Cranberry Highway (Route 28/Route 6) Mill Pond Dam Reconstruction

Eric Silva, PE and Tyler Greco
Pare Corporation
Today’s Panel

• Design Consultant – Pare Corporation
  • Eric Silva, PE
  • Tyler Greco, EIT

• MassDOT
  • Project Manager: Harry Adolphe
Today’s Agenda

- Project Location
- Existing Conditions
- Alternatives Considered
- Project Goals
- Spillway and Bridge
- Historic and Cultural Resources
- Fish Ladder
Existing Conditions

- High Hazard Dam in Poor condition
- Spillway is under design capacity
- Fish ladder has a high mortality rate
- Storage house and harvesting pad are in poor condition
Project Goals

• Improve hydraulic capacity of the dam
• Restore Herring Run
• Accessible harvesting chamber
• Maintain/Restore cultural resources
• Improve pedestrian and bicyclist access
Harvesting Pad and Fish Ladder
Design Alternatives - Spillways

- Arched Crested Weir
  Nonquit Pond, Tiverton, RI

- Ogee Weir
  Sudgen Reservoir Dam, Spencer, MA

- Labyrinth
  Lake Sam, Rayburn, TX
Selected Alternative - Spillway

Arched Crested Weir

Nonquit Pond
Tiverton, RI
Design Alternatives - Superstructure

Precast Concrete NEXT Beams

Steel Fabricated Beam Units (PBUs)

South Pond Road
East Brookfield, MA
Selected Alternative - Superstructure

Steel Fabricated Beam Units (PBUs)
Design Alternatives – Fish Ladder

Alaskan Steeppass

Existing Fish Ladder

Denil

John Day Dam
Rufus, Oregon

Pool and Weir

Damariscotta Mills
Nobleboro, Maine
Selected Alternative – Fish Ladder

Pool and Weir

Damariscotta Mills
Nobleboro, Maine
Design Alternatives – Bike Lane

Striped Buffered Bike Lane
Hope Street
Providence, RI

Median Separated Bike Lane
6th Street Bike Lane
Charlotte, NC

Shared Use Path
East Bay Bike Path
East Providence, RI
Selected Alternative – Bike Lane

Striped Buffered Bike Lane

Hope Street
Providence, RI

massDOT
Massachusetts Department of Transportation
Bicycle and Pedestrian Accommodations

- 6' MIN. TO 8' MAX. SIDEWALK
- 5' 0" BIKE LANE
- 3' 0" STRIPED BUFFER
- 11' 0" TRAVEL LANE
- 11' 0" TRAVEL LANE
- 2' 0" SHOULDER
- 16' MIN. TO 18' MAX. SIDEWALK
Bridge Replacement
Cultural Resources

Dam and Herring Run

- Maintained since the 17th century
- Indigenous population have harvesting rights
- Storehouse replacement
- More accessible harvesting pad
Primary Target Species

- Alewife
- Blueback Herring
- American Eel

Other Target Species

- White Perch
- American Shad
Fish Ladder

AGAWAM RIVER

EEL PASSAGE

FISH LADDER POOLS & WEIRS

HARVESTING POOL

MILL POND
Fish Ladder
Thank You

Cranberry Highway (Route 28/Route 6)
over Agawam River Bridge No. W-06-020

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