



Transit-Oriented Development (TOD) Roles, Visioning, Viability, and Tools Analysis

Executive Summary

Overview

This primary purpose of the Transit-Oriented Development (TOD) Roles, Visioning, Viability, and Tools Analysis was to build on the recommendations from the Hartford Line TOD Action Plan (2019) and CTfastrak TOD Study (2017). The Capitol Region Council of Governments (CRCOG) worked with each of the eight municipalities along these transit corridors to determine the financial viability of their site-specific TOD vision. Financial feasibility was determined by conducting a market demand study, performing a test fit to see how such development (and required parking) could physically fit onto each site, and testing construction costs against sale/rent values to see if such developments would remain profitable. Participating municipalities within the Capitol Region included (from North to South): Enfield, Windsor Locks, Windsor, Hartford, West Hartford, Newington, New Britain, and Berlin.

Task 1. Project Management

The Consultant supported CRCOG with administrative and outreach activities related to the development of the TOD Roles, Visioning, Viability, and Tools Analysis study. This included one-on-one meetings with each municipality and three Technical Advisory Committee (TAC) meetings. Input from these meetings was incorporated in the findings of this study.

Task 2. Stakeholder and Public Outreach

The Consultant prepared a Public Involvement Plan (PIP), which outlined key activities, milestones, and a schedule of public involvement tasks. In addition, the PIP identified stakeholders and stakeholder groups, outlined strategies to engage the public throughout the project, including a project website. The nature of the outreach is described in Task 1, above. Of note, the TAC was comprised of members of CRCOG's TOD Collaborative and municipal representatives.

Since this study created potential development scenarios rather than actual developer sponsored proposals, public outreach meetings with all eight municipalities were deferred at the request of the municipalities.

Task 3. Organizational Roles and Responsibilities

The Consultant reviewed and analyzed stakeholder roles in and around planning and implementation of TOD in the CRCOG region, including State, Regional, Local, Private, and Public organizations that advocate for TOD, as well as developers. The Consultant developed a series of recommendations on how TOD roles could be organized in the CRCOG region to maximize impact and reduce inefficiencies.

Existing Conditions

The existing conditions findings include:

Multiple “players” drive TOD efforts in the Capitol Region: eight municipalities; four regional organizations; and developers. Each has adopted a different strategy tailored to its specific mission and goals, operating within its own organizational constraints.

Five key themes from the municipal interviews revealed a circular dynamic. This in turn framed the four key principles driving the recommendations from this study:

Themes:

- 1) Limited Resources
- 2) Brownfields Remediation Hurdles

- 3) Reliance on coordination with the Connecticut Department of Transportation (CTDOT)
- 4) Historical lack of Community support for TOD
- 5) Need for the Right Financial Incentives

Principles:

- 1) Differences cannot overshadow a regional synergy
- 2) Information sharing can be more formalized and strategic
- 3) Collaboration in prioritizing transportation investments will attract more developer investment
- 4) The region can invest in TOD project delivery and finance expertise

Limited resources are the primary constraint. Medium and small towns have budgets limiting access to specialized expertise on TOD project delivery and finance, as well as access to resources needed to ready a site for market (such as environmental remediation) or to fill financial gaps with incentives. Rather than project delivery, towns have focused on outreach to garner political support for financial incentives and increased density needed to support TOD projects.

In a regional approach, resources could be more efficiently used, but one of the barriers is each municipality's reliance on CTDOT to identify their location as a priority for transit infrastructure investment, fostering a sense of competition. Although the municipalities see the value of a regional approach, this change in dynamic will require a shift in the roles of the regional players in how they support the municipalities.

Recommendations

The recommendations are aimed at fostering a new regional strategy focused on leveraging the potential and resources of the entire region. Only from collective action can the region truly overcome the historical hurdles that have held back a more successful TOD implementation strategy. A regional strategy planning workshop could be an ideal kick-off point to reaffirm and solidify a regional partnership and to develop a strategy to deliver the following three recommendations:

- Build a Knowledge-Sharing Toolkit for Towns
- Adopt a Regional Brand
- Reimagine the Regional Organizations

These recommendations are discussed in greater detail in the full Roles and Responsibilities Report.

Task 4. Site-Specific Visioning and Viability

Task 4A. Review Existing Plans, Studies, and Related Efforts

The Consultant reviewed recent regional TOD initiatives, including the recommendations from the Hartford Line TOD Action Plan and CTfastrak TOD Capacity Study. Findings in this study are consistent with the conclusions and recommendations from previous studies.

Task 4B. TOD Market and Viability Analysis

The Consultant reviewed and analyzed historical and current market conditions for new real estate development in each municipality involved in the study. Data were sourced from CoStar, the United States Census Bureau, and the Bureau of Labor Statistics. Growth projections were based on the last 30 years of development (since 1990) which include four recessions and four economic recoveries, each of varying strength, depth, and duration. The boundaries of local real estate submarkets are designated by respective Town boundaries. The boundaries and definitions of Hartford County and Tolland County are

based on US Census definitions, although counties do not have administrative functions or authority in the State of Connecticut.

Results

The greater Hartford-Springfield region has consistently grown at 0.5% - 1.5% per year, averaging booms and recessions. Annual rates of population growth and gross regional product (GRP) have been in this range as well. Additions to the region's supply of office space, retail space, and hotel rooms have also grown within this range.

Locally, the Capitol Region has grown at 1% - 4% per year. On average, Hartford has attracted 20% - 30% of Hartford County's new residential and office development; Windsor has attracted 28% of industrial growth; and Windsor Locks has attracted 18% of new hotel development. In order to maintain a resilient economy, diverse tax base, and broad cross-section of residents, the Capitol Region will need to compete with New Haven and Fairfield County to attract and develop new jobs and industries in Connecticut. Hartford and its suburbs will continue to grow, but the shape and nature of that growth will both influence and depend on infrastructure investments that are made regionally.

Findings

As noted above, continuing regional growth at 1.5% - 2.0% would generate more than enough demand to fill up new supply on (re)developable acreage around station sites. Local ordinances related to building size, density, parking, and other constraints allow buildings and uses lower than what the market would otherwise demand and supply. Planning around station areas may reasonably assume that over a 30-year time horizon, the region as a whole will be growing sufficiently to take up proposed new supply.

