MEETING MINUTES

SUBJECT: Waterbury and New Canaan Branch Lines Needs and Feasibility Study (Project 170-2562)

MEETING DATE: February 23, 2010

TIME: 10:00 AM – 12:00 PM

LOCATION: Bridgeport City Hall Annex Conference Rooms A and B, Bridgeport, CT

PURPOSE: Study Advisory Committee Meeting #5

ATTENDEES:

Name	Organization	Phone	Email
Mark Nielsen	Greater Bridgeport Regional Planning Agency (GBRPA)	203-366-5405	mnielsen@gbrpa.org
Kathy McNamara	City of Waterbury	203-573-5871	kmcnamara@waterburyct.org
Rodney Chabot	CT Commuter Council	203-972-0864	
David Fogel	Metro-North Railroad	212-340-3327	dfogel@mnr.org
Rick Dun e	Valley Council of Governments (VCOG)	203-735-8688	rdunne@valleycog.org
David Elder	VCOG	203-735-8688	delder@valleycog.org
Peter Dorpalen	Council of Governments of the Central Naugatuck Valley (COG-CNV)	203-757-0535	pdorpalen@cogcnv.org
Sam Gold	COG-CNV	203-757-0535	sgold@cogcnv.org
Maya Loewenberg	CT Department of Economic and Community Development (DECD)	860-270-8000	Maya.loewenberg@ct.gov
Peter Simmons	CT DECD	860-270-8000	Peter.simmons@ct.gov
Scott Howland	Amtrak	203-773-6109	howlans@amtrak.com
Floyd Lapp	South Western Regional Planning Agency (SWRPA)	203-316-5190	lapp@swrpa.org
Phil Smith	Office of Policy and Management	860-418-6200	Philip.smith@ct.gov
Kenny Curran	Office of Congressman Chris Murphy	203-759-7695	Kenneth.Curran@mail.house.gov
Henry Jadach	Town of Milford Transit Manager/Rep. Mayor Richetelli	203-874-4507	henry@milfordtransit.com
Sue Prosi	SWRPA	203-316-5190	prosi@swrpa.org
Katharine Zatkowski	Rideworks of Greater New Haven	203-777-7433	kzatkowski@rideworks.com
Phil Smith	CT Office of Policy and Management	860-418-6200	Philip.smith@ct.gov
Andrew Davis	Connecticut Department of Transportation (CTDOT) – Planning	860-594-2157	Andrew.h.davis@ct.gov
Mark Foran	CTDOT Rail Operations	203-927-6819	j.mark.foran@ct.gov

MEETING MINUTES

Name	Organization	Phone	Email
Elizabeth Federico	Parsons Transportation Group	212-266-8393	elizabeth.federico@parsons.com
Donald Maley	Parsons Transportation Group	215-606-2314	donald.maley@parsons.com
Leslie Black	Fitzgerald & Halliday, Inc.	860-247-7200	lblack@fhiplan.com
Davis Dure	Systra	212-494-9111	ddure@systrausa.com

MEETING SUMMARY

The purpose of this meeting was to solicit input on the "Screen 2" process and draft study recommendations.

Andrew Davis of the Connecticut Department of Transportation began the meeting by reviewing the agenda, followed by introductions by the study team and Study Advisory Committee (SAC) members in attendance.

Next, Elizabeth Federico and Donald Maley of Parsons Transportation Group updated the group on the study's status, reviewed the Short List of Alternatives identified at the previous SAC meeting, walked through the Screen 2 process and results, and presented the draft study recommendations developed by the project team. Details of the screening process and draft recommendations are provided in the attached handouts.

Meeting participants offered the following comments and questions:

Waterbury Branch:

- What are the capital and operating costs of providing shuttle bus service along the Waterbury corridor?

  The conceptual, order-of-magnitude capital cost estimate to implement shuttle bus service on the Waterbury Branch is $3 million. That cost includes station improvements (e.g., bus bays), new vehicles and spare parts, and design/agency costs.

  Operating costs will be developed in coordination with bus operators during the next phase of the project.

