



# FY2024-2026 Business Plan

Virginia Department of  
Transportation



# A Letter from the Commissioner



*It is an exciting time to be in transportation in Virginia. Less than ten years ago, the Commonwealth began the process of making some historic changes to how transportation projects are selected and funded, which has enabled Virginia to launch a number of extensive projects.*

*Some of these major projects include high-occupancy toll (HOT) lanes on I-95/I-395, Transform 66, I-495 HOT Lanes Extension (Project NEXT), I-81 Improvements, widening of Route 29 and I-64 and a new Hampton Roads Bridge Tunnel, Virginia's largest transportation project in history. Virginia's Six Year Improvement Program (SYIP) has nearly doubled in size in this same period, from \$10.7 billion to \$19.6 billion. We have added more than 1,500 projects to the SYIP, now totaling 4,700.*

*The construction program is not the only area that has experienced growth. As new projects come to fruition and the Commonwealth expands, VDOT has additional assets to maintain and operate. We have seen record investments in our maintenance program, including the implementation of the Special Structures program focusing on 25 critical bridges and tunnels throughout the Commonwealth. Our Traffic Operations program has also experienced growth from expanding our active traffic management systems to restructuring organizational functions to ensure Operations is a core function of the agency.*

*As Virginia's transportation needs continue to grow and change, the priority remains that VDOT will provide a safe, efficient, and quality transportation system that is good for business and enables Virginia to be a best-in-class place to live, work, and raise a family. Virginia continues to invest in transportation and VDOT stands ready to deliver on that investment.*

*To deliver on this promise, it cannot go without saying that it will take every person in the agency – whether on the ground, behind the wheel or in an office – to bring a world-class transportation system to Virginians. Each of you is vital to the success of our mission – to Keep Virginia Moving.*

*This business plan builds on our success as an agency and looks to the future. I look forward to evolving together to make and keep Virginia's transportation system the best in the nation.*

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# About VDOT

The Virginia Department of Transportation (VDOT) is responsible for planning, building, maintaining and operating the state's roads, bridges and tunnels.

Through the Commonwealth Transportation Board, VDOT also provides funding for airports, seaports, rail and public transportation.

Virginia has the third-largest state-maintained highway system in the country, behind Texas and North Carolina.



**59,451 Miles**

Of state-maintained roadways



**7,748 Full Time Positions**



**\$7.7 Billion**

In total annual budget

# Agency Mission, Values, and Ethics

**Our mission** is to plan, deliver, operate and maintain a transportation system that is safe, enables easy movement of people and goods, enhances the economy, and improves our quality of life.

## Our Shared Values in Service

- Be responsive to customer needs, consider what VDOT does in terms of how it benefits our customers, and treat customers with respect, courtesy and fairness
- Commit to safety and continuous improvement in everything we do, learning from mistakes and successes alike
- Trust, respect, support and encourage one another
- Make decisions based on facts and sound judgment and accept accountability for our actions
- Strengthen our expertise in using information, tools and technology to achieve high performance and stay on the cutting edge
- Think ahead, acting and planning creatively for today and tomorrow

## Our Employee Code of Ethics

As an employee of the Commonwealth of Virginia and its Department of Transportation, I will commit to:

- Be a trusted steward of public resources
- Act with integrity in all relationships and actions in the work environment
- Abide by Virginia's Standards of Conduct for employees
- Not engage in conflicts of interest between my private interest and my professional role
- Not use public resources for personal gain
- Not accept give gifts in violation of the State and Local Government Conflict of Interests Act
- Not knowingly make a false or fraudulent statement
- Not knowingly conduct or condone any illegal or improper activity



# Workforce Safety

The workforce is the Virginia Department of Transportation's (VDOT) most valuable asset and safety is the top priority, ahead of any and all production goals or performance metrics.

VDOT is dedicated to instilling and maintaining a best-in-class safety culture, supported by significant safety training requirements, and reinforced daily via safety briefings and messages from leadership.



## Strategic Opportunity

### Workforce Safety Data - Tracking, Reporting and Avoiding Injuries

VDOT uses performance metrics to measure the effectiveness of its safety culture. Traditionally, the focus has been tracking the Occupational Safety and Health Administration (OSHA) Recordable Rate, a single measure of lagging performance that supports reactive response but does not support a proactive approach to safety.

Maintaining an effective safety culture depends on the acceptance of shared beliefs, practices and attitudes across the workforce. Each individual's commitment to safety is the cornerstone that shapes the behavior of the entire workforce. Not only are VDOT employees expected to practice safe behaviors, but they are also expected to advocate safety across the workforce and ensure that safety is integrated into all aspects of everyday work activities.

### Goal: Expand the Safety Metric Focus

*Expand the safety metric focus by developing a VDOT Total Safety Score measuring system, incorporating leading and lagging safety indicators, designed to comprehensively measure workforce safety across the agency's activities. Goals include improving overall workforce injuries while driving down the agency's OSHA Recordable Rate.*

1.1

**Objective: Enhance Reporting**  
(VDOT Total Safety Score)

1.2

**Objective: Begin Predicting and Avoiding Injuries**  
(VDOT Safety Predictive Analysis Tools)

### Performance Targets

OSHA Rate

**2.5**

or less  
(statewide)

Total Safety Score

**80%**

(statewide)

## Objective 1.1: Enhance Reporting (VDOT Total Safety Score)

Led by the Office of Safety, Security and Emergency Management (OSSEM), **develop and implement the VDOT Total Safety Score measuring system** by:

- **Expanding the tracking of lagging indicators** to include Total Injury Incident Rate and Percentages of Crashes and Incidents that are Preventable (or pending ruling)
- **Expanding the tracking the leading indicators** to include Near Miss Reporting and Lessons Learned.

