Portland-Milwaukie MAX Moving Forward

By Louis Bowerman

If you haven't taken the time to notice, the latest Portland-Milwaukie MAX line is quickly taking shape both on the Westside near the Marquam Bridge and the Eastside by OMSI and beyond to Milwaukie.

With a total length of 7.3 miles, and ten MAX stations starting in S.W. Portland close to Portland State University, the line crosses the Willamette River on a new bridge concept which will carry busses, MAX trains, Portland Streetcars, bikers and walkers but it will not carry automobile traffic. Additionally, with completion of the new bridge, the final loop of the Portland Streetcar will be completed on the Eastside.

Leaving S.W. Portland, the Milwaukie MAX will head East over the new transit bridge passing near OMSI, traveling East under the current McLoughlin Blvd overhead ramp to S.E. 17th Ave. where right-a-way trackage is laid, then heading South paralleling S.E. 17th Avenue to McLoughlin Blvd where it will continue South paralleling the Union Pacific tracks on its Eastern side and McLoughlin Blvd on its West side where tracks are currently being laid. Also, at the Bybee Blvd overpass, a MAX platform is under construction as well as access from the platform to the Bybee overpass. Looking South from here you can see the Tacoma Street overpass, which is nearing completion. Farther south, a massive overpass is also nearing completion, elevated over commercial businesses below it without disruption. Continuing South,
**Interpretive Center Update**

Painting of the interior of the interpretive center is nearly completed. Volunteers have painted all of the wainscot and trim in the office, restroom and hall areas and are now working in the library to complete the trim around the windows, doors and baseboard. Volunteers with paint brushes include Peter Kloosterman, John Nagy and myself.

Charlie applied the primer to the walls and ceiling in the interpretive display area and has painted the ceiling flat black. He is now installing the door trim and baseboard molding and will begin painting the walls within the week. Light fixtures and electrical outlets in the display area are to be installed in the next few weeks as well.

Tom Kneedland has been working to fabricate the solid oak countertops and is planning completion in the next three weeks. The ticket and gift shop windows and screens will be fabricated and installed once the countertops have been finished.

Gene Fabryka has installed the interior doors in the apartment and is now working on the window and door trim.

Projects for spring include installing the fire system connections and the remainder of the utilities, fabricating and installing the kitchen cabinets in the apartment and completing the plumbing connections to the toilets, sinks, showers and dishwasher.

**How we deliver The Transfer**

The Transfer is delivered both electronically and by postal mail. With the electronic copy, you can see all the pictures in full high-resolution color, a big improvement over the black and white appearance in the printed version.

We have established a web site where you can view and download copies of The Transfer. We have set it up so it is also easy to print on your color or black & white printer if you prefer hard copy.

If you wish, we will send you notification when the next issue is available and a link to the web site where you can view the issue or download and print a copy. Please send an email to: transfer@waynejones.net with your name (as shown on the OERHS membership list) and the email address you would like us to send the notification to. Of course, we will respect your privacy and we will only use your email address to send a single notification that a new The Transfer is ready and a link where you can get it. We will never send promotional material or give or sell your email address to any other person or organization. You can see this issue and the previous issues by going to this web site: oerhs.org/transfer.

We also mail black & white copies of the newsletter to all members of record. Not as clear as the color version available at the web site but some members have stated that this process will provide to all the interesting photos that you will always be able to refer back to previous issues. We believe you will appreciate the higher quality pictures that this process will provide to all the interesting photos that accompany our articles.

**Mission Statement**

The mission of the Oregon Electric Railway Historical Society, Inc. is to preserve the regional heritage of electric railway transportation as a living resource for the benefit of the present and future generations.

To fulfill this mission the Society will promote:

- The study of electric railways, their physical equipment, properties and operations, devoting special attention to the electric railways of western Oregon.
- The procurement and preservation of historic electric railway equipment, materials and property.
- The display, interpretation and operation of surviving historic equipment, materials and properties.

By Laws, Article II, 9/14/93

**Official Notice**

The Transfer is published quarterly as the official publication of the OERHS, state and federally recognized not-for-profit institution. Operator of the Willamette Shore Trolley line between Lake Oswego and Portland and a demonstration trolley line at the railway museum in Brooks.

Please send any change of address, your dues and donations to Treasurer

Oregon Electric Railway Historical Society
3955 Brooklake Rd. NE
Brooks, OR 97303
Phone: 503.393.2424
www.oerhs.org

Do you want to be a Motorman?

