# BELMONT COMMUNITY PATH FEASIBILITY STUDY

Public Meeting #7 – Central Area

February 15, 2017





## **AGENDA**

1. Introduction	Russell Leino
2. Purpose and Process	Amy Archer
3. Alternatives Design/Cost	Amy Archer
4. Advanced Matrix	Kathleen Fasser
5. Public Engagement	Open Discussion
6. Next Steps	Amy Archer

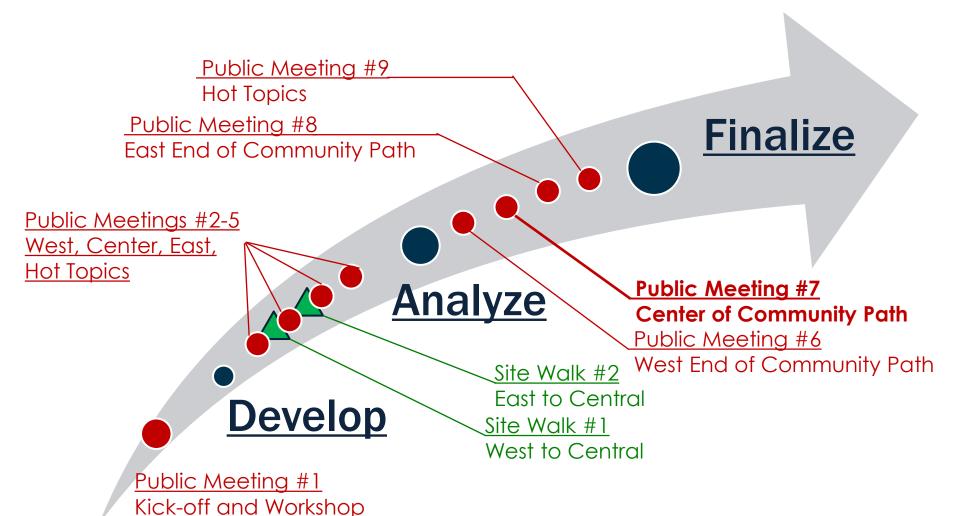
## PURPOSE/LEVEL OF DESIGN

- To recommend a single route that will best serve the Town's residents AND function as a segment of the MCRT.
- Feasibility study intended to advance to conceptual design and planning cost estimate
  - Define path options
  - Quantify impacts
  - Quantify costs
  - Weight and rank alternatives

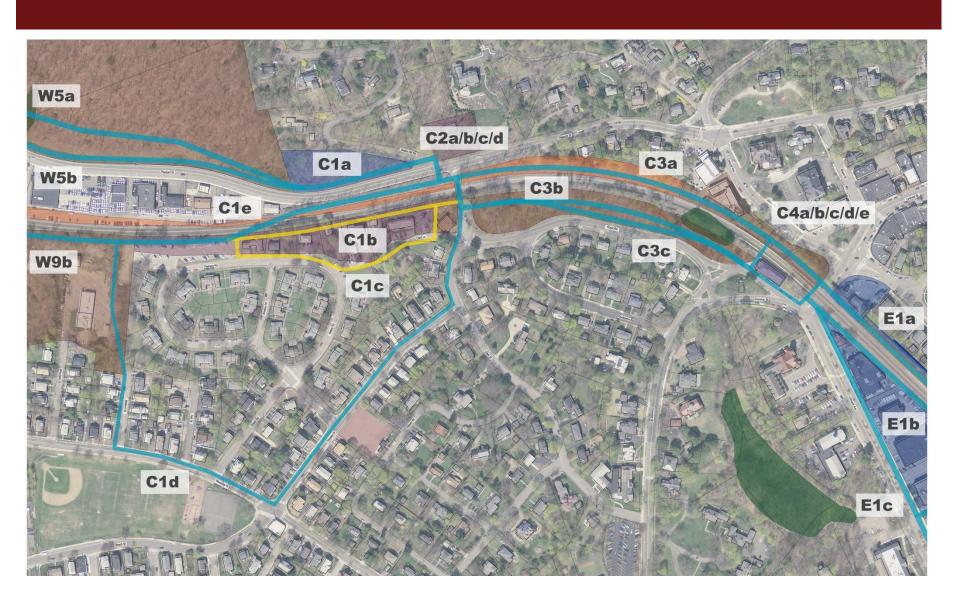
#### PUBLIC ENGAGEMENT GOALS

- A collaborative effort
  - Engaging and considering all stakeholders equally
  - Reflecting interests in project decisions
  - Responsibility of ALL to engage in respectful civil discourse

