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Memorandum Date: January 3, 2011
Meeting Date: January 19, 2011

TO: Board of County Commissioners
DEPARTMENT: Public Works
PRESENTED BY: Betsy Imholt, ODOT Rail Study Director
Lydia McKinney, Transportation Planning & Traffic
AGENDA ITEM TITLE: DISCUSSION/BRIEFING ON OREGON RAIL STUDY

I. MOTION

No motion is proposed.

II. AGENDA ITEM SUMMARY

The purpose of this work session is to provide an opportunity for the Oregon Department of Transportation (ODOT) to present the Oregon Rail Study to the Lane County Board of Commissioners.

III. BACKGROUND/IMPLICATIONS OF ACTION

A. Board Action and Other History

On August 26, 2010, County Administrator Jeff Spartz forwarded the 2010 Oregon Rail Study to the Board of Commissioners. The 2010 Rail Study is a 179 page reference document that includes Appendices A through M. On September 2, 2010, Commissioner Sorenson requested that staff schedule an ODOT representative to provide the board with a presentation and provide an opportunity for the Board to ask questions and provide comments on the information received to date. Subsequently Commissioner Sorenson suggested waiting until the new Board convened after January 2011.

B. Policy Issues

The following goal and policies from the Lane County Transportation System Plan (TSP), page 46, are relevant to this item:

- **Goal 11: Support efforts to maintain rail transportation and to promote high speed rail development**
Policy 11-o: As feasible, Lane County will participate in efforts to plan, develop, and maintain rail-related infrastructure for high-speed and other passenger rail service.

Policy 11-b: Lane County will coordinate with and support state efforts to comply with federal and state rail transportation requirements by consulting adopted versions of the Oregon Transportation Plan and Rail Plan when making transportation or land use decisions involving rail facilities.

C. Board Goals

The following goal from the Strategic Plan, page 18, is relevant to this item:

- *Contribute to appropriate community development in the areas of transportation and telecommunications infrastructure, housing, growth management, and land development.*

D. Financial and/or Resource Considerations

This is an informational item only.

E. Analysis

The 2010 Rail Study includes an infrastructure assessment of Oregon's shortline railroads, analyses of the state's rail freight inventory, an assessment of expanding intercity and commuter passenger rail services, rail industry trends and mitigation strategies, identification of potential funding sources and strategies, return on investment measures, and an examination of the role for state ownership of rail services. This study precedes and will be the basis for an updated Oregon Rail Plan, a federally-required statewide freight and passenger rail study. This study provides policy makers with information to identify the rail improvements critical for economic development, to assess the potential benefits, and to make strategic investments for Oregon.

IV. ALTERNATIVES/OPTIONS

This is an information item only.

V. TIMING/IMPLEMENTATION

None at this time.

VI. RECOMMENDATION

None at this time.

VII. FOLLOW-UP

Staff anticipates bringing the Oregon Rail Plan back to the Board for review and comment at the time the draft is available.

VIII. ATTACHMENTS

1. Executive Summary of the Oregon Rail Study (entire study with appendices available at: http://www.oregon.gov/ODOT/RAIL/Forms_Publications.shtm#Publications)

Executive Summary

The 2007 Oregon Legislature asked the Oregon Department of Transportation to conduct a statewide rail study to better understand the rail network in Oregon. Unlike highways and transit systems, railroads are mostly privately owned and operated. Although the rail system is key to Oregon's transportation system, its issues, challenges and opportunities are not widely understood.

This report, the *Oregon Rail Study*, is a summary of 13 individual technical reports commissioned by ODOT over the last two years. The studies are wide-ranging and designed to inform policy makers how the rail system in Oregon is being used, how it might be used in the future, and to provide a foundation for strategic investments in the state's rail system.

The *Oregon Rail Study* includes an infrastructure assessment of Oregon's shortline railroads, analyses of the state's freight rail industry, an assessment of expanding intercity and commuter passenger rail services, rail industry trends and mitigation strategies, identification of potential funding sources and strategies, return on investment measures, and an examination of the role for state ownership of rail services.

