

# THE LIBERTY BELL ROUTE'S 1000 SERIES INTERURBAN CARS



History  
and  
Roster



## THE LIBERTY BELL ROUTE'S 1000 SERIES INTERURBAN CARS

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Lehigh Valley Chapter

National Railway Historical Society, Incorporated

Allentown, Pennsylvania

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**COVER PHOTOGRAPH — Southbound Car No. 1007 speeds along  
main line near Coopersburg, winter, 1940.**

Photographer — Donald W. Furler

**PRINTER — A B C Printing & Photo-Offset, Bethlehem, Pa.**

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Lehigh Valley Chapter, National Railway Historical Society, Incorporated dedicates this history to two charter members who were closely associated with operations of Lehigh Valley Transit Company's 1000 Series interurban cars.

CHARLES W. HOUSER, SR., operated 1000 Series cars either in extra or regular Liberty Bell Route passenger service from their introduction in 1939 until their withdrawal in 1951. Charlie, a stickler for detail, possesses records which reveal that he operated each of the fourteen cars many hundreds of miles.

ELWOOD C. McELLROY, employed by the maintenance department before qualifying as a city-surburban street car operator in 1942, serviced 1000 Series cars between schedules and maneuvered them over carbarn trackage. During emergency situations, Mac also operated the cars between the main line and the carbarn.

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## PREFACE

Sleek compact high speed lightweight single end electric interurban cars, representatives of a type constructed only in limited numbers, staged their last dramatic stand on Lehigh Valley Transit Company's famed Liberty Bell Route, or Philadelphia Division, in eastern Pennsylvania. From 1939 until 1951 thirteen former Cincinnati and Lake Erie Railroad Company cars and one Indiana Railroad Company car, all adorned in a glistening picador cream and mountain ash scarlet paint scheme, streaked up hill and down dale through rolling "Pennsylvania Dutch" countryside and towns between Allentown and Union, or 69th Street, Terminal nestled in Philadelphia's western suburbs near city line. Lehigh Valley Transit Company acquired the modern cars during their extensive 1938-1940 modernization program, a program the magnitude of which only a few electric street railway systems ever successfully conducted.

Chronologically, the fourteen cars, identified as the 1000 Series cars, represented the Liberty Bell Route's renaissance. A steady decline of passenger revenues and increase of oppressive operating costs during the decade preceding 1938 had moved the transit company to the brink of complete autobus operation. The 1000 Series cars also permitted the Liberty Bell Route to complete the interurban gamut during a half century of operations. Large wooden cars equipped with a few luxuries had inaugurated services in 1902, larger heavier higher speed composite and steel cars equipped with passenger comfort innovations operated from 1912 until 1939, and the faster compact higher speed cars served the finale when operating costs as well as speed and comfort strongly influenced operations.

Lehigh Valley Transit Company's personnel accepted the modern cars with mixed emotions. Rugged shop men who had serviced the heavy majestic 800 Series cars during the system's "golden age" despisngly likened the lightweight interurban cars to oversized electric autobuses operating on rails, but operators who alone toiled diligently to maintain schedules which served many stops appreciated the fast acceleration and braking qualities. Liberty Bell Route's patrons, the people whom the officials strove to accommodate, immediately accepted the luxurious modern cars. However, a tragic fatal collision which involved a lightweight car and a heavy freight car later caused a degree of defection.

Lehigh Valley Transit Company's modernization of city, suburban, and interurban cars and rehabilitation of most rail routes established Allentown as a Mecca for electric railway enthusiasts and historians. Organizations and societies from various localities sponsored tours over most routes in both older and newer rolling stock before and after World War II. The 1000 Series cars attracted the larger share of attention and became one of the most photographed cars in the United States.

This publication, the seventh produced by Lehigh Valley Chapter, National Railway Historical Society, Incorporated, presents the complete history and roster of Lehigh Valley Transit Company's 1000 Series interurban cars. A brief review of operations in Ohio and Indiana permit the presentation of their complete history from their inauguration of service in mid-west America to their demise in eastern Pennsylvania.

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# THE LIBERTY BELL ROUTE'S 1000 SERIES

## INTERURBAN CARS

### INTERURBAN ERA DECLINES

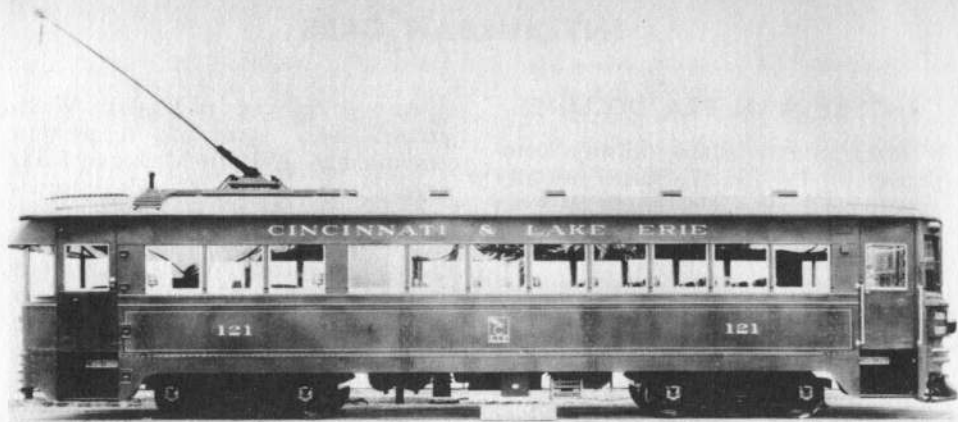
Electric interurban railway companies in the United States initially experienced serious competition from privately owned automobiles during the decade which followed World War I. Most companies first reacted by offering improved services operated by modernized older heavier steam railroad type cars which had been built during the two previous decades. However, this action failed to produce anticipated results and forced the electric railways to pursue one or more phases of an operating cost reduction program adjusted to diminished operational demands: total abandonment of unprofitable routes, curtailment of services, single tracking double track right of way, elimination of stations and station employees, reduction of maintenance crews, closing of substations, acquisition of standard lightweight less power consuming electric cars, substitution of one man operation for two, and introduction of faster passenger schedules.

### CINCINNATI AND LAKE ERIE RAILROAD COMPANY FORMED

Dr. Thomas Conway, Jr., president of Cincinnati, Hamilton and Dayton Railway Company, opposed the trend and, instead, created a new lengthy high speed electric interurban system in Ohio by merging Indiana, Columbus and Eastern Traction Company; Lima Toledo Railroad Company; and Lima City Street Railway Company into the main organization on December 31, 1928. Officials identified this new railway organization as Cincinnati and Lake Erie Railroad Company effective January 1, 1930. The organization together with operating

rights over trackage of Eastern Michigan Toledo Railroad, a system controlled by Eastern Michigan Railways, comprised a 269 mile interurban route which extended from Cincinnati, Ohio, located on the Ohio River, to Detroit, Michigan, located on the shore of Lake Erie. Main line trackage also served Hamilton, Middletown, Dayton, Springfield, Lima, and Toledo, another Lake Erie port, and a projection extended eastward from Springfield to Columbus.

During merger and expansion proceedings, officials of Cincinnati, Hamilton and Dayton Railway Company recognized the lack of qualities of the current standard type lightweight interurban cars in relation to planned operations over their expanded rail network. Accordingly, representatives of Cincinnati, Hamilton and Dayton Railway Company; Cincinnati Car Company; General Electric Company; and Westinghouse Electric Company together designed an extraordinary car which reflected automotive influences. Basically, the group developed a single unit one man operated low streamlined comfortable lightweight interurban car, not much larger than an average double truck city-suburban car produced before World War I, equipped with safety features and a quick acceleration electric system which produced a balancing speed of ninety-two and eight-tenths miles per hour. By applying aluminum structural shapes and body plates to a steel skeleton frame, the designers reduced the car's weight to one-half of that of older types. In 1929 Cincinnati, Hamilton and Dayton Railway Company placed two orders of ten cars each with Cincinnati Car Company, Cincinnati, Ohio. The builder identified the orders as Nos. 3050 and 3055.



Collection of Barney Neuburger  
Cincinnati Car Company's builder's photograph of car No. 121 (LVT No. 1003).



Collection of David E. Crawford  
Interior view of the lounge compartment of car No. 127 (LVT No. 1004).

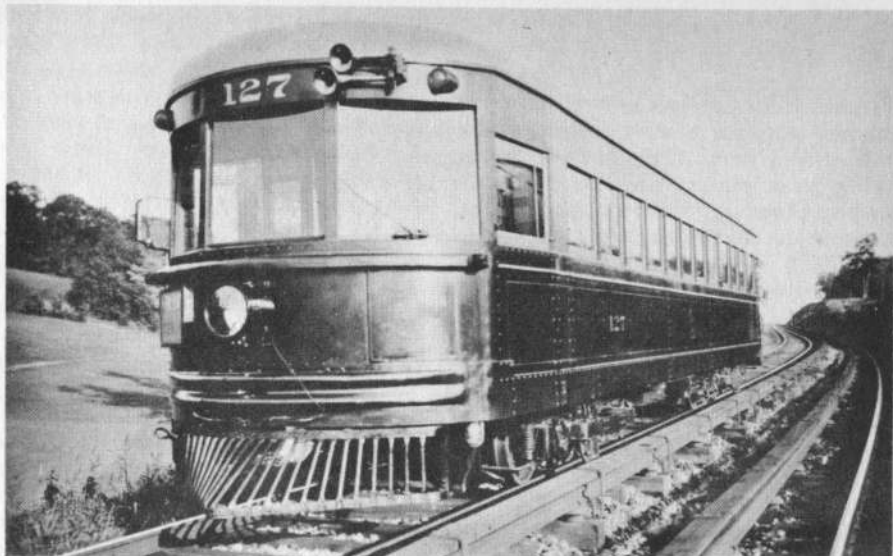
## C&LE CARS' EXTERIOR AND INTERIOR FEATURES

Interior furnishings as well as control and electric systems differed in both sets of cars. The builder, complying with plans, installed General Electric Company's control and motor systems in coach-baggage cars Nos. 110-119 and Westinghouse Electric Company's control and motor systems in coach-lounge cars Nos. 120-129. However, exterior body structure and most mechanical features were identical. Fully equipped cars Nos. 110-119 weighed 48,300 pounds and Nos. 120-129 weighed 47,800 pounds.

Exterior features which were identical in both sets of cars included an aluminum plate riveted steel skeleton body standing on two Cincinnati ABC 74d trucks equipped with four twenty-eight inch wheels; a wooden canvas-covered arch roof; wood floor and aluminum body structure; curved operating end and straight observation end; aluminum visor above observation compartment end windows blended with wide letterboard located above side windows; twelve roof ventilators, six along each side, plus one over vestibule and one over lavatory; wooden mat over observation end roof; rain deflectors on roof above doorways; steel open bar pilot at operating end with a short switch iron placed in the pilot; rolled steel bumper with draw bar pin and socket at each end; a three-bar lightweight metal automobile type bumper fitted underneath rolled bumper at observation end; right front platform-street passenger entrance with floor level door and trap, street loading steps, and grab handles (floor level door designed for use in Cincinnati's proposed subway); right side rear floor level baggage door with trap and street loading steps, the door secured by a lock and an air operated pin bolt controlled by a valve located at motorman's position; motorman's win-

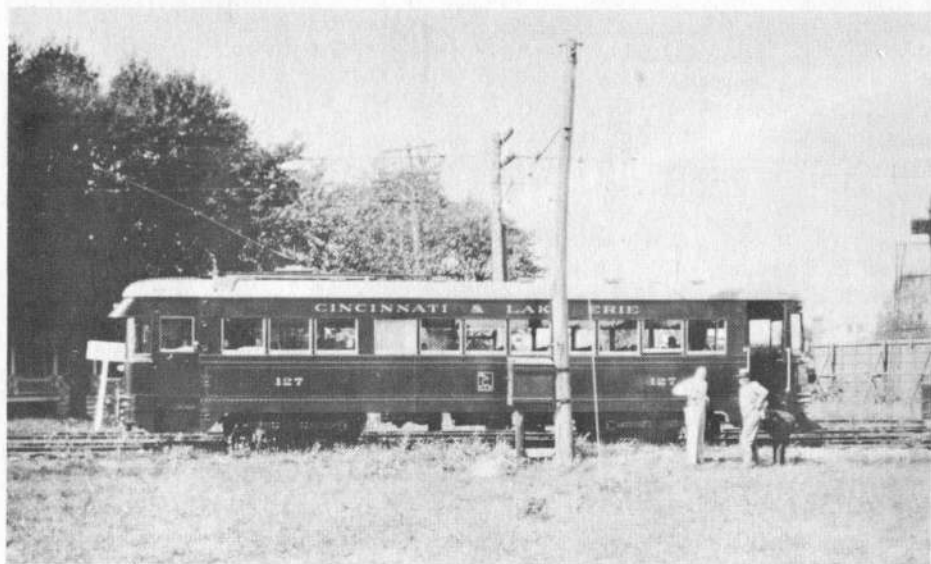
dow and twelve lift sash windows, all equipped with safety glass, along left side with panels separating the motorman's and first passenger window, eighth and ninth, and eleventh and twelfth passenger windows; eleven lift sash passenger windows, equipped with safety glass, flanked by front passenger door and rear baggage door along right side with panels separating the passenger doorway and the first window, eighth and ninth windows, and eleventh window and baggage doorway; right and left side curved glass in right angle shaped corner windows and two large fixed windows across observation end; three large fixed windows across operating end; motorman steps, fastened on the body plate and panel separating eleventh window and baggage door, and a short mat permitted access to the roof; rectangular illuminated destination sign underneath right front window; a side view mirror attached to the right front corner post; and advertising card frame on body underneath left front window. Cars Nos. 120-129 had been equipped with an illuminated rectangular sign and sign hooks in the center of the observation end underneath windows.

Interior features which were identical in both groups of cars included a rose and old ivory paint scheme; fibre board inner ceiling; tile-type floor covering in coach sections (carpet in lounge of cars Nos. 120-129); panels with windows but no doors separated front platform from coach section; lavatory at eighth window on left side contained a flush hopper, basin, liquid soap dispenser, mirror, towel dispenser, and running water; drinking water faucet and paper cup dispenser located on outer lavatory wall along aisle; bronze and white-metal interior hardware; one swivel bucket seat on left front platform for motorman; stand on front platform for fare register; Pantasote window shades on left front, motorman's, pas-



Collection of T. C. VanDegrift, Jr.

Car No. 127 (LVT No. 1004) stands on Philadelphia and Western Railway Company's third rail trackage near Upper Darby, Pennsylvania, during test trip conducted on September 30, 1930.



Collection of T. C. VanDegrift, Jr.

Northbound car No. 127 (LVT No. 1004) halted in Lehigh Valley Transit Company's Broad Siding, Lansdale, Pennsylvania, during test trip conducted over Liberty Bell Route on September 30, 1930.

senger, and both platform-coach partition windows; advertising panels above windows in coach section; button-type passenger bell signal system on window posts; and a mirror fastened above front center window provided an interior view for the operator.

Interior features which differed in both groups: Nos. 110-119, platform coach, lavatory, and baggage compartments; Nos. 120-129, platform, coach, lavatory, parcel, and lounge compartments; Nos. 110-119, sheet metal plates fastened to stanchions between eleventh and twelfth windows on left side and between eleventh window and baggage doorway on right side set off the small baggage compartment from the coach section and interior horizontal metal bars protected window panes; Nos. 120-129, parcel compartment at eighth window on right side with door fastened to lavatory's rear wall formed lounge compartment partition; Nos. 110-119, double cushioned leather upholstered bucket seats along left side from first to seventh and ninth to eleventh passenger windows and along right side from first to eleventh windows, seating capacity, forty-two; Nos. 120-129, cushioned leather upholstered double bucket seats from first to seventh passenger windows along both sides and a double sofa, three single chairs, a table along the left side and a single chair, double sofa, table, and two single chairs along right side comprised the lounge section's seating arrangement from ninth to twelfth windows on left side and from ninth window to emergency door on the right side, seating capacity, thirty-eight; Nos. 110-119, continuous parcel racks installed above side windows throughout car; and Nos. 120-129, parcel racks installed only in coach section.

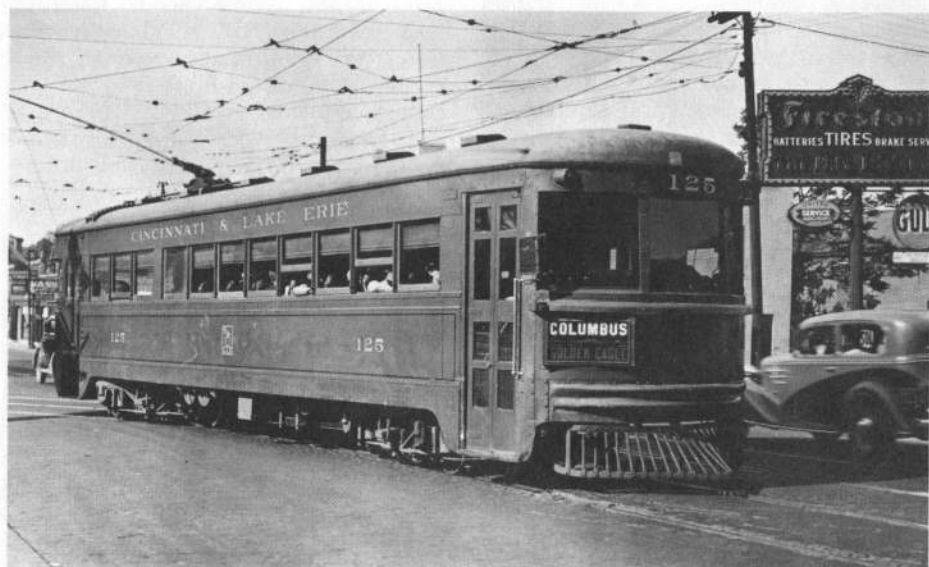
Identical electrical and mechanical features in both sets of cars included

Westinghouse traction air brakes, straight air with safety device, and self-lapping M33 engineer's valve; air lowered and spring raised track brake; hand brake wheel on right front platform; air door valve and air sander valve located near operator's position; rail sander system at front truck supplied with sand from boxes located underneath front seats; a telephone the cable of which plugged into jack boxes on poles along the route; trolley board with base, stand, spring, pole buffer guard, twin hook, and pole equipped with a reversible shoe located at observation end only; spare pole tied to trolley board; retriever fastened on right side of observation end; reset switch and small fan located above left front window; main cable which led from trolley pole base through roof, down lavatory wall toward front of car, along left side near floor level and around motorman's window to switch, from switch to control, and from control to motors; fifteen inch diameter portable 500w incandescent headlight with dimmer for rural operations hung in bracket underneath front center window and plugged into receptacles located underneath bumper; five incandescent 56w lamps in receptacles in an elliptical cowl underneath all three front windows for urban operations; 56w lamps in vapor-proof glass fixtures with metal guards at four corners, clear glass in front and red glass at rear; permanent combination battery operated classification signal and marker lights at all four corners in letterboard; brackets for Adlake oil signal-marker lights and flags at window sill level at both front corners and below window sill level near both observation end corners; rear brake light near rear right corner; interior series lighting, five lamps in a circuit, in small ceiling fixtures along both sides; three spaced battery operated emergency lights on ceiling; wall lamp above observation end windows; line, air,



Don McClain

Car No. 415 (LVT No. 1023), No. 115 temporarily renumbered, and No. 424 stand at Columbus, Ohio, station while University of Cincinnati's band alights, October 3, 1931.



B. J. Misk — George Krambles

Car No. 125 (LVT No. 1000), maintaining the **Golden Eagle** schedule, operates along the streets of Springfield, Ohio, May 31, 1936.

lighting, and heating switches in cabinet below front windows; gauges near control position; electric seat heaters; fire extinguishers and oscillatory electric fans fastened to partitions in forward and rear sections; Westinghouse twin air horns, controlled by interior lever and cord, above left front window; a button controlled horn located above left rear window under visor for warning during backing operations; pneumatic window wiper at left front window; DH-20 Bungalow compressor underneath rear compartment; and air reservoir, switch group, cables, resistors, fuse boxes, rerailer, water tank, jack and handle, brake equipment, line switch, and reverser attached to floor's underside.

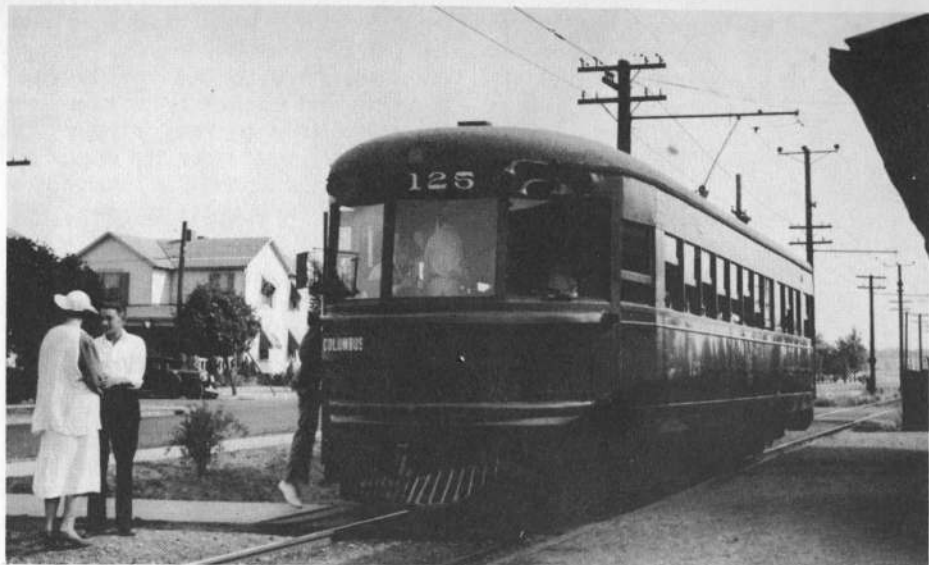
Electrical and mechanical features which differed in both types: Nos. 110-119, four General Electric 706A 600v motors each of which developed one hundred horsepower and together produced a maximum balancing speed of 79.8 miles per hour; Nos. 120-129, four Westinghouse 539A1 300v motors each of which developed one hundred horsepower and together produced a maximum balancing speed of 83.8 miles per hour; Nos. 110-119, 24:43 gear ratio; Nos. 120-129, 26:46 gear ratio; Nos. 110-119, left side GE PC10 deadman three point automatic acceleration control; Nos. 120-129, left side WH HLF deadman manual acceleration control; and Nos. 110-119, movement from centrally located rear control position accomplished by leaving operating end's reset switch, control, and reverse lever at "off" positions, moving rear reset switch to "on" position, moving reverse lever to "forward" position, and operating small control; Nos. 120-129, movement from centrally located rear control accomplished by leaving reset switch at operating end at "off" position, moving operating end control to third

point, hooking down dead man control handle, moving reverse lever at operating end control to "reverse" position, and operating car from rear control position by using reset switch handle as control lever. An engineer's valve was also located at rear control position of both types of cars.

The exterior paint scheme of both types of cars included a tan roof; maroon varnished body; gold numbers, outlined in black, beneath second and ninth windows along both sides and above front center window and beneath left rear window; and "Cincinnati & Lake Erie" in gold, outlined in black, on letterboards above third to ninth windows inclusive; gold herald on body under sixth right and left side passenger windows; black and gold striping on side body and operating end; and black headlight, trucks, pilot, and undercarriage.

## **C&LE LIGHTWEIGHT CARS ENTER SERVICE**

Spectacular events employed by Cincinnati and Lake Erie Railroad Company introduced the new cars to the public. On July 7, 1930, car No. 126 (LVT No. 1002), attaining a speed of ninety-seven miles per hour, raced and beat an open cockpit biplane flying over a designated section of track near Moraine City and car No. 122 (LVT No. 1008) raced and easily beat an auto racer travelling along a section of the National Pike which paralleled the interurban's Springfield-Columbus right of way near Lafayette, Ohio. Sand bags piled throughout the cars' interior reduced swaying motion and increased gravity and spiked switches along the routes reduced the possibilities of derailment. Pathe News movie cameramen photographed the contests from an airplane; from vantage points along the right of way; and from car



B. J. Misek — George Krambles

Car No. 125 (LVT No. 1000) accommodates passengers at Osborne, Ohio, station, August 2, 1936.



John J. Bowman, Jr.

Car No. 127 (LVT No. 1004), maintaining the **Falcon** schedule, and No. 128 (LVT No. 1001), operating the **Governor** schedule, stand at Columbus, Ohio, station, August 2, 1937. No. 127's front had been painted yellow to allow better recognition by motorists.

No. 127 (LVT No. 1004), following No. 126, and car No. 123 (LVT No. 1005), following car No. 122. Cars placed on exhibition in most major towns and cities served by the system offered opportunities for public inspection. Exterior and interior views of cars also appeared in local newspapers and in transit journals.

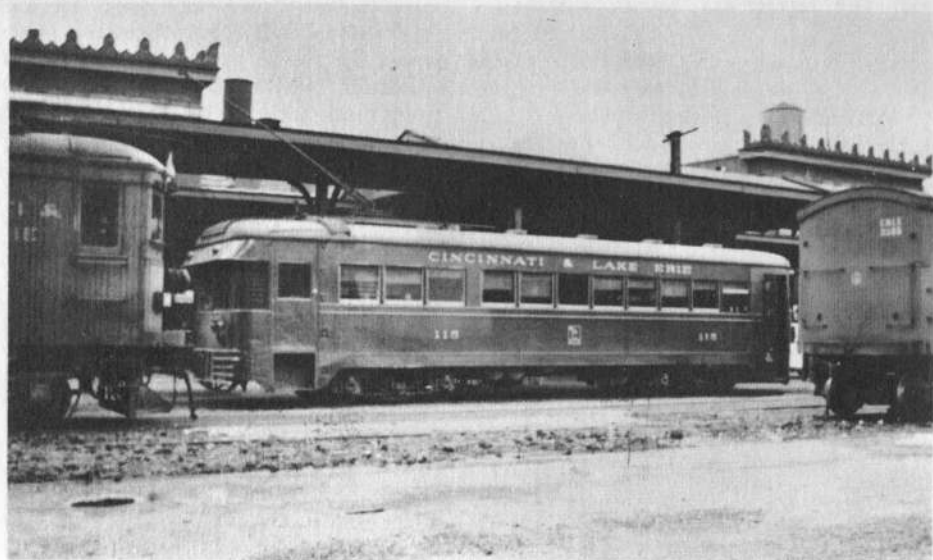
When, and after, car No. 110 operated initial revenue service from Moraine City to Cincinnati on June 28, 1930, the traffic department maintained high speed schedules which identified trains with historical and descriptive names: *Oliver Perry, Daniel Boone, Southgate, The Governor, Valley Queen, Rocket, Meteor, Red Comet, Courier, Falcon, Arrowhead, Mercury, Golden Eagle, Fleeting Sun, Evening Star, Scarlet Wings, and Shawnee*. Train names appeared in an illuminated rear sign and below the city name on the right front destination sign of cars Nos. 120-129. In the latter arrangement, train names were red color and city names were white. The "Red Devils", as they were nicknamed, operated between Cincinnati and Detroit in slightly less than nine hours and between Cincinnati and Columbus in slightly more than four hours of operating time.

