



Transportation and Capital Infrastructure

The Department of Transportation and Capital Infrastructure (DTCI) manages facility planning; assists with the preparation of the capital budget; and completes the planning, design, and construction of capital projects for the County through the Capital Improvement Program (CIP). DTCI is also responsible for long-range transportation planning, traffic engineering, real estate planning and acquisition, and utility relocation. Staff in DTCI serves as technical advisors to the Board of Supervisors (Board) on matters relating to transportation, facility development, regional funding, land acquisition, project scheduling, and cost estimating.

Department Programs

Design and Construction

Collaborates with the Office of Management and Budget (OMB) to develop the CIP budget, schedules, and scope. Oversees the financial management of capital project accounts with multiple funding sources, and prepares and monitors DTCI's operating budget. Manages the planning, design, utility relocation, and construction of capital transportation and facilities projects while ensuring compliance with applicable federal, state, and local laws, standards, and specifications. Administers land acquisition for public infrastructure projects and provides quality control and delivery of projects on schedule and within budget.

Activities

- Transportation Design
- Transportation Construction
- Facilities Design
- Facilities Construction
- Project Utility Relocation
- Capital Project Coordination, Funding, and Policy

Real Estate Planning and Acquisition

Responsible for the land acquisition associated with capital projects as well as the management of existing real estate assets. Identifies a long-range plan for land acquisition and disposal. Plans for land needs associated with future CIP facilities projects. Coordinates with other DTCI program staff to identify opportunities associated with land development applications.

- Real Estate Planning and Acquisition

Space Planning, Policy, Design, and Renovation

The Space Planning, Policy, Design, and Renovation (SPDR) Division takes a comprehensive and systematic approach to the space planning, policy, design, and renovation of County-owned and leased facilities. SPDR focuses on using space efficiently to meet the functional customer service and equity standards, including ensuring that older facilities are updated to the newest standards. SPDR manages and executes the County's space-planning

- Space Planning, Policy, Design, and Renovation (SPDR)



Transportation and Capital Infrastructure (DTCI)

strategy including incorporating countywide enhancements. Project-specific responsibilities on renovation projects include programming, planning, architecture, interior design, construction management, project scheduling, and estimating.

Transportation Planning and Traffic Engineering

Develops, manages revisions to, and ensures compliance with the Countywide Transportation Plan, acting as a referral agency in the community development process. Performs traffic and transportation modeling, safety and operational studies, and special transportation-related studies and evaluations. Performs traffic and highway engineering services to address community traffic and parking complaints. Manages the Residential Permit Parking Program. Coordinates transportation planning and funding with regional partners and funding organizations. Monitors and develops grant funding applications for transportation projects and programs. Supports OMB on matters related to capital facility standards and capital intensity factors.

- Transportation Program Management
- Transportation Planning
- Traffic Engineering
- Regional Coordination

Financial Information

FY 2024 Adopted Information¹

	Expenditures	Revenue	LTF	FTE
Design and Construction ²	\$629,610	\$0	\$629,610	0.00
Space Planning, Policy, Design, and Renovation	2,741,924	0	2,741,924	10.00
Transportation Planning and Traffic Engineering	7,503,151	2,660,865	4,842,286	26.00
Total	\$10,874,685	\$2,660,865	\$8,213,820	36.00

FY 2024 Adopted Information – Capital Projects Fund^{3,4}

	Expenditures	Revenue	LTF	FTE
Capital Design and Construction	\$8,584,133	\$8,584,133	\$0	55.00
Space Planning, Policy, Design, and Renovation	418,419	418,419	0	4.00
Total	\$9,002,552	\$9,002,552	\$0	59.00

¹ Sums may not equal due to rounding.

² Real Estate Planning and Acquisition is currently budgeted within this department program.

³ Sums may not equal due to rounding.

⁴ Financing procedures and sources for the Capital Projects Fund can be referenced in the County's CIP.



DTCI: Design and Construction

Transportation Design

What We Do: The Transportation Design activity provides project design and contract administration for transportation projects in the County's CIP as well as other County-related transportation projects. This activity includes procurement of consulting services; quality assurance throughout the project development process; contract management and compliance; coordination of utility service and relocation; coordination with County departments and state and federal agencies; and compliance with County, state, and federal codes, laws, and regulations.

Transportation Design staff ensures that projects are designed in a safe, functional, cost-effective, context-sensitive, and environmentally-sustainable manner. Staff also coordinates with the Department of Building and Development, the Department of Planning and Zoning, the Virginia Department of Transportation (VDOT), and other agencies to obtain plan approvals and permitting to expedite projects. Staff composes Requests for Proposals (RFPs) to obtain consulting services and material for facilities in coordination with the Department of Finance and Procurement. This activity also ensures that projects are completed within budget and on schedule.

Mandate Information: This activity is not mandated, but it is provided to support and implement the Board's Adopted CIP.

Who Does It: County staff provides this service, supplemented by VDOT and project management consultants as needed.

Why We Do It: Transportation Design staff provides a very important service to the County and community, ensuring that County funds are properly implemented during the design process. Staff ensures that the County is in compliance with County, state, and federal standards and regulations; that projects are adequately documented; that the CIP is implemented; that the County is represented by staff at public meetings; and that the County has a direct link to address community concerns.

