AECOM

Regional Value Capture Study

Funding Strategy Report

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Quality information

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Revision History

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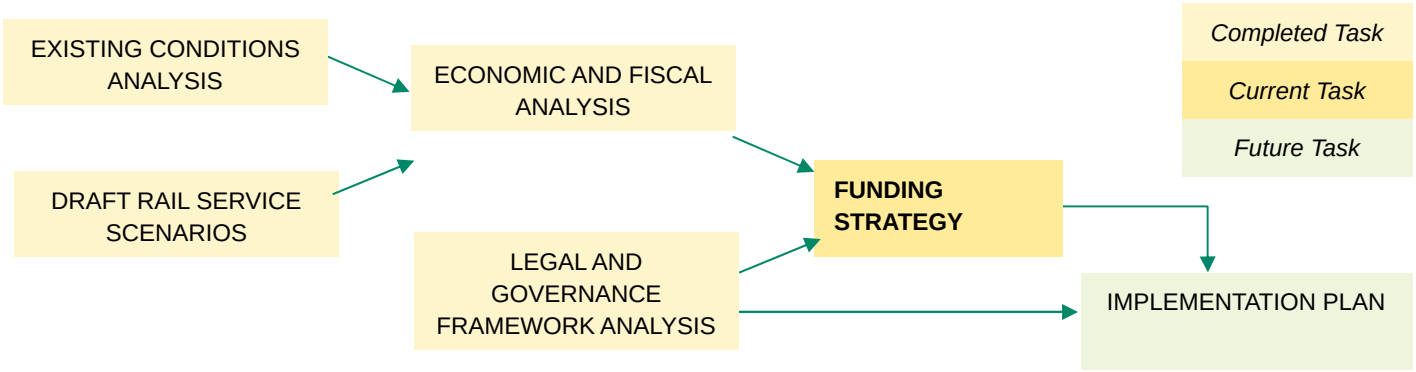
1. Introduction

The Western Connecticut Council of Governments (WestCOG) commissioned the AECOM team to conduct a Regional Value Capture Study for the New Canaan and Danbury Lines. The study is intended to identify strategies for accelerating improvements to the New Canaan and Danbury Lines, including evaluating the potential for value capture and other funding sources to contribute to needed investments. Value capture mechanisms (such as tax increment financing) are public financing tools that recoup some of the value generated by public infrastructure investments to help pay for those investments.

This Funding Strategy Report describes strategies for funding and financing improvements to the New Canaan and Danbury Lines. Given that the improvements are currently expected to take place over a 25- to 50-year period, the report focuses on value capture and other strategies that WestCOG and its local partners can implement to build momentum and support for state and federal investment in the corridor. This includes funding local infrastructure and amenities to support transit-oriented development (TOD), housing, and economic development in the short-term, as well as potential local contributions to larger rail investments in the longer-term. In addition to describing an overall funding strategy, this report also includes planning level, rough order of magnitude (ROM) estimates of the revenues that local governments may be able to generate through three specific value capture tools: tax increment financing (TIF), special assessments, and joint development or other public private partnerships (P3).

Note that this report builds on the previous existing conditions and transit scenarios analyses conducted as part of the Regional Value Capture Study. This analysis will inform value capture implementation plan in the next phase of work. **Figure 1** shows how this research fits into the overall project workflow.

Figure 1: Regional Value Capture Study Workflow



Summary of Key Findings

This section briefly summarizes key findings from this report.

Rail and TOD-Supportive Investments in the Study Area

Significant investment in the New Canaan and Danbury Lines is required both to maintain a state of good repair, and to enhance service. **Table 1** summarizes estimated, rough order of magnitude (ROM) capital and operating costs for three potential scenarios:

- Baseline, which includes state of good repair (SOGR) investments to maintain current levels of service (Scenario 1);
- “TIME FOR CT” Vision, which is a strategic plan for rail service, infrastructure, and fleet investments envisioned in the C37 NEC Commission vision by the state (Scenario 2);
- WestCOG Vision, which include extending the Danbury Line to New Milford and electrifying the line (Scenario 3).

The scenarios build on each other meaning the benefits of Scenario 3 cannot be realized without the investments in both Scenario 1 and 2. As such, it is important to note that the costs are additive.

The scenarios represent major rail investments. Scenario 1 costs are ongoing maintenance up to 2075. Implementing Scenarios 1 and 2 would have a total cost of $2.7 billion up to 2050. Scenario 3 is estimated to require an additional $1.5 billion with $0.6 billion from Scenario 1 totaling to $2.1 billion from 2050-2075. **Table 1** summarizes the transportation and economic development elements for the Study Area.

Table 1 :Summary of Key Elements of Transit Service and Economic Development Scenarios

Scenario	Transportation	Economic Development	Timeframe	ROM Transportation Capital Cost Estimate (2024 Dollars)	ROM Transportation Operating Cost Estimate* (2024 Dollars)
Baseline (S1)	Current conditions for rail and transit service continue, without any substantive capital or operations improvements, aside from general maintenance.	Level of development based on historic trends and development pipeline. • Total residential potential: 10,300 units • Total commercial potential: 3.7M SF	2075	Mainline: $0 Branch line: $1.1 billion	Branch line: $1.6 billion (*$32 million annually*)
Full "TIME FOR CT" Vision (S2)	Focuses on realizing service improvements identified by the Northeast Corridor Commission C37 document and the TIME FOR CT plans. The projects include New Haven Main Line projects	Development capacity based on redevelopment potential analysis, station area plans, and observed patterns of recent developments. • Additional residential potential: 9,800 units • Additional commercial potential: 8.6M SF	2050	Mainline: $1.9 billion Branch line: $134 million	Branch line: $33 million (*up to $3 million additional annually*)
WestCOG Vision (S3)	Focuses on realizing regional aspirations for the rail network by extending Danbury Line service to New Milford as well as improving railroad operations and decreasing emissions by converting to electrification.	Allocates higher development along the Danbury line and extension. • Additional residential potential: 14,600 units • Additional commercial potential: 10.7M SF	2075	Mainline: $0 Branch line: $1.5 billion	Branch line: $246 million (*$3 million-$17 million additional annually*)
TOTAL COSTS THROUGH 2075				Mainline: $1.9 billion Branch line: $2.8 billion	Branch line: $1.9 billion

Note: All costs are additive.
*Operating costs estimated for branch line service only. Operating costs are estimated to increase as capital improvements are made and are assumed to increase midway for each time period (2030-2050 and 2050-2075)

Realizing these levels of development and the benefits of improved transit service requires investments in local infrastructure, housing, and other improvements that would build demand for improved transit, enable local economic development, and support TOD. Discussions with local municipalities have highlighted examples of local needs which include:

- Local infrastructure, including expanding sewer and water capacity and addressing stormwater management to enable higher density development, and improving sidewalks, streetscapes, bike infrastructure, and local transit (e.g., bus) to enhance quality of life in the station areas and better connect new and existing residents, workers, and visitors with the rail stations.
- Remediating brownfields and other contaminated sites.
- Reconfiguring intersections and making other improvements to mitigate traffic congestion and other impacts of growth.

- Providing a mix of housing types to a range of household income levels.

Overall Funding Strategy

Investments of the scale envisioned on the New Canaan and Danbury Lines have typically been funded through a suite of funding sources, including a mix of federal, state, and – in some states, though not historically in Connecticut – local contributions. Many of these sources are also used to fund local transit, housing, and infrastructure needs. **Table 2** summarizes how different sources may contribute to the types of investments needed to support TOD and rail ridership in the corridor. Given the long-term nature of the rail enhancements, short-term investments in local infrastructure and other needs can help support TOD, build ridership demand, and establish the case for state and federal investment in rail improvements.

In the longer term, a coalition of local actors could attract state and federal investment in the Danbury and New Canaan Lines, including potentially leveraging value capture to make a local contribution towards any federal grant match requirements.

Table 2: Study Area Station Areas Funding Needs and Potential Sources.

	SOURCES							
	VALUE CAPTURE				Local CIPs	State Grants	State Bond Funding	Federal Grants
USES	TIF	Special Assessment	P3/ Joint Development	Developer Contributions				
Local Infrastructure	◐	◐	◐	◐	◐	◐	◐	◐
Mix of Housing Types and Affordability Levels				◐		◐	◐	◐
Bus Transit Connections		◐				◐	◐	◐
Environmental Remediation	◐			◐		◐	◐	◐
Rail Enhancements	●	●	●	●	●	◐	◐	◐
● Short-Term								
● Medium- to Long-Term								

Source: AECOM, FHI Studio (now IMEG)

Value Capture Revenue Potential

Based on the need for short-term local investments in the station areas, and the long-term nature of the transit improvements, the value capture analysis segmented tax increment financing (TIF) and special assessment revenues into two categories, as follows:

- **Local Investment Potential**: Estimates TIF and special assessment revenues associated with the Baseline development scenario (Scenario 1). These revenues assume an ongoing level of residential and commercial development based on historic trends and the current development pipeline and could be used to address priorities for the station areas and surrounding neighborhoods identified in municipal Plan of Conservation and Development (POCD) documents and TOD plans.
- **Transit Investment Potential**: Estimates TIF and special assessment revenues associated with an expanded level of transit service – including implementation of both Scenario 2 (TIME FOR CT) by 2050 and Scenario 3 (WestCOG vision) by 2075 – and associated increased rate of residential and commercial development. These funds could be used towards a local match for federal or state grants for longer-term funding requirements. This

would likely require coordinating implementation and funding administration through a state and regional partnership.

Table 3 summarizes the potential revenues that could be raised from TIF and special assessment districts, assuming both are implemented for all properties within half-mile of the stations and based on the level of economic development shown in Table 1. TIF could generate as much as $240 million over 50 years based on the baseline development (i.e. the local investment potential), about $151 million of which is from station areas exclusively on the New Canaan and Danbury branch lines. TIF leverages incremental revenues raised from the existing property tax rate as new development occurs and does not involve levying new taxes or fees. At the local level, TIF revenues could be used on a pay-as-you-go basis to fund local economic development activities, support local bond issuances, or reimburse developers for project costs as part of credit enhancement agreement.

In addition, TIF could generate an estimated $213 million through 2075 with development associated with Scenarios 2 and 3 (the transit investment potential). In turn, this could contribute as much as 3% of the capital costs of the new transportation investment up to 2050 (Scenario 2) and 5% of the capital costs up to 2075 (Scenario 3). If revenue from development only in branch line stations is considered, the TIF revenue through 2075 is estimated at $132 million which is about 4.5% of the estimated capital costs for rail improvements only for the branch lines. These shares assume contribution only towards the new investment in Scenarios 2 and 3, and not maintenance/SOGR costs in Scenario 1. For a major transit investment, TIF revenues could contribute to debt service for state-issued bonds or other loans (e.g., TIFIA/RRIF) secured by multiple funding sources.

Special assessments could raise as much as $298 million over fifty years for local investments (Scenario 1), and an additional $120 million for transit improvements (Scenarios 2 and 3). About two-thirds of this revenue is estimated from stations areas exclusively on the branch lines. Connecticut law requires that special assessment revenues are be used for new service or area upkeep and improvements. Based on state requirements and examples from other states, special tax revenues could be used for operating costs for new or improved rail service, related station area services like local shuttles, or other local economic development initiatives. Special assessment revenues have also been used in Connecticut as a backstop for TIF bonds (i.e., to contribute to debt service in years when TIF revenues fall short of required debt service payments).

Note that these revenues estimates are based on the scenarios and assumptions described in this report. The actual revenue raised will depend on rates and tax structures approved by individual municipalities, local market conditions, and other factors.

Table 3: Revenue Summary Estimates by Value Capture Mechanism

Value Capture Mechanism	Local Investment Potential			Transit Investment Potential		
	2030-2050	2050-2075	Total: 2030-75	2030-2050	2050-2075	Total: 2030-75
TIF-All Station Areas	$162.4 million	$78.3 million	$240.7 million	$102.9 million	$110.8 million	$213.7 million
TIF-Branch Line Station Areas	$99.2 million	$52.1 million	$151.3 million	$61.1 million	$71.2 million	$132.3 million
Special Assessment-All Station Areas	$173.4 million	$124.9 million	$298.3 million	$46.6 million	$73.6 million	$120.2 million
Special Assessment-Branch Line Station Areas	$119.9 million	$84.9 million	$204.8 million	$31 million	$50.3 million	$81.3 million

Note: Revenue estimate from TIF and special assessment are independent estimates for respective value capture mechanisms.

In addition to TIF and special assessment districts, the analysis also considered two case studies of Public Private Partnership (P3). The examples demonstrate the potential for municipalities to facilitate infill development and generate fiscal and economic benefit around the stations.

Overall, the value capture strategies assessed in this report would help address short-term station area needs, facilitate TOD, and build towards the long-term transit vision for the New Canaan and Danbury Lines. Many competitive federal grants for transit include requirements for local, transit-supportive plans, land use policies, and investments. Value capture mechanisms can help address these requirements by providing funding for local infrastructure improvements, and – in the long term – potentially contribute to local match requirements for federal funding.