During summer, 1930, Cincinnati and Lake Erie Railroad Company shipped car No. 127 (LVT No. 1004) to Philadelphia and Western Railway Company, a third rail system which served Philadelphia's suburbs, for experimental purposes. The latter organization, also controlled by Dr. Conway's group, planned to replace older slower cars with new high speed equipment for the 69th Street Terminal-Norristown route. The J. G. Brill Company, Philadelphia, Pennsylvania, supplied special trucks equipped with third rail accessories for the tests. On September 30, 1930, Philadelphia and Western Railway Com-

pany operated No. 127 over the entire Liberty Bell Route between 69th Street Terminal and Allentown with a Lehigh Valley Transit Company motorman serving as pilot between Norristown and Allentown. In Allentown the dispatcher routed the car over Gordon Street loop via Hamilton, North Twelfth, Gordon, and North Seventeenth Streets to allow an uninvolved reversal movement. The demonstrations with No. 127, plus further experiments, influenced Philadelphia and Western Railway Company's design for the ten double end multiple unit 200 Series "bullet" cars which The J. G. Brill Company built in 1931.

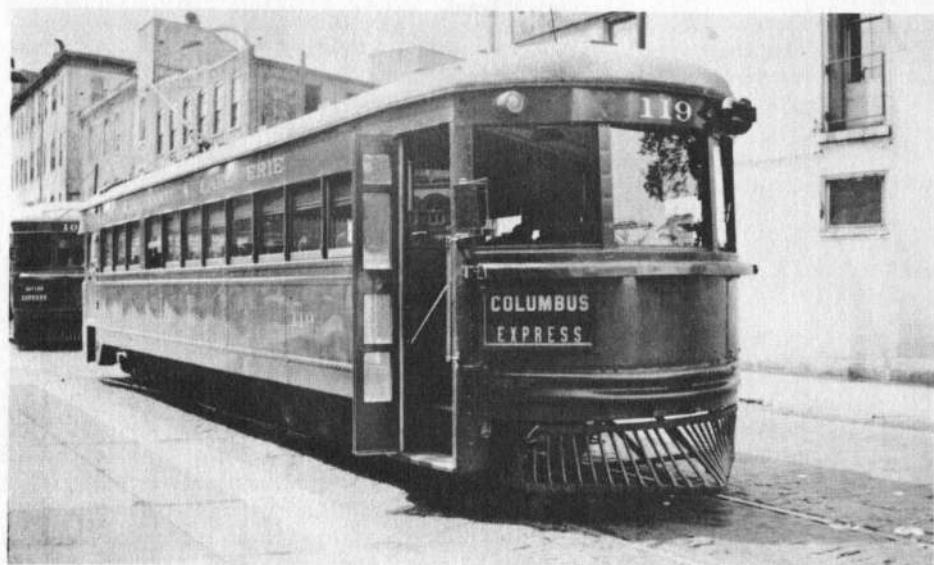
Two other electric interurban systems purchased cars similar to the Cincinnati and Lake Erie Railroad Company's type and introduced improved services in 1931. Indiana Railroad Company assigned thirty-five single end multiple unit cars to Indianapolis-Louisville and Indianapolis-Fort Wayne service and Fonda, Johnstown and Gloversville Railroad Company assigned five moderate-speed single unit single end cars to Gloversville-Schenectady service. The latter cars represented a single end version of Philadelphia and Western Railway Company's 200 Series "bullet" cars.

Between 1930 and 1938 Cincinnati and Lake Erie Railroad Company's mechanical department revised several features: altered ventilators; removed rain deflectors on roof above doorways of several cars; replaced, by 1932, floor level door and trap at right front entrance with outward folding full length door with glass panes; on one car replaced aluminum body plates and letterboards with Cor-Ten steel; and applied yellow paint to the operating end of cars Nos. 125 and 127 to allow better recognition by motorists at rural crossings.



David McNeil

No. 115 (LVT No. 1023), framed by an electric freight motor car and a freight trailer car, stands at Columbus, Ohio, station, May 31, 1938.



David McNeil

Car No. 119 (CRANDIC No. 119) operating the Columbus schedule, meets the Cincinnati-bound car at the station in Dayton, Ohio, August 28, 1938.

## **C&LE RAILWAY SERVICE ABANDONED**

Cincinnati and Lake Erie Railroad Company's twenty new cars and improved service attracted more patrons; however, the financial depression which had followed the stock market failure in 1929, slow street operations through larger towns, and increased use of privately owned automobiles eventually reversed earlier successes. Wage and fare reductions alleviated some problems but could not prevent the application for receivership on January 28, 1932. As the result of events leading to receivership, the twenty comparatively new cars, all unpaid, reverted to Cincinnati Car Company's ownership but remained in service on a rental basis. A renumbering in the corresponding 400 Series indicated the transaction. Eventually, Cincinnati and Lake Erie Railroad Company regained ownership of all cars except Nos. 413 (LVT No. 1020) and 414 (LVT No. 1021) and restored original numbers. Nos. 413 and 414 had been returned to the builder for conversion to a club-type interior and the balancing of the electric system, but the builder entered bankruptcy before work had been performed. Receivers assigned both cars, actually assets of Cincinnati Car Company, to under cover storage pending disposition.

Continued financial losses forced disintegration of Cincinnati and Lake Erie Railroad Company's interurban service section by section: Toledo-Detroit, October 4, 1932; Springfield-Toledo, November 19, 1937; Cincinnati-Dayton, March 30, 1938; and Dayton-Springfield-Columbus, October 29, 1938. Abandonment of interurban service in 1938 placed the seventeen operating lightweight interurban cars in outdoor storage at Moraine City shop located near Day-

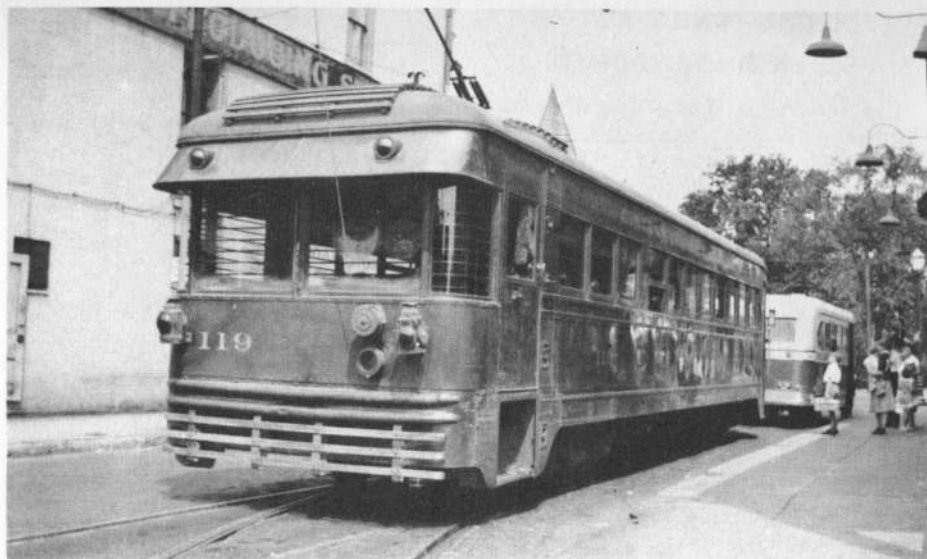
ton. Car No. 124, the eighteenth of the cars owned by Cincinnati and Lake Erie Railroad Company, together with car No. 300 had been destroyed by fire on March 16, 1933, on the wye at Cumminsville station in Cincinnati when a flash flood of the Ohio River backed up waters of Mill Creek which flowed near the right of way.

Discontinuance of interurban service caused abandonment of all trackage except that which extended from Dayton to Cincinnati. However, a one half-mile gap in trackage in Mt. Healthy caused by a paving controversy prevented through service. Cincinnati and Lake Erie Railroad Company offered Hamilton-Dayton local railway service until May 14, 1939; Cincinnati-Mt. Healthy service until May 31, 1939; and Dayton-Moraine City, the last, until September 27, 1941.

## **LEHIGH VALLEY TRANSIT COMPANY'S MODERNIZATION PROGRAM**

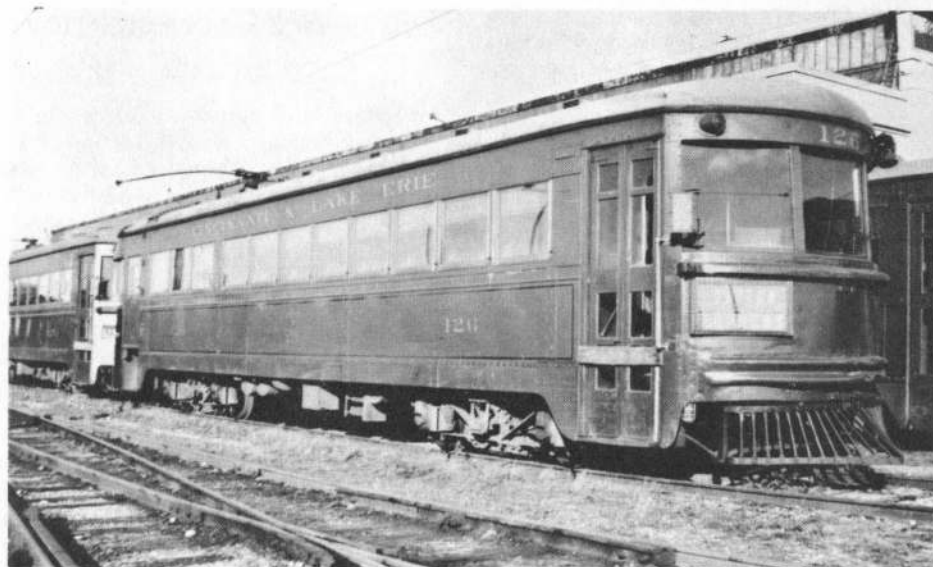
A staff of engineers selected by Electric Bond and Share Corporation, Lehigh Valley Transit Company's managers, thoroughly studied the transit company's property in eastern Pennsylvania early in 1938 and recommended retention of the Liberty Bell Route and all city-suburban rail lines except Easton city routes, modernization of newer city-suburban and interurban cars, acquisition of newer second hand street cars and new autobuses as replacements for all older equipment.

Lehigh Valley Transit Company's revenues had declined sixty-eight percent between 1928 and 1938 and most cars had become obsolete. Four deluxe straight side 700 Series cars, the only evidence of a center entrance conversion program begun in 1930



David McNeil

Rear view of No. 119 (CRANDIC No. 119) during stop at the station in Dayton, Ohio, August 28, 1938.



David McNeil

Car No. 126 (LVT No. 1002) stands in the C&LE yard in Moraine City, Ohio, prepared for shipment to Lehigh Valley Transit Company, October 10, 1938.

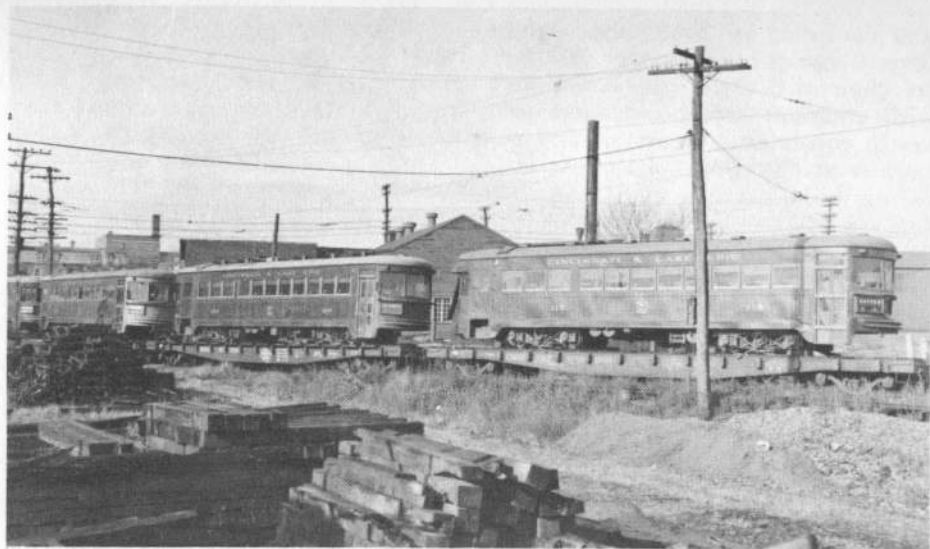
and cancelled in 1932; one slightly revised straight side former 700 Series chair car; three 700 Series cars with enclosed center entrances and newly constructed street loading entrances at the No. 1 end; one converted coach-baggage 800 Series car; and slightly revised wooden car No. 812, a private car converted to passenger service in 1921, represented the motley group of interurban cars which at one time or another regularly operated Liberty Bell Route's daily express schedules commencing with the introduction of one man service in 1932. Several 800 Series coach-baggage cars, operated from passenger end control, served as spare cars. Lehigh Valley Transit Company and Philadelphia and Western Railway Company had entered into an agreement in 1912 which established the revised Liberty Bell Route and permitted operation of the former's passenger and freight cars into 69th Street Terminal, Upper Darby, via the latter's third rail trackage between Norristown and the terminal. Philadelphia and Western Railway Company's crews handled all cars on third rail trackage.

Lehigh Valley Transit Company's sudden decision to modernize railway equipment contradicted the rail-to-autobus conversion prediction mentioned by the incumbent vice president and general manager at an employee's safety meeting conducted only a few months previous. However, the transit system reorganized and effective May 1, 1938, William B. McGorum, newly elected vice president and general manager, assumed duties. He inaugurated the rehabilitation program and directed company policies for the ensuing seven years. The program, designed to operate modern electric railway equipment over well maintained trackage, had been projected initially for a five year period.

Utility Equipment Company, railway equipment brokers, between July, 1938, and January, 1939, shipped forty-three second hand electric railway cars to Lehigh Valley Transit Company from six electric railway companies in the United States. The group included eleven Cincinnati and Lake Erie Railroad Company lightweight interurban cars: Nos. 112, 115, 121, 123, 125, 126, 127, 128, 129, 413, and 414, the latter two actually owned by the bankrupt Cincinnati Car Company. The equipment brokers also sold Cincinnati and Lake Erie Railroad Company's cars Nos. 110, 111, 116, 117, 118, and 119 to Cedar Rapids and Iowa City Railway Company, but Cincinnati and Lake Erie Railroad Company stored cars Nos. 120 and 122 in Moraine City yard pending disposition of court cases arising from accidents which involved interurban cars and automobiles. Prior to the availability of Cincinnati and Lake Erie Railroad Company's cars, William Klein, Lehigh Valley Transit Company's master mechanic had inspected and rejected the five comparatively small medium powered bullet-type single end cars Nos. 125-129 which Fonda, Johnstown and Gloversville Railroad Company in Gloversville, New York, had offered for sale.

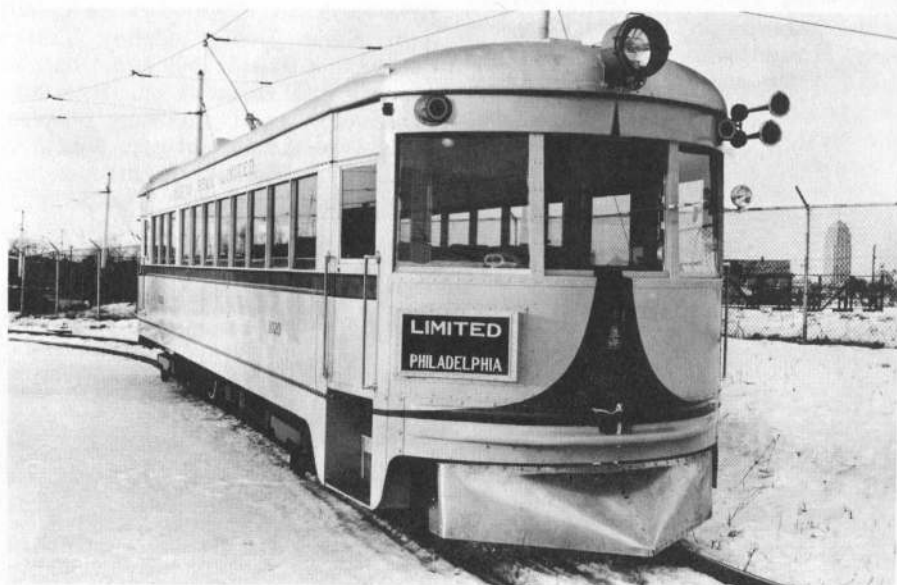
## **ELEVEN C&LE CARS ARRIVE IN ALLENTOWN**

Car No. 413 (LVT No. 1020), the first of Cincinnati and Lake Erie Railroad Company's shipments, arrived on a railroad flat car at Lehigh Valley Transit Company's Riverside Yard located near Front and Linden Streets, Allentown, on September 21, 1938, directly from storage in Cincinnati Car Company's shop. Meanwhile, track and maintenance crews had erected a temporary ramp which permitted unloading of cars on wheels



Howard P. Sell

Cincinatti and Lake Erie Railroad Company cars Nos. 129, 127, 123 and 115 stand on railroad flat cars in Lehigh Valley Transit Company's Riverside Yard, Allentown, October 29, 1938.



Knauss Photo — Collection of Elwood C. McEllroy

Lehigh Valley Transit Company posed car No. 1020 (C&LE No. 413) for timetable photograph on Fairview Car barn's reversal loop, Allentown, December, 1938.

either under their own power or with the aid of another car. Lehigh Valley Transit Company's repair car No. R1, by means of a drawbar, moved the railroad cars bearing the inter-urban cars to and from the ramp. Car No. 413 moved under its own power from the railroad car onto yard tracks and over city trackage to Lehigh Valley Transit Company's small storage yard located at 13th and Gordon Streets. The paint shop foreman chalked outlines of a proposed paint scheme on the body, but the style eventually applied revealed a revised arrangement. C&LE car No. 414 (LVT No. 1021) arrived from Cincinnati Car Company on September 25, 1938, and, after having been unloaded with the aid of dump car No. 549, operated to the storage yard to a position alongside car No. 413. Car No. 413 entered 14th Street Shop for conversion and rehabilitation on October 2, 1938, and No. 414 followed shortly thereafter. Lehigh Valley Transit Company's shop employees noted that Nos. 413 and 414 bore physical evidences of submer-sion in the muddy flood waters which had ravaged the Ohio River valley in 1937. Electricians thoroughly examined motors and electric systems of both cars during the rehabilitation program.

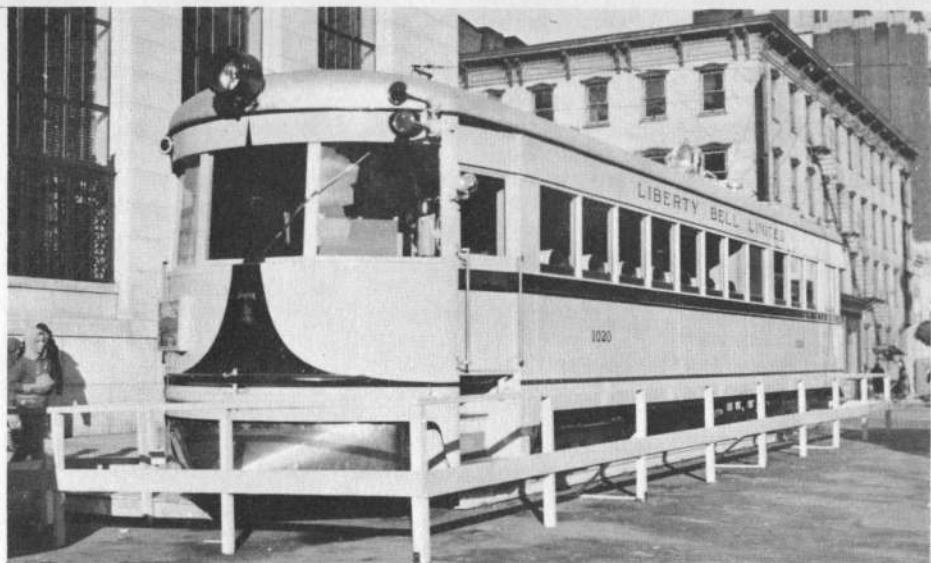
The other nine Cincinnati and Lake Erie Railroad Company cars arrived at Riverside Yard at intervals: Nos. 125 and 128, October 23; Nos. 121 and 126, October 25; and Nos. 112, 115, 123, 127, and 129, October 29, 1938. Car No. 115 arrived with a stove-in front end and a sprung door frame, the result of a collision with a freight motor in Moraine Yard. After unloading operations had been concluded, shop crews moved eight cars under their own power to Fairview Car barn and one, No. 115, with a tow car. Employees placed Nos. 125 and 128 inside the car barn on No. 2 track for immediate rehabilitation and placed

the remainder in outdoor storage on No. 9 track. The mechanical department assigned 1000 Series numbers to cars equipped with Westinghouse Electric Company equipment and 1020 Series numbers to those equipped with General Electric Company equipment. A worker chalked consecutive numbers on cars in the order in which they stood inside the car barn and on outdoor trackage. As the result of this irregular numbering procedure, Lehigh Valley Transit Company's numbers compared to Cincinnati and Lake Erie Railroad Company's numbers as follows: No. 1000, No. 125; No. 1001, No. 128; No. 1002, No. 126; No. 1003, No. 121; No. 1004, No. 127; No. 1005, No. 123; No. 1006, No. 129; No. 1020, No. 413; No. 1021, No. 414; No. 1022, No. 112; and No. 1023, No. 115.

Lehigh Valley Transit Company, as a means to accelerate the modernization program, established additional facilities at Fairview Car barn which heretofore had been located exclusively at 14th Street and Madison Street shops. Carpenters, metal workers, and electricians worked on cars placed in the middle portion of pit tracks Nos. 2 and 3 and painters worked in a temporary paint shop arranged at the end of pit tracks Nos. 5 and 6 and in a new permanent floor level paint shop built at the end of pit tracks Nos. 7 and 8. Additional employees supplemented standard working forces. After the modernization program had been concluded, the transit company abandoned 14th Street and Madison Street shops, where many of the second-hand city-suburban cars had been revamped, and consolidated all service facilities in Fairview Car barn.

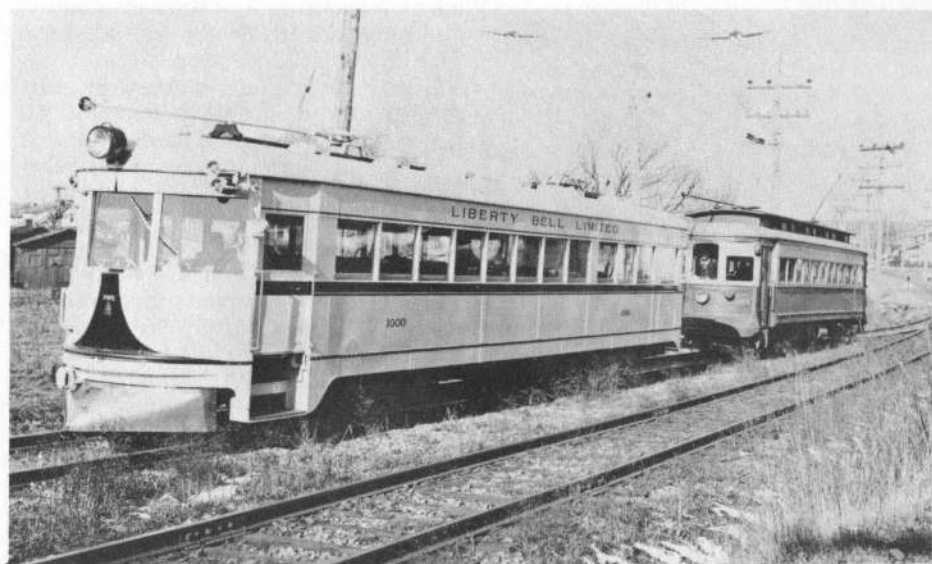
### **LVT'S STRUCTURAL AND MECHANICAL REVISIONS**

Lehigh Valley Transit Company's master mechanic had inspected the



Howard P. Sell

Car No. 1020 (C&LE No. 413) stands on public exhibition on temporary track laid in the southwest corner of Center Square, or 7th and Hamilton streets, Allentown, February 4, 1939.



John P. Scharle

Southbound car No. 1000 (C&LE No. 125) and local car No. 153 stand in Emmaus Junction Siding, Allentown, February 5, 1939. The latter type operated Liberty Bell Route limited schedules from 1903 until 1912.

Cincinnati and Lake Erie Railroad Company's cars at Moraine City yard and had planned structural and mechanical alterations before No. 413 had arrived in Allentown. Planned revisions, which actually exceeded the fifteen hundred dollars per car estimate, primarily reflected the cars' transition from one type of electric railway operational practice to another. Lehigh Valley Transit Company obtained each newer car from Utility Equipment Company in trade for two older cars. Shop crews commenced the revision program by stripping each car of all interior furnishings, removing most electric equipment and all windows, and moving the body from its regular trucks onto shop trucks.

External structural revisions of all eleven cars included conversion of right front street loading doorway into a platform-street loading entrance with floor level door, street level steps, trap, and grab handles; construction of a platform-street loading entrance, identical to that on the right side, in place of the left side motorman's window and corresponding body plate; removal of steps, trap, body plates, and pin bolt mechanism at right rear emergency door and enclosure of floor space with wooden boards and installation of an exterior stirrup step; covering open bar pilot with stainless steel sheathing; removal of rear classification flag holders and movement of front holders from window sill level to upper portion of corner posts; removal of the right sideview mirror; addition of a small step above bumper near right rear corner; patching, replacement, and straightening of damaged and bent body plates; and removal of left front advertising card holder.

