

LONG FORM (for historical record) Entertainment Report for December 5, 2015

December 5, 2015. Jim Schantz's Seashore Trolley Museum Update. Jim Schantz started off the summary of Seashore projects with a photo of the parlor car from the City Of Manchester Street Railway, which had been rescued from an afterlife as a children's playhouse. After restoring this car recently, Seashore got a request to build a duplicate of it for use down in Florida on a private estate to connect the main residence with the waterfront. The first challenge was finding the Brill Model 21 truck (bogie) for this streetcar. Seashore got one from Texas, that had been sitting outside for about 20 years, but which still had the motors in it. Seashore personnel tested the motors using an arc welder as a current source, to determine condition of the motors and suitability for battery operation. The truck was slightly longer than in the City of Manchester car, so the replica will be about 2 feet longer than the original. Jim showed photos of the replica under construction; it has a fiberglass floor and superstructure instead of wood, to enable easier manufacture by a boat builder, which is serving as the contractor in this construction. This replica is expected to be complete some time in 2016.

Seashore Trolley Museum is now 76 years old, and the Town House Shop needs roof replacement (including reinforcement to handle snow loads), which will begin soon. Fairview Carhouse, Highwood Carhouse, and Central Carhouse will also need improvements, including an extension of Fairview Carhouse. The Library Group is active and publishing. Jim showed photos of these buildings and others on the museum grounds.

Next were cars which have been recently restored, are under restoration, or are scheduled for restoration. This started with Cleveland Center Entrance car 1227 (shown in restoration, and then after the restoration was complete); this car received its dedication in 2015. Seashore obtained a partially restored matching trailer from this car from the former Trolleyville collection in Ohio. New seats have been fabricated for the trailer since its arrival in Maine and it is hoped to have an operating two car Cleveland center entrance train in several years. Portland Lewiston car Narcissus was shown in an early stage of restoration — this car once transported President Theodore Roosevelt, so the Theodore Roosevelt Association may help with this. Blackpool Standard car 144 (double decker) is in restoration and should be running in 2016. Lexington & Boston (eventually Middlesex & Boston) car 41 was shown in restoration; it was saved from the fate of all other streetcars from the Middlesex & Boston by being made into a diner in Natick. Bay State Street Railway car 41875 was shown in restoration — this type of car was the basis for the closed replica streetcars running in Lowell. Montreal Tramways boat observation car 2 had run in Montreal for nearly 50 years, and then at Seashore for nearly 50 years, and is now being restored. Connecticut Company car 838 and TTC 2890 (Peter Witt) are also being restored. Boston Center Entrance car 6131, which had been converted into a sand car, is due for restoration, along with Boston Center Entrance car 6270, which will first be used as a template for the restoration of 6131; the restoration of 6131 is quite advanced, and financial support of all Boston enthusiasts who would like to ride on a center entrance car is encouraged.

The next photo was of New York Subway cars at the museum: Hi-V, Redbird, and R-9s, followed by a photo of contemporary cars Eastern Mass semiconvertible 4387 and Boston Elevated Railway (Type 5) 5821. Seashore also recently restored DC Transit PCC 1304 (Jim showed exterior and interior photos of this), and Lehigh Valley Transit car 1030. (a high speed car), followed by Chicago, North Shore & Milwaukee high speed car 755. Next was Atlantic Shore Steeplecab locomotive 100, notable for having a wood carbody. Next was Wheeling, WV car 639, the only preserved and operable Cincinnati "rubber stamp" curved side car, and then Connecticut car 1160 shown adjacent to visiting Ford Model A automobiles.

Seashore has a "Speakeasy" community event to sponsor streetcars by raising operating bonds; the event in 2015 featured Depression era costumes. Next year will feature costumes of the 1950s and 1960s.