How We Do It Now – Current Service Level: At the inception of this activity's implementation of evolved performance measures, Transportation Design maintains a service level of 80 percent of capital design projects on schedule, requiring an average of nine projects per design manager.

How We Plan to Do It in the Future – Recommended Service Level: In the future, it is recommended to maintain a service level of at least 80 percent of capital design projects on schedule, with no more than seven projects per design manager, in order to ensure compliance with all standards and regulations. Based on the FY 2023 – FY 2028 Capital Improvement Program, the number of active transportation design projects will decrease after FY 2025, allowing the number of projects per design manager to approach seven.

	FY 2021 Actual	FY 2022 Actual	FY 2023 Actual	FY 2024 Estimated	FY 2025 Projected
Deliver approved capital projects in accordance with established CIP schedules.¹					
Number of active transportation projects under design	n/a	n/a	92	102	86
Percentage of active Transportation Design projects on schedule	n/a	n/a	75%	80%	80%
Average number of projects per design manager	n/a	n/a	7.8	9.0	8.7
Number of completed Transportation Design projects	n/a	n/a	12	34	23

¹ Data shown as n/a indicates a measure that does not have historical data.



DTCI: Design and Construction

Transportation Construction

What We Do: The Transportation Construction activity provides construction management and contract administration for transportation projects. Staff ensures that projects are built in a safe, functional, cost-effective, and environmentally-sustainable manner, focusing on budget, schedule, and quality management. This activity provides quality assurance throughout the project, as well as contract management and compliance, and monitoring of construction schedules and budget. Staff coordinates utility service and relocation, field inspection and documentation of construction activities, and third-party inspections and testing. This activity ensures compliance with County, state, and federal codes, laws, and regulations. Staff also performs project close out including street acceptance by VDOT. Staff composes Invitations for Bid (IFBs) to obtain construction services in coordination with the Department of Finance and Procurement. Staff also coordinates with the Department of Building and Development, the Department of Planning and Zoning, VDOT, and other agencies to obtain permits, manage financial and project documentation requirements, and close out projects after delivery.

Mandate Information: This activity is not mandated, but it is provided to support and implement the Board's Adopted CIP.

Who Does It: County staff provides this service, supplemented by consultants on an as-needed basis to provide construction engineering and inspection services (such as third-party inspection services, geotechnical analysis and materials testing, and construction administration services). These supplemental services amount to approximately 15 to 20 percent of the CIP projects' needs.

Why We Do It: Transportation Construction staff provides a very important service to the County and community, ensuring that County funds are properly managed during the construction process, and assuring quality in the delivery of projects. Transportation Construction staff ensures that the County is in compliance with County, state, and federal standards and regulations; that construction projects are adequately documented on construction sites daily; and that the CIP is implemented.

How We Do It Now – Current Service Level: At the inception of this activity's implementation of evolved performance measures, Transportation Construction maintains a service level of approximately 100 percent of capital construction projects on schedule, requiring an average of three projects per construction manager.

How We Plan to Do It in the Future – Recommended Service Level: In the future, it is recommended to maintain at least 85 percent of capital construction projects on schedule, with no more than three projects per construction manager, in order to ensure compliance with all standards and regulations.

	FY 2021 Actual	FY 2022 Actual	FY 2023 Actual	FY 2024 Estimated	FY 2025 Projected
Maintain 85 percent of construction projects on schedule.¹					
Number of active transportation projects under construction	n/a	n/a	14	17	18
Percentage of active Transportation Construction projects on schedule	n/a	n/a	96%	100%	90%
Average number of projects per construction manager	n/a	n/a	2.8	3.0	3.0
Number of completed capital Transportation Construction projects	n/a	n/a	14	5	5

¹ Data shown as n/a indicates a measure that does not have historical data.



DTCI: Design and Construction

Facilities Design

What We Do: The Facilities Design activity provides project design and contract administration for General Government; Health and Welfare; Parks, Recreation, and Culture; and Public Safety projects in the CIP as well as other County-related projects. This activity includes procurement of consulting services; quality assurance throughout the project development process; contract management and compliance; coordination of utility service and relocation; coordination with County departments and state and federal agencies; and compliance with County, state, and federal codes, laws, and regulations.

Facilities Design staff ensures that facilities are designed in a safe, functional, cost-effective, and environmentally-sustainable manner. Staff works with County departments and end users to ensure that the design of County facilities provides for the needs of stakeholders that will be using or operating the facility. Staff also coordinates with the Department of Building and Development, the Department of Planning and Zoning, VDOT, and other agencies to obtain plan approvals and permitting to expedite projects. Staff composes RFPs to obtain consulting services and materials for facilities in coordination with procurement staff. Staff also ensures that projects are completed within budget and on schedule.

Mandate Information: This activity is not mandated, but it is provided to support and implement the Board's Adopted CIP.

Who Does It: County staff provides this service, using project management consultants as needed.

Why We Do It: Facilities Design staff provides a very important service to the County and community, ensuring that County funds are properly implemented during the design process. Staff works with consultants to ensure that the County is in compliance with County, state, and federal standards and regulations; that projects are adequately documented; that the CIP is implemented; that the County is represented by staff at public meetings; and that the County has a direct link to address community concerns.

How We Do It Now – Current Service Level: At the inception of this activity's implementation of evolved performance measures in FY 2024, Facilities Design maintains 80 percent of capital design projects on schedule, requiring an average of four projects per design manager to meet stakeholder needs within scope, schedule, and budget.