Volunteers are needed at the museum in Brooks to be trained as Motormen, Conductors, Ticket sellers and Car Barn Tour guides. Saturdays from 10am to 4pm, motorman training on Sydney 1187 and later, other cars. The Museum will again be open to the public in early May 2014 on Saturdays and Sundays. For the weekday projects, contact Bill Binns or Charlie Philpot.

Please come out to the museum and lend a hand. For more information, contact Bob Terkelsen at 503.399.1882.

If you wish to volunteer for the Willamette Shore Trolley, call Rod Cox or Hal Rosene at 503.697.7436 for information about the many volunteer positions that may interest you.

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If you have overlooked paying your dues for 2013 or did not realize that dues are based on a calendar year, this is your reminder that your dues are due. Memberships should be renewed on January 1st each year. New members joining after July 1st should renew on December 31st of the following year. The OERHS is a non-profit 501-C-3 corporation, the benefits of a donation should be discussed with your tax advisor.

- **Active**: $30
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**Mission Statement**

The views expressed herein are solely those of the individual writers identified and of the editor, and may not necessarily represent the views or policies of the Society, its Board of Trustees, Officers or Members.

Articles, photos and letters for publication are always welcome. Please email to transfer@oerhs.org or postal mail to the museum address following.
the right-of-way goes thru downtown Milwaukie paralleling a Portland & Western Railroad timber overpass over McLoughlin Blvd turning South at that point following the right-of-way of the historic Oregon City interurban line to S.E. Park Ave where the line ends. Concrete ties are being used rather than the standard timber ties.

As the right-of-way construction continues, Siemens is constructing eighteen new type five LRV cars at its plant in Sacramento. After delivery, these will bring the fleet to 145 cars (see The Transfer Vol. 18, Issue 2). Also in the same article “Portland Transit Update”, “Siemens is installing the first regenerative energy storage unit in the U.S. which feeds power back into the system during braking.”

Completion of the new Orange Line will be in the Fall of 2015 with then five MAX lines in operation. The new line will expand the MAX system to 60 miles and a total of 97 stations.
Looking North from Bybee overpass with construction of new Bybee MAX platform with Union Pacific (formerly Southern Pacific) and Portland & Western Railroad (PNWR) tracks at right.

Portland & Western tracks to west side California on the left being realigned to accommodate another expansive overpass which goes over several businesses south of the Tacoma Street overpass heading south toward Milwaukie city limits.

Looking south from Bybee Blvd overpass toward Tacoma overpass with Union Pacific and PNWR rail tracks at the left.

Overhead ramp over McLaughlin Blvd heading south on the old interurban right-of-way.

Right-of-way at right of McLaughlin Blvd looking south towards Gladstone and Oregon City.
Maintenance and restoration work continues on the open car as Bill Binns and Peter Kloosterman have been stripping paint and sanding the motorman's cabs on both ends of the car and the open passenger compartments on the south end. Priming and painting will begin when the temperature in the car barn becomes a little more favorable.

Bob Franklin has been working through the winter battling the blackberries and brambles that have been encroaching on the right of way and around some of the maintenance of way equipment stored on the stub track. He has also been trimming back the trees overhanging the track along the west side of the grounds. Ron Vandehey cut up a few trees that had come down in a February wind storm and worked with Bob to clean up the debris.

Ron has also been working on the ballast dump car to prepare for track work later this spring as well as performing maintenance on the tamper. He has retrieved the batteries from all of the maintenance equipment, cleaning, recharging, testing and preparing them for re-install.
Sun Link was the first city after Portland to order cars from United Streetcar in Clackamas. Sun Link ordered eight model 200 cars for operation on the 3.9 mile starter line in Tucson. Model 200 cars have higher capacity air conditioning that is required for this hotter area. This is the only difference between model 100 and model 200.

The first streetcar #101 arrived in Tucson on August 30, 2013 with testing beginning almost immediately. Maximum speed was found to be 43.5 mph. Car 102 arrived October 16, 2013. Car 103 arrived January 7, 2014, Car 104 arrived February 4, 2014, and car 105 arrived in March 18, 2014 with the last three cars to arrive before the middle of May at four-week intervals. Testing begins almost immediately after arrival.

