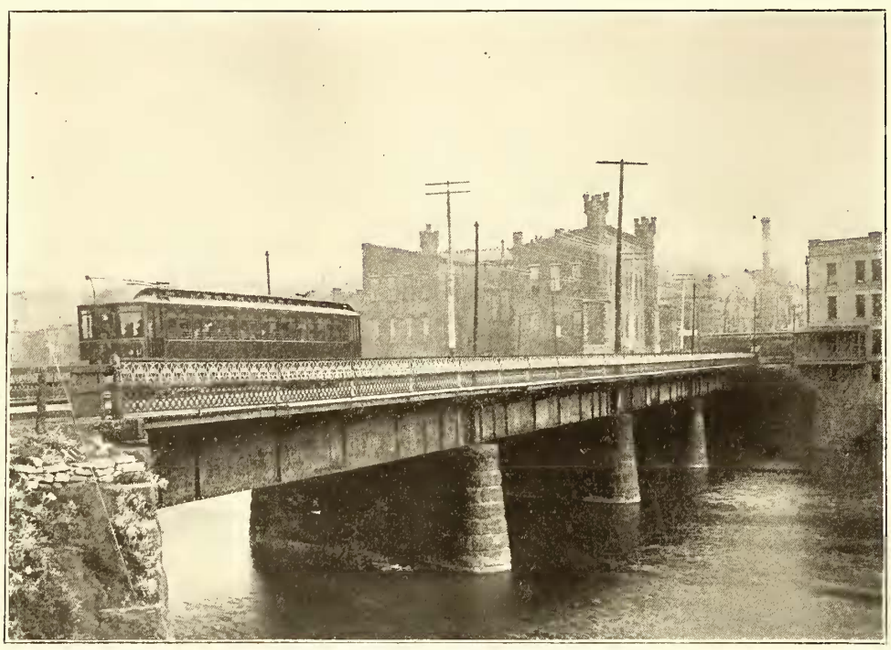
THE APPLEYARD SYNDICATE'S INTERURBAN SYSTEM—I

In the Central West the building of long-distanee eleetrie roads by several syndicates is taken as an indication of a fixed poliey to develop a system that will ultimately prove a factor in the handling of freight as well as passenger traffie. At present it is possible for passengers and freight to be transported from 100 miles to 200 miles by eleetrieity. The building of long-distance roads has been partieularly marked in Ohio, and a very large proportion of the mileage in that State may be credited to the group of eapitalists commonly known as the Appleyard syndieate. In a general way it may be said that this syndieate aims to operate through electrie trunk lines conneeting Cineinnati, Toledo, Columbus, Cleveland, Wheeling, W. Va., and ultimately Pittsburg, Pa. Reference to the map on the opposite page indicates that this syndicate, in connection with closely allied interests, already has in operation lines covering more than two-thirds the mileage required to eonsummate these plans, and rapid progress is being made with the uncompleted portions.