How We Plan to Do It in the Future – Recommended Service Level: In the future, it is recommended to maintain 70 percent of capital design projects on schedule and within scope and budget, requiring an average of four projects per design manager. Over time, as DTIC's workload fluctuates, the Facilities Design team may include more consultant support to optimize flexibility and specialization for Facilities Design projects. DTIC staff expects that the metrics with asterisks below (*) will indicate that the program may need to adjust its services or service levels.

	FY 2021 Actual	FY 2022 Actual	FY 2023 Actual	FY 2024 Estimated	FY 2025 Projected
Deliver approved facility capital projects in accordance with established CIP schedules.¹					
Number of active facilities projects under design*	n/a	n/a	n/a	24	25
Percentage of active Facilities Design projects on schedule*	n/a	n/a	n/a	80%	80%
Number of completed Facilities Design projects*	n/a	n/a	n/a	12	13
Average number of projects per design manager	n/a	n/a	n/a	4	4

¹ Data shown as n/a indicates a measure that does not have historical data.



DTCI: Design and Construction

Facilities Construction

What We Do: The Facilities Construction activity provides construction management and contract administration for capital infrastructure and facility projects. Staff ensures that facilities are built in a safe, functional, cost-effective, and environmentally-sustainable manner, focusing on budget, schedule, and quality management. Staff provides quality assurance throughout the project, contract management and compliance, and monitoring of construction schedules and budget. The Facilities Construction activity coordinates utility service and relocation, field inspection and documentation of construction activities, and third-party inspections and testing. Staff ensures compliance with County, state, and federal codes, laws, and regulations. Staff also performs project close out, including building commissioning and project turnover. Staff composes IFBs to obtain construction services in coordination with the Department of Finance and Procurement. Staff also coordinates with the Department of Building and Development, the Department of Planning and Zoning, VDOT, and other agencies to obtain permits, manage financial and project documentation requirements, and close out projects after delivery.

Mandate Information: This activity is not mandated, but it is provided to support and implement the Board's Adopted CIP.

Who Does It: County staff provides this service, supplemented by consultants on an as-needed basis to provide construction engineering and inspection services (such as third-party inspection services, geotechnical analysis and materials testing, and construction administration services). These supplemental services amount to approximately 15 to 20 percent of the CIP projects' needs.

Why We Do It: Facilities Construction staff provides a very important service to the County and community, ensuring that County funds are properly managed during the construction process, and assuring quality in the delivery of projects. Staff ensures that the County is in compliance with County, state, and federal standards and regulations; that construction projects are adequately documented on construction sites daily; and that the CIP is implemented.

How We Do It Now – Current Service Level: At the inception of this activity's implementation of evolved performance measures in FY 2024, Facilities Construction maintains 90 percent of capital construction projects on schedule, requiring an average of three projects per construction manager.

How We Plan to Do It in the Future – Recommended Service Level: In the future, it is recommended to maintain 85 percent of capital construction projects on schedule, requiring an average of three projects per construction manager, in order to meet the needs of the stakeholders and keep the projects on schedule and budget.

	FY 2021 Actual	FY 2022 Actual	FY 2023 Actual	FY 2024 Estimated	FY 2025 Projected
Maintain 85 percent of construction projects on schedule.¹					
Number of active facilities projects under construction	n/a	n/a	16	16	17
Percentage of active Facilities Construction projects on schedule	n/a	n/a	87%	90%	90%
Number of completed Capital Facilities Construction projects	n/a	n/a	7	10	10
Average number of projects per construction manager	n/a	n/a	3	3	3

¹ Data shown as n/a indicates a measure that does not have historical data.



DTCI: Design and Construction

Project Utility Relocation

What We Do: The use of VDOT's rights-of-way by public utilities is a privilege extended to the utility owners by VDOT in an attempt to best serve public interest. VDOT has established policies and procedures governing the locations where utilities may be placed within VDOT right-of-way. As a result of more and more utilities being installed and relocated into the highway right-of-way, a strong emphasis is being placed on eliminating potential conflicts between highway and utility facilities and on minimizing conflicts between the various utilities. Often, utilities must be relocated to accommodate roadway improvements. DTCI's utility managers coordinate the relocation of utilities to accommodate highway improvements. Often, relocation of utilities includes the acquisition of easements for the relocated facilities.

Mandate Information: This activity is not mandated, but it is provided to support and implement the Board's Adopted CIP.

Who Does It: County staff provides this service, supplemented by consultants on an as-needed basis to provide utility relocation services. These supplemental services amount to approximately 5 to 10 percent of the CIP projects' needs.

Why We Do It: The Project Utility Relocation activity provides a very important service to the County and community, ensuring that County funds are properly managed during the utility relocation phase prior to the construction process, and assuring quality in the delivery of projects. Staff ensures that the County is in compliance with County, state, and federal standards and regulations; that construction projects are adequately documented on construction sites daily; and that the CIP is implemented.

How We Do It Now – Current Service Level: At the inception of this activity's implementation of evolved performance measures in FY 2024, DTCI will provide a service level of approximately 280 utility relocations, requiring an average of more than 140 relocations per utility manager.

