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Introduction

About this Chapter

This chapter describes how DOT projects originate and how they are planned, designed, and implemented, with the exception of work performed on bridges, tunnels, and viaducts, which is managed by DOT's Bridges Division. The chapter includes three case studies: a safety project, the reconstruction of a major roadway, and a plaza project.

Generally, DOT implements two kinds of projects: "Operational" and "Capital." Operational projects usually do not involve sub-surface utility work, drainage, or roadway grading, and they are designed by DOT staff

and built either by agency personnel or by a DOT contractor. Capital projects can impact sub-surface conditions and are more comprehensive. They are initiated by DOT and designed by the Department of Design and Construction (DDC) staff or consultants and are built by DDC contractors.

Operational projects are mainly funded by the city's Expense Budget, which pays for day-to-day operating expenditures, while Capital projects are funded largely by the city's Capital Budget, which is generally financed with federal funds and through the sale of bonds.

Information about specific procedures for notification, permitting, approval, and execution of work by developers and utilities can be found in DOT's *Street Works Manual*.



Operational projects usually do not involve sub-surface utility work, drainage, or roadway grading, and they are designed by DOT staff and built either by agency personnel or by a DOT contractor: Grand Army Plaza, Brooklyn



Pipe installation as part of street reconstruction. Capital projects can impact sub-surface conditions and are more comprehensive. They are managed by the Department of Design and Construction (DDC): Second Avenue at East Houston Street, Manhattan

TABLE 1A

	Operational	Capital
Elements	Signals, markings, signs, basic concrete work such as islands or medians, street furniture, landscaping, paint, epoxy gravel. No sub-surface work	No restrictions. Project can include full reconstruction, sub-surface infrastructure upgrades and/or relocation, lighting, permanent streetscape elements, regrading, resurfacing, and green infrastructure. Many streetscape elements that can be Expense-funded can also be Capitally funded
Funding Source	Mostly City Expense funds; some federal and state grants	Mostly city Capital funds; some federal and state grants
Budget	No restrictions	\$35,000 minimum
Total Project Timeline	1-2 years	4-7 years
Coordination with DEP	Generally not necessary, except for concrete work, to avoid disruption to DEP infrastructure	Necessary to avoid negative impacts to DEP infrastructure (including right-of-way bioswales and stormwater greenstreets). Enhancements to DEP infrastructure in the same project may be possible, thereby realizing overall efficiencies and cost savings. DEP requirements may affect implementation schedule
Reviews by Other Agencies and Utilities	DOT notifies FDNY if there are potential impacts on its operations. Utilities are consulted as necessary. New York State DOT (NYS DOT) reviews projects funded by the Federal Highway Administration (FHWA), and the Federal Transit Administration (FTA) reviews projects that it funds. For major transportation projects*, DOT consults with FDNY, NYPD, the Mayor's Office for People with Disabilities (MOPD), and SBS. Designs for all works of art and structures† intended for use in a fixed location for more than one year are subject to Public Design Commission (PDC) review‡	OMB, and, if relevant, DPR, FDNY, LPC, NYPD, ORR, and PDC. Utilities also review. DPR, MTA, and Port Authority are consulted as necessary. NYS DOT reviews FHWA-funded projects, and the FTA reviews projects that it funds. Coordination with as many as 40 public agencies and private entities may be required. For major transportation projects*, DOT consults with FDNY, NYPD, the Mayor's Office for People with Disabilities (MOPD), and SBS
Coordinating Agency	DOT	DDC
Useful Life	No requirements	Minimum 5 years
"No-Build" Clause	Additional Operational and/or Capital work can be done at project site post-completion, as needed	No additional Capital work can be performed at project site for at least 5 years. Operational work is allowed
Planning	DOT or its consultant	DOT or its consultant
Design	DOT or its consultant	DDC in-house or consultant, often based upon a conceptual schematic from DOT
Implementation	DOT or its contractor	DDC contractor

* Major transportation projects are defined by Local Law 90 of 2009 as affecting four or more consecutive blocks or 1,000 consecutive feet (whichever is shorter); a major realignment of the roadway, including either the removal of a vehicular (or travel) lane(s) or full-time removal of a parking lane(s) or the addition of a vehicular lane(s). For further information, see Section 19-101.2 of the New York City Administrative Code.

† See the definition of "structures" in Section 854(b) of the New York City Charter.

‡ For further information see Section 854(g) of the New York City Charter.

Community Participation

DOT conducts extensive outreach to communities whenever the agency implements safety enhancement projects or makes changes to the local transportation network. Input from residents and businesses helps DOT take into account the character and needs of specific neighborhoods in the project-development process. While each DOT unit that manages a project is involved in community outreach, the Borough Commissioners are the agency's primary liaison with communities and generally conduct the on-going dialogue.