Sun Link is hiring and training eighteen operators and six supervisors are being trained to be ready for opening the streetcar line scheduled for July 25th. The Federal Transit Administration requires six cars to be in operation with two spares. Each car must be fully tested and accepted prior to opening or a waiver from the FTA, which has been requested by the city, must be approved. The city believes that the last two cars will be ready for service by that date. Already over $800 million has been invested in new construction along the route which extends from the University to the Westside. The streetcar project cost itself is close to $200 million.
Would you believe Washington DC transit authorities visited Portland to observe first hand the economic stimulus that was a result of building the MAX and Portland Streetcar lines. Would it also work in DC?

In 2003 proposals were made to build a streetcar system that would span all eight wards in the District. A priority system would be 22 miles long and the optimum system would be eight lines and 37 miles. Due to all the financing and political problems that hampered the project, in 2010 the District Department of Transportation (DDOT) was formed to provide a full range of services to ensure the successful design, construction and operation of the streetcar system. Originally the first line was expected to open in 2008 and in their enthusiasm three streetcars were purchased from Inekon in the Czech Republic and ten placed into storage there. Because of high storage costs, the cars were loaded aboard a container ship and arrived in the US on December 12, 2009 and placed into storage in Metro's Greenbelt Rail Yard.

Track laying had started on the Anacostia line but when the Benning line was chosen as the starter line, these tracks were paved over. The 2.4 mile H Street Benning Road line between Union Station on the West and Anacostia River on the East is the starter line that goes through a blighted area that needs redevelopment. A 14,000 sq. ft. twelve car carbarn, shop and office was completed in 2013 and the three Inekon cars were transferred to there from storage in December 2013. Testing of the cars began in the shop immediately and on the line on December 13.

DC had ordered two Model 100 United Streetcars and on August 3, 2012 increased the order to three cars. The first car was delivered to DC in January 2014, the second in February and the third is scheduled to be delivered in June. In shop testing began almost immediately after delivery and on the line the following...
DC Streetcar, continued

Week. Each streetcar is required to undergo rigorous safety and system testing mandated by the Federal Transit Authority before passenger service begins. Plans are to open the streetcar line free to riders on the same day that the Metro Silver line is opened about September 1st.

The roster consists of three Inekon cars and three United Streetcars. The car shop building was built with future expansion in mind. The next line to be built is the North-South line which is now in the initial development discussion.

Delivery of first United Streetcar to H-Benning for safety testing.

DC Streetcars under construction at United Streetcar in Oregon.

Another view of streetcars under construction at United Streetcar.

View of the cab controls during on-line testing.

Photos and route map from DC Streetcar web site: www.dcstreetcar.com
My visit to Oregon this year for the OERHS banquet and meeting included one day that was devoted to rail fanning with my friend Dick Harrison. The trip began on November 7th when I took Amtrak Cascades train #513 that departed Seattle at 11:25 A.M. and arrived in Portland at 3:05 PM. The wide leather seat was very comfortable and the coffee was good too. Upgrades along this rail line is part of $600+ million budgeted to increase capacity and allow Amtrak to operate on a faster schedule. I enjoyed observing all the construction activity that was evident from Seattle to the Oregon border. Also, senior fares mid week are reasonable.

Dick and I met the next morning to retrace the Oregon Electric line from Multnomah Village to Tigard and beyond to Wilsonville. We photographed the area where the Multnomah station had been and worked our way west scouting both the original line and the new line on which Multnomah Blvd. was later built.

The line from Garden Home to Tigard is hard to follow but the map shows the dead end streets between where the old OE line was located. Houses and apartments have been built on some segments but east of Washington Square where the line crossed Oak St. a short section of right-of-way on the north side of Oak has been fenced while brush hides it on the south side. The line from this point to highway 217 crosses a lowland and is hard to distinguish the exact location.

The OE line from Greton south to just north of the highway 99W overpass has been abandoned and the new junction installed for directional running past the Tigard station. Tigard street is a good location to photograph trains in the afternoon as the sun will allow good 3 quarter views and good parking is close. The commuter trains meet in Tigard and is a good location for photographs. Yamhill County Transit also uses this station as does TriMet buses.

The line was rebuilt using welded rail on concrete ties except at switch points and is very impressive. Gauntlet tracks were built at the stations which the freight trains use for greater side clearance. Each station is similar but are not identical. All have high level platforms for faster loading and unloading and for ease of wheelchair usage. Passengers are loaded on the RDC’s through the baggage door.

