

KEENE DOWNTOWN INFRASTRUCTURE
IMPROVEMENT & RECONSTRUCTION PROJECT
MAYOR'S AD-HOC STEERING COMMITTEE PRESENTATION

KEENE DOWNTOWN IMPROVEMENTS

AGENDA

Project Schedule Update

Public Comment Update

Preliminary Alternatives Discussion

- **Central Square Operations**
- **Main Street Operations**
- **Bicycle Facilities**
- **Gilbo/Railroad Connections**

November 2, 2022

Technical Review Committee (10)

November 9, 2022

Technical Review Committee (11)

November 15, 2022

Steering Committee (6)

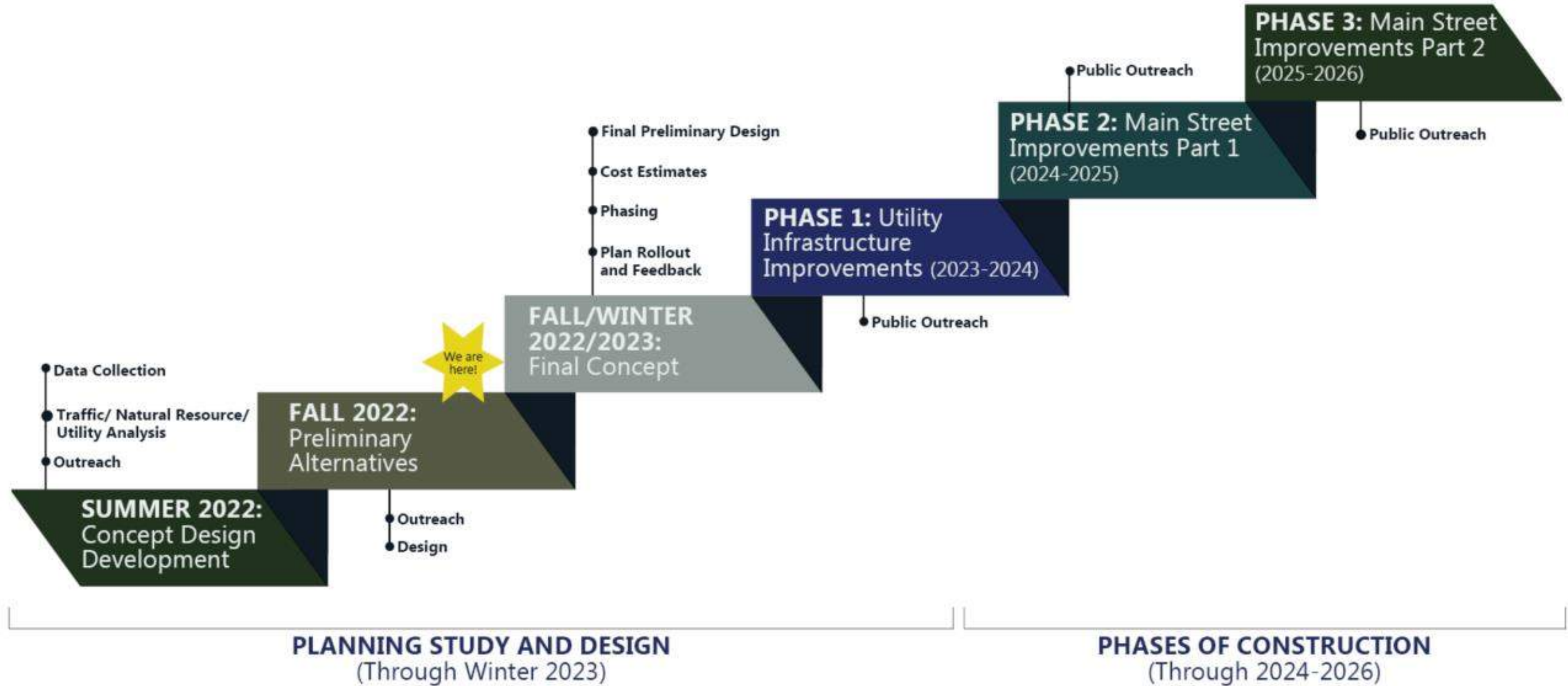
November 23, 2022 – 9:00 AM

Technical Review Committee (12)

January 17, 2022 – 3:00 PM

Steering Committee (7)

KEENE DOWNTOWN IMPROVEMENTS PROJECT TIMELINE



PUBLIC WORKSHOP #2 REVIEW

KEENE DOWNTOWN IMPROVEMENTS STEERING COMMITTEE CONSIDERATIONS

1. In-person workshop, October 2022

- (~100 Participants)

2. Online workshop, October 2022

- (~50 website visitors)

3. Participant Comments

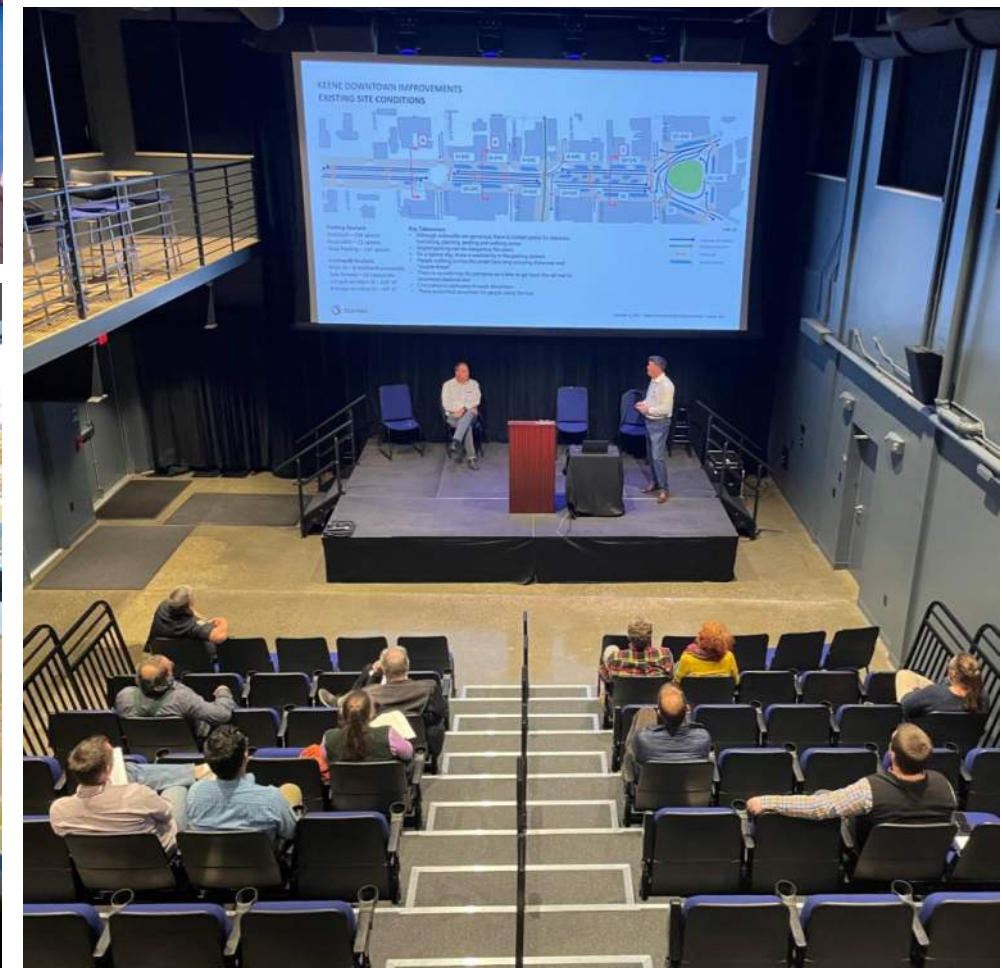
- a. Received 42 preference worksheets at Workshop #2
- b. Received 44 preference/comments from web page

4. Web Page

- Interactive Design Concept preference ranking/comments
- October 6th Public Meeting presentation
- Invited Comments
- 6,706 visits to the web page (as of 11/10/2022)

5. Community Engagement

- 2 day-long public workshops (200+ participants)
- 2 Downtown businesses/Chamber workshops
- Downtown Property Utility Assessments
- Energy & Climate (1), Bike/Ped/Path (2)
- Art's Alive
- Keene Rotary



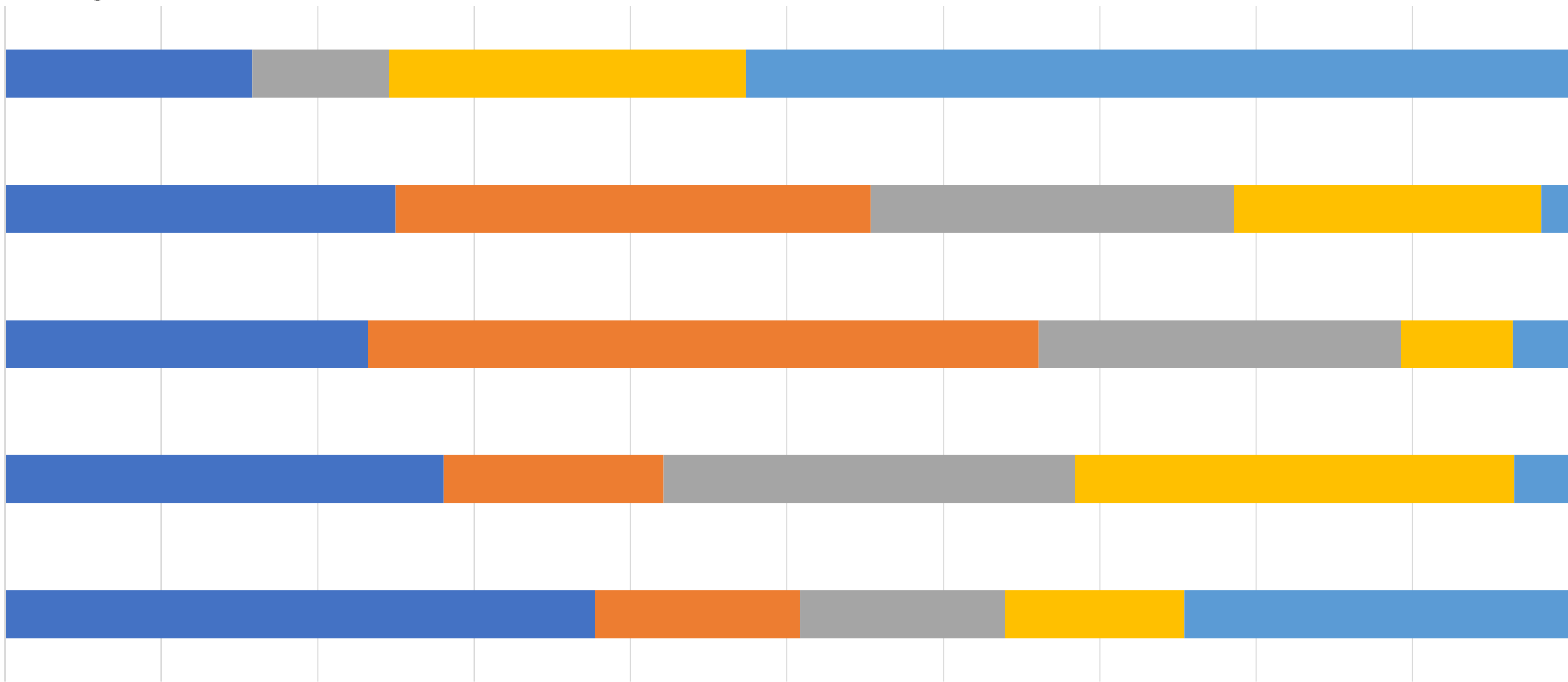
KEENE DOWNTOWN IMPROVEMENTS

MAIN STREET PREFERENCES

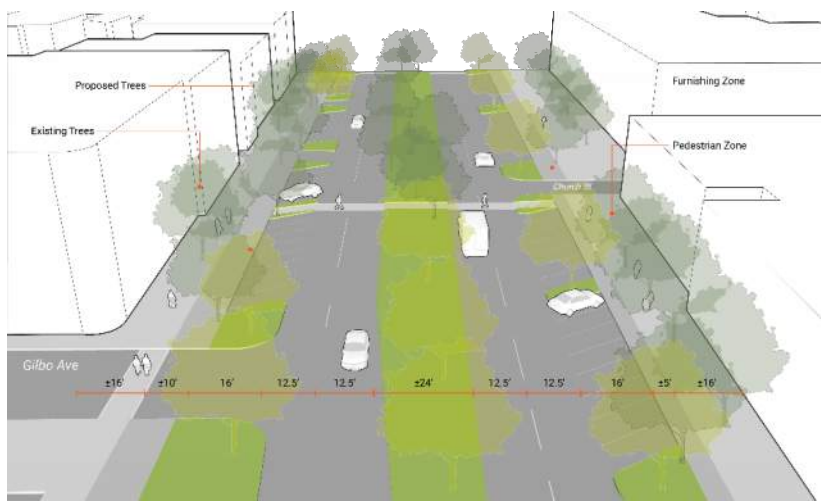
85 Total Responses
 -41 In-Person
 -44 Online

Main Street

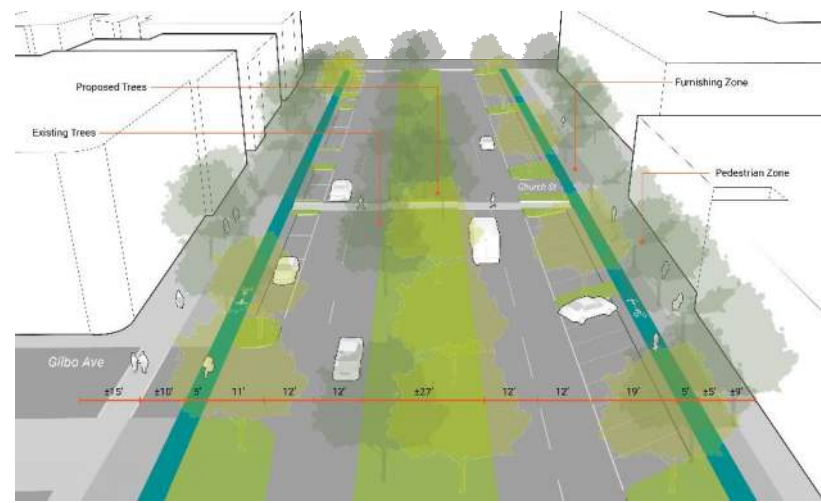
- Option 1: Minimal
- Option 2A: Multi-Modal Bike Lane on Road Grade
- Option 2B: Multi-Modal Bike Lane at Sidewalk Grade
- Option 2C: Multi-Modal Bike Lane in Center Median
- Option 3: Single Lane and Multimodal



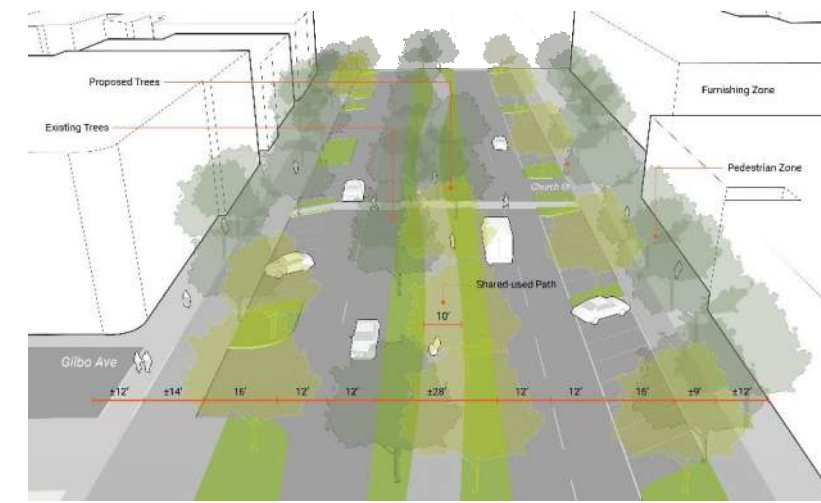
■ 1st Choice ■ 2nd Choice ■ 3rd Choice ■ 4th Choice ■ 5th Choice



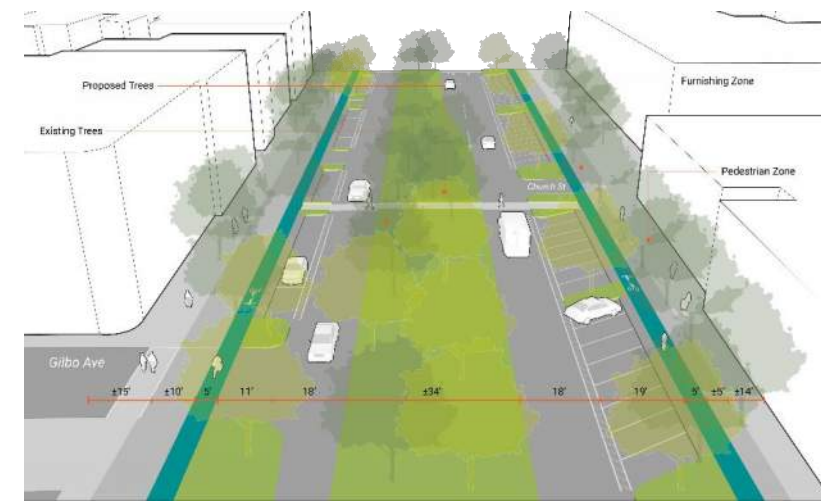
Option 1



Option 2a / 2b



Option 2c



Option 3

KEENE DOWNTOWN IMPROVEMENTS

CENTRAL SQUARE PREFERENCES

85 Total Responses

-41 In-Person

-44 Online

Central Square

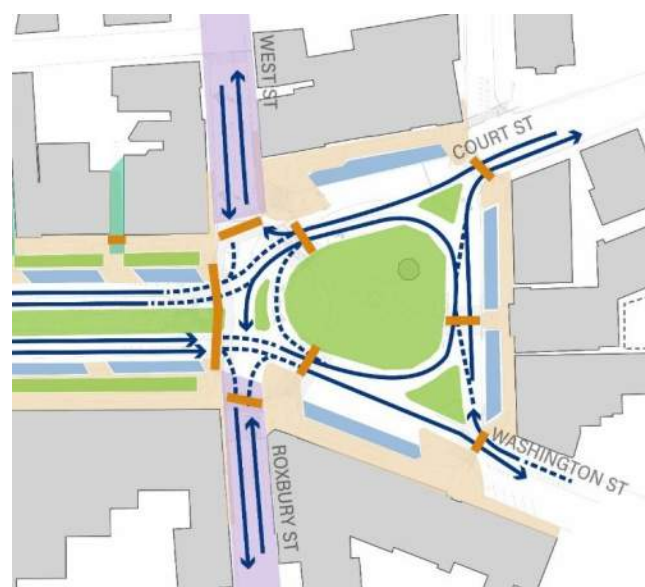
Option 1: Smaller Circular Intersection

Option 2: North Expansion Main Street Two Lane

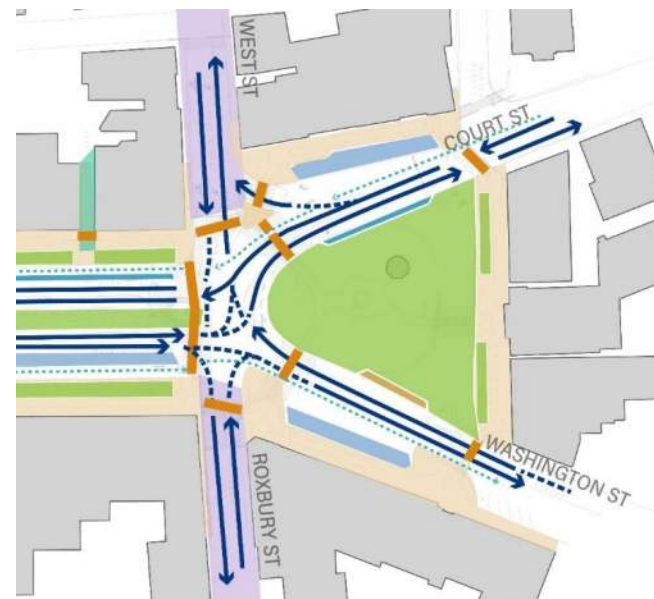
Option 3: North Expansion Main Street Single Lane

Option 4: Mini Roundabout

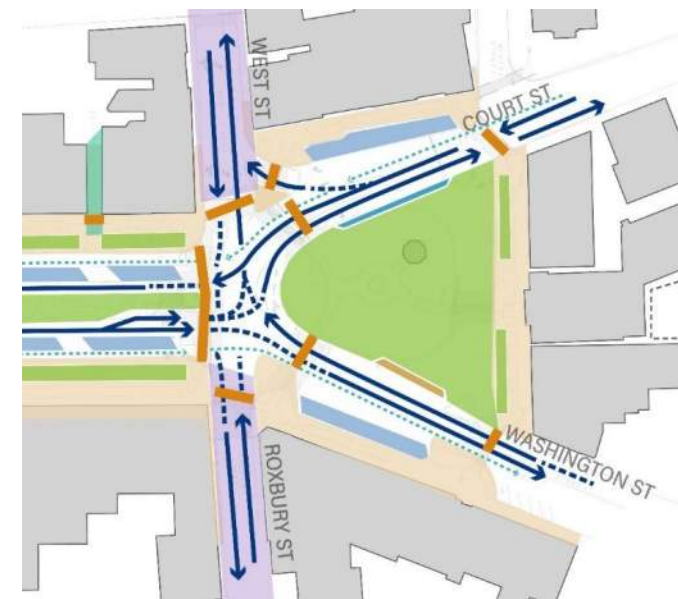
■ 1st Choice ■ 2nd Choice ■ 3rd Choice ■ 4th Choice