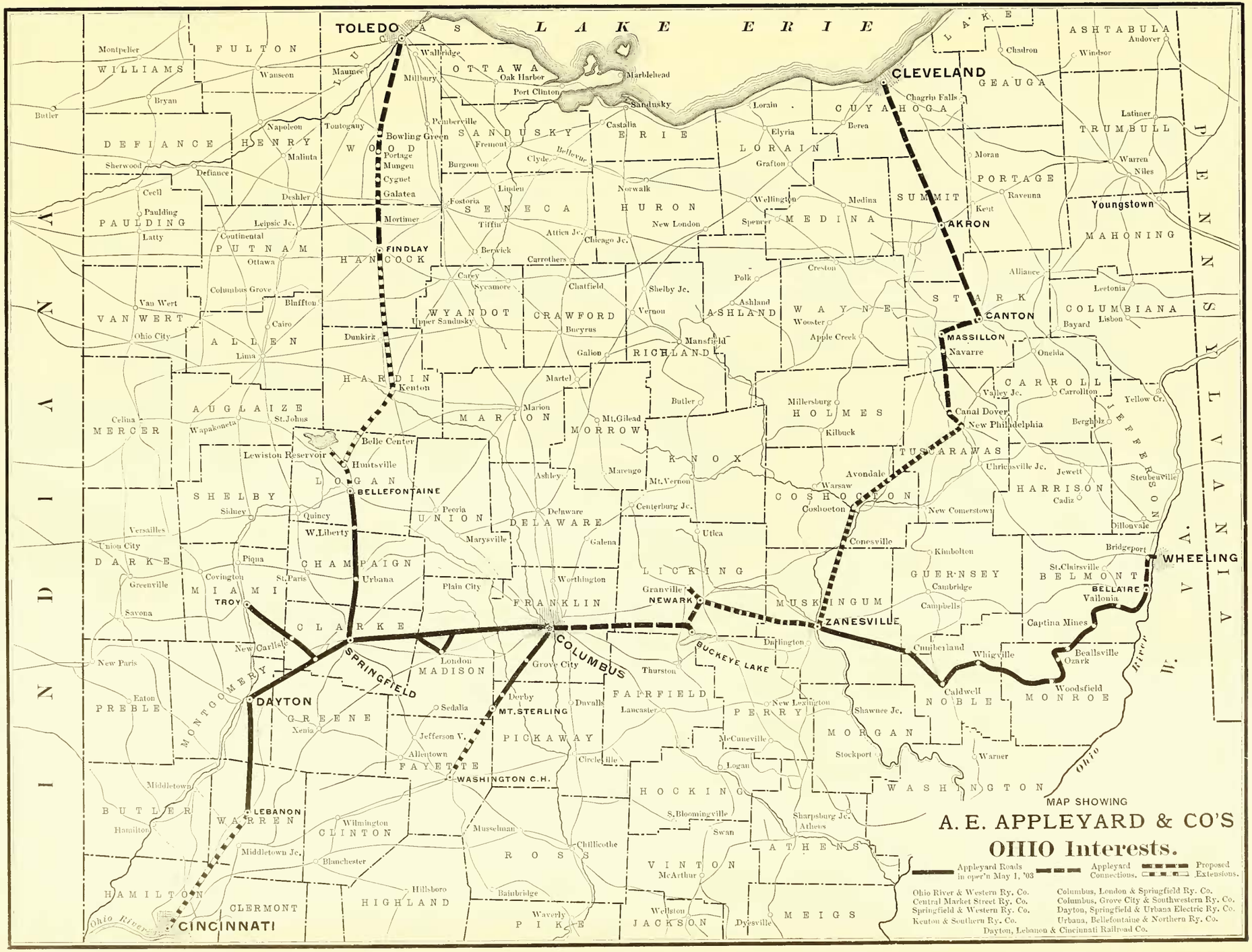
SCIOTO BRIDGE IN COLUMBUS, C., L. & S

The syndicate headed by Arthur E. Appleyard, of Boston, is composed of Boston and Ohio capitalists, and for the last three years it has been engaged in building lines radiating from Columbus, Springfield and Dayton, Ohio. The roads built and controlled by the interests represented by Mr. Appleyard are enumerated below: The first to be eonstrueted was the Dayton, Springfield & Urbana Railway, built in 1899, between the cities mentioned in the title. This is now one of the most prosperous lines in Ohio. In 1902 the Columbus, London & Springfield Railway was built between Columbus and Springfield. To afford entranee for this line the syndieate built a standard gage eity system in Columbus, known as the Central Market Street Railway, together with an interurban loop affording terminal facilities for all the interurban lines building into the capital eity. The Columbus, Grove City & Southwestern Railway, an old line, was purehased and rebuilt, and is now being extended to Washington Court House. A spur line was built from Medway on the Dayton, Springfield & Urbana to New Carlisle, and this is now being extended to Troy. A eompany known as the Urbana, Bellefontaine & Northern has been organized and is building a northerly extension of the Dayton, Springfield & Urbana Railway, to be operated as a part of the latter. The Kenton & Southern Railway Company has been organized to build between Bellefontaine and Kenton, and eventually this will be extended to Findlay, to conneet with a line to Toledo. Last year the syndieate purehased the Dayton, Lebanon & Cineinnati Railway, a steam road operating from Dayton to Lebanon, and this is to be equipped for electric operation of passenger ears. The Ohio River & Western Railway, a narrow-gage steam line operating between Zanesville and Wheeling, has recently been aequired, and will be equipped for eleetrie passenger ears. As outlined the system includes about 150 miles of eleetric lines in operation, 138 miles of steam roads to be changed to electrieity, and about 70 miles of electric roads under eonstruction, with about the same mileage contemplated for the near future. In addition to these roads the Great Northern Construction Company, at the head of whieh is A. E. Appleyard, has constructed the Columbus, Buekeye Lake & Newark Traetion system, and is now building the Columbus, Newark & Zanesville Railway. The two roads last mentioned are controlled by Tucker, Anthony & Company, of Boston, and are very closely allied. Tucker, Anthony & Company also own the Canton-Akron Railway operating between Akron, Canton and Massillon, and they are building the Canton & New Philadelphia Railway to New Philadelphia. Plans are also under way for building a line from New Philadelphia to Zanesville, and when this is eompleted there will be an unbroken eleetrie line from Cleveland to Cineinnati.

OVERHEAD WORK AT DOUBLE-TRACK CURVE, C., L. & S.

COLUMBUS, LONDON & SPRINGFIELD RAILWAY

The Columbus, London & Springfield Railway is equipped and built for high-speed operation. At present cars operate by way of London, but a eut-off is being construeted between Summerford and Lafayette whieh will reduee the mileage between terminals from 49 miles to 45 miles, making the road praetieally an air line. Over the entire distanee it parallels the


TOLEDO
CLEVELAND
AKRON
CANTON
MASSILLON
Youngstown
FINDLAY
BELLEFONTAINE
SPRINGFIELD
COLUMBUS
DAYTON
ZANESVILLE
NEWARK
MT. STERLING
WASHINGTON C.H.
LEBANON
TROY
WHEELING
BELLAIRE
CINCINNATI
BUCKEYE LAKE
LAKE ERIE
INDIANA
PENNSYLVANIA
W. VA.
Ohio River
MAP SHOWING
A. E. APPLEYARD & CO'S
OHIO Interests.
Appleyard Roads in oper'n May 1, '03
Appleyard Connections.
Proposed Extensions.
Ohio River & Western Ry. Co.
Central Market Street Ry. Co.
Springfield & Western Ry. Co.
Keuton & Southern Ry. Co.
Columbus, London & Springfield Ry. Co.
Columbus, Grove City & Southwestern Ry. Co.
Dayton, Springfield & Urbana Electric Ry. Co.
Urbana, Bellefontaine & Northern Ry. Co.
Dayton, Lebanon & Cincinnati Railroad Co.

National Pike, an old government road, and between West Jefferson and Columbus the road traverses the side of the highway under a twenty-five-year franchise. This amounts practically to a private right of way, since the highway is nearly 100

BIG DARBY BRIDGE, C., L. & S.