#### **PROCESS**



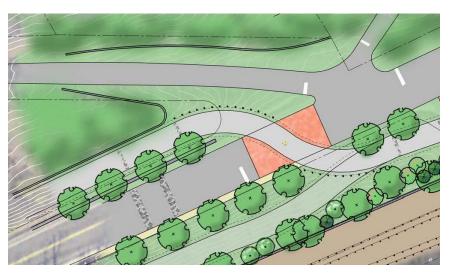
## **CENTRAL SEGMENT ALIGNMENTS**



- C1a: CPAC Alignment
  - Descend from Lone Tree Hill (W5a MSE wall) or continue along north side Pleasant (W5b – masonry wall)
  - Cross Pleasant Street at Snake Hill
    - Potential to realign Snake Hill reduce grade 20% to 12%
    - Construct Walls along Snake Hill
    - Private Property Encroachment
    - Signalized Intersection

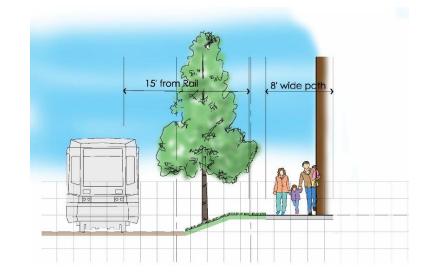
From W5a COST = \$2.60M





- C1b: CPAC Alignment
  - Continue east of DPW on south side of rail
  - 15' offset and 8' path minimums
  - Encroaches on residential dwellings
  - Does NOT include cost of takings/property negotiations

COST = \$0.49M





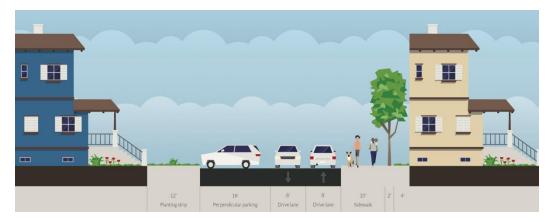
- C1c: CPAC Alignment
  - Continue east of DPW through BHA
  - Clark Lane has 12% grade at east end - cut behind building
  - Cost includes new sidewalk construction and roadway resurfacing



#### **Pearson Road**



Clark Lane



COST = \$0.63M

- C1d: Alternative Go around
   BHA/Clark Lane to the South
  - Make connection from DPW to Midland Street
  - Continue along Waverley,
     Thomas and Clark Streets
  - Connect to Beech Street Center and Town Field
  - Could consider converting
     Waverley/Beech to one-way pair
  - Cost includes two sidewalks and roadway reconstruction

Waverley Street/Thomas Street



Waverley Street/Beech Street



COST = \$1.98M

### Beech Street/Town Field

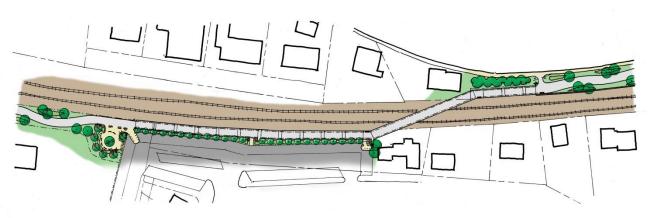
- Could consider connection as added value/connection to path
- Requires path to extend through DPW