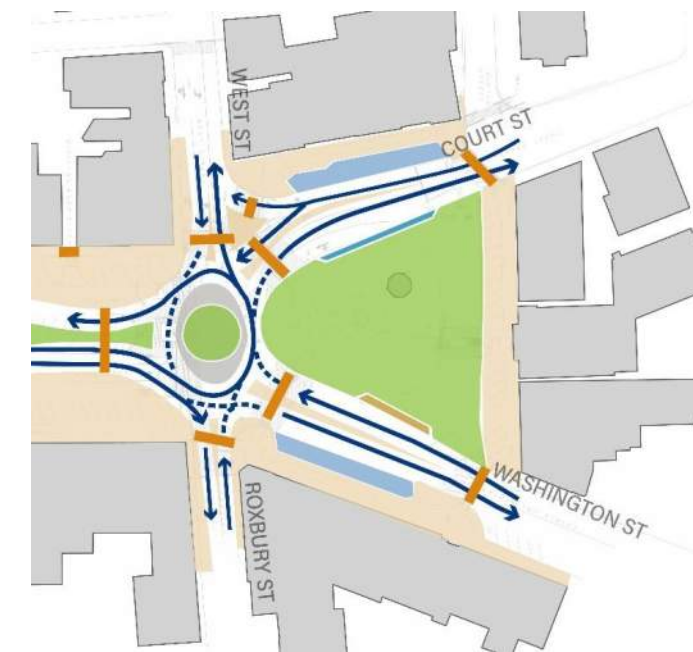
Option 1



Option 2



Option 3



Option 4

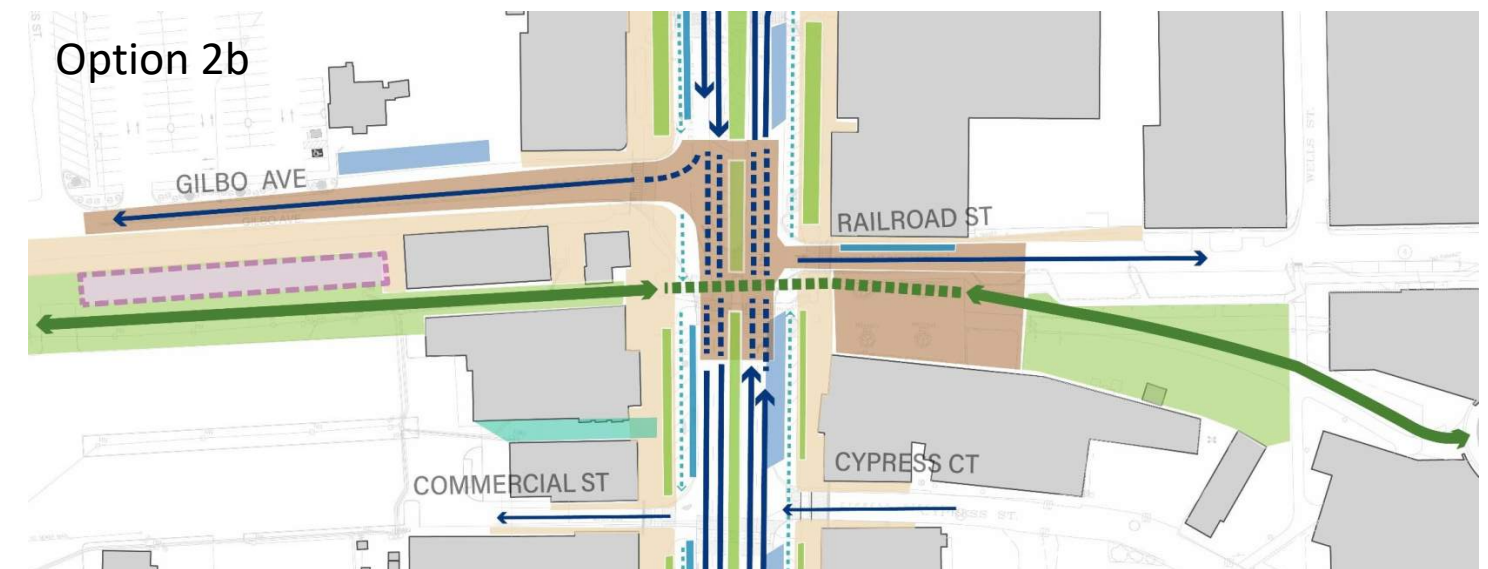
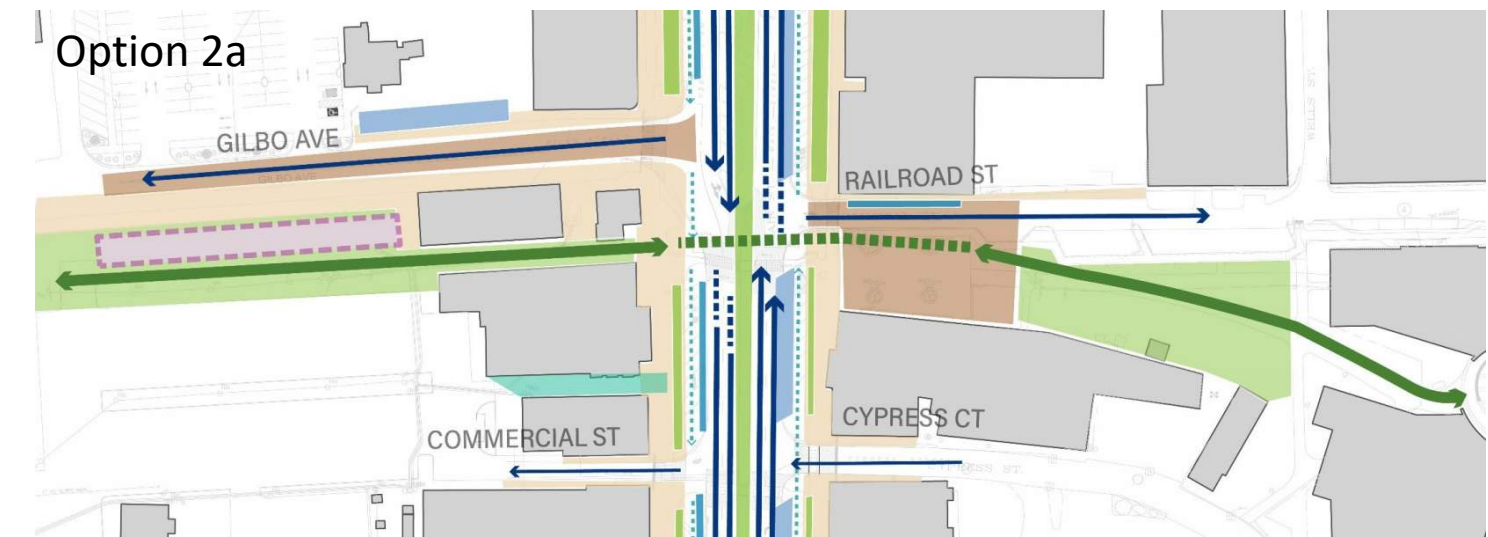
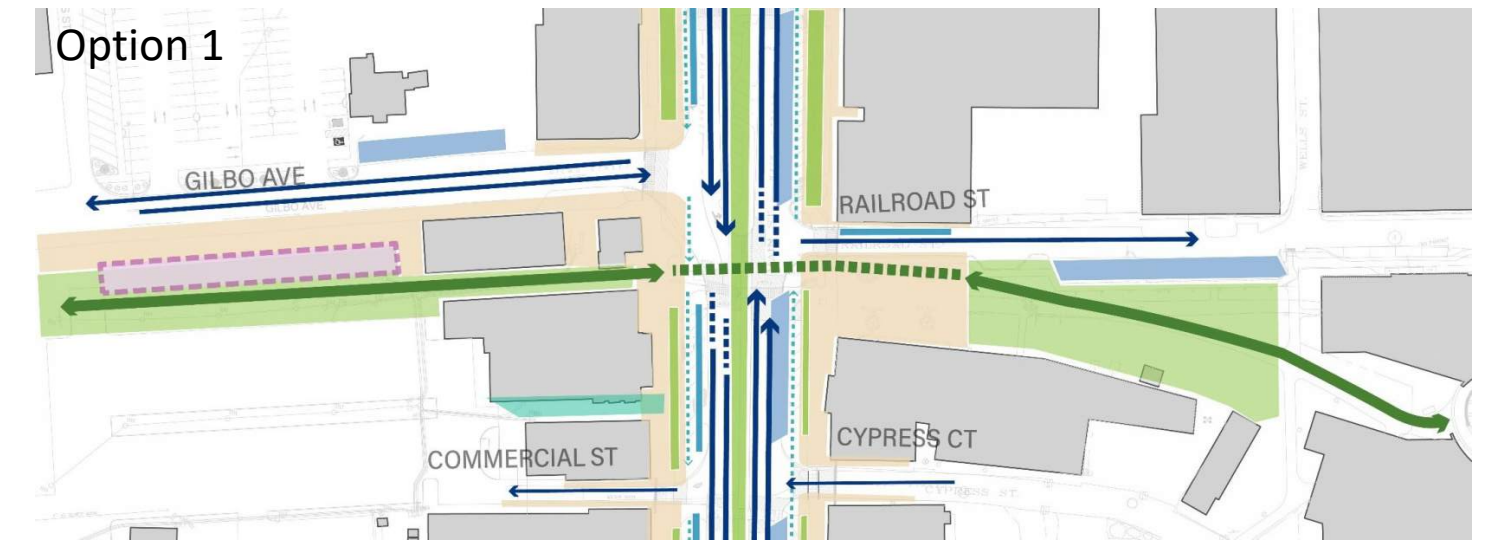
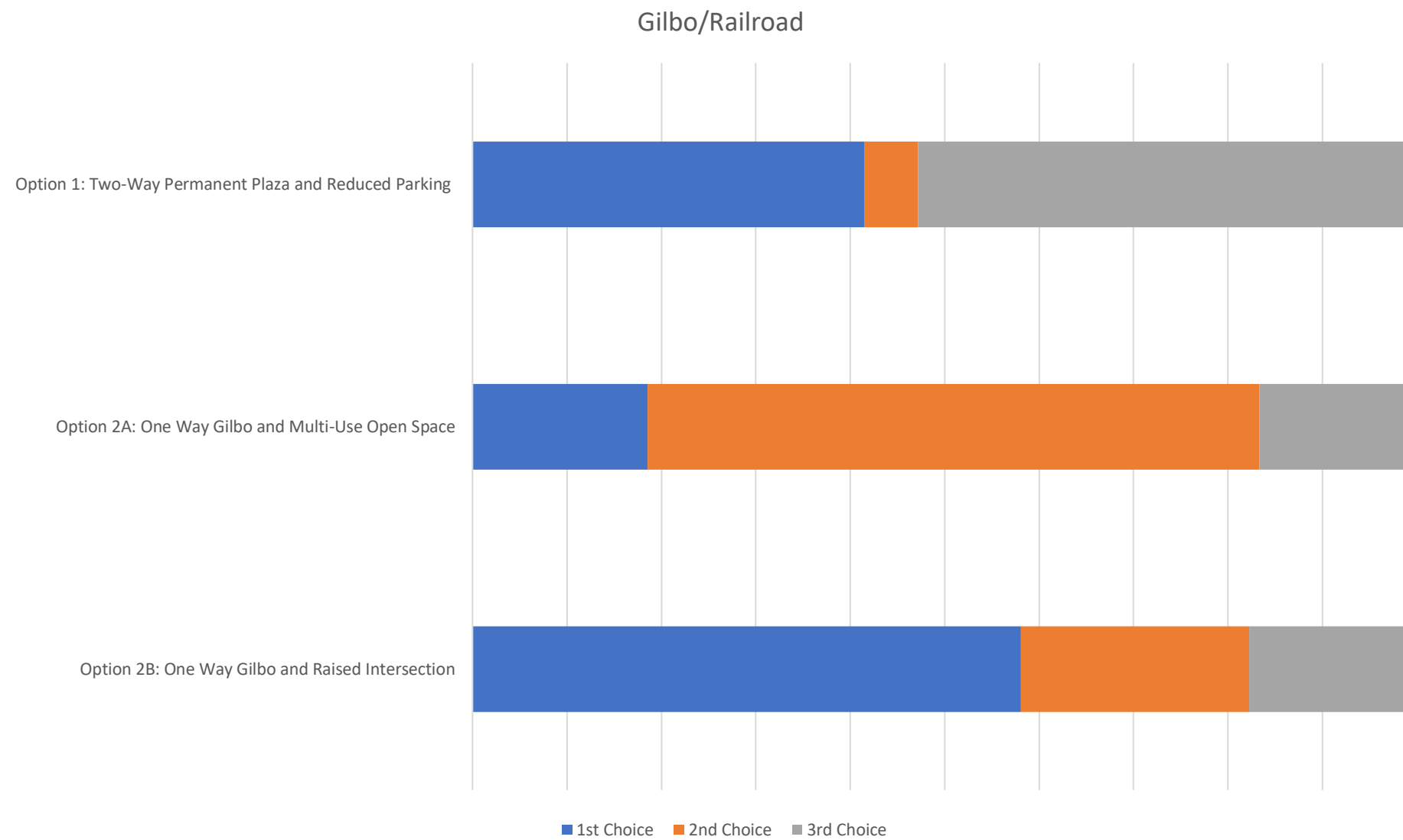
KEENE DOWNTOWN IMPROVEMENTS

GILBO/RAILROAD SQUARE PREFERENCES

85 Total Responses

-41 In-Person

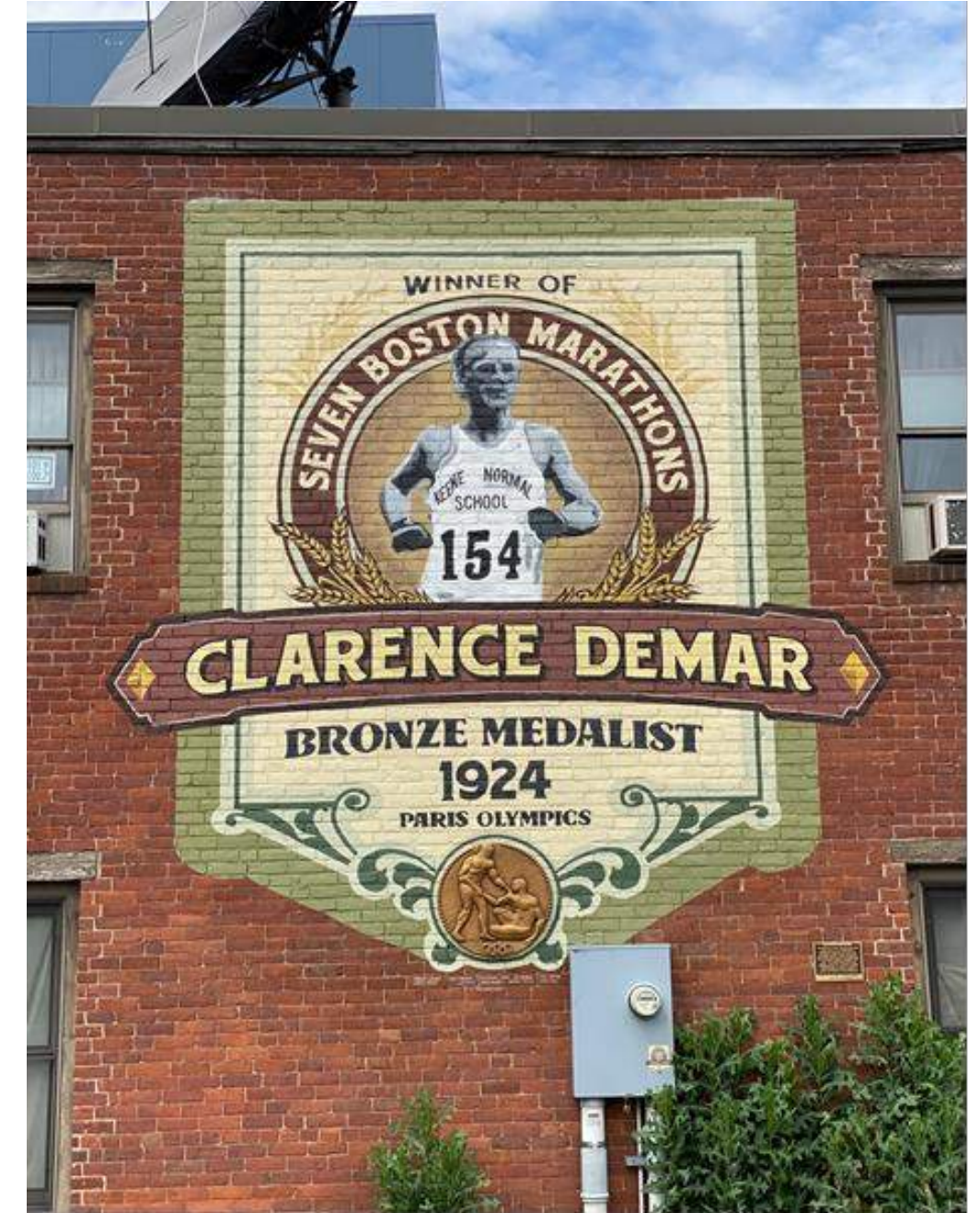
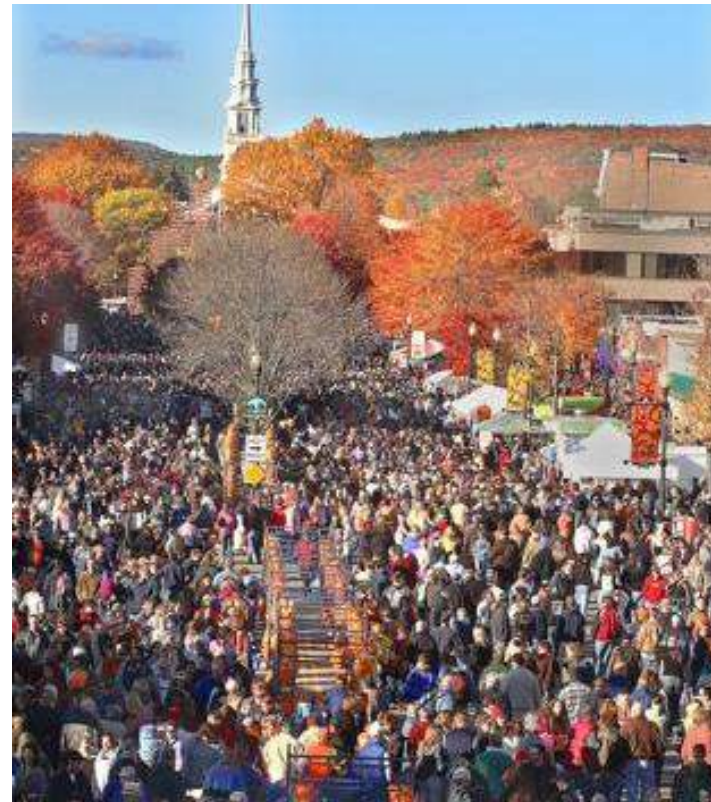
-44 Online



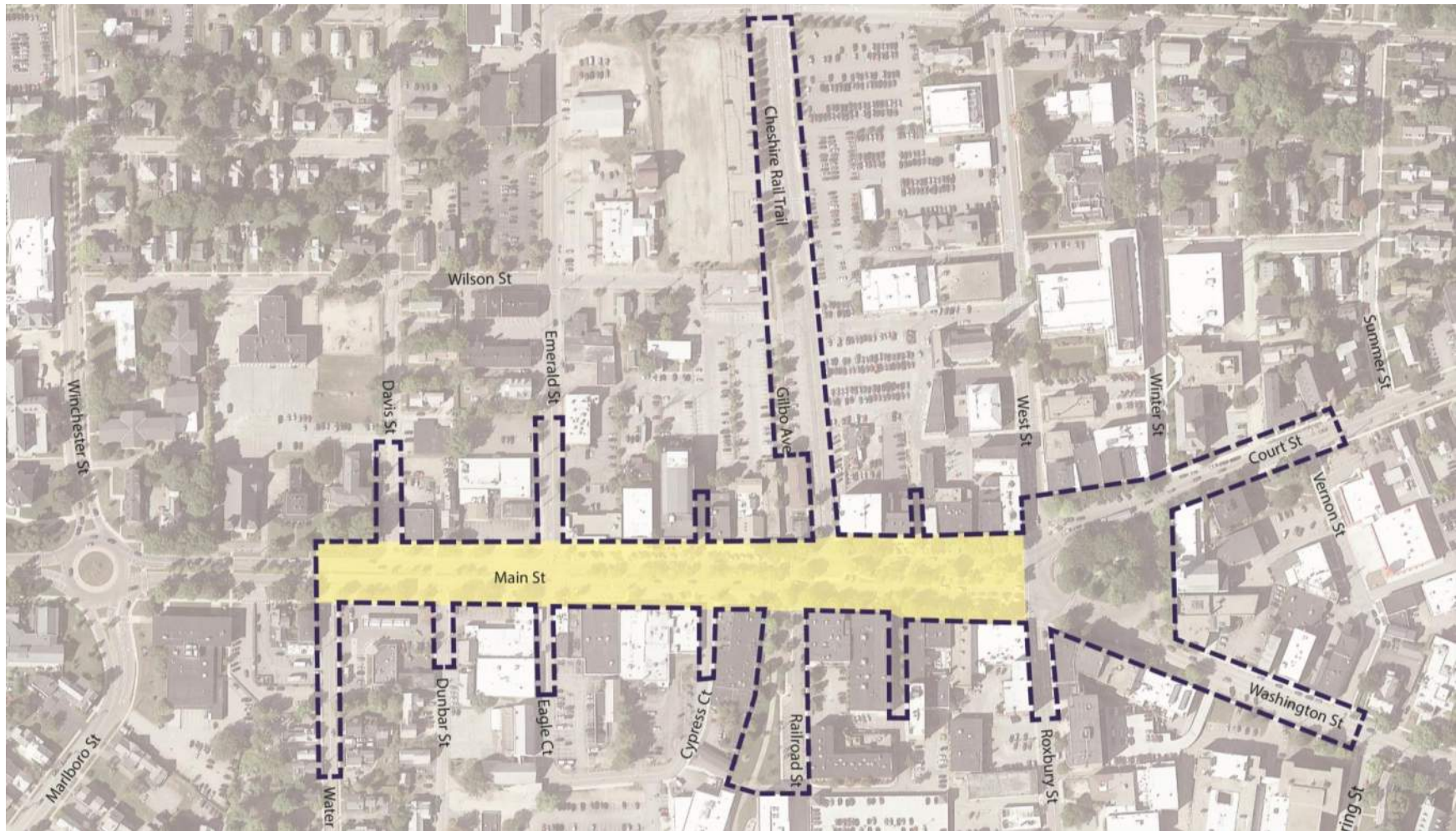
KEENE DOWNTOWN IMPROVEMENTS STEERING COMMITTEE CONSIDERATIONS

Alternatives Concepts to Consider – Key Takeaways

- Main Street Design Alternatives
 - Angled Parking
 - Traffic Analysis/LOS
 - Single- or Multi-Lane Operation
 - Intersection Options
- Main Street Multimodal Corridor
 - Shared Street, Bike Lanes
- Central Square North Expansion
- Gilbo/Railroad Square Design Approach
 - Two-way, one-way, and raised intersection



