I-94
Rest Area
Corridor
Study

I-94 Rest Area Corridor Study

Public Information Meeting

Tuesday,
September 15, 2009

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DEPARTMENT OF TRANSPORTATION

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Welcome & Introductions

- Sheila Ludlow, MDT
- Jim Frank, MDT
- Sarah Nicolai, DOWL HKM
- Jessica Salo, DOWL HKM

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Purpose of Meeting

- Present Findings of I-94 Rest Area Corridor Study
- Discuss Fort Keogh Rest Area Proposal
- Solicit Public Comment

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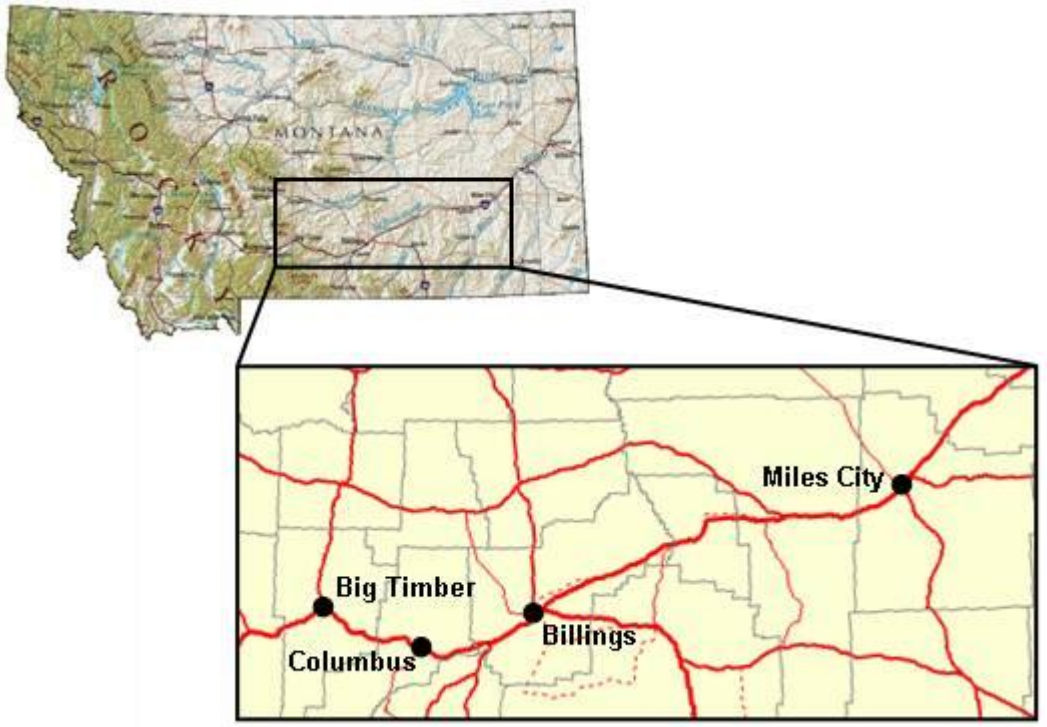
Study Area

I-90 from Big Timber to Columbus in addition to the segment of I-94 from Billings to Miles City.



