

Treasure Valley Reload Center Summary Report Supplement 6/12/19

Overview

In late 2018 Tioga conducted an independent review and summary evaluation of the Treasure Valley Reload Center project plan proposal and supplementary documents. Tioga also reviewed Union Pacific 10-K reports and various investor presentations. Recommendations to the Oregon Transportation Commission regarding this proposal were presented as the conclusion of its report dated January 7, 2019.

Following the February 2019 meeting of the Oregon Transportation Commission, the project sponsors were asked to supplement their project proposals. These documents were provided to Tioga and, at the request of ODOT, Tioga has prepared the following supplementary report.

In preparation of this supplement Tioga reviewed the questions of the OTC and the documents provided by the agency.

Terminal Operator

Each sponsor needs to provide a memo with concurrence from the prospective terminal operator to at a minimum confirm that they are in contract negotiations and provide a timeline for reaching final agreements, fees and rate structure.

MCDC provided a Letter of Interest with AmeriCold Logistics, LLC covering participation in the qualification stage for the Treasure Valley Reload Center in Nyssa, Oregon. AmeriCold represents itself as the world's largest owner and operator of temperature-controlled warehouses. The letter provides that AmeriCold is willing to enter a mutually acceptable lease. MCDC indicates that active conversations are underway. MCDC has thus met the minimum requirement of the OTC.

The MCDC materials discuss the possibility of "triple net" lease, but that option does not appear in the AmeriCold letter.

Tioga previously reviewed AmeriCold's business in the course of another project (see Appendix). AmeriCold operates cold storage facilities and offer value-added services, including truckload consolidation (<https://www.AmeriCold.com/what-we-do/supply-chain-solutions/services/>). AmeriCold has a facility about 20 miles north of Nyssa in Ontario, and another about 40 miles away in Nampa, ID. AmeriCold will load and unload railcars, but does not appear to arrange or manage rail transportation, or provide railcars. AmeriCold would not become an intermediary or broker between TVR customers and UP.

Railroad Concurrence

Railroad concurrence and support is crucial to project feasibility. On May 1 Union Pacific Railroad provided a letter indicating:

- UP would provide manifest service for onions in lanes which have existing rates. These are the same service and rates that are available to rail shippers today, and is not the same as the expedited Cold Connect service provided at Wallula.
- UP will not supply refrigerated railcars; TVR or another entity must supply cars.
- Further review is required for asparagus, sweet potatoes, apples, plums, hemp, mint oil, and peppers. No commitment is provided regarding when this review will be completed, but UP indicated that of these commodities only apples were likely to have a viable rail option.
- UP would not support movement of hay and straw, or intermodal service at Nyssa. (UP is reportedly developing intermodal service at Wallula.)
- UP offers no guarantee of service or car supply rail service during peak seasons. This lack of commitment for rail service during peak seasons means that service may not be available, even if Treasure Valley provides rail cars.
- Prices and available service destinations were referenced in the public tariff.

Tioga notes that the facility may need to be capable of handling a variety of food and other commodities. While moving onions outbound is clearly the “anchor” business for the facility, MCDC may need to pursue a strategy of being a distribution hub for a wide variety of inbound, backhaul commodities. Such a strategy would be limited, however, by Nyssa's geographic location relative to consumer markets.

The UP service letter offers “manifest train” service for TVR, not the expedited service offered at Wallula. As described in UP's letter to the MVIC sponsors, "General manifest service consists of trains made of mixed commodities and rail cars (e.g., boxcars, tank cars, intermodal cars, etc.) that serve multiple customers and move in a hub and spoke like model." A typical pattern is for a local train to depart from a local classification yard (e.g. Nampa, ID), serve customers along a given line, and then return to the classification yard. Outbound cars are later forwarded on "through" freights to a major classification yard (e.g. UP's Bailey Yard at North Platte, NE) and then to destination or to a connecting railroad.

In contrast Wallula is served by a unit train that proceeds directly to Chicago and then on to Albany, NY. The service is several days faster than “manifest” service.

UP's Precision Scheduled Railroading (PSR) initiative should make manifest train service on UP more predictable and reliable, so UP should be able to provide transit times to Chicago or other gateways. Although the rates provided by UP cover the full trip to eastern destinations, service beyond Chicago or other gateways will be controlled by the connecting railroad. It would be advisable for the TVR planners to assemble some *pro forma* service descriptions, drawing on UP's plans and perhaps on the experience of potential customers who have shipped via rail from their own sidings. The TVR team can then verify that the expected service levels will meet shipper needs for time-to-market and reliability.

Union Pacific's proposed value proposition is little different than currently available to Treasure Valley shippers, thus it is unclear as to how shippers would benefit from this service. Some additional advantage may be gained by providing private railcars. The risk of this approach is exacerbated by Union Pacific's lack of peak period rail service commitment and the financial commitments associated with supplying rail cars.

Rail Car Supply

Each sponsor needs to provide a memo outlining the following:

- A. What type of rail cars are going to be needed?*
- B. Who will provide the rail cars?*
- C. If the railroads will be providing rail cars, provide documentation from the relevant rail entity.*
- D. How will the rail cars be provided?*
- E. Where will the rail cars come from?*

The UP representative at the February meeting stated clearly that the TVR sponsors would have to supply their own cars, and that policy was restated in the service letter. Project sponsors have not yet provided any details of contacts with potential railcar providers, and the issues and costs remain unaddressed.

The TVR sponsors have indicated that they do not plan to purchase cars. The likeliest strategy would be a full-service lease of new or refurbished cars. Car builders (e.g. Gunderson or Thrall) can provide detailed, reliable proposals. Tioga is aware from a newspaper report that Cryo-Trans, Inc. has more than 2,000 refrigerated and insulated rail cars on the market and that Cryo-Trans officials are looking forward to discussing lease options with MCDC.

Railcar utilization will be critical in the business plan. Refrigerated railcars are expensive, high-maintenance, and require experienced management. Revenue backhaul moves from produce destinations may be infrequent or difficult to secure. Cost estimates to date have not included these rail car leasing, management services, or the impact of either loaded or empty backhaul moves. Updated financials that include these need to be provided shortly as one of the earlier milestones.

Treasure Valley responded that they are expecting that AmeriCold's clout will help with car supply and management. As noted above, to the best of Tioga's knowledge AmeriCold is not in that business.

Evaluation

With price and service information available from UP and AmeriCold, the market study can be reevaluated to determine the amount of traffic that will be moved through the proposed facility.

Tioga notes that the Union Pacific's proposed value proposition is basically no different than currently available to Treasure Valley shippers. The manifest service promised by Union Pacific means that delivery times to east coast markets will be several days longer than service available at UP's Cold Connect facility at Wallula, WA.

The only reasons for shippers to use the TVR option would be improved rail car availability, cost savings versus trucking to Wallula and shipping via Cold Connect, or to use AmeriCold storage and consolidation services. The TVR service needs to undercut the costs from trucking/shipping from Wallula by substantial margin to offset the service disadvantage and still be a viable competitor. Note that UP will only move the cars to points on its own system to Midwest gateways such as Chicago. Service and rates beyond those gateways to eastern or southeastern markets will depend on CSX or NS.