Report Organization

The remainder of this report describes the analysis and findings in more detail. It is organized in the following sections:

Rail Transit and TOD-Supportive Infrastructure Investments (Section 2): Provides details of capital and operating cost estimates for transportation improvements.

Rail Transit Funding Strategy (Section 3): Provides an overview of different funding sources and associated opportunities and challenges for each funding source.

Value Capture Revenue Potential (Section 4): Provides opportunities and challenges for different value capture mechanisms and ROM estimates from three selected mechanisms.

2. Rail Transit and TOD-Supportive Infrastructure Investments

Significant investment in the New Canaan and Danbury Lines is required both to maintain a state of good repair, and to enhance service. This section summarizes estimated, rough order of magnitude (ROM) capital and operating costs for three potential scenarios: Baseline (Scenario 1); Full “TIME FOR CT” Vision (Scenario 2); and the WestCOG Vision (Scenario 3). For more information on each scenario, see the “Draft Rail Services Scenario” report prepared for this study (dated March 29, 2024). Note that since the previous Rail Services Scenario report was prepared, the capital costs have been updated to further refine the project list and reflect the best available information on anticipated costs.

While rail transit costs are the focus of this study, local infrastructure improvements are critical to maximizing the value of any investment in rail. Local improvements will incrementally improve the station areas and lead to further opportunities for economic development and value creation. Following the summary of rail capital and operating costs, this section concludes with a discussion of the role of local infrastructure in maximizing the benefits of transit investments.

Estimated Rail Transit Capital Costs

Capital costs are estimated for each of the three scenarios and are summarized in **Table 4** below. These estimates are rough order magnitude estimates that have been revised from the Draft Rail Services Scenarios report to better reflect the likely project list and anticipated costs. The projects and costs reflected below are based on publicly available sources including the Northeast Corridor’s C37 Plan, the 2023 – 2027 CTDOT Capital Plan, and other publicly available studies. Costs in **Table 4** represent order of magnitude costs and are intended to reflect the range of investment. All costs are in 2024 dollars and are rounded to the nearest million.

- **Scenario 1: Baseline** (**estimated cost $1.1 billion**) assumes continued maintenance/state-of-good-repair (SOGR) investment on the Danbury and New Canaan Lines from now until 2075. Scenario 1 also includes investment in a new rail fleet for the Danbury Line, on the assumption that these coaches will need to be replaced within that timeframe.[12]
- **Scenario 2: TIME for CT vision (estimated cost $2.1 billion)** includes capital investments part of the TIME for CT Vision. Most of these improvements would occur on the Main Line but they are located in the study area . The improvements were taken from the publicly available sources such as the 2023 – 2027 CTDOT Capital Plan, Northeast Corridor Commission’s C37 plan, and public studies. Based on current plans, Scenario 2 has a buildout timeframe of 2050.
- **Scenario 3: WestCOG vision (estimated cost $1.5 billion)** represents the WestCOG Vision with projects beyond the scope of TIME FOR CT and was developed in coordination with WestCOG. Scenario 3 is assumed to start in 2050 after the completion of Scenario 2, with an anticipated buildout year of 2075. All improvements in Scenario 3 are to the Danbury and New Canaan Lines.

It is important to note that these costs are additive. The scenarios build on each other, and as such, the benefits of Scenario 3 cannot be realized without the investments in both Scenario 1 and 2.

[2] Fleet replacement costs were estimated based on Alstom order price and estimated rail cars for Danbury Line.

Table 4: Transit Service Improvement Projects and Associated ROM Costs through 2075 for Study Area

Project	Total Cost[1]	Branch Projects	Mainline & Branch Projects	Source
Scenario 1: Baseline Subtotal	**$1,133,000,000**	**$1,133,000,000**	**$0**	
Maintenance/SOGR	$991,000,000	$991,000,000	$0	23 - 27 Capital Plan
Rail Fleet Replacement	$142,000,000	$142,000,000	$0	MNR Schedule & Alstom Order Cost[2]
Scenario 2: TIME FOR CT Vision Subtotal	**$2,129,000,000**	**$134,000,000**	**$1,995,000,000**	
Stations	$332,000,000	$0	$332,000,000	C37 & 23 - 27 Capital Plan
Bridges	$1,015,000,000	$0	1,015,000,000	C37
Traction Power	$167,000,000	$0	$167,000,000	23 - 27 Capital Plan
Shops & Yards	$119,000,000	$42,000,000	$77,000,000	C37
Signals & Communication	$84,000,000	$40,000,000	$44,000,000	23 - 27 Capital Plan
Track Improvements	$52,000,000	$52,000,000	$0	C37
TIME Program	$360,000,000	$0	$360,000,000	23 - 27 Capital Plan
Scenario 3: WestCOG Vision Subtotal	**$1,455,000,000**	**$1,455,000,000**	**$0**	
Danbury Line Electrification & 60 MPH Speed Upgrades	$558,000,000	$558,000,000	$0	Page 71 of 2013 Study[3]
Danbury Line Double Tracking	$170,000,000	$170,000,000	$0	C37
New Milford Extension	$727,000,000	$727,000,000	$0	Page 71 of 2013 Study
Scenarios 1-3 Total	**$4,717,000,000**	**$2,722,000,000**	**$1,995,000,000**	

[1] Costs rounded to the nearest million and adjusted to 2024 dollars.

[2] Fleet replacement costs informed by Alstom order with the understanding that cost per car would be of the same rough order magnitude.

[3] 2013 costs inflation adjusted to the 2024 dollars

All projects listed above are in the study area and benefit rail services within the service area. Some of these projects are specific to branch line services and some benefit both NHL Mainline and branch line services. Project costs are broken out into those that benefit only or primarily branch line services (see “Branch Projects” column) and those that benefit both Mainline and branch services (see “Mainline & Branch Projects” column).

Estimated Rail Operating Costs

Operating costs are estimated for each scenario below. Unlike the capital costs, the operating costs are not additive as they reflect the estimated operating cost of service after the capital investments required to enable each scenario. For example, the Scenario 3 operating cost estimate includes the service increases associated with both Scenario 2 and Scenario 3. Dollar figures have been rounded to the nearest million to reflect the rough order of magnitude nature of the estimates.

Table 5: Annual Operating Cost Estimates for Scenarios, 2024 dollars.

Scenario	Danbury Line Annual Operating Cost Estimate	New Canaan Line Annual Operating Cost Estimate	Total Annual Operating Cost Estimate
Scenario 1: Baseline	$24,000,000	$8,000,000	$32,000,000
Scenario 2: TIME FOR CT Vision	$26,000,000	$9,000,000	$35,000,000
Scenario 3: WestCOG Vision	$36,000,000	$13,000,000	$49,000,000

Source: CT State Rail Plan 2022 – 2026, 2023 Eastern CT Rail and Transit Feasibility Study
Operating costs are cumulative as they reflect the estimated operating cost of service after the capital investments required to enable each package. Therefore, the Transit Improvement Package costs are inclusive of the SOGR costs
Costs are expressed in 2024 dollars.

Maximizing the Benefits of Rail Investments

The benefits of the rail investments for the Study Area municipalities range from service reliability in Scenario 1, to service extension in Scenario 3. In particular:

- Scenario 1 investments allow for continued service reliability and maintenance for existing level of service.
- Scenario 2 investments in service, infrastructure, and fleet/facilities would enable modern, accessible, faster rail service; increase the system's resilience to disruption, resulting in improved reliability; and improve overall access and mobility to drive economic growth.
- Scenario 3 investments would extend the service to New Milford, provide GHG benefits with the electrification of the Danbury Line, and include additional trips on both lines.

Investments in local infrastructure, housing, and other improvements would maximize the benefits of the transit investment by building demand for improved rail transit, enabling local economic development, and supporting TOD. From discussions with local municipalities, it is clear that significant investment in local infrastructure is required to support increased density in many parts of the study area. For example, local needs include expanding sewer and water capacity, addressing stormwater management, and in some cases remediating brownfields to enable redevelopment. Communities have also identified a need for improved amenities such as sidewalks, streetscapes, bike infrastructure, and local transit (e.g., bus) to enhance quality of life in the station areas and better connect new and existing residents, workers, and visitors with the rail stations. New growth also comes with a need to reconfigure intersections and make other improvements to mitigate traffic congestion. Specific infrastructure needs identified in the towns' respective TOD plans are summarized below.

- Bethel Forward Plan identifies need for new sidewalks and intersection improvements. The plan also recommends exceptions to the 3-story height limit for projects that provide public amenities incentivizing public realm improvements.
- Branchville TOD Plan identifies the need of provision of bus shelters, sidewalk network improvements, sewer expansion into Branchville, and expansion of water main service to West Branchville Road as major infrastructure needs for enabling TOD planning.
- Downtown Danbury TOD Study identifies need for sidewalk improvements, and streetscape improvements. The City is currently evaluating the sewer infrastructure capacity for accommodating higher densities as recommended in the downtown TOD plan. Additionally, the City was awarded federal funds in 2024 to design the proposed move of the HARTransit Pulse Point station closer to the train station to center rail and bus service in the downtown5.

[5] Michael Gagne, "Danbury Gets $1.6M in Federal Funds to Design Long-Shelved Transit Center to Connect Buses, Trains," News-Times, April 22, 2024, https://www.newstimes.com/local/article/danbury-receives-federal-funding-design-transit-19408751.php

- The Glenbrook Springdale TOD Feasibility Study identified need for improved pedestrian and bike access, lighting for Branchville and Springdale stations. The study also recognized the need to reconfigure entry and exits for Springdale station to improve traffic flow around the station area.
- The Route 7 Land Use Study identified Cannondale station as a node requiring sidewalk improvements. The Study also recognized the need for sidewalk improvements for bike and ped connections for Wilton, Cannondale, and Branchville station areas and recommended detailed study to extend water and sewer service to Branchville to facilitate infill development.

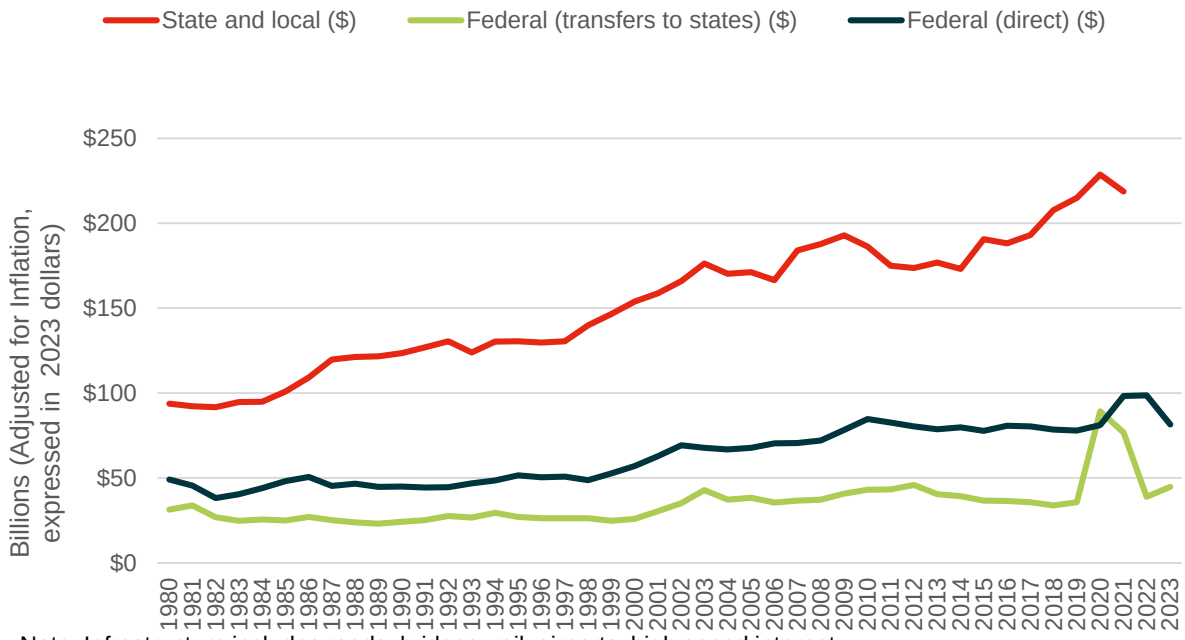
While not the focus of this study, investments in local infrastructure and amenities is a critical part of a value capture strategy: local improvements can help attract and enable new TOD, which in turn generates new transit ridership and property value; a portion of the property value can then be captured to help pay for local infrastructure needs and/or transit improvements. As discussed in the next section, investing in local infrastructure and supporting new TOD is also an important way that municipalities can build momentum and support for federal and state investments to improve rail service on the Danbury and New Canaan Lines.

