The Port of New York Authority's Activities in Regional Highway Development*

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In presenting my paper "The Port of New York Authority's Activities in Regional Highway Development" I believe it would be well for me to begin with a few remarks about the "why" and "what" of the Port of New York Authority to help you understand better its functions and responsibilities relating to the regional highway development in the New York-New Jersey metropolitan area.

The "Why" (The Port of New York Authority)

The New York-New Jersey metropolitan area centering around the port of New York is the most important gateway for the United States. Within a radius of 25 miles of the Statue of Liberty, some 13,000,000 people reside and work in a highly industrialized and commercialized district. The tremendous transportation problems inherent to this great metropolitan area are further complicated by the fact that a state boundary line, the center of the Hudson River, and the harbor of New York divide the area between two sovereign states.

The problem of joint responsibility dates back to the early part of the 19th century when the two states, New York and New Jersey, were quarreling about the harbor boundary lines and jurisdictions. It was not until 1834 that they were able to draw up a treaty defining the areas of responsibility, jurisdiction, etc.

With the growth in transportation—on railroads, by ships, on the highway, and in the air—new conflicts and problems arose involving the two states. During the first World War, the heavy movement of goods from all parts of the country through the Port of New York for movement overseas resulted in a serious tie-up and lack

* All photographs are by courtesy of the Port of New York Authority.
Panoramic view of New York approaches to George Washington Bridge.
of coordination between rail and water service. At that time a freight-rate dispute, with the two states on opposite sides, showed the necessity for a regional study and action program to solve these transportation problems.

Accordingly, in 1917, there was established the New York-New Jersey Port and Harbor Development Commission. After three years of intensive studies this Commission made recommendations to the two states for the organization of a regional authority which would be able to coordinate transportation matters which must of necessity cross state lines. Fulfilling these recommendations, the two states signed the Port Compact in 1921, creating the Port of New York Authority

to function as their joint agency in the Port District. This Port Compact was approved by Congress and the President of the United States.

**The "What" (The Port of New York Authority)**

Under the terms of that Compact, as it was called, the Port of New York Authority was directed to go forward with the planning and development of the terminal and transportation facilities of the whole area around New York Harbor, and to improve and protect the commerce of the district on a self-supporting basis.

![George Washington Bridge. Looking east from Central Avenue Bridge, Fort Lee, New Jersey.](image)

To carry out this tremendous and continuing task, the two states clothed the Port Authority with all of their powers of port and terminal development except the power to tax. The Port Authority, as a body corporate and politic, was given full power to purchase, construct, lease, and operate any terminal or transportation facility within the Port of New York district. This district as geographically defined in the Treaty includes New York City, the counties immediately surrounding New York City, and practically all of Northern New Jersey, or described more generally, as regional area within a radius of 25 miles from the tip of Manhattan or the Statue of Liberty.

It is interesting to note that in the Compact between the two states, the definition of transportation facilities which the Port Authority can
construct, purchase, lease, and operate includes "railroads, steam or electric, motor truck or other street or highway vehicles, tunnels, bridges, boats, ferries, all types of harbor craft including floating elevators, aircraft suitable for harbor service and every kind of transportation facility now in use or hereafter designed for use for transportation or carriage of persons or property." It also goes on to define a terminal facility as including "wharves, piers, slips, ferries, docks, bulkheads, basins, car floats, float bridges, grain or other storage elevators, warehouses, cold storage, tracks, yards, sheds, switches, connections, overhead appliances, and every kind of terminal and storage facility now in use or hereafter designed for use for the handling of storage, loading or unloading of freight at steamship or railroad freight terminals."

I am sure the definitions of the transportation and terminal facilities just quoted indicate to you the comprehensive nature of the responsibility which the States of New Jersey and New York put upon their joint agency, the Port of New York Authority.

The Port Authority was the first "authority" established in the United States. It is patterned after the Port of London Authority which was created in 1908.
Today one frequently hears or reads of the recommendation for the creating of an "authority" as if the word itself was magic with the ability to solve any public deficiency or problem. It is not a "cure all". Luther Gulick of Institute of Public Administration in a recent article, "Authorities and How to Use Them",* defines an authority as a governmental business corporation set up outside the normal structure of traditional government so that it can give continuity, business efficiency, and elastic management to the construction or operation of a self-supporting or revenue-producing public enterprise.

The advantages of an authority may be listed about as follows: First, it is an independent corporate agency which is responsible to a political unit, in this case the two states of New Jersey and New York. Second, its operation is of a non-political character, with a permanent career staff. Third, its projects are self-supporting, with no burden on taxpayers of either state or any municipality. And fourth, it is particularly adaptable to a regional approach which can cut across city or state boundaries to effect a transportation solution which cannot possibly be handled by individual separate political jurisdictions.

The actual organizational set-up of the Port Authority includes a Board of Commissioners and the staff. The Board of Commissioners of the Port Authority consists of six Commissioners appointed by the

Governor of New Jersey and six by the Governor of New York. Their six-year terms are overlapping, and the position is non-salaried. Their sole benefit from serving on the Board of Commissioners comes from the satisfaction of public service. We have been fortunate to have outstanding and distinguished leaders in law, finance, business, etc.