The Wilsonville station is the south end of the passenger service and a large parking lot is located immediately west of the station. TriMet buses and Cherriots buses from Salem also serve this station. The station platform is good for photographing the passenger cars while being serviced after the morning runs. A telephoto lens really helps though.

The shop is a new building built to service and repair the passenger cars and is operated on a three shift basis. It was designed to service a larger fleet that someday may be operated. The only equipment missing is a car wash.

The roster consists of three powered Colorado Cars and one trailer car. Two Budd RDC-2’s are backup units which were originally CN and later were sold to the Alaska Railroad. The Budds have Cummins diesels while the Colorado cars use Detroit diesel engines.

The present schedule shows eight morning trains and eight evening trains. The first train departs Wilsonville at 6:21 AM and every 30 minutes with the last at 9:21 then at 3:28 PM and every 30 minutes with the last at 6:58 PM. From Beaverton the first departs at 5:58 AM and the last at 9:28. In the afternoon, the first leaves at 4:05 PM and the last at 7:15PM. Passenger service opened Feb. 2, 2009, five years ago and has carried over 1.9 million riders. Ridership has been increasing at a rate over 11% a year with the most recent Dec 2013-Feb 2014 period showing over 20% increase; and now the line is experiencing crowding on some of the scheduled runs. Additional cars are needed and the best available are the 13 RDC’s owned by Trinity Rail in Dallas/Ft Worth.

The best time to photograph the cars are in the afternoon when the sun shines from the southwest.
United Streetcar

The U.S. Government became interested in developing a domestic industry for the manufacture of streetcars in the U.S. After reviewing Portland and Seattle streetcar operations, it determined that such an industry could meet the 60% domestic content required to qualify for federal funding of streetcar projects and an industry that would provide good paying jobs that foreign countries now enjoy. Oregon Iron Works was interested and formed United Streetcar Company at their plant in Clackamas. The government funded a prototype car that was built under license from Skoda. It is Skoda model 10-T-3 and United model 100 eventually becoming Portland Streetcar #015. It was completed in January 2007 and underwent extensive testing and equipment change outs and entered service on September 22, 2012 on Portland Streetcar lines.

United's production model 100 underwent many changes and modifications through the testing phase of the prototype and the early production models. The changes made during testing reminds me of the testing what the earlier PCC's and later the Boeing LRV cars underwent to find and improve the underperforming parts and equipment. From the comments that I have heard, the United cars now have smoother riding qualities and have back-up systems to reduce possible breakdowns during operations. A decade of improved electronics are incorporated into the United cars when compared to the Skoda cars.

Will United Streetcar become a leader in the domestic industry? Time will tell as foreign manufactures of light rail cars are now assembling streetcars in the U.S. The roster of cars on order and or delivered are:

- **Portland Streetcar**: Seven cars- model 100 prototype car plus five cars in operation and one car under construction.
- **Sun Link Streetcar Line, Tucson**: Eight model 200 cars ordered, five delivered and undergoing testing as of Mar 18, 2014 with the remainder to be delivered at the rate of one every four to six weeks.
- **DDOT, Washington D.C.**: Three model 100 ordered, two delivered and the third due in June. DDOT purchased three Skoda cars which were completed in Spring 2007 and placed into storage.

United Streetcar's total streetcar count is 18. Will there be additional sales? United built a test track at their facility in Clackamas which should come in handy for ongoing testing of their new cars.

Pacific Northwest Transit Updates

**South Lake Union Streetcar**

The South Lake Union area is undergoing a rapid change. Small warehouses and store buildings are being razed and replaced by high rise buildings resulting in a shortage of parking spots. The streetcar opened on Dec.12. 2007 and continues to show ridership gains every year. With only a three car fleet, only two cars are in operation with the third car used to alleviate crowding. A forth was ordered and is slated to be delivered in Spring 2014. This will allow three car operation for the three rush hours, morning, noon and afternoon as well as special events at the South Lake Union waterfront park.

Ridership has increased every year as follows: 2009: 10.9%, 2010: 11.55%, 2011: 13.7%, 2012: 10.5%. The major employers are:

- Amazon, UW Research Campus,
- Seattle Cancer Care Alliance and
- Bill and Melinda Gates Foundation.

Even the Greyhound Bus station, originally the site of the Seattle-Everett Interurban station, will be replaced by a high rise office building. The Greyhound bus station will be located in the SoDo district a few blocks from the Amtrak station.

