After the Honeymoon:
Strategies to Manage Changes to your Project

Breakout Session #1 – Tuesday, 11:00-12:30

Breakout Session #4 – Wednesday, 8:30-10:00

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Brian Henschel, Senior Vice President, Whitman, Requardt, & Associates
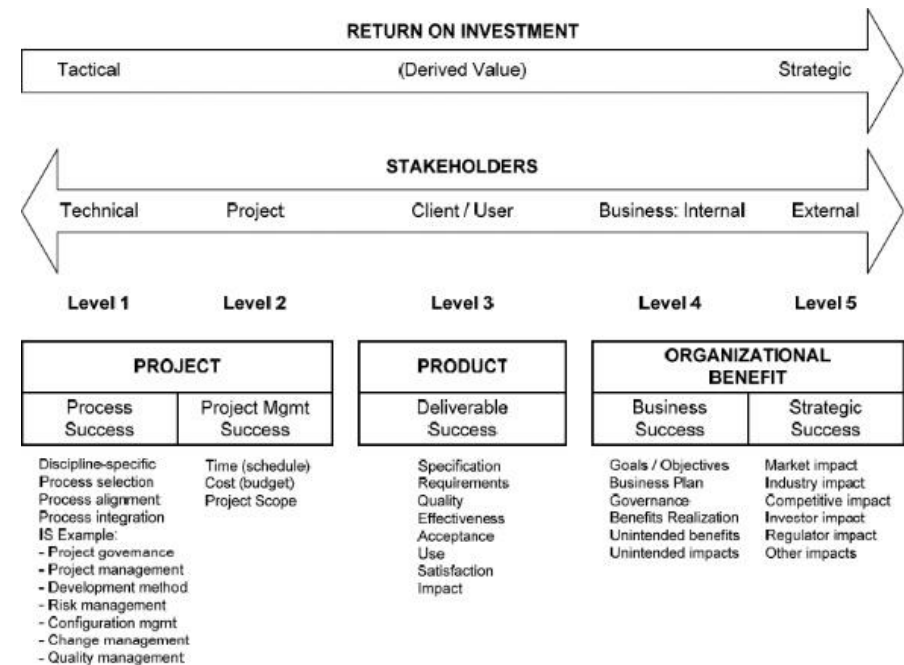
Kelly Waldrop – Moderator

Presentation Agenda

- Introductions
- Topic Areas
  - Getting off to a Good Start
  - Scoping
  - Right-of-Way and Utilities
  - Advertisement to Award
- Resources
- Q&A

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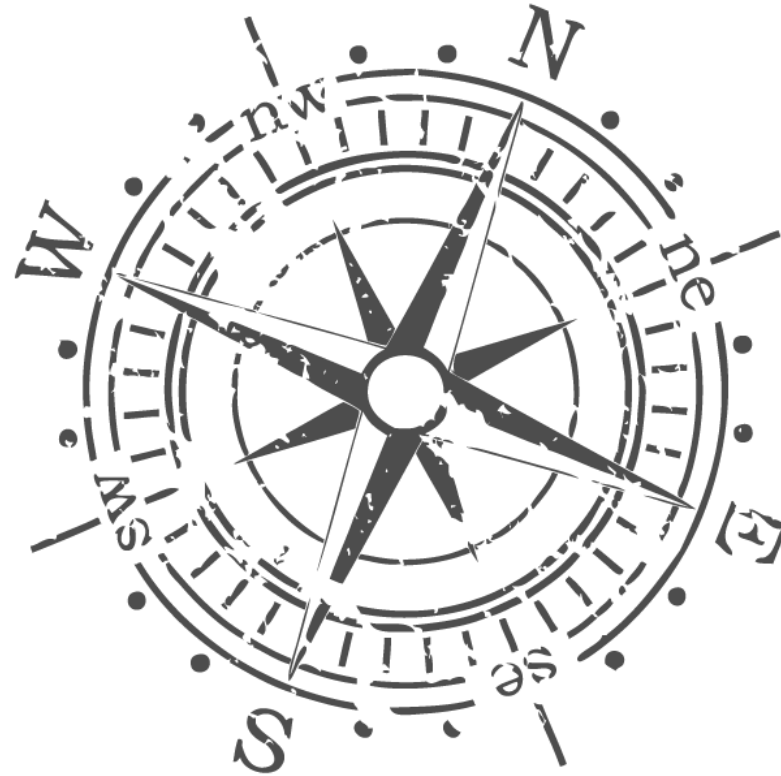
Getting off to a Good Start – Pre-scoping Activities