### Related Strategies

- **1.1.1 Develop and implement a point system** for Near Miss and Lessons Learned Reports.
- **1.1.2 Expand documentation of Lessons Learned** from injuries, illnesses, crashes, and incidents.
- **1.1.3 Separate field and office safety data:**
  - **Analyze assignments** - identifying which positions perform only office tasks, only field tasks, or a combination of both; develop pertinent tracking and reporting.
  - **Provide comprehensive safety reporting** to VDOT Districts and Divisions associated with field and office tasks.



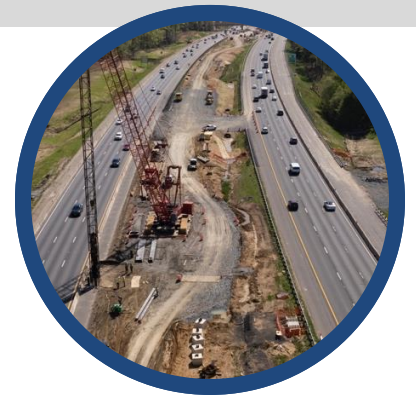
## Objective 1.2: Begin Predicting and Avoiding Injuries (VDOT Safety Predictive Analytics Tools)

**Develop and implement VDOT Safety Predictive Analytics tools**, using the new VDOT Safety Score system as its foundation, to enhance the safety of VDOT workers across the Commonwealth of Virginia.

With assistance from data owners and agency data analytics subject matter experts, implement VDOT Safety Predictive Analytics tools.

### Related Strategies

- **1.2.1 Identify and collect additional data** (such as workforce safety training, weather forecasts) needed to generate predictive safety analytics and develop integration plans.
- **1.2.2 Integrate additional data** with VDOT Total Safety Score system information, creating a system with capabilities to predict where safety-related events or injuries may occur.





# Sustaining the Workforce

VDOT's workforce is vital to the successful completion of the mission.

VDOT must be able to recruit and retain a workforce that is capable of meeting Virginia's transportation needs. In the past, a key draw to state employment was the opportunity to have a 30-year career. That paradigm has shifted.

## Strategic Opportunity

### Strengthen Workforce Recruitment, Retention and Knowledge

To be effective, organizations must align workforce competencies with business goals and must have corporate values that are relatable to the workforce and that drive performance across the business. Developing good leaders that can clearly articulate values and expectations, while establishing consistent behavior expectations among common roles across the agency, is essential to growth and sustainability.

Like many businesses today, VDOT is struggling to recruit and retain workers in an extremely tight labor market. Employees tend to leave VDOT either after 20 or more years or within three years of hire. The VDOT organization was built around the 30-year employee. In the future, however, employees are more likely to have a shorter tenure and enter or leave mid-career.

## Performance Targets

Turnover Rate

**8%**

or less  
(statewide)

Think 50!

**50**

Fill positions within  
50 calendar days,  
on average, from  
the position  
advertisement  
date

Recruitment, retention, training and knowledge transfer are key to building a strong workforce. Contractors and consultants also play an important role in meeting VDOT's demands, particularly at high volume times or where the private sector can perform the services more efficiently than government.

## Goal: Strengthen Workforce Recruitment, Retention, and Knowledge

*Recruit, retain and train a workforce such that it has the knowledge, skills and abilities to plan, deliver, operate, maintain and support the transportation program of today and transfer knowledge to future workers – while lowering the agency's turnover rate and filling vacant positions faster.*

2.1

Objective: Enhance Recruitment by Identifying Needed Skills and Competencies

2.2

Objective: Develop and Implement Employee Retention Strategies

2.3

Objective: Align VDOT Competency Model to Business Needs

2.4

Objective: Strengthen Leadership and Staff Knowledge and Skills



## Objective 2.1: Enhance Recruitment by Identifying Needed Skills and Competencies

Identify skills and competencies needed to recruit the right people.

Develop and implement an Agency Workforce Plan as the foundation for recruiting.



### Related Strategies

- **2.1.1 Develop and Implement an Agency Workforce Plan** reflective of increases in funding, resources and requirements for the construction, maintenance of assets and traffic operations programs along with complementary resource needs for technology and support functions.  
The Plan will identify future skills needed by agency personnel to support ongoing operations and quantify the optimal mix of employee and outsourced resources.
- **2.1.2 Engage and Strengthen Pipeline Program Recruitment.** Enhance and increase the use of pipeline programs - Internships, Scholar, and Engineering Development and Growth Experience (EDGE) to build engineering, technical and business staff resources.
  - **Further develop relationships with Science, Technology, Engineering and Mathematics (STEM) high schools** during junior and senior years for recruitment efforts utilizing local staff in conjunction with Human Resources.
  - **Continue to target colleges and universities with Civil Engineering programs** across the Mid-Atlantic utilizing executive team and staff alumni.



## Objective 2.2: Develop and Implement Employee Retention Strategies



**Develop and implement an employee retention strategy** that focuses on strengthening trust, providing meaningful development opportunities, building leaders and enhancing the employee experience.

**Re-establish alignment of the VDOT competency model** to form the baseline for which VDOT hires, trains, develops and manages performance across all employees.

### Related Strategies

- **2.2.1 Develop employee awareness of the organization.** Expand the 90-day onboarding program to all VDOT locations, in order to provide an overview of VDOT’s business and create an understanding of how individual jobs fit into the overall work of the agency. Based on participant feedback, if necessary, expand the program to include a six- or nine-month check-in.

## Objective 2.3: Align VDOT Competency Model to Support Business Needs

**Modernize VDOT’s competency model** to support business needs.



### Related Strategies

- **2.3.1 Modernize VDOT’s competency model** as the foundation for consistent performance expectations, enhanced employee experience and the development of succession plans.

## Objective 2.4: Enhance Recruitment by Identifying Needed Skills and Competencies



Develop a robust leadership development program that will fulfill specific goals that may be unique to VDOT but encompass certain core competencies.