With overall regional growth expected to continue, cities and towns that offer more than one way to get to work are in a strong competitive position to attract new companies, stores, residents, and hotels. The chief competing submarkets are likely to continue to be cities in New Haven and Fairfield counties, such as Norwalk, Bridgeport, and Stamford. If rail transit is not expanded along the Hartford line, suburban growth in Tolland County, northwestern Hartford County, and northwestern New Haven County are the most likely alternative markets to supply growing demand.

Task 4C. Site Selection

From discoveries in Tasks 4A and 4B, the Consultant collaborated with each municipality to identify one catalyst development site for further analysis. The site selection was informed by the Hartford Line TOD Action Plan and other studies provided by CRCOG. If a new site was selected, the Consultant reviewed existing conditions of potential sites regarding zoning, lot size, land use, built characteristics, street frontage, and development parameters such as transportation access and utility connections. This information informed the Consultant's recommendations for corrective actions necessary to create viable or optimal sites, including site assemblage, rezoning to a more TOD favorable basis, funding and financing, and infrastructure improvements, among others.

Task 4D. Visioning TOD Test-Fit

The Consultant reviewed each selected site and identified market-supported goals for TOD at each selected site based on market analysis findings and stakeholder feedback and then tested the feasibility of each site-specific vision. These basic "Test Fits" for each location take into consideration the limitations based on current zoning and physical characteristics of each site, as well as the integration of equitable development strategies to improve access to new TOD. Each municipality was consulted to develop their

site-specific vision to adjust any features and form of the site to maximize its development attractiveness. The sites selected for analysis and their respective test fits are summarized below:

Enfield

Site Selection

The site was selected in discussion with CROCO and Enfield, and supported by previous TOD planning studies, which identified the riverfront parcels as a soft site given its proximity to the (at the time proposed) Hartford Line Station. The parcels are west of the successful Bigelow Commons mixed-use redevelopment as well. Thus, the selected parcels have an opportunity to build on the success of Bigelow Commons, provide housing adjacent to the station, and enhance riverfront access. For the final analysis, the two northerly lots at 35 and 37 North River Street were removed due to ownership issues.

TOD Test-Fit

The test-fit primarily considered topography, proximity to the Connecticut River, and distance from the parcel lines to the station. The test-fit proposed three sizable residential developments that could be phased, with building A anchoring the TOD and including a small retail footprint. The development is mostly proposed on the flatter pads of the site to minimize grading costs. To accommodate parking, the test-fit uses the topography to tuck a level of parking under the buildings and minimize the need for surface parking. River Street would need to be reconfigured to allow for adequate sidewalk width, travel lanes in two directions, and some on-street parking. The layout maximizes views of the river and provides regular unit sizes while creating opportunities for on-site open space. Buildings B and C are on less-flat land but were designed to accommodate a phased development approach.



Figure 1 - Enfield Station TOD Site

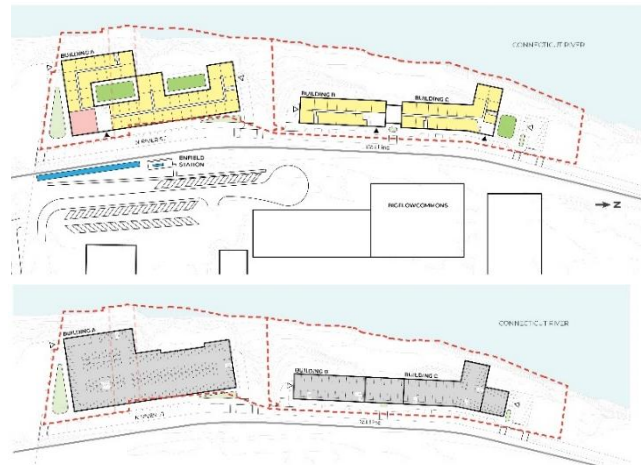


Figure 2 - Enfield Station TOD Test-Fit Ground Floor and Garage Level Floor Plans

Table 1 - Enfield TOD Development Summary

Use	SF	Units	Parking
Commercial	3,900	N/A	8
Residential	308,135	299	449
Total	312,035	316	350*

*Parking provided is lower than required by zoning assuming requirements would be revisited to reduce development costs

Windsor Locks

Site Selection

The parcels selected for the test-fit were chosen in partnership with the town of Windsor Locks, CROG, and influenced by previous TOD studies. The 15 parcels of interest reflected the Town’s eagerness to develop their Main Street Corridor in concert with the relocated Windsor Locks Rail Station. These parcels were originally studied for TOD concept planning, which envisioned an enhanced Main Street streetscape anchored by a cluster of development at the north end of the corridor nearest the station. Given the present market conditions, developing all 15 parcels would oversupply development and see challenges. Thus, the decision was made to focus on the northernmost parcel as the first mover given its direct adjacency to the station and relatively regular topography. The current use is a commercial strip center that is aging. Further, for the final site test fit, only Lot 1, 255 Main Street was analyzed due to prevailing market conditions.

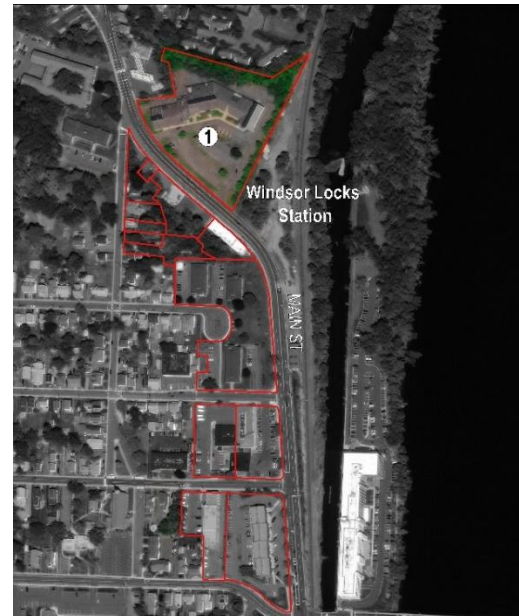


Figure 3 - Windsor Locks Station TOD Site

TOD Test-Fit

The TOD test fit proposes a 3-story mixed-use residential “U” shaped building, centered around a public plaza and fronted by a station plaza at the northernmost parcel. The TOD would have a retail footprint fronting the station plaza at the corner of Main Street and Chestnut Street that could accommodate multiple commercial businesses or a larger community-oriented use. There is an easement that runs along the front of the site which limits the developable area. However, this constraint can be leveraged to create a public space connected to the station. Given its direct proximity to the station and the station’s plan accommodating for a large surface lot, the test-fit assumes that the Town, CTDOT, and a developer could find an agreement for a shared parking garage at the station that could absorb the TOD’s parking requirement. This assumption would help the development be more feasible and allow for a more regular development typology.