The Borough Commissioners routinely meet with Community Boards, elected officials, business leaders, and other community stakeholders on issues ranging from full-scale intersection redesign projects to parking regulation adjustments. These meetings can be in community rooms or school auditoriums, in agency or other offices, or on site to review specific traffic concerns. In addition, DOT notifies local elected officials of every large project and presents the project to the affected Community Board(s) before implementation begins.

DOT tailors its community outreach to suit the scope, size, complexity, and magnitude of potential impacts of each project. The outreach process is iterative, as DOT often adjusts and modifies projects based on community feedback. For some projects, as with NYC Plaza Program Capital projects, local community institutions may also be involved as maintenance partners and actively engage the wider community. The Department of Design and Construction (DDC) conducts community outreach for DOT street reconstruction Capital projects, often in coordination with DOT.

DOT Design Reviews and Analyses

Multiple DOT divisions review project designs throughout the planning and design phases of projects. They review designs not only to determine and mitigate negative impacts of projects, but also to identify opportunities to advance the agency's policy goals as enumerated in this Manual and in other DOT publications. Depending on the type of project, DOT divisions consider the following items (some of which overlap with the technical areas addressed by City Environmental Quality Review [CEQR] analyses):

- Safety
- Motor vehicle level of service
- Air quality
- Construction-phase impacts
- Bicycle and pedestrian mobility and access
- Accessibility that meets or exceeds ADA standards
- Network operations
- Parking utilization
- Goods delivery
- Transit access and operations
- Community character
- Public space opportunities
- Street network resiliency
- Stormwater capture and/or filtration
- Plantings
- Aesthetic appeal
- Temporary and permanent art placement
- Community priorities

Motor vehicle level of service (LOS) is a major consideration in developing a project design because of the importance of maintaining traffic flow to the city's economy. DOT therefore treats LOS as a priority.

DOT conducts design and operations analyses as required by federal, state, and local laws, rules, and regulations (including CEQR procedures); for information on the traffic forecasts that inform these analyses, see "Sustainable Street Design" on (2.0.1) in the Geometry chapter. DOT also conducts its analyses according to standard engineering practices and design guidelines and standards (including those described in this Manual). The level of review varies by project.

The public right-of-way (ROW) serves multiple types of users and functions. LOS must therefore always be balanced with other considerations such as safety and community character.

TABLE 1B

Level of Service	Average Delay in Seconds/Vehicle	
	Signalized Intersections	Unsignalized Intersections
A	≤ 10.0	≤ 10.0
B	> 10.0 and ≤ 20.0	> 10.0 and ≤ 15.0
C	> 20.0 and ≤ 35.0	> 15.0 and ≤ 25.0
D	> 35.0 and ≤ 55.0	> 25.0 and ≤ 35.0
E	> 55.0 and ≤ 80.0	> 35.0 and ≤ 50.0
F	> 80.0	> 50.0

Level of service (LOS) grades. Traffic engineers and planners use LOS analysis at signalized and unsignalized intersections to measure a project's impact on vehicular traffic. They analyze and compare intersections under existing and "post-build" conditions. Under the CEQR Manual, project designs that worsen LOS to below mid-D in a model require a full environmental impact statement and often mitigation.

Reviews by Other Entities

Other city agencies and public utilities regularly review project designs. The New York City Fire Department (FDNY) reviews any designs—whether Operational or Capital—that might affect its operations. The Department of Environmental Protection (DEP) and public utilities review each Capital project for potential impacts on their infrastructure and for opportunities to fold in enhancements to their infrastructure as part of the project.

Aside from FDNY and DEP, other city agencies review DOT projects as necessary. The Department of Parks and Recreation (DPR) reviews all projects that impact existing trees or propose new trees. The New York City Police Department (NYPD) reviews DOT projects that may have security implications. The Mayor's Office for People with Disabilities (MOPD) reviews Operational projects for consistency with ADA standards.

The Public Design Commission (PDC) reviews some Operational projects, depending on whether the design is intended for use in a fixed location during a period of more than one year. At several stages of design, PDC reviews all Capital projects that feature streetscape treatments whose usage is not standard, as indicated in this Manual. These reviews may require multiple submissions; see Design Development and Review Diagram for more information on PDC reviews and their interplay with typical design phases. The Landmarks Preservation Commission (LPC) reviews all Capital projects—and, under certain circumstances, Operational projects—in historic districts.