3. Rail Transit Funding Strategy

Transportation projects are major capital investments that typically require a mix of federal, state, and local funding sources. While the federal government contributes significant funds toward total infrastructure spending, state and local actors have historically contributed the bulk of infrastructure funding in the U.S. (see **Figure 2**) and play a critical role in accessing federal dollars. Many federal funding programs require a local match from state or regional entities – for example, in many programs the federal government may fund up to 80% of a project's cost, and state and local partners must commit to funding 20% of the cost to move the project forward. In addition to providing a local match, state and local actors can also help attract federal funding by implementing supportive actions that make their transportation projects more competitive for a limited pool of discretionary federal resources. For example, these supportive actions may include local transit-supportive regulations (e.g., lower parking requirements), related land use policies (e.g., higher density mixed-use zoning), and inventorying housing, parking, and pedestrian facilities conditions. Any funding strategy seeking to implement the long-term vision of planned transportation improvements in the study area must encompass funding and actions at the federal, state and local levels.

This section of the report focuses on the opportunities and challenges that WestCOG and its local partners may face in attracting federal and state sources to fund long-term transit improvements. Given the long-term nature of the transportation vision, specific federal funding programs are described for illustrative purposes as the nature and priorities of successive federal budget priorities shift over time. The section concludes with a summary of strategies that local actors can pursue to unlock potential funding mechanisms at the federal, state, and local level.

Figure 2: Annual Infrastructure Spending by Source



Note: Infrastructure includes roads, bridges, rail, airports, high speed internet.

Source: 2024 Current State of the Union: US Transportation & Infrastructure

Federal Funding

Historically, federal sources comprise a significant percentage of funding for rail transit capital projects but funds available for operating costs are very restrictive. Capital project funding can be in the form of a grant or loan financing.

Grant programs offered through the United States Department of Transportation (USDOT) are administered through the Federal Railroad Administration (FRA), Federal Highway Administration (FHA), and Federal Transit Administration

(FTA). Grants do not require repayment by the grantee and are awarded on a competitive basis with projects evaluated for various criteria depending on the specific grant type. For example, the Rebuilding American Infrastructure with Sustainability and Equity (RAISE) Grant Program evaluates each projects' merit based on eight criteria including economic competitiveness, quality of life, environmental sustainability, mobility and community connectivity, safety improvements, state of good repair, partnership and collaboration, and innovation.

Two prominent loan programs relevant to rail transit improvements include the Transportation Infrastructure Financing and Innovation Act (TIFIA) and Railroad Rehabilitation & Improvement Financing (RRIF) loans. These programs may offer financing at rates that are lower than public agencies can typically access through the bond market and allow more flexible repayment terms. One of the benefits of the loan programs compared to the grant programs is that funding is based solely on eligibility; they are not competitively awarded like the grant programs.

Recently the federal government has sought to encourage transit-oriented development (TOD) projects through programs like TIFIA and RRIF and has made these development projects eligible for financing. As this represents a recent change in policy, few projects have taken advantage and successfully navigated the loan process. Accessing this funding in the short-term for smaller improvements may pose a challenge but could be part of a comprehensive strategy in the long-term, as discussed below.

Opportunities

Federal grant programs can contribute meaningful funds toward large-scale capital projects For example, CTDOT was awarded up to $119,320,000 by the Federal Railroad Administration (FRA) for the DEVON Bridge Interim Repairs plus $245 million for replacement project which represents 80% of the total project's cost ($149,150,000).[6] CTDOT has enjoyed significant success recently in obtaining federal funding like the above grant to advance its rail capital program. The DEVON Bridge Interim Repairs grant was issued as part of the Federal-State Partnership for Intercity Passenger Rail (FSP) Grant Program. Amtrak was also awarded $827,000,000 to replace the Shore Line East Connecticut River Bridge, bringing the total of FSP-NEC grant funding selection in Connecticut for Fiscal Year 2022 – 2023 alone to $2 billion.[7]

There are opportunities for local actors like municipalities, regional agencies, and private developers to both contribute directly, and to make projects more attractive for federal funding. Federal funding also often requires significant match funds. As described above, CTDOT has been very successful in leveraging state funding to obtain federal funds for large scale capital projects. There are examples from other states where cities or regional entities have contributed to larger scale, federally funded projects, although this has not historically been the practice in Connecticut. In many cases, value capture is a key component of the locally funded contribution. For example, for the South Shore Double Track Project connecting South Bend, IN to Chicago, local contributions through value capture and general fund bond proceeds accounted for 13% of the total project costs.[8] Similarly, for the Dulles Corridor Metrorail Project, about 20% of the project costs came from special assessment districts from Fairfax and Loudon Counties.[9]

In addition to contributing funding directly, local governments can also support federal funding applications by implementing transit-friendly policies like affordable housing, transit-supportive zoning, TOD, parking, and other local infrastructure projects. All of these policies will contribute to ridership increase estimates which competitive grant programs will evaluate to determine which projects will receive federal funding. The extent to which these policies have been explored/implemented is also part of the evaluation criteria for federal funding programs. For example, the FTA's Capital Investment Grants (CIG) evaluate and rate all potential projects according to two types of criteria: local financial commitment and project justification criteria. The local financial commitment criteria deal with the availability of a local match described above. The project justification criteria for New Starts projects include: Land Use, Mobility Improvements, Environmental Benefits, Congestion Relief, Economic Development Effects, and Cost-effectiveness.

[6] Federal Railroad Administration, Federal-State Partnership for Intercity Passenger Rail: NEC Project Fact Sheets, U.S. Department of Transportation, November 2023, https://railroads.dot.gov/sites/fra.dot.gov/files/2023-11/FSP-NEC%20Project%20Fact%20Sheets_PDFa.pdf

[7] Connecticut Department of Transportation, "Governor Lamont Announces $1.2 Billion in Bipartisan Infrastructure Law Funding for Rail Projects Across the State," press release, November 6, 2023, https://portal.ct.gov/dot/ctdot-press-releases/2023/bipartisan-infrastructure-law-funding-for-rail-projects-across-the-state?language=en_US

[8] Federal Highway Administration, "South Shore Line Double Track Project, Indiana," U.S. Department of Transportation, https://www.fhwa.dot.gov/ipd/project_profiles/south_shore_line_double_track_project_indiana.aspx

[9] Metropolitan Washington Airports Authority, "Funding," Dulles Corridor Metrorail Project, https://www.mwaa.com/business/construction/dulles-corridor-metrorail/about-dulles-rail/funding

These transit-friendly policies directly impact several measures the FTA uses to evaluate five out of the six project justification criteria. **Table 5** lists a few examples of measures the FTA uses to rate projects according to these five criteria.

Table 5: FTA CIG New Start Example Measures for Project Justification Criteria

Land Use	Mobility Improvements	Environmental Benefits	Congestion Relief	Economic Development Effects
Avg. Population density	Trips made by persons in households having no cars	VMT reduction	New weekday linked transit trips	Likelihood that Transit Supportive Plans and Policies will generate additional, transit-supportive development in the future
Employment served by system	Trips made by persons living in households in the lowest income bracket	Reduction in pollutant and greenhouse gas emissions		
Central Business District parking spaces per employee	Number of trips made by transit dependent persons			
Amount of legally binding affordability restricted housing				

Source: FTA CIG Policy Guidance

WestCOG and the municipalities it represents can continue to take advantage of federal programs that offer funding and technical assistance to local governments to pursue transit-supportive policies. For example, the FTA has a Pilot Program for Transit Oriented Development Planning Program that provides funding to analyze local zoning and land use policies and help develop policies that are TOD friendly. The grants help organizations plan for transportation projects that connect communities and improve access to transit and affordable housing. Pedestrian network improvements are an identified priority across a number of TOD plans in the study area and technical assistance for similar projects is provided by the DOT through the Intersections Initiative.[10]

Challenges

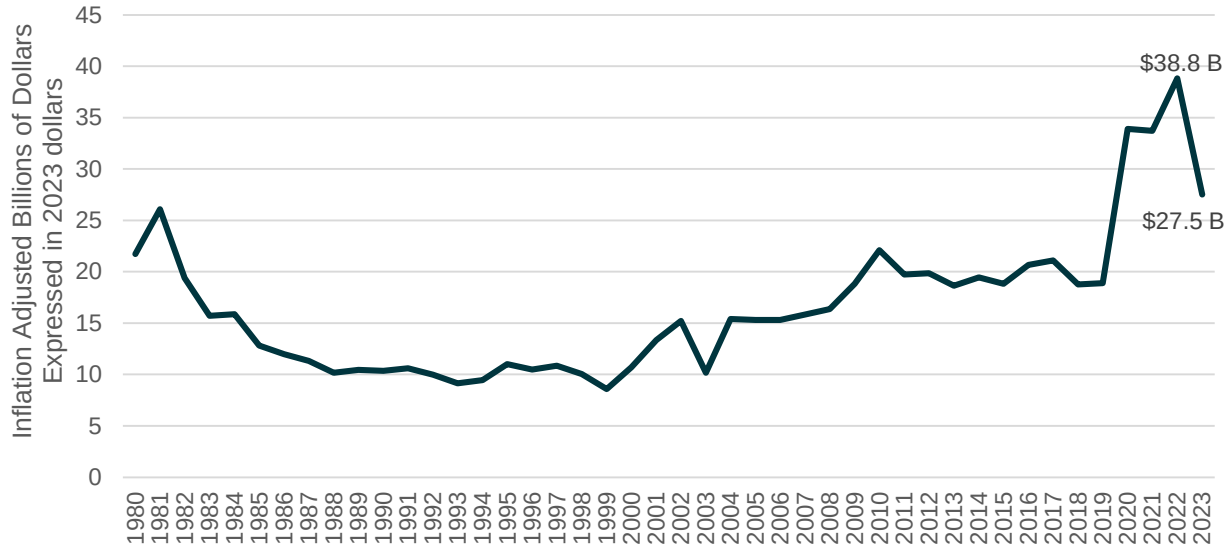
Federal funding is often best suited for larger scale projects that can justify the added expense and technical complication, and where a significant local match is available. Federal funding requirements related to sourcing materials (Buy America), labor (Davis Bacon Act), and reporting can be time-consuming and require technical expertise. Smaller-scale public realm improvements and TOD projects in station areas may not justify the added burden. Many grant and loan programs also have minimum dollar amounts (e.g., TIFIA loans require a minimum anticipated project cost of $10 million) and the savings derived from the lower interest rate may not offset the added expense of complying with federal loan reporting and regulations.

The availability of federal funding is expected to vary as political administrations change. With over $100 billion in funding for public transportation, the Bipartisan Infrastructure Law passed during the Biden Administration

[10] https://intersections-initiative.org/about-the-initiative/

represented a historic increase in federal funding for transportation projects (see **Figure 2 and 3**).[11] Future transportation authorizations may not maintain this historically high level of funding.

Figure 3: Annual Federal Spending on Railroad Infrastructure



Source: 2024 Current State of the Union: US Transportation & Infrastructure

State Funding

Nationally, states have a critical role in almost every significant rail infrastructure project. Direct state funding represents an indispensable source of funding for rail capital projects.

The 2023–2027 CTDOT Capital Plan[12] indicates that roughly 60% of funding for rail capital projects come from the state, while 40% comes from the Federal government. Much of the state funding comes from the Special Transportation Fund (STF), a portion of Connecticut's annual budget dedicated to finance upgrades to its aging transportation infrastructure. The STF was projected to spend $2.3 billion in Fiscal Year 2024, to fund the operations of CTDOT and Department of Motor Vehicles, pensions and other benefits, and pay debt service on state bonds issued to finance repairs, improvements, and upgrades to highways, bridges and rail lines. Fuel taxes have been the principal source of revenue for the STF throughout most of its history, though recently sales tax receipts have supplanted them. In Fiscal Year 2024, revenue from gas taxes is projected to provide $864 million, or nearly 37% of the STF's resources while the sales tax is projected to provide 42%.

Beyond direct funding of transportation projects, one of the state's crucial roles is to leverage additional funding at the federal level. As described above, Connecticut has used state funding as a "local match" to successfully pursue federal funds.

The state's role in Connecticut is particularly crucial as it owns the New Haven Line (NHL) rights-of-way in Connecticut. While Metro-North Railroad (MNR) operates service on the New Canaan and Danbury Lines, the state is financially responsible for 100% of capital improvements and 65% of operating costs in Connecticut.

Opportunities

In addition to funding rail investments Connecticut has deployed complimentary strategies over the past few years to support TOD throughout the state such as DECD programs and the newly formed MRDA. These

[11] Federal Transit Administration, "Bipartisan Infrastructure Law," U.S. Department of Transportation, https://www.transit.dot.gov/BIL#:~:text=The%20Bipartisan%20Infrastructure%20Law%2C%20as%20enacted%20in%20the,investment%20in%20public%20transportation%20in%20the%20nation%E2%80%99s%20history.
[12] Connecticut Department of Transportation, Transportation Infrastructure Capital Plan Spreadsheet, 2023–2027, https://portal.ct.gov/-/media/dot/documents/dcommunications/capital_plan/transportation-infrastructure-capital-plan-spreadsheet-20232027.pdf.

agencies and their programs provide municipalities and businesses with an array of incentive options, including both tax abatements and designated enterprise zones to spur economic growth, enhance new and existing infrastructure, and promote community development. The MRDA is a new quasi-public state agency intended "to spur the growth of new housing across the state by helping municipalities make use of transit-oriented development."[13] Any municipality in Connecticut can opt into MRDA assistance, which may include help with the development of housing growth zones and/or locating necessary TOD-related resources. This includes support for grant writing for local actors to pursue some of the federal funding streams described above. The legislature approved $600,000 per year for the next two years, in addition to $60 million in bonding funds.