Figure 4 - Windsor Locks TOD Test-Fit Ground Floor Plan

Table 2 – Windsor Locks TOD Development Summary

Use	SF	Units	Parking
Commercial	10,000		20
Residential	108,772	109	109
Total	118,772	109	129*

*Parking is assumed accommodated by a shared garage built at the station in collaboration with CTDOT.

Windsor

Site Selection

The parcels were selected in discussion with CROG and the Town of Windsor and supported by previous TOD planning studies and current market conditions. The parcels in question are relatively unencumbered and adjacent to Windsor Station and recent TOD (Windsor Station Apartments). The zoning is permissive of TOD, and current landowners have expressed interest in developing active uses.

TOD Test-Fit

The TOD test-fit takes cues from the nearby Windsor Station Apartments and proposes a residential building of four stories. The northern parcel hosts the building and includes a green space west of the building and on the roof of the building. Parking is accommodated to the south of the building on the southern parcel. The zoning limits the number of



Figure 5 - Windsor Station TOD Site and Test-Fit Ground Floor Plan

units per acre to 30 units per acre, which yields 55 units on the 1.83 acre assemblage. For the final site test fit, the two southerly lots were removed due to ownership issues. However, they are included in the implementation recommendations since the town has indicated that the Loomis-Chafee School may have an interest in their redevelopment.

Table 3 – Windsor TOD Development Summary

Use	SF	Units	Parking
Residential	55,065	55	69
Total	55,065	55	69

Hartford (Flatbush Avenue)

Site Selection

The parcels were selected in discussion with the City of Hartford and the Town of West Hartford. The initial impulse was to expand on the previous Parkville TOD planning studies and current market conditions. However, the consensus was to focus on the proposed West Hartford/Flatbush Avenue CTrail site since there was sufficient development activity already underway in Parkville and the Flatbush Avenue area offered a relatively clean slate upon which to develop.

Zoning

The prevailing zoning for the assemblage of parcels at Flatbush Avenue is Hartford's Commercial-Industrial Mix district (CX-2) mixed with Main Street and industrial designations. Parcels 1 through 4 are zoned Commercial Industrial Mix (CX-2) which permits "allow a highly flexible mix of larger scale, more intensive uses without proximity to residential uses" such as storage facilities, outdoor sales lots, bars, and nightclubs. Parcel 5 is zoned as Main Street (MS-3) which permits commercial uses, including a limited number of vehicle-oriented business types, while balancing the needs of pedestrians and vehicles by limiting driveways and orienting building entrances to the sidewalk. Parcels 6 through 8 are all located in West Hartford and share the same zoning designation of General Industrial District (IG) which are for primarily commercial and industrial uses though residential uses are not prohibited.

The zoning across all eight parcels of the assemblage does not support transit-oriented development. However, both Hartford and West Hartford have TOD Overlays in their zoning codes, and the parcels fall within those overlay districts. Thus, the TOD test-fit exercise assumes that the parcels in questions would be rezoned or have the respective TOD Overlays applied to them. The use, bulk, and lot regulations are set forth in the West Hartford TOD Ordinance (177-43 Transit-Oriented Development)¹ and the Hartford TOD Ordinance (5.3 - Transit Oriented Development Overlay)².



Figure 6 - Flatbush Avenue Station TOD Site

The use, bulk, and lot regulations are set forth in the West Hartford TOD Ordinance (177-43 Transit-Oriented Development)¹ and the Hartford TOD Ordinance (5.3 - Transit Oriented Development Overlay)².

Hartford TOD Overlay

The intent of Hartford's Transit Oriented Development Overlay is "...to allow for greater flexibility and require greater density in the vicinity of fixed nodes of public transportation." Development within the overlay requires applicants to file a zoning permit application and may be asked to submit a transportation management plan. The TOD Overlay requires a master plan submission that outlines new streets and whether they will be public or private, and that primary streets be identified where there is at least two blocks of frontage. Buildings within the overlay shall comport with the Downtown Storefront Building Types and Downtown general Building types as defined in the DT-3 zone. Additionally, Apartment Building types and Row Building types shall comport with the regulations of MX-2 district. Parcels contained in the TOD overlay zone over four acres, a mix of at least two building types is required, included mixed-use with residential above a retail/commercial base as in a Storefront Building. The maximum height for buildings is eight stories.

West Hartford TOD Ordinance

The purpose of the West Hartford TOD Ordinance is, "to encourage development in a predictable, contextual, design-focused manner within walking distance of the CTfastrak stations," and, "...is intended to support transit-oriented development principles which foster the creation of complete neighborhoods...to promote consistent and pedestrian-oriented building and site design." The bulk and

¹ 177-43 Transit Oriented Development, City of West Hartford, CT, Zoning Code. <https://ecode360.com/7295941>

² 5.3 – Transit Oriented Development Overlay, City of Hartford, CT, Zoning Code

https://library.municode.com/ct/hartford/codes/zoning_regulations?nodeId=n5.0SPOV_5.3TRORDEOV

lot regulations that apply in the TOD Overlay are Downtown Storefront Buildings (DT-3 Districts) and have thus been utilized for the test fit.

TOD Test-Fit

For the test-fit exercise, the assumption was to apply the West Hartford TOD Ordinance to all parcels west of Newfield Avenue to promote cohesive and unified development and not to have discrepancies between building form and access to and from the station to potential future and nearby developments. The test-fit also factors in the latest design of the West Hartford Station Plan. The proposed station plan assumed the parcels west of Newfield Avenue would be converted to station surface parking with some buffering green space. The test-fit exercise incorporates the plan for the station, including the platforms and CTfastrak bus loop.



