

November 25, 2019

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VIA EMAIL

Ms. Victoria Rutson
Director, Office of Environmental Analysis
Surface Transportation Board
395 E Street, SW
Washington, DC 20423-0001

Re: Finance Docket No. 36284 - Seven County Infrastructure Coalition - Uinta Basin
Railway Project - Response to Information Request No. 3

Dear Ms. Rutson:

I am enclosing Seven County Infrastructure Coalition's Response to OEA's Information Request No. 3. In addition, I would like to provide an update to the Coalition's September 20, 2019 letter to OEA, which described the preliminary alignment for the Whitmore Park Route. While the majority of the final alignment for the Whitmore Park Route is consistent with the preliminary alignment, the final alignment Whitmore Park Route (1) does not cross BLM-managed lands and (2) will not avoid the approximately 15,000-acre ranch referenced on page 1 of the Coalition's September 20, 2019 letter. With the exception of these minor changes, the remainder of the Coalition's description of the preliminary Whitmore Park Route remains valid with respect to the final Whitmore Park Route.

As stated in the Coalition's September 20, 2019 letter, the Whitmore Park Route generally overlaps with the Indian Canyon Route but deviates slightly in certain areas in order to resolve issues identified through scoping. A portion of the final Whitmore Park Route would be located slightly east of the proposed Indian Canyon route in the Whitmore Park area in Carbon County, Utah. As a result of this shift, impacts to nineteen property owners will be avoided. In addition, this shift will allow the proposed railway to avoid a slide area, which will improve the stability of the railway and reduce annual maintenance costs. The final Whitmore Park Route will also result in construction benefits in the Whitmore Park area including an improved crossing over U.S. Route 191.

Additionally, the final alignment for the Whitmore Park Route will reduce impacts to property owners in an area known as the "Mini-Ranches" in Duchesne, Utah. Compared to the Indian Canyon Route, the final Whitmore Park Route will directly impact ten fewer property owners in

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the Mini-Ranches area. It will also have fewer indirect impacts to property owners in this area, including noise and vibration impacts. Finally, the final Whitmore Park Route will result in fewer potential safety and traffic impacts because this route would have fewer at-grade road crossings in the Mini-Ranches area.

Based on these and other benefits associated with the Whitmore Park Route, the Coalition continues to regard the Whitmore Park Route as its preferred alternative for the project.

If there are any questions regarding this response, please do not hesitate to contact me.

Sincerely,



Kathryn K. Floyd

Encl.

cc: Joshua Wayland
Danielle Gosselin
Debra Rogers
Mike McKee
Kevin Keller
Eric Johnson

**Seven County Infrastructure Coalition’s Response to the
STB Office of Environmental Analysis October 30, 2019
Request for Information No. 3**

November 25, 2019

1. **OEA Request:** Please clarify “both routes” as used in responses. All responses should include information for all routes under consideration.

Coalition Response: In the Coalition’s prior responses, the term “both routes” was used to mean “all routes” under consideration at the time the response was submitted. Initial responses would have included the Craig Route and not the Whitmore Park Route. Currently, “all routes” means the Whitmore Park, Indian Canyon, and Wells Draw routes.

2. **OEA Request:** To inform OEA’s analysis of potential socioeconomic and air quality impacts, please clarify “work season” as used in responses. The clarification should include the specific months that constitute a work season for each of the stated anticipated 2-year construction time frames.

Coalition Response: The term “work season” varies depending on the type of construction activities as described below.

- Construction of the following components is anticipated to occur twelve months per year:
 - Tunnels
 - Bridges
 - Signal and communications systems
- Construction of the following components is anticipated to occur eight months per year, commencing in mid-April and concluding in mid-November:
 - Embankments (cuts and fills)
 - Culverts
 - Retaining walls
 - Roadways and roadway crossings
 - Track
 - Fencing

While it is anticipated that construction for the Indian Canyon and Whitmore Park routes would last approximately two years, this time frame may range from a lower estimate of 20 months to a higher estimate of 28 months, depending upon weather conditions. Construction of the Wells Draw Route is estimated to last approximately three years but may range from a lower estimate of 32 months to a higher estimate of 48 months depending upon weather conditions.

3. For Information Request #1, Item #2
 - a. **OEA Request:** Description of temporary uses or disturbances outside of the proposed footprint (e.g., staging areas).
 - b. **Coalition Response:** There will be staging areas for tunnel and bridge construction. There will be laydown yards for construction equipment and storage of construction

materials. Location of these will be near the tunnel portals and one or both sides of proposed bridge crossings [sic]. Where possible right-of-way will be purchased for bride [sic] and tunnel sites. Staging of construction material and construction equipment locations will be determined with help of a contractor and will be in large and flat areas, ideally they would be in strategic spacing for multiple work fronts and on both ends of the project vicinity. Unable to determine exact temporary disturbance locations. Some easements outside of yet to be determined right-of-way may be needed. Item 6 contains KMZs that show anticipated bridge locations.

- c. **OEA Follow-up Request:** Please provide a scenario against which analysis can be conducted. This could include estimated locations and estimated acres of areas outside of the ROW needed for the disturbances itemized in the Coalition response.
- d. **Coalition Follow-up Response:** For the Indian Canyon and Whitmore Park routes:
 - i. It is anticipated that temporary use areas and disturbances outside the ROW will not be required.
 - ii. Temporary access roads parallel to the track and within the ROW will be built during construction to provide access to the embankment, tunnel portals, and bridge and drainage structure locations.
 - iii. Permanent access roadways for access to ends of sidings and tunnel portals for tunnels 2 miles or more in length will be constructed within the ROW.
 - iv. Existing roads crossing or parallel to the railway will be used for entry and exit to the temporary and permanent access roadways.