How We Plan to Do It in the Future – Recommended Service Level: The high proliferation of telecom utilities, particularly in the eastern portion of the County, is expected to continue to require elevated levels of utility relocations to accommodate roadway improvements. It is recommended to maintain an average of no greater than 150 relocations per utility manager, in order to meet the needs of the stakeholders and keep the projects on schedule and budget.

	FY 2021 Actual	FY 2022 Actual	FY 2023 Actual	FY 2024 Estimated	FY 2025 Projected
Eliminate conflict between existing utilities located in the right-of-way via relocation.¹					
Number of utilities relocated	n/a	n/a	281	300	300
Average number of relocations per utility manager	n/a	n/a	281	150	150

¹ Data shown as n/a indicates a measure that does not have historical data.



DTCI: Design and Construction

Capital Project Coordination, Funding, and Policy

What We Do: The Capital Project Coordination, Funding, and Policy activity partners with OMB in the development of the County's six-year CIP. Staff manages, monitors, and analyzes DTCI's capital project budgets; participates in the strategic development of the annual budget, including the analysis, research, and development of recommendations for additional resources; initiates budget adjustments for approval; and supports the DTCI leadership team in the annual budget process in accordance with the County's fiscal policies. This activity applies for state and federal road grants, reducing the reliance on local tax funding. This activity also represents and advocates for County interests related to transportation at numerous regional and state organizations.

Mandate Information: This activity is not mandated by state or federal law.

Who Does It: County staff provides this service.

Why We Do It: This activity integrates the Board's fiscal guidance, capital facility standards, long-range capital planning, and capital budgeting into a seamless process to achieve the Board's vision for public facility and infrastructure development.

How We Do It Now – Current Service Level: In FY 2020, the service level provided with current resources supported approximately 315 capital projects annually, with approximately 350 budget adjustments processed annually. In subsequent years, the service level was enhanced as improved reporting mechanisms were implemented and additional staff was recruited successfully. In this fiscal year with current resources, DTCI will support more than 760 capital projects and process approximately 520 budget adjustments.

How We Plan to Do It in the Future – Recommended Service Level: As the number of capital projects continues to increase over time, resources and process efficiencies are anticipated to stabilize this service level.

	FY 2021 Actual	FY 2022 Actual	FY 2023 Actual	FY 2024 Estimated	FY 2025 Projected
Provide account management, strategic monitoring, and analysis in support of capital project budgets.					
Number of accounting and budget processes completed in support of capital projects (excludes budget adjustments)	646	557	744	766	789
Number of budget adjustments processed to support capital projects	401	554	505	520	536



DTCI: Real Estate Planning and Acquisition

Real Estate Planning and Acquisition

What We Do: The Real Estate Planning and Acquisition activity provides strategic management of the County's increasing capital real estate asset portfolio. Staff performs land acquisition functions for the Board's Adopted CIP, conducts due diligence processes associated with potential real estate transactions, and coordinates with the County's Space Planning Committee and the Loudoun County Public Schools (LCPS) Land Matrix Committee on long-range acquisition planning.

Land acquisition is the process by which land or property rights are acquired to build County capital facilities (such as fire stations, libraries, and parks) and multi-modal transportation projects (such as roadways, interchanges, intersection improvements, sidewalks and trails, and bus stops). The land acquisition process involves identifying properties to be acquired and negotiating with property owners to obtain the required land rights. The County is required to offer just compensation and negotiate with property owners until an acceptable agreement is reached. To avoid project delays and increased construction costs, the County may exercise the right of Eminent Domain, upon Board direction, if a property owner is unresponsive. Coordination with the County Attorney's Office is required on all Eminent Domain activities.

Real estate asset management is the process of managing the County's real estate portfolio. This includes advising the Board on unsolicited offers to purchase, sell, or lease County real property assets to determine if the transaction provides long-term value to the County's real estate portfolio. Staff pursues opportunities to expand County-owned land in accordance with the Board's objectives, which includes development of policies and procedures to maximize the value of the County's real property assets.

Mandate Information: This service is not mandated. It is provided to support and implement the Board's Adopted CIP. When projects are funded in part or in total by federal or state funds, the policies and requirements of the Uniform Relocation Assistance and Real Property Acquisition Policies Act (Uniform Act) apply. The Uniform Act requires property owners to be provided notice and just compensation for property acquisitions for a program or project. Strict compliance with the Uniform Act is monitored by VDOT personnel, and any deviation from the requirements can jeopardize the County's federal or state project funding.

Who Does It: County staff provides this service, supplemented by contracted services as necessary.

Why We Do It: Land acquisition must be completed before construction activities for CIP projects can begin. If these activities cannot be completed, County facilities and road projects cannot be constructed. This activity proactively pursues the best deal for the County taxpayer and presents potential deals to the Board, when applicable, for acceptance or approval.

How We Do It Now – Current Service Level: In FY 2021, this activity provided support for approximately 120 active land acquisitions, for an average of 30 acquisitions per land acquisition manager. In subsequent years, the number of projects has more than doubled due to the expansion of this activity to include intersection improvements, bus stops, and improvements to sidewalks and trails. In FY 2024, three additional positions were added to accommodate this increased workload. The Real Estate Planning and Acquisition activity will now support approximately 360 active land acquisitions annually, for an average of 60 acquisitions per land acquisition manager. The surge in workload from 30 to 60 acquisitions per manager will be accommodated with consultant support.