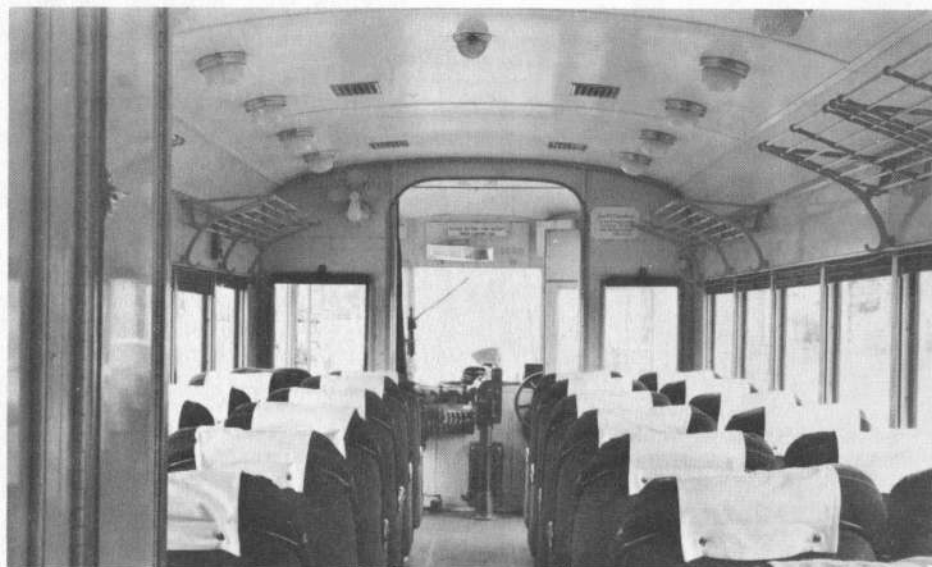
Lehigh Valley Transit Company's interior arrangements differed from

original plans. Cincinnati and Lake Erie Railroad Company had installed Westinghouse Electric Company's motor and control equipment in coach-lounge cars and General Electric Company's motor and control equipment in all-coach cars, but Lehigh Valley Transit Company's revisions established both coach-lounge and all-coach interiors in both types. Rearrangements included the following: LVT Nos. 1020 and 1021 (C&LE Nos. 413 and 414), elimination of the last three double seats on each side, removal of the small baggage compartment bulkheads between eleventh right side window and baggage-emergency door and between eleventh and twelfth left side windows, and installation of a full length door-less partition with circular glass between eighth and ninth right side windows to create a lounge section equipped with sofas and chairs to accommodate ten passengers, total seating capacity, 40; an identical size mirror attached to lavatory wall balanced the partition's circular glass; Nos. 1022 and 1023 (C&LE Nos. 112 and 115), installation of double bucket seats on the left side of the baggage compartment area after removal of baggage section bulkheads retained the all-coach plan but increased the seating capacity from 42 to 44; Nos. 1000-1004 (C&LE Nos. 125, 128, 126, 121, and 127 respectively) retained original coach-lounge arrangement without doors but another double bucket seat replaced the parcel compartment and walls at the eighth right side window, and a partition with circular glass balanced by mirror on lavatory wall, installed between eighth and ninth right side windows separated coach and lounge sections, seating capacity, 40; Nos. 1005 and 1006 (C&LE Nos. 123 and 129), removal of parcel compartment and lounge seats and conversion of both cars to the all-coach type by installing double bucket seats at ninth,



Howard P. Sell

Car No. 1021 (C&LE No. 414), preceding No. 1000, concludes the first complete test trip alongside LVT car No. 702 in 69th Street Terminal, Upper Darby, on P&W's third rail trackage, February 5, 1939.



John P. Scharle

Interior view of the coach section of coach-lounge car No. 1020 (C&LE No. 413).

tenth, eleventh, and twelfth windows along left side and at ninth, tenth, eleventh, and emergency door along right side, seating capacity 44. New electric fare registers, capable of recording multi-zone cash fares and tickets, were placed on the stand located near the motorman's position on the front platform. A portable chair for the operator replaced the stationary swivel bucket seat on the front platform, and short baggage racks replaced the continuous type above the side passenger windows. Lehigh Valley Transit Company retained advertising card panels but never installed cards.

General interior paint schemes of all cars included a white ceiling, ivory wall from window ledge to ceiling, tan wall from floor to window ledge, and light brown linoleum floor. Seat upholstery, however, differed in all cars in both color and material: No. 1000, reddish mohair; No. 1001, blue mohair; No. 1002, light red mohair; No. 1003, wine color mohair; No. 1004, reddish mohair; No. 1005, orange-brown leather; No. 1006, brown leather; No. 1020, green mohair; No. 1021, red-brown mohair; No. 1022, orange-brown leather; and No. 1023, dark green leather. Individual white head rest cloths, embroidered with a Liberty Bell insignia, were attached by buttons to cloth upholstered seats and chairs of all coach-lounge cars Nos. 1000, 1001, 1002, 1003, 1004, 1020, and 1021. Either a tan or green cloth curtain, strung on a semi-circular track suspended from the ceiling behind the operator's position, eliminated interior light glare on front windows during night operations.

Electrical and mechanical alterations and revisions included rehabilitation of trucks, motors, and several installations: cord and buzzer passenger signal systems replaced the button and bell type; installation of a trolley board, stand, pole buffer

guard, trolley pole with a wheel, spring, and single hook at No. 1 end; fastening of a trolley retriever underneath bumper in line with post which separated right and center front windows; installation of speedometer at control position; installation of an overhead-third rail transfer switch in cabinet next to operating end controller; installation of another air valve to control left front door and trap; replacement of curved horns above left front window with two chromium plated trumpet air horns on left corner post near roof base; removal of left front window shade; replacement of single blade window wiper at left front window with a dual blade type which cleaned left front and center front windows; placement of a battery operated spot light on left front corner post; placement of switch iron holder on front platform; installation of a permanent standard incandescent headlight on roof above front center window; removal of under-floor lights at four corners; removal of cowl lights and cowl under front windows; replacement of the reversible slide on rear trolley pole with a stationary type; and installation of third rail brackets, beams, shoes, and cables on both sides of both trucks with the cable fastened inside the beam.

Construction of the left side street-platform entrance in place of the motorman's window presented no unusual problem during conversion of all cars except C&LE No. 128 (LVT No. 1001). The cars' designers had located the main cable from underneath the floor upward along coach-platform partition and around the motorman's window to the switch cabinet; thereby, leaving an unobstructed area for construction of a left front door. However, Cincinnati and Lake Erie Railroad Company's shop crews, when repairing No. 128 after a collision with utility car No. 710 three miles north of Springfield dur-



Howard P. Sell

A northbound 1000 Series car, prior to revision of observation compartment's external structure, departs from Sellersville station, February 25, 1939.



John P. Scharle

Car No. 1003 (C&LE No. 121), enroute to Fairview Car barn after completing a northbound schedule, enters the northern entrance of Eighth Street Bridge from Union Street loop, Allentown, March 21, 1939.

ing summer, 1935, installed the cable at floor level below the left side motorman's window. A Lehigh Valley Transit Company repairman, following established procedure, completely sawed through the cable while removing floor boards, side sheets, structural shapes, and window in preparation for construction of the doorway. Electricians repaired the damage and relocated the cable around the doorway.

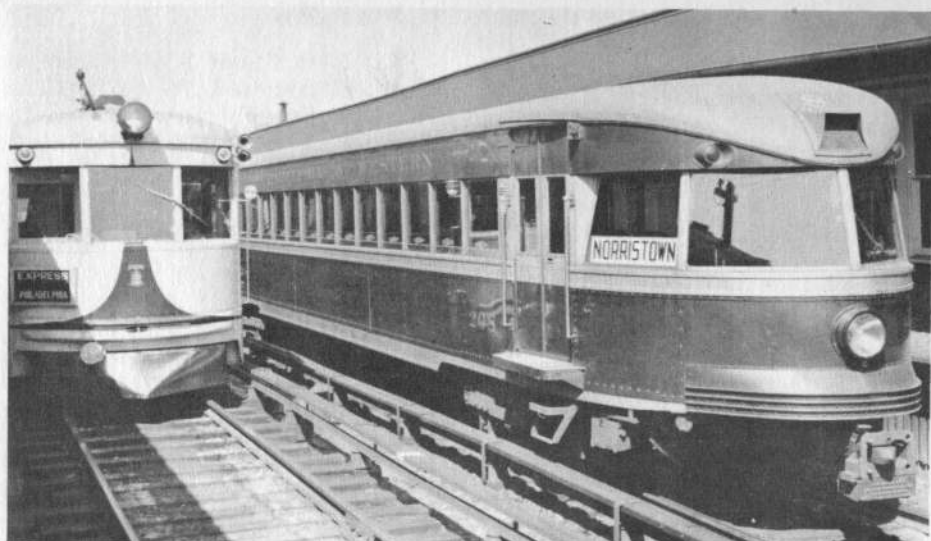
Painters removed all paint from each car after structural changes had been accomplished and applied a flat cream base coat before applying the new paint scheme. The new adornment, different than any style previously applied to equipment by Lehigh Valley Transit Company, included a picador cream lacquered body and trolley retrievers; a mountain ash scarlet pyramid tapered from the front bumper to a peak near the roof above the front center window; a wide scarlet band extended from the right front corner post around the car underneath window sill level to the left front corner post; a narrow scarlet stripe encircled the entire body at bumper level from door to door; scarlet numbers on body underneath second and tenth windows along both sides; scarlet marker lights at both ends and a scarlet headlight and flag holders at operating end; "Liberty Bell Limited" lettered in scarlet on side letterboards; a gold Liberty Bell decal placed directly in the middle of the scarlet pyramid; silver roof and trolley poles; black trucks and wheels with white tires; orange-red third rail beams (the color of insulating material applied to the oak wood used for beams); and black undercarriage. Lehigh Valley Transit Company's paint shop crew painted and placed new roller signs in the destination sign box and lettered "Liberty Bell Limited" in scarlet on a cream background on the inner side of the rear illuminated

sign box glass.

The 14th Street Shop transferred completely revised No. 1020 (C&LE No. 413) to Fairview Car barn on October 30, 1938, and No. 1021 (C&LE No. 414) on December 10, 1938. Fairview Car barn completed No. 1000 (C&LE No. 125) on December 23, 1938, and No. 1001 (C&LE No. 128) on January 10, 1939. Qualified motormen and shop crews conducted daily test trips over portions of the Liberty Bell route as far as Car barn Wye, Souderton, with each car before the master mechanic approved its entry on the operating roster; however, the vice president and general manager withheld completed cars from revenue service until sufficient evidence of the modernization program could be properly presented to the public. Meanwhile, local newspaper articles periodically reported the modernization program's progress.

Several operators, recruited and trained as instructors, meanwhile conducted weekday instruction tours over the Liberty Bell Route between Fairview Car barn and Car barn Wye in Souderton with 1000 Series cars approved for service by the master mechanic. Most veteran Philadelphia Division operators attended instruction trips and successfully qualified to operate both 1000 and 1020 group cars along with several younger men who qualified for the first time. An operator also conducted a test tour over the Allentown-Bethlehem-Easton route with No. 1020 (C&LE No. 413) and recorded clearance and performance data. Philadelphia and Western Railway Company's operators required little instruction inasmuch as 1000 Series cars operated similarly to the 200 Series "bullet" cars.

In preparation for total 1000 Series car operation, track maintenance crews replaced deteriorated ties along



Howard P. Sell

Car No. 1021 (C&LE No. 414) stands at 69th Street Terminal, Upper Darby, alongside Philadelphia and Western Railway Company's "bullet car" No. 208, April 23, 1939.



Randolph L. Kulp

Car No. 1005 (C&LE No. 123), properly positioned for a southbound assignment, stands at Fairview Car barn, Allentown, after completing a northbound trip, May, 1939.

the Allentown-Norristown section of the Liberty Bell Route with newer ties salvaged from Wilkes-Barre Railway Company's abandoned Dallas line. In addition, track crews constructed a loop and another stub siding as replacement for stub-end Rink Siding located at Norristown freight station. Rink Siding loop, Farview Car barn loop, Union Street loop, wye trackage near 69th Street Terminal, the wye entrance to Souderton Car barn from the main line, and wye trackage located at several street intersections in Allentown provided adequate reversal facilities for 1000 Series cars along the Liberty Bell Route's entire length.

For a period of three days beginning Saturday, February 4, 1939, Lehigh Valley Transit Company exhibited Liberty Bell Limited car No. 1020 (C&LE No. 413), Easton Limited Car No. 1100 (Dayton and Troy Electric Railway No. 201), and city-suburban car No. 400 (Public Service of Wisconsin, Green Bay, No. 58) on temporary tracks laid on the street on the south side of Center Square, or Seventh and Hamilton Streets, in the heart of Allentown's business district. No. 1020 and a new autobus stood in the southwest corner along the sidewalk and the other two cars occupied the automobile parking area located only a few feet southward from soldier and sailors monument. Uniformed employees greeted visitors who examined the cars. Lehigh Valley Transit Company also prepared, for public and business viewing, a colored 16 millimeter sound publicity film which compared old equipment with rehabilitated cars and new autobuses. The May, 1939, issue of *Transit Journal* reviewed Lehigh Valley Transit Company's program with an excellent illustrated article entitled "Imagination Rebuilds a Transit System".

Cars No. 1021 (C&LE No. 414) and No. 1000 (C&LE No. 125) com-

pleted test trips from Allentown to 69th Street Terminal, Upper Darby, via Philadelphia and Western Railway Company's third rail system southward from Norristown on February 5, 1939. Lehigh Valley Transit Company officials, operators, a few employees, and two electric railway fans represented the small group which attended the event. Philadelphia and Western Railway Company's officials and crews joined the group at Norristown. Southbound, No. 1021, because the line switch had still been set for Ohio's rolling terrain, barely climbed Lehigh, or South, Mountain even though the controller had been moved to the full power notch. At Summit Lawn, the mountain's crest, a shop crew member reset the accelerating relay, and the trip continued without incident. Northbound, the car briefly attained a speed of seventy-three miles per hour. The control system of cars Nos. 1000-1006, and later acquisitions Nos. 1007 and 1008, provided manual acceleration and the control system of cars Nos. 1020-1023 provided automatic acceleration effected by preset "stepping relays" similar to the AL control system installed on 700 and 800 Series Liberty Bell Route limited cars and freight motor cars Nos. C5-7.

## 1000 SERIES CARS ENTER SERVICE

Cars Nos. 1000 (C&LE No. 125), 1001 (C&LE No. 128), 1002 (C&LE No. 126), 1003 (C&LE No. 121), 1020 (C&LE No. 413), and 1021 (C&LE No. 414) replaced 700 Series cars in regular service on Monday, February 13, 1939, on some but not all schedules. Several weeks passed before all eleven 1000 Series cars had entered service; No. 1004 (C&LE No. 127) March 2; No. 1005 (C&LE No. 123) March 27; No. 1006 (C&LE No. 129) April 10; No. 1022 (C&



Howard P. Sell

Cincinnati and Lake Erie Railroad Company car No. 120 (LVT No. 1007), one of two later arrivals, stands in Riverside Yard, Allentown, after being unloaded from a railroad car, May 30, 1939.



David H. Cope

An Allentown-bound 1000 Series car passes through the overhead-third rail overlap section located at the north end of P&W's Schuylkill River viaduct, Norristown, July 4, 1939.

LE No. 112) May 3; and No. 1023 (C&LE No. 115) July 4, 1939. No. 1022 had been in service only a few weeks when the main cable short circuited and set fire to the lavatory wall and seventh double seat along the left side. The car, stalled by the malfunction on Eighth Street Bridge's southbound track while enroute to Fairview Car barn after completing a northbound schedule, had been saved from total destruction by the motor-man's alertness and immediate aid from Allentown's fire department.

Lehigh Valley Transit Company, effective with the new public timetable issued for the Liberty Bell Route on February 17, 1939, introduced a three-quarter view of car No. 1020 (C&LE No. 413) as cover photograph. The new photograph replaced a side view of deluxe limited car No. 703 which had been adopted in April, 1931, with the establishment of high speed deluxe service. No. 1020's photograph remained on the cover of succeeding timetables until railway operations ceased in September, 1951.

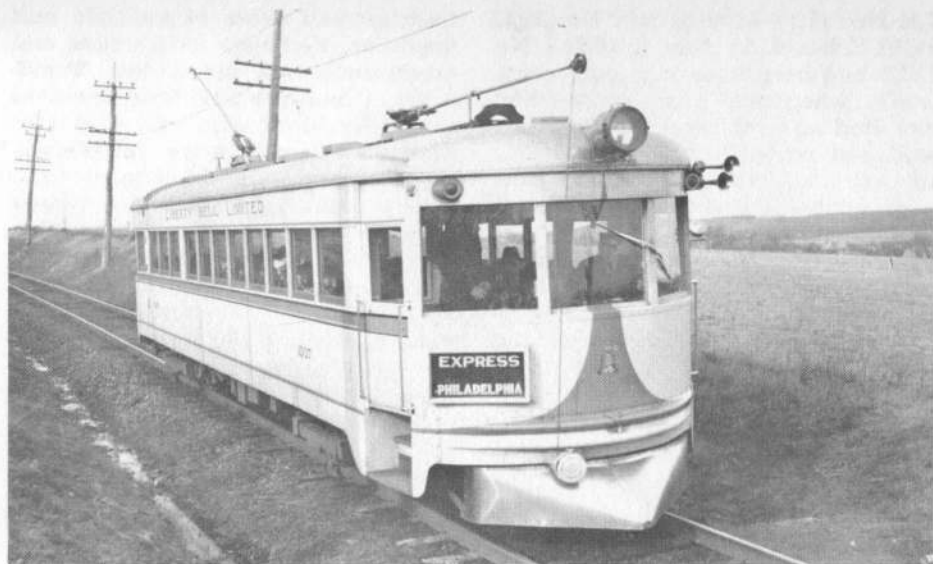
The new schedules eliminated several week day local trips and established consecutive southbound limited service from 6:00 a.m. until 10:00 p.m. and northbound from 7:00 a.m. until 11:00 p.m. throughout an entire week. New and improved schedules immediately produced increased patronage. In addition, the public enthusiastically patronized a bargain Sunday and holiday excursion rate offered in both directions between Easton, Bethlehem, Allentown, and 69th Street Terminal. Increase of passenger traffic normally required the assignment of two or three cars to handle Sunday and holiday trips during late afternoon and evening schedules.

Operation of more than one single car through the Liberty Bell Route's block signal system required, after

twenty-seven years of multiple unit operation, a change in practices and establishment of new rules. Previously, a multiple unit train operated through a block with only one train order, but two or more individually operated cars required as many train orders, headway time, and a fifteen hundred foot minimum distance between cars. Operators, ordered to exercise extreme caution at all times, at their own discretion devised a warning system which protected the first car of a two unit operation during night time disabilities. When practical, the disabled car's operator quickly lowered the rear trolley pole, raised it alongside of the overhead wire, and swayed it back and forth against the wire. Arc flashes resulting from pole and wire contact flared skyward above the right of way and forewarned the second section operator that a disabled car lay ahead. In addition, all night scheduled operators carried an electric railroad lantern which the company supplied.

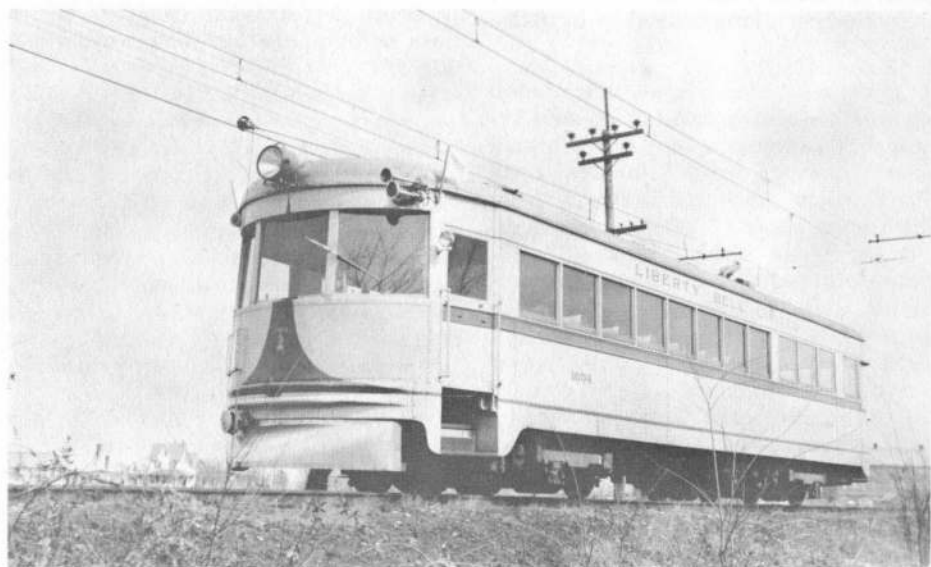
Brisk performance of 1000 Series cars as compared to slower performing 700 and 800 Series cars at first caused some difficulties for operators at approaches to signal blocks between Emmaus Junction, Allentown, and Brush Siding, Norristown. Northbound signals, effective with the block signal system's installation in 1912, normally indicated "stop" position at absolute block entrances. However, overlapping track circuits had been installed some distances in advance of signals and had been timed to allow a twelve second interval before clearance, assuming that a southbound car had not entered the block. Often, until operators had become fully aware of this condition, fast moving 1000 Series cars arrived at the signal before the timed mechanism had raised the northbound signal's semaphore blade.

The 1000 Series cars had been in service only a short time when opera-



Donald W. Furler

Southbound car No. 1007 (C&LE No. 120) speeds along main line near Coopersburg, winter, 1940.



Randolph L. Kulp

Northward-facing car No. 1004 (C&LE No. 127) stands on Quakertown Siding's southbound track after completing a short test trip backward from Allentown, March 9, 1940.

tors voiced a preference for cars Nos. 1000-1006 as compared to Nos. 1020-1023. Manual accelerating equipment of the former group permitted better maintenance of schedules while serving numerous stops, many only a few hundred feet apart, between Allentown and Norristown. However, both types of cars operated equally well over long stretches of track. Dispatchers acknowledged the operator's request and established an unofficial policy which, when feasible, assigned cars Nos. 1020-1023 to stand-by and spare service at both Fairview Car barn and 69th Street Terminal.

Maneuvering of 1000 Series cars between Fairview Car barn and Allentown station followed the pattern established by Lehigh Valley Transit Company in 1938. Operators of cars which concluded northbound trips at the station located in Allentown's business district at Eighth and Hamilton Streets automatically reversed the car's position for the next southbound trip by operating back to Fairview Car barn over Union Street loop via Hamilton, South Sixth, and Union Streets; southbound track on Eighth Street Bridge; and proper directional trackage on South Eighth, St. John, South Lumber (single track), West Cumberland (single and double track), and Lehigh Streets. Operators stationed at observation end controls operated southbound scheduled cars over proper trackage along the same streets between the car barn and the north end of Eighth Street Bridge but continued on northbound track along South Eighth Street to and through a northbound-southbound facing point switch located near Maple Street to a position on the southbound track directly in front of the station. During emergencies which occurred along the main line, the Lehigh Valley Transit Company's operators also used observation end controls to move cars into sidings, wyes, and loops.

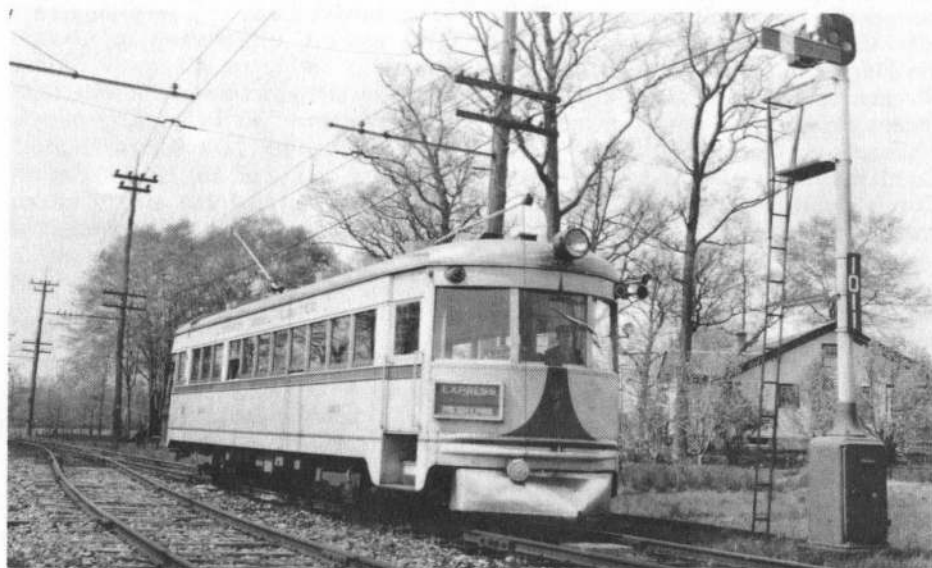
At 69th Street Terminal in Upper Darby the inter-trip reversal movement established for Lehigh Valley Transit Company's Liberty Bell Limited cars in 1912 remained unaltered. Philadelphia and Western Railway Company's operators, the men who operated all of Lehigh Valley Transit Company's cars between Norristown and the terminal, operated the cars from observation end controls while moving the cars to and from the terminal and the reversal wye which had been built east of the car barn across the main line. In emergencies, shop crews performed minor adjustments to Lehigh Valley Transit Company's cars at the car barn, but cars which required extensive repairs were pushed to Norristown for movement to Allentown. Introduction of 1000 Series cars also left undisturbed the customary transfer point between Philadelphia and Western Railway Company's and Lehigh Valley Transit Company's operators at Marshall Siding in Norristown. The point had been moved from the original street level station, established on Swede Street in 1912, to Marshall Siding with the introduction of Philadelphia and Western Railway Company's platform-loading 200 Series "bullet" cars on November 15, 1931. Simultaneously, Philadelphia and Western Railway Company had opened a second story platform station in a building located near the north end of Schuylkill River viaduct.

Lack of a rear conventional headlight required an unsatisfactory method of track illumination during night movements of southbound scheduled 1000 Series cars from Fairview Car barn to Allentown station and during emergencies along the main line. Before moving the car, the operators reversed the spot light fastened on the left front corner post and set it in such a manner that the beam illuminated only the one rail. In addition, operators reduced interior window



Collection of Barney Neuburger

Allentown-bound car No. 1020 (C&LE No. 413) leaves 69th Street Terminal, Upper Darby, via Philadelphia and Western Railway Company's third rail track-age, spring, 1940.



John P. Scharle

Southbound car No. 1003 (C&LE No. 121) passes through Wood Siding, near Brick Tavern, May 14, 1940.

glare by turning off observation compartment light circuits. Motorists occasionally collided with the partially illuminated interurban cars as they moved slowly along Allentown's streets.

