



PROJECT PIPELINE

Program Guide

Round 4 Edition — Planning for Performance

September 2026

Office of Intermodal Planning and Investment
Commonwealth of Virginia



For More Information

Visit vapipeline.virginia.gov for additional details, updates, and documentation about the Project Pipeline planning program. Please contact the Project Pipeline Program Team at the Office of Intermodal Planning and Investment (OIP) to request an alternative format.

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For information regarding the initiation of the program by the Commonwealth Transportation Board (CTB), including presentations and resolutions, please visit <https://ctb.virginia.gov/> (CTB Resolutions of March 17, 2021, and December 8, 2021).

Public and agency involvement is an integral part of the CTB's policy development process. This Program Guide documents relevant CTB policies as of its writing. Comments and feedback related to Project Pipeline policies will be considered for future modifications of the program.

What's New in This Edition

This edition incorporates lessons learned in Round 3 — based on 11 sessions with districts, consultant teams, and program staff — and the decisions made during the July 2026 program quarterly review meeting. Returning readers should note the following changes:

Summary of Changes for Round 4

- **A new Phase 0.** Round 4 begins with a study alignment step: state, local, and regional partners confirm they are on the same page — study limits, local commitments, data collection, and technical expectations — before detailed work begins. District-led alignment starts in August, followed by consultant-led Phase 1 scoping in September (see Chapter 7).
- **An earlier start date.** The full program cycle begins earlier with final draft reports due in April 2028, creating a buffer ahead of the July 2028 SMART SCALE application deadline (see Chapter 4).
- **Program working agreements.** Standing expectations for provision of advance materials, meeting structure, pre-scheduled Stakeholder Working Group (SWG) meetings, template stability, accessibility, and file sharing now appear in one place (see Chapter 5).
- **A defined locality partner role.** Each study now begins with a locality charter that explains the process, the locality representative's role, leadership briefing points, and funding-readiness expectations (see Chapter 3).
- **A consolidated framework document.** The Phase 0 and Phase 1 framework documents are merged into a single document with separate district and consultant sign-off points.
- **Right-sized public engagement.** New standards for survey length, use of the plain language glossary, customized graphics, and enhanced outreach coordination address survey fatigue and improve the quality of public input (see Chapter 6).
- **An Operations/ITS study track.** Guidance for operations, intelligent transportation systems (ITS), and adaptive signal study candidates recognizes that lower-cost operational improvements are a growing share of the program (see Chapter 2).
- **Restructured phase chapters.** Each phase chapter now follows the same pattern — purpose, schedule, key activities, milestones, deliverables, and lessons in practice — so readers can find what they need quickly.
- **A Program Toolkit.** The appendices are replaced by a Program Toolkit that links directly to current templates, checklists, and resources on the program Teams site.

How to Use This Guide

This guide serves several audiences. It is both an orientation for people who are new to Project Pipeline and a working reference for study teams. You do not need to read it cover to cover — start with the sections that match your role.

If you are...	Start with...
New to Project Pipeline	Chapter 1 (Program Overview) and the phase summary table in Chapter 4. Together they explain what the program is, why it exists, and how a study moves from selection to a funding application.
A locality representative	Chapter 3 (your role and the locality charter), Chapter 4 (the schedule and decision points), and Chapter 6 (how public engagement works in your community).
A VDOT District Planning Project Manager	Chapters 3 through 5 for roles, schedules, and working agreements. Chapters 7 through 10 for information regarding the phases as your study progresses.
A consultant team member	Chapter 4 (schedule), Chapter 5 (working agreements), and the phase chapters. Deliverables checklists appear at the end of each phase chapter.
A stakeholder or member of the public	Chapter 1 (Program Overview) and Chapter 6 (Public Engagement). The program website at vapipeline.virginia.gov also has study-specific materials.
Returning from a prior round	What's New in This Edition (see page 3), then Chapters 4, 5, and 7 — the schedule, working agreements, and Phase 0 are the biggest changes.

Conventions Used in This Guide:

- **Key milestones** are marked with a star (★) in the phase chapters. These are the coordination points every study must hit.
- **Lessons in practice** boxes summarize what prior rounds taught us and why a requirement exists. They are guidance, not additional requirements.
- **Deliverables checklists** at the end of each phase chapter list what items must be completed before the study advances. The Phase Requirements Checklist in the Program Toolkit is the authoritative version.

Acronyms and Abbreviations

Acronym	Meaning
CTB	Commonwealth Transportation Board
DMV	Virginia Department of Motor Vehicles
DRPT	Virginia Department of Rail and Public Transportation
FHWA	Federal Highway Administration
HSIP	Highway Safety Improvement Program
IAR / IJR	Interchange Access Report / Interchange Justification Report
ITS	Intelligent Transportation Systems
L&D	Location and Design
MOE	Measure of Effectiveness
MPO	Metropolitan Planning Organization
NEPA	National Environmental Policy Act
OIPI	Office of Intermodal Planning and Investment
OSAR	Operational and Safety Analysis Report
P4P	Pathways for Planning
PDC	Planning District Commission
ROW	Right of Way
STARS	Strategically Targeted Affordable Roadway Solutions Program
SWG	Stakeholder Working Group
TDM	Transportation Demand Management
TMPD	Transportation and Mobility Planning Division
TOD	Traffic Operations Division
TOSAM	Traffic Operations and Safety Analysis Manual
VDOT	Virginia Department of Transportation
VTrans	Virginia's Statewide Transportation Plan

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Chapter 1: Program Overview

Project Pipeline at a Glance

Project Pipeline is Virginia's performance-based planning program. It studies the Commonwealth's highest-priority transportation needs — identified through VTrans, Virginia's statewide multimodal transportation plan — and develops well-defined, fundable projects that can compete in SMART SCALE and other funding programs. Studies are led by VDOT district planning staff, supported by dedicated consultant teams, and shaped by local stakeholders at every step. The program is managed by OIPI and funded through an annual \$6 million pre-scoping set-aside.



Figure 1: Performance-Based Planning and Programming Process

Background

In 2018, the CTB adopted a resolution requiring the Commonwealth's advanced planning and project development activities for capacity expansion projects to be linked to VTrans Priority 1 locations. The CTB initiated a series of pilot studies funded by OIPI and VDOT in 2019 and formally established the Project Pipeline program — including a provision to include VTrans Priority 2 locations — in the spring of 2021. Six million dollars in pre-scoping funding is set aside annually to fund studies that consider a wide range of multimodal options to address identified VTrans needs.

The program formalizes the connection between VTrans and programming and mandates the inclusion of key stakeholders in every study. OIPI manages the program in collaboration with the Virginia Department of Transportation (VDOT) and Virginia Department of Rail and Public Transportation (DRPT).

Program Goals and Objectives

Project Pipeline is designed to develop a steady stream, or a pipeline, of high-priority projects through efficient studies that feed Virginia's statewide prioritization processes. The program is directed by the guiding principles of VTrans: optimize return on investment; consider operational improvements and demand management first; and improve coordination between transportation and land use. The program:

- Focuses on the top multimodal priorities established by the CTB;
- Streamlines project planning and improves project readiness to ensure that needs are understood before offering solutions;
- Develops and refines tools that make use of powerful data and improves collaboration;
- Identifies investment strategies that solve more problems with limited state transportation funds and resources; and
- Standardizes a performance-oriented and multidisciplinary approach.

