



South Dakota RAISE Grant Application
South Dakota Freight Capacity Expansion Project
Rapid City, Pierre & Eastern Railroad

June 7, 2021

Introduction

Since its start-up on June 1, 2014, the Rapid City, Pierre & Eastern Railroad (RCP&E) has been aggressively investing in its infrastructure to better serve South Dakota and Wyoming. Since its inception, RCP&E has spent over \$52 million in routine maintenance of way expense work, and over \$68 million in track and bridge capital improvements. This is an average annual combined total of over \$18 million per year spent by RCP&E on its right-of-way. These investments provide safe, efficient and competitive freight services for RCP&E customers.

These significant investments along with prior federal and state grants have brought the eastern half of the RCP&E (Pierre, South Dakota to Tracy, Minnesota) up to a solid 40 mph line capable of handling industry standard 286,000 lb. rail cars. RCP&E, in partnership with state and local officials, has facilitated significant new development along the railroad since 2014.

Focus for future line improvements now centers on the RCP&E main line west of Fort Pierre to Rapid City. This line is the PRC Subdivision of RCP&E and serves the region of the state known as “West River”. Its operations are now generally limited to 10 mph and a rail car weight limit of 263,000 lbs.

To continue efforts to upgrade the PRC Subdivision, South Dakota Department of Transportation will be applying for a 2021 federal “Rebuilding America Infrastructure with Sustainability and Equity” (RAISE) grant to upgrade main line rail between Fort Pierre and Rapid City, South Dakota.

Upgrading the PRC Subdivision – Key for economic growth and stability in western South Dakota

Almost 90 miles of the PRC Subdivision main line still use old, lighter weight sectional rail. These 33 and 39 foot sections of rail are connected by joint bars bolted to the ends of the rail. These joints, especially with lighter weight rail that is approaching 100 years old, tends to deflect under the weight of passing trains. Also, the line contains numerous trestles requiring upgrading to handle modern freight cars.

Modern, heavier continuously welded rail will eliminate the joints and deflection associated with old sectional rail. It improves operating efficiency and reliability, increases safety, and helps stabilize the railroad when built over the less than ideal Pierre Shale geological formation. Upgraded bridges with strengthened stringers and caps to handle fully loaded modern freight cars. These improvements together will allow service between Fort Pierre and Rapid City to increase from 263,000 lb. freight car limit and 10 mph train speeds to 286,000 lb. and 25 mph.



Typical section of 100 year old, 100 lb. stick rail on the Fort Pierre –
 Rapid City line, showing end of rail deflection and rail damage,
 exacerbated by the Pierre Shale subgrade.

A direct benefit of upgrading the main line rail between Fort Pierre to Rapid City line will be the ability to remove, crop the ends and weld enough 112 lb. rail from the line to finish upgrading the RCP&E Black Hills – Northern Subdivision between Rapid City and Colony, Wyoming. This 112 lb. rail will provide a fully adequate upgraded rail for this line by cutting the bolt ends off of each rail, the source of most of the rail damage, and welding the remaining sections into continuous welded rail. This subsequent step will open the entire line from Fort Pierre to Colony to handle 286,000 lb. rail cars.

Project Benefits

- Improves safety of rail operations – modern, heavy rail reduces risks of breaks and derailments.
- Dramatically increases train operating speed on the line, and allows for handling of modern fully loaded freight cars. This will directly support grain, cement and bentonite clay shippers over the line now, and help them more effectively compete in their respective domestic and international markets.
- Enhances new industrial and agricultural development potentials for site searches along the line requiring rail freight services.
- Strengthens and modernizes the primary rail line serving the West River region and Rapid City.
- Ready for construction with no negative environmental impacts.
- Provides the means to subsequently complete the upgrading of the Rapid City to Colony, Wyoming line to modern standards

Project Cost and Funding

Cost of the project will be \$84 million. Recognizing the importance to the public and the economy of finishing this effort in a prompt fashion, a South Dakota Senate Bill (SB 93) was introduced and passed the legislature by overwhelming margins calling for \$20 million in state funds to be available to RCPE to use as matching funds for a federal grant to upgrade the line. Governor Noem signed the bill into law on March 22, 2021.

Total project cost	\$84,000,000	100%
RCP&E match	\$42,000,000	50%
South Dakota match	\$20,000,000	24%
RAISE Federal Grant Request	\$22,000,000	26%

