East Avenue Traffic Calming

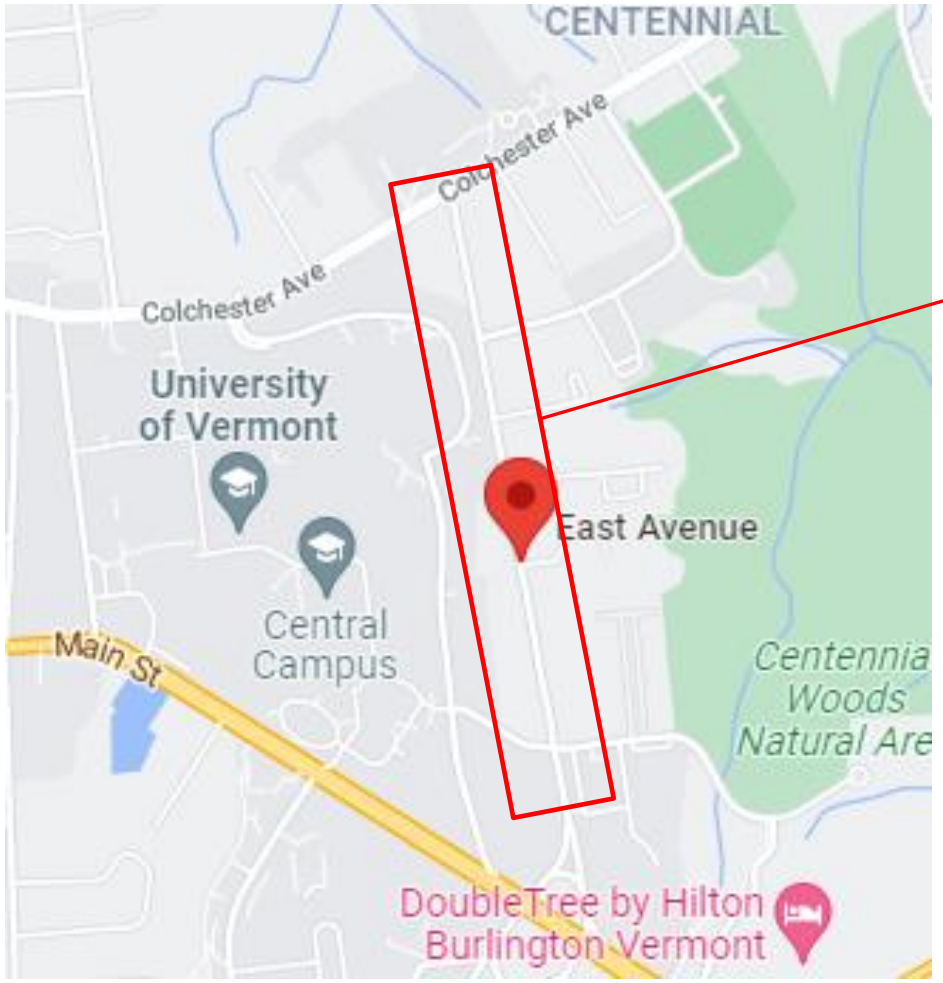
Alternatives Presentation

February 15th, 2022

Meeting Agenda

- Project Background
  - Project Area
  - Concerns
  - What does the Traffic Data tell us?
- What Needs Address?
- What is Traffic Calming?
  - Traffic Calming Tools
  - Traffic Calming Options for East Avenue
- Traffic Calming Recommendation
- Next Steps

