



Minuteman West Bikeway

Rail to Trail



Project Status

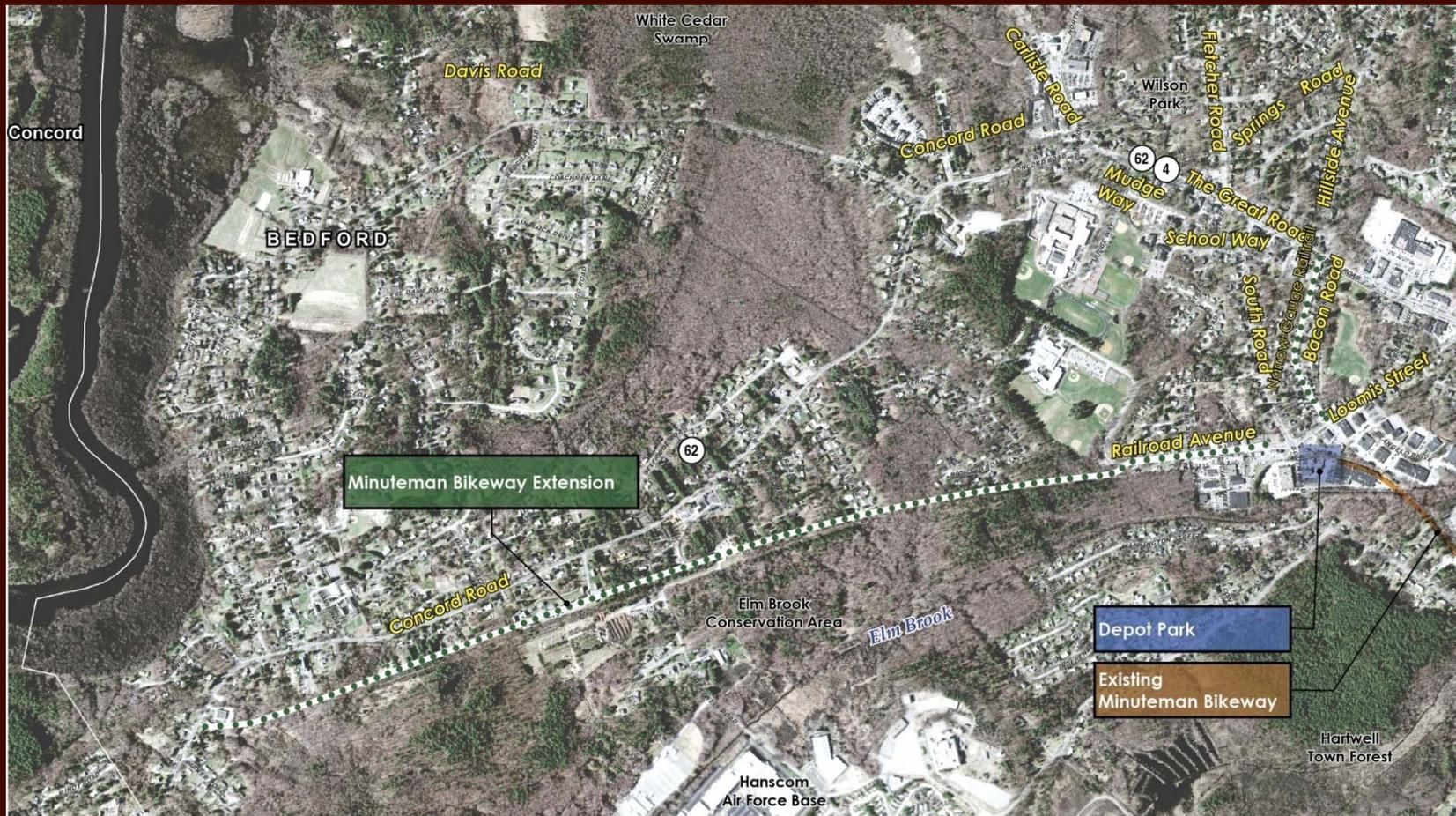
- Preliminary Design currently being developed

- Off-road and on-road design
 - Railroad Ave cross sections studied
 - Off-road path studied at end points



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Design Standards for Bike Accommodations

- Current MassDOT Design Guide
- 1999 (AASHTO) Guide for the Development of Bicycle Facilities
- Americans with Disabilities Act of 1990
- American Access Board
- 2009 Manual on Uniform Traffic Control Devices (MUTCD)



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Design Criteria for off road trail

- Paved – 20 MPH design speed
- Trail STOP at all Road crossings
- Min. Horizontal Clear zone – 3 feet
- Min. Vertical Clearance – 8 feet
- Horizontal curve radius min. – 100 feet
- Max. profile grade – 5%
- Minimum Stopping Site Distance – 122 feet
- Cross Slope – 2% sloped to one side



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Railroad Avenue - Constraints

- Right of Way (40 foot with 10 sidewalk easement in some areas)
- Current pavement width – varies from 20 ft to 28 ft
- Trees
- Geometry
- Utility poles, hydrants, etc
- Drainage



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Railroad Ave – Cross Section Options

1. 6 ft sidewalks both sides
2-10 ft travel lanes with 4 ft shoulders
2. 10 ft sidewalk (south side) w/ 6 ft sidewalk (north side)
11 ft travel lanes and 4 ft shoulders
3. 10 ft off road shared use path (south side)
5 ft buffer and 2 -12 ft travel lanes (no shldrs)
Continue 6 ft sidewalk on north side only w/ 2-10 ft travel lanes with 4 ft shoulders



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Railroad Ave Cross Section

- Option 1 considered the preferred alternative
 - No land takings
 - Maintains sidewalks
 - Reduces tree impacts
 - Direct connection from Depot Park