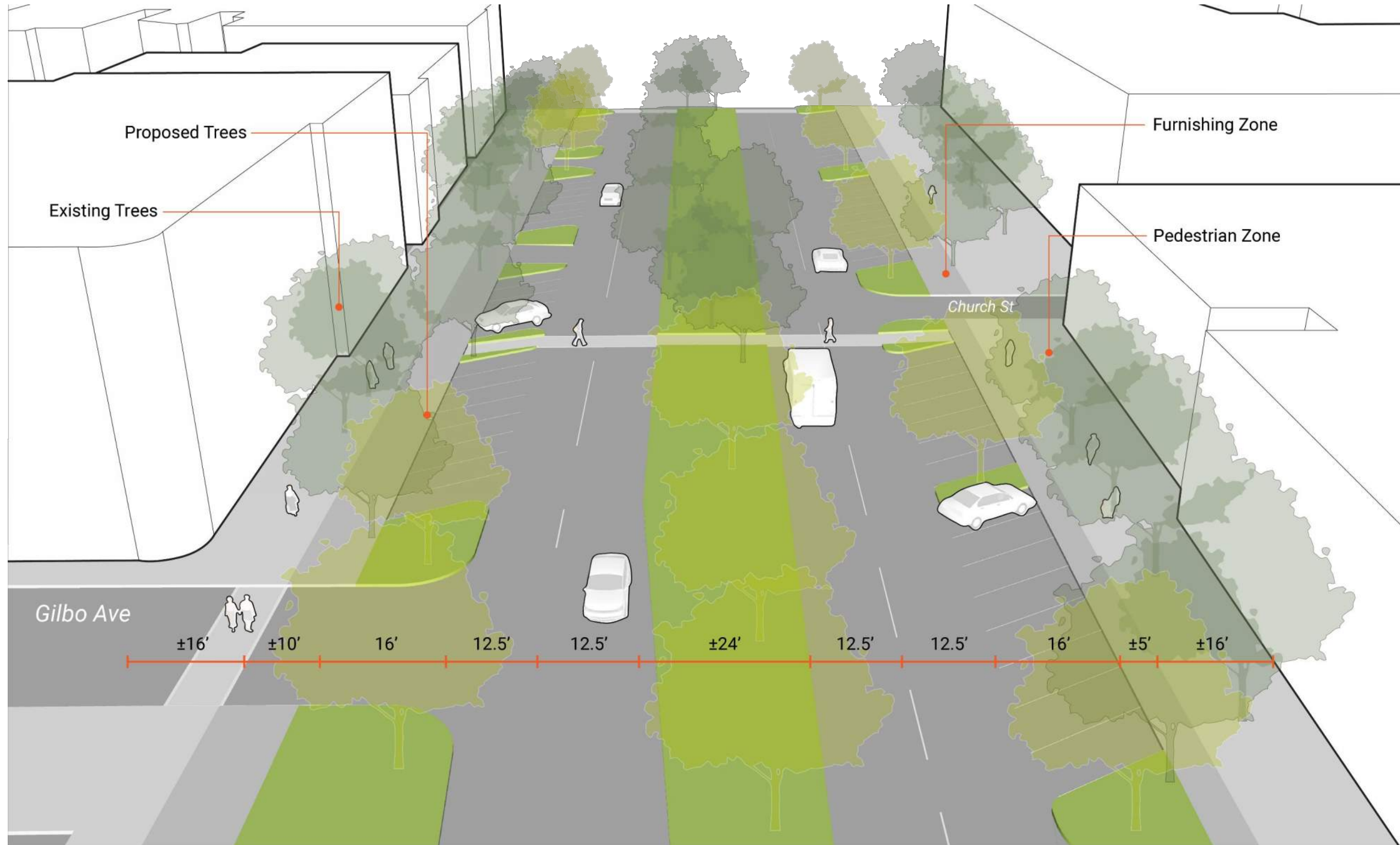
CHARACTER AREA | MAIN STREET *Vibrant / Charming / Inclusive / Welcoming/ Multi-Modal*



KEENE DOWNTOWN IMPROVEMENTS

OPTION 1 MINIMAL | PERSPECTIVE SECTION

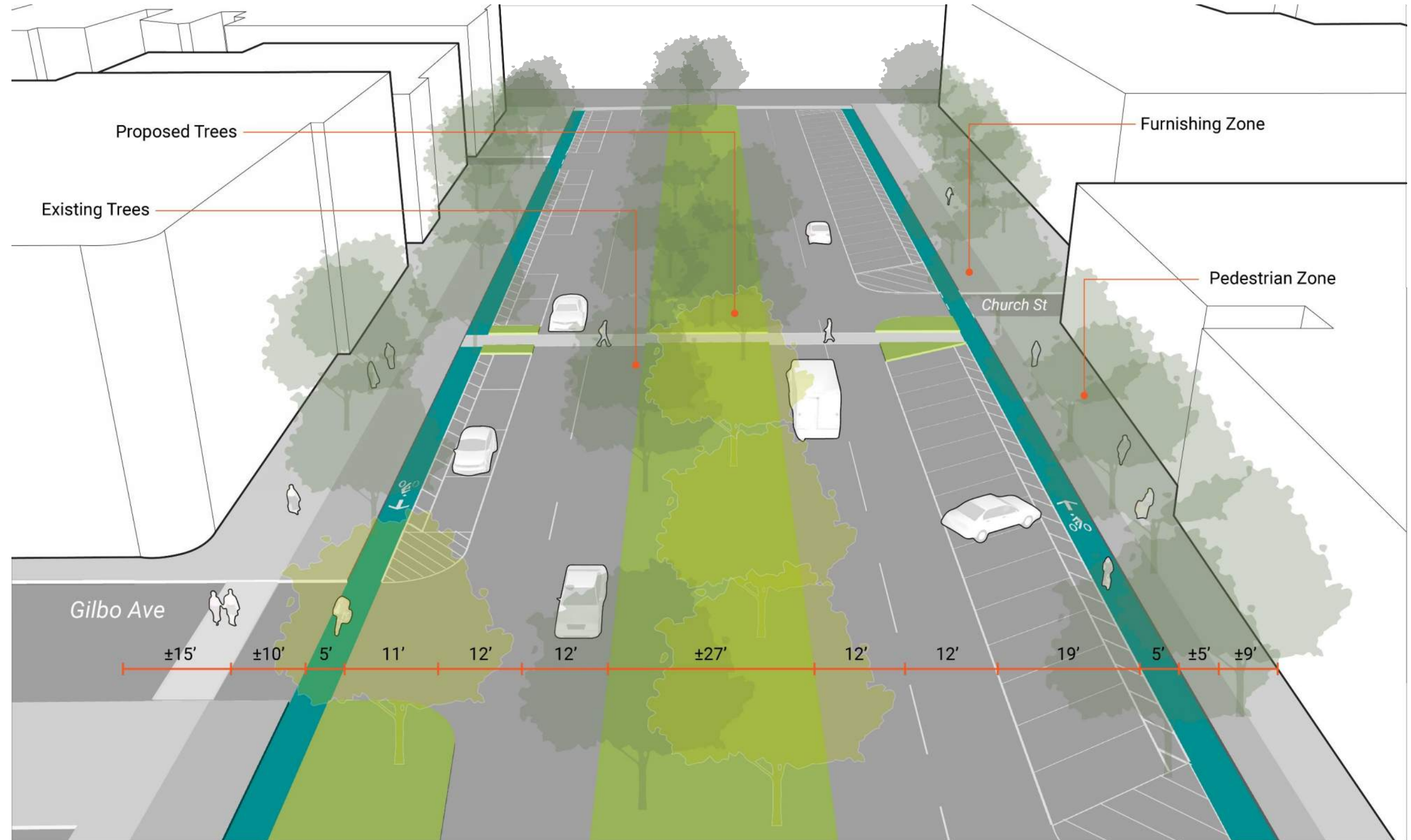
Expanded Pedestrian Zone | Angled Parking | Parking Removed in Center Median



KEENE DOWNTOWN IMPROVEMENTS

OPTION 2A MULTI-MODAL | PERSPECTIVE SECTION – Bike Lane on Road Grade

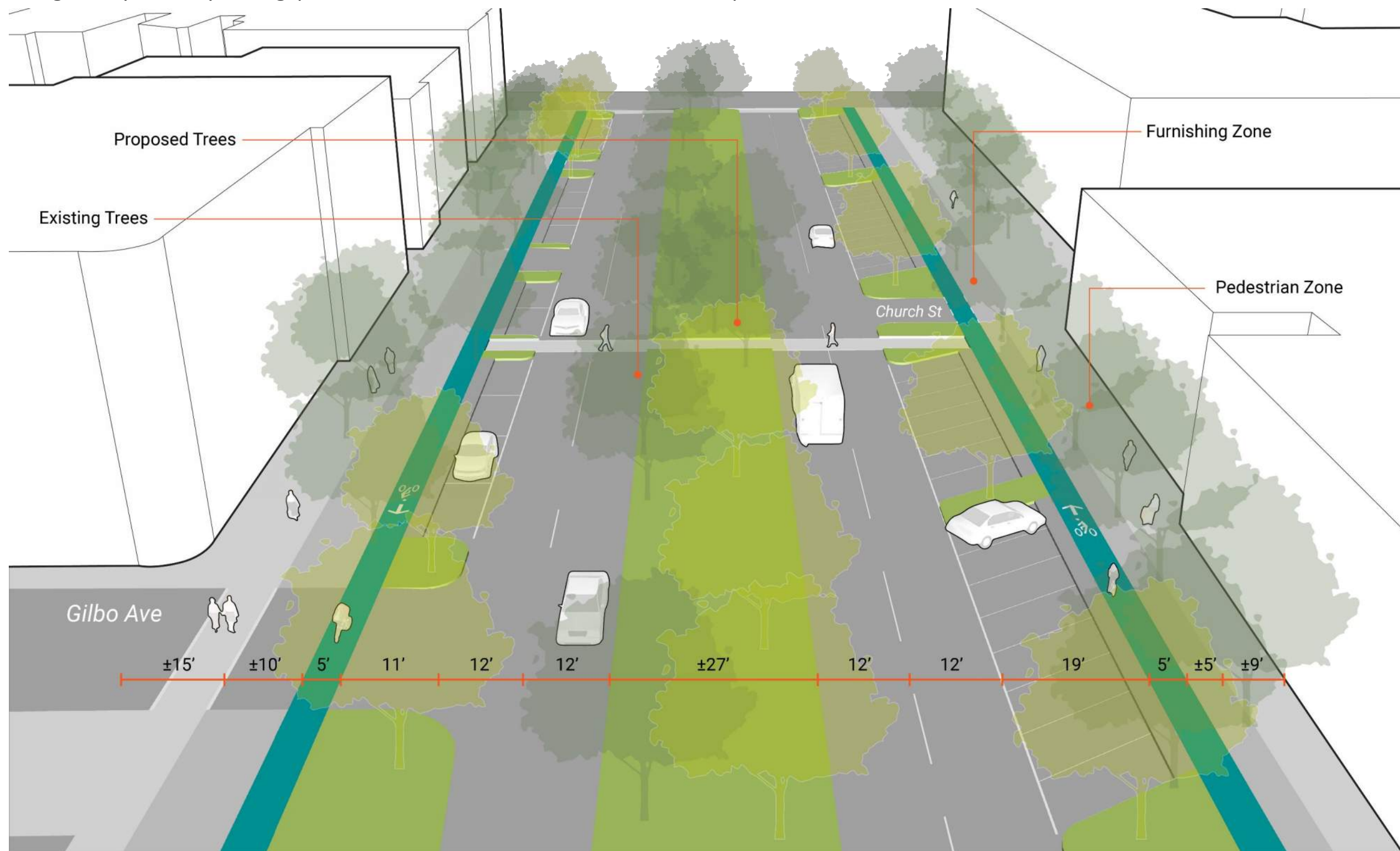
Expanded Pedestrian Zone | Combo angled + parallel parking | Protected Bike Lane on Road Grade | Planted center median



KEENE DOWNTOWN IMPROVEMENTS

OPTION 2B MULTI-MODAL | PERSPECTIVE SECTION - Bike Lane on Sidewalk Grade

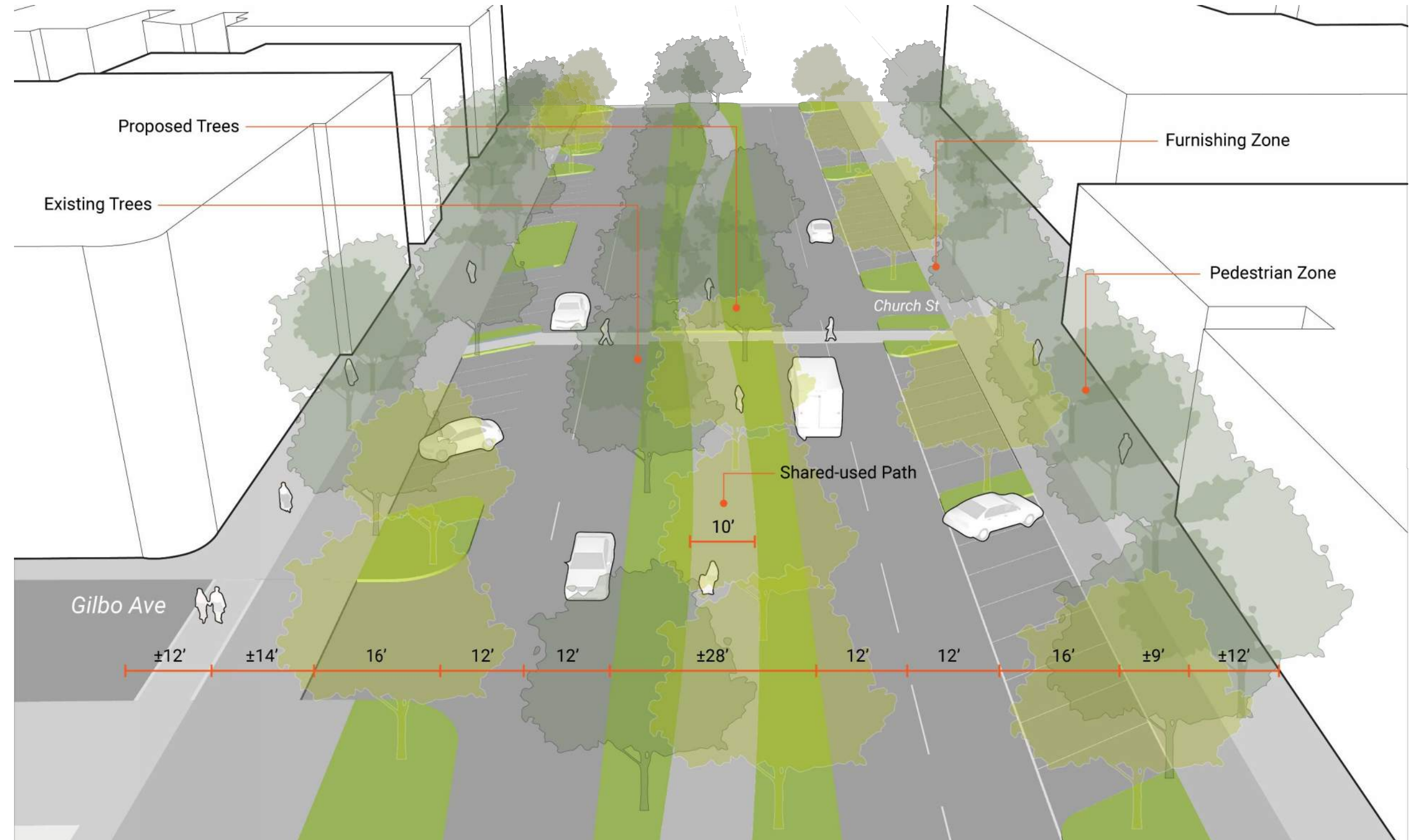
Expanded Pedestrian Zone | Combo angled + parallel parking | Protected Bike Lane on Sidewalk Grade | Planted center median



KEENE DOWNTOWN IMPROVEMENTS

OPTION 2C MULTI-MODAL | PERSPECTIVE SECTION - Bike Lane in Center Median

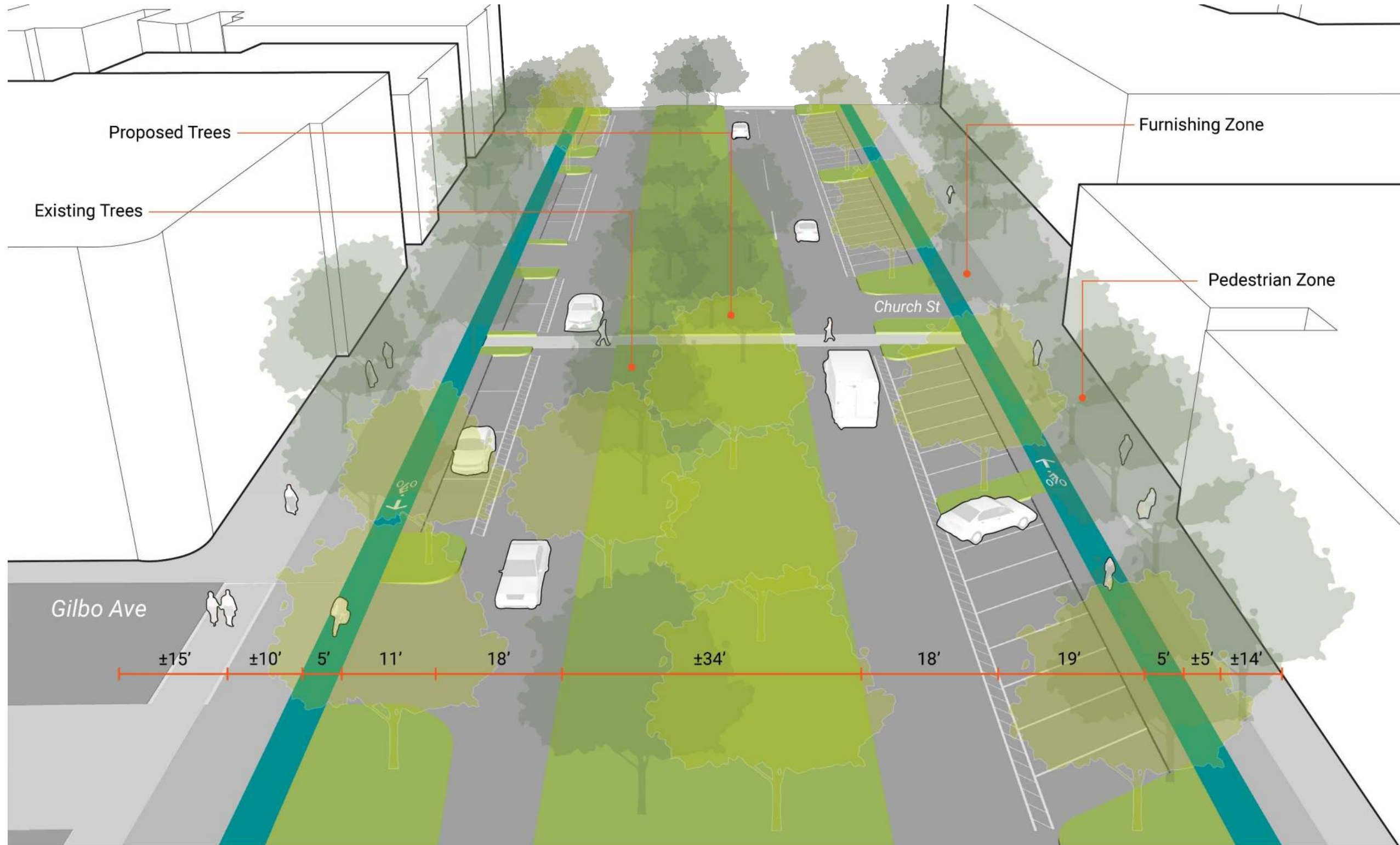
Expanded Pedestrian Zone | Angled parking | Protected Bike Lane in Center Median | Planted center median



KEENE DOWNTOWN IMPROVEMENTS

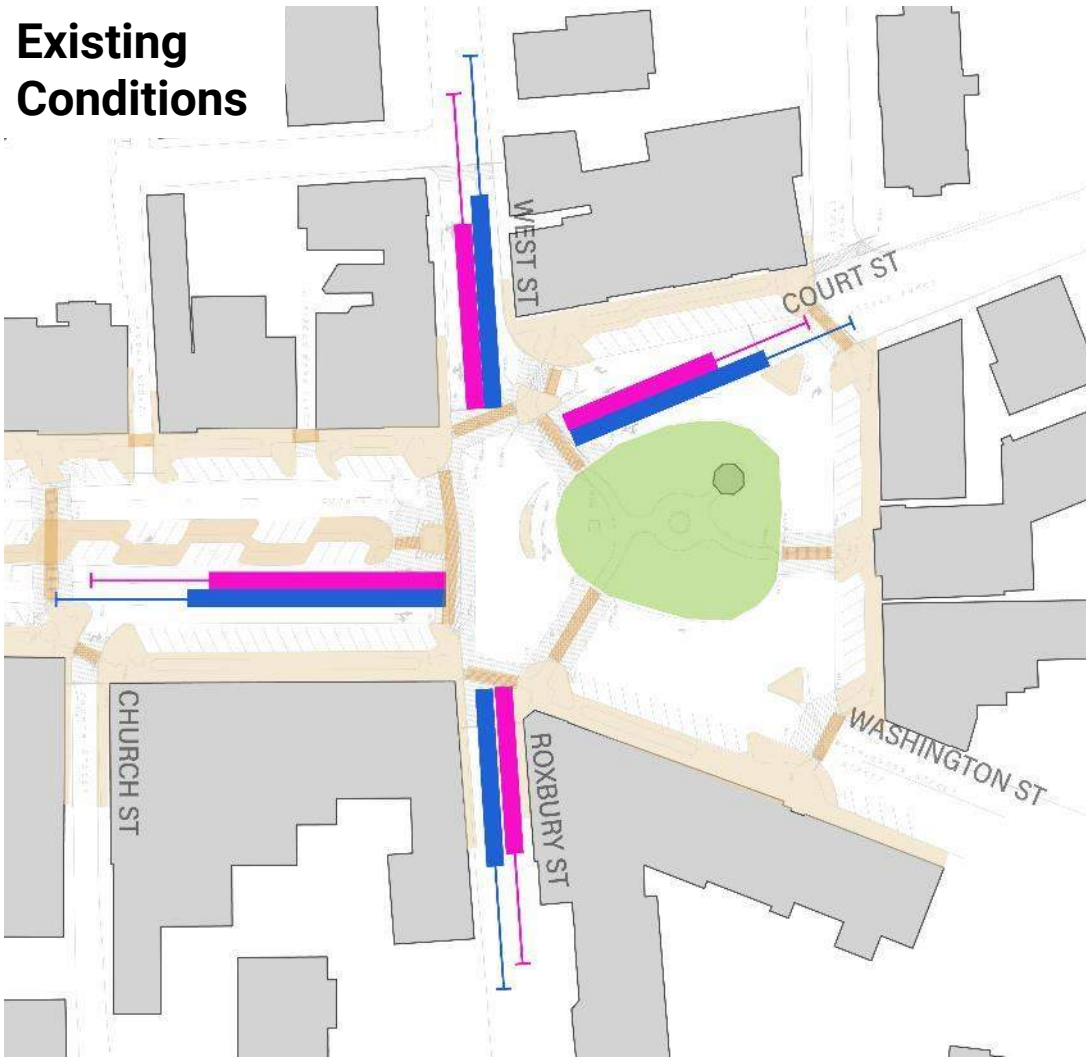
OPTION 3 SINGLE LANE + MULTI-MODAL | PERSPECTIVE SECTION

Expanded Pedestrian Zone | Single Travel Lane | Combo Angled + Parallel Parking | Protected Bike Lane on Sidewalk Grade



