

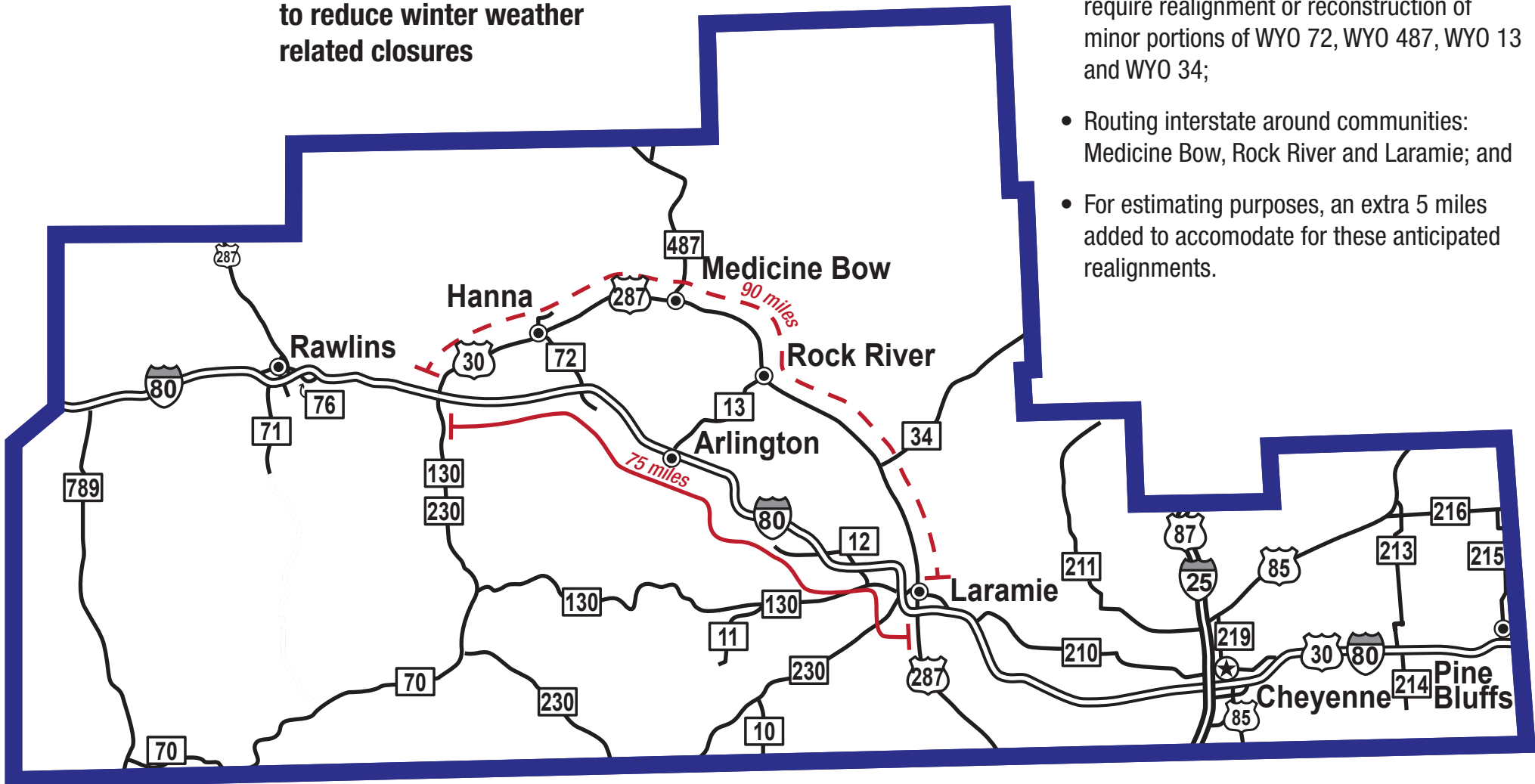


Possible I-80 Rerouting Map

- Existing Route
- - - Possible I-80 Rerouting
to reduce winter weather
related closures

Anticipate:

- Minimum of 7 interchanges needed. Will require realignment or reconstruction of minor portions of WYO 72, WYO 487, WYO 13 and WYO 34;
- Routing interstate around communities: Medicine Bow, Rock River and Laramie; and
- For estimating purposes, an extra 5 miles added to accomodate for these anticipated realignments.



* For illustrative purposes only. This is not a planned project.