Study outcomes are intended to be developed into recommendations that may be considered for statewide funding programs such as SMART SCALE, Revenue Sharing, and the Virginia Highway Safety Improvement Program (HSIP), as well as other regional and local funding sources. To learn more about VTrans needs and priorities, visit vtrans.virginia.gov.

Continuous Program Improvement

The program is deliberately iterative. After each round, OIPI conducts structured lessons learned effort with every district, the consultant teams, and program partners, and the findings shape the next round's processes, templates, schedule, and training. This edition of the Program Guide reflects the most extensive of those efforts to date: 11 Round 3 lessons learned sessions held in June 2026, followed by a program quarterly review meeting in July 2026 where the Round 4 approach was set.

The consistent message from Round 3 was that the program structure is working, but Round 4 needs an earlier start date, clearer front-end expectations, and tighter execution — particularly in meeting discipline and public engagement. Those themes drive the changes described throughout this guide. The Program Guide will continue to be updated as necessary to reflect policy changes and procedural improvements.

Chapter 2: Study Selection

Consistent with CTB policy, the identification and selection of study locations begin with Priority 1 and 2 locations identified through the VTrans process. The objective is to focus limited statewide planning funds on the most critical needs in each district that are also supported locally for funding pursuits. Additional information on VTrans prioritization is available at vtrans.virginia.gov/mid-term-planning/mid-term-needs-and-priorities.

The Biennial Cycle

The Project Pipeline study cycle is integrated into SMART SCALE's biennial schedule, with the main study effort occurring in the SMART SCALE "off years" (currently odd-numbered years). Beginning with Round 4, the cycle starts earlier than in prior rounds: study selection concludes in the summer of the even year, Phase 0 alignment begins in August, and studies finish with final draft reports in April of the following year, well ahead of the SMART SCALE full application deadline in July. Chapter 4 describes the schedule in detail.

District Study Selection Process

OIPI works with VDOT, DRPT, and the CTB to identify study candidates for CTB approval. The number of studies selected per district varies based on each district's needs and its capacity to support the program. Studies follow one of three approaches:

1. **A new planning study** to identify projects and solutions that address the priority needs at a given location.
2. **A performance-based value engineering study** of previous recommendations or proposed projects, to develop alternative or revised solutions that meet core needs more cost-effectively and improve competitiveness for funding.
3. **An operations/ITS/adaptive signal study** to provide a mainstreamed track for low-cost, high-benefit operational improvements.

The study approach and expectations regarding the appropriate level of analysis should be designated at selection so that scoping, staffing, and schedule reflect the right type and level of effort from day one.

Additional factors in final selection include locality concurrence and willingness to apply for funding; input from the district CTB member(s); and bundling of nearby need locations to form logical termini covering key corridors, segments, and intersections. Final study locations are agreed upon by District Planning Managers, District Administrators, CTB members, and OIPI.

Selection Criteria

The following criteria are used to screen candidate studies for eligibility:

- VTrans Statewide and Construction District Priority 1 and 2 locations (see [InteractVTrans MapExplorer](#)).
- Locations that do not have currently funded Six-Year Improvement Program projects. Previously unsuccessful applications are eligible for a performance-based planning study to improve the competitiveness of identified solutions.
- Corridors or intersections not recently studied (within the last three to five years) through the Strategically Targeted Affordable Roadway Solutions (STARS) program, an Arterial Management Plan, or other district- or state-level studies.

Additional considerations include:

- CTB member recommendations of one study location per district that is not a VTrans Priority 1 and 2 location.
- Local input where available data suggests emerging needs not yet been captured by VTrans, such as planned development, recent crash trends, or shifting travel demand patterns that are creating immediate concern.

Testing Locality Commitment Early

A study is only worth its investment if the locality is genuinely invested in solving the problem and pursuing funding. Selection coordination should distinguish localities that will accept a free study from those committed to sponsoring an application, and should give localities adequate time to gather staff, director, and elected-official input before committing. Where overlapping or ongoing studies create uncertainty about locality intent, OIPI, VDOT, and the locality should pre-coordinate before the candidate study is finalized. The locality charter described in Chapter 3 formalizes these expectations at study initiation.

District Capacity and Readiness

District workload and readiness are legitimate selection considerations. A district managing a heavy slate of STARS studies, active SMART SCALE applications, or other commitments may reasonably opt to conduct fewer studies, or none, in each round rather than adding work solely to maintain study volume. Consultant team capacity should be weighed in the same way, since the program's firms often carry Pipeline, STARS, and other VDOT assignments concurrently.

Operations/Intelligent Transportation Systems Study Track

Since earlier rounds addressed the most prominent VTrans Priority 1 and 2 locations, several districts are finding that many remaining high-priority needs are on interstates, along previously studied corridors, or in locations that do not translate cleanly into traditional Pipeline studies. VTrans remains the backbone of candidate selection; however, it should be applied with a practical delivery lens.

Studies with an operational focus are a growing and encouraged candidate type. Adaptive signal control, signal coordination and technology, transit signal priority, Intelligent Transportation Systems (ITS) and traffic sensor deployments, incident management, and other targeted operational strategies can deliver measurable safety and congestion benefits at a lower cost than capacity projects. These types of solutions preserve corridor capacity where widening is impractical. Districts should coordinate with their traffic operations staff during candidate study development to identify corridors where this track fits, and candidates may warrant an early principal-level or traffic operations brainstorm before committing to a full study direction.

Lessons in Practice: The Tightening Candidate Pool

Round 3 sessions surfaced a consistent strategic issue: several districts are running short of strong, unstudied VTrans Priority 1 and 2 candidate study locations. The program's response is threefold:

1. Treat operations/ITS as a real study track;
2. Test locality willingness and sponsor readiness much earlier; and
3. Allow practical flexibility where strong district needs do not fit the cleanest VTrans Priority 1 and 2 location patterns.

Candidate study screening should remain anchored in VTrans while recognizing delivery realities.

Chapter 3: Roles and Responsibilities

Project Pipeline studies are intended to be:

1. **Planning-led.** District planning staff serve as project and study managers, guiding the process from study selection through the submission of funding applications. Where a study is primarily focused on transit, DRPT staff take lead responsibility.
2. **Multidisciplinary.** Study teams include technical staff from planning, traffic operations, roadway engineering, communications, and other perspectives throughout the process.
3. **Collaborative.** Multiple state agencies work with localities and other stakeholders to identify and advance the multimodal projects that address the transportation system's priorities and needs.