Any legislative changes to further transit investment, economic development, and value capture goals will require state action. State investment has been a critical investment in major transit corridors across the state[14] and aligning state investment and enabling local action through legislation are important mechanisms for transit investment. A regional approach towards rail and transit investment would require interlocal agreements and enabling legislative action similar to the state's 2015 TIF legislation which allowed greater flexibility to municipalities for implementation of value capture for economic development.

Challenges

The state's recent success in pursuing federal funding means that in the short-term, CTDOT's focus is likely to be on implementing an ambitious capital program within the limited timeframe identified by these federal funding programs, or risk losing the funding. In addition to this, the near term state funding focus is on maintenance of a state of good repair.

In the long-term, the state's reliance on gas tax revenue may create funding challenges. The commercial automobile market continues to shift to electric vehicles may pose a risk to transportation funding in the future as gas sales decline. For example, California's Legislative Analyst Office projects that the state's gasoline excise tax revenue will decline by $5 billion (64%) over the next decade.[15] As the pool of available funds decreases, investments for capacity and infrastructure upgrades may be delayed in favor of prioritizing maintenance for a state of good repair. A variety of new revenue sources have been discussed by different stakeholders to help cover the projected long-term shortfall, including increased transit fares, highway tolling, surcharges on delivered goods, and a mileage-based utility fee.[16]

Local Funding

The challenges for federal and state funding for transportation improvements described above highlight the opportunity for local governments to play a role. A local coalition could help enable state and federal investment in the Danbury and New Canaan Lines by taking enabling actions to build demand for transit, investing in infrastructure improvements that compliment transit investment, coordinating actions among municipalities, and potentially making a local contribution towards any federal grant match or overmatch requirements.

Opportunities

One of the biggest opportunities for local governments to effect change is in the enabling conditions: changing zoning, land use, and parking regulations to support transit. Allowing greater housing and commercial density within walking distance of a rail station will contribute to higher ridership, which in turn makes investment more attractive for State and Federal funds. For example, the RAISE grant uses ridership as a performance metric when determining whether to fund a project and measuring a project's success. These policy changes would also generate additional value to be captured as part of any value capture strategy pursued by the local government.

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[13] Justin McGown, "Connecticut Municipal Redevelopment Authority Board Holds First Meeting," *Westfair Online*, July 22, 2024, https://westfaironline.com/latest-news/connecticut-municipal-redevelopment-authority-board-holds-first-meeting/

[14] Connecticut Department of Transportation, "Gov. Lamont Highlights Major Upgrades Coming to Waterbury Branch of the New Haven Line," press release, June 15, 2021, https://portal.ct.gov/dot/ctdot-press-releases/2021/gov-lamont-highlights-major-upgrades-coming-to-waterbury-branch-of-the-new-haven-line?language=en_US.

[15] Legislative Analyst's Office, *Assessing the Impact of Zero-Emission Vehicle Adoption on Transportation Funding*, December 13, 2023, https://www.lao.ca.gov/reports/2023/4821/ZEV-Impacts-on-Transportation-121323.pdf.

[16] See for example: Keith M. Phaneuf, "Gov. Lamont's $55.2B Budget Proposal Focuses on Transportation, Economic Growth," *CT Mirror*, February 12, 2025, https://ctmirror.org/2025/02/12/ct-budget-transportation-projects/#:~:text=The%20%2455.2%20billion%20biennial%20budget,about%204%25%20in%20each%20year.

Local governments around the country have developed funding mechanisms such as dedicated tax measures, abatements, special districts, and TIF districts to generate revenue to fund local and regional infrastructure improvements. Historically, local governments have focused their infrastructure spending on local needs such as streets, parks, and sewer. Local funding from municipalities, regional authorities, and other actors such as private developers has not represented a large proportion of rail transit funding improvements. One reason for this is the more constrained ability of local actors to generate sufficient revenue to fund capital-intensive rail projects. Recently, municipalities and counties have explored various ways of generating additional revenue to fund transit improvements through mechanisms like value capture and dedicated taxes. Value capture is the focus of this study and is discussed in more detail in the following sections. However, it is important to note that value capture is not the only way that local governments are raising funds for larger scale transportation projects nationally. One recent example is in Columbus, Ohio where a "Central Ohio Transit Authority sales tax levy" was approved through referendum in November 2024.[17] The proceeds from the dedicated local sales tax are earmarked for transit and/or active transportation improvements.

Challenges

Given the significant capital investment involved in implementing improvements to the Danbury and New Canaan Lines, a creative approach may be required to find opportunities for local funding sources to contribute in a significant way. For example, the Danbury Line Electrification & 60 MPH Speed Upgrades project would allow for faster, more frequent, and more reliable service for riders along the Danbury line, but the estimated cost is around $558 million.[18] The revenue generated by value capture, described in greater detail in Section 5, would likely not be sufficient to fund the project or even provide a meaningful "local match" for federal funding. However, larger scale projects could be broken into constituent parts that could be constructed iteratively over time. For example, the Danbury Line Electrification project above could be implemented in phases with the benefits offered by electric service accruing to successive communities over time. Smaller scale projects like the New Canaan Branch Sidings would provide benefits to a smaller group of riders, and the cost is estimated at $40 million. Local contributions could comprise a more meaningful percentage of this project's total cost.

Implementation of land use, zoning, and parking policy changes may also face local concerns about the impact of new development on community character. Significant zoning changes may also face opposition from local stakeholders concerned about impacts on traffic congestion, community character, and aspects related to quality of life. One potential role for value capture mechanisms or other local funding is to generate funds to address some of the costs associated with new development, for example by providing improved pedestrian and bicycle access to mitigate traffic and congestion impacts.

Conclusion

Connecticut has been very successful in leveraging state funding to obtain federal funds for large-scale capital projects. In the near term, CTDOT's focus is likely to be on spending down federal funds that have already been awarded and implementing the state's existing capital program. In the longer term, opportunities for capital and operational funding may be complicated by shifts in federal funding levels and priorities, and state budget constraints. Given this landscape, there are a number of ways that WestCOG and its local partners can contribute to attracting funding to the study area, including:

- Implementing zoning, land use, and parking regulations and enabling affordable housing to support TOD and transit ridership. These changes could be phased in over time as transit service is improved.
- Taking advantage of federal technical assistance programs and state resources, such as the MRDA, to continue planning efforts and invest in local infrastructure needs and coordinate those improvements with transit service improvements.
- Piloting the use of value capture to help pay for local infrastructure and – in the longer term – potentially to contribute to a local match for large scale transit investments.

[17] Hatcher, Jessica. "Election Results 2024: COTA Tax Levy, Bus Transportation, LinkUS." *The Columbus Dispatch*, November 5, 2024. https://www.dispatch.com/story/news/politics/elections/local/2024/11/05/election-results-2024-cota-tax-levy-bus-transportation-linkus-ohio/75797832007/.

[18] Western Connecticut Council of Governments, *2023 Metropolitan Transportation Plan*, May 4, 2023, https://westcog.org/wp-content/uploads/2023/06/2023_WestCOG_Metropolitan-Transportation-Plan_Final_05042023-1.pdf.

Bundling of federal, state, and local sources would maximize the overall resources for capital expenditures. The next section discusses the potential use of value capture in detail.

4. Value Capture Revenue Potential

Value capture is an important strategy to both help fill the gaps for funding major transportation projects, and to demonstrate local partnership for transportation funding. This section discusses these potential complimentary roles, describes the quantitative analysis conducted, and concludes with a discussion of the role that value capture could play in a funding strategy.

Value Capture Tools Selected for Analysis

The "Legal and Governance Framework Analysis" report outlined four categories for value capture:

- Special assessments and taxes;
- Tax increment financing (TIF);
- Direct contributions from developers (including impact fees, negotiated developer contributions, and community benefits bonus programs); and
- Public sector real estate transactions (public private partnerships or P3s).

For the revenue potential analysis described below, three mechanisms were selected for quantitative analysis: TIF, Special Assessment, and P3. **Table 6** compares the different value capture mechanisms with considerations for implementation.

Tax increment financing was selected for analysis as it has been CT municipalities' preferred value capture mechanism to unlock development potential. TIF districts have been successfully adopted in the towns of Bristol, New Britain, Bloomfield, Old Saybrook, Windsor Locks, and Cheshire, as well as (within the study area) in Stamford.[19] In 2015, state legislation expanded the flexibility of TIF in Connecticut by enabling municipalities to create and allocate funds from TIF districts (previously subject to state approval) and use TIF funds for various projects, including those related to employment opportunities, public transportation systems, and industrial, commercial, residential, retail, and mixed-use buildings. For the purposes of this analysis, TIF was assumed to be deployed within a half-mile of the stations. In practice, implementation of TIF districts under existing state law would require individual municipalities to draw the boundaries for and approve district(s) within their respective jurisdictions.

Under a **special assessment district**, properties that are anticipated to benefit from an infrastructure investment are subject to a charge. The amount of this assessment is typically proportional to the expected benefits, which are assumed to be greater for properties closer to the improvement and lower for those further away. As such, this value capture mechanism could potentially charge properties based on the expected benefits from improved transit service to areas within a distance (e.g., a half-mile or less) of an existing station. There are no specific statutory restrictions on using special assessment funds for transit in Connecticut. This flexibility allows districts to allocate funds toward transit-related projects, such as bus services or mass transit infrastructure, so long as these initiatives support broader economic or public welfare objectives. Municipalities have considerable discretion in directing these funds, provided their use aligns with the public interest. Two notable special assessment districts in the study area include the City Center Danbury and Downtown Stamford special assessment districts which use the assessment revenue for infrastructure and public-realm related improvements -- both of which are identified priorities for a number of TOD plans along the branch lines.

[19] City of Bristol, *Draft TIF Master Plan*, May 2018, https://www.bristolct.gov/DocumentCenter/View/16889/Draft-Document---TIF-Master-Plan---City-of-Bristol-CT---May-2018-Communication.
Town of Windsor Locks, *TIF Policy*, October 4, 2016, https://windsorlocksct.org/wp-content/uploads/2020/09/bos_10-04-16_Adopted_TIF_Policy.pdf. Old Saybrook TIF: Mariner's Way Tax Increment Financing (TIF) District & Plan | oldsaybrookct
Town of Bloomfield, *Tax Increment Financing Districts Master Plan*, https://www.bloomfieldct.gov/DocumentCenter/View/818/Tax-Increment-Financing-Districts-Master-Plan-PDF.
Town of Bloomfield, *Tax Increment Financing Districts Policy*, https://www.bloomfieldct.gov/DocumentCenter/View/331/Tax-Increment-Financing-Districts-Policy-PDF
City of Groton, *Final Document: Joint TIF Master Plan with Attachments, City and Town of Groton*, https://cityofgroton.com/DocumentCenter/View/974/Final-Document-Joint-Tif-Master-Plan-with-Attachments-City-and-Town-of-Groton-PDF.

The third value capture mechanism analyzed is **public-private partnerships (P3)**. This mechanism is analyzed through selected sites for illustrative purposes after discussion with the municipalities. The site analyzed is 301 Main Street in Downtown Danbury. The Danbury downtown site is proximate to the train station and part of the City's downtown plan. More details on the structure of each of these is provided in the joint development/ P3 section.

Table 6: Value Capture mechanisms and implementation considerations

Value Capture Mechanism	CT State enabling Legislation	Statewide Implementation examples	Study Area implementation considerations	Selected for further analysis (Y/N)
TIF	CT Bill 677	Stamford, Cheshire, Windsor Locks, others.	Pros: Expanded municipal control on TIF process with 2015 legislation; Municipalities can issue bonds backed by TIF; Used successfully across CT through credit enhancement agreements for reimbursing developers Cons: Under existing law, TIF is implemented by individual jurisdictions. Administration for multi-jurisdictional TIF will require additional coordination and municipal agreements	Y
Special Assessment	CGS § 7-326, CGS § 7-339	Stamford Downtown Special Services District, CityCenter Danbury Special Services District.	Pros: Can be used for operational costs Cons: Administration of funds may require creation of separate entity; Demonstrating direct benefit may be a challenge given timeline of the benefit of improved transit service.	Y
P3	CGS § 4-255 (For DOT P3 agreements)	Norwalk, Meriden	Pros: Facilitates private funding for public benefit; Offers flexibility on use of private funds for capital or operational costs Cons: Contingent on market conditions and developer interest; Transfers some risk to public entity; Limited in application to specific station areas and cannot typically be used for overall improvement to transit service	Y
Developer Contributions	CGS § 8-2c (fee in lieu of providing parking); CGS § 8-25 (fee in lieu of the dedication of open space or the provision of streets and utilities)	Norwalk	Pros: Facilitates private funding for public benefit Cons: Used for limited purposes in CT as state courts have held that existing laws do not authorize municipalities to impose impact fees;[20] Contingent on market conditions and developer interest; Limited in application to specific station areas and cannot be used for overall improvement to transit service	N
Other: Parking fees, Naming rights, Air rights	NA		Pros: Facilitates private funding for public benefit; can be used towards operational costs Cons: Case-by-case basis implementation contingent on developer interest and market conditions; unlikely to be supported in suburban areas	N

[20] Connecticut General Assembly, *Office of Legislative Research Report: 96-R-0857*, October 4, 1996, https://www.cga.ct.gov/PS96/rpt/olr/htm/96-R-0857.htm.

