



Meriden Transit Oriented Development Master Plan

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EXECUTIVE SUMMARY

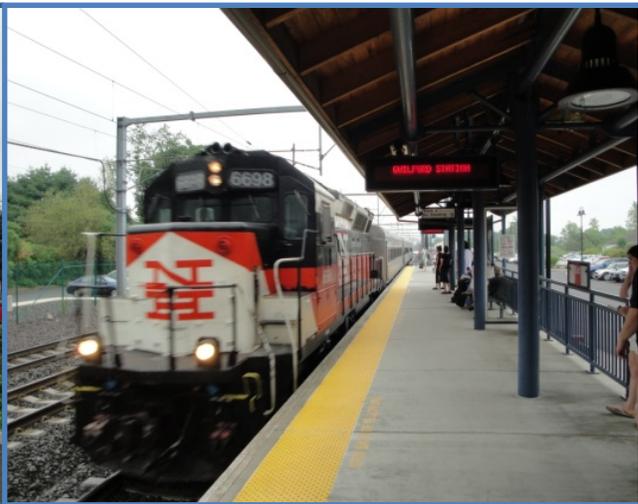
The proposed Meriden Intermodal Center will be designed to accommodate the expanded functions and space requirements associated with the provision of enhanced passenger rail service. The complete analysis of the Meriden Intermodal Center’s program elements takes into account the potential for additional or expanded bus service that may arise as a result of the new Meriden Intermodal Center.

Site program needs will include the provision of raised rail platforms, an “up-and-over” pedestrian bridge above the tracks, bus circulation and staging areas, passenger pick-up and drop-off areas, a taxi stand, Americans with Disabilities Act parking, commuter and service vehicle parking, secure bicycle storage, and plans for pedestrian and bicycle circulation.

Multiple **site plan options** were investigated and analyzed as part of this study. The options explored alternative site layouts and locations for passenger service areas, including those in the existing building site and at nearby locations that could be considered as potential Transit Oriented Development (TOD) opportunities.

The selection of the recommended Conceptual Meriden Intermodal Center Site Plan has been based on an evaluation of the advantages and disadvantages of each site plan option, utilizing the following **design criteria**:

- ◆ Proximity and ease of circulation between rail platforms, bus berths, passenger service areas and commuter parking
- ◆ Visibility and convenience of pedestrian access to the Downtown, Colony Street and East Main Street
- ◆ Safety and convenience of pedestrian access to the surrounding neighborhoods
- ◆ Complementary design and pedestrian access to the proposed HUB Park
- ◆ Potential to incorporate ancillary retail or TOD opportunities



EXISTING CONDITIONS

An existing Meriden Transit Center (MTC) shown in Figure 2-1 serves the basic needs of Amtrak passengers and the Meriden Transit District bus service. The building provides basic services, including an information/ticketing booth and an indoor waiting area. There is only one boarding platform, which is at grade and partially covered by a canopy.

Figure 2-1. View of Existing Meriden Transit Center Site



Source: Bing Maps

Buses park along the curbside on State Street. There are five parking spaces on the MTC site for employees, maintenance and security personnel. There are no commuter parking or designated passenger pick-up/drop-off areas.

Rail Operations

Amtrak operates 6 trains that stop in Meriden daily. There is no commuter rail service currently on the line. With the enhanced passenger service that will be available after completion of the New Haven-Hartford-Springfield (NHHS) Rail Program, the number of trains operating on the line will increase to include trains every 30 minutes during peak rush hours and every 60 minutes on off-peak times. From an operational standpoint, peak hours include the time periods between approximately 6:00 to 10:00 a.m. and between 3:00 to 7:00 p.m. The resulting increase in passenger traffic will require an expansion of the passenger service functions currently located in the existing MTC building.

Bus Operations

Available transit schedules and maps describe the three main bus routes that provide daily service in the city (Routes A, B, and C).

Buses servicing Meriden on Routes A, B, and C are owned by Connecticut Transit (CTTRANSIT). The City of Meriden owns and maintains the station building and grounds. Tickets and passes are issued by CTTRANSIT, but buses are operated by a third party — Northeast Transportation. Drivers do not collect fares; there are machines on the buses that validate tickets and passes. Cash is not received on the bus, only tickets. Buses run from the Railroad Station every half hour, from 6:15 a.m. to 6:00 p.m. on

weekdays and from 9:40 a.m. to 5:40 p.m. on Saturdays. The three bus routes come to the station at the same time.

The A bus is the most popular route, connecting to Westfield Shoppingtown and Kohl’s Plaza, and providing transfer service to New Haven. In addition to the A, B, and C routes, the “M-Link” bus stops at the existing station. This bus provides service between Meriden and Middletown. It is administered by the Meriden Transit District and Middletown Area Transit. The bus stops at the Meriden Rail Station every hour from 7:00 a.m. to 5:15 p.m. and provides regional connections. Other Middletown buses came to the station in the past, but their service has been discontinued.