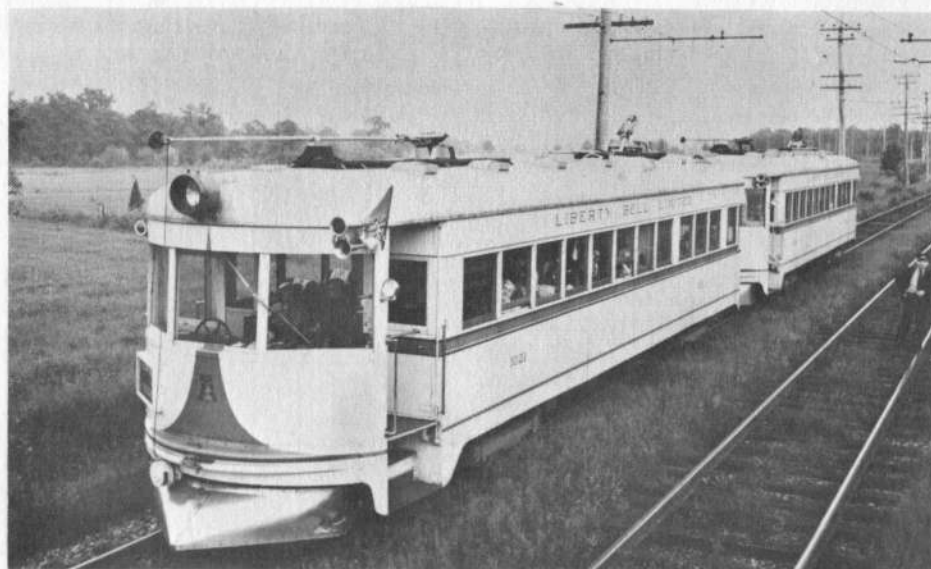
The 1000 Series cars had been in service less than two months when Philadelphia and Western Railway Company demanded the relocation of the right rear safety door. Safety walk facilities provided only along the west side of the single track viaduct which bridged Schuylkill River between Norristown and Bridgeport created the situation whereby a north-bound 1000 Series car's safety door opened toward the blank side. Lehigh Valley Transit Company withdrew cars from service one at a time and Fairview Car barn's shop crews quickly closed the right side emergency door space with a lift sash window and metal sheet; left the stirrup step intact for access to the roof; moved the observation compartment control box from its center position into the left rear corner; constructed a more convenient emergency exit, by using the side safety door, in the observation end's center in line with the aisle; and attached the illuminated Liberty Bell Limited sign box to the rear door of cars so equipped and installed a sign box on cars on which a sign box had not been previously attached. Employees likened the aluminum steps, grab handles, and center door to entrances of police vans. Interior alterations permitted the installation of another double bucket seat in all-coach cars but caused only the rearrangement of several individual chairs in coach-lounge cars.

Construction of a center observation door also provided a more convenient facility for either lowering or raising of trolley poles by Philadelphia and Western Railway Company's operators when 1000 Series cars halted in the overhead-third rail

overlap section at Norristown station. Previously, the operator either lowered or raised the pole from a position on the loading platform. After the revised doorway and steps had been installed, operators either performed the chore from the car's rear steps or from track level.

Officials of Lehigh Valley Transit Company had not originally planned a thirteen car roster, but satisfaction with performances of the eleven 1000 Series cars plus increased patronage influenced the acquisition of Cincinnati and Lake Erie Railroad Company's cars Nos. 120 and 122. The cars arrived in Allentown via railroad cars on May 29, 1939, for conversion to all-coach cars Nos. 1007 and 1008 respectively. Several superstitious maintenance employees immediately predicted tragedy with the establishment of a thirteen car roster. Car No. 1007 entered service on August 24, and No. 1008 on September 20, 1939. During reconstruction of both cars, shop crews installed the rear center safety door arrangement approved by Philadelphia and Western Railway Company. Both cars' interior plan included dark green leather covered seats.

Lehigh Valley Transit Company, as part of the modernization program, also moderately rehabilitated interiors and exteriors of older and heavier interurban cars Nos. 701, 702, 704, 710, and 812 which had been retained for spare service. The older cars appeared during late summer and early autumn, 1939, adorned in the glistening mountain ash scarlet, white, silver, gold, and black scheme assigned to the six 430 Series Philadelphia Division local cars. The 430 Series cars had been procured from Steubenville, East Liverpool and Beaver Valley Traction Company in Ohio through Utility Equipment Company.



Donald W. Furler

Car No. 1021 (C&LE No. 414), first section northbound, and No. 1007 (C&LE No. 120), the second section, await "meet" with southbound car in Broad Siding, Lansdale, June 2, 1940.



Howard P. Sell

Southbound car No. 1004 (C&LE No. 127) leaves Telford station after accommodating passengers, June 23, 1940.

Late in 1940 and early in 1941 electricians improved night time operations from rear compartment controls by installing a small chromium plated six volt automobile-type headlight on the observation compartment roof of all 1000 Series cars. The new headlight replaced the rearward use of the spotlight and provided adequate illumination of trackage. Carpenters provided space for the light by removing an appropriate portion from the roof mat. A switch in the rear compartment control box governed the light.

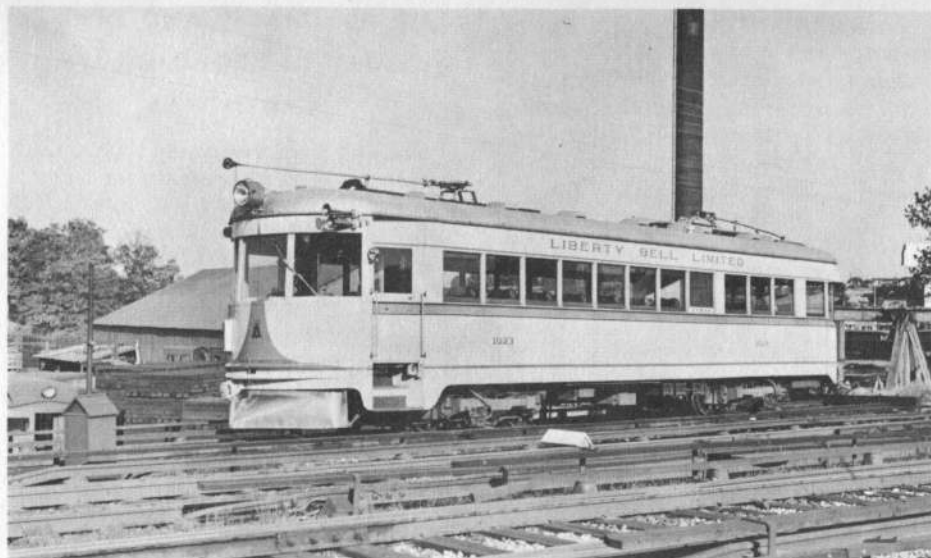
A major catastrophe involved the 1000 Series group after almost two years of normal successful operations. Car No. 1004 (C&LE No. 127), the 10:00 p.m. car leaving Allentown on December 20, 1940, suffered irreparable fire damage on Philadelphia and Western Railway Company's third rail trackage at King Manor, located south of Bridgeport, in the same area in which Liberty Bell Route limited cars Nos. 811 and 703 had been destroyed under similar circumstances in 1929 and 1935 respectively. Philadelphia and Western Railway Company's operator, aware that the heater switch on No. 1004's front platform had started a fire, remained at his post and halted the car at King Manor station. All passengers disembarked safely, but combating efforts could not be accomplished and flames swept through the car and reduced it to a scorched shell. The conflagration also destroyed the platform station. A Philadelphia and Western Railway Company maintenance car pushed the remains to Norristown from which point one of Lehigh Valley Transit Company's work cars moved it to Fairview Car barn to a position at the end of No. 4 pit track. Superstitious shop employees gloatingly recalled their premonitions of tragedy.

## LVT PURCHASES AND REVISES INDIANA RAILROAD COMPANY CAR NO. 55

Indiana Railroad Company, organized in 1930 as a consolidation of various independent city and interurban systems similar to Cincinnati and Lake Erie Railroad Company's pattern, purchased fourteen twenty-five ton coach-lounge multiple unit interurban cars Nos. 50-63 from American Car and Foundry Company, Jeffersonville, Indiana, and twenty-one similar coach-baggage cars Nos. 64-84 from Pullman-Standard Car Manufacturing Company, Chicago, Illinois. All thirty-five cars entered service during July and August, 1931, as replacements for cars almost twice as heavy and provided high speed luxury electric railway service on Indianapolis-Louisville and Indianapolis-Fort Wayne routes. Eventually, however, the system lost passenger patronage to highway vehicles.

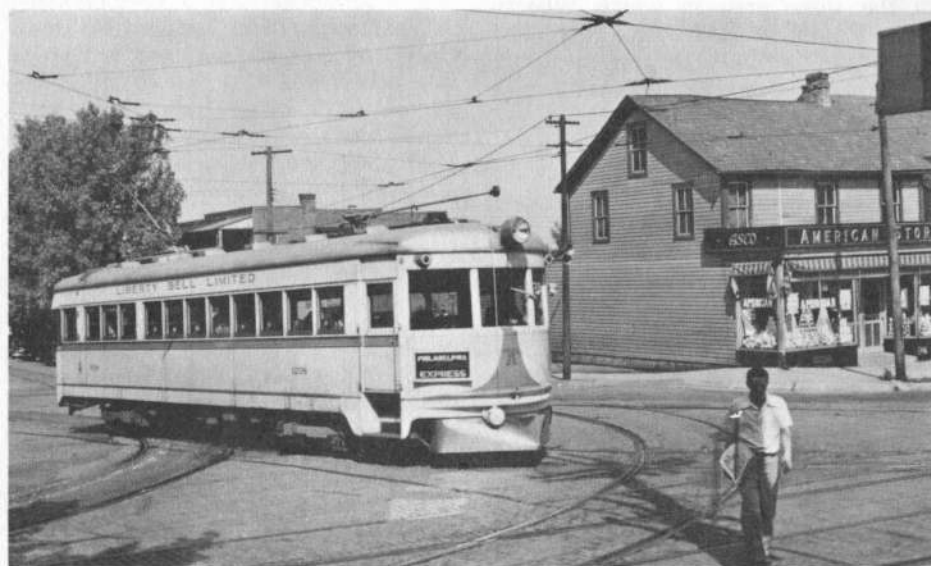
Abandonment of Indiana Railroad Company's eight hundred miles of interurban and city rail network began in 1939, but a franchise controversy retained the sixty-mile Indianapolis-Seymour segment of the Indianapolis-Louisville route and car barn facilities at Columbus, Indiana. The company retained and assigned passenger cars Nos. 55, 65, and 78 to a pool which operated only one daily round trip excluding Sunday, commencing at Seymour. From this group, in January, 1941, Lehigh Valley Transit Company purchased club car No. 55 as replacement for No. 1004 (C&LE No. 127).

No. 55's original exterior features included an aluminum riveted aluminum skeleton body, with a wooden canvas covered arch roof, standing on Commonwealth trucks; wood floor and aluminum structural shapes; curved front and observation ends



Walter Knapp, Jr.

Car No. 1023 (C&LE No. 115), assigned to spare service, stands on Philadelphia and Western Railway Company's storage spur located north of 69th Street Terminal, Upper Darby, summer, 1940.



Howard P. Sell

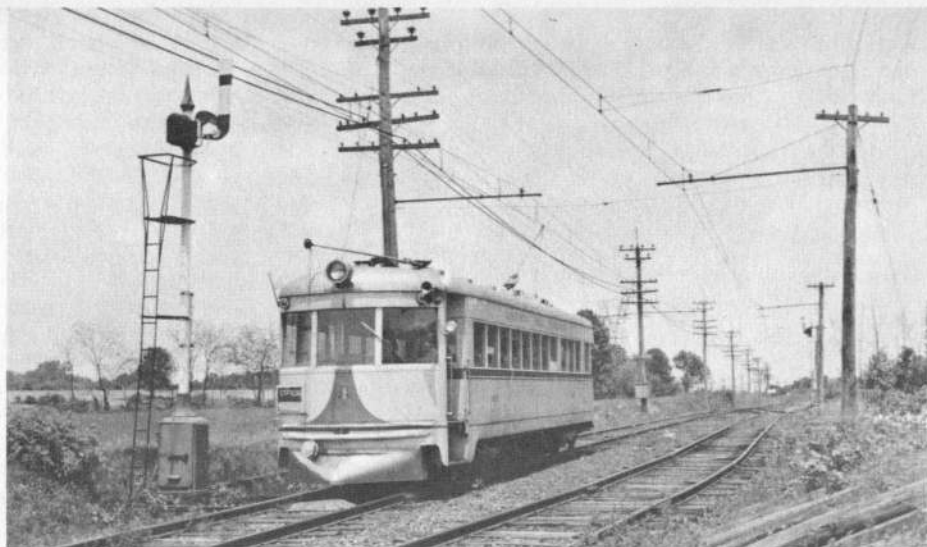
Southbound car No. 1008 (C&LE No. 122) negotiates the curve which led from South Eighth Street onto St. John Street, Allentown, September 29, 1940.

designed for multiple unit train service; illuminated destination sign under right front window; an aluminum multiple unit type pilot under operating end; an aluminum curved visor, blended with letterboard, shielded observation compartment end windows; aluminum body skirts along both sides protected under floor equipment; fabricated steel anticlimbers at both ends; right front pneumatic operated street level folding door; right rear floor level emergency door with stirrup step with door secured inside by a handle; motorman and twelve lift sash passenger windows, equipped with safety glass, along left side with a wide panel separating motorman's and first passenger window and eleventh and twelfth passenger windows; eleven passenger windows, equipped with safety glass, flanked by a front passenger doorway and a rear emergency door along the right side with a wide panel separating front door and first passenger window and eleventh passenger window and emergency door; three large fixed windows at observation end; three large fixed windows at operating end; a side view mirror fastened to each front corner post; motorman steps on body and panel separating eleventh right side window and emergency door plus a roof mat for access to roof; twelve roof ventilators, six along each side, plus a small lavatory ventilator; and a wooden roof mat over the roof crown at each end.

Interior features included front platform, coach, lavatory, and lounge compartments, the lavatory and a partition with door located between eighth and ninth windows separated coach and lounge compartments and a partition with windows but no door separated platform and coach sections; swivel bucket seat on left front platform for motorman; stand on front platform for fare register; double bucket velour upholstered seats from first to sixth passenger windows

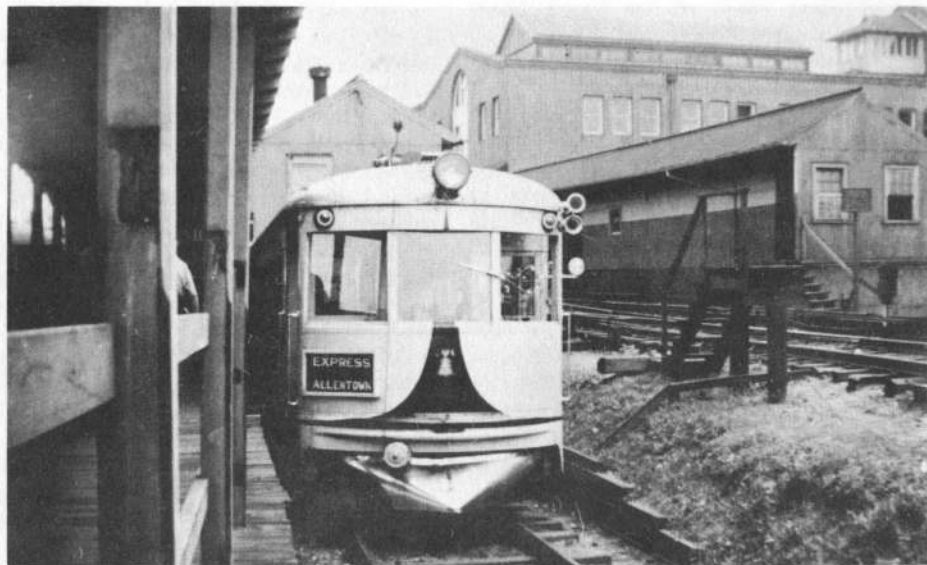
on left side and from first to eighth window on right side in coach section; a lounge compartment from ninth to twelfth windows on left side and from ninth window to emergency door on right side equipped with individual chairs and sofas to seat ten passengers, seating capacity, 38; lavatory at seventh and eighth windows along left side equipped with a flush hopper, basin, liquid soap dispenser, mirror, paper towel dispenser, and running water; drinking water faucet and paper cup dispenser on outer lavatory wall along aisle; Pantasote shades on side and platform-coach partition windows; parcel racks above windows; button and bell passenger signal system; linoleum floor cover; and fibre board ceiling.

Electrical and mechanical features included four GE 706B 600 volt motors which developed one hundred horsepower and together produced a balancing speed of 83 m.p.h.; two Commonwealth trucks equipped with twenty-eight inch wheels; gear ratio 24:43; left side WH HLF single end deadman control; an engineer's valve and reset switch, in place of a control, located at observation end; movement from observation end accomplished by having reverse lever positioned, reset switch left at "off" position, and control set at operating end by hooking down control lever at third point; control system arranged to operate a maximum of three cars in a train with only the first car's pole collecting current; WH traction brakes, electric magnetic rail brakes, and Peacock hand brake; Tomlinson No. 10 car, air, and electric couplers under both platforms; air valve for control of front door located at control position; switch iron holder on front platform; air, light, and heater switches near control position; mirror above front center window provided an interior view for operator; trolley retriever on right side of observation end; trolley board with



John P. Scharle

Southbound car No. 1020 (C&LE No. 413), carrying white flags indicative of an extra movement, passes through Acorn Siding located between Norristown and Lansdale, May 29, 1941.



E. Everett Edwards

Northbound scheduled car No. 1022 (C&LE No. 112) stands at the loading platform reserved exclusively for Liberty Bell Route limited cars in 69th Street Terminal, Upper Darby, summer, 1941.

stand, base, spring, pole buffer guard, twin hook, and pole with reversible shoe at observation end; a spare pole fastened to roof near center; main cable which extended from pole through roof, down lavatory wall to floor, along left side at floor level and around motorman's window to switch box, from switch to control, and from control to motors; large portable incandescent headlight for rural operation set in brackets underneath front center window and plugged into a receptacle above anticlimber; combination signal and marker lights at all four corners in letterboard; flag brackets at window sill level at all four corners; lamps in receptacles in a cowl underneath front windows for street operation; 56w lamps in vapor proof glass fixture with metal guards under floor at four corners, clear glass in front and red glass in rear; right rear brake light; interior series lighting with lamps in receptacles in domes along both sides; automatic electric seat heaters; portable telephone for operator-dispatcher contact; rail sander system at front truck controlled by valve at motorman's position and fed from boxes under front seats; curved twin air horns above left front window; button controlled horn at observation end for backing movements; two electric fans on coach-platform partition, one on lavatory wall facing lounge, and another on coach-lounge partition facing lounge; pneumatic window wiper at left front and center windows; and air reservoir, compressor, switch group, cables, motor, generator, storage batteries, resistors, fuse boxes, rerailer, water tank, jack and handle, brake equipment, line switch, and reverser attached to floor's underside.

Indiana Railroad Company's standard paint scheme comprised a traction orange body; dark green roof; and black numbers, heralds, letters, trucks, and anticlimbers. Large num-

bers were located above front center window on letterboard and on body under first and eleventh passenger windows on both sides; the IR herald appeared under sixth passenger window on both sides; and "Indiana Railroad" appeared in large letters on the letterboard on both sides between second and tenth passenger windows.

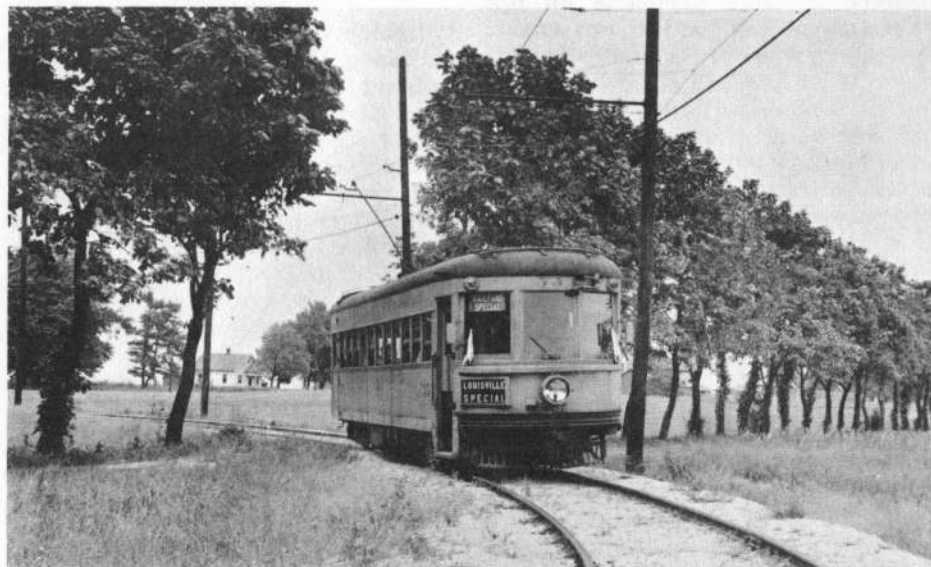
In 1934 Indiana Railroad Company converted No. 55 from a coach-lounge interior to a club car by relocating the lavatory from seventh and eighth to second and third left side windows; removing right side coach-lounge partition and door between eighth and ninth windows; installing refrigerator for food and beverages at first left side passenger window; relocating main cable; and replacing lounge furniture and bucket seats with twenty-four individual upholstered chairs. Body skirts had been removed to provide more convenient access to under-floor equipment.

Lehigh Valley Railroad Company's switching locomotive shunted the railroad flat car bearing Indiana Railroad Company No. 55 through the interchange into Riverside Yard, Allentown, on February 25, 1941. Lehigh Valley Transit Company's employees unloaded the car via a temporary ramp with the aid of work car No. R1, connected motor leads, but waited until evening to move it under its own power to No. 3 track inside Fairview Car barn alongside No. 1004's twisted charred skeleton reposing on No. 4 track. Within the next week mechanical department employees removed the Commonwealth trucks and placed the body on the shop trucks. On March 30, 1941, utility car No. 302, a converted passenger car, moved No. 55 from No. 3 track to No. 2 track for the rebuilding and conversion processes. When the chores commenced, an employee chalked out



The. Rev. Samuel P. Worthington

A southbound 1000 Series car passes Philadelphia and Western Railway Company's shops and Liberty Bell Route's reversal wye prior to entering 69th Street Terminal, Upper Darby, September 15, 1941.



Collection of Barney Neuburger

Indiana Railroad Company's interurban car No. 55 stands on freight spur trackage at Sellersburg, Indiana, during a rail ramble conducted on September 3, 1939.

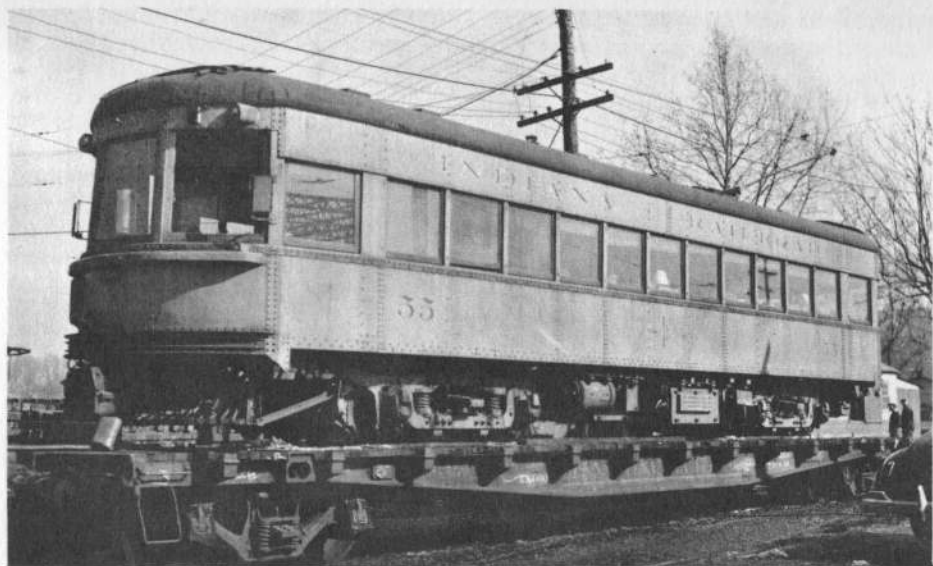
numerals 55 and marked 1030 above. Superstitious employees once again predicted tragedy with restoration of the thirteen car roster.

Exterior alterations, designed to create a form similar to the other 1000 Series cars, included removal of motorman's left side window and corresponding body structure and installation of a platform-street loading entrance with air operated door and trap plus steps salvaged from No. 1004; removal of right side full length door and installation of an air operated trap and platform level door; removal of side view mirrors from both corner posts; removal of front roof mat; removal of right rear emergency door and installation of a lift sash window and body plates; creation of an emergency entrance at center observation window location with door, steps, and grab handles; installation of a motorman step on anticlimber at right rear section; removal of multiple unit type pilot and installation of the covered pilot formerly fastened under No. 1004; fastening of steel sheets over the front end from anticlimber to window sills to create a sloping effect; and fastening of steel plates beneath side panels to create a skirt around the entire body.

