Project Management Tools and Project Initiation
Breakout Sessions #2 & #5

Wednesday, September 19, 2018 (1:30 – 3:00)
Thursday, September 20, 2018 (10:30 – NOON)

Fulton deLamorton
Program Manager, Local Assistance Division, VDOT
5 Keys to Successful Public Sector Transportation Project Management

Rob Tieman, P.E.
Director, Project Management Office
VDOT Central Office
The Central Office Project Management Office (PMO) provides technical project management and engineering support for preliminary engineering projects in the VDOT’s Six Year Improvement Plan (SYIP).
What does the PMO do, and why should Localities care?

- Administer the Project Development Program
- Oversee the integration of people, policies, and technology
- Project Schedules (PWA)
- Policies, Procedures, and Processes
- Process Control to ensure consistency across the Virginia
- PM Knowledge Management – best practices and methodologies
- PM Training, Resources, and Tools
- Facilitate and advance VDOT enterprise-wide PM initiatives
- Represent VDOT to industry, state, and national interests
What is Project Management?

Projects are naturally chaotic.

The primary business function of Project Management is organizing & planning projects to tame this chaos.

Project Management is not for the faint of heart.
Reality Check…

This is not the goal…

VDOT and Localities share the same goal…

…deliver the project!
WHAT DOES A PROJECT MANAGER DO?

- Planning Resources
- Assemble & Lead Project Team
- Time Management
- Budget
- Quality & Satisfaction
- Manage Issues & Risks
- Monitor Progress
- Reporting & Documentation
5 Keys to Successful Public Sector Transportation Project Management

1. Scope the Project
2. Understand the Schedule and Estimate
3. Know the Project Development Process
4. Change Management
5. Professional Development
Scoping is a process

- Define the problem (Purpose and Need)
- Define the solution (Project Description)
- Assemble project team, including stakeholders
- Identify and quantify project risks
- Develop project schedule
- Set the project estimate
What does Scoping a Project look like?

Scope Project (Task 22)
• Scoping begins after PE Funds are Authorized (Task 12)
• Scoping Kickoff Meeting
• Scoping Worksheets (by engineering discipline)
• Preliminary Field Inspection (PFI) / Final Scoping Meeting
• Scoping (PM-100) Form formalizes Scope and completes Task 22

Remember…
• Locality can submit Scoping Report in lieu of PM-100
• Scoping defines Schedule and Budget by which project will be measured for success until Advertisement
• Approved PM-100 (or Local Scoping Report) basis for Change Management….more on this later…

Reference
VDOT LAP Manual Section 12.1.3 (Scoping Process Req.)
VDOT PM Procedure: Project Scope (PMO-1.7)
Understand the Project Schedule and Estimate

Knowing is not understanding. There is a great difference between knowing and understanding: you can know a lot about something and not really understand it.

(Charles Kettering)
Why are Project Schedules so Important?

- Our commitment to the Public
- Helps to Manage Workload
- Used to forecast allocations in Six Year Improvement Plan
- Used for Federal Obligations and to manage cashflow
- Critical metric to measure project performance
Schedules

Now...
- All projects have a schedule in PWA (Project Web Application) – built upon Microsoft Project
- Schedules are “logic based”, meaning tasks are defined and linked together with predecessors and successors
- Schedules dynamically change based upon entered actual dates

Historically...
Schedules were a collection of dates, think of fields in a spreadsheet
How do you get your schedule?

- At project initiation, appropriate PWA Template selected
- Templates contain applicable tasks and durations
- This Template becomes project initial schedule
- This schedule can be modified at Scoping, if needed
What are Project Baselines?

A baseline is a schedule that is frozen at specific project milestones.

Actual dates are compared to baselines to evaluate performance as the project progresses.

Important PWA Baselines
Baseline 1 – PE Authorization to Scoping
Baseline 2 – Scoping to Award
Dashboard 4.0 Monitored Tasks (VDOT and Local)

Task Number – Description
10 - Project Agreement
12 - Authorize PE
22 - Project Scoping
47 - Approve Willingness
49 - Adopt Location/Design
52 - Authorize RW and UT Funds
69 - Acquire RW
70 - Obtain Environmental Permits
67U - Utility Relocation by Others
80 - Advertise Project
84 - Award Contract

Reference
VDOT PMO Task and Scheduling Guide
Why are Project Estimates so Important?

- Our commitment to the Public
- Ensure there is enough money at the right time to keep the project moving forward to completion
- Essential for accuracy of SYIP, Federal Strategy, TIP/STIP, etc.
- Critical metric to measure project performance
Within VDOT PCES is both a spreadsheet and cost estimating system

- Locality develops and provides project estimates to VDOT
  - Independently generated by locality or consultant
  - PCES Spreadsheet
  - Site Manager (after quantities known)
- Estimates uploaded into PCES system
When to update estimates?

1. Project Milestones
   - Preliminary / Initial Estimate
   - Scoping / Preliminary Field Inspection (PFI)
   - Public Hearing / Willingness
   - Field Inspection (FI)
   - RW Authorization
   - Pre Advertisement Conference (PAC)
   - Advertisement

2. When significant changes occur between milestones

3. As needed to support financial programs and requirements

Remember…estimates are also baselined in Dashboard 4.0

Reference
VDOT LAP Manual Section 12.3.5
(Key Submittals / Requirements)
If you can’t describe what you are doing as a process, you don’t know what you’re doing.

William Edwards Deming
References

- VDOT Project Development Process
- VDOT Task and Scheduling Guide
Project Development Workflow Highlights

Local Flexibility…but be cautious

- Local Agreement
- PE Authorization
- PFI (~30% plans)
- Scoping
- Public Hearing/Willingness
- Design Approval
- Detailed Design
- UFI
- Authorize RW
- FI (~60% plans)
- Final Design
- Env Docs/Permits
- Acquire RW
- Utility Relocations
- PAC (~90% plans)
- Finalize PSE
- Advertise
- Award
5 Questions every PM should be able to answer

1. **What** needs to be done
2. **Who** on the team needs to do it
3. **When** it needs to be done
4. **Why** it is important
5. **How** it impacts the project development process

**THIS IS REALLY IMPORTANT!**
PM’s main job is to control this triple constraint
Top threats to Scope, Schedule, and Estimate

- Political Indecision
- Changing priorities, objectives, and success criteria
- Inexperience / lack of knowledge and skills
- Inertia
- Turnover
- Unanticipated and/or Unaccounted Risks
Knowledge Quadrant

**Things we know we know**
- Project Scope
- Policies/Procedures/Processes
- Design Standards

*Project Planning and Project Management*

**Things we know we don’t know**
- Assumptions
- Changing Requirements
- Inexperienced Staff

*Risk Management and Leverage Available Resources*

**Things we don’t know we know**
- Siloed organizational structure
- Institutional Knowledge

*Networking and Knowledge Management*

**Things we don’t know we don’t know**
- Private Developments
- New Requirements
- Unpredictable events

*Design Margins and Contingencies*
VDOT Resource – How to Manage “Project-Issue-Related” Risks

- Probability and Impact Chart
- Risk Analysis Matrix (PM-103B)

Reference
VDOT PM Procedure: Risk Management (PMO-15.0)
Change Management

Scope - VDOT PM-102 “Project Change Control” form
- Describes change of scope and details impacts to schedule and estimate
- Approved by project sponsor or locality leadership – approved by VDOT (Tier 1 – District, Tier 2 – CO State L&D Engineer)