The next sections outline key assumptions and ROM estimates for each mechanism in detail.

Local and Transit Investment Value Capture Potential

Local participation in a larger-scale transit improvement projects can take many forms ranging from using municipal value capture revenue to pay for specific station improvements (e.g. platform expansion) to coordinating with other municipalities for a local match for state and/or federal grant requirements. While value capture mechanisms such as TIF are typically used by municipalities, value capture for rail transit benefits from a regional approach. The state legislative framework review prepared for this study ("Legal and Governance Framework Analysis," dated March 6, 2024) shows that while a regional or multijurisdictional approach to value capture appears to be allowed under current legislation, it has so far not been implemented in Connecticut.

From a financial planning and implementation perspective, a segmented approach to value capture in the study area would help coordinate local efforts to:

1. Build the demand for transit through local value capture mechanisms (focused on individual station area needs). The revenue from value capture mechanisms in this approach is applied for TOD supportive **local investments**.
2. Demonstrate a regional partnership and operating framework for combined municipal contributions towards improved transit service. The revenue from this segment of value capture revenue is applied towards local match requirements for major **transit investments**.

The revenue estimates for these segments are summarized for investments up to 2050 and further from 2050 to 2075. **Table 7** shows the value capture mechanism segmentation and how they relate to the transportation investment scenarios.

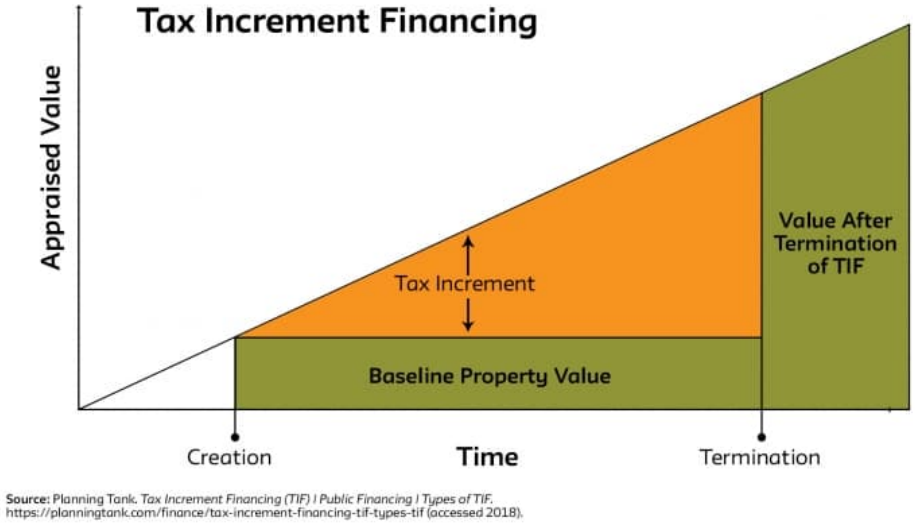
Table 7: Value Capture Revenue Segments

Value Capture Revenue Application		Value Capture Revenue Generation	
Investment type	**Transit and TOD Improvements**	**Value Capture Mechanism**	**Economic Development assumptions**
Local Investment	Local TOD supportive investments for station areas.	TIF and Special Assessment	Development based on historic trends and development pipeline (Baseline (S1))
Transit Investment	Capital and Operational transit investments (TIME FOR CT and WestCOG vision scenarios)	TIF and Special Assessment	Development capacity based on redevelopment potential analysis tied to additional growth from TIME FOR CT (S2) and WestCOG vision (S3) scenarios

Tax Increment Financing

Tax Increment Financing (TIF) is a public financing tool used by municipalities to stimulate economic development, redevelop blighted areas, and fund public infrastructure projects. Through TIF, local governments can capture future increases in property tax revenue (the "tax increment") generated within a designated TIF district and reinvest it back into the area to promote growth and development. This increment is the difference between the current tax revenue (based on the area's existing assessed value) and the increased revenue resulting from higher property values and new developments over time.

Figure 4: TIF Schematic Diagram



Source: Economic Policy Research Institute, "What Is Tax Increment Financing (TIF)?" Economic Policy Research Institute, https://www.economicpolicyresearch.org/insights-blog/what-is-tax-increment-financing-tif.

Connecticut legislative framework enables use of TIF through two statutes: CGS §32-285 and the more recent (2015) CGS §7-339cc more commonly called the Public Act No.15-57[21]. Main differences between the two legislations relate to[22]:

- Delineation: CGS §32-285 identifies projects that are eligible for TIF funding while PA 15-57 establishes TIF districts.
- State and local authority: CGS §32-285 requires review, approval, and bond issuance by state authority while PA 15-57 allows municipalities to create TIF districts whose funding will be through property tax and authorizes municipalities to issue bonds for financing TIF district improvements.
- Eligible developments: PA 15-57 adds Transit Oriented Developments (defined as areas within half mile or walking distance of a transit facility) as eligible districts for TIF investment. CGS §32-285 allows projects related to redevelopment, urban renewal, municipal development, information technology, and remediation as eligible for TIF.

The CGS §32-285 legislative framework has been used for financing large scale projects such as Harbor Point in Stamford. Key differences related to more municipal autonomy for TIF in PA 15-57 have led to higher use of TIF by municipalities for economic development and downtown revitalization in the state. TIF agreements in Cheshire and Windsor Locks have used TIF revenue to reimburse developers through credit enhancement agreements for public infrastructure improvements. The town of New Britain has used TIF for downtown revitalization through a TIF revenue sourced revolving loan for local businesses.[23]

[21] Connecticut General Statutes, Chapter 588n, Section 32-285, https://www.cga.ct.gov/current/pub/chap_588n.htm#sec_32-285.
[22] Connecticut Transportation Finance Panel, Tax Increment Financing Memorandum, July 29, 2015, https://portal.ct.gov/-/media/malloy-archive/transportation-finance-panel/tfp-doc-20150729-tif-memo.pdf?la=en.
[23] "After 2015 Law Revision, More CT Municipalities Use Tax Increment Financing to Spur New Development," *Hartford Business Journal*, https://www.hartfordbusiness.com/article/after-2015-law-revision-more-ct-municipalities-use-tax-increment-financing-to-spur-new.

This analysis evaluates the potential revenue that could be generated from implementing TIF for local and transit investment. The TIF revenues presented below are for illustrative purposes only assuming TIFs within half-mile of the stations. The goal of the analysis is to estimate how much additional incremental property tax revenue could be generated from increases in property values resulting from the associated development as shown in **Table 8**. This potential revenue could then be reinvested to support further development and infrastructure improvements.

The existing TIFs in the study area municipalities are in Stamford which include:

- The Harbor Point Improvement District in Stamford was adopted in 2007 and serves to fund and facilitate roadway, utility, and pedestrian improvements to facilitate TOD by repairing and reconstructing four major collector roads in the South End of Stamford.
- The Mill River Park TIF District in Stamford was established in the early 2000's. The TIF revenue is shared between the park and the city through a tax-sharing agreement, where a portion of the tax revenue from properties near the park is split between them. The additional TIF revenue is used to cover park operating expenses such as supporting basic park operations and free programming.

Other municipalities in the study area have no existing TIFs. The City of Norwalk has outlined TIF delineation criteria as part of "Norwalk Tomorrow." The criteria include property/parcels being substandard, in need of rehabilitation, or suitable for various development types, including industrial, commercial, residential, mixed-use, or retail uses, downtown development, or transit-oriented development. Furthermore, the total assessed value of all TIF districts within the municipality, along with the original assessed value of the proposed district, should not surpass ten percent of the total taxable property value in the municipality.[1]

Key Assumptions

To forecast the TIF revenue, the analysis makes a series of assumptions for revenue potential segments. As described above, the model assumes different development assumptions informing the revenue potential for implementation of the TIF program. Major assumptions of the TIF model are informed by a review of state law and existing TIF reports as available (for a complete list of detailed assumptions, see **Appendix A**). Primary assumptions include:

- Two separate TIF programs, one assuming a baseline growth scenario and one assuming a growth and development associated with the transportation improvements. This helps segment the revenue streams to differentiate application for local and transit investments.
- Two TIF programs are applied to break out the costs by timeframe. The first TIF starts in 2030, and lasting 20 years (2030-2050) followed by second TIF program starting in 2050 for a duration of 25 years (2050-2075). The second phase adds municipalities along the proposed Danbury extension (Brookfield and New Milford).
- All properties within a half-mile of stations are subject to TIF. Actual TIF delineation should take into account the 10% limit on assessed value for all TIFs within a municipality--particularly for municipalities such as Stamford and Norwalk with multiple stations and high value properties within the station areas.
- Base assessed values (price per square foot) are based on the values of buildings constructed after 2000 within a mile of the station areas. Buildings built after 2000 were selected to reflect the assessed values of newer residential and commercial stock. **Table 8** shows estimated existing assessed value per SF of both multifamily and commercial property in the study area's towns. These assessed values are assumed to increase based on historical trends ranging from 1.5% to 3% for residential properties and 0.3% to 0.8% for commercial properties through the TIF periods, in both the baseline and the transit scenarios. Using recent trends in assessed values, an annual increase in assessed values is assumed ranging from 1-4% for residential and up to 0.8% for commercial properties (See Appendix A for more details).
- The TIF capture rate is assumed to be 50% -- meaning 50% of the increment is used for TIF funds and the other half is towards the municipal general fund. TIF operating expenses are assumed to be 0.5% of the total program.

Table 8: Assessed Value per SF by Study Area Municipality

	Assessed Value (Per SF)	
Municipalities	**Multifamily***	**Commercial***
Bethel	$144	$157
Danbury	$75	$158
New Canaan	$249	$157
Norwalk	$122	$80
Redding	$144	$157
Ridgefield	$144	$157
Stamford	$93	$124
Wilton	$144	$268
Brookfield	$144	$153
New Milford	$144	$157

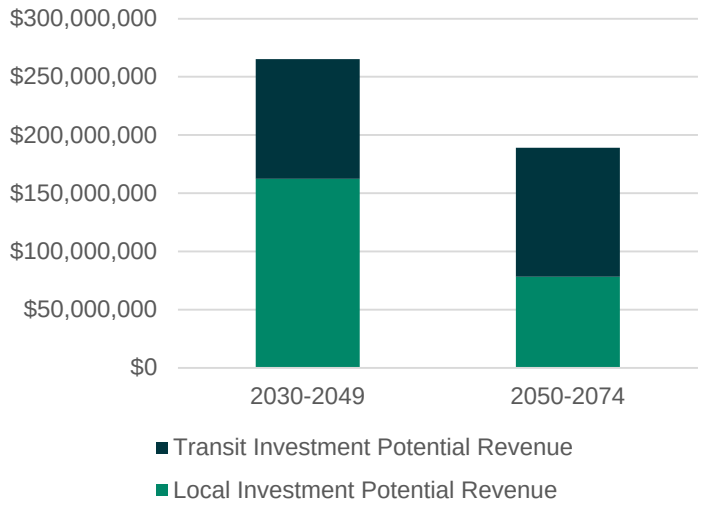
**Total assessed value per building area SF for commercial buildings built after 2000 in 1-mile Station Area*

Additionally, this analysis includes estimates of bond revenue. While TIF captures the future increase in property tax revenues resulting from the growth spurred by a project (e.g., new development or transit improvements), these future revenues will materialize over time. Bonds provide immediate capital for projects by borrowing against future revenues. The debt service on these bonds (the repayment of principal and interest) can then be paid using the incremental tax revenues generated through the TIF district over the years as property values increase.

TIF Revenue Estimates

TIF revenue promises substantial financial benefits for both local investment and transit investment, as indicated in **Figure 5.**

Figure 5: TIF Revenue for Local and Transit Investment by Time Period



Total TIF revenue for local investment from 2030-2050 is estimated at $162 million in 2024 dollars. For transit investment, these figures rise additionally by $102 million. While this highlights the transformative financial impact that transit service improvements could have on both residential and commercial property value, it also reiterates the value that can be captured simply from baseline development through TIF implementation for local investments. Tables 9 and 10 show the municipal breakdown of the local investment and transit investment respectively.