Mechanical and electrical equipment also underwent alterations. Fairview Car barn's mechanical crews scrapped both Commonwealth trucks and installed the Cincinnati trucks which had been under No. 1004 but retained No. 55's General Electric 706B motors and 24:43 gears; eliminated and scrapped front and rear couplers and otherwise converted the car to single unit operation; moved observation control from center location into left rear corner; eliminated the MG set and 32v battery; removed headlight plug receptacle and brackets and installed a permanent scarlet painted headlight on roof at operating end and a small 6v

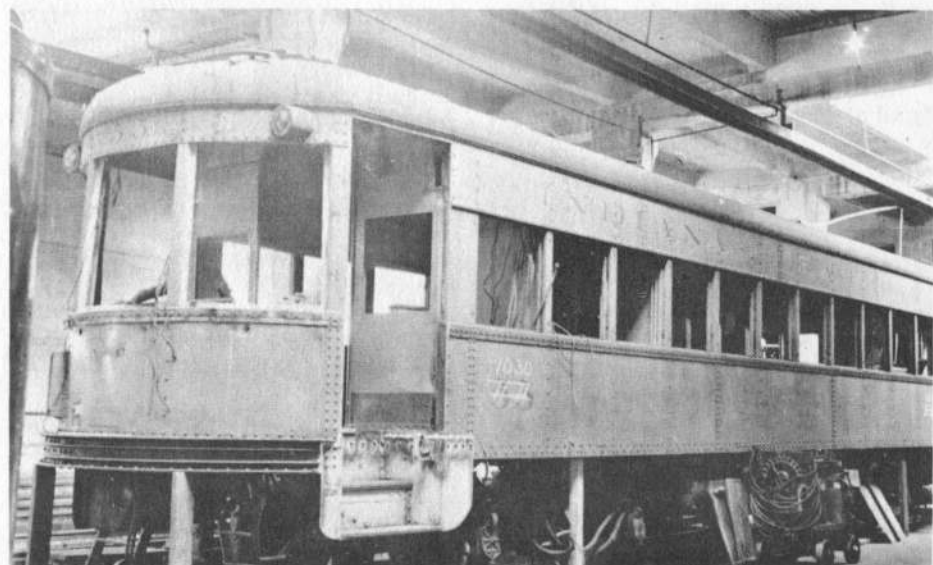
headlight on rear roof; imbedded, in the rear door, a drum light made from the original portable headlight with "Liberty Route" painted inside the glass in scarlet on a cream background and a gold Liberty Bell insignia placed between Liberty and Route; removed curved air horns from above left front window and placed two chromium plated trumpet air horns on left front corner post near roof base; moved observation compartment warning horn from window post to a position underneath visor; installed a trolley board with single hook, stand, spring, cable, pole buffer guard, and pole with wheel on roof at operating end and fastened a trolley retriever below anticlimber in line with post which separated right front and center windows; replaced reversible trolley shoe at observation end with a standard type; installed a ventilator in roof above vestibule; eliminated rear flag brackets and moved front brackets from window sill level to a position near roof base; installed a third rail-overhead transfer switch to the right of operating end's control; installed a cord-buzzer passenger signal system beneath parcel racks; relocated most undercarriage equipment to provide sufficient clearance for operation over Philadelphia and Western Railway Company's third rail system; and removed the lower exterior lamp receptacles at all four corners.

Lehigh Valley Transit Company retained the interior club car arrangement but initiated several moderate changes: a side seat replaced the refrigerator at the first left side window; a portable operator's chair replaced the stationary bucket seat; wall to wall carpet replaced linoleum as the floor cover; furniture reupholstered in rust and black colored cloth; tables refurbished with formica tops; various new table lamps placed at new locations; window posts covered with formica; Monk cloth curtains



Howard P. Sell

Indiana Railroad Company's car No. 55 stands on a railroad flat car in Lehigh Valley Transit Company's Riverside Yard shortly after its arrival in Allentown, February 25, 1941.



Stephen Maguire

Indiana Railroad Company's car No. 55, in process of conversion to Lehigh Valley Transit Company's No. 1030, stands on Fairview Car barn's No. 2 track, March 30, 1941.

draped at observation end windows; individual white head and back rest cloths with an embroidered Liberty Bell placed on all chairs and sofas; smoking stands and receptacles placed at various convenient locations; gold covered metal troughs fastened over existing fixtures simulated indirect lighting; brass hand rails fastened along parcel racks above side windows; polished brass interior hardware replaced the older type; and a bronze flower box, fastened on the lavatory wall, faced the observation end.

On June 17, 1941, while No. 1030's conversion progressed, maintenance employees scrapped No. 1004 (C&LE No. 127) on Fairview Car barn's scrap track. Before the workers had upset the remains from the shop trucks, shop crews removed several other undamaged structural shapes which had miraculously survived the conflagration and which were not needed for No. 1030's revision.

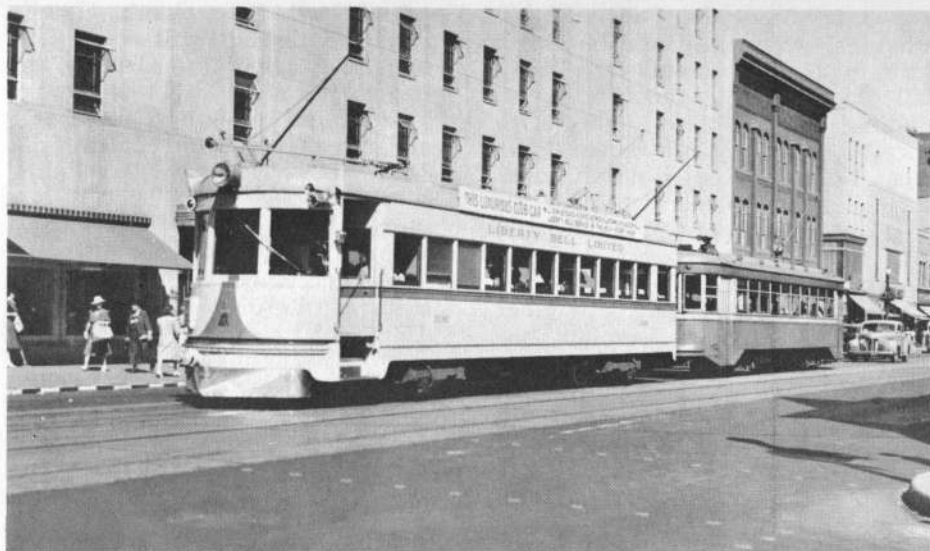
### NO. 1030 ENTERS SERVICE

Transit company officials introduced No. 1030 to the public with an assignment to Allentown Fairground service, a city operation, beginning with the Great Allentown Fair's opening on Sunday, September 14, 1941. As a publicity gesture the mechanical department fastened long temporary signs lettered "This Luxurious Club Car Will Soon Be Placed In Service Between Allentown & Philadelphia—Liberty Bell Service, On The Hour—Every Hour" on the roof along both sides. Another sign, lettered "Temporarily In Service For Fairgoers between Fair Grounds and 8th & St. John Streets", covered the destination sign box glass. No. 1030, carrying white flags in the classification holders, operated between Eighth and St. John Streets wye trackage and the fairground located at North Seventeenth and Chew Streets via South Eighth, Hamilton, North Twelfth,

Gordon, North Seventeenth, Hamilton, and South Eighth Streets. The Philadelphia Division operators assigned to the service maintained an indefinite schedule and collected one customary city zone fare in each direction. Cards lettered "FAIR GROUNDS" and "DOWN TOWN", placed in the right front window, indicated direction. When all seats had been occupied, the operator replaced the destination sign with a "CAR FULL" sign.

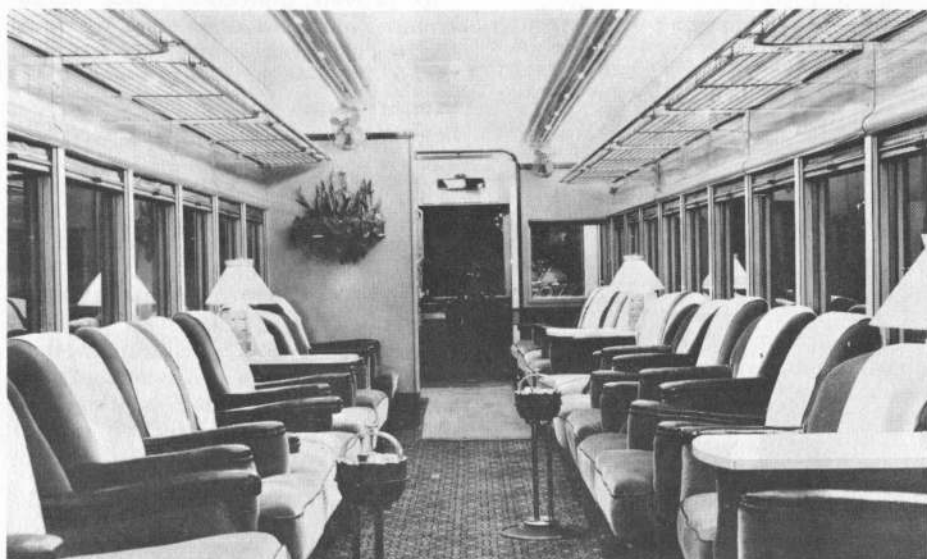
After No. 1030's fair week operation had been successfully concluded, Lehigh Valley Transit Company commenced further tests before officially assigning the car to regular Liberty Bell Route Service. The mechanical department conducted a test trip between Allentown and 69th Street Terminal with No. 1030 on Tuesday, September 23, 1941. Both temporary signs remained intact on the roof but the fair week destination signs had been removed. The southbound trip proved uneventful, but northbound No. 1030 developed a motor malfunction shortly after leaving 69th Street Terminal. Philadelphia and Western Railway Company's operator backed the car from main line trackage onto a coal yard trestle near Ardmore and a Lehigh Valley Transit Company electrician performed adjustments. On Thursday, September 25, 1941, No. 1030 operated perfectly during a test trip conducted by the mechanical department over the short Allentown-Bethlehem-Easton interurban route. Only a highway sign near Farmersville presented a clearance problem, but a maintenance worker bent the sign away from the right of way.

A semi-charter trip sponsored by Lehigh Valley Chapter, National Railway Historical Society, Incorporated, from Allentown to Easton and return and from Allentown to Norristown and return recorded No. 1030's first revenue producing interurban



Howard P. Sell

Car No. 1030 (IR No. 55), operating local fairground service, stands on Hamilton Street near Ninth Street in Allentown's business district, September 19, 1941. A 950 Series city-suburban car follows.



Howard P. Sell

An interior view of car No. 1030's original club-type interior. The transit company's maintenance crews nicknamed the car "The Golden Calf".

venture on September 28, 1941. Forty electric railway historians and enthusiasts from various cities in eastern United States patronized the inaugural trip. Another minor electric equipment malfunction briefly halted No. 1030 in Broad Siding during the return trip from Norristown, but the operator adjusted the condition. Accordingly, the mechanical department delayed No. 1030's debut in scheduled limited service until electricians had conducted another investigation and had completed necessary adjustments.

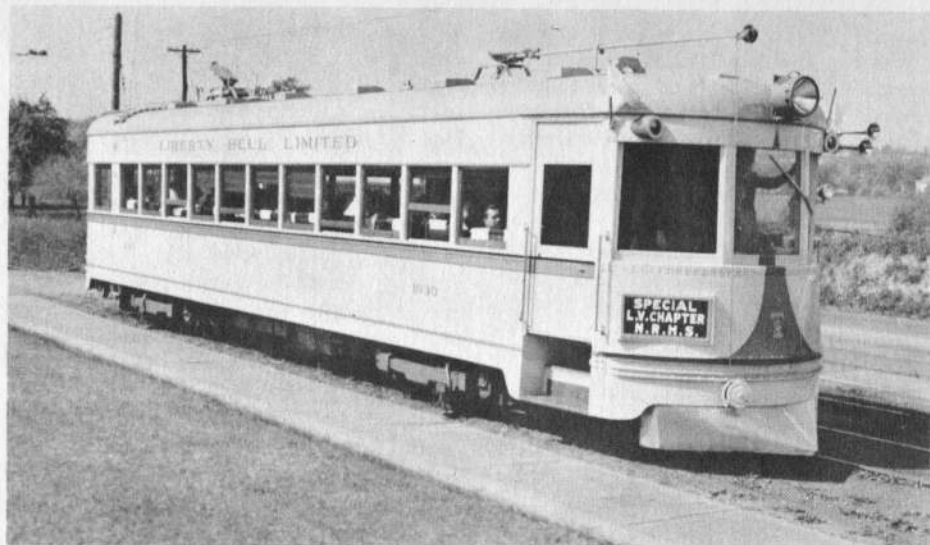
No. 1030 left Allentown at 8:00 a.m., Friday, October 3, 1941, on its first regular scheduled revenue trip over the entire Liberty Bell Route. Thereafter, its limited seating capacity dictated regular assignments to 8:00 a.m. and 2:00 p.m. week day and Saturday trips leaving Allentown; 11:00 a.m. and 6:00 p.m. week day and Saturday trips leaving 69th Street Terminal; 10:00 a.m. and 7:00 p.m. Sunday trips leaving Allentown; and 1:00 p.m. and 10:00 p.m. Sunday trips leaving 69th Street Terminal. When No. 1030 entered service, the Transit Company placed eight of the current popular magazines, secured in leather binders, on various tables for passengers' accommodation and set sansaveria and philodendron plants in the flower receptacle. *Transit Journal News* facetiously referred to No. 1030 as a "mobile garden".

Officials established a more rigid daily maintenance program for No. 1030 as compared to the other 1000 Series cars: customary inspection of motors, brakes, and trolley slides; customary filling of water tanks; customary changing of chair cloths; sweeping carpet; polishing and dusting furniture; pruning and freshening plants; and placement of latest magazines in proper binders. Shop maintenance crews who performed the household type chores, chores similar

to those which charwomen performed during 800 Series car operations between 1912 and 1932, rather disgustingly nicknamed car No. 1030 "The Golden Calf".

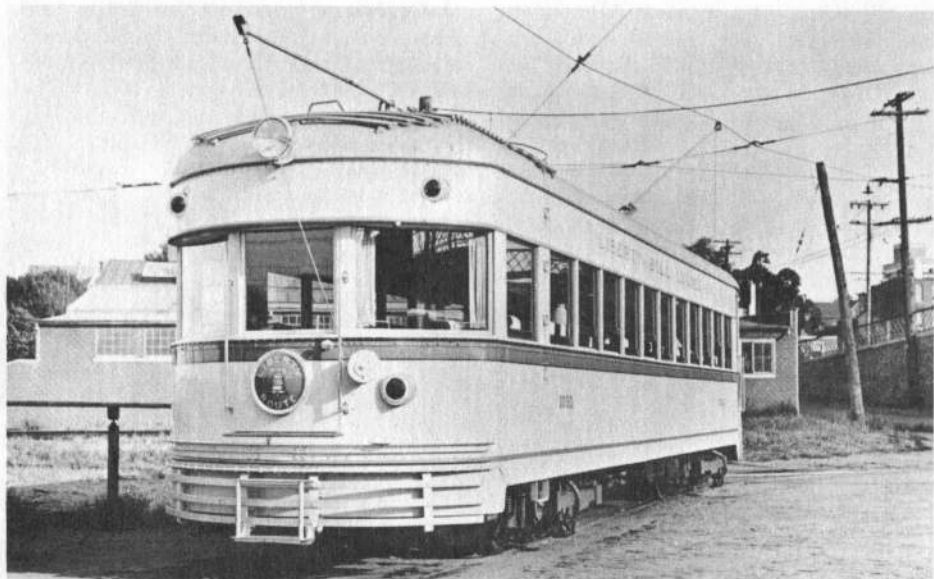
United States' entrance into World War II in December, 1941, altered No. 1030's status. The seating arrangement, the system's pride, soon proved inadequate to conveniently accommodate the influx of industrial workers travelling between homes and factories and servicemen, either on leave or on furlough, travelling between their residences in the Lehigh River Valley and Philadelphia Navy Yard and The Pennsylvania Railroad and The Baltimore and Ohio Railroad Company stations in Philadelphia. On May 5, 1942, shop workers removed several side-facing individual chairs and installed forward and rearward facing sofas. The rearrangement process increased the seating capacity from thirty to thirty-six. Eventually, Lehigh Valley Transit Company removed the flower and plant receptacle from the lavatory wall and discontinued supplying magazines. No. 1030 soon lost "The Golden Calf" nickname with discontinuance of additional maintenance assignments.

Passenger traffic, diverted from highway travel to the Liberty Bell Route as the result of World War II's emergency programs, increased steadily and required additional accommodations during week day morning and evening hours between Allentown and Norristown and on weekends and holidays between Allentown and 69th Street Terminal. One single 1000 Series car had been recorded as having left Allentown on a regular southbound trip with one hundred and twenty-nine passengers aboard. The traffic department alleviated inconvenient conditions by regularly doubleheading heavily patronized trips between Allentown and Norristown on week days. This new



Howard P. Sell

Easton-bound car No. 1030 (IR No. 55) stands on Easton Division trackage before Taylor-Wharton Company, located west of Easton, during trip sponsored by Lehigh Valley Chapter, N.R.H.S., September 28, 1941.



Walter Knapp, Jr.

Car No. 1030 (IR No. 55) stands in Rink Siding, Norristown, during reversal maneuver preliminary to return trip to Allentown, September 28, 1941.

policy also required the constant use of former deluxe cars Nos. 702, 704, and 710 in regular service during morning and evening operations but left Nos. 701 and 812 in reserve status.

### **COLLISIONS PLAGUE LIBERTY BELL ROUTE**

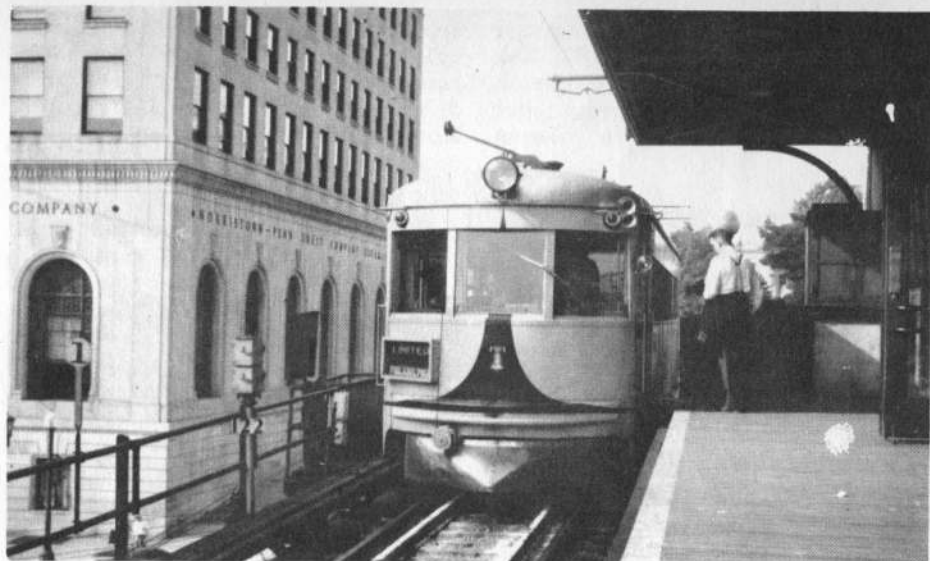
Liberty Bell Route operations continued in a normal fashion until northbound No. 1003 (C&LE 121), the doubleheader from Norristown northward for the 5:00 p.m. trip leaving 69th Street Terminal, collided with freight car No. C14 (former passenger interurban No. 802) on July 8, 1942, at 5:30 p.m. on the sweeping single track curve which extended from DeKalb Highway across a meadow and highway to Brush Siding located north of Norristown. Foilage and vegetation growth had reduced visibility at this point. Eleven passengers and No. 1003's motorman were killed and thirty passengers injured when the heavy higher wood-steel freight car ripped into the lower lightweight aluminum-wood passenger car as far as the fourth passenger window from the operating end. The accident would have claimed more lives if operators of both cars had not applied emergency braking systems shortly before the impact. This unfortunate accident represented the only incident during the Liberty Bell Route's entire history in which a passenger or passengers had been fatally injured while riding inside an interurban car.

Work and freight equipment moved both damaged cars to Fairview Car barn that night. The company concealed No. 1003 inside the paint shop located at the end of No. 7 track and No. C14 at the end of No. 5 pit track. Superstitious employees reiterated the premonitions which they had expressed when No. 1030 had arrived as the thirteenth 1000 Series car. The collision rep-

resented the first of three serious accidents which followed in rapid succession and almost destroyed confidence and prestige which Liberty Bell Route operations had enjoyed for more than a generation.

A second collision within a month aroused the public. On Saturday, July 25, 1942, at 9:22 p.m., only seventeen days after the fatal collision, car No. 1001 (C&LE No. 128), second section northbound, slid into the observation end of car No. 1030 (IR No. 55), first section northbound, stalled in dense foliage on Perkasio Park curve located on an ascending grade only a few hundred feet north of Perkasio station. No. 1030's trolley pole had left the wire while negotiating the curve. The operator had attempted to signal the second section's operator with his lantern, but the latter had already notched the car's control handle to full acceleration preparatory to climbing the incline bordering the park before he had either seen the other operator's signal or stalled No. 1030. Immediate application of the car's emergency features abruptly reduced speed, but momentum carried No. 1001 into No. 1030. The shattering impact stoved in No. 1030's observation end approximately one foot and No. 1001's operating end almost as far as the coach-platform partition. Fourteen passengers and No. 1001's operator suffered injuries of various degrees, but no one suffered fatal injuries. The jolt also rudely awakened several weary homebound soldiers, sailors, and marines dozing comfortably in No. 1030's luxury. Utility cars moved No. 1001 into Fairview Car barn's paint shop at the end of No. 8 track alongside wrecked No. 1003 and placed No. 1030 on No. 2 track for immediate repairs.

The damaged condition of cars Nos. 1001 (C&LE No. 128), 1003 (C&LE No. 121), and 1030 (IR No. 55) forced Philadelphia Division dis-



James E. MacDonald

Car No. 1003 (C&LE No. 121), maintaining a southbound schedule, halted at Norristown station less than three weeks before fatal collision with a freight motor car, June 20, 1942.



The Rev. Wilfred F. Maloney

Car No. 1022 (C&LE No. 112) stands on Fairview Carbarn's No. 5 track prepared for movement through washer and scrubbed No. 1023 (C&LE No. 115) stands on No. 6 track, January 17, 1946.

patchers to rely more frequently upon the four 700 Series cars and No. 812 to maintain daily scheduled service along with the ten operating 1000 Series cars.

The third serious accident along the Liberty Bell Route during summer, 1942, involved a delivery truck and southbound car No. 710, the second section following car No. 1020, at the crossing north of Perkasio Park on Saturday afternoon, September 5, 1942. The impact derailed No. 710's front truck, and with the truck's motor casing sliding on the rail, the car moved down-hill for several hundred feet and smashed into and destroyed a wooden waiting shelter. Wooden boards, hurtled through the air by the impact, entered the car through open windows and struck and slightly injured seven passengers.

Death to twelve passengers and injuries to fifty-two others within sixty days demanded an adjustment to the Liberty Bell Route's operating policy. Although an investigation proved that operational and dispatching policies, policies recognized as standard interurban practices throughout the United States, had not failed, transit company officials nevertheless proposed to alter operations. More frequent single car service rather than assignments of two cars to a heavily patronized trip produced the only plausible solution to the problem.

### **HALF HOUR SERVICE INTRODUCED**

Lehigh Valley Transit Company established half hour regular passenger departure schedules between Allentown and Norristown on week days and between Allentown and 69th Street Terminal on weekends and holidays effective September 20, 1942. New operating rules also banned the movement of two cars in the same direction within a signal block unless an extreme emergency

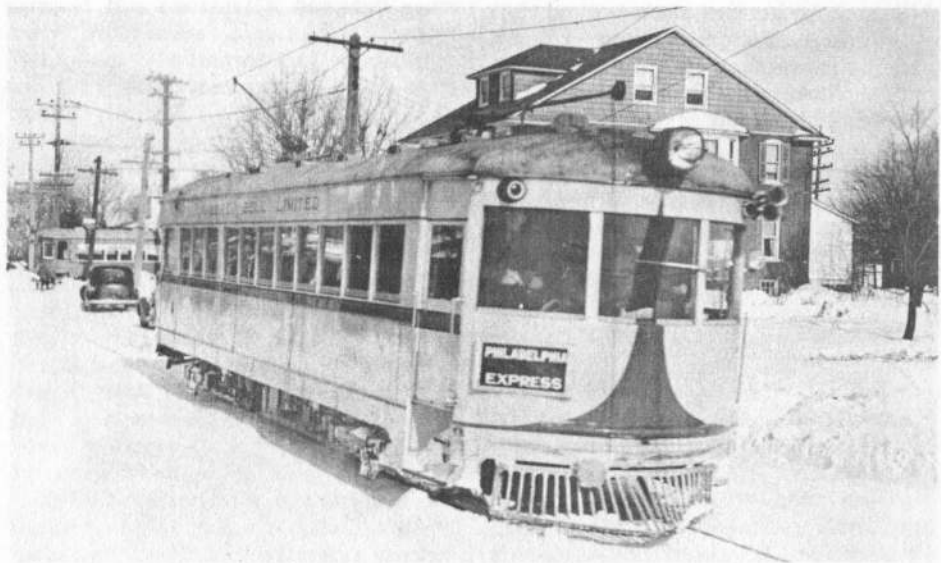
situation dictated otherwise. The new arrangement created the situation whereby ten cars operated within a one hour span of time. As a means to accommodate additional cars along the Liberty Bell Route, the company provided more passing sidings by adding a spring switch, rail, wire, and switch pan to the north end and a spring switch and switch pan to the south end of Couter Siding and by adding a spring switch and switch pan to both ends of Locust, Ridge, Nace, Acorn, and Angle sidings. In addition, the traffic department added fifteen minutes to northbound and southbound schedules with increased time spread only over operations between Allentown and Norristown. In the course of maintaining the lengthened schedule, northbound cars laid over ten minutes at Norristown station and southbound cars usually laid over at Gehman Siding located between Souderton and Hatfield. The traffic department also authorized several safety stops at highway crossings between Allentown and Norristown. Additional inspectors who constantly accompanied scheduled trips enforced the new rules. Ironically, the Liberty Bell Route's fastest interurban cars which had been assigned to service after 1912 operated the slowest schedules, but the new arrangements served intended purposes and reduced accidents.

During October, 1942, as an additional precaution against rear end collisions, the mechanical department installed more warning devices at the observation end of all 1000 Series cars. Shop crews fastened a red circular glass reflector at each lower corner and another at the bottom of the observation safety door and electricians fastened a rack of three small battery operated clearance-type electric lights on the visor beneath the observation end's headlight. Fairview Car barn's mechanical crews returned No. 1030 (IR No. 55) to service on October 23, 1942, and No.



The Rev. Wilfred F. Maloney

Car No. 1022 (C&LE No. 112), enroute to Allentown's station via South 8th Street's northbound track for a southbound trip assignment, crosses Walnut Street, June 14, 1946.



Charles A. Brown

Southbound car No. 1002 (C&LE No. 126) shows effects of drifting snow as it moves along Summit Street, Souderton, February 22, 1947.

1001 (C&LE No. 128), with it front end replaced with that which had been salvaged from fire-gutted No. 1004 (C&LE No. 127), shortly thereafter.

In November, 1942, mechanical crews added a sanding apparatus behind the rear trucks of 1000 Series cars in order to provide better braking facilities during operations from the observation end. Repaired freight car No. C14, renumbered No. C19, returned to service on September 15, 1943, but No. 1003 (C&LE No. 121) stood in outdoor storage at the end of Fairview Car barn's No. 9 track until shop crews completed the dismantling project in December, 1946.