As currently envisioned, the project would yield an AmeriCold-managed cold storage and transloading/consolidation facility capable of shipping by truck or rail on the same basis as individual shippers or other cold storage businesses.

Risks

One apparent risk with the TVR project is that it may not offer any better transportation options than are currently available. Manifest train service is apparently available at other points, and would not match the expedited Cold Connect service offered from Wallula.

The second risk is that an independent supply of refrigerated railcars may not prove operationally or economically feasible.

Recommendation

Tioga has no doubt that Treasure Valley shippers would benefit significantly from the additional shipping options, improved rail service, and cost savings originally envisioned by project sponsors, but it is not yet clear that those benefits can be provided. The supplemental information provided since our earlier assessment indicates that the sponsor has made real progress in filling in some of the information gaps that were previously identified.

The sponsors need to go back to the potential customers with a realistic picture of potential rates and services to determine whether the value proposition is attractive and will attract sufficient business to sustain the operation. Specifically, the sponsors will need to identify what services or cost savings they can offer in competition with other cold storage facilities or shipping options.

With the additional information now available (rail rates and practical service points, cost for rail cars, etc.) and with AmeriCold's assistance, a comprehensive business plan should be prepared to validate the efficacy of the value proposition and financial viability of the proposed enterprise. Tioga's previous recommendation that this project could be viable remains, with the caveat that updated financials should be provided to ODOT prior to advanced design or construction of the facility. Unless the value proposition can be verified to be better than what is currently available to Treasure Valley shippers, it is unlikely that the proposed rail service would be commercially feasible. It is still possible that the project could succeed as a cold storage facility providing value-added services without a specific rail transportation component.

Appendix: AmeriCold Description **Extract from Port of Portland Cold Storage Report** **March 2019**

AmeriCold Realty Trust

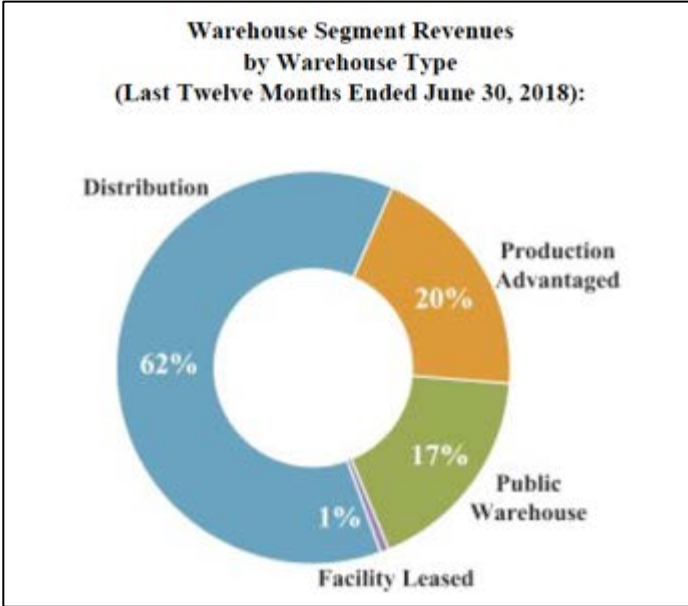
AmeriCold is now the largest cold storage firm, and the largest in the Oregon-Washington market. AmeriCold is a publicly traded Real Estate Investment Trust (REIT). AmeriCold started as merger of local firms in Atlanta, and grew by merger and acquisition, becoming AmeriCold in 1997. In 2005, AmeriCold began sale/leasebacks to acquire production-area facilities from ConAgra and others. Their Initial Public Offering in 2018 generated substantial cash for development and expansion. Blackstone Group had attempted a buyout of AmeriCold in September 2017 for \$3 billion.

Based on descriptions in AmeriCold's S-11 filing of June 2018:

- AmeriCold seeks to expand on land they already own, which could eventually support 500 million cubic feet of capacity.
- AmeriCold avoids "...costs and other impediments associated with land acquisitions."
- They anticipate an average of 2-3 expansion or development opportunities annually.
- AmeriCold intends to focus on expansion (e.g. on land they own) "...primarily in the production advantage and distribution property types." (as opposed to public warehouses).
- AmeriCold focuses on large accounts – major frozen food producers and grocery chains.

Figure 1 shows AmeriCold revenue by segment. Note that most of AmeriCold's revenue comes from distribution facilities operated for large customers. Public storage is only 17% of AmeriCold's business.

Figure 1: AmeriCold Segment Revenues



About 1% of AmeriCold’s business is in facilities it has leased. Figure 2 shows AmeriCold’s revenue streams and the kind of customers served (note that these include foreign locations and customers).

Figure 2: AmeriCold Revenue Streams



AmeriCold Locations

AmeriCold’s U.S. locations are shown in Figure 3. The Oregon and Washington locations are a mix of public, distribution, and production facilities.

Figure 3: AmeriCold Nationwide Locations by Type

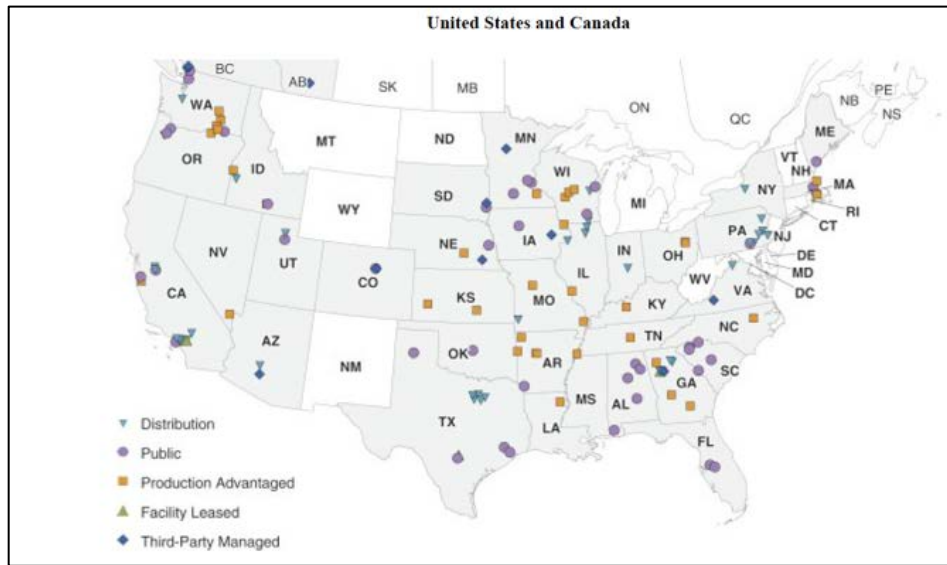


Figure 4 shows AmeriCold’s 2018 portfolio. Operations in the west, mostly in Oregon and Washington, provide the largest segment contribution at \$49.2 million annually.

