



TOWN OF GREENFIELD
COMPLETE STREETS PRIORITIZATION PLAN
SUMMER 2017





ACKNOWLEDGEMENTS

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PART I

INTRODUCTION

The Town of Greenfield officially adopted a town-wide Complete Streets policy in early 2016. This was the first step necessary to apply for MassDOT Complete Streets grant money. The Town retained Alta Planning + Design with Watson Active to provide technical assistance to analyze the needs of the community and develop a Complete Streets Prioritization plan. This report summarizes the 6-month effort undertaken to develop a comprehensive Complete Streets Prioritization plan for the town.

Once adopted, the projects identified in this report will be those that the Town seeks implementation funding during the next MassDOT application cycle that begins September 1st, 2017.

PROJECT PRIORITIZATION

The consultants developed an extensive list of project ideas by:

- Hosting two public forums and inviting input from meeting attendees
- Taking project ideas via email from community members
- Conducting field work within Greenfield to understand opportunities and challenges to implementing projects
- Reviewing existing planning documents*:
 - Franklin County Complete Streets Project (2012 + 2014)
 - CDBG Priority Projects (2015)
 - Most Hazardous Intersections in Franklin County (2011 - 2013)
 - Water Master Plan Update
 - UrbanRiver Visions Greenfield Action Plan (2007)
 - Sustainable Greenfield (2014)
 - Streetscape Enhancement and Ecological Parking Lot Design (2012)
 - Greenfield Downtown Master Plan (2003)
 - Community Branding & Wayfinding Program (2015)
 - Transportation Improvement Program for Franklin Region (2016)
 - Franklin County Regional Transportation Plan (2015)
 - Franklin County Bikeway Plan Update (2009)
 - Regional Transportation Equity Analysis for Franklin County (2015)
 - Hillside Neighborhood Revitalization Plan (2008)
 - Open Spaces and Recreation Plan (2012)
 - Greenfield Renaissance Report (2009)

The wide variety of project sources resulted in a robust projects list, which was then scored using a set of criteria that included six primary goals (see box on page 6.) The maximum score available was 24 points. Each project that scored above 19 was designated a high scoring project. This list was further analyzed by the consultants and Greenfield Town staff to determine a list of projects that would be highly likely to receive funding during the MassDOT review process. The critical considerations during this process were to ensure that the list of projects included improvements to both the bicycle and pedestrian safety and connectivity around Greenfield, and that the projects would benefit a wide range of users encompassing all ages and abilities.

PUBLIC FORUMS

At the first public forum, project ideas were solicited and opportunities and constraints were discussed. At the second public forum, the high scoring projects list was presented to the public, and any missing project ideas were solicited from the public. Following the second public meeting, the consultants and the Town of Greenfield together came up with a list of five high priority projects to be studied in further detail.



Attendees at public forum one were tasked with drawing on maps to show where gaps in the sidewalk and bicycle network exist

*See appendix for review of existing documents report.



COMPLETE STREETS TOOLBOX

Infrastructure that enables the safety of cyclists and pedestrians is a key feature of the recommendations section of this report. Low-cost, context-sensitive retrofits can enable safety improvements to an area pending a more robust or significant future redesign, and can encourage would-be cyclists to try out the new facility.

BICYCLE

Shared Use Path



The addition of off-street shared use paths that connect to the existing Greenfield Bike Path will connect neighborhoods. Shared use paths are the safest and most desirable facility type for bicyclists.

Traditional Bike Lane



Bike lanes designate an exclusive space for bicycles through the use of pavement markings and signage. Bike lanes are typically located adjacent to motor vehicle traffic and travel in the same direction as motor vehicles.

Parking Protected Bike Lane



These bikeways are at street-level and use a variety of methods for physical protection from passing traffic.

PEDESTRIAN

Curb Extension / RRFB*



Curb extensions shorten crossing distance for pedestrians and increase sight lines for motorists by reducing parked car obstacles near crosswalks. Rectangular Rapid Flashing Beacons are optional additions that increase motor vehicle yielding.

Raised Crosswalk



Mobility-impaired individuals have an easier time crossing due to the smaller change in grade when compared with street-level crosswalks.

Green Infrastructure



Stormwater cleansing street tree pits within the pedestrian environment reduces levels of pollutants downstream and enhances the aesthetic of the streetscape, contributing to a sense of place.

TRAFFIC CALMING

Pedestrian Refuge Island



Pedestrian refuge islands limit pedestrian exposure in an intersection and create a two-stage crossing, which is safer for pedestrians of all ages and abilities. They act as visual pinch-points which calms traffic.

Neckdown



Neck downs are typically aligned at the beginning or entrance to a residential side street. Neck downs may be appropriate along typically low-volume streets that experience a high amount of commuter cut-throughs at peak times.

Diverter



Traffic diverters reduce commuter cut-through volumes on residential streets and encourage bicycling by allowing bicycles to enter.

*http://bloomington.in.gov/documents/viewDocument.php?document_id=7158



COMPLETE STREETS TOOLBOX - BICYCLE BOULEVARD

A bicycle boulevard is a recommendation for a range of bicycle improvements for streets that are typically; local residential, relatively low traffic volumes and speed, and run parallel to a busier roadway. Bicycle boulevard treatments are context-sensitive retrofits to achieve the desired goal of increasing bicycle and pedestrian use by reducing traffic volume and/or reducing traffic speed.

Enhanced Sharrows



Enhanced SLMs encourage cyclists to travel away from the door-zone of parked vehicles. These symbols highlight the fact that the roadway is a shared space, and should be coupled with “Bikes May Use Full Lane” signs (MUTCD R4-11). Enhanced Sharrows provide extra awareness to motorists due to the dashed lane lines.

Green-Backed Sharrow



The addition of green paint on the roadway signifies a potential conflict point. Bicycles conflict with motor vehicles at intersections and driveways where a turning movement forces a motor vehicle to cross the path of a bicycle. When striping, 150 foot spacing is ideal.

Chicane



Chicanes deflect vehicles and reduce mid-block speeds by discouraging rapid acceleration.

PROJECT MAPS

The following pages display a variety of map graphics that showcase the steps taken to narrow down the number of projects that Greenfield will ultimately apply for MassDOT Complete Streets Tier 3 funding. The resulting map graphics include:

Opportunities + Challenges

Prior to identifying potential projects, an opportunities and challenges exercise was completed. The consultants conducted field work and solicited input from the community seeking location of missing links within the existing walk and bicycling network. Additionally, input regarding locations of requested improvements were sought as well to inform the project decision making process. This exercise resulted in many project ideas.

All Project Maps

The all project maps show each of the 100+ projects identified in the early stages of the Complete Streets prioritization process (see Appendix for maps and complete project list). The projects are represented by various line types and icons found in the legend at the bottom of each map. These maps generated a useful visual documentation of proposed projects to ensure equal geographic

dispersal of Complete Streets funds. The All Projects Maps set the stage for the second public forum to gather additional insight into ideas that had been previously overlooked, or projects that are infeasible due to space constraints or other obstacles.

Priority Project Maps

The priority project maps display each of the 15 projects that achieved a high score during the prioritization process. These maps contain the projects that were presented at the public forum as the projects that will seek funding via the upcoming MassDOT Tier 3 funding application (deadline: September 1st).

Concept Graphics Map

The concept graphics map contains only the five projects at the highest priority level. A detailed cost estimate and concept graphics accompany the six highest priority projects within this report.



Width of Colrain St from GCC roundabout to Mohawk trail intersection allows for on-street bike treatment

No sidewalk from residential neighborhood to central destinations & schools

No sidewalk from Turners Falls to Greenfield destinations

Ledge along south east side suitable for sidewalk construction (may require utility pole relocation)

4' shoulders offer opportunity for on-street bicycle improvements

Sidewalk gap to major retail destinations

Uncomfortable crosswalk geometry

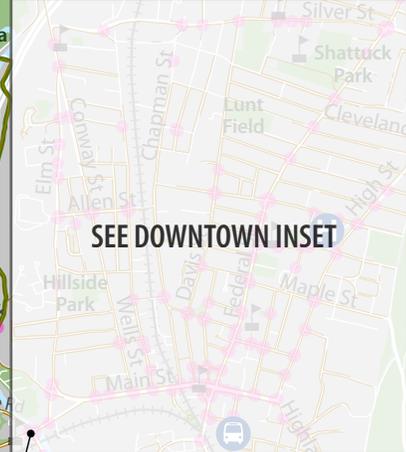
Tight bridge crossing

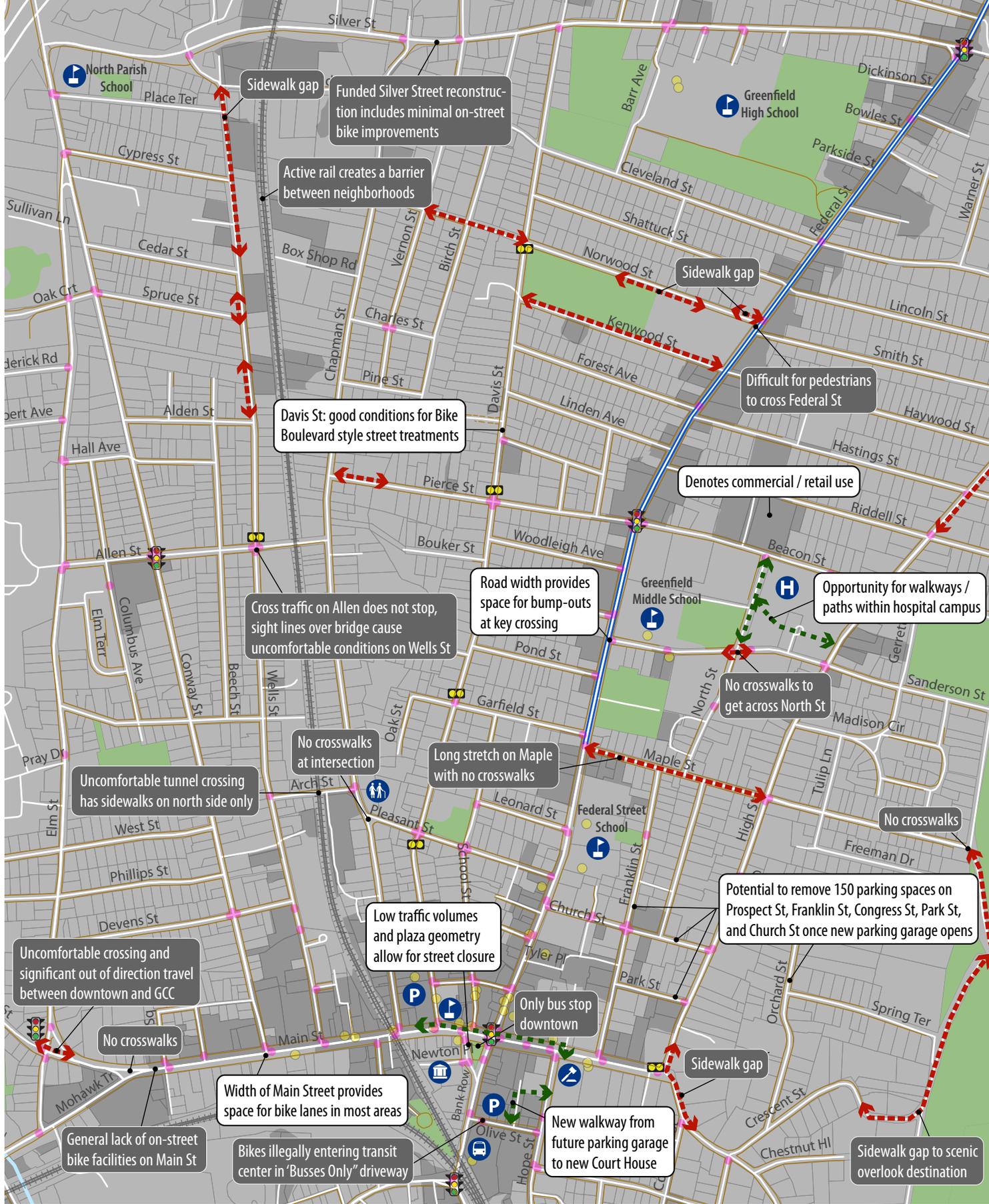
Narrow sidewalk has pinch points between retaining wall and utility poles

Sidewalk gap

Poor connections from Canalside Trail to Greenfield

Large gaps in sidewalk network from residential neighborhood to Center School





EXISTING CONDITIONS		POINTS OF INTEREST		OPPORTUNITIES + CHALLENGES	
	Designated Recreational Bike Route (FRCOG)		School		Explanation of Challenge
	Bus Route		Hospital		Linear / Corridor Gap
	Crosswalk		Senior Housing		Explanation of Opportunity
	Sidewalk		Parking		Linear / Corridor Opportunity
	Railroad Line		Town Hall		
	Bike Parking		Bus Stop		
			Court House		



PROJECT RECOMMENDATIONS

Approximately 100 projects were identified through the processes described on the previous section. The following pages display map graphics that show the projects using stylized lines and icons. The projects were determined to be suitable based on the following project criteria list provided by the MassDOT Complete Streets funding application document:

Traffic + Safety:

- Street lighting
- Traffic calming measures
- Intersection improvements
- Pedestrian signal timing
- Pavement markings or signage that provides guidance for alternative modes
- Addition of or widening shoulders
- Additional regulatory signing
- Curbing

Transit Facilities:

- Improving transit connections for pedestrians
- Transit signal prioritization
- Bus pull-out areas
- Railroad grade crossings improvements (signs, flange way fill, etc.)
- Transit-only or Transit Contra-flow lanes
- Transit shelters

Bicycle Facilities:

- New shared use paths or improvement of shared use paths (non-safety related)
- Designated bicycle lanes / Separated bike lane / Bike boulevards
- Shared lane (sharrows)
- Advance stop facilities (bike box, two-stage turn)
- Bicycle parking on-street, at transit or other locations
- Provide bicycle-safe drainage grates
- Elimination of hazardous conditions on shared use paths
- Bicycle wayfinding signs / Bike route signs

Pedestrian Facilities:

- New sidewalks or sidewalk widening or repairs
- New or improved crossing treatments at intersections, midblock
- ADA/AAB compliant curb ramps
- Pedestrian buffer zones
- Pedestrian refuge islands
- Curb extensions at pedestrian crossings
- Crosswalks
- Accessible pedestrian signals
- Detectable warning surfaces
- Pedestrian wayfinding signs

Raised Pedestrian Crossing



Pedestrian Plaza



Shared Lane Markings



Separated Bike Lane



Curb Extension



Pedestrian Refuge Island



Small Transit Shelter



Transit Shelter





PROJECT LIST

A final list of 15 projects was developed by scoring each of the original 100+ projects identified as the first part of the Complete Streets prioritization process (see Appendix for complete projects list). The Prioritization Criteria in the box at right was used to develop the 15 projects that are highly likely to receive MassDOT Complete Streets funding following the submission of the grant application document.

The five projects high-lighted in the table below indicate that they are Concept Projects -- and have further detail with supporting graphics in the following section in this report.

NOTE: The projects in the following list are organized alphabetically by street name, and numbered for clarity when referencing the maps graphics. However, the following cost estimate includes the order in which the projects were ranked by the Town within the MassDOT Tier II Prioritization funding submission document.

Prioritization Criteria

- 1 Safety:** Project provides a significant safety improvement for all users
- 2 Connectivity:** Project improves connections to existing sidewalks, trails, bike lanes, residential neighborhoods, and downtown
- 3 Transit Linkage:** Project provides link to transit centers and bus stops
- 4 Impact to Vehicular and Freight Operations:** Project does not seriously limit roadway access for motor vehicles and trucks
- 5 Proximity to Schools:** Project lies within one quarter mile of a school
- 6 Community Support:** Project is supported by >1 person at a public forum or on web site

#	Type	Mass DOT	Street Name	Extents	Project Description	Reasoning
1	On street bike facility	B2, B8, S1	Allen	From Elm Street to Chapman Street.	Stripe bike lanes (or shared lane markings where the roadway width is <30 feet.)	Allen St is an important east-west connection and currently has fast-moving motor vehicle traffic with short sight lines due to the railroad bridge.
2	Sidewalk	P1, P5	<i>See box to right.</i>	Chapman Street (east side, from Silver to Norwood) Cleveland Street (South side, from Chapman to Davis) Birch Street (west side, from Silver to Cleveland, includes removal of sidewalk from 45 - 90 Birch Street) Vernon Street (West side, from Silver to Norwood) Norwood Street (South side, from Birch to Federal).	Fill in gaps in sidewalk network in this neighborhood just west of Greenfield High School.	Incomplete sidewalk network in this neighborhood that is often used by students walking to school.
3	Traffic calming	P8, S17, P9	Bank Row	Between Court Square and Olive Street.	Install curb extensions with street trees at the area between the fire hydrant adjacent to Reds Barber Shop and the two parallel parking spaces between Mohawk Office Equipment and Manna House Restaurant. Stripe new crosswalk at this location. Install additional curb extensions with street trees opposite existing curb extension at Olive St. crosswalk. See Concept Project B.	This crosswalk already has a small bump-out on the east side, however this bump out does little to shorten the crossing distance or slow traffic traveling south on Bank row from Main St.
4	On street bike facility	B2, B8, B13	Beacon, Pierce	From Chapman Street to Parkway Street.	Stripe bike lanes and sharrows at intersection approaches.	This is an important east-west bike connection and there are currently no bicycle facilities on this stretch.
5	Sidepath	P5, B10	Colrain Road	From College Drive roundabout to the Mohawk Trail.	Narrow roadway, and utilize space gained to construct new 10' wide asphalt sidepath on west side of roadway. Utilize College Drive design. See Concept Project E.	Need to improve pedestrian and bicycle access from the commercial area on the Mohawk Trail to Greenfield Community College.