Schedule and Estimate
- Work with VDOT Local Coordinators
- After Scoping is closed (Task 22), Rebaselining (Baseline 2) is unlikely

Tips
- Bring PM-100 “Scoping” form (or Locality Scoping Report) to every milestone meeting
- Utilize PM-102 (or Local equivalent) for change management

Reference
VDOT PM Procedure: Project Scope (PMO-1.7)
“Continuous Personal and Professional Development is your key to the future.”
- Brian Tracy
Foundation of Competent and Effective PM

Process Knowledge
Technical Skills
To be a good PM...
...Technical Skills and Process Knowledge

To be a great PM...
...Professional Development of Essential Soft Skills

PM’s Essential Soft Skills

- Leadership
- Team Building
- Motivation
- Communication
- Influencing
- Decision Making
- Political & Cultural Awareness
- Negotiation
- Trust Building
- Conflict Management
- Coaching
Free (or nearly-free) Resources

- AASHTO
- APWA
- ASCE
- FHWA
- PM books/articles (libraries, bookstores, and online)
- VDOT
  - Employees
  - Websites, Resources, and Tools
    - LAD
    - PMO
VDOT Website

- Business Center Tab
- Project Management (under Engineering and Construction)

(http://www.virginiadot.org/business/locdes/project_management_office.asp)

Two Very Useful Links
1. Project Development Process
2. Project Management Policy Links
PMO Website “Project Management Policy” link
In-Person Training Opportunities

TPMI (Transportation Project Management Institute)
  - LAD offers Local Scholarships

UVA – TTA (Transportation Training Academy)

Third Parties
  - PMI (Project Management Institute)
  - PSMJ Resources
One final thought for Project Managers…

“The first responsibility of a leader is to define reality. The last is to say thank you. In between, the leader is a servant.”

-Max De Pree
Thank You!
VDOT District Perspective

Anthony Ford, P.E.,
Director, Programming & Investment Management,
VDOT Salem District
Districts’ Tips and Tools

• LAP Starter Pack
• LAP Map
• Project Delivery Plan
• PCES
• LAP Schedule Tool
• Risk Assessment
• Project Kick-off Meetings
• Quarterly Teleconferences & other touch points
• Project Information Report
• Dashboard 4.0
LAP Starter Pack

• Joint effort: Local Gov. Stakeholders & District Advisory Group
• “Beginner’s Guide to LAPs”
• NOT a substitute to the LAP Manual
• High-level, quick start resource

The purpose of this guide is to briefly outline the major components, processes and procedures necessary to administer a transportation project and should NOT be used as a substitute to the governing Locally Administered Projects (LAP) Manual. The LAP Manual can be found at [http://www.virginiadot.org/business/local-assistance.asp](http://www.virginiadot.org/business/local-assistance.asp).

**PROJECT DEVELOPMENT PROCESS - OVERVIEW**

Certain activities take place on every transportation project, regardless of its size or complexity.

Very few projects can be reasonably designed and built in less than a year. Most will take at least two years, and some could take more than five or six.
GETTING STARTED...
You will need to do certain things before your project can become a Locally Administered Project
**VDOT is available to assist with any and all of the steps noted below**

1. Establish the purpose and need of your project.

2. Establish the location and basic limits of your project – where does it start and end?

3. Identify the funding source(s) (Refer to the LAP Manual chapter 8 for further details).

4. Identify your project team to ensure skills, knowledge, and specified training of personnel. **Refer to page 5**

5. Perform pre-scoping - determine major design constraints, delivery challenges, risks and the locality maintenance plan. Clearly define Scope of Work.

6. Establish a preliminary cost estimate and schedule for each phase of your project -
   PE (Preliminary Engineering & Design)
   RW (Right of Way Acquisition & Utility Relocation)
   CN (Construction)
   **Refer to the LAP Manual chapter 12.3**

7. Apply for appropriate funding source.

8. Work with VDOT to develop information for a Universal Project Code (UPC).

9. Obtain a resolution of support from your governing body to include commitment of funding and delegation of signature authority.

10. Complete the Request to Administer form (if applicable). **Refer to VDOT online forms**

11. Execute agreement with appropriate appendices.

From here, your local District VDOT Local Assistance team can help you to the next step.
**WHO IS THE RESPONSIBLE PARTY?**

The Locality/ Local Public Agency (LPA) and VDOT, each have responsibilities during the project development and construction processes. However, the Locality/ LPA are fully responsible for the administration of their projects and are required to provide a full-time, local government employee to oversee and manage the project.

### Local Public Agency (LPA)

<table>
<thead>
<tr>
<th>Task</th>
<th>Responsibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provide a local government employee responsible for the project</td>
<td>Design quality control and quality assurance</td>
</tr>
<tr>
<td>Perform adequate project scoping to accurately define the project</td>
<td>Right of way acquisition and utility relocation; and condemnation if necessary</td>
</tr>
<tr>
<td>Preparation of environmental documents</td>
<td>Public involvement</td>
</tr>
<tr>
<td>Project design</td>
<td>Preparation of bid documents</td>
</tr>
<tr>
<td>Advertisement</td>
<td>Award</td>
</tr>
<tr>
<td>Civil Rights monitoring</td>
<td>Construction management</td>
</tr>
<tr>
<td>Project acceptance</td>
<td>Financial controls and invoicing</td>
</tr>
<tr>
<td>Monitor Environmental Controls and Commitments</td>
<td></td>
</tr>
</tbody>
</table>

### VDOT

<table>
<thead>
<tr>
<th>Task</th>
<th>Responsibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provide the LPA with applicable guidance materials, forms, and checklists</td>
<td>Receive all submittals from LPA and coordinate VDOT review</td>
</tr>
<tr>
<td>Provide feedback to LPA on all submittals</td>
<td>Provide guidance as issues are identified</td>
</tr>
<tr>
<td>Monitor LPA schedule to ensure federal obligations can be met</td>
<td>Act as liaison between LPA project manager and VDOT technical staff</td>
</tr>
<tr>
<td>Attend preconstruction/progress meetings</td>
<td>Verify materials acceptance procedures</td>
</tr>
<tr>
<td>Periodic review of project documentation-Compliance Assessment Program (Refer to the LAP Manual, Chapter 7)</td>
<td>Review/approval of reimbursement requests</td>
</tr>
<tr>
<td>Periodic spot inspection of work (does not substitute for LPA’s Construction Engineering Inspection responsibility</td>
<td>Participate in final project inspection (does not waive LPA responsibility to seek and enforce contractor’s warranties)</td>
</tr>
<tr>
<td>Project acceptance</td>
<td>Financial controls and invoicing</td>
</tr>
</tbody>
</table>

### THINKING ABOUT PROJECT RISKS

Factors including size, complexity and funding type are directly related to the risk level associated with the project.