- Can you proceed with Recommendation #5 without having completed Recommendation #4 – do recommendations have to fall in order?

  To some extent, the recommendations can be phased differently than listed in the report; for instance, high-level platforms (Recommendation 5) could be added before sidings (Recommendations 1 and 4), signalization (Recommendation 2), or a Waterbury storage yard (Recommendation 3) without affecting the ability to implement the other recommendations in the future.

  However, some improvements must be implemented in a certain order for their benefits to be realized. For example, it would not make sense to invest in a new station at Devon without first constructing sidings and signalizing the branch, as the frequency of service that the Devon alternative is intended to achieve would be impossible without these other improvements.

The proposed order of recommendations also reflects corridor needs and priorities, attempting to address the most pressing operational needs first. The main intent of Recommendation 5 is to increase capacity on the branch by enabling longer train consists, yet capacity will not be an issue on the branch until service frequency is improved, attracting new riders. Therefore, improvements that address the infrastructure issues that currently limit service on the branch (i.e., sidings and signalization) should, from an operational perspective, be implemented first.

- Regarding transit capital costs, is it best to designate a specific fleet for the long term but in the short term contract out the service? The recommendation could be worded as a "contract" versus a "capital cost" for short term service gap improvements.

- Do these recommendations assume installation of bus bays at stations?

  Station Improvement Packages 1 and 2 and the TSM alternative (W-23) assume that bus bays will be installed at Derby-Shelton and Waterbury (or, for W-23, at Naugatuck, if that is selected as the northern terminus of the proposed shuttle service).

- Will the report contain an estimate of number of buses and storage costs?

  The Phase 2 Report will include an estimate of the number of buses required for the shuttle bus alternative but will not discuss costs related to operations. Operating costs will be developed during the next phase of the project.

- What is included in the Waterbury storage facility cost estimate of $3 million?

  The $3M cost estimate includes trackwork, sitework, and design/agency costs. The cost of acquiring the property from Pam Am is not included.

- Is the cost of acquiring additional rolling stock included in the cost estimates for recommendations that would increase service frequency?

  No, it is assumed that existing diesel rolling stock would be shifted from other parts of the rail system. The potential use of electrified equipment for the Shore Line East service as well as the ongoing acquisition of new M-8 electric multiple unit (EMU) cars, will free up diesel rolling stock for use on the Waterbury Branch.

- What is the time estimate for implementation of any of the recommendations?

  For the Waterbury Branch, an EIS or EA will be required for the Waterbury yard, Devon Station, and Derby/Shelton multi-modal station with parking improvements. Funding must be obtained for these environmental studies, which typically take two years to complete. Once the environmental study is complete, additional funding will be required for final design and construction.

- Is there a way to speed the process?

  Some improvements for the Waterbury Branch may require only limited environmental work (e.g., an archeological survey), but major station improvements and alternatives that add more than 200 new parking spaces will have to go through the full environmental study process indicated above.

- What are the requirements for a federal funding timeframe?

  There will be one environmental document for all improvements. The EIS will take two to three years to complete.

- Proposed improvements at Derby-Shelton Station could be impacted by the proposed Interchange 16 Phase III study. The proposed interchange would allow direct vehicle access to the east side of the rail line.

- What are the station improvements included in Package #1?

  Parking and bus facility improvements at Derby/Shelton and Waterbury, and amenity improvements (e.g., canopies, lighting) at all stations.

- Is there a separate plan for implementing Positive Train Control (PTC) by 2015, or is it part of this project?

  Separate. Metro-North has applied to the FRA for a waiver for the Waterbury Branch. Regardless of this study, the department will have to meet federal requirements for PTC on all branches.

- Why was the shuttle bus option looked at?

  The shuttle bus option was looked at to fill the gap in PM peak service.

- Define shuttle bus service.

  There would be three station stops – Bridgeport, Derby-Shelton, and Waterbury/Naugatuck – so riders would need to plan where to park for their inbound trip to use shuttle bus service for the PM outbound trip. Existing trains would continue to run, with shuttle bus filling the gap between the Bridgeport trains. Shuttle service would not require NEPA/CEPA certification – it can start immediately. The decision has not yet been made whether the service would be operated by Metro-North or another service provider.

