

ROUTE 67 (BANK STREET)
SPOT IMPROVEMENTS
PRELIMINARY ENGINEERING REPORT
SEYMOUR, CONNECTICUT

State Project No. 124-165

MMI #3211-02-4

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(Revised March 2016 to include Public Involvement Program)

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TABLE OF CONTENTS

	<u>Page</u>
1.0 Introduction.....	1
2.0 Purpose.....	1
3.0 Existing Conditions.....	2
3.1 Corridor Characteristics	2
3.2 Parking	4
3.3 Regulatory Areas	5
3.4 Historic and Archeological Significance	5
3.5 Drainage and Utility Infrastructure.....	6
3.6 Abutting Property Owners/Project Stakeholders	6
3.7 Traffic Operations	6
3.8 Accident Patterns	7
4.0 Future Traffic Conditions	9
4.1 Traffic Volumes	9
4.2 Analyses	9
5.0 Proposed Improvements.....	13
5.1 Route 67 (Bank Street) from Old Drive to Franklin St./River Street (SR 313).....	15
5.2 Bank Street @ Church Street/Beecher Street	24
5.3 Bank Street @ Klarides Village Driveway/Johnson Street	29
5.3.1 Johnson Street at Bank Street	30
5.3.2 Klarides Village and Bank Street (unsignalized).....	34
6.0 Additional Traffic Signalization Improvements	36
6.1 Klarides Village	36
6.2 Bank Street/Old Drive (west).....	37
7.0 Mitigation Analysis.....	38
8.0 Pedestrian Circulation Summary	43
8.1 Unique Opportunities.....	48
9.0 Other Corridor Improvement Projects	50
10.0 Summary	51

LIST OF TABLES

	<u>Page</u>
Table 1 – Accident Summary	8
Table 2 – 2011 Existing Traffic Volumes – Level of Service Summary – Signalized Intersections	10
Table 3 – 2011 Existing Traffic Volumes – Level of Service Summary – Unsignalized Intersections	11
Table 4 – 2031 Future Background Traffic Volumes (No Build) – Level of Service Summary – Signalized Intersections	12
Table 5 – 2031 Future Background Traffic Volumes (No Build) – Level of Service Summary – Unsignalized Intersections	13
Table 6 – Bank Street Between Old Drive and River Street/Franklin Street Intersection.....	23
Table 7 – Bank Street/Church Street/Beecher Street.....	26
Table 8 – Bank Street @ Klarides Village/Johnson Street	36
Table 9 – 2031 Level of Service – Queuing Impacts of Recommendations – Weekday Morning Peak Hour – Signalized Intersections	39
Table 10 – 2031 Level of Service – Queuing Impacts of Recommendations – Weekday Morning Peak Hour – Unsignalized Intersections	40
Table 11 – 2031 Level of Service – Queuing Impacts of Recommendations – Weekday Afternoon Peak Hour – Signalized Intersections.....	41
Table 12 – 2031 Level of Service – Queuing Impacts of Recommendations – Weekday Afternoon Peak Hour – Unsignalized Intersections	42

LIST OF FIGURES

	<u>Page</u>
Figure 1 – Location Map.....	3
Figure 2 – Project Corridor Map – Critical Enhancement Areas.....	14
Figure 3 – Route 67 (Bank Street) @ Franklin Street/River Street – Alternate 3 – Preferred.....	17
Figure 4 – Route 67 (Bank Street) @ Franklin Street/River Street – Alternate 2	19
Figure 5 – Route 67 (Bank Street) @ Franklin Street/River Street – Alternate 3	21
Figure 6 – Church Street & Beecher Street – Alternate 1 – Preferred.....	25
Figure 7 – Church Street & Beecher Street – Alternate 2.....	28
Figure 8 – Johnson Avenue – Alternate 1 – Preferred.....	31
Figure 9 – Johnson Avenue – Alternate 2.....	32
Figure 10 – Johnson Avenue – Alternate 3.....	33
Figure 11 – Klarides Village – Alternate 1	35
Figure 12 – Proposed Pedestrian Circulation – Project Corridor	45
Figure 13 – Proposed Pedestrian Circulation – Downtown.....	46
 Conceptual Illustration #1	 27
Conceptual Illustration #2.....	49

APPENDIX

Preliminary Opinion of Costs – Preferred Alternatives
Pedestrian Opportunities and Constraints – Bank Street to Downtown Seymour
<i>Synchro</i> Output Files
Summary of Adjacent Property Owners
Drawings – Rehabilitation of Bridge No. 01061 Route 67 Over Little River
Bridge Inspection Report – Structure No. 01585 Route 313 (River Street) Over Little River
Public Involvement – Stakeholder and Public Information Meeting Reports and Correspondence

1.0 Introduction

In 1991, a study by Vanasse, Hangen, Brustlin, Inc. (VHB) assessed traffic conditions along the Route 67 corridor through Southbury, Oxford, and Seymour, Connecticut. In 2011, the Valley Council of Governments (VCOG) hired Milone & MacBroom, Inc. (MMI) to expand upon the 1991 report and to conduct operational analyses to further assess the impacts and validate or refine the earlier recommendations made by VHB. MMI's scope was limited to the segment of Route 67 in Seymour from Klarides Village, a retail development, to the River Street/Franklin Street intersection.

For this segment, VHB's initial recommendations included some mainline widening as well as spot improvements at various intersections including traffic signal retiming, redirection of side street traffic, realignment of side street(s), a roadway closure, and driveway access management. The improvements proposed by VHB are summarized as follows:

- Terminate Johnson Street at Route 67
- Prohibit left turns from Klarides Village by constructing a modified driveway median
- Revise the easterly segment of Old Drive to one way northbound
- Signalize the westerly intersection of Old Drive at Route 67
- Realign the Beecher Street/Church Street intersection with Route 67 for improved traffic operations
- Widen Route 67 between Franklin Street and Old Drive to extend the dual westbound travel lanes beyond 100 Bank Street

2.0 Purpose

The purpose of this study is to evaluate and provide a palette of roadway and intersection enhancements along the CT Route 67 (Bank Street) corridor between River Street/Franklin Street and Klarides Village to the west in the town of Seymour, Connecticut. This study provides an updated analysis to determine the current validity of the aforementioned improvements. Since

the VHB report and prior to MMI's analysis, a Walgreens pharmacy store was constructed east of Old Drive on the northern side of Bank Street. As part of its site plan approval, a new traffic signal was installed at its entrance drive, and two of the earlier VHB recommendations were essentially implemented. These recommendations include an additional traffic signal at the westerly intersection of Old Drive and modification of the easterly segment of Old Drive to a one-way northbound road.

A traffic study was conducted to analyze VHB's recommendations to determine whether current conditions warrant additional improvements. Six major intersections along the Route 67 corridor were analyzed. Of the six locations, it was determined that the three intersections below require geometric improvements while other areas benefit most by enhancing the existing traffic signal operations:

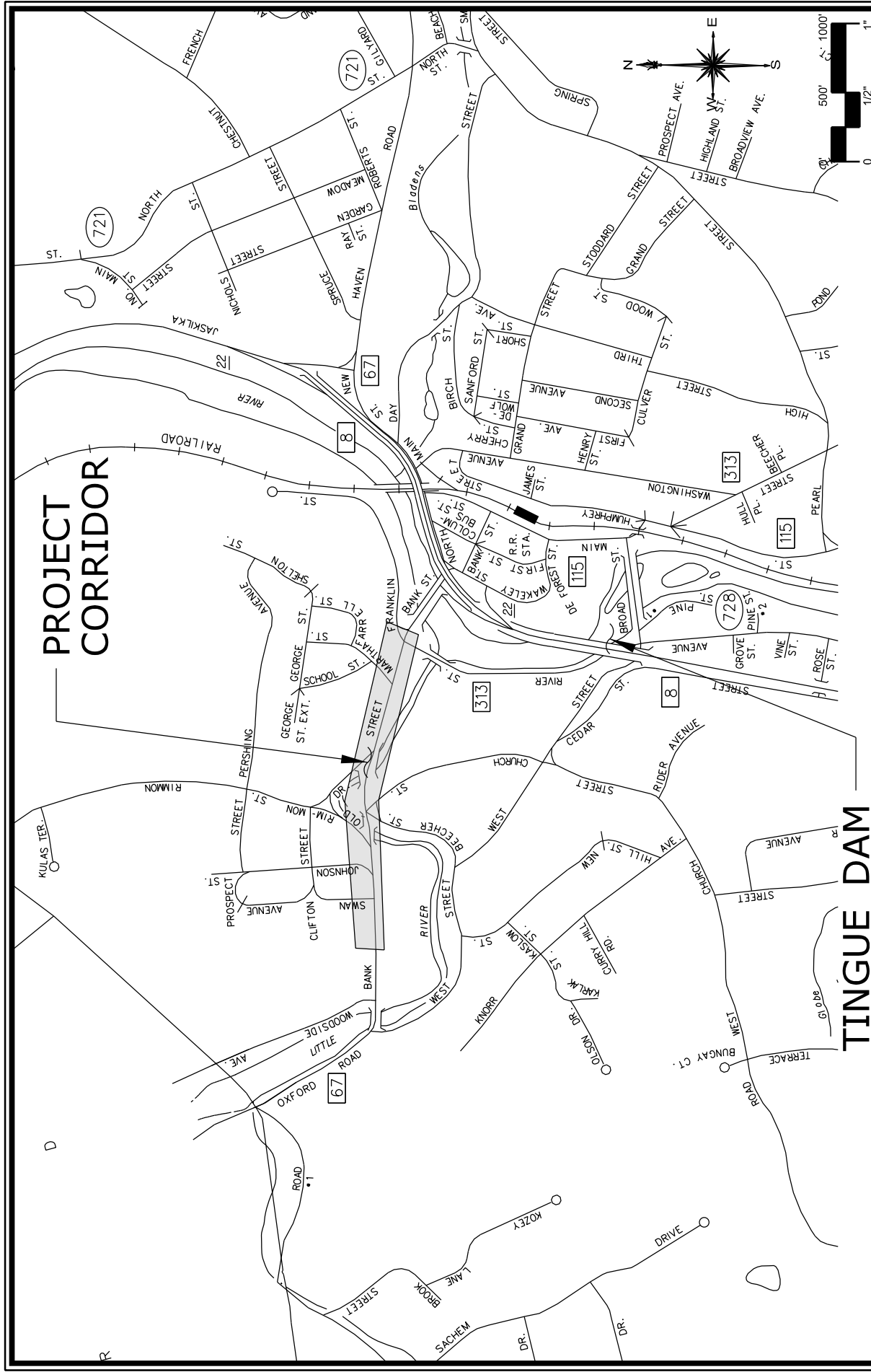
- Bank Street @ Franklin Street/River Street
- Bank Street @ Beecher Street/Church Street
- Bank Street @ Klarides Village/Johnson Street


This preliminary engineering report summarizes existing conditions, discusses the overall corridor issues and opportunities, outlines the right-of-way and regulatory permit implications, and summarizes the traffic and pedestrian network analyses conducted by MMI. The assessment specifically identifies the three main locations where physical improvements are recommended and summarizes the benefits and impacts of each improvement along with a description of the alternatives considered. Figure 1 identifies the study area.

3.0 Existing Conditions

3.1 Corridor Characteristics

The section of Route 67 (Bank Street) that falls within the study area (between River Street/Franklin Street and the westerly end of Klarides Village to the west) is approximately one-third of a mile. Bank Street generally runs in an east/west direction through the western part of



 MILONE & MACBROOM® 99 Realty Drive Cheshire, Connecticut 06410 (203) 271-1773 Fax (203) 272-9733 www.miloneandmacbroom.com	LOCATION MAP ROUTE 67 (BANK STREET) CORRIDOR IMPROVEMENTS		PROJECT PHASE: PRELIMINARY ENG.
	DATE: AUGUST 31, 2012 SCALE: 1"=1000' PROJ. NO.: 3211-02 DESIGNED: DP DRAWN: SMB CHECKED: TC		DRAWING NAME: FIG. 1
SEYMOUR, CONNECTICUT			

town and provides connections to the town center area (via the Naugatuck River bridge) and to Oxford and points west. CT Route 8, which is elevated above the downtown area, provides regional access throughout the Naugatuck Valley region of Connecticut.

Within the study area, Bank Street generally has a single travel lane in each direction with auxiliary turn lanes at various intersections. While discontinuous at some locations, sidewalks are present along most of the project roadways, and the posted speed limit along Bank Street is 30 miles per hour (mph). The land uses through this corridor include retail, office, residential, and light industrial with most of the study area within the C-2 General Commercial Zoning District. At the eastern end of the project area, the zoning begins to transition to the CBD-1 Downtown Central Commercial District. A small area of residential zoning (R-18) abuts Route 67 at the Beecher Street/Church Street intersection. In addition, the C-2 and CBD-1 districts define the limits of the Enterprise Corridor Zone, which provides significant state and local tax incentives for new and existing businesses.

3.2 Parking

As indicated in the 2012 Seymour Master Economic Development Plan (MEDP), which was promoted as a "Downtown Action Strategy," the availability of both on-street and off-street parking was highlighted as a critical element to improving the downtown Seymour experience. On-street parking exists through the downtown area including areas along Bank Street that serve the adjacent retail establishments. As outlined later in this report, any geometric and operational improvements along the corridor need to be reviewed in relation to current and future demand for on- and off-street parking needed to support the adjacent land uses and future redevelopment initiatives. Within the study limits, two on-street parking spaces are currently provided on the north side of Bank Street (near Franklin Street) in front of the businesses at 80 and 82-84 Bank Street. On the south side of Bank Street, a wide shoulder supports "10-minute" on-street parking in front of the properties at 111-113, 115, and 117-119 Bank Street, which are immediately adjacent to the Little River and currently have no on-site parking. The remaining parking areas along the corridor are provided within off-street parking facilities.

3.3 Regulatory Areas

As shown on Figure 1, the Route 67 (Bank Street) project corridor is located immediately west of the Naugatuck River. At two locations within the study area, the Little River is conveyed under Bank Street. From west to east, the river then flows parallel to and behind the buildings along the southern side of Bank Street and eventually under River Street (CT Route 313) to its confluence with the Naugatuck River. As a tributary of the Naugatuck River, the Little River was studied in detail by the Federal Emergency Management Agency (FEMA), and specific floodplain elevations and floodway boundaries were established as shown on the most current FEMA Digital Flood Insurance Rate Maps (FIRMs) for Seymour. Since floodway and floodplain limits are shown across portions of the existing roads, each spot improvement within the corridor will need to be assessed in relation to the potential regulatory permit requirements including but not limited to the Connecticut Department of Energy & Environmental Protection (CT DEEP) Floodplain Management Certification.

In addition to the FEMA regulatory boundaries, field identification and delineation of Connecticut inland wetlands and federal wetlands within the project limits were performed. The wetland limits closely follow the floodplain boundaries and step banks associated with the rivers. Regulated activities associated with the wetlands, watercourses, and the related upland areas may require local, state, or federal permit approvals.

3.4 Historic and Archeological Significance

Within the project limits, there is one property that is eligible for the Register of National Historic Places. Provided within the Appendix of this report are copies of the correspondence between MMI and the Connecticut State Historic Preservation Office regarding 100 Bank Street. The design and construction of the improvements outlined within this report may need to be conducted in accordance with Section 106 under the National Historic Preservation Act.

3.5 Drainage and Utility Infrastructure

Using the Connecticut Department of Transportation (CTDOT) topographic survey as a basis for our investigations, supplemental topographic survey and field reconnaissance were performed to confirm existing flow patterns and assess the existing drainage systems. As the design of the preferred alternatives is advanced, the existing utility infrastructure will be reviewed again in relation to the proposed improvements in order to identify potential conflicts, required upgrades, and/or relocations. In addition, the existing utility infrastructure should be assessed in conjunction with any plans for redevelopment of the adjacent properties to identify and provide the necessary service laterals and prevent future disturbance of the completed improvements identified within this report.

3.6 Abutting Property Owners/Project Stakeholders

As indicated previously in this report, the project corridor includes a mixture of retail, office, residential, and light industrial land uses. Rights-of-way impacts to private property owners are discussed in more detail under various portions of this report. A summary of the property owners (now or formerly) within the study area based upon the Town of Seymour GIS Assessor records can be found in the Appendix of this report.

3.7 Traffic Operations

In order to validate and expand upon previous recommendations using current network conditions, a traffic analysis was performed along Route 67 (Bank Street). The following six intersections were studied:

- Bank Street @ Franklin Street/River Street (CT Route 313)
- Bank Street @ Old Drive (east)
- Bank Street @ Church Street/Beecher Street
- Bank Street @ Old Drive (west)

- Bank Street @ Klarides Village Driveway/Johnson Street (unsignalized)
- Bank Street @ Klarides Village (signalized)

The CTDOT records average daily traffic (ADT) volumes along state-owned highways. The ADT along Route 67, west of River Street and Franklin Street, was 20,000 vehicles per day (vpd) in the year 2009. Previous counts yielded 20,100 vpd in the year 2006 and 20,600 in the year 2003. According to the CTDOT, the average eastbound travel speed is 34 mph, and westbound speed is 35 mph. The 85th percentile speeds along Bank Street are 36 mph for eastbound travel and 38 mph for westbound travel. Manual turning movement traffic counts were collected on Thursday, May 5, and Thursday, June 9, 2011 during the morning and afternoon commuter peak periods (7:00 a.m. to 9:00 a.m. and 4:00 p.m. to 6:00 p.m.). The peak hours for the corridor are 8:00 a.m. to 9:00 a.m. and 5:00 p.m. to 6:00 p.m. Bank Street carries between 1,070 and 1,350 vehicles during the morning peak hour depending on the specific location. During the afternoon peak hour, 1,470 to 2,030 vehicles were counted. The manual counts collected vehicle classification data in addition to the traffic volume data. The analysis found that a greater percentage and overall number of heavy vehicles are present during the morning peak hour (1.5%) as opposed to the afternoon (.4%).

3.8 Accident Patterns

Using CTDOT accident records from January 2006 through December 31, 2008, an analysis of the accident history along the corridor was performed. There were 79 observed crashes. Of these crashes, 63 resulted in property damage only while 16 resulted in personal injury. The crashes resulted from a variety of collision types: rear-end, fixed object, sideswipe, intersecting turns, and same-direction turns. The most prevalent crash type was rear-end, which is typical for signalized intersections. A summary of the accident data is provided in Table 1.

TABLE 1
Accident Summary

LOCATION	ACCIDENT SEVERITY			TYPE OF COLLISION									
	INJURY	PROPERTY DAMAGE	TOTAL	TURN			REAR-END	ANGLE	SIDESWIPE (Same Direction)	FIXED OBJECT	OTHER	TOTAL	
				INTERSECTING	SAME TURN	OPPOSITE							
BANK STREET													
At Klarides Village Drive	5	17	22	4	1	2	13		1	1		22	
Between Old Drive (west) and Klarides Village		2	2		1		1					2	
At Old Drive (west)	4	2	6	4			1			1		6	
Between Church Street and Old Drive (west)			0									0	
At Church Street/Beecher Street	1	1	2			1	1					2	
Between Church Street/Beecher Street and Old Drive (east)			0									0	
At Old Drive (east)		7	7	4			3					7	
Between Franklin Street and Old Drive (east)	3	14	17	4			4		5		4	17	
At Franklin Street/River Street	3	20	23		2	4	11	1	3		2	23	
TOTAL	16	63	79	16	4	7	34	1	9	2	6	79	

Source: CTDOT 1/1/2006 to 12/31/2008

Crashes listed as "Other" at the intersection of Bank Street/River Street/Franklin Street and to the west of this intersection involved four incidents related to parking maneuvers in front of the retail shops. One related to a backing maneuver at the same location, and another involved a pedestrian conflict. The "Sideswipe" accidents in this location were primarily due to the short merge for westbound traffic just west of the intersection.

4.0 Future Traffic Conditions

4.1 Traffic Volumes

Future traffic volumes were forecasted using ambient traffic growth and site-specific traffic generated by proposed or future developments. Review of historic traffic count data for the area revealed an annual traffic growth factor of approximately 1%. Additionally, the CTDOT Bureau of Policy & Planning was contacted regarding this topic, and a 20-year horizon was mandated for purposes of analysis. CTDOT indicated a growth factor of 20% should be used to increase the existing 2011 traffic volumes to 2031.

4.2 Analyses

The corridor was modeled using *Synchro, Version 7*, a traffic operational modeling software package, for three scenarios: existing (2011) conditions, future (2031) no-build conditions, and future (2031) with improved conditions. The existing lane arrangements, signal timings, and phasing sequences were studied to identify existing deficiencies and opportunities. A Level of Service (LOS) was determined. The LOS is a qualitative measure of the efficiency of operations of intersections in terms of delay and inconvenience to motorists and is displayed with letter designations A through F. Summaries of the LOS and queues by approach for the existing traffic volumes are shown in Tables 2 and 3 for signalized and unsignalized intersections, respectively. The 2031 future background (no build) analyses results are summarized in Tables 4 and 5. The results of the 2031 future analyses incorporating the recommend improvements are provided under Section 7.0 of this report in Tables 9, 10, and 11.

TABLE 2
2011 Existing Traffic Volumes
Level of Service Summary
Signalized Intersections

APPROACH	LEVEL OF SERVICE			
	WEEKDAY MORNING PEAK HOUR		WEEKDAY AFTERNOON PEAK HOUR	
	LOS	QUEUE ^a	LOS	QUEUE
<i>Bank Street/River Street/Franklin Street</i>				
Eastbound (Bank Street)	A	89	B	252
Westbound left/through (Bank Street)	C	155	E	358
Westbound right (Bank Street)	B	44	C	135
Northbound left (River Street)	C	86	C	197
Northbound through/right (River Street)	C	35	D	117
Southbound left (Franklin Street)	C	55	C	113
Southbound through (Franklin Street)	D	31	D	54
Southbound right (Franklin Street)	B	33	B	130
Overall	B	--	C	--
<i>Bank Street/Old Drive (west)</i>				
Eastbound left (Bank Street)	A	4	A	19
Eastbound through (Bank Street)	A	117	A	410
Westbound (Bank Street)	B	103	C	958
Southbound (Old Drive)	D	89	D	96
Overall	A	--	C	--
<i>Bank Street/Klarides Village Main Driveway</i>				
Eastbound (Bank Street)	A	226	C	689
Westbound left (Bank Street)	A	9	A	6
Westbound through (Bank Street)	A	77	A	217
Northbound left (plaza driveway)	D	46	D	89
Northbound right (plaza driveway)	B	26	B	34
Overall	A	--	B	--

^a 95th percentile queue in feet

TABLE 3
2011 Existing Traffic Volumes
Level of Service Summary
Unsignalized Intersections

APPROACH	LEVEL OF SERVICE			
	WEEKDAY MORNING PEAK HOUR		WEEKDAY AFTERNOON PEAK HOUR	
	LOS	QUEUE ^a	LOS	QUEUE
<i>Bank Street/Old Drive (east)</i>				
Eastbound left (Bank Street)	A	0	B	0
<i>Bank Street/Church Street/Beecher Street</i>				
Westbound left (Bank Street)	A	7	B	18
Northbound (Church Street)	C	29	F	77
<i>Bank Street/Klarides Village unsignalized driveway</i>				
Westbound (Bank Street)	A	7	A	19
Northbound (plaza driveway)	B	19	C	41

^a 95th percentile queue in feet

TABLE 4
2031 Future Background Traffic Volumes (No Build)
Level of Service Summary
Signalized Intersections

APPROACH	LEVEL OF SERVICE			
	WEEKDAY MORNING PEAK HOUR		WEEKDAY AFTERNOON PEAK HOUR	
	LOS	QUEUE ^a	LOS	QUEUE
<i>Bank Street/River Street/Franklin Street</i>				
Eastbound (Bank Street)	A	146	C	326
Westbound left/through (Bank Street)	C	190	F	465
Westbound right (Bank Street)	B	53	C	166
Northbound left (River Street)	C	102	C	259
Northbound through/right (River Street)	C	40	D	141
Southbound left (Franklin Street)	C	63	C	135
Southbound through (Franklin Street)	D	36	C	65
Southbound right (Franklin Street)	B	39	C	154
Overall	B	--	E	--
<i>Bank Street/Old Drive (west)</i>				
Eastbound left (Bank Street)	A	5	A	18
Eastbound through (Bank Street)	A	185	B	479
Westbound (Bank Street)	B	173	F	1083
Southbound (Old Drive)	D	100	D	111
Overall	A	--	F	--
<i>Bank Street/Klarides Village Main Driveway</i>				
Eastbound (Bank Street)	A	376	D	859
Westbound left (Bank Street)	A	7	A	5
Westbound through (Bank Street)	A	281	B	182
Northbound left (plaza driveway)	D	253	D	91
Northbound right (plaza driveway)	B	27	B	35
Overall	A	--	C	--

^a 95th percentile queue in feet

TABLE 5
2031 Future Background Traffic Volumes (No Build)
Level of Service Summary
Unsignalized Intersections

APPROACH	LEVEL OF SERVICE			
	WEEKDAY MORNING PEAK HOUR		WEEKDAY AFTERNOON PEAK HOUR	
	LOS	QUEUE ^a	LOS	QUEUE
<i>Bank Street/Old Drive (east)</i>				
Eastbound left (Bank Street)	A	1	C	2
<i>Bank Street/Church Street/Beecher Street</i>				
Westbound left (Bank Street)	B	11	B	30
Northbound (Church Street)	D	55	F	205
<i>Bank Street/Klarides Village unsignalized driveway</i>				
Westbound (Bank Street)	A	8	A	24
Northbound (plaza driveway)	C	25	C	50

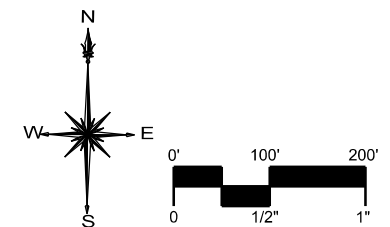
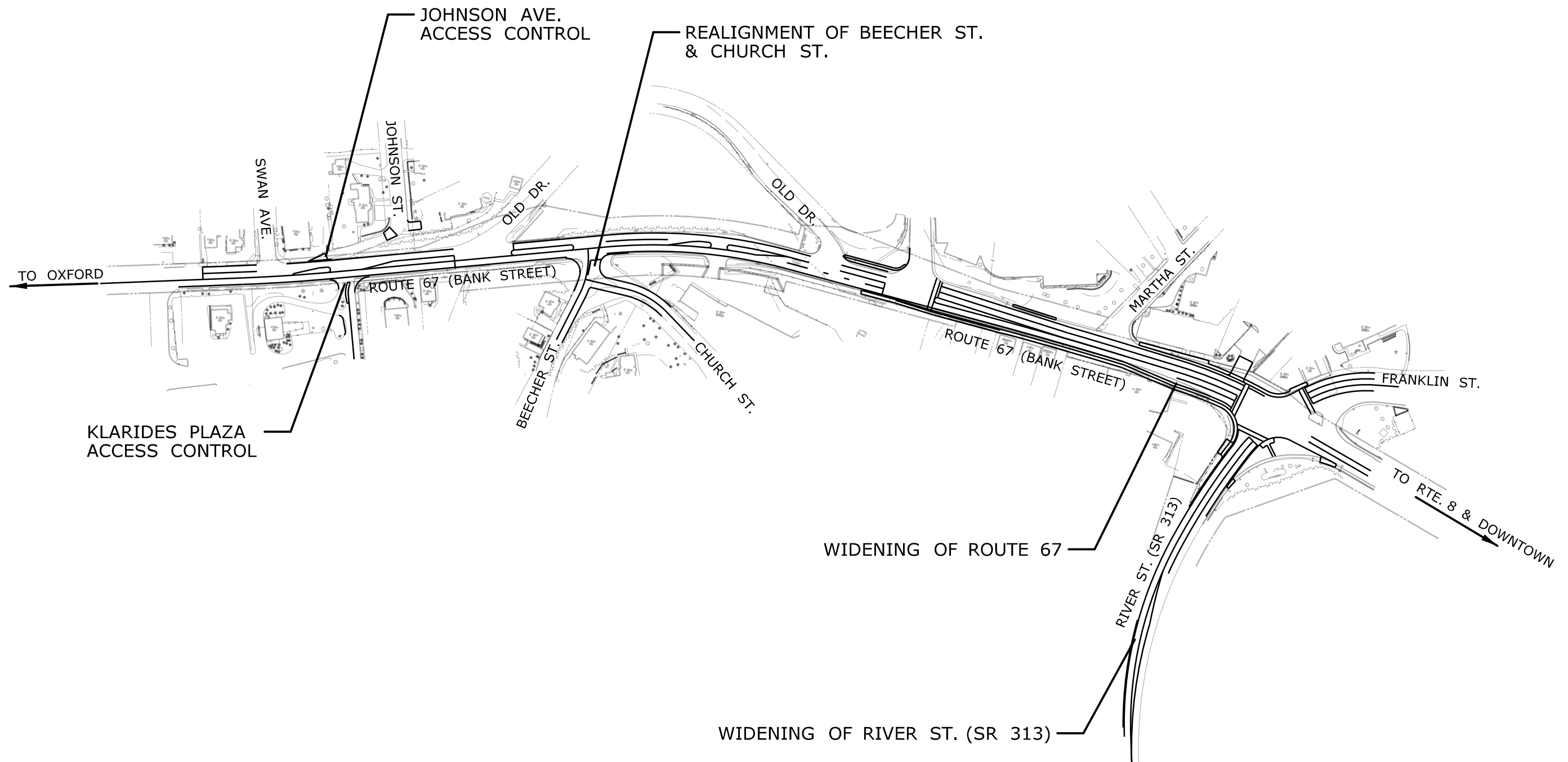
^a 95th percentile queue in feet

The decreases in LOS identified above highlight those locations within the corridor that would benefit from geometric and/or operational improvements. Review of these results allowed MMI to identify deficiencies, test the benefits of certain improvements, and investigate design alternatives detailed herein.

5.0 Proposed Improvements

The traffic analyses performed in relation to the existing and future traffic conditions confirm the original findings presented by VHB. Since VHB's earlier report, some of the recommendations have been implemented through completed development projects immediately adjacent to Bank Street. While these spot improvements have provided isolated operational improvements, additional geometric and system enhancements should be pursued and assessed along the corridor as a whole.

The following three improvement locations as shown in Figure 2 are highlighted as critical enhancement areas along with some operational improvements at two signalized intersections:



REVISIONS

PROJECT CORRIDOR MAP - CRITICAL ENHANCEMENT AREAS
ROUTE 67 (BANK STREET) SPOT IMPROVEMENTS

SEYMOUR, CONNECTICUT

DESIGNED	SMB	CHECKED
SCALE	1"=200'	
DATE	FEBRUARY 2014	
PROJECT NO.	3211-02	

FIG. 2

- Bank Street @ Franklin Street/River Street and @ Old Drive
- Bank Street @ Beecher Street/Church Street
- Bank Street @ Klarides Village/Johnson Street

5.1 Route 67 (Bank Street) from Old Drive to Franklin Street/River Street (SR 313)

In 1991, VHB recommendations included widening Route 67 between the Franklin Street/River Street intersection and the Old Drive intersection to accommodate an additional westbound travel lane. Also, VHB proposed turning the easterly segment of Old Drive into a one-way northbound road and installing a signal at the intersection of Bank Street and Old Drive West. As noted earlier in this report, a Walgreens Pharmacy was built east of the Old Drive intersection. As part of its local land use approval and consistent with the 1991 recommendation, a signal was installed at the westerly intersection of Old Drive, and the easterly segment of Old Drive was improved to a one-way northbound road.

The Old Drive East intersection is an unsignalized intersection adjacent to the intersection with the signalized Walgreens driveway at Bank Street. Since these two intersections are in close proximity (approximately 150 feet), the signal has a direct effect on the operations at Old Drive. Bank Street has a single westbound lane and one eastbound through lane although the left-turn lane from the Walgreens driveway does provide queuing for approximately two vehicles entering Old Drive. A sidewalk is located along the southern side of Bank Street and at the northeast corner of the intersection. A path exists along the western side of Old Drive. While there are pedestrian ramps on both sides of Old Drive, there is no marked crossing for the northern leg of this intersection. Crosswalks do exist at the Walgreens driveway intersection, with pedestrian push buttons for signalized assistance concurrent with the side street green phase.