For the Wells Draw Route, it is anticipated that approximately 10 miles of temporary roadway of 13-foot average total width, will be constructed outside the ROW to provide access to the ROW. These temporary roadways are anticipated to result in approximately 16 total acres (13 feet x 52,800 feet) of disturbance outside the ROW.

For all three alternatives, access roads are anticipated to connect to the nearest existing road crossings in order to minimize the length of access roads. As a result, the total length of access roads is anticipated to be much smaller than the overall project length regardless of which alternative is selected. It is anticipated that access roads will be 13 feet wide. Exact points of connection with public roadways will be determined later in the design process and subject to approval from the roadway owner, operator, or agency with jurisdiction.

All other temporary material laydown and logistics areas utilized for the construction of the railway will be contained either completely within the ROW, or utilize existing, permanent industrial sites already permitted for those uses. For example:

- Existing, permanent, railroad-to-truck transload facilities located at Salt Lake City, Ogden, Provo, Helper, Price, and similar locations will be utilized for materials delivered by rail for transfer by truck for final delivery to the ROW.

- Existing, permanent quarries located in Duchesne, Uintah, Carbon, and Utah counties at which aggregate and rock materials are obtained will be utilized to stockpile aggregate and rock materials for delivery by truck to the ROW.
- Temporary material laydown, staging, and logistics areas will be established within the ROW at bridges, tunnel portals, roadway crossings, and other locations.
- For the Indian Canyon and Whitmore Park routes, one temporary 30-40-person tunnel construction personnel lodging and logistics site of approximately 5 acres in size will be established within the ROW in Indian Canyon, near milepost 35 of the Indian Canyon Route.
- For the Wells Draw Route, two temporary 30-40-person tunnel construction personnel lodging and logistics sites, each of approximately 5 acres in size will be established within the ROW in Argyle Canyon, one located near milepost 23 of the Wells Draw Route and the other near milepost 36 of the Wells Draw Route, and one temporary 200-person embankment and bridge construction personnel lodging and logistics site of approximately 8.5 acres in size will be established within the ROW in Argyle Canyon near milepost 57 of the Wells Draw Route.

In addition to the above-listed temporary disturbances, permanent communications towers will need to be constructed for all three routes. The proposed locations for the communications towers are shown in kmz format in Appendix 1 – Communications Towers as well as in Table 1 below. In addition, Table I below states whether each proposed communications tower site is located within the ROW and explains how the site is anticipated to be accessed.

Each tower site is anticipated to be approximately one-half acre in size. Tower sites within the ROW are anticipated to be accessed by permanent roadways within the ROW. Tower sites outside the ROW are anticipated to be accessed by permanent roadways outside the ROW, as shown in Table 1 below. Permanent access roadways outside the ROW are anticipated to be, on average, 13 feet in width.

Table 1 – Communications Tower Locations

Route	Tower Location	Inside ROW	Access
Indian Canyon	1	Yes	Road within ROW
	2	No	Permanent roadway connecting westward to U.S. 191, 0.6 miles in length
	3	No	Permanent roadway connecting southward to Duchesne County Road 11160 S, 0.2 miles in length
	4	Yes	Road within ROW
Whitmore Park	1	Yes	Road within ROW
	2	No	Permanent roadway connecting westward to U.S. 191, 0.6 miles in length
	3	No	Permanent roadway connecting southward to Duchesne County Road 11160 S, 0.2 miles in length
	4	Yes	Road within ROW
Wells Draw	1	Yes	Road within ROW
	2	No	Permanent roadway connecting southward to ROW, 0.6 miles in length
	3	Yes	Road within ROW
	4	Yes	Road within ROW

Except as detailed above, construction laydown and staging areas for the construction of tunnels, bridges, embankments, culverts, and track, are anticipated to occur exclusively within the proposed Area of Potential Effects (APE), and typically within the ROW itself. Temporary roadways, staging areas, and laydown areas both inside and outside of the ROW, and construction disturbances, not including permanent roadways used for railroad maintenance and operations, would be regraded and revegetated following completion of construction.

4. For Information Request #1, Item #9

- a. **OEA Request:** Railbed Construction: Description of rock quarry and borrow locations/size, footprint, quantity of material extracted, etc., if relevant.
- b. **Coalition Response:** The material may be local or shipped in on train to nearby location to the project. (Possibly [sic] from UT and/or CO). Exact quantities will be determined during the detail design phase.
- c. **OEA Follow-up Request:** To inform OEA’s analysis of potential impacts to local transportation patterns, please clarify if the intent is to use material from existing quarries or if a new source would have to be developed. If a new source would be developed, identify the anticipated location of the source.

- d. **Coalition Follow-up Response:** Quarried materials are anticipated to be obtained as follows:
 - i. Concrete aggregate is anticipated to be obtained from existing UDOT-certified quarries.
 - ii. Subballast material is anticipated to be obtained from existing UDOT-certified quarries.
 - iii. Ballast material is anticipated to be obtained outside the project area from an existing rail-served quarry supplying Union Pacific Railroad near Milford, Utah, or, if that source is unavailable, from existing rail-served quarries supplying Union Pacific Railroad near Granite Canyon, Wyoming, and Carr, Colorado.

A list of certified, existing quarries from which concrete aggregate and subballast material may be obtained is included in Appendix 2 – Gravel Pits. The development of new quarry sources is not anticipated at this time. However, should the need for additional sources be identified as design progresses, all new sources would be developed in conformance with applicable local and state land use and permitting regulations and would meet applicable UDOT specifications.