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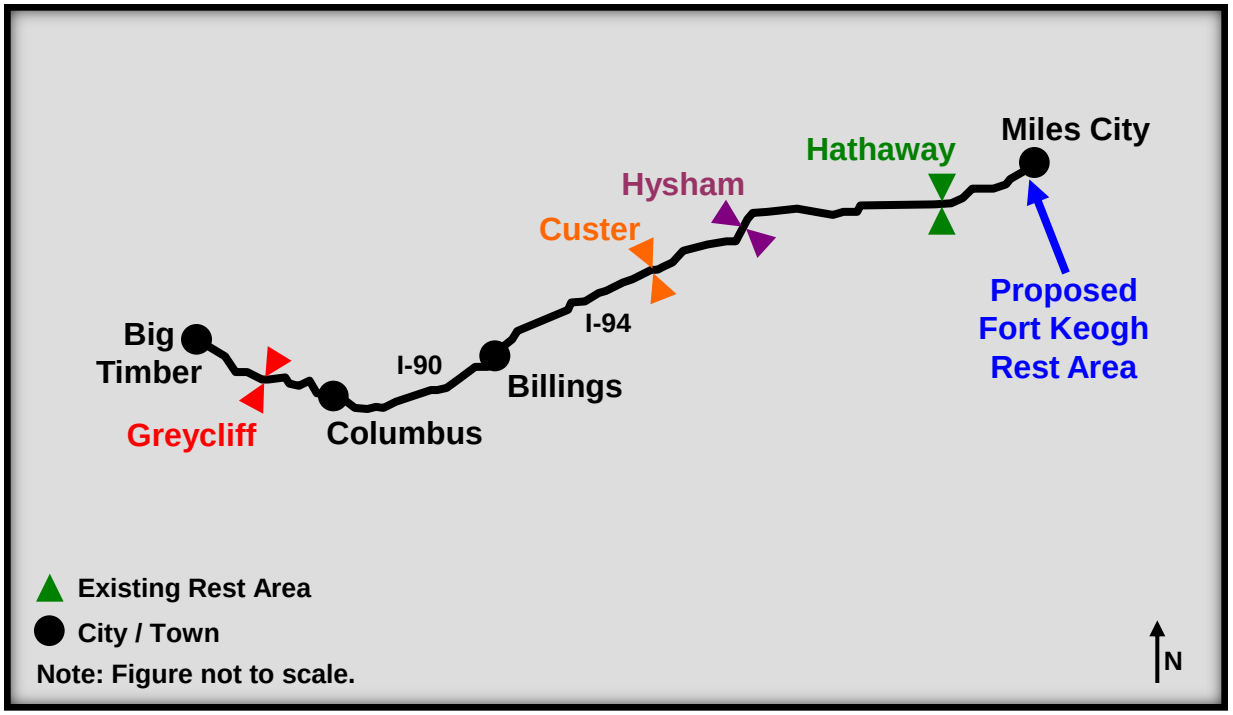
Study Area

Existing rest areas include the eastbound (EB) and westbound (WB) Greycliff, Custer, Hysham, and Hathaway rest areas.



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Methodology

Usage

- Automatic traffic recorders on I-90/I-94
- AASHTO formulas to estimate usage
- Compound annual growth rate of 3.5% over 20 years
- MDT 2010 research project to identify rest area usage more accurately

Year 2027 Projected Rest Area Usage

Rest Area Site	Total # of Vehicles per Hour	# of Cars and Buses per Hour	# of Trucks per Hour
Greycliff	168	124	44
Custer	65	46	19
Hysham	75	58	17
Hathaway	74	54	20

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Methodology

Water Facilities

Quantity

Restroom Usage (AASHTO formulas) + **Irrigation Demand** (area & NRCS consumptive use) = **Total Water Usage**

- Montana Bureau of Mines and Geology (MBMG) Ground Water Information Center (GWIC) well log information
- Compare well log capacities to estimated usage

Quality

- DEQ is regulatory agency
- Currently most sites require minimal treatment
- Proper well construction and location
- DEQ Public Water Supply records for sampling results

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Methodology

Wastewater Facilities

Existing Systems

- Septic tank & gravity-fed drainfield
- DEQ guidelines for evaluating size
- High strength waste composition

Proposed Systems

- Detailed site investigation
- Advanced wastewater treatment systems
- Preliminary calculations & configuration of new advanced systems
- Bi-directional wastewater systems

Hathaway Eastbound

Hathaway Westbound

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Methodology

Building and Parking Facilities

Parking Spaces

- Based on projected rest area usage and average length of stay

Building Facilities

- Building expansion based on the need for additional restroom stalls
- Stalls calculated based on restroom users per vehicle and estimated time cycle per fixture

Year 2027 Projected Parking and Building Facilities

Rest Area Site	Parking Spaces		Restroom Stalls	
	Auto	Truck	Men	Women
Greycliff	56	24	5	8
Custer	21	10	2	3
Hysham	26	9	2	4
Hathaway	24	11	2	4