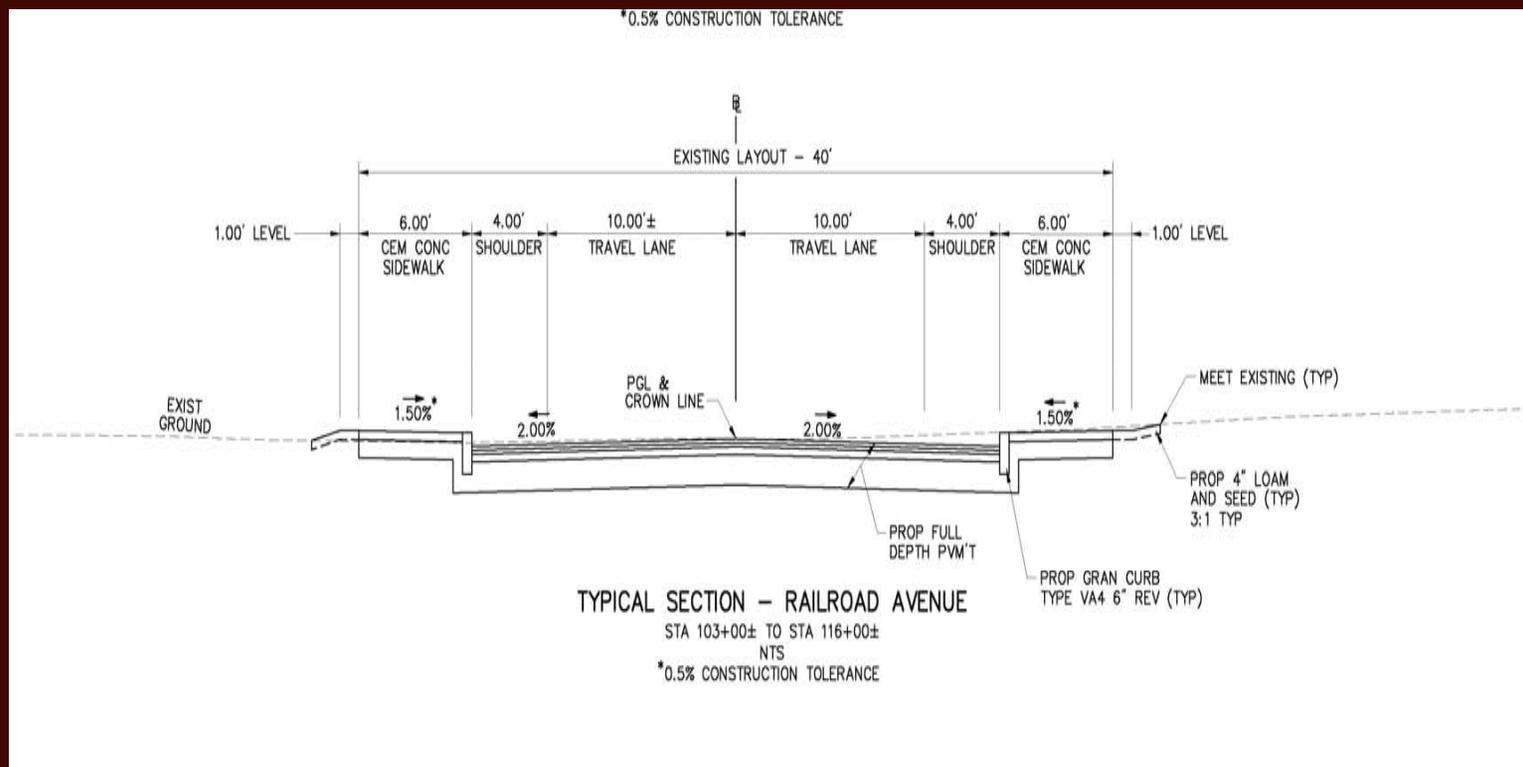


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Rail Road Ave cross section



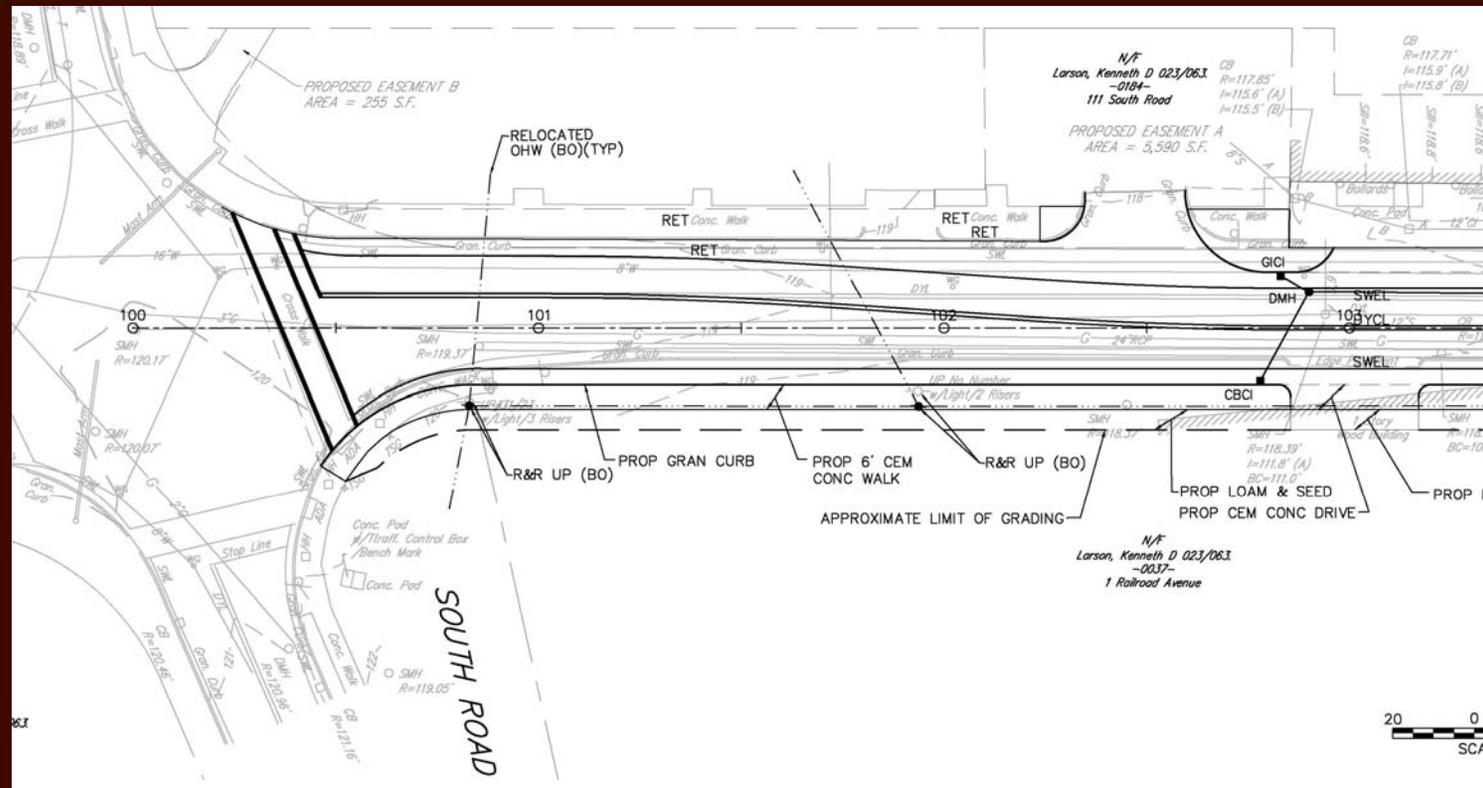


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Rail Road Ave plan view



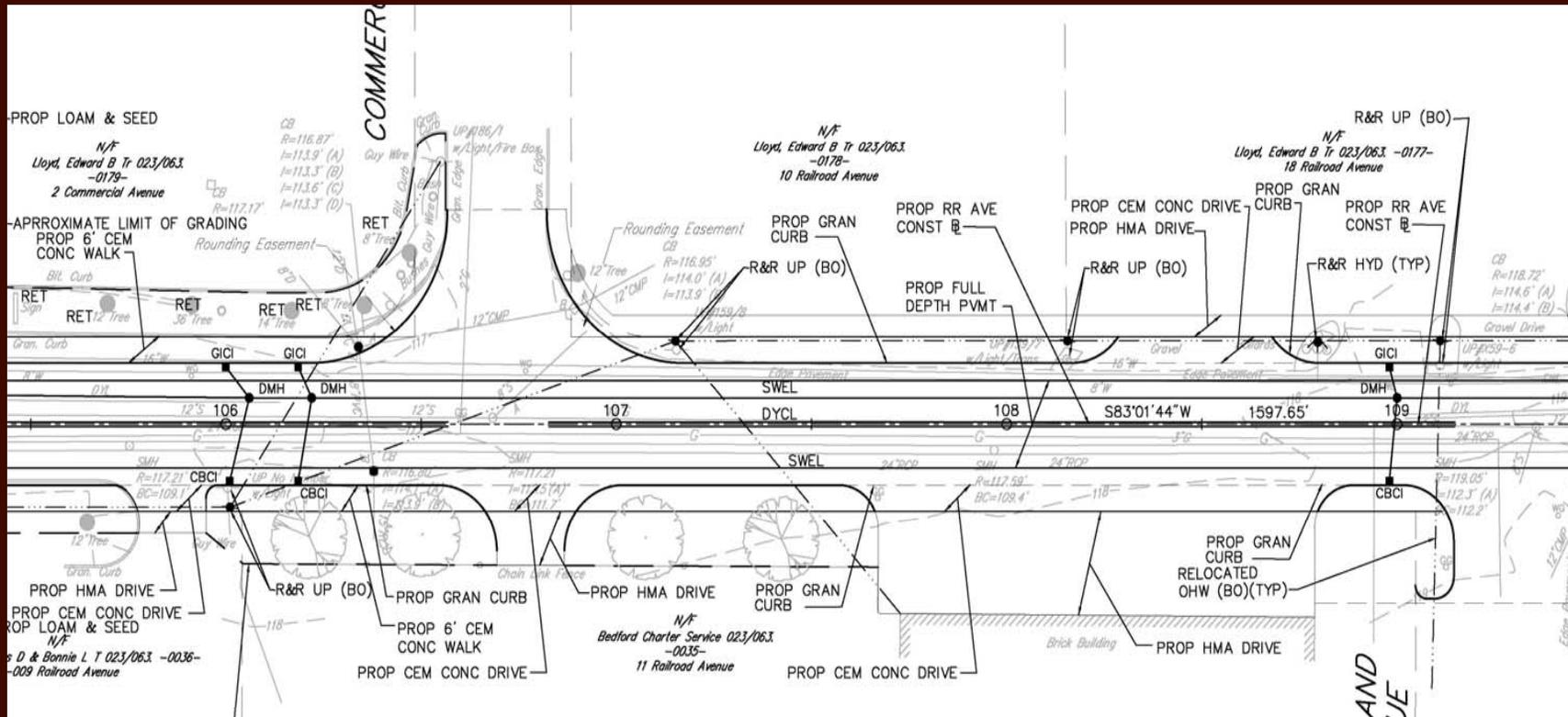