- A trench alongside the rail would be required for signalization – there may be bedrock issues.

New Canaan Branch:

- Recommendations for the New Canaan line make sense.

- If a second platform is added at Springdale station, what safety considerations will be made? All parking is on the west side of the track, adjacent to the existing platform, forcing passengers to cross the track to get to the new platform.

  A pedestrian overpass accessed by stairs and elevator would connect the two platforms, so passengers would not have to cross the track at grade when walking between parking on the west side of the track and the new platform on the east side.

Next Steps: The study team will finalize the recommendations and prepare a final report after the series of public meetings are held the week of March 8th. Any further comments are requested to be submitted to Andrew Davis at CTDOT by Friday, March 26, 2010.

HANDOUTS

SCREEN 2 PROCESS

SCREEN 2 EVALUATION METHOLODOLOGY

The Short List of Alternatives derived from the initial screening (Screen 1) underwent a second screening (Screen 2) to determine the proposed improvements to be recommended for implementation or further study. Alternatives for both branches were evaluated in parallel, using a single methodology but resulting in two sets of recommendations (one for each branch).

Criteria. Screen 2 used two types of criteria: 1) ***quantitative criteria*** to gauge those aspects of the alternatives that were easily defined and measured; and 2) ***qualitative criteria*** to describe those aspects of the alternatives that were not easily represented by a single number.

Quantitative Criteria	Description
Potential AM Peak Direction Frequency	Number of trains able to depart Waterbury/New Canaan 5am-9am
Potential AM Reverse Peak Frequency	Number of trains able to arrive at Waterbury/New Canaan 5am-9am
Potential Non-Peak Frequency	Number of possible train trips per hour per direction on each branch
Estimated Cost	Estimated capital cost of all improvements included in the alternative
Potential AM Peak Direction Ridership Capacity	Number of passengers able to be carried on each branch from 5am-9am in the peak direction based on potential frequencies and train lengths
ROW Requirements	Additional acreage required for all improvements included in the alternative

Qualitative Criteria	Description
Storage Capacity	Impact on train storage at each branch's terminal station
Parking Capacity	Impact of the alternative on parking conditions along the branch and/or at individually affected stations
Station Access	Length (number of cars) and height (low- or high-level) of station platforms
Platform Crowding/Safety	Safety issues related to pedestrian crossing of tracks and boarding
Service Flexibility	Impact on overall service flexibility
Travel Time	Impact on travel time along the branch or between specific station pairs
Environmental Impact	Impact on the existing natural and built environments

Scoring. Every Short List alternative was scored for each quantitative and qualitative criterion. Scores approaching 5 demonstrated a benefit, while scores approaching 1 demonstrated a detriment. Scores were assigned using the rubric on the following page.