- Why are we doing this project?
  - Understand the background, key players, etc.
  - Develop a clear purpose and need statement

- What does success look like?
  - Process
  - Project Management
  - Deliverable
  - Business
  - Strategic

	RETURN ON INVESTMENT		
Tactical	(Derived Value)		Strategic

STAKEHOLDERS				
Technical	Project	Client / User	Business: Internal	External

Level 1	Level 2	Level 3	Level 4	Level 5
PROJECT		**PRODUCT**	**ORGANIZATIONAL BENEFIT**	
Process Success	Project Mgmt Success	Deliverable Success	Business Success	Strategic Success
Discipline-specific Process selection Process alignment Process integration IS Example: - Project governance - Project management - Development method - Risk management - Configuration mgmt - Change management - Quality management	Time (schedule) Cost (budget) Project Scope	Specification Requirements Quality Effectiveness Acceptance Use Satisfaction Impact	Goals / Objectives Business Plan Governance Benefits Realization Unintended benefits Unintended impacts	Market impact Industry impact Competitive impact Investor impact Regulator impact Other impacts

Getting off to a Good Start – Pre-scoping Activities

- Plan for life after the project is constructed
  - Make sure what is being designed will be cost effective for the sponsor to maintain

- Don't be a silo, get all stakeholders involved

- Start building your team
  - Determine if you need outside help (consultant and/or VDOT) and what role you want them to fill

Getting off to a Good Start – Pre-scoping Activities

- Internal Kick-off Meetings
  - Draft a mission statement for the project
  - Share information about project background, key stakeholders and other pertinent information
  - Talk over risks, assumptions
  - Discuss roles/responsibilities
  - Define success
  - Develop a communication plan
  - Plan for larger kick-off meeting
  - Plan for consultant procurement

Getting off to a Good Start – Consultant Procurement

- Consider procuring a federally eligible on-call consultant
  - Saves time because you don't have to go through the procurement process for each Federal grant you receive
  - Allows you to start design following project authorization

- Consider developing a scope of work that allows you to use the same consultant for planning activities (feasibility studies and applications) and for full design
  - Consultant is already familiar with the project
  - Reduces rework and time to get up to speed on the project

Getting off to a Good Start – Consultant Procurement

- Pick a consultant that meets your project and your organization's needs
  - Be humble, know your limits

  - Ask VDOT what they include in their scope of work for similar projects

  - Don't forget construction, engineering and inspection services (CEI)

Getting off to a Good Start – Kick-off Meeting

- Ensure all stakeholders are present at the meeting
  - Be sure to include people beyond your department
    - Internal stakeholders - Right-of-way, utilities, construction, maintenance, decision makers, consultant
    - External stakeholders - VDOT, utility companies, FHWA

  - Opportunity to ensure everyone is on the same page

  - First step to minimizing scope creep

Getting off to a Good Start – Kick-off Meeting

- Meeting topics should include:
  - Introductions
    - Don't assume everyone knows each other

  - Explain the project need and scope

  - Ensure stakeholders understand grant requirements Federal/State requirements, etc.)

  - Agree on a stakeholder communication plan
    - Method (email, SharePoint, etc.)
    - How often?

Getting off to a Good Start – Kick-off Meeting

- Meeting topics should include:
  - Develop a resource plan
    - Assign roles/responsibilities
    - Tie back to the scope

  - Go over any high level assumptions and potential constraints

  - Identify potential risks

  - Define success

Getting off to a Good Start – Practical examples

- Notifying potential property owners as early as possible on the project
  - Airport Property

- Detail your assumptions and risk management
  - Impacts to schedule if something doesn't occur (example – donated RW)

- Not including maintenance or construction staff on design team
  - Later design changes and/or change orders

Scoping – Final Scoping Team Meeting

- Similar to the kick-off meeting, ensure all stakeholders are present
  - Opportunity to discuss final scope and make sure everyone is still on board

- Ensure final scope meets grant requirements
  - Each program has its own requirements as it relates to eligibility, scope change and additional funding

- Generate a baseline schedule and estimate for the remainder of the design through contract award
  - Dashboard schedule is locked at the completion of scoping