Figure 4: AmeriCold's June 2018 Portfolio

Country / Region	# of warehouses	Cubic feet (in millions)	% of total cubic feet	Pallet positions (in thousands)	Average physical occupancy (1)	Revenues (2) (in millions)	Applicable segment contribution (NOI) (2)(3) (in millions)	Total customers (4)
Owned / Leased (5)								
United States								
Central	34	220.6	25%	875.7	76%	\$ 118.6	\$ 43.8	818
East	23	165.9	19%	535.1	75%	121.3	36.0	728
Southeast	36	170.9	20%	573.1	75%	104.8	31.7	640
West	37	230.8	27%	992.5	72%	129.0	49.2	729
United States Total / Average	130	788.2	91%	2,976.4	74%	\$ 473.7	\$ 160.7	2,251
International								
Australia	5	47.6	5%	140.9	86%	\$ 79.7	\$ 15.0	59
New Zealand	7	22.8	3%	72.8	91%	16.0	4.2	74
Argentina	2	9.7	1%	21.6	72%	4.9	0.5	36
International Total / Average	14	80.1	9%	235.3	86%	\$ 100.6	\$ 19.7	161
Owned / Leased Total / Average	144	868.3	100%	3,211.7	75%	\$ 574.3	\$ 180.4	2,343
Third-Party Managed								
United States	8	41.5	74%	—	—	\$ 113.7	\$ 4.9	4
Australia (6)	1	—	—	—	—	6.6	1.6	1
Canada	3	14.3	26%	—	—	9.3	1.1	2
Third-Party Managed Total / Average	12	55.8	100%	—	—	\$ 129.6	\$ 7.6	6
Portfolio Total / Average	156	924.1	100%	3,211.7	75%	\$ 703.9	\$ 188.0	2,344

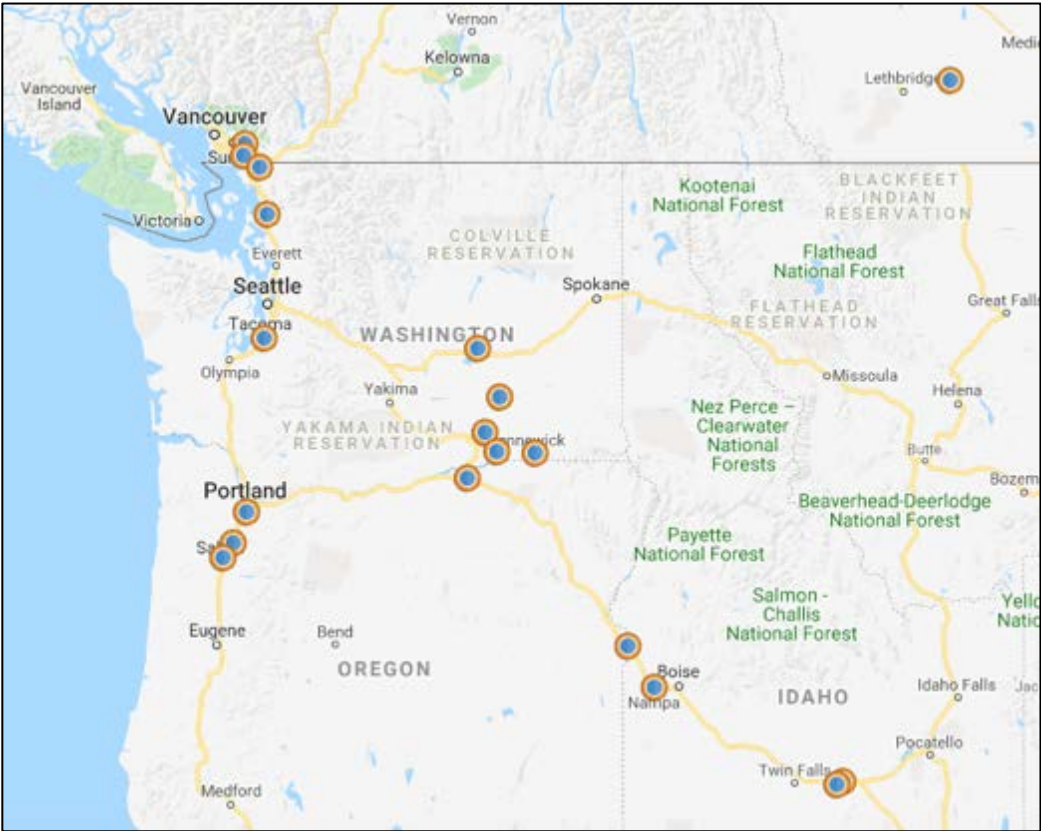
Note that AmeriCold averages about 72% physical occupancy in the West (including Oregon), about average for the portfolio as a whole, against their target of 85%. Operators may track both leased or financial occupancy (the extent to which customers have leased or rented space, whether or not it is occupied) and physical occupancy (the extent to which space is actually used). While financial occupancy may be good in the short term, physical occupancy is the more critical measure for long-term demand.

AmeriCold's Pacific Northwest Facilities (Figure 5) include:

- Milwaukie: 9501 SE McLaughlin Blvd, Milwaukie, OR 97222 - 5,988, 142 Cu Ft, 240,221 sq. ft

- Woodburn: 1440 Silverton Rd, Woodburn, OR 97071 - 8,400,657 cu ft, 327,601 sq. ft
- Salem: 4095 Portland Rd NE, Salem, OR 97301 - 15,291,721 cu ft, 669,650 sq. ft
- Hermiston: 78149 Cottonwood Bend, Hermiston, OR 97838 - 5,352,785 cu ft, 221,330 sq. ft
- Tacoma: 1301 26th Ave East, Tacoma, WA 98424 - 6,443,514 cu ft, 197,368 sq. ft
- Lynden: 406 2nd St, Lynden, WA 98264 - 5,452,294 cu ft, 237,663 sq. ft
- Wallula: 14060 Dodd St, Wallula, WA 99363 - 1,571,756 cu ft, 59,628 sq. ft
- Walla Walla: 115 West Rose St, Walla Walla, WA 99362 - 4,317,945 cu ft, 162,914 sq. ft
- Pasco: 5805 Industrial Way, Pasco, WA 99301 - 7,089,063 cu ft, 251,531 sq. ft
- Connell: 720 W Juniper St, Connell, WA 99326 - 7,887,492 cu ft, 299,776 sq. ft
- Moses Lake: 3245 "N" NE, Moses Lake, WA 98837 - 9,938,345 cu ft, 370,783 sq. ft

Figure 5: AmeriCold PNW Locations



AmeriCold Expansion

Recent AmeriCold expansion (Figure 6) has been in the production and distribution sectors, not in public warehouses. The costs were \$5.00-5.64 per cubic foot (excluding the East Point redevelopment project, which was less costly).