How We Plan to Do It in the Future – Recommended Service Level: Over time, as the demand for land acquisition and real estate management for County-owned property increases, DTIC staff anticipates that the need for these services will shift as standardized processes and policies are developed to ensure timely construction, and as staff pursues effective deals for County taxpayers. Between now and then, DTIC staff expects that the metrics with asterisks (*) below will indicate that the County may need to adjust its services or service levels.

**DTCI: Real Estate Planning and Acquisition**

	FY 2021 Actual	FY 2022 Actual	FY 2023 Actual	FY 2024 Estimated	FY 2025 Projected
Support the CIP by working on land acquisition processes.¹					
Number of Board Member Initiatives*	n/a	n/a	n/a	9	9
Number of unsolicited offers evaluated*	n/a	n/a	n/a	10	10
Number of easement requests on County-owned land*	n/a	n/a	n/a	30	30
Amount of legislative application support (number of appraisal reviews)	n/a	n/a	n/a	3	3
Amount of support provided to the Space Planning Committee and the County/LCPS Land Matrix Committee	n/a	n/a	n/a	6	6
Number of active land acquisition projects	118	80	80	360	390
Average number of active projects per staff member	30	20	23	60	65
Number of acquisitions completed	34	80	43	100	200
Number of condemnations	0	6	0	20	40
Percentage of condemnations	0%	7%	0%	20%	20%

¹ Data shown as n/a indicates a measure that does not have historical data.



DTCI: Space Planning, Policy, Design, and Renovation

Space Planning, Policy, Design, and Renovation (SPDR)

What We Do: The SPDR team oversees renovation projects from conception to occupancy and manages the space strategy of County-owned and leased buildings. The SPDR team is directly responsible for developing, maintaining, and implementing the County's Space Strategy and associated countywide policies. The SPDR team is responsible for the relocation, colocation, programming, planning, design, and renovation of all departments in Loudoun County. Additionally, the SPDR team implements necessary renovations for Board-approved department enhancements, including, but not limited to, providing new furniture, reconfiguration of exiting conditions, relocation of departments, and move coordination.

The SPDR team keeps a record of all departmental moves across County-owned and leased facilities, square footage tabulation of department footprint, and location within the buildings. Additionally, the SPDR team is responsible for programming and tracking departmental growth to understand growth needs and space availability.

Mandate Information: While most of SPDR's projects are not mandated, some projects can be mandated as directed by local ordinances.

Who Does It: The SPDR team is made up of space planners, interior designers, and construction project managers. The team produces in-house space planning scenarios with both financial and operational impacts, and utilizes other contract services to accommodate the load and complexity of the work.

Why We Do It: The SPDR team provides a very important service to the County and community, ensuring that County funds are properly implemented during the design and construction process. The SPDR team ensures that the County is in compliance with County, state, and federal standards and regulations; that projects are adequately documented; that the CIP is implemented; that the County is represented by staff at public meetings; and that the County has a direct link to address community concerns.

Furthermore, the SPDR team provides a vital service which impacts how personnel conduct business with fellow employees and county residents. The team facilitates department growth and operations by renovating the workspace to conform to ever-changing needs and requirements. The SPDR team is committed to developing interior spaces that comply with the Americans with Disabilities Act (ADA) and building and safety codes to produce workspaces that inspire productivity and employee retention.

How We Do It Now – Current Service Level: Prior to FY 2024, the SPDR activity included maintenance projects; but following the reorganization and effective restructure into DTCI during FY 2023, the focus and metrics tracked have been updated. In this fiscal year with current resources, the SPDR team maintains a total of 32 projects related to capital improvement and standalone renovation, with 70 percent of projects being on schedule to facilitate growth and efficient conduct of County operations.

How We Plan to Do It in the Future – Recommended Service Level: Over time, as the number of CIP projects and renovation projects continues to increase in response to previous population growth, it is anticipated that the need for planning and programming (as well as design and construction for SPDR activities) will shift, due to the implementation of new procedures, efficiencies, and quality control. It is recommended that the SPDR team maintains an average of no greater than six projects per design manager in order to meet the needs of the stakeholders and keep the projects on schedule and budget.

**DTCI: Space Planning, Policy, Design, and Renovation**

	FY 2021 Actual	FY 2022 Actual	FY 2023 Actual	FY 2024 Estimated	FY 2025 Projected
Develop, maintain, and implement the County's Space Strategy and oversee necessary renovations for Board-approved department enhancements.¹					
Number of CIP renovation program projects	n/a	49	24	24	21
Number of standalone CIP renovation projects	n/a	n/a	7	8	8
Number of Board-approved FTE enhancement projects	1	1	1	1	3
Total value of capital project expenditures	n/a	n/a	\$23,368,200	\$27,855,274	\$30,719,685

¹ Data shown as n/a indicates a measure that does not have historical data.



DTCI: Transportation Planning and Traffic Engineering

Transportation Program Management

What We Do: The Transportation Program Management activity oversees transportation projects within Loudoun County that are administered by VDOT, towns, and developers. Additionally, this activity manages the VDOT Secondary Road Six-Year Plan for Loudoun County and related activities for Unpaved Roads and Rural Rustic Road applications. Staff also manages assigned corridor studies, safety and operations studies, road safety audits, and conceptual designs for assigned projects, all of which require extensive public involvement. This activity coordinates with VDOT, other localities, Metropolitan Washington Airports Authority (MWAA), Toll Road Investors Partnership II (TRIP II), utility companies, and the development community on transportation projects in the design and/or construction phases. Staff also pursues the use of transportation cash proffers and seeks opportunities for further proffered transportation improvements.