### LOWER RISK

| Non Federal Oversight  
| National Highway System | OVERSIGHT | Federal Oversight  
| National Highway System |
|--------------------------|------------|----------------------|
| State funding (Revenue Sharing)  
| Local funding | FUNDING | Federal funding  
| Special program funding (Federal TAP, CMAQ, HSIP, RSTP) |
| Smart Scale |
| Locally maintained roads | MAINTENANCE AUTHORITY | VDOT maintained roads |
| National Highway System impacts |
| Interstate impacts |
| No right of way, utility or environmental impacts | PROPERTY IMPACTS | Right of way impacts |
| Historic property impacts |
| Utility impacts |
| Environmental impacts |
| Maintenance projects | DELIVERY | Non-standard designs |
| Design-build delivery |
| Construction value <$5 million (Tier 1) | VALUE | Construction value >$5 million (Tier 2) |
| Undeveloped/ Light Developed (Rural) | LOCATION | Heavily developed locations (Urban) |
| Waterway impacts |
| Railway impacts |
| Experienced project team | PROJECT TEAM | Less experienced project team |

Higher-risk projects require a higher level of review and oversight ([See LAP Manual 9.4.2](#)) which increases the cost and time required to deliver the project.
ASSEMBLING THE PROJECT TEAM

Your project team will be responsible for delivering a quality product on-time, on-budget and within accepted standards and regulations. A successful project team needs specific skills, experience, resources and support. The team will be led by a dedicated, knowledgeable and responsible Project Manager (PM).

The locality’s project team members are the decision makers while VDOT team members act as advisors; assisting as needed. Locality team members typically consist of the Project Manager, Key Staff, and Design Consultants. VDOT will assign a Project Coordinator (PC), that will serve as the single point of contact to the locality and will act as a liaison between other VDOT technical experts as needed. To ensure guidance is available during all aspects of project delivery, the PC may engage other disciplines such as, Civil Rights, Environmental, Materials, Location & Design, Traffic Engineering, Structure & Bridge, Right of Way, Utilities and Land Use, as needed.

Consider the following questions when putting your project team together:

- Does the team have recent and direct experience with highway construction project management?
- Does the team have recent and direct experience with delivering federally funded projects?
- Is the team familiar with the relevant standards and regulations and how to apply them?
- Is the project a local priority and does the team have the support of locality executive management and elected officials?
- Are the team members able to devote sufficient time to this project?
- Is the team familiar with the Locally Administered Project development process?
- Does the team have access to the resources required to successfully deliver the project?
- Regarding projects within a Metropolitan Planning Organization (MPO), is the team familiar with the local MPO process and procedures for implementing a transportation project?
- Has the locality attended any of the VDOT Local Assistance Division- sponsored workshops, or reviewed any online training opportunities?

A “no” could make it more difficult to successfully deliver your project.
<table>
<thead>
<tr>
<th>PROCESS</th>
<th>DETAILS</th>
</tr>
</thead>
<tbody>
<tr>
<td>PRE-SCOPING</td>
<td>Programming: Identify funding, verify fund source and ensure project is included in the appropriate planning documents- Ch.8</td>
</tr>
<tr>
<td>Purpose and Need: What will this project accomplish?</td>
<td></td>
</tr>
<tr>
<td>Request to Administer (RTA) / Agreement: Complete forms and have signed by the authorized party- Ch.10.4</td>
<td></td>
</tr>
<tr>
<td>PE Authorization: Design cannot begin without authorization- Ch.9.2</td>
<td></td>
</tr>
</tbody>
</table>

| INITIATION | Consultant Procurement: Obtain services for Preliminary Engineering/ Right of Way/ Construction Mgmt- Ch.11 |
| Environmental Documentation: Establish which level of environmental document will be required- Ch.15 |
| invoices: Req. for reimbursement should be submitted to VDOT every 30 days but no less than every 90 days- Ch.19 |
| Traffic Studies |
| Geotechnical/Soils investigations- Ch.12.2.5.3 |
| Survey- Ch.12.2.5.2 |
| Estimates and Schedule: Establish initial estimate and schedule for each phase of project- Ch.12.3 |
| (LAP Scheduling Tool) |

| SCOPING | Design Iterations: Road, Bridge, Hydraulic, Structure, Pedestrian and Bike Facilities design |
| Public Involvement: Willingness, Public Information Meeting, Public Hearing- Ch.12.4 |
| Plan Submittals: Revises and Coordination Ch.12.5 |
| invoices: Req. for reimbursement should be submitted to VDOT every 30 days but no less than every 90 days- Ch.19 |
| Estimates and Schedule: Update initial estimate and schedule for each phase of project- Ch.12.3 |
| Obtain Right of Way Authorization: Cannot begin without authorization- Ch.16 |
| Obtain permits- Ch.9.3 - Ch.12 - Ch.15 |
| Utility Relocation- Ch.12.2.5.12 |
| Bid document proposal- Ch.12.6.3 |
| Construction Administration Ch.13.1 |
| Determine Disadvantaged Business Enterprise %: Finalize const. est. - VDOT to determine DBE% goal- Ch.17.3 |
| Obtain Advertisement Authorization- Ch.12.6 |

| DESIGN, REVIEW, ACQUISITION, UTILITY RELOCATION | ADVERTISE |
| Develop Project Recommendation Award Submittal Package- Ch.12.6.9.2 |
| Obtain Award Authorization- Ch.9.2 |
| Award- Ch.12.6.9 |
| Issue NTP: Notice to Proceed to awarded contractor |
| Pre-con: Hold pre-construction meeting and invite VDOT- Ch.13.1.4.3 |
| Receive Project or Earnings Schedule- Ch.13.1.4.4 |
| Get Source of Materials Approval from VDOT- Ch.13.2 |
| Determination of Environmental Commitments- Ch.15.12 |
| Civil Rights Monitoring- Ch.17.6 |
| invoices: Req. for reimbursement should be submitted to VDOT every 30 days but no less than every 90 days- Ch.19 |
| Inspections - Ch.13.1.5 |
| Work Order Reviews and Approvals- Field modifications and changes- Ch.13.3 |
| Materials Acceptance & Assurance: Testing, sampling- Ch.13.1.5.3 |
| Maintain Daily Diary- Ch.13.1.5.1 |
| Track Material Quantities- Ch.13.1.5 |
| Claims- Ch.13.4 |

| CONSTRUCTION | PROJECT ACCEPTANCE |
| Close out | Final Invoicing and Reconciliation- Ch.14.2 |
• LAP Manual over 800 pages

• Bottom of LAD’s web page
  • http://www.virginiadot.org/business/locally_administered_projects_manual.asp
## Project Selector

**LAP Map**

<table>
<thead>
<tr>
<th>Question</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. How will this project be funded?</td>
<td>Federal Funds</td>
</tr>
<tr>
<td>2. Will the construction costs be more than $10M?</td>
<td>Tier 2 CN&gt;$10M</td>
</tr>
<tr>
<td>3. How will this project be delivered?</td>
<td>Design-Bid-Build</td>
</tr>
<tr>
<td>4. Who maintains the affected roadway?</td>
<td>LPA-maintained</td>
</tr>
<tr>
<td>5. Is the roadway on the National Highway System?</td>
<td>non-NHS</td>
</tr>
</tbody>
</table>

**Display Map**

LAP-MAP Project Process Type 8 flow-chart

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1. Drop-down options
2. Click here for flowchart
(RTA) – Request to Administer form

- 8-pg document
- Defines “what” & “where” & LPA’s experience with similar projects
Project Delivery Plan (PDP)

- Define “how” & “when” & who’s responsible
- Establish realistic goals & schedules
## LAP Project Delivery Plan