Major transportation projects (as defined by Local Law 90 of 2009) require notification to the affected community board(s) and council member(s) as well as consultation with multiple agencies per Section 19-101.2 of the New York City Administrative Code.

See Table 1A for more information on reviews of DOT projects by other entities.

Projects Initiated Outside DOT

While this chapter focuses on projects that originate at DOT, other entities—both public and private—can plan and design projects that affect the ROW. In such cases, DOT works so that the projects meet established criteria—particularly with regard to safety—and provides guidance on meeting other requirements and guidelines, such as those enumerated in CEQR and this Manual.

Project designs must conform to existing contexts or, if other, nearby projects are planned, to future conditions. For instance, a project site might be a segment of an official truck route or of a planned bicycle route, in which case DOT requests that sufficient lane widths be maintained to continue to accommodate trucks, or asks that bike lanes be incorporated into the design.

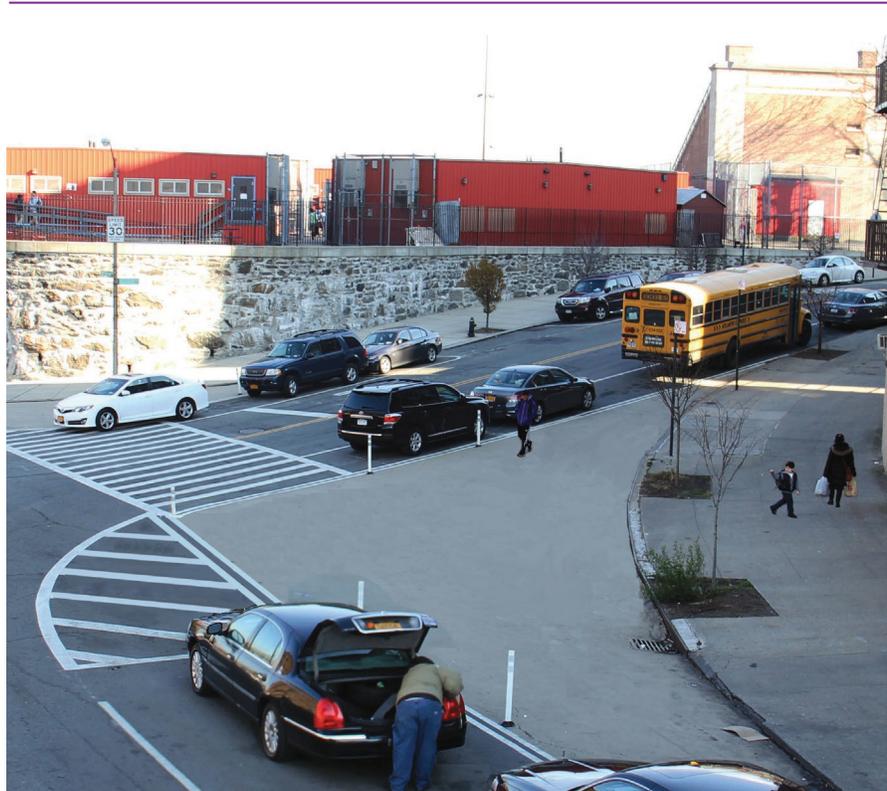
The New York City Economic Development Corporation (EDC) designs and builds many projects in the ROW. DOT collaborates with EDC on such projects.

Operational Projects

1.1.1 Origination

Operational projects can originate as a result of one or more of the following:

- A DOT citywide safety initiative, such as Safe Streets for Seniors, identifies an area in which to make safety enhancements based on crash data and other factors
- As is the case with the development of a Select Bus Service route and many other projects, a DOT unit leads a citywide or neighborhood-level planning process that identifies modifications
- Another city agency's project, such as a DCP area master plan, creates an opportunity for DOT to make cost-effective enhancements in the course of the project
- Elected officials provide federal or state grants or earmarks to fund a project
- Elected officials, the general public, business improvement districts, other agencies, or community boards request certain treatments or ask DOT to investigate conditions and issues



Several DOT programs use Operational projects to address safety issues and enhance the pedestrian environment: Ft. George Avenue, Manhattan

The New York City Charter mandates that each community board submit to the mayor and the appropriate borough president statements of its expense budget priorities for the fiscal year. This is one mechanism by which a community board can originate a DOT Operational project. Each community board must also submit its capital budget priorities. See Section 230 of the New York City Charter for more information.