#	Type	Mass DOT	Street Name	Extents	Project Description	Reasoning
6	On street bike facility, Sidepath, Crosswalk	B2, B8, B10, P9, S1	Colrain Street	From Main Street to the roundabout at Colrain Road.	Striped bike lanes, shared lane markings. Construct new sidepath and crosswalk.	Need to improve bicycle access from Main Street to Greenfield Community College.
7	On street bike facility	B2, S1, S17	Conway	From Nash's Mill Road to Main Street.	Stripe bike lanes. Consider adding 4-way stops at the following intersections: Spruce St, Grove St, and Devens St.	This is an important north-south corridor and represents one of the most comfortable crossings of I-91 for many Greenfield residents. This roadway includes heavily traveled pedestrian and bicycle routes, with access to green river Swimming and Recreation Area and Riverside Greenway. The intersections of Conway St at Allen St, Devens St, and at Hayes St represent three of the top 50 Most Hazardous Intersections in Franklin County, FRCOG, 2011-2013.
8	Bike boulevard	B6, P8, S1, S17	Davis	From Silver Street to Main Street.	Construct bike-boulevard style treatment on Davis Street. Consider adding 4-way stops at the following intersections: Norwood, Pierce, Walnut / Pond, and Pleasant. In conjunction with new street tree installation by Berkshire Gas, install trees on opposite side of Davis Street. See Concept Project C.	Establishing this important north-south connection as a comfortable alternative to Federal Street will encourage more widespread use of cycling for commuting and errands and fill a key gap in the existing bicycle network.
9	Bike path connector	B10, B0, P0	Greenfield Bike Trail - Elm Street	From the intersection of Elm Terrace and Elm street, through the existing break in the fence between the Franklin County Jail and the private residence at 150 Elm Street, through to the Greenfield bike path.	Construct paved bike path connection.	Desirable bicycle and pedestrian connection to Greenfield bike path location.
10	Bike boulevard	B6, S17	Hope	Entire extent.	Construct bike-boulevard style treatment on Hope Street.	Significant increase of motor vehicle volume due to construction of new courthouse. This is an important north-south corridor for bikes and represents a comfortable alternative for north-south travelling bikes to avoid the Bank Row at Mill St. underpass.
11	Sidewalk	P5	Laurel	From Buckley HealthCare Center to existing sidewalk terminus at 22 Laurel Street.	Extend sidewalk from existing terminus on Laurel to Buckley Healthcare Center.	Enhanced pedestrian safety and comfort.
12	Sidewalk	P5	Leyden Road	From Silver at Conway to Leyden Woods Lane.	Construct new sidewalk on west side of Leyden Rd. Copy layout of existing asphalt sidewalk / path on College Drive between GCC and roundabout. Additional option*: rebuild Nash's Mill Rd at Leyden Rd intersection to include new pedestrian refuge island, decreased turning radii, and ADA compliant curb ramps. *Not included in cost estimate. See Concept Project D.	Leyden Road is used by pedestrians and there are no pedestrian facilities. Crashes have occurred due to the lack of adequate pedestrian facilities.
13	On street bike facility	B2, B8, S1	Main Street / 2A	From Shelburne at River Street to High Street.	Stripe mix of bike lanes and parking protected bike lanes where space allows. *Includes MassDOT bridge. See Concept Project A.	Critical bike connection through downtown Greenfield with access to businesses and other institutions.
14	On street bike facility	B2, S17	River and Mill	Entire extents.	Narrow travel lanes to 11' and stripe bike lanes.	Enhanced cyclist safety and comfort.
15	Sidewalk	P5	Wells	From Alden to Cedar, and from Cedar to Silver.	Fill in partial gaps in the sidewalk network on west side of Wells Street.	Pedestrian demand and safety. Proximity to residential neighborhood.



Opinion of Probable Cost

Rank	Item	Quantity	Unit	Unit Cost	Item Total
1	On Street Bike Facility, Allen Street				
	Striped bike lanes	2,628	LF	\$ 3.34	\$ 8,779.91
	Shared lane markings	988	LF	\$ 4.05	\$ 4,001.40
	Overhead and contingency			35%	\$ 4,473.46
	Construction Total				\$ 17,254.77
2	On-street Bicycle Facility, Beacon & Pierce				
	Striped bike lanes	7,708	LF	\$ 3.34	\$ 25,751.73
	Shared lane markings	354	LF	\$ 4.05	\$ 1,433.70
	Overhead and contingency			35%	\$ 9,514.90
	Construction Total				\$ 36,700.33
3	Sidewalk, Chapman St & others				
	Concrete sidewalks	4,329	LF	\$ 77.00	\$ 333,333.00
	Overhead and contingency			35%	\$ 116,666.55
	Construction Total				\$ 449,999.55
4	Sidewalk, Wells St.				
	Concrete sidewalk	2,587	LF	\$ 77.00	\$ 199,199.00
	Overhead and contingency			35%	\$ 69,719.65
	Construction Total				\$ 268,918.65
5	On-Street Bike Facility, Conway St.				
	Stop-sign assembly	4	EA	\$ 500.00	\$ 2,000.00
	Striped bike lanes	15,416	LF	\$ 3.34	\$ 51,503.45
	Overhead and contingency			35%	\$ 18,726.21
	Construction Total				\$ 72,229.66
6	On-Street Bike Facility, Davis St.				
	Marked shared lanes with signage	6,864	LF	\$ 11.19	\$ 76,808.16
	Curb extensions: 12, each 6' x 25'				
	Concrete sidewalks	3,300	SF	\$ 15.40	\$ 50,820.00
	Granite curb	340	LF	\$ 74.00	\$ 25,145.20
	Stop-sign assembly	4	EA	\$ 500.00	\$ 2,000.00
	Street trees	150	EA	\$ 900.00	\$ 135,000.00
	Overhead and contingency			35%	\$ 101,420.68
	Construction Total				\$ 391,194.04
7	Sidewalk, Laurel St.				
	Concrete sidewalk	1,300	LF	\$ 77.00	\$ 100,100.00
	Overhead and contingency			35%	\$ 35,035.00
	Construction Total				\$ 135,135.00
8	On-Street Bicycle Facility, River & Mill Sts.				
	Striped bike lanes	8,184	LF	\$ 3.34	\$ 27,342.00
	Overhead and contingency			35%	\$ 9,569.70
	Construction Total				\$ 36,911.70



9	Traffic Calming, Bank Row					
	Curb extensions	1,206	SF	\$ 15.40	\$	18,572.40
	Granite curb	174	LF	\$ 74.00	\$	12,876.00
	Street trees	5	EA	\$ 900.00	\$	4,500.00
	Crosswalk striping	68	LF	\$ 9.66	\$	656.88
	Overhead and contingency			35%	\$	12,811.85
	Construction Total				\$	49,417.13
10	On-Street Bicycle Facility, Hope St.					
	Marked shared lanes with signage	7,286	LF	\$ 11.19	\$	81,530.34
	Overhead and contingency			35%	\$	28,535.62
	Construction Total				\$	110,065.96
11a	On-Street Bicycle Facility, Main St./ Route 2A - Option 1					
	Remove double yellow line	4,804	SF	\$ 1.50	\$	7,206.00
	Remove angled parking lines - south side	3,843	SF	\$ 1.50	\$	5,764.80
	Restripe double yellow center line	9,608	LF	\$ 1.00	\$	9,608.00
	Stripe parallel parking lines - south side	1,922	LF	\$ 1.00	\$	1,921.60
	Stripe bike lane and buffer lines - north side	9,608	LF	\$ 1.00	\$	9,608.00
	Stripe bike lane and buffer lines - south side	9,608	LF	\$ 1.00	\$	9,608.00
	Green backed sharrow	24	EA	\$ 500.00	\$	12,000.00
	Bike lane markings (5'x8' stencil every 150')	2,562	SF	\$ 3.00	\$	7,686.40
	Overhead and contingency			35%	\$	22,190.98
	Construction Total				\$	85,593.78
11b	On-Street Bicycle Facility, Main St./ Route 2A - Option 2					
	Remove double yellow line	4,804	SF	\$ 1.50	\$	7,206.00
	Remove angled parking lines - south side	3,843	SF	\$ 1.50	\$	5,764.80
	Remove angled parking lines - north side	3,843	SF	\$ 1.50	\$	5,764.80
	Restripe double yellow center line	9,608	LF	\$ 1.00	\$	9,608.00
	Stripe parallel parking lines - south side	1,922	LF	\$ 1.00	\$	1,921.60
	Stripe angled parking lines - north side	7,686	LF	\$ 1.00	\$	7,686.40
	Stripe bike lane and buffer lines - north side	9,608	LF	\$ 1.00	\$	9,608.00
	Stripe bike lane and buffer lines - south side	9,608	LF	\$ 1.00	\$	9,608.00
	Bike lane markings (5'x8' stencil every 150')	2,562	SF	\$ 3.00	\$	7,686.40
	Overhead and contingency			35%	\$	22,698.90
	Construction Total				\$	87,552.90
12	Sidewalk, Leyden Rd.					
	Asphalt sidewalk	4,693	LF	\$ 54.00	\$	253,422.00
	Overhead and contingency			35%	\$	88,697.70
	Construction Total				\$	342,119.70
13	On-Street Bicycle Facility, Colrain St.					
	Striped bike lanes	3,590	LF	\$ 3.34	\$	11,993.86
	Shared lane markings	3,380	LF	\$ 4.05	\$	13,689.00
	Asphalt sidepath	1,690	LF	\$ 70.00	\$	118,300.00
	Crosswalk striping	30	LF	\$ 9.66	\$	289.80
	Overhead and contingency			35%	\$	50,495.43
	Construction Total				\$	194,768.10

**14 Bicycle Facility, Greenfield Bike Trail**

Paved bike path	1,367	LF	\$ 84.00	\$ 114,828.00
Overhead and contingency			35%	\$ 40,189.80
Construction Total				\$ 155,017.80

15 Sidepath, Colrain Rd.

Asphalt sidepath	2,940	LF	\$ 70.00	\$ 205,800.00
Overhead and contingency			35%	\$ 72,030.00
Construction Total				\$ 277,830.00

Program Construction Total (including overhead and contingency) \$ 2,625,115.28

Design Costs:

Development of construction documents:	6%	\$ 157,506.92
Construction administration and inspection:	4%	\$ 105,004.61
Permitting:	1%	\$ 26,251.15
Public process:	1%	\$ 26,251.15
Survey:	2%	\$ 52,502.31
Total		\$ 367,516.14

(not reflected in Program Construction Total)

Contingency and Overhead:

Construction general conditions and overhead:*	10%
Design contingency:	25%
Total	35%

Design Costs:

Development of construction documents:	8%
Construction administration and inspection:	4%
Permitting:	2%
Public process:	2%
Total	16%

*Traffic mgmt., mob/demob, trailer & facilities, etc.

*Adjustment for scope, existing conditions, etc.

Colrain

Leyden

Millbrook Aquifer Protection Area

Griswold Wildlife Sanctuary

Barton Road

Town Of Greenfield Farm

Farm Rd

Country Club of Greenfield

Country Club Rd

Greenfield

FALL RIVER

burne

Leyden Woods

12. Construct new sidewalk with optional intersection rebuild: See Concept Project D

Connecticut River Greenway State Park

Green River Swimming Area

2

Greenfield Community College

SEE DOWNTOWN INSET

5. Construct 10' asphalt sidepath: See Concept Project E

6. Stripe bike lanes, shared lane markings, and 10' asphalt sidepath

2

2

Canalside Trail

Turners Falls

11. Construct new sidewalk

14. Stripe bike lanes

10. Bike Boulevard treatment

Turnpike Rd

Rocky Mountain Park

Montague

Deerfield

Peffer Farm

5

Connecticut River Greenway State Park

PRIORITY PROJECTS MAP: TOWN WIDE

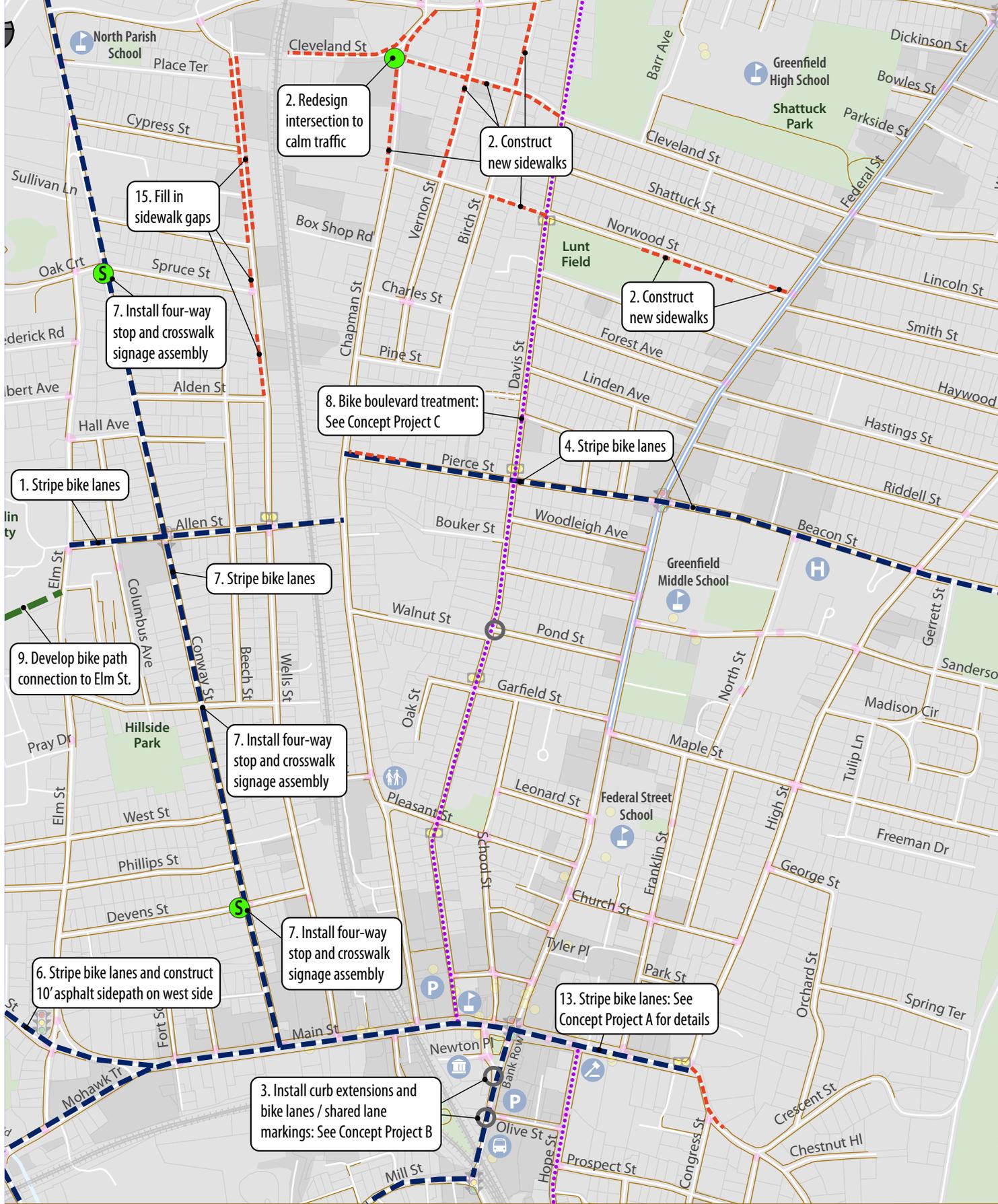
RECOMMENDED PROJECTS

- Shared Use Path
- Bike Lanes or Bikeable Shoulder
- Traffic Calming Elements
- Bike Boulevard Treatment (Shared Lane Markings, Signage, and Traffic Calming)

- Sidewalk
- Walkable Shoulder / Flush Sidewalk
- Intersection Improvement
- New/Improved Crosswalk

- New/Improved Crosswalk Signage
- Bus Stop / Signage
- Street Lighting

The following page displays the Downtown Inset map graphic, which contains additional projects.



RECOMMENDED PROJECTS

- Shared Use Path
- Bike Lanes or Bikeable Shoulder
- Traffic Calming Elements
- Bike Boulevard Treatment (Shared Lane Markings, Signage, and Traffic Calming)

- Sidewalk
- Walkable Shoulder / Flush Sidewalk
- Intersection Improvement
- New/Improved Crosswalk

- New/Improved Crosswalk Signage
- Bus Stop / Signage
- Street Lighting



PART II

CONCEPT PROJECT GRAPHICS

The internal working group together with the consultants identified the five highest priority projects to develop in further detail. The following pages showcase each project and the potential options or variations to each project, given existing roadway widths, traffic conditions, and other factors. The options graphics were reviewed by the internal working group to ensure both that they were fully eligible for MassDOT Complete Streets project funding, and that if funded, the project could be successfully implemented to make Greenfield's streets safer for all modes of travel.