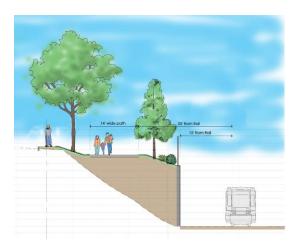


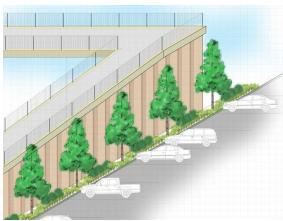
COST = \$0.86M



- C1e: Alternative Go around BHA/Clark Lane to the North
  - Make connection from BHA parking lot to south side Pleasant
  - Connect to Pleasant Street businesses/redevelopment
  - Requires structure along BHA lot and bridge
  - Requires retaining wall (approx. 18' tall) for 600' along
     Pleasant
  - Cost includes parking lot reconfiguration to maintain spaces







COST = \$3.84M

## **CLARK STREET CONNECTIONS (C2)**

- C2a: North to North
  - From C1a or C1e
  - Continue across Clark Street on south side of Pleasant
  - Maintain existing Clark Street bridge





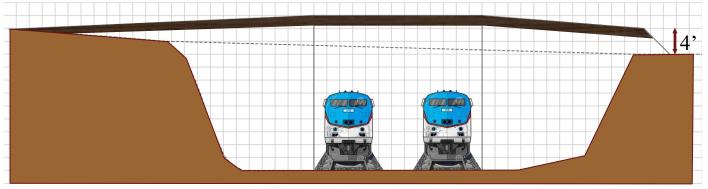
COST = \$0.12M

## **CLARK STREET CONNECTIONS (C2)**

- C2b: North to South or South to North
  - Reconstruct Clark Street bridge
  - Needs to be raised approx. 5' to meet 22'-6" clearance required by MBTA
  - Requires regrading on south side
  - Cost includes retained parking and stairs/access

COST = \$1.90M





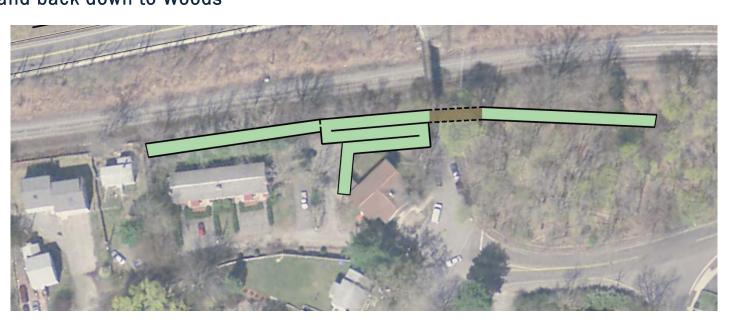


## **CLARK STREET CONNECTIONS (C2)**

- C2c & C2d: South to South
  - Maintain existing Clark Street bridge
  - From C1b or C1c (higher cost)
    - Tunnel under Clark Street behind existing abutment
    - Ascend with retention/switchback to Clark Street and back down to Woods

C2c COST = \$0.39M

C2d COST = \$0.62M

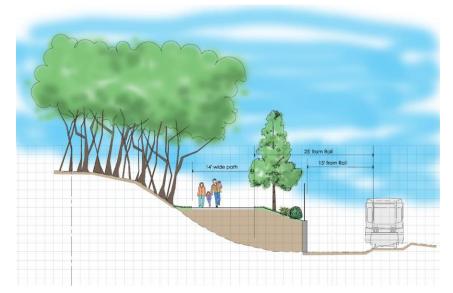


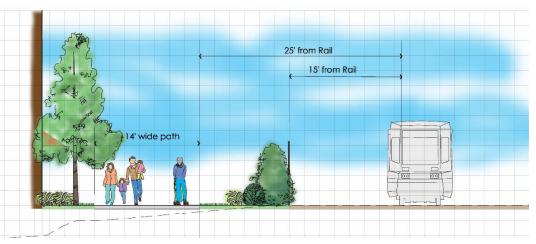
# CLARK STREET TO BELMONT CENTER (C3)