Report Methodology & Credits

The *Oregon Rail Study* is a summary, prepared by David Evans and Associates, Inc., of 13 rail-related technical studies, which were prepared by three independent teams led by David Evans and Associates, Inc., Parsons Brinckerhoff, and Shannon and Wilson, Inc.

Challenges

Rail infrastructure supports economic development and provides Oregon with a more sustainable transportation option. All Oregon regions benefit from rail investment through improved freight mobility. The *Oregon Transportation Plan (OTP)* forecasts freight demand to grow by as much as 80 percent between the year 2000 and 2030. Without preservation and strategic growth of our rail system, our highway system will experience increased congestion, which the *OTP* identifies as a major issue facing Oregon's transportation system. A degenerative rail system will negatively impact our ports and cause them to become less competitive in an increasingly challenging global economy.

Travel demand for personal and business trips is projected to grow as population and employment continue to increase. Planning agencies forecast population in Oregon will grow from nearly 3.2 million people in the year 2000 to 4.8 million people in 2030, a 50 percent increase,¹ along with a similar increase in employment. Over one million of these new residents will live in the Willamette Valley and they will generate an increase in travel demand that exceeds the available freight and passenger rail capacity

¹ *Forecasts of Oregon's County Population and Components of Change, 2000 to 2040*, Oregon Office of Economic Analysis, 2004.

currently available between Eugene and Portland. This regional growth places a heavy burden on the existing transportation network. Some of the known challenges in 2010 include train delays, the ripple effects on businesses of declining reliability of deliveries, and competition by passenger rail for limited track capacity. Train delay ratios in the Portland area are proportional to conditions seen in the much larger and denser Chicago rail system. Freight trains within the corridor accumulate 100 hours of delay per day at a cost of \$300 per hour, or \$11 million a year in lost time and efficiency.² Without expansion of the capacity of the rail network, future expansion of the Port of Portland will be hindered, shipping costs will increase, reliability will decrease, and shippers may be forced to divert freight away from the region. Passenger rail service frequency between Eugene and Portland cannot grow above current service levels without expanded track capacity. Absent capacity improvements, on-time service performance may fall below the 2009-2010 levels of 68 percent, and the current two hour and 35 minute travel time is expected to increase.

Rail Infrastructure

The Class I railroads operate vast networks across the country and are vital to the national and local economies. Oregon's Class I railroads are BNSF Railway Company (BNSF) and Union Pacific Railroad (UPRR). Both railroads are financially sound and invest billions each year in improving their nation-wide infrastructure. Their future is constrained by congestion due to lack of capacity on their lines, but the track they have is well maintained.

Shortline carriers play an important role in connecting smaller communities and shippers to the national rail system. In contrast to the Class I railroads, Oregon's shortlines have available capacity, but the capital intensive nature of the business combined with the low business volumes have left some shortlines on the brink of closure. The existing conditions of shortline track, bridges, and tunnels are generally in need of improvement and were assessed in detail in this study.

Freight Rail Service

As Oregon faces increasing population growth and freight demand over the next 20 years, robust rail service will be essential to providing efficient and fluid mobility for freight and passenger travel alike. However, unlike the State of Oregon's role in highway system planning, the state's role in planning and influencing the rail system is limited because the vast majority of railroads in Oregon are privately owned and federally regulated. Many forces affect Oregon's rail service: federal regulations, national and regional economic conditions, as well as the markets and operations of the railroads themselves. The state is not in a position to influence all aspects of the rail industry, but there is an opportunity to understand the business strategies of the railroads, the impacts of these strategies in Oregon, and to position Oregon for the ensuing challenges and opportunities.

² *I-5 Rail Capacity Study*, HDR Inc., February 2003.