1.1.2 Planning & Design

Scoping (1-4 Months)

DOT plans and designs most of its Operational projects rather than engaging a consultant to do so. When it begins to plan a project, agency staff conduct site visits, talk to stakeholders, and collect appropriate information, which typically includes some or all of the following:

- Crash data
- Traffic speeds
- Pedestrian, bicycle, and motor vehicle volumes
- Turning-movement counts
- Parking utilization
- Contextual information, particularly local land uses, parking regulations, bus/truck route information, etc.
- Inventory of existing infrastructure, such as fire hydrants, storm drains, manholes, sidewalks and curbs, curb cuts, etc.
- Relevant demographic data, such as high proportions of elderly New Yorkers and/or people with disabilities

Preliminary design concepts often emerge from initial data collection and information from stakeholders.

Design (6-12 Months)

DOT surveys the project site and creates a base map to establish existing conditions. Agency staff then design enhancements that meet project goals. DOT may collect additional information as the project is developed if other nearby intersections are determined to be in need of modification.

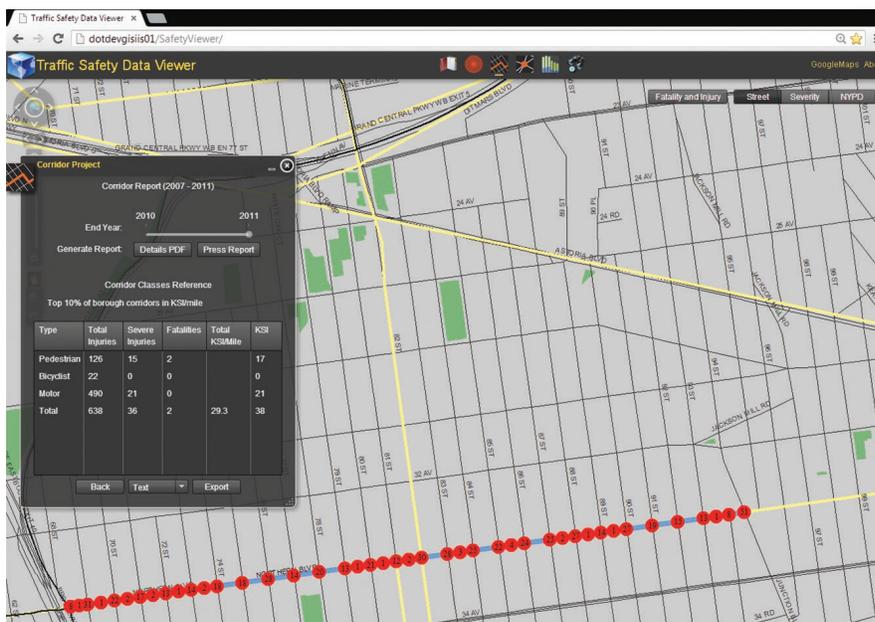
DOT consults with FDNY to address any concerns about the impact of the designs on its operations. The agency also presents the preliminary concepts to the relevant community board and elected officials for input. If the project is a major transportation project, as defined in Local Law 90 of 2009, DOT also consults with NYPD, the Department of Small Business Services, and the Mayor's Office for People with Disabilities. The Department of Sanitation (DSNY) is consulted when a design will clearly impact its operations. Designs for all works of art and structures intended for use in a fixed location for more than one year are subject to PDC review.

In some cases, if DOT contemplates making changes to signal timing or narrowing or removing lanes, the agency uses computer modelling to anticipate future conditions and adjust the plan or make improvements as needed.

1.1.3 Implementation (2-90 Days)

Once a project design is completed, the relevant DOT unit and/or outside contractors implement the project. The work season is usually between mid-April and mid-November.

DOT staff monitor and analyze crash data at the project site for up to three years after implementation. DOT also compares pre- and post-implementation motor vehicle, bicycle, and pedestrian data to determine what impact, if any, the project had on mobility. If issues arise out of this analysis, DOT may revisit the project to make modifications. DOT is increasingly measuring other project-performance indicators as well, such as economic and environmental impacts. Much of these data are available in DOT's annual Sustainable Streets Index report.



DOT's Traffic Safety Data Viewer displays and exports crash data details and summaries for corridors and intersections. Information from the Viewer informs project scoping

Capital Projects

1.2.1 Origination

DOT Capital projects are initiated in any of the following ways:

- DOT identifies structural issues with roadways, bulkheads, retaining walls, or step streets. (This Manual does not cover bridges, tunnels, and viaducts, which are managed by DOT's Bridges division)
- DOT divisions identify safety, mobility, resiliency, or other issues that need Capital enhancements
- DOT citywide initiative, such as the Safe Routes to Schools program, identifies areas in which to make enhancements. Such initiatives can also employ Operational work
- Another agency's project, such as a DEP infrastructure upgrade, creates an opportunity for DOT to incorporate enhancements to the ROW
- The general public or community boards make requests, sometimes obtaining funding from their elected officials or from grants
- Elected officials provide grants and earmarks to fund a project
- The mayor or other elected officials establish priorities to be fulfilled by DOT
- Non-profit organizations with community support apply to DOT's Plaza Program to have public spaces built in under-utilized ROW