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Rail Road Ave plan view





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Railroad Avenue



10/25/2010





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Parking at Railroad Ave



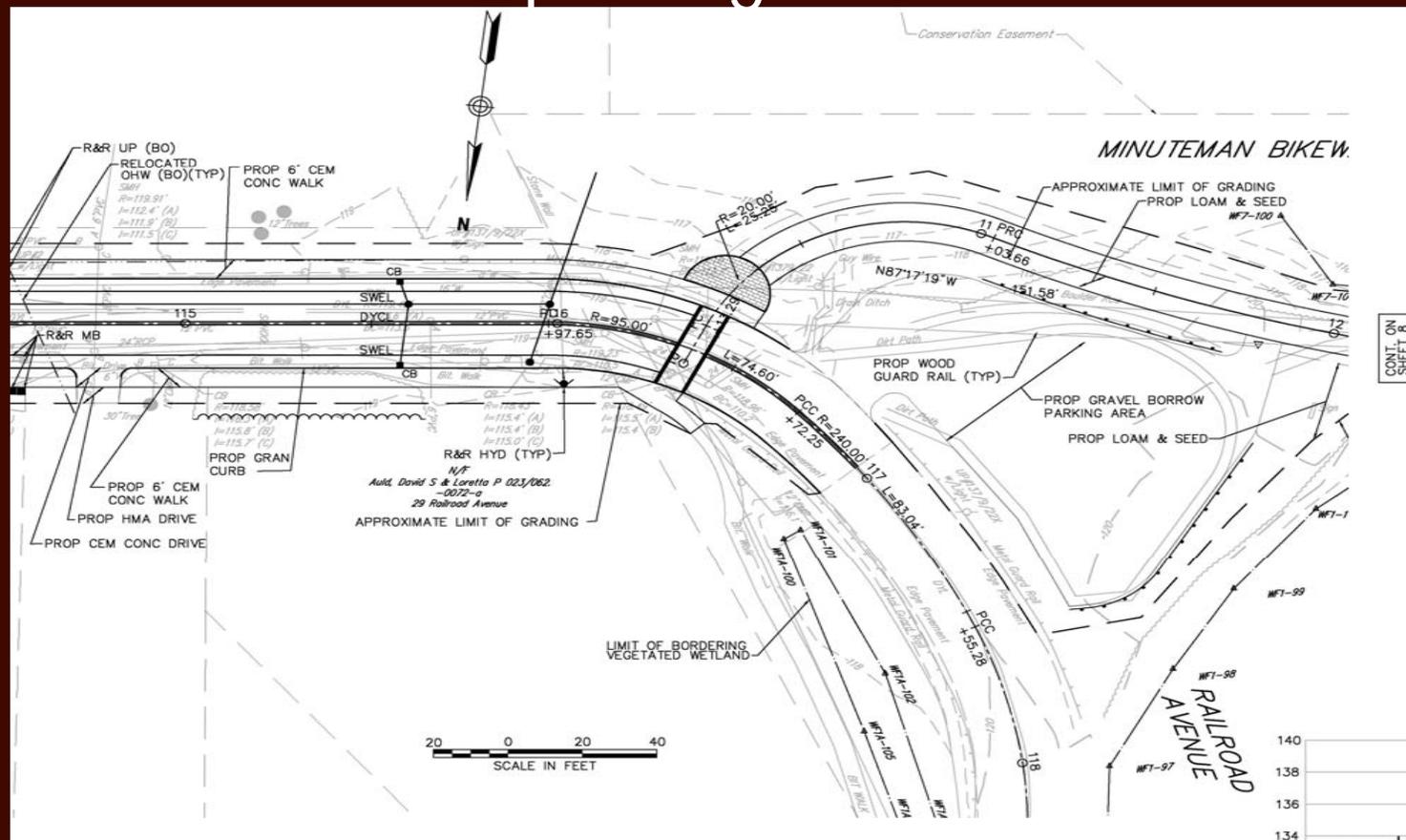