Figure 6: Recent AmeriCold Expansion

Completed Since 2014	(\$ in millions)							
	Facility	Opportunity Type	Facility Type	Cubic Feet (mm)	Pallet Positions ('000)	Cost of Expansion / Development		Completion Date
						Total Cost	ROIC	
	Phoenix, AZ	Development	Distribution	3.5	12	\$18	18.0%	Q1 2014
	Leesport, PA	Expansion	Distribution	2.2	2	12	20.4%	Q3 2014
	East Point, GA	Redevelopment	Distribution	4.2	9	11	9.0% - 11.0% ⁽¹⁾	Q4 2016
	Clearfield, UT	Expansion	Distribution	5.8	21	29	12.0% - 15.0%	Q4 2017
	Total			15.7	44	\$70		

Under Construction	(\$ in millions)									
	Facility	Opportunity Type	Facility Type	Cubic Feet (mm)	Pallet Positions ('000)	Cost of Expansion / Development ⁽¹⁾				Target Completion Date ⁽¹⁾
						Cost to Date	Estimated to Completion ⁽²⁾	Estimated Cost ⁽³⁾	Expected ROIC	
	Middleboro, MA	Development	Production Advantaged	5.2	28	15	9	24	8.0% - 12.0%	Q3 2018
	Rochelle, IL	Expansion	Distribution	15.7	58	32	47	79	12.0% - 15.0%	Q4 2018
	Total			20.9	86	\$47	\$56	\$103		

Mid-Valley Intermodal Center Proposal Summary Report Supplement 6/12/19

Overview

In late 2018 Tioga conducted an independent review and summary evaluation of the Mid-Valley Intermodal Center project plan proposal and supplementary documents. Tioga also reviewed Union Pacific 10-K reports and various investor presentations. Recommendations to the Oregon Transportation Commission regarding this proposal were presented as the conclusion of its report dated January 7, 2019.

Following the February 2019 meeting of the Oregon Transportation Commission, the project sponsors were asked to supplement their project proposals. These documents were provided to Tioga and, at the request of ODOT, Tioga has prepared the following supplementary report.

In preparation of this supplement Tioga reviewed the questions of the OTC and the documents provided by the agency.

Service Concept

As the sponsors have filled in more details of the project, a clearer picture of the proposed operation has emerged:

- Rail service from Millersburg would connect with existing NWCS service between Portland and Seattle or Tacoma.
- UP manifest service from Millersburg (or alternately, P&W manifest service) would forward loaded intermodal cars to a Portland interchange, adding at least a day to the service. For a Wednesday NWCS train to Seattle or Tacoma, for example, NWCS would leave Millersburg on Tuesday.

In this respect, it would be more accurate to evaluate the proposed Millersburg service as a rail intermodal alternative to a truck trip to Portland, not as a service between the Willamette Valley and Seattle/Tacoma.

- Rail options between Portland and Seattle/Tacoma will not change.
- Customers are currently choosing between trucking containers to/from NWCS at Portland and trucking all the way to Seattle/Tacoma.
- The Millersburg service would give customers the choice of trucking to Millersburg rather than to Portland to access the NWCS (or T-6) rail service.

Because the rail service options north of Portland will be identical, the operative customer choice is between truck to Portland, or truck to Millersburg and rail to Portland.

Terminal Operator

Each sponsor needs to provide a memo with concurrence from the prospective terminal operators to at a minimum confirm that they are in contract negotiations and provide a timeline for reaching final agreements, fees and rate structure.

Linn Economic Development Group (LEDG) has met the minimum requirement of the OTC. LEDG and North West Container Services, Inc. (NWCS) provided a signed contract that covers consulting services provided by NWCS through July 29, 2019. The date is significant because it is coincident with the outside closing date on the Millersburg property. LEDG and NWCS also provided an unsigned sample operating agreement. The contract term is 10 years and can be extended for twenty-five years in five year segments, all by mutual agreement. The contract is difficult to terminate, except for cause.

NWCS would be compensated in two ways:

- LEDG reimburses NWCS the greater of (1) all operating costs or (2) a guaranteed minimum monthly cost.
- 30% of all revenue in excess of the guaranteed minimum amount.
- The operator agreement is a cost plus arrangement. The operating financial risk is on LEDG, not NWCS.

The contract seems to imply that LEDG will be billing and receiving funds from third parties for terminal and transportation services, and sharing 30% with NWCS after expenses are paid. The sponsors should clarify whether LEDG or NWCS will be billing shippers, and what their sources of revenue will be.

Rail Car Supply

Sponsor will provide a memo outlining the following:

- A. What type of rail cars are going to be needed?*
- B. Who will provide the rail cars?*
- C. If the railroads will be providing rail cars, provide documentation from the relevant rail entity.*
- D. How will the rail cars be provided?*
- E. Where will the rail cars come from?*

NWCS has its own fleet of rail cars in intermodal service and reports that it is capable of providing additional cars as needed. NWCS will know how much the railcars cost to own and maintain, and what utilization can be expected. This knowledge should be explicitly included a revised business plan for MVIC.

P&W service at Millersburg

Sponsor to provide a memo outlining:

- A. *If service to the facility is possible from P&W with a concurrence memo from P&W.*
- B. *What physical and “paper” barriers exist.*
- C. *The process or steps to remove the barriers, including costs. General assessment of P&W rail service viability.*

P&W provided a representation that it sees no issues in serving the Millersburg project site. LEDG concurred and identified an approximate cost of \$2 million to upgrade and extend a rail spur needed to provide the service.

Tioga notes that Millersburg would face the same practical challenges in executing a P&W/BNSF service as the Brooks facility.

NWCS service to Seattle and Tacoma

Operator to provide a memo detailing how UP/NWCS services will work:

- A. *When it reaches Portland.*
- B. *When it reaches the Ports of Seattle and Tacoma.*
- C. *Describe how operations will serve non-UPRR served marine container terminal.*

NWCS indicated that the Millersburg service will be based on NWCS’ existing operations. Service to MVIC from Portland would be two or possibly three days per week.

It would be helpful if the sponsors were to provide a *pro forma* train schedule as part of their business plan to insure that customer requirements would be met. Our current understanding is that NWCS serves Seattle and Tacoma alternately, 3 days per week. Sponsor materials indicate that MVIC service to Portland would be 2–3 days per week. On that basis there could be a significant delay in matching up departures from MVIC to specific Seattle or Tacoma destinations.

Ocean Carrier Agreements

The facility operator to provide a memo detailing the current status of negotiations with ocean carriers and if they expect the current rates to Portland to be extended to Millersburg, and timelines for these negotiations to be completed.

NWCS reports:

- Ocean carriers maintain agreements with importers and exporters.
- NWCS reports that it moves the containers for the ocean carrier **OR** shipper. NWCS does not have volume commitments from ocean carriers.
- Union Pacific is a subcontractor to NWCS for the rail portion of the movement.

The practical impact of this situation is that the ocean carriers and shippers can walk away from the NWCS intermodal service with no notice. While this aspect of the transportation market has been stable for a number of years, history is no guarantee, particularly as ocean carriers respond to the recent shocks and changes in the Asia-Pacific Northwest trade.

The ocean carriers are apparently not prepared to extend subsidized service to MVIC. Tioga believes there are then two separate business cases that need to be considered based on the actions of the ocean carriers.