While all leaders will participate in the program, the goal is to develop those leading from the middle of the organization, the pipeline of future leaders, who face multiple challenges that include gaining collaboration across the organization, doing more with less, maintaining resilience in the face of uncertainty or complex problems, and influencing leaders at all levels of the organization.

### Related Strategies

**Design a leadership program aimed at communicating and training all VDOT leaders on the behaviors required to deliver a top employer experience and drive a culture of continuous improvement and collaborative problem solving.** Key messaging may include reframing VDOT's leadership approach from “doers” and “task executers” to “thinkers,” “developers” and “problem solvers.”

- **2.4.1 Develop and implement a leadership development program** that identifies the skills to be successful in the organization and makes existing and new leaders more effective influencers and decision makers.
- **2.4.2 Develop and provide technical training.** Develop a training path for a workforce that may have a shorter tenure than the traditional workforce.
- **2.4.3 Pilot a maintenance training “boot camp”** designed to teach newly hired transportation operators a core set of skillsets prior to being deployed to area headquarters.
- **2.4.4 Explore developing a traffic operations training program** to ensure that traffic operations workers have the technical skills they need to keep pace with rapidly evolving and technically advanced traffic operation positions.

# Program Development and Delivery

Virginia continues to invest in transportation, and VDOT stands ready to deliver.

The construction (CN) program is poised to grow considerably over the next few years, and VDOT will be scaling up several programs to meet this growth. Partnerships, such as those with industry and localities, are key to ensuring that projects are developed and delivered in a timely manner.

## Strategic Opportunities

### Manage the Increased Construction Program

VDOT and its local and industry partners will need to adjust to accommodate these changes so that projects can be delivered to the citizens of the commonwealth in a timely manner.

### Mitigate the Risk of Disasters

The risk of natural and manmade disasters is increasing. VDOT needs to take reasonable steps to ensure that infrastructure is resilient to such disasters to minimize the cost and disruption to the transportation network.

### Goal: Utilize All Available Resources in CN Program Delivery

*Deliver a construction program that utilizes all available funding resources in a timely manner so that the public can receive the benefit of the projects for which they've paid.*

**3.1** Objective: Increase Construction Project Throughput to Fully Leverage Financial Resources

**3.2** Objective: Create a Strategic Portfolio Management Plan

**3.3** Objective: Strengthen Locality Relationships

### Goal: Make Roadway Infrastructure More Resilient

*Make Virginia roadway infrastructure more resilient to both natural and manmade disasters.*

**3.4** Objective: Implement VDOT's Resilience Plan

## Performance Targets

**70%**

*Projects developed and awarded by their planned award date*

**74%**

*Projects developed within their planned budget*

**77%**

*Projects delivered by their planned due date*

**85%**

*Projects delivered within their planned budget*



## Objective 3.1: Increase Construction Project Throughput to Fully Leverage Financial Resources



Increase the throughput of construction projects to fully leverage financial resources.

Increase the amount of work underway in the next several years. In FY2024 -26, **commit \$2.2 Billion each year** to VDOT and locally administered projects. This is roughly a 50% increase over current commitments.

### Related Strategies

- **3.1.1 Increase the use of consultants to design projects.** VDOT relies on its partnership with industry to scale the program up or down based on economic conditions. Economic conditions for the foreseeable future indicate that VDOT will need to rely heavily on industry partners to meet demand.
- **3.1.2 Increase the use of design-build contracts, especially over the next 24-36 months.** Design-build projects allow VDOT to expedite project delivery by using industry partnership and innovation to solve problems and break through barriers that can often slow the traditional design-bid-build process. The use of design-build will be a key strategy over the next 36 months as VDOT works to meet the demands of the construction program.
- **3.1.3 Continue efforts to consolidate or bundle projects** to expedite delivery and reduce project management efforts.
- **3.1.4 Reduce and prevent the project backlog.** While VDOT and its local partners strive to deliver projects on-time and on-budget, there is a backlog of projects that have fallen behind schedule due to various reasons. While some backlog in a large construction program is to be expected, quickly resolving issues that have delayed these projects, identifying ways to keep new projects from becoming part of the backlog, and minimizing the amount of time a project is part of the backlog must be a priority. The current backlog will be resolved and VDOT will identify strategies to resolve issues quickly on future projects.

## Objective 3.1: Increase Construction Project Throughput to Fully Leverage Financial Resources *(continued)*



Increase the throughput of construction projects to fully leverage financial resources.

Increase the amount of work underway in the next several years. In FY2024 -26, committing **\$2.2 Billion each year** to VDOT and locally administered projects. This is roughly a 50% increase over current commitments.

### Related Strategies

- **3.1.5 Streamline the consultant procurement and contract management process** to ensure the agency has access to consultant resources required to meet business needs in a timely fashion.
  - Through an ongoing, iterative process, identify obstacles to timely award of contracts and evaluate and implement improvements to shorten procurement timeframes. Related policies and procedures will be revised to reflect improvements as implemented. Review annually for further enhancement opportunities.
  - Establish policies and processes to further promote a vibrant consultant industry and encourage participation by small and medium-size firms by December 2024.
  - Develop a web-based system for procurement and management of consultant contracts to automate negotiation processes and improve monthly invoice submissions by June 2024.
  - Develop a consultant contract management system for effective document storage to enhance contract management and compliance by December 2025.
- **3.1.6 Enhance Dashboard metrics** to promote on-time and on-budget delivery including, but not limited to, the following:
  - Measure project development on budget by comparing the final advertisement estimate to the award amount.
  - Measure project delivery on time against revised completion dates for VDOT-owned time extensions.
  - Evaluate the feasibility of closing the scoping milestone at the end of public involvement to allow for stakeholder input prior to setting the schedule and estimate of record.
  - Review metrics and targets for effectiveness in driving the agency to meet its goals.

## Objective 3.2: Create a Strategic Portfolio Management Plan

Recognizing the concurrent rapid growth in the size of the Six-Year Improvement Program (SYIP) and the paradigm shift in how the SYIP is developed, create a **Strategic Portfolio Management Plan** that establishes a strategic plan for delivering the construction program.



