MOTOR COACH AGE

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MOTOR COACH AGE

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Since its founding in 1948, the Society has had as its main purpose the collection and publication of information about the history and progress of the bus business in the United States and Canada. Its membership includes representation of many phases of the industry as well as students and members of the general public with an interest in buses.

All right you mugs,
who forgot to renew
my subscription to
MOTOR COACH AGE

FRONT COVER:

Motor Coach Age this month begins coverage of transit in Salt Lake City and vicinity. This smart looking Utility Coach was one of 14 used to convert the busy Sandy suburban line when street paving requirements forced track removal. --Collection of Warren Miller

SALT LAKE CITY

PART I

UTAH LIGHT & TRACTION CO.

Salt Lake City was laid out in 1848 by Mormon pioneers led by Brigham Young. The city was conceived on a grand scale, with city blocks of ten acres and streets up to 132 feet wide. The latter would prove very inviting to the automobile 75 years later.

In 1872 the city had a population of 15,000 and was ripe for public transit. The Salt Lake Railroad Company, with Brigham Young as President, was formed in that year and built a street railway equipped with bob-tail cars pulled by Missouri mules. The line was generally considered a great success, although cynics held that walking was quicker.

The first electric car ran on August 8, 1889, when five miles of electricfied track were placed in service. A rival appeared the following year in the form of the Salt Lake Rapid Transit Company.

This set off a period of intense competition, with classic confrontations between rival construction crews. Tracks were torn up and relaid, and routes were laid on parallel streets in efforts to serve the same areas. The resulting network was overbuilt - a situation that was to come home to roost in later years.

Recognizing that the competition was not in the best interest of the two companies, they merged to form the Consolidated Railway & Power Company in 1901. Several independent short lines were also included. Extension of lines into surrounding communities some distance from the city continued.

CR&P was merged in 1904 with the local power company to form the Utah Light & Railway Company. This firm then passed to the control of E. H. Harriman, President of the Union Pacific Railroad, who announced his intention to create a model transportation system in Salt Lake City.

This he preceeded to do. Eighty miles of track was rebuilt, new cars ordered, and power facilities modernized. New car barns were built to provide the most up to date maintenance facilities. Since the city was isolated from other manufacturing centers, the shops were equipped to do virtually any kind of work, including the construction of new cars. The buildings still exist today, converted to the popular "Trolley Square," a collection of restaurants, shops and theaters, with a number of restored streetcars for atmosphere.

This modernization at a relatively early date was to have a significant impact on later transit developments. At this point, the power and transit operations were run as a single enterprise, and it was decided to separate them. In 1914 the transportation operations became the Utah Light & Traction Company, and electric power facilities passed to Utah Power & Light Co.

UL&T had considerable political influence. An attempt in 1914 by the Five-cent Street Automobile Company to establish jitney service was nipped in the bud. A city ordinance effective April 1, 1915 required that the autos operate on schedules over fixed routes and provide service from 6 a.m. to midnight. The jitneys disappeared and were never to be a threat to the street cars. UL&T's financial situation was greatly aided by this early removal of the jitney competition.

By 1918 the maximum trackage of 146 miles was reached, and a period of consolidation and retrenchment began. Post World War 1 economic conditions led the company during the 1920's to rebuild its cars to one-man configuration. Some new car bodies were purchased and other cars extensively rebuilt. In the process cars were renumbered, and persons interested in such matters still have not been able to reconstruct exactly what happened.

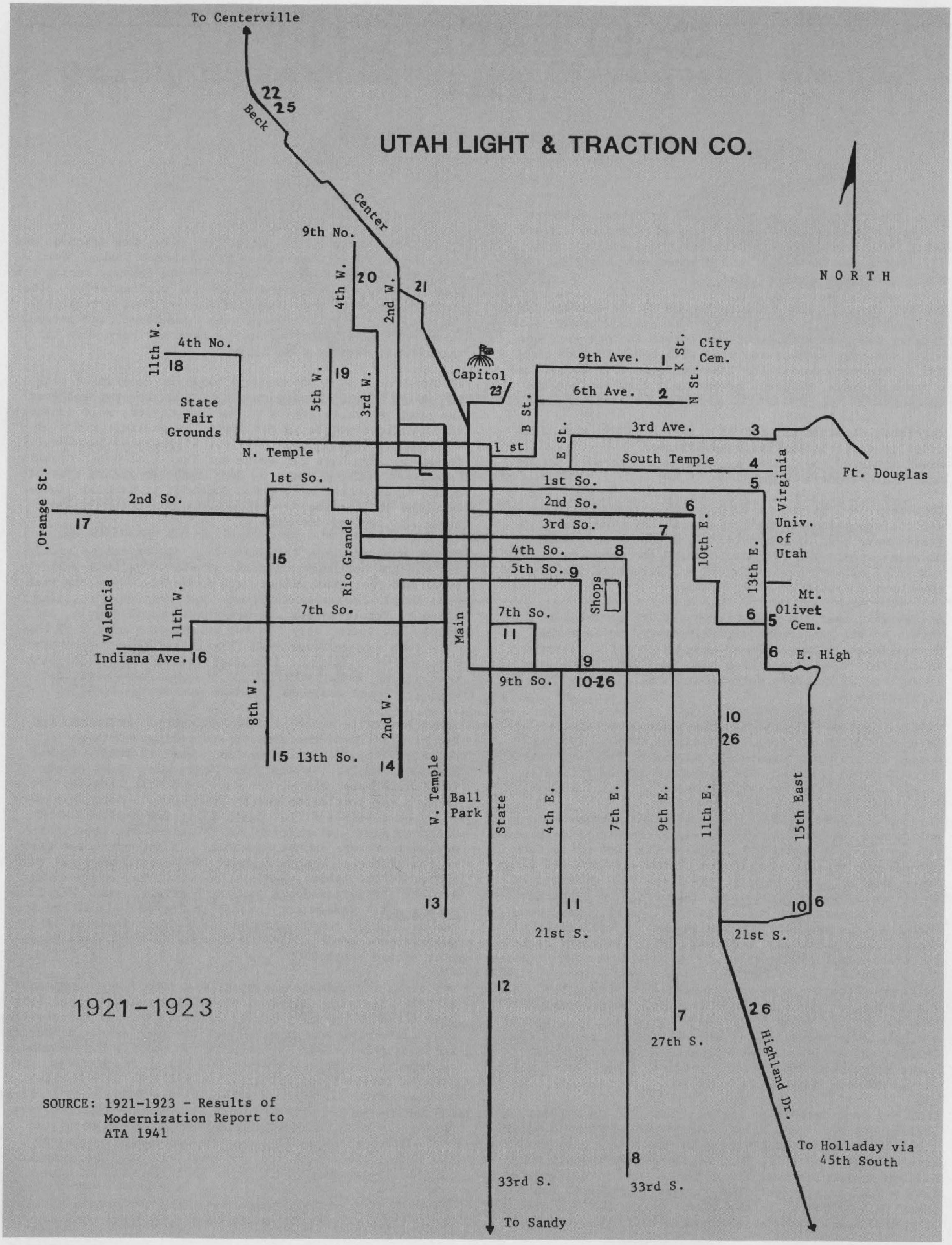
In October of 1923 the company began to experiment with the motor bus. A 12-passenger White was leased, and over the next two years trials of feeder services were conducted at various points in the city. The earliest route of which there is any record is one along South 13th East Street between East 9th South and East 21st South Streets feeding street car route 5. Some early documents refer to a new route in the Mill Creek section; it is still undetermined if the line described above and the Mill Creek route are one and the same.

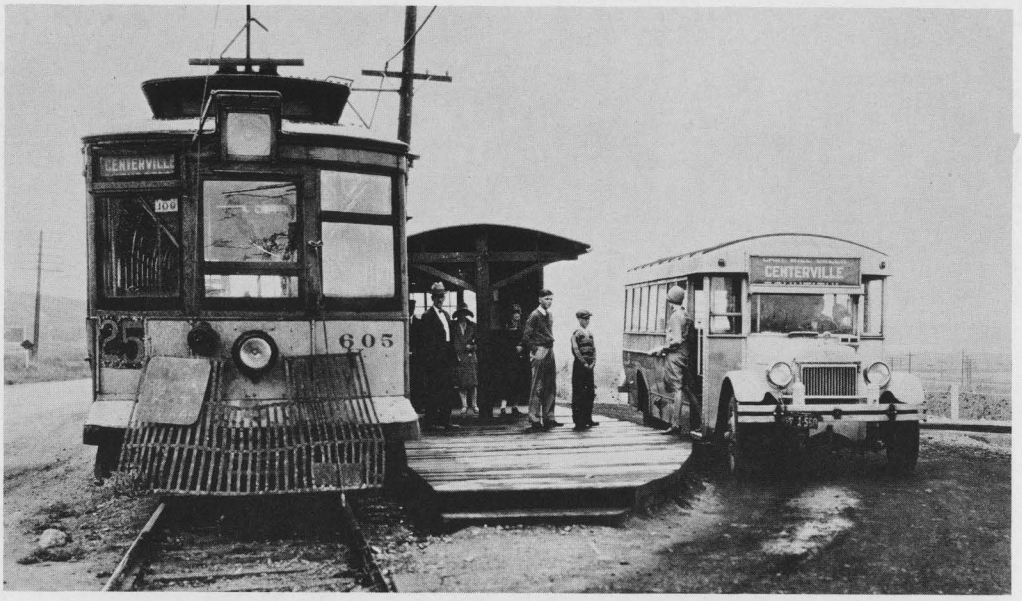
Street numberings in Salt Lake City can be confusing. In all but the northeast quadrant of the city, both north-south and east-west streets are numbered. Numbering starts from Temple Square in downtown. East-west streets lying south of Temple Square are designated South Temple, 1st South, 2nd South, etc. In the southeast quadrant of the city they are prefixed with "East," and in the southwest quadrant with "West." Thus West 2nd South would be that part of 2nd South lying in the southwest quadrant, and East 2nd South would be in the southeast quadrant.