Responsible to the Board of Commissioners is our staff, headed by the Executive Director and General Counsel. The staff itself is organized along lines similar to private business organizations, engineering firms, etc. For example, we have a Law Department, a Department of Audit and Control, a Personnel Department, an Operations Department, an Engineering Department, and a Department of Port Development which carries out planning of new projects and general port promotional and protection activities of the Port Authority.

During the early days of the Port Authority, a major activity was the attempt to unify and coordinate the railroads and railroad terminal facilities within the Port District. One of the first accomplishments
by the Port Authority was the setting up of the Belt line railroad along the New Jersey waterfront (from Edgewater to Bayonne) consisting of four sections of trackage owned by separate railroads but having physical connections for interchange of traffic with all railroads in the Port District. After further studies and joint hearings with the I.C.C. the railroads expended over one-half million dollars in track construction and signals, revised their tariffs, and eliminated circuitous routing in favor of direct routing over this belt line.

Shippers benefited immediately and have continued to do so since. Other railroad improvements included the opening in 1932 of the $16,000,000 Union Inland Terminal, No. 1, which serves as a "post office" for small-lot rail shipments. The Port Authority offices occupy the two upper floors of this building.

**REGIONAL HIGHWAY ACTIVITIES OF THE PORT OF NEW YORK AUTHORITY**

Though the early activity of the Port Authority was largely concerned with improvements in rail transportation and terminal facilities, the need for adequate highway facilities connecting the two states was
not overlooked. Highway travel was rapidly increasing, and the Port Authority, at the direction of the two states, entered into an era of bridge and tunnel building.

Perhaps some of you know that the Holland Tunnel was actually built by the New York-New Jersey Bridge and Tunnel Commission and was opened to traffic in 1927. Subsequently, in 1931, the tunnel was transferred to the Port Authority’s jurisdiction. The Holland Tunnel is the principal connection between Manhattan and U.S. 1, which extends from Maine to Florida. Of the 15,000,000 vehicles which use this underwater roadway each year, 30 percent are trucks. The safety record of the Tunnel surpasses that of any comparable surface highway.

As a contribution to better travel for both tunnel and local motorists, and to relieve a traffic bottleneck on the existing two-way viaduct, the Port Authority is now about to construct at a cost of approximately $3,000,000 a new four-lane viaduct between the Holland Tunnel exit
plaza and the underpass through the high rock bluff along the Jersey City waterfront. This new facility, equal to the capacity of the existing facility, which is used in both directions, will be used for westbound traffic, eliminating two bad right-angle turns and permitting the existing viaduct to be used only for eastbound traffic into Manhattan (New York City).

The Port Authority early undertook the construction of the Bayonne Bridge, the Goethals Bridge, and the Outerbridge Crossing between Staten Island and New Jersey. In the 1920's, prior to the construction of the Pulaski Skyway and New Jersey Route 25 and the opening of the Holland Tunnel, the tremendous traffic congestion which existed between New York and Northern New Jersey and the shore points in New Jersey indicated that the construction of these Staten Island bridges would materially relieve the serious congestion which then existed. Since the opening in November, 1932, of the Pulaski Skyway, N. J. Route 25 artery, a 3½-mile elevated structure, much of the traffic originally anticipated for these bridges has not materialized. However, they are serving the needs of ever-increasing local travel and at present, for the first time since their construction (1927-1930), are paying off all operating costs and debt charges. These bridges furnish convenient time-saving highway connections avoiding congested metropolitan traffic between Manhattan, Staten Island, the New Jersey seacoast, and points west and south. An average of 1,500,000 vehicles annually uses each bridge.

By the late 1920's, Routes 4, 6, and 46 as major east-west routes through northern New Jersey had been completed, and in New York City expressways and parkways leading to New England were well under way. To provide the needed connection between these traffic arteries of the two states, the George Washington Bridge was begun in 1927 and completed in 1931. The George Washington Bridge, described by some as the eighth wonder of the world, has a main span of 3,500 feet—twice the length of the longest suspension bridge ever before built. Other facts concerning this bridge are: total length between anchorages, 4,760 feet; height of tower above water, 600 feet; height of roadway above river, 260 feet with a clearance beneath deck at center of 248 feet. The bridge is suspended by four cables, 36 inches in diameter with 26,474 wires on each cable or a total of 105,000 miles of steel wire, enough to circle the world four times at the equator.