1.2.2 Planning & Design

Scoping (3 Months-1 Year)

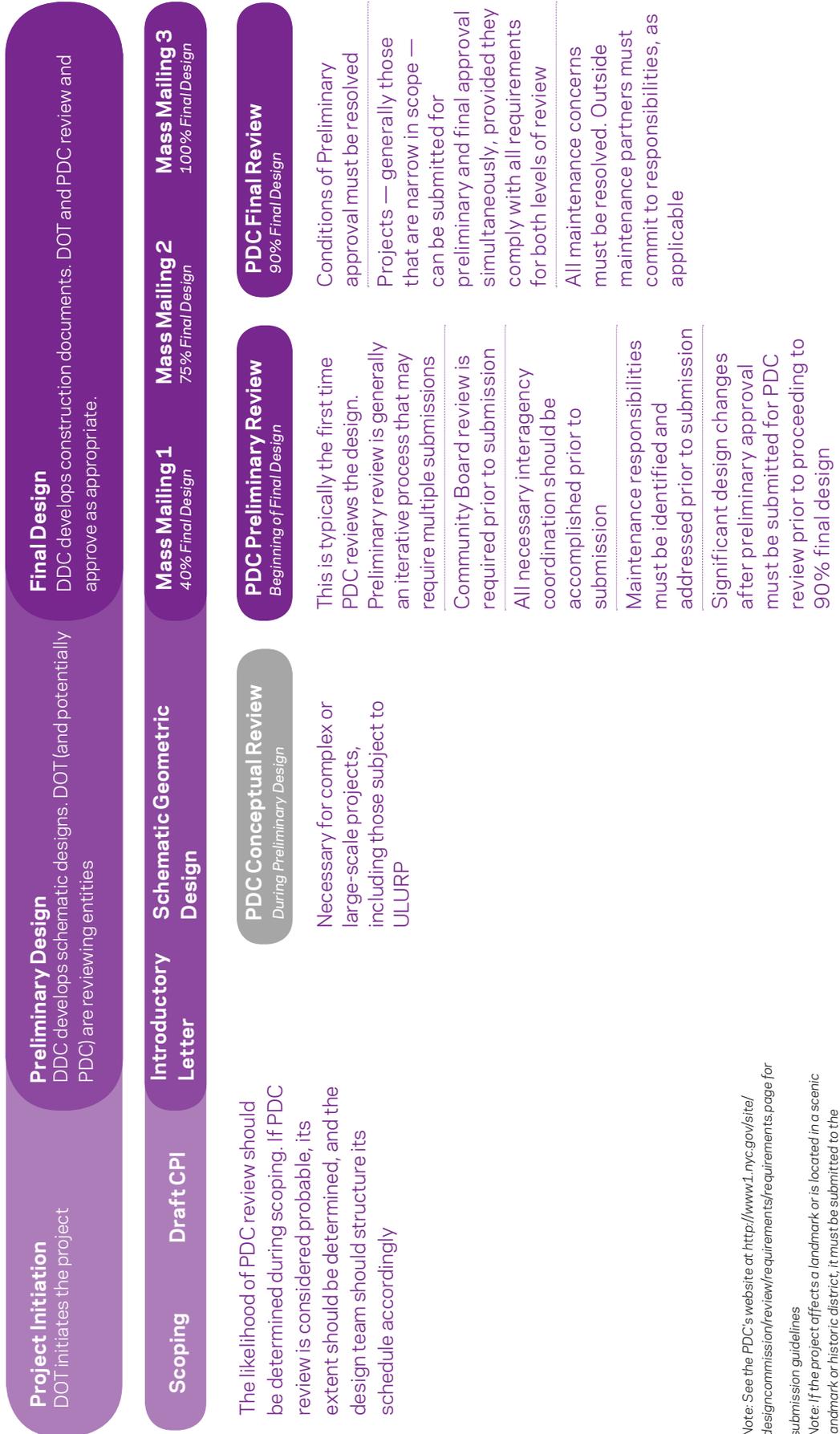
When a Capital project is proposed, DOT creates an initial project budget and adds the project to the agency's capital plan, which is updated three times per year. The Office of Management and Budget (OMB) must approve the addition of the project to DOT's capital plan before work can begin.