A. Main Street



B. Bank Row



C. Davis Street



D. Leyden Road at Nash's Mill Rd.



Image: Bing Maps

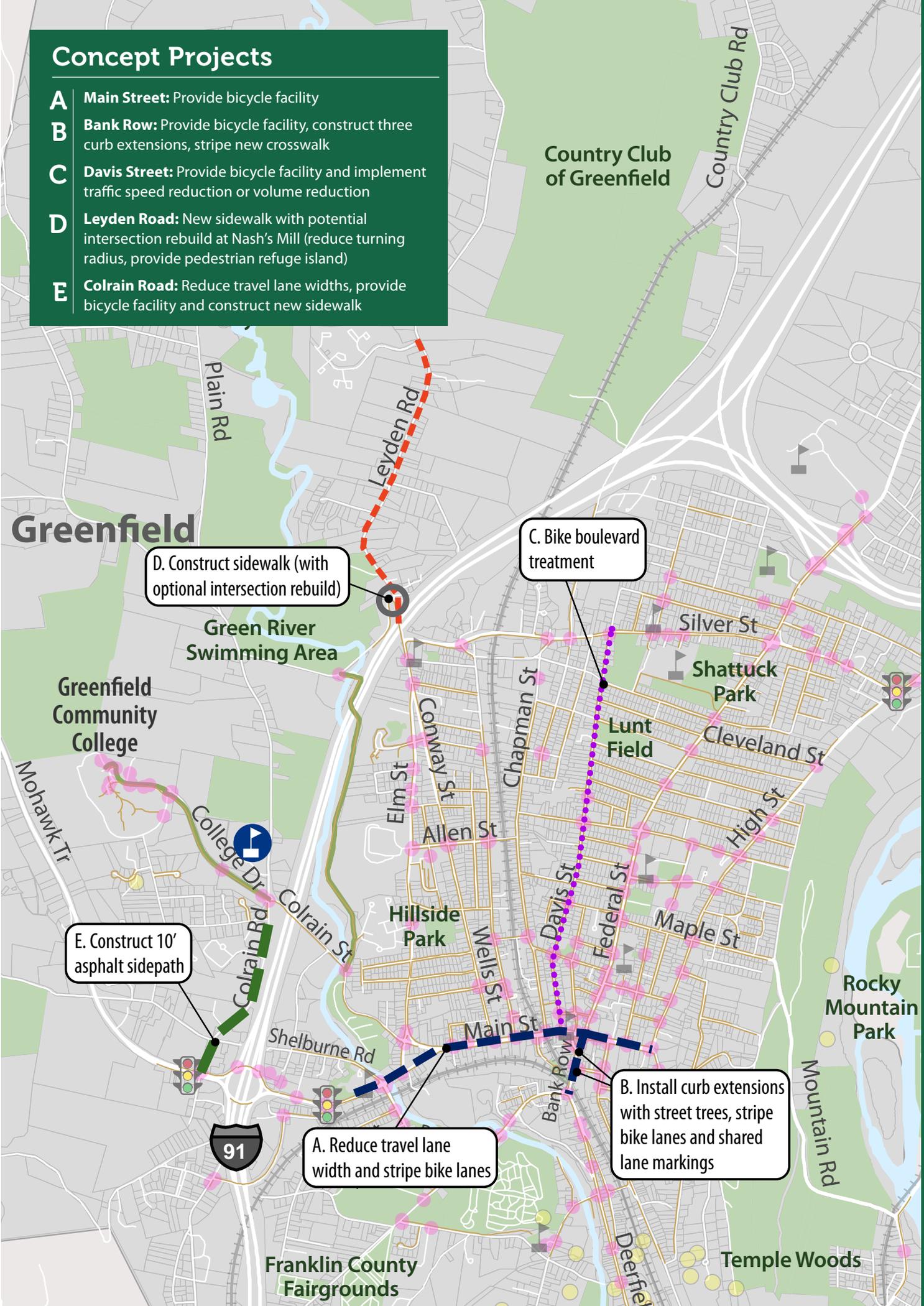
E. Colrain Road



Image: Google Maps

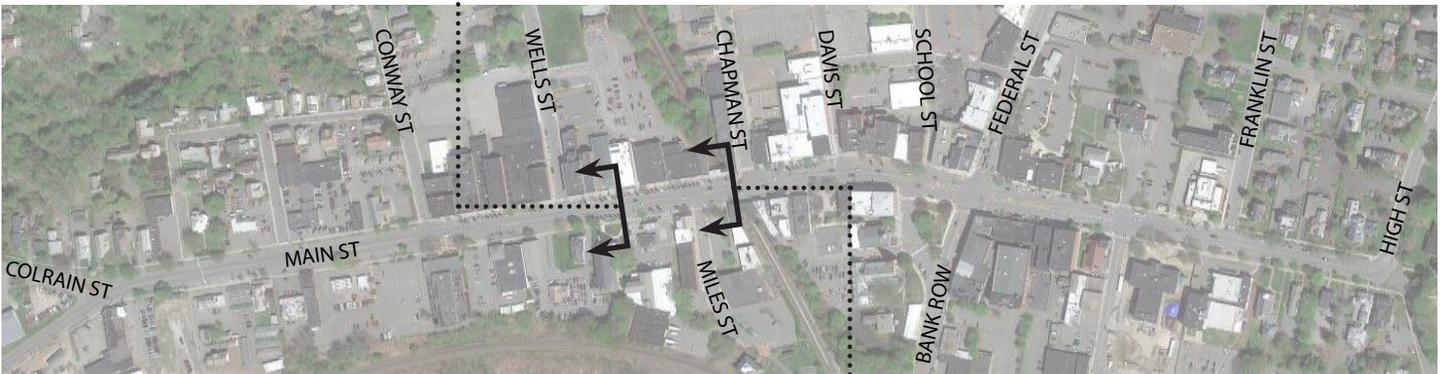
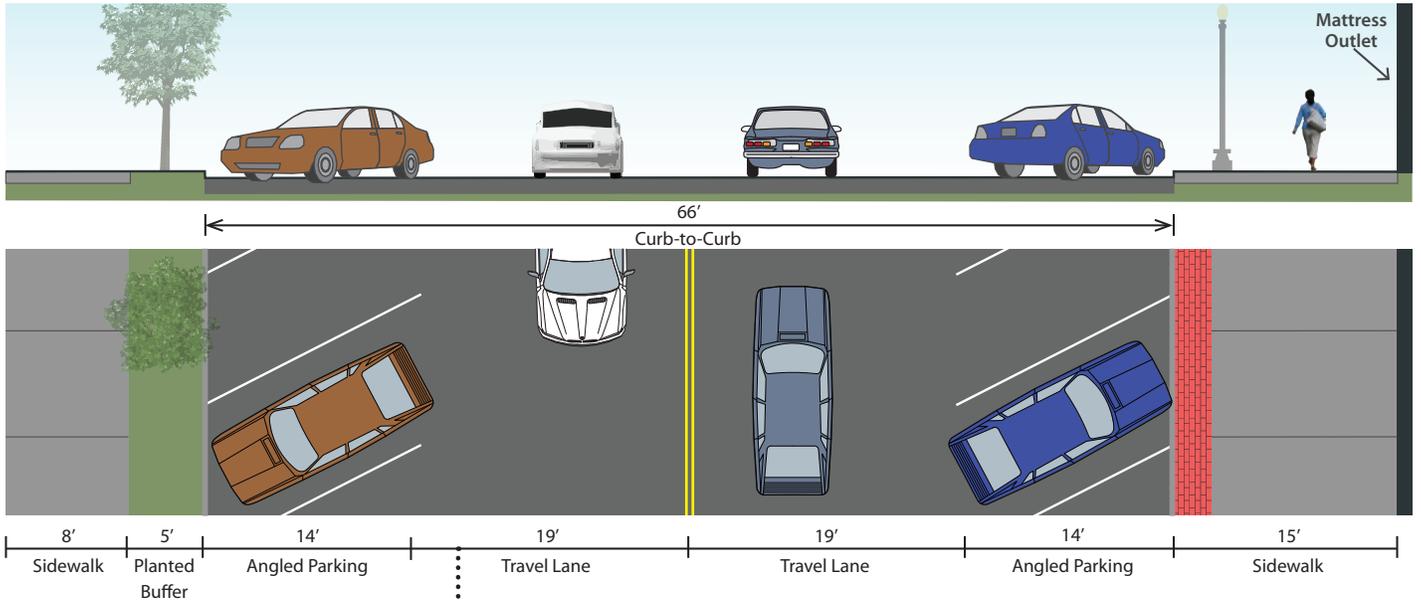
Concept Projects

- A** **Main Street:** Provide bicycle facility
- B** **Bank Row:** Provide bicycle facility, construct three curb extensions, stripe new crosswalk
- C** **Davis Street:** Provide bicycle facility and implement traffic speed reduction or volume reduction
- D** **Leyden Road:** New sidewalk with potential intersection rebuild at Nash's Mill (reduce turning radius, provide pedestrian refuge island)
- E** **Colrain Road:** Reduce travel lane widths, provide bicycle facility and construct new sidewalk

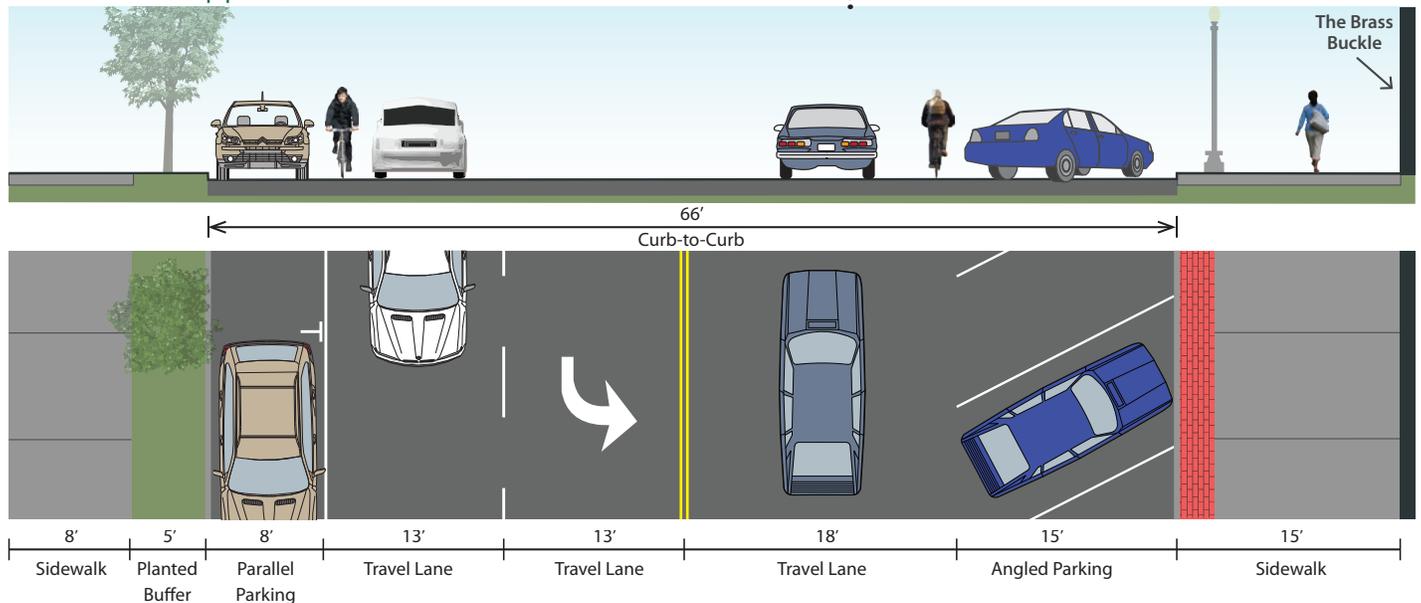


Main Street West: Existing Conditions

Mid-block



Intersection Approach

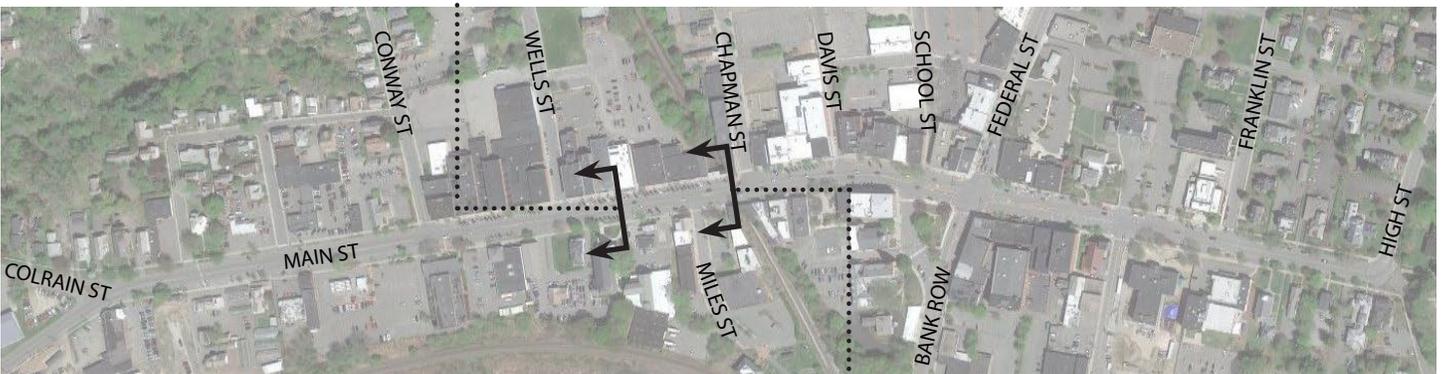
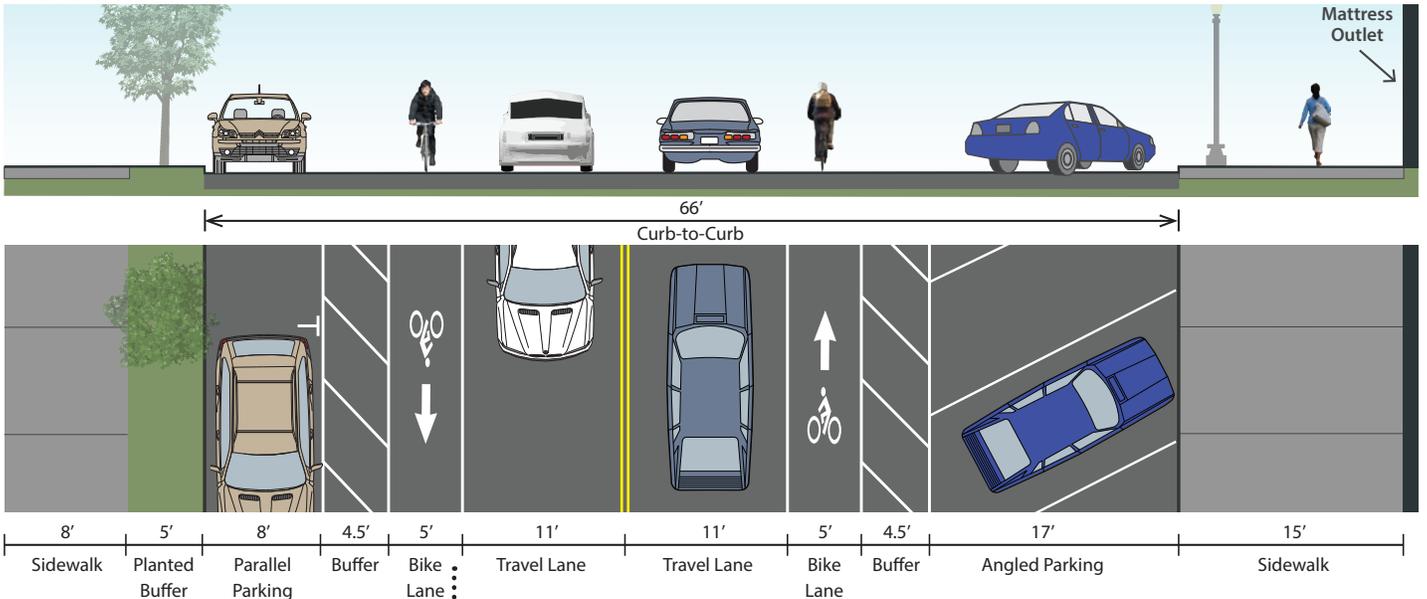


Main Street West: Option 1 - Standard and Buffered Bike Lanes

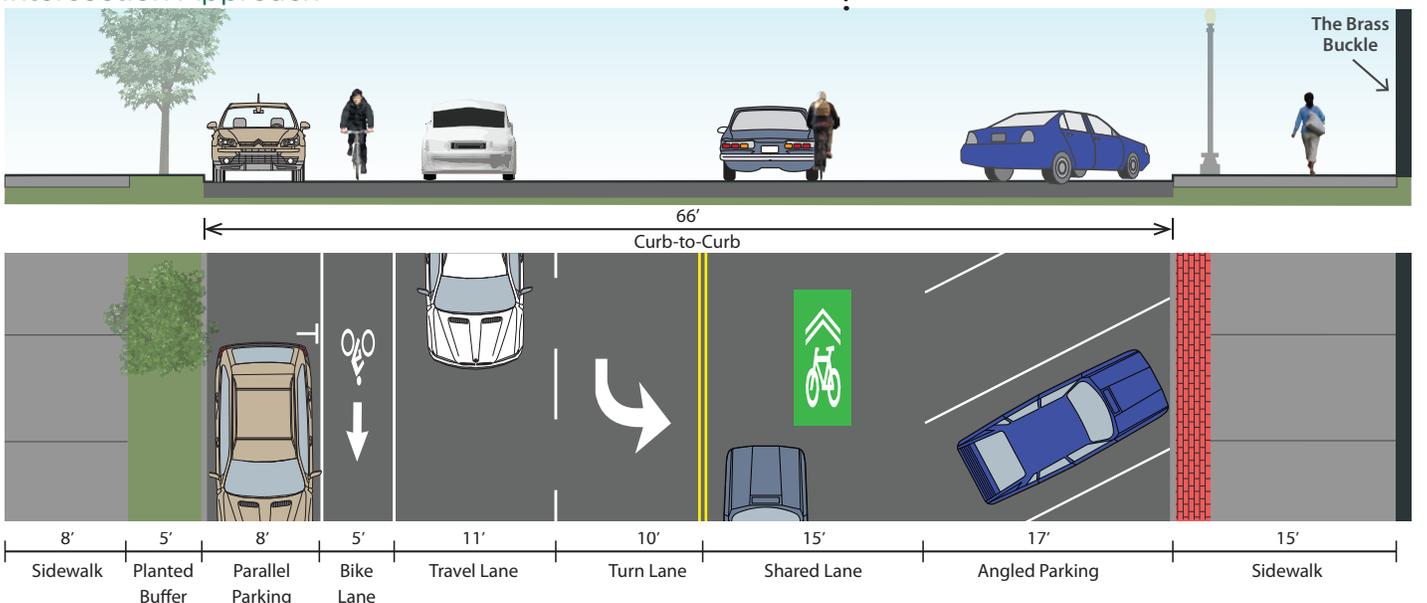
Mid-block: Change from angled parking to parallel on south side, stripe 4.5' buffers and 5' bike lanes, maintain 17' angled parking on north side.