Scoping –
Final Scoping Team Meeting

- Develop a plan for:
  - Estimate increases
  - Schedule changes
  - Ineligible items

- Maintain a list of project risks

  and continue to track them
  - Impact Costs x Probability

Probability	Schedule Impact	Cost Impact
1 - Very Unlikely	1 = Minimal or no impact	1 = Minimal or no impact
2 - Unlikely	2 = Additional Resources required; able to meet	2 = <5%
3 - Possible	3 = Slip in key milestones; not able to meet need data	3 = 5-7%
4 - Likely	4 = Major slip in key milestone or critical path impacted	4 = 7-10%
5 - Near Certainty	5 = Can't achieve key team or major program milestone	5 = >10%

Scoping – Evaluate/Monitor Project Risks

- Risk Matrix

UPC: XXXXX   Project No.:   (NFO) XXXX-YYY-ZZZ, C501   Updated: Following 3/24/15 Prog. Meeting

Main Street Widening Project

Item N	Owner	Potential Risk	Likelyhood	Schedule	Cost	Risk	Possible mitigation or solution	Status
1	BVU	Excavation will get within 1' of 24" waterline. Could potentially damage pipe @ Sta. 97+00	4 = Highly Likely	2 = Additional Resources required; able to meet	4 = 7-10%	24	Area should be clearly marked to notify contractors of risk. JJ will call P. King when W-L is working around STA. 97+/-	Open
2	BVU	All locations where storm goes under water and sewer line	4 = Highly Likely	2 = Additional Resources required; able to meet	2 = <5%	16	Areas should be clearly marked to identify risk. WRA has identified critical areas with W-L will continue to monitor	Open
3	BVU	Storm sections D6.3 & D7.2 @ Sta. 99+50. Storm sewer crosses 24" waterline, vertical clearance less than 1'	4 = Highly Likely	2 = Additional Resources required; able to meet	4 = 7-10%	24	Area should be marked. Grades have already been raised to mitigate, no other modification possible	Open
4	Contractor	Temporary signals across project to allow traffic to switch North. (Schedule)	3 = Likely	4 = Major slip in key milestone or critical path impacted	3 = 5-7%	21	Elliot and W-L to immediately plan. Scheduled following 2/2/15 meeting - anticipate resolution soon	Open
5	Contractor	Perm. Traffic signals @ Plaza Dr. Pole foundation locating and design approval	3 = Likely	2 = Additional Resources required; able to meet	1 = Minimal or no impact	9	W-L to aid Elliot to expedite process as much as possible. W-L Sub to do foundation drilling and submit foundation design. Not to grade yet.	Open
6	Contractor	All submittals to initially be sent to W-L & they will disseminate accordingly	5 = Near Certainty	1 = Minimal or no impact	1 = Minimal or no impact	10	Timely submitted to avoid delays. Submittal Schedule reviewed at Progress Meeting	General Note
7	Contractor	May avoid 3-day flashing period				0		RESOLVED

Scoping – Evaluate/Monitor Project Risks

- Common risks to budget and schedule:
  - Utility relocations
  - Property acquisition/easement
  - Permits
  - Politics
  - Scope creep/lack of funding
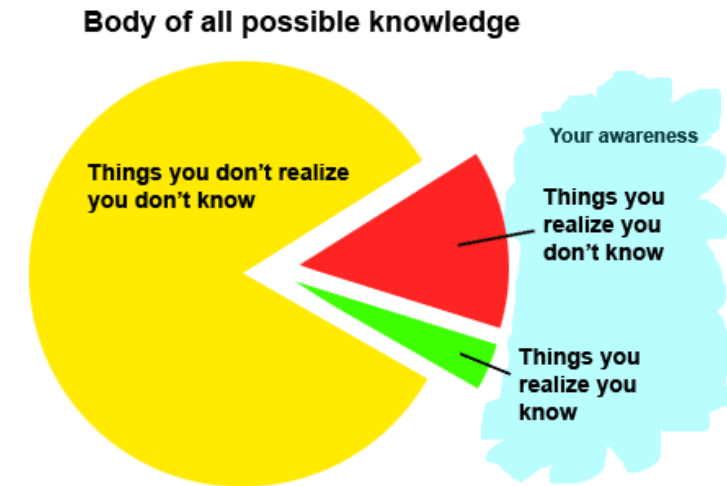
- Practical Examples