North of Temple Square lie North Temple, 1st North, 2nd North, etc., with the appropriate prefix. North-south streets follow a similar system. West of Temple Square are West Temple, 1st West, 2nd West, etc. East of the Square are Main, State, 2nd East, 3rd East, etc. For these streets the prefix is "North" or "South." Note that there is no East Temple or 1st East; these are replaced with Main and State, respectively. These are the principal business streets in the downtown. In the northeast quadrant a different system is used. Numbered streets run east and west: 1st Avenue, 2nd Avenue, etc., and north-south streets are lettered: A Street, B Street, etc. First Avenue and A Street are closest to Temple Square. The system is further complicated by the current practice in which, for example, East 9th becomes East 900, and South 21st become South 2100.

The first substitution of buses for street cars was made in 1926 when eight miles of route 25 were abandonned from just north of the city limits to Bountiful and Centerville. The side-of-the-road trolley had the much faster Bamberger Railroad interurbans for competition and its demise was to be expected. The replacement bus ran to Centerville, but by 1934 (and perhaps earlier) was cut back to Bountiful, leaving Centerville to be served by the Bamberger. At first the bus connected with Route 22 -- Center Street trolleys at the new end of track. In 1932 Route 22 was converted to bus, and the Bountiful service combined with it. By the end of 1926 the White was gone, and one 25-passenger and two 29-passenger Mack model AB buses were on hand.

The following year saw cutbacks of the two remaining suburban trolleys. The 6.4 miles of single track of Route 12


UTAH LIGHT & TRACTION CO.
NORTH
To Centerville
Beck
Center
22
25
9th No.
4th W.
20
2nd W.
21
11th W.
4th No.
18
5th W.
19
3rd W.
State Fair Grounds
N. Temple
Capitol
23
1 st
B St.
E St.
9th Ave. 1
K St.
City Cem.
N St.
6th Ave. 2
3rd Ave. 3
South Temple 4
1st So. 5
2nd So. 6
3rd So. 7
4th So. 8
5th So. 9
7th So. 11
9th So. 10-26
Virginia
Ft. Douglas
Univ. of Utah
10th E.
13th E.
Mt. Olivet Cem.
E. High
Shops
Main
Rio Grande
Orange St.
2nd So.
17
1st So.
15
Valencia
11th W.
7th So.
Indiana Ave. 16
8th W.
15 13th So.
2nd W.
14
W. Temple
Ball Park
State
4th E.
7th E.
9th E.
11th E.
15th East
13
11
21st S.
10
26
10 6
21st S.
12
7
27th S.
26
Highland Dr.
8
33rd S.
33rd S.
To Sandy
To Holladay via 45th South
1921-1923
SOURCE: 1921-1923 - Results of Modernization Report to ATA 1941



A Mack model AB with a modern looking "Duralite" aluminum body meets a route 25 streetcar at the north city limits, to pick up passengers for Bountiful and Centerville. The date was September 1927 and within a few years, the buses would be running into town replacing the trolley cars.
--Mack

serving Midvale and Sandy were abandonned beyond Regal Street in Murray and bus service substituted. Route 26 to Holladay was also discontinued. Actually this had been a single track extension of Route 10, which retained its terminal at 33rd South and Highland Drive. A bus for Holladay connected with the trolleys at 33rd South. The fleet now consisted of eight Macks and one Graham.

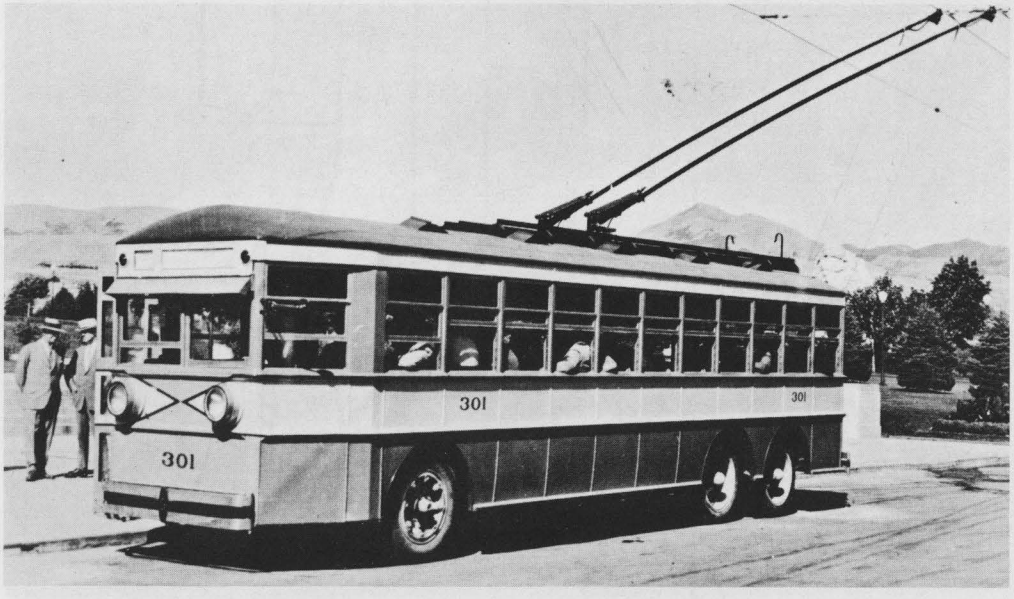
The year 1928 was to see major changes in the system. There was pressure from the city to pave or repave a number of streets along which streetcars ran. UL&T would have been required to pay for the portions occupied by the tracks -- an expensive item. In addition, much track was in poor condition, and rebuilding it would have added considerably to the cost. Thus the early upgrading and track renovation was now a powerful incentive to abandon.

In addition, to reduce operating costs the company wanted to do away with certain duplicating services which ran on parallel streets only one block apart. These dated from the competition in the days before consolidation.