**Locality:**

**Project #:**

**UPC:**

**Scope of Project:**

---

### Date LAP Project Delivery Plan & RTA Form Submitted to VDOT:

<table>
<thead>
<tr>
<th>ID</th>
<th>Planned End Date</th>
<th>Planned Duration</th>
<th>Possible Duration</th>
<th>Project Development Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>10/31/2018</td>
<td>30</td>
<td>1 Month</td>
<td>VDOT Review/Approval of PDF &amp; RTA; Agreement Drafted &amp; Sent</td>
</tr>
<tr>
<td>2</td>
<td>12/30/2018</td>
<td>60</td>
<td>2 Months</td>
<td>Agreement/App A Review, Approval, &amp; Execution by LPA &amp; VDOT</td>
</tr>
<tr>
<td>3</td>
<td>4/29/2019</td>
<td>120</td>
<td>4 Months</td>
<td>Procure Consultant</td>
</tr>
<tr>
<td>4</td>
<td>4/30/2019</td>
<td>1</td>
<td>1 Day</td>
<td>Hold Kick-off Meeting/ Pre-scoping meeting with VDOT</td>
</tr>
<tr>
<td>5</td>
<td>8/28/2019</td>
<td>120</td>
<td>4 Months</td>
<td>30% Plans Completed for review</td>
</tr>
<tr>
<td>6</td>
<td>9/12/2019</td>
<td>15</td>
<td>15 Days</td>
<td>VDOT Review and comment</td>
</tr>
<tr>
<td>7</td>
<td>6/8/2020</td>
<td>270</td>
<td>9 Months</td>
<td>Complete Environmental Document (concurrent activity)</td>
</tr>
<tr>
<td>8</td>
<td>3/10/2020</td>
<td>180</td>
<td>6 Months</td>
<td>Develop 60% Plans and special provisions, and pay items</td>
</tr>
<tr>
<td>9</td>
<td>3/25/2020</td>
<td>15</td>
<td>15 Days</td>
<td>VDOT Review and comment</td>
</tr>
<tr>
<td>10</td>
<td>5/9/2020</td>
<td>45</td>
<td>45 Days</td>
<td>Public Involvement (Willingness or Public Hearing)</td>
</tr>
<tr>
<td>11</td>
<td>7/8/2020</td>
<td>60</td>
<td>2 Months</td>
<td>Develop 90% Plans and special provisions, and pay items</td>
</tr>
<tr>
<td>12</td>
<td>7/23/2020</td>
<td>15</td>
<td>15 Days</td>
<td>VDOT Review and comment</td>
</tr>
<tr>
<td>13</td>
<td>4/19/2021</td>
<td>270</td>
<td>9 Months</td>
<td>RW/Utility phase (varies per project based on needs)</td>
</tr>
<tr>
<td>14</td>
<td>4/29/2021</td>
<td>10</td>
<td>2 Weeks</td>
<td>Obtain R-O-W Certification</td>
</tr>
<tr>
<td>15</td>
<td>6/28/2021</td>
<td>60</td>
<td>2 Months</td>
<td>Submit final plans &amp; bid document, technical specs</td>
</tr>
<tr>
<td>16</td>
<td>7/13/2021</td>
<td>15</td>
<td>15 Days</td>
<td>VDOT Review and comment</td>
</tr>
<tr>
<td>17</td>
<td>9/11/2021</td>
<td>60</td>
<td>2 Months</td>
<td>Request &amp; obtain advertisement Authorization</td>
</tr>
<tr>
<td>18</td>
<td>10/11/2021</td>
<td>30</td>
<td>30 Days</td>
<td>Advertise for Bids</td>
</tr>
<tr>
<td>19</td>
<td>11/10/2021</td>
<td>30</td>
<td>1 Month</td>
<td>Review &amp; Recommend Award of Contract</td>
</tr>
<tr>
<td>20</td>
<td>11/15/2021</td>
<td>5</td>
<td>5 Days</td>
<td>VDOT Review and Approve Award of Contract</td>
</tr>
<tr>
<td>21</td>
<td>11/25/2021</td>
<td>10</td>
<td>2 Weeks</td>
<td>Preconstruction Conference &amp; issue Notice to Proceed</td>
</tr>
<tr>
<td>22</td>
<td>7/23/2022</td>
<td>240</td>
<td>Varies</td>
<td>Construct Project</td>
</tr>
<tr>
<td>23</td>
<td>7/24/2022</td>
<td>1</td>
<td>1 Day</td>
<td>Construction Complete</td>
</tr>
<tr>
<td>24</td>
<td>8/23/2022</td>
<td>30</td>
<td>30 Days</td>
<td>Final reimbursement request (ensure funds expended by deadline on Project Administration Agreement.)</td>
</tr>
</tbody>
</table>

**Note:** This date generates potential (not committed) schedule below.
### Project Delivery Plan (RTA)

**Strategy for Contracting and Procurement**
- Design-Bid-Build
- Design-Build

**Resources to deliver the project**
- **PE**: Select from drop-down box
- **R/W**: Select from drop-down box
- **CN** - (Quality Mgmt & Oversight): Select from drop-down box

**Expected Role of the VDOT:** List any assistance outside of reviews & technical support.

**Potential Risk Identification:** List any risk that may delay or impact the project that will require mitigation planning.

**Funding Plan:** (Also identify sources for costs outside of authorized funds)

---

*January 2018*
## Project Summary

**UPC:** 109288  
**Description:** #HB2.FY17 Transit Accessibility Improvements on Edgewood St  
**State Project #:** U000-128-390

## Estimates

<table>
<thead>
<tr>
<th>Type</th>
<th>Date</th>
<th>Author</th>
<th>Version</th>
<th>PE</th>
<th>RW</th>
<th>CN</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-Scoping</td>
<td>6/6/2016</td>
<td>James Guy</td>
<td>POOL</td>
<td>$35,000</td>
<td></td>
<td>$315,811</td>
<td>$350,811</td>
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<tr>
<td>Scoping</td>
<td>12/14/2016</td>
<td>Cheryl Becker</td>
<td>6.10</td>
<td>$2,500</td>
<td>$0</td>
<td>$348,311</td>
<td>$350,811</td>
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<tr>
<td>PFI</td>
<td>3/23/2017</td>
<td>Cheryl Becker</td>
<td>6.20</td>
<td>$6,000</td>
<td>$0</td>
<td>$344,811</td>
<td>$350,811</td>
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<tr>
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<tr>
<td>FI</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RW</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Final Submission</td>
<td>8/10/2017</td>
<td>Cheryl Becker</td>
<td>7.00</td>
<td>$6,000</td>
<td>$0</td>
<td>$417,307</td>
<td>$423,307</td>
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<tr>
<td>Award</td>
<td>8/22/2017</td>
<td>Heather Patel</td>
<td>AWARD</td>
<td>$6,000</td>
<td>$0</td>
<td>$417,307</td>
<td>$423,307</td>
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<tr>
<td>Expenditures</td>
<td>8/3/2018</td>
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<td>CRD</td>
<td>$6,226</td>
<td>$0</td>
<td>$248,372</td>
<td>$254,598</td>
</tr>
</tbody>
</table>
PCES

*Project Cost Estimating System*

- All project estimates must be updated in PCES at least once every 6 months
- LPAs can use own system/methods for generating estimate
- VDOT PC will input values in PCES
- Will go RED on Dashboard 4.0 if not updated within last 12 months
## Project Cost Estimating System