5. For information Request #1, Item #12

- a. **OEA Request:** Material Acquisition for Construction
 - i. If site-specific cut volumes are insufficient, where would the fill come from?
 - ii. Where would sub-ballast material be obtained? What quarries are nearby?
 - iii. Where would ballast material be obtained?
 - iv. Will water be required for dust suppression and soil compaction? If so, where would this water come from?
- b. **Coalition Response:** Balancing the Cut and Fill material is the goal for the design of the railway. Ballast and sub-ballast material may be local or shipped in on train to nearby location to the project. Water will be required for both suppression and soil compaction, and the water will likely be trucked in from approved locations. The material will be required to meet all specifications and if water is extracted it will have to be done following rules and regulations.
- c. **OEA Follow-up Request:** To inform OEA’s analysis of potential impacts to local transportation patterns, please indicate whether ballast and sub-ballast material would be available from local quarries. To inform OEA’s analysis of potential impacts to water resources, please indicate whether the approved water locations are anticipated to be groundwater sources, surface water sources, or both. Please identify estimated water volumes needed, including per track mile.

- d. **Coalition Follow-up Response:** It is anticipated that the final design of the railway will balance cut and fill material so that fill and spoil sites are not required.

Subballast materials are anticipated to be obtained from local quarries as described in the Coalition’s response to Question 4 above. Ballast materials are anticipated to be sourced from existing rail-served quarries as described in the Coalition’s response to Question 4 above. A list of certified, existing quarries from which concrete aggregate and/or subballast material may be obtained is included in Appendix 2 – Gravel Pits. During construction, subballast would be transported via truck. Ballast would be delivered by rail directly to its final location. Staging for subballast and ballast material would occur at the quarries from which those materials are obtained.

Total water volumes required for construction of routes inclusive of compaction, dust control, and concrete work are anticipated to be approximately:

- 8,890 total acre-feet for construction of the Wells Draw Route (80.1 acre-feet per mile);
- 1,750 total acre-feet for construction of the Whitmore Park Route (19.7 acre-feet per mile); and
- 1,650 total acre-feet for construction of the Indian Canyon Route (20.2 acre-feet per mile).

For all routes, it is anticipated that water will be obtained from water resources owned by the Ute Tribe. These sources may include groundwater, surface water, potable water, or reclaimed and treated wastewater.

6. For Information Request #1, Item #13

- a. **OEA Request:** Bridges, Culverts, and Other Surface Water Crossings: Description of location and types of bridges, culverts, or other undesignated drainage structures used to cross streams, rivers, or ditches. Would there be any in-water structures associated with bridges? If so, please describe in detail.
- b. **Coalition Response:** Attached is the current preliminary list for both routes for bridges. Culverts have not been detailed at this time. All bridges and culverts will be designed to appropriate means for railway loading.
- c. **OEA Follow-up Request:** To inform OEA’s analysis of potential impacts to water resources, please provide a list of bridge crossings for the Whitmore Park route with an equivalent level of detail as included in the lists provided for the Indian Canyon and Wells Draw routes. Define the acronyms used in the “BR Type” column in all lists. Identify which bridges over water bodies are anticipated to be clear span (i.e., no structures placed below the ordinary high-water mark) and which are anticipated to include structures in-water or below the ordinary high-water mark. Provide example information on culverts, such as typical culvert type (i.e.,

round pipe, box, double barrel, pipe-arch), material (i.e., corrugated metal, concrete), and size range (i.e., diameter ranges). Please also provide hydraulic basis for culvert design, specifically the flow event that culverts and bridges would be designed to accommodate (e.g., 100-year flood).

- d. **Coalition Follow-up Response:** A revised draft bridge list identifying anticipated bridge locations for all routes and clarifying acronyms is included in Appendix 3 – Bridge Lists. Bridges, culverts, and drainage structures under railway tracks will meet the following hydraulic criteria:
- The top invert of culverts and bottom soffits of bridges will be designed to clear the predicted 50-year flood event water elevation without causing a backwater increase.
 - Bridges and culverts will be designed so that the predicted 100-year flood event water elevation will be no more than one foot above the top invert of culverts or the bottom soffits of bridges and will be below the top of embankment subgrade elevation. These structures will be designed so that the predicted 100-year flood event will cause no more than a one-foot backwater increase.

For culverts and bridges located in mapped floodplains, standards set by the Federal Emergency Management Agency (FEMA) floodplain regulator will also be met. Substructure units, piers, and bents for bridges and culverts will be placed within the Ordinary High Water and will include openings sufficient to meet the standards described above. Typical bridge, track, and culvert design standards, including sizes and materials, are included in Appendix 4 – Typical Sections. No bridges over water bodies are anticipated to be clear span bridges.

7. For Information Request #1, Item #14

- a. **OEA Request:** Construction Schedule:
- a. Description of construction schedule, for example:
 - i. How many months would it take to construct and what is the overall time period? Consider weather restrictions in the project area.
 - b. **Coalition Response:** 24 month or less construction time is the current estimation taking on weather considerations.
 - c. **OEA Follow-up Request:** To inform OEA’s analysis of potential socioeconomic and air quality impacts, please clarify anticipated months of the year during which construction would occur for each alternative.
 - d. **Coalition Follow-up Response:** Please refer to the Coalition’s response to Question 2 above. The months of the year during which construction would occur are anticipated to be the same for all three alternatives.

8. For Information Request #1, Item #15

- a. **OEA Request:** Grade Crossings: Planned (including voluntary mitigation) safety protection at new at-grade crossings.
- b. **Coalition Response:** See item 6 for both route features KMZ that shows locations of grade crossings. Grade crossings will be protected in accordance with all rules and requirements. Each crossing will be looked at and designed based on the established criteria for which type of protection will be used.
- c. **OEA Follow-up Request:** Please provide a KMZ file with route features for the Whitmore Park Route. Please confirm that paved public roadway crossings would be equipped with active warning devices (bells, flashers, and gated) in addition to constant warning time devices. Please confirm that for gravel and unsurfaced public crossings and private crossings, passive warning devices consisting of stop signs and crossbucks would be used.
- d. **Coalition Follow-up Response:** A revised KMZ file for each route that includes the proposed APE limits and bridge locations is provided in Appendix 5 – Alignment KMZ. Anticipated at-grade roadway crossings are provided in both list and KMZ format in Appendix 6 – At-Grade Crossings. Paved public roadway crossings, if not grade-separated, will be equipped with active warning devices (bells, flashers, and gates) and constant warning time devices. Gravel and unsurfaced public roadway crossings and all private roadway crossings, if not grade-separated, will be equipped with passive warning devices (stop signs and crossbucks). Road crossings will be consolidated to improve safety and reduce maintenance costs where feasible.