The additional westbound Bank Street travel lane discussed above and supported in this study is intended to alleviate queuing issues approaching the Walgreens and Old Drive East intersections and improve the flow of traffic through this intersection. Currently, those traveling west along

Bank Street are required to merge to a single lane only 200 feet west of the Franklin Street/River Street intersection and just before the Martha Street intersection in order to cross the bridge just west of the Old Drive East intersection. Widening of the road will allow queuing in the right-turn lane at the Walgreens intersection and will extend the merge length for westbound vehicles. It was also determined that not only should Bank Street be widened between Franklin Street and Old Drive but operational improvements would be needed for the Bank Street/Franklin Street/River Street intersection along with redesign of the signal.

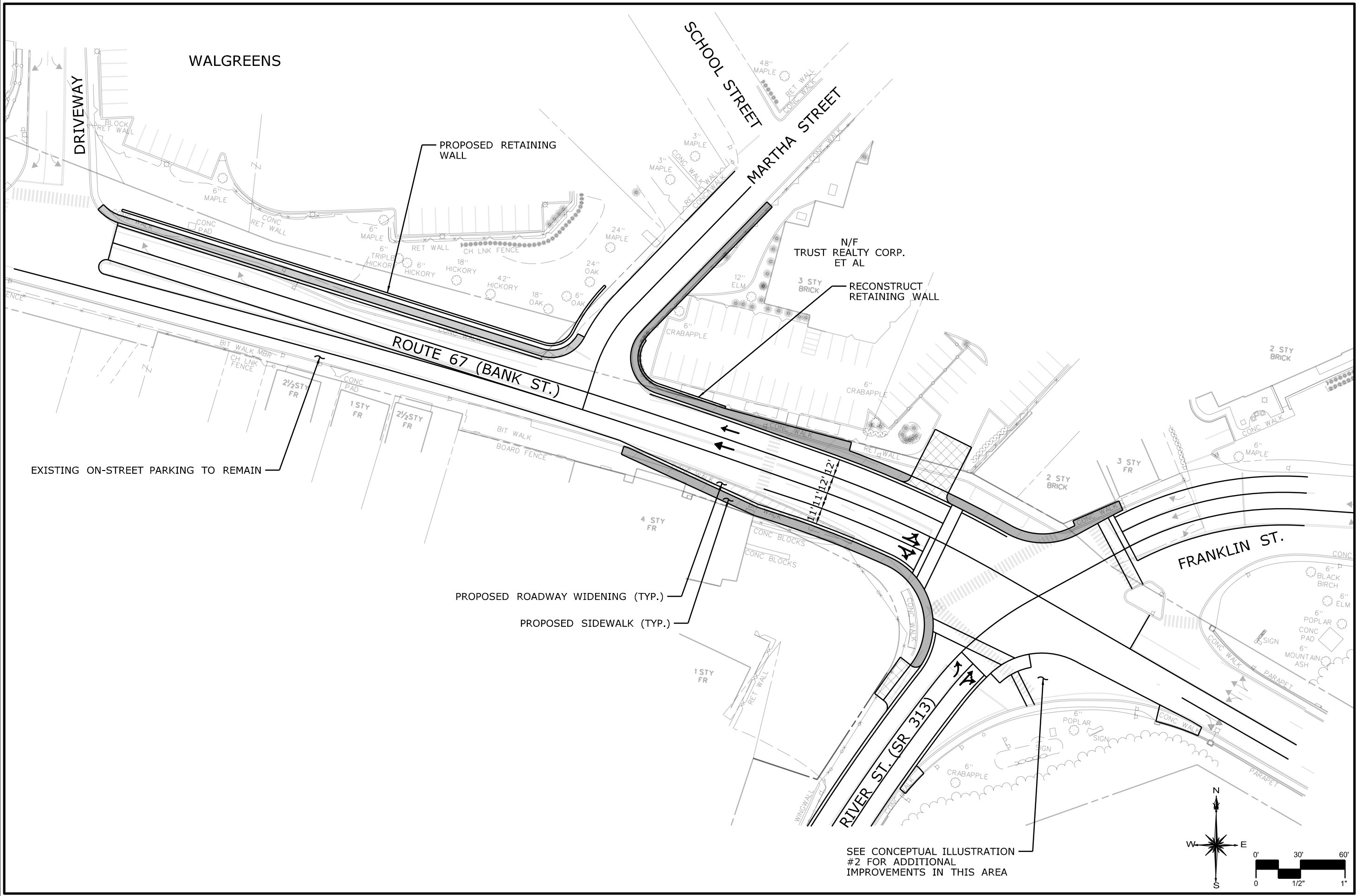
The Bank Street/Franklin Street/River Street intersection operates under signal control with Bank Street approaching from the east and west, Franklin Street serving as the northern leg, and River Street to the south. The westbound Bank Street approach has one shared left-turn/through lane and one shared through/right-turn lane with channelization for the right turns. The eastbound approach also has two general-purpose lanes. The northbound approach has an exclusive left-turn lane and a through/right-turn lane. The southbound approach has exclusive left-turn, through, and right-turn lanes. Crosswalks are present at the northern, southern, and western legs of this intersection. The signal phasing provides for an exclusive pedestrian phase, which is activated by push buttons at each corner. Sidewalks extend from all legs of this intersection.

Following our analysis and assessment of the conditions within the project corridor and discussions with the Town of Seymour and VCOG staff, it is recommended that the preferred design for this section of Route 67, referred to as Alternate No. 1 and shown in Figure 3, include widening (primarily) on the south side of Bank Street between Old Drive East and the Franklin Street/River Street intersection. Based upon input from the VCOG and Town of Seymour, earlier concepts now include the use of 11-foot lanes with 5-foot shoulders to support on-street bicycle connectivity from the areas adjacent to Bank Street to downtown Seymour and the developing riverfront recreational opportunities. Aside from the minor widening and the construction of a small retaining wall on the north side of Bank Street, immediately in front of Walgreens, the concept holds the northern edge of pavement and extends the widened pavement section to the south. In doing so, the new edge of pavement and sidewalk create direct impacts to the buildings along the southern side of Bank Street including but not limited to direct impacts

to the buildings and porches and the elimination of the limited "10-minute" on-street parking. In addition to the direct building impacts, the loss of parking constitutes a serious impact given the lack of on-site parking spaces and the current short-term on-street parking used by these properties and businesses. Given the loss of parking, acquisition of these properties may be necessary and therefore is assumed in the cost analysis. While the town supports the preservation and/or creation of on-street parking within the downtown area, the acquisition of such properties may provide opportunities to reshape the south side of Bank Street in this area to either establish new on-street parking beyond the widened lane arrangement or to create off-street parking as part of redevelopment efforts planned for the southwest corner of the Bank Street/Franklin Street/River Street intersection. These concepts will be explored further by the Town of Seymour and VCOG as the design of these spot improvements and the adjacent redevelopment area evolves.

The preferred alternate also extends the westbound right-turn lane at the Walgreens driveway through to the intersection of Old Drive East to accommodate the traffic volumes at this location and continue the intended pedestrian and on-street bicycle patterns through the corridor. The improvements at the entrance to Walgreens propose to shift the existing Bank Street crosswalk from the western to the east side of the intersection. The shift increases the distance between the existing crosswalk and the end of the Route 67 Little River bridge parapet and improves the sight distance and visibility associated with this existing pedestrian and potential future bicycle crossing.

An alternative to the preferred, Alternate No. 2, as shown in Figure 4, proposes to only widen the northerly side of the road. A large retaining wall would need to be built along the northerly side west of Martha Street in order to retain the slope. Also, to the east of Martha Street, the existing retaining wall at 100 Bank Street would have to be reconstructed and shifted north to accommodate the widening. While this retaining wall may provide an appealing and historic aesthetic along this section of Bank Street, large portions are in disrepair. Furthermore, removal of the wall may require assessment and proper documentation in accordance with Section 106 under the National Historic Preservation Act given that the property is eligible for listing on the



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REVISIONS		

ROUTE 67 (BANK STREET) @ FRANKLIN ST./RIVER ST. - ALTERNATE 2

ROUTE 67 (BANK STREET) SPOT IMPROVEMENTS

SEYMOUR, CONNECTICUT

DP	SMB	MJJ
DESIGNED	DRAWN	CHECKED

1"=60'

SCALE

FEBRUARY 2014

DATE

3211-02

PROJECT NO.

FIG. 4

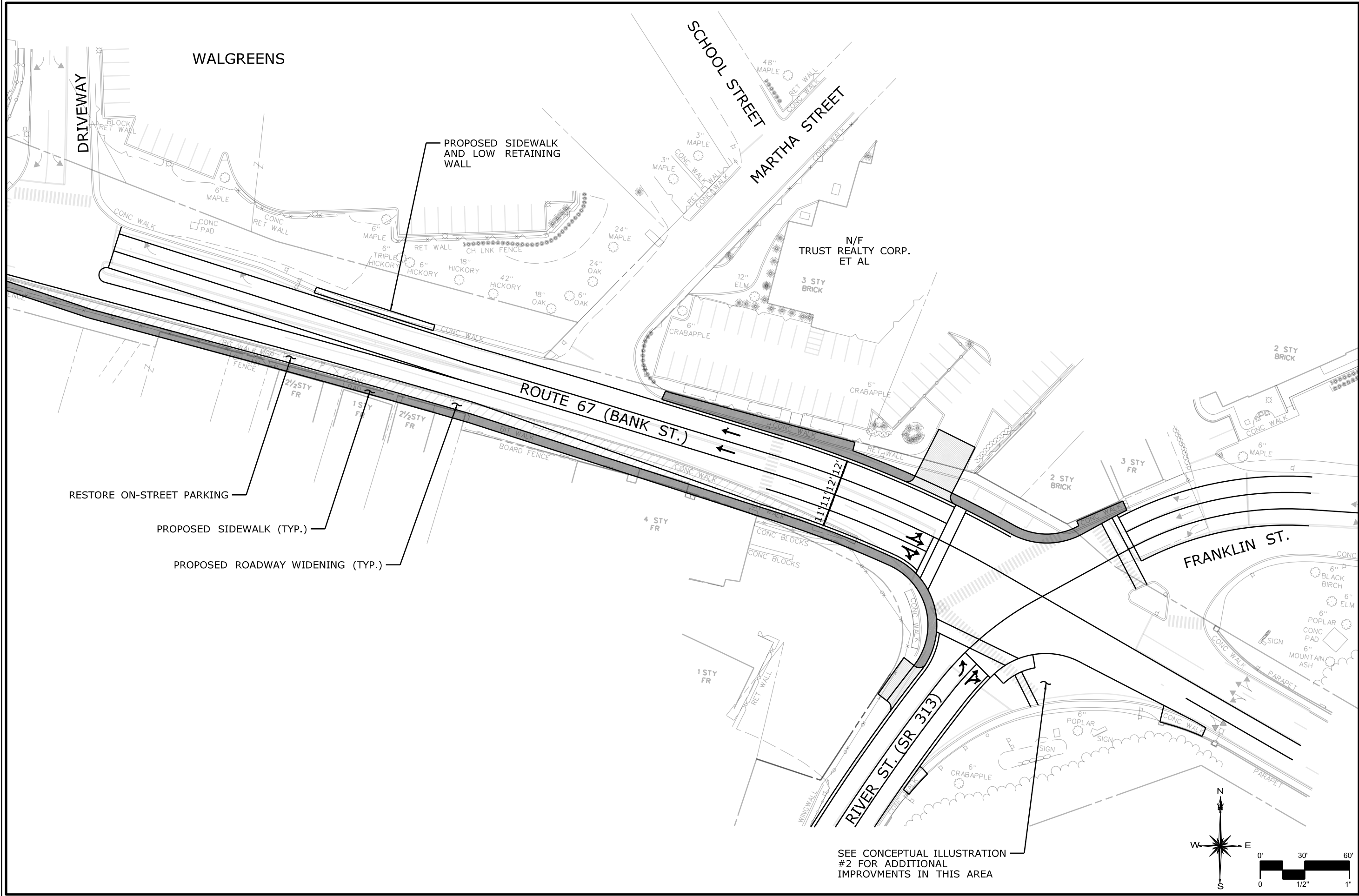
SHEET NO.

National Register of Historic Places. Widening to the north will also steepen the grade of Martha Street and impact the off-street parking at 100 Bank Street. For the reasons summarized above, this alternative has been deemed undesirable.

Alternate No. 3, proposing more extensive impacts (shown in Figure 5), was also considered. The concept is similar to the design approach shown in Figure 3 for Alternate No. 1 but preserves the on-street parking along the southern side of Bank Street. While the preferred alternative (Figure 3) may result in acquisitions due to the loss of parking, the design shown in Figure 5 will require full acquisition of several parcels to accommodate the widening and preservation of on-street parking. The alternatives shown in Figures 3 and 5 may need to be reviewed/considered together in relation to available funding and plans for redevelopment in the area.

The preferred option and the alternatives each require encroachment upon the existing sidewalk, building, and right-of-way along the south side of Bank Street and immediately west of the River Street intersection in order to maintain the current lane configurations. Also, both the preferred and alternative improvement options will require additional enhancements to the Franklin Street/River Street intersection including the removal of the two on-street parking spaces along Bank Street at the northwest corner of the intersection. The accident history indicates numerous crashes have occurred in this area due to parking maneuvers. A reduced curb-to-curb width at this location will shorten the crossing distance for pedestrians.

Furthermore, the curb radius for the River Street right-turn lane northbound movement at the southeast corner of the intersection may be reduced substantially. The existing radius exceeds 150 feet, which is more than adequate for trucks making right turns northbound onto Bank Street. A reduced radius would serve to slow vehicles making this turn, shorten the distance for pedestrian crossings, and provide additional landscape area and possible connections to the town's Naugatuck River recreational resources.



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REVISIONS

ROUTE 67 (BANK STREET) @ FRANKLIN ST./RIVER ST. - ALTERNATE 3

ROUTE 67 (BANK STREET) SPOT IMPROVEMENTS

SEYMOUR, CONNECTICUT

DP	SMB	MJJ
DESIGNED	DRAWN	CHECKED

1"=60'

SCALE

DATE **FEBRUARY 2014**

PROJECT NO. **3211-02**

FIG. 5

SHEET NO.

Modifying the signal timing to provide additional green time for the Bank Street east/west phase will also be needed to improve the LOS at this intersection. This is the phase with the heaviest traffic volumes. The increased time for this phase can be expected to improve the weekday afternoon overall operations from LOS E to LOS C, with little impact to northbound and southbound movements. The westbound approach will improve from LOS F to LOS C, and the 95th percentile queue at this approach can be reduced by over 140 feet.

As supported by the results from our traffic analysis, widening the northbound (River Street) approach to this intersection to extend the left-turn lane should also be pursued. The 95th percentile queue for this lane exceeds 300 feet. The widening of River Street to lengthen the northbound left-turn lane was assessed in conjunction with our review of the inspection reports for the River Street (SR 313) bridge (No. 01585) over the Little River. While the bridge is listed as being constructed in 1936 (and reconstructed partially in 1991), it remains in fairly good condition as represented in the bridge inspection report. Currently, it supports the existing and proposed lane arrangement except for the continuation of the 5-foot (bike lane) shoulder from Bank Street to River Street. The structure's overall rating is adequate, but the curb-to-curb deck width does not meet the current requirements. The latest inspection report indicates the curb-to-curb distance is currently 37.5 feet, which is well below the minimum criteria, resulting in a deck geometry appraisal rating of 2. According to the Federal Highway Administration (FHWA) *Recording and Coding Guide for the Structure Inventory and Appraisal of the Nation's Bridges*, a rating of 2 is defined as "basically intolerable requiring high priority of replacement." Upon closer review, there are significant factors that would complicate the widening along eastern River Street including the proximity of the bridge to the Naugatuck River and the configuration of the wingwalls, which primarily run parallel to River Street. These factors limit the ability to widen the bridge superstructure, add a cantilevered section for sidewalk, etc. For the purposes of this study and in order to avoid regulatory obstacles associated with working within the Naugatuck River FEMA floodway, the widening of River Street and the River Street bridge is assumed to be along the western side of the road. In order to accommodate the widening of River Street, a new retaining wall will need to be constructed or the existing retaining wall reconstructed along the western side of the road in the area south of the former Housatonic Wire

Company property. The existing eastern edge of pavement would be maintained in its current location. The widening of River Street in this area will need to be reviewed concurrently with the town's parallel efforts to investigate and plan riverwalk extensions along the Naugatuck River and around the Tingue Dam recreational and park areas.

When assessed in conjunction with the improvements recommended herein, the capacity analysis detailed in the traffic study indicates that the LOS would improve at the intersection of Bank Street/Franklin Street/River Street, experiencing an overall operational improvement from LOS E to LOS C during the afternoon peak hour. This enhancement is primarily caused by the improvement to the westbound through traffic. By providing additional time for this movement, the operations will improve for this approach from LOS F to LOS C during the afternoon peak hour. The afternoon queues at this approach can also be reduced by approximately 220 feet, and the morning queues would also show improvement.

Table 6 below details a very early opinion of approximate construction costs of the alternates along this specific section of Route 67 expressed in 2014 dollars. A more comprehensive cost analysis that includes all of the improvements associated with the preferred alternates summarized herein can be found in the Appendix of this report.

TABLE 6
Bank Street Between Old Drive and
River Street/Franklin Street Intersection
(not including River Street widening)

Improvement	2014 Cost*
Alternative 1 - preferred	\$1,029,000
Alternative 2	\$1,552,000
Alternative 3	\$1,270,000

*Excludes right-of-way acquisition costs, utility relocations, streetscape enhancements, and hazardous materials, if any

5.2 Bank Street @ Church Street/Beecher Street

Church Street approaches Bank Street from the southeast and carries two-way traffic while Beecher Street departs toward the southwest (away from Bank Street) as a one-way street. Bank Street provides a single eastbound lane. Westbound Route 67 has one through lane and an exclusive left-turn lane for motorists entering Church and Beecher Streets. The side streets operate under stop sign control, and there are no controls on the mainline (Route 67). A sidewalk exists along the southerly side of Bank Street; however, no crosswalks exist. The intersecting streets are skewed with a crossing distance of approximately 60 feet. Currently, the intersection is a safety concern with little vehicle priority established. With such a wide entrance, those traveling westbound along Bank Street and turning onto Beecher Street must contend with those traveling eastbound on Bank Street turning right onto Church Street. MMI agrees with VHB's original recommendation that this intersection be reconfigured to provide for safer traveling movements.

MMI initially considered reconfiguring Church and Beecher Streets such that Beecher Street forms the leg of a T-intersection with Church Street with two northbound approach lanes. In turn, Church Street would be narrowed/realigned at its intersection with Bank Street. This would provide a narrower intersection, reduce vehicular speeds and the potential for conflicts, and shorten the pedestrian crossing distance. However, upon review of site conditions and preliminary engineering efforts, a T-intersection along Beecher Street (instead of Church Street), along with the narrowing and realignment of the intersection at Bank Street, may be more feasible (shown in Figure 6). This figure represents Alternative No. 1.

This alternative will create a safer condition for both vehicular and pedestrian mobility, will result in the same overall improvement to traffic operations at a much lower cost, and will not require the acquisition of private property. This approach will reduce the width of the curb cut at Bank Street and create a T-intersection with Beecher Street and Church Street. Currently, there is an informal roadway/access strip for drop-off and pickup in front of the Russian American Citizen Club. This area is within the public right-of-way but is used almost exclusively by the

club. Under this option, the access strip will remain available for limited parking and, through the use of streetscape design elements, there is potential to enhance the overall appearance of these intersections and the drop-off area (see Conceptual Illustration #1). Options to narrow Beecher Street to allow for additional on-street parking along the Russian American Citizens Club frontage were also considered but, given the current on-street parking associated with the existing residences on the opposite side of the street, this was not incorporated into the preferred alternative.

The additional turning lane on Beecher Street approaching Bank Street will help to reduce delays for motorists turning right due to left-turning vehicles. Morning peak-hour queues will be reduced by approximately 40 feet and afternoon peak-hour queues by nearly 150 feet. The two-lane configuration will yield afternoon operations of LOS D for right-turning vehicles, which is an improvement from the LOS F condition experienced by the current single-lane approach.

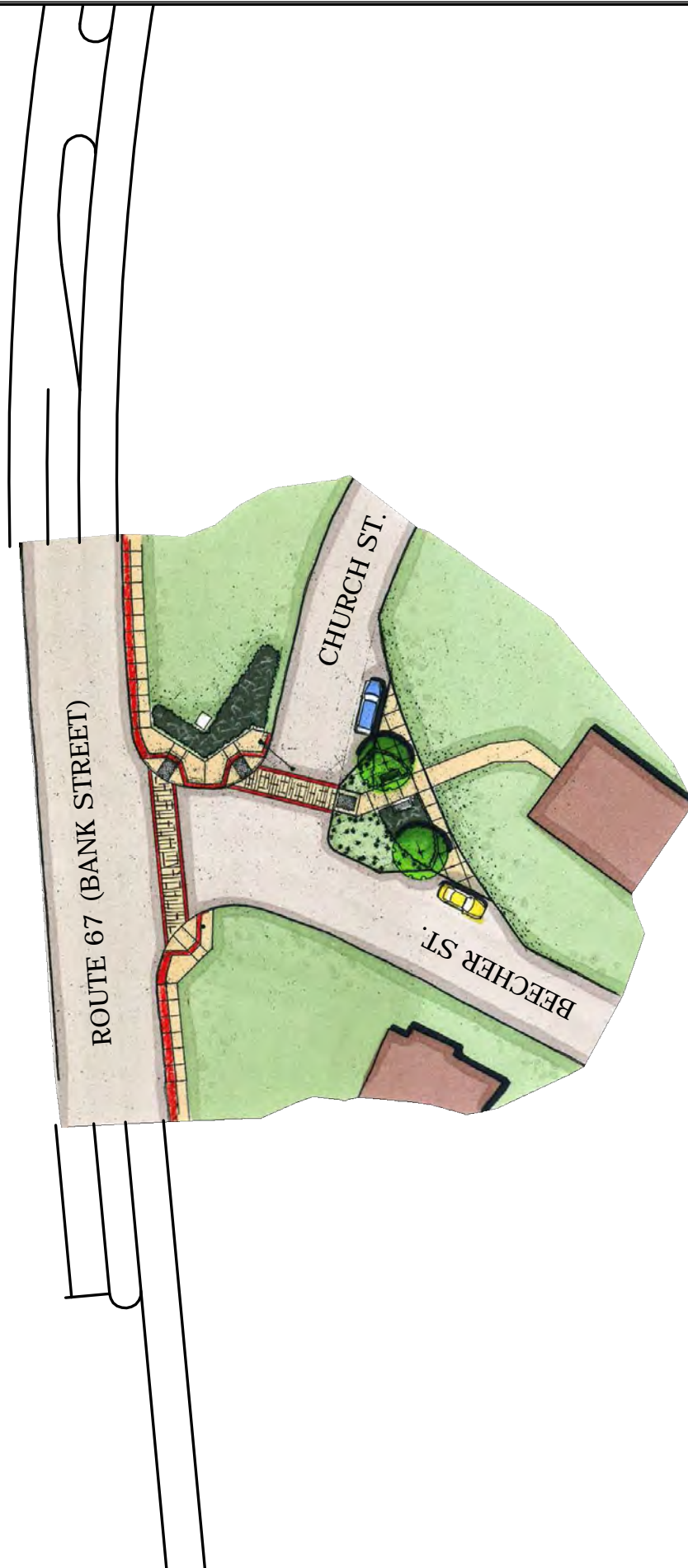
The alternative to this improvement, Alternate No. 2, would be similar to the original VHB recommendations, which would create the primary intersection of Church Street at Bank Street with Beecher Street intersecting Church Street at 90 degrees. The impacts to traffic are similar; however, it was determined that geometrically creating a T-intersection along Church Street would be much more extensive and would require adding a significant amount of pavement and regrading. This option will also involve the acquisition of property to the east of the intersection and would eliminate the roadway strip in front of the Russian American Citizen Club. Figure 7 details this option.

Table 7 below details the estimated costs per each improvement.

TABLE 7
Bank Street/Church Street/Beecher Street

Improvement	2014 Cost*
Alternative 1 - preferred	\$207,000
Alternative 2	\$470,000

*Excludes right-of-way acquisition costs, utility relocations, streetscape enhancements, and hazardous materials, if any



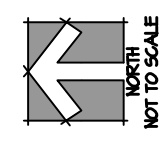
CONCEPTUAL ILLUSTRATION #1

ROUTE 67 (BANK STREET) SPOT IMPROVEMENTS

VALLEY COUNCIL OF GOVERNMENTS

SEYMOUR, CONNECTICUT

FEBRUARY 2014



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5.3 Bank Street @ Klarides Village Driveway/Johnson Street

This intersection is located at the easterly end of Klarides Village, between the McDonald's restaurant and TD Banknorth. The plaza driveway has a single exit lane, which is signed to prohibit left turns onto Bank Street. Bank Street provides for a single lane in each direction at this location. Opposite the plaza driveway is a retaining wall that supports Johnson Street, a steep, one-way southbound roadway (toward Bank Street) with a left-turn prohibition. Johnson Street is sharply skewed with Bank Street. The angled approach (from the northeast) results in a poor sightline looking to the left when entering Bank Street. Johnson Street serves a residential neighborhood.

Currently, the intersection has a good LOS of A along the westbound approach on Bank Street during both AM and PM peak hours, a LOS of B at the northbound plaza driveway in the AM, and a LOS of C during the PM peak. Future conditions show a decrease in the AM northbound plaza drive approach to a LOS of C.

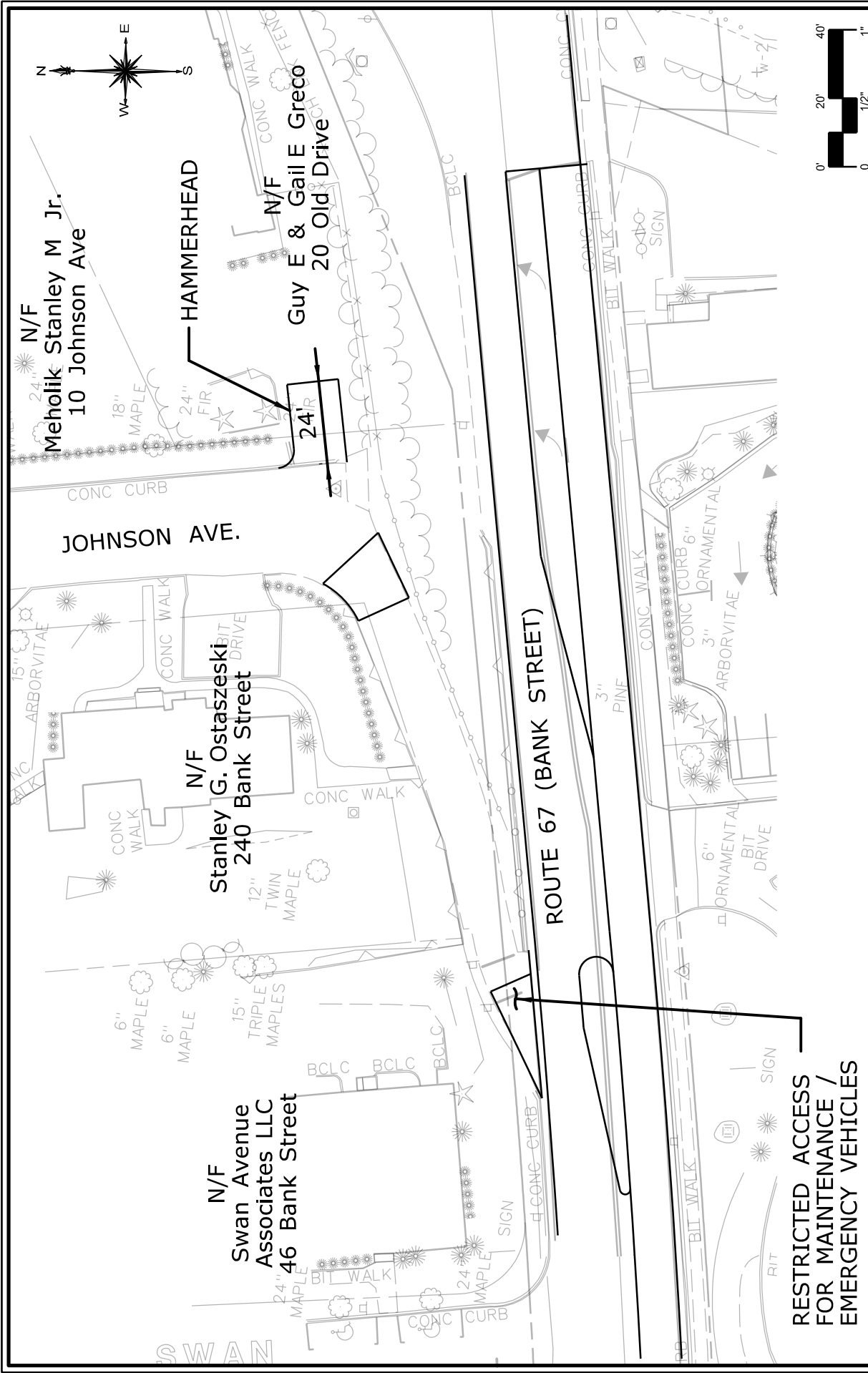
A sidewalk is present along the southern side of Bank Street, and the length of the pedestrian crossing at the plaza driveway is approximately 32 feet. There is no sidewalk on the northern side of Bank Street. The sidewalks to the east of the intersection and on the southerly side are in good condition; however, the grass strip at the edge of the road requires restoration. The sidewalk to the west, toward the signalized driveway, is in poor condition. The curb reveal is diminished, and there is need for curbing along an abandoned curb cut. Lastly, mulch eroded from the adjacent landscape bed is migrating onto the walkway.

The proposed improvements from the original study were to terminate Johnson Street at Route 67 along with prohibiting left turns from Klarides Village by constructing a modified median. MMI found these improvements to remain valid and has made the following recommendations and improvements.

5.3.1 Johnson Street at Bank Street

In order to improve safety associated with the sharply skewed intersection of Johnson Street and Route 67, closure of the southerly portion of Johnson Street to traffic while maintaining access only for emergency and maintenance vehicles should be pursued. Since Johnson Street will need to remain a two-way street, provisions for vehicles to turn around will be needed. Of the several options considered, the preferred alternative offered herein includes the construction of a hammerhead intersection immediately adjacent to the existing residential properties closest to Route 67 that would allow the access of emergency and maintenance vehicles. In order to deter drivers from using this access point, raised brick pavers and decorative landscaping are proposed to limit access. This plan will require a partial taking from the Mehalick residence to the east for the turnaround portion. Currently, the approach to Bank Street is dangerous and has poor sightlines. Elimination of this access point will improve the safety of users at this intersection and provide for a free flow of traffic along Route 67. However, this option will require Johnson Street area residents to seek alternate access to Route 67. Minor drainage adjustments may be needed to address runoff from the additional impervious area proposed. Figure 8 details the preferred Alternate No. 1.

Two additional road closure alternatives were considered. Alternate No. 2 shown in Figure 9 considers creating a T intersection with Route 67. However, the significant elevation difference of approximately 25 feet would require extensive filling and regrading along Johnson Street, which will also create access issues for some of the residential properties along the street. The roadway profile of Johnson Street is approximately 10%. A T-intersection construction would require a road profile in excess of 25%, which creates an unsafe condition and would exceed the maximum allowable grade per local regulations. The third alternative proposes creating a cul-de-sac at the end of Johnson Street. As shown in Figure 10, the cul-de-sac would terminate above the steep slope above Route 67 but would encroach on the Byrne residence to the west. Given the impacts to private properties, this alternative has been deemed undesirable.