### MANUAL ESTIMATE

<table>
<thead>
<tr>
<th>DATE</th>
<th>PE</th>
<th>RW</th>
<th>CN</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>09/03/18</td>
<td>$8,226</td>
<td>$0</td>
<td>$0</td>
<td>$248,372</td>
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<tr>
<td>09/09/18</td>
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<td>$0</td>
<td>$0</td>
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<tr>
<td>09/25/17</td>
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<td>$423,307</td>
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<tr>
<td>08/08/18</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
</tr>
</tbody>
</table>

### ESTIMATE YEAR AD YEAR

<table>
<thead>
<tr>
<th>FY2019</th>
<th>PE</th>
<th>FY2019</th>
<th>RW</th>
<th>CN</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>$6,000</td>
<td>$0</td>
<td>$6,000</td>
<td>$0</td>
<td>$417,307</td>
<td>$423,307</td>
</tr>
</tbody>
</table>

### PROJECT MANAGER / DESIGNER

- **Cheryl Becker**

### PRELIMINARY ENGINEERING ESTIMATE

- **MANUAL**

### CONSTRUCTION ESTIMATE

- **MANUAL**

### RIGHT-OF-WAY ESTIMATE

- **MANUAL**

### UTILITIES ESTIMATE

- **MANUAL**

### DATE

- 8/8/2018

### THE FOLLOWING DATA WILL BE PROVIDED UPON COMPLETION OF THE REMAINDER OF THE WORKBOOK, WHICH IS ACCESSED BY SELECTING THE CONST, RW, & UTIL TABS BELOW

- **Bridge PE ESTIMATE**: $0
- **Bridge CN ESTIMATE**: $0
- **Bridge RW ESTIMATE**: $0
- **ENGINEERING ESTIMATE (excluding Bridge PE)**: $6,000
- **STRUCTURE ESTIMATE (excluding Bridge CN)**: $417,307
- **& UTILITIES ESTIMATE (excluding Bridge RW)**: $0
- **TOTAL PROJECT ESTIMATE (excluding Bridge estimate)**: $423,307

---

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Revised 07/01/18
LAP Schedule Tool

• Introduced at 2015 LPW
• Developed through partnership between VDOT Hampton Roads District and City of Virginia Beach
• Developed in MS Excel for ease of use
• Accessed directly from VDOT external forms site:  http://vdotforms.vdot.virginia.gov/
Welcome to the Locality Schedule Planning Tool!

Users are encouraged to view the slideshow for answers on frequently asked questions

Planning Tool User Guide
Risk Assessment

Ch. 9 LAP Manual

Funding
Who Maintains?
Project Category
LPA Experience

VDOT’s project risk and oversight assessment method requires the VDOT Project Coordinator to identify applicable project elements from Table 1 – Project Risk Assessment, below, which affect the level of risk. By summing the weighted values for each selected element, a risk factor is determined. That risk factor correlates to an anticipated level of oversight found in Table 2 – Oversight Assessment.

Table 1 – Project Risk Assessment
* See VDOT Construction Oversight Guide, Appendix A, for Category Definitions

<table>
<thead>
<tr>
<th>Element</th>
<th>Value (factor)</th>
<th>Check Elements That Apply</th>
<th>Total Factor per Element</th>
</tr>
</thead>
<tbody>
<tr>
<td>Federal Oversight</td>
<td>20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>National Highway System</td>
<td>20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Design-Build/PPTA</td>
<td>20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Funding</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Federal Funded (non-Transportation Alternatives)</td>
<td>15</td>
<td></td>
<td></td>
</tr>
<tr>
<td>State Funded</td>
<td>10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Federal Transportation Alternatives (Impacts R/W)</td>
<td>7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Federal Transportation Alternatives (Off R/W)</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Completed Project Maintenance</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>State Maintained Project</td>
<td>10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LPA Maintained Project</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Project Category *</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Category I</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Category II</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Category III, IV, V</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>LPA Experience Administering Project</td>
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<td></td>
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</tr>
<tr>
<td>Low Level</td>
<td>15</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intermediate Level</td>
<td>10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>High Level</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Factor Total</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* See the VDOT Post Award Scheduling Guide, Section I, Item #5 (page 13) for project category descriptions.

* Also see same Project Oversight Risk Assessment Scoring found in 13.1-B of the LAP Manual.
In general terms, the following table illustrates the characteristics of projects at the three levels of oversight.

<table>
<thead>
<tr>
<th>Oversight Level</th>
<th>Impact/Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>High (H)</td>
<td>Significant impact on infrastructure due to non-compliance -</td>
</tr>
<tr>
<td></td>
<td>Significant effects to quality of construction, cost and schedule; High risk of</td>
</tr>
<tr>
<td></td>
<td>non-compliance resulting in loss of funding or regulatory agency action</td>
</tr>
<tr>
<td>Moderate (M)</td>
<td>Moderate impact on infrastructure due to non-compliance -</td>
</tr>
<tr>
<td></td>
<td>Moderate effects to quality of construction, cost and schedule; Moderate probability of non-compliance</td>
</tr>
<tr>
<td>Low (L)</td>
<td>Minimal impact on infrastructure due to non-compliance -</td>
</tr>
<tr>
<td></td>
<td>Minimal effects to quality of construction, cost and schedule; Low probability of non-compliance</td>
</tr>
</tbody>
</table>

Actual activities associated with each oversight level vary with the unique characteristics of each project. These can include such considerations as unusually complex project features; sensitive environmental or socio-economic issues; and the LPA project manager’s experience with similar transportation projects.

The following table is an example of oversight activities for federal-aid projects; many of these may not be applicable to State-aid projects. The VDOT Project Coordinator and the LPAs Project manager should develop more specific oversight activities and their frequency based on specific project needs and conditions.
<table>
<thead>
<tr>
<th>Oversight Level</th>
<th>Minimum Oversight Activities</th>
</tr>
</thead>
</table>
| Low             | • Kickoff (scoping) meeting attendance
|                 | • Plan development coordination meeting
|                 | • Final plan review
|                 | • Pre-construction meeting attendance
|                 | • Random site visits during construction
|                 | • Final acceptance inspection
| Moderate        | • Kickoff (scoping) meeting attendance
|                 | • Plan development coordination meeting
|                 | • 30 percent plan review
|                 | • Public hearing attendance
|                 | • Final plan review
|                 | • Pre-advertisement contract review
|                 | • Pre-award bid review
|                 | • Monthly to quarterly site visits during construction
|                 | • Final acceptance inspection
| High            | • Kickoff (scoping) meeting attendance
|                 | • Monitor consultant procurement process
|                 | • Environmental coordination meeting
|                 | • Plan development coordination meeting
|                 | • Right-of-Way coordination meeting
|                 | • 30 percent plan review
|                 | • Public hearing attendance
|                 | • 60 percent plan review
|                 | • 90 percent plan review
|                 | • Bid document review
|                 | • Pre-award bid review
|                 | • Pre-construction meeting attendance
|                 | • Weekly to monthly to quarterly site visits during construction
|                 | • Final acceptance inspection
Project Kick-off Meetings

- Key Points of Contact
- Review Funding
- Procurement
- Reimbursement Requests
- ROW
- Environmental
- Plans & Bid Doc
- Authorizations
- Construction
- Schedule & Scope
Quarterly Teleconferences with District staff
Quarterly Teleconferences with District staff