DOT begins research into the project location and visits the site with various agency divisions and other stakeholders to discuss the project scope. The agency then defines the project scope; this process generally takes several months to a year, depending on the project's size and complexity.

Special attention is given to whether the project is located in a flood-vulnerable area, according to the NYC Preliminary FEMA Flood Map (FEMA, 2015). Capital projects in Flood Hazard Zones may involve many additional resiliency considerations from planting selection and salt tolerance to concrete and asphalt thickness. As of December 2015, New York City is developing a set of resiliency-focused design principles for projects in flood-vulnerable areas.

Scoping also considers the impacts of climate change, including projected sea level rise and coastal storm surge. To ensure consistency in these measurements, all elevations are measured in accordance with the North American Vertical Datum of 1988 (NAVD88).

Design Development and Review Diagram



Note: See the PDC's website at <http://www1.nyc.gov/site/designcommission/review/requirements/requirements.page> for submission guidelines
 Note: If the project affects a landmark or is located in a scenic landmark or historic district, it must be submitted to the Landmarks Preservation Commission

If the project includes non-standard elements, such as distinctive materials or furnishings, OMB reviews and comments on the preliminary project scope and budget. The project is then transferred to the Department of Design and Construction (DDC) for detailed design and implementation (see “Capital Project Initiation”) using the Capital Project Initiation form (CPI). The CPI includes:

- Project Purpose/Justification
- Site plan
- Project Scope resulting from scoping process
- Cost Estimate and/or Available Funds
- Funding Sources summary
- Conceptual Design, if applicable
- Other relevant reference materials

Design (1–3 Years)

DDC usually awards a contract or task order to a consultant to design the project. For less complex projects, DDC utilizes in-house staff. DDC and the consultant conduct an analysis of existing conditions, and DDC simultaneously requests that all DOT divisions and other relevant agencies provide information that may have some bearing on the project—e.g., traffic analysis, crash data, environmental studies, etc.—and about other planned or ongoing work occurring in the project area or nearby.

The role of Department of Design and Construction (DDC) is to:

- Perform or contract for and oversee design work, procure construction services, and manage the construction process for DOT’s Capital roadway projects
- Coordinate among all stakeholders and manage outreach to communities affected by projects
- Manage Capital street work funded by different city agencies and coordinate Capital programs to minimize conflicts

Schematic Geometric Design

The consultant creates a schematic geometric design—a basic design showing curblines and markings—upon which all DOT divisions comment. Changes in geometry or to the number of moving lanes require further traffic analysis.

Other entities also review project designs. See Table 1.A and REVIEWS BY OTHER ENTITIES (1.0) for more information.

Final Design

Final Design begins the process of creating construction documents. Once DDC and its consultant incorporate all of DOT’s comments on the schematic geometric design, the consultant produces the final design in three stages: 40%, 75%, and 100% completion. DDC

circulates each set of drawings to all DOT divisions and to the relevant community boards and elected officials—as well as, in some cases, to other agencies and utilities—for their review. At 40% and 75% design, DOT collates and transmits its comments to DDC, and the consultant incorporates the comments into the next design phase. DDC holds “alignment” meetings with the private utilities during final design, as necessary, to avoid conflicts with their infrastructure and so that there is minimal disruption to the construction schedule.

Acquisition/ULURP as Necessary (1–2 Years)

Capital projects sometimes require the acquisition of private property (e.g., to build a new street or widen an existing street) or Uniform Land Use Review Procedure (ULURP) (e.g., to map a new street or change a street’s mapped width). Either action often necessitates completion of an environmental impact study. These processes will generally add another year or two to a project’s implementation timeline.

1.2.3 Construction (1–2 Years)

Once the design is complete, DDC requests a construction Certificate to Proceed (CP) from OMB and bids out the project to construction management (CM) firms and contractors. OMB typically issues the construction CP before the CMs and contractors respond. Construction can begin when the contract with the selected bidder is finalized with DDC.

Case Studies

Hoyt Avenue at RFK Bridge

Short-Term Project

Operational projects can be effective in saving both time and costs; the enhancements around Hoyt Avenue at the RFK Bridge were implemented quickly, despite some jurisdictional overlap with the MTA. Stakeholders played a formative role in identifying project goals at the outset, thereby avoiding delays during community board design review.



ABOVE: Columbus Triangle before the project

LEFT: One of the enhancements to the pedestrian experience was an expansion of the Columbus Triangle, which is adjacent to the Astoria Boulevard N/Q subway station and which accommodates passengers waiting for the M60 bus

Purpose

Enhance safety for all users, improve mobility, add landscaping, and create new public space in an area that sees thousands of pedestrians daily.