#### ■ C3a: CPAC Alignment

- Continue along north side of rail
- Short wall needed east of Clark
- Connect to redevelopment of Municipal Light building
- Enters Belmont Center at tracklevel westbound platform

COST = \$0.99M



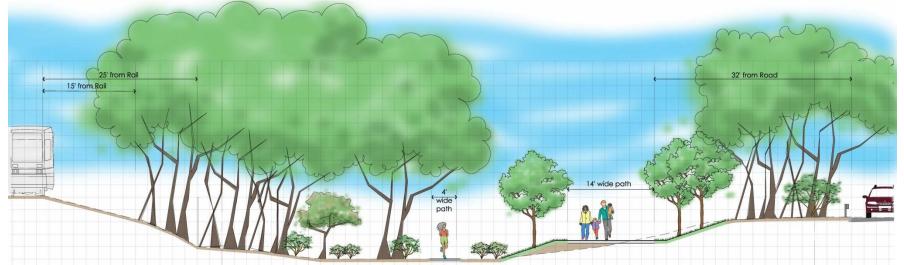


## CLARK STREET TO BELMONT CENTER (C3)

- C3b: CPAC Alignment
  - Continue along south side of rail
  - Run through Royal Road Woods
  - Connects to Belmont Center Station
  - Allows for separate running path
  - Wetland impacts not fully defined
    - May require extensive boardwalk (assumed for cost)

COST = \$2.57M



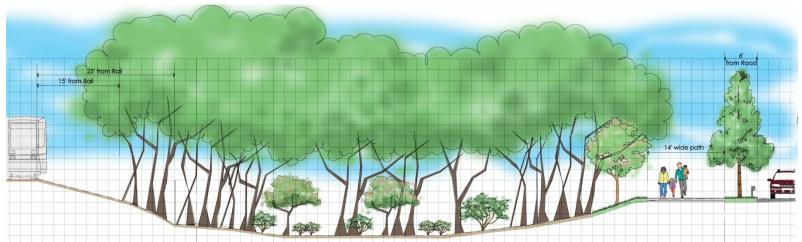


# CLARK STREET TO BELMONT CENTER (C3)

- C3c: Alternative Run along Royal Road
  - Minimizes impacts to wetlands
  - Increases connection to neighborhood
  - Allows more room for park space

COST = \$1.16M





- C4a: North to North
  - Continue at rail level across existing bridge structure
  - Create park and enhance downtown connection cost as shown

COST = \$1.76M



- C4b: North to South or South to North
  - Either Option: Descend or ascend to/from street through park
  - North to South must cross Concord
     Ave
  - Cost includes sidewalk reconstruction roadway resurfacing
- C4c: South to South
- Both require signalized crossing



C4b COST = \$0.79M

C4c COST = \$0.59M

- C4d: South to North
  - Widen/shorten existing station access tunnel (cut and cover)
  - Ramp up to track level across park space



COST = \$2.44M

- C4e: North to South or South to South
  - Ascend with switchback to track level
  - Structure adjacent to Belmont Center Station
  - Bridge parallel historic overpass

COST = \$0.84M



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#### **CRITERIA**

- Based on community input PAST AND PRESENT
- Refined to 21 subcategories

Access and Connectivity	Environmental Impacts	Property Impacts	Sense of Security/ Comfort	Relative Cost
3	1	3	2	2

Matrix Definitions available at: <a href="http://www.belmont-ma.gov/sites/belmontma/files/u151/matrix\_definitions\_02\_08\_17.pdf">http://www.belmont-ma.gov/sites/belmontma/files/u151/matrix\_definitions\_02\_08\_17.pdf</a>