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Rail Road Ave parking area



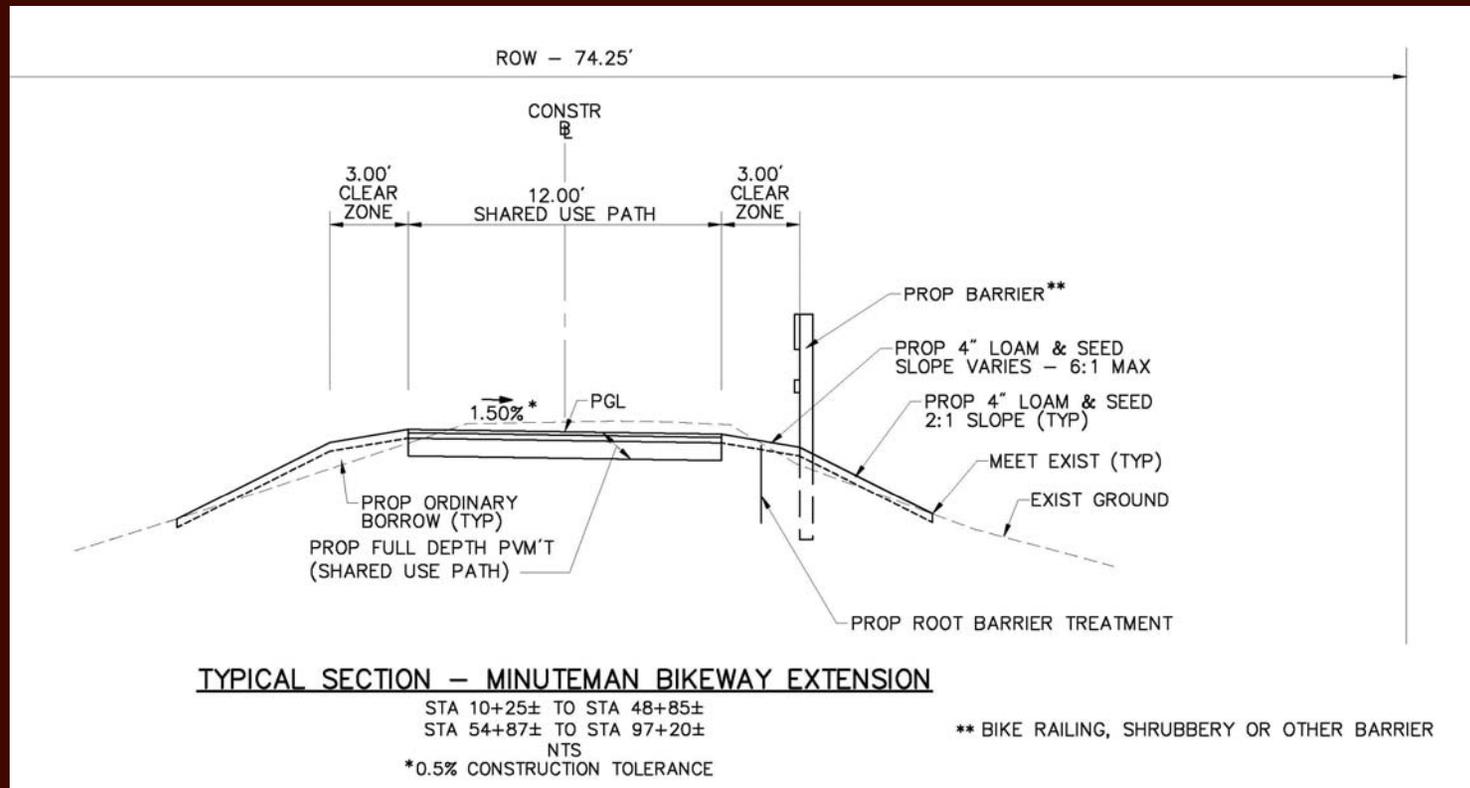


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Typical Section – off road



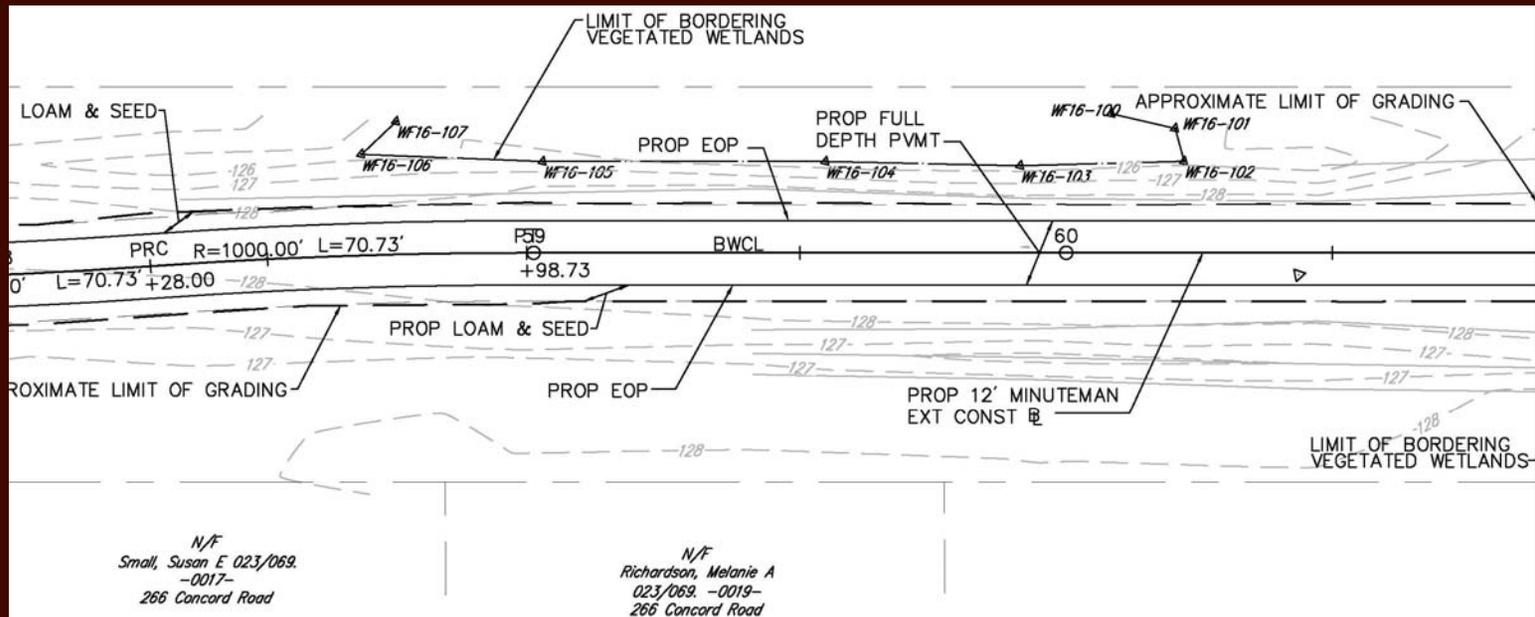


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Off road typical plan view