Figure 7 - Flatbush Avenue Station Test-Fit Ground Floor Plan

The original test-fit consisted of four buildings with retail ground floors and residential upper floors. Following further discussions with Hartford, West Hartford, and CTDOT, the test-fit was revised to focus on the parcels west of Newfield Avenue and include only two buildings. Both buildings would be six stories. The buildings were situated to reflect CTDOT’s station design criteria. In addition to TOD-related parking, additional spaces were included for commuters. Parking is accommodated through surface lots and an aboveground parking deck in Building A. Presumably, the larger parking deck will need a public construction subsidy to enhance the overall project viability.

Table 4 – Hartford TOD Development Summary

Use	SF	Units	Parking
Commercial	11,885	N/A	35
Residential	195,960	196	195
Commuter	n/a	n/a	256
Total	207,845	196	486

West Hartford (Elmwood)

Site Selection

The parcels were selected in discussion with CROG and the City of West Hartford and supported by previous TOD Planning studies and current market conditions. The assemblage proposed is located across the street from Elmwood Station. The proximity to the station, as well the current success of the Gastropark commercial business at 637 New Park Avenue and the flat pads of the other nearby businesses, make this an ideal spot for TOD. The assemblage also abuts the Trout Brook and the associated trail and is a nearby neighbor to the Elmwood Community Center. Collectively, these factors make the assemblage an attractive site for TOD. These parcels are almost all located within West Hartford’s TOD Overlay, making them ready for TOD.



Figure 8 - Elmwood Station TOD Site

TOD Test Fit

The TOD Test Fit builds off the success of the existing Gastropark businesses and complements them with additional commercial spaces of a similar building type. In addition, mixed-use residential buildings frame a central street that culminated in a community square. These buildings range from five to six stories with the largest building tucked into the back of the assemblage. The test fit revolves around the community green mode as a gathering space and is surrounded by ground floor retail on all sides. Parking is accommodated both in surface lots nearest the commercial node and garages tucked into buildings A, B, and E. The TOD is porous facing Trout Brook to allow for direct access to the brook and associated trail. The building set back are prescribed in the zoning code and maintain a common design language to portray a unified language. Lastly, the TOD is principally designed with Elmwood Station in mind; the perpendicular relationship with the station area acts as a funnel to both direct people to the station from within the TOD and to invite riders into the active and vibrant development.

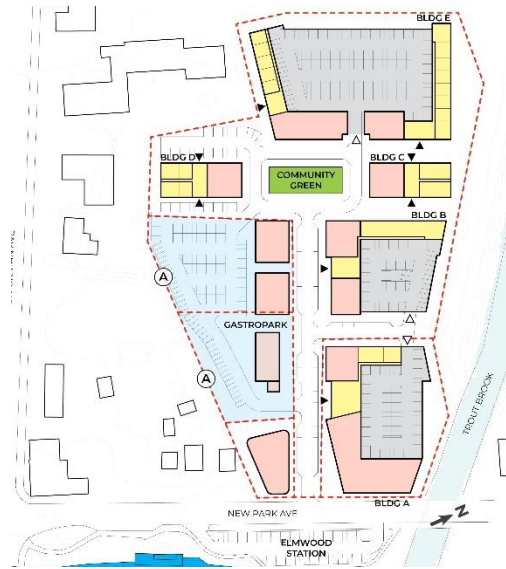


Figure 9 - Elmwood Station TOD Test-Fit Ground Floor Plan

Table 5 – West Hartford TOD Development Summary

Use	SF	Units	Parking
Commercial	62,700	N/A	188
Residential	308,135	512	512
Total	312,035	512	700*

*721 parking spaces are physically able to be accommodated in the test-fit as designed.

Newington Station

Site Selection

The parcels were selected in discussion with CRCOG and the City of Newington and supported by previous TOD Planning studies and current market conditions. The existing land use of the assemblage is predominantly light industrial and made up of autobody businesses. The assemblage abuts the Newington Junction CTfastrak Station, providing a direct link to transit. There is a historic Victorian home at 112-114 Willard Avenue that would need to be preserved and relocated.

TOD Test-Fit

The TOD test-fit assumes that the assemblage would be rezoned from low-density residential and industrial to the Transit Village Design District to promote TOD. The Test fit proposes three multifamily buildings in an “L” shaped pattern along the southern and eastern edges of the



Figure 10 - Newington Junction Station TOD Site

assemblage. Building A includes first floor commercial space, while all other buildings are singularly residential. Buildings A and B frame an extension of the Station Plaza, creating a direct connection to Newington Junction Station and encouraging riders, visitors, and residents to interact across the plaza and green spaces to the north of buildings A and B. The TOD also assumes that an existing historic Victorian home that fronts Willard Avenue would be moved into a perpendicular position to Willard Avenue and shifted to allow for similar townhomes to be built on either side to preserve the lower-density character of Willard Avenue and provide screening for the denser TOD behind them. The topography of the site may present an issue.



Figure 11 - Newington Junction Station TOD Test-Fit Ground Floor Plan

Table 6 – Newington TOD Development Summary

Use	SF	Units	Parking
Commercial	9,170	N/A	28
Residential	130,740	94	96
Total	139,910	94	124

*119 parking spaces are provided on site, with the townhomes having parking on site.

New Britain Site Selection

The parcels were selected in discussion with CRCOG and the City of New Britain (City) and supported by previous TOD Planning studies and current market conditions. The proposed assemblage sits to the east of the East Main Street CTfastrak Station. The assemblage is cut through toward the western end by Harvard Street, which is currently a dead end and only accessible by City employees. The site currently houses a gas station, New Britain City Yard and Garage, the Public Works Department, a salt pile, and a handful of two- to three-story mixed-use and residential buildings. The City currently has plans that seek to align East Main Street and Newington Avenue, which would split the assemblage through the northeast corner. The assemblage is currently zoned for TOD (TOD-EM-1).