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PROJ. NO.: 3211-02

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DRAWN: SMB

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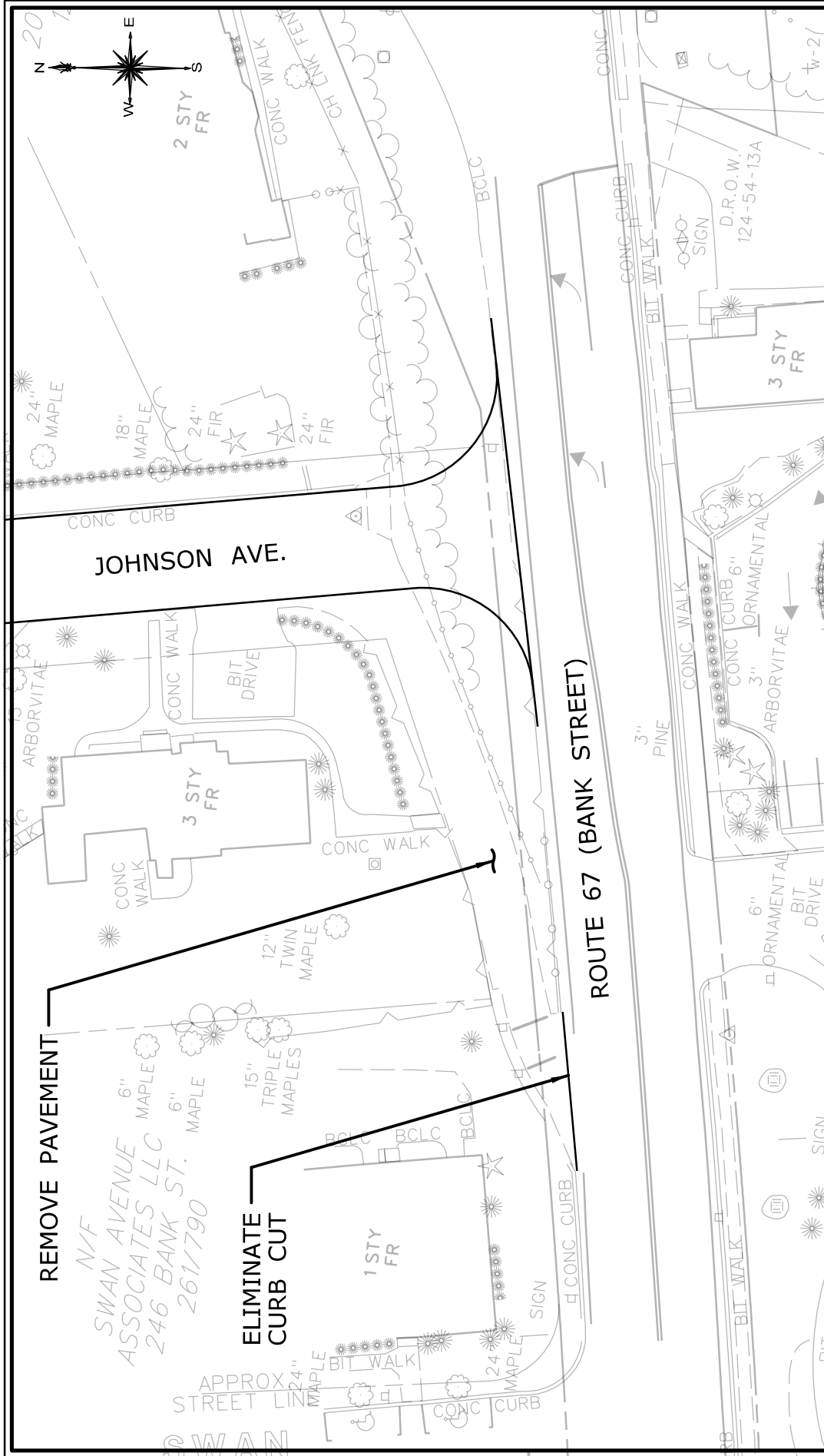
JOHNSON AVENUE - ALTERNATE 1 - PREFERRED

ROUTE 67 (BANK STREET) SPOT IMPROVEMENTS

PROJECT PHASE: **PRELIMINARY DESIGN**

DRAWING NAME: **FIG. 8**

SEYMOUR, CONNECTICUT



PROJECT PHASE:
PRELIMINARY ENG.

DRAWING NAME:

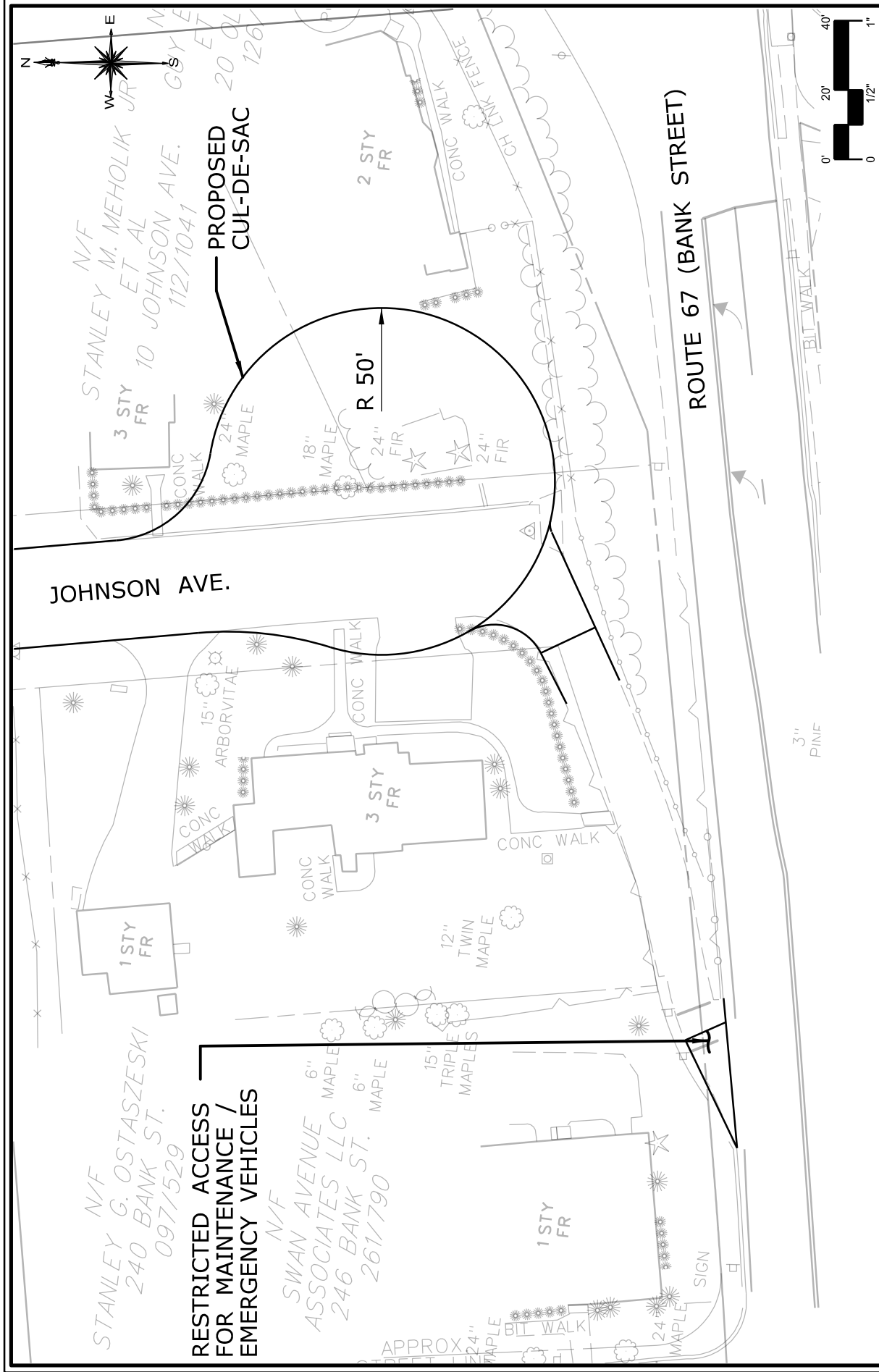
FIG. 9

JOHNSON AVENUE - ALTERNATE 2
ROUTE 67 (BANK STREET) SPOT IMPROVEMENTS

SEYMOUR, CONNECTICUT

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JOHNSON AVENUE - ALTERNATE 3 ROUTE 67 (BANK STREET) SPOT IMPROVEMENTS		PROJECT PHASE: PRELIMINARY ENG.
SEYMOUR, CONNECTICUT		DRAWING NAME: FIG. 10
DATE	FEBRUARY 2014	
SCALE	1"=40'	
PROJ. NO.	3211-02	
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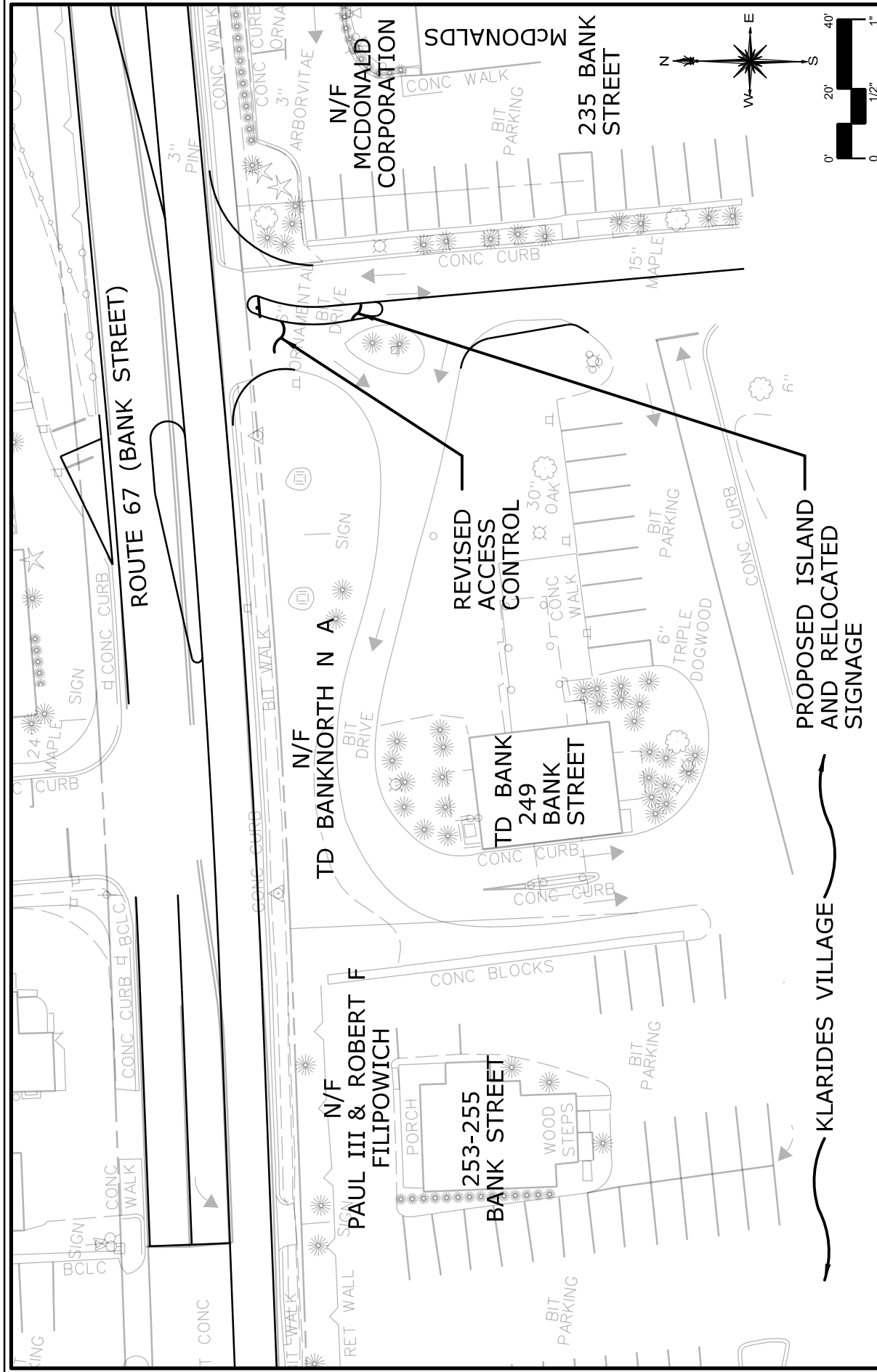
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5.3.2 Klarides Village and Bank Street (unsignalized)

The second improvement recommended for this intersection was to better enforce the no-left-turn movement by adding a physical barrier. Currently, the left-turn is prohibited by a sign posted opposite the driveway; however, there is a tendency for drivers to turn left. As shown in Figure 11, the preferred alternative includes constructing a delta island within the driveway area to physically restrict and prohibit left turns.

This enhancement will reinforce the existing intersection design. The illegal left turns that are occurring create safety issues crossing Route 67 and block traffic attempting to exit right out of the Klarides driveway. Those turning left or heading east along Route 67 will be required to drive through the plaza to the existing signalized driveway. This allows for safer movements and provides better traffic flow along the corridor. Physically prohibiting the ability to turn left will eliminate the safety concerns and the queuing issues at the unsignalized intersection. This design will require the removal of the existing landscaped island in order to accommodate the new geometry of the landscaped raised median. In addition, the No Left Turn signage should be located on the new island for better visibility. This design is expected to have minimal to no impacts on rights-of-way and utilities. Stakeholder impacts will be essentially limited to those patrons exiting McDonald's and TD Banknorth and wishing to travel east on Route 67.

The second alternative explored would further restrict the movement of vehicles at this location. This alternative would make the driveway one way, permitting ingress only. This option would eliminate the option to exit eastbound and would require patrons to travel through the plaza to the signalized driveway. This option would also create more congestion at the signalized driveway and within the property and would further impact convenience. This alternative would also increase delays at the signalized driveway and possibly impact businesses adversely.



Engineering, Landscape Architecture and Environmental Science MILONE & MACBROOM® 99 Realty Drive Cheshire, Connecticut 06410 (203) 271-1773 Fax (203) 272-9733 www.miloneandmacbroom.com		DATE: OCTOBER 2015 SCALE: 1"=40' PROJ. NO.: 3211-02 DESIGNED: DP DRAWN: SMB CHECKED: —	PROJECT PHASE: PRELIMINARY ENG. DRAWING NAME: FIG. 11
KLARIDES VILLAGE - ALTERNATE 1 - PREFERRED ROUTE 67 (BANK STREET) SPOT IMPROVEMENTS		SEYMOUR, CONNECTICUT	

Overall, with the suggested improvements made at Johnston Street and the Klarides Village driveway, the goal to limit left turns will be achieved along with creating a safer flow of traffic by eliminating the Johnson Street entrance. While these improvements will not provide a significant change in the LOS C, they will provide for a safer driving experience.

Table 8 below details the estimated costs per each improvement.

TABLE 8
Bank Street @ Klarides Village/Johnson
Street

Improvement – Johnson Street	2014 Cost*
Alternative 1 – preferred	\$72,000
Alternative 2	\$1,126,000
Alternative 3	\$191,000
Alternative 4	\$261,000
Improvement – Plaza Driveway	
Alternative 1 – preferred	\$38,000
Alternative 2	\$31,000

*Excludes right-of-way acquisition costs, utility relocations, streetscape enhancements, and hazardous materials, if any

6.0 Additional Traffic Signalization Improvements

Along with specific geometric improvements, signalization improvements are recommended at two intersections. These two intersections are described below.

6.1 Klarides Village

With the enhancements at the Klarides Village and Johnson Street intersection, signal improvements at the Klarides Village signalized driveway will also be needed. The plaza driveway approaches Bank Street from the south with two lanes, one left-turn lane and one right-turn lane. The eastbound Bank Street approach has a single lane while the westbound approach has an exclusive left-turn lane and a through lane. A sidewalk is present along the southern side

of Bank Street, and a crosswalk connects to two corners at the southeast and southwest. Another crosswalk is present across Bank Street at the western leg of the intersection. The walk phases operate concurrently with the corresponding green phases.

The traffic analysis supports modifying the signal timing at this intersection. Reducing the cycle length from 90 seconds to 60 seconds will maintain overall operations of LOS A and will significantly reduce 95th percentile queues, especially for the eastbound approach (850+ feet to 300 feet).

While safety will be enhanced, no significant operational improvements are realized at the Bank Street/Klarides Village signalized driveway. However, the westbound queues will be reduced by 75% during the morning peak hour, and the eastbound queues can be reduced by approximately half.

6.2 Bank Street/Old Drive (west)

Originally, VHB recommended adding a signal at the Bank Street/Old Drive (west) intersection. Upon development of a Walgreens, this intersection was upgraded. While the signal was added, our analysis has determined that the signal timing needs to be adjusted to accommodate the improvements proposed herein.

This signalized intersection has a single westbound lane, one eastbound through lane, and one eastbound left-turn lane along Bank Street. The southbound Old Drive approach has a single approach and departure lane. A sidewalk exists along the southerly side of Bank Street and the easterly side of Old Drive. Pedestrian ramps are present at the eastern leg of the intersection, but no crosswalk has been marked. Pedestrian push buttons and signal heads are located at the northeast and southeast corners. The pedestrian signal phase operates concurrently with the Old Drive green phase.

Modification of the signal timing at this intersection is recommended. A shorter cycle length (60 seconds, down from 90 seconds) will enhance operations from LOS F to LOS C and will significantly reduce queues at all approaches. An increase in the percentage of green time for the Bank Street east/west movements and a reduction of the Old Drive southbound green time will enhance operations.

During the weekday afternoon peak hour, the Bank Street/Old Drive (west) intersection improves from LOS F to LOS C. The eastbound queues can be reduced by approximately 300 feet and the westbound queues by 350 feet. Morning peak-hour operations will remain unchanged; however, the westbound queues will be reduced by approximately 45 feet.

7.0 Mitigation Analysis

The effects of these recommendations on LOS for the peak periods are summarized in Tables 9 through 12.

TABLE 9
2031 Level of Service/
Queuing Impacts of Recommendations
Weekday Morning Peak Hour
Signalized Intersections

APPROACH	NO BUILD		WITH IMPROVEMENTS	
	LOS	QUEUE ^a	LOS	QUEUE
<i>Bank Street/River Street/Franklin Street</i>				
Eastbound (Bank Street)	A	146	A	120
Westbound left/through (Bank Street)	C	190	B	154
Westbound right (Bank Street)	B	53	A	41
Northbound left (River Street)	C	102	C	110
Northbound through/right (River Street)	C	40	D	41
Southbound left (Franklin Street)	C	63	C	69
Southbound through (Franklin Street)	D	36	D	37
Southbound right (Franklin Street)	B	39	C	47
Overall	B	--	B	--
<i>Bank Street/Old Drive (west)</i>				
Eastbound left (Bank Street)	A	5	A	5
Eastbound through (Bank Street)	A	185	A	185
Westbound (Bank Street)	B	173	A	128
Southbound (Old Drive)	D	100	D	100
Overall	A	--	A	--
<i>Bank Street/Klarides Village Main Driveway</i>				
Eastbound (Bank Street)	A	362	A	362
Westbound left (Bank Street)	A	7	A	2
Westbound through (Bank Street)	A	76	A	21
Northbound left (plaza driveway)	D	46	D	46
Northbound right (plaza driveway)	B	27	B	27
Overall	A	--	A	--

^a 95th percentile queue in feet

TABLE 10
2031 Level of Service/
Queuing Impacts of Recommendations
Weekday Morning Peak Hour
Unsignalized Intersections

APPROACH	NO BUILD		WITH IMPROVEMENTS	
	LOS	QUEUE ^a	LOS	QUEUE
<i>Bank Street/Old Drive (east)</i>				
Eastbound left (Bank Street)	A	1	A	1
<i>Bank Street/Church Street/Beecher Street</i>				
Westbound left (Bank Street)	B	11	B	11
Northbound (Church Street)	D	55	--	--
Northbound left (Church Street)	--	--	D	11
Northbound right (Church Street)	--	--	C	31
<i>Bank Street/Klarides Village unsignalized driveway</i>				
Westbound (Bank Street)	A	8	A	8
Northbound (plaza driveway)	C	25	C	25

^a 95th percentile queue in feet

TABLE 11
2031 Level of Service/
Queuing Impacts of Recommendations
Weekday Afternoon Peak Hour
Signalized Intersections

APPROACH	NO BUILD		WITH IMPROVEMENTS	
	LOS	QUEUE ^a	LOS	QUEUE
<i>Bank Street/River Street/Franklin Street</i>				
Eastbound (Bank Street)	C	326	C	337
Westbound left/through (Bank Street)	F	465	C	321
Westbound right (Bank Street)	C	166	B	127
Northbound left (River Street)	C	259	D	302
Northbound through/right (River Street)	D	141	D	143
Southbound left (Franklin Street)	C	135	C	150
Southbound through (Franklin Street)	C	65	D	70
Southbound right (Franklin Street)	C	154	C	195
Overall	E	--	C	--
<i>Bank Street/Old Drive (west)</i>				
Eastbound left (Bank Street)	A	18	A	7
Eastbound through (Bank Street)	B	479	A	184
Westbound (Bank Street)	F	1083	D	728
Southbound (Old Drive)	D	111	C	83
Overall	F	--	C	--
<i>Bank Street/Klarides Village main driveway</i>				
Eastbound (Bank Street)	D	857	B	302
Westbound left (Bank Street)	A	5	A	3
Westbound through (Bank Street)	B	182	A	137
Northbound left (plaza driveway)	D	91	D	87
Northbound right (plaza driveway)	B	35	B	30
Overall	C	--	A	--

^a 95th percentile queue in feet

TABLE 12
2031 Level of Service/
Queuing Impacts of Recommendations
Weekday Afternoon Peak Hour
Unsignalized Intersections

APPROACH	NO BUILD		WITH IMPROVEMENTS	
	LOS	QUEUE ^a	LOS	QUEUE
<i>Bank Street/Old Drive (east)</i>				
Eastbound left (Bank Street)	C	2	C	2
<i>Bank Street/Church Street/Beecher Street</i>				
Westbound left (Bank Street)	B	30	B	32
Northbound (Church Street)	F	205	--	--
Northbound left (Church Street)	--	--	F	52
Northbound right (Church Street)	--	--	D	40
<i>Bank Street/Klarides Village unsignalized driveway</i>				
Westbound (Bank Street)	A	24	A	24
Northbound (plaza driveway)	C	50	C	57

^a 95th percentile queue in feet

The intersection of Bank Street/Franklin Street/River Street will experience an overall operational improvement from LOS E to LOS C during the afternoon peak hour. This is primarily due to improving the westbound through traffic. By providing additional time for this movement, the operations will improve from LOS F to LOS C during the afternoon peak hour. The afternoon queues at this approach have also been reduced by approximately 220 feet, and the morning queues also show improvement.

During the weekday afternoon peak hour, the Bank Street/Old Drive (west) intersection improves from LOS F to LOS C. The eastbound queues can be reduced by approximately 300 feet and the westbound queues by 350 feet. Morning peak-hour operations will remain unchanged; however, the westbound queues will be reduced by approximately 45 feet.

While safety will be enhanced, no significant operational improvements are realized at the Bank Street/Klarides Village signalized driveway. However, the westbound queues will be reduced by

75% during the morning peak hour, and the eastbound queues can be reduced by approximately half.

The addition of a lane to the Church Street approach to Bank Street will allow motorists turning right to minimize delays associated with left-turning vehicles. This will reduce morning peak-hour queues by approximately 40 feet and afternoon peak-hour queues by nearly 150 feet. The two-lane configuration will yield afternoon operations of LOS D for right-turning vehicles, which is an improvement from the LOS F condition experienced by the single-lane approach.

8.0 Pedestrian Circulation Summary

An important component of the project was to analyze pedestrian mobility and connectivity along the Route 67 corridor and its connection to downtown Seymour. An evaluation of pedestrian infrastructure was conducted on July 29, 2011 to identify pedestrian-related issues and connectivity gaps. The Seymour/Route 67 Site Analysis Summary is attached in the Appendix. The following is a summary of the findings and recommendations for pedestrian and streetscape enhancements.

In general, the study area does not effectively provide for safe pedestrian mobility throughout. While a sidewalk network exists, many areas are in disrepair, crosswalks are not handicap compliant, and gaps exist in many areas making it unsafe for pedestrians to travel from Klarides Village and points west to downtown Seymour. Sidewalk and crosswalk improvements have been made over the past few years but are site specific to development sites such as the new Walgreens. The primary challenge of connecting the Bank Street corridor to downtown Seymour is the Route 8 interchange that separates these two areas. Safety measures, physical improvements, and streetscape enhancements are needed in order to encourage pedestrian activity. There are many unique features including three parklet areas within the study area, which provide opportunities to create linkages and a safer and much more inviting experience for pedestrians. Additionally, the Tingue Dam fish bypass channel and park in downtown Seymour (currently under construction), which will be accessed via Deforest Street, offers an additional

pedestrian destination. This project will permit river access at the mouth of a new fish bypass channel in conjunction with park improvements and provide a unique recreational and educational experience along the Naugatuck River.



Tingue Dam Fish Bypass and Park Currently Under Construction

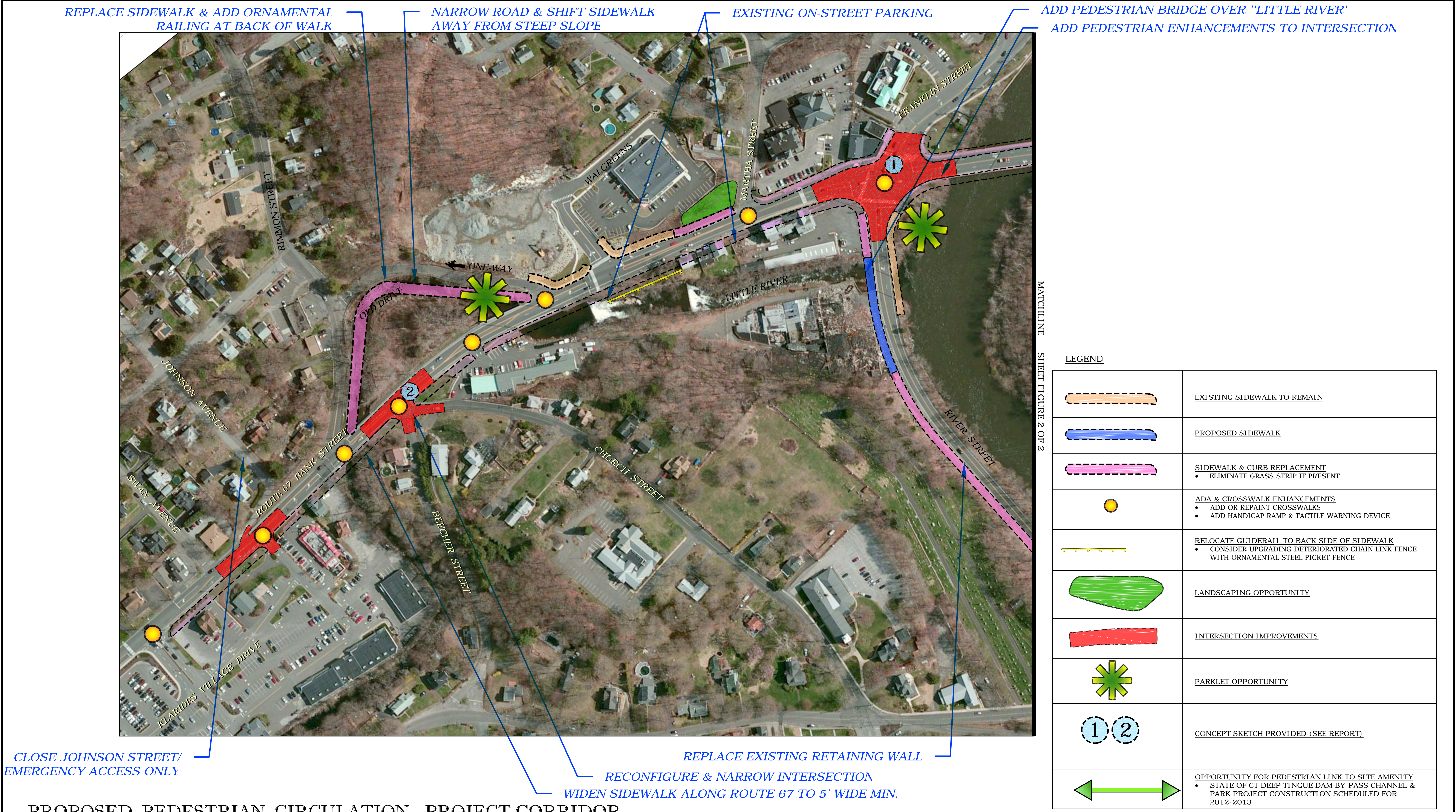


Tingue Dam Overlook

Figures 12 and 13 graphically depict the pedestrian circulation gaps and proposed improvements for Bank Street to downtown Seymour. The following summarizes the common issues and opportunities found within the study area.

Americans With Disabilities Act (ADA) Compliance Issues – The majority of crosswalks need enhancements such as simply repainting the crosswalk or adding handicap ramps and/or tactile warning devices in order to comply with current ADA standards. Crosswalks are needed at each major commercial driveway curb cut or intersecting roadway. The intersection at Old Drive West and Bank Street needs a painted crosswalk across Bank Street. Due to steep slopes and right-of-way constraints, sidewalks are not feasible along the northerly side of Bank Street. Therefore, pedestrians are required to cross at this intersection. While a tactile warning device is present, there is no marked crosswalk.





PROPOSED PEDESTRIAN CIRCULATION - PROJECT CORRIDOR

ROUTE 67 (BANK STREET) CORRIDOR IMPROVEMENTS

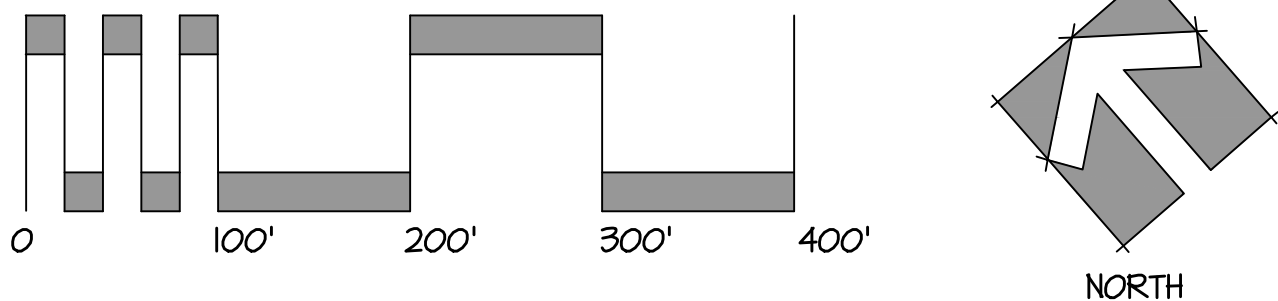
VALLEY COUNCIL OF GOVERNMENTS

DOWNTOWN AREA & ROUTE 67 WEST TO KLARIDES VILLAGE

SEYMOUR, CONNECTICUT

FEBRUARY 2014

FIGURE 12



CREATE PEDESTRIAN FRIENDLY EXPERIENCE
UNDER ROUTE 8

MATCHLINE SHEET FIGURE 1 OF 2



EXISTING SIDEWALK TO REMAIN

LEGEND

	EXISTING SIDEWALK TO REMAIN
	PROPOSED SIDEWALK
	SIDEWALK & CURB REPLACEMENT • ELIMINATE GRASS STRIP IF PRESENT
	ADA & CROSSWALK ENHANCEMENTS • ADD OR REPAINT CROSSWALKS • ADD HANDICAP RAMP & TACTILE WARNING DEVICE
	RELOCATE GUIDERAIL TO BACK SIDE OF SIDEWALK • CONSIDER UPGRADING DETERIORATED CHAIN LINK FENCE WITH ORNAMENTAL STEEL PICKET FENCE
	LANDSCAPING OPPORTUNITY
	INTERSECTION IMPROVEMENTS
	PARKLET OPPORTUNITY
	CONCEPT SKETCH PROVIDED (SEE REPORT)
	OPPORTUNITY FOR PEDESTRIAN LINK TO SITE AMENITY • STATE OF CT DEEP TINGUE DAM BY-PASS CHANNEL & PARK PROJECT CONSTRUCTION SCHEDULED FOR 2012-2013

REPLACE EXISTING SIDEWALK W/10' WIDE MULTI - USE TRAIL &
ADD PROPOSED IMPROVEMENTS, LIGHTS, BENCHES, ETC.