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Trail Head Transition Path



10/25/2010



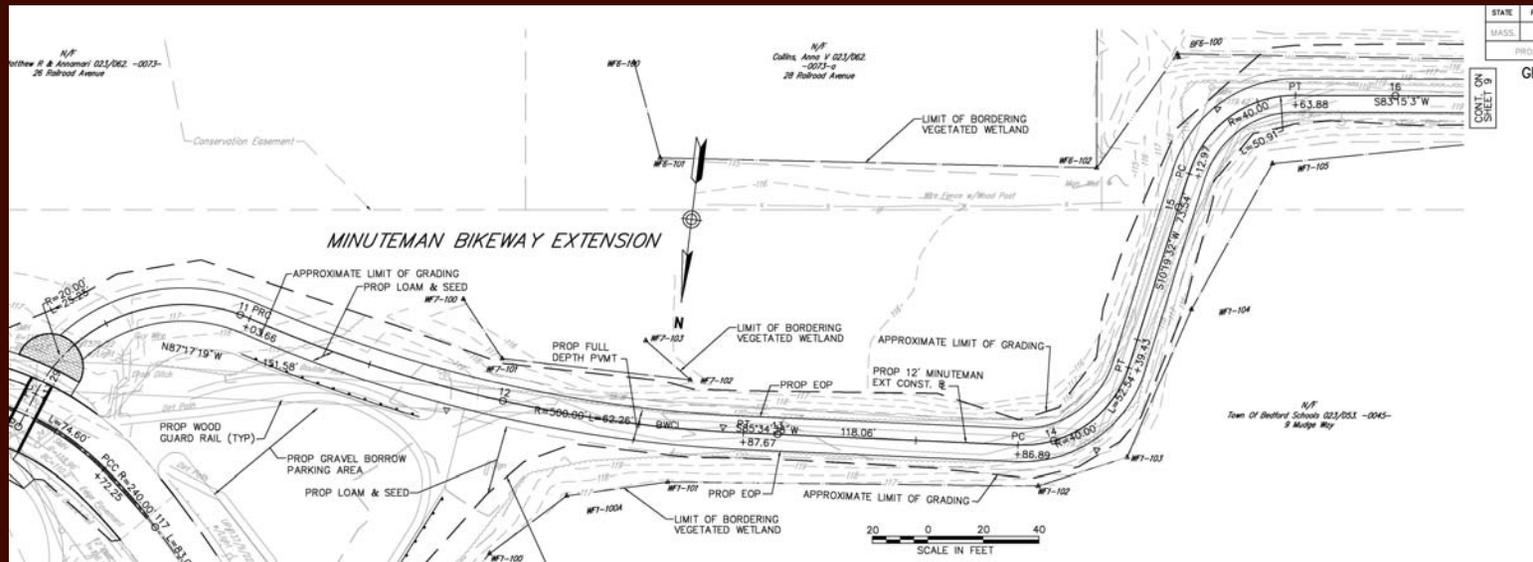


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Railroad Ave entrance to off-road path