Figure 12 - East Main Street Station TOD Site

TOD Test-Fit

The TOD test-fit envisions TOD occurring on an assemblage that closes Harvard Street and realigns East Main Street with Newington Avenue. Cottage Place extends through to Florence Street to provide access to parking, which is tucked within the assemblage. A three-story L-shaped mixed-use multifamily building abuts the CTfastrak station with the commercial footprint fronting East Main Street. A second three-story

L-shaped multifamily building sites just east of the East Main Street and Cottage Place intersection. To integrate the TOD into the neighborhood more seamlessly, two-unit townhomes line East Street and Florence Street for contextual development to adjacent multi- and single-family homes. The interior spaces between building types are assumed as public plaza and green space, while the townhomes assume private yards. The provided parking satisfies the zoning requirements, factors in eligible parking reductions available in the zoning, and includes a small number of extra spaces for commuters.



Figure 13 - East Main Street TOD Test-Fit Ground Floor Plan

Table 7 – New Britain TOD Development Summary

Use	SF	Units	Parking
Commercial	8,060	N/A	23
Residential	112,805	78	94
Total	120,865	78	123

Berlin

TOD Site Selection

The parcels were selected in discussion with CRCOG and the Town of Berlin and supported by previous TOD Planning studies and current market conditions. The assemblage is adjacent to a nearby residential development called Steele Center, and it is a few blocks away from the Berlin Rail Station. The Mattabeset River is a site constraint, which minimized the developable area of the parcels.

TOD Test-Fit

The TOD Test-Fit envisions two mixed-use buildings and surface parking tucked behind the buildings. Both buildings are required to front Farmington Avenue and provide commercial ground floors per the zoning. Given the higher parking requirements and need to maintain consistency along Farmington Avenue, Building A is three-stories while building B is two-stories. The TOD includes some green space tucked between the buildings and on the interior of Building B. Some of the parking required is satisfied by a small ground floor covered lot, which allows for Building B to extend in an L-shape to

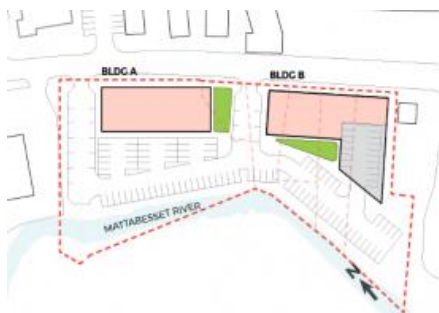


Figure 14 - Berlin Station Test-Fit Ground Floor Plan



Figure 15 - Berlin Station TOD Site

consistency along Farmington Avenue, Building A is three-stories while building B is two-stories. The TOD includes some green space tucked between the buildings and on the interior of Building B. Some of the parking required is satisfied by a small ground floor covered lot, which allows for Building B to extend in an L-shape to

provide more units on the second floor. To accommodate any river flooding, the development includes a 20-foot buffer from the river.

Table 8 – Berlin TOD Development Summary

Use	SF	Units	Parking
Commercial	20,150	N/A	81
Residential	36,540	25	50
Total	56,690	25	131

Task 4E. Market & Project Viability Analysis

Pro Forma Analyses

The Consultant developed pro forma analyses for each site, based on the Vision and Concept Plans developed in Task 4D. Each pro forma estimated financial returns for the envisioned TOD at each site, based on regional average costs of construction and current local market conditions for land costs and rent/sale revenues.

Assumptions for Building Costs

Overall costs per square foot are based on interviews with local developers conducted in third quarter 2022. “Hard Costs” include materials and labor. They are “hard” because costs are directly proportional to the size of the building(s), which are finalized once construction begins. “Soft costs” include professional services such as lawyers and architects. They are “soft” because final costs depend on hours billed, which may change as projects evolve. They are calculated as a percent of hard costs as specified in the tables below.

Table 9 – Building Cost Assumptions Used in Pro Forma Analyses (Hard Costs)

Construction Type	Townhouse Per SF	Quad-Plex to Hex-Plex Per SF	Apartment or Condo Per SF	Hotel Rooms Per SF	Retail Store(s) Per SF	Parking Per Space
1-3 Story Lumber	\$120	\$130	\$215	\$180	\$220	
4-6 Story Lumber			\$220	\$200	\$230	
4-6 Story Lumber on Podium			\$180	\$220	\$300	
7-10 Story Reinforced Concrete			\$200	\$270	\$300	
10+ Story Reinforced Concrete			\$220	\$290	\$300	
Parking - Surface						\$1,500
Parking - Underground Garage						\$35,000
Parking - Aboveground Garage						\$25,000

Table 10 – Building Cost Assumptions Used in Pro Forma Analyses (Soft Costs)

Construction Type	Townhouse Per SF	Quad-Plex to Hex-Plex Per SF	Apartment or Condo Per SF	Hotel Rooms Per SF	Retail Store(s) Per SF	Parking Per Space
Entitlement (Permits, Fees, Taxes)	4%	10%	10%	8%	8%	0%
Commissions and Closing Costs	0%	6%	7%	8%	10%	0%
Architects, Engineers, Consultants	6%	12%	12%	12%	12%	9%
Site Prep	5%	6%	8%	6%	3%	0%

Assumptions for Building Revenues

Prices and capitalization rates are from third quarter 2022. As the newest and latest developments tend to sell at or near the highest prices in the regional market, the highest sale prices recorded in the third quarter of 2022 are used for comparable sale values. “Capitalization Rate” is the ratio between the sale price and one year of net operating income (example: if an apartment building generates \$100,000 in annual revenues and was purchased for \$1,000,000, it would have a capitalization rate of 10%). Average townhouse sale value based on average of 3Q-2022 transactions in the Hartford metro region. Capitalization rates do not apply to townhomes because they are part of the home/residential market instead being commercial investment properties.

Table 11 – Building Revenue Assumptions Used in Pro Forma Analyses

Building Type	Highest Sale Price 2022-3Q	Average Capitalization Rate
Townhouse	\$325,000 per unit	
Quad-Plex to Hex-Plex	\$250,004 per unit	7.8%
Apartment or Condo	\$291,736 per unit	5.7%
Hotel Rooms	\$204,862 per unit	9.1%
Retail Store(s)	\$530 per SF	6.8%
Office Space	\$316 per SF	8.8%
Warehouse/ Distribution	\$489 per SF	8.2%
Light Manufacturing	\$489 per SF	8.2%

Sources: CoStar for commercial/investment properties and uses (including apartment buildings); Redfin for owner-occupied residences (townhomes).