KEENE DOWNTOWN IMPROVEMENTS

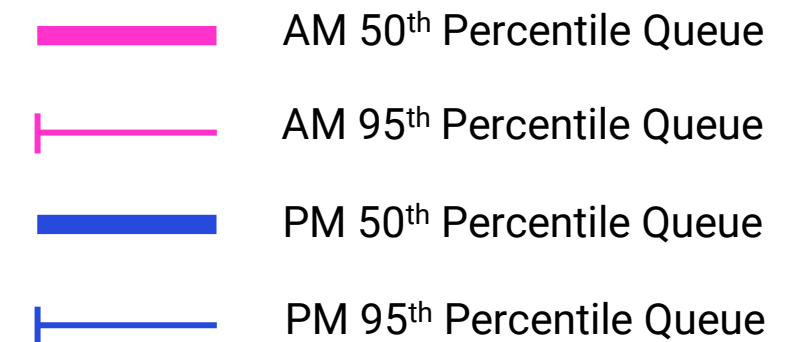
TRAFFIC ANALYSIS | CENTRAL SQUARE LEVEL OF SERVICE (LOS)



AM Main St Queue

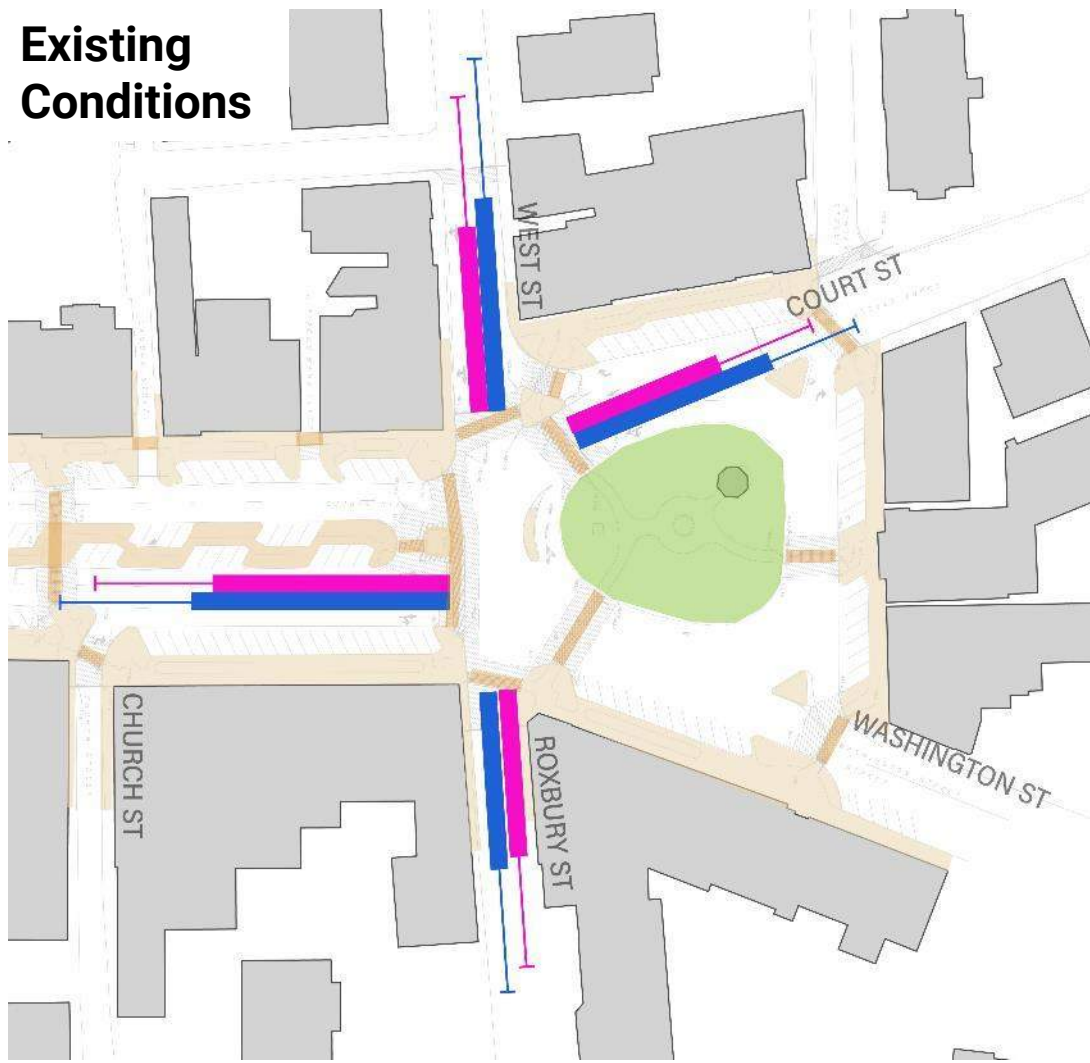
AM Main St Queue

Existing						
Central Square Signal (Main Street at West Street and Roxbury Street)	2022 AM			2022 PM		
	Level of Service (LOS)	Control Delay (s)	95th%-ile Queue (ft)^	Level of Service (LOS)	Control Delay (s)	95th%-ile Queue (ft)^
West St (EB)	D	36.7	198	D	35.9	223
Roxbury St (WB)	C	24.5	190	C	24.9	175
Main St (NB)	C	34.1	241	D	35.6	250
Court St (SB)	C	21.0	165	C	24.4	191



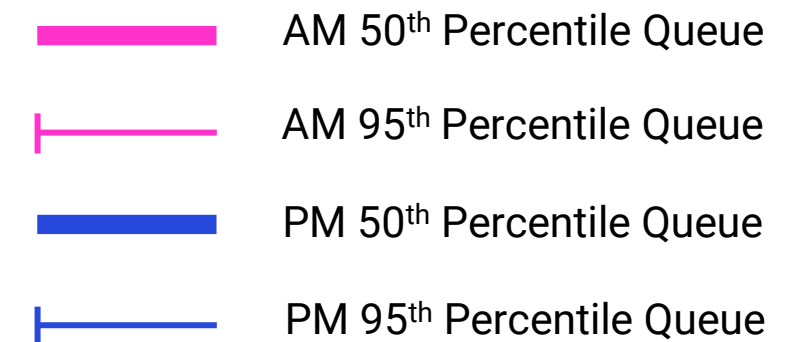
KEENE DOWNTOWN IMPROVEMENTS

TRAFFIC ANALYSIS | CENTRAL SQUARE LEVEL OF SERVICE (LOS)



AM West St Queue

Existing						
Central Square Signal (Main Street at West Street and Roxbury Street)	2022 AM			2022 PM		
	Level of Service (LOS)	Control Delay (s)	95th%-ile Queue (ft)^	Level of Service (LOS)	Control Delay (s)	95th%-ile Queue (ft)^
West St (EB)	D	36.7	198	D	35.9	223
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Court St (SB)	C	21.0	165	C	24.4	191

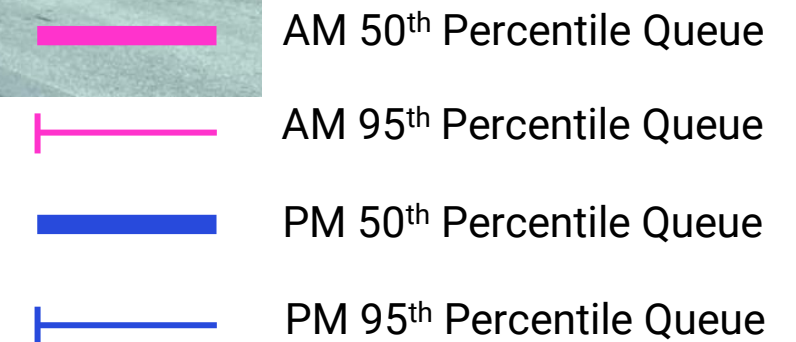


KEENE DOWNTOWN IMPROVEMENTS

TRAFFIC ANALYSIS | MAIN STREET LEVEL OF SERVICE (LOS)



PM Main St Queue



Existing	2022 AM			2022 PM		
	Level of Service (LOS)	Control Delay (s)	95th%-ile Queue (ft)^	Level of Service (LOS)	Control Delay (s)	95th%-ile Queue (ft)^
Central Square Signal (Main Street at West Street and Roxbury Street)						
West St (EB)	D	36.7	198	D	35.9	223
Roxbury St (WB)	C	24.5	190	C	24.9	175
Main St (NB)	C	34.1	241	D	35.6	250
Court St (SB)	C	21.0	165	C	24.4	191

KEENE DOWNTOWN IMPROVEMENTS

TRAFFIC ANALYSIS | CENTRAL SQUARE LEVEL OF SERVICE (LOS)

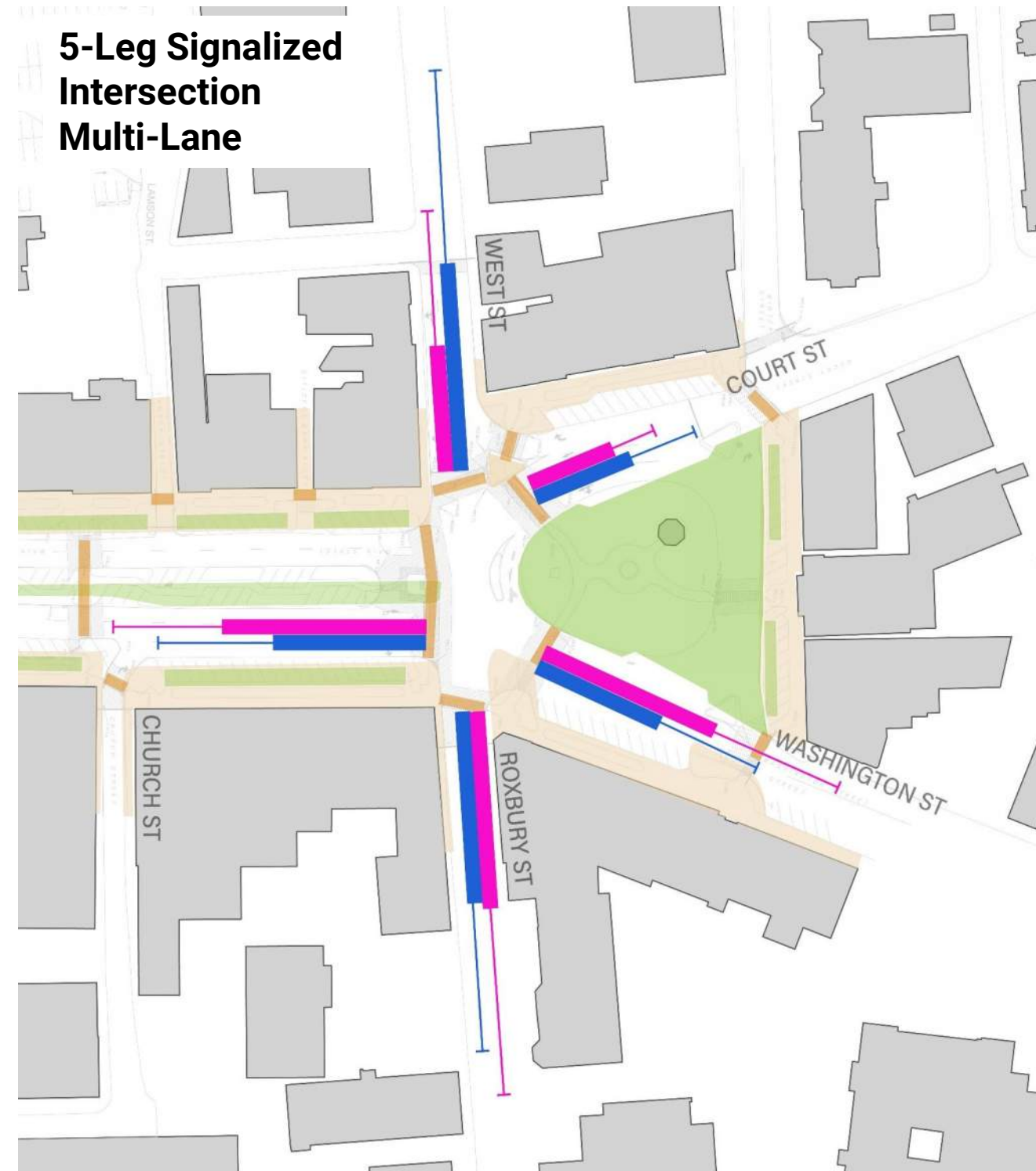
Existing Conditions



Existing

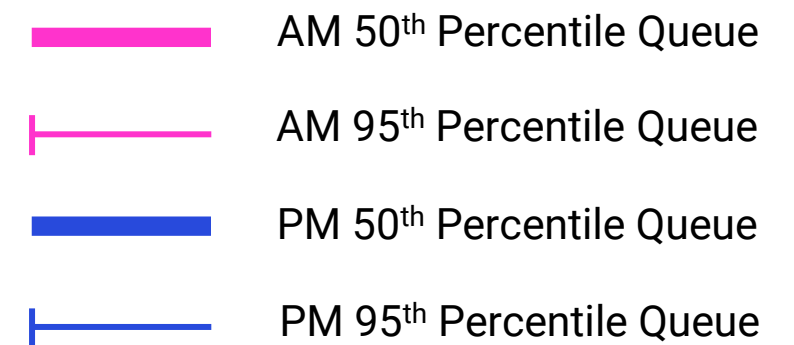
Central Square Signal (Main Street at West Street and Roxbury Street)	2022 AM			2022 PM		
	Level of Service (LOS)	Control Delay (s)	95th%-ile Queue (ft)^	Level of Service (LOS)	Control Delay (s)	95th%-ile Queue (ft)^
West St (EB)	D	36.7	198	D	35.9	223
Roxbury St (WB)	C	24.5	190	C	24.9	175
Main St (NB)	C	34.1	241	D	35.6	250
Court St (SB)	C	21.0	165	C	24.4	191

5-Leg Signalized Intersection Multi-Lane



Alternative - 5-Leg Signal - 2 Lanes Main

Central Square Signal (Main Street at West Street and Roxbury Street)	2022 AM			2022 PM		
	Level of Service (LOS)	Control Delay (s)	95th%-ile Queue (ft)^	Level of Service (LOS)	Control Delay (s)	95th%-ile Queue (ft)^
West St (EB)	E	76.2	213	E	75.6	323
Roxbury St (WB)	E	66.5	310	E	60.2	276
Main St (NB)	D	43.3	253	D	41.2	217
Washington St (SB)	D	52.3	267	D	44.1	187
Court St (SB)	D	46.8	119	D	42.2	139



KEENE DOWNTOWN IMPROVEMENTS

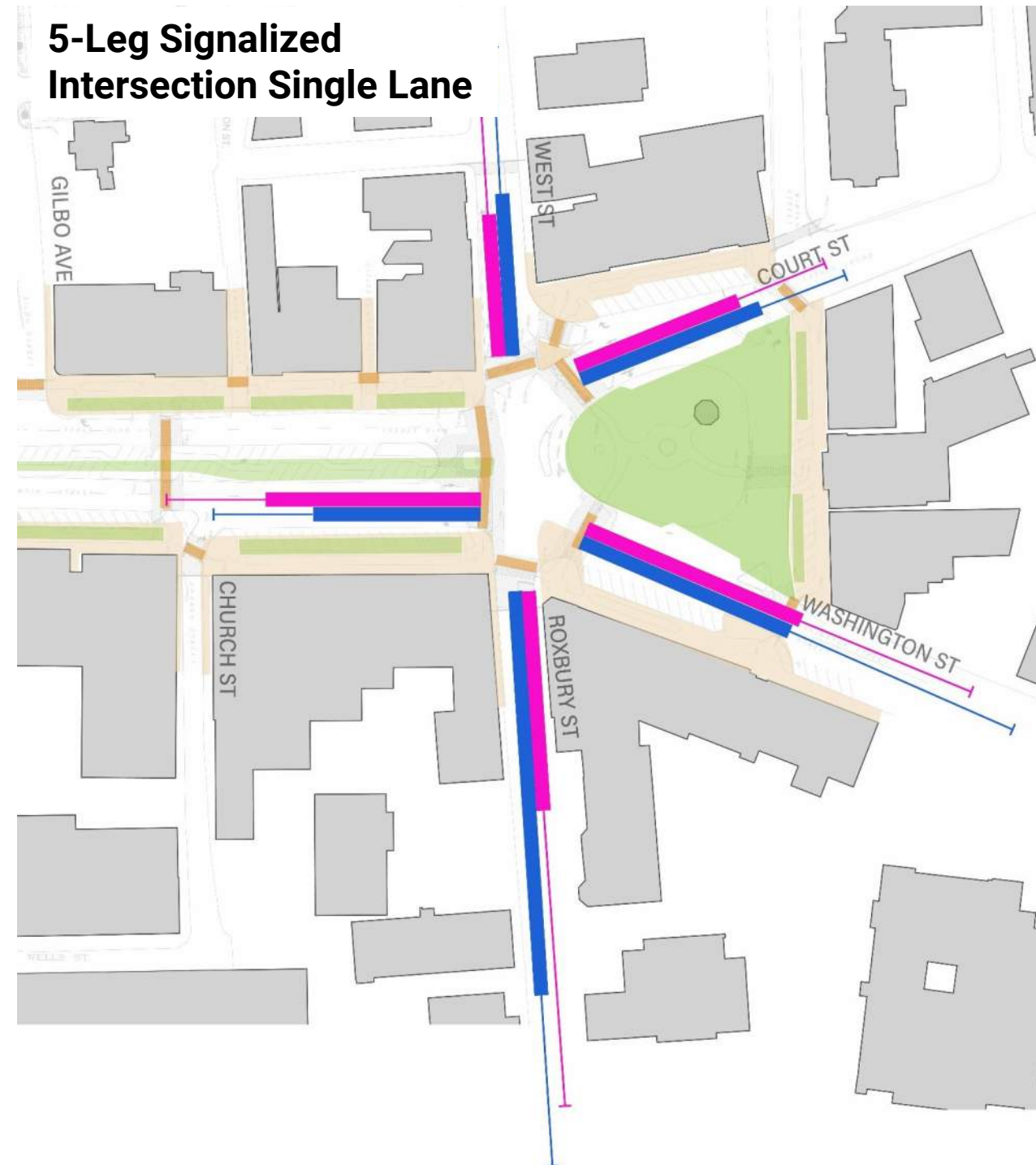
TRAFFIC ANALYSIS | CENTRAL SQUARE LEVEL OF SERVICE (LOS)

Existing Conditions



Central Square Signal (Main Street at West Street and Roxbury Street)	Existing			Existing		
	2022 AM			2022 PM		
	Level of Service (LOS)	Control Delay (s)	95th%-ile Queue (ft)^	Level of Service (LOS)	Control Delay (s)	95th%-ile Queue (ft)^
West St (EB)	D	36.7	198	D	35.9	223
Roxbury St (WB)	C	24.5	190	C	24.9	175
Main St (NB)	C	34.1	241	D	35.6	250
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5-Leg Signalized Intersection Single Lane



Queueing to Roxbury Ct

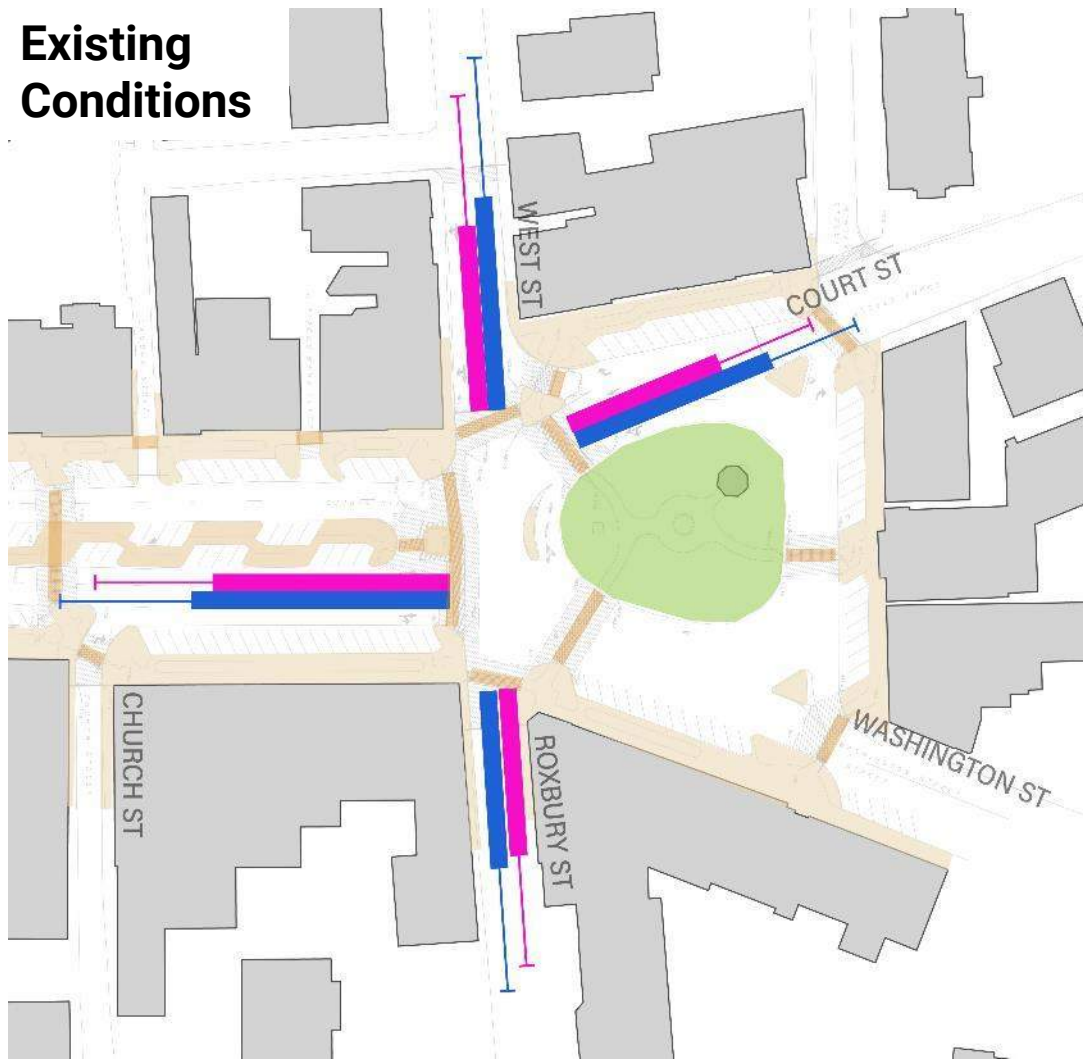
Central Square Signal (Main Street at West Street and Roxbury Street)	Alternative - 5-Leg Signal - Single Lane Main					
	2022 AM			2022 PM		
	Level of Service (LOS)	Control Delay (s)	95th%-ile Queue (ft)^	Level of Service (LOS)	Control Delay (s)	95th%-ile Queue (ft)^
West St (EB)	E	57.5	229	E	63.9	269
Roxbury St (WB)	F	93.4	465	F	>100	752
Main St (NB)	D	48.8	275	E	56.0	235
Washington St (SB)	E	66.3	371	F	98.8	403
Court St (SB)	E	60.8	245	D	54.2	242