9. For Information Request #1, Item #20

- a. **OEA Request:** Proposed Rail Line Operation
 - Description of proposed operations, including:
 - Number of days per week and year that trains would operate
 - Number of locomotives used to move the unit trains and horsepower.
 - Maximum and average length of trains.
 - Average operating speeds including speed at each new at-grade crossing.
 - Description of proposed maintenance.
 - Specific information on rail route and length (for operations, not just what would be built), intended track class, any additional speed

restrictions beyond those for the track class (such as on steep inclines).

- Number of anticipated rail cars by commodity or group of like commodities.

- b. **Coalition Response:** Anticipated volumes range from 2 to 7 trains per day each way, dependent on market conditions and shipper acceptance of the railway. Maximum train length will vary and may be up to 10,000 feet long or 150 60' cars with locomotives and buffer cars. Railroad [sic] operations will be anticipated at all hours of the day and over the entire year. Locomotives per train will vary from 1 to 12 locomotives per train depending on length, load and operations. Types of cars are potentially the following: open and covered hopper, well cars, flat cars, plain and equipped box cars, any typical car carried by a north American railroad, open and covered gondola, refrigerator car, tank car train can are possibly be anticipated for this area. Operating maximum speed is 40 mph and average speed for a loaded train up the may roughly average between 10 to 20 MPH. Commodities will include energy fuels, bulk refined and unrefined commodities, manufactured goods, animal products and agriculture products, consumer goods, building materilas [sic], industrial materials, autos and trucks, machinery, other mobile machinery, chemicals, forest products, etc. Speed restrictions on curves and descending grades will be be [sic] based on typical north America railroad standards. The item 1 above includes KMZ for both routes for the lengths of track. Locomotive and their horsepower will be similar to north American fleet averages for tiers and types. Proposed maintenance may include activities on the tracks, such as surfacing the rail, cleaning the ballast, tamping the ballast, checking gauge, rail grinding, fixing rail pull aparts and rail kinks. Maintaing [sic] signals. Maintaing [sic] rail sensors and rail lubrication. Replacing rail, ties and ballast over time. Maintaing [sic] tunnels and regularly inspecting tunnels. Regular track inspection. Various other maintenance items needed to operate a railway.
- c. **OEA Follow-up Request:** Please see STB Information Request #2, for follow up requests related to this response. Also, please indicate whether it would be reasonable to assume that the main locomotives used during operations for incoming and outgoing trains would be newly built GE ES44AC locomotives and that ES44AC locomotives would be used to supplement the main locomotives.
- d. **Coalition Follow-up Response:** It is anticipated that locomotives used on the Uinta Basin Railway will be drawn from the general North American heavy-haul locomotive fleet at the time of initial operational status and throughout the life of the railway, and thus will be reflective of the U.S. Environmental Protection Agency (EPA) Tier averages of the North American heavy-haul locomotive fleet currently in use at that time. No new locomotives are anticipated to be purchased for the operation of the railway.

Table 2 below provides an estimate of EPA Tier averages for locomotives used within the Southern California Air Basin for calendar years 2014 and 2030. It is anticipated that the broader western Class I locomotive fleet, from which Uinta

Basin Railway’s locomotives will be drawn, will be similar to the estimated EPA Tier averages shown in Table 2 below.

Table 2: Table ES-4 from “CARB – Freight Locomotives” (April 2016)

**Table ES-4:
Percent of Work by UP & BNSF Locomotives
in the South Coast Air Basin by Emissions Tier**

Emissions Tier	Percent of Work by UP & BNSF Locomotives in the South Coast Air Basin	
	2014 ¹	2030
Pre-Tier 0	0.2	0
Tier 0	17	0
Tier 1	20	1
Tier 2	45	4
Tier 3	18	10 ²
Tier 4	0	85
Totals	100	100

1. Based on reported UP and BNSF locomotive megawatt-hours (MWh) in the South Coast Air Basin in 2014.

2. Tier 3 includes about two percent for Ultra-Low Emitting Locomotives (ULELs).
Source: <http://www.arb.ca.gov/railyard/1998agree/1998agree.htm>

10. For Information Request #1, Item #21

- a. **OEA Request:** Proposed Rail Line Operation: Train operations for each alternative, including:
 - EPA Tier emissions rating of locomotives to be used.
 - Amount of diesel fuel to be used.
- b. **Coalition Response:** Locomotives will be similar to north American fleet averages for tiers. A preliminary estimation of diesel fuel to be used may be between 40 – 70 gallons per car cycle which is a full cycle of a loaded and unloaded train trip.
- c. **OEA Follow-up Request:** To inform OEA’s air quality analysis, please provide the most representative scenario of the EPA Tier emissions ratings of the locomotives that would be used. Please confirm whether the midpoint of the provided range (55 gallons per car cycle) is most representative of diesel fuel usage.
- d. **Coalition Follow-up Response:** For a representative scenario of the EPA Tier emissions ratings of the locomotives that would be used, please see the Coalition’s response to Question 9 above. OEA’s calculated midpoint of 55 gallons per loaded-empty car cycle is representative of anticipated diesel fuel usage.