June 1, 2020

I-80 Expansion / Partial Relocation

Estimated costs



OPTION	PROJECT	New Interstate Miles	Project Cost in 2020 dollars	Project Cost in 2022 ¹ dollars	Project Cost in 2032 ¹ dollars	Increased Maintenance Costs/Yr ²
1	New 3 rd lane each direction ³	0	\$5,880,000,000	\$6,500,000,000	\$10,600,000,000	\$4,750,000
2	New 3 rd lane each direction with re-alignment ^{3&4}	95±		\$12,600,000,000	\$20,600,000,000	\$5,264,000
3	New 2-lane each direction near US30 ^{3&4}	95±		\$6,100,000,000	\$10,000,000,000	\$340,000

¹ Assumes an annual 5% inflation rate and 1.2 factor for Preliminary Engineering (PE) & Construction Engineering (CE).

² Maintenance includes additional full time employee (FTE), equipment and material costs.

³ Anticipate 10-years of construction to upgrade 403 miles (border to border).

⁴ Bypasses Elk Mountain that is the worst segment for poor winter road conditions. I-80 has been closed for 385 hours through this segment since Oct. 1, 2019, at an estimated cost of \$385,000,000 to the nation.

Notes for Option 1 & 2 above – Increased maintenance costs include an additional 29 trucks and 29 operators

Estimated one-time up-front cost = \$13,100,000 (trucks and additional facility space needs)

One-time cost for trucks would be \$5,655,000 at \$195,000/truck

New facility needs to store trucks inside to keep them operating properly along with new FTE space

One-time cost = \$7,442,000 including design costs

Annual additional loaded labor cost for 29 FTE's = \$2,408,160/yr

I-80 Expansion / Climbing Lanes

Estimated costs



Interstate	Construction Cost/Mile in 2022 Dollars ¹	Increased Maintenance Cost/Mile/Yr ²
Climbing Lane	\$5,000,000	\$7,100

¹Assumes a 5% inflation rate and 1.2 factor for PE & CE.

²Maintenance cost/mile/year for I-80 based on average over the last 3 years.

Climbing Lane Location	Length	Estimated Construction Cost in 2022 Dollars	Increased Maintenance Cost/Yr
EASTBOUND			
MP 14.5-15.0	0.5	\$ 2,500,000	\$ 3,550
MP 21.3-21.8	0.5	\$ 2,500,000	\$ 3,550
MP 316.9-319.0	2.1	\$10,500,000	\$14,910
MP 266.1-269.2	3.1	\$15,500,000	\$22,010
MP 140.7-142.2	1.5	\$ 7,500,000	\$10,650
MP 28.2-28.7	0.5	\$ 2,500,000	\$ 3,550
WESTBOUND			
MP 20.4-19.9	0.5	\$ 2,500,000	\$ 3,550
MP 13.3-12.8	0.5	\$ 2,500,000	\$ 3,550
MP 343.0-339.9	3.1	\$15,500,000	\$22,010
MP 252.6-251.3	1.3	\$ 6,500,000	\$ 9,230
Total	13.6	\$68,000,000	\$96,560

Source: I-80 Corridor Study, Master Plan Implementation Report, March 2018

MP = Milepost

2-lane Roadway Expansion

Estimated costs



Expansion Project	Construction Cost/Mile ¹	Increased Maintenance Cost/Mile/Yr ²
Existing 2-lane highway to a divided 4-lane highway	\$4,680,000	\$9,000
Existing 2-lane highway to 5-lane highway	\$3,120,000	\$13,500

¹ Currently we assume a 5% inflation rate and 1.2 factor for PE & CE.

² Maintenance includes additional FTE, equipment and materials costs. Estimate 35.4 lane-mile/truck & operator.

Passing Lanes: To address funding shortfalls, WYDOT is in the difficult position of choosing to preserve the state's asset rather than build new roads or add capacity. Where traffic studies support a need, WYDOT installs passing lanes in lieu of full-width expansion. This is an efficient alternative when funding is available.

Passing Lane Projects	Construction Cost/Mile ¹	Increased Maintenance Cost/Mile/Yr ²
Flat terrain	\$ 690,477	\$4,500
Rolling terrain	\$1,780,213	\$5,000
Mountainous terrain	\$2,160,000	\$5,500

*Notes 1 and 2 for 2-lane highway expansion above

Maintenance costs do not include contract maintenance such as crack seal, chip seal, patching, etc.