- AM 50th Percentile Queue
- AM 95th Percentile Queue
- PM 50th Percentile Queue
- PM 95th Percentile Queue

KEENE DOWNTOWN IMPROVEMENTS

TRAFFIC ANALYSIS | CENTRAL SQUARE LEVEL OF SERVICE (LOS)

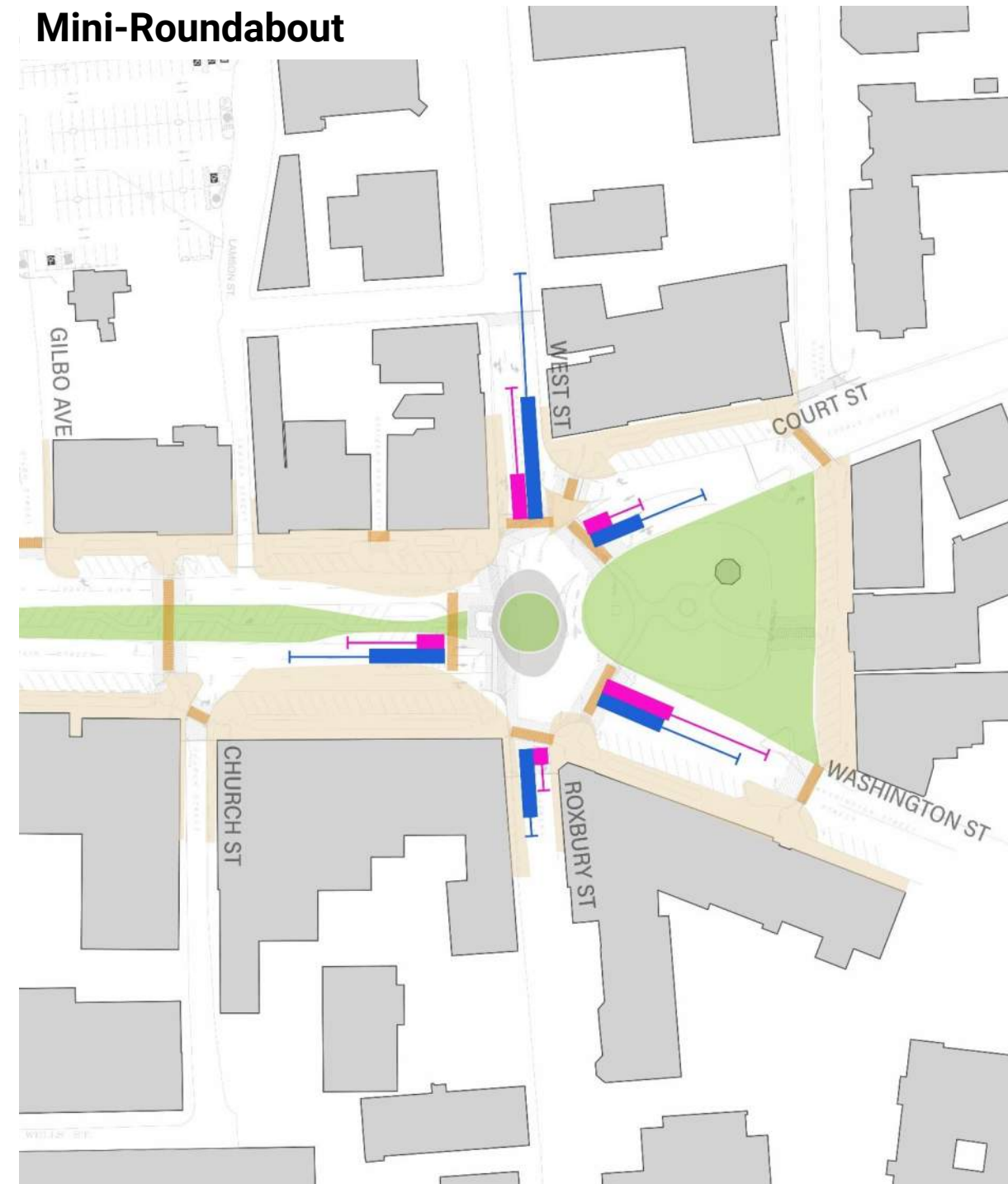
Existing Conditions



Existing

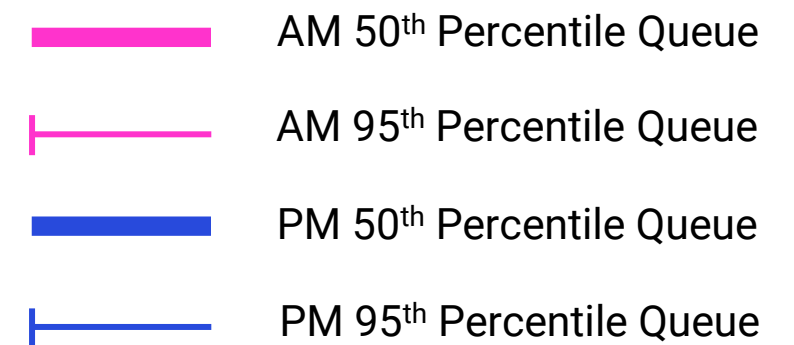
Central Square Signal (Main Street at West Street and Roxbury Street)	2022 AM			2022 PM		
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Court St (SB)	C	21.0	165	C	24.4	191

Mini-Roundabout



5-Leg Roundabout - 2 Lanes NB

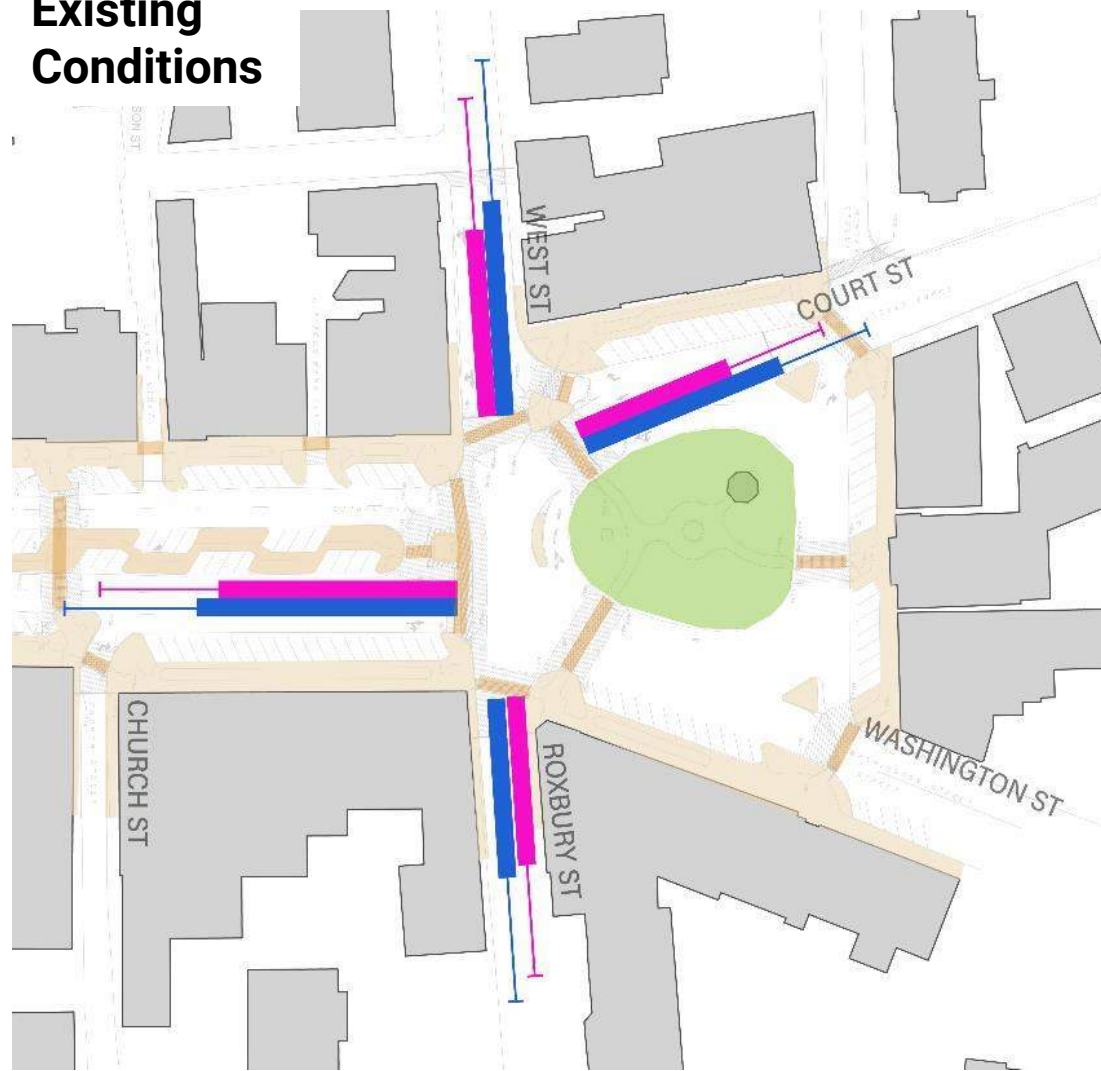
Central Square Roundabout (Main Street at West Street and Roxbury Street)	2022 AM			2022 PM		
	Level of Service (LOS)	Control Delay (s)	95th%-ile Queue (ft)^	Level of Service (LOS)	Control Delay (s)	95th%-ile Queue (ft)^
West St (EB)	B	14.6	96	C	24.7	193
Roxbury St (WB)	B	10.2	34	B	14.5	52
Main St (NB)	A	9.1	63	B	11.9	116
Washington St (SWB)	C	18.0	123	C	18.0	108
Court St (SEB)	A	9.4	39	C	15.3	79



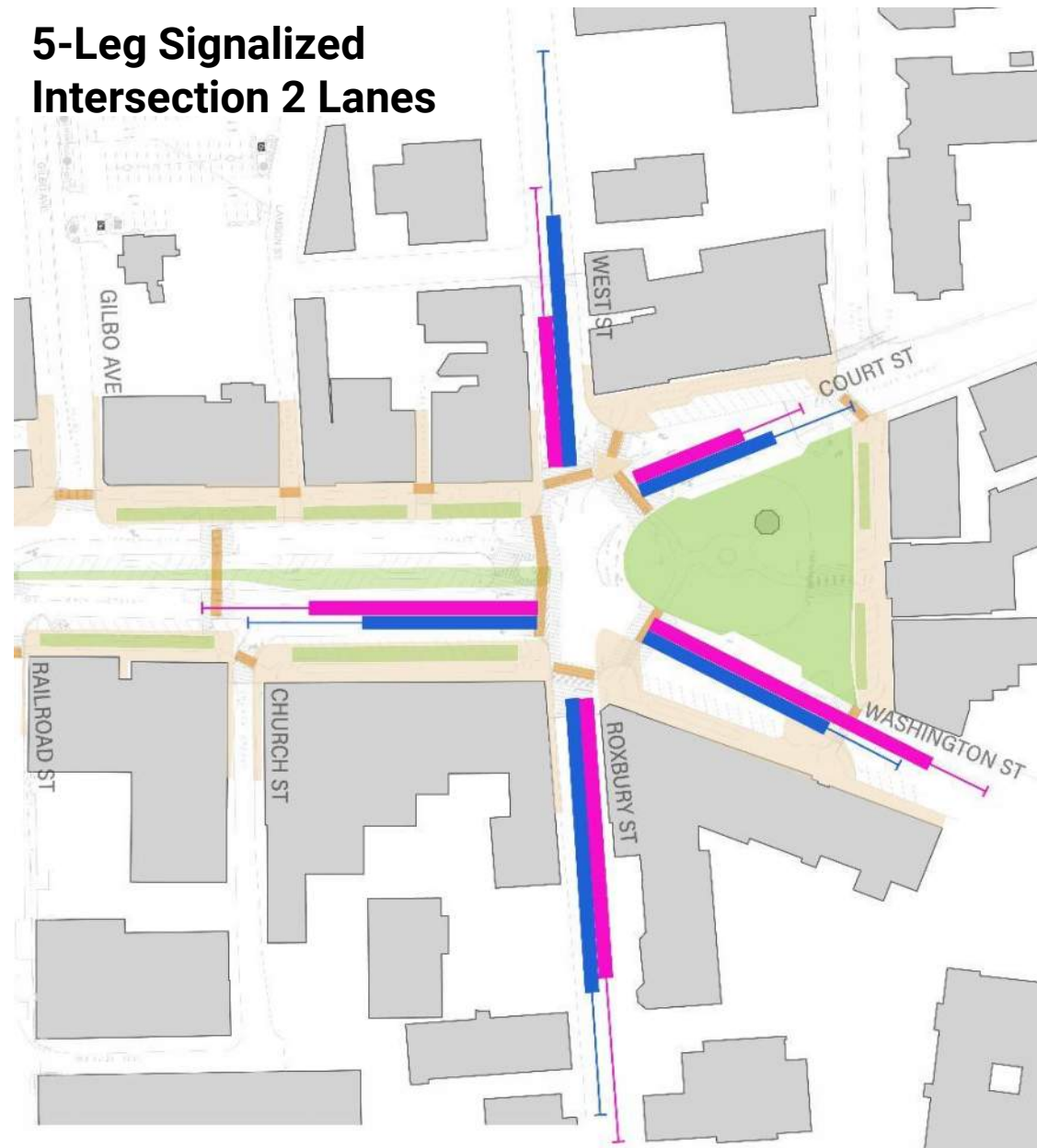
KEENE DOWNTOWN IMPROVEMENTS

TRAFFIC ANALYSIS | CENTRAL SQUARE OPTION COMPARISON

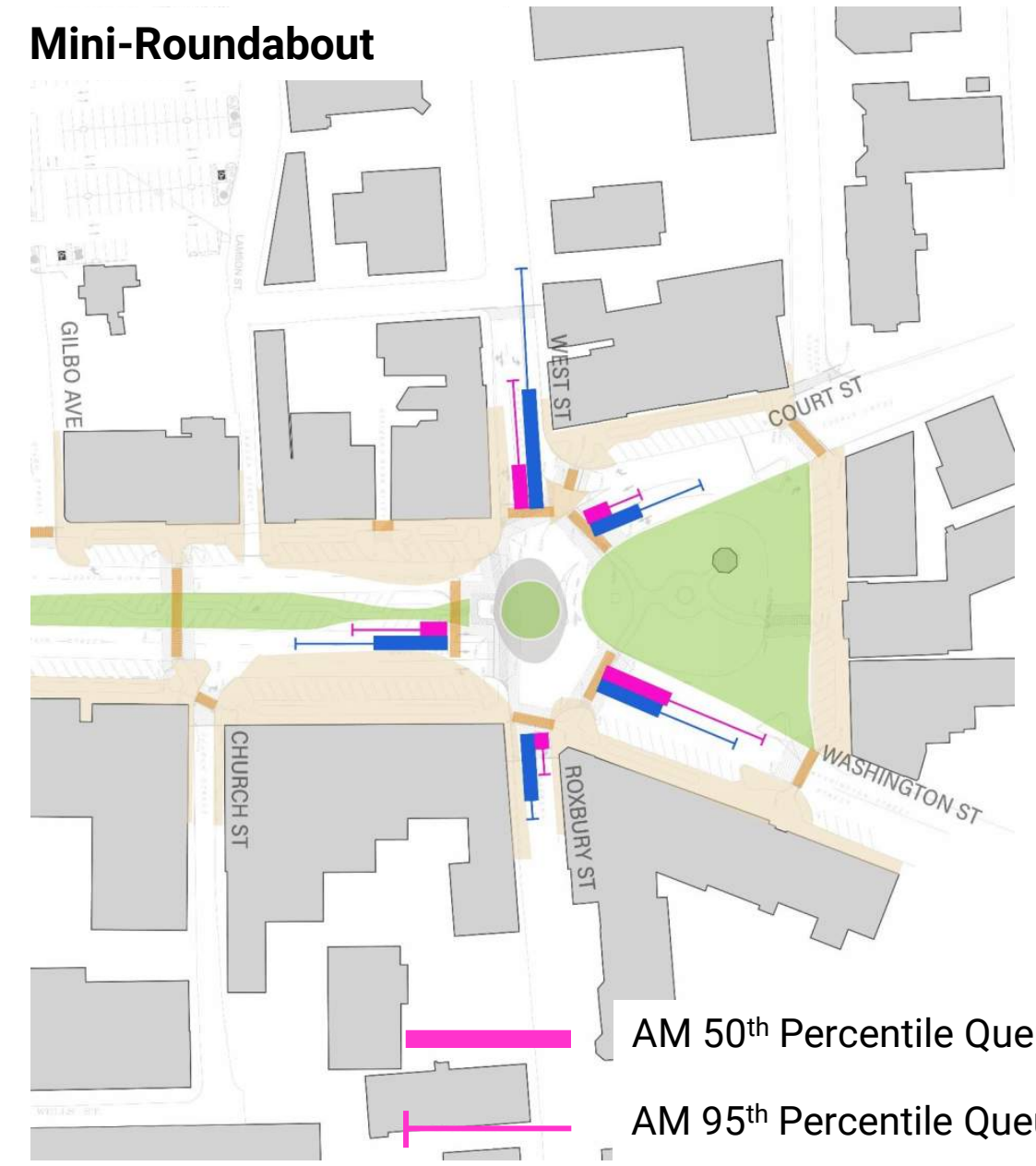
Existing Conditions



5-Leg Signalized Intersection 2 Lanes



Mini-Roundabout



- AM 50th Percentile Queue
- AM 95th Percentile Queue
- PM 50th Percentile Queue
- PM 95th Percentile Queue