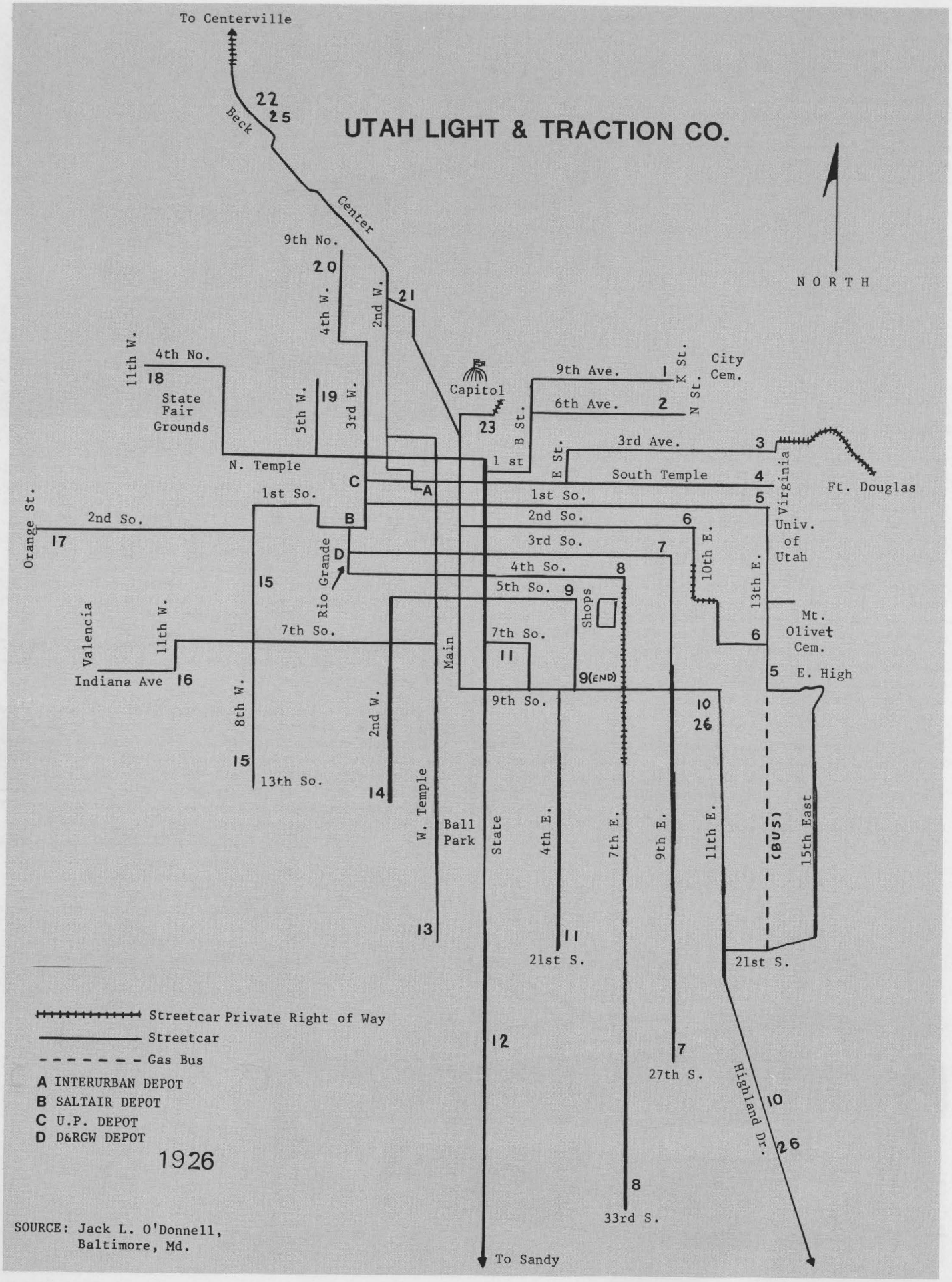
With these factors in mind, Route 4 -- South Temple, was converted to bus and extended a short distance into an area called Federal Heights. This was the first bus route to operate into downtown. Streetcar routes were rerouted from South 2nd East and South 4th East so that the tracks could be removed. Route 7 -- Fifth East and Route 20 -- North Yards were discontinued with no bus substitutions. Other lines served these areas on streets one or two blocks distant. Also discontinued was Route 24--Depots. This line had operated on a loop connecting railroad and interurban stations with hotels and downtown and was not replaced.

More significant, however, was the conversion of Route 11 -- South 4th East and Route 23 -- State Capitol to trolley coach service.

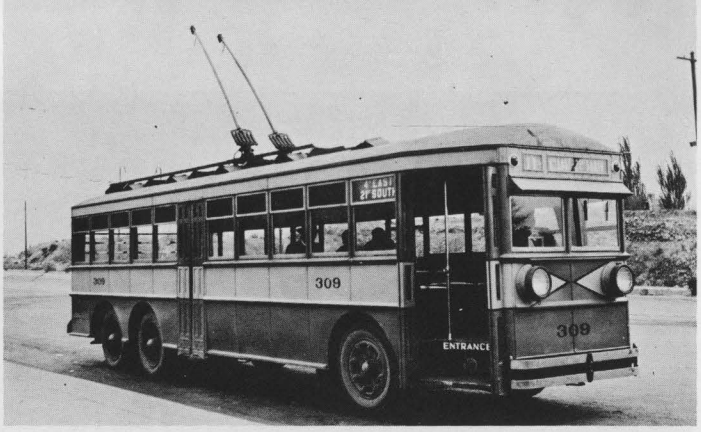
In the fall of 1927 General Manager Edward A. West, accompanied by Superintendent of Way & Structures Jedediah F. Woolley and others, attended the convention of the American Electric Railway Association in Cleveland. A 40-passenger gas-electric Twin Coach was on exhibit, and West wondered if a pair of trolley poles could take the place of the gasoline engine and generator. If so, such a vehicle could replace streetcars on heavily traveled lines.



Versare electric coach number 301 brought a new paint scheme as well as a new technology to Salt Lake City when going through its trials. The first model 3880 to arrive on August 10, 1928, 301 is shown here ten days later carrying city and state officials on a demonstration.
--Westinghouse



SOURCE: Jack L. O'Donnell, Baltimore, Md.



Above, Nine More electric coaches including 300 arrived on August 29 and went into service on September 7th on the South Fourth East -- State Capitol line. -- Westinghouse. Above right, Electric coach number 309, poses for the camera at the turnback loop at 21st South and 4th East at the end of route 11, on October 20, 1928. Below, Electric Coach 311 was originally a Versare demonstrator with G.E. equipment and tandem rear axles (like the first ten). It passed to Cincinnati Car Co. and came to Salt Lake City in March of 1929 when it was the first coach rebuilt with a single rear axle and dual rear wheels in June of that year. --Ohio Brass

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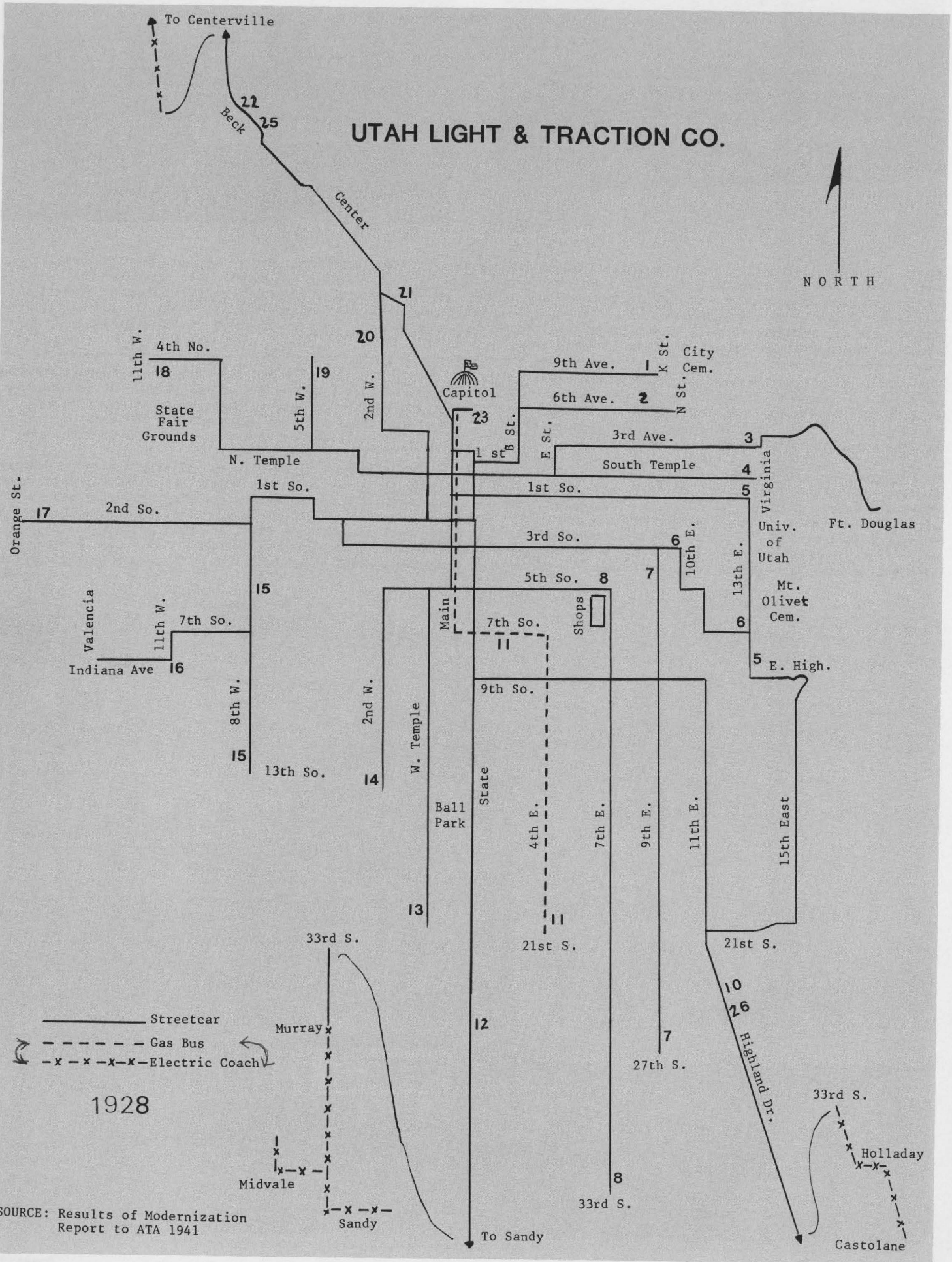
The paving costs could be avoided, and the company's large investment in power distribution facilities would not be lost. Before returning home, Jedediah Woolley visited Rochester, N.Y. for a look at the relatively successful trolley coach operation there.

