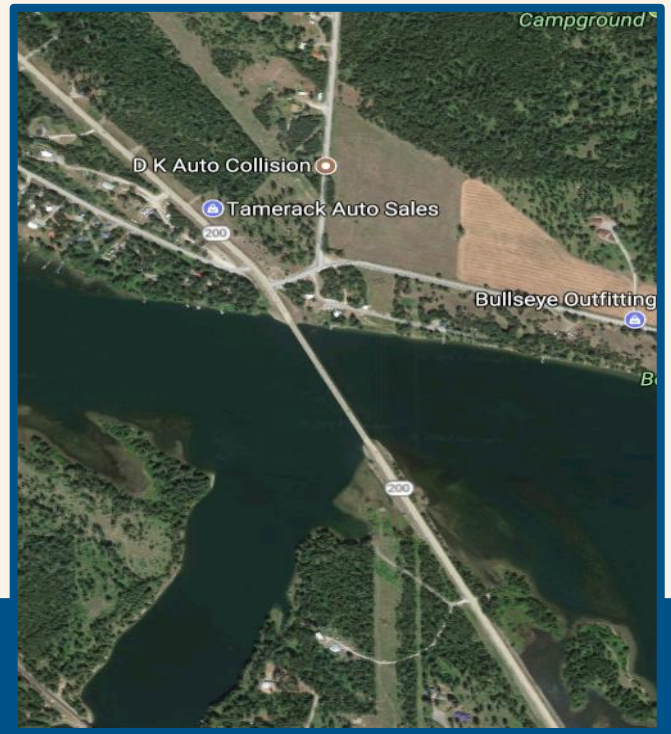
CLARK FORK – 1M NW TROUT CREEK

- Major Bridge Rehabilitation - bridge deck required replacement
- Significant site constraints & major utilities in vicinity of structure
- Accelerated construction utilizing precast bridge deck panels
- Closed to traffic 6/1 to 7/10 (39 days total) – opened 3 days ahead of schedule



- Project Highlights:
  - Accelerated pre-construction phase
  - Robust Public Involvement effort
  - Innovative construction methods using precast panels with accelerated schedule
  - Local fabricator used (Kalispell)

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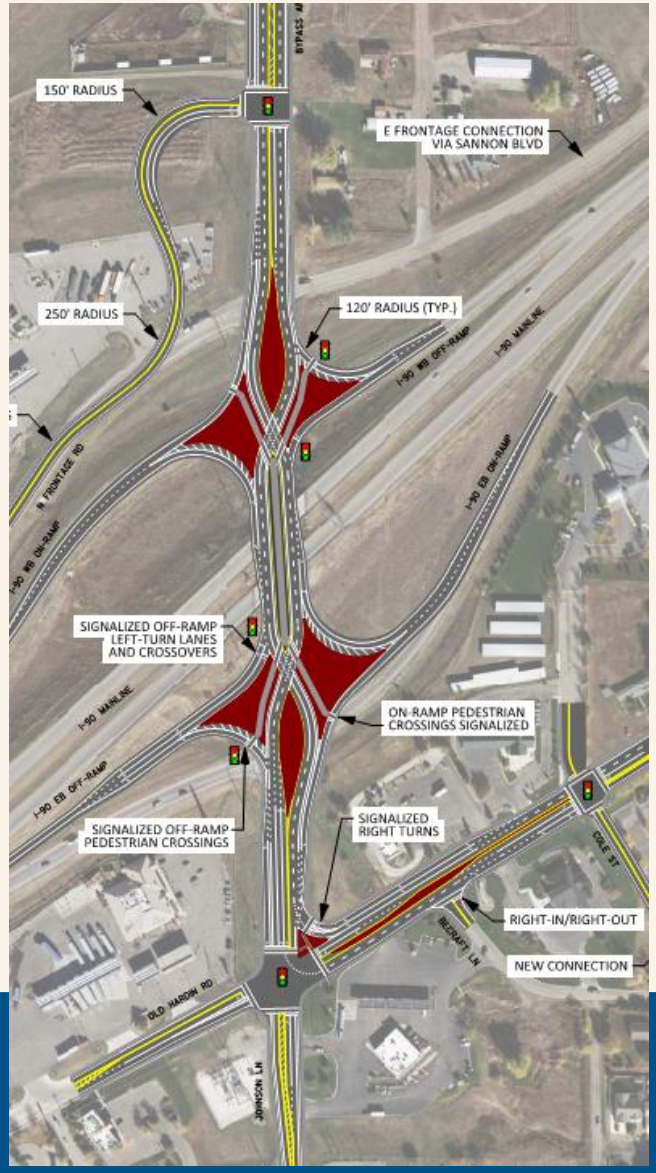
Salmon Lake Reconstruction

- 4.5 Mile Reconstruction in challenging terrain
- Significant geotechnical challenges
- Maintenance of traffic issues
- Status: under design
- Project Highlights:
  - Environmental sensitive design
  - Right of Way constraints
  - Unstable slopes on the right, lake proximity on the left