Summary: Building Profit and Loss Model

Table 12 – Pro Forma Model Results Summary Part 1: Berlin to West Hartford

Building Program	Berlin	New Britain	Newington	West Hartford
Dwelling Units	25	78	96	512
Dwelling Units per Acre	9	18	17	56
Gross Square Footage	56,690	120,865	139,910	604,800
Retail Square Footage	20,150	8,060	9,170	45,700
Total Parking Spaces	113	123	119	721
Building Sale Value	\$ 17,981,968	\$ 20,512,701	\$ 33,003,939	\$ 292,200,709
Building Cost Total	\$ 20,610,393	\$ 32,569,740	\$ 46,661,705	\$ 206,827,234
Building Sale Value per Square Foot	\$ 317	\$ 170	\$ 236	\$ 483
Building Cost per Square Foot	\$ 364	\$ 269	\$ 334	\$ 342
Residential Section Sale Value per Unit	\$ 291,736	\$ 208,170	\$ 293,122	\$ 445,559
Residential Section Construction Cost per Unit	\$ 519,759	\$ 358,851	\$ 426,302	\$ 342,673
Retail Section Sale Value per Square Foot	\$ 530	\$ 530	\$ 530	\$ 1,402
Retail Section Cost per Square Foot	\$ 361	\$ 360	\$ 358	\$ 456
Residual Value ("Land Value")	\$ (2,628,426)	\$ (12,057,039)	\$ (13,657,767)	\$ 85,373,476
Residual Land Value per Acre	\$ (969,899)	\$ (2,784,536)	\$ (2,425,891)	\$ 9,320,248
Land Acquisition Cost (Most Recent Valuation)	\$ 1,906,500	\$ 1,779,540	\$ 1,046,400	\$ 4,547,600
Land Acquisition Cost per Acre	\$ 703,506	\$ 410,979	\$ 185,861	\$ 496,463
Financial Profit (Gap) for Project Total	\$ (4,534,926)	\$ (13,836,579)	\$ (14,704,167)	\$ 80,825,876
Financial Profit (Gap) per Acre	\$ (1,673,404)	\$ (3,195,515)	\$ (2,611,753)	\$ 8,823,786
Financial Profit (Gap) per Unit	\$ (66,936)	\$ (40,968)	\$ (27,206)	\$ 17,234
Financial Profit (Gap) per Square Foot	\$ (80)	\$ (114)	\$ (105)	\$ 134

Table 13 – Pro Forma Model Results Summary Part 2: Hartford to Enfield

Building Program	Hartford	Windsor	Windsor Locks	Enfield
Dwelling Units	196	55	109	299
Dwelling Units per Acre	46	54	34	50
Gross Square Footage	207,845	55,065	118,772	312,035
Retail Square Footage	11,885	0	10,000	3,900
Total Parking Spaces	486	69	0	350
Building Sale Value	\$73,050,562	\$ 25,853,624	\$ 47,308,834	\$ 88,617,128
Building Cost Total	\$76,184,383	\$ 19,915,226	\$ 37,592,877	\$ 109,932,780
Building Sale Value per Square Foot	\$351	\$ 470	\$ 398	\$ 284
Building Cost per Square Foot	\$367	\$ 362	\$ 317	\$ 352
Residential Section Sale Value per Unit	\$339,178	\$ 470,066	\$ 342,757	\$ 291,736
Residential Section Construction Cost per Unit	\$310,491	\$ 341,599	\$ 285,876	\$ 341,011
Retail Section Sale Value per Square Foot	\$553	N/A	\$ 995	\$ 356
Retail Section Cost per Square Foot	\$982	N/A	\$ 456	\$ 475
Residual Value ("Land Value")	\$(3,133,821)	\$ 5,938,399	\$ 9,715,957	\$ (21,315,652)
Residual Land Value per Acre	\$(741,345)	\$ 5,821,959	\$ 3,036,237	\$ (3,529,081)
Land Acquisition Cost (Most Recent Valuation)	\$1,359,760	\$ 104,200	\$ 10,310,720	\$ 220,520
Land Acquisition Cost per Acre	\$321,669	\$ 102,157	\$ 3,222,100	\$ 36,510
Financial Profit (Gap) for Project Total	\$(4,493,581)	\$ 5,834,199	\$ (594,763)	\$ (21,536,172)
Financial Profit (Gap) per Acre	\$(1,063,014)	\$ 5,719,803	\$ (185,863)	\$ (3,565,591)
Financial Profit (Gap) per Unit	\$(5,424)	\$ 103,996	\$ (1,705)	\$ (11,925)
Financial Profit (Gap) per Square Foot	\$(22)	\$ 106	\$ (5)	\$ (69)

Summary: Results by Site

Supply chain disruptions, inflation, and interest rates changes caused volatility in prices at the time of this study. Most building types are not financially feasible at the time of this writing. However, some interim steps and mitigations covered in the Implementation Task may help municipalities stimulate development.

Enfield

With an estimated construction cost of \$109.9 million and land acquisition cost of \$220,000, compared to estimated sale value of \$88.6 million, this study estimates a residual value of -\$21.5 million (the “land value”). This residual value indicates that a market-rate developer would require a subsidy of approximately \$21.5 million (about \$12,000 per unit) to build mixed-use TOD in the current market.

Windsor Locks

With an estimated construction cost of \$37.6 million and land acquisition cost of \$10.3 million, compared to estimated sale value of \$47.3 million, this study estimates a residual value of -\$600,000 (the “land value”), assuming CTDOT constructs shared parking at the station. This residual value indicates that a market-rate developer would require a subsidy of approximately \$1,700 per unit to build mixed-use TOD in the current market.

Windsor

With an estimated construction cost of \$19.9 million and land acquisition cost of \$104,200, compared to estimated sale value of \$25.9 million, this study estimates a residual value of \$5.9 million (the “land value”). This residual value indicates that a market-rate developer would be willing to negotiate to pay more than the current assessed value of \$104,200 (about \$17,000 per unit) to build mixed-use TOD in the current market.