Another important Downtown bus service is the 19 Meriden Express. Two buses run twice a day from Centennial Plaza in Meriden to Downtown Hartford, departing at 6:30 and 6:50 a.m., and returning at 4:00 and 4:50 p.m. This service is provided by the Connecticut Department of Transportation (ConnDOT) and is operated by Kelley Transit. Bus capacity is 55 seats. The Meriden Express runs on East Main Street and doesn’t stop at the Railroad Station. It stops one block away on West Main Street. It is conceivable that it could stop at the MTC if roadway circulation were reconfigured to facilitate access.

Looking to the future, it would be desirable to provide the Meriden Intermodal Center bay space for regional bus service (e.g., Peter Pan or Greyhound) and for additional Middletown buses, if service is expanded. Additional area will be needed for a fourth bus to stop and wait in the event all the CTTTRANSIT bus bays are occupied at once.

PLANNING AND URBAN DESIGN OBJECTIVES

The design of the Meriden Intermodal Center will need to respond to a series of program needs, and technical standards required by the Federal Railroad Administration (FRA) and ConnDOT. In addition, the final layout and configuration of new passenger service areas will need to be rooted in the overall planning vision and goals outlined for the Meriden TOD District.

The following planning and urban design objectives for the future Meriden Intermodal Center are aimed at complementing the general goals of the TOD plan:

◆ Planning Objectives

- Replace, renovate and expand, or complement the existing MTC building with new indoor space for enhanced passenger services.
- Accommodate the existing bus service operations in the new Meriden Intermodal Center building program, and allow for future expansion to support the envisioned TOD and Center City development.
- Locate the new enhanced passenger services in the vicinity of the new rail platforms, and within easy walking distance of the bus bays and commuter parking structure that will be built as part of the new Meriden Intermodal Center.

- Provide for a passenger pick-up/drop-off area near the rail platforms and bus bays, and assign space for taxis and accessible parking nearby.
 - Update traffic circulation patterns in the vicinity of the Meriden Intermodal Center to accommodate an increase in traffic volume and peak demand.
 - Update pedestrian and bicycle circulation patterns to allow for safe and easy access to the new Meriden Intermodal Center from multiple directions.
 - Connect the new Meriden Intermodal Center to the proposed Harbor Brook linear trail system and the proposed new park on the HUB Park.
- ◆ **Urban Design Objectives**
- Locate the new Meriden Intermodal Center in an area of high visibility with easy access from Colony Street and East Main Street.
 - Arrange all the required design components on the site in a way that supports safe and efficient intermodal passenger transfers.
 - Consolidate bus bays on a dedicated bus way, and close State Street between East Main and Brooks Street to private vehicular traffic to enhance safety of bus operations.
 - Close the existing at-grade rail crossing on Brooks Street to ensure safety of rail operations.
 - Design the new Meriden Intermodal Center and site area in a way that complements and responds to the proposed new park on the HUB site.
 - Improve pedestrian access and connections to the existing Downtown and surrounding neighborhoods.
 - Explore TOD opportunities that may incorporate some of the required passenger services and building program elements.
 - Locate the required “up-and-over” pedestrian bridge over the tracks in such a way that it supports and improves pedestrian access between Colony Street and the new Center City.

MERIDEN INTERMODAL CENTER PROGRAM ELEMENTS

The new Meriden Intermodal Center will be designed to accommodate the expanded functions and space requirements associated with the provision of enhanced passenger rail service. The analysis of Meriden Intermodal Center program elements has taken into account the potential for additional or expanded bus service that may result from the consolidation of regional bus stops that service the Downtown into one centralized multimodal station.

Passenger rail ridership projections for the NHHS regional corridor indicate new building space will be required in addition to the existing. A preliminary assessment of building program needs indicates that approximately 4,600 to 4,700 square feet of gross building area may be required.

Meriden Intermodal Center Building Program

A draft building program based on Amtrak standards and incorporating information on bus service operations is provided in Table 2-1. The draft building program complements the improvements associated with the ongoing NHHS rail enhancement project with multimodal services for bus passengers. It also contains a list of envisioned building spaces and anticipated building area requirements. These areas are preliminary estimates, and the final design areas could vary 10 percent to 15 percent more or less than what is indicated in this program. The estimated areas are a starting point for the design, and the final design should be evaluated on its efficiency and functionality, not simply by the areas indicated in this program.

The estimated building area requirements are based on information compiled from the following sources:

- ◆ Existing bus service operations and facility requirements (as outlined and documented at a meeting with the Meriden Transit District on June 6, 2011)
- ◆ Potential for additional or expanded bus service (near- and mid-term future, as discussed at the meeting referenced above)
- ◆ Amtrak and commuter rail ridership projections
- ◆ Amtrak Station Program and Planning – Standards and Guidelines (Version 2.2 – March 2008).