Up to this time most trolley coach installations in North America had been at best only marginally successful, and several had been discarded as failures. The vehicles had either been attempts to adapt single truck street car designs to off-rail use or were bus bodies mounted on motor truck chassis, with electrical gear where the gasoline engine would have been. Seating had been limited to thirty or so. The ride had been rough, due in part to poor street surfaces, but more directly because of poor springing and the use of hard rubber tires. Attempts to use pneumatic tires had been unsuccessful. The greater torque of the electric motors tended to pull them from the rim.

The Fageols had come up with an entirely new and attractive design for their gas-electric coach that gave greater passenger capacity and a much better ride. There seemed no reason that it would not make a satisfactory trolley coach. Once back in Salt Lake City, a detailed study was done to determine if the idea was feasible. The Fageol brothers were doing well with their model 40 gas-mechanical bus, too.


UTAH LIGHT & TRACTION CO.
NORTH
To Centerville
Beck
Center
22
25
21
20
23
Capitol
9th Ave.
6th Ave.
3rd Ave.
1 st
South Temple
1st So.
2nd So.
3rd So.
5th So.
7th So.
9th So.
21st S.
33rd S.
27th S.
13th So.
N. Temple
4th No.
State Fair Grounds
11th W.
5th W.
2nd W.
8th W.
B St.
E St.
K St.
N St.
City Cem.
Virginia
Univ. of Utah
Ft. Douglas
Mt. Olivet Cem.
10th E.
13th E.
Shops
Main
W. Temple
State
4th E.
7th E.
9th E.
11th E.
15th East
Ball Park
Orange St.
Valencia
Indiana Ave
E. High.
Highland Dr.
Holladay
Castolane
Murray
Midvale
Sandy
To Sandy
Streetcar
Gas Bus
Electric Coach
1928
SOURCE: Results of Modernization Report to ATA 1941

Right, Cincinnati-built electric coach 317 was a model 4-E-430 and, like the Versares, seated 43. It shows off the simplified paint scheme of the 1930's as it rolls through Temple Square. --Ohio Brass

Below left, UL&T bought six Twin Coach trolley coaches to expand the system. The standard Twin Coach design was modified with an exit door amidships and dynamic braking before UL&T would place an order. Number 402 was snapped in November of 1929. --General Electric

Below right, Twin Coach added a small, 20-passenger bus to its line, and dubbed it the model 21. Few were built before a better type known as the model 22 replaced it. Tiny Twin Coach 50 was one of these, and was probably Salt Lake City's smallest bus. It became a money car after modification and mounting on a surplus Brill streetcar truck. --Railway Neg. Ex.

Company officials were convinced, but it remained to get the permission of the city for a test. Photos of a Twin Coach were obtained and, with poles drawn in, carefully superimposed on photos of downtown Salt Lake City. A stretch of overhead was erected in downtown so the Fire Chief could satisfy himself that the wires would not interfere with his equipment. Finally, a movie of the Rochester line was obtained on short notice from Eastman Kodak. After a showing to city officials, they gave their consent to a test.

The route selected included street surfaces of gravel, asphalt, and cobblestones to provide a comprehensive test of the new vehicles. There was a 10 percent grade approaching the Capitol, and here the car tracks were left in place, should winter conditions prove too much for the electric coaches.

The Fageols already had an order from Manila for trolley coaches, and were unwilling to modify their design to meet the requirements specified by UL&T. These included placing the exit door in front of the rear wheels, the provision of dynamic (regenerative) braking, two 50-horsepower motors in place of the 36-horsepower motors thought adequate by the Fageols, and controls similar to those of autos of the day to facilitate driver training.

The company then turned to the Versare Corporation of Albany, New York, a builder of gas-electric buses of advanced design and construction. Versare was quite willing to meet the specifications, and the first vehicles reached Salt Lake City in time for service to begin on September 9, 1928.

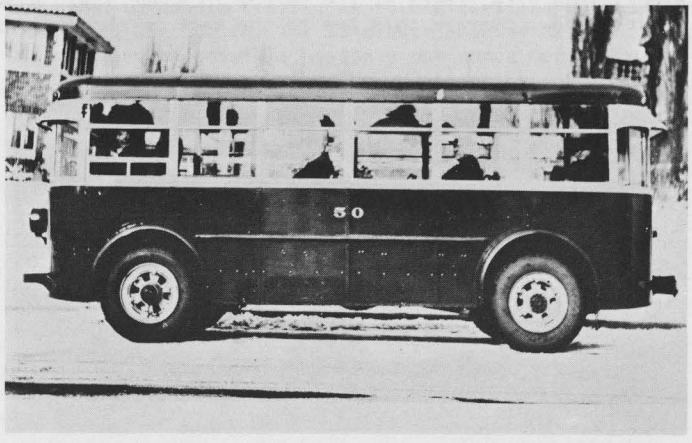
These were much larger than any previous trolley coach, seating 43 passengers. The company wanted to stress that they were an entirely new type of vehicle. They were given the name "Salt Lake City Electric Coaches" and a distinctive paint scheme. Street cars were orange, but the coaches had bodies with a combination of amber brown and canary yellow with roofs of terra cotta red.

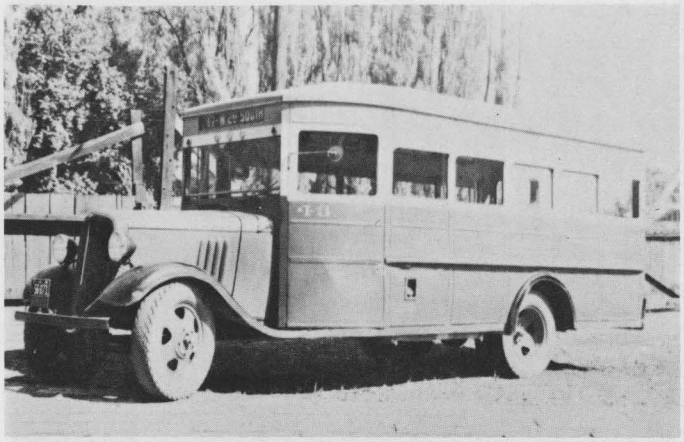
They were rarely referred to as trolley coaches or trolley buses--always electric coaches. At about this same time vehicles with internal combustion engines began to be called "gas buses," and this terminology would continue until the last coaches ran in 1946.

Problems developed. This was the first time trolley coaches were operated under the same wire as streetcars. There was much experimentation and new designs for frogs had to be devised to prevent dewirements.

More serious were difficulties with the trunnion-mounted rear axles on the coaches. The ride was rougher than anticipated, despite the use of pneumatic tires, and there was a serious problem with the drive shaft breakage. In ~~1929~~ 1930-31 all were converted to a single rear axle configuration, and this seems to have given satisfaction.

If a pole left the wire the dynamic braking ceased to function, and this also required correction. A problem with passengers receiving electric shocks as they boarded or left the vehicles was solved by installation of drag chains to discharge static electricity. Despite the problems, the coaches proved popular with the public, and an identical eleventh coach on exhibit at the AERA





Above, UL&T received seven Chevrolets with Wayne bodies in 1934, and bus 43 appears in our illustration as representative of this group. These were probably the lightest and most economical buses in the Salt Lake City fleet. Not built to withstand the rigors of regular route service for many years, only 43 was on hand at the time of the sale to Salt Lake City Lines. -- Bob Burrowes. Above right, Dwight Austin demonstrated his Utility Coach for Jedediah Woolley in 1932 and the impressive performance of the little bus led to orders totalling 21 of the unique vehicles. Licensed in Utah for 1933, but not lettered or numbered for UL&T yet, this bus was photographed at the Utility Coach plant and is a copy by Yellow Coach. -- Collection of Thomas C. VanDegrift, Jr.

convention was hurriedly shipped to Utah to handle the increased ridership.

The company was satisfied that the coaches would do the job, and plans went forward for more conversions. Data available at this time showed a decided cost advantage for the trolley coach. Conversion of the entire system to trolley coach was envisioned.

In January of 1929 the Fageols, still convinced that their design was better, shipped a demonstrator built along the lines of their original proposal to Salt Lake City. It proved to be under-powered, and its lack of dynamic braking caused a tendency to skid on wet pavement, as well as to wear out brake shoes at a phenominal rate. It was soon kept off the streets in bad weather. Company officials were impressed, however, with the better ride provided by the balloon tires and longer springs.

Versare had been taken over by the Cincinnati Car Company late in 1928, apparently to give Cincinnati Car a foothold in what it saw as a promising market for gas-electric and trolley buses. In March of 1929 it, too, shipped a demonstrator to Salt Lake City. In appearance this vehicle resembled the previous eleven, but had better dynamic braking, General Electric instead of Westinghouse electrical gear, and some other modifications.

On December 4, 1929, the conversion of Route 7 -- South 9th East to electric coach operation took place, and its linking with South 4th East. Route 23 reverted to street cars. Route 7 was selected because of the very bad condition of its track. This combination of route 7 and 11 was to prove over the next few years to be one of the most heavily used routes in the system.

To accomplish the conversion the company split its order. Seven coaches of a new design were ordered from Cincinnati Car Co. and six from the Fageols. All had the rear exit forward of the rear wheels, dynamic braking and 50 horsepower motors. Both the Twin Coach and Cincinnati demonstrators were also purchased at this time.