Key Roles at a Glance

Role	Core Responsibility
OIPI Staff	Leads the program; guides District Planning Project Managers and Consultant Team Managers; ensures statewide consistency; participates in all SWG meetings and should be invited to all Technical Team meetings.
Program Management Team	OIPI staff and key consultant team members provide overall program support: tools, templates, dashboards, communications coordination, and schedule tracking.
VDOT District Planning Project Manager	Leads and manages each study from initiation through final deliverables and funding applications; accountable for study progress and outcomes.
Consultant Team Manager	Builds and directs the consultant team (including subconsultants); develops scopes with the district and OIPI; manages the team; tracks tasks, oversees quality review of deliverables, and ensures timely preparation of meeting materials.
Technical Teams	Multidisciplinary teams (district planning, traffic operations, L&D, subject matter experts, consultants, and others as needed) review data, diagnose needs, develop alternatives, and prepare recommendations for stakeholders.
Stakeholder Working Groups	The steering committee for each study, including locality, MPO/PDC, VDOT residency, VDOT communications, and other local and agency representatives, who provide feedback, local knowledge, and support for study outcomes.
Locality Partners	Represent local interests, brief local leadership at defined milestones, coordinate with local stakeholders, and carry out study outcomes to governing bodies to uphold support for funding applications.
DRPT	Leads transit-focused studies; supports studies with transit and rail needs; helps bridge coordination with local and regional transit providers.

Technical Teams

Technical Teams combine the expertise of VDOT district staff, the resources of the consultant teams, and input from other state and local technical staff relevant to each study. To achieve efficiency and consistency, the same Technical Team is generally responsible for all studies within a district for the duration of the cycle. The teams meet routinely to review data, diagnose the core contributing factors behind VTrans needs, brainstorm and refine alternatives, and reach consensus on the most feasible and fundable solutions to bring to the SWG — all grounded in a data-driven approach.

Core Technical Team roles include the VDOT District Planning Project Manager (leadership and direction), Consultant Team Manager (direct support and coordination of consultant technical work), district planning staff (capacity, forecasting, land use, multimodal), district traffic operations staff (safety and operations), district L&D staff (design criteria, exceptions and waivers, construction risks, and cost estimates), and consultant technical staff.

Additional involvement should be scaled to the study:

Staff Involvement	When and Why
District and/or Central Office L&D	Early engagement during development of potential and preferred alternatives in Phases 1 and 2, so design staff understand the process that led to the projects. Core members of the Technical Team in Phases 2 and 3; critical to risk assessment, constructability input, and final outcomes. Central Office L&D participation is required for any study involving a limited access facility.
Right of Way & Utilities	Early involvement to identify key risks and potential impacts of proposed alternatives — property lines, impacts, and utility conflicts should be identified and discussed before sketches and estimates harden.
Environmental	Early involvement to identify permitting concerns, cultural resources, and other red flags before alternatives advance.
Structure & Bridge	Where significant structures or bridge assets are involved.
DRPT	Where transit and rail needs are present and of high need.
Locality Technical Experts	Where counties, cities, or towns have planning or engineering staff with transportation expertise, their local knowledge is highly valuable in Technical Team meetings.
Central Office Divisions	For high-profile or critical studies that would benefit from a statewide perspective and additional resources (see Chapter 11).

Lessons in Practice: Involve Specialists Before Assumptions Harden

A recurring Round 3 theme: risks discovered late — right of way lines, environmental red flags, signal reconstruction costs, structural constraints — forced rework of sketches, estimates, and even public outreach materials. Study scopes should state explicitly when right of way, environmental, structure and bridge, L&D, and traffic operations specialists will be engaged, and early site visits should include the appropriate functional area and locality representatives. Phase 0 is designed to front-load this screening (see Chapter 7).

Stakeholder Working Groups

Engaging the SWG is critical to the success of every study. The SWG serves as a steering committee to the Technical Team: stakeholders provide background information and local input to help define the study's needs, along with preferences and support for solutions. SWG meetings are the main opportunity for members to ask questions, provide direct feedback, and express preferences — and the group's engagement is what ensures study outcomes are strongly supported and approved by local governing bodies so studies can proceed to funding applications.

Each SWG should include county, city, or town staff; MPO or PDC staff; residency engineers and liaisons; and district public affairs/communications staff, with OIPI participating in all meetings. Additional members should be added based on study needs:

- **Local first responders** (law enforcement, fire/rescue, and emergency medical services) where safety is an especially high need;
- **Transit operators and leadership** where local or regional transit services are present (see Transit and Transportation Demand Management (TDM) Coordination section below);
- **School transportation, parks and recreation, and local public works** where the corridor context warrants — these local stakeholders are frequently affected and historically under-engaged;
- **District subject matter experts** (Right of Way, Utilities, Environmental, Civil Rights) to advise on risk areas and potential fatal flaws; and
- **Federal Highway Administration (FHWA) staff**, required for any study involving an interstate facility.
- **Assistant State Location & Design Engineer** assigned to the district is required for studies at interchanges that trigger IIM-LD-200 requirements for FHWA coordination; for improvements likely to exceed \$10 million, which require a high-level detailed estimate review with district comment response; and for improvements likely to exceed \$50 million, which require detailed independent estimate review with comment resolution and concurrence.

The Locality Partner Role and the Locality Charter

Round 3 made clear that locality representatives are not always positioned to influence board or application decisions, and that local leadership is sometimes surprised by concepts late in the process. Beginning in Round 4, every study will start with a locality charter — a one-page document delivered at the Phase 0 locality kickoff meeting that explains, in plain language:

- What Project Pipeline is and why this corridor or location was selected;
- The locality representative's role (to attend SWG meetings, brief county, city, or town leadership at defined milestones, and coordinate with other local stakeholders);
- The decision points where the locality weighs in — scope (Phase 0), needs (Phase 1), alternatives and preferred alternative (Phase 2), and funding application (Phase 3);
- Which other key local stakeholders should be consulted and when — first responders, school transportation, transit, parks and recreation, and public works; and
- What success looks like: a SMART SCALE-ready concept, a locality resolution of support, and a funding path — including the expectation that the locality is prepared to sponsor a funding application if the study produces a viable project.

The charter uses plain language and is role-specific so it works for smaller localities where one representative might wear multiple hats (e.g., planning, zoning, and public works). A statewide locality kickoff or orientation, including examples from localities that have used Pipeline studies well, might supplement the charter each round.

Transit and Transportation Demand Management Coordination

Corridor-level transit and TDM recommendations are difficult to make meaningful without a view of local and regional transit plans. Transit providers typically plan on a one-to-five-year horizon, while Pipeline studies look 10 or more years into the future. DRPT is invited to program coordination meetings and SWG meetings, but the local and regional providers themselves often understand demand, planned service, transit development plans, and implementation timing best. Phase 0 scoping includes an explicit step to decide whether transit or TDM needs require direct local or regional provider participation, and DRPT can help bridge between studies and providers where coordination is difficult.

Consultant Team Expectations

Each district is supported by a full-service consultant team under the program's on-call contracts. Beyond technical delivery, Round 4 sets clear expectations for how consultant teams operate; these are confirmed at the statewide consultant kickoff (see Chapter 7) and reinforced in the working agreements (see Chapter 5):

- **Own the administration.** Consultant teams manage shared task trackers, action owners, due dates, locality invitations, and meeting preparation; district staff should not have to micromanage study logistics.

- **Bring the right people.** When a subconsultant's technical work is being discussed, that subconsultant should be present. Meeting attendance should otherwise be right-sized; large consultant delegations with limited locality or VDOT participation are a poor use of everyone's time.
- **Bring independent ideas.** Consultants should bring their own technical perspectives to Technical Team and SWG meetings rather than relying only on SWG or locality feedback and should not prematurely narrow alternatives based on perceived cost or acceptability.
- **Deliver quality on schedule.** Internal quality control is the consultant team's responsibility; rushed or unreviewed deliverables create schedule anxiety for the whole study. Manage staff transitions so incoming team members arrive with full context and access.