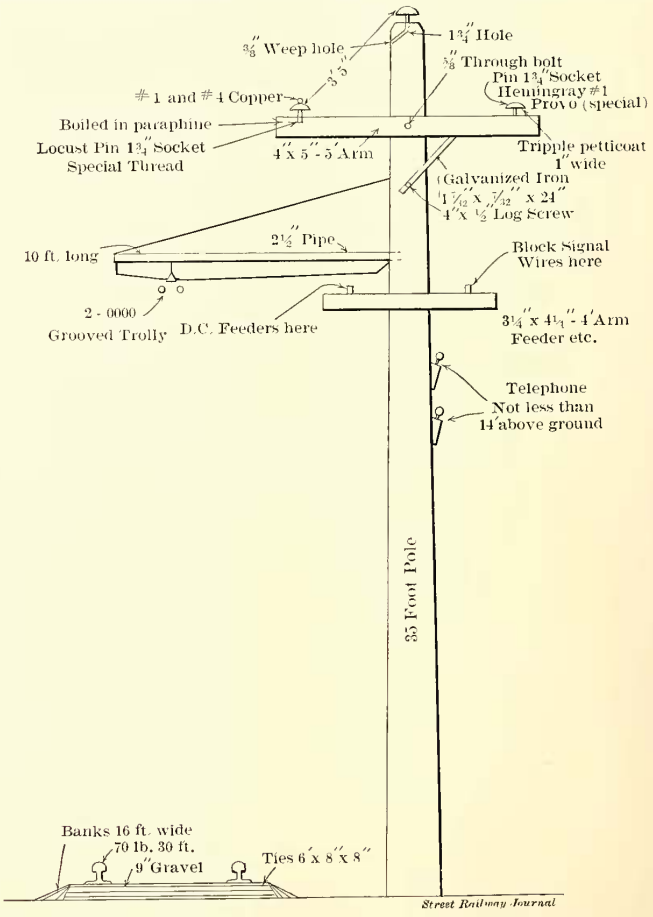
ft. wide and the track is separated from the wagon road by ditch and pole line; if desired, the company may fence its track under the franchise. The balance of the road is on private right of way ranging from 50 ft. to 100 ft. in width. A unique feature of this road is that in the majority of cases it passes around the outskirts of the small villages, avoiding the main street, to insure safety and admit of continuous high speed. All of the curves caused by these swing-outs have been double tracked so as to serve as passing points.

The country traversed is extremely level, and there are no grades over 1½ per cent. It is purposed to follow this standard throughout the entire system, and it has been necessary to make

HIGH STAND TARGET SWITCHES ON D., S. & W. AND C., L. & S.

several large cuts and fills because of this policy. Markley Hill cut is 43 ft. deep in one place, with a 29-ft. fill nearby. About 90,000 yds. of earth were taken out the cut, just making up for the fill. The Foster cut and fill required about the same amount of labor, but the cut is not so deep nor the fill so high. Crossing Big Darby River the company erected the structures shown herewith. The bridge is 950 ft. over all, having one steel span 162 ft. long, 65 ft. above water, and resting on concrete abutments. The balance of the structure is three-deck timber work. Two steam roads are crossed by overgrade crossings, while others are crossed at grade with Porter derailers for protection. The roadbed is graded 16 ft. wide, with slopes 1½ to 1, and all cuts are graded 20 ft. wide. Track is laid with 75-lb. A. S. C. E. rails, 30-ft. lengths, laid on white oak and chestnut ties, measuring full 6 ins. x 8 ins. x 8 ft. Six-bolt fish-plate angle-bars are used in connection with American Steel & Wire 0000 12-in. bonds. The track is cross-bonded every 100 ft. with 00 copper. Careful attention is given to maintaining the bonding, and men using Chase-Shawmut bond testers are kept busy all the time. Nine inches of gravel under the ties forms the ballast on the greater portion of the system, but a part is ballasted with crushed rock. The company has a fine gravel bank covering 80 acres and having a 50-ft. face. Two steam shovels with a large number of side-dump cars are used.

Switches are laid with No. 10 frogs, and have 73-ft. leaders. Ramapoo 14-ft. targets are used at all turnouts. These are turned by hand, and have a spring so that cars can run through at high speed. At each target there is a circuit of five incan-



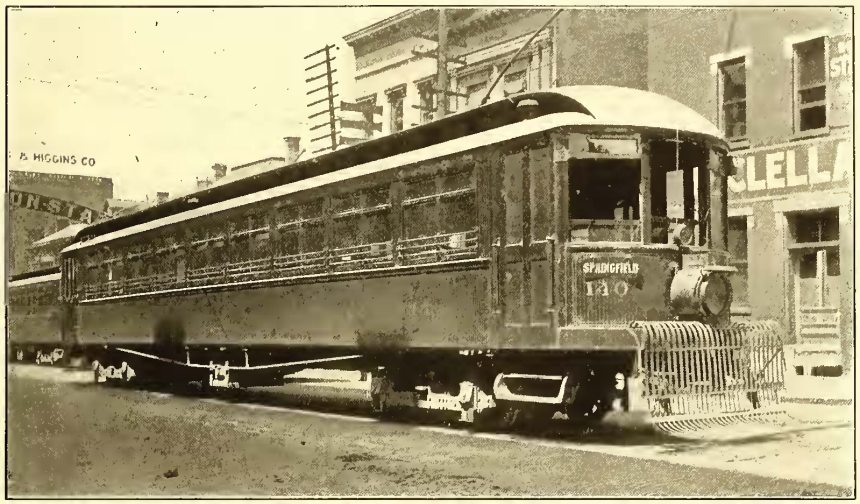
OVERHEAD CONSTRUCTION AND ROADBED

descent lamps, including two colored lamps on the target, two at the lock and one on the telphone box, which is located between the tracks. At all railway crossings there are also five lights, a white light on the crossings, red lights at the derailers, notifying the motorman to stop, and green lights 150 ft. from the crossing notifying him to get the car under control. Green posts are daylight signals for crossings and switches, and white

posts are stopping points for local cars. There are also "slow" signals at curves and "W" for whistle at street crossings. All road crossings are protected by cattle guards, and the track is fenced on both sides with American Steel & Wire fence. Connection is made with all steam roads.