	1	2	3	4	5
Potential AM Peak Direction Frequency	More than one fewer trip compared to No Build	One fewer trip compared to No Build	No change from No Build	One more trip compared to No Build	More than one more trip compared to No Build
Potential AM Reverse Peak Frequency	More than one fewer trip compared to No Build	One fewer trip compared to No Build	No change from No Build	One more trip compared to No Build	More than one more trip compared to No Build
Potential Non-Peak Frequency	More than one fewer trip compared to No Build	One fewer trip compared to No Build	No change from No Build	One more trip compared to No Build	More than one more trip compared to No Build
Estimated Cost	More than $100M	$26-100M	$11-25M	$6-10M	$0-5M
Potential AM Peak Direction Ridership Capacity	Half or less than half the capacity of No Build	Lower capacity than No Build	No change from No Build	Higher capacity than No Build	Double or more than double the capacity of No Build
ROW Requirements	More than 3 acres	2-2.999 acres	1-1.999 acres	Less than 1 acre	No ROW acquisition
Storage Capacity	Half or less than half the capacity of No Build	Lower capacity than No Build	No change from No Build	Higher capacity than No Build	Double or more than double the capacity of No Build
Parking Capacity	Half or less than half the capacity of No Build	Lower capacity than No Build	No change from No Build	Higher capacity than No Build	Double or more than double the capacity of No Build
Station Access	Platforms and facilities degraded at more than one station	Platforms and facilities degraded at one station	No change from No Build	Platforms and facilities improved at one station	Platforms and facilities improved at more than one station
Platform Crowding/Safety	Platform crowding increased and/or pedestrian track crossing added at more than one station	Platform crowding increased and/or pedestrian track crossing added at one station	No change from No Build	Platform crowding reduced and/or pedestrian track crossing removed at one station	Platform crowding reduced and/or pedestrian track crossings removed at more than one station
Service Flexibility	Service flexibility degraded substantially	Service flexibility degraded moderately	No change from No Build	Service flexibility improved moderately	Service flexibility improved substantially
Travel Time	Travel time increased by more than 2 minutes	Travel time increased by 1-2 minutes	No change from No Build	Travel time decreased by 1-2 minutes	Travel time decreased by more than 2 minutes
Environmental Impact	Significant negative impacts that cannot be mitigated	Potential negative impacts; add'l permitting and/or environmental review req'd	Potential minor negative impacts	No impacts on environmental and community resources	Benefits/protects environmental and community resources

SCREEN 2 RESULTS

WATERBURY – QUANTITATIVE CRITERIA RESULTS

	No Build	TSM (W-23 Shuttle Bus)	W-1 Increased Train Length (Includes High-Level Platforms)	W-3 Full Signalization	W-10 Beacon Falls Siding	W-11 Four Passing Sidings	W-13 Devon Alternative 2 (Includes 3 Passing Sidings)	W-15 Derby-Shelton Multi-Modal Alternative 1	W-18 Waterbury Multi-Modal Station (Includes 5 Storage Tracks)	W-19 Relocated Naugatuck Platform	W-22 Express Bus
Potential AM Peak Direction Frequency (Trains/Buses Departing Waterbury 5am-9am)	3	15[1]	3	3	4	4	4	3	3	3	16[2]
Potential AM Reverse Peak Frequency (Trains/Buses Arriving Waterbury 5am-9am)	1	1	1	1	4	4	4	1	1	1	16[2]
Potential Non-Peak Frequency (Train/Bus Trips Per Hour Per Direction)	<1	<1	<1	<1	<1	1	1	<1	<1	<1	2
Estimated Cost	--	$10M	$48M	$128M	$20M	$64M	$85M	$3M	$40M	$21M	$17M
Potential AM Peak Direction Ridership Capacity[3]	1,200	2,040	2,400	1,200	3,200[4]	3,200[4]	3,200[4]	1,200	1,200	1,200	1,120[2]
ROW Requirements[5]	0	0	0.8 acres	0	0.073 acres	1.535 acres	3.633 acres	0	1.45 acres	0.03 acres	0

[1] Three train trips plus twelve bus trips
[2] Represents combined frequency/capacity of two routes serving Derby/Shelton to Bridgeport; frequency/capacity for Waterbury to Bridgeport would be half
[3] Assumes 4 car trains (100 passengers/train car) with current platforms, 8 car trains with platforms in W-1; assumes 70 passengers/bus (40 seated, 30 standing)
[4] If combined with Alternative W-1 and W-3
[5] Detailed ROW breakdowns in report