**First Hill Streetcar - Broadway Line.**

The trackwork has been completed and the last of the overhead trolley line is being installed. New concrete sidewalks being laid, painting of traffic lanes and thousands of details to finish the construction project. The extension of the Broadway line north to E. Aloha St. is in the engineering stage.

The streetcars are being assembled in Seattle by Pacifica Marine Inc. and Inekon Group. Pacifica specializes in refurbishing and fabricating transit vehicles and has worked on the Talgos, Monorail and streetcars. Deliveries of the cars are expected this spring and early summer.

**Streetcar Expansion**

The city is considering a downtown streetcar line to connect the Broadway line with the South Lake Union line and have narrowed it to two routes. One option is connect with the Broadway line on 1st and Jackson and then north to a street to the Westgate Center and the South Lake Union line. The cross street has yet to be determined. The 2nd option is to connect to the Broadway line on 5th Avenue and then use 4th and 5th Avenues to reach the Westlake Center and the South Lake Union line.
You could say my career has been the reverse of the general transportation industry starting with airplanes and ending with turn of the century trolleys. My first job was in the Air Force as an aircraft mechanic where I learned the intricacies of modern aircraft. Then I moved forward as an FAA-Certified aircraft mechanic working in four states over the next seven years before coming back home to Portland. In 1974, I was hired by Tri-Met to work in the bus body shop where I stayed for seven years. Subsequently, as early discussions of bringing light rail to Portland were going on, I was involved with promoting the concept of light rail as a better alternative to cars and ever increasing highway construction. The killing of the Mt. Hood Freeway had taken place. This event led to funds for the MAX line to Gresham. I became an LRV Technician to learn many new skills alongside manufacturing engineers, designers and operators to keep MAX moving and expanding. When Portland was talking about the Vintage Trolley project, I worked on the restoration of the original Council Crest 503 car and subsequently on the Gomaco replicas of 503 that arrived in 1991 for Vintage Trolley operation. Now, capping my career, I am helping to restore Vintage Trolley 514, and hopefully later 513, for operation on the Willamette Shore Trolley Line in Lake Oswego.

My story has been an interesting journey. In 1976, as a member of the Oregon Association of Railway Passenger (OreARP), I was involved with convincing politicians and the public in general to add Light Rail to the Banfield Highway Project. This ultimately became the MAX line between downtown Portland and Gresham. Public sentiment towards rail as an urban people mover was mixed with many citizens still favoring the automobile and building more highways through neighborhoods. As a means to turn opinion, I traveled to Edmonton, Alberta to film a documentary to show how Light Rail Transit could successfully integrate into a city. This documentary was shown to several businesses and citizen interest groups. After the project was approved, Tri-Met had to plan, design, and build the system, a huge learning process that I was happy to be a part of. I remember the delivery of the first LRV cars from Bombardier in 1984. Like most new technologies, there were many issues to sort out before the cars and system was ready for public use. Over a two-year period, we developed 1500 modifications to get the MAX Type 1 LRVs to be a successful rail vehicle and enable MAX to open on Labor Day weekend in 1986. Over 150,000
passengers came out that weekend to welcome the new trains from Gresham to Portland. I felt good that Rail Transit was coming back to Portland.

In 1980 I was at Tri-Met's Center Street Garage where I worked on the restoration of the original Council Crest Trolley car 503 which Tri-Met displayed in downtown Portland. After this exhibit, 503 was sent to San Francisco where it operated for several summers on tourist runs. It was back in Portland in 1984 to welcome the first LRV car delivery to Ruby Junction.

In 1991 when the four Gomaco replica cars arrived for the Vintage Trolley tourist operation, I signed up to be a mechanic to specialize on maintaining these vehicles in Portland, a job I held for thirteen years.

I also worked on the MAX line ticket vending machines for several months. I was given a radio call number as “291”, which led to confusion with MAX Control dispatch. My pronunciation of “291” was mistaken several times by dispatch as “Train One”. So my radio call name became “Trolley Dave” at MAX Control, a name I continue to use.

My activities at Tri-Met included being a training instructor for rail employees to obtain Commercial Class A driver licenses, and a welding instructor of several years. I retired from Tri-Met after 30 years of dedication.

In 2013 I was invited to help restore Vintage Trolley 514 and possibly VT 513 for operation on the Willamette Shore Trolley Line in Lake Oswego. That process continues.