Chapter 4: Study Lifecycle and Schedule

Bundled Approach

Studies are bundled by district: one consultant team is assigned to each district, and the same Technical Team supports all the district's studies for the cycle. This gives the VDOT District Planning Project Manager a single point of contact, reduces duplicate meetings and administrative overhead, and allows single task orders to cover the full level of effort for the district's studies.

Phased Approach Schedule

Each study moves through four phases with progress checkpoints at key milestones. The checkpoints ensure the right level of effort and support for each study, keep stakeholders coordinated, and build in appropriate levels of communications and public outreach. The Consultant Team must satisfy the Phase Requirements Checklist for every phase, including milestone meetings and required deliverables, before a study will transition to the next phase.

Phase	Timing (Round 4)	Purpose	Primary Outputs
Phase 0: Study selection.	August–September (even year) <i>Starting in late summer protects the fall traffic count window before Thanksgiving and the winter holidays.</i>	Study alignment: state, local, and regional partners confirm limits, commitments, data collection plans, and technical expectations before detailed work begins	- Signed Framework Document (district section) - Data collection plan - Phase 1 Scope of Work
Phase 1	October–March (odd year) <i>Phase 1 public outreach timeframe is October – December.</i>	Diagnose needs, obtain public feedback on identified needs, analyze existing conditions, develop future traffic volumes, and develop preliminary alternatives	- Needs diagnosis - Preliminary alternatives - Phase 2 Scope of Work
Phase 2	April–September (odd year) <i>Phase 2 public outreach timeframe is scheduled for April to July.</i>	Evaluate and refine alternatives, obtain public feedback on alternatives, and select and confirm a preferred alternative	- Preferred alternative with sign-off - Public engagement summary - Phase 3 Scope of Work
Phase 3	October–April (even year); applications by July 2028	Develop the preferred alternative with a risk-based design approach; prepare estimates and application support	- Risk register - Basis of Design Memo and cost estimate - Final report (draft due in April)

Lessons in Practice: Why the Schedule Moved

Study Approaches

A planning study is the traditional approach, used when no recent studies have been performed and issues are largely unknown. This type of study follows the full four-phase process described in Chapters 7 through 10.

A value engineering study is used when previous study outcomes have not been successful in achieving funding and a fresh review of prior alternatives is appropriate. This type of study largely compresses Phase 1—the Technical Team reviews prioritization scoring, cost estimates, and cost drivers to determine which project components are and are not achieving results, and then develops retooled, phased, or more efficient alternatives in Phase 2 aimed at improving benefits or reducing costs. Public outreach is scaled to the degree of change from the original concept, and SWG involvement remains

critical to local support. The phase chapters note where the value engineering approach differs from the traditional approach.

The study type should be clearly designated at selection because the two approaches demand different scoping, analysis, and engagement. Value engineering or refinement studies should not be scoped, staffed, or scheduled as if they were standard corridor problem-identification studies.

Chapter 5: Program Working Agreements

The most consistent operational feedback from Round 3 was not about technical methods, but about execution: materials arriving too late for meaningful review, meetings that rehash old ground, templates changing midstream, and unclear file-sharing and administrative protocols. This chapter collects the program's standing working agreements in one place. They apply to every study and every team, and they are confirmed at the statewide consultant kickoff meeting at the start of each round.

Meeting Schedules

- **Pre-schedule SWG meetings for full study at the beginning of each phase.** Issue placeholder dates to protect the schedule; individual meetings can be adjusted when localities cannot make a planned date.
- **Schedule site visits and major phase meetings early.** Calendar coordination routinely costs one to two weeks per meeting when left to the last minute.
- **Consider combined meetings where they serve stakeholders.** For example, a combined SWG meeting covering concepts and analysis can provide stakeholders with better context for decision-making.

Advance Materials

- **SWG meeting materials must be distributed at least three business days before the meeting.** This is a program requirement, not a courtesy. District and locality staff need time to review materials and coordinate internally before they can engage meaningfully. If meeting materials cannot be sent out three days in advance, the consultant team will cancel the meeting and reschedule it for a later date.
- **Online surveys and other public-facing materials need at least one week of district and SWG review before launch.** District communications need additional lead time for newspaper advertisement deadlines and approval of social media copy and graphics. Build these review windows into every outreach schedule (see Chapter 6).
- **Provide editable drafts when review and feedback are expected.** Online survey content, for example, should be circulated as a shared, editable document before it is built in the survey platform.

Meeting Structure and Focus

Every SWG and milestone meeting should follow a simple outline:

1. **Open with a concise recap** of prior decisions, one or two slides, not a full recap of the program or prior meeting materials.
2. **Clearly state the decisions needed** at the start, so participants know what needs to be accomplished during the meeting.

3. **Close with action owners and due dates** for every action item, and the schedule impacts/risks if items slip.

Bring work forward in steps rather than large batches: stakeholders consistently prefer stepwise review and approval points over big packages of technical work arriving late in a phase. Interim working sessions with a smaller group (such as locality staff) are encouraged where detailed discussion is needed between full SWG meetings.

Tracking and Accountability

- **The Consultant Deliverable Tracker spreadsheet** maintained by the Program Management Team lists the key decisions and required outcomes for every SWG meeting, so every team knows what each meeting must accomplish. Consultant team leads are required to update throughout each phase.
- **Consultant teams will maintain consistent weekly communication with district staff.** Regular coordination calls (weekly or biweekly, at the district's preference) with checklists and deadline trackers proved highly effective in Round 3 and are the expected practice.
- **Use the program checklists.** The Phase Requirements Checklist and preferred alternative sign-off tools are required for every study and every team. OIPI confirms at kickoff that all prime consultant teams are using the same tools across districts.

Template Stability

Templates exist to provide flexibility within a framework but changing them midstream creates rework and frustration. The program commits to the following:

- **Templates will be finalized before the round starts.** Report templates, survey formats, accessibility guidance, and process rules are stabilized before phase work begins and held stable through the round except where a change is unavoidable.
- **Required versus flexibility is stated explicitly.** Round 4 guidance identifies which templates are required as-is and which are flexible frameworks that teams may extend; for example, a study focused primarily on safety will likely have different report elements than a study focused primarily on traffic operations.
- **Reports are written for decision-makers.** Narrative-heavy reports are difficult to use. Include decision summaries, phase recaps, and clear comparison tables so a reader can find what was decided and why without reading the full narrative.

Online Accessibility

All public-facing documents must meet online accessibility (Section 508/Americans with Disabilities Title II) requirements. PDF remediation is labor-intensive and making small changes late in the process can undo prior remediation. Accessibility expectations, responsibilities, and the remediation workflow will be shared, to the extent possible, before production starts each round, and teams should plan document finalization so that remediation happens once, at the end. The program continues to evaluate

responsive HTML as a web-friendly complement, but a fully compliant PDF remains required for formal deliverables.

