Helena to Great Falls Bicycle/Pedestrian Path Feasibility Study

Workshop
July 9, 2008
Workshop Goals

• Share information
• Gather input
• Discuss next steps
Background
Corridor identification
Route segmentation
Implementation Strategies
Conclusions
Next Steps
• Study requested by Senate Highways and Transportation Committee

• Feasibility only----no funding commitments

• MDT will report to Committee prior to 2009 session.

• Project assisted by a Technical Advisory Group (TAG)
Study Goal

Study the feasibility of a bicycle and pedestrian path between Helena and Great Falls within public road right-of-ways.
# Study Timeline

## Helena to Great Falls Bicycle/Pedestrian Path Feasibility Study Timeline

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<th>Task</th>
<th>Week</th>
<th>Dec/Jan</th>
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<th>May</th>
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<td>4. Develop Proposed Pathway Configuration Parameters</td>
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<td>5. Technical Advisory Group Scoping Meeting</td>
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<td>7. Bicycle and Pedestrian Facilities</td>
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<td>10. Establish Screening Criteria</td>
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<td>11. Identify Feasible Routes</td>
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<td>12. Technical Advisory Group and Agency Input</td>
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<td>13. Public Scoping Meeting</td>
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<td>14. Develop Preliminary Draft Study Report</td>
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<td>16. Develop Final Report</td>
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<td>17. Study Completion</td>
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Data-Driven Analysis

• Spatial data
  - Roadway
  - Bridge
  - Other spatial layers
• Environmental information
• Utility information
• Right-of-way (from construction plans)
• Hydrology
• Fish, Wildlife, and Parks fishing access sites & toilet facilities
• Aerial imagery
• Windshield surveys conducted to identify topographic constraints*

*Note: Not an engineering survey
<table>
<thead>
<tr>
<th><strong>Termini:</strong></th>
<th>Gore Hill and Lincoln Road</th>
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<tbody>
<tr>
<td><strong>Boundary:</strong></td>
<td>20 miles on either side of I-15</td>
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<td><strong>Route:</strong></td>
<td>Public paved route</td>
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<td><strong>Right-of-way:</strong></td>
<td>Public right of way along state and county roads</td>
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<tr>
<td><strong>Safety:</strong></td>
<td>Minimize crossovers</td>
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3rd Iteration

- Recreation Road

- I-15 (three miles between exits 216 and 219)-this segment is a chokepoint that has safety implications and is included in this study only to preserve corridor continuity

- Chevallier Drive from Lincoln Rd. to Sieben (gravel road, low AADT of 40)

- Note: For purposes of this study, I-15 from Lincoln Road to Sieben is not being considered due to high AADT and high speeds
Recreation Road

- 63.6 mile route along the Little Prickly Pear Creek and Missouri River between Spring Creek Interchange (exit 219) and Gore Hill in Great Falls

- The entire route is paved and existing shoulders are generally under 1 foot the entire length

- Right-of-way (generally 30-60 feet each direction from centerline) varies along the route and owned by the State

- Rural speeds from 55-70 mph and annual average daily traffic is 320-750
Recreation Road
I-15 (3 miles: exit 216 - exit 219)

Example of Chokepoint: Not feasible due to safety

- 3 mile route connecting exit 216 (Sieben and Chevallier Drive) to exit 219 (Recreation Road)
- Paved route with an 8-10 foot shoulder except for a 526 foot bridge segment chokepoint with a 2 foot wide shoulder
- Right-of-way is state owned
- Annual average daily traffic is 4,190
Chevallier Drive

- 12.9 mile route along Little Prickly Pear Creek connecting I-15 with Secondary 279 (Lincoln Rd)

- The first 2 miles on north end by Sieben Interchange are paved. The remaining 10.9 miles are gravel

- Right-of-way (generally 20-25 feet each direction from centerline) is owned by Lewis and Clark County

- Annual average daily traffic is 40
Route Segmentation

• Segment: A continuous section of road with similar properties (i.e. shoulder widths, right-of-way, topography).

• Segment Types:
  - Separated path (A)
  - Widened shoulders (both directions) (B)
  - Less viable separated path (C1)
  - Less viable widened shoulders (C2)
  - Chokepoints: bridges, cliffs, guardrails (D)

Note: Smoothing has been used to determine segment lengths
Segment Types

**Route Segmentation**

- **A** - Pavement
  - Path viable*
  - ROW exists
  - Terrain level beyond pavement

- **B** - Pavement
  - Path less viable*
  - ROW exists
  - Terrain level 3 feet beyond pavement
  - Terrain contoured >3 feet
  - Shoulder viable*

- **C** - Pavement
  - Path less viable*
  - ROW exists
  - Terrain contoured beyond pavement
  - Shoulder less viable*

- **D** - Pavement
  - Path not viable*
  - ROW exists
  - Terrain obstructed beyond pavement
  - Shoulder not viable*

*Viable: A rough gauge of path or shoulder constructability based on right-of-way, topography, and physical obstructions.
Route Segmentation Type D

D - Chokepoints: Bridges, Cliffs, Guardrails

Areas where physical barriers prevent at least three feet of paved shoulder on both sides or any addition of shoulder width or a separated path. Sufficient right-of-way may or may not exist.