Project Background: Project Area



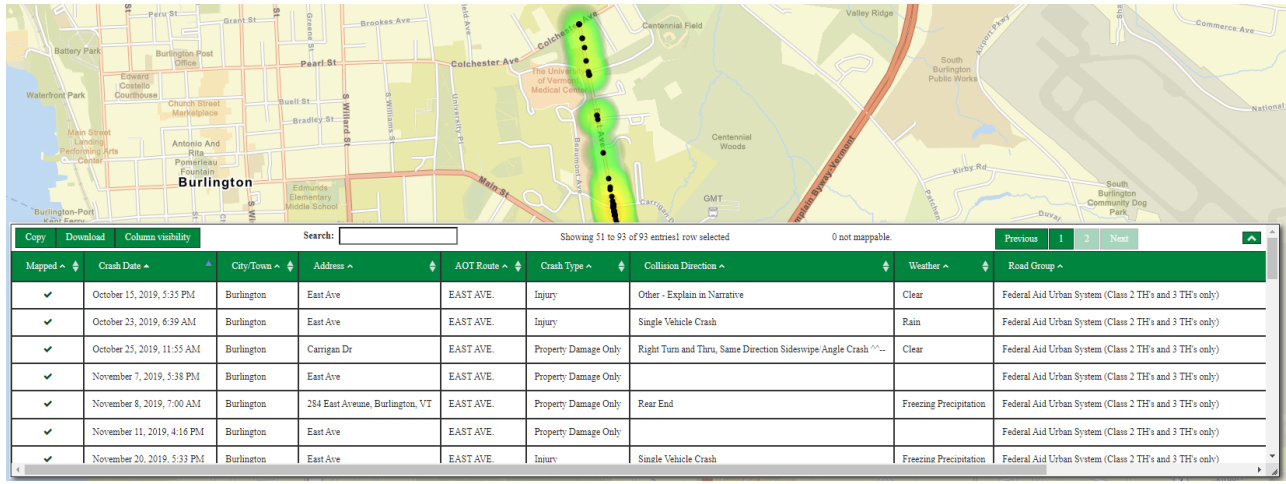
Location

Project Background: Roadway Characteristics

- Roadway Width = 35’
  - Bike Lane (west side) = 5’
  - Vehicle Travel Lanes = 22’
  - On-Street Parallel Parking (east side) = 8’
  - Greenbelt & Sidewalk (east side)
  - Two Crosswalks
- One traffic control device (stop-controlled intersection) along corridor
- Mountable Medians between Carrigan Dr & University Rd (installed in late ‘90s)
- Roadway Classification: Minor Arterial
- Land-Use: Residential

Project Background: Safety Concerns

- Meets / Exceeds Speed **and** Crash thresholds set in City Traffic Calming Manual
  - Speeds are **well in excess** of 25mph limit – The 85th Percentile Speed is **33mph**
  - Crash History exceeds threshold over 5-yr period
- Heavy pedestrian activity at crossings located at University Road and Bilodeau Court
- Pedestrian Crossing at University Road does not have adequate accommodations
- Stop Sign Compliance



