Manhattan Transfer

Syd Williams

A discussion at a recent lunch meeting, amongst other things, led to mention by the music fans present of a group (or vocal ensemble if you prefer) called Manhattan Transfer. This in turn led to thoughts and suggestions as to where their name came from. Having heard there was a station of this or similar name somewhere around New York City, investigation has led to this article.

Briefly, the station was an interchange, actually situated in Harrison, New Jersey across the Hudson River from New York. It was built by the Pennsylvania Railroad and opened in 1910 but closed in 1937. It was also used by the Hudson & Manhattan Railroad and one unusual feature was there was no road access (but as an interchange is on a much grander scale than our own Berney Arms station which was also in the middle of a marsh with no road access but only caters for anglers, wildfowlers and Real Ale Fans. At least it is still open).

In the late 19th Century the Hudson River remained a barrier to railroads from the south across New Jersey aiming for New York. Trains terminated on the west bank of the Hudson and passengers had to complete their journey into New York by means of ferry boats. The Pennsylvania Railroad was no exception and their trains terminated at Exchange Place in Jersey City directly opposite Manhattan Island. It was freight traffic that originally attracted the Pennsylvania to the North East from its base in Philadelphia but passenger traffic also became a major commodity as New York City developed. The boat transfer was not too serious a problem for freight which could be transferred by barge to ships in any part of the harbour but the PRR wanted to be able to carry passengers directly into the heart of New York. Its great rival, the New York Central, was able to bring passengers from the north directly into Manhattan at Grand Central Station via the easier Hudson Valley Route. Grand Central Terminal incidentally celebrated its centenary earlier this year.

Tunnel building under water was considered a risky business in the 1870s and the Pennsylvania (and other railroads) were not prepared to take on or finance such projects and thoughts turned to building a bridge over the Hudson. This had been inspired by the Brooklyn Bridge of 1883 but the plans were quashed by the War Department and the City Authorities who claimed it would be a serious threat to navigation. After much manoeuvring Congress passed legislation which might have satisfied the objectors but the project had ballooned to unmanageable proportions (at one stage a 14 track bridge was considered) but the cost, particularly to the Pennsylvania RR, meant that the scheme was not progressed.

Two abortive attempts were made to tunnel under the Hudson. The first was started in 1879 but a disaster in July 1880 caused the abandonment of the project. The second, in 1888, using a Greathead shield pushed forward to a point close to the Manhattan shore but after a year or two, and principally for financial reasons, the project also failed and lay dormant for another span of years.

In 1892 a young lawyer, William Gibbs McAdoo, from Chattanooga Tennessee, arrived in New York to seek fame and fortune (in which he succeeded) and in 1901 he had the idea of reviving the trans-Hudson tunnel. An expedition was made into the abandoned tunnel and it was found that the Greathead shield was in good order. Finance was obtained and McAdoo had visions of building an interurban railway network from New Jersey into Manhattan using tunnels which would dispense with the time consuming ferry boat journey.

Stock was to be multiple unit electric 650 volts d.c. In February 1908 The Hudson & Manhattan Railroad Co. opened the first pair of underground tube lines under the Hudson, from Hoboken NJ to 33rd Street (midtown Manhattan) and in July 1909 another pair, located about 1¼ mile south of the first pair, to Jersey City from Hudson Terminal (downtown Manhattan) via Exchange Place.The map shows the location of these. The line surfaced west of Exchange Place at Grove St. in Jersey City and was a surface operation from there to Newark. To digress for a moment, the Hudson Terminal was considered an architectural and engineering marvel of its time, comprising two 22 storey buildings with the station underneath. It was built across Dey St. but the City Authorities would not permit the street to be closed and a bridge was built part way up connecting the two buildings. By the mid 1960s however the H&M Railroad was in serious decline and the building had become dated. It was demolished in 1965 and replaced by The World Trade Centre, opened in 1973, which itself was a victim of the terrorist atrocity on Sept 11th 2001.

At the same time as the McAdoo tubes (as they were always called) were envisaged (and constructed) the Pennsylvania RR was confident that an underwater tunnel of sufficient size to take main line trains was practical and that haulage by electric locomotives feasible. Electric haulage was necessary due to an ordnance of the New York City Authorities which banned steam traction south of 42nd Street and as the Pennsylvania Station was at 33rd St. there was no option.This was a mammoth scheme and involved a new line which branched off the original main line to Exchange Place at Harrison, two miles east of Newark, and cut across the Jersey Meadows on an embankment. A pair of tunnels burrowed under the Hudson from the Bergen Portal giving the PRR its long cherished access to New York City. A superb station (Pennsylvania Station) was built at 33rd Street and 7th Avenue. The line continued as a four track subway, under the East River to Long Island and a major storage and repair facility was built in Queens known as Sunnyside Yard. The yard had a capacity for 1550 passenger carriages together with a loco servicing and repair depot and covered 75 acres. The whole project was electrified 650 volt d.c. The final component was the interchange point between steam and electric traction out in the Jersey Meadows and known as Manhattan Transfer.