File Sharing and Administration

- **Follow the program's file-sharing protocol** for each audience: VDOT-internal collaboration, consultant exchange, and locality/SWG access each have a designated channel established at kickoff. Do not create parallel copies across multiple platforms, as posting to multiple places is a leading source of version confusion. The Program Management Team is working toward improved external sharing options that meet VDOT IT requirements; interim guidance will be issued at kickoff.
- **Follow the program's UPC and invoicing guidance** for charge codes and invoice tracking, issued with the task orders.
- **Confirm records requirements for collaboration tools.** Interactive tools such as virtual whiteboards are encouraged for working sessions, but confirm export and retention needs up front.

Lessons in Practice: Discipline is a Deliverable

Round 3 stakeholders were direct: materials arriving the morning of a meeting, meetings that repeat program background, and technical work arriving in one late batch all waste the scarcest program resource—the attention of district and locality staff. Teams that pre-scheduled meetings, held standing coordination calls/meetings, and used the checklists consistently delivered on time. The agreements in this chapter simply make those practices universal.

Chapter 6: Public Engagement and Communications

Public involvement is a critical element in the development and delivery of transportation projects. The people who live along or use a corridor daily provide key insights into its issues and challenges, which leads to better and more complete solutions. Proactive engagement builds awareness and ultimately support for preferred alternatives and future projects. Participation has been strong: 19,024 MetroQuest surveys were completed in Round 1 (in English, Arabic, Korean, and Spanish); since adopting the PublicInput platform in Round 2 of the program, Pipeline surveys have generated a combined total of 78,736 participants, 1,433,046 responses, and 106,764 comments.

This chapter sets the program's approach to public engagement, including the process improvements identified following Round 3: right-size the engagement to the study, coordinate outreach across studies to avoid confusion and survey fatigue, and design all graphics and outreach materials to facilitate the public's understanding of the study and alternatives.

Right-Size Engagement to the Study

The study teams seek public feedback during Phases 1 and 2. The level and format of engagement should match the complexity of the study.

- **Phase 1** engagement is generally well suited to online surveys for broad problem identification and confirmation of needs. In-person public outreach is optional, not mandatory in Phase 1, but early outreach can be highly beneficial depending on the study profile, community engagement levels, and locality preference.
- **Phase 2** engagement should include in-person or hybrid opportunities wherever concepts are complex or neighborhood-sensitive. Innovative intersections, interchange concepts, movement relocations, and unfamiliar designs need staff on hand to explain alternatives and answer questions; a survey alone will not build understanding. Options include public information meetings, workshops, charrettes, map-based or interactive formats, and online surveys. Study teams should use community spaces, include photos of existing conditions, provide brief descriptions of benefits, and clearly differentiate the alternatives.
- **Identify high-risk alternatives early** in Phase 2 planning, so in-person outreach options are budgeted and scheduled, rather than improvised if an online survey underperforms.
- **Connect the phases.** Collect opt-in contact information in Phases 1 and 2 to notify respondents of future engagement opportunities, including Phase 2 alternatives surveys and later project development stages.

For additional information, see the Transportation and Mobility Planning Division (TMPD) [Instructional and Informational Memorandum 4.0](#), which outlines opportunities for the public to provide comments on transportation improvement recommendations that may have an impact on their travel patterns or access to their property.

Online Survey Design Standards

Online surveys are the program's highest-volume engagement tool, and their design determines the quality of the input received. All study teams should adhere to the following standards:

- **Keep surveys short and focused.** Long surveys overwhelm respondents and reduce useful feedback. Cap or narrow the alternatives through Phase 1 screening before anything goes to public review. It is crucial that only viable alternatives should be included in the Phase 2 alternatives survey.
- **Use plain language.** Avoid technical jargon; use the program's plain-language glossary. Terms like "phase" and technical intersection names confuse participants — explain concepts with visuals and everyday words.
- **Use skip logic on long corridors** so respondents answer only for the locations relevant or of interest to them.
- **Ask about features, not favorites.** Explain the purpose of each improvement and ask what features respondents like, dislike, or find concerning. Prefer simple multiple-choice questions over matrix questions. Public-facing materials should also explain that input informs decisions but is not dispositive.
- **Present costs consistently** across alternatives and across nearby studies, so respondents can make fair comparisons.
- **Build in review time.** Circulate an editable draft to the district and SWG in accordance with the survey workflows provided by the Program Management Team, with clear reviewer sequencing, and account for communications approval timelines.

Coordinate Outreach Across Studies

When multiple Pipeline studies run in overlapping ZIP codes and social media markets, audiences tune out and every study's response quality suffers. To manage this:

- **The Program Management Team maintains a statewide survey and advertising calendar** each round, coordinating launch windows across studies and districts rather than planning outreach study-by-study.
- **Make each study recognizable.** Ads and survey graphics must be corridor-specific and phase-specific. Graphics will include corridor photos or other distinctive visuals in addition to the study area map and call-to-action graphics for online surveys and public meetings/open houses.
- **Vary creative during a campaign.** Diversify organic social media copy and graphics between initial runs and reminders to reach multilingual users and counter ad fatigue.
- **Use targeted channels alongside broad ones.** Homeowners' associations, schools, locality partner lists, neighborhood platforms, and district or 511-related channels can reach the specific communities a study affects, in coordination with communications staff while maintaining outreach to the broader traveling public. In-person attendance is trending smaller, so virtual options and targeted distribution matter more.

Program Communications Resources

The Project Pipeline website (vapipeline.virginia.gov) provides an overview of the program, including the program guide and a narrated presentation. An interactive web-based map allows users to zoom in from the district to street level and access details for each study, including the study name, ID, limits, district, point of contact, and webpage link. Each individual study page includes the study area map, purpose, opportunities for public outreach, partners, key points of contact, schedule, and documents.

The Program Management Team provides the program logo and branded templates for presentations, reports, and social media; study-specific social media ad copy and graphics for paid and organic posts across major platforms; a news release template for district-led survey announcements; and landscape and portrait display board templates for public meetings. Districts, consultant teams, and localities should cross-promote content to expand reach. The Program Management Team coordinates directly with Central Office Communications to schedule geotargeted paid social media for the Phase 1 and Phase 2 surveys.

Study deliverables are designed to be concise and easy to understand; summary sheets visualize and frame the critical safety, operations, and multimodal needs along each corridor, and public engagement summaries document participation in the Phase 1 and Phase 2 surveys.

Lessons in Practice: Better Questions, Better Input

Round 3's engagement feedback converged on a simple insight: the public gives useful input when study teams make it easy — short surveys, familiar words, recognizable photos of the corridor, and questions about what matters to them. When done well, feedback was actionable; when not done well, feedback included low-value rankings and survey fatigue complaints.

Chapter 7: Phase 0—Study Alignment

Phase 0 At a Glance

Timing: August through September of the even year (district-led alignment beginning in August; consultant-led scoping beginning in September).

Purpose: Ensure the state and its local and regional partners are on the same page before detailed technical work begins. Parties should be aligned on study limits, roles, commitments, data collection, and technical expectations, so that scopes are locked with full information and shared understanding.

Ends with: A signed district section of the framework document, a data collection plan, and an approved Phase 1 scope of work.