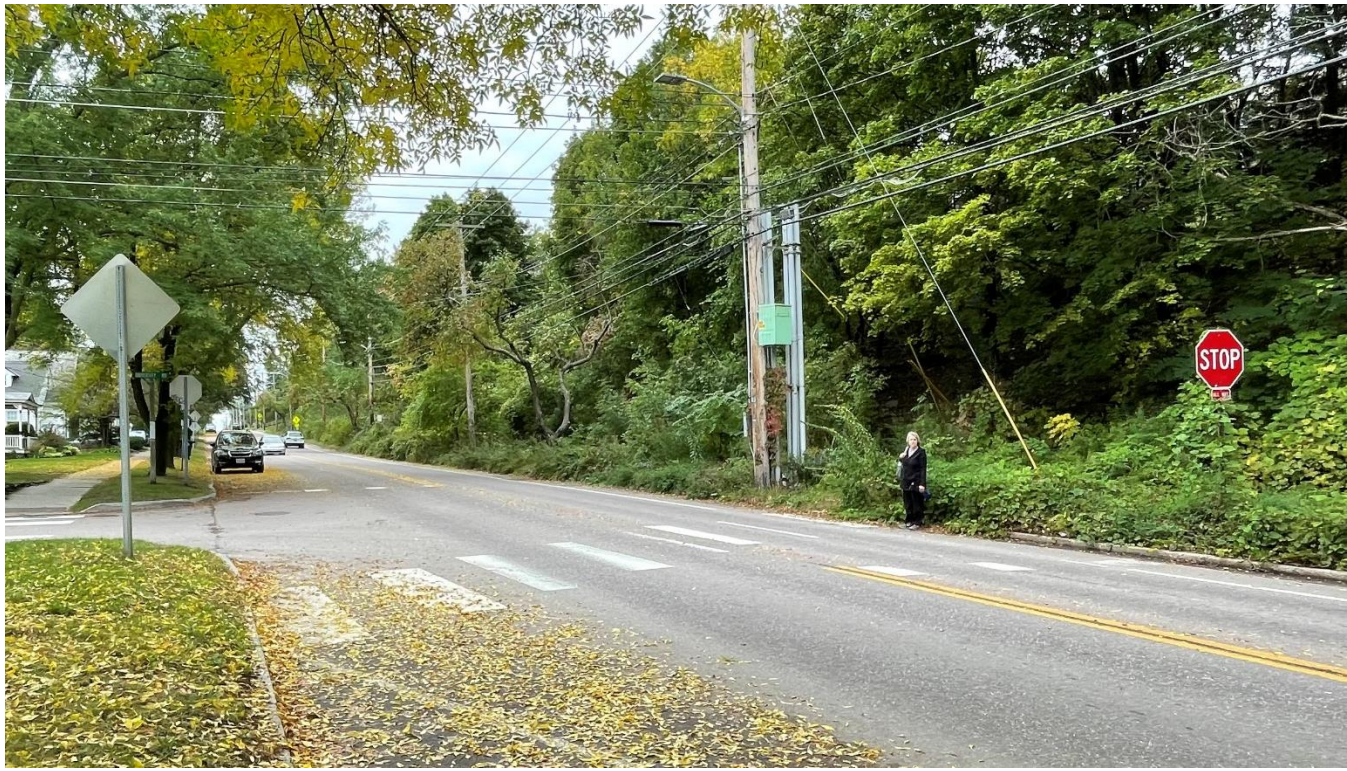
Mapped	Crash Date	City/Town	Address	AOT Route	Crash Type	Collision Direction	Weather	Road Group
✔	October 15, 2019, 5:35 PM	Burlington	East Ave	EAST AVE.	Injury	Other - Explain in Narrative	Clear	Federal Aid Urban System (Class 2 TH's and 3 TH's only)
✔	October 23, 2019, 6:39 AM	Burlington	East Ave	EAST AVE.	Injury	Single Vehicle Crash	Rain	Federal Aid Urban System (Class 2 TH's and 3 TH's only)
✔	October 25, 2019, 11:55 AM	Burlington	Carrigan Dr	EAST AVE.	Property Damage Only	Right Turn and Thru, Same Direction Sideswipe/Angle Crash ^^--	Clear	Federal Aid Urban System (Class 2 TH's and 3 TH's only)
✔	November 7, 2019, 5:38 PM	Burlington	East Ave	EAST AVE.	Property Damage Only			Federal Aid Urban System (Class 2 TH's and 3 TH's only)
✔	November 8, 2019, 7:00 AM	Burlington	284 East Aveune, Burlington, VT	EAST AVE.	Property Damage Only	Rear End	Freezing Precipitation	Federal Aid Urban System (Class 2 TH's and 3 TH's only)
✔	November 11, 2019, 4:16 PM	Burlington	East Ave	EAST AVE.	Property Damage Only			Federal Aid Urban System (Class 2 TH's and 3 TH's only)
✔	November 20, 2019, 5:33 PM	Burlington	East Ave	EAST AVE.	Injury	Single Vehicle Crash	Freezing Precipitation	Federal Aid Urban System (Class 2 TH's and 3 TH's only)

Project Background: Traffic

- Roadway AADT (Annual Average Daily Traffic) is between 7,800 and 8,900 vehicles
- Traffic Peak Hours are standard
  - 7:30 – 8:30am and 4:30 – 5:30pm
- Midday traffic volumes higher than similar roadway type given connectivity between Main Street and Colchester Avenue

What needs addressing?

- Design for max speed of 25mph
- Reduce frequency of crashes
- Prevent crashes involving people walking / bike
- Enhance pedestrian crossing at University Road
- Improve stop sign compliance at University Road
- Sensitivity to Resident Permit Parking



What is Traffic Calming?