The Twin Coaches seem to have worked out well. A problem with rear axle breakage developed with the Cincinnati products, however. The problem was eventually solved, but the cause was never pin-pointed. It may have been due to the axles having been designed for use with gasoline engines, and could not handle the torque of the electric motors.

One wonders if this problem may not have given Cincinnati trolley coaches a bad reputation. This could have been a factor to the company's lack of success in breaking into the market for either trolley coaches or gas-electric buses. It sold trolley coaches only to Chicago, New Orleans and Knoxville and sold no gasoline powered vehicles at all.

Below, The prominence of the rear engine installation and the stylish trim are highlighted in these Utility Coach photographs. Left, Note the third headlight in this view, also taken in 1933 before numbering and lettering for UL&T. Right, This view, taken at the garage in about 1941, shows that sign boxes for route numbers had been added to the first window. Compare this bus to the Mack on the following page. --Collection of Van C. Wilkins.

ROSTER OF BUSES

UTAH LIGHT & TRACTION CO. 1923-1944

1		White	?	?	12	1924	(Used rented buses earlier)
1		Mack	AB	592112	29	1925	
2		Mack	AB	593209,593215	29	1926	Aluminum "Duralite" bodies
1		Mack	AB	59336	29	1926 (1927)	Wolverton Bus Co. (Wash. state)
1		Mack	AB	59774	29	1926 (1927)	Idaho Transit Co.
3		Mack	AB	59329,59775.59778	25	1926 (1927)	Walla Walla Transit Co.
1		Graham	?	?	21	1927	
	40	Studebaker	?	?	?	1929	Stevens body; see Note A
	50	Twin Coach	*21*	?	21	1927 (1929)	?
1		Mack	AB	592737	26	1926 (1930)	See note B
1		Reo	?	?	23	1931	
	41	Chevrolet	?	?	16	1933	Wayne body
	60-77	Utility	?	?	21	1933	(del. 4 plus 14)
	78-79	Utility	?	?	21	1934	
	42-48	Chevrolet	?	?	17	1934	Wayne bodies
	80-96	Mack	6-CW-3S	1017-1033	20	1935	
	20-24	Twin Coach	23-R	?	23	1936	
	59	Utility	?	?	21	1936	
	101-110	Yellow	733	193-202	21	1936	
	111-134	Yellow	733	?	21	1937	
	135-139	Yellow	733	?	21	1938	
	140-148	Yellow	733	?	21	1939	
	201	Yellow	1204	?	24	1939	
	251-260	Yellow	TG-2701	011-020	27	1940	
	261-276	Yellow	TG-2706	011-026	27	1941	
	277-286	Yellow	TG-2706	280-289	27	1942	
	501-516	Ford	29-B	570131-570138,570232-570239	27	1943	
	300-309	Versare	3880	?	43	1928	See Note C
	310	Versare	3880	?	43	1928 (1928)	Demo
	311	Versare	3880	?	43	1928 (1929)	Demo
	399	Twin Coach	40-TT	?	40	1928 (1929)	Demo
	400-405	Twin Coach	40-TT	?	40	1929	
	315-321	Cincinnati	4-E-430	?	43	1929	

Note A. 13-passenger in ERL, 17-passenger in B.T., and 20-passenger in company records.
Note B. Mack records do not list any prior owner for this bus, four years old at least when UL&T bought it.
Note C. We think we know where the serial numbers fit in Twin Coach and Versare lists, but in the absence of official data we have not included them.

UL&T to SLCL 4/27/44: 20-24, 40, 43, 47, 59-79, 101-148, 201, 251-286, 501-516 (147 gas buses)
300-311, 315-321, 399-405 (26 electric coaches)
(and eight streetcars)

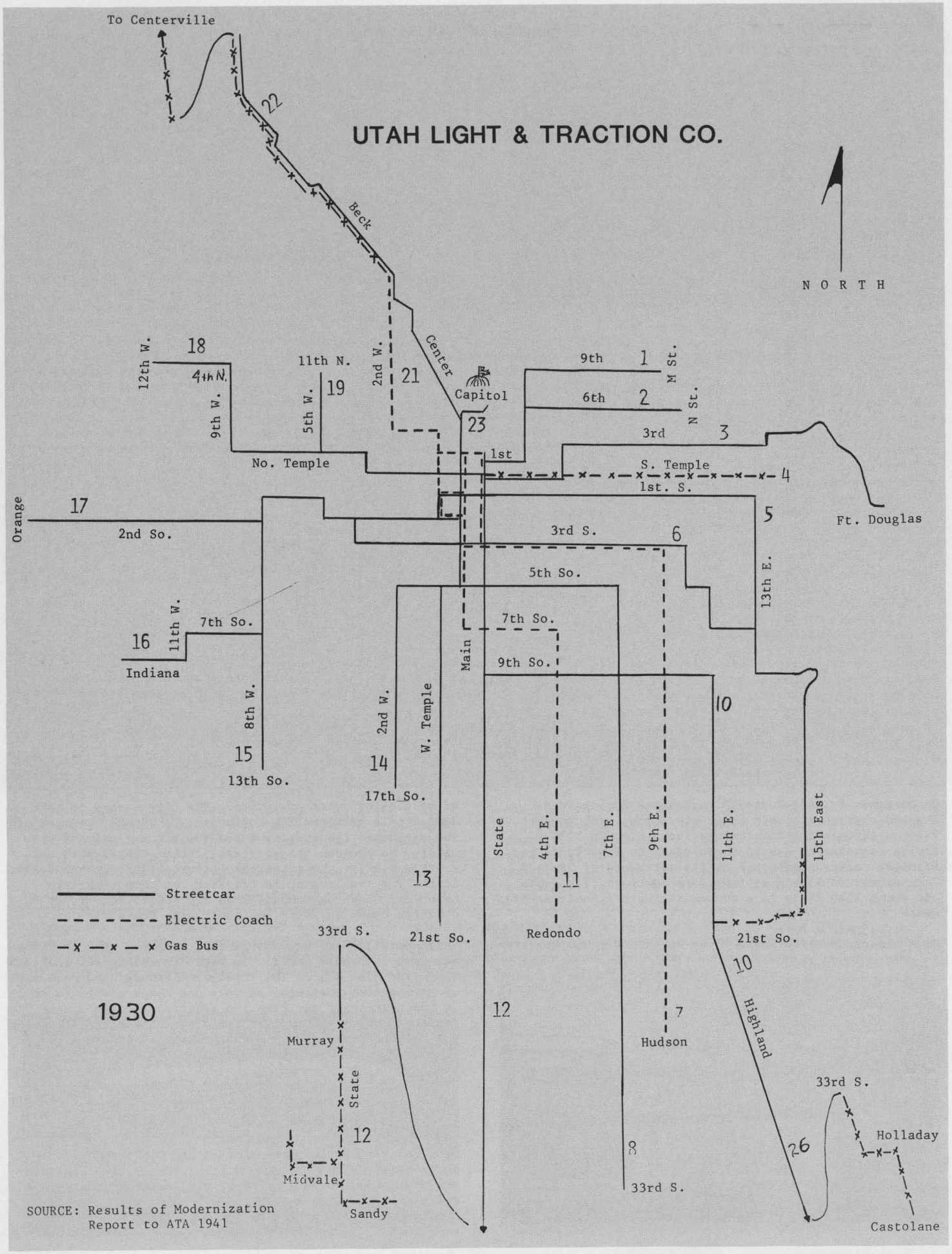
On ~~December 6, 1931~~ November 23, 1930 Route 21 -- Wasatch Springs was changed over to electric coach operation, with coaches looping through the downtown section. Also in 1930 a paving requirement caused the company to substitute gas bus service for streetcars on the outer end of Route 5. The bus ran on 15th East from 17th South to 21st South and along 21st South to a connection with streetcars of Route 10.

On ~~November 23, 1930~~ December 6, 1931 Route 13 -- West Temple was converted to trolley coach operation. The city wished to pave West Temple between 13th South and 21st South. Because of low patronage the company asked for but was refused permission to abandon the service. It then substituted a shuttle bus for the streetcars between 13th South and 21st South. The requirement to transfer cut into ridership even more, and the company then decided to convert to electric coach and link the route with Route 21.

This operation was unusual in that a single pair of wires was used to handle traffic in both directions between 13th South and 21st South. The 15-minute headway used made such an arrangement possible, as only one coach needed to be in the section at any time. No additional coaches were required for this change. The depression was in full swing and reduced ridership on the other routes released the four coaches needed for the 13-21 combination.

In 1932 Route 22 -- Center Street was converted to gas bus operation, although some track was left in place until 1935 to allow continued access to a sand and gravel spur.