	CRITERIA
1	<u>User Experience</u>
	Ease of Access
	Aesthetics
	Comfort
	Vehicular conflicts
	Conflicts with pedestrian way
ı	Environmental and Cultural Impacts
	Wetlands
	Historic resources
	Mature Woodland
ı	<u>Design Attributes</u>
	Encroachments necessary/MOU
	Fire and Safety
	Potential Partnerships
	Distance to residential structures
ı	<u>Transportation</u>
	Connectivity to Destinations (Resources, Amenities and Transit)
	Ease of universal public accessibility
	Consistency with regional plans
	(MCRT/Wayside Trail)
	Impact on existing traffic/transportation
	Rail conflicts/proximity
	<u>Cost</u>
	Range of Construction Costs
	Operations and Maintenance Costs
	Qualify for Funding
	Value Added

#### **USER EXPERIENCE**

- Ease of Access ramps, directness
- Aesthetics views, landscaping, amenities
- Comfort noise, pollution, personal space
- Vehicular Conflicts intersections, driveways
- Pedestrian Conflicts along or across walkways

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### **ENVIRONMENTAL/CULTURAL IMPACTS**

- Wetlands
- Historic Resources
- Mature Woodlands

CRITERIA
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Qualify for Funding
Value Added

#### **DESIGN ATTRIBUTES**

- Encroachments necessary/MOU
- Fire and Safety views, remoteness, interference
- Potential Partnerships land acquisition, funding, and/or maintenance
- Distance to residential structures –
   concern for impacts based on proximity
   to resident, not owner

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#### **TRANSPORTATION**

- Connectivity to Destinations resources, businesses, amenities and transit
- Ease of Universal Access directness of accessible routes; quantity and challenge of accessible routes/ramps
- Consistency with Regional Plans
- Impact on existing traffic/transportation
- Rail Conflict/proximity

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Qualify for Funding

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### **COST**

- Range of Construction Costs
- Relative Operations and Maintenance Costs
- Qualify for various Funding sources
- Value Added

CRITERIA	_
<u>User Experience</u>	
Ease of Access	
Aesthetics	
Comfort	
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Conflicts with pedestrian way	
Environmental and Cultural Impacts	
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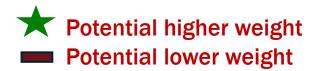
# MATRIX DEVELOPMENT WEIGHT THE CRITERIA

Public Input (Past and Present) indicate some relative importance: High quality recreational experience, community connectivity, off-road and safety



CRITERIA
<u>Transportation</u>
Connectivity to Destinations (Resources, Amenities and Transit)
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Qualify for Funding
Value Added