Additionally, this activity provides support for the Route 28 Highway Transportation Improvement District (Route 28 Tax District) Commission and Landowners Advisory Board, and additionally assists with groundbreaking and ribbon cutting ceremonies. Staff also serves as “troubleshooters” to resolve complex issues related to transportation projects, provides guidance and direction on transportation issues and projects, and provides Geographic Information System (GIS) support to DTCI staff. In FY 2023, Transportation Program Management staff provided support to the Department of Planning and Zoning as part of the County’s Zoning Ordinance Rewrite process. Further, in FY 2023, the County received grant funding to prepare a local road safety plan, which will provide the framework for future project selection criteria to enhance transparency in the decision-making process. Transportation Program Management staff will administer this grant and the implementation of the local road safety plan.

Mandate Information: Other than required activities to support the Route 28 Tax District, this service is not mandated by federal or state law. It is performed to ensure the Board’s strategic priority of delivering transportation projects is achieved.

Who Does It: County staff provides this service, with consultant assistance for various technical studies and other tasks.

Why We Do It: The Transportation Program Management activity monitors and ensures VDOT-, town-, and developer-administered projects are moving forward. Staff offers recommendations and direction to resolve complex issues involving transportation projects, which enables projects to proceed to completion. These issues are often highly variable and may involve design, environmental, utility relocation, and/or right-of-way acquisition processes. Staff provides information to the public about proposed projects and engages the public in an effort to gain increased support for projects. The work products prepared by Transportation Program Management staff are used in the initiation of new transportation projects.

How We Do It Now – Current Service Level: In FY 2020, the level of service provided included five VDOT-administered projects and 17 studies, requiring more than 3,800 hours of effort annually. Since then, the volume of VDOT-administered projects, the number of studies, and the number of special projects has significantly increased, which has required the addition of staff and other resources. It is also noted that in FY 2022, a GIS analyst position was added to this program for department-wide mapping support. In this fiscal year with current resources, the Transportation Program Management activity will continue to provide broad-based and timely delivery of work products, information, and analysis to various internal and external stakeholders at a service level of 30 VDOT-administered projects, ten active studies, 70 map/GIS data requests, and 20 other special projects, collectively requiring approximately 5,700 hours of effort annually.

How We Plan to Do It in the Future – Recommended Service Level: Over time, as change occurs in transportation trends, Board priorities, DTCI/County needs, and funding availability, workload for this program will likely increase. Between now and then, DTCI staff expects that the metrics with asterisks (*) below will indicate that the County may need to adjust its services or service levels.

**DTCI: Transportation Planning and Traffic Engineering**

	FY 2021 Actual	FY 2022 Actual	FY 2023 Actual	FY 2024 Estimated	FY 2025 Projected
Provide recommendations and direction to resolve complex issues, enabling projects to proceed to completion.¹					
Total number of active studies	n/a	8	7	10	12
Number of safety and operational studies*	n/a	3	3	3	2
Number of hours spent on safety and operational studies	n/a	3,000	600	2,500	1,800
Number of capacity/corridor studies*	3	4	5	5	5
Number of hours spent on capacity/corridor studies	395	1,000	1,386	1,700	1,450
Number of road safety audits*	4	4	3	1	1
Number of hours spent on road safety audits	440	130	33	12	12
Number of VDOT projects supported*	29	22	27	30	25
Number of map/GIS data requests	n/a	n/a	85	70	70
Number of hours spent on map/GIS data requests	n/a	n/a	1,197	920	920
Number of other/miscellaneous special projects*	n/a	n/a	19	20	20
Developer infrastructure coordination efforts (number of post-development approvals)*	n/a	n/a	24	20	20
Number of hours spent on DTCI project support tasks	n/a	n/a	632	575	575

¹ Data shown as n/a indicates a measure that does not have historical data.



DTCI: Transportation Planning and Traffic Engineering

Transportation Planning

What We Do: The Transportation Planning activity supports the development and implementation of the Countywide Transportation Plan (CTP). This activity serves as a referral agency for the Department of Planning and Zoning and the Department of Building and Development through the land development application review process. Team members also provide County representation on regional technical committees. Tasks include land development application review, transportation data management, traffic study scoping for land development applications, updates to the CTP, Comprehensive Plan Amendments (CPAMs), and maintaining and updating the County's Travel Demand Model.

It is important to note that while the Department of Planning and Zoning is the official keeper of the Loudoun County Comprehensive Plan, the DTCI Transportation Planning staff members are the subject matter experts on traffic- and transportation-related matters associated with the Comprehensive Plan. In addition to the Code of Virginia, the work performed by the Transportation Planning staff members is regulated by applicable provisions of the Loudoun County Zoning Ordinance.

Additionally, the Transportation Planning team is responsible for the County's recently implemented data collection and warrants program. This program carries out Board direction for DTCI staff to collect traffic data for traffic studies associated with land development application review, and to manage the various warrant analyses required by approved land development applications. Data collection and warrant analyses work commenced at the start of FY 2023, though significant efforts to procure consultant assistance and update regulatory documents were completed in FY 2021 and FY 2022.