• 30-minute conference call, once per quarter.
• Not required, but your VDOT District PMs find them useful, as do many of the LPAs.
• Opportunity to:
  • Provide updates on current and future LAP projects to VDOT staff.
  • Ask questions about issues that have come up on your project(s).
  • Receive updates on upcoming funding deadlines, requirements and applications.
Project Information Report

BLACKSBURG
UPC: 111319
Proj: EN17-150-275
Description: Town of Blacksburg - Bike Parking

PC: Adam Czarnecki
PM: Town of Blacksburg
Project Purpose: Bike parking, racks, lockers and shelters

PROJECT INFORMATION
Project Status: NO DATES SET YET PE OPEN
Federal Eligibility: Federally Eligible
Route: EN17
Jurisdiction: Blacksburg
District: Salem
From: Various
To: Various
Scope: Facilities for Pedestrians and Bicycles

CURRENT ESTIMATES
Current PE Estimate: 16,995
Current RW Estimate: 0
Current CN Estimate: 143,890
Total Current Est: 160,885
Estimate Type: Pre-Scooping
Current Est Date: 05/25/2017

SCHEDULE
Planned Start Date: 10/02/2017
Actual Start Date: 10/02/2017
Planned Finish Date: 01/26/2018
Actual Finish Date: 01/26/2018

SCHEDULE
10 Project Agreement/County/State Agreement
12 Authorize Preliminary Engineering
17E Environmental Review Process (ERP)
22 Scope Project
26 Draft Environmental Document or CE
65F Plan Design/Field Inspection
69X Right of Way/Utility Certification Date
72X Plan Submission Date
79 Construction Funding Review; Authorization of Funds
80 Advertise Project/Begin State Forces-Hired Equipment Construction
84 Award Contract
91 Administrator Contract
95 District Project Closeout
96 Central Office Project Closeout

PROGRAMMING SCHEDULE
PE | RW | CN
Start: 03/12/2018 | 03/14/2018 | 03/15/2018
End: 06/09/2021 | 06/09/2021 | 06/09/2021

Allocations - FY18 FINAL - REV 06/21/17 (public post)

<table>
<thead>
<tr>
<th>Description</th>
<th>FY2018</th>
<th>FY2019</th>
<th>FY2020</th>
<th>FY2021</th>
<th>FY2022</th>
<th>FY2023</th>
<th>Total</th>
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<tbody>
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<td>MAP21 TAP Transportation</td>
<td>0.00</td>
<td>116,207.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>116,207.00</td>
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<tr>
<td>Enhancement Funds</td>
<td>26,834.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>26,834.00</td>
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<tr>
<td>Total</td>
<td>0.00</td>
<td>143,041.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>143,041.00</td>
</tr>
</tbody>
</table>

Total Allocations: 143,041.00

Allocations are reported from the last C18 approved FY FINAL scenario. Allocations added or removed after this approved version will not be displayed. Consult with your respective VDOT Project Coordinator for current allocations.

CURRENT EXPENDITURES
PE Expenditures: $1,100
RW Expenditures: $0
CN Expenditures: $0
Total: 1,100

CONSTRUCTION PROJECT EVENTS
Awards Date: 05/16/2016
Estimated Construction Completion: Contract Letting:
Contract Execution: Construction Started:
Awards Amount: Construction Completed:

Run Date: 05/29/2018
Run Time: 8:06 AM
Project Information Report

- New tool for localities to view basic info
  - Current estimate
  - SYIP allocations
  - Expenditures to date
  - Expanded schedule
- Updated weekly
- http://www.virginiadot.org/business/resources/local_assistance/reports/Salem.PDF
Dashboard 4.0

PROJECT DEVELOPMENT OVERVIEW

ON-TIME PERFORMANCE

<table>
<thead>
<tr>
<th>Status On-Time</th>
<th>Active Count</th>
<th>Completed Count</th>
<th>Total Count</th>
<th>Total Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>R</td>
<td>18</td>
<td>1</td>
<td>19</td>
<td>$378M</td>
</tr>
<tr>
<td>Y</td>
<td>13</td>
<td></td>
<td>13</td>
<td>$58M</td>
</tr>
<tr>
<td>G</td>
<td>166</td>
<td>19</td>
<td>185</td>
<td>$594M</td>
</tr>
<tr>
<td>Total</td>
<td>197</td>
<td>20</td>
<td>217</td>
<td>$602M</td>
</tr>
</tbody>
</table>

(198 of 217 On-Time (Green + Yellow)

(91% of Projects Complete Development Phase On-Time)

ON-BUDGET PERFORMANCE

<table>
<thead>
<tr>
<th>Status On-Budget</th>
<th>Active Count</th>
<th>Completed Count</th>
<th>Total Count</th>
<th>Total Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>R</td>
<td>10</td>
<td>1</td>
<td>11</td>
<td>$30M</td>
</tr>
<tr>
<td>Y</td>
<td>10</td>
<td>2</td>
<td>12</td>
<td>$68M</td>
</tr>
<tr>
<td>G</td>
<td>177</td>
<td>17</td>
<td>194</td>
<td>$592M</td>
</tr>
<tr>
<td>Total</td>
<td>197</td>
<td>20</td>
<td>217</td>
<td>$602M</td>
</tr>
</tbody>
</table>

(194 of 217 On-Budget (Green)

(89% of Projects Complete Development Phase On-Budget)

Fiscal Year  UPC  District  Residency  City/County  Road System  Accomplishment  Administered By

Scope of Work  Description

All  All  Salem  All  All  All  All

All  All

* Please right-click the data row and select Drillthrough to view project detail

<table>
<thead>
<tr>
<th>UPC</th>
<th>District</th>
<th>Description</th>
<th>On-Time</th>
<th>On-Time Reason</th>
<th>On-Budget</th>
<th>On-Budget Reason</th>
</tr>
</thead>
<tbody>
<tr>
<td>102763</td>
<td>Salem</td>
<td>Meadow Creek Road (Rt. 658) realignment. FY13 RS</td>
<td>G</td>
<td>Determine Requirements milestone finished on-time</td>
<td>G</td>
<td>Project is on budget</td>
</tr>
<tr>
<td>104078</td>
<td>Salem</td>
<td>Commonwealth Blvd Bridge Repairs</td>
<td>G</td>
<td>Determine Requirements milestone finished on-time</td>
<td>G</td>
<td>Project is on budget</td>
</tr>
<tr>
<td>104128</td>
<td>Salem</td>
<td>Town of Floyd - Heritage Pathways, Phases 3-4</td>
<td>G</td>
<td>Solicit Bids milestone finished 32 days early</td>
<td>Y</td>
<td>Project estimate is less than $5M and is up to 20% over budget</td>
</tr>
<tr>
<td>104179</td>
<td>Salem</td>
<td>RTE, 608 OVER NSRR (STR 2685) - BRIDGE</td>
<td>G</td>
<td>Determine Requirements milestone finished on-time</td>
<td>G</td>
<td>Project is on budget</td>
</tr>
</tbody>
</table>

http://www.virgiiniadot.org/dashboard/projects.asp
Dashboard 4.0

PROJECT DEVELOPMENT DETAIL

104387

#HB2.FY17 Intersection Improv - N. Franklin St/Cambria St

GENERAL INFORMATION

- Fiscal Year: FY2019
- District: Salem
- Residency: CHRISTIANSBURG
- City/County: Christiansburg
- Road System: 0460
- Route: Locally
- Administered By: Programming Division
- Program Manager: Programming Division
- Accomplishment: NON VDOT