- **The ocean carrier contracts with the shipper based on origin/delivery at Sea/Tac.** In this case the shipper would pay NWCS separately for service between Millersburg and Sea/Tac. NWCS would pay UP for service between those two points. There would be no ocean carrier subsidy.
- **The ocean carrier contracts with the shipper based on origin/delivery at Portland.** In this case the shipper would pay NWCS for service between Millersburg and Portland and the ocean carrier would pay for the Portland to SeaTac service. NWCS would pay UP separately for service between those two points.
- A variation on these scenarios would be if NWCS also performed the motor carrier delivery/pick up at the shippers' location.

It is not clear to Tioga how the sample contract provided by LEDG applies in each of these cases, as it reads as if LEDG will be collecting the revenue rather than NWCS. As noted above, the role and revenue sources for each party should be clarified as part of a revised business plan.

Some steamship lines, CMA CGM for example, offer service via BNSF at T-6 rather than via NWCS. Customers of those carriers would not be able to use a Portland bill of lading or benefit from ocean carrier subsidies if they use the MVIC/NWCS option, limiting the market accessible to MVIC unless additional ocean carrier agreements can be secured.

Railroad Concurrence

Serving rail entity to provide written concurrence that the business analysis is acceptable (e.g. complete Step 5 of UPRR decision process as presented to the OTC).

Railroad concurrence and support is crucial to project feasibility. On May 1 Union Pacific Railroad issued a letter indicating:

- UP is committed to seasonally constrained, manifest rail service commitment south of Portland, with the possibility of seasonal constraints.
- The UP did not provide rates, but did promise to provide rates to the actual customers (which in this case would apparently be NWCS)
- UP will require for "pure" loaded double stack cars using private containers, chassis, and rail cars with each loaded car going to a single destination (i.e. UP will not re-handle containers if destinations are mixed).
- UP will require the sponsors to provide cars, which effectively eliminates the possibility of domestic container service (unless the sponsors can provide enough cars to support long-distance domestic intermodal service).

Evaluation

Tioga remains convinced that the basic terminal concept and operating plans are physically workable in the near term. It is clear that LEDG and NWCS have made significant progress in recent months toward the goal of establishing the Mid-Valley Intermodal Center and associated intermodal service.

Tioga's remaining concerns include:

- While the issues covered in this report primarily relate to the commercial aspects of the project, Tioga notes that apparently there reportedly remain site-related due diligence issues to be resolved.
- Tioga also notes that the operating agreement is a long term cost plus agreement between LEDG and NWCS. The risk of prospective operating losses would be borne exclusively by LEDG.

Tioga's primary concern is the commercial challenge, which remains formidable. A combined truck and rail intermodal service cannot match all-truck rates and service over the very short distance between Millersburg and Portland, which is roughly 75 miles. In addition, the cross-subsidized truck/NWCS option sets the competitive price.

If the ocean carriers are unwilling to extend Bills of Lading and subsidies to Millersburg, the MVIC service will have to be commercially viable as a free-standing proposition.

At this stage, the MVIC sponsors do not yet know:

- How much the Millersburg to Portland rail service will cost.
- How much potential customers are currently paying to truck containers to Portland.
- What potential customers would be willing to pay for Millersburg to Portland service connecting with NWCS there given the longer service times.
- What competitive response would likely be forthcoming from drayage firms.

The MVIC project will not offer a separate intermodal service from NWCS, but a different way of accessing the current NWCS service in each direction. MVIC customers and shipments will be drawn primarily from the existing NWCS customer base. NWCS may gain additional business to the extent that customers find a Millersburg-Portland-NWCS-Seattle/Tacoma service more attractive than a Portland-NWCS-Seattle/Tacoma service accessed by trucking to Portland.

It is impossible to quantify this concern without a business plan that includes rates from Union Pacific. Tioga notes that Union Pacific committed to providing the study rates to the payer of the freight. That has been, and is likely to be, NWCS.

The fundamental risk with the MVIC proposal is that the proposed combination of rail service and cost between Millersburg and Portland will not attract business that is currently being trucked to NWCS at Portland or directly to Seattle/Tacoma.

- Tioga believes it unlikely that MVIC will be able to offer connecting rail service over the 75 miles from Millersburg to Portland at a significantly lower price than customers are paying for drayage service.
- One reason customers truck containers to Seattle or Tacoma rather than using NWCS is the need to meet specific outbound vessel cutoffs that do not match NWCS service. It is unlikely that those customers would use an MVIC option that merges with the same NWCS schedules, but takes 1–2 days longer.

Recommendation

At this point the MVIC sponsors have provided a great deal of information, but the basic economic and commercial feasibility question remains unanswered.

A revised business plan and value proposition based on real rates and available services should be developed and tested with shippers to determine their receptiveness prior to construction funding or substantial design funding being released. This documentation must include:

- The rates NWCS will have to charge for intermodal service between Millersburg and a connection to the existing NWCS service at Portland:
 - UP rates to NWCS (or whatever organization ultimately contracts with UP).
 - Rail car costs.
 - NWCS terminal costs (noting that NWCS will avoid a lift at Portland).
 - Allocations of facility maintenance costs.
 - Profits or payments to NWCS and MVIC.
- Actual, all-inclusive drayage rates from customer locations to MVIC versus customer locations to NWCS or BNSF at Portland. These rates must be based on actual customer experience or specific quotes from the drayage firms customers use. Estimates or Drayage.com examples are not reliable in this context.
- A *pro forma* train service schedule, showing cutoff times at MVIC and corresponding delivery times at Seattle and Tacoma (and the reverse).

The safe assumption for the business plan is that the ocean carriers only offer a Portland Bill of Lading, and that any operating subsidy for the Millersburg service will ultimately have to come from a local public agency (Linn County has gone on record with a letter of financial support) or the state.

If these documented rates and services meet customer requirements – including customer willingness to use NWCS north of Portland – then the MVIC proposal may be commercially viable.

Brooks Intermodal & Transload Center Proposal

Summary Report Supplement

6/12/19

Overview

In late 2018 Tioga conducted an independent review and summary evaluation of the Project Plan Proposal for the Oregon Port of Willamette (OPW), Brooks Intermodal and Transload Facility (Brooks) as well as supplementary documents.

Following the February 2019 meeting of the Oregon Transportation Commission, the project sponsors were asked to supplement their project proposals. These documents were provided to Tioga and, at the request of ODOT, Tioga has prepared the following supplementary report.

In preparation of this supplement Tioga reviewed the questions of the OTC and the documents provided by the agency.

From the OPW materials it is apparent that the preferred rail service would consist of a P&W move to/from Brooks connecting with the existing BNSF services at Portland. A less desirable service that relies on UP has been postulated, though due to existing agreements P&W may not have full access interchange with UP.

As the emerging picture of rail service makes clear, the real-world comparison will not be between drayage from the Willamette Valley to Seattle/Tacoma vs. intermodal rail, but drayage from the Willamette Valley to Portland versus a drayage-rail combination to Portland. Whether P&W connects with BNSF or UP, the OPW cars will be combined with the cars moving between Seattle or Tacoma and UP or BNSF interchange points in Portland.

