

THE FIRST DEPARTMENT OF TRANSPORTATION— THEN AND NOW

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N.J. BACKGROUND DATA

Prior to talking about the New Jersey Department of Transportation (DOT), its organization, its strong points and weak points, I would like to let you know a little about my state. New Jersey is the most densely populated state in the union. The population of the state is approximately 7.5 million and it has been forecast to reach 10.3 million in 1990, a rate of growth greater than either of the neighboring states of New York or Pennsylvania.

The average density is 953 persons per square mile, and West New York, New Jersey, is, at last look, the most densely populated city in the world. It is interesting to note, however, that even with this high density, approximately 80 percent of New Jersey land is uninhabited. The concentration of population is in the northeast and southwest portions of the state, in the areas of New York City and Philadelphia. From this, you can see that New Jersey has rural transportation problems as well as urban transportation problems.

In the late 1920's, New Jersey built the first cloverleaf at U.S. 1 and U.S. 35 in Woodbridge, New Jersey, the first traffic circle at U.S. 30 and U.S. 130 and N.J. 38 and the first divided highway, U.S. 1, in 1936.

New Jersey was also the first state to grant monetary aid in the building of public roads. In 1891, New Jersey moved to the foreground of the national road picture by passing legislation that accomplished providing financial aid to the counties in the construction of highways to the extent of one-third of their cost and approximated 75,000 annually to be expended by the president of the State Board of Agriculture as administrator of roads.

I recently read in a publication entitled *Early Communications*, the story of New Jersey by Robert Albion, the following quote concerning travel in New Jersey during the Revolution. I quote:

Good statistical evidence indicates that well-traveled New Jersey had the best road system in the colonies at the time of the Revolution. A dispatch describing a trip from New York to Philadelphia was described in the following way: After leaving New York, the dispatcher reached Elizabethtown by 7 p.m.—by 10 p.m. he was at Woodbridge and as the clock struck midnight, the messenger crossed the Raritan River to New Brunswick. He galloped into Princeton at 3:30 a.m., reached Trenton in three hours, and finally arrived in Philadelphia at noon on Wednesday. . . 22 hours from New York, a rate of almost 100 miles a day.

Now this all occurred in 1775. After reading this quote to my wife, she stated without smiling that the way traffic is now, with any luck we might be able to equal that time today.

N.J. DOT 1966—RESPONSIBILITIES OF COMMISSIONER

The New Jersey Department of Transportation was established effective July 1, 1966, by an act of the legislature. Thus, New Jersey was the first state in the continental United States to adopt the concept of an integrated approach to all transportation problems.

Under the Transportation Act of 1966, the newly-created Transportation Department absorbed the functions of the State Highway Department and received the Bureau of Aeronautics from the Department of Conservation and Economic Development.

The law provided for a Commissioner of Transportation to head the department, to be appointed by the governor with the advice and consent of the Senate. In brief, the act directs the commissioner to assume the following responsibilities:

1. Develop and maintain a comprehensive master plan for transportation development.
2. Develop and promote programs to foster efficient and economical public transportation services in the state.
3. Prepare plans for the preservation and improvement of the commuter railroad system.
4. Develop plans for more efficient public transportation service by motor-bus operators and facilitate more effective coordination between bus service and other forms of public transportation, particularly the commuter railroads.
5. Cooperate with interstate commissions and authorities, state agencies, appropriate federal agencies, and interested private individuals and organizations in the coordination of plans and policies for the development of air commerce and facilities.

6. Coordinate the transportation activities of the department with those of other public agencies and authorities.

The commissioner is empowered to appoint principal subordinates to assist him in carrying out his duties: A deputy commissioner who directs the department's overall operations; an assistant commissioner for highways; and an assistant commissioner for public transportation.

FOUR MAJOR AREAS OF DOT BASED ON FUNCTIONS

The department is organized into four major areas, based on the function which must be performed: transportation planning and research; engineering and operations; fiscal management; and employee and management services.

Transportation Planning and Research

In the planning and research area, statistics and data are constantly gathered and analyzed to guide the inter- and intra-modal planning for new transportation facilities and expansion and improvement of existing facilities. Planning personnel also develop and update a transportation master plan for the department and compile coordinated construction programs.

Engineering and Operations

The director of engineering and operations has many divisions and bureaus under his supervision for the design and construction of all transportation projects and maintenance of the state highway system. To efficiently perform this function, many regional construction, maintenance, and right-of-way offices are located throughout the state. Engineering and operations acts as liaisons between the federal government and local municipalities in the administration of various federal aid programs for highways.