ASSOCIATED CONTRACT ID

Contact Type: Non-VDOT Project Manager
Name: Wayne Nelson
Phone: (540) 382-2349

Contact Type: VDOT Project Manager/Coordinator
Name: Adam J Czesnowski
Phone: (540) 387-5408

SCHEDULE

- Start Purchasing Right-of-Way milestone finished 46 days early

PROJECT DEVELOPMENT MILESTONE

<table>
<thead>
<tr>
<th>Milestone</th>
<th>Code</th>
<th>Planned Start</th>
<th>Planned Finish</th>
<th>Actual Start</th>
<th>Actual Finish</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agreement with Locality</td>
<td>10</td>
<td>7/1/2016</td>
<td>8/31/2016</td>
<td>7/1/2016</td>
<td>9/7/2016</td>
<td>R</td>
</tr>
<tr>
<td>Determine Requirements</td>
<td>22</td>
<td>1/10/2017</td>
<td>6/6/2017</td>
<td>2/28/2017</td>
<td>6/12/2017</td>
<td>R</td>
</tr>
<tr>
<td>Engage Public</td>
<td>49</td>
<td>11/17/2017</td>
<td>12/12/2017</td>
<td>11/17/2017</td>
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<tr>
<td>Start Delivery</td>
<td>84</td>
<td>2/5/2019</td>
<td>5/21/2019</td>
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<td>G</td>
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</table>

BUDGET

- Project is on budget

<table>
<thead>
<tr>
<th>Budget</th>
<th>Estimate</th>
<th>Variance</th>
<th>Estimate Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>$8,489,534</td>
<td>$8,489,534</td>
<td>0.00 %</td>
<td>4/9/2018</td>
</tr>
</tbody>
</table>

Network for Success
Local Programs Workshop
VDOT Virginia Department of Transportation
Dashboard 4.0

- Milestone name and Activity Codes designed to coordinate with **LAP Schedule Tool**

<table>
<thead>
<tr>
<th>Project Milestone</th>
<th>Activity Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Local Agreement</td>
<td>10</td>
</tr>
<tr>
<td>Start Development (Authorize PE)</td>
<td>12</td>
</tr>
<tr>
<td>Determine Requirements (Scope Project)</td>
<td>22</td>
</tr>
<tr>
<td>Engage Public (Approve Willingness, Adopt Location/Design)</td>
<td>47, 49</td>
</tr>
<tr>
<td>Start Purchasing Right-of-Way (Authorize R/W &amp; UT Funds)</td>
<td>52</td>
</tr>
<tr>
<td>Utility Relocation</td>
<td>67U</td>
</tr>
<tr>
<td>Complete Purchasing Right-of-Way (Acquire Right-of-Way)</td>
<td>69</td>
</tr>
<tr>
<td>Obtain Permits</td>
<td>70</td>
</tr>
<tr>
<td>Solicit Bids (Advertise Project)</td>
<td>80</td>
</tr>
<tr>
<td>Start Delivery (Award Contract)</td>
<td>84</td>
</tr>
</tbody>
</table>

**80 Advertise Project**

- 80-1 Notify Locality Federal authorization received
- 80-2 Submit for advertisement

**82 Bid Opening**

- 82-1 Bid opening/Review bids
- 82-2 Submit award estimate and Appendix 5-A Certification (State projects only)
- 82-3 Award Concurrence (DBE & Funding) - Federal projects only

**84 Award Contract**

- 84-1 Executing contract with low bidder to NTP
Dashboard 4.0

- Primary evaluation tool for each locality’s ability to administer a state or federally funded transportation project
  - Request to Administer form
  - Funding application scoring
- Performance measurements will be available
  - to those making funding allocation decisions
  - to the media and general public
- Success on Dashboard means fund are being used in a timely manner and transportation projects are being constructed
“Locality of the Year” Categories

Communication & Participation
- Quarterly Conference Calls
- Training Opportunities
- District LAP Day
- Statewide Local Programs Workshop

Project Development & Delivery
- Grants & Applications
- RTA’s, Transfers, Agreements
- PS&E Submittals
- Environmental & ROW
- Financial Mgmt
- CN Information & Documentation
- Site Visit Observations

Performance
- **Dashboard 4.0**
- # of projects completed with final reimbursement request submitted
Network for Success

Local Programs Workshop

Project Initiation & Effective Project Management Tools
The Local Perspective

Katie Shannon, P.E.
City of Virginia Beach
Transportation Project Support Office Manager
What is a Project?

• “TEMPORARY endeavor undertaken to create a UNIQUE product, service or result.” - PMI

• Temporary in that it has a defined beginning and end (Schedule), and defined resources (Budget)

• Unique in that it is not a routine operation but a specific set of operations designed to accomplish a singular goal (Scope)
Triple Constraint

On Time, on Budget and within Scope Goal for Every Project
Project Initiation

• Key Stakeholders
  – Who is the Owner?
    ▪ Public Works → Road, Sidewalk
    ▪ Parks & Recreation → Trail, Parking Lots
    ▪ Economic Development → Facility supporting economic growth (complete streets)
  – Supporting Players?
    ▪ Public Utilities → Utility Betterments
    ▪ ComIT → Communication Fiber
    ▪ Stormwater → Recurring Flooding, Sea Level Rise
  – VDOT
  – Internal Review Staff
    ▪ QA/QC, Traffic, Stormwater, Operations
Project Oversight

- Establish and Plan for the Right Level of Project Oversight from the Beginning
  - Project Manager
    - Level of Experience
  - Internal Review Staff
  - Management
  - Value Engineering
  - VDOT
    - Environmentally Sensitive Area
    - Type, Size & Location (TS&L) Analysis for Bridge
  - Federal Oversight
  - National Highway System
Project Risk

• Assess and Manage Project Risk
  – Project Team
    ▪ Experience Level
  – Location
    ▪ Undeveloped - Rural - Urban
  – Property Impacts
    ▪ Right of Way
    ▪ Private Utilities
    ▪ Environmentally Sensitive Area
    ▪ Permits Required
  – Funding Type
    ▪ Local
    ▪ State Funds → Oversight; SERP
    ▪ Federal Funds → Additional Oversight; NEPA
  – Project Value
    ▪ Level of Risk increases with Construction Value
Scope

• Establish Purpose and Need
  – Identifies Issues and Objectives
  – Foundation of a Project

• *Potential* Funding Sources
  – What is the *Color* of the $$$
    ▪ Local
    ▪ State - Revenue Sharing
      ▪ SERP
    ▪ Federal - TAP, CMAQ, RSTP, HSIP, SMART SCALE
      ▪ NEPA
      ▪ PE/ROW/CN Phase Authorizations
      ▪ DBE Goals

  – Grant Program Requirements
    • Timeframe to Expend Funds?
    • Match Requirements?
Scope

• Property Impacts
  – Site Acquisition → ROW? Easements?
  – Private Utility Adjustments
    • Prior Rights?
  – Environmental
    • Permits Required
    • Level of Documentation Anticipated
  – Historic Property Impacts

• Level of Oversight
  – National Highway System
  – Federal Oversight / Projects of Divisions Interest (PODI)
Scope