Between Portland and Seattle/Tacoma the OPW cars and containers will thus receive the identical service as T-6 customers on BNSF, or manifest/intermodal service on UP, and will likely incur the same costs. The BNSF service to T-6 is presumable cross-subsidized by the ocean carriers that use BNSF; UP manifest or non-NWCS intermodal service is not. This observation is consistent with the reported reluctance of the ocean carriers to offer a Brooks bill of lading.

The OPW/P&W rail service of about 50 miles each way between Brooks and Portland would then compete with the incremental drayage cost of driving from the Willamette Valley to/from Portland instead of Brooks. NWCS and T-6 are both about 50 miles north of Brooks. For a customer south of Brooks, the realistic comparison would be:

- Round-trip drayage to OPW at Brooks, and round-trip P&W rail service to UP or BNSF at Portland.

versus

- Drayage 50 miles farther each way from origin to NWCS/T-6 at Portland.

In this respect, it would be more accurate to evaluate the proposed Brooks service as a rail intermodal alternative to a truck trip to Portland, not as a service between the Willamette Valley and Seattle/Tacoma. In effect, the P&W rail service would be competing with two additional hours of drayage time.

Terminal Operator

Each sponsor needs to provide a memo with concurrence from the prospective terminal operators to at a minimum confirm that they are in contract negotiations, and provide a timeline for reaching final agreements, fees & rate structures.

The Oregon Port of Willamette (OPW) has met the requirement of the OTC. OPW and Cordele Intermodal Services, Inc. (CIS) provided a signed contract that covers consulting services provided by CIS. In addition OPW and CIS provided a signed operating agreement.

- Both parties have financial and contractual commitment to the success of the project.
- 10 year term with a one year cancellation clause for cause; immediate cancellation if parties are not paid. The contract can be extended for 20 years in 5 year increments.
- If things work well, the contract is a cost plus deal with a 50% split of the profits. If not, OPW is fully obligated to pay operating costs for the first three years and half the operating costs thereafter.
- Railroad/ocean carrier agreements negotiated by CIS and approved by OPW.
- CIS to provide equipment (rail equipment implied, not terminal equipment—this provision may not specific enough)
- CIS to provide a 24/7 gate-except as may be mutually agreed.
- Nothing requires cargo moved through the terminal to be handled by rail.
- At least first the first three years, the operator agreement is a cost plus arrangement. For that period, financial risk is on OPW, not CIS.

Rail Car Supply

Sponsor will provide a memo outlining the following:

- A. What type of rail cars are going to be needed?*
- B. Who will provide the rail cars?*
- C. If the railroads will be providing rail cars, provide documentation from the relevant rail entity.*
- D. How will the rail cars be provided?*
- E. Where will the rail cars come from?*

CIS intends to purchase or lease a private fleet of 40' single well rail cars optimized for this service. CIS should be able to obtain and supply a cost figure to be incorporated in a revised OPW business plan, including the impact of expected utilization.

The SRF letter notes that OPW has an agreement to lease railcars from Greenbriar for \$87 per day. This arrangement is not documented elsewhere, and does not specify the car type or the rate basis. Rates from multi-well double-stack cars are sometimes quoted as "per platform-day". Since a well car can carry two containers per platform, a rate so quoted needs to be divided by two to get a unit rate. If the quote is for a 3-unit or 5-unit car, it should be allocated accordingly.

These two perspectives need to be reconciled.

CIS service to Seattle and Tacoma

Operator to provide a memo detailing how P&W-UP/BNSF service will work:

- A. When it reaches Portland (or another interchange point).*
- B. When it reaches the Ports of Seattle and Tacoma.*
- C. How service will work if trains from the site to Portland include cars going to both BNSF and UP,*
- D. Concurrent memo or written document from P&W and UPRR/BNSF as appropriate acknowledging these operations.*

P&W-BNSF. The Brooks P&W intermodal service would interchange with BNSF at Willbridge Yard or Vancouver Yard. Intermodal cars may be added to the train from Terminal 6. At Tacoma cars would be transferred to Tacoma Rail, with attendant interchange and lift costs. At Seattle, P&W cars would be taken to SIG and unloaded there, with attendant drayage costs. If volume warranted, cars with containers destined to T-18 could be delivered on-dock there. To date the project sponsor has not included any acknowledgement from BNSF indicating willingness to serve or how they might accommodate this operation.

P&W-UP. The Brooks P&W intermodal service would interchange with Union Pacific in Albina Yard in Portland, from which the cars would be forwarded (via manifest or intermodal train, not the NWCS train) to Tacoma Rail in Tacoma, with attendant interchange and lift costs, or to Argo Yard in Seattle, with attendant drayage costs. While the OPW sponsors have speculated that the ocean carrier might pay for drayage, there is no agreement from the ocean carriers to do so. If volume warranted, cars with containers destined to T-18 could be delivered on-dock there.

Railroad Concurrence

Sponsor to provide memo detailing the steps/timeline needed to reach final agreement with UP/BNSF for service including final rates and fees. Include written concurrence from serving rail entities that these steps and timeline are accurate and that each has concurred with the basic service and marketing plan at a similar level as the UP Step 5 decision as described at the OTC meeting in February.

While P&W has provided additional information, overall railroad concurrence is still outstanding as of 6/10/19.

Portland and Western (P&W) acknowledged and supported CIS's statements. In addition, P&W shared the following:

- P&W has existing interchange agreements with BNSF but does not have an agreement that permits interchange of intermodal traffic. (No understanding is in place on rates at this time)
- Brooks service on the preferred P&W/OE line is limited to 10 hours per day due to passenger service.
- According to P&W, BNSF must provide a waiver for the traffic to route to UP. The financial compensation due to BNSF has not yet been determined, estimated, or considered in documents available to Tioga. This circumstance may add to the cost or difficulty of working with UP.
- P&W and UP have not agreed on an interchange point.
- P&W has not provided rates to OPW. CIS has noted that as of April 23 HOOI has "rate structure comps in place with Genesee & Wyoming". This comment should be clarified and rates included in financial projections. The difference between these rates and drayage rates to/from Portland rail terminals is a critical commercial feasibility issue.

UP's service letter is largely the same as that provided to the MVIC sponsors, and does not contain service or rate information. UP proposes to offer manifest train service from the P&W, but leave open the location at which interchange would take place.

Ocean Carrier Agreements

The facility operator to provide a memo detailing the current status of negotiations with ocean carriers and if they expect the current rates to Portland to be extended to Brooks and timelines for these negotiations to be completed.

CIS represents that the lines wish to continue their Portland bill of lading services, not extend it to Brooks. CIS will then charge the shippers for the service beyond Portland.

If the ocean carriers offer a Portland Bill of lading, CIS will contract with shippers for service south of Portland on the P&W. This apparently is no change in structure of payments made by ocean carriers to BNSF T6 service. There would be no connection to the NWCS service, so service via UP would not benefit from ocean carrier cross-subsidies. Unless new agreements are made with the ocean carriers, the OPW market would be limited to shippers using the ocean carriers aligned with BNSF.