Seashore helped Lowell with the construction of the streetcar system in the 1980s, and has stayed in close contact with Lowell city transit officials, and maintains a museum presence in Lowell, including a museum car and exhibits about historical city transit. Recently, Lowell has made plans to expand the system, to connect the university campus, downtown, and the commuter rail station and an important hotel. AECOM, which is a contractor for the MBTA's Green Line Extension, has already been involved in contracts for passing sidings and switch/frog upgrades in Lowell. A Request for Proposal for operations has been issued. One of the challenges of expansion is wheel profile testing. Much of the Lowell track was old Boston & Maine railroad track, which was designed for wide wheels with deep flanges set somewhat narrower than streetcar wheels. This is compared to streetcar track, which was built for narrower wheels with shallower flanges, with somewhat wider spacing. Even though both track gauges are nominally standard gauge, the differences can cause derailments in case of mismatch — heavy rail equipment is designed for looser tolerances of track gauge (as might be expected when heavy rail equipment has historically included long rigid wheelbases). The narrow streetcar wheels can fall in between the tracks when they are in the wider region of the tolerance range, or fall into the grooves in heavy rail switches; conversely, the deep flanges of heavy rail wheels can exceed the depth of grooves provided in street-running streetcar rails (flange rails) and in streetcar switches, or (due to their narrower spacing) can even fail to fit into the grooves altogether. It is possible to build rail vehicles that can run on both types of track, and it is possible to build track that can accommodate both types of rail vehicles, but it is not safe to assume that existing equipment will be compatible, so testing is necessary. Jim showed a map of existing and proposed streetcar trackage. ADA compliance is another challenge — historic streetcars were not designed for accessibility to people having disabilities, so integration of provisions for this into the streetcars and/or the boarding areas requires careful design.

Jim showed us the APTA Streetcar and Heritage Trolley web site home page. This web site provides knowledge resources for planning streetcar systems, to provide for safe operation without the need for government (legislative or administrative) regulation. The site also lists recently opened and future streetcar systems, including expansions of existing systems. Jim showed photos of some of the systems listed on the site: the New Orleans Loyola/Union Passenger Terminal line (heritage replica streetcars), the Salt Lake City Sugar House Streetcar (modern light rail vehicles), Tucson Sun Link Streetcar (modern light rail vehicles built by United Streetcar in Oregon, which is now defunct), Atlanta Streetcar (modern light rail vehicles), the Dallas streetcar (modern light rail vehicles, featuring off-wire battery operation, built by Brookfield Equipment Corporation in Pennsylvania), Charlotte Gold Line (heritage replica cars built by Gomaco in Iowa — these are to be replaced by modern cars when phase II of the line is built), a map of the New Orleans proposed Rampart/St. Claude and Canal Terminal line (using more heritage replica cars), a map of the St. Louis Delmar Loop Trolley (not actually a loop, to use replica cars built by Gomaco, obtained second hand from Portland, Oregon), the Washington DC H Street/Benning (modern streetcars built by Anacostia Inekon and United Streetcar, project delayed by over 10 years due to political fighting), the Seattle First Hill Streetcar (featuring downhill battery operation with modern streetcars), El Paso's (heritage trolley line under construction, with a photo shown one of the PCCs left derelict next to the airport, on a trailer awaiting restoration, including air conditioning and new Brookville bogies), the Kansas City Streetcar system (modern streetcars built by CAF, shown on truck being delivered and under powered testing), the Cincinnati streetcar system (similar to Kansas City, being delivered — incomplete Cincinnati subway also shown, including a 1 mile walkthrough and photos of the station entrance and tunnels).

Next, Jim showed us Brookville Equipment streetcar orders for Milwaukee (on order — rendering shown), Detroit (on order), Oklahoma City (on order), San Pedro (Pacific Electric replica, service suspended and closed due to Port of Los Angeles construction), Tucson Old Pueblo (replica, service suspended due to rollback accident), Memphis (heritage and heritage replica streetcars, service suspended due to fires, of which Jim showed a photo).

The APTA Streetcar Committee has a standard for heritage trolleys and guidelines for modern streetcars, and a level boarding background memo, along with a document about off wire trolley operation (State of the Art in Alternative Power Systems, spurred by objections to overhead wires). These can be found on the committee's website at www.heritagetrolley.org. The latter includes Ground Level Power Supply (GLPS), Onboard Energy Storage System (OES—usually battery and/or supercapacitor), and Onboard Power Generation System (OPGS), as well as hybrids of these. Jim showed slides listing advantages and disadvantages of each of these; one of the non-obvious potential disadvantages is the risk of being tied to one vendor. This segment of the show included photos of the Bordeaux tram (GLPS) and the Dallas Streetcar (OES/battery for operation over the bridge). Eight systems use GLPS; nine systems use OES; four systems use OPGS. Due to volume of manufacture, the technology for energy storage is driven by the automotive sector. In some cases, OES enables charging at stations, although most current usage has sections of operation under wire.