WATERBURY – QUALITATIVE CRITERIA RESULTS

	No Build	TSM (W-23 Shuttle Bus)	W-1 Increased Train Length (Includes High-Level Platforms)	W-3 Full Signalization	W-10 Beacon Falls Siding	W-11 Four Passing Sidings	W-13 Devon Alternative 2 (Includes 3 Passing Sidings)	W-15 Derby-Shelton Multi-Modal Alternative 1	W-18 Waterbury Multi-Modal Station (Includes 5 Storage Tracks)	W-19 Relocated Naugatuck Platform	W-22 Express Bus
Storage Capacity	Single track	Single track	Single Track	Single Track	Single Track	Single Track	Single Track	Single Track	Five storage tracks	Single Track	Single Track
Parking Capacity	Parking available at most stations	Parking available at most stations	Parking available at most stations	Parking available at most stations	Parking available at most stations	Parking available at most stations	Parking available at most stations	Increased parking at Derby-Shelton	Increased parking at Waterbury	Parking available at most stations	Parking available at most stations
Station Access	All low-level boarding areas for 4-car trains except at Waterbury	Trips served by bus only stop at Bridgeport, Derby-Shelton and Naugatuck or Waterbury	All high-level platforms, most allowing 6-car trains	All low-level boarding areas for 4-car trains except at Waterbury	All low-level boarding areas for 4-car trains except at Waterbury	All low-level boarding areas for 4-car trains except at Waterbury	High-level 6-car platforms at Devon	High-level 6-car platforms at Derby/ Shelton	High-level 6-car platforms at Waterbury	High-level 6-car platforms at Naugatuck	Half of all trips only serve Derby-Shelton and Bridgeport
Platform Crowding/Safety	Passengers on same level as tracks except at Waterbury	Passengers on same level as tracks except at Waterbury	Passengers removed from tracks	Passengers on same level as tracks except at Waterbury	Passengers on same level as tracks except at Waterbury	Passengers on same level as tracks except at Waterbury	Passengers also removed from tracks at Devon	Passengers also removed from tracks at Derby-Shelton	Passengers also removed from tracks at Waterbury	Passengers also removed from tracks at Naugatuck	All trips served by bus
Service Flexibility	Only one train allowed on branch at a time	Only one train allowed on branch at a time supplemented by shuttle buses	Only one train allowed on branch at a time	Multiple trains allowed to follow each other on the branch	One train allowed to operate in each direction; multiple trains with W-3	One train allowed to operate in each direction; multiple trains with W-3	One train allowed to operate in each direction; multiple trains with W-3	Only one train allowed on branch at a time	Only one train allowed on branch at a time	Only one train allowed on branch at a time	No trains; all travel subject to traffic conditions on Route 8

WATERBURY – QUALITATIVE CRITERIA RESULTS

	No Build	TSM (W-23 Shuttle Bus)	W-1 Increased Train Length (Includes High-Level Platforms)	W-3 Full Signalization	W-10 Beacon Falls Siding	W-11 Four Passing Sidings	W-13 Devon Alternative 2 (Includes 3 Passing Sidings)	W-15 Derby-Shelton Multi-Modal Alternative 1	W-18 Waterbury Multi-Modal Station (Includes 5 Storage Tracks)	W-19 Relocated Naugatuck Platform	W-22 Express Bus
Travel Time	Travel time unchanged	Buses subject to traffic conditions on Route 8	Station dwell time shortened	Travel time unchanged	Travel time unchanged	Travel time unchanged	Added station stop; decreased travel time toward New Haven	Dwell time shortened at Derby-Shelton	Travel time unchanged	Dwell time shortened at Naugatuck	Buses subject to traffic conditions on Route 8
Environmental Impact	No increased transit capacity with potential negative impact on air quality	Increased transit capacity with potential positive impact on air quality	Potential minor impacts to visual setting, soil, water and wildlife	No increased transit capacity with potential negative impact on air quality	Further env'l review and permitting required	Further env'l review and permitting required	Further env'l review and permitting required	Further env'l review and permitting required	Further env'l review and permitting required	Potential minor impacts to visual setting and water	Decrease in transit capacity with potential negative impact on air quality