Scoping – Finalizing a Good PE & RW Schedule

- Importance of good schedule
  - Sets goals and critical path items for the team
  - Identifies resources and effort needed to reach construction
  - Incorporates construction duration to determine optimal advertisement window

- Challenges to your schedule
  - Perfection getting in the way of good enough
  - Underestimating VDOT review times
  - Local politics

Scoping – Finalizing a Good Estimate

- Ensure the estimate includes:
  - Design, RW/Utilities, and Construction
  - CEI and support services
  - Third Party Costs (ex – VDOT, permits)
  - Contingency

- Potential Risks
  - RW
  - Scope Creep
  - Unknowns (Knowns/Unknowns)

Body of all possible knowledge

Your awareness

Things you don't realize you don't know

Things you realize you don't know

Things you realize you know

Scoping – Changes to Project Scope

- Detail reason(s) why changing the scope is necessary

- Evaluate impacts to project features, estimate/budget, schedule, quality and NEPA

- Before altering the project scope, coordinate with your VDOT project coordinator and VDOT special funding manager
  - Projects are competitively selected based on scope and estimate
  - Some changes may be ineligible or require a rescoring

Unapproved scope changes may result in loss of funding

Right-of-Way & Utilities – Strategies for Successful Execution

- Utilities
  - Begin coordinating with utility companies as soon as possible (~30% plans)

  - Know your franchise agreement
    - Lays out process for relocations, costs, etc

  - Build in time for relocations and monitor progress
    - Don't assume it is getting done

  - Develop a relationship with utility companies
    - Ask VDOT for help

Right-of-Way & Utilities – Strategies for Successful Execution

- Right-of-Way
  - Sit down with your Right-of-Way agent early and develop a plan

  - Don't get locked into one path, consider all options
    - Reducing footprint
    - Temporary easement versus permeant

  - Understand your internal process for RW acquisition and plan for it

Right-of-Way & Utilities – Strategies for Successful Execution

- Practical Examples
  - Working with VDOT on coordination with utility companies

  - Monitoring progress of utility relocations

  - Understanding internal RW condemnation process

CN Authorization to Award – Keeping Momentum into Construction

- Start early
  - Don't wait until the target start date for a deliverable.   Start looking at items needed as early as possible (Example – proprietary equipment)

- Be prepared for bottlenecks
  - Everyone might be submitting for authorization at the same time

- Finalize construction schedule
  - Determine duration and seasonal requirements (landscaping, school, tourism, etc.) that may impact when you need to advertise the project and costs

CN Authorization to Award – Factors in Construction Estimating

- Project Features including:
  - Complexity of project
  - Size and quantities needed
  - Urban/Rural
  - Proximity of Traffic
  - Access issues (restricted flow in/out?)
  - Time constraints (compressed schedule)
  - Number of specialty features

CN Authorization to Award – Factors in Construction Estimating

- Time of year for bid/construction

- Competition from other projects for resources and materials

- Degree of risk placed on the contractor
  - Special provisions
  - Availability of work – Linear or Concurrent
  - Handling of Unknowns

CN Authorization to Award – Keeping Momentum into Construction

Practical Examples

Tools/Resources

- LAP Starter Pack
  - http://www.virginiadot.org/business/resources/local_assistance/LAPStarterPack.pdf

- LAP ✥ Map
  - http://www.virginiadot.org/business/locally_administered_projects_manual.asp

- LAP Schedule Tool
  - VDOT Forms Library

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Tools/Resources – Program Guidance

- SMART Scale (http://vasmartscale.org/resources/default.asp)

- Transportation Alternatives (http://www.virginiadot.org/business/resources/local_assistance/2017_TA_Program_Guide_Update_-_Interim.pdf)

- Revenue Sharing (http://www.virginiadot.org/business/resources/local_assistance/Revenue_Sharing_Program_Guidelines.pdf)

Tools/Resources – Program Guidelines

- HSIP (http://www.virginiadot.org/business/ted_app_pro.asp)
- Access Roads
  - Economic Development (http://www.virginiadot.org/business/resources/local_assistance/access_programs/EconomicDevelopmentAccessProgramGuide.pdf)
  - Airport Access (http://www.virginiadot.org/business/resources/local_assistance/access_programs/AirportAccessProgramGuide.pdf)
  - Recreational Access (http://www.virginiadot.org/business/resources/local_assistance/access_programs/RecrAccessGuide.pdf)

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Questions?