Phase 0 is new in Round 4. It is, at its core, an alignment step: a study succeeds when OIPI, the district, the locality, and regional partners share the same understanding of what is being studied and why, what the roles and responsibilities will be, and what will happen with the results of the study. Prior rounds struggled with misalignment after scopes of work were executed (such as locality expectations and count needs) and technical triggers surfaced mid-study and forced rework. Phase 0 also reflects a practical reality: securing individual consultant task orders before study kickoff is not feasible. Splitting the front end into two steps lets districts and their partners align immediately, allowing consultant scoping to proceed with real information.

Phase 0A: District-Led Partner Alignment (August)

Districts begin work in August, before consultant task orders are in place, to align the study's state, local, and regional partners on its foundation:

- **★ Hold the locality kickoff.** A focused meeting of 60 minutes or less, using the standard agenda, where the district walks the locality through the study and discusses the locality charter (see Chapter 3). The kickoff aligns both the study team and the locality decision chain: role expectations, leadership briefing points, local stakeholder involvement, and funding-readiness expectations.
- **Confirm study extents and termini.** Engage the locality to finalize study limits so scoping and count planning reflect the real study area.
- **Identify risks early.** Flag known right-of-way constraints, environmental sensitivities, structural assets, political considerations, and prior study history that will shape the scope.
- **Establish local partnership agreements** documenting the locality's role and commitments for the study.
- **Align regional partners.** Engage regional partners (MPO, PDC, transit providers, schools, first responders, parks and recreation, etc.) during Phase 0A, so that regional plans and local operations are reflected in the study foundation from the start.

- **Draft the preliminary data collection plan.** Identify count locations and types, reusable recent counts, seasonal timing constraints, and any nonstandard data needs—before CTB one-on-one briefings and in time to reserve the fall count window. Data collection will be executed through the program's statewide prime consultant task orders, so early planning will secure vendor capacity before the holiday count window closes.

The district will complete its section of the consolidated framework document and sign off, formally recording study limits, goals, local commitments, and known risks.

Phase 0B: Consultant-Led Phase 1 Scoping (September Onward)

- **★ Attend the statewide consultant kickoff.** Held in October after district assignments, the kickoff sets the rules of engagement for the round: working agreements (see Chapter 5), consultant attendee expectations, quality control responsibilities, advance material requirements, template and accessibility rules, and file-sharing and invoicing protocols.
- **Conduct technical screening with the district.** Before the Phase 1 scope is locked, identify traffic modeling and count needs (including count duration, queue observations, and whether microsimulation is expected); forecasting assumptions (opening year versus design year, growth rate approach, and TMPD involvement); Operational and Safety Analysis Report (OSAR), Interchange Access Report (IAR), or Interchange Access Justification Report (IAJR) triggers and the applicable IIM-LD-200 documentation path; Traffic Operations and Safety Analysis Manual (TOSAM) analysis requirements; signal reconstruction assumptions; right of way, environmental, structure, and constructability flags; environmental justice and other risk screenings; and district-specific analysis expectations. VDOT Central Office L&D should be made aware early where interchange or limited-access documentation may be triggered, with detailed framework documentation following once preferred improvements are clearer.
- **Mine existing information first.** Use locality Geographic Information Systems (GIS), Virginia Geographic Information Network (VGIN) imagery, ProjectWise, as-builts, and right of way records before assumptions are locked into sketches, estimates, or public graphics.
- **Decide the transit/TDM approach.** Determine whether the corridor's transit or TDM context requires direct participation from local or regional providers and engage DRPT to help make those connections.
- **Develop the Phase 1 scope of work** reflecting the screening above and complete the consultant section of the framework document.

Phase 0 Deliverables

1. Locality charter delivered and locality alignment meeting held (agenda of 60 minutes or less)
2. Local partnership agreement
3. Preliminary data collection plan (in advance of CTB one-on-one briefings)
4. Technical screening summary (analysis triggers, risks, and district expectations)
5. Phase 1 Scope of Work

Lessons in Practice: Why Phase 0 Exists

Nearly every Round 3 session pointed at the same gap: misalignment discovered too late. Localities sometimes did not understand how their study was selected or what was expected of them.

Forecasting and analysis expectations surfaced mid-study and forced late revisions. Count windows were missed. Interchange documentation requirements appeared after report formats were set.

Phase 0 moves that alignment ahead of the scope—getting every partner on the same page before sketches, costs, and public-facing materials harden.

Chapter 8: Phase 1—Diagnose Needs and Develop Preliminary Alternatives

Phase 1 At a Glance

Timing: September through March of the odd year.

Purpose: Use program data and tools, with stakeholder and public input, to diagnose the core issues behind the VTrans needs and identify the most viable preliminary alternatives.

Ends with: A firm, shared understanding of the issues; a screened set of preliminary alternatives with real potential to improve performance, achieve funding, and earn public support; and an approved Phase 2 scope of work.

Schedule and Scope

With partner alignment and scoping completed in Phase 0, Phase 1 opens directly into technical work: analyzing dashboards, assessing existing conditions, completing any remaining data collection, and diagnosing needs. Remaining counts and field data collection should be scheduled around school year and seasonal constraints identified in the data collection plan. Include transit ridership and commuter assistance program data in the Phase 1 dataset, if applicable.

Future-year forecasting and growth analysis occurs in Phase 1 wherever capacity is in question, so that needs and alternatives reflect growth before recommendations are developed. Forecasting assumptions follow the framework document and the Phase 0 technical screening.

Analysis in Phase 1 should stay at a planning level appropriate to screening. The goal is to identify the most viable options and determine the level of analysis needed to fully evaluate them in Phase 2, not to perform final design-level review. Depending on the study and schedule position, there is flexibility to begin Phase 2 tasks during Phase 1 with OIPI concurrence.

Key Activities

- **★ Hold the study kickoff meeting.** The study team, OIPI, SWG, and others as needed formally initiate the study, share priorities and goals, and confirm the framework established in Phase 0.
- **Conduct the Phase 1 site visit.** Early site visits happen for every study, follow the field review checklist, and include the right functional-area representatives—planning, design, traffic, utilities, hydrology, and right of way where practical—plus locality representatives.
- **Complete data collection.** Data collection occurs per the Phase 0 plan and is executed through statewide data collection task orders.
- **Conduct preliminary public outreach.** Online surveys work well at this stage for broad problem identification (see Chapter 6). Collect opt-in contact information for Phase 2 follow-up.
- **Collaborate as a Technical Team.** Meet regularly across the district's studies to analyze dashboards, diagnose needs, brainstorm alternatives, prepare sketch-level concepts, review data and public

input, and prepare materials for the SWG. Preliminary sketches should show major assumptions such as signal infrastructure impacts, right of way constraints, and constructability risks.

- **★ Present the Phase 1 Executive Summary to the SWG.** Present findings and preliminary alternatives and obtain the SWG's feedback on the analysis priorities and viability of the alternatives. This milestone marks the transition into Phase 2. VDOT's internal review of preliminary alternatives should precede the broader SWG and locality presentation.
- **Develop the Phase 2 scope of work.** The Phase 2 scope of work is based on the alternatives to be advanced, the tools and methodology required, and the public engagement plan—including early identification of complex or high-risk alternatives that will need in-person and/or additional public outreach.