Location

Astoria, Queens, near where RFK Bridge (formerly the Triboro Bridge) intersects with neighborhood streets and around the Astoria Blvd elevated subway station.

Context

The land uses in the area are generally commercial, with some residential. The Astoria Blvd N/Q elevated subway station is a major pedestrian generator and destination, with many subway riders transferring to the M60 bus here to go to LaGuardia Airport.

The recent construction of a senior center at the intersection of 29th Street and Hoyt Avenue South increased the urgency of the project enhancements.

Project Origination

DOT's Queens Borough Commissioner's office co-hosted a New York Metropolitan Transportation Council (NYMTC) "Walkable Communities" workshop in late March 2009, focused on the project area. Safety was a major concern: the intersection of 31st Street, Hoyt Avenue, and Astoria Boulevard was the highest crash location in northwestern Queens, and, although pedestrian injuries in the area were low, participants nonetheless perceived this multi-segment intersection as dangerous.

Planning & Design

NYMTC's workshop served as an ideal start to the planning and design process: it included stakeholders who could provide local expertise (e.g., members of Queens CB 1, local business owners, and officers from the local precinct), and it generated a comprehensive list of problems that DOT could explore in developing proposed solutions.

DOT conducted site visits, collected data (travel times, vehicle volumes, vehicle turning movement counts, pedestrian and bike counts, crash data, curb regulations, and signal timing), took field measurements, analyzed traffic in computer models—in order to develop a comprehensive proposal. DOT met with MTA Bridges & Tunnels on site to discuss adding a new traffic signal and pedestrian crosswalk at 29th Street where the RFK Bridge exits into the neighborhood. DPR collaborated on planning the addition of trees to new and expanded traffic islands.

DOT then presented its findings and recommendations to elected officials as well as Queens CB 1's Transportation Committee and, as appropriate, made changes to the project design in response to feedback. Queens CB 1's full board then approved the design.



Participants at the NYMTC Walkable Communities workshop in March 2009

Implementation

In early December, 2009, DOT crews laid new concrete, resurfaced roadway segments, installed signals, markings, and signs, and changed signal timing. Some work was done on the MTA's RFK Bridge, and DPR personnel managed the landscaping. All work was completed in five months.

Results

The final design enhanced the pedestrian experience with curb extensions to reduce crossing distances, new and expanded pedestrian spaces, and more convenient transit connections. The project also included the following: new signal phasing and timing throughout the project area; greater travel lane clarity through new markings and signage through intersections; rush hour turn bans off 31st Street; and additional parking spaces on Hoyt Avenue South. New bicycle network connections were also added.

RFK Bridge operations were unaffected, and motor vehicle travel times through the main intersection improved.

West Houston Street

Capital Project

Originally conceived as a series of safety enhancements, the West Houston Street Capital project was expanded to include DEP and MTA sub-surface infrastructure upgrades. The end product was therefore considerably more robust and durable.



ABOVE: Before its reconstruction, West Houston Street provided minimal protection to crossing pedestrians

RIGHT: As part of the project, the medians were expanded to sustain plantings and to provide more protection to pedestrians



Purpose

Enhance safety, reduce motor vehicle congestion, and replace aging infrastructure.

Location

At its western end, Houston Street serves as the border between SoHo to the south and the West Village to the north. The project includes part of East Houston Street.

Context

Land uses in the corridor vary: there is a mixture of manufacturing with a commercial overlay at the western extent and mixed commercial and residential in the center. Parking is allowed along most of the street. The M21 bus runs along the entire length of Houston Street, and several subway lines stop along the street.

Project Origination

A number of factors led to the project. Houston Street, last rebuilt in the late 1950s, was in need of upgrading. The corridor's crash rate was of concern to DOT, with rear-end crashes involving vehicles turning left off Houston Street being the predominant type of crash. Finally, local elected officials provided funding for new plantings in the median to replace dead trees. DOT determined that widening the median would be necessary to support plantings, and this would also enhance pedestrian safety.



The project enhanced the median landscaping and provided seating where appropriate

Planning & Design

The Capital Project Initiation form (CPI) was drafted in November 2002. DOT and DDC met with Transportation Committees of Community Boards 2 and 3 several times between 2001 and 2004 to present plans for feedback. CB2 passed a resolution in support of the project in 2004.

Several agencies were involved in the project besides DOT: DDC (engineering, design, and construction); DEP (water and sewer); DPR (new park and trees and other plantings); LPC (review); PDC (review); and MTA New York City Transit, which modified portions of Houston Street between Elizabeth Street and Bowery to facilitate a new subway fan plant. DOT transferred necessary funds to the MTA so the work could be performed in advance of the roadway project.