All Pennsylvania RR trains stopped at Manhattan Transfer to change locomotives (steam/ electric) and so the Hudson & Manhattan RR entered into an agreement with the PRR to allow PRR passengers who wished to travel to downtown Manhattan to change on to the H&M tube at Manhattan Transfer (whilst those who intended to travel to midtown stayed on the PRR to Pennsylvania Station). The Hudson & Manhattan Newark line was adjacent to the original Pennsylvania line to Exchange Place and was diverted into Manhattan Transfer. (Any H& M Newark non-stop trains by-passed Manhattan Transfer on a through line). An unusual feature was that the H&M tube stock was a smaller loading gauge than the main line PRR stock and there was thus a gap from the doors of the tube stock to the platform edge at Manhattan Transfer This was solved by providing a gauntlet line in the station platform area which in effect removed the gap and allowed the tube trains to stop alongside the platforms.

Manhattan Transfer was a rather austere place with minimal facilities literally in the middle of nowhere as can be seen from a photograph taken in 1911 shortly before its opening. It consisted of two 1100 feet long island platforms connected by a subway. There were several by-pass tracks and a locomotive shed at Meadows Yard. An inbound steam hauled train (for Penn Station, eastbound in PRR jargon) would stop for an exchange of motive power. The electric locomotive, a DD1, would then take the train on through the tunnel and the steam

loco would be serviced for a westbound balancing service brought out from Penn Station by another DD1. In the meantime there would be a regular service of the H&M (McAdoo) tubes westbound to Newark and eastbound to Exchange Place and Hudson Terminal with connections at the former for Hoboken. The business district of New York was at the south end of Manhattan Island which meant much commuter traffic for New Jersey on the H&M tubes whose passengers often changed at Manhattan Transfer. It was thus a busy station and it is estimated that 230 million passengers used the station before it was closed in 1937.

Ironically the closure was, in a sense, on the cards within a few years of the opening as by 1915, only five years after the opening of Manhattan Transfer, the Pennsylvania RR had commenced experimenting with 11kv a.c.with an overhead catenary system, in Philadelphia, which city it regarded as "home territory" . The trials were on suburban services at first but it was hoped that the technology would extend to mainline working particularly on the heavily graded lines in the Alleghenies. As time went on gradual progress, development and experiment were made but expansion went not westward but to the north and south along the Atlantic coast and by 1931 the wires were in place from New York to Philadelphia. There were 44 trains per day between the two cities and from February 1931 all were 11kv electric loco. hauled.Several locomotives types had been trialled culminating in the P5 class 2-C-2. When production started some alterations such as larger traction motor blowers were made and 90 were built from 1931-1935 and were classed P5a. Originally these were box ended but, following accidents, the end cabs were removed to the centre of the unit for the safety of drivers in the event of a collision and to provide for bi-directional running. These were known as P5aModified. By 1935 however longer and heavier trains made timekeeping more difficult and double heading often necessary. This led to the introduction of a new streamlined locomotive, class type GG1 and this is illustrated as well as a P5a and a P5aModified.

It was of course no longer necessary to change traction at Manhattan Transfer and the original 3rd rail DD1s were replaced by the P5a class (and subsequently the GG 1). Even so, some mainline trains called at Manhattan Transfer as did the Hudson & Manhattan tubes to and from Newark but much of the old-time charm was lost with the ending of the power change ritual. Some say the evening rush, especially in the dark of winter time, had created a special magic. Passengers would wait on the platform under the yellowish glow of light bulbs whilst changing trains. West of the station the steam locomotives would signal their impatience with safety valves blowing. A DD1 hauled train would clatter in from Penn Station and the waiting station crew would swing into action to disconnect the hoses and couplings. The DD1 would be signalled away and the impatient steamer backed down. A similar frenzied rush to couple up took place with much shouting and waving and then the train would thunder off along the Pennsylvania main line to Washington or wherever. It is said the evening show never failed to impress.

But now this magic was gone. Through electric traction was not the same and to add further to hasten the demise, a new £20 million installation was planned for Newark and this opened in 1937. The H&M tubes were incorporated in the new Newark station which meant that connections could be handled more appropriately there. This meant that Manhattan Transfer was redundant which led to its closure on 20th June 1937. Perhaps it was a slow day for news or perhaps Manhattan Transfer was special but the news of the closure was given more extensive nationwide press coverage than the opening of Penn Station and the tunnels in 1910 !

The tracks of the Pennsylvania RR and the Hudson & Manhattan RR in New Jersey continue to be in use to-day but sadly there is no trace of the demolished station. The story from 1937 to the present day is one of rise and fall and rise again of commuter railroads in USA and perhaps will be the subject for another article.

I recommend an excellent book "Rails under the Mighty Hudson" by Brian J Cudahy to whom I am indebted for much of the above information.