In the national context, Oregon is not a major player in terms of track mileage or traffic volume. In 2007, Oregon ranked 39th among states for rail tonnage carried; this includes originating, terminating and through traffic. At a national level, the Class I railroads are focused on maintaining network fluidity for their busiest corridors, which predominantly handle coal, chemicals, intermodal,³ and grain movements. Understanding the Class I business model, and how Oregon fits in it, is the first step in determining how Oregon can affect the rail industry in the state.

Class I railroads have increasingly favored movement of large volume, unit train⁴ shipments as a means of obtaining maximum tonnage and revenue on their capacity-constrained networks. Although the Class I carriers are required by law to provide service to all traffic, sometimes the smaller shipments may be unprofitable or even costly to the Class I railroads. For this reason, some Oregon shippers cannot obtain competitive pricing and service.

Shortline carriers play an important role in connecting smaller shippers to the national rail system. In contrast to the Class I railroads, Oregon's shortlines have available capacity, but they are challenged by low volumes and contractual restrictions or "paper barriers" that limit their access to one major railroad.

Several strategies may be considered by policy makers to plan and partner with railroads to preserve and expand rail access in Oregon. Many of the strategies are targeted at creating incentives for the major railroad to continue serving Oregon shippers. These include increasing railroad capacity, developing hub facilities for transloading and aggregating shipments, and purchasing rail cars for Oregon-specific uses. Freight growth projections demonstrate an opportunity to increase rail service in the I-5 corridor. However, the capacity to handle this intra-Oregon traffic exists mainly on the shortlines. In order to serve this market, these shortlines need infrastructure improvements, access to multimodal hubbing facilities, and access agreements with their Class I partners.

Intercity Passenger Rail Service

As population, employment and freight demand are all projected to increase, regional and state transportation plans include some limited capacity improvements, but there are no plans to build capacity into the highway and rail systems to match this projected growth. Accommodating this rising demand for passenger and freight service, especially in the Willamette Valley, presents a major challenge for the rail industry and transportation planners alike.

To continue Oregon's efforts to grow passenger rail service, ODOT commissioned a study of existing rail lines between Portland and Ashland.

³ Intermodal is a term used to describe transporting freight in containers or truck trailers, using multiple modes of transportation (rail, ship, and truck), without any handling of the freight itself when changing modes.

⁴ A unit train is loaded at a single origin and unloaded at a single destination and are typically 8,000 feet long and made up of 100 or more cars.

PORTLAND TO EUGENE

The *Oregon Rail Study* assesses the two existing rail lines between Portland and Eugene for providing improved future intercity passenger service. Without capacity improvements, by 2030 travel times for the existing Portland to Eugene intercity service could lengthen to over three hours each way. With improvements and increased frequency of service, intercity passenger rail ridership could more than double by 2030. However without improvements, ridership will only increase by 49 percent.

Oregon is part of a federally designated high-speed rail corridor, the Pacific Northwest Rail Corridor (PNWRC), between Eugene and Vancouver, BC. This designation was granted in 1994 based on projected ridership, public benefits, and anticipated partnership participation of faster and safer intercity passenger rail in the future.

Today passengers traveling between Portland and Eugene have six daily roundtrip options: two Amtrak *Cascades* trains and three intercity *Thruway* buses, all sponsored by ODOT, and the Amtrak *Coast Starlight*. The two Amtrak *Cascades* trains run from Eugene to Portland in the morning and on to Seattle and Vancouver, BC. Both *Cascades* trains from Portland to Eugene run in the afternoon/evening. The buses run at other times to provide a link to Amtrak train service at Portland's Union Station. The trains run on the UPRR mainline track, which carries many more freight trains on the same route (see Chapter 4). The scheduled travel time each way between Portland and Eugene is two hours and 35 minutes. On-time performance averaged 68 percent in 2009-2010. Significant investment is required to increase passenger service from two to six roundtrips per day, increase average speed from 42 to 65 mph, and improve reliability from 68 percent to 95 percent on-time performance.