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Mongo Brook culvert



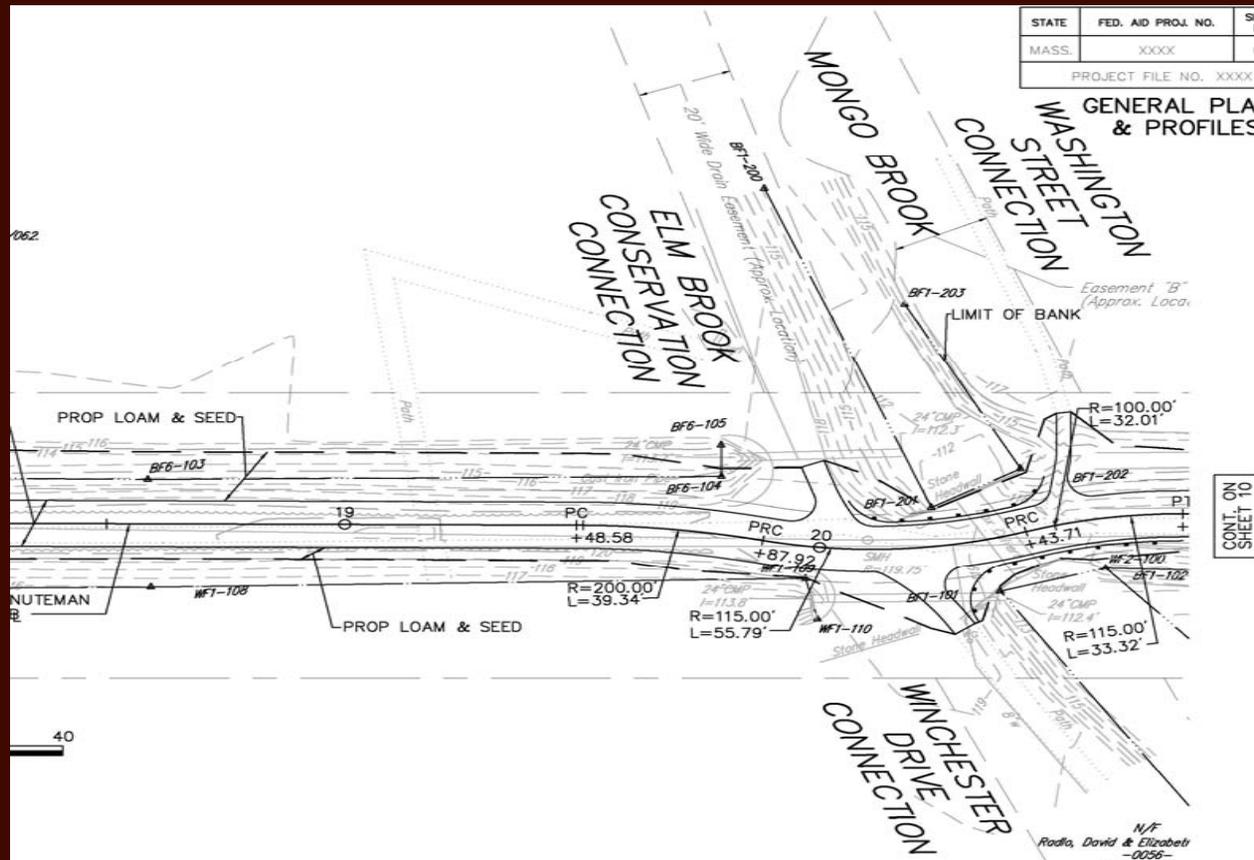


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Mongo Brook Crossing



CONT. ON SHEET 10





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Water Treatment Plant Access Drive