**Meeting #6 Priority - Directness** 

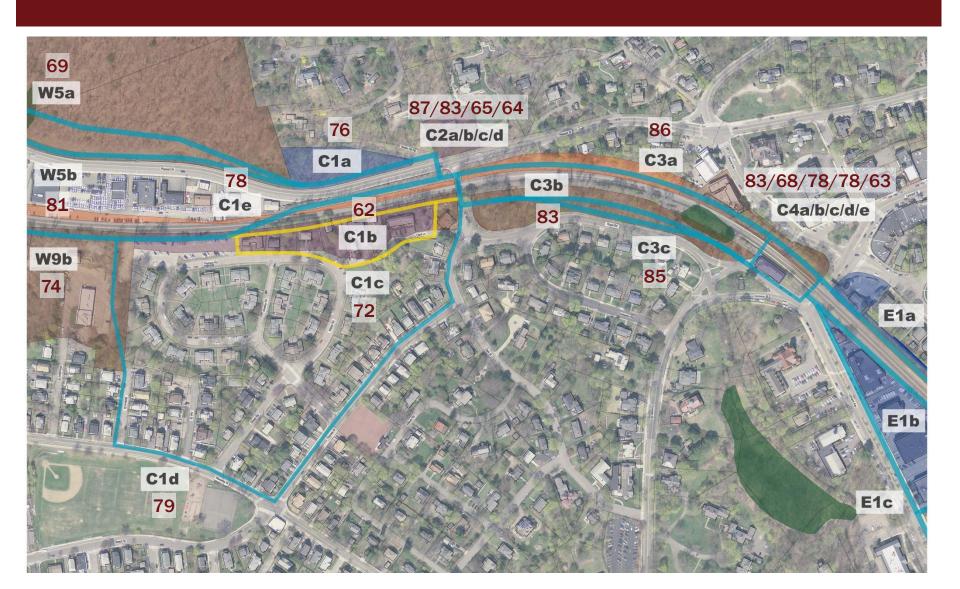


# MATRIX DEVELOPMENT: FATAL FLAWS

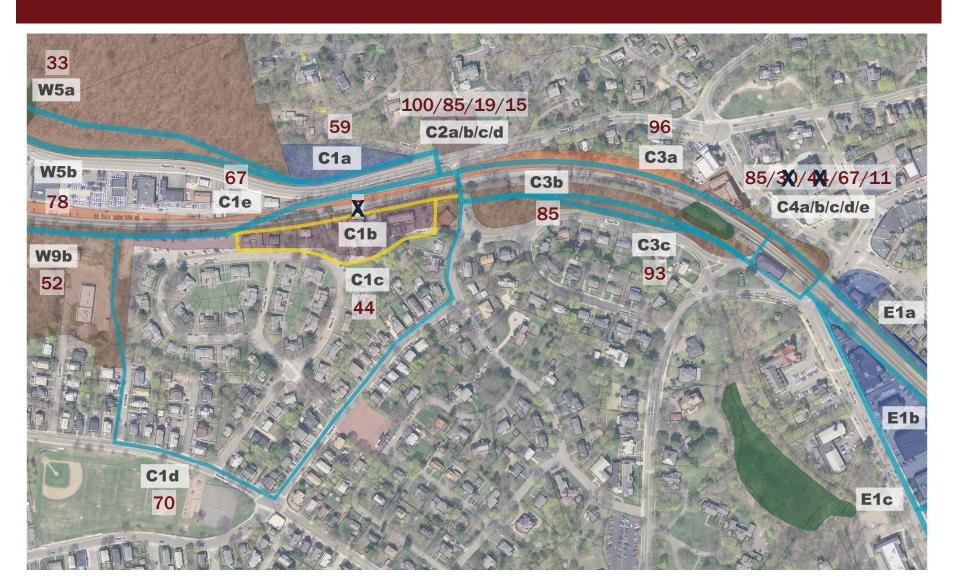
# FATAL FLAWS – Not compatible with identified goal, eliminated from route consideration

- 1. Direct impact to an existing residential dwelling
- 2. Over 5,000 sf of loss to high quality wetlands
- Path location is infeasible to patrol or too difficult to access in emergency situations or impedes access to other areas under Town responsibility
- 4. MBTA has rejected the proposed alignment/know private owner will not agree/requires speculation about usability of land at time of BOS determination
- 5. Alignment crosses an intersection with various negative conditions including excessive vehicular traffic volumes, multiple approaches/conflict points, poor sight lines, and lack of signal/inability to add signalization or alignment crosses 5 or more highly trafficked driveways within 500 linear feet of path

## FOR DISCUSSION



## FOR DISCUSSION



#### ROUTE EVALUATION

#### COMPARISON

- What makes a Route "HIGH RANKING"?
  - Fatal Flaws are NOT considered for a Route
  - "High Ranking" to be determined based on final scores
  - Cutoff = i.e. 50 out of 100?
- How to evaluate Routes?
  - Does a high ranking alternative raise the score of an adjacent low ranking alternative?
  - Does a low ranking alternative decrease the score of an adjacent high ranking alternative?
  - Do links and lengths count the same?

#### WHAT'S NEXT?

- Consultant Team present alternative costs and expanded matrix and begin assessment of overall routes
- Cost/Matrix presentations and discussion:
  - Meeting 8: Eastern End (Downtown Brighton) March 8
  - Meeting 9: Cost Summary/Full Matrix/Funding TBD

http://www.belmont-ma.gov/community-path-implementation-advisorycommittee-cpiac/pages/community-path-feasibility-study

www.belmontmedia.org

<u>jwheeler@belmont-ma.gov</u>