The details of the standard overhead construction are shown herewith. Trolley wire is 0000 grooved, and it is tapped to the direct-connected feeders every tenth pole. Poles are 35 ft. tall, and in some places 40-ft. and 45-ft poles have been used to clear trees for the high-tension wires. Poles are octagon shape and painted red. Brackets are of the Craighead 10-ft. flexible type. No. 1 copper is used for high-tension transmission, and the details of this construction are as indicated. The high-tension lines pass around all towns on separate poles and make a circuitous route in entering Columbus. In crossing steam roads the high-tension lines clear the tracks 25 ft.

The car equipment of the Columbus, London & Springfield is among the heaviest ever built for electric service in this country. Those used in regular service at the present time are four in number, and are 62 ft. over all. They have baggage compartment, smoker and passenger compartment. There are seats for sixty-four passengers, but the cars have carried as many as 180 people. The baggage compartments are of great advantage for carrying travelers' sample trunks, and much business is obtained from this class of people, whereas many other roads cannot accommodate them. A toilet room and water-cooler are located between the two compartments. The interior finish is in solid mahogany, of rich dark colors, inlaid with holly. The seats in the passenger compartment are red plush, and rattan in the smoker. The General Electric type-M control is used, and the power equipment consists of four General Electric No. 73 motors. These are mounted on Barney & Smith type-J trucks. Wagenhals arc headlights, Ham trolley catchers, Kalamazoo trolley wheels, Christensen air brakes and Consolidated heaters are included in the equipment. The cars weigh complete 75,000 lbs. On a recent special run one of them made 42 miles in 1 hour, 7 miles in 8 minutes and 1 mile in 57 seconds. There are also four cars having the same general details, except that they are 50 ft. over all and have no baggage compartments. There are also four 60-ft. express cars equipped with four General Electric No. 57 motors, B. & S. type-F trucks with 6-in. axles. For fast limited service between Columbus and Dayton the company has two 60-ft. parlor cars and five more will soon be delivered. An interior view of one of the cars is presented. They have individual plush chairs, two toilet rooms, observation ends and are magnificently finished inside. These cars have extra heavy B. & S. trucks, and are equipped with four 125-hp General Electric motors. They are geared to 65 miles an hour, and will make the run from Columbus to Dayton, 77 miles, in 2 hours and 30 minutes, and will operate under two hours' headway. They will have right of way over regular cars and will stop only in Springfield. The cars were all built by the Barney & Smith Car Company, Dayton. It will be noticed that the trucks are designed for third-rail shoes, as it was the original intention to equip with this system, and the plan may be carried out eventually. It is believed that sleeping car service between Columbus and Cincinnati might prove a profitable innovation, and the company will make the experiment. An order has been placed with the Holland Sleeping Car Company for a sleeper which will accommodate thirty people. For hauling freight and construction cars the company has ordered two 60-ton Baltimore & Ohio type electric locomotives. These will be equipped with four 125-hp motors, and will be designed to haul fifteen freight



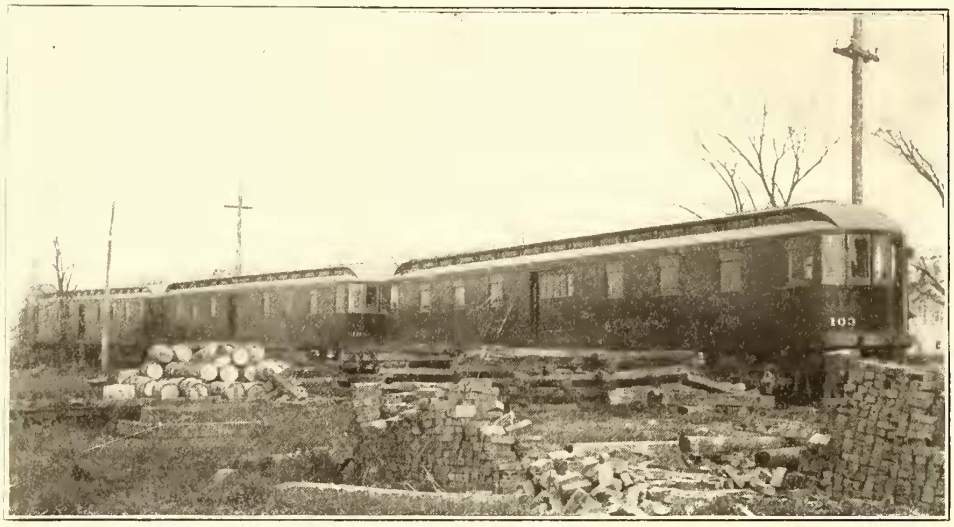
60-FT. COLUMBUS, LONDON & SPRINGFIELD CAR

FREIGHT STATION AT JUNCTION OF C., L. & S. AND D., S. & C., SPRINGFIELD

INTERIOR PARLOR CAR, C., L. & S.

cars. In addition to the equipment mentioned the Columbus, London & Springfield has snow-plows and line cars, besides two 62-ft. Jewett semi-convertible excursion cars.

The tribuary population included in the cities and townships



NEW FREIGHT AND EXPRESS CARS

traversed by the Columbus, London & Springfield is 179,207. The towns touched with rates of fares and population are detailed below:

	Population	Single Fare	Round Trip	Distance Miles
Columbus	125,560	..	..	..
West Jefferson	803	$0.25	$0.45	16
Lafayette	200	.35	.65	23
London	3,511	.45	.75	27.6
Summerford	200	.55	1.05	31
Lagonda	300	.60	1.10	35
Harmony	100	.65	1.15	45
Springfield	38,253	.75	1,35	48.8

DAYTON, SPRINGFIELD & URBANA

The Dayton, Springfield & Urbana Railway was described in the STREET RAILWAY JOURNAL of April 17, 1900, but immense improvements have been made since that date, while others are under way. The road is now on entirely private right of way from 50 ft. to 100 ft. wide. As the traffic is the heaviest on this portion of the system the entire road is being double tracked. The route has been changed at several points to avoid heavy grades, and in entering Springfield a new right of way has been secured through Snyder Park. A large double-track trestle is being built near Dayton, crossing the Cincinnati, Hamilton & Dayton tracks and Harshman's Creek.

