LESSONS LEARNED:
SUCCESSFUL PROJECT DELIVERY INTO THE FUTURE

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LESSONS LEARNED: SUCCESSFUL PROJECT DELIVERY INTO THE FUTURE

- FOUR LEGS OF SUCCESSFUL PROJECT DELIVERY
- PROJECT LEG PRIORITIES
- SUCCESSFUL PROJECT DELIVERY FOUNDATION
- DALLAS COUNTY 5 PHASE PROJECT DELIVERY
- PLANNING & PRELIMINARY DESIGN
- PRIMARY DESIGN, ROW, UTILITY RELOCATIONS
- CONSTRUCTION
FOUR LEGS OF SUCCESSFUL PROJECT DELIVERY

- Leg One: Project Function/Quality
- Leg Two: Budget
- Leg Three: Schedule
- Leg Four: Stakeholder Commitment/Perception/Acceptance
Overall priorities can be different depending on the project.

Determine priorities for a project as soon as possible.

Project priorities can change during project delivery.

Different project delivery methods will tend to be better (or worse) for different priorities.

Project priorities are best focused on during certain phases of project delivery.
SUCCESSFUL PROJECT DELIVERY FOUNDATION

- Funding program for projects should be flexible and functional to meet the needs of stakeholders (Dallas County Major Capital Improvements Program).
- Place a priority on Partnering (internal and external) in all project delivery phases, particularly construction.
- Have a systematic approach to project delivery (Dallas County 5 Phase Delivery Program).
- Understand project priorities and when they can best be addressed.
- Understand critical items in all phases of project delivery and manage accordingly.
- Utilize best practices based on previous project lessons learned.
DALLAS COUNTY 5 PHASE PROJECT DELIVERY SYSTEM

- Planning & Preliminary Design
- Primary Design Start
- ROW Initiation and Primary Design Completion
- ROW Completion and Utility Adjustments
- Construction
FOCUS ON project Leg Two (Budget) and Leg Four (Stakeholder Commitment/Perception)
BUDGET- secure adequate funding by having larger contingency early in project planning and reduce as project delivery progresses. Make sure scope is realistic. Utilize project delivery that best suits funding and vice versa (example: federal vs. local funds)
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STAKEHOLDER COMMITMENT/PERCEPTION - secure project stakeholder commitment and perception of project among elected officials, senior staff, local property owners, etc.
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PLANNING & PRELIMINARY DESIGN
SEPARATE Preliminary Design and Primary Design.

SEPARATE Project Engineer and Project Manager duties, if possible.
KEY ELEMENTS OF PRELIMINARY DESIGN

- Isolate 30% design when project changes are easier than later phases.
- Basic horizontal and vertical alignment.
- Identify/incorporate innovative and state of the art industry trends.
- Manage ROW needs as soon and in as much detail as possible.
- Refine project scope and budget.
- Identify environmental, permitting, mitigation needs, etc.
- Identify critical issues effecting design and construction.
- Engineer and manage for value throughout design as opposed to "value engineering".
IDENTIFY KEY PROJECT AND PLAN ELEMENTS UP FRONT

- Design standards and criteria.
- Drafting and plan formatting standards (example set).
- Perform existing condition evaluation.
- Show and label existing project conditions in as much detail as possible before commencing design.
- Perform “muddy boots” review of existing conditions with plan draft.
- Make existing plan as accurate and understandable as possible (“drawn aerial photograph”).
- Label accurate and understandable information on utilities.
- Label existing property ownership. ROW, easements, centerline, etc.
- Plan review of existing conditions (0%)?
PRELIMINARY DESIGN CHARRETTE

- Meeting at the end of preliminary design to come to an agreement with stakeholders on project scope, budget, and critical issues.
- Refined budget can be used to establish adequate funding or adjust project scope.
- Understand stakeholder desires and concerns via open house style format to receive input.
- Utilize Preliminary Design and Design Charrette to define Primary Design engineering and draft Project Specific Agreement, if needed.
FOCUS ON project Leg One (Project Function/Quality) and Leg Three (Schedule)
PROJECT FUNCTION/QUALITY—concentrate effort on areas of design that are most important to project quality (example: paving profile on roadway project).
SCHEDULE - concentrate effort on design phase components that are most important to the critical path (example: initiate ROW documents/acquisition and permitting as early as possible).
- CONDUCT monthly Task Force Meetings (same, day, time, and place).
- EXPEDITE project items so they are not waiting on you or your entity (reviews, issue resolution, etc.).
UTILIZE DESIGN TOOLS EFFECTIVELY

- Geotechnical information to ASSIST in design and provide subsurface conditions to contractor.
- Subsurface Utility Engineering: Level A SUE primarily at specific critical locations to identify potential utility conflicts,
- Design or Management software to ASSIST in design.
- Constructability, utility, and third party technical reviews.
TAKE BUSINESS APPROACH TO PROJECT DELIVERY

- Engage in engineering and project management “moneyball”.
- Expedite ROW acquisition efficiently and economically.
- Update project budget with a more accurate construction estimate with reduced contingency.
- Grasp the 99% rule.
- Multi-task the time required for utility relocations with project bid, award, pre-con, and contactor mobilization.
- Emphasize the contract bid proposal when preparing bid package.
KEY ELEMENTS OF BID PROPOSAL

- Utilize a previous bid proposal or pay estimate from a similar project when drafting a new bid proposal.
- Bid items and quantities should reflect not just the plans but what is actually needed for project construction experience as a guide.
- Bid items and units should be fair and efficient (“subsidiary” is not always best).
- Allowances can be used for items that are difficult to define or quantify prior to construction.
- Bid schedule and options should allow flexibility in the contract award to fit budget.
CONSTRUCTION

- FOCUS ON project Leg One (Project Function/Quality) and Leg Four (Stakeholder Acceptance)
CONSTRUCTION

- PROJECT FUNCTION/QUALITY - emphasize finished project product and quality details throughout construction.
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STAKEHOLDER ACCEPTANCE - emphasize construction efficiencies and details that benefit the public and create a project of which everyone can be proud.
KEY ELEMENTS OF CONSTRUCTION MANAGEMENT

- Method of bidding can be utilized to reflect priorities.
- Utilize partnering approach including partnering session in Pre-Con.
- Conduct weekly field meetings (same day, time, place).
- Adjust construction as needed to actual conditions in the field.
- Create innovative solutions to unique challenges.
- Encourage issue resolution as close to the field level as possible.
- Choose battles wisely to the benefit of the project.
- Learn from what works and what doesn’t for future projects.
WRAP-UP

- SUMMARY
- QUESTIONS?
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