### Related Strategies

- **3.2.1** Develop and implement key performance indicators that consider program allocation balances, resources, performance targets, industry commitments and other factors.
- **3.2.2** Development, implement and establish targets for health index metrics that include items such as work underway by phase, procurement methods, project administration and project size.





## Objective 3.3: Strengthen Locality Relationships



Improve performance by strengthening the relationship with localities and clarify expectations so that they can meet local sustainable performance program targets.

### Related Strategies

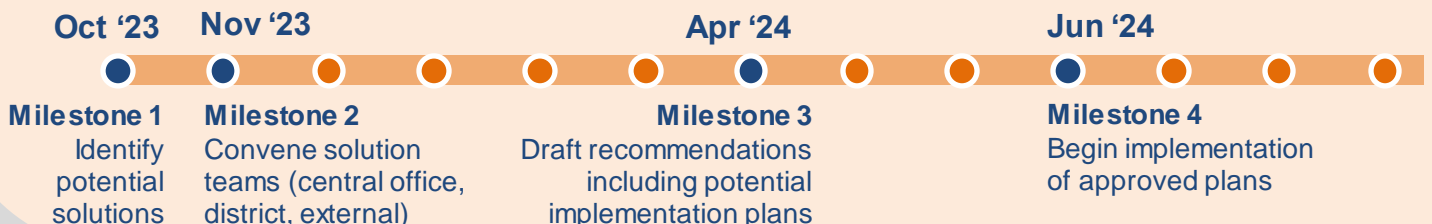
- **3.3.1 Rollout the Local Sustained Performance Program (LSPP)** focusing on assessing locality metrics for:
  - **Timely execution** – past, present, and carry over projects.
  - **Reasonable Progress** – locality ability to hit project milestones in reasonable timeframes.
  - **Unexpended Allocations** – locality ability to expend allocations for project advancement.
  
- **3.3.2 Streamline the Locally Administered Projects (LAP) Procurement Process** working with stakeholders to identify innovative options – including use of indefinite delivery/quantity contracts, application of state processes for federal-aid non-construction, service contracts and the use of a consultant “bench” to support smaller localities.

### 3.3 Implementation Milestones

#### 3.3.1: Rollout of the Local Sustained Performance Program



#### 3.3.2: Streamlining the LAP Procurement Process





## Objective 3.4: Implement VDOT's Resilience Plan



VDOT will maintain and strengthen the resilience of its infrastructure, called for in the VDOT Resilience Plan that will influence the agency's construction program. The Resilience Plan is a framework to incorporate resilience into the agency's business including transportation planning, project development, delivery, operations, maintenance and emergency management.

### Related Strategies

- **3.4.1 By June 2025, incorporate or enhance resilience review into design processes** through accomplishment of the following key milestones:
  - **Milestone 1: June 2024** – Identify suite of enhanced or adaptive design criteria for further consideration.
  - **Milestone 2: December 2024** – Develop a methodology to determine infrastructure vulnerability.
  - **Milestone 3: June 2025** – Incorporate application of appropriate design criteria based on vulnerability assessment.
  - **Milestone 4: June 2025** – Develop or revise supporting standards, guidance documents and policies.

### 3.4.1 VDOT Resilience Plan Implementation Milestones



June 2024

December 2024

June 2025



**Milestone 1**

**Milestone 2**

**Milestone 3 & 4**

Identify enhanced criteria for consideration

Develop methodology to determine infrastructure vulnerability

Incorporate application of design criteria and develop supporting standards, guidance, and policies

# Maintenance and Land Use

**VDOT has successfully utilized asset performance measures to define the level of care needed to maintain key assets.**

In the past, the agency has primarily focused on pavements and bridges; however, there are other assets that need similar attention.

There is a need to expand the use of performance measures to set standards for these other assets. Expanding the use of performance measure on other assets will ensure a sustainable asset management approach as the highway network continues to grow and age.

Over the past several years Virginia has seen an increase in the number and severity of weather events. Closer attention to routine items such as clearing drains, ditches and pipes, and keeping trees cut back from the roadway are low-cost solutions that can prevent assets from becoming overwhelmed by weather events.

VDOT will be looking to “right size” core maintenance staff and equipment to meet these new challenges. However, VDOT cannot do this without the help and support of private sector partners, who will have a greater role to play in keeping assets in top shape over the next few years.

## Strategic Opportunities

**Manage the Increased Maintenance Program workload while modernizing equipment and facilities**

Maintenance needs have expanded for three primary reasons:

- **Aging infrastructure:** Maintaining aging assets, many that have reached or exceeded their anticipated service lives, is challenging. As the infrastructure ages, maintenance needs increase.
- **Additional lane miles:** VDOT adds approximately 200 lane miles to the system each year.
- **Resiliency:** Nationwide, DOTs are facing a rise in severe weather events. Proper maintenance is one tool available to make the network more resilient. Maintaining the network at a higher level of readiness will increase its resiliency, thus limiting the impact and disruption of unforeseen events to the traveling public.

## Performance Targets

### Pavements (% sufficient)

**85%**

*Interstate*

**82%**

*High Volume  
PR & SC*

**75%**

*Low Volume  
Primary (PR)*

**60%**

*Low Volume  
Secondary (SC)*

### Bridges (% not poor)

**5.6**

*Average General  
Condition Rating  
(GCR)*

**97%**

*Interstate:  
Structures not  
poor*

**95%**

*Primary:  
Structures not  
poor*

**90%**

*Secondary:  
Structures not  
poor*

**Goal:**

Best-In-Class  
Roadway  
Maintenance

**Goal:**

Resilient  
Roadway  
Infrastructure

**Goal:**

Modernize  
the Vehicle  
Fleet

**Goal:**

Safe, Secure,  
Modern  
Facilities

**Goal:**

Enhanced  
Land Use  
Review  
Process

## Objective 4.1: Ensure the proper people, processes and technologies are in place to meet roadway performance metric targets.