Intersection Approach: Reduce width of east bound travel lanes, stripe 5' bike lanes on south side, stripe green-backed sharrows on north side, maintain 17' angled parking on north side.

Mid-block



Intersection Approach

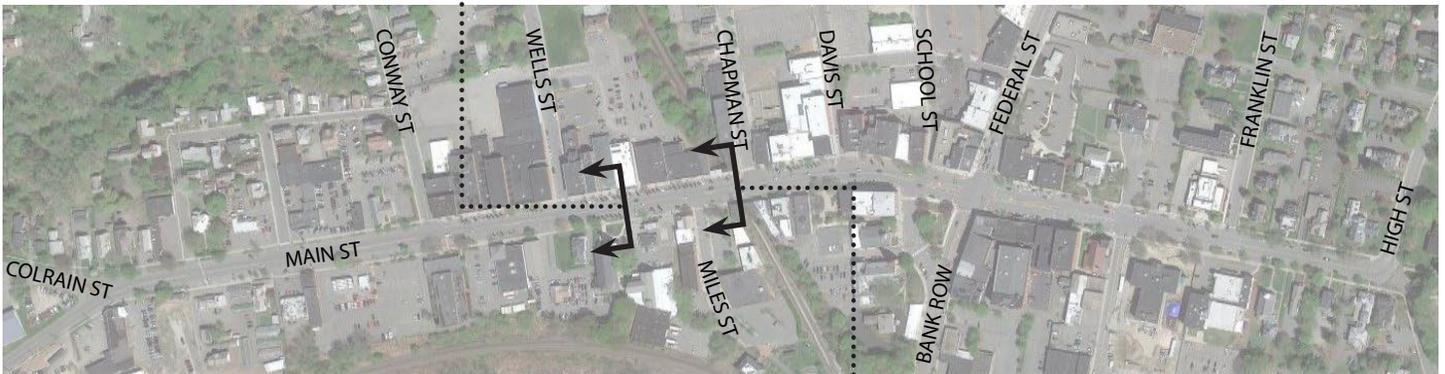
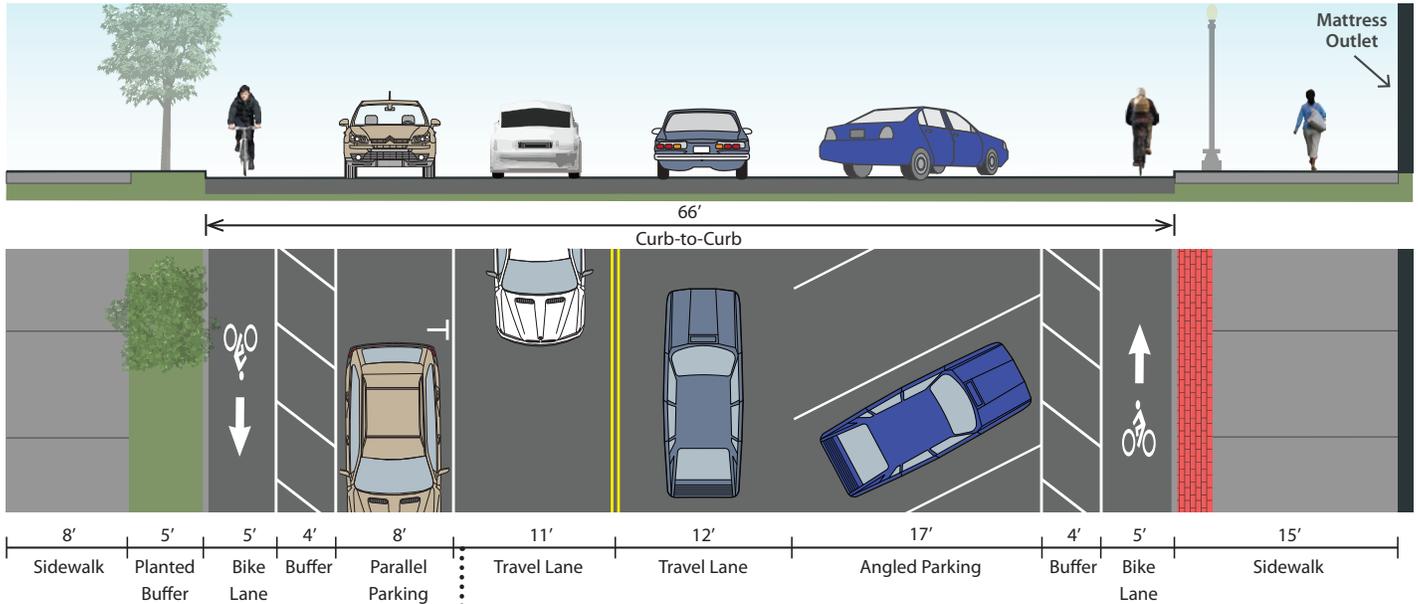


Main Street West: Option 2 - Separated Bike Lanes

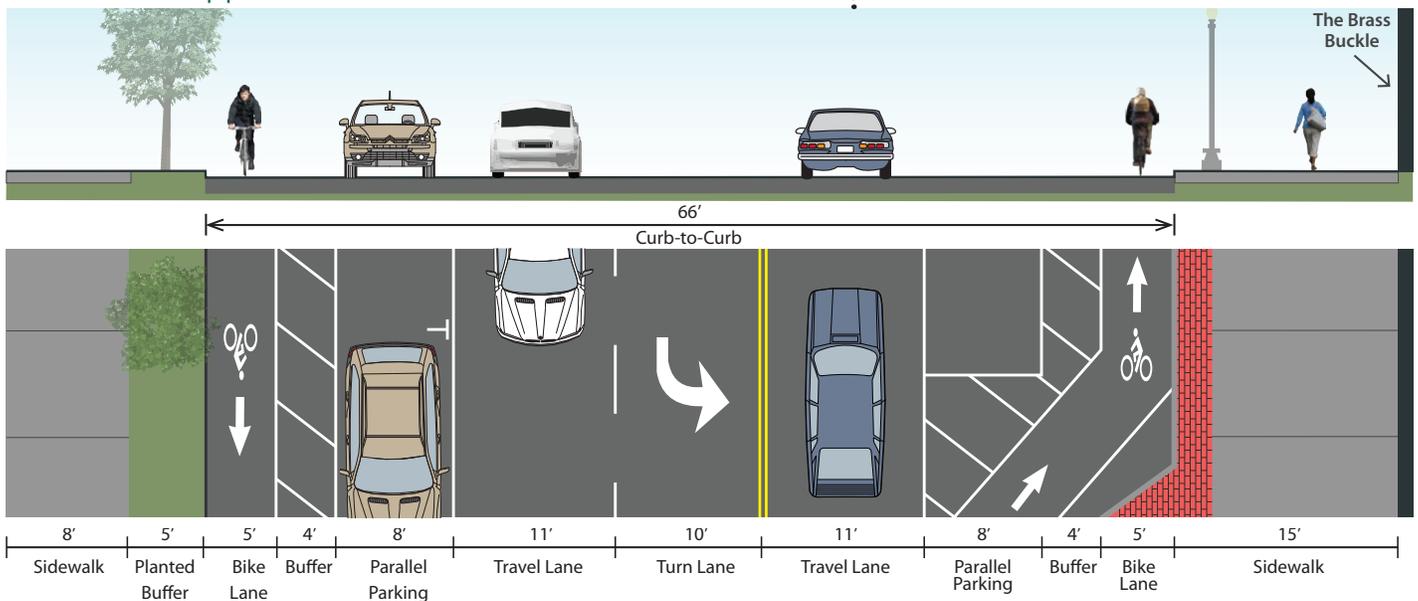
Mid-block: Realign parking away from curb, stripe 4.5' buffers and 5' bike lanes, maintain 17' angled parking on north side.

Intersection Approach: Realign parking away from curb, stripe 5' bike lanes with 4.5' buffers.