The two existing rail alignments studied include the current line used, UPRR, and Portland & Western Railroad's (PNWR) Oregon Electric (OE) line. The OE alternative would attract more riders, be less expensive to construct (approximately \$1.8 billion verses over \$2 billion on the UPRR), and improve PNWR freight service without risking on-time performance of the passenger trains due to high density freight congestion, which exists on the UPRR line. The OE alternative would also improve freight service on the high-density UPRR line by returning its capacity used for the current passenger service to increased freight service.

At the national level, the federal government has recently awarded funds for investment in the federally designated high-speed rail corridor between Eugene and Vancouver, BC from the High-Speed Intercity Passenger Rail (HSIPR) program. This newly created program is the first federal on-going passenger rail program in the United States (US). The next phase to implement higher-speed passenger service in the Willamette Valley is to prepare an assessment in accordance with the National Environmental Policy Act, which will include an Alternatives Analysis to review other potential routes and identify Oregon's preferred passenger service route. Engineering and environmental studies, along with a public involvement process, will be necessary to support the Alternatives Analysis. These efforts are a prerequisite to federal funding for major corridor improvements.

EUGENE TO ASHLAND

The *Oregon Rail Study* assesses extending intercity passenger rail service from Eugene to Ashland on the existing freight line, the Central Oregon & Pacific Railroad (CORP) Siskiyou line. The estimated cost of improvements on the existing rail line exceeds \$2.9 billion, while attracting less than 2,700 passengers per year. Travel time on an improved, existing alignment between Ashland and Eugene is estimated to be just over five hours, which is significantly longer than three hours by automobile, or four hours by bus, and is the primary deterrent to potential passenger rail riders. A new, faster alignment more competitive with the three-hour auto travel time would increase ridership by 50 percent over the five-hour scenario. However, to achieve the three-hour run time would require significantly more than the \$2.9 billion in capital investment to straighten the alignment through rolling and mountainous terrain. Many challenges facing implementation of intercity passenger rail between Eugene and Ashland render initiating passenger service infeasible at this time.

Commuter Rail Service

Like intercity passenger rail, commuter rail typically operates over the privately owned freight rail system. It is distinguished from intercity passenger rail by connecting cities within the same metropolitan area during commuting hours. Another difference is when Congress created Amtrak in 1970, it mandated that the freight system must allow Amtrak to operate intercity passenger service on the system, but exempted commuter rail. Therefore, the railroads do not have to accommodate commuter rail service on their lines.

Since 1997, six studies have examined the idea of adding commuter rail service to the following four Oregon corridors:

- Ashland to Medford, 2001
- Yamhill County to Portland, 1998 and 2008
- Wilsonville to Beaverton, 1997
- Vancouver, Washington (WA) to Portland, 1999 and 2006

Five aspects of commuter rail should be evaluated in any feasibility analysis in order to obtain a complete picture of the opportunities and constraints. The five critical aspects are: outreach to the railroad owners of the track regarding right-of-way and trackage rights, data collection, operating plan assumptions, data analysis, and feasibility assessment.

The *Oregon Rail Study* includes an assessment of extending the existing commuter rail service between Beaverton and Wilsonville to Salem. The assessment revealed that extending commuter rail to Salem is technically feasible, but it faces political and financial challenges, such as lack of support from the host-railroad, PNWR, and lack of identified funding. Ridership is estimated at 3,000 to 4,000 per day. Capital costs are estimated at \$327-387 million and operation costs are estimated at \$5.5-6.9 million per year.



Albany & Eastern
Railroad bridge upgrade, a
ConnectOregon II project

As population and road congestion are projected to grow, state and local leaders are interested in commuter rail as a piece of the transportation solution. Future studies could focus on the recommended study aspects in varying degrees of depth. Though not every study may cover all aspects due to cost or time constraints, railroad outreach should always be considered. Without the cooperation of the railroad, commuter projects on existing freight rail lines are not possible.