PAINT BRIDGE RAILING BLACK &
ADD PEDESTRIAN LIGHTING

2012 BROAD STREET PARK RENOVATIONS

TINGUE DAM PROJECT (SEE LEGEND)

CREATE PEDESTRIAN CONNECTION TO TINGUE DAM

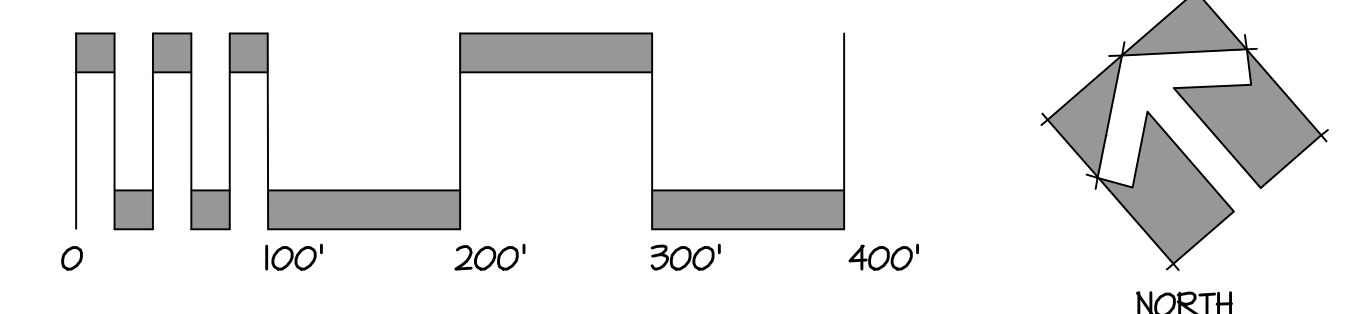
PROPOSED PEDESTRIAN CIRCULATION - DOWNTOWN

ROUTE 67 (BANK STREET) CORRIDOR IMPROVEMENTS VALLEY COUNCIL OF GOVERNMENTS

DOWNTOWN AREA & ROUTE 67 WEST TO KLARIDES VILLAGE
SEYMOUR, CONNECTICUT
FEBRUARY 2014

MILONE & MACBROOM
Engineering,
Landscape Architecture
and Environmental Science
99 Realty Drive
Cheshire, Connecticut 06410
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www.miloneandmacbroom.com

FIGURE 13



Sidewalk and Streetscape Enhancements – Sidewalk and streetscape enhancements should be considered along the Bank Street corridor and downtown Seymour for pedestrian safety and for creating an aesthetically pleasing experience for all modes of travel. It should also be noted that the introduction of certain streetscape improvements has been proven to affect traffic calming.



A sidewalk network exists along Bank Street; however, there are areas where the concrete is broken, mulch and landscaping debris are present on the walkway, and vegetation overburden impacts useable sidewalk widths. Therefore, these sidewalks should be addressed. The decision to replace curbing should be evaluated on a case-by-case basis.

The downtown sidewalk network is generally in better condition than that of Bank Street. However, the sidewalks that provide the connection to downtown by way of Bank Street and River Street are also in disrepair and will require improvements. Currently, these sidewalks are unsafe and in some instances are poorly illuminated, adversely affecting safe pedestrian mobility.

The following treatments/improvements are recommended:

- Replace all concrete walks along Bank Street and "as needed" in the downtown area with the exception of the new walk along the frontage of Walgreens.
- Replace curbing (granite, cost permitting, and on a case-by-case basis).
- Add decorative pedestrian-level lighting where feasible and appropriate. (Illumination below the Route 8 overpass may be deemed critical.)
- Add trees and shrubs where feasible and appropriate.
- Extend landscape treatments along the slope on Bank Street between Walgreens and Martha Street - see images below.



Streetscape enhancements should be consistent throughout the study area. This will create a sense of place and character that the Bank Street corridor currently does not have, encourage more pedestrian use, and assist in traffic calming.

8.1 Unique Opportunities

A prominent downtown feature and natural resource to the town of Seymour is the Naugatuck River. The Naugatuck River and its tributaries provide recreational opportunities and destinations throughout the study area. There are two locations along Bank Street and one location in downtown Seymour that utilize the Naugatuck River and its tributary as scenic recreational refuges.

The first is located at the intersection of River Street, Franklin Street, and Bank Street. A small parklet exists at the southeast corner of the intersection that overlooks the river. Along with roadway improvements, this area can be enhanced by adding more recreational space and updating the park area to become more inviting (see Conceptual Illustration #2).

A second parklet opportunity is located along Old Drive East. This parklet is accessed by the sidewalk/trail that loops around the river bend and connects back to Bank Street along Old Drive West. There are serious safety concerns along this loop. The timber railings are unstable and do not meet current code requirements,



ROUTE 67 (BANK STREET)

FRANKLIN ST.

RIVER ST.

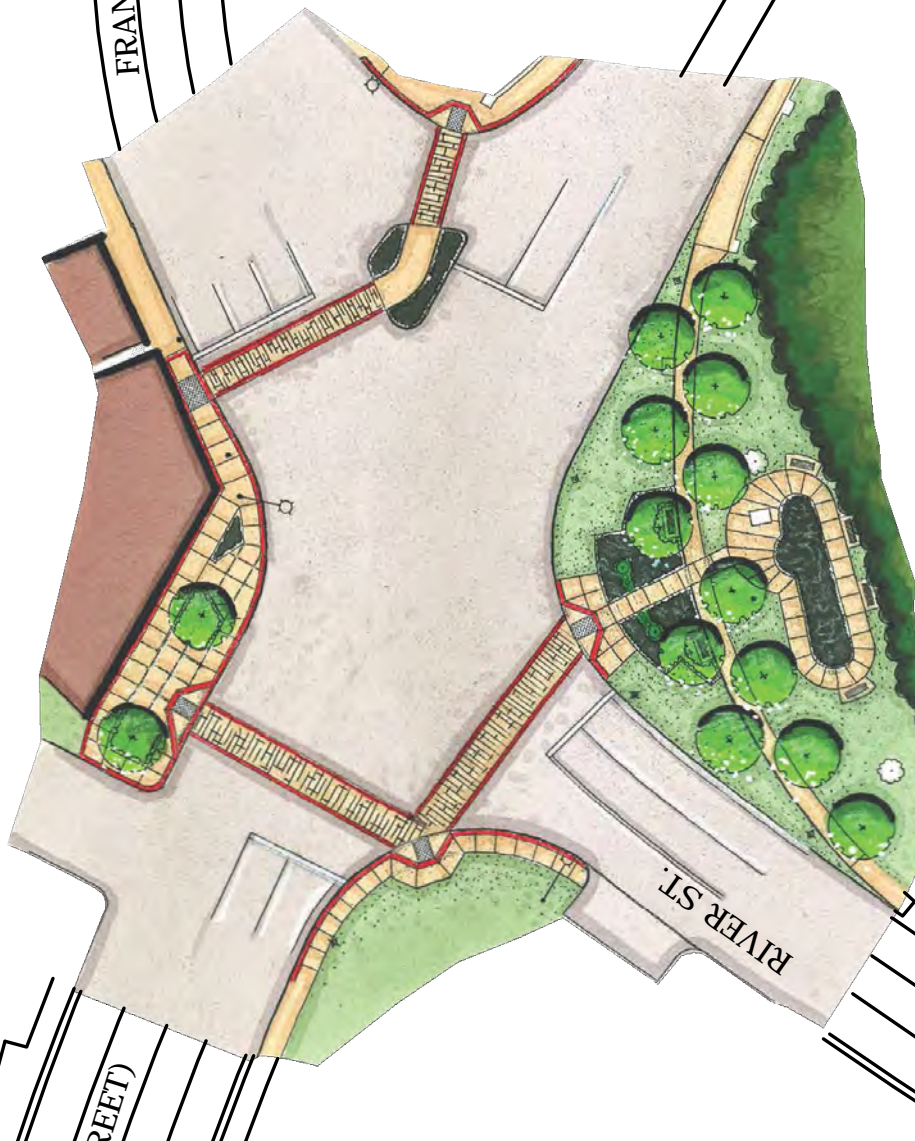
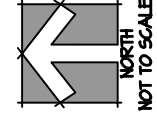
CONCEPTUAL ILLUSTRATION #2

ROUTE 67 (BANK STREET) SPOT IMPROVEMENTS
VALLEY COUNCIL OF GOVERNMENTS

SEYMOUR, CONNECTICUT

FEBRUARY 2014

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and the trail itself is set so close to the drop-off of the embankment that it creates a potential serious liability. Since Old Drive East is now a one-way street, the roadway may be narrowed, moving this path away from the steep drop-off and replacing the railings.

The third parklet is located in the downtown area at the corner of River Street and Broad Street. This parklet overlooks the Tingue Dam from the west. In 2012, renovations of the Broad Street park were initiated providing a 500-foot brick walkway, benches overlooking the dam and Naugatuck River waterfalls, and lighting for safety. With these improvements, this parklet further enhances the downtown Seymour experience and enjoyment of the river.

Lastly, the Tingue Dam fish bypass and associated park feature currently being constructed will create a recreational park area in downtown Seymour that overlooks the dam. This is expected to bring visitors and create a sense of place in the downtown.

9.0 Other Corridor Improvement Projects

In addition to the projects mentioned above that are being pursued within or adjacent to the limits of this study, recently, the CTDOT advertised and received bids for the Rehabilitation of Bridge No. 01061 Route 67 Over Little River (CTDOT Project No. 124-167). This structure crossing is immediately west of Old Drive East and the Walgreens signalized intersection. As indicated in the inspection reports for this structure, the bridge has been given a poor rating given the condition of the existing superstructure. The proposed rehabilitation will include:

- Replacement of the expansion joints at both abutments
- Replacement of the concrete-filled steel grid sidewalk and cantilevered sidewalk stringers
- Painting of the exposed structural steel and steel members along the walkway
- Repairs to the deteriorated concrete surfaces on the superstructure and substructure

The replacement of the cantilevered walk and pedestrian railing will slightly narrow the width of the walkway from 7'-0" clear to 6'- 5^{3/8}". The existing water main, which is hung underneath the

sidewalk, will also be replaced as part of that project. While the sidewalk replacement maintains the current pedestrian access across the bridge, given the width of the bridge and the location of the through-girder/steel parapet in relation to the minimum Route 67 lane geometry, the bridge superstructure, unless replaced and widened, currently cannot support a widened shoulder or wider sidewalk, which would allow for a shared-use path or on-street bicycle continuity. Also, the existing lane configuration and limited shoulder widths west of this bridge also limit on-road bicycle continuity. Based upon a cursory review of the structure drawings, it appears that a similar cantilevered sidewalk could be constructed on the north/upstream side of the bridge. While on-street bicycle opportunities to the west are limited, as discussed earlier in this report, there are opportunities to establish bicycle connections between the residential areas served by Old Drive/Rimmon Road and the Bank Street and larger downtown Seymour area.

10.0 Summary

As outlined within this report, some of the original recommendations by VHB have been implemented, and our recent analysis will help advance the implementation of the remaining recommendations. Several design alternatives have been presented within this report, some more challenging than others. Attached in the Appendix of this report are preliminary cost opinions for each of the preferred alternatives, summarized individually and collectively for funding purposes. The amounts have been adjusted for inflation assuming a construction year of 2019.

Similar to most municipal downtown centers, the options outlined to improve traffic and safety along the corridor must also consider the impacts to and the needs of the adjacent residences and businesses, future redevelopment, and other interested or affected stakeholders. Also, while streetscape enhancements may have to be phased, attempts should be made to incorporate these improvements into each stand-alone project as it is advanced.

This report has highlighted the issues and opportunities to not only improve the traffic operations but also the pedestrian circulation network that connects Route 67 (Bank Street) to the adjacent neighborhoods, Seymour's downtown area, and nearby riverfront resources. Using the

information provided herein, the VCOG and Town of Seymour will be able to develop priorities within the corridor, identify available funding sources to implement the improvements, and integrate these improvements with current and future redevelopment initiatives.

3211-02-4-mr1516-rpt

Preliminary Opinion of Costs – Preferred Alternatives

Valley Council of Governments
Preliminary Opinion of Costs - Preferred Alternates
Route 67 (Bank Street) Spot Improvements
Seymour, CT
State Project No. 124-165

February 2014

Improvement Location (see attached for specific breakdown)	Cost			
Johnson Street Access Termination	\$ 52,280.00			
Klarides Plaza Entrance	\$ 26,785.00			
Church St. / Beecher St. Realignment	\$ 149,400.00			
Route 67 - Old Drive to River St. Int.	\$ 734,330.00			
Southeast corner of Bank/River St. Int.	\$ 148,235.00			
River St. (SR 313) Widening - inc. bridge	\$ 726,250.00			
subtotal	\$ 1,837,280.00			
Traffic Items 3%	\$ 55,118.40			
Minor Items 25%	\$ 459,320.00			
subtotal	\$ 2,351,718.40			
<i>Clearing & Grubbing, M&PT, Trafficperson, Mobilization & Construction Staking included in each location cost</i>				
Inflation (4%/year) 2019 Construction	\$ 509,506.62			
subtotal	\$ 2,861,225.02			
Contingencies (<\$5,000,000 : 10%)	\$ 286,122.50			
Incidentals (\$1-5million : 25%)	\$ 715,306.25			
Utilities (Estimated)	\$ 100,000.00			
Total Construction Cost	\$ 3,962,653.77			
	Total Cost	Federal (80%)	State (10%)	Town (10%)
Total Cost Opinion (Rounded)	\$ 3,970,000.00	\$ 3,176,000	\$ 397,000	\$ 397,000

Pedestrian Opportunities and Constraints – Bank Street to Downtown Seymour

Pedestrian Opportunities and Constraints

Bank Street to Downtown Seymour

Pedestrian accessibility is an important component of the RT 67 corridor study in Seymour, CT. On July 29, 2011 the entire study area was walked and pedestrian related issues were documented using digital photography and field notes. To facilitate understanding these issues and where they occur we will start from the western limit of work, at the Klarides Village Shops and proceed easterly down Bank Street, then cross the bridge and pass beneath Route 8, turning south down Wakely Street, then turning east along Deforest Street, then turning south along Main Street, then turning west along Broad Street (passing over the bridge), then passing beneath Route 8 and proceeding north along River Street, returning to the intersection of River Street and Bank Street. We performed further visual analysis along Franklin Street, traveling north to approximately the Stop 'n Shop store. In this area we focused on the existing sidewalks and park-like area to the east of Franklin Street (adjacent to the Naugatuck River).

An existing walk system along Old Drive (adjacent to Little River) provides for pedestrian movement along the north side of Bank Street where no sidewalks currently exist. We will report our findings along this section of road at the end of this study.

In addition to supporting graphics prepared as part of this phase of the project, this report will provide additional photographs to depict unique or special conditions.



S. Side of Bank Street at Klarides

- Bituminous concrete sidewalks in poor condition and approx. 5' wide
- Curb reveal is less than 6"
- Mulch from adjacent landscape bed is migrating onto walk – need for curb at
- Abandoned curb cut



S. Side of Bank Street at Klarides Entrance

- Crosswalk does not meet current standards
- Drop curbs missing ADA tactile warning strips



N. Side of Bank Street at Klarides

- No ADA tactile warning strip at crosswalk
- Ped signal, but no sidewalk along north side



S. Side of Bank Street south of Klarides

- Concrete walk in good condition
- Grass strip at edge of road is maintenance problem
- Consider extending walk to back of curb
- Adequate space for site lighting (minimal overhead conflicts)



Pedestrian Crossing at Bank and Old Drive

- No dedicated painted crosswalk
- No ADA tactile warning strip on south side of Bank Street
- Note: no sidewalk exists along the north side of Bank Street
- This crossing provides ped. Access to the walk along Old Drive



S. Side of Bank Street at Allen's Plumbing Supply

- No painted crosswalk
- Drop curbs missing ADA tactile warning strips



S. Side of Bank Street Adjacent to Little River

- On-street parking is an advantage
- Existing guiderail conflicts with ease of pedestrian movement from the car to the sidewalk (as well as the swing of the car door)
- Narrow bituminous sidewalk in poor condition
- Chain link fence is uninviting – consider optional fence treatment



N. Side of Bank Street at Klarides

- No ADA tactile warning strip at crosswalk
- Ped signal, but no sidewalk along north side



N. Side of Bank Street at Walgreens

- Concrete walk in good condition
- Bank plantings have stabilized slope



N. Side of Bank Street East of Walgreens

- Slope treatment – low visual appeal and doesn't match treatment at Walgreens.
- Concrete sidewalk in fair condition



S. Side of Bank Street at Ed's Cleaners

- Curb reveal is less than 6" high
- Bituminous concrete sidewalk in poor condition
- Consider expanding new surface treatments to the building façade
- Opportunity for new bench and trash receptacle



N. Side of Bank St. at Martha St. Intersection

- Concrete and curb in poor condition
- Bituminous concrete road and gutter have failed
- No painted crosswalk or accessible ramps with tactile warning strip



S.Side of Bank Street at Seymour Lumber Co.

- Opportunity to work with developer to enhance streetscape treatments
- Good opportunity to establish streetscape theme here and at the intersection



N. Side of Bank Street Approaching RT 313 Intersection

- Concrete sidewalk and curb in poor condition with minimal curb reveal
- Wall in need of repair
- Unsafe mid-block crossing is visible
- No ADA compliant drop curbs/ramps or tactile warning strips



Pedestrian Crossing at Intersection of Bank and Franklin

- Crosswalks are poorly defined
- No ADA drop curb/ramp or tactile warning strips
- Note: no sidewalk exists along the north side of Bank Street
- This crossing provides ped. Access to the walk along Old Drive



Pedestrian Crossing at Intersection of Bank and Franklin

- Excessively wide street crossing with no area of pedestrian refuge
- Consider bump out at end of on-street parking to shorten distance



Pedestrian Areas and Crosswalks Below Rt 8

- Area is a sea of pavement and is poorly lit
- Poorly defined pedestrian movements
- Opportunity to introduce new paving treatments and lighting
- Majority of pedestrian crosswalks are lacking ADA compliant tactile warning strips



West Side of Wakely Street

- Opportunity for construction of new sidewalks and streetscape enhancements



W. Side of Wakely Street at Office Building

- Opportunity to continue dedicated pedestrian walk through parking lot
- Adequate room exists to adjust the limits of paved parking lot to enhance safe pedestrian movement



W. Side of Wakely Street at Parking Lot Adjacent to RT 8 and Future Tingue Dam Improvements

- Existing concrete walks and bituminous curb in poor condition
- Establish safe dedicated pedestrian access to waterfront improvements at Tingue Dam



Intersection of Wakely and DeForest Streets

- No painted crosswalk
- No accessible Drop curbs/ramps and missing ADA tactile warning strips
- Existing brick walking surface is uneven, but visually inviting compared to other walks in the area.



S. Side of DeForest Street

- Limit of brick paver sidewalk
- Concrete in poor condition
- Curb cut appears to be excessively wide and curb reveal is minimal



Intersection of DeForest and First Streets.

- No dedicated pedestrian crosswalks, or ADA compliant drop curb/ramp with tactile warning strips.



Intersection of DeForest and Main Street

- Lacking dedicated pedestrian crosswalks with accessible drop curb/ramp and tactile warning strips.
- Curb in front of Post Office is excessively high and creates an unsafe condition. Car doors cannot be opened on the sidewalk side of the on-street parking



Main Street Sidewalks Looking South

- Concrete walks and curb on west side of street are generally in good to fair condition
- Concrete walks and curb on east side of street are in poor condition
- Opportunity for introduction of pedestrian-level lighting



Broad Street Bridge Over Naugatuck River

- Metal Bridge Railing is rusted and would benefit from a new coat of paint
- Consideration should be given to providing pedestrian level lighting, which could be attached to the outside of the concrete rail/wall
- Vehicular speeds are high in this location, with minimal safe walking distance from travelway



Curb Cut Along South Side of Broad Street

- No dedicated ADA compliant pedestrian crossing



South Side of Broad Street at Route 8 Underpass

- No ADA compliant pedestrian crosswalk here, which denies safe access to the parklet on the north side of the street



River Street at Bottom of Route 8 Ramp

- No ADA compliant pedestrian crosswalk across River Street or at bottom of ramp.



West side of River Street Looking North

- Existing concrete walks and bituminous curb in poor condition
- Wide grass shelf could accommodate wider sidewalks and other amenities, including new landscape treatments
- No sidewalks along east side of road



West side of River Street Looking North

- Existing concrete walks and curb in poor condition and very narrow (curb is approx. 2' away from travelway)
- Retaining wall is in very poor condition. Wall ranges in height from approx. 1' to 5'
- Possible horizontal realignment of the road in the direction of the river would permit widening of the walk.



West Side of River Street at Lumber Co.

- Presently no sidewalk exists. It is presumed that this will be corrected as part of the site plan approval process for the new development



Little River Bridge at West Side of River St.

- No sidewalk at this location
- Consider new prefabricated pedestrian bridge to be located adjacent to the existing concrete bridge
- Existing bridge structure should be evaluated for structural integrity



Franklin Street Looking North to Stop n Shop

- Sidewalk along west side of Franklin terminates with no pedestrian linkage to Stop n Shop
- Existing concrete sidewalk in poor condition



Parklet Along East Side of Franklin

- Existing sidewalk provides a circuitous route to the Stop n Shop
- Area could benefit from pedestrian-level site lighting.



East side of Old Drive Adjacent to Little River

- Existing bituminous sidewalk is narrow and in fair to poor condition
- Timber fence system is not code compliant (based on vertical drop to water, no openings can be greater than 4").
- Existing mature deciduous trees are generally in good condition and provide for an enjoyable, shady walking experience



East side of Old Drive Adjacent to Little River

- A single pedestrian opening at the intersection does not provide for safe discharge at the intersection.
- No crosswalks



East side of Old Drive Adjacent to Little River

- Vertical drop to river is treacherous
- Structural integrity of the existing cobble wall should be performed



Old Drive Adjacent to Little River Looking East

- One-way vehicular travel
- Road width appears adequately wide to provide for wider, enhanced sidewalks along the water side



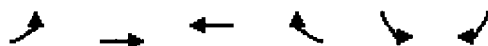
East side of Old Drive Adjacent to Little River

- Small level lawn area at the end of Old Drive provides an opportunity for a small parklet.

***Synchro* Output Files**

Lanes, Volumes, Timings
2: Bank St & Old Dr (west)

10/17/2012



Lane Configurations						
Volume (vph)	20	775	610	5	80	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100			0	0	0
Storage Lanes	1			0	1	0
Taper Length (ft)	25			25	25	25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.999		0.968	
Flt Protected	0.950				0.963	
Satd. Flow (prot)	1770	1863	1861	0	1736	0
Flt Permitted	0.314				0.963	
Satd. Flow (perm)	585	1863	1861	0	1736	0
Right Turn on Red				No		No
Satd. Flow (RTOR)						
Link Speed (mph)		30	30		30	
Link Distance (ft)		275	175		403	
Travel Time (s)		6.3	4.0		9.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	22	842	663	5	87	27
Shared Lane Traffic (%)						
Lane Group Flow (vph)	22	842	668	0	114	0
Turn Type	pm+pt					
Protected Phases	1	1 2	2		4	
Permitted Phases	1 2	2				
Detector Phase	1	1 2	2		4	
Switch Phase						
Minimum Initial (s)	3.0		15.0		7.0	
Minimum Split (s)	6.1		20.0		11.0	
Total Split (s)	8.1	62.0	53.9	0.0	18.0	0.0
Total Split (%)	10.1%	77.5%	67.4%	0.0%	22.5%	0.0%
Maximum Green (s)	5.0		48.9		14.0	
Yellow Time (s)	3.0		3.0		3.0	
All-Red Time (s)	0.1		2.0		1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.1	3.1	5.0	4.0	4.0	4.0
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?						
Vehicle Extension (s)	1.5		5.0		1.5	
Recall Mode	None		C-Min		None	
Act Effct Green (s)	62.5	66.2	51.8		9.5	
Actuated g/C Ratio	0.78	0.83	0.65		0.12	
v/c Ratio	0.04	0.55	0.55		0.55	
Control Delay	2.8	4.3	11.4		42.8	
Queue Delay	0.0	0.0	0.0		0.0	
Total Delay	2.8	4.3	11.4		42.8	
LOS	A	A	B		D	
Approach Delay		4.3	11.4		42.8	
Approach LOS		A	B		D	
Queue Length 50th (ft)	2	109	95		55	

Lanes, Volumes, Timings
2: Bank St & Old Dr (west)

10/17/2012



Queue Length 95th (ft)	m5	185	173	100
Internal Link Dist (ft)		195	95	323
Turn Bay Length (ft)	100			
Base Capacity (vph)	586	1555	1220	304
Starvation Cap Reductn	0	49	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.04	0.56	0.55	0.38

Area Type: Other

Cycle Length: 80

Actuated Cycle Length: 80

Offset: 1 (1%), Referenced to phase 2:EBWB, Start of Yellow

Natural Cycle: 60

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.55

Intersection Signal Delay: 9.8

Intersection LOS: A

Intersection Capacity Utilization 53.4%

ICU Level of Service A

Analysis Period (min) 15

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Bank St & Old Dr (west)



Lanes, Volumes, Timings
7: Bank St & Plaza Main Drwy

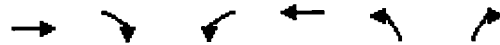
10/17/2012



Lane Configurations	↩		↩	↑	↩	↩
Volume (vph)	690	80	35	515	35	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	70		0	0
Storage Lanes		0	1		1	1
Taper Length (ft)		25	25		25	25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.986					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1837	0	1770	1863	1770	1583
Flt Permitted			0.248		0.950	
Satd. Flow (perm)	1837	0	462	1863	1770	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	15					38
Link Speed (mph)	30			30	30	
Link Distance (ft)	456			361	333	
Travel Time (s)	10.4			8.2	7.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	750	87	38	560	38	38
Shared Lane Traffic (%)						
Lane Group Flow (vph)	837	0	38	560	38	38
Turn Type			pm+pt			Prot
Protected Phases	2		1	1 2	4	4
Permitted Phases			1 2	2	4	
Detector Phase	2		1	1 2	4	4
Switch Phase						
Minimum Initial (s)	15.0		6.0		6.0	6.0
Minimum Split (s)	20.0		9.1		11.0	11.0
Total Split (s)	56.9	0.0	10.1	67.0	13.0	13.0
Total Split (%)	71.1%	0.0%	12.6%	83.8%	16.3%	16.3%
Maximum Green (s)	51.9		7.0		8.0	8.0
Yellow Time (s)	3.0		3.0		3.0	3.0
All-Red Time (s)	2.0		0.1		2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	4.0	3.1	3.1	5.0	5.0
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		2.0		2.0	2.0
Recall Mode	C-Max		None		None	None
Act Effct Green (s)	57.5		66.5	70.9	6.7	6.7
Actuated g/C Ratio	0.72		0.83	0.89	0.08	0.08
v/c Ratio	0.63		0.08	0.34	0.26	0.23
Control Delay	9.9		2.3	2.4	38.5	15.4
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	9.9		2.3	2.4	38.5	15.4
LOS	A		A	A	D	B
Approach Delay	9.9			2.4	26.9	
Approach LOS	A			A	C	
Queue Length 50th (ft)	231		3	46	18	0

Lanes, Volumes, Timings
7: Bank St & Plaza Main Drwy

10/17/2012



Queue Length 95th (ft)	362	m7	76	46	27
Internal Link Dist (ft)	376		281	253	
Turn Bay Length (ft)		70			
Base Capacity (vph)	1325	509	1631	177	193
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.63	0.07	0.34	0.21	0.20

Area Type: Other

Cycle Length: 80

Actuated Cycle Length: 80

Offset: 7 (9%), Referenced to phase 2:EBWB, Start of Yellow

Natural Cycle: 60

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.63

Intersection Signal Delay: 7.8

Intersection LOS: A

Intersection Capacity Utilization 54.5%

ICU Level of Service A

Analysis Period (min) 15

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 7: Bank St & Plaza Main Drwy



Lanes, Volumes, Timings
11: Bank St & Franklin St

10/17/2012



Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Volume (vph)	95	740	85	10	520	80	140	20	10	80	25	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	13	11	11	16	11	13	13	11	11	13
Storage Length (ft)	0		125	0		25	230		0	300		300
Storage Lanes	0		1	0		1	1		0	1		1
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	0.95	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.986				0.850		0.950				0.850
Flt Protected		0.995			0.999		0.950			0.950		
Satd. Flow (prot)	0	3356	0	0	3418	1794	1711	1829	0	1711	1801	1636
Flt Permitted		0.815			0.924		0.741			0.556		
Satd. Flow (perm)	0	2749	0	0	3161	1794	1334	1829	0	1001	1801	1636
Right Turn on Red			Yes			Yes			No			No
Satd. Flow (RTOR)		17				35						
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		209			822			621			552	
Travel Time (s)		4.8			18.7			14.1			12.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	103	804	92	11	565	87	152	22	11	87	27	54
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	999	0	0	576	87	152	33	0	87	27	54
Turn Type	pm+pt			Perm		Prot	pm+pt			pm+pt		pt+ov
Protected Phases	1	1 2			2	2	3	8		7	4	4 1
Permitted Phases	1 2			2	2		8	8		4	4	
Detector Phase	1	1 2		2	2	2	3	8		7	4	4 1
Switch Phase												
Minimum Initial (s)	6.0			15.0	15.0	15.0	6.0	6.0		6.0	6.0	
Minimum Split (s)	10.0			20.5	20.5	20.5	10.0	10.9		10.0	10.9	
Total Split (s)	17.0	44.2	0.0	27.2	27.2	27.2	17.0	18.8	0.0	17.0	18.8	35.8
Total Split (%)	21.3%	55.3%	0.0%	34.0%	34.0%	34.0%	21.3%	23.5%	0.0%	21.3%	23.5%	44.8%
Maximum Green (s)	13.0			21.7	21.7	21.7	13.0	13.9		13.0	13.9	
Yellow Time (s)	3.0			3.0	3.0	3.0	3.0	3.9		3.0	3.9	
All-Red Time (s)	1.0			2.5	2.5	2.5	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	5.5	5.5	5.5	4.0	4.9	4.0	4.0	4.9	4.9
Lead/Lag	Lead			Lag	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	0.2			0.2	0.2	0.2	2.0	2.0		2.0	2.0	
Recall Mode	Max			C-Max	C-Max	C-Max	None	None		None	None	
Act Effct Green (s)		48.0			21.7	21.7	15.2	7.8		17.0	6.6	33.3
Actuated g/C Ratio		0.60			0.27	0.27	0.19	0.10		0.21	0.08	0.42
v/c Ratio		0.54			0.67	0.17	0.50	0.19		0.26	0.18	0.08
Control Delay		7.9			30.6	15.6	32.0	34.4		23.4	36.6	15.5
Queue Delay		0.0			0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay		7.9			30.6	15.6	32.0	34.4		23.4	36.6	15.5
LOS		A			C	B	C	C		C	D	B
Approach Delay		7.9			28.6			32.4			23.0	
Approach LOS		A			C			C			C	

Lanes, Volumes, Timings
11: Bank St & Franklin St

10/17/2012



Queue Length 50th (ft)	78	134	20	72	16	33	13	16
Queue Length 95th (ft)	146	190	53	102	40	63	36	39
Internal Link Dist (ft)	129	742			541		472	
Turn Bay Length (ft)			25	230		300		300
Base Capacity (vph)	1845	857	512	353	318	394	313	682
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.54	0.67	0.17	0.43	0.10	0.22	0.09	0.08

Area Type: Other

Cycle Length: 80

Actuated Cycle Length: 80

Offset: 46 (58%), Referenced to phase 2:EBWB, Start of Yellow

Natural Cycle: 55

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.67

Intersection Signal Delay: 18.2

Intersection LOS: B

Intersection Capacity Utilization 67.0%

ICU Level of Service C

Analysis Period (min) 15

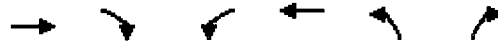
Splits and Phases: 11: Bank St & Franklin St

ø1	ø2	ø3	ø4
		ø7	ø8

HCM Unsignalized Intersection Capacity Analysis

1: Bank St & Plaza Drwy

10/17/2012



Lane Configurations	↩			↩	↩	
Volume (veh/h)	690	30	70	555	5	90
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	750	33	76	603	5	98
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)	361			275		
pX, platoon unblocked			0.73		0.84	0.73
vC, conflicting volume			783		1522	766
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			518		946	496
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			90		98	77
cM capacity (veh/h)			766		219	419

Volume Total	783	679	103
Volume Left	0	76	5
Volume Right	33	0	98
cSH	1700	766	400
Volume to Capacity	0.46	0.10	0.26
Queue Length 95th (ft)	0	8	25
Control Delay (s)	0.0	2.5	17.1
Lane LOS		A	C
Approach Delay (s)	0.0	2.5	17.1
Approach LOS			C

Average Delay		2.2	
Intersection Capacity Utilization		87.1%	ICU Level of Service E
Analysis Period (min)		15	

HCM Unsignalized Intersection Capacity Analysis

4: Bank St & Church/Beecher

10/17/2012



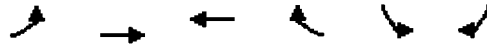
Lane Configurations	↩		↩	↑	↩	
Volume (veh/h)	825	30	80	595	20	90
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	897	33	87	647	22	98
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None		None			
Median storage veh						
Upstream signal (ft)	175		1318			
pX, platoon unblocked			0.80		0.90	0.80
vC, conflicting volume			929		1734	913
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			785		1253	765
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			87		85	70
cM capacity (veh/h)			665		148	322

Volume Total	929	87	647	120
Volume Left	0	87	0	22
Volume Right	33	0	0	98
cSH	1700	665	1700	265
Volume to Capacity	0.55	0.13	0.38	0.45
Queue Length 95th (ft)	0	11	0	55
Control Delay (s)	0.0	11.2	0.0	29.3
Lane LOS		B		D
Approach Delay (s)	0.0	1.3		29.3
Approach LOS				D

Average Delay	2.5			
Intersection Capacity Utilization	66.3%		ICU Level of Service	C
Analysis Period (min)	15			

HCM Unsignalized Intersection Capacity Analysis 8: Bank St & Old Dr (east)

10/17/2012



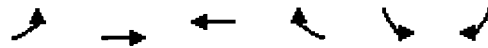
Lane Configurations	↰	↑	↱			
Volume (veh/h)	5	915	670	25	0	0
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	5	995	728	27	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)		612	881			
pX, platoon unblocked	0.76				0.87	0.76
vC, conflicting volume	755				1747	742
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	525				1213	507
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				100	100
cM capacity (veh/h)	795				174	432

Volume Total	5	995	755
Volume Left	5	0	0
Volume Right	0	0	27
cSH	795	1700	1700
Volume to Capacity	0.01	0.59	0.44
Queue Length 95th (ft)	1	0	0
Control Delay (s)	9.6	0.0	0.0
Lane LOS	A		
Approach Delay (s)	0.1		0.0
Approach LOS			

Average Delay		0.0	
Intersection Capacity Utilization		51.5%	ICU Level of Service A
Analysis Period (min)		15	

Lanes, Volumes, Timings
2: Bank St & Old Dr (west)

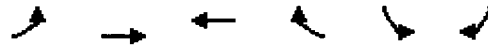
10/17/2012



Lane Configurations	↖	↑	↗	↖	↗	↘
Volume (vph)	40	880	1140	5	70	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100			0	0	0
Storage Lanes	1			0	1	0
Taper Length (ft)	25			25	25	25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.999		0.955	
Flt Protected	0.950				0.968	
Satd. Flow (prot)	1770	1863	1861	0	1722	0
Flt Permitted	0.086				0.968	
Satd. Flow (perm)	160	1863	1861	0	1722	0
Right Turn on Red				No		No
Satd. Flow (RTOR)						
Link Speed (mph)		30	30		30	
Link Distance (ft)		275	175		403	
Travel Time (s)		6.3	4.0		9.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	43	957	1239	5	76	38
Shared Lane Traffic (%)						
Lane Group Flow (vph)	43	957	1244	0	114	0
Turn Type	pm+pt					
Protected Phases	1	1 2	2		4	
Permitted Phases	1 2	2				
Detector Phase	1	1 2	2		4	
Switch Phase						
Minimum Initial (s)	3.0		15.0		7.0	
Minimum Split (s)	6.1		20.0		11.0	
Total Split (s)	24.1	61.0	36.9	0.0	29.0	0.0
Total Split (%)	26.8%	67.8%	41.0%	0.0%	32.2%	0.0%
Maximum Green (s)	21.0		31.9		25.0	
Yellow Time (s)	3.0		3.0		3.0	
All-Red Time (s)	0.1		2.0		1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.1	3.1	5.0	4.0	4.0	4.0
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?						
Vehicle Extension (s)	1.5		5.0		1.5	
Recall Mode	None		C-Min		None	
Act Effct Green (s)	71.8	75.5	47.3		10.2	
Actuated g/C Ratio	0.80	0.84	0.53		0.11	
v/c Ratio	0.08	0.61	1.27		0.58	
Control Delay	6.5	12.7	147.3		49.3	
Queue Delay	0.0	0.4	0.0		0.0	
Total Delay	6.5	13.1	147.3		49.3	
LOS	A	B	F		D	
Approach Delay		12.8	147.3		49.3	
Approach LOS		B	F		D	
Queue Length 50th (ft)	6	240	~950		63	

Lanes, Volumes, Timings
2: Bank St & Old Dr (west)

10/17/2012



Queue Length 95th (ft)	m18	m479	m#1083	111
Internal Link Dist (ft)		195	95	323
Turn Bay Length (ft)	100			
Base Capacity (vph)	593	1562	979	478
Starvation Cap Reductn	0	190	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.07	0.70	1.27	0.24

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 1 (1%), Referenced to phase 2:EBWB, Start of Yellow

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.27

Intersection Signal Delay: 85.5

Intersection LOS: F

Intersection Capacity Utilization 73.8%

ICU Level of Service D

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.