According to an analysis of ridership and parking projections prepared by Wilbur Smith Associates in May 2008, ridership will reach an interpolated estimate of 432 daily boardings at Meriden in 2030. This places the Meriden station in the Medium station category within Amtrak standards and guidelines, based on ridership and revenue.

The following preliminary assessment of building needs is based on Amtrak standards and requirements for Medium stations.

Table 2-1. Baseline Assessment of Building Program Needs

FUNCTION	QUANTITY	SQUARE FEET	ADJACENCY	FLOOR
INTERIOR SPACES				
PUBLIC				
Waiting/Seating Area	1	1200	Direct - Ticket/Information, Public Toilets	Platform Level
Amtrak Ticket/Information Window	1	100	Direct - Indoor Waiting Area	Platform Level
Meriden Ride Bus Ticket Office	1	100	Direct - Indoor Waiting Area	Street Level
Vestibule	2	70	Direct - Indoor Waiting Area	Street Level
Men's Toilet	1	180	Direct - Indoor Waiting Area, Accessible. Visual - Ticket/Information Window(s)	Street Level
Women's Toilet	1	180	Direct - Indoor Waiting Area, Accessible. Visual - Ticket/Information Window(s)	Street Level
<i>Subtotal Public Spaces</i>		1900		
RETAIL				
Vending Machines	1	80		Street Level
<i>Subtotal Retail Spaces</i>		80		
PRIVATE				
Amtrak Ticket Office	1	100	Direct - Indoor Waiting Area	Platform Level
Storage	1	32	Direct - Amtrak Ticket Office	Platform Level
Baggage Room	1	325	Direct - Amtrak Ticket Office	Platform Level
Storage	1	32	Direct - Baggage Room	Platform Level
Meriden Ride (Bus) Storage Room	1	32	Direct - Meriden Ride Ticket Office	Street Level
Staff Toilet Room (Unisex)	2	80	Exterior Access to Bus Loading Bays	Street Level
<i>Subtotal Private Spaces</i>		681		
SERVICE				
Mechanical Room/AC & DHW	1	200	Direct - Exterior Access (Preferred)	Flexible
Mechanical Penthouse	1	200	Direct - Above Mechanical Room (Preferred)	Roof
Pump Room	1	200	Direct - Mechanical Room	Street Level
Electrical/IT Server Room	1	100	Direct - UPS Room. Indirect - Mechanical Room	Flexible
Uninterrupted Power Supply (UPS)	1	60	Direct - Electrical & IT Server Room	Flexible
Telephone Closet	1	30	Direct - IT Server Room. Indirect - Building Core (Preferred)	Flexible
Fire Alarm Panel	1	20	Direct - Street Entrance	Street Level
Sprinkler Control Valve Cluster	0	20	Mount in Cabinet Wall Panel in Waiting Area	Flexible
Janitor's Closet	1	50	Direct - Public Toilets & Scrubber Storage	Street Level
Floor Scrubber Storage	1	50	Direct - Janitor's Closet	Street Level
<i>Subtotal Service Spaces</i>		910		
EXTERIOR SPACES				
PUBLIC				
Covered Rail Platform	2	TBD	Direct - Indoor Waiting Area	Platform Level
Pedestrian Bridge Connector	1	TBD	Direct - Rail Platforms	Platform Level
Platform Seating	24	15	Direct - Rail Platforms	Platform Level
CT Transit Bus Bay - 45ft. Bus	4	780	Direct - Indoor/Outdoor Waiting Area	Street Level
Commuter Bus - 45ft. Bus	1	780	Direct - Indoor/Outdoor Waiting Area	Street Level
Middletown Bus - 45ft. Bus	1	780	Direct - Indoor/Outdoor Waiting Area	Street Level
Interstate Bay - 45ft. Bus	1	780	Direct - Indoor/Outdoor Waiting Area	Street Level
CT Transit Ticket Vending Machine	1	100	Direct - Indoor/Outdoor Waiting Area	Street Level
Pick-Up & Drop -Off	6	200	Direct - Bus Bays	Street Level
Taxi Stand	2	200	Visual/Indirect - Indoor Waiting Area and Ticketing	Street Level
Disabled Parking Spaces	2	250	Direct - Indoor Waiting Area and Ticketing	Street Level
PRIVATE				
Delivery/Pick-Up Area	1	360	Direct/Indirect - Station & Trash Enclosure	Street Level
City Employee Parking Space	2	200	Direct/Indirect - Station	Street Level
Maintenance/Police Parking Spaces	2	200	Direct/Indirect - Station	Street Level
SERVICE				
Emergency Generator	X	360	Direct/Indirect - Electrical Room	Flexible
Trash Room	1	100	Exterior Enclosure for Trash Dumpster	Street Level
<i>Subtotal Climate Controlled Space</i>		3,571		
<i>Circulation Space and Walls (30%)</i>		1,071		
<i>Total Climate Controlled Space</i>		4,642		