Mid-block

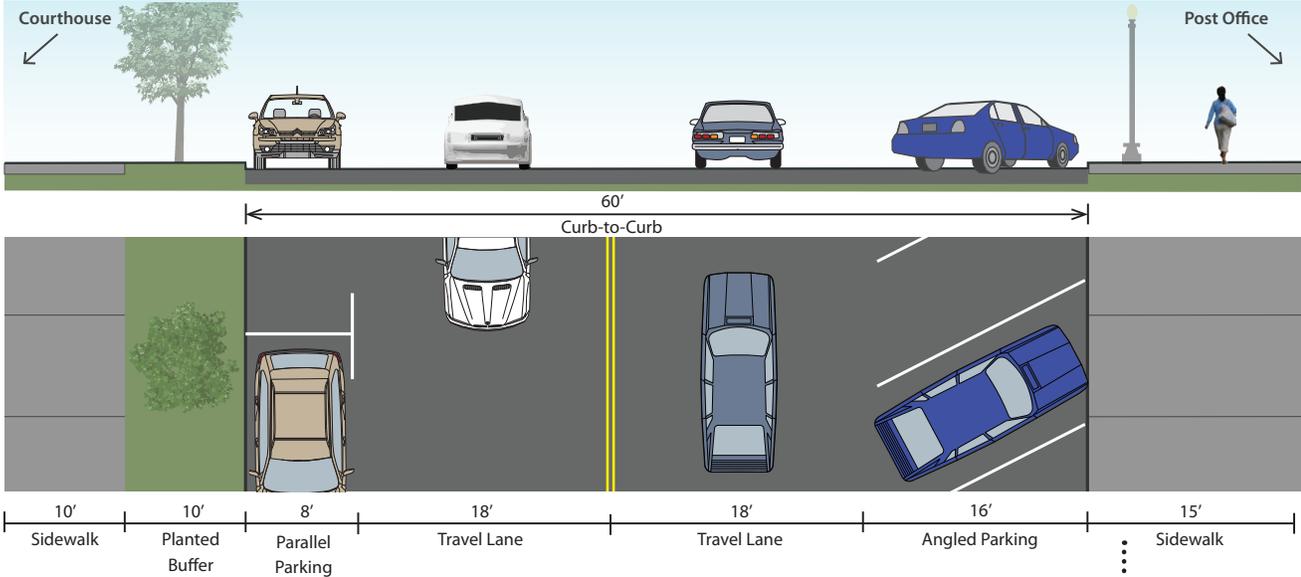


Intersection Approach

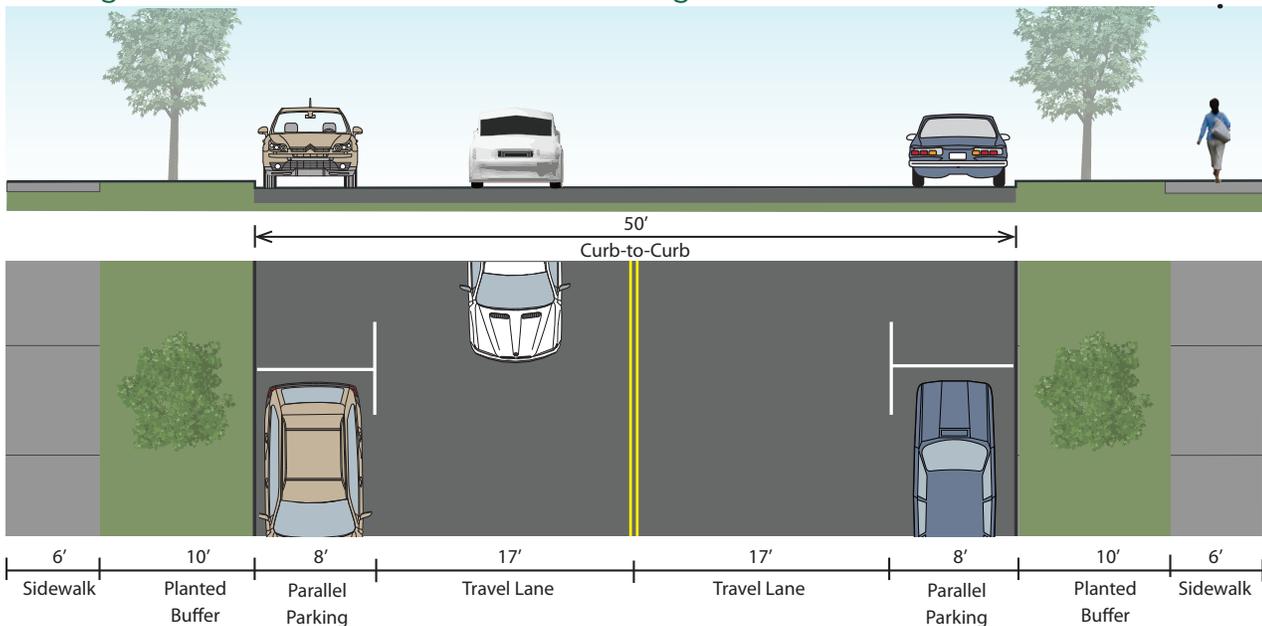


Main Street East: Existing Conditions

Existing Conditions at Post Office block



Existing Conditions between Franklin St and High St

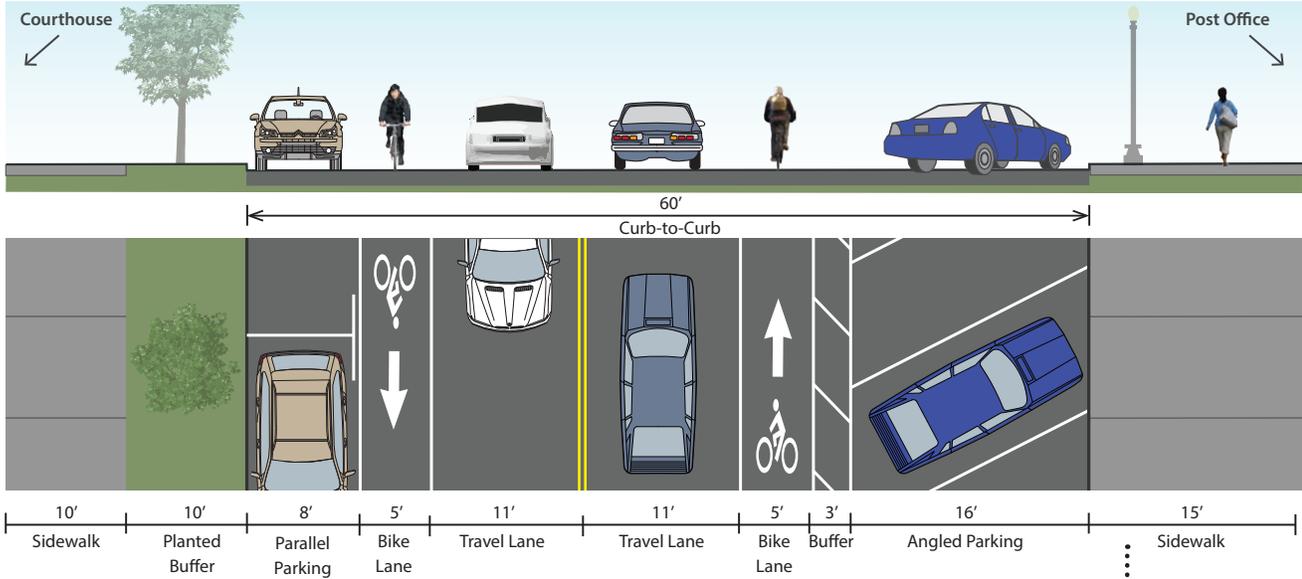


Main Street East: Option 1 - Standard Bike Lanes

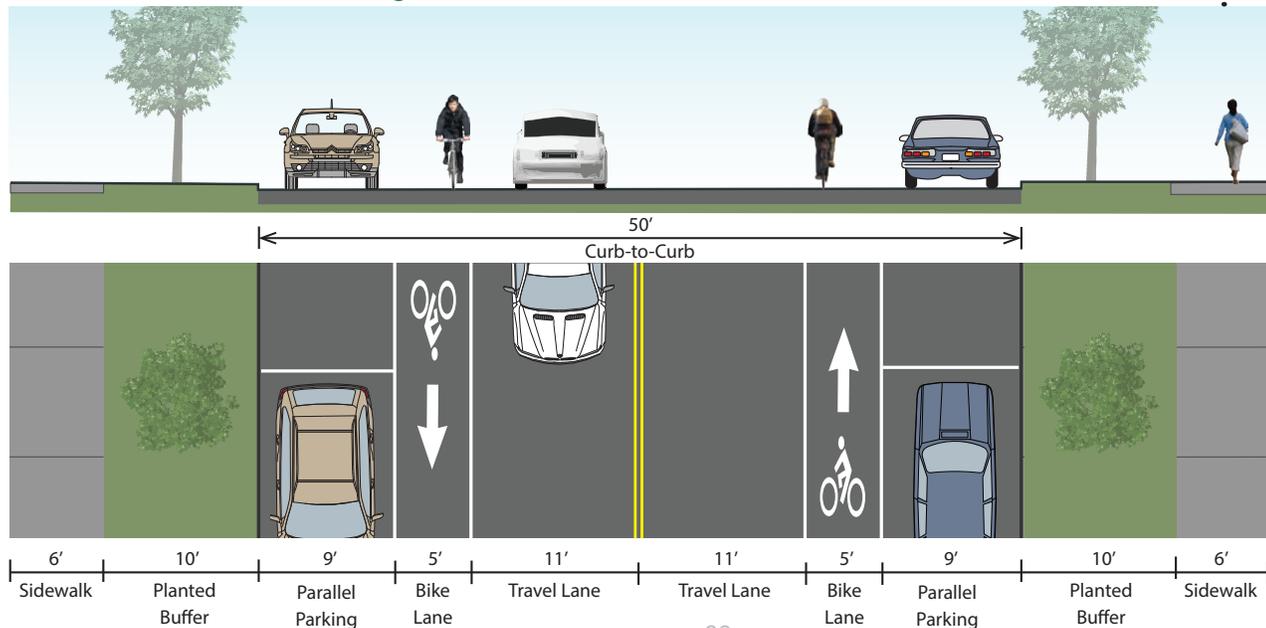
Post Office: Reduce width of travel lanes, stripe 5' bike lanes, stripe 3' buffer between bike lane and angled parking.

Between Franklin and High: Reduce width of travel lanes, stripe 5' bike lanes.

Post Office block



Between Franklin St and High St

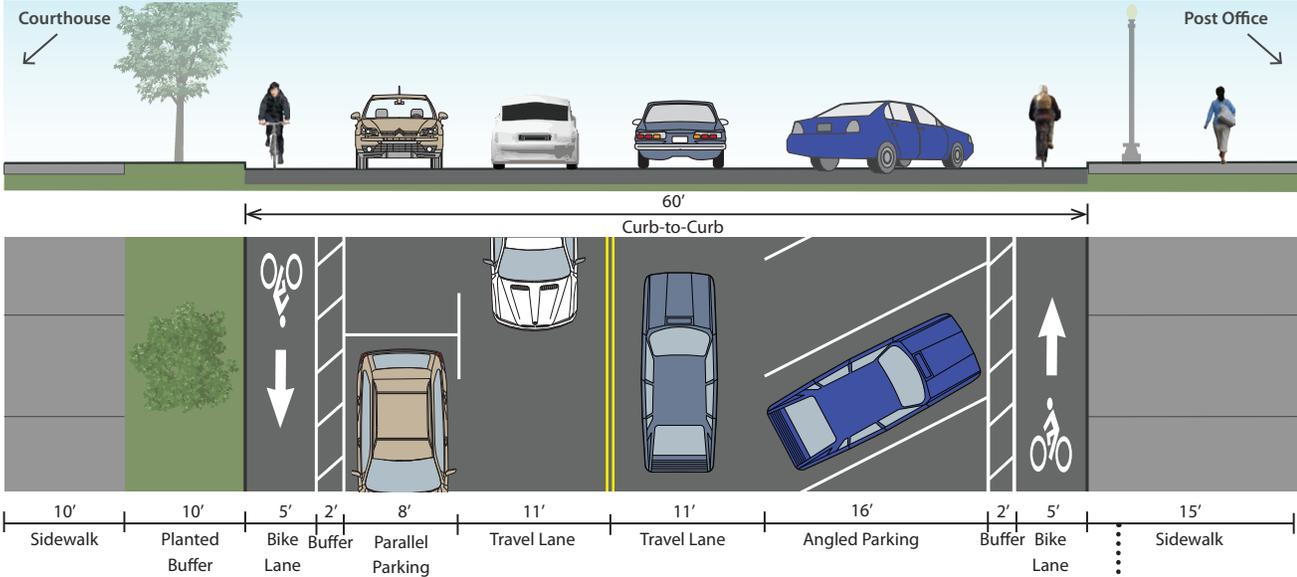


Main Street East: Option 2 - Separated Bike Lanes

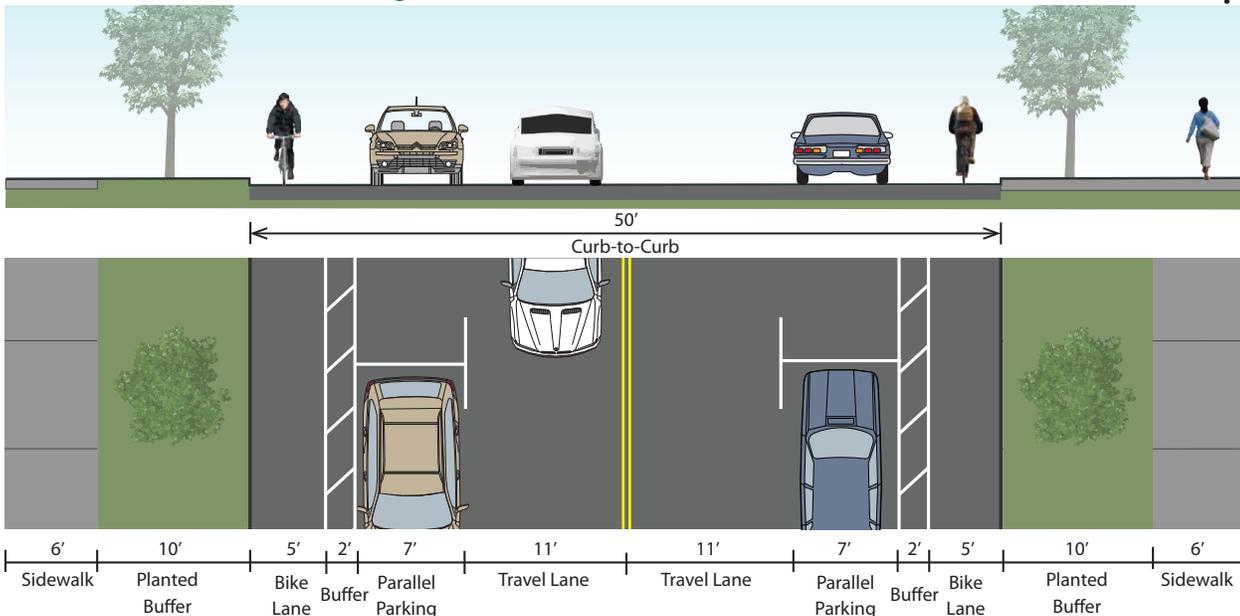
Post Office: Restripe parking away from curb edge, stripe 2' buffers and 5' parking protected bike lanes.

Between Franklin and High: Restripe parking away from curb edge, stripe 2' buffers and parking protected bike lanes.

Post Office block



Between Franklin St and High St



Bank Row

Area between southern edge of Court Sq Park and the Olive Street intersection.

Bank Row is a wide street with diagonal parking on the west side and parallel parking on the east. Bank Row has somewhat steep topography as it descends from Main Street towards the Olver Transit Center and the rail trestle underpass at the intersection with Mill Street.

The Bank Row concept project involves:

- A large curb extension with street trees on the west side of Bank Row at the existing crosswalk from Olive Street, which will compliment the existing curb extension on the east side of Bank Row on the north end of the Olive St intersection.
- A set of curb extensions with street trees at approximately the location of the existing curb cut just south of the Manna House Korean restaurant. The future parking garage to be built on Olive Street will have a pedestrian pathway and small park built at this location to facilitate pedestrian travel from the new garage to Downtown Greenfield.
- A crosswalk between the new curb extensions.
- Green-backed shared lane markings (or 'sharrows') on the west side (south bound)
- 5' standard bike lane on the east side (north bound)



Location of existing curb extension on Bank Row (view from Olive St)

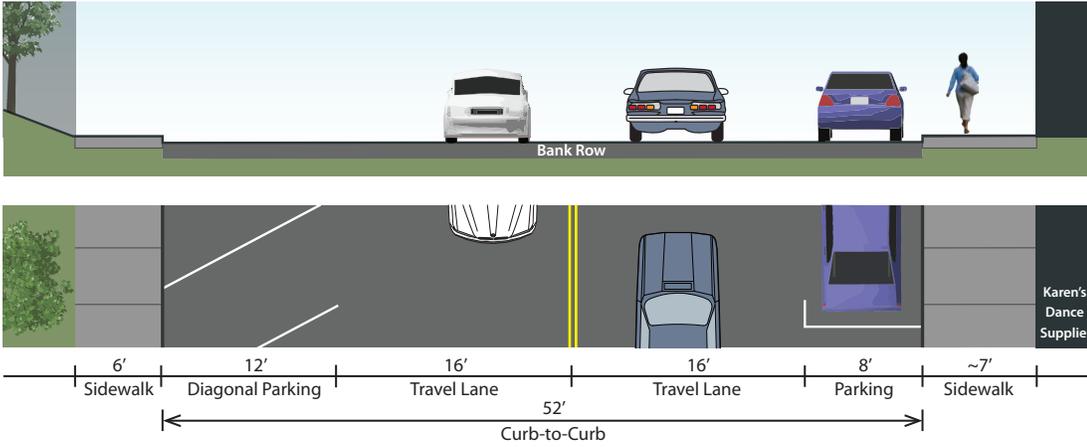


Location of proposed curb extensions and crosswalk

Bank Row

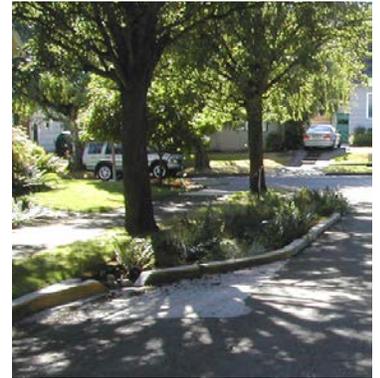
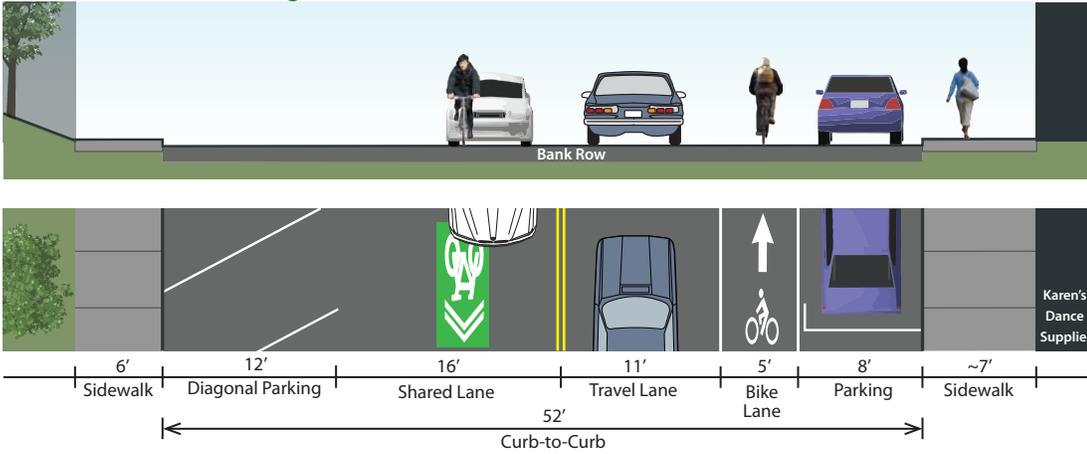
Construct three curb extensions with street trees: two at Manna House restaurant and one at existing crosswalk at Olive Street. Stripe shared lane markings southbound, and a 5' bike lane northbound.

Bank Row Existing Conditions



Location of new curb extension to compliment existing curb extension (see photo simulation below)

Shared Lane Markings and Bike Lanes



Precedent stormwater feature / curb extension: Portland, OR

Photo simulation of proposed curb extension with street trees and ADA curb ramp on Bank Row at Olive Street



Davis Street

Reduce traffic speed by installing curb extensions at 3 key intersections, and in limited mid-block areas stripe green-backed sharrows, install signage, and consider speed humps.

Davis Street is a residential north - south street that extends between two major arterial / collectors; Silver Street and Main Street. During the community input process, multiple comments regarding Davis Street being used as a commuter cut-through were collected.

Davis Street is prime for bicycle and pedestrian improvements as it meets the following three key criteria:

- Local residential street
- Low traffic volumes and speed
- Runs parallel to a busier roadway

Bicycle boulevard treatments include choosing the right mix of tools to achieve the desired goal of increasing bicycle and pedestrian use by; reducing traffic volume, and/or; reducing traffic speed. Reducing traffic speed along Davis Street can be achieved by utilizing a mix of the following options:

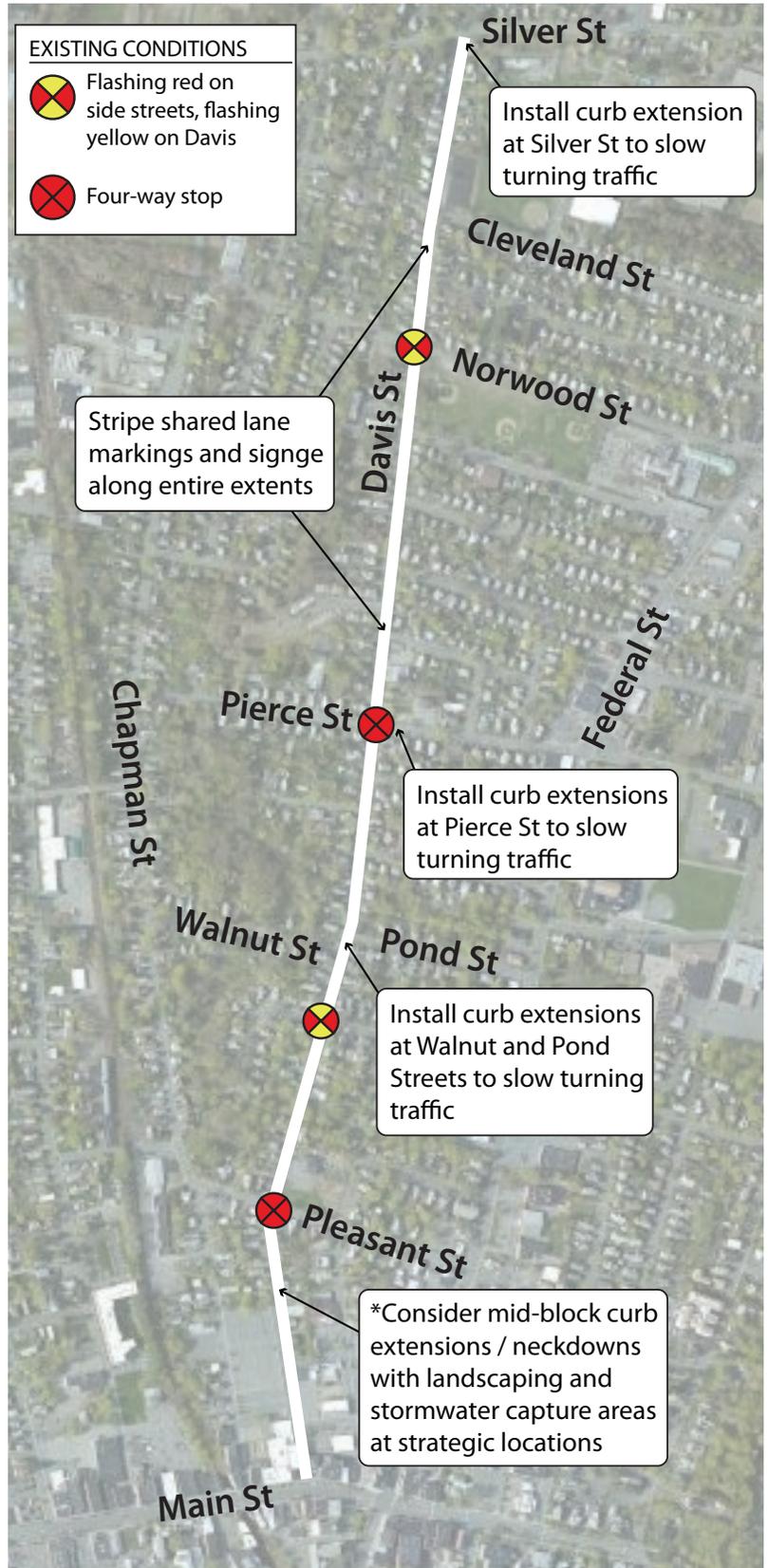
- Curb extensions
- Mid-block neck-downs
- Green-backed sharrows
- Signage