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Greycliff Rest Area

Summary of Findings

Site	Parameter					
	Building and Parking Facilities	Spacing	Water, Sewer and Power Facilities	Right-of-Way	Recommendation and Timeframe	Approximate Cost
EB	Existing building and parking facilities are undersized to meet current demand	Spacing is appropriate	• Wells have adequate capacity to meet 2027 demand • Water quality is satisfactory	One additional acre needed to meet 2027 parking demand	Consider major rehabilitation of EB and WB sites in the near term to meet current demand	$3.5 million
WB			• Existing septic tanks and drainfields are undersized to meet current demand • Existing grid power is sufficient	Two additional acres needed to accommodate 2027 wastewater system		$4 million

Note: Dark orange cells indicate failure to meet current demand or spacing guidelines.
Light orange cells indicate failure to meet future demand.

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Custer Rest Area

Summary of Findings

Site	Parameter					
	Building and Parking Facilities	Spacing	Water, Sewer and Power Facilities	Right-of-Way	Recommendation and Timeframe	Approximate Cost
EB	Existing parking facilities are undersized to meet 2027 demand	Spacing is appropriate	• Wells have adequate capacity to meet 2027 demand • Water quality is satisfactory	No additional right-of-way needed	Rehabilitate existing EB and WB sites; consider new advanced wastewater treatment systems; convert sites to year round use.	$800,000
WB			• Existing drainfields are undersized to meet 2027 demand • Existing grid power is sufficient			$700,000

Note: Light orange cells indicate failure to meet future demand.

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Hysham Rest Area

Summary of Findings

Site	Parameter					
	Building and Parking Facilities	Spacing	Water, Sewer and Power Facilities	Right-of-Way	Recommendation and Timeframe	Approximate Cost
EB	Existing parking facilities are undersized to meet 2027 demand	Hysham is excessively close to Custer (25 miles)	• Wells do not have adequate capacity to meet 2027 demand • Water quality is satisfactory • Existing septic tanks and drainfields are undersized to meet 2027 demand • Existing grid power is sufficient	No additional right-of-way needed (assuming conversion to truck parking location)	Convert to truck parking location	$200,000
WB					Demolish existing facilities and install vault toilets	$200,000

Note: Dark orange cells indicate failure to meet current demand or spacing guidelines.
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Hathaway Rest Area

Summary of Findings

Site	Parameter					
	Building and Parking Facilities	Spacing	Water, Sewer and Power Facilities	Right-of-Way	Recommendation and Timeframe	Approximate Cost
EB	Existing facilities are undersized to meet 2027 demand	Spacing is appropriate	• Existing water supply is unable to meet landscaping needs • Water quality is satisfactory	No additional right-of-way needed	Provide water system improvements in near term	$1.1 million
WB			• Existing septic tanks are undersized to meet 2027 demand • Existing grid power is sufficient		Rehabilitate remaining facilities over 20-year planning horizon as funding becomes available	$1.1 million

Note: Dark orange cells indicate failure to meet current demand or spacing guidelines.
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Existing Rest Areas

Summary of Findings

- **Greycliff**
  Rehabilitate in the near term
- **Custer**
  Rehabilitate over 20-year planning horizon
- **Hysham**
  Convert to truck parking location in near term
- **Hathaway**
  Rehabilitate water system in near term; address other facilities over 20-year planning horizon

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Fort Keogh Proposal

Summary of Findings

- New rest area not needed from spacing perspective
- New construction more costly than rehabilitation of existing sites
- Proposal **Not Recommended** in Corridor Study
- Funding could be pursued at local level if there is strong local support

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Next Steps

- Your input is important!

  Please submit comments:
  - At the public meeting
  - Mail to Sheila Ludlow, MDT, PO Box 201001, Helena, MT 59620-1001
  - Email to sludlow@mt.gov
  - Submit comments online at www.mdt.mt.gov/pubinvolve/i94restarea/

  Submit comments by September 25, 2009.

- Finalize Study

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