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In addition to program requirements, the Amtrak Station Program & Planning – Standards and Guidelines Station manual lists program elements that should be evaluated for inclusion for each station category. Required services and amenities in Medium category stations include the following:

- ◆ Accessible/FRA requirements
- ◆ Trailblazer – highway signs
- ◆ Paved parking
- ◆ Auto/taxi pick-up/drop-off lanes
- ◆ Bicycle racks
- ◆ Exterior signage/lighting
- ◆ Amtrak standard signage
- ◆ Paved platform w/ canopy
- ◆ Platform lighting
- ◆ Trash receptacles
- ◆ Trash pick-up/snow removal
- ◆ Janitorial services
- ◆ Janitorial service/dedicated cleaning staff
- ◆ Waiting room
- ◆ Restrooms
- ◆ Quik-Trak
- ◆ Ticket Office
- ◆ Passenger boarding assistance
- ◆ Information kiosk
- ◆ Passenger Information Display System (PIDS)
- ◆ Public Address system w/PIDS
- ◆ Pay telephones
- ◆ Security on call/Systems
- ◆ Mailbox nearby
- ◆ Vending machines
- ◆ Newsstand or news racks

According to the Amtrak manual, the following program elements should be evaluated for inclusion in addition to the ones above mentioned, based upon business analysis for need, availability and cost:

- ◆ Passenger assistance (Red Cap)
- ◆ Checked baggage
- ◆ Baggage storage
- ◆ Amtrak Express
- ◆ Restaurant/ Food service
- ◆ Rental cars on call

The Amtrak Station Program & Planning manual includes design guidelines and generic floor plan diagrams to guide the professionals in charge of station design. As the station manual points out, the diagrams are illustrative and final plans need to be tailored to the particular needs of each site and each community, but they represent a good source of reference.

Additional Meriden Intermodal Center Space Needs

The following space-need considerations were identified after a review of current bus operations and interviews with MTC personnel:

- ◆ Bus tickets and passes are sold online, by mail, and at separate venues Downtown. It is suggested that there be a ticket sales/customer care office for bus services in the new transit center to complement the existing venues.
- ◆ Food is not allowed on the buses; however, space for food vending machines in the station area would be desirable.

- ◆ The future Meriden Intermodal Center building program should consider the provision of space for a potential retail concession, food vendor, or other support functions that may be compatible with transit service.

Project Cost Considerations

The current budget for the NHHS rail project does not include provisions for the financing of an expanded Meriden Intermodal Center facility, other than the construction of new elevated platforms, track and signal improvements, and an up-and-over pedestrian bridge connection over the tracks.

Implementation of a new or expanded Meriden Intermodal Center, including all the areas and building spaces outlined in the draft building program, would therefore depend on the availability of additional budget and funding. Phasing and funding considerations need to be investigated in more detail and incorporated into the TOD implementation process.

Similarly, opportunities for public/private partnerships also need to be considered as potential mechanisms to develop some of the required passenger services in conjunction with TOD projects in the vicinity of the station site.

SITE PROGRAM NEEDS

Site program needs associated with the provision of enhanced passenger rail service will include the construction of raised rail platforms, an “up-and-over” pedestrian bridge above the tracks, passenger pick up/drop-off areas, accessible parking, commuter parking, bicycle storage, and pedestrian and bicycle circulation. These will be provided as part of the NHHS rail project.

Bus Operational Requirements

As previously discussed, current bus operations consist of three local routes and the M-Link bus to Middletown. Additional bus service in the future could include regional buses (Peter Pan or Greyhound), additional Middletown buses, and an express bus to Hartford. Taking these into account, the site program is estimated to include 6 to 7 bus bays and a dedicated bus lane. These would include the following:

- ◆ 4 bays for CTTTRANSIT buses (Routes A, B, and C, and an additional bay for waiting)
- ◆ 1 bay for the M-Link bus
- ◆ 1 bay for the 19 Meriden Express (commuter bus to Hartford)
- ◆ 1 bay for regional/interstate buses (Peter Pan, Greyhound or Middletown buses). This bay could be shared with the 19 Meriden Express, which only runs twice in the morning and twice in the evening.

Several standard bus bay configuration options are available:

- ◆ Flat bay – Buses park parallel to the curb (80-foot to 100-foot curb length per bus).
- ◆ Saw-tooth bay – Buses park at an angle, which allows easy reintegration to the bus lane without needing to back up (65-foot curb length per bus).

- ◆ 45-degree angled bay – Buses would back up into the bus lane for departure (not recommended for city buses).
- ◆ Flow-through bay – Buses drive into the bay, stop to load/unload, and then drive straight forward without backing up.