Compare this CW view with that of the Utility Coach and several small differences are evident; the shape of the engine housing and radiator grille, the windshield design and the window height are perhaps the most prominent. --Collection of Van C. Wilkins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2nd W.
No. Temple
9th
1
M St.
6th
2
N St.
3rd
3
1st
S. Temple
1st. S.
4
Ft. Douglas
5
Orange
17
2nd So.
3rd S.
6
5th So.
13th E.
7th So.
11th W.
16
Indiana
Main
9th So.
10
8th W.
15
13th So.
2nd W.
W. Temple
14
17th So.
State
4th E.
7th E.
9th E.
11th E.
15th East
13
11
Redondo
21st So.
Streetcar
Electric Coach
Gas Bus
1930
33rd S.
12
Murray
State
Midvale
Sandy
Hudson
7
8
33rd S.
Highland
10
26
Holladay
Castolane
SOURCE: Results of Modernization Report to ATA 1941

DATES OF CONVERSION OF VERSARE ELECTRIC COACHES FROM TANDEM REAR AXLES TO SINGLE REAR AXLES WITH DUAL TIRES

Coach No.	Out of service	back in service
300	2-25-30	4-15-30
301	5-27-30	1-21-31
302	5-14-30	10--6-30
303	3-20-30	5--6-30
304	1-31-30	3-12-30
305	12-26-29	2-20-30
306	2-20-30	4-03-30
307	1-11-30	2-21-30
308	3-12-30	6-16-30
309	1-10-30	2-25-30
310	2-14-30	3-21-30
311	6-25-29	7-23-29

In the same year tracks were removed from North Temple Street because of a paving requirement. This meant that Routes 18 -- West 4th North and 19 -- North 5th West had to be converted to gas bus operation. The company received approval to convert these two routes to electric coach operation in 1933, after paving was completed. Overhead was completed for Route 19 and for Route 18 on North Temple as far as North 9th West, the location of the State Fairgrounds, and for two blocks north on 9th West to a loop. There is no evidence that the ramining ten blocks of Route 18 ever received trolley coach overhead.

There is also no direct evidence that either of these two routes ever saw regular trolley coach service. If they did, it was only for a short time. It is certain that by July, 1934 operation was with gas buses on both of them. Extra service by electric coach was run to the Fairgrounds as late as 1938. Wire was removed from North 5th West in 1940, possibly to be used for an 0.8 mile extension in that year of Route 7 from Parkway Avenue south to Hudson Avenue. Overhead on North Temple apparently remained in place for some time after that. UL&T reports to the Utah Public Service Commission do not record its removal.

No discussion has been found as to the reasons the company spent money to string overhead and then did not make regular use of it, and we can only speculate. By this time there had been considerable improvement in gas bus technology, and the cost of gas bus operation had dropped. As experience in gas bus operation was gained, it probably became apparent that the use of trolley coaches on lines where traffic was light did not make economic sense.

Permission was given in 1933 to substitute gas bus service for Route 10 -- Sugar House/Highland Drive streetcars on Highland Drive between 27th South and 33rd South.

Left, A glimpse at the electric coach conversion program showing how the Versares were taken from service, converted and returned. Average conversion time was about two months, but 311 was done in a month. Why 301 and 302 took so long is not known.

Bottom left, The Utility coach was well liked in Salt Lake City, and when Dwight Austin was hired by Yellow Coach, both Mack and Kenworth saw possibilities with the design, especially for future Salt Lake City orders. Both builders constructed prototypes, but Mack won the UL&T order with an almost photographic copy, the model CW. UL&T bought 17 of them in 1935! They were never as popular as the Utility Coaches. --Mack

Bottom right, UL&T turned to Twin Coach for small buses in 1936 with an order for five model 23-R buses. They retained the basic layout of prewar small bus orders, but with rear doors. The 23-R was not unlike the Utility Coaches and Mack CW buses. The engine and transmission were over the rear axle, and drove down to the differential. There were two sets of rear windows -- one inside the coach behind the rear settee, separating the engine and passenger compartments. The other rear window followed the outside contour and was hinged so it could be lowered for access. --Collection of Van C. Wilkins

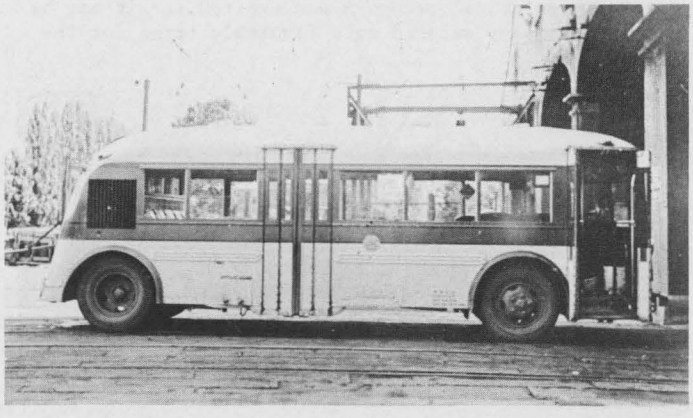
This bus route would later be linked with the shuttle on 15th East and 21st South, and it is probable that both routes were operated with a single bus.

The Holladay bus, which had connected with Route 10 at 33rd South was by this time operating into the downtown. It did not receive a route number, however, but remained the "Holladay Bus," even though its predecessor streetcars had been Route 24.

When UL&T decided to replace four lightly patronized trolley lines in the southwest quadrant of the city, Jedediah Woolley began looking at small gas buses rather than electric coach. In response came Dwight Austin with a unique Utility Coach demonstrator. The bus had been designed and built by Austin in the former Pickwick Motor Coach Works in Inglewood, California, where he had been Chief Engineer.

The bus was small, seating 21 passengers and it was loaded with sandbags to simulate a full standing load. The course was up the steep State Street hill to the Capitol building and the bus did extremely well, sufficiently impressing Woolley with its performance that he ordered four.

Once again, UL&T had decided to pioneer. The bus was of a radical design. With the exception of the Twin Coaches, most buses of that time had the engine mounted at the front of the bus. The Utility Coach featured an engine mounted in a bustle (Mack called it a "trunk") carried at the rear of the bus. This arrangement was made possible by a right-angle drive patented by Dwight Austin. The ar-



Electric Coach 308, after conversion to single rear axle with dual wheels and tires, follows a Route 12 streetcar. The coach is probably working Route 7, and the scene is looking north on State Street near Temple Square.
--Ohio Brass

rangement was said to facilitate maintenance, since it made for easy removal and replacement of the engine, even out on the road. It also allowed more room for passengers inside the bus or the same number of riders could be carried on a shorter wheelbase.

UL&T was to have the only large fleet of Utility Coaches as Yellow Truck & Coach hired Dwight Austin for his angle drive patent and production of Utility Coaches ceased. UL&T was pleased with the design, and two more were ordered in 1934; another appeared in 1936, apparently an ex-demonstrator. Los Angeles was the only other city in which the Utility Coach was to operate in any number. When UL&T wanted more buses of this design, Mack and Kenworth built prototypes; Mack's was a nearly identical coach and was the model CW. UL&T ordered 17 in 1935 but they were never as well liked as the Utility Coaches.

Earlier in 1933 the incoming Roosevelt administration had seen federally financed highway projects as one way to alleviate the very high unemployment resulting from the Depression. Funds were available to the State Highway Department to pave the highway from Salt Lake City to Murray, said to be one of the busiest roads in the entire state. This road was an extension of State Street, and was occupied by the double tracks of Route 12.

The company at first objected to removal of the trolleys, as it would lose its investment in tracks, overhead and power distribution facilities. This position was consistent with those taken with respect to other conversions. Streetcars were replaced only when there was a clear advantage in doing so. It also noted that Route 12 streetcars carried more riders than did all the autos then using the road, and its patrons should not be inconvienced because of the needs of the automobile drivers.

Evidently political pressure was exerted, or it may be that the company secured more favorable terms for the conversion, because on July 15th the company announced that it would not oppose the changeover. By mid-August bus service had replaced the trolleys below 17th South.

Two other routes were converted in 1933. These were 14 -- South 2nd West and 17 -- West 2nd South. This meant that no streetcars were in operation anywhere west of Main St.

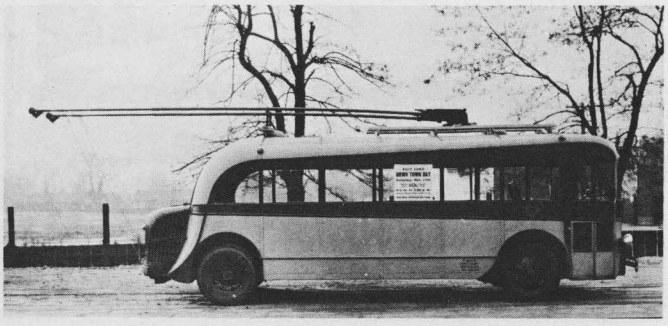
Except for the conversion of the remainder of Route 12, there were no streetcar abandonments in 1934. Seven 17-passenger Chevrolets with Wayne bodies were delivered, however. (One of these actually arrived in 1933.)