11. For Information Request #1, Item #22

- a. **OEA Request:** Employment: Estimated Construction Expenditures
- b. **Coalition Response:** Currently construction expenditures are based on estimates with 25% contingency. For the Indian Canyon Route the Cost is currently estimated around \$1.2 to \$1.5 Billion. For the Wells Draw route the Cost to construct is roughly \$2.5 to \$2.8 Billion.
- c. **OEA Follow-up Request:** To inform OEA's analysis of potential socioeconomic impacts, please provide estimated construction expenditures for all routes.
- d. **Coalition Follow-up Response:** Estimated construction expenditures for all routes are provided in Tables 3A-3C below. These estimates have been updated since the Coalition's Response to OEA's Request for Information No. 1 to reflect alignment revisions and the addition of signalization costs.

Table 3A: Indian Canyon Route – Estimated Construction Cost Expenditures

		\$ Total (MM)	% Total By Category	% Local	% Non-Local (Other Utah and Out-of-State)	Job Years
Track	Equipment	\$56	30%	10%	90%	
	Labor	\$56	30%	10%	90%	323
	Materials	\$75	40%	0%	100%	
Earthwork	Equipment	\$139	40%	95%	5%	
	Labor	\$200	58%	100%	0%	1141
	Materials	\$7	2%	100%	0%	
Bridges and Drainage Structures	Equipment	\$45	30%	50%	50%	
	Labor	\$45	30%	90%	10%	256
	Materials	\$60	40%	10%	90%	
C&S	Equipment	\$2	5%	10%	90%	
	Labor	\$21	45%	15%	85%	119
	Materials	\$25	50%	0%	100%	
Tunnels	Equipment	\$166	30%	90%	10%	
	Labor	\$222	40%	95%	5%	1268
	Materials	\$166	30%	50%	50%	
Fencing	Equipment	\$1	20%	100%	0%	
	Labor	\$2	60%	100%	0%	12
	Materials	\$1	20%	100%	0%	
	Grand Total (MM)	\$1,290				3,119

Table 3B: Whitmore Park Route – Estimated Construction Cost Expenditures

		\$ Total (MM)	% Total By Category	% Local	% Non-Local (Other Utah and Out-of-State)	Job Years
Track	Equipment	\$58	30%	10%	90%	
	Labor	\$58	30%	10%	90%	331
	Materials	\$78	40%	0%	100%	
Earthwork	Equipment	\$144	40%	95%	5%	
	Labor	\$205	58%	100%	0%	1171
	Materials	\$7	2%	100%	0%	
Bridges and Drainage Structures	Equipment	\$46	30%	50%	50%	
	Labor	\$46	30%	90%	10%	264
	Materials	\$60	40%	10%	90%	
C&S	Equipment	\$2	5%	10%	90%	
	Labor	\$21	45%	15%	85%	120
	Materials	\$26	50%	0%	100%	
Tunnels	Equipment	\$178	30%	90%	10%	
	Labor	\$239	40%	95%	5%	1366
	Materials	\$178	30%	50%	50%	
Fencing	Equipment	\$1	20	100%	0%	
	Labor	\$2	60	100%	0%	12
	Materials	\$1	20	100%	0%	
	Grand Total (MM)	\$1,350				3,264

Table 3C: Wells Draw Route – Estimated Construction Cost Expenditures

		\$ Total (MM)	% Total By Category	% Local	% Non-Local (Other Utah and Out-of-State)	Job Years
Track	Equipment	\$65	30%	10%	90%	
	Labor	\$65	30%	10%	90%	371
	Materials	\$87	40%	0%	100%	
Earthwork	Equipment	\$334	40%	95%	5%	
	Labor	\$478	58%	100%	0%	2732
	Materials	\$17	2%	100%	0%	
Bridges and Drainage Structures	Equipment	\$51	30%	50%	50%	
	Labor	\$51	30%	90%	10%	293
	Materials	\$68	40%	10%	90%	
C&S	Equipment	\$3	5%	10%	90%	
	Labor	\$19	45%	15%	85%	109
	Materials	\$30	50%	0%	100%	
Tunnels	Equipment	\$261	30%	90%	10%	
	Labor	\$348	40%	95%	5%	1987
	Materials	\$261	30%	50%	50%	
Fencing	Equipment	\$1	20	100%	0%	
	Labor	\$2	60	100%	0%	9
	Materials	\$1	20	100%	0%	
	Grand Total (MM)	\$2,140				5,501

12. For Information Request #1, Item #23:

- a. **OEA Request:** Estimated employment in full time equivalent (FTE) employees during construction.
- b. **Coalition Response:** 5,000 to 7,000 person years is the rough estimate for construction at this time. Over a 2-year period this is roughly 2,500 people.
- c. **OEA Follow-up Request:** To inform OEA’s analysis of potential socioeconomic impacts, please provide estimates for each alternative route. Additionally, please

include annual average and peak workforce estimates, and time of year for peak estimate for each year of construction.

- d. **Coalition Follow-up Response:** It is anticipated that each route would have similar average and peak annual employment levels. However, the Wells Draw Route is anticipated to have a longer overall construction period as explained in the Coalition's response to Question 2 above. For all routes, the average annual workforce during construction is estimated to include approximately 1,000 individuals, with peak employment of approximately 1,500 individuals. Peak employment levels are anticipated to occur between May 1 and October 30 each year.