A curb extension or neck down can be an effective tool to reduce traffic speeds on residential streets that are prime for bicycle boulevard treatment



An additional tool to encourage pedestrians and bicyclists to use bicycle boulevards is branding and signing the route



**Mid-block curb extensions not included in cost estimate)*

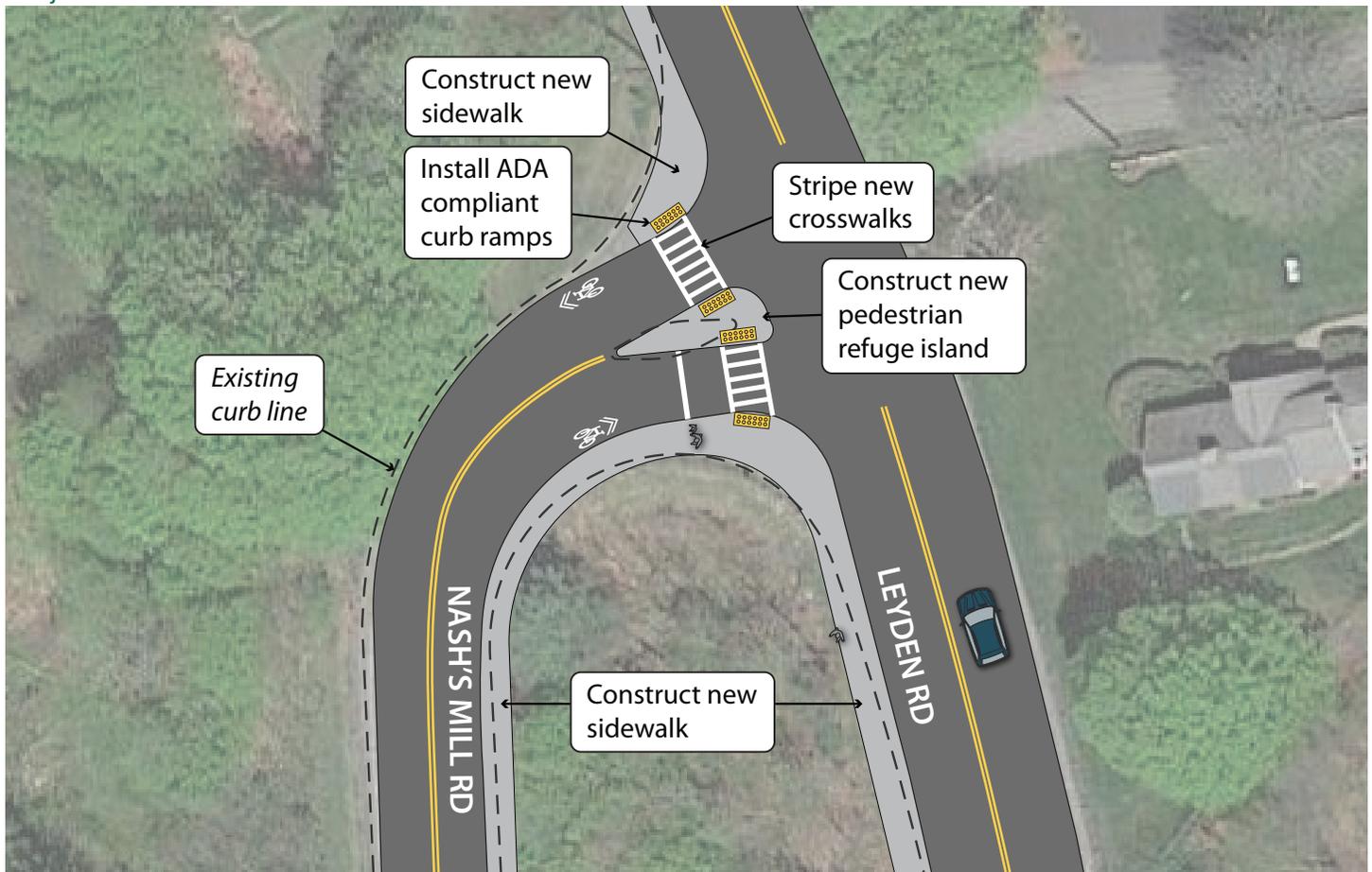
Leyden Road at Nash's Mill Drive

Rebuild intersection and reduce turning radius, construct pedestrian refuge island, stripe new crosswalks with ADA curb ramps and pedestrian warning panels.

Existing Conditions



Project Recommendation

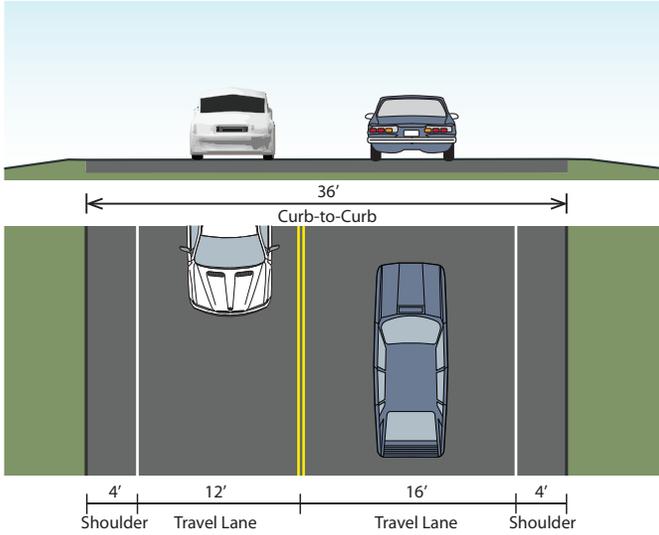


Colrain Road

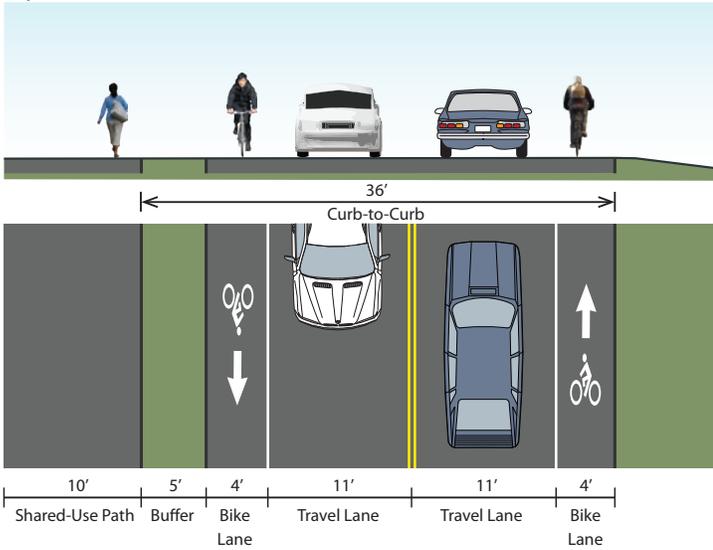
Option 1: Reduce travel lane width, stripe 4.5' bike lanes, add 5' sidewalk on west side.

Option 2: Reorient travel lanes towards east side of road, stripe 10' wide shared use path with 3' buffer on west side (requires minor widening of shoulder.)

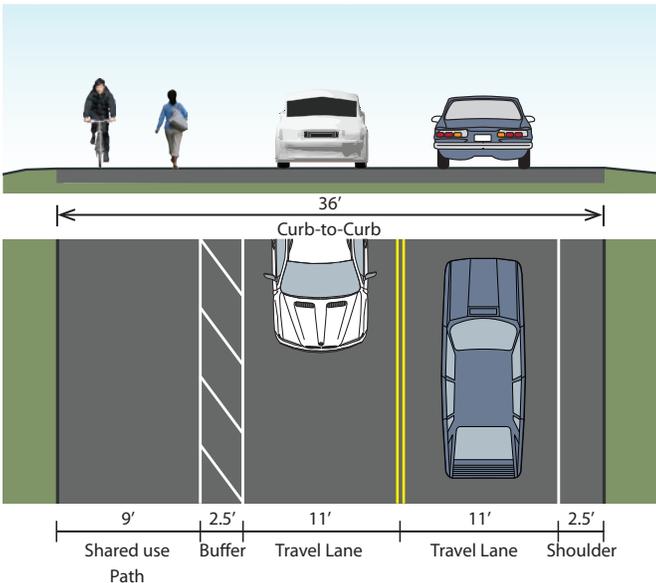
Existing Conditions south of Thayer Road



Option 1



Option 2: Short-term Improvements



The existing asphalt sidewalk on Colrain ends here at Thayer Road

Image: Google Maps



APPENDIX

ALL PROJECTS LIST

The consultants generated a list of 100+ project ideas by conducting field work, reviewing existing documents related to Complete Streets and other surface transportation projects, and collecting robust feedback from community members. These projects were then scored according to a mutually agreed upon set of criteria discussed within the report. Roughly 33 high-scoring projects (a score of 19 or above, out of a possible 24 points) were then recommended by the consultants to the Town of Greenfield to apply for Complete Streets Tier III MassDOT funding. The following projects list and map graphics include the 100+ original projects, and if MassDOT Complete Streets funding becomes available in future years, should be carefully considered for funding as Greenfield works to ensure that streets are safe for all modes of travel. Any project column that is high-lighted indicates that it was one of the 33 high-scoring projects.

Following the table, summary bar charts and map graphics add helpful visuals to help understand the type of projects, the source of each project idea, and to see the geographic distribution.



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	Type	Mass DOT	Street Name	Extents	Project Description	Reasoning
1	On-Street Bike Facility	B2, B8	Allen		Stripe bike lanes (or shared lane markings where the roadway width is <30 feet.)	Allen St is an important east-west connection and currently has fast-moving motor vehicle traffic with short sight lines due to the railroad bridge.
2	Traffic Calming	P8, S17	Allen	Elm, Conway, Wells, and Chapman intersections.	Construct bump-outs across the side streets to slow turning traffic and shorten pedestrian crossing distances.	These four intersections along Allen St. are four of the top 50 Most Hazardous in Franklin County.
3	Traffic Signal	S16	Allen	At Chapman.	Install traffic signal.	This intersection is of the top 50 Most Hazardous Intersections in Franklin County.
4	Sidewalk	P1	Arch	At railroad underpass.	Rebuild sidewalk. (To be coordinated with/by MassDOT redesign of the bridge -- any redesign should include sidewalk.)	The existing sidewalk needs repair at this high pedestrian demand pinch-point.
5	Bank Row	P8, S17	Bank Row	West side of street, at existing crosswalk to Olive St.	Install bump-out after last diagonal parking space on west side of Bank Row, north of the underpass.	This crosswalk already has a small bump-out on the east side, however this bump out does little to shorten the crossing distance or slow traffic traveling south on Bank row from Main St.
6	On-Street Bike Facility	B2, B13	Bank Row	Federal Street to Mill St. and at Olive St crosswalk.	Remove diagonal parking and replace with parallel parking. Install bike lanes, potentially buffered depending on space acquired from removal of diagonal parking. Also, install two-stage left-turn queue box to access Olive Street.	Bicycle safety. Dangerous topography. Difficult left turn for bikes trying to reach Olver Transit Center. A left turn box will allow them to pull out of traffic safely and wait in a designated area to cross in alignment with crosswalk.
7	Sidewalk	P5, P9, P2	Beacon St	From Gerrett St to Parkway St.	Construct new sidewalk on the south side of Beacon Street. Include crosswalks and ADA curb ramps.	There are currently no sidewalks to the park.
8	On-Street Bike Facility	B2, B8, B13	Beacon St	From High St to Parkway St.	Stripe bike lanes and sharrows at intersection approaches.	This is an important east-west bike connection and there are currently no bicycle facilities on this stretch.
9	Transit Stop	T1		At Cherry Rum Plaza 489 Bernardston road.	Install bus route signage.	To alert transit users as to the location of this bus stop.
10	Crosswalk	P10, S6, P9		At the intersection	Expand sidewalk area and/or tighten the turning radii to reduce intersection crossing distance. Stripe high visibility crosswalk as well.	Difficult intersection for bikes and pedestrians due to intersection geometry. Only feasible walking connection from Deerfield village residential neighborhood and other residences along Country Club Road to access Community Health Center of Greenfield plaza.
11	Sidewalk	P5	Birch	From Cleveland St to Silver St.	Install sidewalk on west side of Birch St.	Clear gap in sidewalk network.
12	Traffic Calming	S6, S17	Chapman	At intersection with Pierce.	Decrease size of curb radius to calm traffic turning right from Chapman onto Pierce.	This is a heavy turn movement from Allen Street motorists wishing to travel east, resulting in an uncomfortable pedestrian crossing.
13	Traffic Calming	S8 S17, P12	Chapman	At Silver St intersection.	Install raised crosswalk or other traffic calming device to slow motorists turning off of Silver onto Chapman. Consider installation of flashing yellow beacon.	Vehicles make right turn at high speeds.
14	Sidewalk	P5, P1	Chapman	From Silver to Cleveland.	Install sidewalk on east side of Chapman.	Current sidewalk needs repair. Fill in small existing gap.



	Type	Mass DOT	Street Name	Extents	Project Description	Reasoning
15	Sidewalk	P5	Chapman	From Norwood to Silver.	Install sidewalk from existing sidewalk terminus at 352 Chapman St to Silver St intersection.	Existing sidewalk gap.
16	Sidewalk	P5		From intersection of Cheapside and Deerfield St / Rt 5, under the Montague City Rd underpass, to Montague City Rd / General Pierce Bridge over the Connecticut River.	Construct sidewalk on the south side of Cheapside St (south side due to bridge constraints immediately west of the intersection of Cheapside and Deerfield St / Rt 5.)	No sidewalk exists in this high-demand area.
17	Sidewalk	P5	Cherry	On the short east-west leg of Cherry St., directly north of the elementary school playground ballfield.	Construct sidewalk/path from Cherry Street, through ballfield, to Four Corners Elementary School.	To encourage school students to walk from adjacent residential neighborhoods.
18	Sidewalk	P5	Cherry, Oakland, Country Side	Entire extents; from Country Club Road to Bernardston Rd.	Construct new sidewalk.	Important pedestrian connection from residential neighborhoods on Country Club Rd / Country Side Rd / Oakland St to Federal St commercial / retail area / Discovery School.
19	Traffic Calming	S8, S17, P12	Church	At High St.	Construct raised crossing across Church Street.	Church Street used as a cut-through; raised crosswalk will slow turning traffic
20	Intersection	S0, T0	Cleveland	At Railroad crossing.	Construct fence to prevent unauthorized track crossings.	School students often cross here because of uncomfortable conditions on Silver St.
21	Sidewalk	P5	Colrain Rd	From College Dr roundabout to the Four Rivers Charter School.	Construct new sidewalk on west side of roadway.	Stakeholder input and the need to improve pedestrian access from the charter school to Greenfield Community College.
22	Sidewalk	P0, P5, B2	Colrain Rd	From College Dr roundabout to the Mohawk Trail.	New sidewalk on west side of roadway and striped bike lanes. (Low cost option could include a striped pedestrian lane in the west shoulder of the road, provided there is space for 10' travel lanes and bike lanes in each direction.)	Need to improve pedestrian and bicycle access from the commercial area on the Mohawk Trail to Greenfield Community College
23	On-Street Bike Facility	B2, B8, S1	Colrain St	From Main St. to roundabout at Colrain Road.	Include a mix of bike lanes where space is available, shared lane markings and signage.	Improves bicyclist connection between downtown and GCC.
24	Crosswalk	S8, P12	Conway	At Hillside Park entrance.	Construct raised crossing and/or install a pedestrian-actuated flashing beacon or RRFB.	To calm traffic at this mid-block crossing.
25	On-Street Bike Facility	B2, S17	Conway	From Nash's Mill Rd to Main St.	Stripe bike lanes. Consider adding 4-way stops at the following intersections: Spruce St, Grove St, and Devens St.	This is an important north-south corridor and represents one of the most comfortable crossings of I-91 for many Greenfield residents. This roadway includes heavily traveled pedestrian and bicycle routes, with access to green river Swimming and Recreation Area
26	Traffic Calming	S8, S17, P12	Conway	At intersections with Place Terrace, Spruce St, and Devens St.	Install crosswalk signage assembly. Potentially include raised pedestrian crossing with flashing yellow beacons. (Pedestrian count needed.)	Same as above.