Based on bus operational requirements and the configuration of the existing station site, it is recommended that either a flat bay or a saw-tooth configuration be adopted as the most adequate for the Meriden Intermodal Center. Both configuration options were tested through concept design explorations and site layout options. The recommended Conceptual Meriden Intermodal Center Site Plan (Figure 2-3) shows a flat bay configuration. However, the analysis and decision whether a flat bay or a modified saw-tooth bay is the most appropriate bus bay configuration should be worked out in more detail during the production of final design and construction documents.

The standard dimensions of buses operating in Meriden are the following:

- ◆ CTRANSIT buses: 35 feet long – 102 inches wide; 40 feet long – 102 inches wide
- ◆ Middletown vehicles: 29 feet long – 90 inches wide; 35-foot long – 102 inches wide

Service Parking Requirements

The existing station site has five parking spaces for employees and service vehicles.

The future Meriden Intermodal Center service parking needs are estimated to include 10 parking spaces and a taxi stand, distributed as follows:

- ◆ 2 spaces for station supervisor and employees
- ◆ 1 space for police officer
- ◆ 1 space for maintenance vehicle (service van)
- ◆ 6 pick-up/drop-off spaces, including 2 wheelchair accessible spaces
- ◆ 2 spaces for taxis (taxi stand)

SITE PLAN OPTIONS

Multiple site plan options for the Meriden Intermodal Center were analyzed as part of this study. Five preliminary options were narrowed to three and then to two. The plans explored alternative site layouts and locations for passenger service areas, including the existing MTC station site and potential TOD opportunities at neighboring locations.

Alternatives to the current site allocation were explored in order to assess where the optimum location of a new facility would be in relation to the Downtown, the future HUB Park, and potential TOD opportunities along State Street and Colony Street (see Figure 2-2). The proposed location of buildings, primary site elements, and general space allocations were investigated. Detailed site elements, such as canopies and landscape features were not explored, and they will be determined as part of future design documents.

Figure 2-2. Preliminary Site Plan Options



Recommended Option

The selection of a recommended Conceptual Meriden Intermodal Center Site Plan was based on a comparison of advantages and disadvantages offered by the preliminary options in relation to the following design criteria:

- ◆ Proximity and ease of circulation between rail platforms, bus berths, passenger service areas and commuter parking
- ◆ Visibility and convenience of pedestrian access to the Downtown, Colony Street, and East Main Street
- ◆ Convenience of pedestrian access to the surrounding neighborhoods
- ◆ Complementary design and pedestrian access to the future HUB Park
- ◆ Potential to incorporate ancillary retail and TOD opportunities
- ◆ Potential to contribute to Downtown revitalization

The recommended Conceptual Meriden Intermodal Center Site Plan places new enhanced passenger service areas on the ground floor of a new TOD building with access on Colony Street (Figure 2-3). Bus circulation and berthing areas, passenger pick up/drop-off, taxis, commuter parking and bicycle storage will be located east of the tracks. The “up-and-over” pedestrian bridge over the tracks will serve as a public walkway connecting Downtown to the new HUB Park.

CONCEPTUAL MERIDEN INTERMODAL CENTER SITE PLAN

The recommended site plan envisions the future Meriden Intermodal Center as an opportunity to establish new visual and pedestrian connections between the historic Downtown and the Center City. As the transit focal point of the proposed TOD District, the new Meriden Intermodal Center needs to be visible and easily accessible from East Main Street, Colony Street, and the new HUB Park. The recommended site plan responds to the planning and urban design objectives identified for the project by envisioning the location of enhanced passenger service areas on the ground floor of a new TOD building on Colony Street.

Figure 2-3 shows the proposed layout and main features. Shown in yellow color are the elements that will be built as part of the NHHS rail enhancement project — raised boarding platforms on both sides of the tracks, the “up-and-over” pedestrian bridge connecting both platforms, and the commuter parking structure. Shown in orange color are buildings that will be developed as part of TOD initiatives — a new mixed-use building on Colony Street with passenger service areas on the ground floor, and a smaller building on the east side of the tracks that could be used for ancillary retail or complementary passenger services. Other potential TOD opportunities on adjacent infill sites, consistent with planning and urban design alternatives identified for the overall TOD District, are shown in brown color.

Recommended Site Plan Elements

The following list summarizes the recommended planning and design elements of the Conceptual Meriden Intermodal Center Site Plan. These elements have been reviewed and further refined with comments and input from the City and reviewing agencies.

Rail Boarding Platforms. The NHHS rail project will construct raised train-boarding platforms on both sides of the tracks. The platforms will be 500 feet long by 12 feet wide, and 48 inches tall, consistent with high-speed rail requirements. Wheelchair access ramps will be provided on one end of the platforms by the proposed “up-and-over” bridge structure. It is recommended that additional wheelchair access ramps be provided on the opposite end of the platforms to facilitate universal access from the passenger pick up/drop-off areas and proposed pedestrian connections.