13. For Information Request #1, Item #24

- a. **OEA Request:** Employment: Number and characteristics of property acquisitions and displacements.
- b. **Coalition Response:** On Indian Canyon and Wells Draw around 100 property owners could be impacted. Property will be acquired and displacements determined if necessary. Standard steps will be followed for this process. The detailed design to be completed in the future will allow for exact dimensions for each right-of-way acquisition.
- c. **OEA Follow-up Request:** Please provide the requested information for each alternative route.
- d. **Coalition Follow-up Response:** The requested information for each route is provided in Appendix 7 – Property Acquisition and Displacement, which contains the following information:
 - A unique identifier number for each private parcel that falls within the proposed APE, in part or in whole
 - Total size of each parcel, in acres
 - Estimated area of the proposed APE within each parcel, in acres
 - Estimated displacements occurring on each parcel, if any
 - Type of observed general land use for the proposed APE within each parcel, such as
 - Agricultural, grazing
 - Agricultural, irrigated
 - Residential
 - Industrial
 - No apparent use

14. For Information Request #1, Item #25

- a. **OEA Request:** Employment: Description of construction camps (if needed). If not needed, where is it assumed construction workers would reside?

- b. **Coalition Response:** Likely Helper/Price and Duchesne/Myton will host a number of the construction teams. Man camps may be used at certain remote areas and will provide all necessary requirements for suitable services such as catering and washroom facilities that will be properly maintained. If the contractor selects to use man camps, detailed camp information will be produced once a contractor is selected.
- c. **OEA Follow-up Request:** To inform OEA’s analysis of potential socioeconomic impacts, please indicate the size of each “construction team” by alternative route. Indicate, by alternative route, if those teams would lodge in one place and commute to current construction site for duration of construction or move as construction along the line progresses. Indicate if existing accommodations would be used first, and then man camps utilized as needed, or if man camps would be used for duration of construction.
- d. **Coalition Follow-up Response:** As explained in the Coalition’s response to Question 12 above, the average annual workforce during construction is estimated to include approximately 1,000 individuals, with peak employment of approximately 1,500 individuals for all routes. Most construction personnel are anticipated to be housed in their own personal residences or in existing commercial hotels and motels. For the Indian Canyon and Whitmore Park routes, dedicated construction camps are anticipated to be utilized for some tunnel construction personnel; the anticipated location and size of these camps are described in the Coalition’s response to Question 3 above. For the Wells Draw Route, dedicated construction camps are anticipated to be utilized for some personnel needed to construct tunnels, bridges, and the embankment; the anticipated location and size of these camps are described in the Coalition’s response to Question 3 above.

15. For Information Request #1, Item #26

- a. **OEA Request:** Employment: Description of Staffing
 - Number of FTE employees necessary to operate the proposed alternative and their positions
 - Number of FTE supervising trainmasters, train crew members, section gangs, track inspectors, carman/inspectors, signal technicians, communication technicians, etc.
- b. **Coalition Response:** Total estimated is 50 to 100 FTE including management. No detailed breakdown for supervisors, inspectors, etc. available at this time.
- c. **OEA Follow-up Request:** To inform OEA’s analysis of potential socioeconomic impacts, please provide likely scenarios of labor requirements for each alternative route, including job type, based on anticipated rail operations and maintenance needs.

- d. **Coalition Follow-up Response:** Operations and maintenance employment requirements are anticipated to be similar for the Indian Canyon and Whitmore Park routes, and greater for the Wells Draw Route.

Direct employment requirements for operations and maintenance of the Whitmore Park and Indian Canyon routes are anticipated to include:

- Approximately 50 railroad employees for the 1.84 unit trains per day lower volume scenario estimated in the Coalition's response to Information Request No. 2; or
- Approximately 100 railroad employees for the 5.26 unit trains per day higher volume scenario estimated in the Coalition's response to Information Request No. 2.

Estimated direct employment requirements for operations and maintenance of the Wells Draw Route is anticipated to include:

- Approximately 65 railroad employees for the 1.84 unit trains per day lower volume scenario estimated in the Coalition's response to Information Request No. 2; or
- Approximately 120 railroad employees for the 5.26 unit trains per day higher volume scenario estimated in the Coalition's response to Information Request No. 2.

Skilled labor (craft employees) and unskilled labor will include:

- Railroad operations employees such as engineers, conductors, foremen, and train dispatchers;
- Maintenance-of-Way (MOW) employees, such as track maintainers, bridge maintainers, machine operators, truck drivers, signal and communications systems maintainers, and laborers; and
- Mechanical employees, such as rail car and locomotive maintainers and inspectors (only running repair of rail cars and locomotives is anticipated, i.e., light repairs and replacement of consumables such as brake shoes) and laborers.

The management labor breakdown consists of:

- Operations management, which includes supervision of train crews and direction of day-to-day operations;
- Engineering management, which includes supervision of track, bridge, and signal maintainers, and direction of day-to-day fixed infrastructure maintenance;
- Mechanical management, which includes supervision of locomotive and rail car maintainers and inspectors; and
- General management and general office staff.

Estimated percentages of the total operations and maintenance workforce by job type are anticipated to be as follows:

- For the low-volume scenario:
 - Operations employees 45%
 - Maintenance-of-way employees: 35%
 - Mechanical employees: 5%
 - Management employees: 15%
- For the high-volume scenario:
 - Operations employees: 60%
 - Maintenance-of-way employees: 25%
 - Mechanical employees: 5%
 - Management employees: 10%

As reflected above, the relative percentage of operations employees is anticipated to increase as railroad traffic increases. The relative percentages of maintenance-of-way and management employees are anticipated to decrease as railroad traffic increases. The relative percentage of mechanical employees is anticipated to remain the same as railroad traffic increases.

At full capacity, average wages and benefits are estimated to average approximately \$122,000 per employee per year, which is consistent with the national average for railroad employees. Annual total wages and benefits for skilled and unskilled labor are estimated to range from \$75,000-150,000 per employee. Annual total wages and benefits for management employees are estimated to range from \$100,000-200,000 per employee.