	Type	Mass DOT	Street Name	Extents	Project Description	Reasoning
27	Traffic Calming	S6, S17, P12	Conway	At Silver St.	Investigate traffic calming elements such as tighter turning radii and/or bump outs.	To calm traffic traveling north-south on Leyden St and Conway St. To ease congestion for Silver Street motorists traveling south on Conway Street. To facilitate ease of transition for cyclists who wish to enter new Silver Street extension to bike path.
28	Intersection	P15, S1, S17	Court Sq	In front of Town Hall from Main St to Newton Pl.	Restrict motor vehicle access to Court Sq. between Main St and Newton Pl / Bank Row.	Low vehicle volume and heavy pedestrian demand make this a clear opportunity for walkability improvements.
29	Sidewalk	P5	Crescent	From current sidewalk terminus at 21 Crescent Street to the other sidewalk terminus at 500 Main St (house fronts High St/Main St intersection.)	Add sidewalk on east side of Crescent.	Pedestrian demand. Proximity to Main st, high St, residential area.
30	Shoulder Striping	S1, S15	Crescent, Mountain	From current sidewalk terminus at bend in Crescent Road just before it reaches Mountain Road to the turn in Mountain Rd near Poets Seat parking area.	Add shoulder striping on south side of Crescent / east side of Mountain Road.	Pedestrian and bicycle safety.
31	On-Street Bike Facility	B6, S17	Davis	From Silver Street to Main Street.	Construct bike-boulevard style treatment on Davis Street. Consider adding 4-way stops at the following intersections: Norwood, Pierce, Walnut / Pond, and Pleasant.	Establishing this important north-south connection as a comfortable alternative to Federal Street will encourage more widespread use of cycling for commuting and errands and fill a key gap in the existing bicycle network.
32	Intersection	P12	Deerfield Rd / Rt 5	At Petty Plain Rd intersection.	Update crosswalk at Petty Plain Rd / Pedestrian bridge intersection with high visibility crosswalk. Install push-button flashing yellow beacon.	To increase motorist yield behavior.
33	On-Street Bike Facility	B13	Deerfield Rd / Rt 5	From Greenfield side of the bridge south of Cheapside St intersection to southern end of green triangle.	This is a long and exposed intersection with frequent turn movements that pose a risk to pedestrians and bicyclists.	This is a long and exposed intersection with frequent turn movements that pose a risk to pedestrians and bicyclists.
34	Sidewalk	P2, P6	Deerfield Rd / Rt 5	In front of businesses on east side of street from Cheapside to Mill St.	Provide better sidewalk delineation, upgrade non-ADA sidewalks and curb ramps.	Many businesses along this stretch have vehicle parking that extends into the sidewalk / pedestrian zone.
35	Sidewalk	P0	Deerfield Rd / Rt 5	East side of street, from Mill to Cheapside.	Relocate utility poles.	Existing utility poles are in middle of sidewalk. Relocate to back of sidewalk.
36	Sidewalk	P5	Fairview	From Laurel St to Wisdom Way.	Construct sidewalk.	People walking in the roads when there are events at the fairgrounds due to lack of sidewalks is a safety concern.
37	Street Lighting	S9	Federal	At CVS.	Upgrade street lighting.	Stakeholder concern.
38	Crosswalk	P9	Federal	At Norwood intersection.	Install new crosswalk with signage across Federal St.	Frequent pedestrian crossings. Pedestrian crossing safety.
39	Traffic Calming	S8, S11, S17, P8	Ferrante	Entire extents.	Utilize traffic calming elements such as neck downs, chicanes, or speed humps to deter fast-moving traffic from cutting through this neighborhood street in close proximity to schools.	Neighborhood street used as a commuter cut-through.



	Type	Mass DOT	Street Name	Extents	Project Description	Reasoning
40	On-Street Bike Facility	B6, S17	Franklin	Entire extents, from Main St to Maple St.	Implement bike boulevard-style treatments on Franklin St.	Coupled with North Street, Franklin Street has the opportunity to be an important north-south connection for cyclists traveling between residential areas, downtown, Greenfield Middle School, and the hospital and avoid the traffic on Federal St.
41	Sidewalk	P1	George	From High to Orchard St. (Entire extents)	Update to concrete sidewalks.	Current asphalt sidewalks are in disrepair.
42	Sidewalk	P2, P5, P9	Gerrett	From Sanderson to Beacon St.	Construct new sidewalks on west side of Gerrett Street. Include crosswalks and ADA curb ramps.	There are currently no sidewalks on Gerrett St.
43	Trail Link	B10		From the west side of Elm Street, between Oak Court and Sullivan Lane.	Construct 12' shared use path from existing shared use path to Elm St.	This short segment would connect trail users from the Elm St / Conway St / Spruce St / Cypress St / Cedar St neighborhood to the popular bike trail. The Greenfield Housing Authority owns the parcel.
44	Trail Link	B10 B0, P0		From South side of Petty Plain Road, between Meridian St and the Green River, to the Deerfield river edge.	Construct 10' - 12' wide paved shared use trail. Work with town of Deerfield to establish receiving trail on Deerfield side of River. Long term: Construct new non-motorized trail bridge over Deerfield River.	Long-term north-south connectivity opportunity through town-owned land. Deerfield side has low-volume farm roads well suited for cycling and walking.
45	Trail Link	B10		From the intersection of Mead St at Mill St., continue trail up Power Court, hugging the riverbank, under the railroad bridge, and up Conway Drive.	Construct 10' - 12' shared-use path along edge of Green River.	This represents a desire line for cyclists and pedestrians traveling east - west from the Hope Street, Russell Street, and James Street neighborhood to Mill Street / River Street neighborhood and points west.
46	Trail Link	B10		From the intersection of Silver Street and Conway St to the bike path junction on the east side of I-91.	Extend bike path from its current location up through the town-owned parcel adjacent to I-91 to the end of Silver St.	Clear long-term opportunity to create more comfortable cycling connections from east-west to north-south.
47	Sidewalk	P5	High	Existing sidewalk terminus at Riddell St to the Greenfield Coop Farmer Exchange.	Add sidewalk on east side of High St.	Pedestrian demand. Proximity to residential areas, and businesses.
48	Crosswalk	P9	High	At Smith Street intersection.	Add crosswalk from existing sidewalk on west side of street to the Coop.	Short term pedestrian connectivity from homes to area market.
49	Traffic Calming	P7, S17	High	At George St, Maple St, Pierce St, intersections.	Install pedestrian refuge island.	To shorten the crossing distance for pedestrians and encourage motorist yield behavior.
50	Traffic Calming	S17	High	Entire extents where posted speed limit is 40MPH or higher.	Reduce speed to 35 MPH (consider 30 MPH).	Significant motorist speeding behavior on High St.
51	Traffic Calming	P7, P12, S17	High St / 2A	At Stone Farm Ln intersection.	Install median refuge island or flashing yellow beacons to alert motorists to presence of pedestrians in crosswalk.	The pavement sidewalks are in need of replacement and the sidewalk is in need of pedestrian zone definition.
52	Sidewalk	P0	High St / 2A	Entire extents.	Relocate all utility poles that are currently in middle of sidewalk.	Helps to create a more comfortable sidewalk width that is more compliant with ADA.
53	On-Street Bike Facility	B2, S1	High St / 2A	From Main St to Adams Rd intersection.	Stripe bike lanes. Use delineator posts on shoulder line to encourage motorists to stay out of the bike lane.	This is 40 MPH signed road, decreasing cyclist comfort due to high-speed vehicles. A rumble strip will help cyclists feel comfortable.
54	Traffic Calming	S17	High St / 2A	From Loomis Rd to Adams Rd intersection.	Lower speed limit. And/or include traffic calming elements such as narrower travel lanes.	The current speed limit of 40 allows motorists to comfortable travel at 45 and sometimes 50 MPH. This is dangerous for pedestrians and bicyclists accessing the Stop & Shop plaza.



	Type	Mass DOT	Street Name	Extents	Project Description	Reasoning
55	Traffic Calming	P8, P9, S17	Hope	At midblock crossings to new courthouse.	New mid-block crosswalk with bump outs or raised crosswalk to provide connection to new courthouse.	Traffic calming Hope St is important for safety, with the highest emphasis on the new midblock crossing to the court house.
56	Traffic Calming	P8, P9, S17	Hope	From Prospect St to Main Street.	Add bump-outs and/or raised crosswalks/speed tables at all Hope Street crosswalks between Prospect Street and Main Street.	This is already a very high pedestrian demand area and will become even more so with the completion of the new court House and parking structure on Olive Street. Discouraging motorists from using Hope Street as a cut-through by means of traffic calming will increase pedestrian comfort along the Hope St corridor from Main St to south of Prospect St. The intersection of Hope and Prospect was noted in the top 50 Most Hazardous Intersections in Franklin County, FRCOG, 2011-2013.
57	Traffic Calming	S0	Hope	At intersection with Olive Street.	Install signage and striping to designate a commercial loading / delivery zone for area businesses.	Formalizing a delivery / loading zone will encourage trucks not to park near crosswalks, on sidewalks, or in front of driveways.
58	Sidewalk	P5, S15	Hope	From Russell to James Street (minimum) or to Cheapside St.	Construct sidewalk on one side or explore opportunity to widen the shoulder on one side to form a shoulder area for walking.	Currently a large gap in sidewalk network.
59	Sidewalk	P5	Kenwood	From Davis to Federal.	Construct sidewalk on north side of Kenwood St.	Pedestrian demand. Proximity to Lunt Park.
60	Sidewalk	P5	Laurel	From Buckley HealthCare Center to existing sidewalk terminus at 22 Laurel Street.	Extend sidewalk from existing terminus on Laurel to Buckley Healthcare Center.	Enhanced pedestrian safety and comfort.
61	Sidewalk	P5	Leyden	From Nash's Mill Rd to Leyden Woods Ln.	Construct new sidewalk on west side of Leyden Rd.	Leyden Rd is used by pedestrians and there are no pedestrian facilities. Crashes have occurred due to the lack of adequate pedestrian facilities.
62	Transit Stop	T1, T3	Leyden	At existing bus stop near Nash's Mill Road.	Formalize bus stop. Officially add stop to route, install transit shelter, install signs with route maps and operating schedule / timetables.	Bus stop is currently informal with no signage or transit shelter.
63	Traffic Calming	S17	Leyden	From Phyllis Lane to Newcomb Lane.	Install traffic calming elements, particularly signage warning motorists of upcoming crosswalks / pedestrians / slower speed limit.	Leyden Road would benefit from slower traffic speeds around the relatively blind corner.
64	Transit Stop	T1, T3	Main / 2A	From rotary to Bank Row	Determine suitable locations for enhanced bus stop including more visible signage, benches and shelter. Mirror this stop on both sides of the street.	Stakeholder desire for increased transit access.
65	On-Street Bike Facility	B2, B8	Main / 2A	From Shelburne Rd / River St to Colrain St.	Stripe bike lanes and/or enhanced shared lane markings (TBD)	Critical bike connection through downtown Greenfield with access to businesses and other institutions.
66	On-Street Bike Facility	B2, B8	Main / 2A	From Colrain St. to Federal St.	Stripe bike lanes and/or enhanced shared lane markings (TBD)	Critical bike connection through downtown Greenfield with access to businesses and other institutions.



	Type	Mass DOT	Street Name	Extents	Project Description	Reasoning
67	Traffic Calming	P8, S9, S17	Main / 2A	At Coombs Ave / Fort Sq.	Construct bump-outs to shorten the pedestrian crossing distance across Main St. Deploy other traffic calming devices to slow speeding traffic. Install brighter street lighting that doesn't back-light crossing pedestrians.	Difficult to see pedestrians crossing at dusk and at night.
68	Crosswalk	P8, P9	Main / 2A	At Chapman.	Relocate crosswalk to east side of Chapman Street; add bump outs or refuge island as well.	This will avoid potential conflicts between cars turning right onto Main St and pedestrians crossing Main St.
69	Crosswalk	P8, S17	Main / 2A	Between Federal Street and High Street	Construct bump-outs at the crosswalks in this portion of Main St.	Shortens the long crossing distance for pedestrians.
70	On-Street Bike Facility	B2, B11	Main / 2A	From Federal Street to High Street.	Stripe bike lanes in this stretch of roadway; consider opportunities to include a separated bike lane design which may require changing the angled parking in front of the Post Office to parallel parking.	Shortens the long crossing distance for pedestrians.
71	Intersection	S0	Main / 2A	At Fort Sq.	Remove eastern curb cut on Main St in front of Koch's Automotive. Retain Koch's Automotive existing curb cut to the west. Encourage one-way in and out, utilizing existing curb cut on Fort Square.	This unnecessary curb cut should be removed for pedestrian safety and comfort along the north side of Main St.
72	Crosswalk	P12, S17	Main / 2A	Between Federal Street and High Street	Install crosswalk signage assembly and in-street crossing signs.	Increase motorist yielding behavior.
73	Street Lighting	S9	Main / 2A	At the Conway St, Wells St, and Miles St intersections.	Update street / pedestrian lighting.	Stakeholder concern.
74	On-Street Bike Facility	B8, B13	Main / 2A	At River St intersection.	Install shared lane markings / green skip striping across Main St.	Bicycle safety and route guidance for Franklin County Regional Bikeway. Motorists on River St waiting (facing north) at the Main Street traffic light almost exclusively turn left or right, while the majority of cyclists travel straight.
75	Crosswalk	P9	Maple	At North St	Add crosswalk across Maple St.	There is currently a >1,300 foot stretch of Maple with no crosswalk. (From High to Federal.)
76	Crosswalk	P7, P9, S17		At intersection with Mountain Rd.	Construct crosswalk and refuge island across Montague City Road (project in currently on TIP and will be incorporated into MassDOT's bridge design)	This is an uncomfortable crossing for pedestrians.
77	Sidewalk	P5		From intersection with Mountain Road to Greenfield Center School.	New sidewalk on west side of roadway.	Provides a pedestrian connection from the homes along Montague City Road and elsewhere to the school.
78	Street Lighting	S9	Mountain Rd	Entire extents.	Install street lighting.	Stakeholder concern for bikes and peds using road at night.
79	Crosswalk	P9, P12	Mountain Rd	At Poets Seat parking lot area.	Construct crosswalk and potential flashing yellow beacon across Mountain Road. (Will connect from parking lot area to trail head and low-volume Spring Ter, Crescent St, Parkway St roads.)	Stakeholder concern for bikes and peds accessing Poets Seat and access to the adjacent trailheads.
80	Shoulder Striping	S1, S15	Mountain Rd	Entire extents. (From Maple to Montague City Rd.)	Add shoulder striping on east side of Mountain Road.	Pedestrian and bicycle safety.



	Type	Mass DOT	Street Name	Extents	Project Description	Reasoning
81	Sidewalk	P5, P6	Nash's Mill	From Leyden road to Swimming area parking lot entrance at crosswalk to Riverside Greenway. Potentially extend all the way to end of Nash's Mill Road at Colrain Rd.	Construct new sidewalk with curbs on west side of Nash's Mill Rd. If possible, include a grass buffer between sidewalk and curb.	Heavily traveled pedestrian routes, with access to green river Swimming and Recreation Area and Riverside Greenway.
82	On-Street Bike Facility	P2, P5, P7, P9, S14, S17	Nash's Mill	At intersection with Leyden Rd.	Construct wedge-shaped pedestrian refuge area in center of intersection with sidewalks, curbs, ADA curb ramps, a new stop sign for motorists traveling east on Leyden Rd, and new crosswalks.	This roadway includes heavily traveled pedestrian and bicycle routes, with access to green river Swimming and Recreation Area and Riverside Greenway.
83	On-Street Bike Facility	B6, S17	North	Entire extents.	Implement bike boulevard-style treatments on North Street.	Coupled with Franklin Street, North Street has the opportunity to be an important north-south connection for cyclists traveling between residential areas, downtown, Greenfield Middle School, and the hospital.
84	Crosswalk	P9	North	At Sanderson St.	Add crosswalk across North St. (south side)	Pedestrian demand. Proximity to residential area, large employer (hospital), and school.
85	Sidewalk	P5	Norwood	At existing gap in sidewalk on south side of Norwood by Lunt field, and at existing gap in sidewalk from Davis St to Birch St.	Fill in sidewalk gap on south side of Norwood St.	Pedestrian demand. Proximity to Lunt Park.
86	Sidewalk	P5, P6	Olive	Entire extents.	In coordination with the design of the Olive Street parking garage, construct new concrete sidewalk on north side, with minimal curb cuts and new streets trees, space permitting.	The pavement sidewalks are in need of replacement and the sidewalk is in need of pedestrian zone definition.
87	On-Street Bike Facility	B2	Olive	Entire extents.	In coordination with the design of the Olive Street parking garage, stripe bike lanes on both sides of Olive Street.	Bicyclist safety and comfort. Motorist awareness.
88	Street Lighting	S9	Olive	Entire extents.	In coordination with the design of the Olive Street parking garage, upgrade existing pedestrian-scale street lighting.	Sufficient sidewalk and roadway lighting is important in high pedestrian demand areas to maximize comfort for transit center users.
89	Sidewalk	P5, P6, S0	Olive	At the KDS Dance supplies parking lot.	In coordination with the design of the Olive Street parking garage, remove curb cut access to adjacent business, leaving them access on Bank Row only. Replace with standard sidewalk and street trees.	This parking lot has 2 egresses, which is unnecessary. Closing one of them permanently will enhance the pedestrian-scape between the new parking structure and Bank Row / Main St.
90	On-Street Bike Facility	B11	Parkway	Beacon St to Sanderson St.	Construct new 10' bike path along Parkway St alignment - on eastern edge of existing town-owned park parcel bordered by Beacon, Gerrett, and Sanderson Streets.	Establishing alternatives to Federal St and High St which experience heavy motor vehicle volumes will help bicycling and walking become more viable transportation options.
91	Sidewalk	P5	Petty Plain	Ped Bridge at Rt 5 to Wisdom Way.	Construct sidewalk on one side to provide access to Green River School.	Stakeholder desire for pedestrian access to dog park and elementary school.
92	On-Street Bike Facility	B2, B8, B13	Pierce	Entire extents.	Stripe bike lanes and sharrows at intersection approaches.	This is an important east-west bike connection and there are currently no bicycle facilities on this stretch.
93	Sidewalk	P5	Pierce	At existing sidewalk gap adjacent to 85 Pierce St and 265 Chapman St.	Fill in sidewalk gap.	Pedestrian demand. Proximity to downtown and dense residential area.