Achieve performance measures to include annual targets and deliverables, for established performance measures by asset types.



**Goal:**  
Best-In-Class  
Roadway  
Maintenance

### Related Strategies

- **4.1.1 VDOT will implement the Comprehensive Review** to create a sustainable program for VDOT maintained (i) pavements interstate, primary and secondary, (ii) bridges, (iii) special structures and (iv) routine maintenance in order to manage the aging infrastructure.
- **4.1.2 Special Structures Reviews:** “Special Structures” (e.g., tunnels, moveable bridges and complex structures) are critical components of the infrastructure for roadway and marine traffic. VDOT will maintain these vital links over the next 50 years, by incorporating the use of the health indices in the annual Program 50-Year Long-Term Plan update.
- **4.1.3** As a part of the **Agency Workforce Plan Review**, determine the correct mix of contractor and VDOT staff needed to meet performance targets.
- **4.1.4 Highway Maintenance Management Review:** Create executive and technical stakeholder groups, which will be led by the Maintenance Division. Initial tasks for the groups will include performing gap analysis between goals and Highway Maintenance Management System (HMMS) performance in each program area and establishing long-term sustainable strategy. This will include establishing an asset inventory and inspection program.
- **4.1.5 Severe Weather Application:** Update the application to support agency response to Winter weather by implementation of Severe Weather Application System (SWAS) 2.0 solution.



## Objective 4.2: Maintain and Strengthen the Resilience of Virginia’s Roadway Infrastructure

VDOT will maintain and strengthen the resilience of its infrastructure through establishment of the strategies called for in the VDOT Resilience Plan that will influence the agency’s maintenance and operations programs.

### Related Strategies

- **4.2.1 June 2024 – Identify a suite of operational and maintenance measures** for further consideration.
- **4.2.2 June 2025 – Adopt operational and maintenance resilience measures** based on vulnerability assessment.
- **4.2.3 June 2025 – Develop or revise supporting standards, guidance documents and policies** to integrate into current business practices.

### 4.2 Implementation Milestones



June 2024

June 2025

#### Milestone 1

Identify suite of operational and maintenance measures

#### Milestone 2 & 3

Adopt operational and maintenance resilience measures and develop supporting standards, guidance, and policies



## Goal:

# Modernize the Vehicle Fleet

## Objective 4.3: Modernize the Maintenance Fleet

Modernize the fleet of vehicles with supporting accessories and technology, enabling the workforce to meet the workload demand in a safe, timely, high-quality manner.

VDOT needs access to an equipment fleet that is modern.

### Related Strategies

- **4.3.1** Reduce in great significance, DGS owned vehicles from the VDOT fleet by December 2023 and right-size the agency's fleet with modern equipment.
- **4.3.2** Document and begin implementation of a long-term strategy to transition fuel management to a new IT solution.
- **4.3.3** Install Automatic Vehicle Locators (AVL) on identified equipment to capture vehicle data such as meter reading (miles or hours), location and engine diagnostics.
- **4.3.4** Create a mechanism to share light-duty vehicles and increase their utilization.
- **4.3.5** Develop a strategy by December 2024 to modernize the agency's two-way low-band radio system.



## Objective 4.4: Facilities Maintenance Assessment

Ensure that VDOT's workforce has safe, secure, modern facilities that enable, not hamper, attainment of performance goals and public expectations.

**Goal:**  
Safe, Secure,  
Modern  
Facilities

### Related Strategies

- **4.4.1** Annually identify and report statewide deferred maintenance needs. **Reforecast** and **project ongoing need for Physical Plant, Maintenance Reserve and Capital Replacement budgets** and prioritize available funding by May of each year.
- **4.4.2** **Complete the Statewide Capital Outlay and Facility Management Plan** by September 2023.
- **4.4.3** **Conduct annual updates** to account for new, demolished and renovated buildings as well as the impact of capital, maintenance reserve and physical plant investments on deferred maintenance. **Conduct needs assessments on current facilities** to identify locations and buildings that are less than optimal to meet operational needs.
- **4.4.4** **Facility Management:** Continue statewide implementation of the Facility Force Management System. Gather, track and analyze statewide data to create budgetary strategies and develop dashboards and reports to increase transparency. Estimate full implementation by December 2024.
- **4.4.5** **Implement the Safety Rest Area Programs 25-Year Long-Term Plan** for required facility enhancements or upgrades.

## Objective 4.4: Facilities Maintenance Assessment *(continued)*

Ensure that VDOT's workforce has safe, secure, modern facilities that enable, not hamper, attainment of performance goals and public expectations.

**Goal:**  
Safe, Secure,  
Modern  
Facilities

### Related Strategies

- **4.4.6** Conduct a statewide study of optimal chemical storage supply, district locations and stockpiling locations to determine capital plan investment and priority by June 2024.
- **4.4.7** Expand portfolio of pre-engineered and cost-effective buildings for equipment storage, office facilities, etc. by June 2025.
- **4.4.8** Complete facility functionality survey to determine whether current locations of current facilities (e.g., area headquarters) are properly situated to optimize operational effective and response time. Address aging facilities and divest of less-than-ideal sites through analysis of condition assessment data and collaboration with districts by June 2024.





## Objective 4.5: Improve Land Management

**Enhance VDOT's land use review process** to identify and take advantage of opportunities to maximize value to the Commonwealth and meet commitments by July 2025.

**Improve land management** to maximize the beneficial outcomes and outputs of VDOT's existing land assets in a manner that supports the agency's policy and legislative objectives.