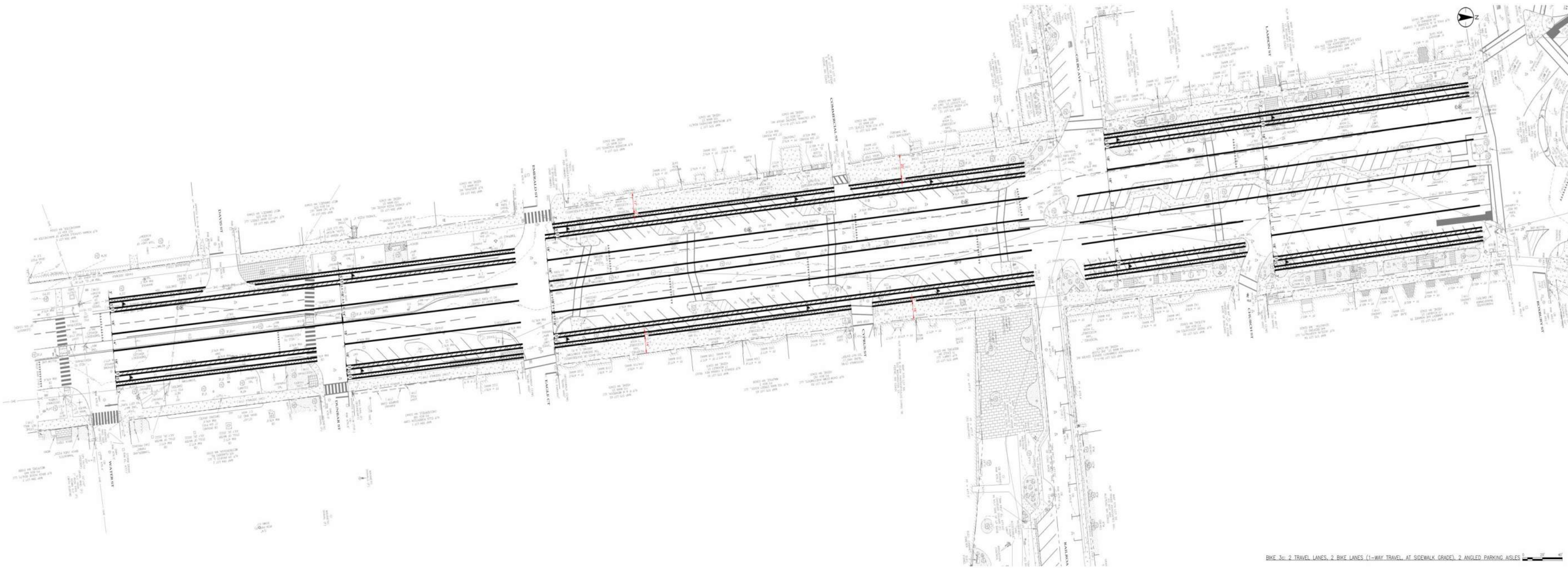
KEENE DOWNTOWN IMPROVEMENTS

CORRIDOR PLAN | MULTIMODAL CORRIDOR - MULTI-LANE

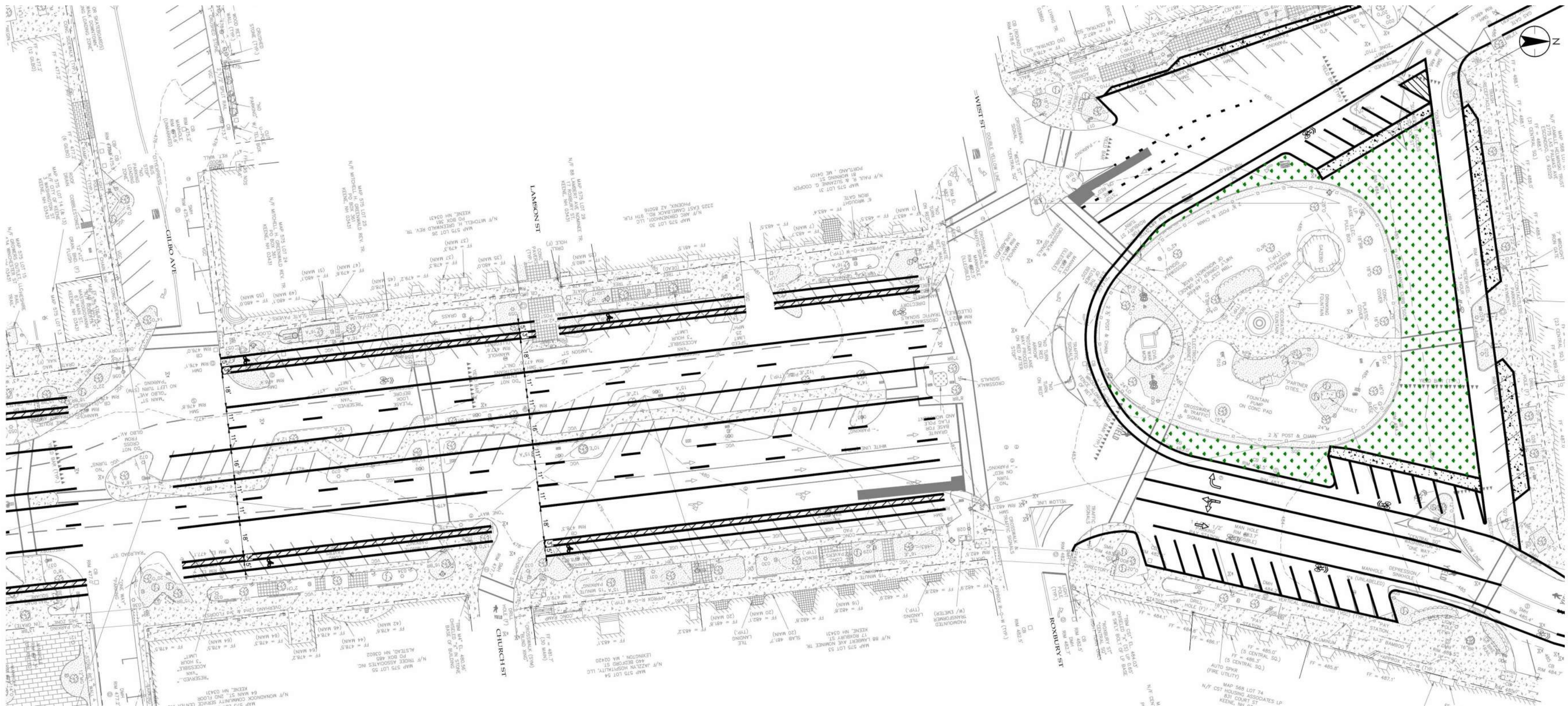


KEENE DOWNTOWN IMPROVEMENTS

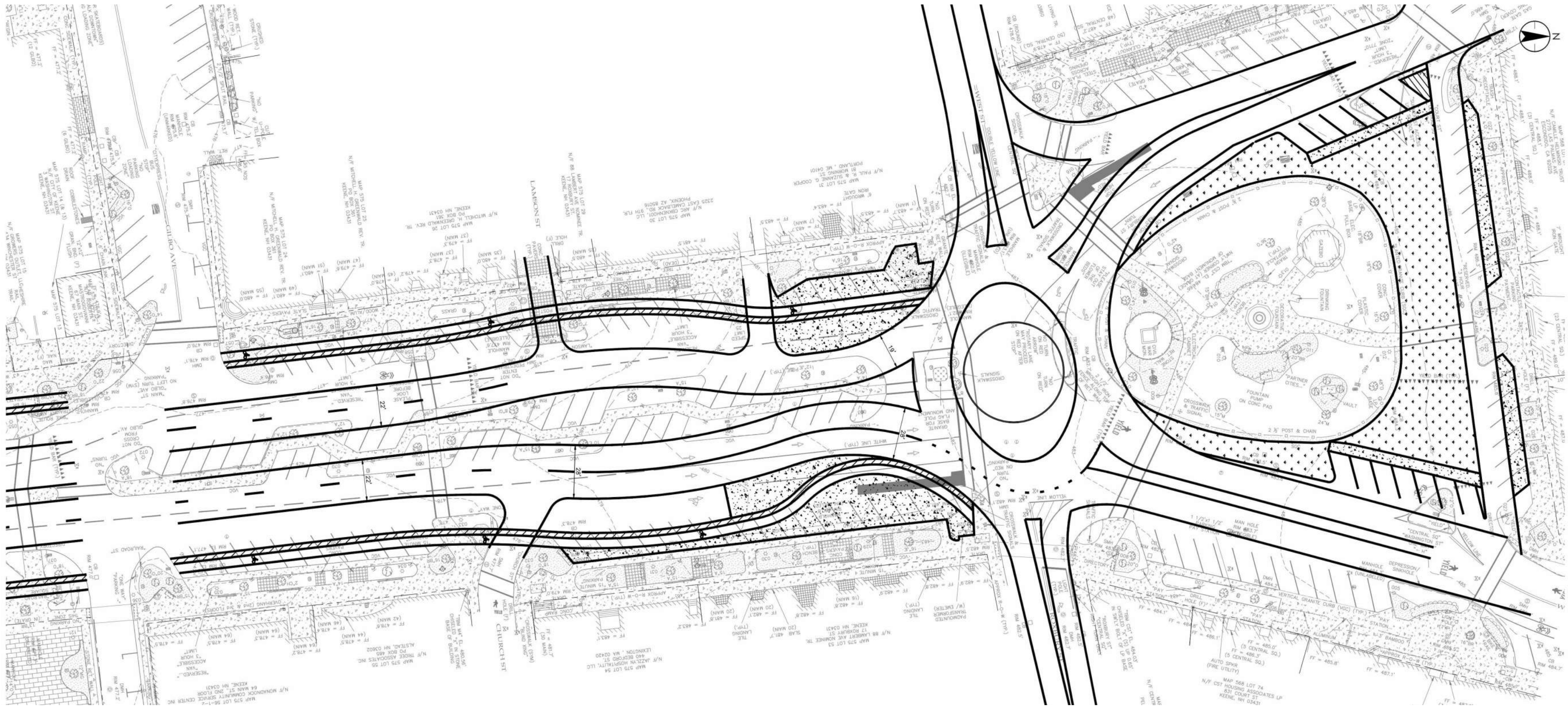
CORRIDOR PLAN | MULTIMODAL CORRIDOR - SINGLE-LANE



KEENE DOWNTOWN IMPROVEMENTS CORRIDOR PLAN | 5-LEG SIGNALIZED INTERSECTION



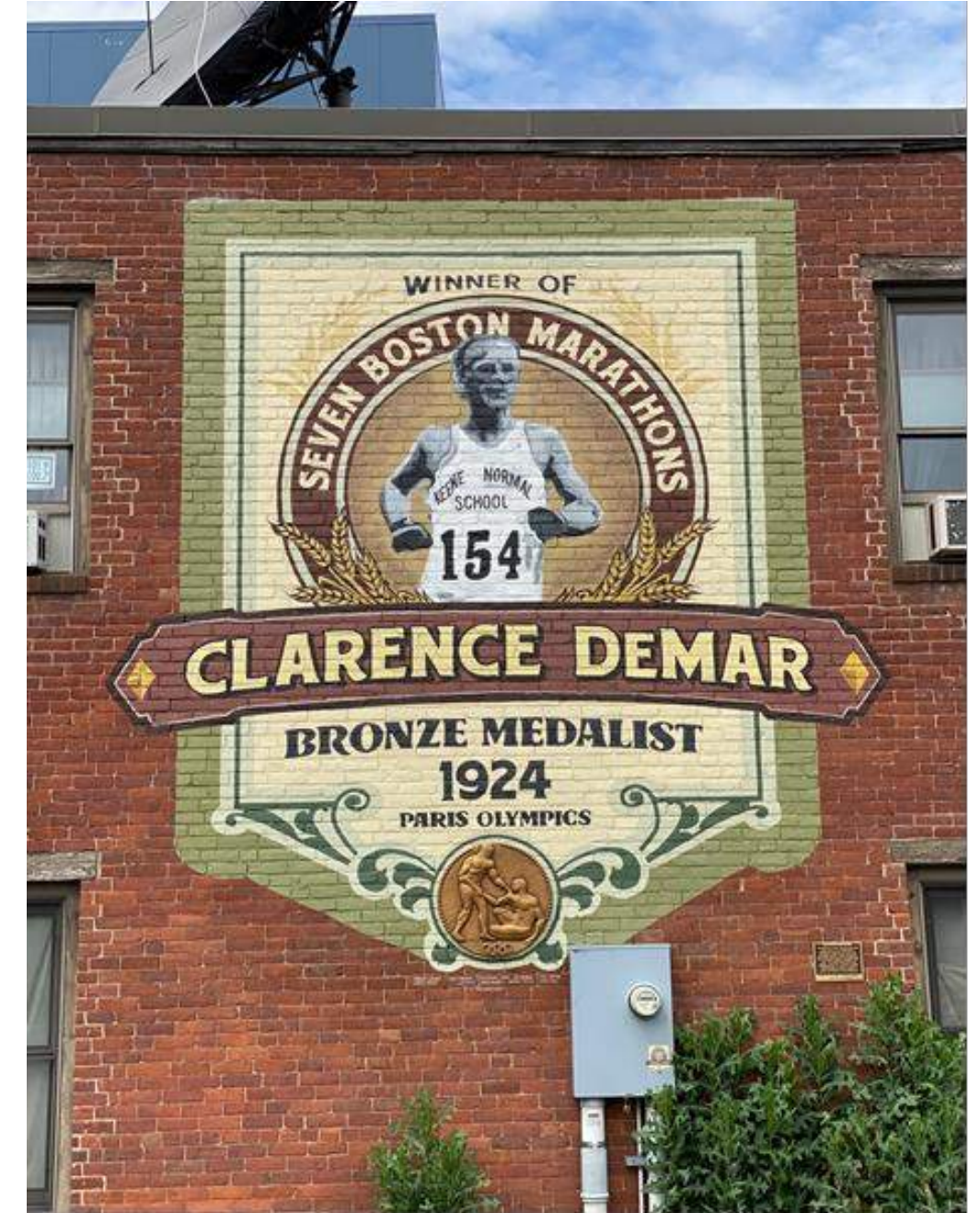
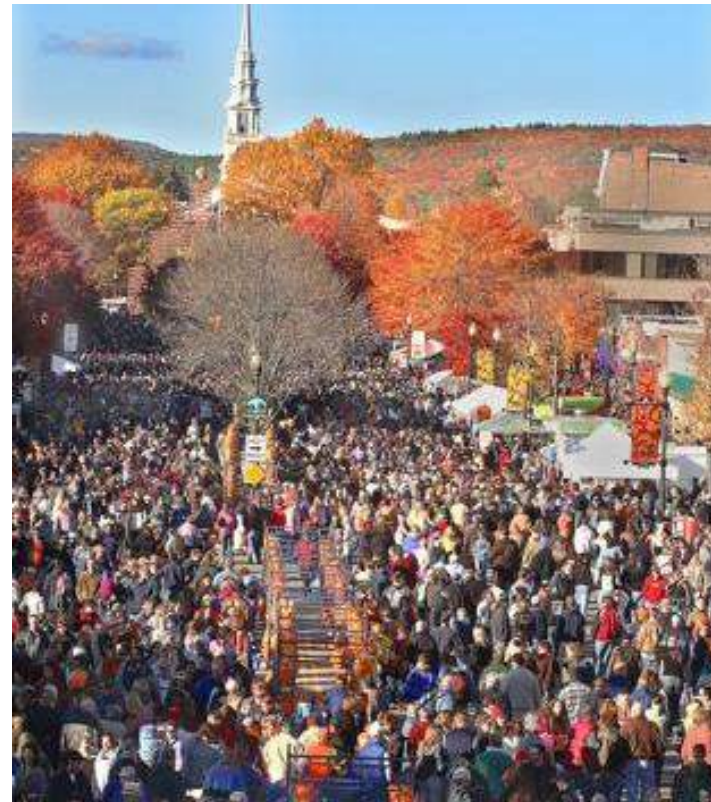
KEENE DOWNTOWN IMPROVEMENTS CORRIDOR PLAN | MINI ROUNDABOUT



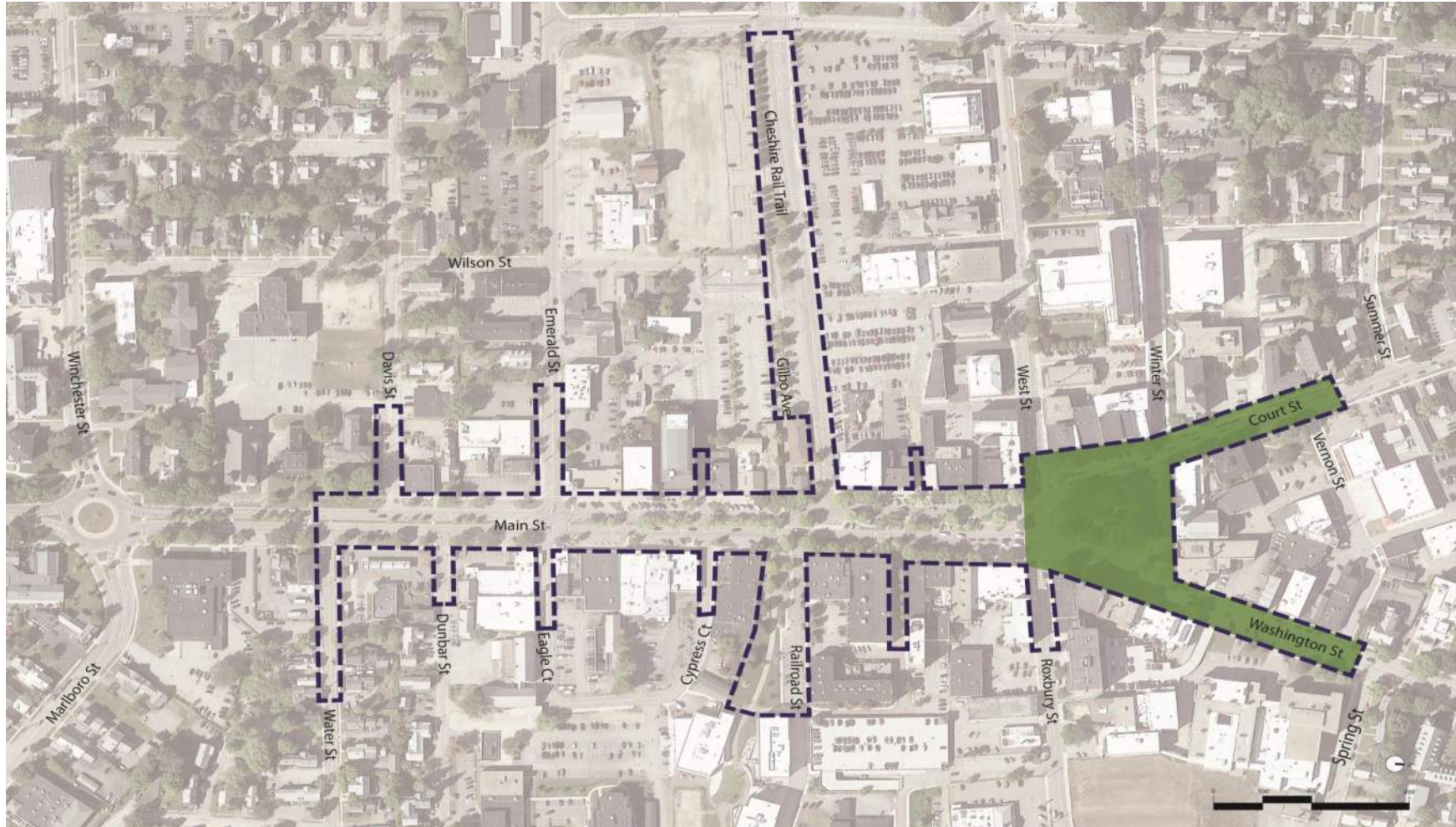
KEENE DOWNTOWN IMPROVEMENTS STEERING COMMITTEE CONSIDERATIONS

Alternatives Concepts to Consider – Key Takeaways

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 - Angled Parking
 - Traffic Analysis/LOS
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 - Intersection Options
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 - Shared Street, Bike Lanes
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- Gilbo/Railroad Square Design Approach
 - Two-way, one-way, and raised intersection

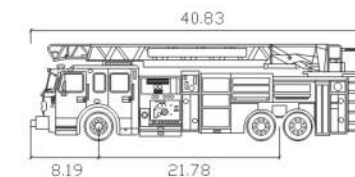
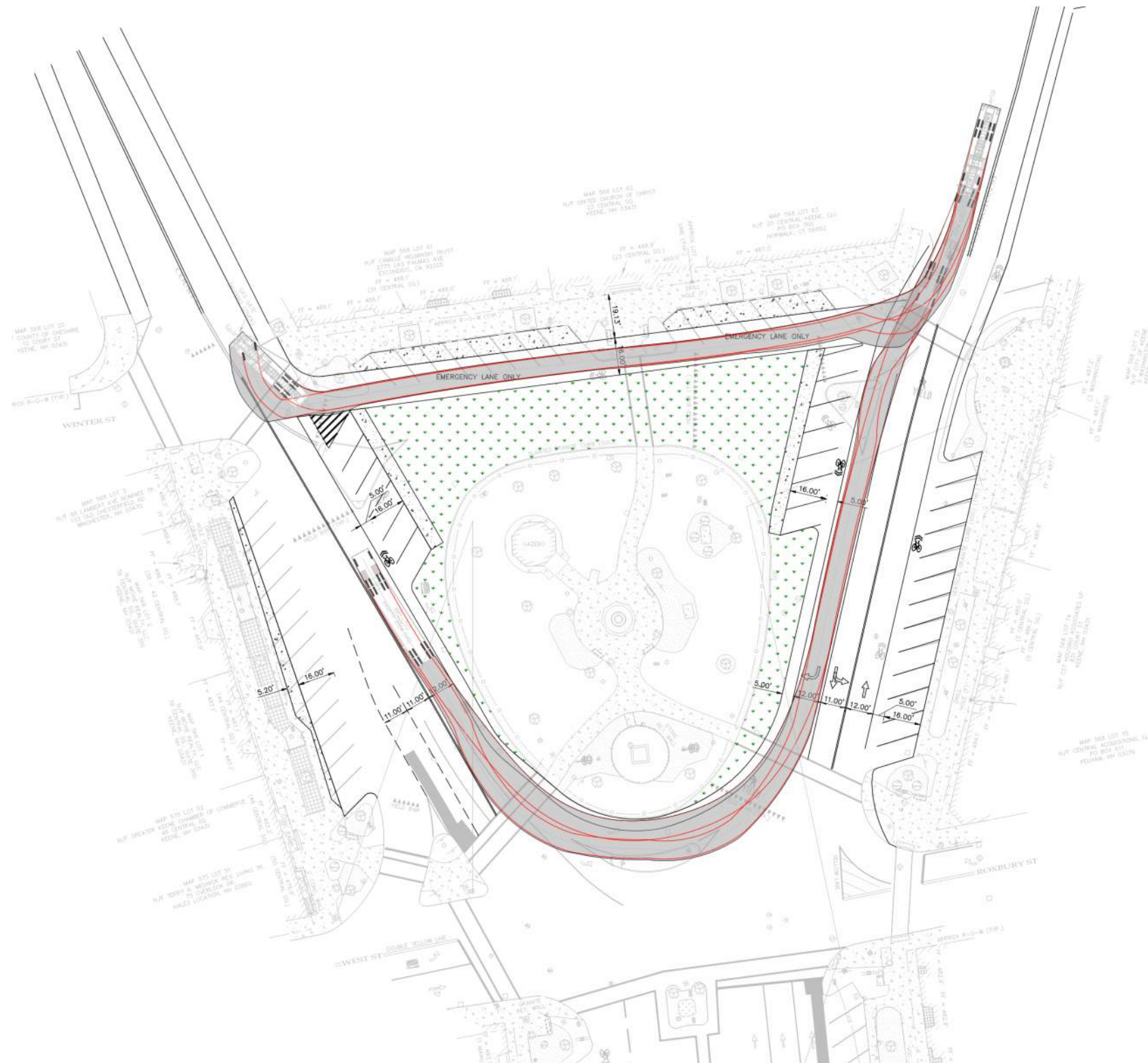