An emerging need that has become apparent with the onset of the data collection and warrants program is an expanded focus on larger safety- and capacity-data-related needs for the Transportation Planning and Traffic Engineering Division. Such an enhanced focus would help coordinate the overall collection, management, and dissemination of traffic safety and capacity data to better support decision-making, resource allocation, and transportation infrastructure asset management. This need is also apparent as the County received grant funding in FY 2023 to prepare a local road safety plan, which upon completion, enables the County to be able to apply for grant funding for construction of eligible safety improvements.

Mandate Information: Title 15.2-2200 of the Code of Virginia mandates that all land development applications be reviewed for transportation impacts, and sets forth regulations pertaining to that review.

Who Does It: County staff provides this service, augmented by consultant services for studies and special projects as well as data collection and warrant analyses.

Why We Do It: The robust growth the County has experienced over the last several decades has resulted in continued strain on its transportation network. Transportation continues to be one of the most important services provided by government, fulfilling the crucial role of linking people to their jobs, schools, recreation, and shopping. Careful transportation planning must be undertaken in order to ensure that the mobility needs of the County's residents continue to be met over the long-term. The Transportation Planning team's work directly supports this goal through the implementation of transportation strategies within the CTP – to “Complete the build out of the major road network while ensuring integration with the local road network, and encouraging connectivity between developments...” The policies and strategies provided in the CTP guide the Transportation Planning team's review of land use development applications.

How We Do It Now – Current Service Level: In FY 2020, the level of service provided was processing approximately 79 percent of land development referrals (LDRs) on time. Since then, the volume of LDRs has increased; and with additional staff and other allocated resources, the service level increased to 84 to 85 percent during FY 2021 and FY 2022. In FY 2023, the service level decreased to approximately 70 percent, due to staff vacancies and the implementation of a new referral software program.

In this fiscal year with current resources, Transportation Planning staff will process approximately 90 percent of LDRs on time, in an effort to deliver a customer-focused process and work product to the development community and other customers. It is noted that the software program referenced above is expected to increase efficiencies in LDR review and production going forward.



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How We Plan to Do It in the Future – Recommended Service Level: As the interest in development within Loudoun County continues to intensify over time, it is anticipated that the number of LDRs received annually will increase. DTCI staff recommends that the Transportation Planning activity maintains a service level of processing 90 percent of LDRs on time.

	FY 2021 Actual	FY 2022 Actual	FY 2023 Actual	FY 2024 Estimated	FY 2025 Projected
Ensure 90 percent of all LDRs are processed on time, as set forth by the Code of Virginia and County policies.					
Total number of LDRs received	696	770	771	800	850
Percentage of LDRs processed on time	85%	84%	69%	90%	90%
Average number of LDRs per staff member	174	128	154	133	142
Number of highly-complex LDRs received	2	8	13	15	15
Percentage of highly-complex LDRs processed on time	100%	50%	54%	90%	90%
Number of complex LDRs received	100	110	119	130	145
Percentage of complex LDRs processed on time	75%	70%	64%	90%	90%
Number of basic and standard LDRs received	594	652	639	655	690
Percentage of basic and standard LDRs processed on time	86%	88%	70%	90%	90%



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Traffic Engineering

What We Do: The Traffic Engineering activity is responsible for County programs and services related to vehicular and pedestrian safety concerns, ultimately improving Loudoun residents' quality of life. These programs and services include the Residential Traffic Management Program, the Residential Permit Parking Districts Program (RPPD), the Sidewalk and Trails Program (STP), and the Roadway Intersection Improvement Program (IIP).

Some of these projects are initiated via resident requests to District Supervisor Offices, while others are initiated via formal Board Member Initiatives. With these requests, traffic engineering studies are completed in which viable solutions are recommended; and then they undergo detailed review by stakeholders through various meetings. In order for these recommendations to be implemented, formal endorsement and authorization to use County funds is required by the Board. The duration for each project varies, depending on its complexity and unique circumstances.

The Traffic Engineering team is responsible for the preparation and administration of a variety of traffic- and parking-related sections of Loudoun County Codified Ordinances. In FY 2023, the Traffic Engineering team completed a prioritization analysis of the County's planned bicycle and pedestrian trail network as well as an equity analysis to help guide implementation of missing bicycle and pedestrian facilities through the County's STP. The Traffic Engineering team also manages the concept development and traffic operation and safety analysis components of the County's IIP.

An emerging need that has become apparent as the STP and IIP have progressed over the past few years is an expanded focus on these initiatives with a dedicated program management team to streamline the overall program transparency, including planning, design, and construction of the improvements as well as periodic updates of the priority list of projects, as approved by the Board.

Mandate Information: This activity is not directly mandated by state or federal law. However, federal, state, and local ordinances, standards, guidelines, and policies are applied to projects and services.

Who Does It: County staff provides this service, augmented by consultant services.

Why We Do It: As the County continues to develop, challenges to vehicular and pedestrian safety are expected to increase. Federal, state, and local guidelines, standards, and policies are applied to projects; and engineering techniques are used to develop and implement safe, efficient vehicular and pedestrian traffic flow.

How We Do It Now – Current Service Level: In FY 2020, the level of service provided resulted in an average of 14 active studies and/or projects per staff member annually. Since then, the volume of projects has increased, as have additional staff and other resources to help mitigate the increased workload. In this fiscal year with current resources, the Traffic Engineering team will continue to provide the programs and services within its assigned areas of responsibility, with an average of approximately 27 active studies and/or projects per staff member annually.