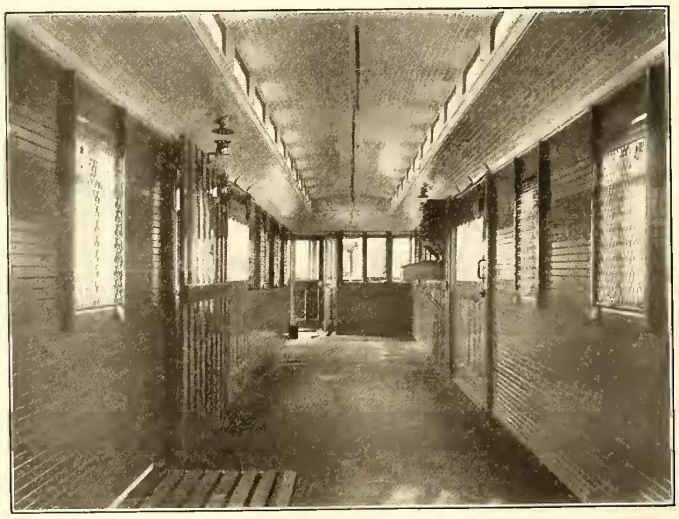
It will be 302 ft. over all, a portion 72-ft. plate girders, and the balance 30-ft. plate girders. These will be supported on steel posts, 15 ins. x 15 ins., resting on concrete abutments. Tracks will be on 13-ft. centers. Near this bridge there is a 65-ft. cut, where 112,000 yards were removed and filled nearby. Because of the fact that the power house on this road will supply the greater portion of the system, the high-tension wires are on independent poles, and they will be made in duplicate on separate poles.

The Dayton, Springfield & Urbana has ten 50-ft. passenger coaches and two 60-ft. express cars equipped similarly to the Columbus, London & Springfield cars.

An interesting system of despatching is in vogue on the Dayton, Springfield & Urbana, and will probably be adopted on the other lines. Written orders are given only from the despatcher's station at Medway. The order is written on an automatic register, made by the Egrey Autoregister Company, of Dayton. This makes two copies, one of which is torn off and handed to motorman and conductor, who read it and then hang it on a hook in the office, while the other copy is rolled up inside the box, which can be opened only by the superintendent. On the line the motorman calls only when ordered to do so, or when cars are more than 5 minutes late. The motorman takes the order, repeats it to the conductor, who in turn repeats it back to the despatcher, and the latter says "complete." No written order is used, which saves time. When the line is knocked out the cars make regular meeting points, and extras wait the arrival of regulars and run on their time. In addition to this the United States Electric Signal Company's system is being installed over the entire system. The telephone instruments were furnished by the Hipwell Manufacturing Company.

At Springfield the Dayton, Springfield & Urbana has a unique traffic arrangement with the Erie Railway. The main line of this system passes through Durbin, 7 miles from Springfield, and the electric company operates a special car known as the "Erie Transfer," which connects with all passenger trains on the steam road. Regular passengers are not carried, and Erie tickets sold in Springfield bear a coupon for the electric car. The electric road receives a pro rata of the total amount collected, except in case of tickets for distant points, when it receives a flat rate. The arrangements also provide that the electric line is to haul steam excursion trains to the center of the city by means of electric locomotives.