CHARACTER AREA | **CENTRAL SQUARE** *Civic / Formal / Village Center*

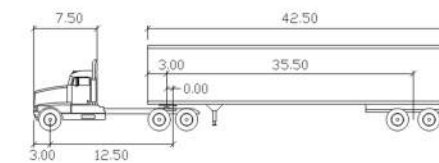


KEENE DOWNTOWN IMPROVEMENTS

TRAFFIC ANALYSIS | CENTRAL SQUARE WB-50/FIRETRUCK TURNING



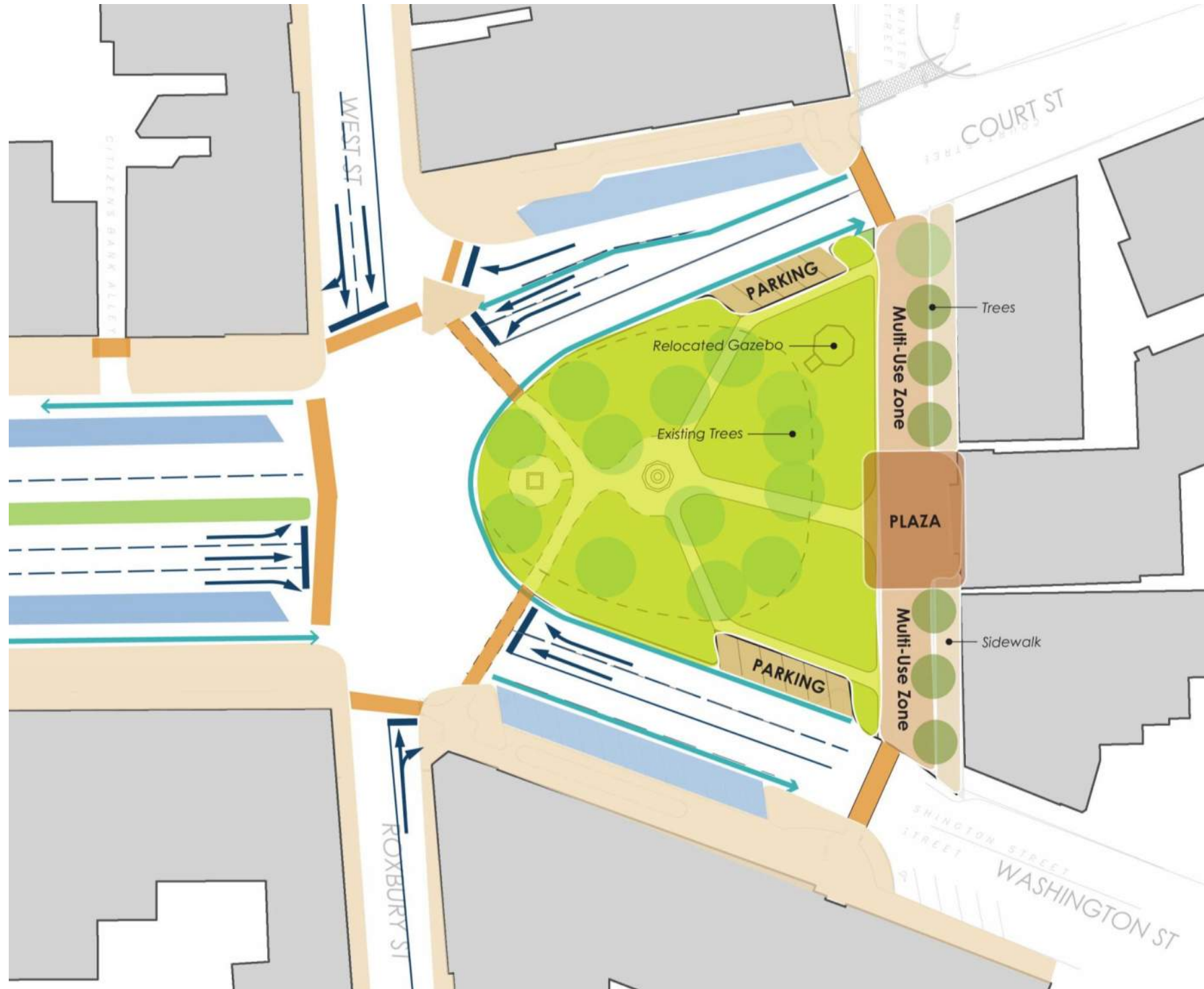
Spartan Gladiator Star Series Aerial
 feet
 Width : 8.25
 Track : 7.87
 Lock to Lock Time : 6.0
 Steering Angle : 46.3



WB-50
 feet
 Tractor Width : 8.00
 Trailer Width : 8.50
 Tractor Track : 8.00
 Trailer Track : 8.50
 Lock to Lock Time : 6.0
 Steering Angle : 17.7
 Articulating Angle : 7.00

KEENE DOWNTOWN IMPROVEMENTS

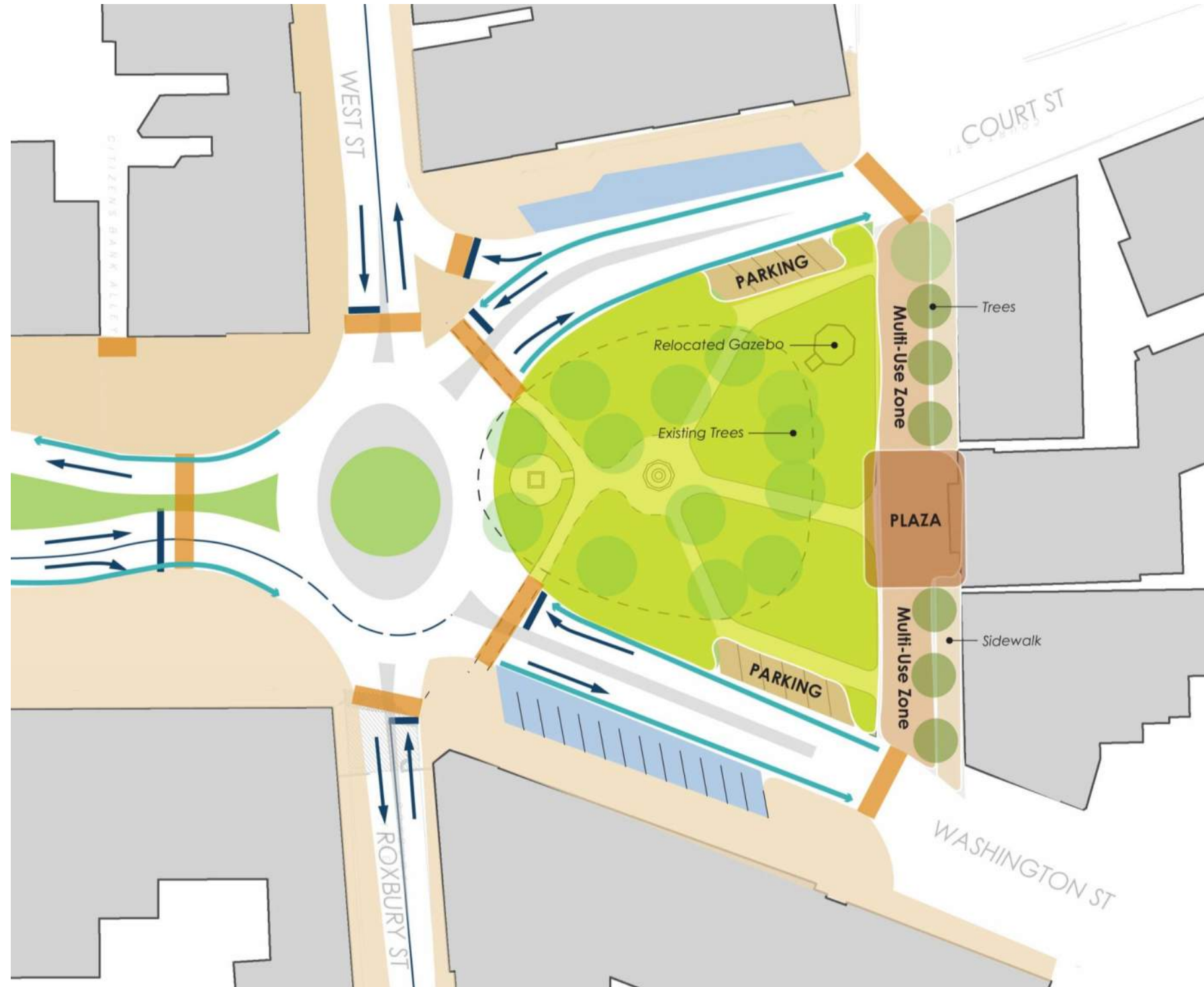
TRAFFIC ANALYSIS | CENTRAL SQUARE 5-LEG SIGNALIZED INTERSECTION



Existing Open Space – 17,750 SF
Additional Open Space – 13,950 SF
TOTAL – 31,700 SF

KEENE DOWNTOWN IMPROVEMENTS

TRAFFIC ANALYSIS | CENTRAL SQUARE MINI ROUNDABOUT



Existing Open Space – 17,450 SF
Additional Open Space – 13,950 SF
TOTAL – 31,400 SF



Madison, WI

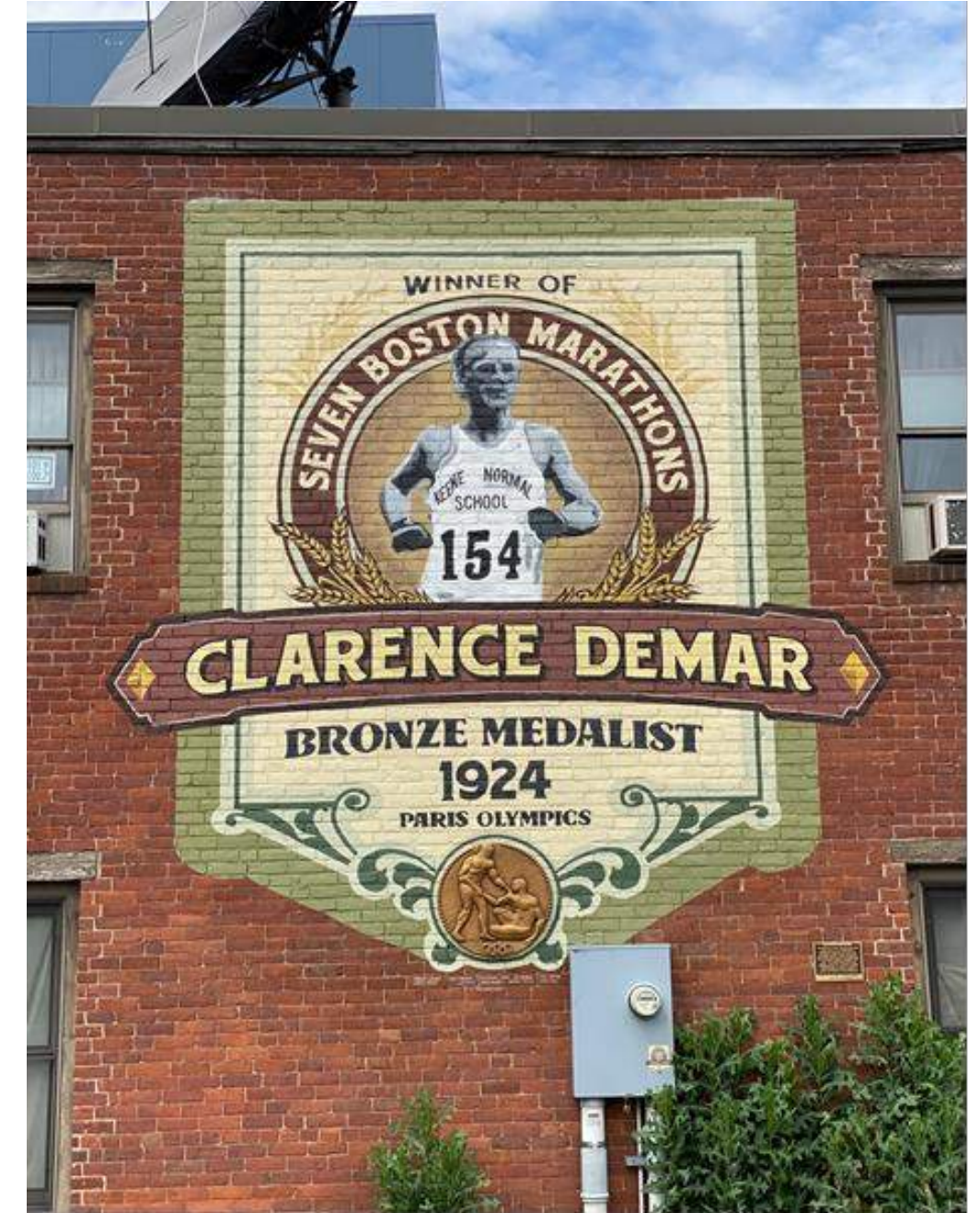
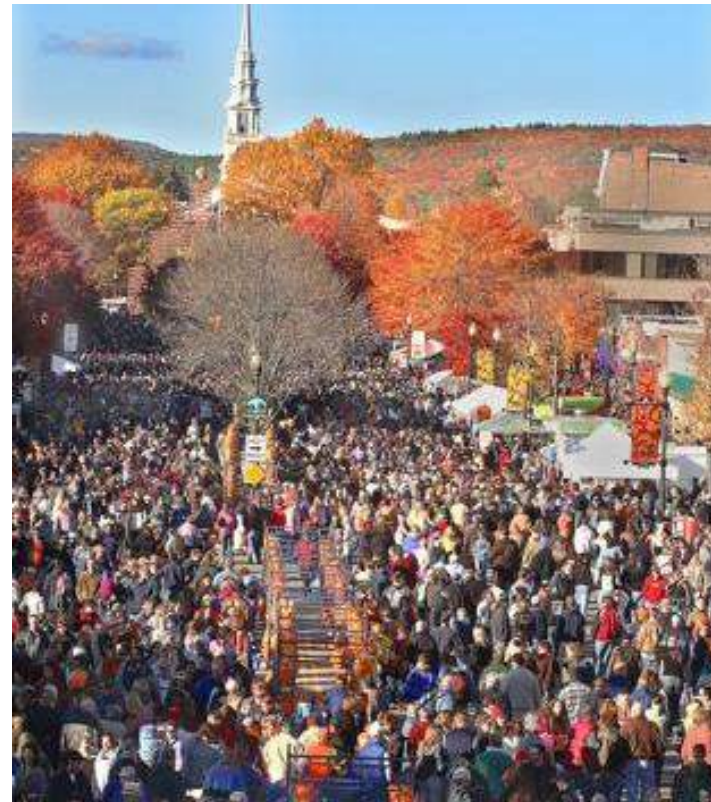


Norwood, MA

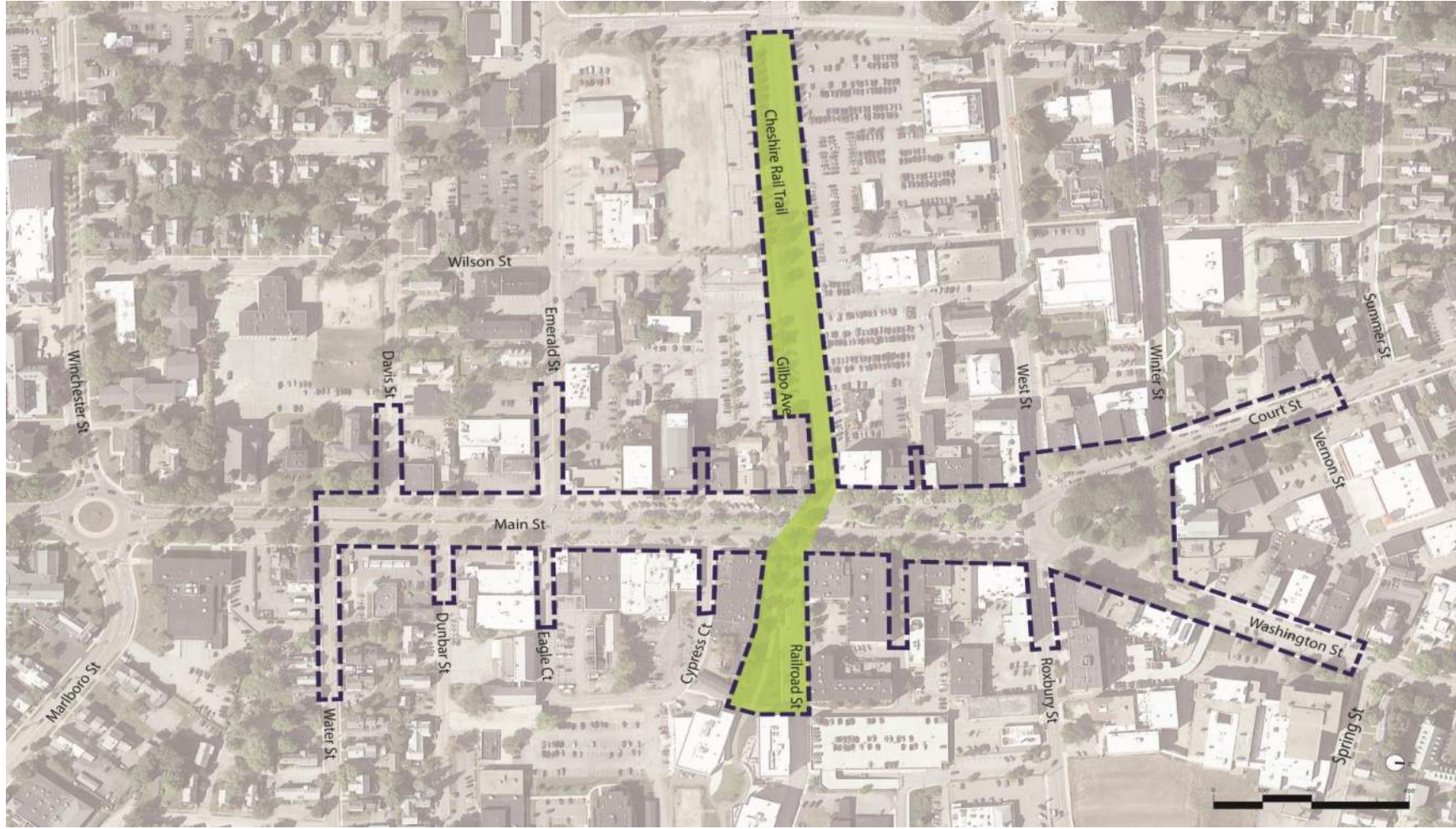
KEENE DOWNTOWN IMPROVEMENTS STEERING COMMITTEE CONSIDERATIONS

Alternatives Concepts to Consider – Key Takeaways

- Main Street Design Alternatives
 - Angled Parking
 - Traffic Analysis/LOS
 - Single- or Multi-Lane Operation
 - Intersection Options
- Main Street Multimodal Corridor
 - Shared Street, Bike Lanes
- Central Square North Expansion
- Gilbo/Railroad Square Design Approach
 - Two-way, one-way, and raised intersection



CHARACTER AREA | GILBO+RAILROAD *Artistic / Festive / Flexible/ Historic*



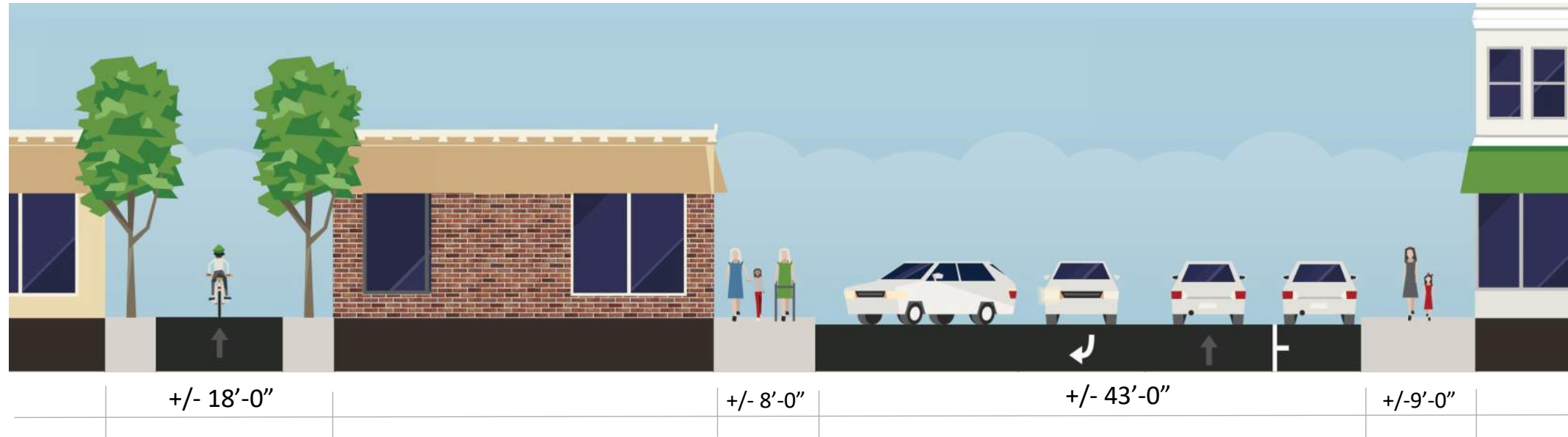
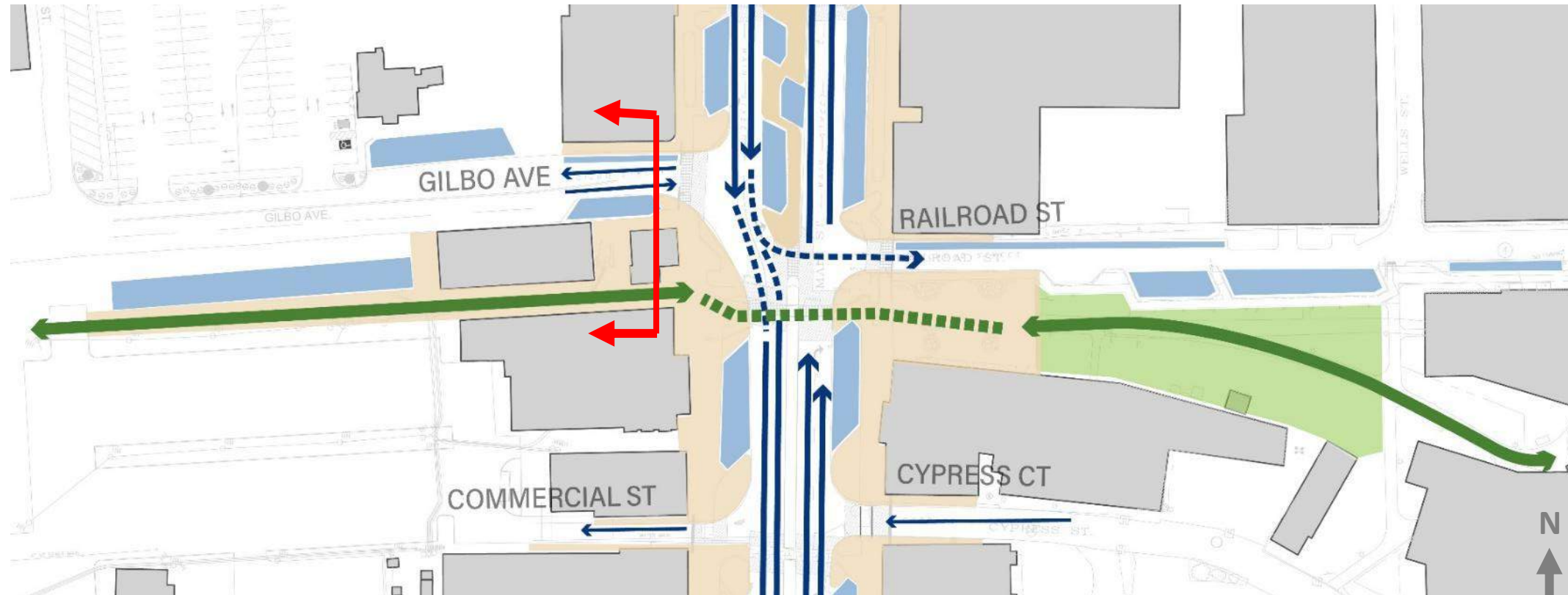
KEENE DOWNTOWN IMPROVEMENTS