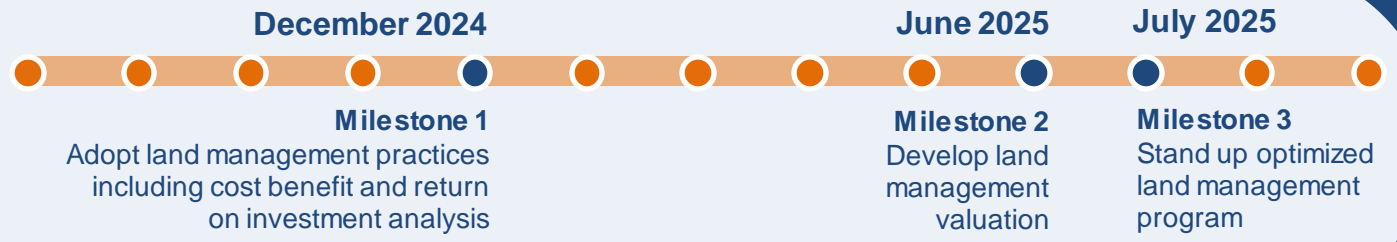
**Enhance the existing land use review process** to create opportunities for informed and data driven decision-making to optimize right-of-way values in support of the agency's operations. The enhanced land use review process will ensure future land use decisions are consistent, defensible and complies with environmental requirements as well as other VDOT commitments and Commonwealth goals.

### Related Strategies

- **4.5.1 December 2024** – Develop and adopt a suite of land management practices and accompanying decision support methodologies to include cost-benefit and return on investment analyses.
- **4.5.2 June 2025** – Develop a land management valuation to identify cost and burden reductions to the agency.
- **4.5.3 July 2025** – Establish a land management program that optimizes land values and provides a decision-support methodology as well as a tracking mechanism for leadership use. This will allow the Department to lead the decision-making process as external interest in the agency's right-of-way increases.



## 4.5 Implementation Milestones



# Traffic Operations and Cybersecurity

## VDOT’s ability to deliver a best-in-class transportation network relies on effective traffic operations.

VDOT will continue to integrate Transportation Systems Management and Operations (TSMO) as a core function. However, as technology evolves, this means that traffic operations is about more than increasing throughput on the existing transportation network.

Cybersecurity is becoming a core part of keeping the transportation network safe. VDOT has recently completed an internal realignment and established new functions focused on traffic operations and the security of all the devices within the network.

### Strategic Opportunities

#### Manage Interstates and Parallel Arterials as a Single Corridor, Improve Communications, and Align Policies, Strategies and Procedures

Traffic volume is a challenge during incidents and peak periods. Integrated Corridor Management (ICM) strategy improves traffic flow by managing all corridor transportation modes including interstates and adjacent arterials, High Occupancy Vehicle (HOV) lanes, rail and public transit. ICM integrates technologies and procedures to maximize movement of people, while local partnerships are key to operating systems effectively and holistically.

#### Goal: Efficient Movement of Travelers

**5.1** Objective: Establish Control/Response Agreements with Localities

**5.2** Objective: Implement Improved Communications Processes

#### Goal: Enhance Consistency and Alignment of Operations

**5.3** Objective: Enhance Consistency and Availability of VDOT Traffic Operations’ Command and Control Systems

**5.4** Objective: Strengthen Cybersecurity and Implement Additional Redundancy for Statewide Communication Networks

#### Goal: Improve Cyber Resiliency of Traffic Ops Environment

**5.5** Objective: Strengthen Traffic Operations Network Security

Over the next few years, VDOT will be focusing on technology infrastructure initiatives designed to keep the network safe and operable during adverse conditions. However, VDOT will also be focusing on “people” aspects, such as working more closely with localities and looking for ways to improve real-time communications with the traveling public.

#### Performance Targets

**90%**

Roadway incidents cleared in under 90 minutes

**48%**

Roadway incidents cleared in under 30 minutes

## Objective 5.1: Establish Control and Response Agreements with Localities

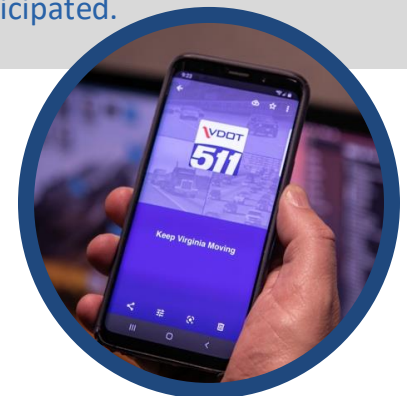


Consistently maximize the efficient movement of travelers through corridors of statewide significance by implementing activities and/or agreements with localities for either shared control or concurrent response actions for signal operations on detour and parallel routes.

### Related Strategies

- **5.1.1 Complete implementation of the Data Exchange Platform** for statewide ICM activities by December 2023.
- **5.1.2 Award the AI-decision support system, parking management system and dynamic incentivization RFP** for Regional Multi-Modal Mobility Program (RM3P) by December 2024.
- **5.1.3 Identify, prioritize, and implement select corridors** throughout the state for ICM initiatives implementation where high Return on Investment (ROI) is anticipated.

## Objective 5.2: Implement Improved Communications Processes



**Implement improved communications processes and tools** across the agency and with private and public partners that is coordinated, effective and timely.

**Provide direct and actionable messaging** that is accurate, coordinated, consistent and timely to the traveling public across all traveler information distribution channels.

### Related Strategies

- **5.2.1 Deploy a Traffic Operations messaging concept** and operationalize new standard operating procedures in all districts by fall 2023.
- **5.2.2 Deploy a new 511 application, 511 website and SmarterRoads portal** with enhanced features by spring 2024.
- **5.2.3 Improve coordination and automated data integration efforts with private business sector GPS partners**, specifically Google Maps and Waze, to broaden dissemination of official VDOT data by spring 2024.



## Objective 5.3: Enhance Consistency and Availability of VDOT Traffic Operations Command and Control Systems



Ensure statewide consistent applications and tools and continuous availability of VDOT's Traffic Operations related command and control systems.