Hartford

With an estimated construction cost of \$76.2 million and land acquisition cost of \$1.4 million, compared to estimated sale value of \$73.1 million, this study estimates a residual value of -\$3.1 million (the “land value”). This residual value indicates that a market-rate developer would require a subsidy of approximately \$5,424 per unit to build mixed-use TOD in the current market. This conclusion is based on sale price assumptions midway between current Hartford and West Hartford prices. Public funding of a shared parking structure would have a significant impact on the underlying financial feasibility of development at this location.

West Hartford

With an estimated construction cost of \$206.8 million and land acquisition cost of \$4.5 million, compared to estimated sale value of \$292.2 million, this study estimates a residual value of \$80.8 million (the “land value”). This residual value indicates that a market-rate developer would be willing to negotiate to pay more than the current assessed value of \$4.5 million (about \$17,000 per unit) to build mixed-use TOD in the current market.

Newington

With an estimated construction cost of \$46.7 million and land acquisition cost of \$1.0 million, compared to estimated sale value of \$33.0 million, this study estimates a residual value of -\$14.7 million (the “land value”). This residual value indicates that a market-rate developer would require a subsidy of approximately \$14.7 million (about \$27,000 per unit) to build mixed-use TOD in the current market.

New Britain

With an estimated construction cost of \$32.6 million and land acquisition cost of \$1.8 million, compared to estimated sale value of \$20.5 million, this study estimates a residual value of -\$13.8 million (the “land value”). This residual value indicates that a market-rate developer would require a subsidy of approximately \$13.8 million (about \$61,000 per unit) to build mixed-use, TOD in the current market.

Berlin

With an estimated construction cost of \$20.6 million and land acquisition cost of \$1.9 million, compared to estimated sale value of \$18.0 million, this study estimates a residual value of -\$4.5 million (the “land value”). This residual value indicates that a market-rate developer would require a subsidy of approximately \$4.5 million (about \$67,000 per unit) to build mixed-use TOD in the current market.

Task 5. Financial Tools

State of Connecticut

CTDOT supports TOD as a best practice for coordinating public transportation assets, supporting mobility choice, and generating sustainable economic development.

Overall Funding Responsibility

The State has numerous financial tools available for TOD-based economic development across several departments, accessing both State and Federal programs. Some of these programs overlap and can be funded by more than one State agency.

Table 14 – State Funding Sources

Agency	Program Overview
Connecticut Department of Housing (DOH)	Affordable Housing Focused Programs
Connecticut Housing Finance Authority (CHFA)	Structured Finance for Residential Development
Connecticut Department of Economic and Community Development (DECD)	Job Creation and all forms of real estate development, including residential, commercial, and industrial

Applicable DECD Community Development Programs

DECD’s Community Development Programs should be the first place that any municipality looks to for gap financing of TOD projects. Potentially relevant programs include:

- Opportunity Zones
- Brownfield Redevelopment
- Transit Oriented Development
- Urban Act Grants

2022 Transit-Oriented Development Grant Program

The Office of Policy and Management (OPM) is currently administering a competitive grant funding opportunity available to Connecticut municipalities, titled the 2022 Transit Oriented Development Grant Program. Grants range from \$200,000 to \$2,000,000 for construction-ready projects within one-half mile of transit stations. Municipalities could take advantage of future rounds of this funding should they become available.

Residential Funding

DOH administers numerous programs and acts as an access point for certain Federal programs, including Housing Development Programs, Community Development Programs, and Individual and Family Support. To facilitate the creation of a pipeline of identified potential projects for funding opportunities, DOH and CHFA offer a Development Engagement Process (DEP) in the spring and fall. Programs include:

- Affordable Housing Program (AHP) aka “Flex”
- HOME Investment Partnerships (HOME)
- Housing Trust Fund
- HUD Housing Trust Fund
- Competitive Housing Assistance for Multifamily Properties (CHAMP)
- Pre-Development Loan Program
- Federal Low-Income Housing Tax Credit (LIHTC) Program
- Multifamily Development Financing
- Multifamily Second Mortgage Program
- Incentive Housing Zone (IHZ) Program/ Housing for Economic Growth (HEG) Program

Federal Programs

The Build America Bureau (BAB) manages two loan programs: the Transportation Infrastructure Finance and Innovation Act of 1998 (TIFIA) credit program and the Railroad Rehabilitation and Improvement Financing (RRIF) credit program. The FAST Act expanded both programs’ eligibility to include TOD projects and related infrastructure. To be eligible for loans through these programs, projects must comply with BAB’s TOD-specific eligibility criteria, summarized below:

Table 15 – RRIF and TIFIA Program Comparison

	RRIF	TIFIA
Project Types	<ul style="list-style-type: none"> • Economic development • Related infrastructure and activities 	<ul style="list-style-type: none"> • Public infrastructure and related activities • Joint development
Project Eligibility	<ul style="list-style-type: none"> • Incorporates private investment • Is physically or functionally related to a passenger rail station or multimodal station that includes rail service • Has a high probability of the applicant commencing the construction contracting process within 90 days of loan execution • Has a high probability of reducing the need for financial assistance under other federal programs related to the rail facility or service by generating revenue exceeding costs 	<ul style="list-style-type: none"> • Located within walking distance of, and accessible to, one or more of: <ul style="list-style-type: none"> ○ Fixed guideway transit facility ○ Passenger rail station ○ Intercity bus station ○ Intermodal facility

Source: USDOT

The Federal Transit Administration (FTA) offers the Capital Investment Grants Program (CIG). CIG is a competitive and discretionary grant program that provides matching funds for transit capital investments. The CIG program could potentially have application if a TOD project includes some station infrastructure, potentially as part of the Flatbush Avenue TOD, for example, with the developer's costs as local matching funds.

The Pilot Program for TOD Planning provides funding to integrate land use and transportation planning with a new fixed guideway or core capacity transit capital investment under the Capital Investment Program. In June 2022, FTA announced funding availability of \$13 million. A second round of \$13.4 million was announced in August 2023. The maximum Federal funding share is 80%, and projects with committed local matching funds will receive higher ratings from FTA on this evaluation component.