COMMUTER OPERATING AGENCY

Members

A major policy-making body in the department is the Commuter Operating Agency which is comprised of four members: the commissioner of transportation; the assistant commissioner for public transportation; the state treasurer; and the president of the State Board of Public Utility Commissioners. The agency has the authority to contract with rail and bus carriers to conserve and improve necessary commuter services and to contract for improvement of capital facilities essential to those services.

Commuter Rail Operations and Subsidies

The department subsidizes commuter rail operations over 483 route miles with ridership volume of over 170,000 passenger trips per average weekday. The program comes close to blanketing the state with rail service, fanning out from New York City and Camden, reaching into 14 of the state's 21 counties. The state owns cars and locomotives but no tracks. Approximately 95 locomotives and 700 cars are in service.

Bus Operations and Subsidies

There are more than 300 private bus companies in New Jersey, of which over 20 are subsidized. Passenger subsidization began in 1960 with payments to railroads totaling under \$6 million. This has grown to a needed subsidy of over \$72 million (\$41 million for rail and \$31 million for bus).

Division of Commuter Services

A recently strengthened unit in the department is the Division of Commuter Services, responsible for developing plans and implementing capital improvements for the suburban rail and bus system. The division negotiates agreements with private carriers to maintain essential services and to encourage increased use of mass transit.

FIRST DOT IN U.S.—ADVANTAGE OR DISADVANTAGE?

Since New Jersey was the first within the continental United States to organize a Department of Transportation, we had the advantage, or disadvantage (depending on how you look at it) of having no other Department of Transportation to look at for the benefit of their experience. We were free to make our own judgments based on intuition and a lot of prayer. We had, however, the benefit of having been thinking public transportation long before the change took place. The state began a study of rail-commuter problems that resulted in a formation of a Division of Railroad Transportation in the highway department in 1959.

ORGANIZATIONAL CHANGES SINCE 1966

Before '66—Typical Organization—Public Transportation Minor

Since 1966, the Department of Transportation has changed organizationally on a number of occasions. Prior to 1966, the organization was as shown in Figure 1. This, I think, is fairly typical of many other highway departments around the country, with only minor emphasis being placed on public transportation.

NEW JERSEY HIGHWAY DEPARTMENT

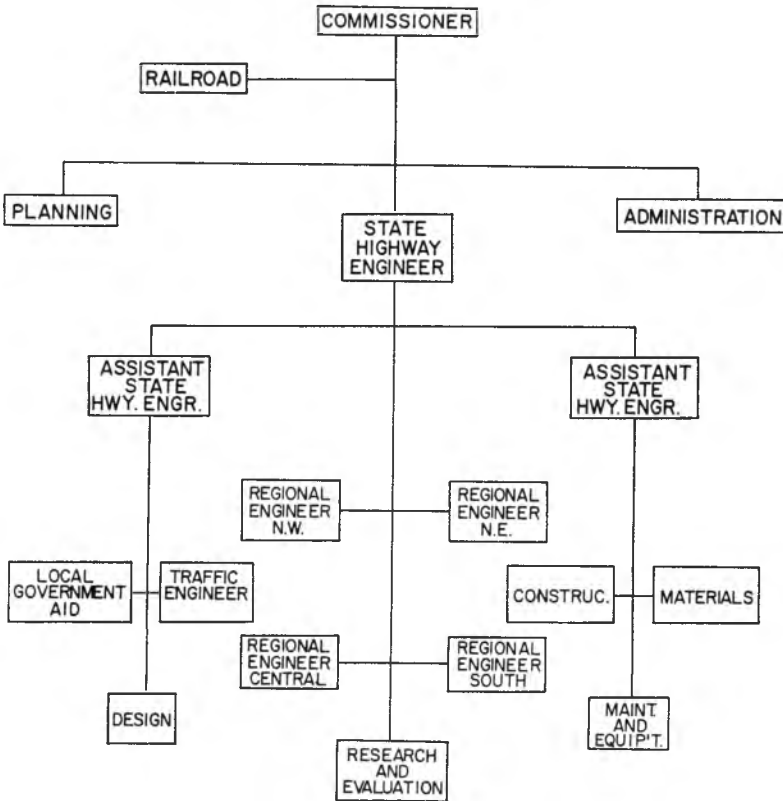


Figure 1.

First DOT Organization More Modal than Functional

The first organization under a Department of Transportation might be considered to be more modal than functional (Figure 2) with the emphasis on public transportation being under the assistant commissioner for public transportation.