How We Plan to Do It in the Future – Recommended Service Level: Over time, as change occurs in transportation trends, Board priorities, County needs, and funding availability, workload for this program will likely increase. Additional resources are anticipated to be needed in order to respond to emerging needs for dedicated management of the STP and IIP that will streamline the overall program transparency, as well as ensure sustainable levels of support to the Board's priority list of projects. Between now and then, DTCI staff expects that the metrics with asterisks (*) below will indicate that the County may need to adjust its services or service levels.

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	FY 2021 Actual	FY 2022 Actual	FY 2023 Actual	FY 2024 Estimated	FY 2025 Projected
Provide traffic engineering solutions that provide pedestrian safety, traffic calming, and traffic operations improvements to benefit Loudoun's residents.¹					
Total number of active studies or projects*	99	149	193	190	200
Number of traffic calming studies initiated	4	5	10	10	10
Number of traffic calming studies completed*	10	7	8	8	8
Number of RPPD initiatives requested	1	2	2	2	2
Number of RPPD initiatives completed*	1	0	0	1	1
Number of speed studies requested	15	13	7	12	11
Number of speed studies completed*	17	16	5	13	12
Number of commercial/general parking restriction initiatives completed*	n/a	n/a	n/a	5	7
Number of IIP concepts under study/development*	n/a	n/a	n/a	15	25
Number of STP concepts under study/development*	n/a	n/a	n/a	10	20
Number of special projects/studies completed*	n/a	n/a	n/a	3	3
Average number of active studies per staff member	19.8	24.8	32.1	27.1	28.5

¹ Data shown as n/a indicates a measure that does not have historical data.



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Regional Coordination

What We Do: The Regional Coordination activity is responsible for proactively representing, advocating for, and ensuring a consistent response related to Loudoun County's priorities and positions with federal, state, regional, and local transportation entities, by providing input, advice, opinions, and follow-up to legislative processes. This activity works closely with DTCI leadership and County Administration to prepare and respond to legislative processes to reflect the position of the Board. Staff participates on technical committees for state and regional transportation programs and organizations, and provides input on the planning documents for these organizations. Regional Coordination staff analyzes transportation issues, including project selection criteria, to determine the most appropriate projects to submit for funding consideration, in addition to coordinating all aspects of seeking and preparing grant funding applications relative to the needs of the program.

Grant funding applications are typically submitted on a recurring basis to VDOT for the SMART SCALE, Revenue Sharing, Transportation Alternatives (TAP), Congestion Mitigation and Air Quality (CMAQ), and Regional Surface Transportation (RSTP) Programs, to regional agencies including the Northern Virginia Transportation Authority (NVTa) for competitive regional funding opportunities, as well as for other state and federal discretionary grant programs as opportunities arise.

The Regional Coordination activity also conducts research, develops position papers, and briefs the Board on matters pertaining to regional transportation programs.

An emerging need that has become apparent as the County increases its use of federal funding is the need for grant management support. Such additional support, primarily after a discretionary grant is received, will aid in the County's overall grants management efforts, allowing current staff in this activity to devote more time towards the regional planning and coordination tasks related to recurring state and regional funding application processes.

Mandate Information: Participation in regional plan preparation and updates is mandated by various federal and state regulations, as are reporting requirements related to these planning programs.

Who Does It: County staff provides this service, augmented by limited consultant support services.

Why We Do It: This service is performed to support the Board's priorities and advocate its policy positions, in addition to placing the County in a better position to obtain federal, state, and regional funds for transportation projects and initiatives. Additionally, staff ensures that the County participates in the planning for the region and the state; and advocates for the County's interests and needs through review and comment on regional and state funding program regulations. Staff also provides input on the planning documents for various state and regional transportation programs and organizations. Without this input to ensure that the County's projects are included in these planning documents, the County would not be able to qualify for certain funding opportunities.

How We Do It Now – Current Service Level: DTCI defined this as a separate activity in FY 2024 and implemented new performance measures. In this fiscal year, the service level provided with current resources is expected to be approximately 110 state and regional meetings attended per year; and 12 state and regional recurring grant funding applications submitted, requiring approximately 500 hours of annual staff effort. It is noted that the number of state and regional recurring grant funding applications is forecasted to increase in FY 2025 due to even-/odd-year submission cycles for certain funding applications, which will require a commensurate increase in the numbers of hours of effort required.

How We Plan to Do It in the Future – Recommended Service Level: In recognition of increased opportunities at the federal and state level for emerging discretionary grant opportunities, DTCI staff anticipates the need for grant management will increase, in order to better support effective grant administration and regional coordination efforts. Between now and then, DTCI staff expects that the metrics with asterisks (*) below will indicate that the County may need to adjust its services or service levels.

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	FY 2021 Actual	FY 2022 Actual	FY 2023 Actual	FY 2024 Estimated	FY 2025 Projected
Represent the County at state/regional transportation meetings and submit recurring and discretionary grant funding applications for transportation projects and initiatives.¹					
Number of state/regional meetings attended	n/a	n/a	n/a	110	110
Number of state/regional grant funding applications submitted*	n/a	n/a	n/a	12	16
Number of state/regional grant funding applications submitted*	n/a	n/a	n/a	500	600

¹ Data shown as n/a indicates a measure that does not have historical data.