FRA design standards require that train-boarding platforms keep a minimum distance of 200 feet from street intersections. The recommended site plan shows the platforms at an approximate distance of 240 feet from East Main Street. However, the exact location of the new raised platforms will be determined as part of future design development plans.

Pedestrian Bridge over the Tracks. The “up-and-over” bridge above the tracks will be provided by the NHHS rail project, and it is expected to follow the design parameters of the Guilford pedestrian bridge built in recent years (Figure 2-4). Informal discussions held during the TOD planning process suggest that the appearance and some details of the pedestrian bridge could be modified to convey an individualized local character and image for the Meriden station. The design of this building should also relate to the design of the new HUB Park. As in the case of the platforms, the detailed location and configuration of the pedestrian bridge will be determined in future stages of the design process.

Figure 2-3. Conceptual Meriden Intermodal Center Site Plan



Figure 2-4. View of the Guilford “Up-and-Over” Pedestrian Bridge



Commuter Parking Structure. Based on parking demand projections associated with the provision of enhanced passenger rail service, the NHHS rail project will build a commuter parking structure as part of the new Meriden Intermodal Center site plan. The new structure will be located in the vicinity of the rail platforms and bus boarding areas, with direct vehicular access from State Street. As in the case of the pedestrian bridge, the design of the garage should relate to the design of the new HUB Park across State Street.

Enhanced Passenger Service Areas. High-speed rail will require an expansion of passenger service areas, as previously outlined in the discussion of Meriden Intermodal Center building program needs. These will include enhanced ticketing and information services, enhanced passenger waiting areas, larger restrooms, and space for food vending and retail concessions. The Conceptual Meriden Intermodal Center Site Plan proposes that the bulk of these services be located on the ground floor of a new TOD building on Colony Street, which would also include commercial or educational uses on upper floors.

The proposed TOD building should reflect the public character of the new Meriden Intermodal Center on its exterior design, especially on the Colony Street façade. High ceilings and extensive areas of glazing should open the view of the interior passenger service areas to the street and convey a perception of transparency. Public entrance to the station areas should be marked with a canopy, projecting or receding façade elements, and appropriate signage identifying the name of the station.

Station Service Parking. Parking for Meriden Intermodal Center service, maintenance, and security vehicles will need to be provided. Up to six parking spaces could be accommodated along the side of the TOD/station building on Colony Street. Additional spaces could be reserved in the pick-up/drop-off area off State Street for maintenance and security vehicles that may need to temporarily park on the east side of the tracks.

Dedicated Bus Lane and Bus Bays. A dedicated bus lane will provide access to 6 or 7 dedicated bus bays (depending on the final bus bay configuration) where buses will park along the curb at designated locations. The largest buses currently operating in the Meriden Transit District are 40 feet long. They will need a minimum curb length of 80 feet per bus in order to easily maneuver on departure if the final bus bay configuration is a flat bay (100 feet would be desirable).

The dedicated bus lane will follow the alignment of State Street, which would be closed to private vehicular traffic between Brooks Street and East Main Street to allow for safe and efficient bus operations. Pedestrian crosswalks at several locations will connect bus and rail boarding areas with the HUB Park and the Center City. Crosswalks and walkways will be aligned with the main proposed park walkways.

Bus bays and boarding areas will be connected to the rail platforms and passenger service areas by the “up-and-over” pedestrian bridge over the tracks. Bicycle access to the bus boarding areas and the pedestrian bridge will be available through signalized crosswalks and bike path links to the proposed Harbor Brook Trail.

Ancillary Retail Building. A small building on the east side of the tracks will provide space for the location of ancillary retail, such as a coffee stand or a newsstand serving bus and rail passengers. Alternatively, this building could be used for the location of passenger services complementary to the ones available on Colony Street. These could include automated bus/rail ticket vending machines, additional restrooms or bicycle storage.

Pick-Up/Drop-Off Areas and Taxi Stand. Vehicular access to pick-up/drop-off areas for commuting passengers will be available from State Street. A turnaround near the rail platforms will provide shoulder

space for cars to pick up or drop off passengers. The conceptual site plan includes 20 parking spaces for short-term waiting while trains arrive. At least 2 parking spaces would be reserved for wheelchair accessible vehicles. A taxi stand with space for 2 or 3 cabs is also proposed in this area.

Pedestrian Access and Connections. In addition to the existing public street network, pedestrian access to the new Meriden Intermodal Center will be available through landscaped walkways connecting both ends of the platforms to neighboring streets and amenities. Walkways will connect the end of the platforms to East Main Street, Brooks Street and the commuter parking structure, running parallel to the tracks but separated from them by fences.

Pedestrian connections between the historic Downtown and the HUB Park will be possible through the ground floor of the new TOD/station building, the “up-and-over” bridge over the tracks, and the proposed crosswalks on the dedicated bus lane. Additional pedestrian connections could be created in conjunction with future TOD projects, such as the potential infill building illustrated on the site plan in the vicinity of Colony and Washington Streets.