Phase 1 Deliverables

1. Phase 1 Scope of Work (carried from Phase 0)
2. Signed consolidated Framework Document
3. Phase 1 Executive Summary identifying study needs by technical area (safety/access, multimodal, operations)
4. Phase 1 Public Engagement Summary
5. Phase 1 Stakeholder Presentation
6. Summary of study needs and diagnosis (Chapter 1 of the Final Report)
7. Phase 2 Scope of Work

Value Engineering Approach in Phase 1

Phase 1 is abbreviated in studies that take the value engineering approach. The team analyzes how prior alternatives performed in funding processes—reviewing scoring details, estimates, and cost drivers—to determine which project components are meeting needs and which are generating cost or risk without commensurate benefit. Initial stakeholder coordination remains critical to understanding the previous process and potential concessions; additional public outreach and data collection may be unnecessary depending on prior efforts. Phase 1 concludes with SWG engagement to discuss findings and set up Phase 2.

Chapter 9: Phase 2—Evaluate Alternatives and Select the Preferred Alternative

Phase 2 At a Glance

Timing: April through September of the odd year; launch public outreach by April and complete it by the end of August.

Purpose: Advance from preliminary alternatives to a preferred alternative through detailed analysis, stakeholder collaboration, and public feedback—balancing performance, cost, and support.

Ends with: A formally confirmed preferred alternative with documented analysis, local concurrence, and a signed closeout; and an approved Phase 3 scope of work.

Schedule and Scope

Phase 2 may begin as soon as Phase 1 concludes, with OIPI concurrence. Its duration depends on the range and complexity of alternatives and the extent of stakeholder and public engagement, but an extended Phase 2 directly reduces the time available for estimating and design refinement in Phase 3, and holiday-season slippage constrains stakeholder availability.

The analysis done in Phase 2 helps to narrow options to alternatives that deliver maximum impact at achievable funding levels. The level of analysis follows the framework document and study complexity. A congested urban area may require detailed microsimulation, while a safety-focused rural study may not; high transit or multimodal needs may require coordination with local operators on demand and service impacts. Division staff and stakeholders may raise additional evaluation factors such as economic development, environmental impacts, and land use.

Travel demand forecasting and future-year scenarios—established in the framework document and largely developed in Phase 1 — should be one factor among several. Future forecasts can bias evaluation toward larger, more expensive alternatives (interchanges, widening) that may not be fundable if they do not adequately address existing needs. Teams should stay focused on a performance-based approach that solves current needs, incorporates flexibility for future scenarios, and remains cost-competitive. An outcome that includes multiple fundable alternatives addressing different needs, areas, or time ranges is a positive result, and teams should consider multiple funding sources as alternatives advance. Short-term, quickly implementable improvements should be a visible and consistent study output alongside mid-term SMART SCALE candidates and long-term needs, including outputs that help localities preserve long-term options through land use and right-of-way decisions.

Key Activities

- **Continue Technical Team analysis.** Refine alternatives through modeling and analysis with input from specialty staff and divisions; develop concepts and scoping; and assess general impacts and

risk factors (right of way, utilities, environmental) as concepts solidify. Conceptual drawings must explicitly reflect critical assumptions.

- **★ Hold SWG alternatives meeting(s).** Present findings for detailed feedback before public outreach, following the meeting structure and focus discussed in Chapter 5—recap, decisions needed, stepwise review. Interim sessions with locality staff support deeper discussions between full SWG meetings. A combined concepts-and-analysis meeting may serve stakeholders better than two separate meetings.
- **Conduct public outreach** on the alternatives under consideration between April and August using the format guidance and survey design standards Chapter 6.
- **Refine alternatives and prepare planning-level cost estimates** with consistent cost presentation across alternatives.
- **Hold the field review.** Conduct the multidisciplinary field meeting in the second half of Phase 2 — with L&D, traffic, planning, right of way, utilities, and locality staff in attendance. The findings will help inform the preferred alternative and a well-scoped Phase 3.
- **★ Present the preferred alternative to the SWG** with the supporting analysis.
- **★ Obtain concurrence and formal sign-off.** Secure concurrence from local jurisdiction(s) and key VDOT subject matter experts and complete the preferred alternative sign-off. The preferred alternative must be formally confirmed before Phase 3 begins.
- **Develop the Phase 3 scope of work** in coordination with L&D and design team leads, informed by the field review and identified risk areas.

Phase 2 Deliverables

1. Technical deliverables (models and evaluation tools)
2. Preferred alternative(s) with documented concurrence from key VDOT subject matter experts and formal sign-off
3. Phase 2 Executive Summary identifying the preferred alternative(s)
4. Phase 2 Stakeholder Presentation
5. Phase 2 Public Engagement Summary
6. Summary of alternatives analysis, refinement, outcomes, and outreach (Chapter 2 of the Final Report)
7. Phase 3 Scope of Work

Value Engineering Approach in Phase 2

Phase 2 focuses on developing efficiencies or alternatives to the original concept following stakeholder input in studies that take the value engineering approach. Key elements include reducing scope for non-beneficial items, testing innovative configurations that reduce impacts, adding minor items that improve benefits, or redesigning elements to cut costs or eliminate risk. Prior analysis should be leveraged, with targeted new analysis to confirm results and some design work on high-risk elements where

appropriate. The timing and extent of public outreach depend on how much the original alternative's scope has changed.

Chapter 10: Phase 3—Develop the Preferred Alternative and Support Applications

Phase 3 At a Glance

Timing: October through April of the even year, with final draft reports due in April.

Purpose: Develop the preferred alternative through a practical, risk-based design approach; produce a defensible estimate; and a SMART SCALE ready concept sketch.

Ends with: Final study deliverables—risk register, basis of design technical memorandum and conceptual plans, cost estimate package and workbook, investment strategy, and Final Report.

Schedule and Scope

The goal of Phase 3 is to define projects to the maximum extent possible and to identify and mitigate risks. Teams should review and develop the concept from the same perspectives considered up to a Preliminary Field Inspection or 30% design effort, without producing design packages. Phase 3 scoping identifies the key design areas (structures, drainage, environmental, right of way, utilities) and any optional services—survey, geotechnical, utility exploration, environmental—needed to define high-risk items. Under the Round 4 schedule, core technical work concludes with final draft reports in April, leaving the remaining weeks for revisions, locality approvals, and application support.

The objective of the Phase 3 cost estimates is to develop detailed, quantity-based, deterministic estimates and designs paired with thoughtful risk assessment and mitigation, which reduces uncertainty and allows lower contingencies and overall funding requirements. Teams should use practical design and common-sense engineering methods, document assumptions and approaches, and maintain focus on the needs identified in Phases 1 and 2.

Phase 3 requires thorough collaboration with districts, VDOT Central Office Divisions, FHWA (if needed), and other partners with decision-making authority over future designs. Where a study has triggered interchange documentation, the required OSAR, IAR, or IAJR materials must follow the applicable IIM-LD-200 structure even when the broader corridor analysis remains in the standard Project Pipeline report format. As staffing changes over time, the documentation and approvals from this phase that reflect the basis of design, assumptions, waivers and exceptions, and judgment exercised are critical to the future success of projects whose future managers and design teams were not involved in the Pipeline study.

Managing the Phase 2-to-Phase 3 Handoff

The transition into Phase 3 often brings new consultant design staff into the study. The Consultant Team Manager is responsible for onboarding incoming staff with full context, which includes prior decisions and their rationale, the framework document, the preferred alternative sign-off, the field review findings, and access to all study files. The Phase 2 field review (see Chapter 9) exists in part to make this handoff concrete as its findings directly shape Phase 3 design work.