• Basic Services
  – Submittals → how many?
• Additional Services
  – Traffic Study
  – Survey vs. GIS
  – Geotechnical Investigation
  – Environmental Documentation
• Scope of Services Template
  – Comprehensive Design Contract
  – Edit as Needed
Scoping Pitfalls

• **Scope Creep**
  – Clearly Define Project Scope

• **Experience Level of Project Manager**
  – In line with complexity of project

• **Environmental**
  – Significant impacts to project
VDOT Scoping Tools

- LAP Starter Pack
  - ‘Cliff Notes’ for the LAP Manual
  - Highlights Critical Information
  - References Chapter/Section of LAP Manual
  - Excellent Tool for new Project Managers
  - Reference Guide for Project Scoping
  - NOT a Comprehensive Guide!
Schedule

• Why are Schedules Important?
  – Forms the Basis for Negotiations
    • Design
    • Private Utility Adjustments
    • Site Acquisition
    • Construction
  – Predicts Cash Flow
    • Programming of Funds
  – Establishes the beginning and end of a project
  – Everyone is Impacted
Schedules

- Schedules are the Basis For:
  - Localities CIP
  - VDOT’s SYIP
  - STIP
  - MPO’s TIP
  - Federal Authorizations
  - Federal Strategy
  - Dashboard
    - Performance Metrics
  - Project Close Out
Scheduling Pitfalls

• Why do Localities Miss the Mark?
  – Overly Optimistic
    ▪ Smaller Projects
  – Resource Changes
  – Underestimate Time for Critical Path Items
    ▪ Permits
    ▪ Site Acquisition
  – Local Politics
  – Hesitant to use Condemnation
  – Some activities are out of our control
    ▪ Private Utility Relocations
    ▪ VDOT Approvals
  – Not Learning from Previous Mistakes
VDOT Scheduling Tools

- LAP MAP
- LAP Schedule Tool
Resource to Build Schedule

Flow Chart based on 5 Project Parameters

1) Project Funding
   - Federal?  State?

2) Construction Costs
   - over or under $10M

3) Project Delivery
   - D-B vs. D-B-B

4) Who will Maintain Road
   - VDOT or Locality?

5) NHS Roadway
   - Yes or No

Maps out Project Milestones / Tasks
- Beginning to End (A to Z)
- Does not Include Task Durations
- Does not Account for UCI Efficiencies
- Does not Account for Specific Locality Requirements

Hyperlinks to LAP Manual
- Additional Information / Specific Forms

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Local Programs Workshop

--- Additional Information / Specific Forms ---
Submit Project Award Submittal Package for review
App. 12.6A & 12.6C, 12-59, 12-64, 12-66

Award Concurrence

NTP to Award Notification 12-67, 12-68

Revise Estimate in Appendix A 10-9, 12-68


Prepare Response to RW Review Comments

Submit All necessary Documents RW Authorization per RW Check List RW-301, 16-A-6

Funding verification

Request RW Federal No.

Locality to email image of Title Sheet to VDOT PC to check the data

Locality signs & Submit Title Sheet to VDOT 12-67, 16-A-6

VDOT District reviews RW Auth. Package & forward to C.O. (Plan Coordination) for Approval & Authorization
**LAP Schedule Tool**

**Excel Based Planning Tool**

- Task Durations based on 5 Schedule Factors
  1. Funding Type: Federal? State?
  2. Phases: PE, RW & CN included and Value of Activities
  3. Public Involvement: Hearing or Posting of Willingness?
  4. Consultant Procurement: Local Forces, On-Call or RFP?
  5. Environmental Document: Anticipated Level (PCE, CE, EA?)

**Overall Programming Schedule Provided**
- Start / End Dates of PE, RW & CN
- Customization Feature to Account for Locality Requirements
- Does not Account for UCI Efficiencies

**Detailed Deliverables Grid**
- Durations in Working Days Provided for all Tasks
- Baseline Durations Default BUT Custom Durations may be Entered
- Select Risk Factors for RW & Utility Relocations to View Different Baseline Durations

**User Guide Embedded in Spreadsheet**
**LAP Schedule Tool**

### Schedule Factors
- **Start Date:** 7/1/2019
- **Target Finish:** 9/4/2026 (86 months)
- **Funding:** Federal
- **Roadway Maintained By:**
- **Phases:** Yes
- **Estimate:** 1,500,000
- **Public Involvement:**
- **Plan Design:**

### Programming Schedule
- **Start:** 12/10/2020
- **End:** 6/27/2024

### Task and Subtasks Table

<table>
<thead>
<tr>
<th>Task #</th>
<th>Subtasks</th>
<th>Duration (Working Days)</th>
<th>Planned Schedule</th>
<th>Actual Schedule</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Baseline</td>
<td>Start Date</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Custom</td>
<td>End Date</td>
</tr>
</tbody>
</table>

### Customization
- **Add a new section**
- **Add new line**

---

**Network for Success**

**Local Programs Workshop VDOT**
Scheduling Tips

• Reference Past Experience
  – Learn from Previous Errors
  – Share Knowledge throughout Organization
• Research Similar Projects
  – Size & Location
• Know the Funding Type
  – Affects Project Requirements
• Level of Site Acquisition / PUA Required
  – ROW Phase = Longer Duration
• Early & Often Coordination / Communication
  – Real Estate / Stormwater / PUA / Regulatory Agencies
• Competitive Bid vs. On-Call vs. In-House Forces
  – Impacts Design & Construction Duration
Budget

- Detailed Estimate of all Costs required to Complete Project Tasks
- Critical Component of Project Success
- Accurate & Complete Cost Estimating is Key
- 2 Solutions for an Insufficient Budget:
  - Cut Scope
  - Find Additional Funds
Budget Pitfalls

• Underestimating Project Costs
  – Historical Data
• Unforeseen Conditions / Events
  – Contingency is Critical
• Scope Creep
  – Scope Changes Cost $$$
• Cost Mistakes
  – Error in Budget Line Item
• Poor Budget Monitoring
  – Periodically Review Budget to Address Shortfalls or Issues as soon as they are Identified
Budget Tips

• Be Conservative
  – Generous Contingency

• Coordinate with Key Stakeholders
  – Public Utilities ➔ Water & Sewer Betterments
  – ComIT ➔ Fiber

• Deep Dive into Stormwater Requirements
  – Sea Level Rise ➔ 1.5’ to 3’
  – Recurring Flooding Issues
  – Water Quality

• Type of Funds
  – Federal
    ▪ NEPA ➔ Soundwalls ($$$)
    ▪ CEI ➔ ~15% of Construction Costs
Budget Tips

- Construction Unit Prices Escalation
  – Planning/Programming Outer Year Funds (6 Years)
  – 1% - 2% Escalation per Year
- Budget Housekeeping
- Document Estimate References /Assumptions
Budget Tools

- PCES
- Estimate Templates

Percentage of Const. Est:
- Based on Recent History
- Design → 15% to 25% of CN Est
- PUA → 10% to 15% of CN Est depending on OH or UG
- Landscaping → 5% of CN Est

Formula:
- LED Streetlights → $7,000 / light and 1 light / 175' of roadway
- Ductbank → $1,500 / LF

Table: Sheet Unit Price Comparison.xlsx

For Local Programs Workshop by VDOT Virginia Department of Transportation
Scope – Schedule – Budget are Interconnected
Discussion

"Have a seat, Flipmeyer... Let's chat about that project of yours."