Four major areas were established. The highway planning and administration were basically the same as under the highway department. The major change was that the planning area now had responsibility for planning for all modes while the highway area remained responsible for only highways. The reason for the major emphasis on highways could be speculated that the personalities involved with highways con-

stituted a strong force within the organization and federal legislation and funds were still basically highway-oriented although changes were beginning to occur.

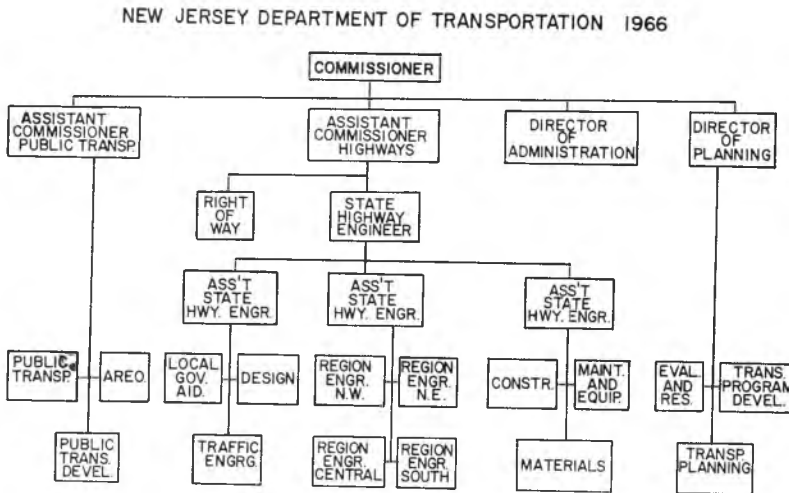


Figure 2.

1970—Shift More to Public Transportation—More Functional

In 1970, with a change in administration in the State House, the emphasis shifted more toward public transportation. The governor appointed a nationally known advocate of public transportation, John Kohl, a former UMTA administrator, as DOT commissioner. Consequently, the organization changed to reflect this change in emphasis.

Figure 3 indicates that the department is more aligned along a functional basis. The planning area maintained its planning for highway and public transportation and the highway area became the area of engineering and operations and encompassed engineering for all modes of transportation. The assistant commissioners were relieved of line functions and became staff members on what was referred to as the Transportation Planning Board which advised the commissioner on policy decisions. An executive director also was appointed to oversee the day-to-day operation of the department. Here the planning was multimodal, the engineering was multimodal, and the area of public transportation, although in an advisory or staff capacity, carried out basically the subsidy program for public transportation.

This change meant that the engineering personnel, who for years and years had been designing, constructing, and maintaining a highway

system, were now responsible for the same functions in the public transportation area. Needless to say, extensive training and retraining was necessary as now terminal buildings, specifications for buses, rail cars, etc., were their responsibility.

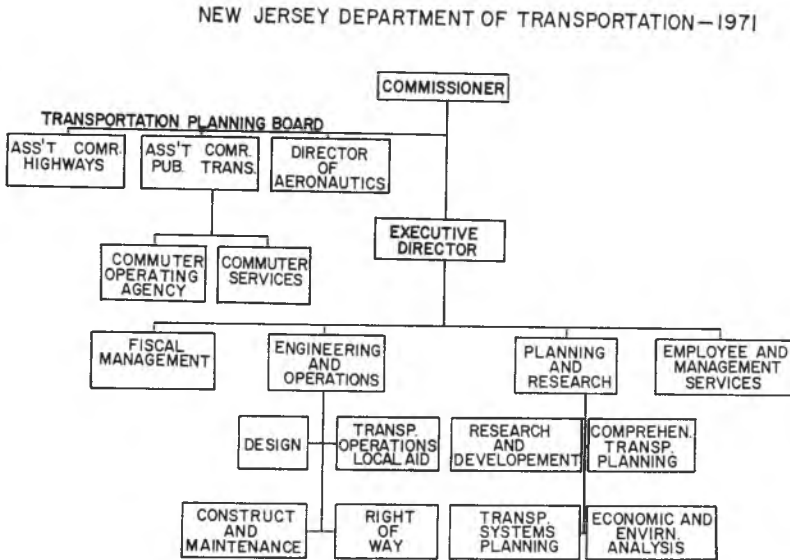


Figure 3.

1974—Increased Emphasis on Public Transportation

In 1974, the administration in the State House again changed and an even greater emphasis on public transportation was mandated and a new organizational structure emerged. (See Figure 4.) Here the assistant commissioners were given line functions again and also retained on the Transportation Planning Board. The planning and engineering areas are still operating on a functional basis. The director of planning and the two assistant commissioners now report directly to a deputy commissioner, formerly the executive director. The director of engineering and operations also reports directly to the deputy commissioner but receives advice and direction from each assistant commissioner as it may pertain to his area.