Key Activities

- **Perform the risk assessment.** Assess the preferred alternative for risks that could significantly affect scope, cost, or feasibility; document the risks in the risk register with mitigation strategies.
- **Conduct scoping-level design review and development.** Using a practical, risk-based approach, develop the concept to a level that clearly defines the project scope based on available data.
- **Refine the design.** Adjust the preferred alternative based on risk findings and design development. Cost-driving features may need to be removed or revisited with the district and key SWG members if scopes vary significantly.
- **Prepare the advanced cost estimate.** Develop phase estimates and contingencies in the VDOT Cost Estimation Manual and Workbook format, carrying estimates beyond pre-scoping detail (or to a high-confidence pre-scoping level) to reduce risk and contingency.
- **Document assumptions and basis of cost** through Basis of Design Memorandum and supporting reports that validate the estimate.
- **★ Seek review and concurrence on the concept and estimate** with OIPI, the district, and VDOT Central Office reviewers.
- **★ Prepare and deliver final study deliverables.** Integrate Phase 3 work into the Final Report, with the final draft due in April. Delivery of the Final Report with Phase 3 documentation marks the completion of the study effort. All final deliverables and signed phase checklists are due at closeout, and final deliverables are reviewed and approved for public availability.

Phase 3 Deliverables

1. Project Risk Register
2. Basis of Design Technical Memorandum and preferred alternative conceptual sketch
3. Preliminary Design Waiver/Exception Determinations and concurrence
4. Cost estimate package, including PES Workbook
5. Investment strategy for pursuit of funding
6. Final Report (draft due in April) and signed phase checklists

Chapter 11: Program Resources

The program asks a great deal of VDOT District Planning Project Managers, who carry these studies alongside other duties. The resources in this chapter are designed to reduce the time and effort required while improving program effectiveness.

Data Dashboards and Analytics

OIPI and VDOT collaborate on data dashboards that assemble sources—VDOT, DRPT, Virginia Department of Motor Vehicles (DMV), external "big data," public feedback, and other agency data—into user-friendly platforms so teams can visualize study areas in depth from the start. Microsoft Power BI serves as the current base platform, and the Program Management Team maintains "How To" guides for building ArcGIS and Power BI dashboards covering safety, travel time reliability, multimodal planning, crash, and infrastructure conditions data. Tools such as Pathways for Planning (P4P) continue to make data more accessible. Dashboards are developed and finalized once candidate studies are identified and CTB-approved, so study teams can diagnose needs quickly and hold more constructive conversations from the Phase 1 kickoff onward.

Contracts and Task Orders

Consultant and technical support are provided primarily through on-call contracts with teams experienced in the program's goals. One consultant team is assigned to each district for the cycle, providing dedicated support and consistency across the district's studies through single task orders sized to the full effort. Multiple contracts remain available where additional subject matter experts, subconsultants, or capacity are needed. Beginning in Round 4, traffic data collection will be executed through centralized statewide task orders with the program's prime consultants, so counts are procured efficiently and count vendor capacity is secured early (see description of Phase 0 in Chapter 7).

VDOT Central Office Division Involvement

VDOT Central Office involvement varies with the studies selected in a cycle; Appendix H (Readiness Gates) of the SMART SCALE Technical Guide identifies divisions with review, approval, or technical roles that affect study success. As Phase 1 proceeds and preliminary alternatives take shape, teams should identify the input needed from VDOT Central Office to avoid future disruption, as their input is often critical to achieving agency support for preferred alternatives.

Division	Involvement
Right of Way and Utilities	Coordinate in all phases of studies, particularly where property impacts are significant or major utilities are present.
Traffic and Operations	Required for studies involving interstates, freeways, interchanges, Arterial Preservation Network locations, or Corridors of Statewide Significance.

Division	Involvement
Central Office L&D	Required for interchange studies triggering IIM-LD-200 FHWA coordination; for improvements likely exceeding \$10M (high-level detailed estimate review with district response); and improvements likely exceeding \$50M (detailed independent estimate review with comment resolution and concurrence).
Structure & Bridge	Where significant structures or bridge assets are included.
Environmental	Performs initial review; engage early where cultural resources, historic properties, natural habitats, or other impacts are likely, to avoid alternatives that will be difficult to advance through the National Environmental Policy Act (NEPA) and other processes.
Communications	The Program Management Team coordinates directly with Central Office Communications on geotargeted paid social media advertisements for the Phase 1 and 2 online surveys; the team provides these ads and news release templates to District Communications for organic posts and media outreach, respectively.

Templates

Program templates provide "flexibility within a framework": a consistent process that keeps expectations clear while allowing study-specific tailoring. Per the working agreements in Chapter 5, templates are finalized before the round starts, and Round 4 guidance states which are required as-is and which are flexible frameworks. The template library includes:

- **Consolidated Framework Document:** a single document capturing VTrans needs, background, methodologies, local commitments, and technical screening. Additional details can be added for more complex studies.
- **Locality Charter:** the plain-language one-pager delivered at the Phase 0 locality kickoff (see Chapter 3).
- **Phase Requirements Checklists:** the milestone meetings and requirements that must be completed and approved before each phase transition, including the preferred alternative sign-off. This is the authoritative phase-transition requirements.
- **Field Review Checklist:** agenda and discipline participation guidance for site visits and field reviews.
- **Scopes of Work:** standardized scopes for each phase to streamline task order initiation. Phase 1 is typically consistent across studies; Phase 2 is informed by Phase 1 but follows standard objectives and common deliverables; Phase 3 follows a consistent process with additional optional efforts as needed.
- **Executive Summaries and Stakeholder Presentations:** summary sheets and presentations for each phase to communicate with local partners, stakeholders, and the public.
- **Survey and Outreach Templates:** survey formats, news release, paid social media ad, display board (landscape and portrait) templates, and approved plain-language terms for public materials (see Chapter 6).

- **Basis of Design Memorandum and Cost Estimate Templates:** comprehensive templates covering design inputs and risk categories, vetted through District L&D, suitable for SMART SCALE and other applications.
- **Data Dashboard How-To Guides:** guides for building and using the ArcGIS and Power BI study dashboards.

Current versions of all templates are available through the Program Toolkit on the Project Pipeline Teams site, and templates are updated between rounds based on feedback and program needs.

Summary and Conclusion

Project Pipeline is a robust program intended to address the highest-priority multimodal transportation needs throughout the Commonwealth. Through a data-driven, multidisciplinary, and bundled approach, the program improves the focus and efficiency of the study process, and its studies produce well-defined projects that are supported by localities and key stakeholders and reflect clear investment strategies for future funding applications.

The Round 4 changes documented in this edition include an earlier start, a Phase 0 alignment step, standing working agreements, a defined locality partnership, and right-sized public engagement and come directly from the people who deliver these studies. The program puts resources and guidance in place to support district planners while preserving flexibility for local and regional policies and preferences. With continued attention to lessons learned, Project Pipeline will keep improving the tools needed to meet the changing needs of Virginia's transportation system and ensure a true pipeline of high-value projects enters each cycle of the statewide prioritization and funding programs.