Regular half-hour schedules, in effect between 1942 and 1947, required constant use of all twelve 1000 Series cars, the four 700 Series cars, and No. 812. In order to maintain scheduled service during emergency situations, the Philadelphia Division's dispatcher often reversed the car which had concluded a northbound trip and assigned it to the southbound trip without customary inter-trip maintenance at Fairview Car barn. This policy, plus excess wear and tear caused by quick acceleration and braking maneuvers while serving numerous stops and power voltage variation between Lehigh Valley Transit Company's overhead system and Philadelphia and Western Railway Company's third rail system, tended to cause frequent motor failures in 1000 Series cars. When equipment failures rendered 1000 Series cars inoperable on the main line, either line car No. R2 or work car No. 551, both assigned to Souderton Car barn and 214 Series passenger cars, assigned to Fairview Car barn in Allentown, pulled disabled cars back to Fairview Car barn by means of a standard drawbar. Multiple unit freight cars, 700 Series cars, and No. 812 also performed the assignment by using a specially bent

drawbar which fit the coupler.

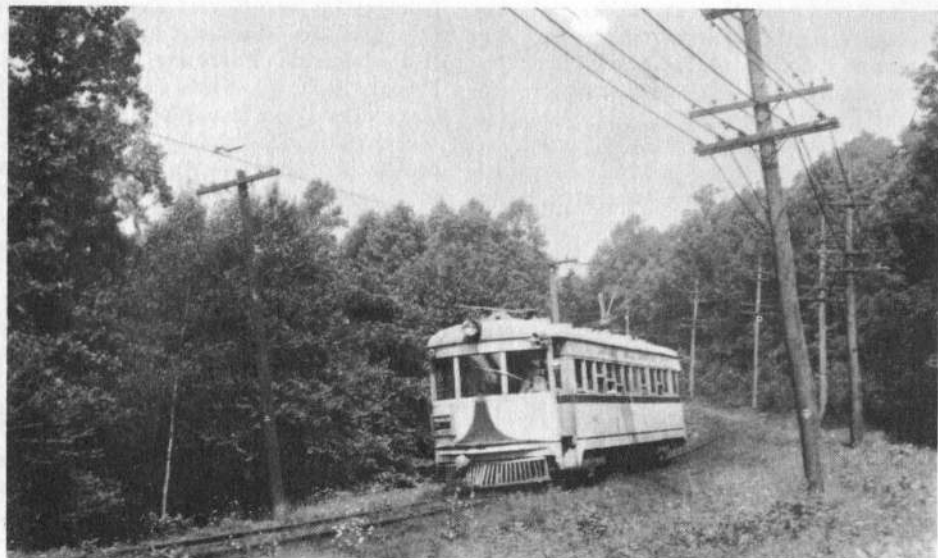
Lehigh Valley Transit Company's mechanical department, effective late 1946, removed the stainless steel pilot cover from a 1000 Series car to allow the movement of cool air over motors of both trucks and thereby reduced the rate of motor failures. Shop crews eventually removed pilot covers from cars Nos. 1000, 1001, 1002, 1005, 1007, 1021, 1022, 1023, and 1030 but left pilot covers intact in cars Nos. 1006, 1008, and 1020 until the end of railway operations.

Only a few insignificant adjustments, other than removal of pilot covers, altered 1000 Series cars' appearance during World War II and the post-war period: movement of third rail cable on trucks from inside the beam to the outside; "Watch Swing of Car" warning signs fastened on both corners of the observation end; protective metal bar fastened above the left front door prevented damage to air horns and spot light from roller brushes as the car moved through the washing apparatus installed inside Fairview Car barn on No. 6 track; brackets for lamps and flags placed on lower portion of both observation compartment corners; red replaced cream as trolley retriever color on several cars; pearl gray replaced silver as standard roof color; cream replaced scarlet as flag holder color; a darker red replaced mountain ash scarlet for lettering and trimming; elimination of the gold Liberty Bell decal in the operating end's scarlet pyramid; curved air horns, the car's original equipment, replaced the trumpet type on cars Nos. 1006, 1007, and 1030; on several cars, after the rear sign box had been removed, painters lettered "Liberty Bell Limited" in red on the rear door where the sign box had been fastened; and the word "Bell" replaced the Liberty Bell insignia on the rear drum light of No. 1030. At the war's conclusion the 1000 Series cars revealed deter-



Collection of T. C. VanDegrift, Jr.

Southbound car No. 1006 (C&LE No. 129) emerges from the tunnel bored underneath Reading Company's Bethlehem Branch at Perkasio, June, 1947.



James J. Maloney, Jr.

Southbound car No. 1022 (C&LE No. 112) ascends the northern slope of Lehigh, or South, Mountain, August 24, 1947.

ioration effects of continuous high speed service in varied weather conditions. Body plates on several cars had begun to bulge and disintegrate along seams. In 1947 painters applied the cream and scarlet paint scheme to the four 700 Series cars and to No. 812 in order to standardize the adornment for all Liberty Bell Route limited cars.

After hostilities ceased in Europe and Asia and the post-war era commenced, the federal government gradually removed emergency wartime controls which had limited production of domestic items. As automobile sales increased the Liberty Bell Route's revenue declined. Effective September 6, 1947, the Philadelphia Division eliminated half hour midday week day service between Allentown and Norristown but retained half hour week day morning and evening service between both points and half hour Saturday, Sunday, and holiday service between Allentown and 69th Street Terminal. Schedule curtailments returned Nos. 701, 702, 704, 710, and 812 to spare service.

Meager publicity accompanied the last major accident which involved a 1000 Series car and another railway car. During the evening of September 13, 1948, freight car No. C15 (former passenger car No. 808) struck and stove in the observation end of southbound car No. 1022 (C&LE No. 112) halted at No. 75½, or "chicken house", stop located inconveniently south of a curve on a descending grade along private right of way between Perkasio and Sellersville. Neither passengers nor crew members suffered injuries. Shop crews at Fairview Car barn commenced but never completed No. 1022's restoration. Mangled body plates had been replaced and given a prime coat of paint when management cancelled the project. Decline in passenger service and Lehigh Valley Transit Company's announced

intentions of early abandonment of Liberty Bell Route electric railway service influenced the sudden decision. Before a work car towed No. 1022 from shop trackage to outdoor yard storage, shop employees fastened a heavy tarpaulin over the windowless observation end as a means to protect interior furnishings from adverse weather conditions.

Cancellation of No. 1022's repairs prompted Lehigh Valley Transit Company to convert No. 1030 from club to coach type in autumn, 1949. Shop crews removed sofas and individual chairs and installed forward facing double bucket seats, reupholstered with red leather before installation, which had been salvaged from Easton Limited car No. 1101 (former Dayton and Troy Electric Railway car No. 202). All four 1100 Series cars had been sidetracked pending disposition with discontinuance of Easton limited service effective August 15, 1949. During No. 1030's interior revisions, shop crews removed wall-to-wall carpet and placed square linoleum blocks on the floor and removed the golden trough, which had simulated indirect lighting, and uncovered the original small semi-flush light fixtures fastened to the ceiling.

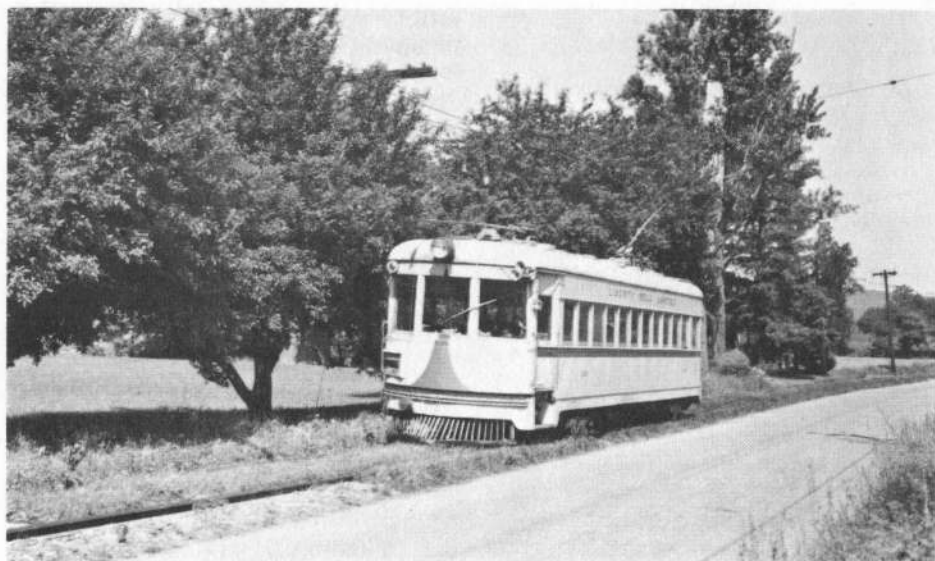
### **ABANDONMENT OF LIBERTY BELL ROUTE PLANNED**

Effective with schedules commencing September 26, 1949, Lehigh Valley Transit Company cancelled their contract with Philadelphia and Western Railway Company which had permitted passenger car operations over third rail trackage between Norristown and 69th Street Terminal. Thereafter, most patrons who had travelled on electric cars directly between Allentown and Philadelphia patronized autobus service rather than endure inconveniences and delay in transferring between Lehigh Valley Transit Company's cars and connecting Philadelphia and Western



Lester K. Wismer

Car No. 1005 (C&LE No. 123) stands in Rink Siding, Norristown, prepared for a Norristown-Allentown doubleheader trip as car No. 433 (SEL&BV **Midland**) operates a northbound local schedule, summer, 1949.



Donald W. Furler

Southbound car No. 1030 (IR No. 55) approaches Center Valley from Lanark on main line trackage which bordered the original Allentown-Philadelphia highway, May 30, 1949.

Railway Company's cars at Norristown station. However, electric freight service between Allentown and 72nd Street freight terminal in Upper Darby continued according to contract. Despite curtailment of service, hourly schedules remained in effect between Allentown and Norristown seven days per week with half hour service scheduled during morning and evening rush hours from Monday through Friday inclusive.

Lehigh Valley Transit Company tentatively planned abandonment of the Liberty Bell Route for spring, 1950, but a protest filed by an independent autobus company which served the Lansdale-Norristown area delayed a decision by Pennsylvania Utility Commission. When it appeared as though permission for total abandonment of rail service would be delayed, Lehigh Valley Transit Company considered abandonment of Lansdale-Norristown trackage only and establishment of a transfer arrangement with Reading Company's electric commuter service over Bethlehem Branch between Lansdale and Reading Terminal, 12th and Market Streets, Philadelphia. If the transit company and railroad had entered into a transfer arrangement, either a reversal wye or loop for 1000 Series cars would have been built by the transit company on the site of Broad Siding located south of Lansdale.

Company officials, when prospects for abandonment improved, ordered a retrenchment policy effective January, 1951. The decision sidetracked 1000 Series cars which required expensive electrical and mechanical repairs. Dispatchers, in order to provide cars for each trip, once again relied upon the four 700 Series cars and No. 812. In accordance with this drastic policy Lehigh Valley Transit Company gradually withdrew disabled 1000 Series cars from service: No. 1000 (C&LE No. 125), resistance

malfunction, Norristown, January 27; No. 1007 (C&LE No. 120), motor failure, Quakertown, June 4; No. 1023 (C&LE No. 115), motor failure, Souderton, August 8; No. 1020 (C&LE No. 413), motor failure, Souderton, August 15; No. 1008 (C&LE No. 122), motor failure, Lansdale, August 16; and No. 1030 (IR No. 55), motor failure, Allentown, August 30, 1951.

## **LIBERTY BELL ROUTE ABANDONED**

Lehigh Valley Transit Company, in an unprecedented move, late Thursday afternoon, September 6, 1951, immediately commenced abandonment of Liberty Bell Route railway service after receiving authorization from Pennsylvania Utility Commission. Local and limited car operators verbally conveyed the information to patrons during evening operations that autobuses would operate schedules effective September 7.

On the final day of Liberty Bell Route electric railway service, Thursday, September 6, 1951, cars Nos. 1001 (C&LE No. 128), 1002 (C&LE No. 126), 1005 (C&LE No. 123), 1006 (C&LE No. 129), and 1021 (C&LE No. 414) comprised the 1000 Series operating roster; however, two cars failed to complete schedules. Car No. 1001, during the afternoon in Norristown, and No. 1005, during the evening at Wales Junction, developed motor trouble and left the route at Rink Siding and Lansdale freight spur respectively. Line car No. R2 and work car No. 551 in relay hauled No. 1001 to Fairview Car barn by early evening and freight car No. C19 (former No. C14 and No. 802), aided by freight car No. C5 northward from Souderton, pulled No. 1005 back to Fairview Car barn circa midnight.



The. Rev. Samuel P. Worthington

Southbound car No. 1007 (C&LE No. 120) approaches the south end of Philadelphia and Western Railway Company's viaduct which spans Schuylkill River between Norristown and Bridgeport, June, 1949.



Lester K. Wismer

Southbound car No. 1001 (C&LE No. 128) enters South Fourth and Priscilla streets intersection, Allentown, after crossing St. John Street viaduct, spring, 1949.

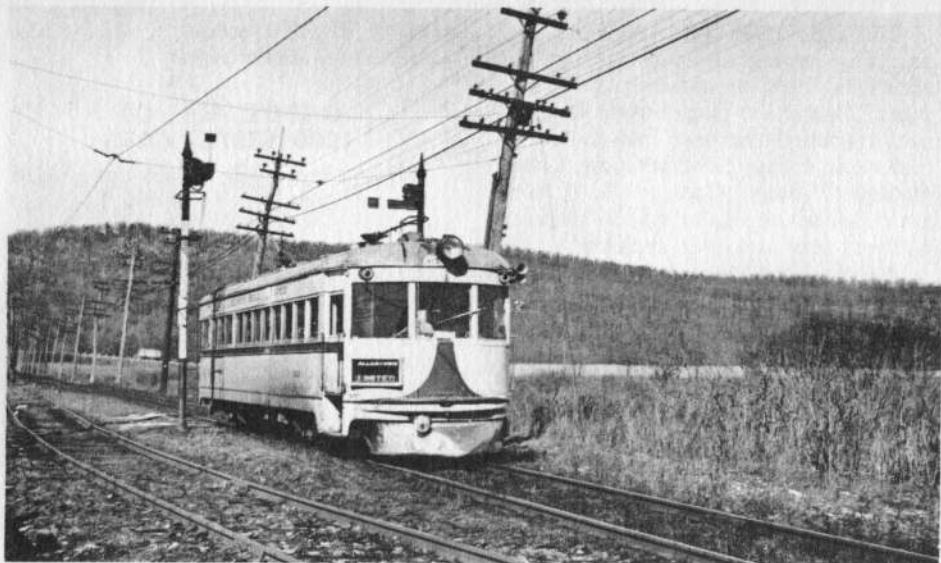
Car No. 1006 (C&LE No. 129), carrying many electric railway enthusiasts, left Allentown at 11:06 p.m., Thursday, September 6, 1951, and recorded the last interurban operation in either direction over Lehigh Valley Transit Company's Liberty Bell Route, or Philadelphia Division, without any unusual incidents. Enroute the operator obligingly halted the trip while interested town folk and passengers photographed the historic trip with cameras equipped with flash bulb attachments. The operator commenced the final return trip from Norristown at 1:06 a.m., Friday, September 7, 1951, and "called off" the Liberty Bell Route from Emmaus Junction's telephone at 2:46 a.m. The operator, aware that no passengers destined for Allentown station were aboard, operated No. 1006 directly to Fairview Car barn from Eighth and St. John Streets intersection without completing the entire trip to the station. In this manner No. 1006 unceremoniously ushered the famed electric interurban route into history.

Autobuses replaced electric railway cars with commencement of daily schedules on Friday morning, September 7, 1951, and maintained established electric car schedules via paralleling and bisecting highways and rural roads. Transit company personnel, operating private automobiles, visited former car stops and acquainted patrons with the change of service. Lehigh Valley Transit Company's autobuses had barely completed initial Liberty Bell Route round trips when track gangs commenced removal of trackage. By Monday, September 10, 1951, two track crews, aided by motor trucks, had removed rails at School Lane located south of Souderton and at Broad Siding located south of Lansdale and a third group, aided by work cars Nos. 522 and 551, had removed track northward from Emmaus Junction

to a point south of Aineyville Junction in Allentown.

## DISPOSITION OF 1000 SERIES CARS

All twelve 1000 Series cars stood idle outdoors in Fairview Car barn yard at various locations until disposition had been planned. After Lehigh Valley Transit Company concluded scrapping arrangements with Luria Brothers and Company, Incorporated, the program, which ultimately culminated with the scrapping of all but two electric railway cars commenced in autumn, 1951. Lehigh Valley Transit Company's personnel, working in conjunction with the scrap metal company, delivered eleven 1000 Series cars on wheels to Bethlehem Steel Company, Bethlehem, Pennsylvania. A temporary physical connection which led from the transit company's Bethlehem-Hellertown route through an improvised gate to a Philadelphia, Bethlehem and New England Railroad Company's stub siding located along the fence within plant property permitted convenient delivery. Delivery operations proceeded as follows: November 14, 1951, No. 812 towed No. 1022 (C&LE No. 112) and No. 710 towed No. 1007 (C&LE No. 120); January 8, 1952, No. 701 towed No. 1001 (C&LE No. 128), No. 702 towed No. 1008 (C&LE No. 122), and No. 704 towed No. 1020 (C&LE No. 413); January 10, 1952, freight car No. C16 (former passenger car No. 800) towed No. 1000 (C&LE No. 125), No. C18 (former passenger car No. 809) towed No. 1005 (C&LE No. 123), and No. C19 (former passenger car No. 802 and freight car No. C14, towed No. 1023 (C&LE No. 115), but No. C19 returned to Fairview Car barn after pushing No. 1023 into the plant; and January 23, 1952, No. C19 towed No. 1002 (C&LE No. 126), No. 1006 (C&LE No. 129) towed city-suburban car No. 910, and No. C17 (former passenger



William D. Middleton

Southbound car No. 1023 (C&LE No. 115) speeds through Lehigh Siding located at the southern foot of Lehigh, or South, Mountain near Lanark, February 3, 1950.



William D. Middleton

Northbound car No. 1023 (C&LE No. 115) crosses St. John Street viaduct, Allentown, February 4, 1950. The structure bridged Reading Company's East Penn Branch and Trout Creek meadows.

car No. 806) towed No. 1021 (C&LE No. 414) but freight cars Nos. C19 and C17 returned to Fairview Car barn after pushing Nos. 1002 and 1021 into the plant. The pushing operation was accomplished by maneuvering both cars through wye trackage located a short distance west of the entrance to the steel company at the intersection of Minsi Trail Bridge's south entrance and Daly Avenue.

No. 1006 (C&LE No. 129), the last car which operated over the Liberty Bell Route, ended its service assignments as the only 1000 Series car which moved under its own power to the steel plant. In addition, No. 1006 performed its final assignment for Lehigh Valley Transit Company by pulling, with draw bar, city-suburban car No. 910 from Fairview Carbarn, Allentown, into the plant. Within a few weeks after the cars had been either towed or pushed over Philadelphia, Bethlehem and New England Railroad Company's trackage to the scrap preparation area, fire reduced the bodies to heaps of twisted metal and ash.

Before the scrapping program had begun, the scrap company sold the General Electric Company motors and third rail components installed in trucks under cars Nos. 1020, 1021, 1022, 1023, and 1030 to Philadelphia and Western Railway Company for use in the 200 Series "bullet" cars.

### **SEASHORE TROLLEY MUSEUM PURCHASES NO. 1030**

Seashore Trolley Museum, an operating street car museum located in typical Maine woodland near Kennebunkport, purchased car No. 1030 (IR No. 55) from the scrap metal brokers. In preparation for No. 1030's shipment to the destination designated by the purchaser, Lehigh Valley Transit Company substituted No. 1002's trucks, complete with mo-

tors, for those from which motors had been removed earlier for sale to Philadelphia and Western Railway Company. On January 29, 1952, Lehigh Valley Transit Company's maintenance crews commenced the shipping task by constructing a loading ramp in Riverside Yard. During the morning of January 30, car No. 218, a former 214 Series Easton limited car, towed No. 1030 from Fairview Car barn through Allentown's business district as far as the single track on the bridge which spanned the Lehigh River between Hamilton and Union Streets and East Allentown. From this point city-suburban car No. 445 (former Jamestown Street Railway car No. 85) pulled No. 1030 with a drawbar westward on Hamilton Street's westbound track to Front Street and then pushed it northward on Front Street into Riverside Yard. Within yard property the smaller lighter No. 445 laboriously pushed the heavier interurban car up the ramp onto the railroad flat car. During negotiation of the right angle curve at Front and Hamilton Streets, a pushing operation, the drawbar bent and No. 445's left roof corner smashed the glass in No. 1030's left rear signal-marker light. As a safety measure for the movement through city streets, No. 1030's trolley pole collected electric current to provide braking facilities but motor leads had not been connected.

Several members of Seashore Trolley Museum, on hand for the event, properly prepared No. 1030 for shipment to storage at Everett Carbarn of Metropolitan Transit Authority of Boston after Lehigh Valley Transit Company's crews had placed the interurban car on the railroad flat car. On February 2, 1952, a Lehigh Valley Railroad Company switching locomotive moved the railroad car bearing No. 1030 from the transit company's Riverside Yard to the railroad's nearby yard for an assignment to an east bound freight train.



Lester K. Wismer

Southbound car No. 1007 (C&LE No. 120) races Reading Company's Philadelphia-bound passenger train at a point south of Hatfield where the interurban's track paralleled the railroad's Bethlehem Branch, spring, 1950.



Lester K. Wismer

Car No. 1005 (C&LE No. 123) approaches Center Square, Allentown, on Hamilton Street enroute to Fairview Car barn via Union Street loop after completing a northbound schedule, spring, 1950.

## CONCLUSION

The 1000 Series cars prolonged electric railway service over Lehigh Valley Transit Company's Liberty Bell Route, or Philadelphia Division, for twelve years after abandonment seemed certain. When the sleek compact interurban cars entered service in 1939, company officials and operating and maintenance personnel recognized the cars as the last which would operate Liberty Bell Route's railway passenger service. Only the length of time during which they could successfully compete with highway vehicles and the cost-income ratio factor remained a conjecture. Lehigh Valley Transit Company's management had tentatively figured five years, but World War II and its drastic tire and gasoline rationing plus elimination of automobile production for private use temporarily postponed the day of decision and lengthened the 1000 Series cars' operating years. The Liberty Bell Route's history between 1939 and 1951 and the 1000 Series cars' history are synonymous.

Lehigh Valley Transit Company's operation of 1000 Series cars compared to that of Cincinnati and Lake Erie Railroad Company's represented a distinct contrast. The engineers who had designed the cars specifically for high speed service over Ohio's rolling terrain never intended to have them operate over the Liberty Bell Route's many and varied grades and perform frequent stops for passenger accommodations. Cars leaving and entering the Lehigh Valley area while maintaining a regular schedule scooted up the steep right of way over Lehigh Mountain at a speed of fifty

miles per hour.

Lehigh Valley Transit Company virtually subjected the 1000 Series cars to brutal punishment. Substation operators reported that needles of ammeters jumped to the limit of their capacity when a 1000 Series car accelerated nearby and that the cars actually consumed more current than that which the twice-as-heavy 800 Series cars, with their 500 horsepower rating, ever consumed. Motor casings of cars which stood over Fairview Car barn's inspection pits between northbound and southbound schedules radiated heat sufficient to fry an egg. One observer referred to the cars as "mobile short circuits".

The fact that these cars survived more than twelve years of wear and tear for which they had not been designed speaks well for the engineers of Westinghouse Electric Company and General Electric Company as well as operators and maintenance crews of Lehigh Valley Transit Company who nursed them through fair weather and foul and through war and peace.

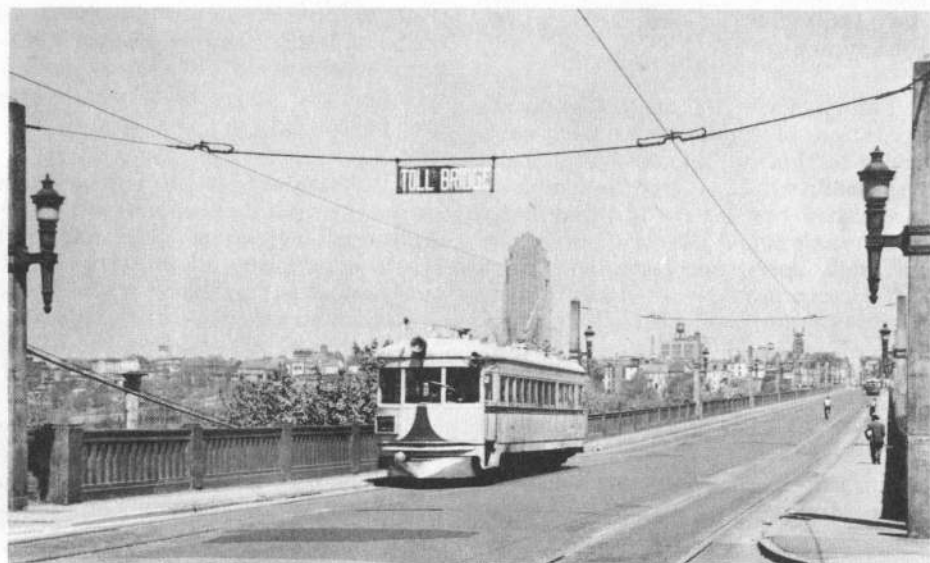
Unfortunately, the 1000 Series cars recorded an unimpressive finale. During the waning hours of Liberty Bell Route operations, seven cars set in out-of-service condition in Fairview Car barn and two of the five operable cars suffered incapacities while in service and failed to complete assigned schedules. Appropriately, however, a 1000 Series car operated the last scheduled electric car trip over the curtailed Liberty Bell Route from Allentown to Norristown and return.

END



Lester K. Wismer

Southbound car No. 1005 (C&LE No. 123) approaches Colesville Road located at the foot of Lehigh Mountain's southern slope, spring, 1950.