16. For construction phase, termini/station cost information, including the following:

- Stations and terminus point construction costs
- Associated employment/labor costs
- Percent of labor and materials supplied locally

Coalition Response: No stations are anticipated to be constructed or operated by the Uinta Basin Railway. The railway's operating plan anticipates run-through operations with Union Pacific Railroad (UP) and BNSF Railway (BNSF) and does not anticipate locomotive repair shops, rail car repair shops, marshalling yards, storage yards, or other associated facilities. Mechanical inspections and repairs will be conducted primarily by shippers at shipper-owned facilities.

Terminus point facilities where trains are loaded and unloaded are anticipated to be constructed by third parties and are not part of the proposed railway. At this time, exact information about the size, location, cost, labor, or source of materials used for stations and terminus point facilities, which are anticipated to be built by third parties, is not available. For a representative example of terminal footprints and associated facilities please see Figures 1 and 2 below. Terminals generally range from approximately 200-400 acres in

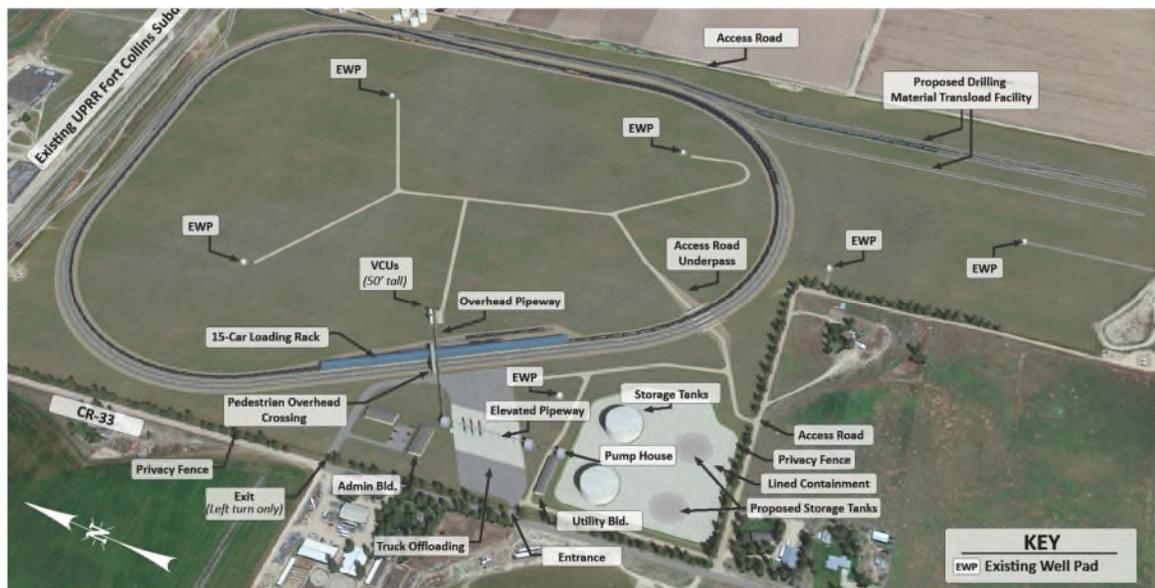
size, and terminal construction costs generally range from approximately \$60-\$400 million, depending on capacity. Pipeline-to-rail and truck-to-rail crude oil terminal facilities typically include:

- Truck delivery gates;
- Truck unloading racks;
- Tank storage;
- Rail loading racks;
- Rail arrival and departure tracks;
- Pipeline manifolds and pumps;
- Administration and maintenance buildings;
- Wastewater retention and treatment facilities;
- Oil tank safety berms;
- Internal roadways and utility connections; and
- Road connections to public roadways.

Figure 1: Typical Crude Oil Rail Loading Terminal – Example 1



Figure 2: Typical Crude Oil Rail Loading Terminal – Example 2



17. For construction phase, track construction cost information, provide the following:

- Track, track structures, and communications and signals costs
- Associated employment/labor costs
- Percent of labor and materials supplied locally

Coalition Response: Construction and associated labor costs are described in Tables 3A-3C in the Coalition’s response to Question 11 above.

Based on county population, county skilled labor availability and unemployment rates, and distance of travel to the construction area, the labor supply is estimated to be made up as follows:

- 15% from Uintah County;
- 10% from Duchesne County;
- 10% from Emery County;
- 10% from Carbon County;
- 5% from the Ute Tribe;
- 20% from Wasatch Front Counties (including Salt Lake, Utah, Summit, etc.); and
- 30% from more distant Utah counties or locations outside of Utah.

100% of the following materials are anticipated to be supplied locally:¹

- Concrete aggregate;
- Subballast;
- Road base;
- Ready-mix concrete;
- Water;
- Asphalt road material; and
- Shoring timber and miscellaneous timber and lumber requirements.

It is anticipated that these locally-sourced materials will comprise 15% of the total value of materials consumed by the project. These values include the cost of transporting materials to the site.

100% of the following materials are anticipated to be supplied from sources within Utah, but not locally:

- Cement;
- Reinforcing steel;
- Prefabricated concrete bridge material;
- Structural steel;
- Fabricated bridge steel;
- Fuels;
- Ballast; and

¹ For purposes of this response, the term “supplied locally” is interpreted to include materials sourced from Uintah, Duchesne, and Carbon counties.

- Common transmission line and communication line materials.

It is anticipated that these materials will comprise 35% of the total value of materials consumed by the project. These values include the cost of transporting materials to the site.

100% of the following materials are anticipated to be sourced from states other than Utah:

- Communications and signaling material; and
- Track material consisting of rail, crossties, other track material (“OTM,” which includes items such as rail to tie fasteners, joint bars, rail anchors, and rail braces), and turnouts.

It is anticipated that these materials, sourced from outside of Utah, will comprise 50% of the total value of materials consumed by the project. These values include the cost of transporting materials to the site.