	Type	Mass DOT	Street Name	Extents	Project Description	Reasoning
94	Sidewalk	P5	River	From existing sidewalk terminus at 90 River St to Enterprise Rent-A-Car / 2A.	Extend sidewalk on east side of River Street.	Enhanced pedestrian safety and comfort.
95	On-Street Bike Facility	B2, S17	River / Mill	Entire extents.	Narrow travel lanes to 11' and stripe bike lanes.	Enhanced cyclist safety and comfort.
96	On-Street Bike Facility	S15, P5	Russell	From Hope St to Washington St. (Under rail-road bridge.)	Repave Russell Street. Add bike lanes. Construct new sidewalk on south side.	Important connection for cyclists, Russell Street currently is in poor shape due to potholes and roadway deterioration.
97	Sidewalk	P2, P5, P9		From Gerrett to Parkway St.	Construct new sidewalk on north side of Sanderson St. Include crosswalks and ADA curb ramps.	There are currently no sidewalks on Sanderson St.
98	Traffic Calming	P1, P10	School	From Garfield St to Main St. (Entire extents.)	Update to concrete sidewalks. Consider widening sidewalk.	Current sidewalks in disrepair.
99	Traffic Calming	S6	Silver	At Davis St intersection.	Tighten turning radius.	A neck-down at the Silver St approach to Davis St will complement the Davis St. bike-boulevard style treatments and establish Davis as a slow / neighborhood street.
100	Crosswalk	P9	Turners Falls Rd	At Loomis Rd / Eliza Ln.	Install crosswalks and signage across Turners Falls Road at the Eliza Lane one-way exit, at Loomis Road where it meets Turners Falls Road, and at Eliza Lane where it meets Loomis Road.	Pedestrian safety and comfort.
101	Traffic Calming	S5, S17	Turners Falls Rd	Between Loomis Rd and White Bridge over Connecticut River.	Install digital vehicle speed feedback signage, or other similar traffic calming device.	Turners Falls Rd has significant pedestrian demand. There are no currently no sidewalks along Turners Falls Rd. This is an important connection between Greenfield and Turners Falls.
102	Sidewalk	P5, S1	Turners Falls Rd	Entire extents.	Construct new sidewalk on one side and stripe shoulders or bike lanes.	Turners Falls Rd has significant pedestrian demand. There are no currently no sidewalks along Turners Falls Rd. This is an important connection between Greenfield and Turners Falls.
103	Traffic Calming	S8, S17, P8	Walnut	From Davis to Chapman. (Entire extents)	Calm traffic utilizing a neckdown or raised crossing.	Speeding cut-through traffic.
104	Sidewalk	P5	Wells	From Alden to Cedar, and From Cedar St to Silver St.	Construct sidewalk.	Pedestrian demand, safety, and comfort. Proximity to residential neighborhood.
105	Traffic Calming	S8, S11, S17, P8	Wildwood	Entire extents.	Utilize traffic calming elements such as neck downs, chicanes, or speed humps to deter fast-moving traffic from cutting through these neighborhood streets in close proximity to schools.	Neighborhood street is used as a commuter cut-through.
106	Traffic Calming	P5, S17	Wisdom	Entire extents.	Add traffic calming elements. Construct sidewalk. Project is on TIP and will be designed with Complete Streets principles.	Neighborhood street is used as a commuter cut-through.

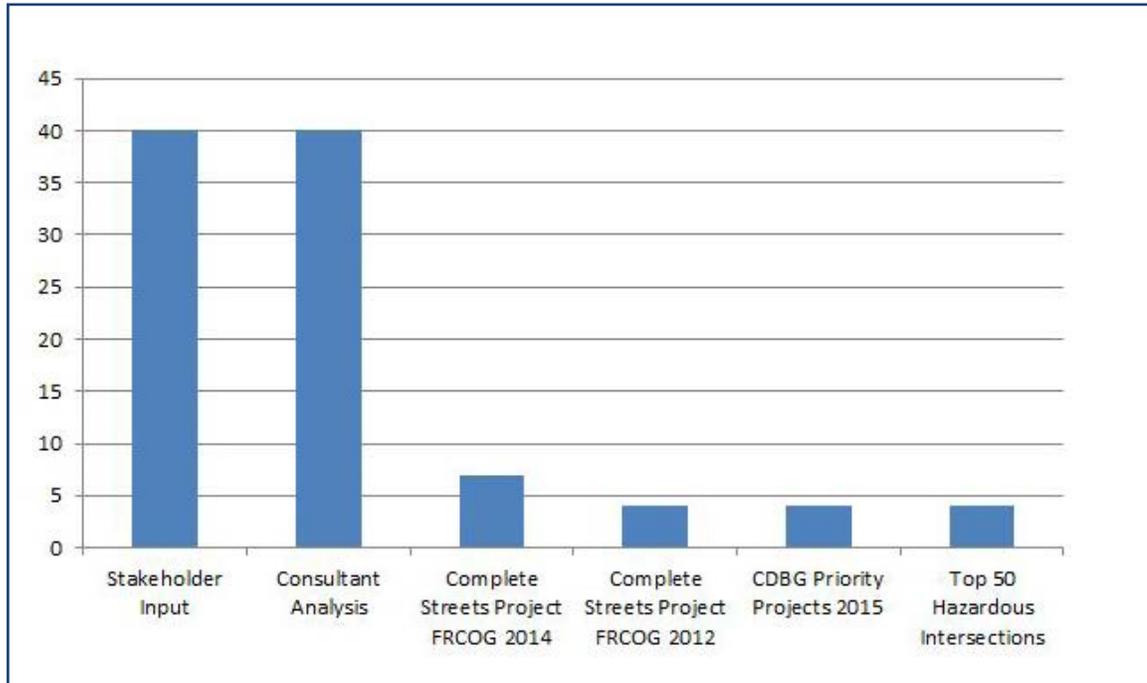


ALL PROJECTS LIST SUMMARY DATA

The following bar charts show the number of projects by:

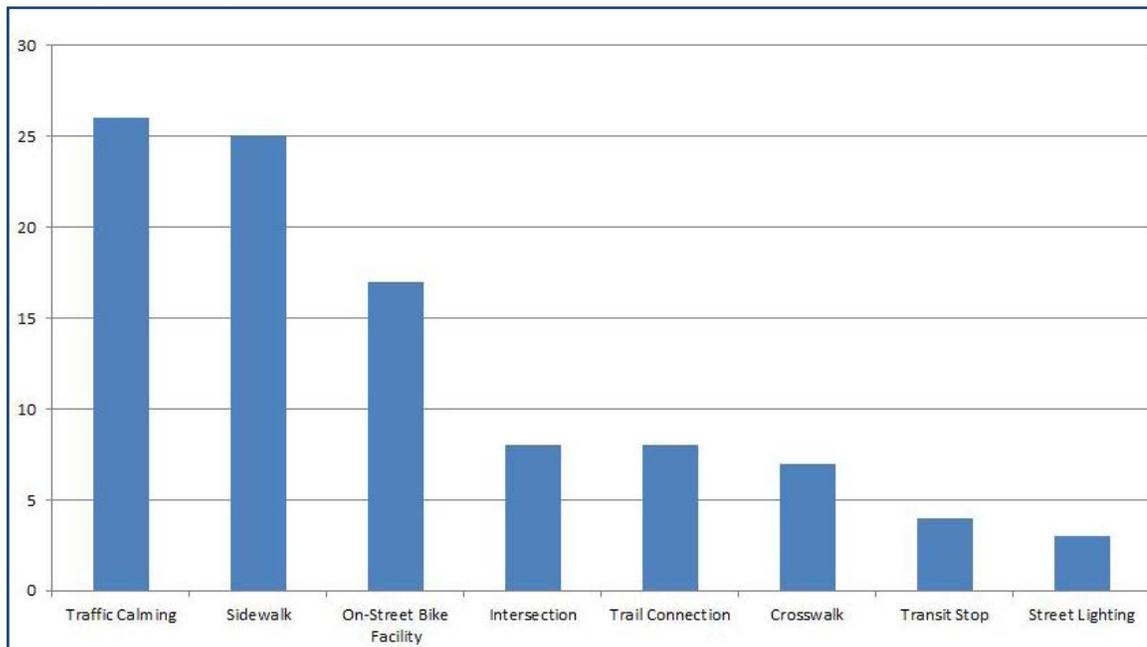
- source of each project idea, and
- the category or type of Complete Streets project

PROJECT SOURCE

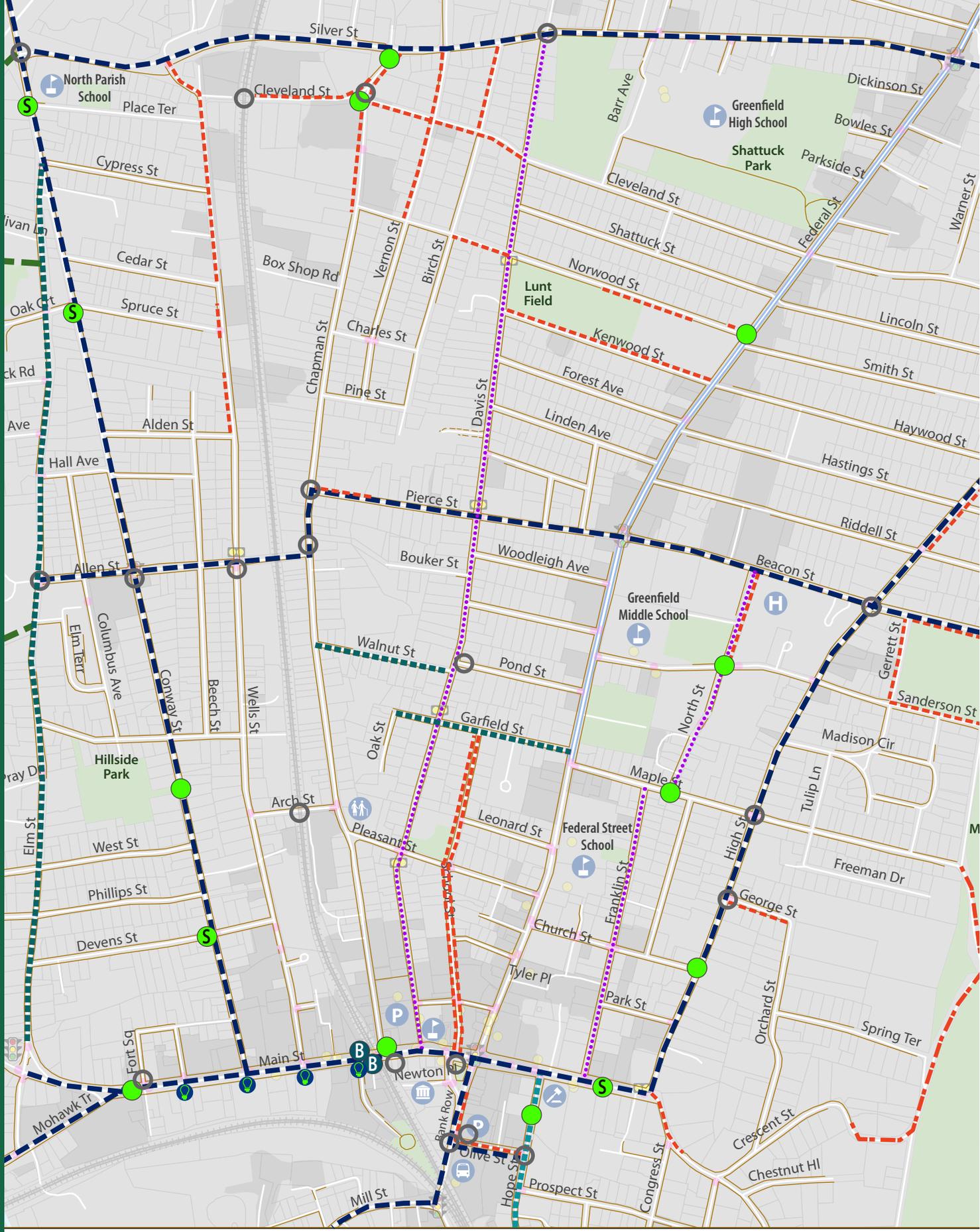


This chart shows that there was a wide variety of project ideas recorded by the public and from consultant analysis / fieldwork, and fewer projects from the various reports summarized.

PROJECT TYPE

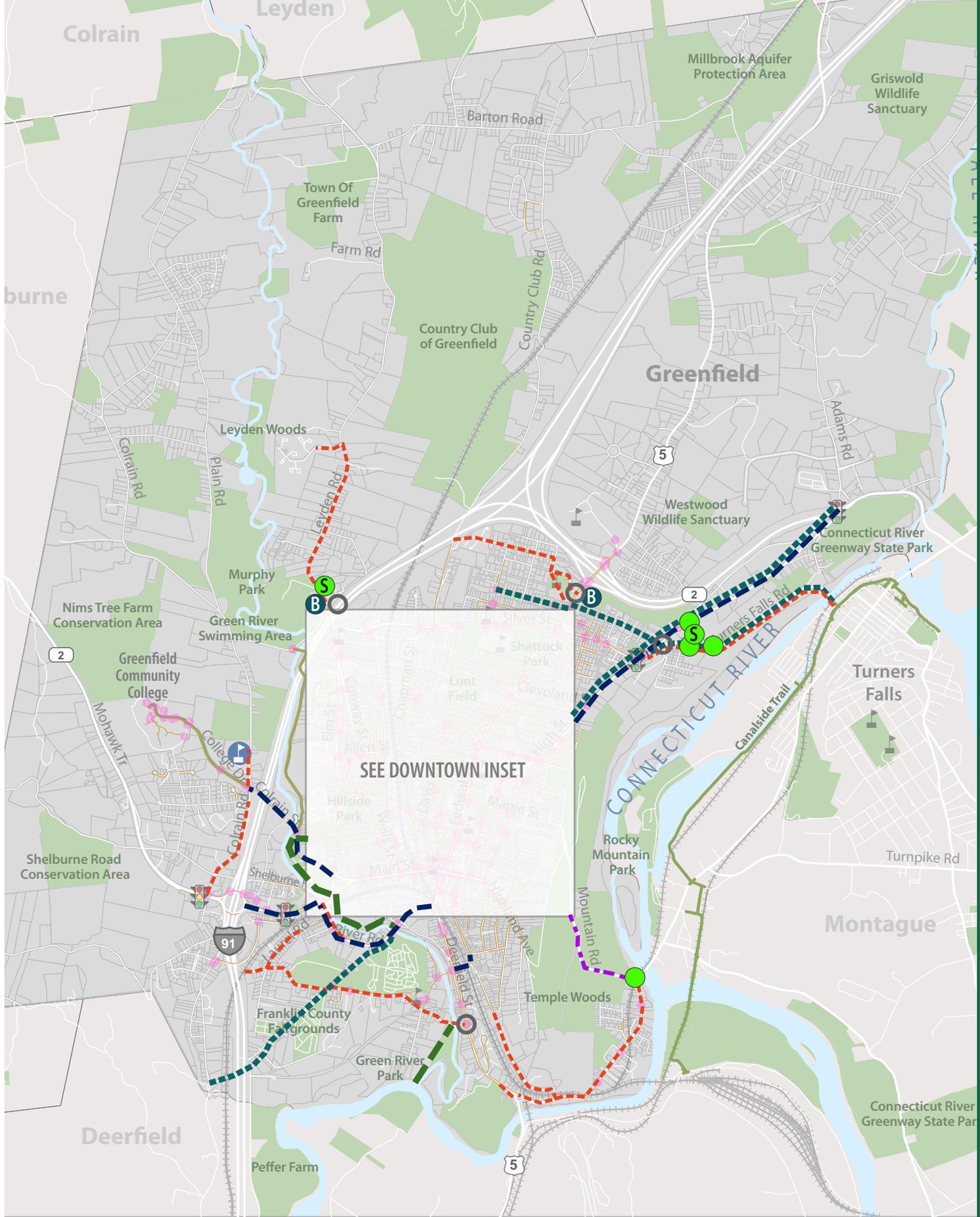


This chart shows that the top three types of recommended Complete Streets projects are Traffic Calming, Sidewalk, and On-Street Bike Facility projects.



RECOMMENDED PROJECTS

- Shared Use Path
- - - Bike lanes / Bikeable Shoulder
- ⋯ Bike Boulevard Treatment (Shared Lane Markings, Speed Humps, Signage)
- - - Sidewalk
- - - Flush Sidewalk
- Improved Crosswalk
- Crosswalk Signage Assembly
- - - Traffic Calming
- Intersection Improvement
- B Transit Stop / Signage
- Street Lighting



RECOMMENDED PROJECTS

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