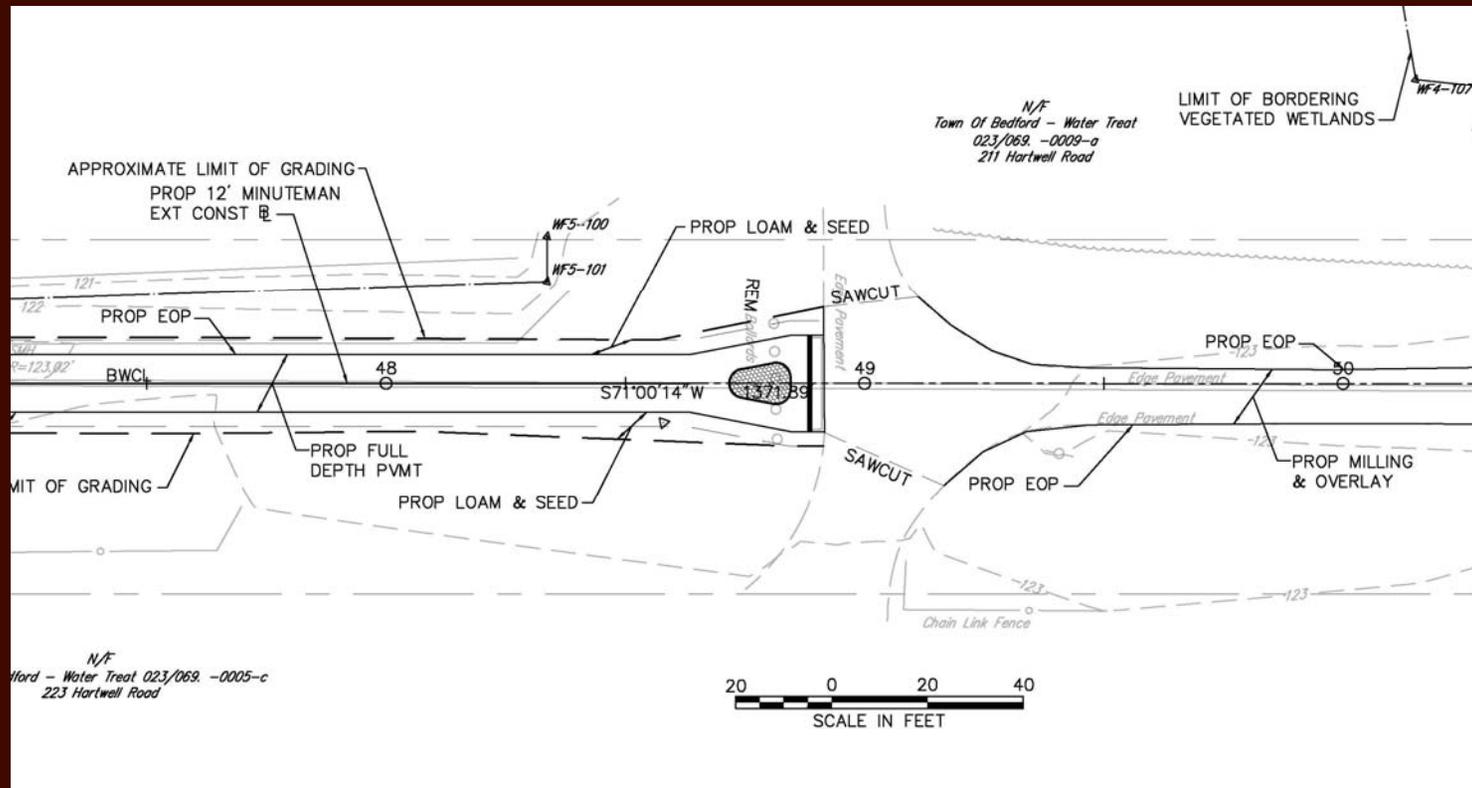


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Hartwell Road Water Treatment Plant





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Roadway Crossings – Passive Signal System