Land Use Impacts

Many Oregon communities were settled along the state's rail lines, most of which remain in operation today. Demand for freight and passenger rail is projected to increase, which means more trains will be operating throughout Oregon. The increase in the frequency of trains will present benefits and challenges for rail carriers and the communities along the rail corridors. Careful community planning must be undertaken to avoid creating new conflicts or exacerbating existing conflicts between heavy rail and neighborhoods. The common conflicts between rail and adjacent land uses can be grouped under three issue areas: the impacts of increased train frequency on communities, the ability of shippers to gain access to rail service, and the impacts of community development on freight railroads.

Land use decisions have impacts on freight rail operations and, by extension, the industries served by freight rail. Local jurisdictions nor individual businesses can afford to leave rail carriers out of their calculations regarding development along rail lines. Early involvement of the freight railroads is essential when planning or proposing new uses or development adjacent to a rail line. Whether a city is updating its comprehensive plan, a property owner is seeking rail service, or a passenger station is being considered, involving the rail operator early in the process will increase the likelihood for success for all parties in the short and long terms.

State Ownership

As states recognize the importance of maintaining freight and passenger rail in the transportation system, some have decided to own rail assets. The benefits of state rail ownership are significant and can support the preservation of a key part of Oregon's transportation infrastructure and the businesses and communities that depend on it. State ownership also carries risks. States such as Oklahoma, Wisconsin, Washington and New Mexico have taken on ownership of rail infrastructure with varying degrees of success. These case studies are examined in the *Oregon Rail Study*.

As the rail industry continues to change in Oregon, especially for the shortlines, the state can expect to be faced with more decisions about whether or not to purchase or operate rail lines. Currently Oregon owns 155 miles of rail right-of-way, the Salem passenger rail station, and has assisted other public entities in purchasing rail lines.

However, in preparing for future opportunities that will arise, Oregon can look to other states that own and operate rail lines to inform its future decisions. States that have committed resources to support long term freight rail programs have been the most successful, seeing fruitful operations and growing volumes over time. Other states that own lines without a well-supported program continue to struggle. Purchasing a low-business freight line to convert to a passenger operation, like in New Mexico, requires a strong coalition of public partners from the beginning, because of the higher maintenance and operations costs, and community impacts of increased trains. Lessons from these states can provide insight as Oregon addresses future ownership decisions.

Funding Options and Return on Investment

Oregon has long recognized that communities depend on having multiple transportation options to reduce congestion and support economic development. Robust freight and passenger rail service is part of the solution. However, state funding for this program is limited. Unlike many other states, a permanent funding source for rail infrastructure does not exist in Oregon. Current rail funding is limited to the sale of custom vehicle license plates, which yields about \$4 million per year dedicated to passenger rail programs. This funding, coupled with ticket revenue, does not provide enough to pay for planning, equipment, capacity enhancements, or maintenance. Options used to fund freight and passenger rail programs in other states are presented in the *Oregon Rail Study*.

The Way Forward

The *Oregon Rail Study* provides a foundation by assessing the benefits and costs of enhancing the rail system and what the future role of Oregon could be in maintaining and growing that system, including:

- An inventory of existing shortline infrastructure conditions including costs to replace, repair, or upgrade the infrastructure to make shipping by rail more competitive;
- An updated Oregon commodity flow analysis identifying the corridors with the most freight rail growth potential;
- Strategies for improving freight rail growth in Oregon;
- An inventory of freight rail lines considered “at-risk” of abandonment;
- Three feasibility studies for two potential intercity services (Portland to Eugene and Eugene to Ashland) and one commuter service (Wilsonville to Salem);
- A review of past commuter rail studies and issues to consider when evaluating future commuter rail service;
- An analysis of land use impacts on freight rail service;

- A review of different state ownership models to assist the state in optimizing its role in supporting the rail system, while avoiding some of the pitfalls experienced in the past and by other states; and
- An analysis of state funding options and estimated potential returns on investment.

This information will be used to update the *Oregon Rail Plan*, a federally-required statewide freight and passenger rail strategy, contribute to other state, regional and local planning efforts, and inform policy makers on potential strategic rail investments for Oregon.