Within a few years increasing travel between the two states made it necessary to provide additional approach connections to distribute
the traffic properly to local major streets or arterial highways. The Port Authority made substantial contributions to both states by providing additional local connections in the municipality of Fort Lee on the New Jersey side, and new approaches and ramps on the Manhattan side connecting directly to Riverside Drive, Henry Hudson Parkway, and local streets. To further improve the approaches for better distribution of traffic as well as reduce traffic delays and congestion on the Manhattan side, a two-lane tunnel under 178th Street was constructed between the bridge and the Harlem River Drive and the Bronx. To date, the Port Authority has spent over $80,000,000 on the George Washington Bridge and approaches. Even now, because of new traffic arteries which empty additional traffic onto the bridge on both sides of the Hudson River, plans are under way for further improvements to the approaches. Included in a long-range program to provide better connections to expedite travel between New Jersey-upper New York City and New England is another upper Manhattan crosstown two-lane tunnel under 179th Street extending from the George Washington Bridge to the Harlem River.
Drive and the Cross-Bronx Expressway. When completed, this tunnel will be used for westbound traffic, while the existing two-directional tunnel under 178th Street will be used for eastbound traffic. Also planned, in conjunction with the New Jersey State Highway Department, is the construction of an approach connection at the George Washington Bridge for the southern terminus of the Palisades Interstate Parkway. This parkway will connect New York to the New York State Thruway.

Just a little over a year ago two additional lanes on the bridge were opened to traffic, making eight lanes now available, or a 35 percent increase in capacity. Provision was also made to operate five lanes in one direction to handle peak-hour traffic. We estimate we can handle 6,500 to 7,000 vehicles per hour in peak direction. Last summer and fall we had several Sundays during which up to 75,000 vehicles used the bridge.

As New Jersey continued in its planning for additional major highways in its metropolitan area, the Port Authority, keeping abreast of these developments based on traffic needs, constructed the Lincoln Tunnel connecting midtown Manhattan with Union City and Weehawken on the New Jersey side of the Hudson River. The first of the two-lane twin tubes was opened to traffic in 1941. The exigencies of the war halted completion of the second tube until February, 1945, when it was finally opened to traffic. Each two-lane tube has a roadway width of 21 feet 6 inches and a length of nearly 8,500 feet. Ventilating equipment consisting of 32 fans completely changes the air in the tunnel every 70 seconds. The air is fresher in the tunnel than on the street.

To facilitate traffic at the tunnel approaches, the Port Authority at a cost of over $13,000,000 constructed a six-lane depressed roadway, an open cut through the Palisades at Union City and Weehawken, to connect with New Jersey Routes 1 and 3. This included a three-level traffic interchange at the boundary line between North Bergen and Union City. In addition, three-fourths of a mile of elevated structure between the toll plaza and this open-cut was constructed at a cost of $4,500,000. An additional $3,500,000 was spent in making connections to the local highway and street system in Weehawken. In mid-Manhattan, separate exit and entrance plazas providing six new approach streets as traffic distributors were constructed at a cost of over $7,000,000 to provide additional capacity and reduce street congestion. As a result, the Lincoln Tunnel traffic of some 10,600,000 vehicles in 1947 was quite fluid. New arterial highway connections
are yet to be made on the New Jersey side which will tend to further facilitate the traffic through the Lincoln Tunnel.

The Port Authority's two tunnels and four bridges just briefly described are important links in a network of major arterial routes that extend through and beyond the metropolitan Port District of New York-New Jersey. Some conception of the extent of the highway system in the Port District may be had when it is realized that it includes over 20,000 miles of streets and highways. This mileage of a network of interlocking highways connected by tunnels and bridges provides an integrated regional highway transportation system serving the greatest population density (some 13,000,000) anywhere in the world.

The geography of the region reveals that it is a series of islands separated by rivers tied to the mainland of New York and New Jersey by numerous tunnels and bridges. Since 1920, three tunnels and twenty-three bridges have been built as links in the regional highway system within the Port District.

Vehicular traffic on this highway system runs into astronomical figures. The heaviest-travelled highway is New Jersey Route 25,
which carries an average of 60,000 vehicles daily and on peak days has reached 100,000 vehicles. Similarly, the traffic on parkways and major streets in New York City is proportionally heavy, with attendant congestion. In 1947, 44,500,000 vehicles used the Port Authority bridges and tunnels, approximately 90,000 interstate bus travelers entered the area daily, and 7,000 long-haul trucks came to Manhattan every twenty-four hours.

Studies are continuously being made of the future highway needs of the area, including those of the Port Authority as well as other agencies. These studies are concerned with the size, capacity, character, and priority of construction of roadways in the Port District. In addition, studies are made with a view to determining requirements for facilitating traffic by means of improved connections and methods of traffic control between Port Authority crossings and highways on both sides of the Hudson River.

The Port Authority maintains liaison with all agencies concerned with the regional development of the arterial highways in the Port District. Such agencies include the Public Roads Administration, the New Jersey State Highway Department and New York Department of Public Works, county engineers, city engineers, county and city planning boards, and other agencies such as the Palisades Interstate Parkway Commission, the New York City Department of Parks, and the Triborough Bridge Authority.

The motor vehicle is an essential factor in our national economy and everyday life. The lack of adequate traffic facilities tends to congest and strangle our very economic existence. Though it obviously cannot provide facilities in proportion to the demands or requirements, the Port Authority is continuously cooperating with the highway officials of the two states and the municipalities within the Port District in the planning and development of integrated transportation and terminal facilities.