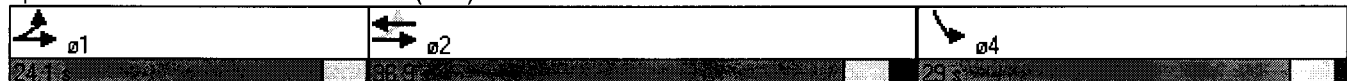
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Bank St & Old Dr (west)



Lanes, Volumes, Timings
7: Bank St & Plaza Main Drwy

10/17/2012



Lane Configurations	↩	↩	↩	↩	↩	↩
Volume (vph)	705	60	40	940	80	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	70		0	0
Storage Lanes		0	1		1	1
Taper Length (ft)		25	25		25	25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.989					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1842	0	1770	1863	1770	1583
Flt Permitted			0.092		0.950	
Satd. Flow (perm)	1842	0	171	1863	1770	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	5					60
Link Speed (mph)	30			30	30	
Link Distance (ft)	456			361	333	
Travel Time (s)	10.4			8.2	7.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	766	65	43	1022	87	60
Shared Lane Traffic (%)						
Lane Group Flow (vph)	831	0	43	1022	87	60
Turn Type			pm+pt			Prot
Protected Phases	2		1	1 2	4	4
Permitted Phases			1 2	2	4	
Detector Phase	2		1	1 2	4	4
Switch Phase						
Minimum Initial (s)	15.0		6.0		6.0	6.0
Minimum Split (s)	20.0		9.1		11.0	11.0
Total Split (s)	35.0	0.0	27.0	62.0	28.0	28.0
Total Split (%)	38.9%	0.0%	30.0%	68.9%	31.1%	31.1%
Maximum Green (s)	30.0		23.9		23.0	23.0
Yellow Time (s)	3.0		3.0		3.0	3.0
All-Red Time (s)	2.0		0.1		2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	4.0	3.1	3.1	5.0	5.0
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		2.0		2.0	2.0
Recall Mode	C-Max		None		None	None
Act Effct Green (s)	44.7		71.9	75.6	9.1	9.1
Actuated g/C Ratio	0.50		0.80	0.84	0.10	0.10
v/c Ratio	0.91		0.07	0.65	0.48	0.28
Control Delay	41.5		7.1	12.5	46.6	13.5
Queue Delay	0.0		0.0	0.3	0.0	0.0
Total Delay	41.5		7.1	12.8	46.6	13.5
LOS	D		A	B	D	B
Approach Delay	41.5			12.5	33.1	
Approach LOS	D			B	C	
Queue Length 50th (ft)	442		4	156	48	0

Lanes, Volumes, Timings
7: Bank St & Plaza Main Drwy

10/17/2012



Queue Length 95th (ft)	#857	m5	m182	91	35
Internal Link Dist (ft)	376		281	253	
Turn Bay Length (ft)		70			
Base Capacity (vph)	917	649	1565	452	449
Starvation Cap Reductn	0	0	127	0	0
Spillback Cap Reductn	0	0	0	0	3
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.91	0.07	0.71	0.19	0.13

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 7 (8%), Referenced to phase 2:EBWB, Start of Yellow

Natural Cycle: 70

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.91

Intersection Signal Delay: 25.8

Intersection LOS: C

Intersection Capacity Utilization 62.0%

ICU Level of Service B

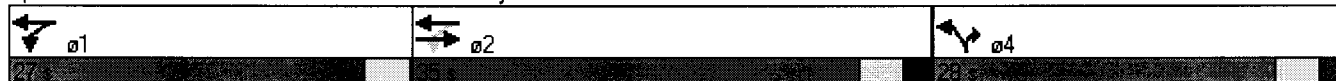
Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 7: Bank St & Plaza Main Drwy



Lanes, Volumes, Timings
11: Bank St & Franklin St

10/17/2012



Lane Configurations	←↑↑				←↑↑				↑			
Volume (vph)	125	805	85	20	855	230	345	130	15	200	55	220
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	13	11	11	16	11	13	13	11	11	13
Storage Length (ft)	0		125	0		25	230		0	300		300
Storage Lanes	0		1	0		1	1		0	1		1
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	0.95	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.987				0.850		0.985				0.850
Flt Protected		0.994			0.999		0.950			0.950		
Satd. Flow (prot)	0	3357	0	0	3418	1794	1711	1896	0	1711	1801	1636
Flt Permitted		0.522			0.901		0.573			0.657		
Satd. Flow (perm)	0	1763	0	0	3083	1794	1032	1896	0	1183	1801	1636
Right Turn on Red			Yes			Yes			No			No
Satd. Flow (RTOR)		14				54						
Link Speed (mph)		30			30			30				30
Link Distance (ft)		209			822			621				552
Travel Time (s)		4.8			18.7			14.1				12.5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	136	875	92	22	929	250	375	141	16	217	60	239
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1103	0	0	951	250	375	157	0	217	60	239
Turn Type	pm+pt			Perm		Prot	pm+pt			pm+pt		pt+ov
Protected Phases	1	1 2			2	2	3	8		7	4	4 1
Permitted Phases	1 2			2	2		8	8		4	4	
Detector Phase	1	1 2		2	2	2	3	8		7	4	4 1
Switch Phase												
Minimum Initial (s)	6.0			15.0	15.0	15.0	6.0	6.0		6.0	6.0	
Minimum Split (s)	10.0			20.5	20.5	20.5	10.0	10.9		10.0	10.9	
Total Split (s)	20.0	49.1	0.0	29.1	29.1	29.1	20.0	20.9	0.0	20.0	20.9	40.9
Total Split (%)	22.2%	54.6%	0.0%	32.3%	32.3%	32.3%	22.2%	23.2%	0.0%	22.2%	23.2%	45.4%
Maximum Green (s)	16.0			23.6	23.6	23.6	16.0	16.0		16.0	16.0	
Yellow Time (s)	3.0			3.0	3.0	3.0	3.0	3.9		3.0	3.9	
All-Red Time (s)	1.0			2.5	2.5	2.5	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	5.5	5.5	5.5	4.0	4.9	4.0	4.0	4.9	4.9
Lead/Lag	Lead			Lag	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	0.2			0.2	0.2	0.2	2.0	2.0		2.0	2.0	
Recall Mode	Max			C-Max	C-Max	C-Max	None	None		None	None	
Act Effct Green (s)		44.4			23.6	23.6	32.3	16.4		26.3	13.1	36.4
Actuated g/C Ratio		0.49			0.26	0.26	0.36	0.18		0.29	0.15	0.40
v/c Ratio		0.90			1.18	0.49	0.77	0.46		0.52	0.23	0.36
Control Delay		28.2			124.3	25.6	34.6	37.5		24.6	34.9	20.9
Queue Delay		0.0			0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay		28.2			124.3	25.6	34.6	37.5		24.6	34.9	20.9
LOS		C			F	C	C	D		C	C	C
Approach Delay		28.2			103.8			35.5			24.1	
Approach LOS		C			F			D			C	

Lanes, Volumes, Timings
11: Bank St & Franklin St

10/17/2012



Queue Length 50th (ft)	169	~344	93	165	79	85	30	93
Queue Length 95th (ft)	#326	#465	166	#259	141	135	65	154
Internal Link Dist (ft)	129	742			541		472	
Turn Bay Length (ft)			25	230		300		300
Base Capacity (vph)	1219	808	510	491	353	488	320	651
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.90	1.18	0.49	0.76	0.44	0.44	0.19	0.37

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 46 (51%), Referenced to phase 2:EBWB, Start of Yellow

Natural Cycle: 65

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.18

Intersection Signal Delay: 55.8

Intersection LOS: E

Intersection Capacity Utilization 92.3%

ICU Level of Service F

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

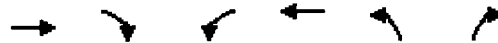
Splits and Phases: 11: Bank St & Franklin St

ø1	ø2	ø3	ø4
ø5	ø6	ø7	ø8

HCM Unsignalized Intersection Capacity Analysis

1: Bank St & Plaza Drwy

10/17/2012



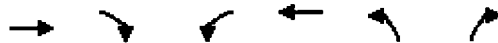
Lane Configurations	↰			↱	↰	↱
Volume (veh/h)	725	40	160	990	0	165
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	788	43	174	1076	0	179
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)	361			275		
pX, platoon unblocked			0.56		0.71	0.56
vC, conflicting volume			832		2234	810
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			303		1133	264
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			75		100	59
cM capacity (veh/h)			702		119	432

Volume Total	832	1250	179
Volume Left	0	174	0
Volume Right	43	0	179
cSH	1700	702	432
Volume to Capacity	0.49	0.25	0.41
Queue Length 95th (ft)	0	24	50
Control Delay (s)	0.0	8.5	19.1
Lane LOS		A	C
Approach Delay (s)	0.0	8.5	19.1
Approach LOS			C

Average Delay		6.2	
Intersection Capacity Utilization		121.7%	ICU Level of Service H
Analysis Period (min)		15	

HCM Unsignalized Intersection Capacity Analysis 4: Bank St & Church/Beecher

10/17/2012



Lane Configurations	↩		↩	↩	↩	
Volume (veh/h)	910	40	155	1125	20	90
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	989	43	168	1223	22	98
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None		None			
Median storage veh						
Upstream signal (ft)	175		1318			
pX, platoon unblocked			0.74		0.72	0.74
vC, conflicting volume			1033		2571	1011
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			872		2192	843
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			71		14	64
cM capacity (veh/h)			576		25	271

Volume Total	1033	168	1223	120
Volume Left	0	168	0	22
Volume Right	43	0	0	98
cSH	1700	576	1700	98
Volume to Capacity	0.61	0.29	0.72	1.22
Queue Length 95th (ft)	0	30	0	205
Control Delay (s)	0.0	13.8	0.0	243.3
Lane LOS		B		F
Approach Delay (s)	0.0	1.7		243.3
Approach LOS				F

Average Delay		12.4		
Intersection Capacity Utilization		75.6%	ICU Level of Service	D
Analysis Period (min)		15		

HCM Unsignalized Intersection Capacity Analysis 8: Bank St & Old Dr (east)

10/17/2012



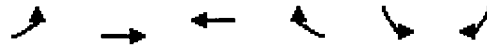
Lane Configurations	↰	↑	↱			
Volume (veh/h)	5	1000	1280	95	0	0
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	5	1087	1391	103	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh						
Upstream signal (ft)		612	881			
pX, platoon unblocked	0.52			0.67	0.52	
vC, conflicting volume	1495			2541	1443	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1490			2070	1391	
tC, single (s)	4.1			6.4	6.2	
tC, 2 stage (s)						
tF (s)	2.2			3.5	3.3	
p0 queue free %	98			100	100	
cM capacity (veh/h)	236			39	91	

Volume Total	5	1087	1495
Volume Left	5	0	0
Volume Right	0	0	103
cSH	236	1700	1700
Volume to Capacity	0.02	0.64	0.88
Queue Length 95th (ft)	2	0	0
Control Delay (s)	20.6	0.0	0.0
Lane LOS	C		
Approach Delay (s)	0.1		0.0
Approach LOS			

Average Delay		0.0	
Intersection Capacity Utilization		76.5%	ICU Level of Service D
Analysis Period (min)		15	

Lanes, Volumes, Timings
2: Bank St & Old Dr (west)

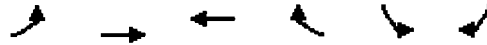
10/17/2012



Lane Configurations						
Volume (vph)	20	775	610	5	80	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100			0	0	0
Storage Lanes	1			0	1	0
Taper Length (ft)	25			25	25	25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.999		0.968	
Flt Protected	0.950				0.963	
Satd. Flow (prot)	1770	1863	1861	0	1736	0
Flt Permitted	0.314				0.963	
Satd. Flow (perm)	585	1863	1861	0	1736	0
Right Turn on Red				No		No
Satd. Flow (RTOR)						
Link Speed (mph)		30	30		30	
Link Distance (ft)		275	175		403	
Travel Time (s)		6.3	4.0		9.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	22	842	663	5	87	27
Shared Lane Traffic (%)						
Lane Group Flow (vph)	22	842	668	0	114	0
Turn Type	pm+pt					
Protected Phases	1	1 2	2		4	
Permitted Phases	1 2	2				
Detector Phase	1	1 2	2		4	
Switch Phase						
Minimum Initial (s)	3.0		15.0		7.0	
Minimum Split (s)	6.1		20.0		11.0	
Total Split (s)	8.1	62.0	53.9	0.0	18.0	0.0
Total Split (%)	10.1%	77.5%	67.4%	0.0%	22.5%	0.0%
Maximum Green (s)	5.0		48.9		14.0	
Yellow Time (s)	3.0		3.0		3.0	
All-Red Time (s)	0.1		2.0		1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.1	3.1	5.0	4.0	4.0	4.0
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?						
Vehicle Extension (s)	1.5		5.0		1.5	
Recall Mode	None		C-Min		None	
Act Effct Green (s)	62.5	66.2	51.8		9.5	
Actuated g/C Ratio	0.78	0.83	0.65		0.12	
v/c Ratio	0.04	0.55	0.55		0.55	
Control Delay	2.8	4.3	8.8		42.8	
Queue Delay	0.0	0.0	0.0		0.0	
Total Delay	2.8	4.3	8.8		42.8	
LOS	A	A	A		D	
Approach Delay		4.3	8.8		42.8	
Approach LOS		A	A		D	
Queue Length 50th (ft)	2	109	98		55	

Lanes, Volumes, Timings
2: Bank St & Old Dr (west)

10/17/2012



Queue Length 95th (ft)	m5	185	128	100
Internal Link Dist (ft)		195	95	323
Turn Bay Length (ft)	100			
Base Capacity (vph)	586	1555	1220	304
Starvation Cap Reductn	0	49	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.04	0.56	0.55	0.38

Area Type: Other

Cycle Length: 80

Actuated Cycle Length: 80

Offset: 1 (1%), Referenced to phase 2:EBWB, Start of Yellow

Natural Cycle: 60

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.55

Intersection Signal Delay: 8.8

Intersection LOS: A

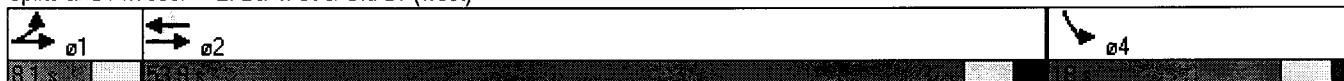
Intersection Capacity Utilization 53.4%

ICU Level of Service A

Analysis Period (min) 15

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Bank St & Old Dr (west)



Lanes, Volumes, Timings
7: Bank St & Plaza Main Drwy

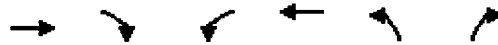
10/17/2012



Lane Configurations	↩	↩	↩	↩	↩	↩
Volume (vph)	690	80	35	515	35	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	70		0	0
Storage Lanes		0	1		1	1
Taper Length (ft)		25	25		25	25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.986					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1837	0	1770	1863	1770	1583
Flt Permitted			0.248		0.950	
Satd. Flow (perm)	1837	0	462	1863	1770	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	15					38
Link Speed (mph)	30			30	30	
Link Distance (ft)	456			361	333	
Travel Time (s)	10.4			8.2	7.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	750	87	38	560	38	38
Shared Lane Traffic (%)						
Lane Group Flow (vph)	837	0	38	560	38	38
Turn Type			pm+pt			Prot
Protected Phases	2		1	1 2	4	4
Permitted Phases			1 2	2	4	
Detector Phase	2		1	1 2	4	4
Switch Phase						
Minimum Initial (s)	15.0		6.0		6.0	6.0
Minimum Split (s)	20.0		9.1		11.0	11.0
Total Split (s)	56.9	0.0	10.1	67.0	13.0	13.0
Total Split (%)	71.1%	0.0%	12.6%	83.8%	16.3%	16.3%
Maximum Green (s)	51.9		7.0		8.0	8.0
Yellow Time (s)	3.0		3.0		3.0	3.0
All-Red Time (s)	2.0		0.1		2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	4.0	3.1	3.1	5.0	5.0
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		2.0		2.0	2.0
Recall Mode	C-Max		None		None	None
Act Effct Green (s)	57.5		66.5	70.9	6.7	6.7
Actuated g/C Ratio	0.72		0.83	0.89	0.08	0.08
v/c Ratio	0.63		0.08	0.34	0.26	0.23
Control Delay	9.9		0.9	1.0	38.5	15.4
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	9.9		0.9	1.0	38.5	15.4
LOS	A		A	A	D	B
Approach Delay	9.9			1.0	26.9	
Approach LOS	A			A	C	
Queue Length 50th (ft)	231		1	16	18	0

Lanes, Volumes, Timings
7: Bank St & Plaza Main Drwy

10/17/2012



Queue Length 95th (ft)	362	m2	21	46	27
Internal Link Dist (ft)	376		281	253	
Turn Bay Length (ft)		70			
Base Capacity (vph)	1325	509	1631	177	193
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.63	0.07	0.34	0.21	0.20

Area Type: Other

Cycle Length: 80

Actuated Cycle Length: 80

Offset: 7 (9%), Referenced to phase 2:EBWB, Start of Yellow

Natural Cycle: 60

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.63

Intersection Signal Delay: 7.3

Intersection LOS: A

Intersection Capacity Utilization 54.5%

ICU Level of Service A

Analysis Period (min) 15

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 7: Bank St & Plaza Main Drwy



Lanes, Volumes, Timings
11: Bank St & Franklin St

10/17/2012



Lane Configurations	95	740	85	10	520	80	140	20	10	80	25	50
Volume (vph)	95	740	85	10	520	80	140	20	10	80	25	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	13	11	11	16	11	13	13	11	11	13
Storage Length (ft)	0		125	0		25	230		0	300		300
Storage Lanes	0		1	0		1	1		0	1		1
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	0.95	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.986				0.850		0.950				0.850
Flt Protected		0.995			0.999		0.950			0.950		
Satd. Flow (prot)	0	3356	0	0	3418	1794	1711	1829	0	1711	1801	1636
Flt Permitted		0.836			0.929		0.833			0.606		
Satd. Flow (perm)	0	2820	0	0	3178	1794	1500	1829	0	1091	1801	1636
Right Turn on Red			Yes			Yes			No			No
Satd. Flow (RTOR)		22				43						
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		209			822			621			552	
Travel Time (s)		4.8			18.7			14.1			12.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	103	804	92	11	565	87	152	22	11	87	27	54
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	999	0	0	576	87	152	33	0	87	27	54
Turn Type	pm+pt			Perm		Prot	pm+pt			pm+pt		pt+ov
Protected Phases	1	1 2			2	2	3	8		7	4	4 1
Permitted Phases	1 2			2	2		8	8		4	4	
Detector Phase	1	1 2		2	2	2	3	8		7	4	4 1
Switch Phase												
Minimum Initial (s)	6.0			15.0	15.0	15.0	6.0	6.0		6.0	6.0	
Minimum Split (s)	10.0			20.5	20.5	20.5	10.0	10.9		10.0	10.9	
Total Split (s)	17.0	54.0	0.0	37.0	37.0	37.0	15.0	14.0	0.0	12.0	11.0	28.0
Total Split (%)	21.3%	67.5%	0.0%	46.3%	46.3%	46.3%	18.8%	17.5%	0.0%	15.0%	13.8%	35.0%
Maximum Green (s)	13.0			31.5	31.5	31.5	11.0	9.1		8.0	6.1	
Yellow Time (s)	3.0			3.0	3.0	3.0	3.0	3.9		3.0	3.9	
All-Red Time (s)	1.0			2.5	2.5	2.5	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	5.5	5.5	5.5	4.0	4.9	4.0	4.0	4.9	4.9
Lead/Lag	Lead			Lag	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	0.2			0.2	0.2	0.2	2.0	2.0		2.0	2.0	
Recall Mode	Max			C-Max	C-Max	C-Max	None	None		None	None	
Act Effct Green (s)		49.3			31.5	31.5	13.9	7.2		15.7	6.1	24.3
Actuated g/C Ratio		0.62			0.39	0.39	0.17	0.09		0.20	0.08	0.30
v/c Ratio		0.54			0.46	0.12	0.53	0.20		0.28	0.20	0.11
Control Delay		7.1			19.5	9.4	34.7	35.9		25.4	38.4	21.7
Queue Delay		0.0			0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay		7.1			19.5	9.4	34.7	35.9		25.4	38.4	21.7
LOS		A			B	A	C	D		C	D	C
Approach Delay		7.1			18.1			34.9			26.3	
Approach LOS		A			B			C			C	

Lanes, Volumes, Timings
11: Bank St & Franklin St

10/17/2012



	EB	WB	SB	NB	EB	WB	SB	NB
Queue Length 50th (ft)	76	109	13	73	16	33	13	20
Queue Length 95th (ft)	120	154	41	110	41	69	37	47
Internal Link Dist (ft)	129	742			541		472	
Turn Bay Length (ft)			25	230		300		300
Base Capacity (vph)	1856	1251	732	310	208	323	137	476
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.54	0.46	0.12	0.49	0.16	0.27	0.20	0.11

Area Type: Other

Cycle Length: 80

Actuated Cycle Length: 80

Offset: 46 (58%), Referenced to phase 2:EBWB, Start of Yellow

Natural Cycle: 55

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.54

Intersection Signal Delay: 14.9

Intersection LOS: B

Intersection Capacity Utilization 67.0%

ICU Level of Service C

Analysis Period (min) 15

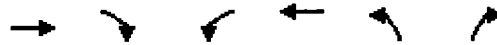
Splits and Phases: 11: Bank St & Franklin St

ø1	ø2	ø3	ø4
17 s	17 s	15 s	11 s
		ø7	ø8
		12 s	12 s

HCM Unsignalized Intersection Capacity Analysis

1: Bank St & Plaza Drwy

10/17/2012



Input Data						
Lane Configurations	1			1	2	
Volume (veh/h)	690	30	70	555	5	90
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	750	33	76	603	5	98
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None		None			
Median storage (veh)						
Upstream signal (ft)	361		275			
pX, platoon unblocked			0.73		0.84	0.73
vC, conflicting volume			783		1522	766
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			518		946	496
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			90		98	77
cM capacity (veh/h)			766		219	419

Output Data			
Volume Total	783	679	103
Volume Left	0	76	5
Volume Right	33	0	98
cSH	1700	766	400
Volume to Capacity	0.46	0.10	0.26
Queue Length 95th (ft)	0	8	25
Control Delay (s)	0.0	2.5	17.1
Lane LOS		A	C
Approach Delay (s)	0.0	2.5	17.1
Approach LOS			C

Summary			
Average Delay		2.2	
Intersection Capacity Utilization		87.1%	ICU Level of Service E
Analysis Period (min)		15	

HCM Unsignalized Intersection Capacity Analysis 4: Bank St & Church/Beecher

10/17/2012



Lane Configurations	↗		↖	↑	↘	↗
Volume (veh/h)	825	30	80	595	16	90
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	897	33	87	647	17	98
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None		None			
Median storage veh						
Upstream signal (ft)	175		1318			
pX, platoon unblocked			0.80		0.89	0.80
vC, conflicting volume			929		1734	913
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			785		1297	765
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			87		87	70
cM capacity (veh/h)			665		138	322

Volume Total	929	87	647	17	98
Volume Left	0	87	0	17	0
Volume Right	33	0	0	0	98
cSH	1700	665	1700	138	322
Volume to Capacity	0.55	0.13	0.38	0.13	0.30
Queue Length 95th (ft)	0	11	0	11	31
Control Delay (s)	0.0	11.2	0.0	34.8	21.0
Lane LOS		B		D	C
Approach Delay (s)	0.0	1.3		23.1	
Approach LOS				C	

Average Delay		2.0			
Intersection Capacity Utilization		63.0%		ICU Level of Service	B
Analysis Period (min)		15			

HCM Unsignalized Intersection Capacity Analysis 8: Bank St & Old Dr (east)

10/17/2012



Input						
Lane Configurations	↰	↑	↱			
Volume (veh/h)	5	915	670	25	0	0
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	5	995	728	27	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh						
Upstream signal (ft)		612	881			
pX, platoon unblocked	0.77			0.88	0.77	
vC, conflicting volume	755			1747	742	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	530			1215	512	
tC, single (s)	4.1			6.4	6.2	
tC, 2 stage (s)						
tF (s)	2.2			3.5	3.3	
p0 queue free %	99			100	100	
cM capacity (veh/h)	796			175	431	

Output			
Volume Total	5	995	755
Volume Left	5	0	0
Volume Right	0	0	27
cSH	796	1700	1700
Volume to Capacity	0.01	0.59	0.44
Queue Length 95th (ft)	1	0	0
Control Delay (s)	9.6	0.0	0.0
Lane LOS	A		
Approach Delay (s)	0.1		0.0
Approach LOS			

Summary			
Average Delay		0.0	
Intersection Capacity Utilization		51.5%	ICU Level of Service A
Analysis Period (min)		15	

Lanes, Volumes, Timings
2: Bank St & Old Dr (west)

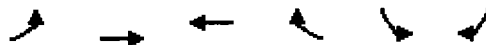
10/17/2012



Lane Configurations						
Volume (vph)	40	880	1140	5	70	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100			0	0	0
Storage Lanes	1			0	1	0
Taper Length (ft)	25			25	25	25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.999		0.955	
Flt Protected	0.950				0.968	
Satd. Flow (prot)	1770	1863	1861	0	1722	0
Flt Permitted	0.103				0.968	
Satd. Flow (perm)	192	1863	1861	0	1722	0
Right Turn on Red				No		No
Satd. Flow (RTOR)						
Link Speed (mph)		30	30		30	
Link Distance (ft)		275	175		403	
Travel Time (s)		6.3	4.0		9.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	43	957	1239	5	76	38
Shared Lane Traffic (%)						
Lane Group Flow (vph)	43	957	1244	0	114	0
Turn Type	pm+pt					
Protected Phases	1	1 2	2		4	
Permitted Phases	1 2	2				
Detector Phase	1	1 2	2		4	
Switch Phase						
Minimum Initial (s)	3.0		15.0		7.0	
Minimum Split (s)	6.1		20.0		11.0	
Total Split (s)	5.1	48.1	43.0	0.0	11.9	0.0
Total Split (%)	8.5%	80.2%	71.7%	0.0%	19.8%	0.0%
Maximum Green (s)	2.0		38.0		7.9	
Yellow Time (s)	3.0		3.0		3.0	
All-Red Time (s)	0.1		2.0		1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.1	3.1	5.0	4.0	4.0	4.0
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?						
Vehicle Extension (s)	1.5		5.0		1.5	
Recall Mode	None		C-Min		None	
Act Effct Green (s)	44.5	48.2	39.7		7.5	
Actuated g/C Ratio	0.74	0.80	0.66		0.12	
v/c Ratio	0.20	0.64	1.01		0.53	
Control Delay	4.0	4.8	43.3		34.0	
Queue Delay	0.0	0.0	0.0		0.0	
Total Delay	4.0	4.8	43.3		34.0	
LOS	A	A	D		C	
Approach Delay		4.7	43.3		34.0	
Approach LOS		A	D		C	
Queue Length 50th (ft)	3	90	~510		39	

Lanes, Volumes, Timings
2: Bank St & Old Dr (west)

10/17/2012



Queue Length 95th (ft)	m7	184	#728	83
Internal Link Dist (ft)		195	95	323
Turn Bay Length (ft)	100			
Base Capacity (vph)	219	1496	1230	227
Starvation Cap Reductn	0	3	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.20	0.64	1.01	0.50

Area Type: Other

Cycle Length: 60

Actuated Cycle Length: 60

Offset: 0 (0%), Referenced to phase 2:EBWB, Start of Yellow

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.01

Intersection Signal Delay: 26.5

Intersection LOS: C

Intersection Capacity Utilization 73.8%

ICU Level of Service D

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.