GILBO AVE / RAILROAD ST

Key Takeaways:

- Prioritizes pedestrians
- Similar traffic operations to today
- Closest to status quo

Existing Conditions | Street Closure During Events



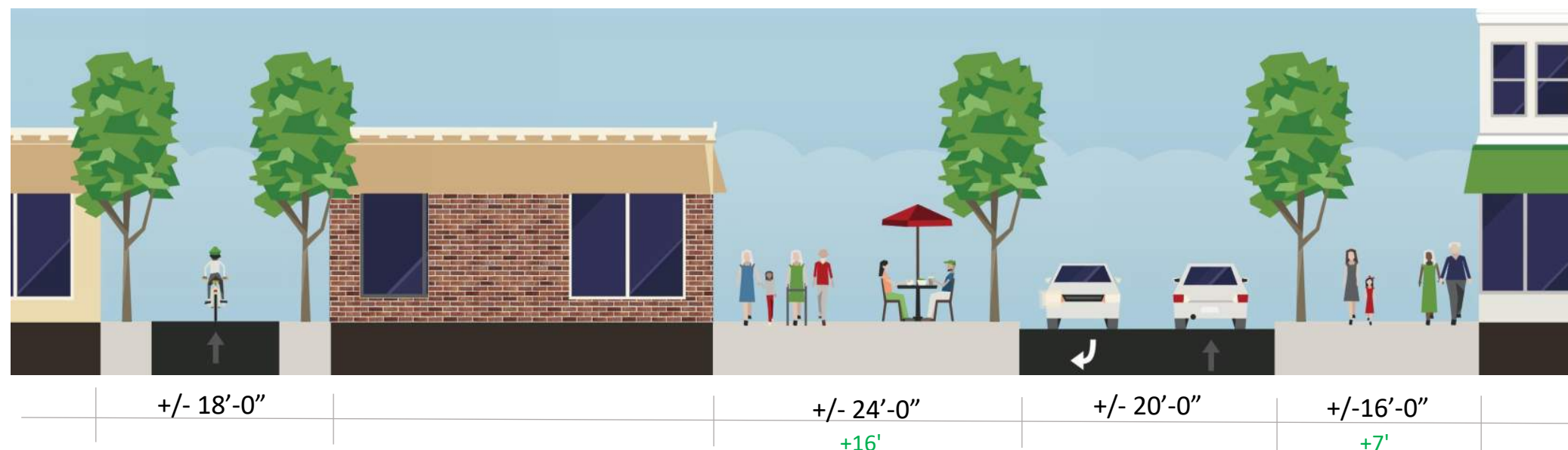
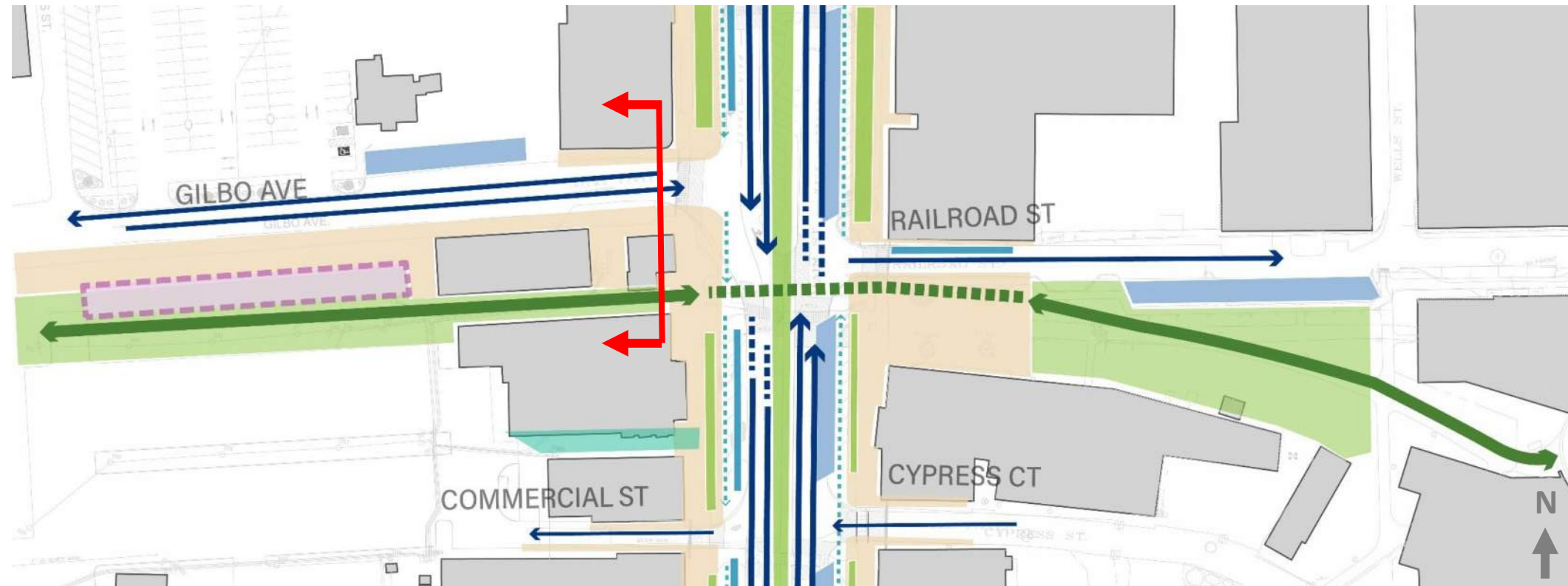
KEENE DOWNTOWN IMPROVEMENTS

GILBO AVE / RAILROAD ST

Key Takeaways:

- Prioritizes pedestrians
- Expands civic space / Downtown feel
- Similar traffic operations to today, but slower due to narrowing of street

Option 1 – Two-way | Permanent Plaza and Reduced Parking



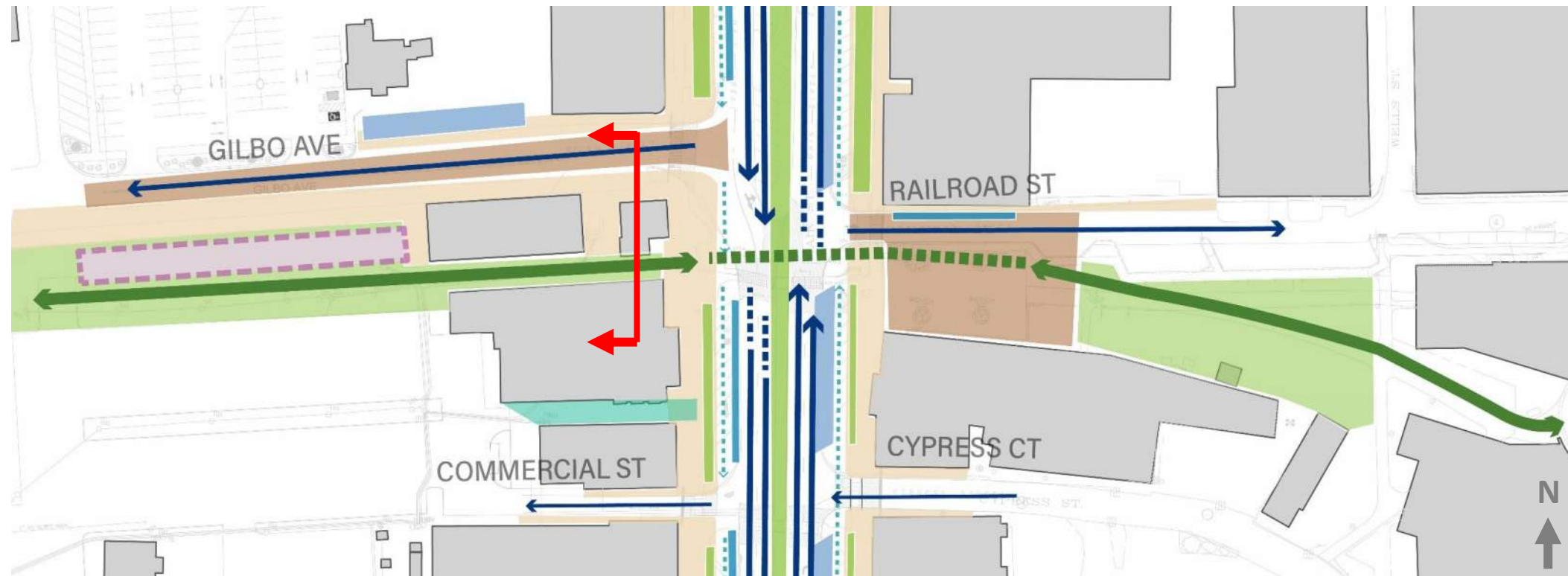
KEENE DOWNTOWN IMPROVEMENTS

GILBO AVE / RAILROAD ST

Key Takeaways:

- Prioritizes pedestrians
- Expands civic space / Downtown feel
- One-way may cut down on vehicle traffic using Gilbo
- One-way WB allows for access to parking at start of trip (from Main)

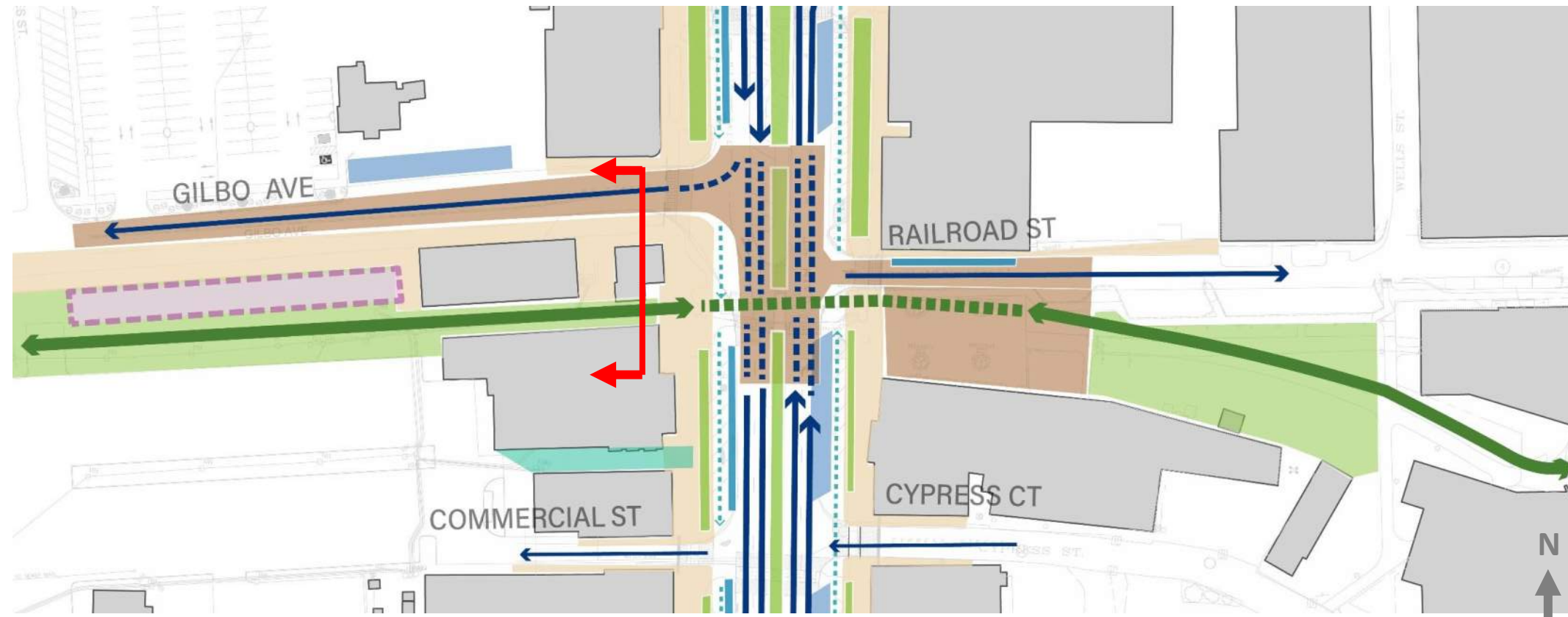
Option 2a – One Way Gilbo and Multi-Use Open Space



KEENE DOWNTOWN IMPROVEMENTS

GILBO AVE / RAILROAD ST

Option 2b – One Way Gilbo and Raised Intersection



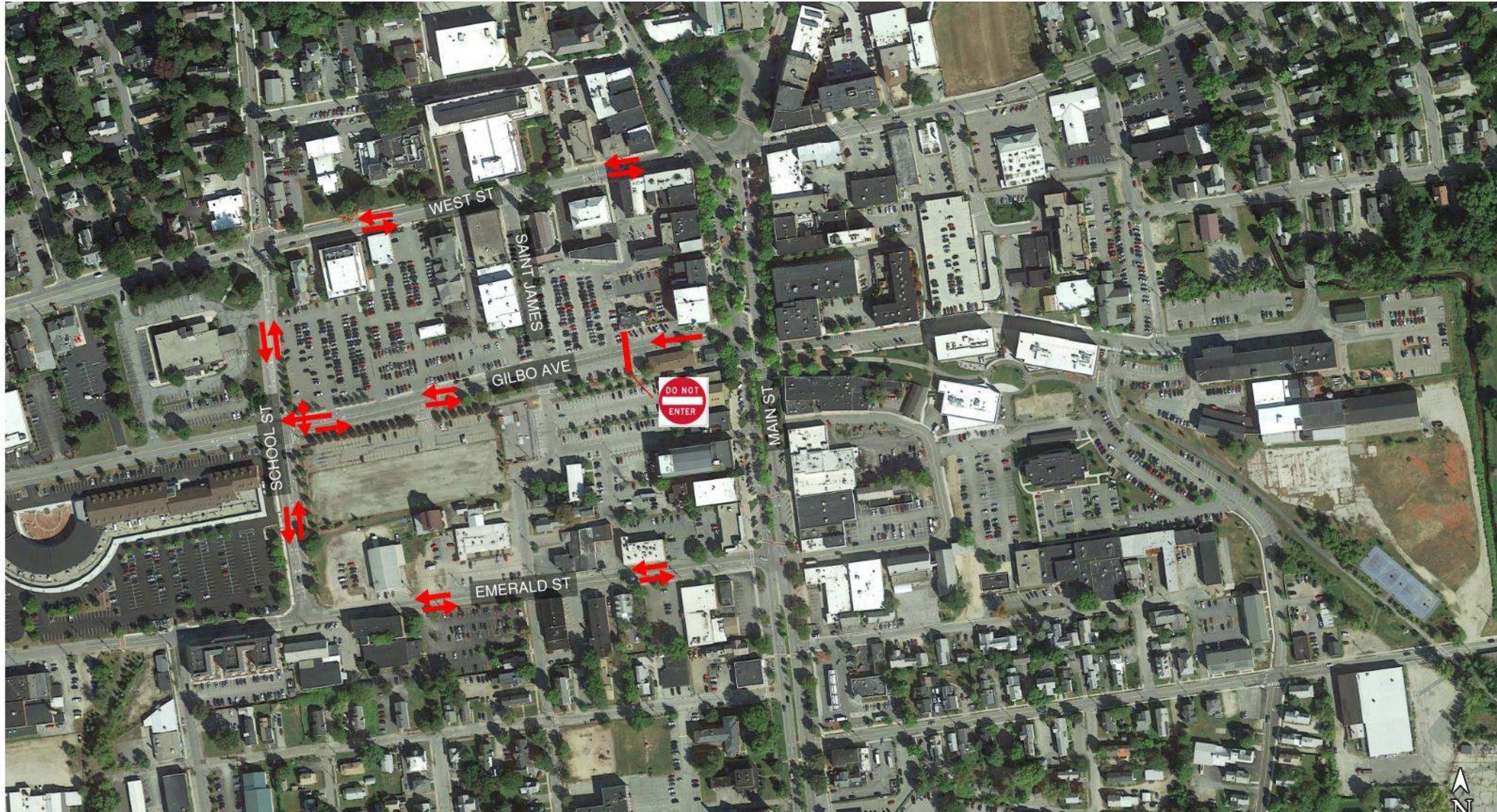
Key Takeaways:

- Prioritizes pedestrians and people biking
- Creates safe crossing for people walking/biking to new civic space
- Expands civic space / Downtown feel and creates gateway to downtown
- One-way may cut down on vehicle traffic using Gilbo
- One-way WB allows for access to parking at start of trip (from Main)



KEENE DOWNTOWN IMPROVEMENTS

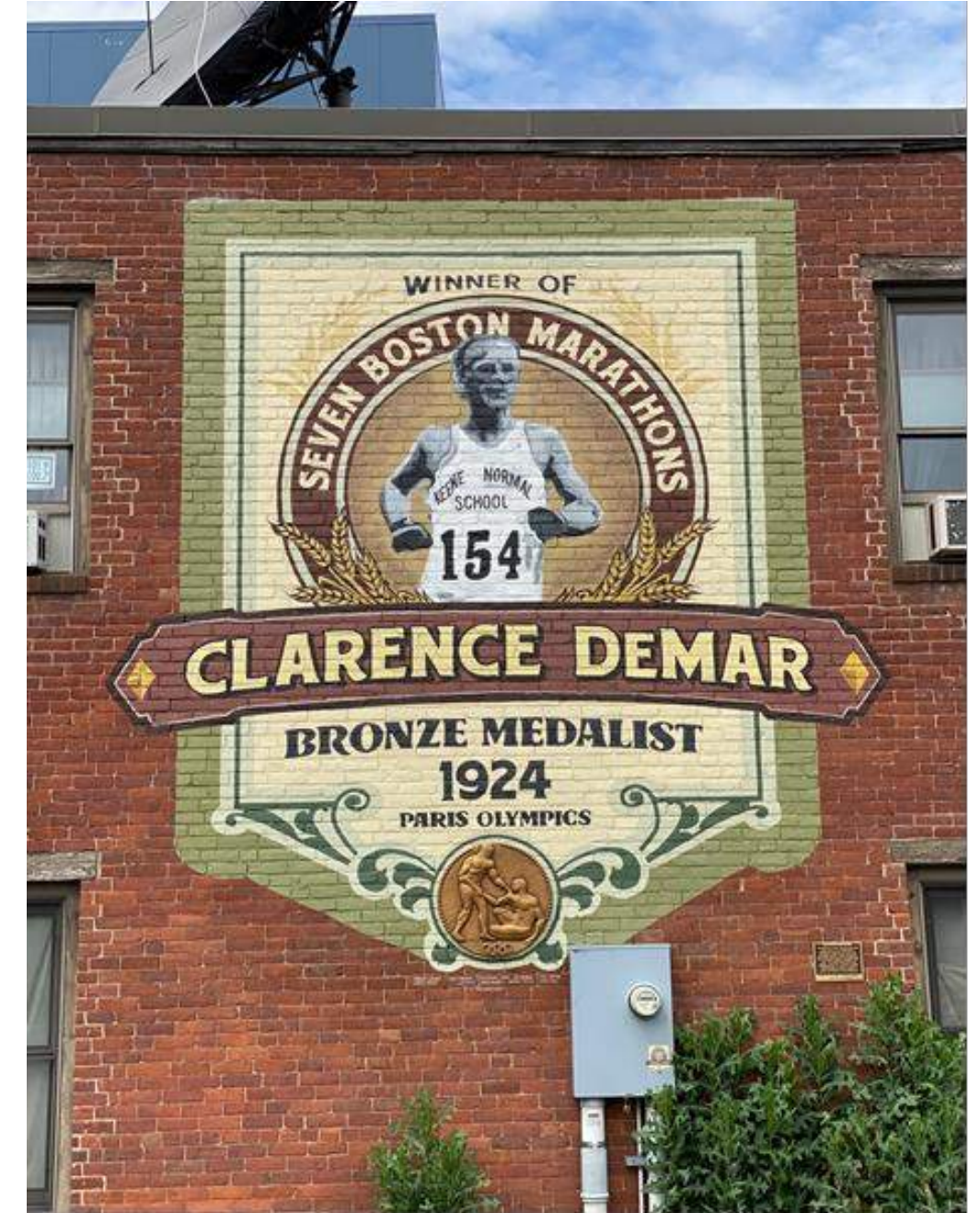
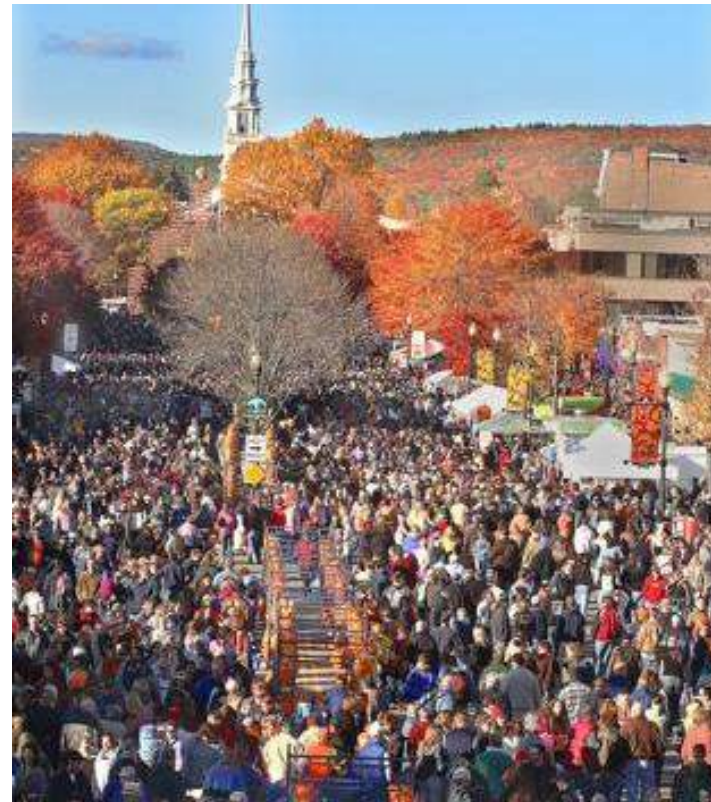
GILBO AVE / RAILROAD ST



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KEENE DOWNTOWN IMPROVEMENTS STEERING COMMITTEE CONSIDERATIONS

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