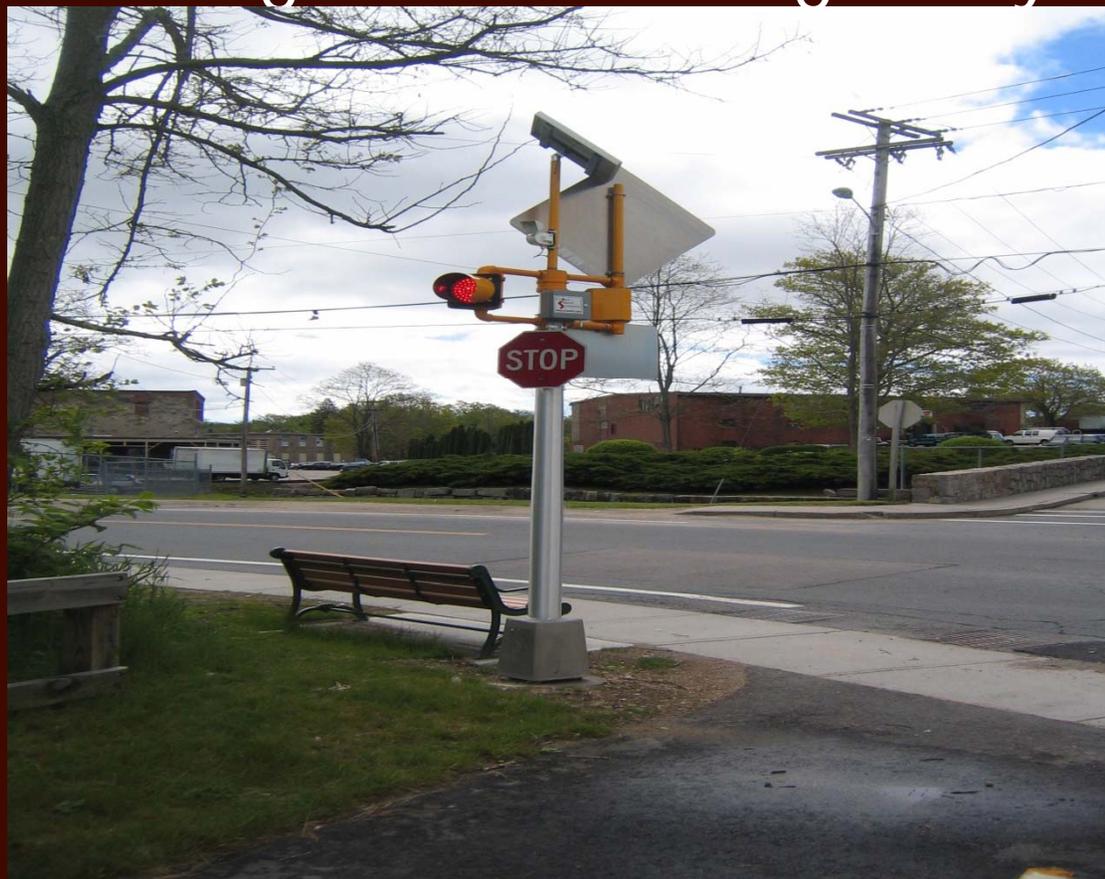


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Road Crossings – Passive Signal System





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Parking at Concord Rd



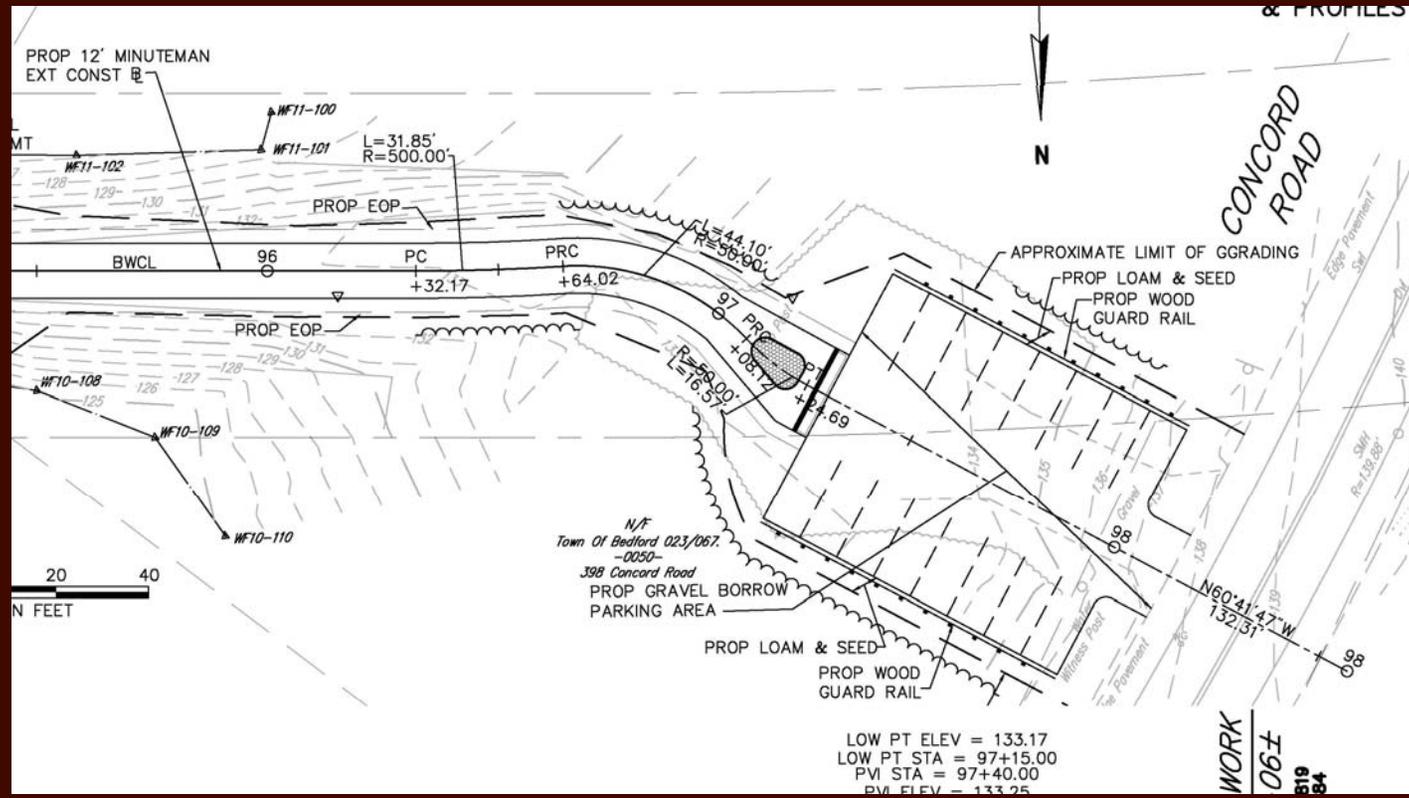


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Parking Lot Design option





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Next Steps

- Address comments from Bike Committee
- Present project to Bedford Selectboard
- Submit Project Need Form to MassDOT for construction support
- Submit preliminary design plans to MassDOT for review.



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Elm Brook Alternative Option

Study needs to be completed to determine if this is a viable alignment for a transportation corridor

- Path cross section and surface material consistency
- South Road crossing options
- Wetland Impacts (greater than 5,000 sf)
- Elm Brook Flood Plain Impacts
- Miller Moore Conservation Restriction
- Elm Brook Conservation Area
- Land Takings
- Potential mitigation requirements
- Funding eligibility
- Design/permitting and land taking schedule