Table 9: Local Investment TIF Development and Revenue Estimate (000's) by Municipality

Period	2030-2049			2050-2075		
Municipality	Baseline Development		Local Investment Revenue	Baseline Development		Local Investment Revenue
	Units	*Commercial SF*	*Total*	*Units*	*Commercial SF*	*Total*
Bethel*	200	-	$10,870	430	-	$3,790
Danbury	3,010	1,727,390	$6,400	1,890	1,972,980	$1,410
New Canaan	1,540	1,487,910	$16,530	590	2,210,670	$9,330
Norwalk	5,620	4,981,040	$59,230	7,440	5,185,290	$39,180
Redding	-	31,950	$970	-	37,530	$60
Ridgefield	40	154,750	$3,310	10	154,750	$1,210
Stamford	6,010	3,341,430	$52,910	10,810	3,691,200	$9,910
Wilton	820	1,033,770	$12,190	940	1,429,370	$4,110
Brookfield	10	66,190	NA (No TIF)	20	74,550	$1,130
New Milford	180	168,330	NA (No TIF)	80	196,600	$8,190

*Estimate of Baseline Commercial SF for Bethel unavailable due to data limitation

** Note: all revenues are rounded to the nearest 10,000 and are expressed in 2025 dollars.*

Table 10: Transit Investment TIF Development and Revenue Estimate (000's) by Municipality

Period	2030-2049			2050-2075		
Municipality	Additional Development		Additional Revenue for Transit Investment	Additional Development		Additional Revenue for Transit Investment
	Units	*Commercial SF*	*Total*	*Units*	*Commercial SF*	*Total*
Bethel*	260	58,950	$990	590	147,380	$960
Danbury	4,760	3,321,180	$17,170	6,330	6,015,760	$12,620
New Canaan	1,810	1,755,710	$7,110	1,130	2,746,260	$7,060
Norwalk	7,740	6,837,500	$33,140	12,740	9,655,180	$50,300
Redding	30	51,670	$290	50	86,840	$240
Ridgefield	90	191,480	$2,910	120	246,580	$5,400
Stamford	8,490	5,711,110	$31,400	15,780	7,980,190	$17,990
Wilton	1,350	1,590,970	$9,920	2,280	2,822,380	$8,250
Brookfield	30	83,470	$0	80	132,140	$2,290
New Milford	300	286,830	$0	460	591,600	$5,670

** Note: all revenues are rounded to the nearest 10,000 and are expressed in 2025 dollars*

TIF offers significant financial benefits at the municipal level. Larger municipalities like Danbury, Norwalk, and Stamford have the highest baseline revenue projections. Notably, Danbury could generate over $6 million in TIF revenue during 2030-2049, with an additional $17 million possible from transit-related development during the same period. Similarly, Stamford's local investment revenue estimates show a strong revenue stream of $52 million which could potentially increase by $31 million with transit improvements between 2030-2049. This reflects the substantial development potential in these larger urban centers that could be leveraged through TIF districts.

The data also reveals significant patterns in smaller communities. While towns like Bethel and New Canaan show more modest revenues for local improvements, they demonstrate strong potential for transit investment revenue growth. For instance, Wilton could generate $9 million in additional transit-investment revenue by 2050 and further adding $8 million in revenue for 2050-2074, representing a significant multiplication of its baseline revenue. Brookfield and New Milford show some revenue potential in the 2050-2074 timeframe, suggesting development opportunities that can be realized with the New Milford extension of the Danbury service. These patterns indicate that transit-oriented development could be a powerful catalyst for revenue growth even in smaller communities, though the timing and scale of benefits vary significantly by location.

The transit enhancement scenario generally brings additional development and consequently additional TIF revenue to the municipalities compared to the baseline development scenario. In addition to the magnitude of development, there is a change in the mix between the two development scenarios with the baseline development being primarily residential while additional diversification of uses with more commercial development is to be expected with improved transit service. Residential demand is demonstrated with post-COVID increases in home values in the Study Area municipalities, and while there are concerns associated with new residential development in the Study Area municipalities, the analysis shows that residential development that is transit-oriented could generate revenue to address some of the concerns of impact on municipal infrastructure and create additional municipal revenue. Additionally, the state has prioritized housing development near transit as demonstrated by the creation of MRDA and municipal initiative that aligns with the state's objective of more residential development near transit would be viewed favorably for state funding. Residential development addresses existing market demand, builds demand for transit, and with the appropriate value capture mechanisms implemented, would contribute towards current and future infrastructure needs.

Bonding Capacity

For both local and transit investments, the TIF program provides a steady stream of revenue, allowing for the issuance of bonds to fund infrastructure and other local improvements within the TIF study area that would in turn enable the critical investments needed to drive property value increases. By initiating these improvements, municipalities can proactively enhance their areas' attractiveness, spurring further economic growth and development. Based on TIF bond examples and CT state law, bonds are assumed to be issued with 20-year terms starting in 2030 at a 5% coupon (interest) rate.

Table 11 shows the local investment bond revenue potential by municipality. In Stamford alone, this approach has the potential to generate over $4.8 million in bonding capacity for transit improvements from baseline development, illustrating the impact of strategic investment in high-value locations. This cycle of investment and revenue generation serves as a foundation for sustainable growth in the station areas, with each round of funding laying the groundwork for future enhancements and long-term fiscal health.

Table 11: Local Investment Bond Revenue

Municipality	1st Year TIF Revenues (2030-2049)	Max Bond Amount (2030-2049)*	1st Year TIF Revenues (2050-2074)	Max Bond Amount (2050-2074)*
Bethel	$118,200	$1,107,000	$190,500	$672,600
Danbury	$66,600	$623,500	$39,200	$138,500
New Canaan	$161,600	$1,513,600	$312,500	$1,103,200
Norwalk	$533,700	$4,999,000	$1,479,800	$5,223,500
Redding	$10,000	$93,900	$2,900	$10,400
Ridgefield	$34,200	$320,600	$49,900	$176,200
Stamford	$516,800	$4,840,400	$436,800	$1,541,800
Wilton	$123,400	$1,155,800	$130,800	$461,700
Brookfield	$0	$0	$36,500	$145,500
New Milford	$0	$0	$280,100	$1,116,900
Total	**$1,564,500**	**$14,653,800**	**$2,959,000**	**$10,590,300**

** Note: all values are rounded to the nearest 100, and all values are in 2025 dollars.*

The total annual TIF revenue potential across all municipalities increases by $989,000 with improved transit service, with a corresponding additional maximum bond payment capacity of $9.2 million. Norwalk, Stamford, and Danbury account for the majority of this bonding capacity. Transit investments create significant incremental bonding capacity, with the largest gains in Norwalk (+$2.7 million, a **55%** increase), Danbury (+$1.7 million, a **268%** increase), and Stamford (+$2.9 million, a **60%** increase). Even smaller communities see meaningful additions to their bonding capacity – for example, New Canaan gains $576,000 in additional bonding potential (a **38%** increase). This suggests that transit-oriented development could substantially increase municipalities' ability to finance infrastructure improvements through bonds, with the additional capacity potentially supporting both transit-related and other municipal infrastructure investments. These estimates are for improvements to 2050 with estimates for 2050-75 tabulated separately in **Table 12**.

Table 12: Transit Investment Bond Revenue

Municipality	Additional Annual TIF Revenue (2030-2049)	Increase in Max Bond Amount (2030-2049)	Additional Annual TIF Revenue (2050-2074)	Increase in Max Bond Amount (2050-2074)
Bethel	$10,200	$95,600	$18,800	$66,300
Danbury	$178,700	$1,673,500	$222,500	$785,500
New Canaan	$61,500	$576,100	$168,200	$593,700
Norwalk	$295,900	$2,771,800	$817,700	$2,886,400
Redding	$2,800	$26,500	$4,000	$14,100
Ridgefield	$26,000	$243,200	$63,400	$223,900
Stamford	$311,300	$2,915,900	$453,700	$1,601,400
Wilton	$102,900	$963,500	$140,200	$495,000
Brookfield	$0	$0	$16,500	$66,000
New Milford	$0	$0	$58,300	$232,700
Total	**$989,300**	**$9,266,100**	**$1,963,300**	**$6,965,000**

** Note: all values are rounded to the nearest 100, and the max supportive bond amounts are in 2025 dollars*

Special Assessments

In Connecticut, special assessments are primarily governed by statutes enabling municipalities to establish Special Services Districts (SSDs) or Special Taxing Districts (STDs) to address targeted local needs. SSDs tend to fund downtown revitalization and business improvement districts and can exercise a variety of powers, including purchasing property and borrowing money. In contrast, STDs tend to perform more specific services, such as road maintenance, fire protection, or condominium improvements. To fund these services, these districts can levy taxes or fees within their boundaries to provide services to residents and visitors, in addition to selling general obligation or revenue bonds.

Typically, districts establish annual mill rates—the tax amount per $1,000 of assessed property value—which are then reviewed and confirmed annually at town meetings. As of 2024, the average mill rate for SSDs in Connecticut is 4.21 mills, while the combined average mill rate of SSDs and STDs in the study area is 6.61 mills.[24] For example, the Downtown SSD in Manchester has a mill rate of 2.87 and collected over $75,000 in property taxes in 2023.[25]

While special districts can offer services similar to those provided by the municipality, they are restricted in two significant ways:

1. **No Education Services**: The district cannot take over services related to elementary or secondary public education. These are still the responsibility of the local government.
2. **No Duplication of Regional Services**: If there is a service already being provided by a regional or multi-town organization (for example, a water authority serving several towns), the special district cannot duplicate that service within its boundaries.[26]

These limitations ensure that special districts focus on enhancing local services without overlapping with core municipal or regional functions. A report from the Connecticut Office of Legislative Research notes that special taxing districts run the risk that “excessive reliance on single function special districts” could subsequently lead to a “lack of coordination in local service provision, use of public funds to further private development interests, decrease in public accountability, and decreased capability of general-purpose governments to enact effective areawide policies.”[27] However, these concerns can be mitigated through effective governance and service provision.

There are no specific statutory restrictions on using special assessment funds for transit in Connecticut. This flexibility allows districts to allocate funds toward transit-related projects, such as bus services or mass transit infrastructure, so long as these initiatives support broader economic or public welfare objectives. Municipalities have considerable discretion in directing these funds, provided their use aligns with the public interest. Chapter 103(a) of the Connecticut General Statutes authorizes the formation of dedicated transit districts. These districts can levy service charges and apply for state funding to operate various transit services, including the construction and improvement of transportation facilities. This provision offers municipalities a structured approach to enhancing local transit infrastructure and services.

Within the study area, SSDs and STDs serve a variety of community needs, with the most common being Improvement Districts —23 in total—primarily focused on infrastructure projects. These Improvement Districts, mostly established between the 1970s and early 2000s, focus on enhancing local facilities and amenities. Six Special Services Districts, predominantly located in urban areas, provide services such as public safety and beautification efforts, with most having been established since the 1990s to support urban revitalization goals. Additionally, there are five Fire Tax Districts in the study area, some of which date back as far as 1863, demonstrating a long-standing commitment to localized fire protection. Twelve miscellaneous districts also exist, many of which serve homeowner and condominium associations, with establishment dates spanning from the 1920s to as recently as 2010. These varied districts illustrate the range of community-focused services and enhancements supported by SSDs and STDs across the region.

[24] Connecticut Office of Policy and Management, "Mill Rates," https://portal.ct.gov/opm/igpp/publications/mill-rates.
[25] Town of Manchester, "FY25 Budget Information," https://www.manchesterct.gov/Government/Departments/Budget-and-Research-Office/FY25-Budget-Information.
[26] CT Gen Stat § 7-339n. (2023)
[27] Connecticut General Assembly, *Office of Legislative Research Report: 98-R-0335*, June 23, 1998, https://www.cga.ct.gov/PS98/rpt/olr/htm/98-R-0335.htm.

Two notable examples within the study area include CityCenter Danbury and the Stamford Downtown Special Services District (DSSD).

CityCenter Danbury Special Services District
Established in 1988 after a vote by downtown property owners, CityCenter Danbury covers one square mile in the heart of downtown, encompassing 215 properties owned by 150 individuals. Property owners in the district pay a small additional fee on top of their regular real estate taxes, generating approximately $170,000 annually, or an average of $790 per parcel per year.[28] CityCenter focuses on issues such as parking, marketing, events, business recruitment, security, and the upkeep of the area's streetscape. The majority of its funding is dedicated to revitalization programs, special services, and infrastructure improvements, reinforcing its role as a cornerstone of Danbury's downtown renewal.[29]

Stamford Downtown Special Services District
The Stamford DSSD, a Business Improvement District founded in 1992, is funded by 220 commercial and 305 residential property owners through an annual tax based on property assessments. With additional program income from sponsorships, the DSSD enhances Stamford's downtown experience by implementing its Public Realm Enhancement Plan, improving parking and landscaping, and hosting community events.[30] The DSSD's recent priorities include urban forestry and green infrastructure, exemplified by its 2022 partnership with the City of Stamford to inventory 680 trees downtown and its 2023 pilot program to plant new trees along Washington Blvd. and Main Street. This pilot also trains volunteers to care for the new trees and seeks funding to expand the initiative, emphasizing DSSD's ongoing commitment to a sustainable, vibrant downtown.