JOHNSON LANE INTERCHANGE – BILLINGS BYPASS



- I-90 interchange reconstruction
- Diverging diamond interchange
- Maintenance of traffic issues
- Status: under design
- Project Highlights:
  - Defining an efficient decision process
  - Enhanced MDT participation
  - Design efficiencies
  - Bluebeam used for plan review

MT-200 Bridges – Lewistown Area

- Replacement/Rehab of 11 timber bridges
- Recently selected a Design Consultant
- Advertise for CM in February 2021
- Advertise for ICE in March 2021
- Project Highlights:
  - Age of existing bridges – all but 2 pre-1940
  - Right of way constraints – limited width
  - Maintaining traffic flow

LESSONS LEARNED

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QUESTIONS & COMMENTS

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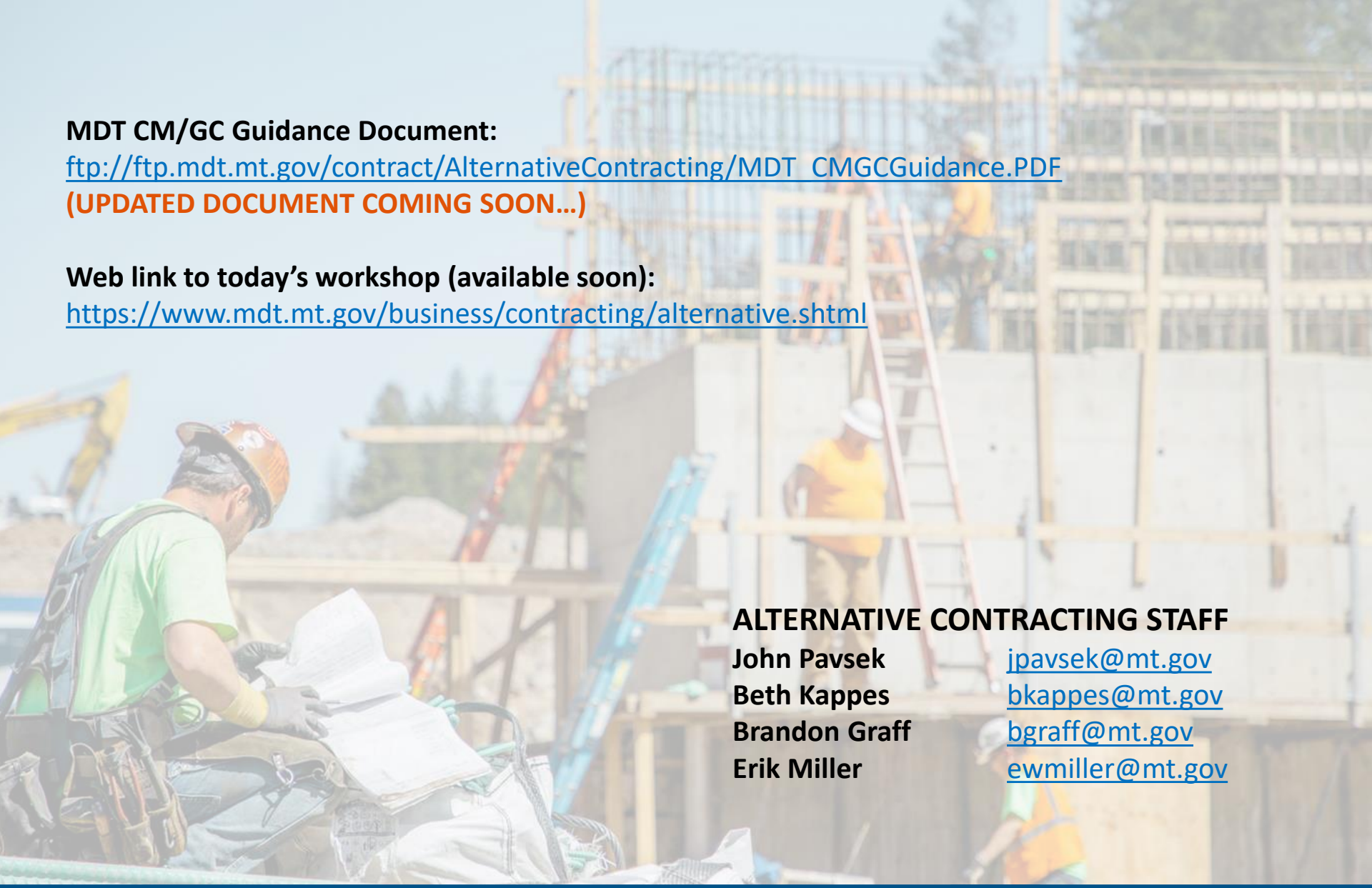
MDT CM/GC Guidance Document:
ftp://ftp.mdt.mt.gov/contract/AlternativeContracting/MDT_CMGCGuidance.PDF
(UPDATED DOCUMENT COMING SOON…)

Web link to today's workshop (available soon):
https://www.mdt.mt.gov/business/contracting/alternative.shtml



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