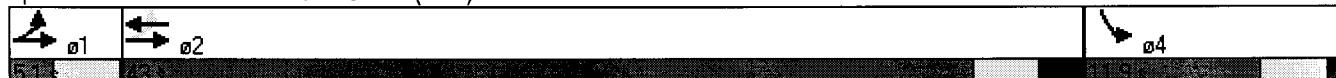
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

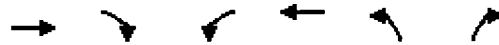
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Bank St & Old Dr (west)



Lanes, Volumes, Timings
7: Bank St & Plaza Main Drwy

10/17/2012



Lane Configurations	1	2	3	4	5	6
Volume (vph)	705	60	40	940	80	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	70		0	0
Storage Lanes		0	1		1	1
Taper Length (ft)		25	25		25	25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.989					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1842	0	1770	1863	1770	1583
Flt Permitted			0.222		0.950	
Satd. Flow (perm)	1842	0	414	1863	1770	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	13					60
Link Speed (mph)	30			30	30	
Link Distance (ft)	456			361	333	
Travel Time (s)	10.4			8.2	7.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	766	65	43	1022	87	60
Shared Lane Traffic (%)						
Lane Group Flow (vph)	831	0	43	1022	87	60
Turn Type			pm+pt			Prot
Protected Phases	2		1	1 2	4	4
Permitted Phases			1 2	2	4	
Detector Phase	2		1	1 2	4	4
Switch Phase						
Minimum Initial (s)	15.0		6.0		6.0	6.0
Minimum Split (s)	20.0		9.1		11.0	11.0
Total Split (s)	42.0	0.0	8.0	50.0	10.0	10.0
Total Split (%)	70.0%	0.0%	13.3%	83.3%	16.7%	16.7%
Maximum Green (s)	37.0		4.9		5.0	5.0
Yellow Time (s)	3.0		3.0		3.0	3.0
All-Red Time (s)	2.0		0.1		2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	4.0	3.1	3.1	5.0	5.0
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		2.0		2.0	2.0
Recall Mode	C-Max		None		None	None
Act Effct Green (s)	38.8		45.8	49.5	5.0	5.0
Actuated g/C Ratio	0.65		0.76	0.82	0.08	0.08
v/c Ratio	0.70		0.10	0.66	0.59	0.32
Control Delay	11.4		2.5	4.7	45.3	13.4
Queue Delay	0.0		0.0	0.1	0.0	0.0
Total Delay	11.4		2.5	4.8	45.3	13.4
LOS	B		A	A	D	B
Approach Delay	11.4			4.7	32.3	
Approach LOS	B			A	C	
Queue Length 50th (ft)	175		3	137	31	0

Lanes, Volumes, Timings
7: Bank St & Plaza Main Drwy

10/17/2012



Queue Length 95th (ft)	302	m3	m137	#87	30
Internal Link Dist (ft)	376		281	253	
Turn Bay Length (ft)		70			
Base Capacity (vph)	1195	432	1537	148	187
Starvation Cap Reductn	0	0	27	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.70	0.10	0.68	0.59	0.32

Area Type: Other

Cycle Length: 60

Actuated Cycle Length: 60

Offset: 0 (0%), Referenced to phase 2:EBWB, Start of Yellow

Natural Cycle: 70

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.70

Intersection Signal Delay: 9.4

Intersection LOS: A

Intersection Capacity Utilization 62.0%

ICU Level of Service B

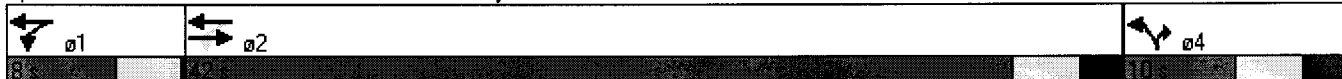
Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 7: Bank St & Plaza Main Drwy



Lanes, Volumes, Timings
11: Bank St & Franklin St

10/17/2012



Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Volume (vph)	125	805	85	20	855	230	345	130	15	200	55	220
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	13	11	11	16	11	13	13	11	11	13
Storage Length (ft)	0		125	0		25	230		0	300		300
Storage Lanes	0		1	0		1	1		0	1		1
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	0.95	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.987				0.850		0.985				0.850
Flt Protected		0.994			0.999		0.950			0.950		
Satd. Flow (prot)	0	3357	0	0	3418	1794	1711	1896	0	1711	1801	1636
Flt Permitted		0.591			0.907		0.511			0.657		
Satd. Flow (perm)	0	1996	0	0	3103	1794	920	1896	0	1183	1801	1636
Right Turn on Red			Yes			Yes			No			No
Satd. Flow (RTOR)		15				66						
Link Speed (mph)		30			30			30				30
Link Distance (ft)		209			822			621				552
Travel Time (s)		4.8			18.7			14.1				12.5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	136	875	92	22	929	250	375	141	16	217	60	239
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1103	0	0	951	250	375	157	0	217	60	239
Turn Type	pm+pt			Perm		Prot	pm+pt			pm+pt		pt+ov
Protected Phases	1	1 2			2	2	3	8		7	4	4 1
Permitted Phases	1 2			2	2		8	8		4	4	
Detector Phase	1	1 2		2	2	2	3	8		7	4	4 1
Switch Phase												
Minimum Initial (s)	6.0			15.0	15.0	15.0	6.0	6.0		6.0	6.0	
Minimum Split (s)	10.0			20.5	20.5	20.5	10.0	10.9		10.0	10.9	
Total Split (s)	13.0	54.0	0.0	41.0	41.0	41.0	21.0	20.0	0.0	16.0	15.0	28.0
Total Split (%)	14.4%	60.0%	0.0%	45.6%	45.6%	45.6%	23.3%	22.2%	0.0%	17.8%	16.7%	31.1%
Maximum Green (s)	9.0			35.5	35.5	35.5	17.0	15.1		12.0	10.1	
Yellow Time (s)	3.0			3.0	3.0	3.0	3.0	3.9		3.0	3.9	
All-Red Time (s)	1.0			2.5	2.5	2.5	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	5.5	5.5	5.5	4.0	4.9	4.0	4.0	4.9	4.9
Lead/Lag	Lead			Lag	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	0.2			0.2	0.2	0.2	2.0	2.0		2.0	2.0	
Recall Mode	Max			C-Max	C-Max	C-Max	None	None		None	None	
Act Effct Green (s)		46.7			35.5	35.5	31.3	15.4		21.8	9.9	23.6
Actuated g/C Ratio		0.52			0.39	0.39	0.35	0.17		0.24	0.11	0.26
v/c Ratio		0.93			0.78	0.33	0.81	0.48		0.62	0.30	0.56
Control Delay		31.9			29.2	15.2	39.7	39.5		31.0	41.2	34.8
Queue Delay		0.0			0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay		31.9			29.2	15.2	39.7	39.5		31.0	41.2	34.8
LOS		C			C	B	D	D		C	D	C
Approach Delay		31.9			26.3			39.6			33.9	
Approach LOS		C			C			D			C	

Lanes, Volumes, Timings
11: Bank St & Franklin St

10/17/2012



	11: Bank St	12: Franklin St	13: Franklin St	14: Franklin St	15: Franklin St	16: Franklin St	17: Franklin St	18: Franklin St
Queue Length 50th (ft)	201	243	69	173	82	90	32	118
Queue Length 95th (ft)	#337	321	127	#302	143	150	70	195
Internal Link Dist (ft)	129	742			541		472	
Turn Bay Length (ft)			25	230		300		300
Base Capacity (vph)	1189	1224	748	470	325	371	202	415
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.93	0.78	0.33	0.80	0.48	0.58	0.30	0.58

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 46 (51%), Referenced to phase 2:EBWB, Start of Yellow

Natural Cycle: 65

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.93

Intersection Signal Delay: 31.4

Intersection LOS: C

Intersection Capacity Utilization 92.3%

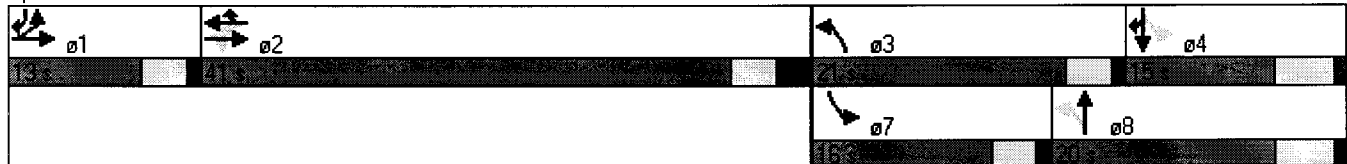
ICU Level of Service F

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

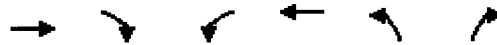
Queue shown is maximum after two cycles.

Splits and Phases: 11: Bank St & Franklin St



HCM Unsignalized Intersection Capacity Analysis 1: Bank St & Plaza Drwy

10/17/2012



Lane Configurations	↩			↩	↩	
Volume (veh/h)	725	40	160	990	0	165
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	788	43	174	1076	0	179
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)	361			275		
pX, platoon unblocked			0.67		0.52	0.67
vC, conflicting volume			832		2234	810
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			500		1477	468
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			76		100	55
cM capacity (veh/h)			711		55	398

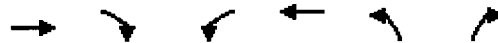
Volume Total	832	1250	179
Volume Left	0	174	0
Volume Right	43	0	179
cSH	1700	711	398
Volume to Capacity	0.49	0.24	0.45
Queue Length 95th (ft)	0	24	57
Control Delay (s)	0.0	8.3	21.3
Lane LOS		A	C
Approach Delay (s)	0.0	8.3	21.3
Approach LOS			C

Average Delay		6.3	
Intersection Capacity Utilization		121.7%	ICU Level of Service H
Analysis Period (min)		15	

HCM Unsignalized Intersection Capacity Analysis

4: Bank St & Church/Beecher

10/17/2012



Lane Configurations	↰		↱	↑	↱	↰
Volume (veh/h)	910	40	155	1125	20	90
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	989	43	168	1223	22	98
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None		None			
Median storage veh						
Upstream signal (ft)	175		1318			
pX, platoon unblocked			0.66		0.72	0.66
vC, conflicting volume			1033		2571	1011
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			796		1935	763
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			69		40	64
cM capacity (veh/h)			548		36	268

Volume Total	1033	168	1223	22	98
Volume Left	0	168	0	22	0
Volume Right	43	0	0	0	98
cSH	1700	548	1700	36	268
Volume to Capacity	0.61	0.31	0.72	0.60	0.36
Queue Length 95th (ft)	0	32	0	52	40
Control Delay (s)	0.0	14.5	0.0	201.7	25.9
Lane LOS		B		F	D
Approach Delay (s)	0.0	1.8		57.9	
Approach LOS				F	

Average Delay		3.7			
Intersection Capacity Utilization		72.2%		ICU Level of Service	C
Analysis Period (min)		15			

HCM Unsignalized Intersection Capacity Analysis 8: Bank St & Old Dr (east)

10/17/2012



Lane Configurations	↰	↑	↱			
Volume (veh/h)	5	1000	1280	95	0	0
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	5	1087	1391	103	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh						
Upstream signal (ft)		612	881			
pX, platoon unblocked	0.49			0.68	0.49	
vC, conflicting volume	1495			2541	1443	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1489			1749	1384	
tC, single (s)	4.1			6.4	6.2	
tC, 2 stage (s)						
tF (s)	2.2			3.5	3.3	
p0 queue free %	98			100	100	
cM capacity (veh/h)	221			63	86	

Volume Total	5	1087	1495
Volume Left	5	0	0
Volume Right	0	0	103
cSH	221	1700	1700
Volume to Capacity	0.02	0.64	0.88
Queue Length 95th (ft)	2	0	0
Control Delay (s)	21.7	0.0	0.0
Lane LOS	C		
Approach Delay (s)	0.1		0.0
Approach LOS			

Average Delay		0.0	
Intersection Capacity Utilization		76.5%	ICU Level of Service D
Analysis Period (min)		15	

Summary of Adjacent Property Owners

Location Property Owner (N/F)

Bank Street

#80	PASJ, LLC
#82-84	Dongs Realty of Seymour, LLC
#98	Town of Seymour
#100	Trust Realty Corp.
#79-101	Doris M. Tkacz Living Trust
#111-113	Richard Sobotka
#115	Elaine Larsen
#117-119	Fatima C. Silva
#123-125	Ronald E. & Lucretia M. Kurtz
#127	Leonard Remetta, Sr.
#144	Lots 70A&70B Associates, LLC
#145	MJBANK, LLC
#200	State of Connecticut (Fisheries)
#225	RAB I, LLC
#235	McDonald's Corporation
#240	Stanley G. Ostaszewski
#246	Swan Avenue Associates, LLC
#249	TD BankNorth, N.A.
#252	NAMO, LLC
#253-255	Paul Filipowich (III), et al
#256	Seymour-Oxford Nursery & Child
#260	Carl J. (III) & Patricia K. Miller
#277	Klarides Family Associates, LLC

Beecher Street

#23-24	Gina Affinito
#25	Joseph Cavanaugh

Church Street

#20	Russian American Citizens Club
#22	Ronald J. Fredericks

Franklin Street

#7-9	Dongs Realty of Seymour, LLC
#10	Town of Seymour

Johnson Avenue

#10	Stanley M. Meholik, Jr., et al
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Martha Street

#7	Robert E. Simpson
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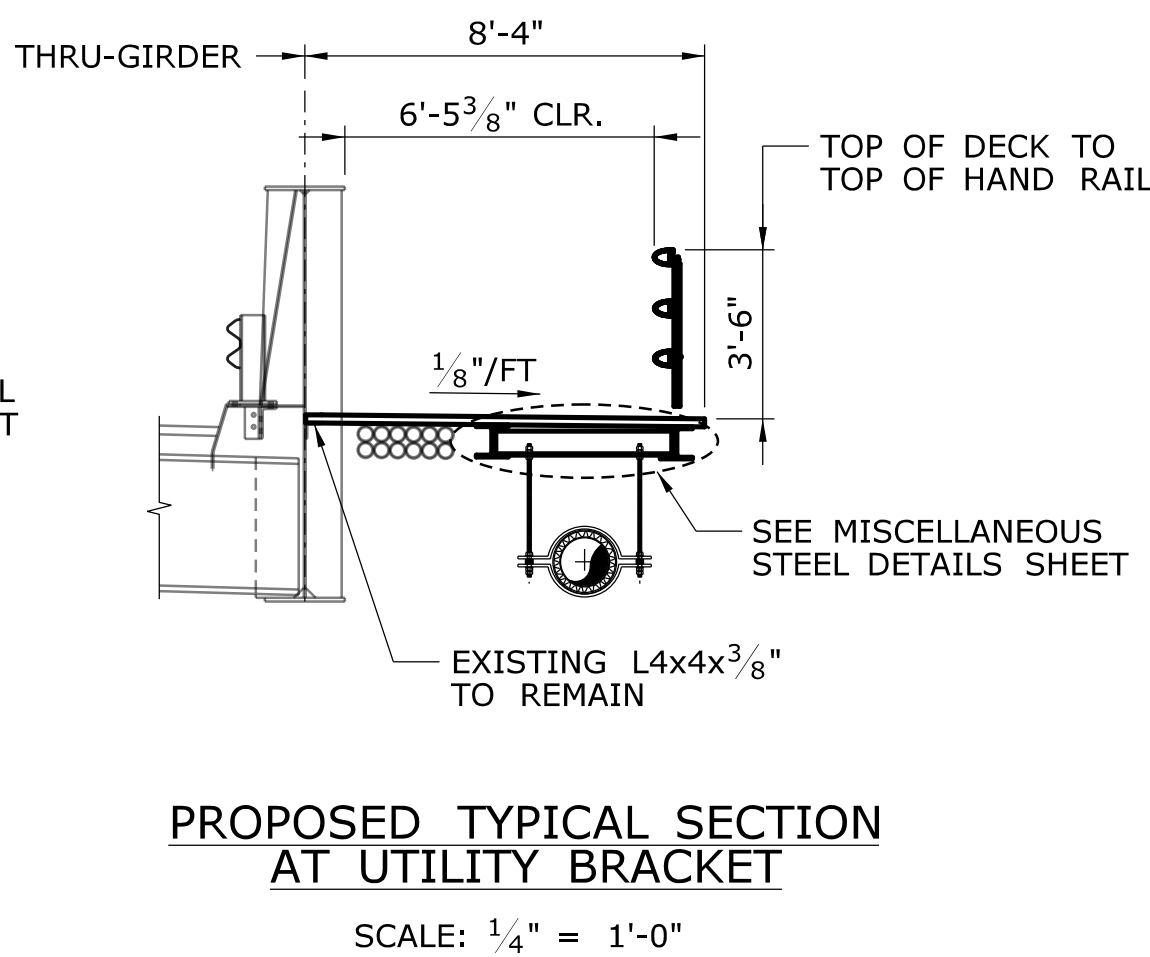
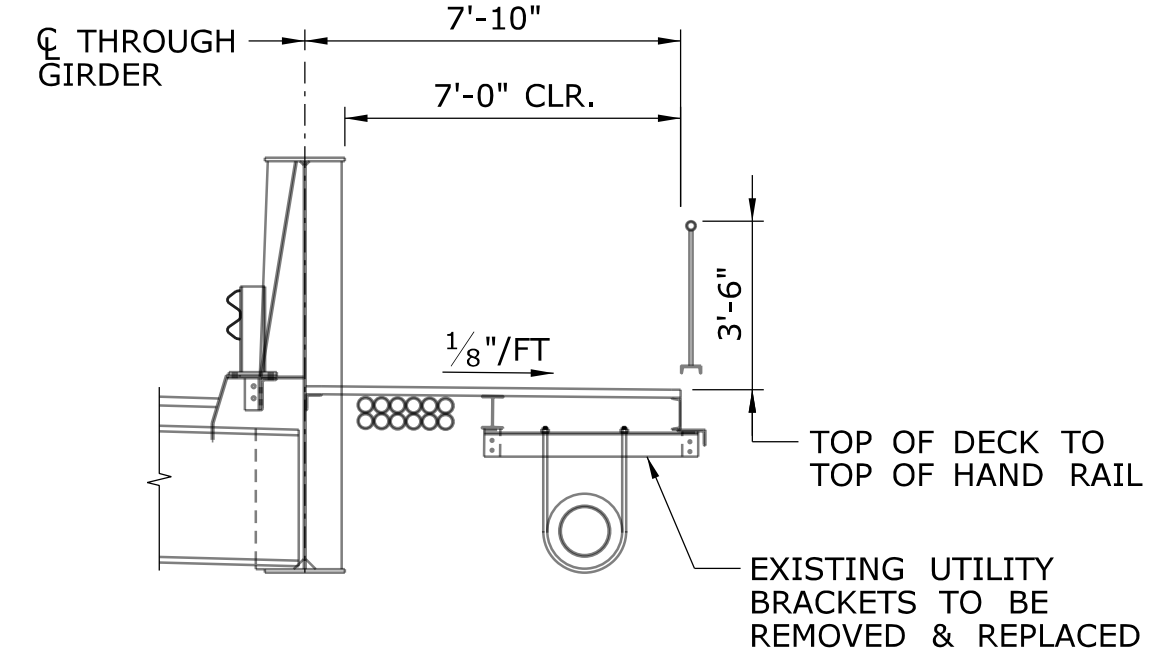
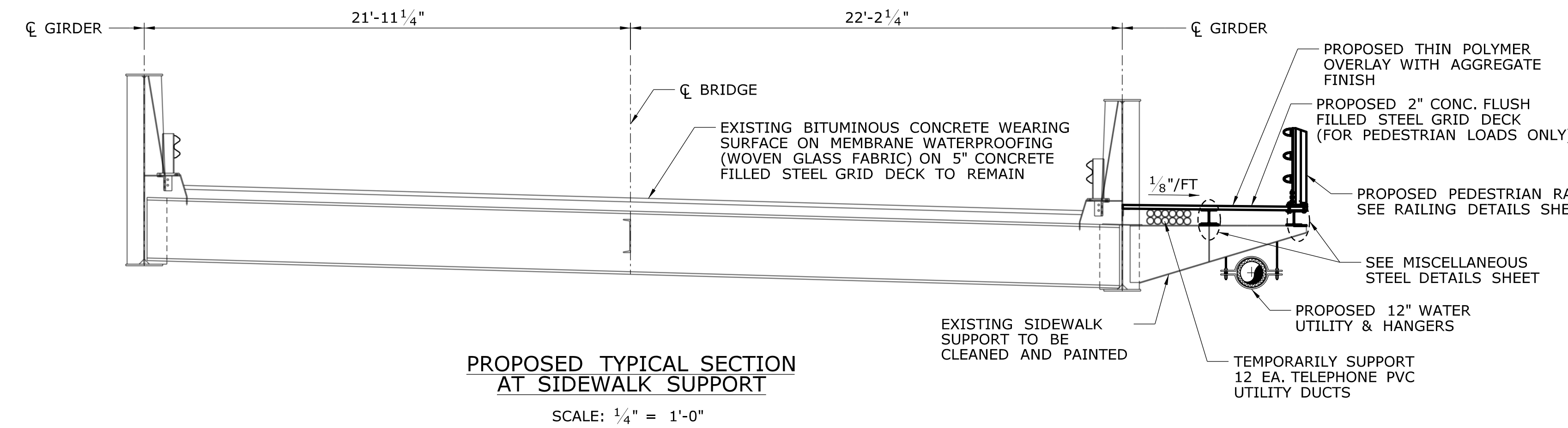
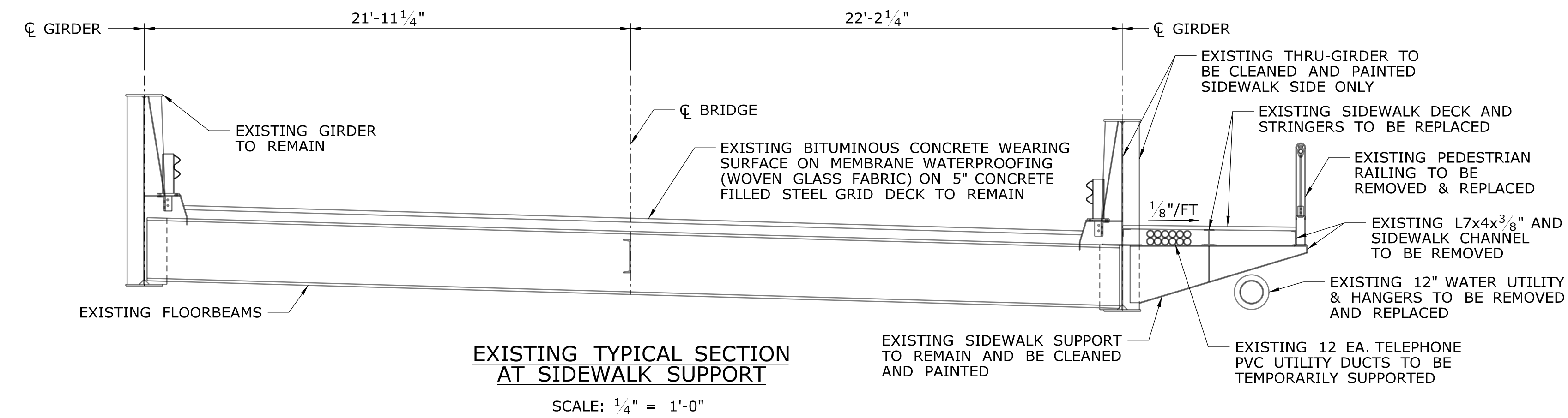
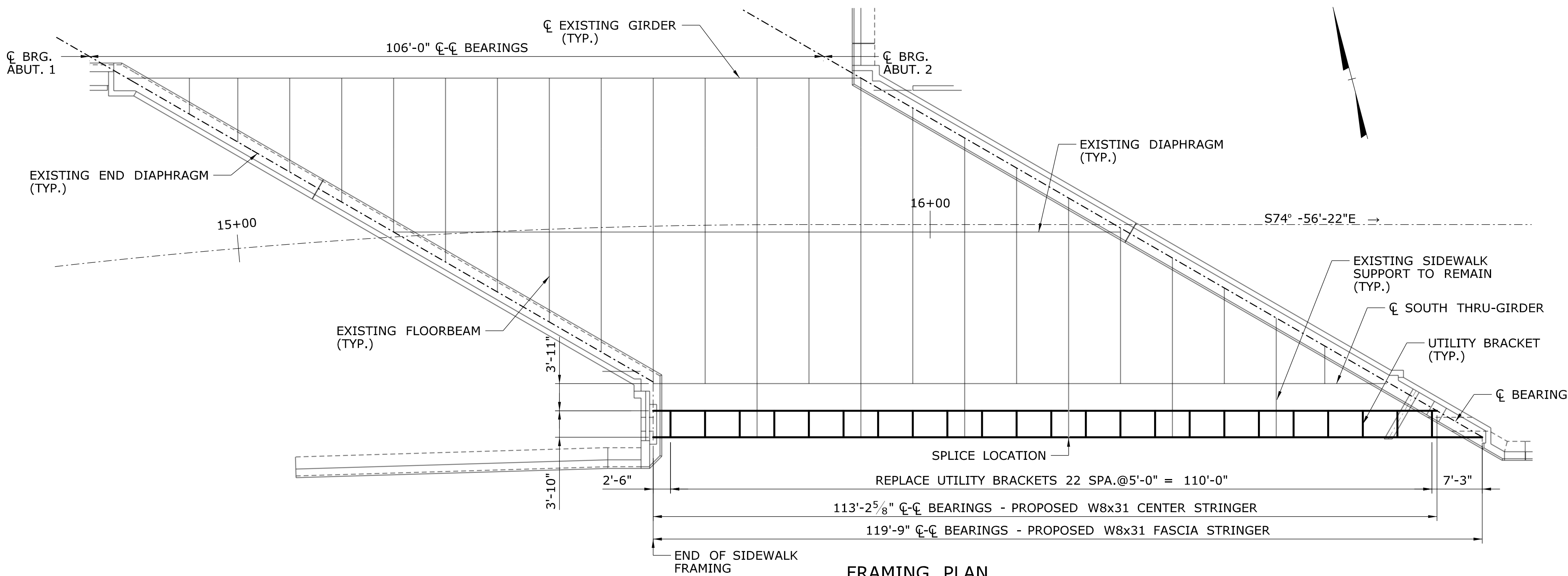
Old Drive

#20	Guy E. & Gale E. Greco
-----	------------------------

River Street

#109	Housatonic Wire Company
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Drawings – Rehabilitation of Bridge No. 01061 – Route 67 Over Little River



STRUCTURAL STEEL NOTES:

- STRUCTURAL STEEL (LOW ALLOY) SHALL CONFORM TO AASHTO M270, GRADE 50 T2.
- ALL STRUCTURAL STEEL SHALL BE HOT-DIP GALVANIZED IN ACCORDANCE WITH ASTM A123. THE TOP FLANGE OF STRINGERS AND SPLICE LOCATIONS SHALL BE MASKED OR TREATED PRIOR TO GALVANIZING. SPLICE LOCATIONS SHALL BE TOUCHED UP IN THE FIELD WITH A GALVANIZING COMPOUND IN ACCORDANCE WITH THE SPECIAL PROVISIONS.
- WELDING DETAILS, PROCEDURES, AND TESTING METHODS SHALL CONFORM TO THE ANSI/AASHTO/AWS D1.5-(CURRENT) - BRIDGE WELDING CODE, UNLESS OTHERWISE NOTED ON THE PLANS.
- FIELD SPLICES, OTHER THAN THOSE SHOWN ON THE PLANS, WILL NOT BE ALLOWED EXCEPT WITH THE WRITTEN PERMISSION OF THE ENGINEER PRIOR TO THE SUBMISSION OF THE SHOP PLANS. IF ALLOWED, THESE SPLICES SHALL BE DESIGNED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER. THE COST OF THESE SPLICES, INCLUDING THE COST OF DESIGN, SHALL BE AT NO ADDITIONAL EXPENSE TO THE STATE.
- ENDS OF BEAMS SHALL BE VERTICAL AFTER THE APPLICATION OF FULL DEAD LOADS.
- THE STRUCTURAL STEEL FABRICATORS SHALL BE CERTIFIED UNDER THE AISC QUALITY CONTROL PROGRAM AS NOTED BELOW:

CATEGORY MBr:

ALL BRIDGE STRUCTURES OTHER THAN UNSPLICED ROLLED BEAM BRIDGES.
- THE CONTRACTOR SHALL TAKE THE PROPER PRECAUTIONS TO ENSURE THE STABILITY OF ALL STRUCTURAL ELEMENTS UNTIL THE TOTAL STRUCTURE IS IN BEING.
- ALL LENGTHS SHOWN ON THE PLANS ARE HORIZONTAL.
- NO ATTACHMENTS, EXCEPT AS SHOWN ON THE PLANS, SHALL BE FILLET WELDED, PLUG WELDED, OR TACK WELDED TO THE BOTTOM FLANGES.

PAINTING NOTES:

- ALL WORK SHOWN ON THIS DRAWING SHALL BE PERFORMED WHERE DIRECTED BY THE ENGINEER.
- CONTRACTOR'S ATTENTION IS CALLED TO THE FACT THAT EXISTING SUPERSTRUCTURE PAINT MAY CONTAIN LEAD. SEE SPECIAL PROVISIONS FOR PROCEDURES AND SUBMITTALS OF:
 - "ABRASIVE BLAST CLEANING AND FIELD PAINTING OF STRUCTURES (SITE NO. 1)"
 - "CLASS 1 CONTAINMENT AND COLLECTION OF SURFACE PREPARATION DEBRIS"
 - "LEAD HEALTH PROTECTION PROGRAM (LHPP)"
- FINAL PAINT COLOR SHALL CONFORM TO FEDERAL STANDARD 595, AND CHOSEN TO MATCH EXISTING PAINT AS CLOSELY AS POSSIBLE.
- PAINTING LIMITS ARE AS FOLLOWS:
 - A. THE SOUTH SIDE OF THE SOUTH THRU-GIRDER FROM THE TOP OF SIDEWALK CANTILEVER SUPPORTS TO THE TOP FLANGE, INCLUDING ALL STIFFENERS. SEE "TYPICAL SIDEWALK AT FLOORBEAM" SECTION ON DRAWING NO. S-07
 - B. ALL SURFACES OF SIDEWALK CANTILEVER SUPPORTS.

TEMPORARY SUPPORT OF UTILITIES:

- TELEPHONE CONDUITS SHALL BE TEMPORARILY SUPPORTED DURING CONSTRUCTION. THIS WORK SHALL BE PAID FOR UNDER THE ITEM "TEMPORARY SUPPORT OF UTILITIES."
- EXISTING SIDEWALK SUPPORTS MAY BE USED TO TEMPORARILY SUPPORT UTILITIES BUT ADEQUATE SPACE TO FACILITATE CLEANING, PAINTING, AND RECONSTRUCTION OF THE SIDEWALK IS REQUIRED.

NOTES:

- THE THIN POLYMER OVERLAY SHALL BE APPLIED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
- THE THIN POLYMER OVERLAY SHALL BE PAID FOR UNDER THE ITEM "2" STEEL GRID FOR BRIDGE SIDEWALK".
- THE WATER UTILITY SHALL BE REMOVED FOR THE DURATION OF CONSTRUCTION. BYPASS AND RECONSTRUCTION OF WATER UTILITY SHALL BE IN ACCORDANCE WITH UTILITY PLANS.


-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
REV.	DATE	REVISION DESCRIPTION	SHEET NO.


THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

Plotted Date: 9/9/2013

DESIGNER/DRAFTER:
DEH
CHECKED BY:
RRC

SCALE AS NOTED

**STATE OF CONNECTICUT**
DEPARTMENT OF TRANSPORTATION
Filename: ...\\SB_Br01061_S_04_Framing.dgn



SIGNATURE/
BLOCK:


CME ASSOCIATES, INC.
333 East River Drive.
Suite 400
East Hartford, CT 06108

PROJECT TITLE:
REHABILITATION OF BRIDGE
NO. 01061
ROUTE 67 OVER LITTLE RIVER

TOWN:
SEYMOUR

DRAWING TITLE:
FRAMING PLAN &
TYPICAL SECTIONS

PROJECT NO.
124-167

DRAWING NO.
S-04

SHEET NO.
03.04

Bridge Inspection Report
Structure No. 01585 – Route 313 (River Street) Over Little River

Structure No. 0 1585
Route 313 {River Street}

over

Little River

Seymour

Mile Point 0.04

Routine Inspection
on
15-Nov-11

Inspected By Team No. 8 - CTDOT - Bridge Safety

For Area No. 5

TEAM:	Forwarded to T.E. 3: <u>D PAWLKOWSKI</u>	Date: <u>12 13 11</u>
-------	--	-----------------------

TE. 3:	Reviewed By T.E. 3: <u>D PAWLKOWSKI</u>	Date: <u>12 14 11</u>
BMM Required	<u>NO</u>	
Town Structure	<u>NO</u>	
Rating <= 5 {Item Nos. 58, 59, 60, 61 or 62}	<u>NO</u>	
Forwarded to Supervisor	_____	Date: _____
Forwarded to "To Be Copied Drawer"	<u>✓</u>	Date: <u>12 14 11</u>
Date BRI-19 Entered	<u>12 14 11</u>	

SUPERVISOR:	Reviewed By Supervisor _____	Date: _____
-------------	------------------------------	-------------

Support:	Date Copies Made: _____	BMM No. _____
	Scanned By _____	Date: _____ PDF Box No.: _____

NBIS: Yes

Last Inspection Date: November 10, 2009

State of Connecticut - Department of Transportation
Bureau of Engineering & Construction - Bridge Safety & Evaluation

Bridge No: 0 1585

Town: Seymour

Location: Route 313 {River Street} over Little River

Inspection Date: November 15, 2011

TABLE OF CONTENTS

<u>Bound Report Pages</u>	Number of Sheets Enclosed
Title Cover Sheet	1
Table of Contents	1
Additional Sheets	1
Sketches	3
Photo Sheets	9
Photo Images	18
<u>Forms</u>	
BRI-18 Bridge Inspection Report Form	8
BRI-19 Structure Evaluation Form	2
Pontis Form	2

01585

Bridge Number

STATE OF CONNECTICUT

DEPARTMENT OF TRANSPORTATION

Inspected By: Chavez & Ferrara

BRIDGE SAFETY & EVALUATION

Sufficiency Rating 78.48

Previous Inspection Date 11/10/2009

BS&E Received ☐

Data Entry By: DP

Copies Made ☐

Data Entry Date: 12/15/11

SHEET 1 OF 1 (INSP. REPORT)

STRUCTURE EVALUATION

90) Inspection Date	7/7/15	Inspection Team	91) Frequency Class:
Depth Insp	Deck Survey	Access	Flagman
10/23/2003	1/1/1900	12:	0

CRITICAL FEATURE INSPECTIONS

Type	Frequency	Team	Date
Fracture:			
Uwater:			
Special:			

RED FLAG

IDENTIFICATION

Bridge Name

Town Name SEYMOUR

Town Code 67610

5) Inventory Route

A) Record Type 1

B) Signing Prefix 3

C) Level of Service 1

6) Feature Intersected

7) Facility Carried:

8) Location

9) Milepoint

10) Latitude

11) Longitude

12) Border Bridge:

A) State Code

C) Border Town Name

99) Border Bridge Structure No

43) Structure Type, Main:

A) Material 1 Concrete

44) Structure Type, Approach:

A) Material 0 Other

45) Number of Spans, Main Unit

46) Number of Approach Spans

107) Deck Structure Type

108) Wearing Surface/Protective System:

A) Type of Wearing Surface

B) Type of Membrane

C) Type of Deck Protection

AGE AND SERVICE

27) Year Built 1936

42) Type of Service:

A) On 5 Highway-pedestrian

28) Number of Lanes:

A) On 3

29) Average Daily Traffic

109) Percent Truck

30) Year of ADT

19) Bypass, Detour Length

GEOMETRIC DATA

48) Length of Max Span

49) Structure Length

50) Curb or Sidewalk Widths:

A) Left 5.0ft

B) Right 1.3ft

51) Brg Rdwy width, curb-curb

52) Deck Width, Out-Out

32) Approach Roadway Width

33) Bridge Median

Deck Area

34) Skew Angle

35) Structure Flared

10) Inv. Rte. Min. Vert. Clearance

47) Log Inv. Rte. Total Horiz. Clr.:

47) RLog Inv. Rte. Total Horiz. Clr.:

53) Min Vert Clearance Over Bridge

54) Min Vert Under Clearance

55) Min Lat Under Clearance on Right

56) Min Lat Under Clearance on Left

BRIDGE COMMENTS

Bituminous

None

None

CLASSIFICATION

SHEET 2 OF 2 FORM BRI-19 REV 10/00

SHEET OF

Inspected By: Chavez & Ferrera

Bridge Number	01585	NBIS Length
Town Name	SEYMOUR	Yes 55
Facility Carried	ROUTE 313	
Feature Crossed	LITTLE RIVER	

LOAD RATING AND POSTING

	4	1	5	A	Open, no restriction
63) Design Load					
63) Operating Rating Type					
64) Operating Rating	50.9				
65) Inventory Rating Type	1				
65) Inventory Rating	36.6				

CONDITION

Item	Rating	By
58) Deck	7	JTC
59) Superstructure	6	JTC
60) Substructure	7	JTC
61) Channel & Chan. Protection	6	JTC
62) Culverts	N	A














APPRAISALS

	Rating	By
67) Structure Evaluation	6	6/10/02
68) Deck Geometry	4	6/10/02
69) Under Clear Vert & Horiz	N	6/10/02
71) Waterway Adequacy	5	6/10/02
72) Approach Rdwy Alignment	8	6/10/02
113) Scour Critical	8	6/10/02

PROPOSED IMPROVEMENTS

[illegible]

POSTED SIGNS & UTILITIES

Other Posted Signs 1	Blank		
Other Posted Signs 2	Blank		
Actual P.L. Single Unit Truck	tons		tons
Rec. P.L. Single Unit Truck	tons		tons
Actual P.L. Semi-Trailer Truck	tons		tons
Rec. P.L. Semi-Trailer Truck	tons		tons
Rec. P.L. All Vehicles	ft		ft
Posted Vert Clearance On Bridge	ft		ft
Posted Vert UnderClearance	mph		mph
Posted Speed Limit	Utility		
Utility	1 Gas		
Utility	2 Water		
Utility	7 Sewer		

OTHER FEATURES

Fence Required	No								No
Fence Present	No								No
Fence Height 0.0 ft									No
Fence Type									No
Fence Material									No
Fence Top Type									No
Barrel Ladder									No
Stand Pipes									No
Cat Walks									No
Movable Inspection System									No
Loose Concrete Checked?									No

INSPECTION COMMENTS

Proposed Next Indepth Insp Year 2013
Senior Parviz Mirzaee
Supervisor Joseph Kozlowski
REVIEWED BY: [Signature] Date 12/14/11
(1741-20043)

115181

Abutment Stem Work Sheet

Bridge No.: 0 1585

Town: Seymour

Facility Carried\Feature Intersected: Route 313 {River Street} over Little River

Abutment Stem No. or Nos.: Abutment Nos. 1 & 2

Abutment Stem Design Type: Full Height\Closed Abutments - Cantilever

Abutment Stem Material Type: Concrete

Abutment Stem Foundation Type: Spread Footings Founded on Rock

Item No. 113 Scour Critical: - 8 -

Tidal: No

Rip Rap: Yes

Exposed Footing: No

Footing Undermining: No

Sheet Piles - Timber or Steel: No

Bed Rock: No

Concrete Apron: No

Abutment Stem - In Water - At Normal Stage:

Normal Stage - The water stage prevailing during the greater part of the year.

Comments: Bridge Plans - Project No. 124 - 11 - Year 1936

Abutment No . 1 Footing Height - 3 feet 8 inches & 4 feet 5 inches - per plans

Abutment No . 1 Footing Width - 13 feet 6 inches & 15 feet 00 inch - per plans

Abutment No . 2 Footing Height - 3 feet 6 inches - per plans

Abutment No . 2 Footing Width - 12 feet 00 inch - per plans

Wingwall Footing Height - Varies 3 feet 6 inches to 5 feet 00 inch - per plans

Wingwall Footing Width - Varies 9 feet 00 inch to 15 feet 00 inch - per plans

Prepared By: David Pawlikowski, P.E.

Date: December 14, 2011

CTDOT - Bridge Safety

Connecticut Department of Transportation

Bridge Inspection Report BRI-18

Bridge #: 01585

Inspection Date: 11/15/2011

Inspection Type:	Routine	Previous Inspection Date:	11/10/2009	Snooper Required:	No
Inspection Performed By:	Team 8	Feature Carried:	ROUTE 313	Snooper Used:	No
Town:	SEYMOUR	Feature Intersected:	LITTLE RIVER	Year Built:	1936
Location:	211 FT E OF ROUTE 67	Main Design:	Tee Beam	Year Rebuilt:	-
Main Material:	Concrete				

Visits

Visit Date:	Temp:	Start Time:	End Time:
11/15/2011	66	1:50:00 PM	3:20:00 PM

Inspectors:

Inspector:	Task:
A. Ferrara	Lead Inspector
J. Chavez	Inspector

DECK: Inspected south to north, per plans. Overall Rating: 7

Rating

OVERLAY:	7	Bituminous concrete with waterproof membrane : exhibits longitudinal and transverse cracking with minor areas of segregated bituminous.
DECK-STR. CONDITION:	7 <i>loop 12/4/11</i>	Integral deck rating format. Per CT. Bridge Inspection Manual. Rating base only on the condition of the wearing surface.
CURBS:	7	Concrete shows abrasion wear and minor chips and cracks. Northeast approach curb exhibits one vertical crack open 3/16" +/- with a 14" potential spall near deck end. Curb reveals at mid-span east side 10" & west side 6".
MEDIAN:	N	-
SIDEWALKS:	7	Newer concrete sidewalk on the east side. South end approach side walk has settled up to 7/8" +/- at deck end.
PARAPET:	7	East side has concrete parapet with double aluminum railing. Vertical hairline cracks extending across top with some efflorescence and areas of rub coat peeling.
RAILING:	6	Original concrete balustrade on the west side exhibits light abrasion and hairline cracks at random locations and a large surface spall 17"x 9"x 3" deep and a 3/16" open diagonal crack at the southwest end post.

		Double aluminum rail on east side only; no note worthy defects.
PAINT:	N	-
FENCE:	N	-
DRAINS:	N	-
LIGHTING STANDARD:	N	-
UTILITIES TYPE/SIZE:	8	8" Water main between beams-1 & 2 and is not seated in north hanger section. 24" Sewer pipe along the west side. 2" gas pipe along the west side.
CONSTR JOINTS:	N	-
EXPANSION JOINTS:	8	Asphaltic plug joint seals exhibits areas of slightly exposed aggregate.

59.

SUPERSTRUCTURE:

Concrete Tee-Beam

Overall Rating: 6

Rating

BEARING DEVICES:	6	Limited view to front of plates. Abutment-1 bearings generally exhibits minor light to heavy rust. Abutment- 2 bearings are turning blue in color from reaction of different metals in plates.
STRINGERS:	N	-
GIRDERS:	6	Concrete "T" Beams. Generally all beam webs exhibits numerous partial and full height hairline vertical cracks that continue from transverse cracks across the bottom of the beams. There are some beams the exhibits shallow spalls with exposed rebars at random locations on the vertical faces and some honeycomb areas and small potential spalls on the bottom faces. General note : Two newer T-Beams and abutment seats where added in the past to the east end.
FLOOR BEAMS:	N	-
TRUSSES-GENERAL:	N	-
TRUSSES-PORTALS:	N	-
TRUSSES-BRACING:	N	-
PAINT:	N	-
RUST:	7	See above.
MACHINERY MOV SPAN:	N	-
RIVETS & BOLTS:	N	-
WELDS - CRACKS:	N	-
TIMBER DECAY:	N	-
CONCRETE CRACKING:	6	See above. The u-side of the deck exhibits approximately 2% of deterioration with transverse, longitudinal and a few diagonal hairline cracks. Noted were some map hairline cracks and a large surface spall with exposed rebar approximately 2-Sq ft. located in bay- 4 north end & one 8-Sq.ft. area of honeycombing at south end.
COLLISION DAMAGE:	8	-
MEMBER ALIGNMENT:	8	-
DEFLECT. UNDER	N	Normal.

LOAD:		
VIBRATION UNDER LOAD:	N	Normal.
STAND PIPES:	N	-
BARREL LADDERS:	N	-

ARE BARREL LADDERS OSHA COMPLIANT? NA

60. SUBSTRUCTURE:	Concrete	Overall Rating: 7
-------------------	----------	-------------------

Rating

ABUTMENTS-STEM:	7.	Abutments exhibits areas of light to medium abrasion and scaling along the base with hairline vertical cracks at random locations. The south abutment exhibits two slightly open vertical cracks under beams-3 & 5. The north abutment at west cheekwall exhibits a 1/8" +/- open crack with efflorescence approximately 3-ft +/- long continuing into the cap. Newer section exhibits some hairline cracks with efflorescence.
ABUTMENTS-BACKWALL:	7.	Monolithic backwalls. Some minor hairline cracks at random locations. North end exhibits a patched spall over the sewer pipe.
ABUTMENTS-FOOTINGS:	N	Not visible.
ABUTMENTS-SETTLEMENT:	8.	-
ABUTMENTS-WINGWALLS:	7.	Wingwalls generally exhibits areas of minor abrasion and scaling with some minor hairline cracks and minor spalls. The northwest wingwall also exhibits an area of heavy-severe scaling located on top of wingwall approximately 9-ft long x 10" wide.
PIERS/BENTS-CAPS:	N	-
PIERS/BENTS-PILE BENT:	N	-
PIERS/BENTS-COLUMNS:	N	-
PIERS/BENTS-FOOTING:	N	-
PIERS/BENTS-SETTLEMENT:	N	-
EROSION-SCOUR:	8.	-
CONCRETE CRACK-SPALL:	7.	See above.
STEEL CORROSION:	N	-
PAINT:	N	-
TIMBER DECAY:		

	N	-
COLLISION DAMAGE:	8	-
DEBRIS:	N	-

**61. CHANNEL &
CHANNEL
PROTECTION:**

Overall Rating:

Rating

CHANNEL SCOUR:	6	Channel exhibits local scour along the northwest end due to poor channel alignment. Water depth up to 3-ft deep. See attached sheets.
EMBANKMENT EROSION:	8	-
DEBRIS:	5	Obstruction - miscellaneous trash. Debris- shopping carts, tires.
VEGETATION:	5	Heavy vegetation encroachment in the up stream channel.
CHANNEL CHANGE:	5	Stream bed aggradation and vegetation encroachment diverts low flow to the north side and into the northwest wingwall. General note Little River interfaces with Naugatuck River at the outlet end.
FENDER SYSTEM:	N	-
SPUR, DIKES & JETTIES:	N	-
RIP RAP:	8	Boulders.

**62. CULVERTS &
RETAINING
WALL:**

Overall Rating:

**65. APPROACH
CONDITION**

Overall Rating:

Rating

APPROACH SLAB:	N	-
RELIEF JOINTS:	N	-
APPROACH GUIDE RAIL:	4	Wood posts and cables at northwest end. Cables are loose and sagging on the ground. Unable to stop an errant vehicle.

		MBR on the east side. (8 rating).
APPROACH PAVEMENT:	7.	<p>Bituminous Concrete exhibits areas of light segregation.</p> <p>South approach exhibits transverse, longitudinal and diagonal cracks.</p> <p>North approach exhibits transverse and longitudinal cracks with areas of map type cracking in the southbound travel lane.</p> <p>There is 1-1/2" of settlement adjacent to the A.P.J on the north approach curblines.</p>
APPROACH EMBANKMENT:	8.	-

TRAFFIC SAFETY FEATURES

	Rating	
BRIDGE RAILINGS:	Last Inspection: 0 Current: 0	-
TRANSITIONS:	Last Inspection: 0 Current: 0	-
APPROACH GUARDRAILS:	Last Inspection: 0 Current: 1	-
APPR. GUARDRAIL ENDS:	Last Inspection: 0 Current: 1	-

66. LOAD POSTING

	- Posted Loading -	
SINGLE UNIT (TONS):	Last Inspection: - Current: -	-
SEMI TRAILER (TONS):	Last Inspection: - Current: -	-
4 AXLE (TONS):	Last Inspection: - Current: -	-
3S2 (TONS):	Last	-

	Inspection: -	
	Current: -	
ADVANCE WARNING (Y/N):	-	
LEGIBILITY:	-	
VISIBILITY/LOCATION:	-	

67.
MISCELLANEOUS

Rating

MIN. VERT. UNDERCLEARANCE:	Last Inspection: 0' 0" Current: 20' 5"	-
POSTED CLR. UNDER BRIDGE:	Last Inspection: -' -" Current: -' -"	-
POSTED CLR. ON BRIDGE:	Last Inspection: -' -" Current: -' -"	-
ADVANCED WARNING (YES/NO):	No	-
SPEED LIMIT (IF ANY):	Last Inspection: 35 Current: -	-
CHARACTER OF TRAFFIC:	(ADT) 5,500 - 4% Trucks	

ADDITIONAL NOTES:

Bridge ID's are in place.

ADDITIONAL COMMENTS:

Inspectors' Signatures:

1) *Carlene*
2) *John Chert*
3) _____

Date: 12/12/11

Date: 11/22/11

Date: ____/____/____

4)

Date: ___/___/___

P.E. Signature:

Date: ___/___/___

P.E. #:

Date: 12/14/11

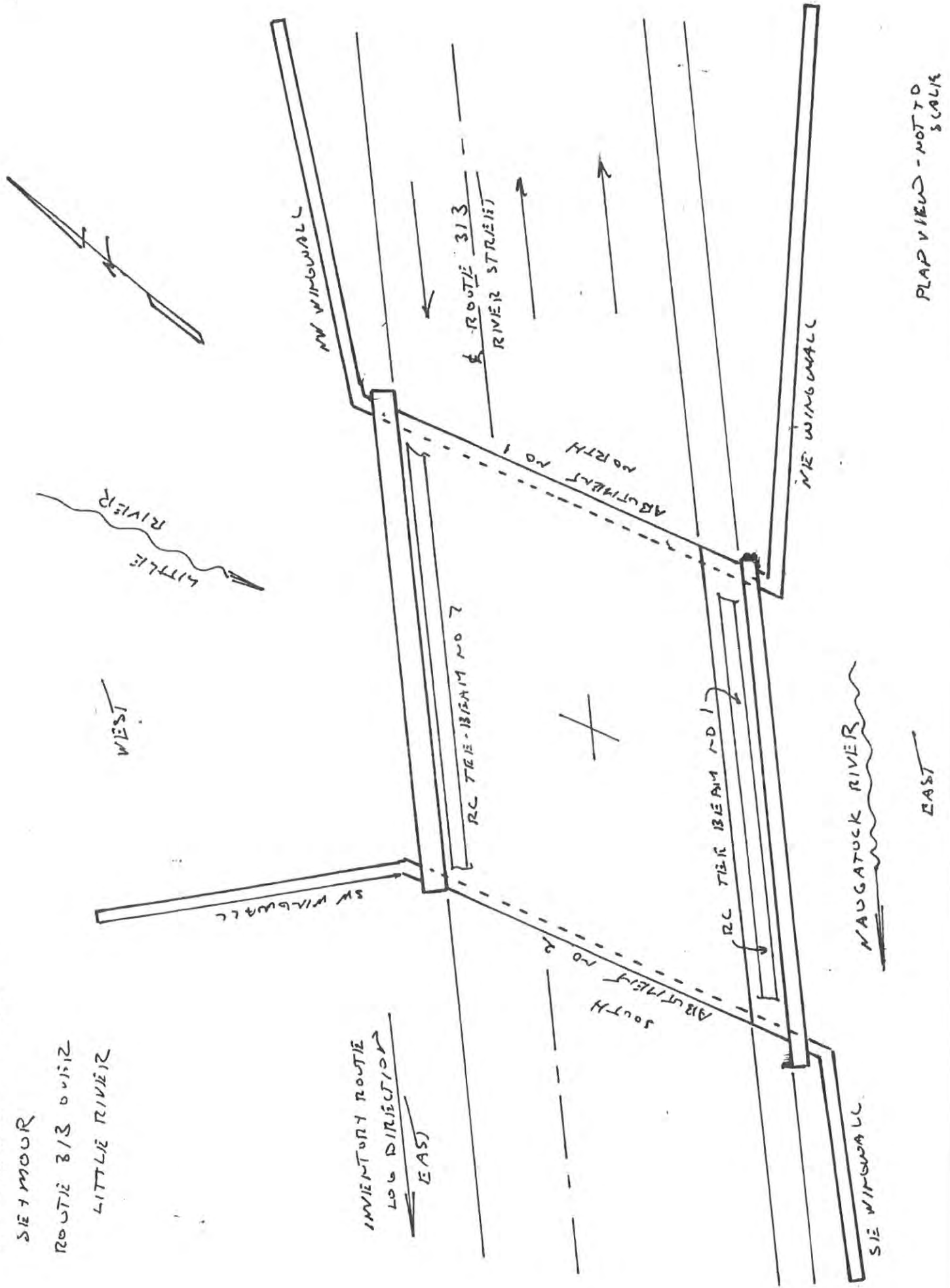
Reviewed by:

Date: 12/14/11

20987

conndot

ROUTLE 8/3 0 v i z
LITTLE RIVER



PLAP VIEW - NO 1 TO 8 CALS

Bridge No.	01585	Inspected by:	ANDREW FERRARA
Town:	SEYMOUR	Inspected by:	JOHN CHAVEZ
Feature Carried:	RT-313	Date Inspected:	11/15/2011
Feature Crossed:	LITTLE RIVER	Project No.:	

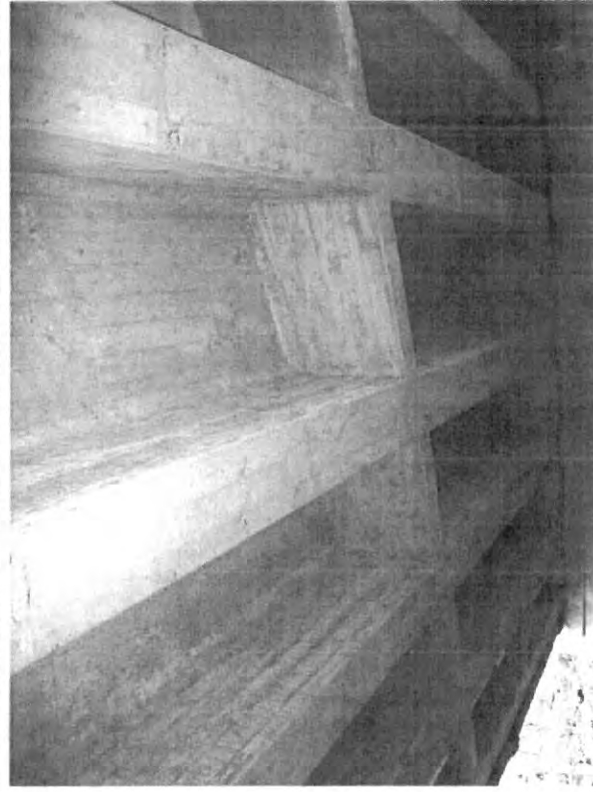


Photo # 15: View of Superstructure Underside.

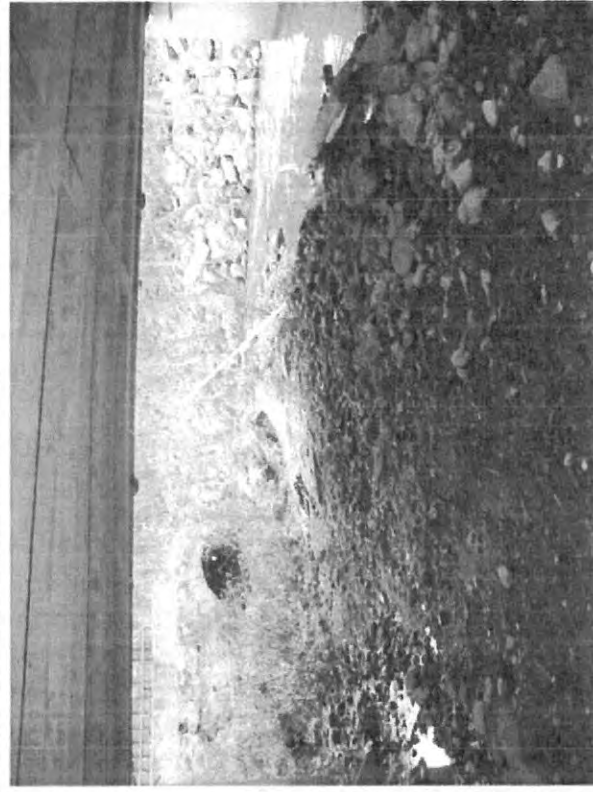


Photo # 16: View of Heavy Silt & Stone Buildup Under Structure.

Public Involvement
Stakeholder and Public Information Meeting Reports and Correspondence



Report of Meeting

DATE OF MEETINGS: October 13, 2015 – Stakeholder Meeting No. 1
October 15, 2015 – Stakeholder Meeting No. 2
October 19, 2015 – Public Information Meeting

MMI #: 3211-02-4

STATE PROJECT NO.: 124-165

PROJECT: Route 67 (Bank Street)
Spot Improvements
Klarides Village to River Street
Seymour, Connecticut

SUBJECT: Presentation of Preliminary Engineering Study

LOCATION: Norma Drummer Room – Seymour Town Hall
1 First Street
Seymour, CT 06483

ATTENDEES:

Fred Messore, Director, Seymour Economic Development
Mark Neilsen, Director of Planning/Assistant Director, Naugatuck Valley Council of Governments (NVCOG)
Rory Wilson, Administrative Assistant to Seymour First Selectman
Anthony Ciriello, P.E., Principal, Director of Transportation – Milone & MacBroom, Inc. (MMI)
Michael Joyce, P.E., Associate, Manager of Highway Design – MMI
Dilip Patel, P.E. – MMI
Jennifer Martz – MMI

See attached list of attendees from the public.

A public information meeting to discuss the Route 67 (Bank Street) Spot Improvements was held on October 19, 2015 to offer an opportunity for public comment and to discuss the information compiled and presented in the Preliminary Engineering Report dated February 19, 2014. Public Notice of the meeting was provided by the town in the *Republic American* on October 3, 2015. (See attached notice and verification from newspaper). In addition, prior to the formal public information meeting, the property owners immediately abutting the project limits were invited to attend two informal stakeholder workshops on October 13 and 15 at Town Hall to provide additional opportunities to receive information about the project, provide feedback, and gather information to support the public involvement process.

To begin the meeting, MMI representatives presented a general overview of the project and purpose of the preliminary engineering study and provided a more specific technical presentation of the project details as summarized below by using handouts provided to the public, existing photographs and photo simulations, colored renderings of the proposed design alternatives, and a computer-generated simulation showing the existing and future traffic conditions.

PROJECT LOCATION

The section of Route 67 (Bank Street) that falls within the study area (between River Street/Franklin Street and the westerly end of Klarides Village to the west) is approximately one-third of a mile. Bank Street generally runs in an east/west direction through the western part of town and provides connections to the town center area (via the Naugatuck River bridge) and to Oxford and points west. CT Route 8, which is elevated above the downtown area, provides regional access throughout the Naugatuck Valley region of Connecticut.

PROJECT PURPOSE

The purpose of this study is to evaluate and provide a palette of roadway and intersection enhancements along the CT Route 67 (Bank Street) corridor between River Street/Franklin Street and Klarides Village to the west in the town of Seymour, Connecticut.

This preliminary engineering study summarizes existing conditions, discusses the overall corridor issues and opportunities, outlines the right-of-way and regulatory permit implications, and summarizes the traffic and pedestrian network analyses conducted by MMI.

EXISTING CONDITIONS

Within the study area, Bank Street generally has a single travel lane in each direction with auxiliary turn lanes at various intersections. Sidewalks in various conditions are present along most of the project roadways, and the posted speed limit along Bank Street is 30 miles per hour (mph). The land uses through this corridor include retail, office, residential, and light industrial with the study area located within the C-2 General Commercial Zoning District, the CBD-1 Downtown Central Commercial District, and a small area of residential zoning (R-18) abutting Route 67 at the Beecher Street/Church Street intersection. The C-2 and CBD-1 districts define the limits of the Enterprise Corridor Zone.

Traffic Operations

The Connecticut Department of Transportation (CTDOT) records average daily traffic (ADT) volumes along state-owned highways. The ADT along Route 67, west of River Street and Franklin Street, was 20,000 vehicles per day (vpd) in 2009. The 85th percentile speeds along Bank Street are 36 mph for eastbound travel and 38 mph for westbound travel.

A traffic analysis was performed along Route 67 (Bank Street) at the following six intersections:

- Bank Street @ Franklin Street/River Street (CT Route 313)
- Bank Street @ Old Drive (east)
- Bank Street @ Church Street/Beecher Street
- Bank Street @ Old Drive (west)
- Bank Street @ Klarides Village Driveway/Johnson Avenue (unsignalized)
- Bank Street @ Klarides Village (signalized)

The peak hours for the corridor are 8:00 a.m. to 9:00 a.m. and 5:00 p.m. to 6:00 p.m. Bank Street carries between 1,070 and 1,350 vehicles during the morning peak hour depending on

the specific location. During the afternoon peak hour, 1,470 to 2,030 vehicles were counted. The analysis found that a greater percentage and overall number of heavy vehicles are present during the morning peak hour (1.5%) as opposed to the afternoon (.4%).

Accident Patterns

Using CTDOT accident records from January 2006 through December 2008, an analysis of the accident history along the corridor indicated there were 79 observed crashes. Of these, 63 resulted in property damage only while 16 resulted in personal injury. The crashes resulted from a variety of collision types: rear-end, fixed object, sideswipe, intersecting turns, and same-direction turns. The most prevalent crash type was rear-end, which is typical for signalized intersections.

Parking

On-street parking exists through the downtown area including areas along Bank Street that serve the adjacent retail establishments. Within the study limits, two on-street parking spaces are currently provided on the north side of Bank Street (near Franklin Street). On the south side of Bank Street, a wide shoulder supports "10-minute" on-street parking in front of several properties that are immediately adjacent to the Little River and currently have no on-site parking. The remaining parking areas along the corridor are provided within off-street parking facilities.

Regulatory Areas

The Route 67 (Bank Street) project corridor is located immediately west of the Naugatuck River. At two locations within the study area, the Little River is conveyed under the areas where improvements are proposed along Bank Street and under River Street (CT Route 313) to its confluence with the Naugatuck River. The Little River was studied in detail by the Federal Emergency Management Agency (FEMA), and specific floodplain elevations and floodway boundaries have been established.

In addition to the FEMA regulatory boundaries, field identification and delineation of Connecticut inland wetlands and federal wetlands within the project limits were performed. The wetland limits closely follow the floodplain boundaries and steep banks associated with the rivers. Regulated activities associated with the wetlands, watercourses, and the related upland areas may require local, state, or federal permit approvals.

Historic and Archaeological Significance

Within the project limits, there is one property that is eligible for the Register of National Historic Places. The design and construction of the improvements outlined within this report may need to be conducted in accordance with Section 106 under the National Historic Preservation Act.

Rights-of-Way Activities

Rights-of-way impacts to private property owners are discussed in more detail below and under various portions of the Preliminary Engineering Report.

PROPOSED IMPROVEMENTS

The following three improvement locations, as more specifically shown and described in the Preliminary Engineering Report dated February 2014, are highlighted as critical enhancement areas along with some operational improvements at two signalized intersections:

- Bank Street @ Franklin Street/River Street and @ Old Drive
- Bank Street @ Beecher Street/Church Street
- Bank Street @ Klarides Village/Johnson Avenue

Bank Street From Old Drive to Franklin Street/River Street (SR 313)

The preferred design for this section of Route 67 includes widening (primarily) on the south side of Bank Street between Old Drive East and the Franklin Street/River Street intersection. The concepts include the use of 11-foot lanes with 5-foot shoulders to support on-street bicycle connectivity from the areas adjacent to Bank Street to downtown Seymour and the developing riverfront recreational opportunities. The new edge of pavement and sidewalk create direct impacts to the buildings along the southern side of Bank Street including but not limited to direct impacts to the buildings and porches and the elimination of the limited "10-minute" on-street parking. In addition to the direct building impacts, the loss of parking constitutes a serious impact given the lack of on-site parking spaces and the current short-term on-street parking used by these properties and businesses. Full acquisition of these properties is likely and, therefore, is assumed in the cost analysis.

The preferred alternate also extends the westbound right-turn lane at the Walgreens driveway through to the intersection of Old Drive East to accommodate the traffic volumes at this location and continue the intended pedestrian and on-street bicycle patterns through the corridor.