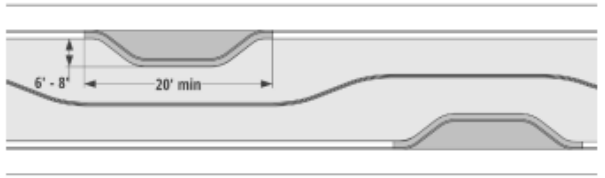
- Traffic Calming is the use of physical design elements to improve safety for motorists, pedestrians and bicyclists
- Objectives of Traffic Calming:
  - Enhance street environment and quality of life
  - Slow motorist speeds
  - Reduce frequency and severity of collisions
  - Reduce need for police enforcement
  - Reduce unwanted cut-through traffic

Source: City of Burlington

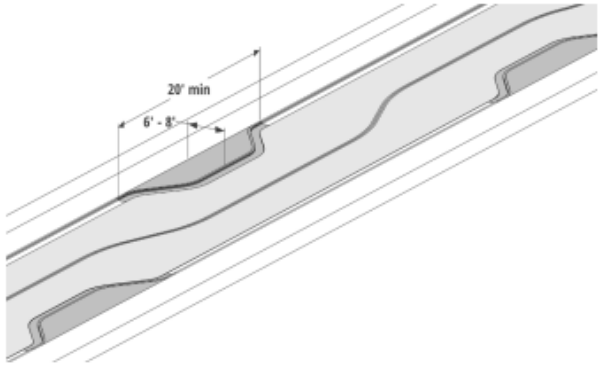
Ward Street Traffic Calming using speed cushions

Traffic Calming Methods & Treatments

- Speed Humps / Tables
- ***Median Islands***
- Chokers
- ***Chicanes***
- Curb Extensions
- ***Raised Crossings***
- Rumble Strips
- Parking Conversion



Plan View Detail



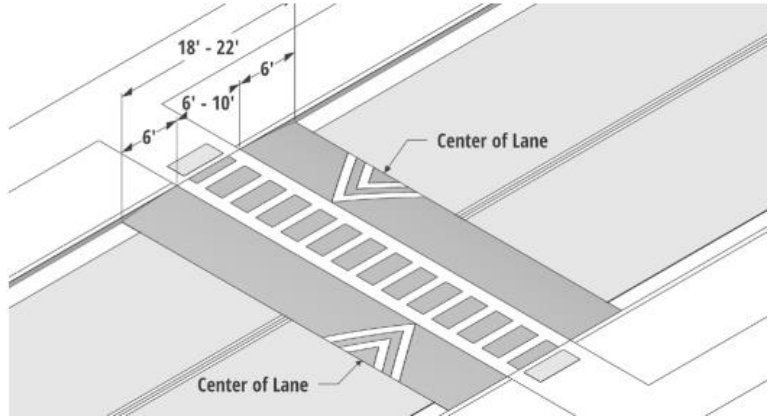
Oblique Angle Detail

TRAFFIC CALMING MEASURES AND CONTEXTUAL GUIDANCE

\+ Most desirable
! Engineering judgment
\- Not recommended

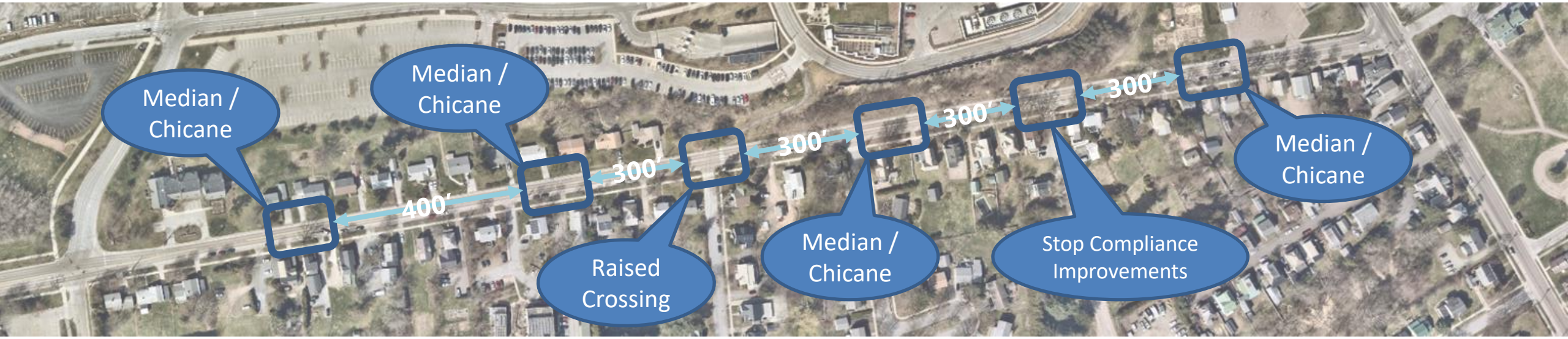
Street Typology	Neighborhood & Slow Street [1,3]		Bicycle Street [1]		Transit Street [1]			Complete Street [1]		
Low-Impact Physical Design	2-lane	3-lane	2-lane	3-lane	2-lane	3-lane	4-lane	2-lane	3-lane	4-lane
Rumble Strips	-	-	-	-	!	!	+	!	+	+
Reallocation of Pavement Space	-	-	+	+	+	+	!	+	+	-
Curb Extension	+	+	+	+	!	!	!	+	+	+
Choker	+	!	+	!	!	!	-	+	!	-
Chicane	+	!	+	!	!	!	-	!	!	-
Speed Hump	+	+	!	!	-	-	-	!	-	-
High-Impact Physical Design										
Raised Crosswalk	+	+	!	!	-	-	-	!	-	-
Raised Intersection	+	+	!	!	-	-	-	!	-	-
Median Refuge Island (intersection treatment)	+	!	+	!	+	!	!	+	!	!
Median Island (midblock treatment)	+	+	+	+	!	!	!	+	+	!
Neighborhood Traffic Circle	+	-	+	-	+	-	-	!	-	-
Road Closure	+	+	+	+	!	-	-	!	-	-
Other Traffic Calming										
Parking Conversion [2] (or modification of parking space)	!	!	!	!	!	!	+	!	!	+