Bicycle Access and Connection to Harbor Brook Trail. The new Meriden Intermodal Center will be connected to the proposed Harbor Brook Trail through a series of pedestrian/bicycle crosswalks on East Main Street. Traffic signals at the intersections of East Main/Colony Street and Hanover/South Colony Street will be programmed to include pedestrian and bicycle crossing time.

Bicycle connections will be provided across the rail tracks at the East Main Street signalized rail crossing and across the Meriden Intermodal Center dedicated bus lane. The most direct connection to the Harbor Brook Trail will be the crosswalk aligned with the “up-and-over” pedestrian bridge over the tracks. Figure 2-5 illustrates the proposed points of connection.

Figure 2-5. Proposed Alignment of Harbor Brook Trail



Bike racks are proposed next to the pedestrian “up-and-over” bridge, and at the ground level of the commuter parking garage. The provision of bike racks in front of the TOD/station building on Colony Street should be considered as part of the detailed architectural design of the building.

Landscape Design Elements. The new Meriden Intermodal Center site area should be landscaped with a variety of trees and low plantings including evergreens, deciduous and flowering trees, bushes, annuals and perennials. Trees and bushes should be clustered at strategic locations, such as places where people may gather to sit down in the summer, around monuments and bike paths, and along fences and walls.

Detailed landscaping plans will be prepared as part of future Meriden Intermodal Center design documents. The recommended Conceptual Meriden Intermodal Center Site Plan provides a general layout and indication of areas where trees and other plantings may be provided. The final landscape design plans should relate to the design of the adjacent new HUB Park to optimize visual and spatial connectivity between the two.

Park improvements are proposed at the intersection of Colony/South Colony/East Main Streets, in conjunction with the design and construction of the Harbor Brook Trail. These improvements should be aimed at providing opportunities for public gathering, passive recreation, and an attractively landscaped gateway into Downtown Meriden from the south and the east.

There is an existing canopy over the rail platform on the current station site that is in fair condition and has become a signature element of the Meriden station. To the extent possible, it is proposed that the existing canopy be dismantled, saved, and reused as part of the new Meriden Intermodal Center to provide a sheltered pedestrian connection between the northbound rail platform and the commuter parking structure.

Wayfinding Signage. Directional and wayfinding signage will be provided at selected locations to guide vehicles, bicycles and pedestrians to the main access points and features of the Meriden Intermodal Center.

INTEGRATION INTO TOD DISTRICT

The Meriden Intermodal Center will be the functional focal point of the TOD District. TOD is based on Smart Growth principles that promote compact mixed-use development within 5 to 7 minutes of walking distance to a transit station. The benefits sought by this planning approach are two-fold: first, to encourage new development and density in the vicinity of a transit station, taking advantage of available access to public transportation; and second, to encourage transit use by placing new residences, businesses and recreational facilities within easy walking distance of a station, thus reducing vehicular traffic congestion and pollution.

Smart Growth also calls for the creation of communities with a distinctive identity based on a strong “sense of place,” as pointed out in the section of this report that describes the applicability of TOD principles to Meriden. The new Meriden Intermodal Center will strengthen the sense of place in

Downtown Meriden by creating a new gathering point and enhanced transit services in a signature TOD building on Colony Street. The “up-and-over” pedestrian bridge over the tracks will allow for new walking connections between the historic Downtown, the new HUB Park that will be created along the Harbor Brook, and the City Center — all of them converging central points of the proposed TOD District.

The new Meriden Intermodal Center will be a groundbreaking project and one of the first redevelopment initiatives in the TOD District (completion of the new rail platforms and pedestrian bridge is planned for 2016). Together with the flood control project that will result in the HUB Park and the rehabilitation of the Harbor Brook, the new Meriden Intermodal Center will help create a new image and civic identity for Downtown Meriden.

Besides representing an initial public investment in the new TOD District, the intermodal transit center will stimulate the revitalization of Downtown by unlocking its potential for redevelopment. By working in partnership with a private developer or institution to create a new TOD/station building, the City can pave the way for future redevelopment initiatives Downtown and the areas immediately surrounding the vacant east side lot on Colony Street.

LEED CONSIDERATIONS

Leadership in Energy and Environmental Design (LEED) is a rating system aimed at identifying, measuring, and implementing green building performance. Recognized worldwide, LEED is paving the way for sustainable planning, design, and construction. Developed by the U.S. Green Building Council (USGBC), a non-profit organization, LEED is becoming the standard of choice for monitoring and achieving cost-efficient and energy-saving green buildings.