Together, these districts showcase how SSDs and STDs not only maintain essential services but also drive other efforts, such as revitalization and sustainability, in their communities.

Special Assessment Revenue Estimates

This analysis models the revenue-generating potential of special assessment districts across the study area. The model examines various mill rate scenarios applied to all development (existing and new) within half-mile of the stations, as Connecticut law allows these districts to levy additional property taxes. Typically, special assessment districts are used for operating costs on a year-by-year basis. The analysis does not determine bonding capacity for special assessment revenue as it is assumed that the revenue will be used on a pay-as-you-go basis for local investment (infrastructure improvements, station area upkeep and beautification) and transit investment (potential operating costs, micro transit services etc.).

Based on an analysis of existing special assessment districts in Connecticut, the model applies a conservative mill rate of 4.21 mills. Operating costs for administering these districts are estimated at 1% of revenue, in line with comparable districts in the state. This framework allows for a systematic comparison of revenue potential between baseline development patterns and transit-oriented development (TOD) scenarios. The findings presented in **Table 13** apply the special assessment to existing and new development within half mile of the stations.

[28] CityCenter Danbury, https://citycenterdanbury.com/.
[29] "WestConn Society Luncheon Honors Tom Devine," Western Connecticut State University, https://www.wcsu.edu/news-archives/westconnsocietyluncheonhonorstomdevine/.
[30] Stamford Downtown, *Stamford Downtown Annual Report 2022-2023*, 2023, http://stamford-downtown.com/wp-content/uploads/2023/06/StamfordDowntown_AnnualReport202223_Final.pdf.

Table 13: Special Assessment Revenue Estimates by Municipality and Development Scenario

	Local Investment		Additional Revenue for Transit Investment	
Municipality	**2030-2050**	**2050-2075**	**2030-2050**	**2050-2075**
Bethel	$9,500,000	$5,900,000	$373,400	$558,900
Danbury	$16,300,000	$9,400,000	$11,747,200	$15,997,900
New Canaan	$23,800,000	$18,600,000	$4,034,700	$6,836,200
Norwalk	$33,200,000	$29,800,000	$9,012,600	$18,546,000
Redding	$1,600,000	$900,000	$147,300	$216,900
Ridgefield	$4,900,000	$3,100,000	$1,399,300	$3,237,300
Stamford	$59,200,000	$39,400,000	$14,045,200	$18,105,100
Wilton	$14,500,000	$9,800,000	$4,557,000	$6,529,300
Brookfield	$1,600,000	$1,200,000	$333,600	$1,069,500
New Milford	$8,800,000	$6,900,000	$952,100	$2,591,300
Total	**$173,400,000**	**$124,900,000**	**$46,602,400**	**$73,688,400**

All estimates are in 2024 dollars

Table 13 summarizes the special assessment revenue potential at $173 million for 2030-2050 and an additional $125 million for 2050-2075. For local investment, the estimated special assessment revenue ranges from $1.6 million for Redding and Brookfield to almost $60 million for Stamford for 2030-50. After 2050, the local investment potential is smaller than the estimate for 2030-2050, primarily because the period has a higher revenue potential for transit investment which is tied to additional development.

The transit scenario adds incremental revenue compared to the baseline: $46.6 million for 2030-2050 and $73.6 million for 2050-2075. This suggests that while transit investments do enhance special assessment revenue potential, the potential impact may not be as large as that of TIF. Like other forms of value capture, the largest urban centers show the strongest transit investment-related gains. Stamford captures the largest share of additional revenue from a transit improvement scenario ($14 million), followed by Danbury ($11.7 million) and Norwalk ($9 million), which stands in contrast to smaller amounts in smaller communities like Redding ($147,000) and Brookfield ($333,000). The timing of the funding is also noteworthy—most communities show higher special assessment potential in the 2050-2075 period compared to 2030-2050, indicating that the value capture benefits will increase over time as development patterns mature around transit investments. Given these revenue estimates, special assessment mechanisms will not support upfront capital investments on their own, but could be leveraged with other revenue sources (potentially including TIF) to help cover debt service for rail capital costs or to support rail operating/maintenance costs over time.

Joint Development/P3

Public-private partnerships are contractual agreements between public agencies and private entities that allow for joint participation in a development or infrastructure project.[31] P3s typically involve real estate development on land that may be publicly owned where private benefit is realized through returns on development on the property and public benefit could range from additional revenue through taxes, lease as well as developer contribution to infrastructure improvements. While P3s can sometimes be difficult to establish and dissolve, long-term P3s can demonstrate the capacity for shared vision and leadership across public and private sectors. In the study area, P3s could enable a developer agreement that allows for simultaneous redevelopment of transit stations and new development of interest to the private partner. Fundamentally, a P3 moves funding from a single strategy of

[31] U.S. Department of Transportation, "Public-Private Partnerships (P3)," https://www.transportation.gov/buildamerica/p3.

governmental aid to a more diversified approach involving increased utilization of private markets.[32] Numerous major North American cities, including Atlanta, Charlotte, Miami, Portland, San Diego, Toronto, Vancouver, and Washington DC, have successfully leveraged P3s in transit-oriented development projects.

Chapter 55d of Connecticut General Code stipulates how P3s are defined, procured, approved, and funded, in addition to other requirements for P3 agreements on DOT owned properties.[33] Within the Study Area, P3 agreements have been implemented in Stamford and Norwalk.

Examples of P3 Implementation in Study Area

Strong developer interest in Stamford and Norwalk in the Study Area have led to P3 developments in both municipalities. Examples from both municipalities are presented below which demonstrate how future P3 agreements could be structured along other stations for both branch lines. Both examples demonstrate state participation and municipal capacity for P3 execution.

Stamford Transportation Center

The Connecticut DOT is seeking to replace the DOT owned original parking garage located at the Stamford Transportation Center through a public-private partnership agreement that includes TOD. Up to $35 million dollars in bond proceeds were made available from the State of Connecticut for the replacement garage.[34] It demolishes the original 727-space parking garage which opened in 1987and constructs new parking facilities with a minimum of 273 spaces. It also includes improvements of vehicular and pedestrian circulation and access along Station Place, improved multimodal commuter amenities at the Stamford Transportation Center, and modernization of the Parking Access and Revenue Control System (PARCS).[35]

Norwalk

Norwalk Redevelopment Agency has primarily led development efforts and P3 formation in the city's downtown core. Historically, its interests have been supportive of transit, as the city has benefitted from the Main Line commuter rail connection to New York City. The potential for innovative funding mechanisms also exists through P3s, as the Norwalk Redevelopment Agency owns the South Norwalk Train Station. In a P3, 60 surface parking spots at the South Norwalk Train Station in 2016 were sold to the developer to construct wider transportation improvements. The project also included developer contributions, fund matching for community engagement from the private partners, and the involvement of DECD.

Potential P3 Implementation Case Studies

This section presents a high-level analysis of a potential P3 agreement on Danbury Main Street site near Danbury station. This site was selected in consultation with WestCOG and municipal staff from the respective municipality and the development program is informed by discussion with the developers and/or municipal staff. This case study presents different contexts of neighborhood conditions, development programs, and P3 structure summarized below.

Danbury Downtown: 301 Main St.

Development Opportunity

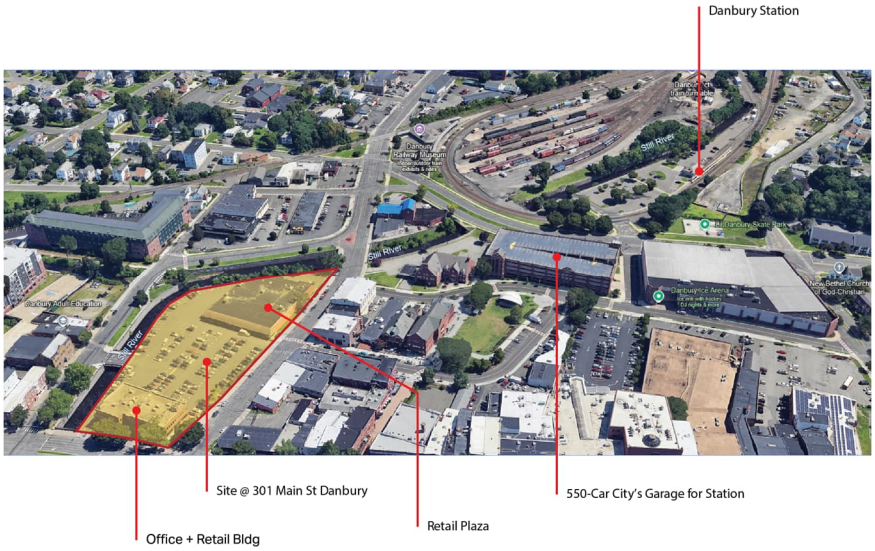
The potential site is a 2.54-acre parcel currently owned by a private developer. The site contains two existing buildings: one is a mixed-use office and retail space, and the other is a retail plaza. Additionally, there is a surface parking lot included on the property. These buildings are in good condition and have been generating stabilized cash flow for the current owner. However, the City is interested in incentivizing the developer to redevelop the site due to its prime location in proximity to both the station and downtown and be more consistent with the new downtown zoning that allows higher density. The City hopes to see additional housing opportunities on this site, complemented

[32] American Public Transportation Association Task Force on Public-Private Partnerships, Schneider, M., & Davis, J. (2006). Public-Private Partnerships in Public Transportation: Policies and Principles for the Transit Industry. American Public Transportation Association. https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/apta_ppp_white_paper_final.pdf
[33] Connecticut General Statutes, *Chapter 55d*, https://www.cga.ct.gov/2023/pub/chap_055d.htm.
[34] Connecticut Department of Energy and Environmental Protection, Scoping Notice: Stamford Transportation Center, https://portal.ct.gov/ceq/dot/scoping-notice/stamford-transportation-center.
[35] Connecticut Department of Transportation, *Stamford ROD 2012*, 2012, https://portal.ct.gov/-/media/dot/stamfordrod2012pdf.pdf.

by public parking and resident-supportive retail. These upgrades aim to further diversify the lifestyle and amenities available in downtown Danbury.

Three key comparable projects have informed the design and assumptions for this P3 development (**Figure 6**). Two of them are multi-family developments: 333 Main St and 1 Kennedy, which provide 149 and 374 residential units, respectively. These buildings are six and four stories tall, with a density of approximately 40 dwelling units per acre (DUAC). These residential projects serve as references for the assumptions in this analysis. Additionally, the site across from 301 Main St is currently under development for Ives Bank's new office branch building. This project is benefiting from the City's tax deferral program and will play a significant role in revitalizing the downtown area by increasing employment opportunities and foot traffic.

Figure 6: Downtown Danbury Site Map



Development Program

Table 14 summarizes the potential development opportunity, based on the City's earlier TOD development study and discussions with the current owner. The development would be of partial site, involving retaining the existing office and retail mixed-use building on Main Street while demolishing the surface parking lot and retail plaza. This would allow for the construction of a new three- or four-story multifamily mixed-income and retail mixed-use building, accompanied by a brand-new parking solution. The proposed parking would include a combination of podium parking on the ground level of the new building and surface parking. Currently, only a small portion of public parking is planned, but the developer could allocate additional public parking based on negotiations with the City.

Table 14: Danbury Downtown Site P3 Development Program

Site area	2.12 acres (92,500 SF)
Program	New Residential + New/Existing Retail + Existing Office
Structure 1	Existing 3-story office building with ground retail
Structure 2	3-story residential with ground retail and parking
	Surface parking lot
Gross SF	132.5K SF
Residential	97.5K SF (74% of All Bldg GSF)
Retail	18.0K SF (14% of GSF)
Office	17.0K SF (13% of GSF)
Parking	37.2K SF (164 spaces)
Program Detail	
Residential	85 units

Affordability	30% Set-Aside: 15%@60%AMI & 15%@80%AMI
Unit Mix	10% Studio & 50% 1BR & 40% 2BR

SF= Square Feet
AMI= Area Median Income
GSF= Gross Square Feet
BR= Bedroom

Potential P3 Structure

The current site includes two commercial properties with ample parking that generate revenue for the property owners. Based on AECOM's experience and industry standards, this suggests that a developer would likely require an internal rate of return (IRR) of 20% or higher to justify the increased risks associated with demolishing existing buildings and redeveloping the property. Therefore, the key analytical element in this P3 structure is whether public incentives can support returns at this level.

Since the site is privately owned, the City has few tools available to incentivize publicly desired outcomes such as enabling housing development or incorporating public amenities into the project. One of the few tools available to the City, and the focus of this analysis, is a tax deferral program. This program aims to incentivize the developer by reducing tax commitments, thereby mitigating risks and improving the private developer's financial returns.