WATERBURY – QUANTITATIVE CRITERIA SCORING

	No Build	TSM (W-23 Shuttle Bus)	W-1 Increased Train Length (Includes High-Level Platforms)	W-3 Full Signalization	W-10 Beacon Falls Siding	W-11 Four Passing Sidings	W-13 Devon Alternative 2 (Includes 3 Passing Sidings)	W-15 Derby-Shelton Multi-Modal Alternative 1	W-18 Waterbury Multi-Modal Station (Includes 5 Storage Tracks)	W-19 Relocated Naugatuck Platform	W-22 Express Bus
Potential AM Peak Direction Frequency (Trains/Buses Departing Waterbury 5am-9am)	3	5	3	3	4	4	4	3	3	3	5
Potential AM Reverse Peak Frequency (Trains/Buses Arriving Waterbury 5am-9am)	3	3	3	3	5	5	5	3	3	3	5
Potential Non-Peak Frequency (Train/Bus Trips Per Hour Per Direction)	3	3	3	3	3	4	4	3	3	3	5
Estimated Cost	5	4	2	1	3	2	2	5	2	3	3
Potential AM Peak Direction Ridership Capacity	3	4	5	3	5	5	5	3	3	3	2
ROW Requirements	5	5	4	5	4	3	1	5	3	4	5

WATERBURY – QUALITATIVE CRITERIA SCORING

	No Build	TSM (W-23 Shuttle Bus)	W-1 Increased Train Length (Includes High-Level Platforms)	W-3 Full Signalization	W-10 Beacon Falls Siding	W-11 Four Passing Sidings	W-13 Devon Alternative 2 (Includes 3 Passing Sidings)	W-15 Derby-Shelton Multi-Modal Alternative 1	W-18 Waterbury Multi-Modal Station (Includes 5 Storage Tracks)	W-19 Relocated Naugatuck Platform	W-22 Express Bus
Storage Capacity	3	3	3	3	3	3	3	3	5	3	3
Parking Capacity	3	3	3	3	3	3	3	3	4	3	3
Station Access	3	1	5	3	3	3	4	4	4	4	1
Platform Crowding/Safety	3	3	5	3	3	3	4	4	4	4	5
Service Flexibility	3	4	3	4	5	5	5	3	3	3	2
Travel Time	3	1	4	3	3	3	5	4	3	4	1
Environmental Impact	3	5	3	3	2	2	2	3	2	3	3

NEW CANAAN – QUANTITATIVE CRITERIA RESULTS

	No Build	NC-1 Springdale Siding	NC-2 Full Signalization	NC-5 Full Signalization + Siding + 2nd Platform at Springdale	NC-13,14,15 Springdale Platform Extension; Talmadge Hill Pedestrian/Parking/Platform Improvements; New Canaan Platform Extension
Potential AM Peak Direction Frequency (Trains Departing New Canaan 5am-9am)	6	8	6	8	6
Potential AM Reverse Peak Frequency (Trains Arriving New Canaan 5am-9am)	1	2	1	2	1
Potential Non-Peak Frequency (Train Trips Per Hour Per Direction)	1	1	1	2	1
Estimated Cost	--	$19M	$8M	$31M	$9M
Potential AM Peak Direction Ridership Capacity	4,800	6,400	4,800	6,400	4,800
ROW Requirements[1]	0	0.238 acres	0	0.242 acres	2.192 acres