The population in townships traversed by the Dayton,



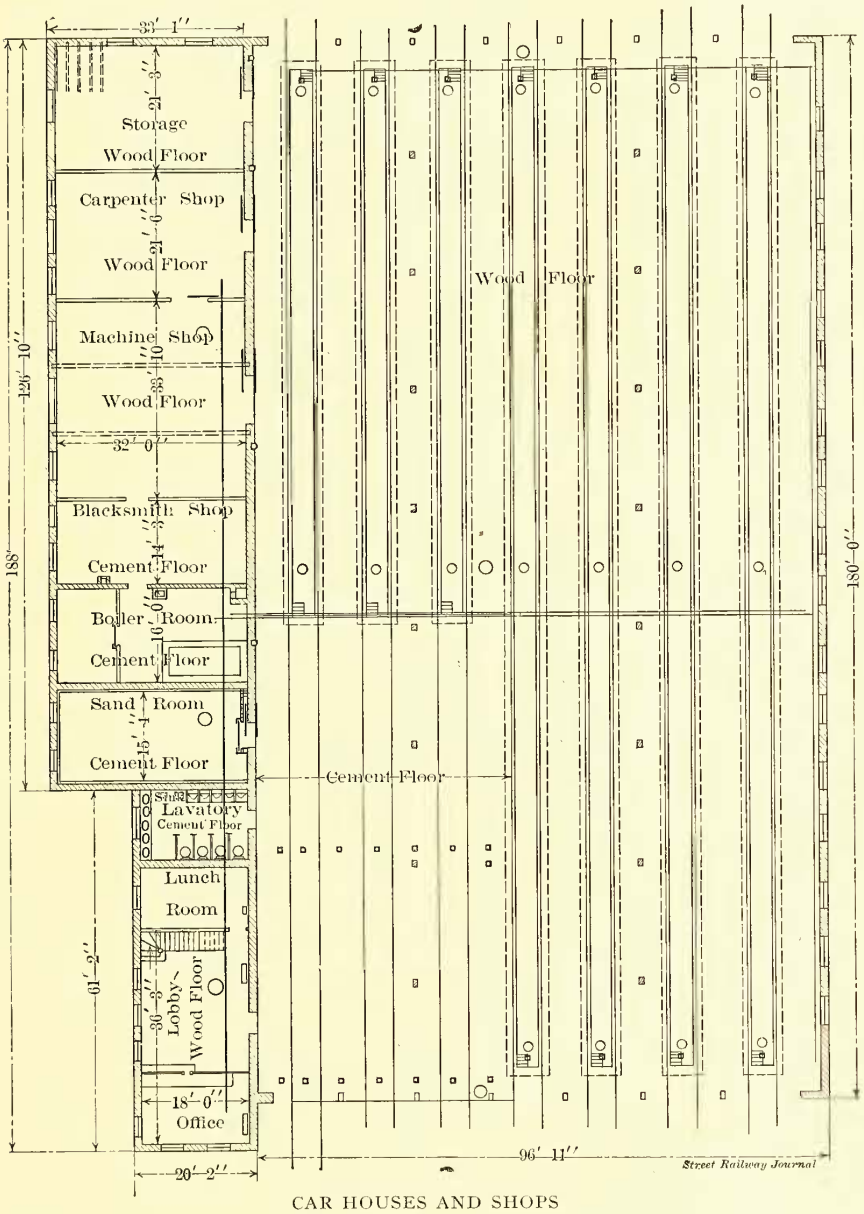
INTERIOR EXPRESS CAR

Springfield & Urbana is 146,267. The towns included, with rates of fare, are indicated:

	Population	Single Fare	Round Trip	Distance Miles
Dayton	85,833	..	..	..
Harshman	300	$0.10	$0.15	5
Fairfield	335	.20	.35	8
Osborn	948	.20	.35	10
Medway	200	.25	.40	15
Donelsville	200	.30	.55	18
Enon	295	.30	.55	20
Snyderville	100	.40	.75	24
Springfield	38,253	.40	.75	27
Glen Echo	100	.55	1.05	35
Bowlusville	100	.60	1.10	37
Urbana	6,808	.65	1.15	42

CENTRAL MARKET STREET RAILWAY

In building into Columbus the Appleyard syndicate decided to build its own city system to provide entrance for interurban lines. The Central Market Street Railway Company was formed for this purpose, and it acquired franchises for about 30 miles of road. The chief lines operate through the city from north to south and from east and west, all cars traversing the interurban loop in the center of the city. The loop itself is owned by the Columbus, London & Springfield Company, but the balance of the system is owned by the Central Market Company. The city lines are all double track, and a noteworthy feature is that in order to provide large radius curves for the long interurban cars, the company was obliged to purchase corner lots in all cases, and in a number of instances houses were torn down. The smallest curve on the system has a 60-ft. radius and the largest 114 ft. On the 6½ miles of improved streets traversed by the system standard Trilby rails, 107 lbs. to the yard, 62 ft. long and 9 ins. high, are used, and these are set on 6-in. ties with a 10-in. bed of crushed stone and concrete, making a roadbed which, it is claimed, will last for many years. The section between Long Street on Third Street to Warren Street, extending through Chestnut Street to Fourth Street, has three rails, because the Columbus Railway Company's gage is 5 ft. 2 ins. This feature was illustrated in the article on the Columbus, Delaware & Marion Railway, published in the March 21 issue of the STREET RAILWAY JOURNAL. All rail joints are bonded with 0000 General Electric figure 8 bonds, and cross-bonded every 500 ft. with 0000 Roebling wire. The overhead construction is supported on 30-ft. iron poles, with the exception of street corners, which are 32-ft. Trolley wire is 0000 Roebling, and all span wire is insulated in four places. Two of the insulators carry the interurban telephone wires.



CAR HOUSES AND SHOPS

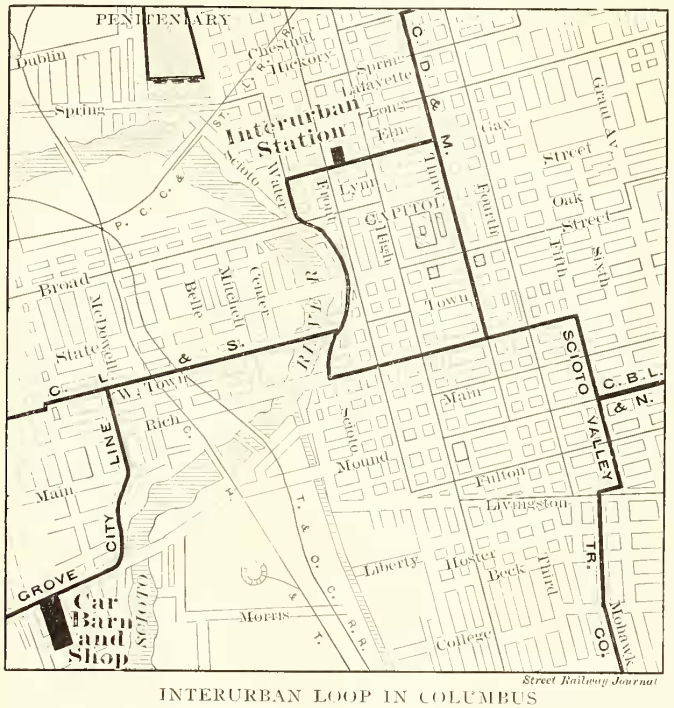
The Central Market rolling stock is unusually fine. There are twenty-five 40-ft. double-truck cars, finished in mahogany both inside and outside. One of them is illustrated. Fifteen of these cars were built by the Laconia Car Company, and ten by the Jewett Car Company. The interior finish is inlaid, they have plush side and cross seats, push buttons and double windows. Five of them have smoking compartments, and these are at present used on the Columbus, Grove City & Southwestern line. The cars are heated by Consolidated electric heaters, and have the Christensen air-brake outfit, with four General Electric No. 57 motors. A portion of them have Laconia trucks, and the balance are of the Peckham type. There are two thirteen-bench Laconia and ten nine-bench Jewett cars for summer traffic, also ten single-truck closed cars; these will be used on the city systems in smaller cities where local service is required. The company has under contract thirty-two fifteen-bench open cars. Central Market cars operate under 7-minute to 10-minute headway, and traverse the most thickly populated portions of the city besides drawing trade from a large number of outlying factories, among them the United States Steel Corporation plant at Steelton, which employs 6000 men to 8000 men. Under the terms of its franchise the company sells eight tickets for 25 cents, with 5-cent single fares. It gives transfers to cars of its own system but not to the interurban cars.