Under the proposed tax deferral program, based on previous initiatives by the City, Danbury would forgo property taxes on the improvements made to the development for 7 years. In the long term, the new residential and retail mixed-use property's taxes would contribute to public sector revenues. The City would continue to collect tax on the land and the existing building, and the developer would pay taxes from year 8 on the entire development.

Table 15: Potential P3 Structure for Danbury Downtown Site

Partnership Structure	Public Incentives
Key Questions	What values can be created and captured? And if a tax deferral program will incentivize the developer to develop the site?
Public Role	Relaxing property taxes for 7-Year Deferral Period
Private Role	Developing new properties with a limited number of public parking
Partnership Goals	
Public Goals	Capturing values: Increased property tax on the longer term Creating public benefits: New mixed-income housing opportunities, station improvement, market improvement
Private Goals	Feasible IRR (20% as min)

Captured Values for Private and Public

Table 15 summarizes the results of this potential P3 development. For the private developer, the total development cost is estimated at approximately $34.7 million, including all construction, soft, and contingency costs. Year 1 revenues, after the property is stabilized, are projected at $2.5 million, with an accumulated total of $20.0 million over the 10-year analysis period. The resale value at the end of the period is estimated to be around $30.5 million, resulting in a 22.4% IRR. This 20%+ IRR positions the project as an attractive investment. AECOM also evaluated scenarios without the 7-year deferral program. Without the tax deferral, the IRR would drop to 18.4% which may be less appealing to developers, given the risks associated with redevelopment of a property that is currently generating a cash flow.

On the public side, Danbury's primary source of revenue is the longer-term increase in property taxes from the enhanced portion of the development. This increase is estimated at $82,200 for the first year following the conclusion

of the tax deferral program. The public benefit of this development could potentially be realized through overall downtown revitalization with new development that cannot be quantified through this P3 analysis.

Figure 7: Danbury Downtown Site P3 Analysis Results

Private	
Development Costs	$34.7 million
1-YR Stabilized Revenues	$2.5 million
10-YR Total Stabilized Revenues	$20.0 million
Re-Sale Value at Year 10	$30.5 million
Levered IRR	22.40%
Public	
Post Deferral Period: 1st Year Assessed Property Tax from the Improvement Portion	$82,200

^This is estimate of assessed property tax that the City is not collecting during the deferral period

Levered IRR is the expected rate of return on an investment after accounting for borrowed funds and financing costs

Conclusion

Value capture mechanisms can meaningfully contribute towards local and rail investments for the study area. **Table 16** summarizes the rail investment costs and value capture contribution estimates. TIF revenue could support 3-5% of the total capital costs and special assessment revenue could cover 5-7% of the estimated operating costs for rail improvements. Alternatively, TIF and special assessment revenues could both contribute to financing capital improvements, for example by contributing to debt service for a state bond issuance or federal low interest loan.

Beyond contributing to rail transit expansions, value capture mechanisms can also help realize the baseline development potential in the station areas by contributing towards local infrastructure. The local investment revenue from TIF is estimated at $162 million in 2024 dollars for 2030-2050; this represents near-term revenue from the baseline development scenario that municipalities could utilize to support local infrastructure improvements. Special assessment revenue for local investment is estimated at $172 million for 2030-50. Similar to the transit investment portion, local value capture investment could be structured in a variety of ways. For example, municipalities could issue TIF-backed bonds to raise upfront funding or enter into credit enhancement agreements with developers. Special assessment revenues could be used on a pay-as-you-go basis, or to secure TIF bonds.

As discussed throughout this report, these rough order of magnitude estimates assume that TIF and special assessment districts are implemented in the half mile radius around each station, throughout the time horizon of the of the study (through 2075). While these figures provide a sense of the potential scale for value capture revenues, actual implementation will require approval of individual municipalities.

Complementing these district-based value capture mechanism, P3 agreements would aid in implementing the overall vision by facilitating new development near the stations, addressing public infrastructure needs, supporting ridership demand, and adding to the property tax base for respective municipalities.

Additional implementation considerations for structuring these revenue contributions will be presented in the next deliverable (implementation plan) for the project.

Table 16: Rail Investment Costs and Value Capture contribution (2024 dollars)

	2030-2050		2050-2075	
	Rail Improvement Costs (1)	Value Capture Revenue (2)	Rail Improvement Costs (1)	Value Capture Revenue (2)
Capital Costs	$2.7 billion	$102.9 million	$2.1 billion	$110.8 million
Operating Costs	$830 million	$46.6 million	$1.1 billion	$73.6 million

(1) Rail Improvement costs combine capital and operating costs for Baseline/SOGR with TIME FOR CT vision (2030-50) and WestCOG vision (2050-75). Baseline/SOGR costs are estimated up to 2075 and as such were split between both transit scenarios to get total costs.

(2) Value Capture Revenue is showing only estimates for transit investment and assumes TIF revenues towards capital costs and special assessment revenue towards operating costs. Value Capture revenue for local investments not shown in this tabulation.

Appendix A

TIF Model Assumptions

TIF Program Assumptions

- **Program Phasing:** Two consecutive TIF programs will be implemented to align with the overall development timeline:
  - TIF Phase 1: Primarily focused on capturing value from the current rail development, this phase will begin in 2030 and run for 20 years. Property assessed values will be frozen in 2030.
  - TIF Phase 2: This phase will target value capture from both the current rail development and the future rail extension, particularly in the towns of Brookfield and New Milford. Phase 2 is projected to start in 2050 and will continue for 25 years. Property assessed values will be frozen in 2050, meaning towns involved in TIF Phase 1 will re-freeze assessed values based on 2050 figures.
- **Capture Rate:** It is assumed that 50% of the incremental assessed values will be collected into TIF funds managed by local municipalities. This assumption is based on comparable TIF programs in Connecticut.
- **TIF Fund Operating Costs:** A fixed cost of 0.5% of TIF revenues per year is assumed to cover fund operation and management expenses. This percentage is derived from general financial fund practices. Actual costs may vary depending on how local municipalities choose to structure their TIF funds.
- **Other key TIF assumptions**
  - For newly developed projects, the frozen assessed value is assumed to be zero.

Assessed Values

- **Assessed Values:** Baseline assessed values (measured in dollars per building square foot) are categorized into multifamily and commercial properties. These values represent the median figures for buildings constructed after 2000 within a one-mile radius of the station area. For towns with limited data (fewer than five data points) or no data available, a station-level median value is used to ensure the accuracy of the assumptions. The table included in the report summarizes the assessed values for each town as of 2023.

- **Growth of Assessed Values:** assessed values are assumed to remain stable or, in most cases, increase over time. Using historical Grand List data from the state (2011–2023), growth rates for each town have been calculated. Two different sets of growth rates are applied depending on the development phase: the growth period and the stabilized period.
  - Growth Period Rates: These range from the average historical growth rate (as minimum growth) to the third quartile historical growth rates (as maximum growth).
  - Stabilized Period Rates: These range from 0% (as minimum growth) to the average historical growth rate (as maximum growth)

	Development Phase 1 (2025-2049)		Development Phase 2 (2050-2074)	
Municipality	**Residential**	**Commercial**	**Residential**	**Commercial**
Bethel	3.48%	0.37%	1.57%	0.03%
Danbury	2.87%	0.53%	0.00%	0.05%
New Canaan	3.51%	0.46%	1.67%	0.04%
Norwalk	3.68%	0.62%	2.10%	0.06%
Redding	2.96%	0.32%	0.23%	0.03%
Ridgefield	3.41%	0.78%	1.39%	0.08%
Stamford	2.99%	0.08%	0.31%	0.00%
Wilton	3.02%	0.42%	0.37%	0.04%
Brookfield	1.71%	0.02%	3.53%	0.25%
New Milford	2.87%	0.04%	3.98%	0.40%

Bond

- In the analysis and model, AECOM assumes that local municipalities will issue bonds to finance projects and infrastructure development, with the bonds exclusively backed by TIF revenues. The first-year TIF revenues of the program are used to determine the maximum bond amount the town can issue.
- The bonds have terms of 20 and 25 years, corresponding to the two TIF programs' durations and development phases (2030–2049 and 2050–2074). These terms are determined based on Connecticut state law (Connecticut General Statutes Title 7 – Municipalities, Chapter 109 - Municipal Bond Issues, Section 7-371. Form of Bonds) and comparable TIF district examples within the state, such as the Bridgeport Steel Point Infrastructure Improvement District.
- The bonds will follow the standard municipal bond structure, with an annual coupon rate of 5.0%, as reflected in the S&P Municipal Bond Connecticut Index, and biannual payments. The bond terms will run concurrently with the corresponding TIF program phases.

Development Schedule/Phasing

- **Typical unit sizes:** Based on assessor data, the analysis and model assume the following unit sizes for single-family and multi-family housing:
  - Single-Family House: 2,400 sq.ft per house
  - Multi-Family Unit: 1,000 sq.ft per unit

- **Development Schedule:** The baseline inventory is derived from 2024 data. The analysis and model project that future developments will occur at a consistent pace, with newly developed units evenly distributed across two periods: 2025–2049 and 2050–2074.

Other Global Assumptions

- All parcels within a 1/2-mile radius are included in the TIF programs.
- No special assessments are applied in addition to the TIF programs.
- Among various taxing entities, only local municipalities participate in the TIF programs.

AECOM GENERAL LIMITING CONDITIONS

a) AECOM devoted the level of effort consistent with (i) the level of diligence ordinarily exercised by competent professionals practicing in the area under the same or similar circumstances, and (ii) consistent with the time and budget available for the Services to develop the Deliverables. AECOM also represents that during the conduct of due diligence as reflected in its proposal, it determined that the time and budget available is sufficient to perform the Services and Deliverables required by this Agreement and that AECOM employs competent employees who shall comply with this standard.

The Deliverables are based on estimates, assumptions, information developed by AECOM from its independent research effort, general knowledge of the industry by the competent professionals in the employ of or under contract to AECOM, and information provided by and during consultations with Client and Client's representatives. Subject to the standard of care and associated level of diligence set forth above, no responsibility is assumed for inaccuracies in data provided by the Client, the Client's representatives used in preparing or presenting the Deliverables. AECOM assumes no duty to update the information contained in the Deliverables following final submission of said Deliverables unless such additional services are separately retained pursuant to a written amendment to this agreement signed by AECOM and Client.

b) AECOM's findings represent its professional judgment. Neither AECOM nor its parent corporations, nor their respective affiliates or subsidiaries ("AECOM Entities") make any warranty or guarantee, expressed or implied, with respect to any outcomes as may be set forth in the Deliverables pertaining to the improvement of the Danbury and New Canaan Branches of the Metro-North Railroad.

c) The Deliverables shall not be used as a basis for any public or private offering of securities, debt, equity, or other similar purpose where it may be relied upon to any degree by any person other than the Client.

d) Possession of the Deliverables does not carry with it any right of publication or the right to use the name of "AECOM" in any manner without the prior express written consent of AECOM. No third party may reference AECOM with regard to any abstract, excerpt or summarization of the Deliverables without the prior written consent of AECOM. Any changes made to the Deliverables, or any use of the Deliverables not specifically identified in the Agreement between the Client and AECOM or otherwise expressly approved in writing by AECOM, shall be at the sole risk of the party making such changes or use.

e) The Deliverables were prepared solely for the use by the Client, member municipalities, and special purpose entities created by member municipalities in furtherance of this Agreement. No third party may rely on the Deliverables unless expressly authorized by AECOM in writing (including, without limitation, in the form of a formal reliance letter). Any third party expressly authorized by AECOM in writing to rely on the Deliverables may do so only on the Deliverable in its entirety and not on any abstract, excerpt or summary. Entitlement to rely upon the Deliverables is conditioned upon the entitled party accepting full responsibility for such use, strict compliance with this Agreement and not holding AECOM liable in any way for any impacts on the forecasts or the earnings resulting from changes in "external" factors such as changes in government policy, in the pricing of commodities and materials, changes in market conditions, price levels generally, competitive alternatives to the project, the behavior of consumers or competitors and changes in the Client's policies affecting the operation of their projects.

f) The Deliverables may include "forward-looking statements". These statements relate to AECOM's expectations, beliefs, intentions or strategies regarding the future. These statements may be identified by the use of words like "anticipate," "believe," "estimate," "expect," "intend," "may," "plan," "project," "will," "should," "seek," and similar expressions. The forward-looking statements reflect AECOM's views and assumptions with respect to future events as of the date of the Deliverables and are subject to future economic conditions, and other risks and uncertainties. Actual and future results and trends could differ materially from those set forth in such statements due to various factors, including, without limitation, those discussed in the Deliverables. These factors are beyond AECOM's ability to control or predict. Accordingly, where the report includes a specific and appropriate qualification, AECOM makes no warranty or representation that any of the projected values or results contained in the Deliverables will actually occur or be achieved. The Deliverables are qualified in their entirety by, and should be considered in light of, these limitations, conditions, and considerations.