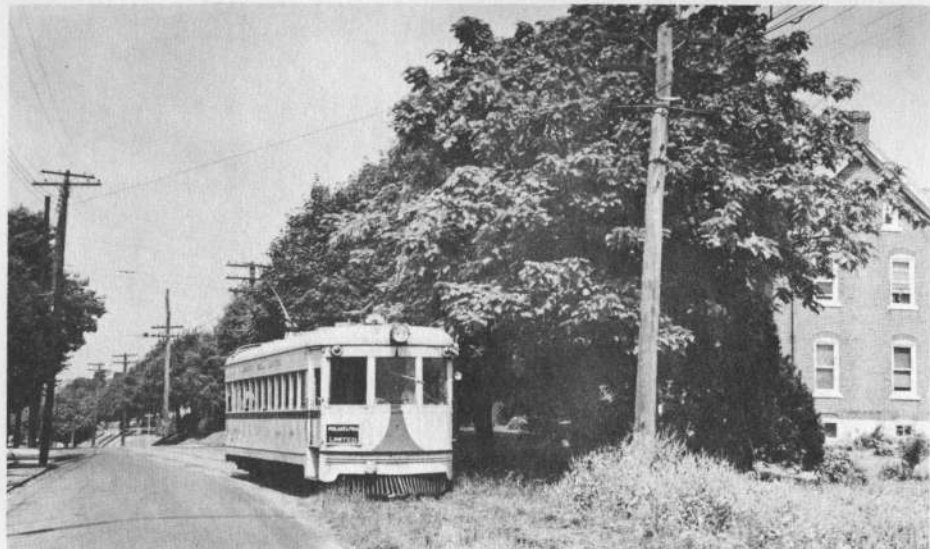


Lester K. Wismer

Southbound car No. 1006 (C&LE No. 129) approaches the southern entrance of Eighth Street Bridge, Allentown, summer, 1950.

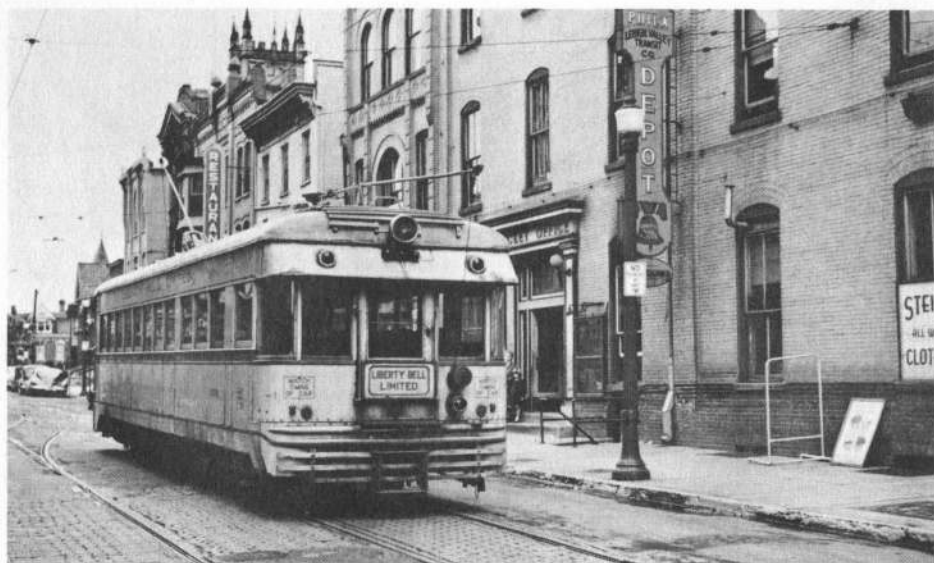
# 1000 SERIES ROSTER

| NO.  | BUILDER                  | BUILDER DATE | ACQUIRED BY LVT | FORMER NO. | INTERIOR          | IN LVT SERVICE | DISPOSITION                                                                                                                    |
|------|--------------------------|--------------|-----------------|------------|-------------------|----------------|--------------------------------------------------------------------------------------------------------------------------------|
| 1000 | Cincinnati               | 1930         | October, 1938   | C&LE 125   | Coach-lounge      | 2/13/39        | Scrapped, Bethlehem Plant, Bethlehem Steel Co., 1/10/52                                                                        |
| 1001 | "                        | "            | "               | C&LE 128   | "                 | 2/13/39        | Scrapped, Bethlehem Plant, Bethlehem Steel Co., 1/8/52                                                                         |
| 1002 | "                        | "            | "               | C&LE 126   | "                 | 2/13/39        | Scrapped, Bethlehem Plant, Bethlehem Steel Co., 1/23/52                                                                        |
| 1003 | "                        | "            | "               | C&LE 121   | "                 | 2/13/39        | Demolished in collision with freight car No. C14 near Penn Square, 7/8/42; scrapped, Fairview Car barn, December, 1946         |
| 1004 | "                        | "            | "               | C&LE 127   | "                 | 3/2/39         | Destroyed by fire on P&W Ry. at King Manor, 12/20/40; remains scrapped at Fairview Car barn, 6/17/41                           |
| 1005 | "                        | "            | "               | C&LE 123   | Coach             | 3/27/39        | Scrapped, Bethlehem Plant, Bethlehem Steel Co., 1/10/52                                                                        |
| 1006 | "                        | "            | "               | C&LE 129   | "                 | 4/10/39        | Scrapped, Bethlehem Plant, Bethlehem Steel Co., 1/23/52                                                                        |
| 1007 | "                        | "            | May, 1939       | C&LE 120   | "                 | 8/24/39        | Scrapped, Bethlehem Plant, Bethlehem Steel Co., 11/14/51                                                                       |
| 1008 | "                        | "            | "               | C&LE 122   | "                 | 9/20/39        | Scrapped, Bethlehem Plant, Bethlehem Steel Co., 1/8/52                                                                         |
| 1020 | "                        | "            | September, 1938 | C&LE 413   | Coach-lounge      | 2/13/39        | Scrapped, Bethlehem Plant, Bethlehem Steel Co., 1/8/52                                                                         |
| 1021 | "                        | "            | "               | C&LE 414   | "                 | 2/13/39        | Scrapped, Bethlehem Plant, Bethlehem Steel Co., 1/23/52                                                                        |
| 1022 | "                        | "            | October, 1938   | C&LE 112   | Coach             | 5/3/39         | Out of service, 9/13/48; struck by freight car C15 near Sellersville; scrapped, Bethlehem Plant, Bethlehem Steel Co., 11/14/51 |
| 1023 | "                        | "            | "               | C&LE 115   | "                 | 7/4/39         | Scrapped, Bethlehem Plant, Bethlehem Steel Co., 1/10/52                                                                        |
| 1030 | American Car and Foundry | 1931         | February, 1941  | IR 55      | Club; coach, 1949 | 9/14/41        | Sold via scrap broker to Seashore Trolley Museum, Kennebunkport, Maine, 2/2/52                                                 |



Lester K. Wismer

Southbound car No. 1030 (IR No. 55) enters private right of way from Penn Avenue, Souderton, summer, 1950.



William D. Middleton

Southbound scheduled car No. 1006 (C&LE No. 129) arrives at Allentown station on South Eighth Street from Fairview Car barn, June 4, 1950.

# 1000 SERIES TECHNICAL INFORMATION

## NOS. 1000-1008, 1020-1023

|                      |                                                                                                                                                                                                                                                                                                                                                                                                                         |
|----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| BUILDER              | — Cincinnati Car Company, Cincinnati, Ohio, 1930                                                                                                                                                                                                                                                                                                                                                                        |
| ORIGINAL OWNER       | — Cincinnati and Lake Erie Railroad Company, Cincinnati, Ohio                                                                                                                                                                                                                                                                                                                                                           |
| BODY                 | — Single unit; steel skeleton, aluminum body plates, wood floor, and canvas covered wood roof; 44 ft., 9 in. long; 8 ft., 10 in. wide; and 10 ft., 9½ in. high                                                                                                                                                                                                                                                          |
| TRUCKS               | — Cincinnati ABC 74 d; 74 in. wheel base; 23 ft., 2 in. truck centers; 28 in. wheels; and 5 in. axles                                                                                                                                                                                                                                                                                                                   |
| CONTROL              | — Nos. 1000-1008; Westinghouse HLF<br>Nos. 1020-1023; General Electric PC 10                                                                                                                                                                                                                                                                                                                                            |
| MOTORS               | — Nos. 1000-1008; WH 539 A1; 300 v.; 26:46 gear ratio; 100 h.p.<br>Nos. 1020-1023; GE 706 A; 600 v.; 24:43 gear ratio; 100 h.p.                                                                                                                                                                                                                                                                                         |
| BRAKES               | — Westinghouse traction brake, straight air with full safety device, self lapping M33 engineer's valve; hand brake; air lowerd and spring raised magnetic track brake                                                                                                                                                                                                                                                   |
| WEIGHT               | — Nos. 1000-1008; 48,300 pounds<br>Nos. 1020-1023; 48,300 pounds                                                                                                                                                                                                                                                                                                                                                        |
| SEATING CAPACITY     | — Nos. 1000-1004 and 1020-1021; coach-lounge; 30 in coach, 10 in lounge<br>Nos. 1005-1008 and 1022-1023; coach, 44, increased to 46 after relocation of emergency door                                                                                                                                                                                                                                                  |
| PAINT                | — 1939; picador cream body and trolley retrievers; mountain ash scarlet trim, striping, pyramid, numbers, letters, headlight, and signal-marker lights; silver poles and roof; gold Liberty Bell decal; orange-red third rail beams; black trucks and undercarriage; white wheel tires<br>1942; same as 1939 except pearl gray replaced silver as roof and pole color<br>1947; darker red replaced mountain ash scarlet |
| HEADLIGHT            | — Standard incandescent type permanently fastened on roof at operating end and small 6 v. automobile type fastened on roof at observation end                                                                                                                                                                                                                                                                           |
| SIGNAL-MARKER LIGHTS | — Electric type imbedded at all four corners near roof                                                                                                                                                                                                                                                                                                                                                                  |
| WARNING DEVICE       | — Twin trumpet air horns at upper left front corner; auto type horn at observation end under visor                                                                                                                                                                                                                                                                                                                      |



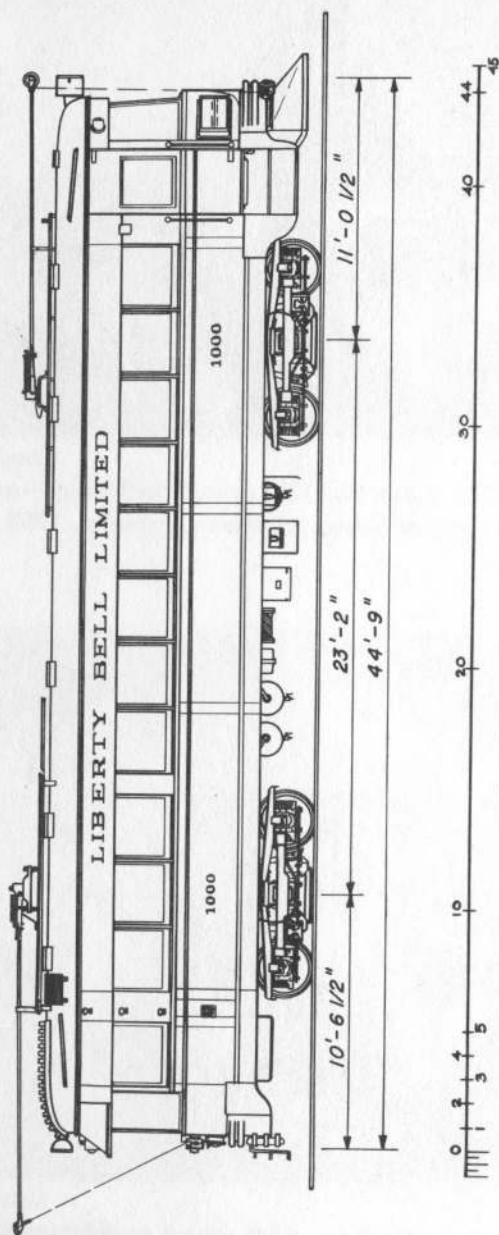
Lester K. Wismer

Southbound car No. 1001 (C&LE No. 128) operates along former Quakertown Traction Company right of way at Rich Hill, summer, 1950. The village is located south of Quakertown along the old Bethlehem Pike.



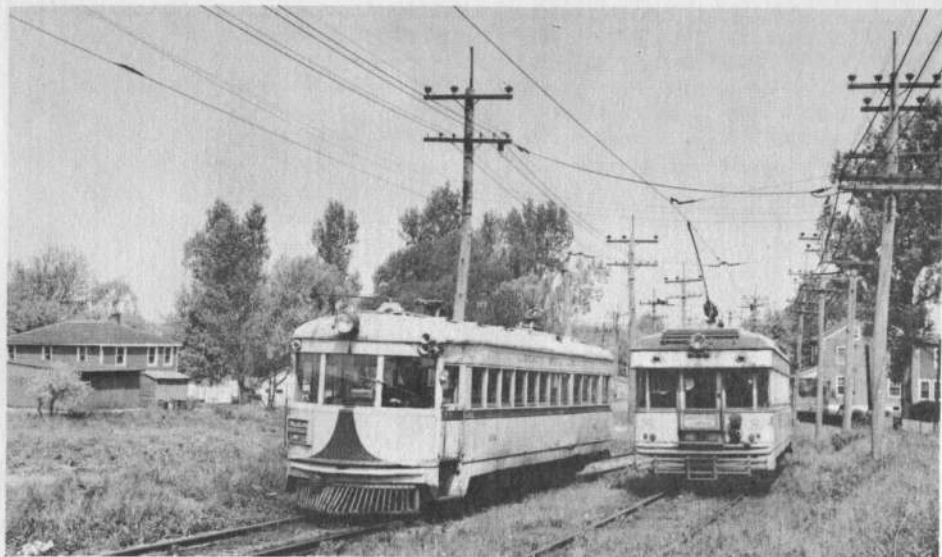
Lester K. Wismer

A southbound 1000 Series car erroneously carrying a northbound destination sign, approaches West Point waiting shelter, summer, 1950.



Drawing By: A.W. Maginnis  
February 1964

Side view drawing of cars Nos. 1000 - 1008 and 1020 - 1023.



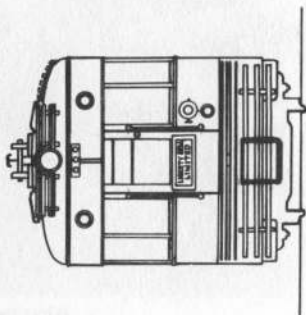
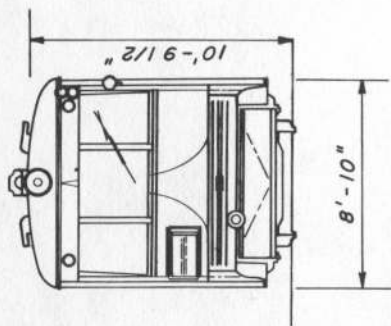
Lester K. Wismer

Southbound car No. 1002 (C&LE No. 126) passes northbound car No. 1023 (C&LE No. 115) in Emmaus Junction Siding, Allentown, summer, 1950.

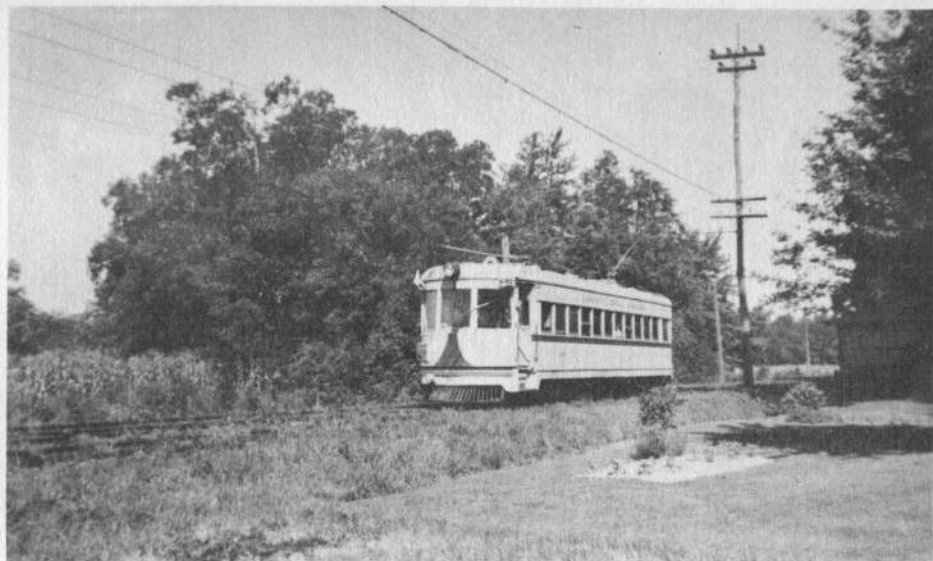


Lester K. Wismer

Northbound car No. 1001 (C&LE No. 128) passes southbound car No. 812, former private interurban car No. 999 converted to passenger service, in School Siding, Center Valley, summer, 1950.

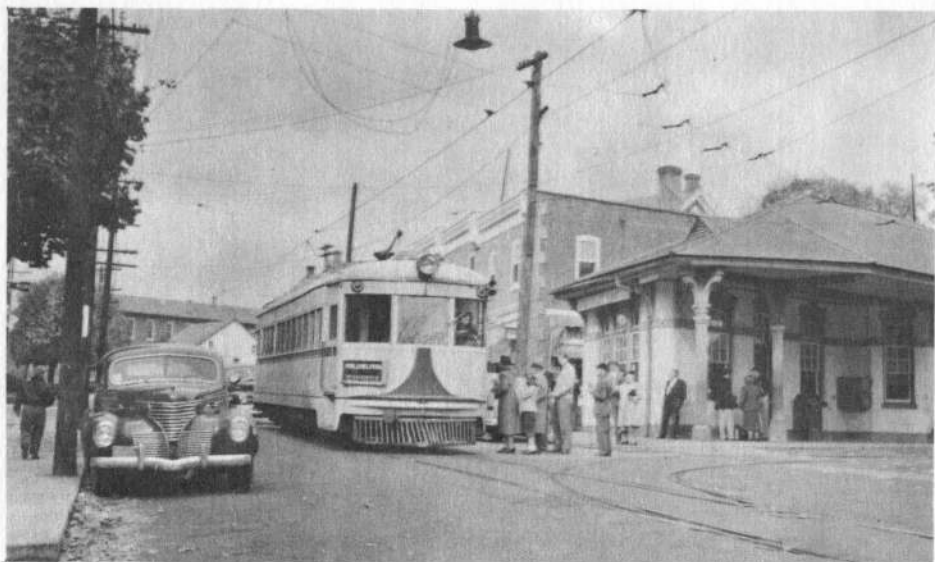


Drawings of front and rear ends of cars Nos. 1000 - 1008 and 1020 - 1023.



Andrew W. Maginnis

Southbound car No. 1030 (IR No. 55), operating a railfan tour, halted at Wood Siding, Brick Tavern, for photography purposes, August 13, 1950.



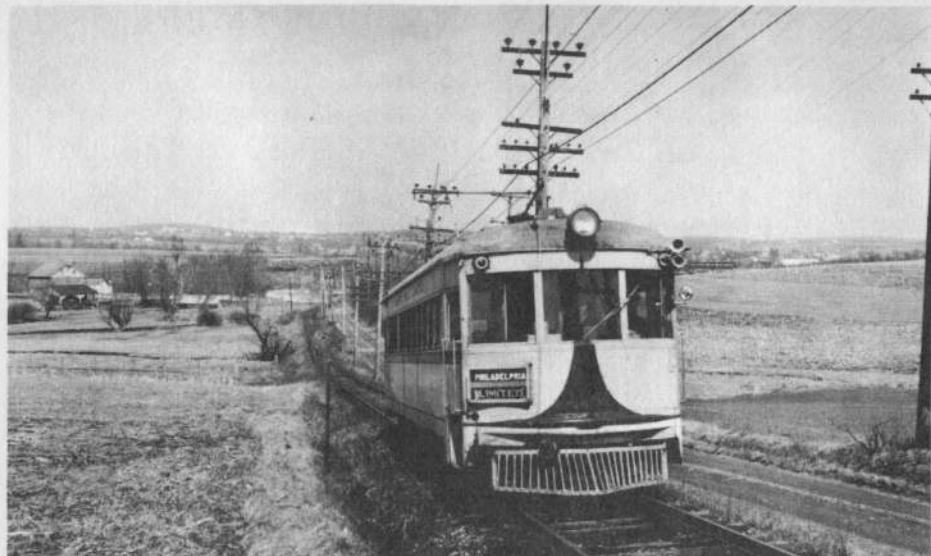
Elwood C. McEllroy

Southbound car No. 1001 (C&LE No. 128) accommodates passengers at Perkasio station, October 21, 1950.

# 1000 SERIES TECHNICAL INFORMATION

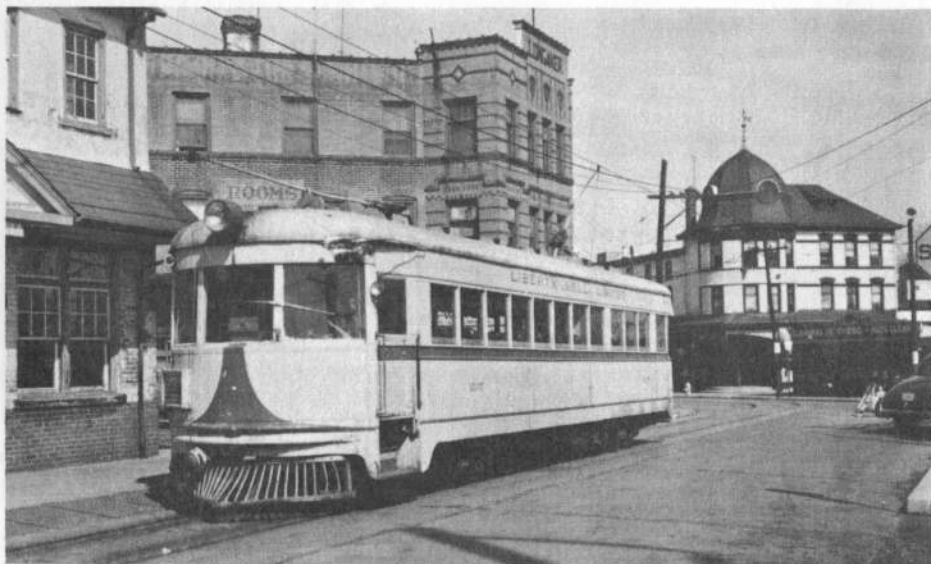
## NO. 1030 ONLY

|                      |                                                                                                                                                                                                                                                                                                                                              |
|----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| BUILDER              | — American Car and Foundry Company, Jeffersonville, Indiana, 1931                                                                                                                                                                                                                                                                            |
| ORIGINAL OWNER       | — Indiana Railroad Company, Indianapolis, Indiana                                                                                                                                                                                                                                                                                            |
| BODY                 | — Multiple unit type aluminum skeleton, aluminum body plates, wood floor, wood canvas covered roof; 46 ft. long; 8 ft., 10 in. wide; and 11 ft., 1¼ in. high.                                                                                                                                                                                |
| TRUCKS               | — Cincinnati ABC 74 d; 74 in. wheel base; 23 ft., 2 in. truck centers; 28 in. wheels (trucks originally under LVT No. 1004); 5 in. axles                                                                                                                                                                                                     |
| CONTROL              | — Westinghouse HLF                                                                                                                                                                                                                                                                                                                           |
| MOTORS               | — GE 706 B; 600 v.; 24:43 gear ratio; 100 h.p.                                                                                                                                                                                                                                                                                               |
| BRAKES               | — Westinghouse traction brake, straight air with full safety device, engineer's valve; hand brake; air lowered and spring raised magnetic track brake                                                                                                                                                                                        |
| WEIGHT               | — 50,000 pounds                                                                                                                                                                                                                                                                                                                              |
| SEATING CAPACITY     | — 1941; club car, 30<br>1942; club car, 36<br>1949; coach, 46                                                                                                                                                                                                                                                                                |
| PAINT                | — 1941; picador cream body and trolley retrievers; mountain ash scarlet trim, striping, pyramid, numbers, letters, headlight, and signal-marker lights; pearl gray poles and roof; gold Liberty Bell decal; orange-red third rail beams; black trucks and undercarriage; white wheel tires<br>1947; darker red replaced mountain ash scarlet |
| HEADLIGHT            | — Standard incandescent type permanently fastened on roof at operating end and small automobile type fastened on roof at observation end                                                                                                                                                                                                     |
| SIGNAL MARKER LIGHTS | — Electric type imbedded at all four corners near roof                                                                                                                                                                                                                                                                                       |
| WARNING DEVICE       | — Twin trumpet air horns at upper left front corner; auto type horn at observation end under visor                                                                                                                                                                                                                                           |



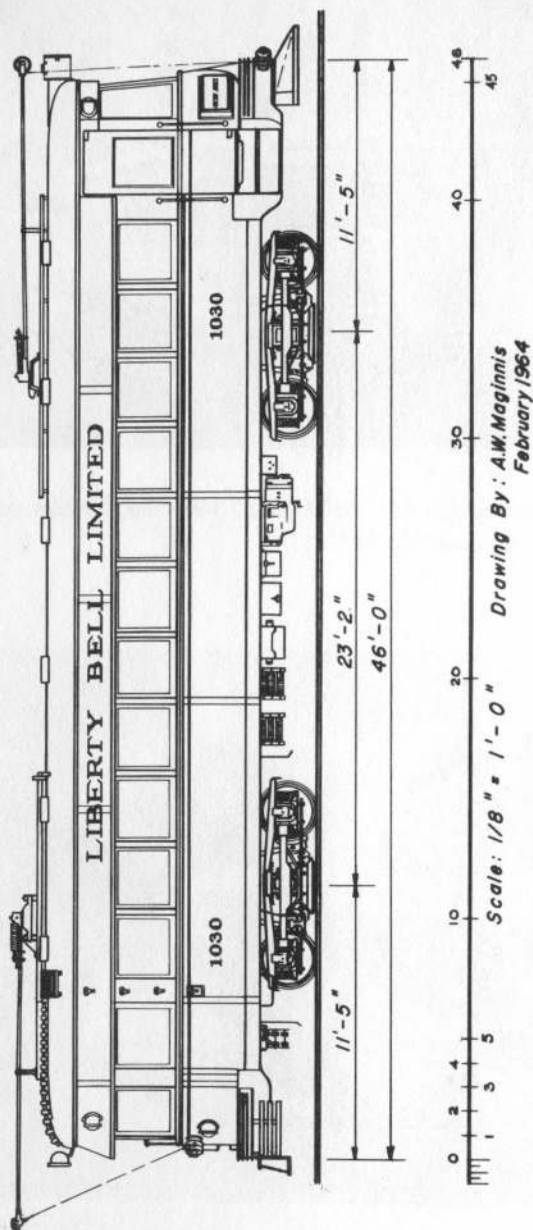
Lester K. Wismer

Southbound car No. 1021 (C&LE No. 414), speeding along former Inland Traction Company right of way, approaches Hill Top from Derstines, spring, 1951.