Feasibility study only – detailed engineering study required
Route Segmentation Types

Recreation Road

- Separated path
- Less Viable separated path
- Widened shoulders
- Less Viable widened shoulders
- Chokepoint

NOTE: Entire route shown on posters

Feasibility study only — detailed engineering study required
Route Segmentation Type

Chevallier Drive

- Separated Path
- Less viable widened shoulders
- Not viable for either path or shoulders

Feasibility study only – detailed engineering study required
Segment & Path Continuity

- A separated path the entire length is not possible due to chokepoints*

- Continuity can be maintained with a mix of segment types (separated paths and widened shoulders) but will require multiple roadway crossings

* The analysis did not include the cost or viability of removing chokepoints
Recreation Road Safety Issues

Number of Roadway Crossings & Segment Lengths

All Possible Separated paths
53 Segments
52 Roadway crossings
35.6 miles - separated
27 miles - 3 feet

Separated paths > 0.5 mile
35 Segments
34 Roadway crossings
33.5 miles - separated
29.1 miles - 3 feet

Separation paths > 1 mile
12 Segments
11 Roadway crossings
26.5 miles - separated
36.1 miles - 3 feet

Widened shoulders entire length
1 Segment
0 Roadway crossings
62.6 miles - 3 feet

Additional Conflict Points

Chokepoints
(cliff, wetland, guardrail, bridge)
22 locations
2.8 miles

Not possible due to chokepoints
Chokepoint Locations

Chokepoints are shown in red

Feasibility study only – detailed engineering study required
Estimated Cost Ranges

A -B -

8 foot path: $150,000/mile +
10 foot path: $170,000/mile +

Two 5 foot shoulders: $200,000/mile +

10 foot path: $200,000/mile ++

$$$ = very expensive & probable environmental issues

Note: All estimated costs are in today’s dollars
Independent Utility

- **Independent utility**: A segment of the corridor where a separated path (or widened shoulders) can be developed as a stand-alone amenity with areas that allow for vehicle parking.

- This strategy supports:
  - a phased implementation of path segments within the corridor by “picking low-hanging fruit first”
  - a recreational travel focus
Segment Criteria & Identification

Criteria

• Segments have vehicle parking areas on either end

• Segment lengths are greater than 1 mile

The process of identifying independent utility segments uses two segment types A and B (previously identified) against independent utility criteria.
Scenario A1 - Path

Staging/parking areas exist
A1 Path Locations

- Stickney Creek fishing access site
- I-15 Underpass (1 mile)
- Gore Hill (Great Falls airport) southwest to Ulm (7.1 miles)

Feasibility study only – detailed engineering study required
Scenario A2 – Path

Staging/parking area needed
A2 Path Locations

- Cascade to narrow point (4.7 miles)
- Ulm to narrow point (5.1 miles)
- Canyon Access to I-15 (2 miles)
- North of Wolf Creek Bridge (1 mile)

Feasibility study only – detailed engineering study required.
Scenario B1 - Shoulders

Staging/parking areas exist
B1 Shoulder Locations

- Local Access Interchange (1.2 miles)
- I-15 underpass
- Lichen Creek fishing access site (2 miles)
- Table Rock fishing access site

Feasibility study only – detailed engineering study required
Scenario B2 - Shoulders

Staging/parking area needed.
(Segment may contain short & narrow bridges)
B2 Shoulder Locations

- Wolf Creek Bridge to Table Rock fishing access site (7.1 miles)
- North of Wolf Creek Bridge (2.5 miles)
- North and south of Craig Bridge (2.8 miles)

Feasibility study only – detailed engineering study required
Scenarios & Locations for Chevallier Dr.

- Potential separated path: southern 4.4 miles (scenario A2)
Conclusions

• 25 miles of additional separated path can be built with a minimal amount of complex engineering solutions.

• 15 miles of widened shoulders along the existing roadway can be built with a minimal amount of complex engineering solutions.

• There are multiple locations where chokepoints and obstacles exist that would limit a contiguous separated path.

• A phased implementation of path segments as stand-alone amenities can be accomplished.

Note: These assessments would need to be supported by additional engineering analysis.
Next Steps

Incorporate Public Comments
Prepare Draft Report
Make Draft Report Available
Incorporate Additional Comments
Finalize and Publish Report
Questions & Comments

Comments may be submitted in writing at the meeting, or by mail to Zia Kazimi, Rail, Transit and Planning Division at PO Box 201001, Helena, MT 59629-1001, or online at www.mdt.mt.gov/mdt/comment_form.shtml by August 11, 2008