18. For construction phase, rail car cost information, including the following:

- New rail cars and engine costs
- Percent purchased locally

Coalition Response: No new rail cars or locomotives (engines) are anticipated to be purchased during the construction phase. Rail cars and locomotives (engines) used during the construction period for transportation of rail, ties, ballast, and other material are anticipated to be supplied either by the transporting rail carrier (UP and BNSF) from their own fleets, by the supplier of the construction material, or by the contractor and drawn from existing lease fleets. As such, no rail cars or locomotives (zero percent) will be purchased locally. Additionally, no rail car or locomotive manufacturers exist within the local project area.

19. For construction phase, other construction cost information, including the following:

- Excavation, support and maintenance facilities (including any locomotive/car shops and storage sheds), yards, administration buildings, and other anticipated components, not already included above. Include costs of any fencing to restrict public access to the railway and related facilities
- Associated employment/labor costs
- Percent of labor and materials supplied locally

Coalition Response: Construction costs for support and maintenance facilities (including any locomotive/car shops and storage sheds), yards, administration buildings, and other anticipated components, not already included above, are not available to the Coalition as these facilities are anticipated to be constructed by third parties and are not part of the proposed project. Associated employment/labor costs are similarly not available to the Coalition for the same reasons. The percent of labor and materials to be supplied locally are described in the Coalition’s response to Question 17 above. Construction costs for the

embankments (excavation) and civil structures, including fencing to restrict public access to the railway, are included in the total cost estimates for each route, which are provided in Tables 3A-3C in the Coalition's response to Question 11 above. Construction costs for fencing to restrict public access to support and maintenance facilities (including any locomotive/car shops and storage sheds), yards, administration buildings, and other anticipated components, not already included above, are not available to the Coalition as these facilities are anticipated to be constructed by third parties and are not part of the proposed project.

20. For operation phase, expected operations and maintenance costs for rail/terminal upkeep, including employees or labor costs.

Coalition Response: Please see the Coalition's response to Question 15 above. Terminals will be developed, operated, and maintained by shippers and are not included in the scope of this common-carrier railway. As such, no terminal operational/maintenance cost estimates exist at this time. Anticipated rail operations and maintenance costs are provided in the Coalition's Response to Question 21 below.

21. For operations phase, expected operations and maintenance costs, including employees or labor costs, or operations costs for a similar stretch of railway that can be adapted to estimate the alternative routes.

Coalition Response: The estimated operations and maintenance cost of the railway, inclusive of employees and labor (but exclusive of terminals and stations, which will be developed, operated, and maintained by third parties), is anticipated to be similar to the current U.S. Class I railroad average of \$0.028 per revenue ton-mile, as published by the American Association of Railroads in its "2018 Fact Book."

Revenue tons are anticipated to vary on all three routes from 31,000/day to 86,000/day (rounded up to nearest 1,000 revenue tons) calculated from the estimated range of total carloads provided to the STB in the Coalition's Response to Information Request No. 2, dated October 10, 2019.

Revenue mileage of the typical train will vary by route. Terminals are anticipated to be developed at South Myton Bench and Leland Bench. It is expected that each of these anticipated terminal locations will be utilized approximately equally by shippers. Thus, revenue miles would be the average of the distance between the railway's connection to the UP and BNSF main lines at Kyune, and the South Myton and Leland Bench locations. These averages would be as follows:

- For the Indian Canyon Route: 72 miles, the average of the 64 route miles between Kyune and Myton, and the 80 route miles between Kyune and Leland Bench;
- For the Whitmore Park Route: 78 miles, the average of the 71 route miles between Kyune and Myton, and the 85 route miles between Kyune and Leland Bench;
- For the Wells Draw Route: 90 miles, the average of the 85 route miles between Kyune and Myton, and the 95 route miles between Kyune and Leland Bench.

Thus, the estimated revenue ton-miles (RTMs) are estimated to range from:

- 2.23 million per day to 6.19 million per day (72 x 31,000 to 86,000) for the Indian Canyon Route;
- 2.42 million per day to 6.71 million per day (78 x 31,000 to 86,000) for the Whitmore Park Route; and
- 2.79 million per day to 7.74 million per day (90 x 31,000 to 86,000) for the Wells Draw Route.

Based on the above-listed estimates, estimated daily operating and maintenance costs are expected to vary from:

- \$62,400 to \$173,376 ($\$0.028 \times 2.23$ to 6.19 million RTMs) for the Indian Canyon Route;
- \$67,800 to \$187,824 ($\$0.028 \times 2.42$ to 6.71 million RTMs) for the Whitmore Park Route; and
- \$78,100 to \$216,720 ($\$0.028 \times 2.79$ to 7.74 million RTMs) for the Wells Draw Route.

On an annual basis (365-day year), the estimated operating and maintenance costs are anticipated to vary from:

- \$22,776,000 to \$63,282,000 for the Indian Canyon Route;
- \$24,747,000 to \$68,556,000 for the Whitmore Park Route; and
- \$28,507,000 to \$79,103,000 for the Wells Draw Route.

22. The Coalition's response to Request for Information No. 2 indicated that the proposed rail line would likely not transport crude oil from the Uinta Basin to refineries in Salt Lake City, Utah. Please identify refineries that could potentially accept crude oil from the Uinta Basin or confirm that the following locations (identified in the 2018 Pre-Feasibility Study prepared on behalf of the Coalition by R.L. Banks & Associates, Inc.) represents a reasonable list of potential target markets:

- Anacortes, Washington;
- Cattlesburg, Kentucky;
- Shreveport, Louisiana,
- Baton Rouge, Louisiana;
- Garyville, Louisiana;
- Pascagoula, Mississippi;
- Baytown, Texas;
- Deer Park, Texas;
- Galveston Bay, Texas; and

- Port Arthur, Texas.

Coalition Response: The refinery locations above represent reasonable potential target markets.