With the arrival of the Mack CW buses (known locally as "new Macks") in 1935, conversions continued. The three routes remaining in the northeast section of the city, 1 -- 9th Avenue, 2 -- 6th Avenue, and 3 - 3rd Avenue, were changed over. Service to Fort Douglas, which had been an extension of Route 3, was shifted to Route 4 -- South Temple, and Route 3 was terminated at Fairfax Avenue.

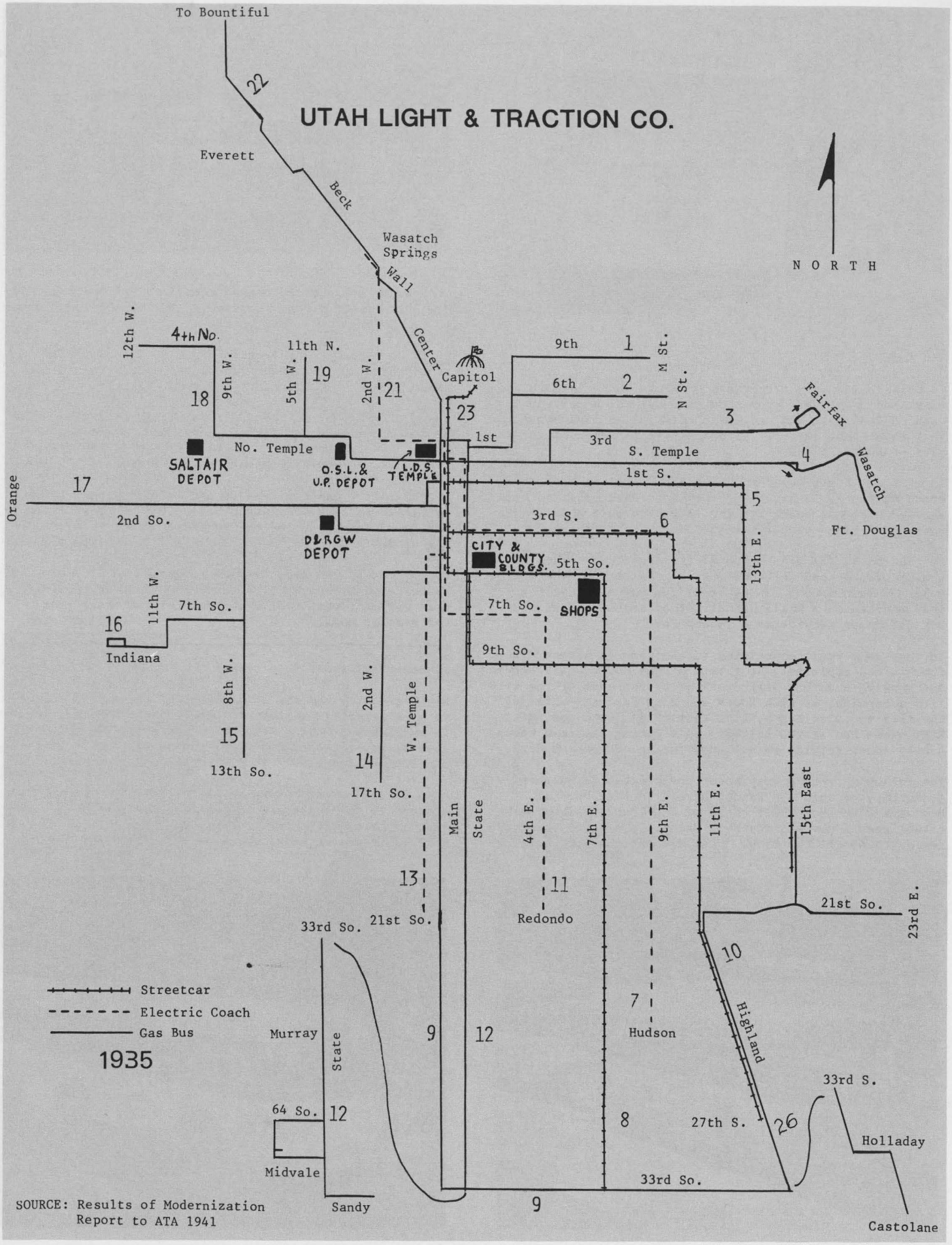
In 1936 five model 23-R Twin Coach buses and the first ten of what was to be a fleet of 48 model 733 Yellow Coach buses arrived, and conversions continued. Route 6 -- East 3rd South was changed over and rerouted to East 2nd South. Route 23 -- State Capitol, which had been operated in 1928 -1929 with electric coaches, also received gas buses.

UL&T's first bus retirements took place during 1936. The original Macks, the Graham, and the Reo all left the roster.

The following year Route 6 was redesignated 15th East and 17th East was removed from 2nd South. Instead it left downtown via Main to 9th South, and then ran east to the streets of its new designation. This provided service to a developing suburban area. It also absorbed the 15th East shuttle bus. Part of the area had been served by Route 5 streetcars, which were cut back to 13th East and



Salt Lake City's transit system put sturdy vehicles to good use. A Utility Coach with sleet-breakers looks like a trolley coach. This photo was taken at the shops in November, 1934, when the Utility Coaches were still new. The bus still has seats and even a sale-days advertisement in the window. Perhaps the poles were removed at winters end and the bus operated as a regular coach. *--Frank M. Brown*



SOURCE: Results of Modernization Report to ATA 1941

Utah Light & Traction Company turned to Yellow Coach for new buses in 1936, and received 48 Yellow model 733 buses in four orders over four years.

Left, The second (and largest order -- 24 buses) is represented by 129 shown loading passengers in mid-town about 1941. -- Collection of Van C. Wilkins

Above, The layout of the 733 is shown in this view. The Yellow 733 looked similar to early Ford 70 and Beaver buses, and had the engine inside, alongside the driver.
--Collection of Van C. Wilkins

Bottom left, Larger 27-passenger Yellow Coaches began to appear in 1940. The first order, for 10 TG-2701 models, can be distinguished by the vertical chrome trim below the windshield. *--Yellow Coach*

Bottom right, Two later orders for model TG-2706 are represented by another builders view. Lack of vertical trim and different roof vents distinguish these from the earlier model. *--Yellow Coach*

9th South.

To replace Route 6, streetcars on Route 10 -- Sugar House -Highland Drive were converted to buses which left down-down on 2nd South and had their terminal at 33rd South. This meant that just two streetcar routes remained in service -- Routes 5 and 8.

In 1938 gas buses began to be used to supplement electric coach on Routes 13-21. Four trolley coaches provided base service with gas buses filling in during rush hours. More passengers rode the buses than rode the trolley coaches.

By the end of the year seven of the eight Chevrolets and the Studebaker had left the roster. Number 50, the lone model 21 Twin Coach, was retired from bus service; its body mounted on a Brill 21E streetcar truck, and as number 013 began service as a "money car."

In that same year competition in the form of Airway Motor Coach Lines appeared. At first, Airway Motor Coach served the growing suburban Mill Creek area southeast of the city from a terminal at 89th South and 23rd East and entering the city via 33rd South, 21st East, 21st South and Main. UL&T buses had served Holladay only during the rush hours. Airway added service to Holladay during off-peak hours.

The following year Airway Motor Coach established service to Murray, Midvale and Sandy, already served by UL&T. Headways were about half those of UL&T buses. Airway also established a new bus route to Union, located in the growing southeast of the city. UL&T discontinued bus service to Bountiful about this time.

Nineteen-forty saw the abandonment of one of the two remaining streetcar routes -- Route 8, and the use of buses in evening and Sunday service on Route 5. Electric Coach service was extended 0.8 miles on 9th East to a new terminal at Hudson.

Also in 1940 a new bus route was established. Route 9 was created to operate south on Main to 21st South, east on 21st South to 13th East. In what was termed experimental service it was extended north on 13th East to 9th South.