During the planning process, DEP decided to upgrade its water and sewer lines, thereby transforming the project into a full reconstruction. Also, utility companies decided to make enhancements, adding to the project's complexity and cost.

The project design reduced crossing distances with wider sidewalks, wider medians modeled on the Broadway malls, curb extensions, bollards, and pedestrian safety islands. The widened medians made possible the addition of left-turn bays and benches. One eastbound travel lane was removed between Avenue of the Americas and W. Broadway/LaGuardia. Also, between Avenue of the Americas and Varick Street, a parking lane was removed to widen the narrow south sidewalk.

Implementation

Construction started August 2005 and was completed in June 2009.

Additional water and sewer main work, funded by DEP, increased the cost of the project from \$16,067,439 to \$31,099,118 and contributed to a longer construction timeline.

Results

Crashes involving injuries within the project area dropped by 24%. Motor vehicle travel times in westbound lanes dropped dramatically during the weekday afternoon peak; travel times in eastbound lanes increased slightly during the weekday afternoon peak, potentially due to ongoing construction on East Houston.

Amenities included a new park at Bedford Triangle, benches on the medians, extensive landscaping and planting of 74 trees throughout the project area, Davit light poles, pigmented-concrete sidewalks, and granite curbs.

Willoughby Plaza

Capital Project

Willoughby Plaza was originally built as an Operational project. This allowed local businesses to experience the street segment as a plaza and to observe the project's impacts in real time. Once it was clear that the change benefitted the area, DOT reconstructed the site to make it permanent.



ABOVE: Willoughby Plaza after the implementation of Operational enhancements

LEFT: Willoughby Plaza post-Capital construction

Purpose

Enhance pedestrian safety, provide more open space and pedestrian and bicyclist amenities, and address illegal parking on Willoughby Street.

Location

The project site is located in the heart of Downtown Brooklyn, a bustling, mixed-use neighborhood and New York City's third-largest central business district. The project created a permanent plaza on Willoughby Street between the Adams Street East Service Road and Pearl Street, plus about 120 feet along the service road.

Context

The surrounding area is characterized primarily by medium- to high-density commercial and institutional uses and street-level retail. On the north side of Willoughby Street, two- to 13-story buildings house mostly government and educational uses, while on the south side, lower-rise buildings house retail and small offices. C5-4 and C6-4.5 zoning regulations surround the site.

Project Origination

In 2004 EDC and DCP drafted the Downtown Revitalization Plan, which recommends a series of zoning map text changes, new public open spaces, and other actions. This set the stage for more intense development in the area, which led to significantly increased pedestrian volumes on Willoughby Street. DOT created an interim plaza at this site in spring 2006. Willoughby Plaza eventually became a Capital project and was reconstructed in permanent materials. The project budget was \$1.8 million.

Planning & Design

Before and after creating the interim plaza on this segment of Willoughby, DOT conducted extensive community outreach and technical analyses, including an Environmental Assessment Study (EAS). This work included a study of the impacts of the closure on traffic operations, pedestrian volumes, and deliveries. Since DOT conducted an EAS for the Operational project, the Capital project did not require an EAS.

The Capital Project Initiation form (CPI) for the permanent plaza was completed in late July 2007. Entities involved in the project, besides DOT, include DDC (engineering, design, and construction), PDC (review), and the MetroTech Business Improvement District (maintenance partner).

DOT engaged local stakeholders throughout the design process via MetroTech BID, which maintains and programs the plaza. The BID was involved in all aspects of the project design. DOT also worked directly with the adjacent property owner.

The design buffered the plaza from the Adams Street East Access Road with a large, contiguous planter. Also, new trees mirrored a line of existing trees in the heart of the plaza. Finally, the design included nearly 200 linear feet of fixed seating, plus opportunity for nearly 200 movable chairs.

The existence of a significant amount of underground vaults and utilities prevented the incorporation of “green” drainage infrastructure into the design.



Willoughby Street before the Operational enhancements

Implementation

Construction began in fall 2011 and was completed in spring 2013.

Results

Administered by the MetroTech BID, Willoughby Plaza provides public seating, concessions, and landscaping and cleaning services for pedestrians visiting the nearby restaurant and retail locations, several of which have opened since the plaza's completion. In addition to acting as a gathering space, the plaza serves as a venue for year-round programming for the community, where activities regularly attract upwards of 100 participants. Events include family-friendly concerts, seasonal activities, and the popular Downtown Brooklyn Nights series, featuring live music, dance lessons, and movies screenings.