The practical impact of this situation is that the carriers and shippers would have no commitment to the CIS intermodal service. While this aspect of the transportation market has been stable for a number of years, history is no guarantee, particularly as ocean carriers respond to the recent shocks and changes in the Asia-Pacific Northwest trade.

Railroad Clearances

Project Sponsor to provide a memo detailing how they and/or P&W propose to address these known clearance issues including a) timeline for resolving b) where will the funds come from, and c) written concurrence from PNWR to this proposed plan.

Clearance work is required on 1 to 3 locations on the preferred P&W (Brooks to Tigard) OE route. The cost is estimated at \$2.5-4 million. The certain clearance issue is where the preferred route passes under the P&W UP leased line to Sherwood. The vertical clearance is 20' and a significant effort would be required to clear the route. Clearance issues on two bridges are thought to be much easier to deal with.

The money to clear the route is not immediately available; the project sponsors identified three options for raising the money to clear the route.

A less efficient but already cleared route is available via the Labish connection to Union Pacific. Costs for operations on this route have not been provided, and would involve compensation to BNSF on some portion.

Strategic Rail Finance Model

The SRF modeling results provided in SRF's 5/31/19 letter continue to use conceptual numbers rather than actuals and to (apparently) comingle one-way and round-trip costs. Reading the detail of the SRF document, it is apparent that they have been modeling a different operation than that now being proposed.

The round-trip train cost of \$34,174 would need to cover 200 containers each way: 200 loads northbound, 53 loads and 147 empties southbound – even allowing for 100% re-use of the 53 southbound loaded containers. That would be an average of \$170.87 RT for each container. The distance to Seattle is about 211 miles RT, so the SRF estimate is the equivalent of \$0.40 per mile per container. That average is well below any existing rail intermodal average. Moreover, the SRF model assumes run-through intermodal service, while the UP service letter specifies manifest trains. P&W may have a lower cost structure than UP or BNSF, but P&W is only about 50 miles of the 211 miles to Seattle, or about 25%. Note that the P&W letter of 11/9/18 says that \$46,000 is “in the ball park”, but does not specify one way or round-trip.

The SRF model allows \$1,000 for a competitive door-to-port rate. This conceptual rate should be replaced with actual round-trip rates being paid by potential OPW customers. The model also uses a \$300 drayage rate for origin trucking to and from the OPW facility at Brooks. This hypothetical rate should likewise be replaced by actuals. Because commercial drayage rates are round-trip, all comparisons between rail and drayage options should also be round trip.

The SRF allowance of \$101 per container at SeaTac only applies to the Tacoma Rail connection, and is a one-way figure. The round trip figure should be \$203, and verified with Tacoma Rail.

The SRF model does not allow for round-trip drayage between UP's Argo yard and the port marine terminals. Based on a preliminary look at Drayage.com, this cost is likely to be \$175–250.

Evaluation

It is clear that OPW and CIS have made significant progress in recent months toward the goal of establishing the Brooks Intermodal & Transload Center and associated intermodal service.

Unless resolved, the lack of BNSF participation in the process is a fatal flaw for the Brooks project. At this point there is no commitment to serve and no rate information upon which define a value proposition. The ability to meet the demand at a competitive price has not been demonstrated.

The project sponsors have been working to develop a P&W/Union Pacific option, but according to P&W this requires a BNSF waiver. As this service would be in direct competition with BNSF's at T6 in Portland, this seems unlikely to be obtainable on commercially sustainable terms, and again requiring action on the part of BNSF.

As noted in the SRF analysis, the voluminous documentation provided is contradictory at times, making it difficult to ascertain the actual business model proposed. For example, one P&W letter states that they have full interchange with UP, whereas the UP letter says otherwise, and earlier communications from P&W do acknowledge this challenge. In addition train operating costs are variously estimated at \$34,174, \$46,000, and \$60,369.

Tioga's primary concern is the commercial challenge, which remains formidable. A combined truck and rail intermodal service cannot match all-truck rates and service over the very short distance between Brooks and Portland, which is roughly 50 miles. The NWCS option typically sets the competitive price.

Recommendation

While the sponsors have made progress and submitted a large volume of information, the basic question of economic and commercial feasibility remains unanswered. The sponsors have not yet provided detailed information on what the service will cost to operate, what rates will be charged, what services will be offered, or what potential customers are currently paying for the alternatives.

If this process is to continue, a value proposition and revised business model based on real rates and available services should be developed and tested with shippers to determine their receptiveness. This documentation must include:

- The rates CIS will have to charge for intermodal service between Brooks and a connection to the existing BNSF service or UP service at Portland:
 - P&W/BNSF or P&W/UP rates to CIS (or whatever organization ultimately contracts with the railroads), including trackage right payments and any other P&W costs.
 - Rail car costs.
 - Tacoma Rail interchange and lift costs.
 - CIS lift rates (noting that BNSF or UP will avoid a lift at Portland).
 - Allocations of facility maintenance costs.

- Profits or payments to CIS and OPW.
- Actual, all-inclusive drayage rates from customer locations to Brooks versus Portland, and from Argo and SIG in Seattle to the marine terminals. These rates must be based on actual customer experience or specific quotes from the drayage firms customers use. Estimates or Drayage.com examples are not reliable in this context.
- A *pro forma* train service schedule, showing cutoff times at Brooks and corresponding delivery times at Seattle and Tacoma (and the reverse).

The ambiguities regarding P&W routing must also be resolved. The sponsors should provide a clear description of the proposed rail service:

- Routes used.
- Interchange points.
- Terminals served.
- Nature of train service on each segment (e.g. manifest versus intermodal).
- *Pro forma* schedule.
- Improvements or investments required on the proposed routes, and funding plan.

All these comparisons should be round-trip, and clearly indicated as such. If these documented rates and services meet customer requirements – including customer willingness to use BNSF or UP north of Portland – then the OPW proposal may be commercially viable. If not, the service must be subsidized to undercut truck rates. The safe assumption for the business plan is that the ocean carriers will only offer a Portland Bill of Lading, and that any operating subsidy for the Brooks service would need to come from OPW/CIS per the terms of the provided contract.

OPW-MVIC Comparison

Draft of 061219

Purpose

The Oregon Port of Willamette and the Mid-Valley Intermodal Center projects have the same basic purpose: offering Willamette Valley importers and exporters a rail intermodal option to reach Portland, and via Portland to reach Seattle and Tacoma. If this option can save shippers time and money and direct trucks from congested highways, there would be both private and public benefits.

Service Concepts

Although both sponsors present their projects as offering service between the Willamette Valley and the Ports of Seattle and Tacoma, the actual plans are now more modest.

- The OPW project would provide rail service over the Portland & Western (P&W) between a terminal at Brooks and a connection to existing BNSF service from T-6, or to existing UP intermodal or manifest service at a UP interchange point.
- The MVIC would provide connecting UP manifest train service between a terminal at Millersburg and the existing NWCS service at Portland (a P&W connection may be an option).