On West Mound Street the company has a site of 4½ acres, where it is completing a car house and repair shops. These will also be used for some of the cars of the Columbus, London & Springfield and Columbus, Grove City & Southwestern, and the lighter repair work for these interurbans will be done here. The building is 188 ft. 4 ins. long, and 97 ft. wide at the widest part. The car house proper is 72 ft. wide, and has the saw-tooth type of roof construction. There are three tracks on a level, half the space being provided with pits for repair work, and the balance cemented floors for washing, while the other four tracks have slanting ends for car storage. There is storage space for twelve of the largest interurban cars. There are seven doors at each end of the Kinnear rolling type. The wing, which is 27 ft. wide and two stories high in front, is divided into offices, sand-house, blacksmith shop, boiler room, machine shop, carpenter shop, armature and stock room. The plan of the building is presented herewith. The special work will include three tracks to the west and four to the east. The machine shop will be provided with a shaper, two lathes, drill press, grinder, wheel lathe, wheel press and lathes for armature winding. The carpenter shop will have a buzz-saw, band-saw and circular-saw and other tools. The pits will be provided with hydraulic jacks of a special design, furnished by Watson & Stillman Company. Cars are scrubbed out daily, and a force of women is kept busy at this work at all times. Seats are cleaned by air furnished by the compressor on the car. The purchasing agent of the system will occupy hand-

somely appointed offices in the front of the second floor, and there is a lounging room in the rear for employees.

INTERURBAN STATION

The interurban union station at Columbus, located on the loop on Gay Street, near High Street, is owned and operated by



INTERURBAN LOOP IN COLUMBUS

the Columbus, London & Springfield Company. It is a large brick dwelling house remodeled for the service, and while it is well equipped it has been found wholly inadequate for handling both passenger and freight service as originally proposed, and plans are being made for two new stations to be located on the loop; one will be for passenger and the other for freight and express. It is claimed the passenger station will be one of the finest of its kind in the country. As in the case of the present station it will be owned by the Columbus, London & Springfield Company, and each interurban line traversing the loop will pay its proportion of the expenses. A site has already been secured for the union freight station, and it is announced that it will be ample in size to handle the business of the present roads as well as those building and contemplated.

EXPRESS BUSINESS

At the present time both the Columbus, London & Springfield and the Dayton, Springfied & Urbana are doing an extensive express business, but it has not been pushed on either of the properties. At the present time about 10 per cent of the receipts of the Dayton, Springfield & Urbana come from this source, but it is believed that with systematic efforts the business can be made to equal if not exceed the passenger traffic. It is proposed to have cars make two round trips a day from Columbus to Dayton, while the spur lines will have one round trip a day. The business is at present divided into two classes. The regular express includes collection and delivery in all towns of over 4000 population, and is about the same as regular steam express rates. The non-delivered class is a trifle higher than regular freight rates. The company has express offices in connection with its ticket offices in all the principal towns, and it maintains horses and wagons in towns of over 4000.

PARKS

At present the chief pleasure resort of the system is Tecumseh Park. Historians say that within the confines of this park the famous Indian warrior, Chief Tecumseh, made his last stand and met his fate. The site includes 100 acres, and is within a short distance of the power house at Medway. A dam in Mad River affords a fine pond where there is boating, bathing and fishing. The company has erected a large dance hall and pavilion, which is leased on a percentage basis, as are the majority of the other attractions, which include a Ferris wheel, bowling alley, shooting gallery and miniature railroad. The pavilion is 100 ft. x 50 ft., and has a 10-ft. promenade all the way around. The building may be closed in winter and is heated by a number of Consolidated electric heaters. Admission to the grounds is free, and Sundays and evenings the company makes a round-trip rate of 25 cents from either Springfield or Dayton. At other times the round-trip rate is 40 cents from Dayton and 35 cents from Springfield. The pavilion is rented to private parties much of the time, and private cars are supplied from either Dayton or Springfield for $12.50. This, of course, does not include the use of the pavilion.

The Columbus, London & Springfield is planning to establish a private park near Columbus. It will include about 100 acres and have a fine pond. At this park will be erected a merchants' club house. An effort will be made to secure a club membership of 1000, at annual dues of $5 per year each, the park to be open only to members and their families and guests.

DEVELOPMENT PLANS

The plans for developing the recently acquired steam roads contemplate much more radical innovations than any heretofore attempted. The Ohio River & Western Railway traverses some of the most important coal fields in Ohio, and the company itself owns an inexhaustible field. It is the intention, as soon as possible, to change the road to standard gage and equip it with electricity. In the heart of the coal fields it is proposed to erect the largest interurban power station in the world. It will be situated near the mouth of a coal mine, from which fuel will be mined and passed to the boiler room of the station. A well watered site has been secured for such a station. The power units will be turbines, and the transmission lines will be built with the view of handling 60,000 volts. The Ohio River & Western is to be equipped with the latest rolling stock for handling coal, and it is the intention to develop the coal fields in this territory, something which has never been possible heretofore, owing to the narrow gage and inferior equipment of the road.

UNION DEPOT AT COLUMBUS

There are also valuable sandstone quarries and oil fields along this road, and it will be the policy of the owners to make use of all these advantages. As a connecting link between Cincinnati and Pittsburg it is believed the road will develop a heavy passenger business as well.