Capitol Region

Capitol Regional Development Authority

On June 15, 2012, the Connecticut General Assembly officially established the Capitol Region Development Authority (CRDA). CRDA may be an appropriate financing vehicle for larger, multijurisdictional projects in need of site assemblage or capital, since it provides long term debt financing. A caveat is that CRDA only covers four of the eight municipalities in this study: Windsor, Hartford, West Hartford, and Newington.

CRDA utilizes its funds to make both loans and equity contributions to potential projects to fill one of two types of funding gaps. The first type addresses the gap between the cost of construction and the "upon completion" value. The second type closes the financial shortage between the conventional capital stack of debt and equity and the completed value. Interest on loans is accrued and credited to operations based on the principal amount outstanding. These housing loans earn interest at rates ranging from 0.5% to 5.75% and mature at various dates through May 2058.

Municipalities

Overall, cities and towns with membership in CROG have demonstrated sophistication and success in attracting traditional economic development. Most member municipalities (particularly those with station locations involved in this study) are transitioning toward focusing on TOD, infill development, historic preservation, and adaptive reuse. Of note, the City of New Britain has a track record of being able to obtain grants and funding to assist development projects from state and federal sources and has the capacity to offer incentive packages of its own to qualified developers and businesses. Further, the City's dashboard can serve as an example for other towns. Programs highlighted include:

- Enterprise Zone Tax Abatements
- Tax Increment Financing (TIF)
- Economic Development Assistance Grants for Infrastructure
- Business Assistance Loans
- City Tax Modification Programs
- Historic Redevelopment Tax Credits
- Brownfields Assessment and Cleanup Funding

Most funding sources are in the form of debt, the servicing of which may be a challenge given current market conditions. Financial tools recommendations are contained in the more comprehensive Implementation Strategy section.

Task 6. Implementation Strategy

Based on work completed in previous Tasks, the following are Implementation Strategies for each TOD site in the study. This strategy will include actionable implementation steps and changes to TOD visions.

Enfield

A subsidy of \$21.5 million appears too large to be feasible. Waiting for market prices to reach equilibrium (as interest rates stabilize, supply chains return to fully operational, and prices adjust to reflect higher costs) is the advised course of action. At the same time, the Town should proceed with the proposed interim retail development, as well as seeking CTDOT participation in the acquisition, remediation, and provision of shared structured parking on the Eversource parcels until market equilibrium is achieved.

Next step: Begin discussions with CTDOT to acquire Eversource site to construct shared parking structure. Potentially revisit some of the sales pricing assumptions given the stronger Enfield-specific market.

Windsor Locks

Absent the cost of parking (assuming CTDOT provides shared parking with the new station) the site is near breakeven, indicating that a nominal level of subsidy would be required to effectuate development. The relatively high assessed value of the land (presumably based on full retail occupancy) was a contributing factor in tipping this site negative. Presumably, given its high vacancy rate, the parcels will trade at a discount, potentially favorably impacting the financial profit of development.

Next step: Begin discussions with CTDOT to construct shared parking structure.

Windsor

Although pricing is based on an approximate model, it clearly indicates that market-rate TOD in Windsor is financially feasible.

Next step: Begin discussions to include Loomis-Chafee parcel and resolve any outstanding CTDOT station improvement uncertainties.

Hartford

As pricing is based on an approximate model, market-rate TOD around the Flatbush Avenue station with portions in Hartford and West Hartford is not certain to be financially feasible. Although building costs are in line with regional averages, revenues from sales or rents are more difficult to predict. West Hartford boasts the region's highest prices for both residential and retail uses, while Hartford's prices can often fall below the regional average. If prices are higher like West Hartford, the project is more likely to be financially feasible. If prices are closer to Hartford averages, the project is not likely to move forward. The accommodation of commuter parking also complicates matters. Public funding of a shared parking structure would have a significant impact on the financial feasibility of development at this location.

Next steps: Given that CTDOT anticipates acquisition of the majority of the land west of Newfield Avenue for its station facility and parking, it is recommended that CTDOT take the lead on the implementation of TOD on this site in collaboration with Hartford, West Hartford, and CRCOG. Further, CTDOT should modify its 30% station design drawings to accommodate TOD, utilizing the revised test-fit as a starting point. CTDOT, the municipalities and CRCOG should identify federal and state programs to advance the design/pre-development of the project. The inclusion of TOD may enhance CTDOT's ability to receive grants for this site. Further, TIFIA has financing programs specific to TOD designed to be a component of developers' capital stacks. Lastly, the State of Connecticut Governor's Office Strategic Advisor for

Economic Development has TOD on its agenda for 2023 and may provide funding for this site. Once the project has been advanced, a go-to-market strategy and developer solicitation process could begin.

West Hartford

Although pricing is based on an approximate model, it clearly indicates that market-rate TOD in this area of West Hartford is financially feasible.

Next steps: Begin discussions with landowner to get approval for greater density.

Newington

A subsidy of \$14.7 million may be too large to be feasible. Waiting for market prices to reach equilibrium (as interest rates stabilize, supply chains return to fully operational, and prices adjust to reflect higher costs) is the advised course of action.

Next step: Begin discussions with landowners on site assemblage for potential future development as well as planning for rezoning to enable TOD at this site.

New Britain

A subsidy of \$13.8 million may be too large to be feasible. Waiting for market prices to reach equilibrium (as interest rates stabilize, supply chains return to fully operational, and prices adjust to reflect higher costs) is an advised course of action. Another option would be to access state funding for the infrastructure, including the East Main Street realignment, and position this as an affordable housing opportunity eligible for federal tax credits and state subsidies. The feasibility of such would require additional analysis beyond the scope of this study.

Next step: Pursue CTDOT funding for new street connection/infrastructure and engage the affordable housing development market.

Berlin

A subsidy of \$4.5 million may be too large to be feasible. Waiting for market prices to reach equilibrium (as interest rates stabilize, supply chains return to fully operational, prices adjust to reflect higher costs), and allowing the market to fully absorb the newly constructed 76 units of residential and 9,800 square feet of retail at Steele Center is the advised course of action.

Next step: Confirm adjacent landowner Matson Rugs is looking to assist in site assemblage and determine if easing the retail requirement would positively impact the financial feasibility of TOD at this location.