In both cases, the service would be a direct competitor to truck drayage to Portland, about 50 miles between Brooks and Portland or about 75 miles between Millersburg and Portland.

Terminal Operations

Both proposals have developed workable conceptual terminal designs and engaged potential terminal operators. Tioga assumes that the terminal designs can be refined in consultation with the selected terminal operators, and will present no barriers. Both proposed terminal operators – CIS at Brooks and NWCS at Millersburg – are experienced and capable firms.

Commercial Viability

At this point, therefore, there is no firm basis on which to evaluate the commercial viability of either proposal.

Neither project has demonstrated commercial viability. Neither sponsor has obtained reliable rail rates or car costs and assembled a complete picture of service costs and rates. Likewise, neither sponsor has developed a clear picture of train frequency, connections, schedules, and cutoff times. Finally, neither sponsor has assembled reliable information on competing truck drayage costs.

Contacts by one sponsor have indicated that the ocean carriers will not subsidize the services south of Portland, as they do north of Portland. This outcome is not surprising, as the two proposals are not likely to create any new ocean carrier business or lower ocean carrier costs.

Given the extremely short rail distances and the apparent unwillingness of ocean carriers to extend cross-subsidized service beyond Portland, Tioga believes that the proposed services will not be able to undercut truck rates. The addition of 1–2 days of transit time will also make it harder for the two services to compete with truck drayage.

Rail Service

MVIC. For MVIC, UP would provide manifest train service from Millersburg to Portland and presumably work with NWCS to add the Millersburg cars to NWCS trains to/from Seattle and Tacoma. The MVIC sponsors currently envision 2–3 trains per week, connecting with 3 weekly NWCS trains. Although sponsors have not provided a pro forma schedule, this plan appears to add a day to the current NWCS schedule (i.e. a Millersburg departure on Tuesday would join with a northbound Portland departure on Wednesday. There is apparently an option for P&W service to MVIC, although final details have not been worked out.

Under the MVIC scenario of connecting to existing NWCS trains, customers would not have access to the BNSF service at T-6. Customers of the ocean carriers using the BNSF service would not have access to subsidized Portland Bills of Lading unless the ocean carriers concerned choose to make subsidized rates available for the MVIC service.

OPW. Rail service to/from Brooks would rely on a P&W connection to UP, BNSF, or both in Portland. There are two possible P&W routes.

- North from Brooks on P&W's own line. This line reportedly has clearance issues that could require a minimum of \$2.5 million in capital outlays. No definitive sources for these funds has been identified, although possibilities have been discussed.
- South from Brooks to a connection with UP at Labish, and then north on UP under trackage rights to Portland. This route does not have known clearance issues.

As discussed in more detail in Tioga's supplementary report on the OPW proposal, some aspects of these routing options remain to be clarified, including trackage rights payments or other compensation to BNSF or UP, and the interchange point between P&W and UP.

At Portland and beyond there appear to be multiple options.

- Interchange with UP (which the letter from UP has acknowledged may be challenging), with Brooks cars forwarded to Argo Yard in Seattle or to Tacoma Rail either in manifest service or on existing UP intermodal trains.
- Interchange with BNSF, with the presumption that OPW cars would be added to BNSF trains to SIG in Seattle, or interchanged with Tacoma Rail in Tacoma.

The preference of the OPW team appears to be the P&W/BNSF option, although the materials provided to date are unclear and at times contradictory. While there have reportedly been discussions with BNSF, there is as yet no documentation and the OPW team reports that BNSF has a policy of withholding commitment until a project has been approved. The lack of BNSF commitment or concurrence at this point in the project, however, suggests that BNSF does not see this as an attractive business opportunity, and raises a serious concern regarding project viability .

Under the OPW/P&W scenario, customer would not have access to the NWCS trains or to the subsidized Portland Bills of Lading from NWCS ocean carriers. Under a P&W/BNSF scenario, they would presumably have access to the T-6 service.

At Portland, P&W will have to negotiate detailed arrangements with either UP or BNSF. If the P&W cars are added to the BNSF trains, the containers will presumably be handled in the same fashion at Seattle and Tacoma. If P&W cars are forwarded on UP trains, they will likely be interchanged with Tacoma Rail at Tacoma (at OPW/CIS cost) or taken to UP's Argo Yard in Seattle (from which they must be drayed to marine terminals).

Railcars. Both operators would have to provide railcars, and both have plans to do so although costs have not yet been incorporated in revised business plans. UP's statement that they will not re-handle containers effectively presents either sponsor from offering domestic container service beyond the Willamette Valley-Seattle/Tacoma corridor in which the private railcars will operate. Domestic intermodal service is unlikely to be competitive in the relatively short corridor.

Seattle-Tacoma Operations

MVIC. The MVIC service would connect with existing NWCS trains and use the existing arrangements to move containers to and from Seattle and Tacoma marine terminals (or the reverse). Tioga's understanding is that Tacoma traffic is ordinarily interchanged with Tacoma Rail, and that Seattle containers are ordinarily drayed to and from NWCS's Seattle facilities. Portions of these costs are borne by the ocean carriers.

OPW. The OPW service does not yet appear to have a detailed plan for Seattle or Tacoma connections. It is expected that service via either BNSF or UP north of Portland would deliver Tacoma containers to Tacoma Rail, and would bear the interchange and lift costs. At Seattle, a BNSF service would terminate at SIG and a UP service at Argo. Truck drayage would be required to move containers to/from the marine terminals, but costs have not yet been provided.

Comparison

Based on the record to date it appears to Tioga that both proposals carry substantial commercial and economic risk, but that the development risks associated with the Millersburg terminal site are less, and more easily resolved, than the complex risks associated with the Brooks rail service.

Neither project has presented the information necessary to demonstrate commercial viability, and neither seems likely to be commercially viable on a stand-alone basis.

- Both projects are essentially alternatives to truck drayage between the Willamette Valley and Portland, where they would connect to existing rail services.
- Neither project has provided rail costs, rail car costs, or reliable information on competitive drayage rates.
- Tioga believes it unlikely that either rail alternative can compete successfully with truck drayage.
- The existing NWCS and BNSF services are cross-subsidized by the ocean carriers. This arrangement would apparently not extend to Brooks or Millersburg.

Based on information made available to date, there is a distinct risk that, once approved, a commercially unsustainable project will generate calls for on-going subsidy. Tioga believes it likely that this risk is one reason for railroad reluctance to participate.

The Brooks proposal entails significant risk regarding rail service. BNSF has not provided any documentation of railroad concurrence and commitments as of 6/10/19. One P&W route requires \$2.5 to \$4 million in clearance improvements; the other relies on trackage rights over UP, and interchange points are not settled.

Accordingly, if a choice must be made based on the information provided to date, Tioga recommends approval of the MVIC/Millersburg project proposal, primarily because:

- There are fewer barriers or uncertainties to project implementation.
- The MVIC has a clear, and clearly feasible rail service plan.
- The UP route does not require capital investment in clearance improvements.
- The MVIC service would be able to leverage existing NWCS customer, ocean carrier, and railroad relationships, and market access.