UTAH LIGHT AND TRACTION COMPANY
SALT LAKE CITY, UTAH
SCHEDULE DATA AND PASSENGER TRAFFIC STATISTICS
1938

Line Names	AM Peak	PM Base	PM Peak	PM Night	Annual Statistics - 1938 Vehicle Miles	Revenue Passengers
STREET CARS						
East 1st South and 7th East	14	6	13	6	545,038	2,507,105
ELECTRIC COACHES						
9th East - 4th East	15	8	15	8	541,867	2,087,457
South West Temple & Wasatch Spgs.	4	4	4	4	96,846	326,940
Extra Fair Grounds					4,480	24,214
MOTOR BUSES						
9th-6th Ave, 15-17 East	18	10	21	19	807,486	2,589,737
East 2nd South & 11th East	14	7	17	7	628,533	1,767,937
West 4th North	9	7	9	6	467,598	1,428,387
State St., & S.H.	10	6	10	6	438,762	1,348,840
M. S. M.	4	3	4	3	303,735	776,504
3rd Avenue	5	3	5	3	206,857	704,257
E. South Temple & Ft. DOuglas	4	2	4	2	200,511	702,649
So. West Temple & Wasatch Spgs.	-	-	-	-	158,998	478.;54
South 2nd West and Center	3	2	3	2	202,010	436,070
State Capitol	1	1	1	1	49.991	178,892
West 2nd South	1	1	1	1	44,061	118,223
Holladay	1	1	1	1	40,370	84,367
East Mill Creek	-	-	-	-	18,083	27,946
East 21st South	1	1	1	1	17.160	16,768
Stub - East Mill Creek	-	-	-	-	6,706	8,405
Extra Fair Grounds	-	-	-	-	251	968
W. H. S.	-	-	-	-	-	-
South 8th West 7th So. - No. 5th.	-	-	-	-	-	-
	104		109		4,779,343	15,613,820

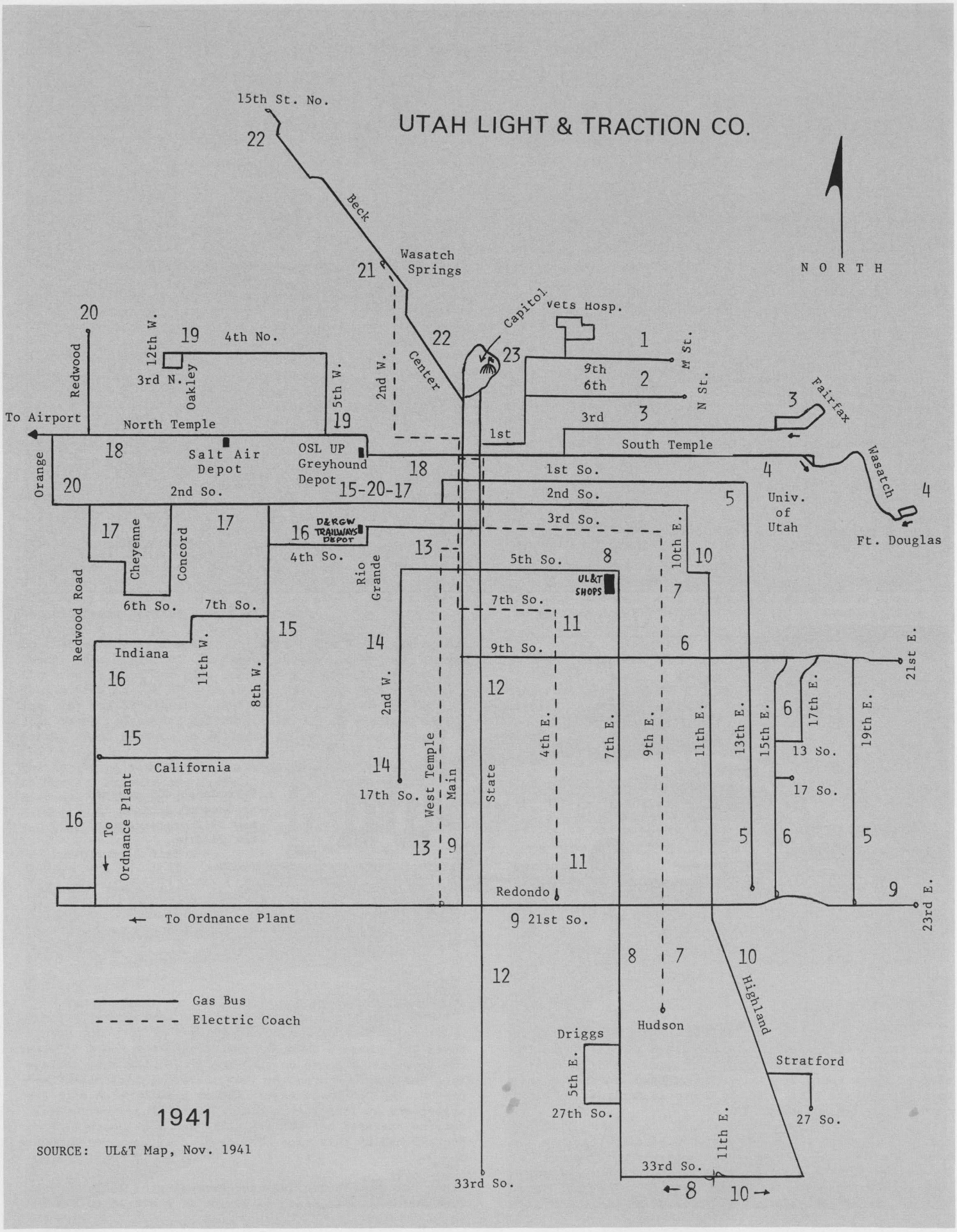
SOURCE: UL&T

Twin Coach 405 snapped at Wasatch Springs in May 1942 operating on the 21 line.
--Robert A. Burrowes

Other experimental service included a branch of Route 10 on Stratford, and an extension of Route 17 and establishment of a new Route 20 to developing areas in the northwest part of the city. The old Route 26 designation was restored to the Holladay bus.

What was supposed to be the last run of streetcars on Route 5 and in the city took place in the early hours of June 1, 1941. World War II intervened, and the company was ordered to resume streetcar operation. The cars were back on the street before 1941 ended, although Route 5 buses which served the territory beyond the Route 5 Street car terminal operated on the same streets as the trolleys into the downtown area. By 1943, however, this practice ceased, and the buses terminated at a connection with the streetcars at 13th East and 9th South. The experimental service operated between 9th South and 21st South by Route 9 had by this time been taken over by buses of Route 5.

Other wartime changes included extension of Route 9 along 21st South to 23rd East, extension of Route 16 to a new



1941

SOURCE: UL&T Map, Nov. 1941

UTAH LIGHT AND TRACTION COMPANY
SALT LAKE CITY, UTAH
FARE STRUCTURE - 1921 to 1941

	Cash Fare	Ticket or Token Fare No./Price ¢	Weekly Passes (Price)	Children's or Students' Rates	Charge for Transfers	Zone Fares	Special Services or Rates
1920-July 3	7¢	16/$1.00 (a)	-	50/$2.00	free	-	-
1924-May 5	7¢	16/$1.00 (a)	1.25,1.75,2.25*	50/$2.00	free	Yes*	-
1926-May 23	10¢	13/$1.00(a),3/25¢(b)	1.25,1.75,2.25	50/$2.00	free	Yes	-
1933-July10	10¢	13/$1.00,3/25¢	1.25,1.75,2.25	50/$2.00,4/15¢(c)	free	Yes	-
1939-Nov 15	10¢	13/$1.00,3/25¢	1.25,1.75,2.25	50/$2.00,4/15¢	free	Yes	Yes**

* First Zone Pass - $1.25; Second Zone Pass - $1.75; Third Zone Pass - $2.25.
** Effective November 15, 1939 a new rate schedule applied to 2nd and 3rd zones of Murray-Midvale-Sandy route. Five cent fare within Murray City Limits and between Midvale and Sandy. Ten-cent fare between Murray and Sandy or Midvale and between Salt Lake City and the territory between 33rd South and the North Murray Limits. Fifteen-cents from Salt Lake City to Murray (25% reduction on a cash basis) and a twenty-cent fare from Salt Lake City to Midvale and Sandy (33 1/3% reduction on cash basis.

(a) Paper tickets sold at ticket offices. Effective June 9, 1932 small tokens replaced paper tickets at same rate.
(b) Large tokens - sold by operators
(c) Four tokens for 15-6 sold to children under 12 years of age, effective July 10, 1933

SOURCE: UL&TCo.

Airway Motor Coach Lines' buses were Ford Transits painted bright red including 34, signed here for East Mill Creek, the area where UL&T ran its first experimental feeder bus line.

-- Utah State Historical Society

ordnance plant southwest of the city, and creation of an unnumbered route serving the Veterans and Latter Day Saints Hospital on 13th Avenue. Route 18 was re-routed to serve the airport, and its former territory became the responsibiilty of Route 19. By this time, the experimental Route 20 had disappeared.

Service to Murray, Midvale, and Sandy was cut back to 33rd South, and Route 26 to Holladay was discontinued. This left the area below 33rd South to Airway Motor Coach Lines, which established another new route along South 9th East to 48th South.

By 1944 the fleet had grown to a total of 146 gas buses. All 26 trolley coaches were still on the property, along with eight streetcars used on Route 5.

On July 13, 1944 at 3 a.m., Salt Lake City Lines, a subsidiary of Pacific City Lines, took over the entire system. Jesse L. Haugh was president of the new company, and Glen L. Stanley, formerly manager of Pasadena City Lines, was general manager. The price paid was $675,000, and Salt Lake City Lines agreed to remove existing streetcar tracks and improve streets at a cost of $240,000.

All other assets and liabilities of UL&T were taken over by Utah Power & Light on December 31, 1944. UL&T was another victim of the federal push at that time to separate transit operations from other utility functions, as well as the idea that once a system was headed toward 100 percent bus, there was no reason for utility companies to be involved any longer.

In a subsequent issue, the Salt Lake City story will continue, picking up at the advent of City Lines' ownership.

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Conversion of Sandy route - see part II p. 3