Brookville Equipment Company (in Brookville, PA) presented their streetcar systems to Jim, including the energy storage system slide, and Jim in turn showed their slides (including a cab photo from one of the Dallas "Liberty" streetcars). Jim also showed slides from Alstom, including GLPS and OES for use in the planned Rio de Janeiro light rail system that will use Citadis streetcars.

Jim showed us some of the tram lines in France (now up to 30 lines, from a low of 3 achieved after abandonment of most of France's streetcar systems). All of the lines shown were in Paris greater metropolitan area, and operated by Régie Autonome des Transports Parisiens (RATP, the operator for most public transit in the Paris greater metropolitan area), except for line T4, which is operated by Société Nationale des Chemins de fer Français (SNCF, the French national railway company); these tram lines use proof of payment fare collection with computerized validation and counting. This started with a photo of a France Standard Tram on Paris Tram line T1 (opened in 1992). The France Standard Tram is a recent equivalent of the US SLRV, including a government mandate for transit systems to use it, which three of the early French systems (Paris, Rouen, and Grenoble) used. These cars are 70% low floor to enable use of standard bogies in the end segments, similar to MBTA Type 8 streetcars, although with less requirement to handle extremely sharp curves. This design is used on line T1, and was formerly also used on line T2; it has been supplanted by several varieties of 100% low floor cars for later lines. Note that 100% low floor cars have (at a minimum) a type of multiple articulation known in the early Twentieth Century as "two rooms and a bath" (with longer versions having more segments of each type); this type of articulation exhibits undesirable behavior (from the point of view of both quality of ride and safety) when entering sharp curves, unless the curvature is increased progressively heading into the curve, and then decreased progressively coming out of the curve. Paris Tram lines T2 (opened in 1997) and T3 use different models of Citadis cars; T3 is actually two lines connected end-to-end: T3a (opened in 2006) and T3b (opened in 2012). Paris Tram line T4 uses Siemens Avanto U 25500 cars adapted for tram train operation, running under commuter rail electrification (25,000 V @ 50 Hz) on heavy rail track instead of streetcar track. Paris Tram line T5 uses Translohr model STE3 rubber tired trams with a single guide rail, in an unsuccessful attempt to save on system cost; these have three segments each (Translohr vehicles were originally built by Lohr Industrie, and now by a consortium of Alstom and Fonds Stratégique d'Investissement). Paris Tram line T6 uses similar but much longer rubber tired trams (Translohr model STE6, of six segments each). Both models of rubber tired trams provide a surprisingly rough ride. Paris Tram lines T7 and T8 use yet another model of Citadis cars; these are the only lines (aside from T3a/T3b) to use the same cars as each other; one photo of line T7 featured an out of service Concorde aircraft in the background.

This show ended with a Question and Answer session; material from this session has been incorporated into the relevant sections of the above summary of the show.

SHORT FORM (for Annual Report) Entertainment Report for December 5, 2015

December 5, 2015. Jim Schantz's Seashore Trolley Museum Update. Seashore Trolley Museum chair Jim Schantz provided an update on recent progress at Seashore, including restoration of some important Boston cars, Seashore's activities in Boston, and recent developments in expansion of the trolley system in Lowell (including plans for a museum presence). Finally, he reported on the museum's participation in the streetcar activities of the American Public Transit Association and the Community Streetcar Coalition, and involvement with new streetcar projects across North America, with bonus photos of Paris trams and new US-built modern light rail vehicles.

—

Lucius Chiaraviglio | lucius1@verizon.net (main)
| lchiarav@gmail.com (photos & BSRA)
| lchiarav@yahoo.com (alternative)
| lucius1@post.harvard.edu (fwd only)