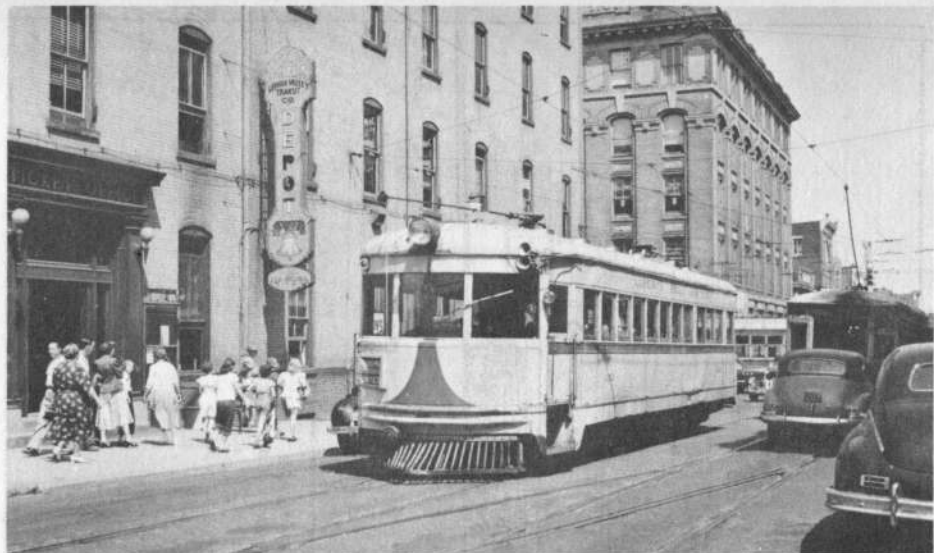


Max Hubacher

Car No. 1007 (C&LE No. 120) stands before Lansdale station during maintenance of a southbound schedule, April 15, 1951.

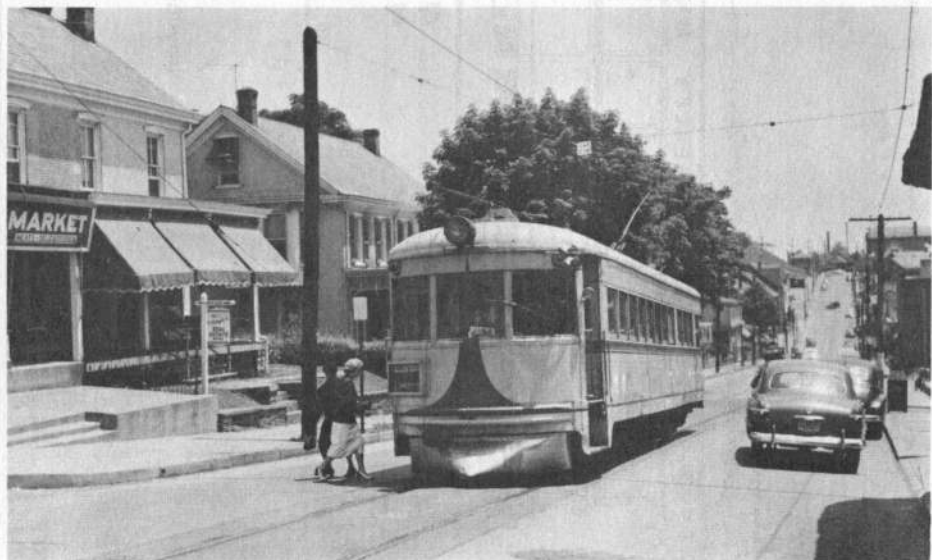


Side view drawing of car No. 1030.



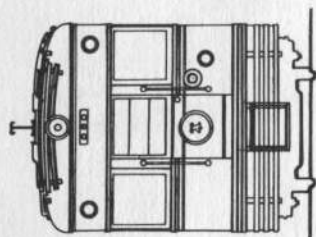
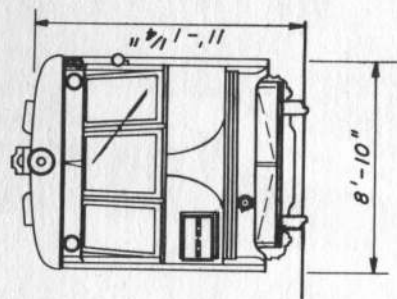
Max Hubacher

Southbound scheduled car No. 1002 (C&LE No. 126) awaits departure time before Allentown station, June 16, 1951.

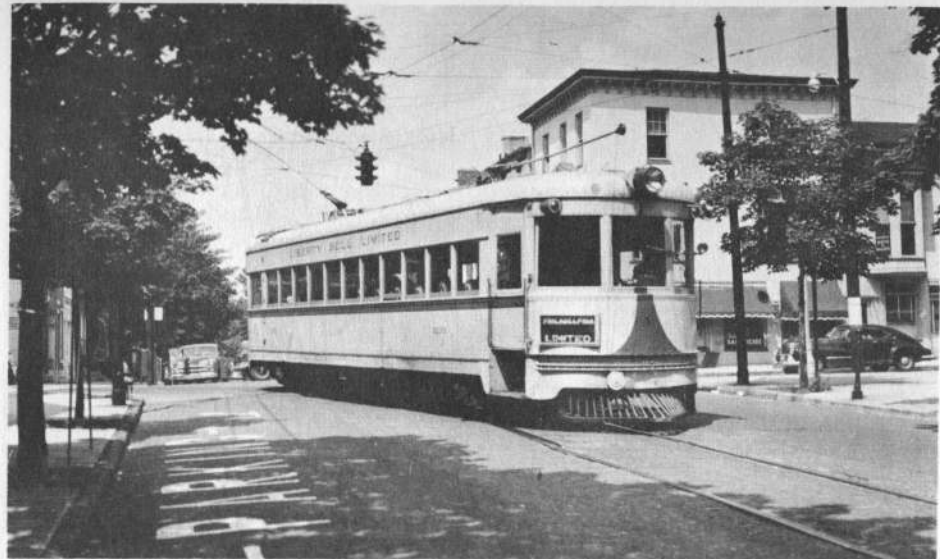


Max Hubacher

Passengers alight from and enter northbound car No. 1006 (C&LE No. 129) during a stop at the intersection of Main Street and Central Avenue in Souderton, June 16, 1951.

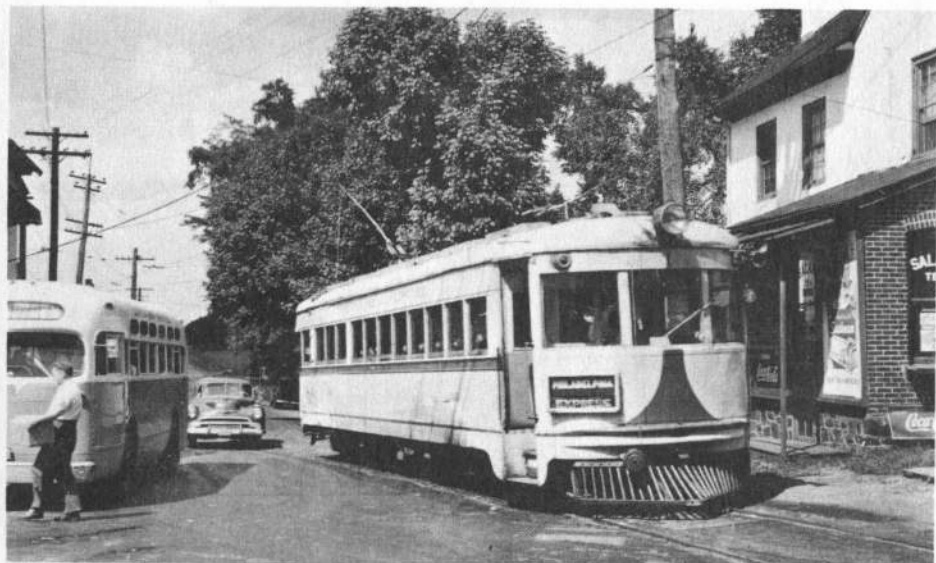


Drawings of front and rear ends of car No. 1030.



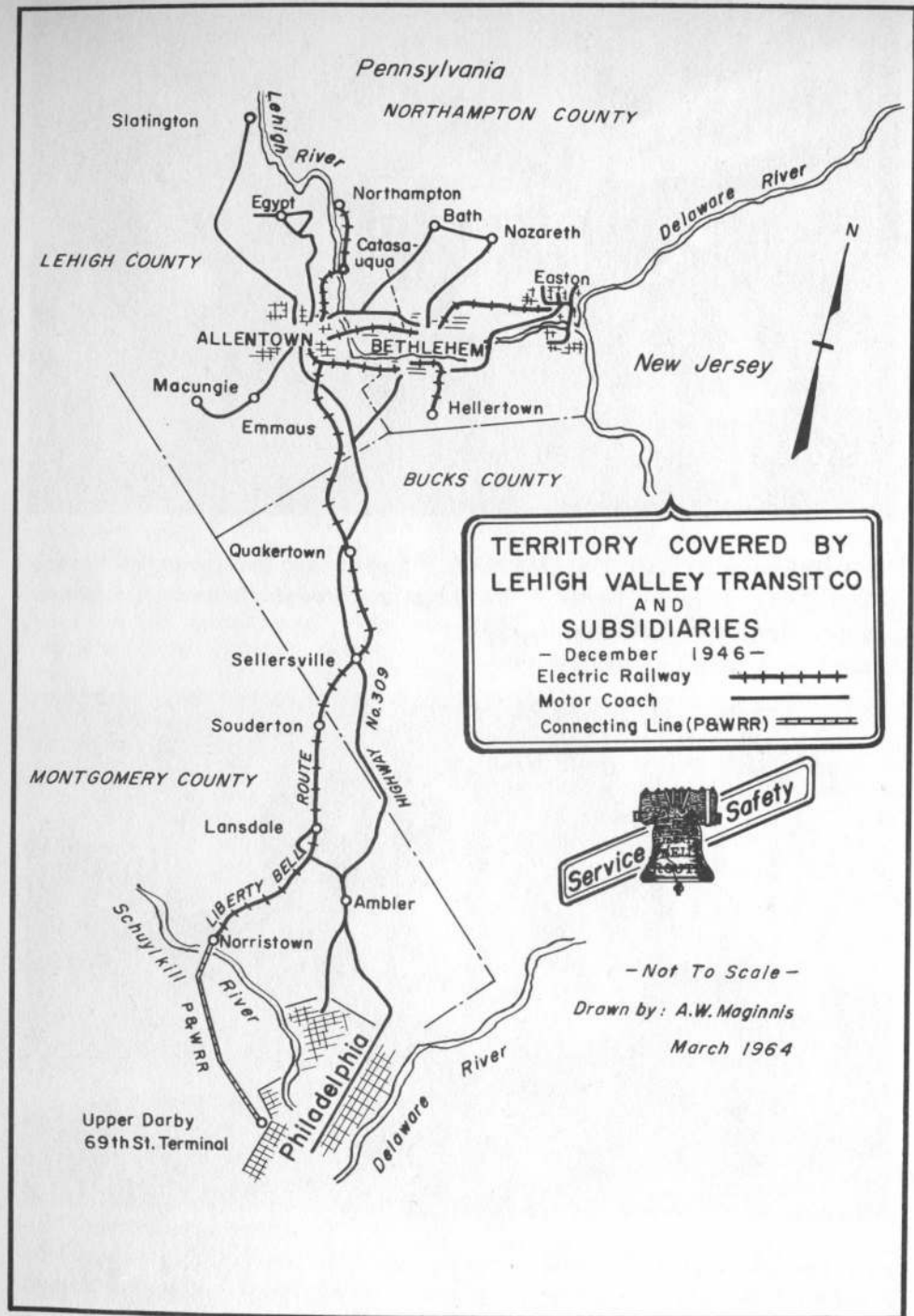
Max Hubacher

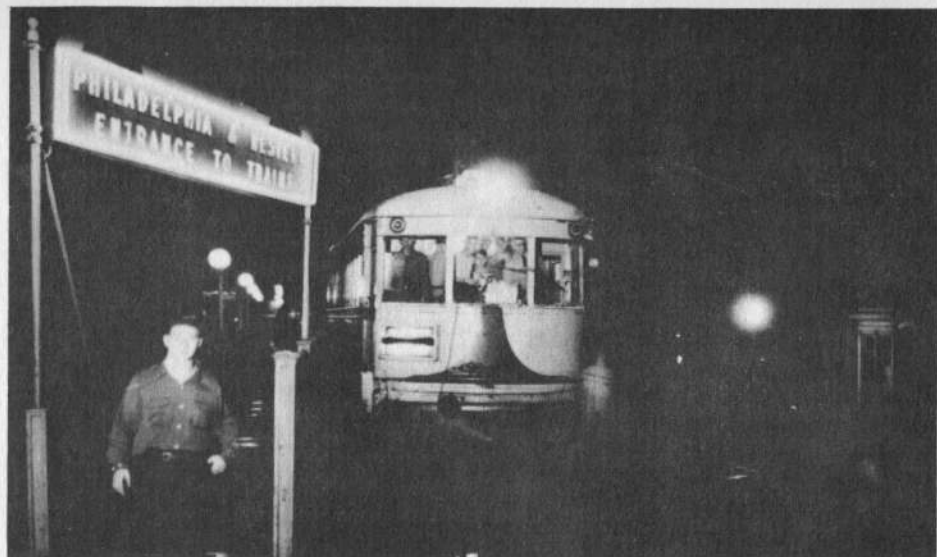
Southbound car No. 1030 (IR No. 55) negotiates curve in Norristown near north entrance to Philadelphia and Western Railway Company's Schuylkill River viaduct, June 16, 1951.



Max Hubacher

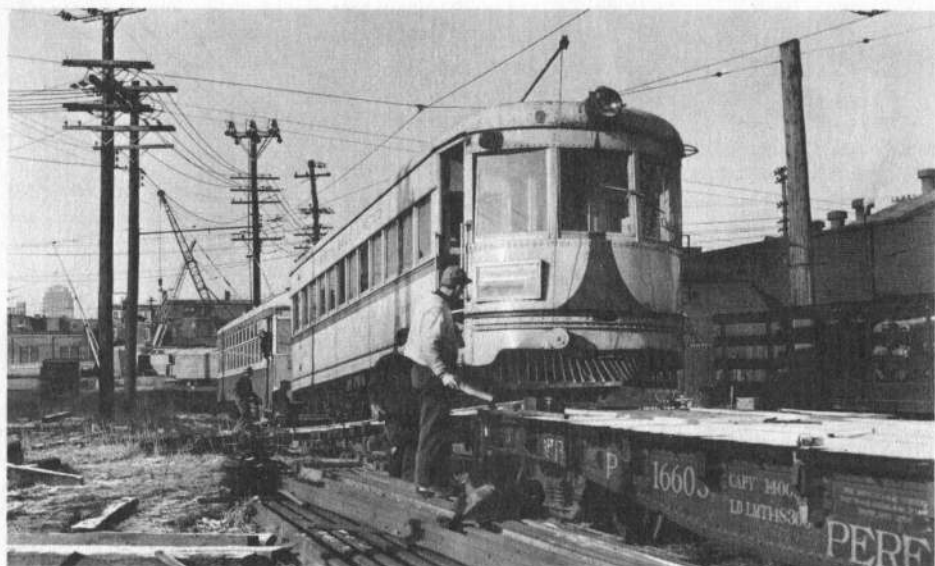
Southbound car No. 1001 (C&LE No. 128) halted at Quakertown station, August 22, 1951.





Gerhard Salomon

Northbound car No. 1006 (C&LE No. 129), performing the Liberty Bell Route's final railway operation, leaves Philadelphia and Western Railway Company's viaduct, Norristown, September 7, 1951.



Call-Chronicle Newspapers, Inc.

City-suburban car No. 445 pushes car No. 1030 (IR No. 55), purchased by Seashore Trolley Museum, through Riverside Yard, Allentown, and up the loading ramp onto a railroad flat car for shipment to Everett, Massachusetts, January 29, 1952.

## SEASHORE TROLLEY MUSEUM

Seashore Trolley Museum, founded in 1939 as Seashore Electric Railway and chartered as a non-profit educational corporation in 1941 as New England Electric Railway Historical Society, represents the world's oldest and largest electric railway museum. Typical Maine woodland northwest of Kennebunkport provides the background for the museum's car barn, storage yards, and main line trackage. Volunteer workers who serve without remuneration perform most of the museum's operation, mechanical, and maintenance chores.

Visitors to the museum may view and photograph the street car's entire history from the small rough-riding four-wheel horse car to the modern double truck lightweight comfortable streamliner. The museum's roster includes sundry type cars from near and far corners of the world — cars which moved slowly through crowded cities, roared across mid-west America's rolling terrain, threaded their way along New England's valleys, and carried workers and vacationists in foreign lands. Many cars are in operating condition and maintain schedules which the museum offers daily during summer months and on holidays and week ends during spring and autumn seasons.

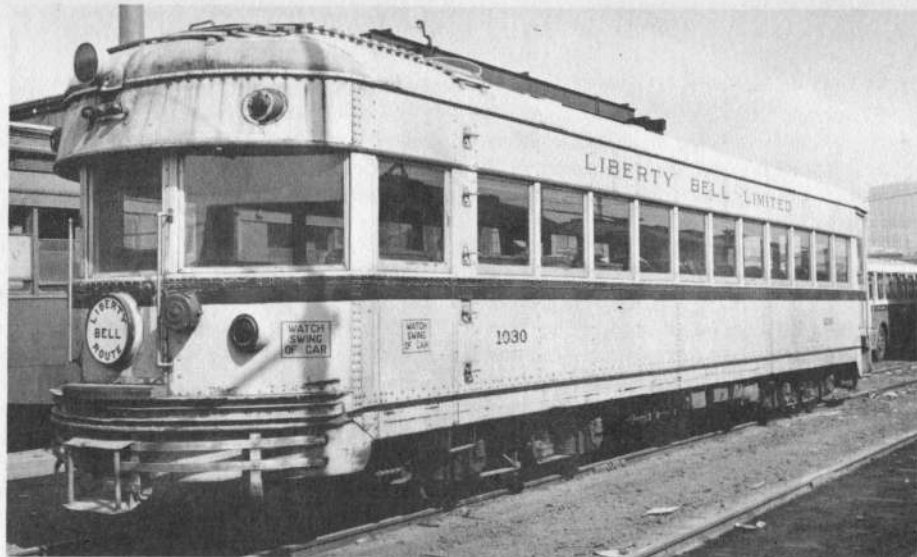
Seashore Trolley Museum purchased Lehigh Valley Transit Company's No. 1030 as a representative of the electric interurban system's final attempt to challenge competition offered by motorized highway vehicles in the late 1920's. Metropolitan Transit Authority of Boston's Everett Car barn received No. 1030 on February 10, 1952, and unloaded it shortly thereafter. The transit authority, because no railroad directly served the museum site in Maine,

provided storage facilities until the members could conveniently move the car via highway trailer to the museum's trackage.

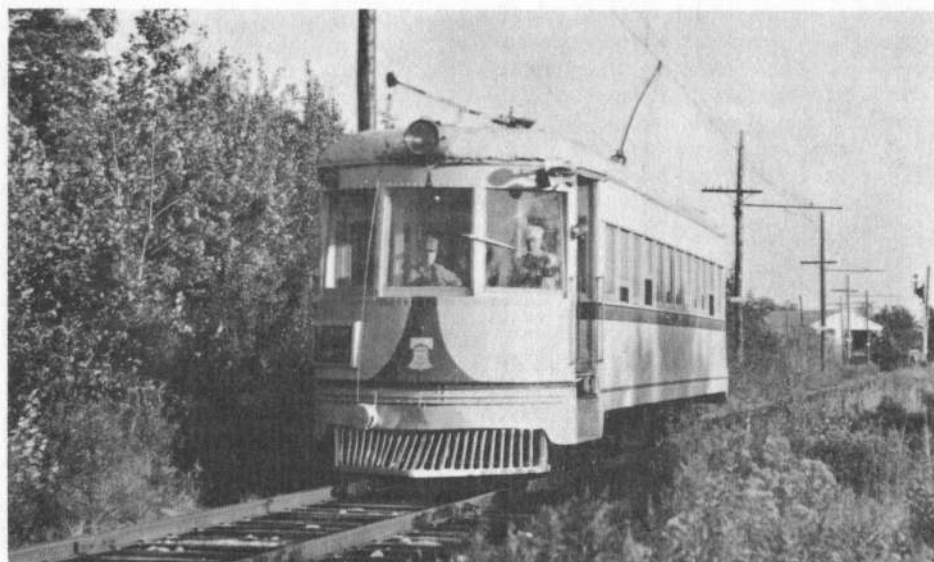
On December 1, 1952, Seashore Trolley Museum loaded No. 1030 on an adequate highway truck trailer and hauled it from Everett Car barn over New England's highways to the museum site. The museum's members provided an authentic environment for No. 1030's position on the trackage by installing several feet of catenary overhead wire which had been employed at various locations along the Liberty Bell Route during the 1912 revision program, erected a semaphore signal which had governed main line northbound movements at Wood Siding, and installed switch points which had provided access to stub-end Lehigh Siding near Lanark.

Visitors to Seashore Trolley Museum have opportunities to photograph, inspect, and on occasion, to ride the car which served Indiana Railroad Company from 1931 until 1941 and Lehigh Valley Transit Company's Liberty Bell Route from 1941 until 1951. The trolley museum also owns and displays Cedar Rapids and Iowa City Railway Company's No. 118, formerly Cincinnati and Lake Erie Railroad Company's No. 118.

Illinois Railway Museum of Chicago owns the only other lightweight Indiana Railroad Company car, the coach-baggage type identified as No. 65, which has escaped dismantling. The museum purchased the car from Cedar Rapids and Iowa City Railway Company who in turn had purchased it in 1941 from Indiana Railroad Company and had identified it with their paint scheme as No. 120.



Metropolitan Transit Authority of Boston  
Car No. 1030 (IR No. 55) stand in Metropolitan Transit Authority of Boston's  
Everett Car barn yard awaiting shipment to Kennebunkport, Maine, summer, 1952.



Laurence J. Kostka

Former Lehigh Valley Transit Company interurban car No. 1030 (IR No. 55)  
stands on Seashore Trolley Museum's trackage near Kennebunkport, Maine,  
September 15, 1962.

## OHIO RAILWAY MUSEUM

Railway enthusiasts in Ohio organized Central Ohio Railfans Association in 1945 and during reorganization in 1950 incorporated Ohio Railway Museum as a division. The group has established yard, storage, main line, maintenance, and office facilities in the northeast section of Worthington, Ohio, located approximately nine miles north of Columbus. The property represents the first railway museum established in mid-west America.

Objectives of the museum's membership are to preserve, exhibit, and operate railway equipment which previously had served railway systems in and near the state of Ohio. The roster as established by July, 1964, included various electric interurban and street railway cars; a gas-electric rail motor car; one electric locomotive; two railroad coaches; and various utility cars. Adequate electric generating and transmission facilities plus a network of overhead wire permit the operation of electric railway units over the museum's one mile of main line trackage. The road bed upon which the museum's equipment operates had been abandoned in 1933 by Columbus, Delaware and Marion Electric Company, an electric interurban system. When conditions permit, the museum will purchase appropriate equipment as it becomes available and will extend main line trackage southward from Worthington.

Former Cincinnati and Lake Erie Railroad Company's lightweight interurban car No. 119 represents one of the museum's valued possessions. The organization purchased the car from Cedar Rapids and Iowa City Railway Company after the company discontinued passenger service on

May 30, 1953. When Cincinnati and Lake Erie Railroad Company abandoned electric interurban service in 1938, Cedar Rapids and Iowa City Railway Company acquired No. 119 along with Nos. 110, 111, 116, 117, and 118. The latter company, also identified as CRANDIC, identified the cars in a new paint scheme but retained the C&LE numbers. In 1959 the museum's members completed No. 119's restoration to the original C&LE paint scheme and appearance with minor variations caused only by the unavailability of appropriate material.

C&LE car No. 119 and Car No. 21, a railroad roof type interurban car built in 1903 by Niles Car Company for Toledo, Port Clinton and Lakeside Railway Company, permit the museum to display and operate representatives of the first and last types of electric cars which had previously operated over Ohio's interurban trackage.

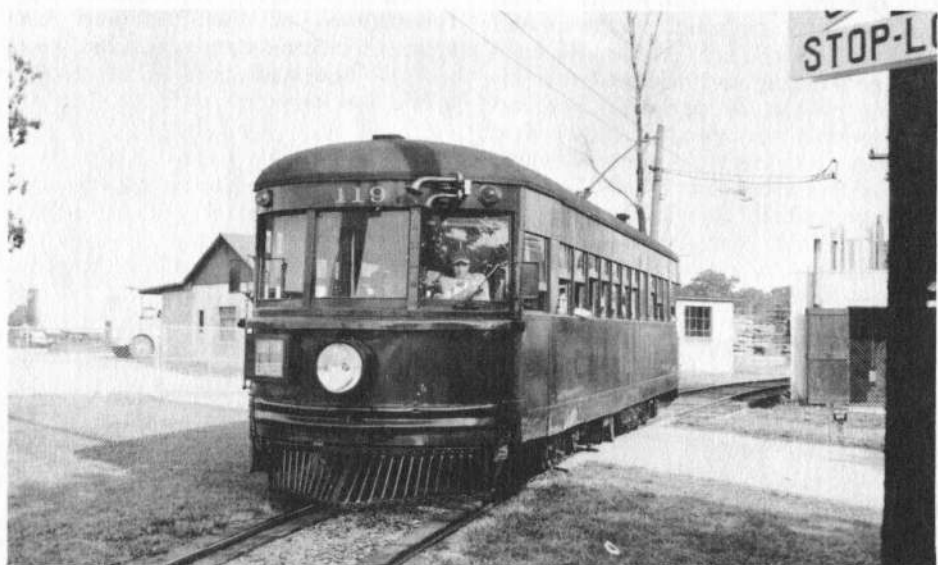
Visitors to the museum site have opportunities to ride and photograph the various types of railway equipment. Operating schedules are in effect daily during summer months and on week ends in spring and autumn seasons. Steam locomotives operate under steam during one week each month.

Three other former Cincinnati and Lake Erie Railroad Company lightweight interurban cars in addition to No. 119, all purchased from CRANDIC, have been preserved for posterity: No. 111, by a private individual in Emporia, Kansas; No. 116, at Branford Trolley Museum, Short Beach, Connecticut; and No. 118, at Seashore Trolley Museum, Kennebunkport, Maine.



Russel N. Schram

Former Cincinnati and Lake Erie Railroad Company interurban car No. 119 (CRANDIC No. 119) stands on Ohio Railway Museum's main line trackage in Worthington, Ohio, summer, 1959.



Russel N. Schram

Former Cincinnati and Lake Erie Railroad Company interurban car No. 119 (CRANDIC No. 119) stands on Ohio Railway Museum's trackage near the sub-station in Worthington, Ohio, summer, 1960.