### Related Strategies

- **5.3.1 Undertake a comprehensive review** for Traffic Operations to ensure a sustainable performance and investment strategy with at least a 20-year outlook.

## Objective 5.4: Strengthen Cybersecurity and Implement Additional Redundancy for Statewide Communication Networks



Strengthen cybersecurity and implement additional redundancy for statewide communication networks for signals, cameras, and message signs to improve reliability. Additionally, implement common equipment and processes to facilitate economies of scale and efficiencies.

### Related Strategies

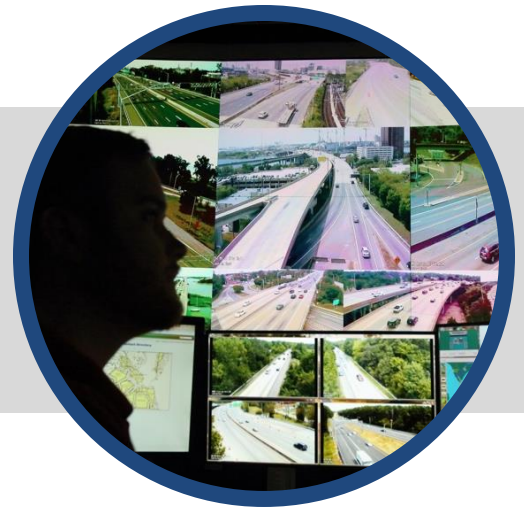
- **5.4.1 Implement common server and network infrastructure** at all Transportation Operation Centers (TOCs).
- **5.4.2 Equip TOCs with the technology, tools, and procedures** to operate effectively when unforeseen actions disrupt access to statewide, cloud-based Operations Technology (OT) applications such as the Advanced Traffic Management System (ATMS) and Statewide Traffic Signal System (STSS).
- **5.4.3 Stand up an Operations Technology Certification and Testing Lab** to analyze and validate OT device capabilities regarding specification compliance, with an emphasis on cybersecurity.
- **5.4.4 Build out additional north-south and east-west bisectors for the OT statewide communications backbone ring**, maximizing utilization of resource sharing agreements.

### Implementation Milestones





## Objective 5.5: Strengthen Traffic Operations Network Security



### Improve cyber resiliency of the Traffic Operations environment

(communications, signals, cameras, message signs, etc.) through effective monitoring, management, mitigation and recovery activities.

As the need for technology grows, so does the need to implement cybersecurity strategies for operations to limit cybersecurity related attacks.

**Implement improvements, processes and technologies across the Operation Technology environment to effectively monitor and mitigate external and internal cybersecurity related attacks or vulnerabilities.**

### Related Strategies

- **5.5.1 Continuously monitor and mitigate attacks or vulnerabilities** of the physical and logical Operations Technology environment.
- **5.5.2 Expand deployment and tuning of physical and logical cyber security tools.**
- **5.5.3 Implement a 24/7/365 Traffic Operations Support Center Security Operations Center (SOC)** to provide monitoring, management and mitigation support.
- **5.5.4 Establish internal SOC and executive level cybersecurity awareness and performance dashboards.**

# Data and Technology

Information systems play an increasingly important role in ensuring that VDOT can deliver its core services efficiently and effectively.

Technology has always changed rapidly. In order to meet this quickly evolving environment, VDOT will change the current Information Technology (IT) delivery model to partner with business units more closely through an agile product line approach along with a shift to the Cloud and delivering Software as a Service (SaaS). Over the next few years, VDOT will focus on data and content management strategies aimed at providing easy access to quality data and content to those who need access.

## Strategic Opportunities

### Upgrade, Enhance and Modernize Information Technology Systems

Information Technology systems, services and delivery methods need to be continually upgraded and enhanced in order to meet business needs. These upgrades are needed to ensure that systems meet security needs and provide functional capabilities to allow VDOT to operate with optimal efficiency in a secure manner.

#### Goal: Ensure Technology Suite Meets Current Business Needs

*Ensure that the technology suite at VDOT meets current business needs, and that a process is in place to meet future business needs. Work with business partners to improve agility, transparency and distributed decision authority related to IT Projects and Services.*

**6.1** Objective: Implement a Product Line Delivery Approach

**6.2** Objective: Provide a Better IT Customer Experience

**6.3** Objective: Enable Business Unit Technology-Solution Development

#### Goal: Ensure Data are Readily Available to Meet Business Needs

*Ensure that data and content are readily available to meet business needs while being adequately protected.*

**6.4** Objective: Develop and Implement Agency-wide Data and Content Management Strategies

VDOT will focus on governance and best practices that enable business units to meet many of their own day-to-day technology needs. This will enable IT professionals to focus on enterprise-wide solutions.

### Performance Targets

**80%**

*IT projects delivered on-time*

**90%**

*IT projects delivered on-budget*

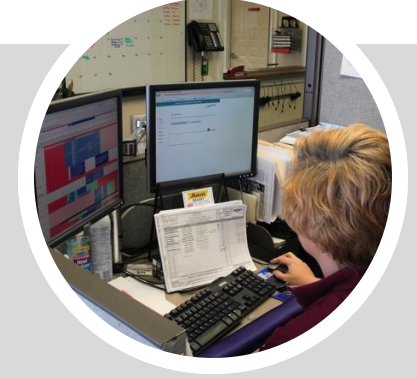
**90%**

*IT projects delivered with full project scope*

## Objective 6.1: Implement an Information Technology Product Line Delivery Approach

A VDOT product line melds business and technology needs over a three-to-five-year planning time period in alignment with a strategic business capability.

This approach will include an annual planning cycle supported by system roadmaps aligned to business capabilities.



### Related Strategies

- **6.1.1 Complete a product line pilot** by summer 2024. As a result of the pilot, define and document new methods for project or service delivery, security and project management.
- **6.1.2 Roll out one to two product lines each year** beginning in FY25.