[1] Detailed ROW breakdowns in report

NEW CANAAN – QUALITATIVE CRITERIA RESULTS

	No Build	NC-1 Springdale Siding	NC-2 Full Signalization	NC-5 Full Signalization + Siding + 2nd Platform at Springdale	NC-13,14,15 Springdale Platform Extension; Talmadge Hill Pedestrian/Parking/Platform Improvements; New Canaan Platform Extension
Storage Capacity	10-car main track, 10-car middle track, 6-car bulk track	10-car main track, 10-car middle track, 6-car bulk track	10-car main track, 10-car middle track, 6-car bulk track	10-car main track, 10-car middle track, 6-car bulk track	10-car main track, 10-car middle track, 6-car bulk track
Parking Capacity	Long waiting lists for parking permits at all stations; open to local residents only	Long waiting lists for parking permits at all stations; open to local residents only	Long waiting lists for parking permits at all stations; open to local residents only	Long waiting lists for parking permits at all stations; open to local residents only	Improvements to parking capacity at Talmadge Hill Station; open to local residents only
Station Access	Single side platforms at all stations; 5 cars open doors at New Canaan, 4 cars open doors at all other stations	Single side platforms at all stations; 5 cars open doors at New Canaan, 4 cars open doors at all other stations; reverse peak trains don't stop at Springdale Station	Single side platforms at all stations; 5 cars open doors at New Canaan, 4 cars open doors at all other stations	Single side platforms at all stations; 5 cars open doors at New Canaan, 4 cars open doors at all other stations	Introduction of two platforms at Talmadge Hill; 8 cars open doors at New Canaan and Springdale, 4 cars open doors at Talmadge Hill and Glenbrook
Platform Crowding/Safety	Some at-grade pedestrian track crossings necessary for boarding; crowded platforms	Some at-grade pedestrian track crossings necessary for boarding; crowded platforms	Some at-grade pedestrian track crossings necessary for boarding; crowded platforms	No need for pedestrians to cross tracks at Springdale	No need to cross tracks at Talmadge Hill; less crowding at New Canaan and Springdale
Service Flexibility	Only one train allowed on branch at a time	Multiple trains allowed to operate on branch; some reverse peak trains unable to stop at Springdale	Only one train allowed on branch at a time; automation of switch at New Canaan	Multiple trains allowed to operate on branch; all reverse peak trains stop at all stations	Only one train allowed on branch at a time
Travel Time	Travel time unchanged	Travel time unchanged	Travel time unchanged	Travel time unchanged	Travel time unchanged
Environmental Impact	No increased transit capacity with potential negative impact on air quality	Increased transit capacity with potential positive impact on air quality	No increased transit capacity with potential negative impact on air quality	Increased transit capacity with potential positive impact on air quality	Potential minor impacts to soil and water

NEW CANAAN – QUANTITATIVE CRITERIA SCORING

	No Build	NC-1 Springdale Siding	NC-2 Full Signalization	NC-5 Full Signalization + Siding + 2nd Platform at Springdale	NC-13,14,15 Springdale Platform Extension; Talmadge Hill Pedestrian/Parking/Platform Improvements; New Canaan Platform Extension
Potential AM Peak Direction Frequency (Trains Departing New Canaan 5am-9am)	3	5	3	5	3
Potential AM Reverse Peak Frequency (Trains Arriving New Canaan 5am-9am)	3	4	3	4	3
Potential Non-Peak Frequency (Train Trips Per Hour Per Direction)	3	3	3	4	3
Estimated Cost	5	3	4	2	4
Potential AM Peak Direction Ridership Capacity	3	4	3	4	3
ROW Requirements	5	4	5	4	2

NEW CANAAN – QUALITATIVE CRITERIA SCORING

	No Build	NC-1 Springdale Siding	NC-2 Full Signalization	NC-5 Full Signalization + Siding + 2nd Platform at Springdale	NC-13,14,15 Springdale Platform Extension; Talmadge Hill Pedestrian/Parking/Platform Improvements; New Canaan Platform Extension
Storage Capacity	3	3	3	3	3
Parking Capacity	3	3	3	3	4
Station Access	3	2	3	3	5
Platform Crowding/Safety	3	3	3	4	5
Service Flexibility	3	4	4	5	3
Travel Time	3	3	3	3	3
Environmental Impact	3	5	3	5	3

Waterbury and New Canaan
Branch Lines Feasibility Study

DRAFT STUDY RECOMMENDATIONS

DRAFT STUDY RECOMMENDATIONS

INPUTS

- ***Screen 2 results***, to help us to measure and compare the strengths and weaknesses of the Short List alternatives.
- ***Study goals and objectives***, to frame what it is these proposed improvements are intended to accomplish.
- ***Input from agency and public stakeholders***, to ensure the recommendations reflect the needs of communities along the corridors.

APPROACH

- Which initial investment would measurably improve transit service and/or increase capacity in the corridor?
- Building upon that initial investment, what other improvements would further improve service and increase capacity in the corridors?
- How should implementation of these improvements be phased?