It has long been understood that an isolated building, even if designed and built to the highest LEED standards, is not completely “green” if it depends on long-distance vehicular transportation for its operation and supply. As a result, the USGBC has developed several LEED rating systems tailored to building construction and neighborhood development. Within this framework, the new Meriden Intermodal Center and TOD plan could apply for certification under two LEED rating systems:

- ◆ LEED for New Construction
- ◆ LEED for Neighborhood Development (LEED-ND)

In these systems, projects accumulate points towards achieving a LEED-certifiable status based on their performance against a series of criteria. Projects can accumulate 100 base points, 6 possible Innovation in Design points, and 4 Regional Priority points. LEED 2009 rating systems (the most current) grant LEED certification at the following levels:

- ◆ Certified 40 – 49 points
- ◆ Silver 50 – 59 points
- ◆ Gold 60 – 79 points
- ◆ Platinum 80 points and above

LEED for New Construction

Depending on the final design specifications for the Meriden Intermodal Center, the new buildings could achieve LEED-certifiable status by complying with a minimum number of points in a series of categories. There are many ways to accumulate or earn points under each category. The categories listed below are the “Credit” line items that appear to be more applicable to the recommended Conceptual Meriden Intermodal Center Site Plan and building program needs assessment. This is a preliminary listing, provided here for general reference only. The final list will be different by the time the Meriden Intermodal Center design documents are completed. A more detailed analysis of LEED compliance should be prepared as the project makes progress if LEED certification is regarded as a goal.

- ◆ **Sustainable Sites** (26 possible points) – The Meriden Intermodal Center could accumulate points through development density and community connectivity, Brownfield redevelopment, alternative transportation, stormwater design, heat island effect-roof, and light pollution reduction credits.
- ◆ **Water Efficiency** (10 possible points) – Points could be earned through water use reduction, water efficient landscaping, and innovative wastewater technologies credits.
- ◆ **Energy and Atmosphere** (35 possible points) – Points could be accumulated through minimum and optimized energy performance, the use of on-site renewable energy or green power, measurement and verification.
- ◆ **Materials and Resources** (14 possible points) – Points could be earned through construction waste management, materials reuse, and the use of recycled content and regional materials.
- ◆ **Indoor Environmental Quality** (15 possible points) – Points could be accumulated through the use of ventilation, low-emitting materials, controllability of lighting and thermal comfort systems, and the use of daylight and views in the design.
- ◆ **Innovation in Design** (6 possible points) – Points could be earned through the development of innovative green design strategies and the employment of LEED Accredited Professionals in the project.
- ◆ **Regional Priority** (4 possible points) – Points could be earned based on the project compliance against Regional Priority credits identified by the USGBC for each region.

The approximate number of points that could be earned by the new Meriden Intermodal Center Intermodal Station project cannot be anticipated at this time. It is too early in the building design process to determine which specific credits are applicable (more information can be found on LEED 2009 for New Construction and Major Renovations, available for public downloading at <http://www.usgbc.org/DisplayPage.aspx?CMSPageID=220>).

However, goals could be set by the City, ConnDOT, and the professional team of architects and engineers responsible for building design to make the new Meriden Intermodal Center a LEED-certifiable building. In this case, a clear set of programmatic and design goals to achieve a target number of points could be established from early stages of the design process.

LEED for Neighborhood Development (LEED-ND)

The Meriden TOD Plan could potentially be considered for LEED-ND certification since many of the basic design premises of the plan are compatible with LEED-ND Credit criteria. Points are accumulated under the following categories:

- ◆ **Smart Location and Linkage** (27 possible points) – The TOD Plan could earn points for Brownfield redevelopment, reduced automobile dependence, bicycle networks and storage, housing and jobs proximity, and restoration of habitat or wetlands and water bodies (especially if the Harbor Brook Flood Control System is taken into account).
- ◆ **Neighborhood Pattern and Design** (44 possible points) – Multiple points could be earned under this category, including points for walkable streets, compact development, mixed-use, mixed-income, reduced parking footprint, and transit facilities, among other credits.
- ◆ **Green Infrastructure and Buildings** (29 possible points) – Points could be earned for certified green buildings, building energy and water efficiencies, existing building reuse, historic resource preservation, heat island reduction, solar orientation, infrastructure energy efficiency, wastewater and solid waste management, light pollution reduction, and other green infrastructure considerations.
- ◆ **Innovation and Design Process** (6 possible points).
- ◆ **Regional Priority Credit** (4 possible points).

Because LEED-ND projects require longer periods of development and construction than individual buildings, LEED-ND certification is achieved through three consecutive stages: conditional approval, pre-certification, and certification.

The City of Meriden may want to consider if it desires to apply for Conditional Approval of a LEED-ND Plan while “no more than 50 percent of a project’s total new and/or renovated building square footage has land-use entitlements to use property for the specific types and quantities of residential and non-residential land uses proposed...” (More information can be found on LEED 2009 for Neighborhood Redevelopment, available for public downloading at <http://www.usgbc.org/DisplayPage.aspx?CMSPageID=148>).