## Objective 6.2: Provide a Better IT Customer Experience



### Related Strategies

- **6.2.1 Assign a Customer Relationship Manger (CRM) to each division and district** CRMs will meet monthly with customers to discuss IT requests in motion.
- **6.2.2 Maintain up-to-date Customer Portals** reflecting active projects and services by division and by district.

## Objective 6.3: Enable Business Unit Technology-Solution Development



Enable business units to develop and implement their own technology solutions under the protection of a governance umbrella by June 2024.

### Related Strategies

- **6.3.1 Establish governance and parameters for business delivery, based on solution complexity by June 2024.**
- **6.3.2 Develop and provide training to key stakeholders to foster growth and effective use of business enablement tools. Enhance Communities of Practice to sustain long-term growth and maturity of business enablement practices.**





## Objective 6.4: Develop and Implement Agency-wide Data and Content Management Strategies

VDOT's data management and content management strategies are needed to **support efficient collaboration with business partners** and to **provide quality data needed for data-driven decision-making.**

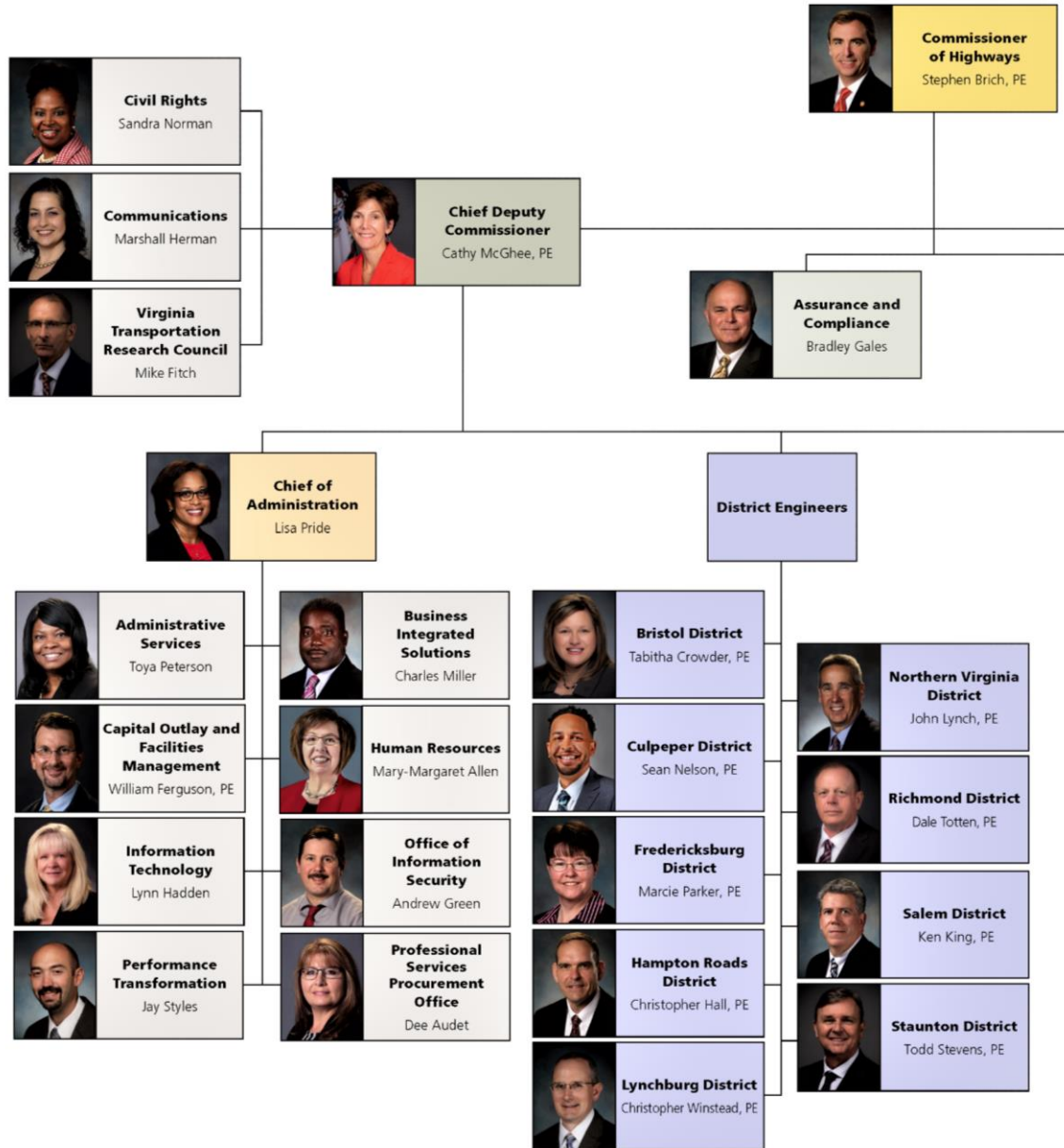


### Related Strategies

- **6.4.1 Address the need to fully enable searchable geo-referencing and project mapping of assets as well as deploy Geographic Information System (GIS)/GPS-enabled tools** to allow field staff to interact seamlessly with systems. Assess and evaluate requirements, prioritize data sets, document data definitions and create a business data glossary by June 2024. Initial data sets will be created by June 2025.
- **6.4.2 Implement VDOT's content management strategy** to include improved search capabilities and a workflow management strategy by December 2024.
- **6.4.3 Enhance access to data** by completing the following:
  - **Develop a plan** to maximize the potential of available technology and data, with a focus on closer collaboration with VDOT's business partners.
  - **Establish a data roadmap** that prioritizes data sets that require mastering such that the data can be utilized for business decision-making by June 2024.
  - **Identify the processes, tools and technologies required** to sustain a data management program beginning June 2024.
  - **Establish an effective data stewardship program** within the agency by June 2025.



# ORGANIZATION CHART



August 2023

\* Designates positions requiring professional engineering license