Furthermore, the curb radius for the River Street right-turn lane northbound movement at the southeast corner of the intersection may be reduced substantially. The existing radius exceeds 150 feet, which is more than adequate for trucks making right turns northbound onto Bank Street. A reduced radius would serve to slow vehicles making this turn, shorten the distance for pedestrian crossings, and provide additional landscape area and possible connections to the town's Naugatuck River recreational resources.

Modifying the signal timing to provide additional green time for the Bank Street east/west phase will also be needed to improve the LOS at this intersection.

Widening the northbound (River Street) approach to this intersection to extend the left-turn lane should also be pursued. Currently, it supports the existing and proposed lane arrangement except for the continuation of the 5-foot (bike lane) shoulder from Bank Street to River Street. The structure's overall rating is adequate, but the curb-to-curb deck width does not meet the

current requirements. The existing eastern edge of pavement would be maintained in its current location.

Bank Street @ Church Street/Beecher Street

The preferred alternative for this improvement location includes the realignment of Church Street to intersect Beecher Street at a T-intersection along with the narrowing and realignment of the intersection of Beecher Street at Bank Street. This alternative will create a safer condition for both vehicular and pedestrian mobility, will result in the same overall improvement to traffic operations at a much lower cost, and will not require the acquisition of private property. There is an informal roadway/access strip for drop-off and pickup in front of the Russian American Citizen Club. This area is within the public right-of-way but is used almost exclusively by the club and will remain available for limited parking. The additional turning lane on Beecher Street approaching Bank Street will help to reduce delays for motorists turning right due to left-turning vehicles.

Bank Street @ Klarides Village Driveway/Johnson Avenue

The proposed improvements for this area include the termination of Johnson Avenue at Route 67 along with prohibiting left turns from Klarides Village by constructing a modified median. The improvements listed below are primarily intended to improve traffic safety at this intersection:

Johnson Avenue at Bank Street

The preferred alternative offered herein includes the construction of a hammerhead intersection immediately adjacent to the existing residential properties closest to Route 67 that would allow the access of emergency and maintenance vehicles. This plan will require a partial taking of property east of Johnson Avenue for the turnaround area. Elimination of this access point will improve the safety of users at this intersection and provide for a free flow of traffic along Route 67. This option will require Johnson Avenue area residents to seek alternate access to Route 67.

Klarides Village and Bank Street (unsignalized)

The preferred alternative for this side of the intersection is to physically prohibit the current no-left-turn restriction by adding a physical barrier. Vehicles turning left or heading east along Route 67 will be required to drive through the plaza to the existing signalized driveway. Physically prohibiting the ability to turn left will eliminate the safety concerns and the queuing issues at the unsignalized intersection. This design is expected to have minimal to no impacts on rights-of-way and utilities. Stakeholder impacts will be essentially limited to those patrons exiting McDonald's and TD Banknorth and wishing to travel east on Route 67.

Additional Traffic Signalization Improvements

Signalization improvements are also recommended at two intersections as described below.

Bank Street @ Klarides Village

The traffic analysis supports modifying the signal timing at this intersection. Reducing the cycle length from 90 seconds to 60 seconds will maintain overall operations of LOS A and will significantly reduce 95th percentile queues, especially for the eastbound approach (850+ feet to 300 feet).

Bank Street/Old Drive (west)

While a new traffic signal was added as part of the development of the Walgreens site, the analysis has determined that the signal timing needs to be adjusted at Old Drive (west) to accommodate the improvements proposed under this project.

Pedestrian Circulation

An evaluation of pedestrian infrastructure was conducted to identify pedestrian-related issues and connectivity gaps. In general, the study area does not effectively provide for safe pedestrian mobility throughout. While a sidewalk network exists, many areas are in disrepair, crosswalks are not handicap compliant, and gaps exist in many areas making it unsafe for pedestrians to travel from Klarides Village and points west to downtown Seymour.

PRELIMINARY CONSTRUCTION COST OPINION

Johnson Avenue Access Termination	\$52,280
Klarides Plaza Entrance.....	\$26,785
Church Street/Beecher Street Realignment	\$149,400
Bank Street (Route 67) – Old Drive to River Street/Franklin Street Intersection	\$734,330
Southeast Corner of Bank Street/River Street.....	\$148,235
River Street (SR 313) Widening – including bridge improvements.....	\$726,250

Total (after adding inflation to 2019, contingencies, incidentals, etc.) *\$3,970,000

*Excludes right-of-way acquisition costs, utility relocations, streetscape enhancements, and hazardous materials if any.

FUNDING 80% FEDERAL / 10% STATE / 10% TOWN

PROJECT SCHEDULE

All dates below are subject to the availability of funding, permit approvals, and right-of-way acquisitions/relocations:

- Completion of Preliminary Engineering Study Phase – winter 2015
- Final Design Phase – 2016 to 2018
- Construction – spring 2019

COMMENTS AND ADDITIONAL INFORMATION

See correspondence attachments as summarized below.

- Invitation to Stakeholder Meetings on 10/13/15 and 10/15/15
- Public Notice for Public Information Meeting on 10/19/15 (including newspaper proof)
- Deed (Vol. 114, Page 579) and Copy of Plan from project 124-148 submitted by Housatonic Wire Company depicting limits of land ownership around the island at the intersection of Church Street and Beecher Street
- 10/12/15 letter from John J. Borgesano (Russian American Club) to town (w/enclosure)
- 10/15/15 Letter from John J. Borgesano (Russian American Club) to town (w/enclosure)
- 12/2/15 email from Milone & MacBroom, Inc. to Ms. Fatima Silva (#117-#119 Bank Street)

Comments and discussions from the public during the stakeholder meetings, public information, and in correspondence before and within 30 days after October 19, 2015 are summarized below and are organized by location:

General Comments and Concerns

- The public in attendance was generally in favor of the need to perform improvements along Route 67 (Bank Street) to improve traffic operations through the corridor, especially improvements to the traffic signal timings and coordination. Larger regional concerns and questions were raised regarding what long-term planning efforts have been performed or will be performed for Route 67 in Seymour and Oxford and all the way out to Southbury. Concerns were raised about how developments in other towns were affecting traffic in Seymour.
- Residents reported that some of the biggest traffic problems occur during school bus pickup and drop-off times.
- Residents described current driving behavior and patterns that motorists familiar with the area use to avoid intersections within the project limits. More specifically, many represented that drivers often avoid using the Church Street/Beecher Street intersection to access Bank Street and instead use West Street to travel toward Oxford and areas west of the project limits.

Bank Street From Old Drive to Franklin Street/River Street (SR 313)

- It was noted that changes to the existing conditions since the start of the study include the new signal improvements and development associated with the construction of Walgreens on the north side of Bank Street, the demolition of the existing buildings on the southwestern corner of the Bank Street/River Street intersection, and new cantilevered sidewalk improvements to the Route 67 Bridge Over Little River (State Project No. 124-167).
- As indicated during the presentation and given the anticipated impacts, full acquisitions are anticipated for the remaining residential and commercial properties along the southern side of Bank Street. The property owners in attendance, which included the owners of Ed's Dry

Cleaners (115 Bank Street) and Chet Sobotka, the trustee for the estate of Richard Sobotka (111 Bank Street), expressed a general understanding of the purpose of the improvements and related impacts but requested an accelerated rights-of-way acquisition process. With the knowledge that the project would create these impacts, the owners expressed concern about the costs and ongoing efforts that are needed to maintain, rent, use, or sell these properties for an undetermined time until the acquisitions will occur. These concerns were echoed by Fatima Silva (117-119 Bank Street) during a phone conversation with MMI after the public information meeting. An approximate schedule for when the rights-of-way process may begin was offered by representatives of MMI and NVCOG, and the residents were informed that the CTDOT would initiate the formal rights-of-way acquisition and relocation discussions after the formal design of the project commences. Any decisions regarding accelerated acquisitions would need to be made by CTDOT and would be dependent on the availability of state and federal funding.

- The public was in support of the geometric and lane improvements proposed at the intersection, including the elimination of the parallel parking spaces on the northeastern corner of the intersection.
- The additional length of the northbound River Street left-turn lane was acknowledged as an important improvement to the intersection. It was stated that while signs are posted on portions of West Street prohibiting use by trucks both car and truck drivers often use West Street to avoid the River Street/Bank Street/Franklin Street intersection in order to access Route 67 and other areas west of the project limits.

Bank Street @ Church Street/Beecher Street

- Representatives from the Russian American Club (#20 Church Street) submitted correspondence dated 10/12/15 and 10/15/15 expressing concerns about the potential loss of the informal "on-street" parking. This area along their property and adjacent to the traffic island at the intersection of Church Street and Beecher Street has been used by the club for years for parking and deliveries. With no on-site parking for the property due to severe topographic elevation changes, relocation of the parking on site does not seem feasible.
- The club representatives indicated that without a similar number of parking spaces and available loading/delivery area they will not be able to host events at the club and could be put "out of business."
- Representatives of the church indicated that it was their understanding that the area used for parking and the intersection island may be owned by the club. Additional deed and map information was submitted by representatives of the Housatonic Wire Company indicating the island club parking area is likely owned by Housatonic Wire Company. This is information that was not obtained by the CTDOT during its survey and land record research efforts for this project. It was indicated by the Russian American Club and Housatonic Wire Company that in 1994 under state project 124-148 the CTDOT decided not to pursue modifications to the island and parking area due to concerns raised by the club. The next phase of design will include a more detailed rights-of-way analysis including title searches, which will aid in clarifying the private and public ownership limits.

- A request was made by the Russian American Club and other members of the public who use Church Street and Beecher Street to consider improvements closer to Bank Street, including changes to the east radius to accommodate the desire to provide a right- and left-turn lane while limiting the changes to Church Street and Beecher Street. Analysis of this option will need to consider both the vertical and horizontal limitations associated with Church Street and the elevation changes along Allen's Plumbing supply.
- Concern was raised about the newer traffic signal improvements at Old Drive/Rimmon Street west of Church Street, and a question was raised if the western end of Old Drive/Rimmon Street could be shifted to align with Church and Beecher. Residents indicated that given the amount of traffic on Route 67 and the location between two traffic signals left turns from Church/Beecher onto Route 67 are often difficult and likely contribute to the reason vehicles use West Street to bypass this location. However, the ability to realign the intersections is limited by permitting, hydraulic, structural, and cost implications associated with the work that would be required for the existing Route 67 Little River bridge crossings. Those challenges appear to significantly outweigh the traffic improvements the realignment would provide.
- Suggestions were also made to consider converting Beecher Street from one way to two way. This would need to be assessed in relation to the on-street parking that is currently provided for the residences along the western side of Beecher Street.
- During the next phase of design, adjustments to the preferred alternative can be analyzed in relation to the public comments in order to provide the desired traffic improvements while minimizing the impacts to the current use of the public right-of-way.

Bank Street @ Klarides Village Plaza Driveway/Johnson Avenue

- Paul Lepezzo, a representative for McDonald's, expressed concern about the future ability of delivery trucks, which currently use the unsignalized driveway for access, to use the driveway if the island is installed. It was explained that the intent of the improvements at the driveway and on Route 67 is to provide adequate space for vehicles to turn left into the property but prevent/deter vehicles from turning left out of the property. Left-turning vehicles exiting the site, including trucks, will need to use the existing signalized shopping plaza entrance to the west. The existing on-site parking configuration and proposed island to deter left turns from the plaza can be analyzed during the next phase of design to accommodate the turning movements of delivery vehicles that need to use this entrance. Options such as but not limited to a raised but mountable island may be considered.
- At Johnson Avenue, the preferred alternative was generally accepted. The property owner at the southern end of Johnson Avenue (#20 Old Drive) complained about vehicles that currently use her driveway and property to turn around without permission. The preferred alternative, which includes a turnaround area and limits access to Route 67 to town and emergency vehicles only, would formalize through an easement or partial acquisition the activities that currently occur.

NAME	COMPANY	ADDRESS	EMAIL	PHONE	FAX
Michael Joyce	Milone & MacBroom, Inc.	99 Realty Drive, Cheshire CT 06410	mikej@miloneandmacbroom.com	203-271-1773	203-272-9733
Stanley Jachimowski		17 Sacko Drive, Seymour, CT 06483	Jachimowskicci@att.net		
Rich Grudzias		29 Rimmon Street, Seymour, CT 06483	grud84@att.net		
Chet Sobotka		14031 Monterra Avenue, Fontana, CA	chets5@aol.com		
Fred Stanek		481 Oxford Road, Oxford, CT (office)	fstanek@wtsblaw.com		
Devid Peck	E&S	87 Blackberry Hill, BF	djpeck830@att.net		
Elaine Bariluk	E&S	87 Blackberry Hill, BF	eb47@att.net		
Tom Gabianelli		69 West Street			
Alex Budzinski		109 River Street	housatonicwire@aol.com		
Gregory Omelchenko		20 Church Street		203-888-2856	
John Borgesano		20 Church Street	woosterborg@yahoo.com		
David A. Bitso		1 Meadow Woods Road, Seymour, CT		203-535-9797	
John Allen		145 Bank Street, Seymour, CT			
John Koerker		30 Emma Street	jkoerker@gmail.com		
Paul Carvalho		31 Elm Street	paulcarvalhojr@yahoo.com		

Michael Dion		20 Church Street, Seymour, CT	mjdio12@gmail.com		
Mark Solanch		47 Pershing Avenue (20 Church Street)	mark.solanch@att.net		
Cindy Dion		18 Carriage Drive	cidio12@gmail.com		
Jack Santore		49 William Street. Seymour, CT		203-924-7992	
Paul Lepezzo	McDonald's				
Michael Horbal	Michael H. Horbal Land Surveyors & Planners	52 Main Street, Seymour, CT		203-888-9660	
Gwyn Sussman		43 Church Street, Seymour, CT			
Bill Wareholik		106 West Street, Seymour, CT		203-982-1488	

INVITATION

TOWN OF SEYMOUR

BANK STREET (ROUTE 67) SPOT IMPROVEMENTS
STATE PROJECT NO. 124-165

PRELIMINARY ENGINEERING STUDY

NEIGHBORHOOD STAKEHOLDER MEETINGS

October 13th and October 15th, 2015
6:00 PM to 8:00 PM

The Town of Seymour (Town) and the Naugatuck Valley Council of Governments (NVCOG) have prepared a Preliminary Engineering Study for spot improvements along Bank Street (Route 67) from the Klarides Village shopping center, east to the Naugatuck River Bridge, including improvements to Johnson Avenue.

The Town and NVCOG hereby extend an invitation to the property owners and residents along and adjacent to the project corridor to attend one of two evening "workshop" meetings on October 13th and 15th at Town Hall to review and discuss the project, the improvements and related impacts in more detail with the Town, NVCOG and the engineer. These "workshop" meetings are being held in advance of a more formal public information meeting on October 19, 2015 (see attached Public Notice) when the project will be presented to the general public.

All meetings will be held in the Seymour Town Hall, Norma Drummer Room, 1 First Street, Seymour, Connecticut 06483. All persons interested in this project are encouraged to attend the public information meeting. Additional information from the preliminary engineering study will be provided to the public and residents at this meeting and will be made available on the Town's website.

Anyone interested in obtaining further information or providing input on this project may do so by contacting the Director of Economic Development, Rory Burke at 203-888-2511 or at rburke@seymourct.org

TOWN OF SEYMOUR

PUBLIC NOTICE

BANK STREET (ROUTE 67) SPOT IMPROVEMENTS
STATE PROJECT NO. 124-165

PRELIMINARY ENGINEERING STUDY
PUBLIC INFORMATION MEETING

The Naugatuck Valley Council of Governments (NVCOG) has prepared a Preliminary Engineering Study for spot improvements along Bank Street (Route 67) from the Klarides Village shopping center east to the Naugatuck River Bridge, in the Town of Seymour. The study includes a preliminary analysis of geometric and traffic signalization improvements along the corridor including but not limited to roadway widening, driveway access management at Klarides Village, realignment of the Bank Street/Church Street/Beecher Street intersection and potential closure of Johnson Avenue to through traffic.

It is the policy of the Town of Seymour, NVCOG and the State of Connecticut Department of Transportation (DOT) to keep persons informed and involved when such projects are undertaken. It is important that the community be informed and provide meaningful input to assist in the project's development. The Town of Seymour will hold a public informational meeting on October 19, 2015 at 6:00 pm in the Seymour Town Hall, Norma Drummer Room, 1 First Street, Seymour, Connecticut 06483. All persons interested in this project are encouraged to attend the public information meeting.

Anyone interested in obtaining further information or providing input on this project may do so by contacting the Director of Economic Development, Fred Messore at 203-463-3008 office or at fmessore@seymourct.org

RepublicanAmerican

389 Meadow Street • Waterbury, CT 06702 • 1-800-992-3232

Classified Advertising Proof

Account Number: R19342

Order Number: RA0692759

DANA FLACH
SEYMOUR, TOWN OF
FIRST SELECTMAN'S OFFICE
1 FIRST STREET
SEYMOUR, CT 06483
203-888-2511

Title: Republican-American | **Class:** L-Legal -Public Notice 019

Start date: 10/3/2015 | **Stop date:** 10/3/2015 |

Insertions: 1

Title: Rep-Am.com | **Class:** L-Legal -Public Notice 019

Start date: 10/3/2015 | **Stop date:** 10/3/2015 |

Insertions: 1

TOWN OF SEYMOUR
PUBLIC NOTICE
BANK STREET (ROUTE 67) SPOT
IMPROVEMENTS
STATE PROJECT NO. 124-165
PRELIMINARY ENGINEERING STUDY
PUBLIC INFORMATION MEETING

The Naugatuck Valley Council of Governments (NVCOG) has prepared a Preliminary Engineering Study for spot Improvements along Bank Street (Route 67) from the Klarides Village shopping center east to the Naugatuck River Bridge, in the Town of Seymour. The study includes a preliminary analysis of geometric and traffic signalization improvements along the corridor including but not limited to roadway widening, driveway access management at Klarides Village, realignment of the Bank Street/Church Street/Beecher Street Intersection and potential closure of Johnson Avenue to through traffic.

It is the policy of the Town of Seymour, NVCOG and the State of Connecticut Department of Transportation (DOT) to keep persons informed and involved when such projects are undertaken. It is important that the community be informed and provide meaningful input to assist in the project's development. The Town of Seymour will hold a public informational meeting on October 19, 2015 at 6:00 pm in the Seymour Town Hall, Norma Drummer Room, 1 First Street, Seymour, Connecticut 06483. All persons interested in this project are encouraged to attend the public information meeting.

Anyone interested in obtaining further information or providing input on this project may do so by contacting the Rory Burke, 203-888-2511; rburke@seymourct.org
RA-October 3, 2015

Total Order Price: \$141.52

Please call or send an email by 3pm to approve or to make changes.

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October 15, 2015

Mr. Roy Burke, Director of Economic Development
Town of Seymour
1 First Street
Seymour, Ct.

Re: Bank Street (Route 67) Spot Improvements
State Project No. 124-165

Dear Mr. Burke

The Russian American Club located on #20 Church Street, Seymour has reviewed Figure 6 of the Preliminary Engineering Study and submit the following comments :

1. The Russian American Club has been in business since 1938.
2. The Russian American Club has used the front area in question since 1938.
3. Without the front area we will be without an area for loading or unloading of goods.
4. The 8 parking spaces allow our more senior members easy access to the front of the Club.
5. We have donated to the town charities, parades and help out the local fire department with fund raising.
6. Without the loading, unloading and parking area, we will be unable to run our business leaving us without funding to donate
7. Without the area in question we will basically be out of business.

We the members of the Russian American Club urge the Town to carefully examine the benefits vs what it will do the Russian American Club as an Entity.

Very truly yours
John J Borgesano



RAC
Chairman: Building and Grounds

October 12, 2015

Mr. Rory Burke, Director of Economic Development
Town of Seymour
1 First Street
Seymour, CT 06483

Re: Bank St. (Route 67) Spot Improvements
State Project No. 124-165

Dear Mr. Burke:

The Russian American Citizens Club located at # 20 Church Street, Seymour has reviewed Figure 6 of the Preliminary Engineering Study and submit the following comments:

1. The Russian American Citizens Club (RA Club) currently has seventy four (74) members who actively support the club and the Town.
2. Annually, the Christmas Party, the St. Patrick's Day Party and various parties, birthday, anniversary, wedding, etc. are held in the hall. During these occasions it is not uncommon to have over 100 participants and 40 -50 cars and our parking is extremely limited.
3. The existing parking lot at the intersection of Church and Beecher Streets serves two important functions: (a.) to accommodate up to eight parking spaces for club members and their guests and (b.) to provide a loading area for delivery trucks.
4. Figure 6 proposed to take much of the parking area to allow Church Street to be revised to intersect with Beecher Street approximately 40 ft. south off the edge of Bank Street

Other than moving Church Street 20 ft. south and taking away much needed parking and loading space for the RA Club what does it do? Is there a high rate of accidents here? We don't think so.

In 1994 the Town undertook State Project No. 124-148 and listened to the concerns of the RA Club and did not take away any of its land or parking.

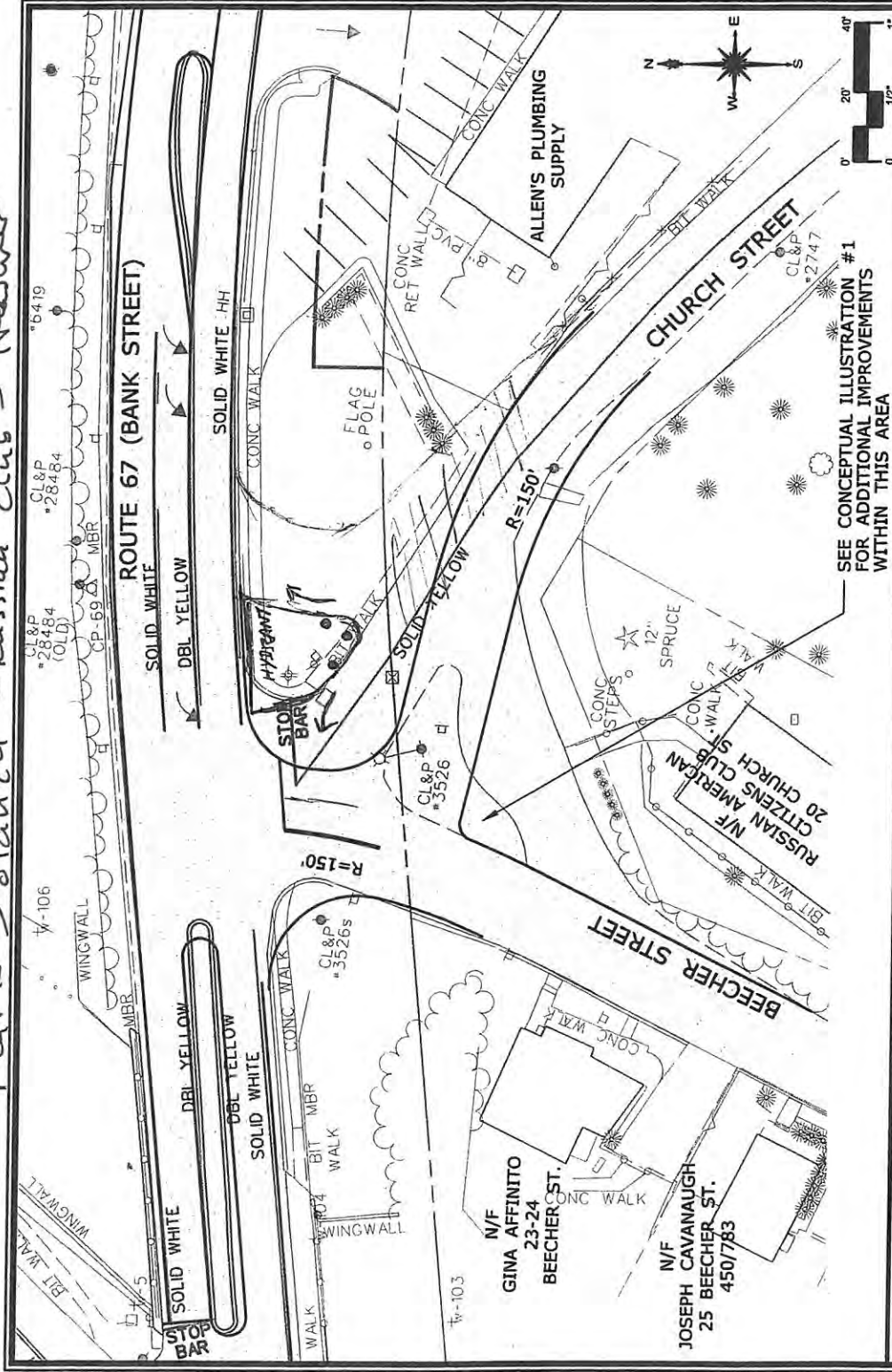
If constructed according to Figure 6, would cars still be able to enter the lot from Beecher St. and exit onto Church Street? If not, then delivery trucks would either have to back into the parking lot or back out of it onto Beecher Street causing a dangerous situation.

We, the RA Club members urge the Town to carefully examine the benefits of the design and eliminate it from the project.

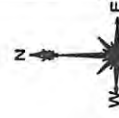
Very truly yours,

A handwritten signature in blue ink, appearing to read "Rory Burke", is written over a faint circular stamp.

Mark Solanch - Russian Club - Newer



SEE CONCEPTUAL ILLUSTRATION #1
FOR ADDITIONAL IMPROVEMENTS
WITHIN THIS AREA



MILONE & MACBROOM Engineering, Architecture and Environmental Science 99 Realty Drive Cheshire, Connecticut 06410 (203) 271-1773 Fax (203) 272-9733 www.miloneandmacbroom.com		DATE: OCTOBER 2015 SCALE: 1"=40' PROJ. NO.: 3211-02 DESIGNED: DP DRAWN: SMB CHECKED: TC	PROJECT PHASE: PRELIMINARY ENG. DRAWING NAME: FIG. 6
CHURCH STREET & BEECHER STREET - ALTERNATE 1 - PREFERRED ROUTE 67 (BANK STREET) SPOT IMPROVEMENTS		SEYMOUR, CONNECTICUT	

FIFTH PIECE:

Consisting of such rights as The James Swan Company may have had in and to a private road known as Mill Street running Westerly from the Westerly line of the third piece hereinbefore described.

EASTERLY : by the third piece hereinbefore described, 27-1/2 feet;

SOUTHERLY : by land now or formerly of Ida Swan and land now or formerly of State of Connecticut, 274 feet, more or less;

NORTHWESTERLY : by state highway Route No. 67 taking line, 60 feet, more or less; and

NORTHERLY : by other land now or formerly of Ida Swan, 209.27 feet.

Said piece of land being formerly used as a private roadway by The James Swan Company and others.

SIXTH PIECE:

Being a small piece, more or less triangular in shape.

NORTHEASTERLY : by Church Street;

SOUTHERLY : by a drive which runs along land now or formerly occupied by the Russian-Hall, so-called;

NORTHWESTERLY : by Beecher Street; and

NORTHERLY : by State Highway Route No. 67, the last line being 23 feet, more or less, in length.

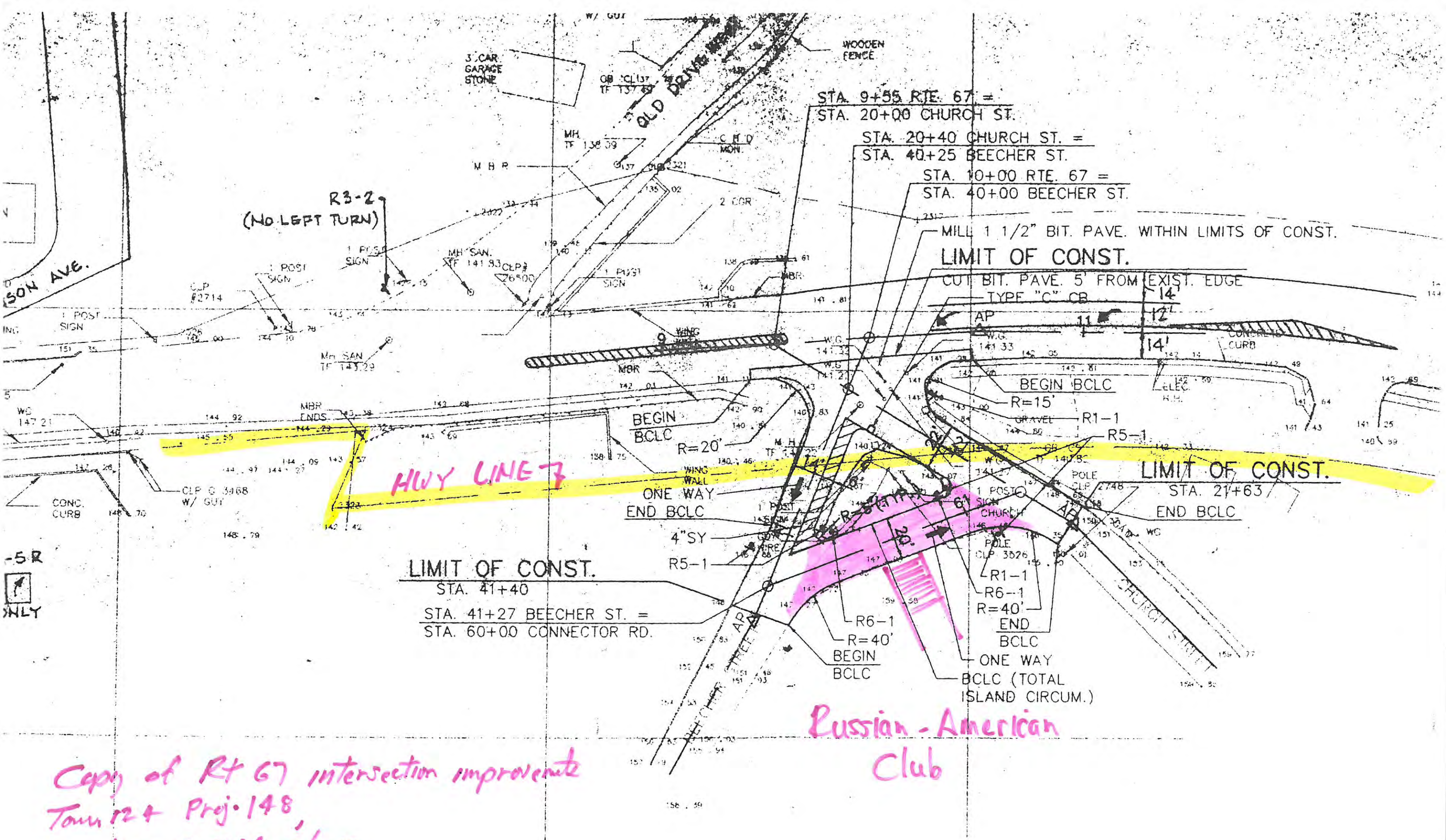
Said premises being a portion of the third piece described in the deed from the Estate of Frank H. Beecher recorded in said land records, in Volume 24 on Page 87.

Said piece is subject to such rights as may exist, if any, concerning the placing and maintenance of a pole thereon as set forth in said conveyance from The James Swan Company to The United Electric Light and Water Company above mentioned.

SEVENTH PIECE:

Being a small piece of land largely covered by Little River, lying Southwesterly from the Southwesterly face of the old iron bridge hereinbefore mentioned and extending as far as the North-easterly face of the dam known as the Beecher Dam, and being a portion of the second piece in said deed from the Estate of Frank H. Beecher recorded in Volume 24 on Page 87.

Commencing at the Southwesterly corner of said old iron bridge which formerly led to Church Street from Bank Street; thence Northwesterly along the Southwesterly side of said bridge, 49 feet, more or less, to Bank Street;



Copy of Rt 67 intersection improvements
 Town 124 Proj. 148,
 June 8, 1984 release

Mike Joyce

From: Mike Joyce
Sent: Wednesday, December 02, 2015 8:23 AM
To: 'timasilva@netzero.net'
Subject: Route 67 - Bank Street - Spot Improvements - Seymour
Attachments: Final-PIM-brochure.pdf

Ms. Silva,

Please find attached the public information meeting brochure for the Route 67 (Bank street) spot improvements project.

I've also provided a link below which provide more information about the project.

<http://nvcogct.org/publication/route-67-preliminary-engineering-study>

Please do not hesitate to contact our office with any questions.

Thank you,

Michael J. Joyce, P.E., Associate

Manager of Highway Design



MILONE & MACBROOM®

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203.271.1773 Ext. 205 / 203.272.9733 (Fax)

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