OTHER FACTS

- Shifted focus from individual alternatives to cumulative "packages" of improvements.
- Considered station improvements that don't directly affect operations separately. For each branch, created one or more Station Improvements Package that could be implemented independent of any of the operational recommendations. These include improvements such as platform extensions, upgraded station amenities, and/or expanded multi-modal facilities.
- Treated Shuttle Bus as the Waterbury Branch TSM, the "best that can be done" to improve existing service without capital improvements.

DRAFT STUDY RECOMMENDATIONS – WATERBURY BRANCH

Recommendation	Effect on Branch Operations	Total Cost (millions)	Cumulative Cost (millions)
Recommendation 1: Beacon Falls Passing Siding (W-10)	Even without signalization, a passing siding in Beacon Falls would improve flexibility and allow additional service by enabling more than one train to operate on the branch at once.	$20	$20
Recommendation 2: Full Signalization (W-3)	Adding a passing siding **and** signalizing the branch would provide an even greater benefit, enabling multiple trains on the branch at once.	$128	$148
Recommendation 3: Waterbury Storage Yard (W-18)	The ability to store trains at the northern end of the branch would improve operational flexibility, allowing staging of trains at both ends of the branch.	$3	$151
Recommendation 4: Three Additional Passing Sidings (W-11)	Adding passing sidings at Devon, Derby, and Waterbury—in addition to a passing siding at Beacon Falls—enables increased service, as well as operational flexibility in case of breakdown.	$44	$195
Recommendation 5: Increased Train Length with High-Level Platforms (W-1)	Initially, capacity is not an issue on the branch, but it's likely that ridership would increase if Recommendations 1-4 were implemented. Lengthening platforms to allow for longer train consists could increase capacity on the branch to serve the ridership generated by improved service. Longer, high-level platforms would also improve safety and decrease boarding time.	$48	$243
Recommendation 6: Devon Station (W-13)	Ultimately, the way to substantially increase service on the branch without degrading mainline service is to build a new station that provides Waterbury Branch customers with frequent access to NHL trains, without taking up mainline schedule slots.	$54	$297
Station Improvements Package 1 (W-15, W-18 (no yard), W-19 + amenity improvements at all stations)	Improving station facilities along the branch would improve the customer experience and enable better multi-modal connections.	$61	$61
Station Improvements Package 2 (W-1, W-15, W-18, W-19)	In addition to the improvements included in Package 1, Package 2 would provide an operational benefit by allowing longer trains and would also improve safety.	$109	$109

DRAFT STUDY RECOMMENDATIONS – WATERBURY BRANCH

Recommendation	Effect on Branch Operations	Total Cost (millions)	Cumulative Cost (millions)
TSM: Shuttle Bus Service (W-23)	Until funds are available for capital improvements, supplemental bus service could fill service gaps in the Waterbury Branch schedule.	$10	$10

DRAFT STUDY RECOMMENDATIONS – NEW CANAAN BRANCH

Recommendation	Effect on Branch Operations	Total Cost (millions)	Cumulative Cost (millions)
Recommendation 1: New Canaan Station Signalization (NC-2)	Extending the signal system to New Canaan Station and providing remote switch operations would reduce the time required to enter and leave the station.	$8	$8
Recommendation 2: Springdale Passing Siding (NC-1)	Adding a passing siding at Springdale would enable multiple trains to operate on the branch at the same time.	$19	$27
Recommendation 3: New Canaan Station Signalization + Springdale Siding + Two-Platform Springdale Station (NC-5)	Adding New Canaan Station signalization, a passing siding, and a second platform at Springdale would enable additional service on the branch **and** allow reverse-peak trains to pick up and discharge passengers at Springdale while waiting on the passing siding.	$31	$31[1]
Station Improvements Package (NC-13, NC-14, NC-15 + amenity improvements at all stations)	Extending platforms at New Canaan and Springdale and adding a second platform at Talmadge Hill would alleviate platform crowding, decrease boarding time, improve passenger safety, and improve the customer experience.	$9	$9

[1] NC-5 cost already includes New Canaan Station signalization and Springdale passing siding