1 Street Typology represents the priority mode for the specific street. This does not suggest that other modes are not in use.
2 Parking Conversion is context dependent, but may refer to widening of on-street parking to restrict the travel lane or conversion of angled- to parallel-parking.
3 See PlanBTV WalkBike Corridor, Neighborhood and Downtown Slow Zones.



Traffic Calming Recommendation: Raised Medians / Chicanes with Raised Crossing at Bilodeau Ct

- Raised Medians / Chicanes
  - Spaced approximately every 300'-400'
  - Anticipated Speed Reduction: 6-9mph
- Raised Crossing at Bilodeau Court
  - Anticipated Speed Reduction: 6-9mph
- Pedestrian Crossing and Stop Compliance Enhancements at University Road
- Proposed traffic calming improvements will result in removal of 17 parking spaces along corridor



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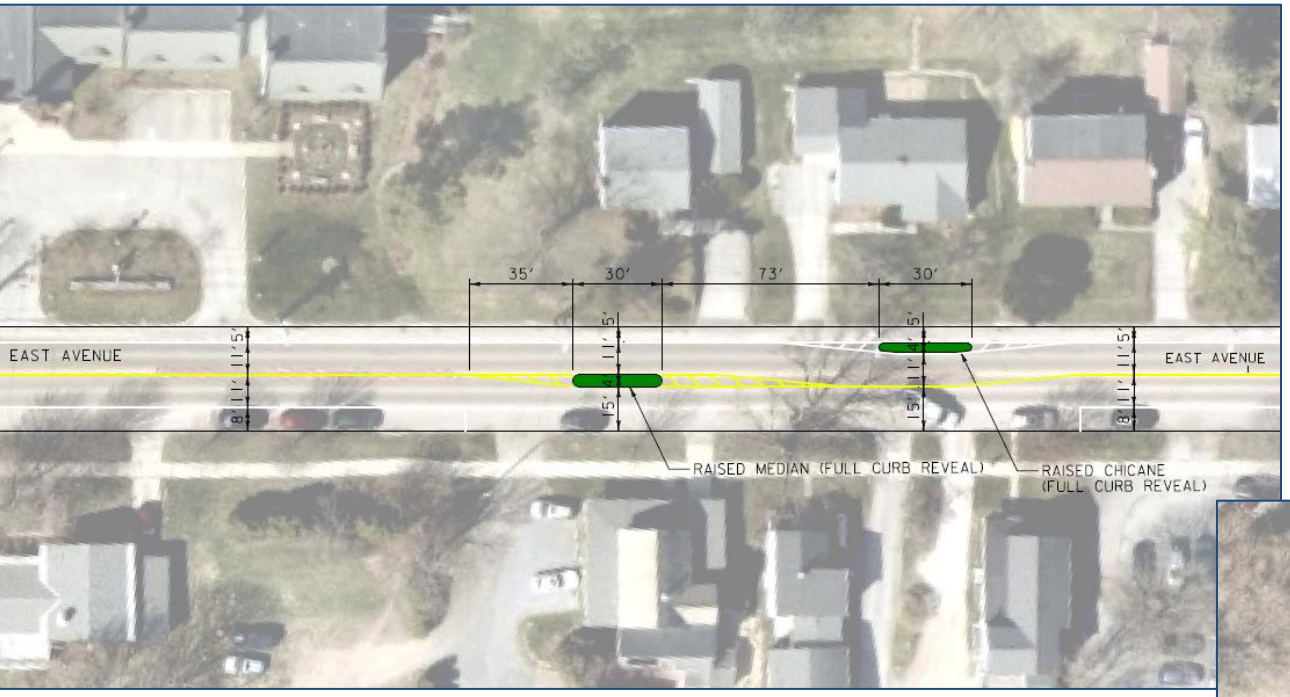
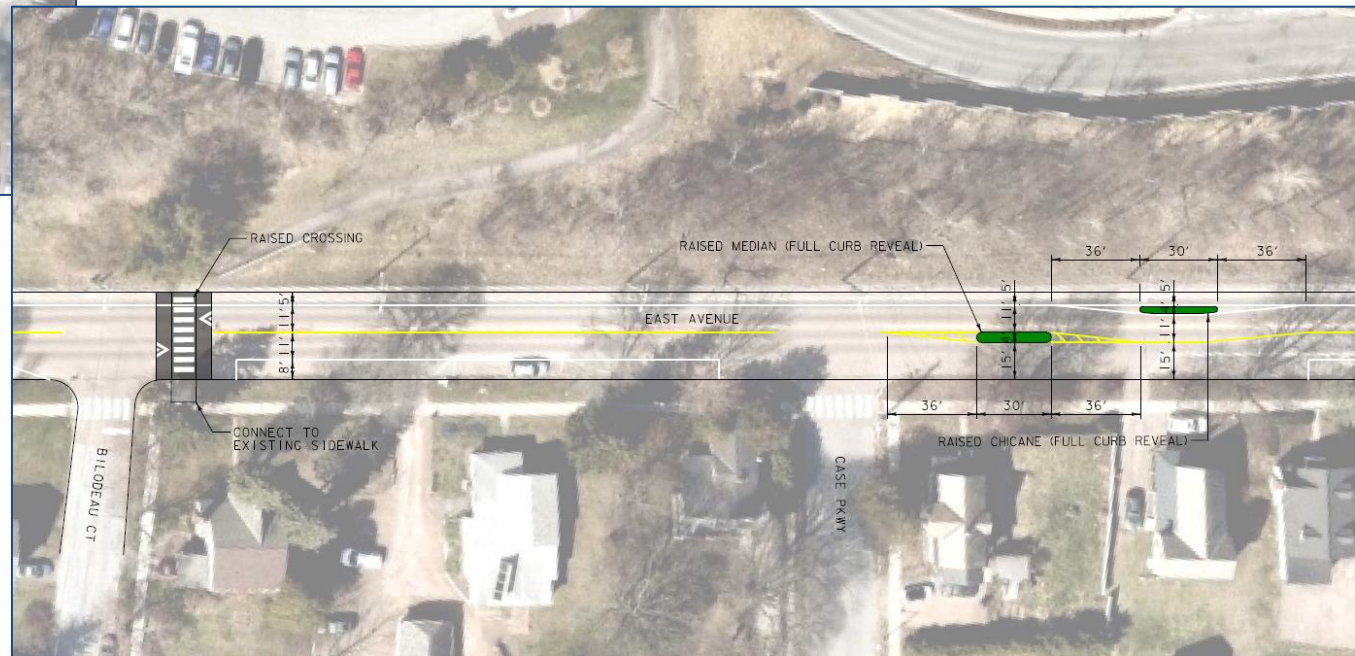



Built Example - Source: Dan Burden, Walkable Communities



Discussion

- Goal: Improve traffic safety
  - Design for max speed of 25mph
  - Reduce crash frequency
  - Prevent crashes involving people walking / biking
- Challenges:
  - Options are limited on arterials
  - Sensitivity to resident parking (63% retained)

Next Steps…

- Move Preferred Alternative forward to Preliminary Engineering Design
- Public Works Commission Approval of Parking Changes
- Complete Final Engineering Design
- Construct Improvements – 2022 Construction Season

Please Share Your Thoughts with Us

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