The Dayton, Lebanon & Cincinnati road traverses a rich farming country, and when connection is completed with Cincinnati the road will furnish one of the best outlets for the business of that city.

At Beavertown and Centerville the company owns very extensive limestone quarries which have been worked for years. Great quantities of stone are shipped to Cincinnati, Hamilton, Dayton and other points. The company also owns a large rock

crushing outfit, and sells large quantities of crushed stone besides using it for ballast. For handling this material the company has purchased twenty steel hopper-bottom gondolas of the largest size.

The Dayton, London & Columbus has recently secured a private right of way from the heart of Dayton to its line at Hempstead, a distance of 7 miles. Adjoining the Union passenger station at Dayton the company has acquired 45 acres where a terminal freight station and yards will be erected. The Dayton, Springfield & Urbana line will join the Dayton, London & Columbus at this point. For rapid handling through freight a cut-off is being built from Harshman's on the Dayton, Springfield & Urbana to Lebanon Junction on the Dayton, Lebanon & Cincinnati, thus enabling freight to be transported around Dayton. The Dayton, Lebanon & Cincinnati has ninety-seven freight cars of all kinds and seven steam locomotives, which will be retained for hauling freight trains. The line will be equipped with electricity at once for the passenger service.

MANAGEMENT

Each of the Appleyard properties has its own set of officers and the roads are handled separately. In the case of the Dayton, Springfield & Urbana, Columbus, London & Springfield, and Central Market Street systems the chief executives are identical, John S. Harshman, of Springfield, who was one of the original promoters of the Dayton, Springfield & Urbana, being the president. A. E. Appleyard is managing director and controlling stockholder in all of the properties, while the active management of all of

TYPICAL CROSS-ROADS STATION

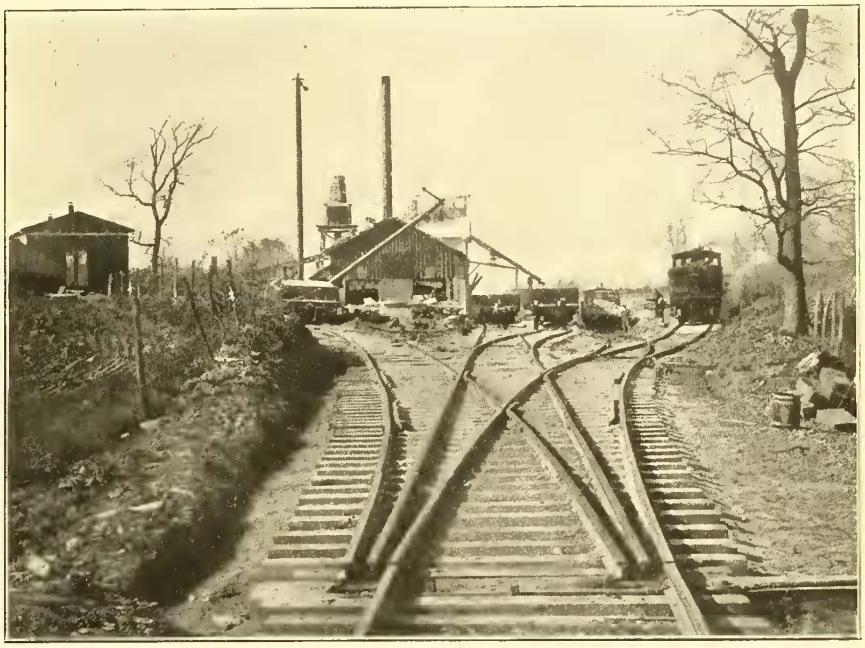
the roads is in the hands of Richard Emory, as general manager, who has his headquarters in Columbus.

The greater part of the work of construction of these roads was planned and supervised by C. A. Alderman, chief engineer of the Great Northern Construction Company, and now chief engineer of the several roads. The writer is indebted to Mr. Alderman for much of the information relating to the details of the road construction, also to H. W. Ginaven, engineer of the Medway power house, for details of the power equipment.

[The second part of this paper, dealing with the power house, sub-stations and distribution system, will be presented next week.]

NEW "L" TUNNEL ROUTE IN BOSTON

The Boston Transit Commission is expected shortly to announce its decision as to the route for the new Washington Street subway. The proposition now before the Commission



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is a tunnel to afford a new way of bringing the elevated trains down town from the present elevated structure at Castle Street, and to give up their route in the present Tremont Street subway to the surface cars which formerly traversed it. The other part of the problem, which may not be taken up until the end of a year, after the completion of the new subway, is a proposition for another surface car subway somewhere near the proposed elevated train tunnel, but separate from the Tremont Street subway. The Commission has no authority under the legislative act to extend either of these new underground routes to Roxbury, and there is no evident intention of providing for elevated trains to East Boston. The whole question is simply one of giving the elevated trains a new route underground from the elevated structure at Castle Street to the Charlestown Bridge; of giving back the whole of the Tremont Street subway to surface cars, and of providing later a new subway for surface cars which now use the tracks on Washington Street.

Indications are that the new tunnel for elevated trains will take a line somewhat to the east of Washington Street, cutting through the wholesale business district, where no through car service exists at present, and connecting with the surface lines of the present subway, the East Boston tunnel and the proposed new subway by transfers at points where the lines cross over or under each other. If the line should be carried direct to the Charlestown Bridge instead of past the North Station a transfer could readily be provided at Haymarket Square, so that through passengers from Roxbury and adjoining points for the North Station would here take surface cars for the railroad terminal. In the same event passengers from the Back Bay and Tremont Street districts, bound for the North Station, would reach that point by surface cars running through the Tremont Street subway, as in the days before the elevated road was built.

The Commission has been engaged on this problem a long time, and has given the subject careful thought, as it is realized that the decision will probably settle future developments in local transportation.