Granted, this is a dangerous item to mention while on the campus of an academic institution as I am sure there are no management texts that would recommend this. I will discuss this aspect a little later.

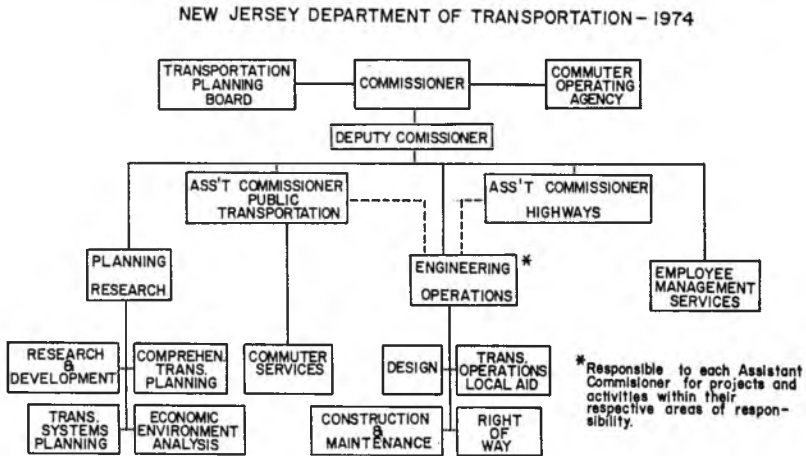


Figure 4.

Need for Balanced Transportation Always Recognized

Even with the strong commitment to public transportation, the recognition of the need for *balanced* transportation was not lost. The existing management realizes that you do not necessarily improve your public transportation system at the sacrifice of your highway system. There must be a balance which will benefit both systems so that each will complement and/or supplement the other.

Organizational Changes Not Easy

In a period of ten years we have come from a typical highway department to a basically modal department of transportation and into a functional department of transportation. To tell you it was a simple and easy transition would be misleading. It wasn't. I believe we have accomplished some success.

COMMENTS ON INDIANA DOT LEGISLATION AND PLANS

I found out yesterday that the proposed legislation you had in your legislature that would have created an Indiana DOT never made it out of committee. Nevertheless, I'm going to comment on it since perhaps, someday, for better or worse, it may. From a cursory review of the proposed legislation, it appears that you may have been attempting to make the best of the two types of organizational structures, modal and functional. I note that the planning area would be functional and responsible for the planning in regard to all transportation and I feel

this is right and proper. To integrate planning for all modes in one area I do not think would be a problem for the planning professionals as they have, in fact, been doing this, at least to some degree, for many years.

The methods and techniques to assist in planning for balanced transportation exist now—and from my experience with planning personnel in the various highways departments, they are capable of this multimodal planning function. I notice that the highway operations area appeared to be modal in nature and I also agree with this.

TURNING HIGHWAY TO TRANSPORTATION ORGANIZATION TRAUMATIC

From my experience, one of the most difficult problems we have encountered is to make the engineering and operations area truly functional. To turn what was a typical highway engineering organization into a transportation organization with the same personnel can be a traumatic experience. The areas of design, construction, maintenance, etc., are truly capable of designing, constructing, and maintaining a highway facility—but there is a difference between this and designing a rail station, road bed for track, or specifying criteria for the purchase of buses. It is not a function that technically comes easy. Also, most highway designers are, for some reason, highway-oriented and do not in some cases have the desire to change their personalities or work habits. In some cases, putting toothpaste back into the tube is a much easier accomplishment. If new personnel can be hired who already possess the talent and experience in the rail or public transit areas, believe me, it would expedite matters to hire them. I'm sure that the simple "fear of" or "resistance to" change is the main reason for complications in the engineering area, but the problem does exist and is one that must be dealt with.

I believe that just about any organizational structure can be successful if one important ingredient is present. That ingredient is proper leadership. It is essential—even mandatory—that the chief administrative officer actually believe in the concept of a balanced transportation system.

STRONG LEADER SHOULD BELIEVE IN BALANCED TRANSPORTATION

This is true whether he is head of a commission or the single executive. By balanced, I do not necessarily mean 50/50. I mean balanced to the extent that the proper emphasis is given to each mode

of transportation so that the public is provided with adequate mobility from each mode. Excessive emphasis to one mode is inevitably at the expense of the other and leads to a less than adequate system. The balance is different, I'm sure, in Indiana than in New Jersey.

CLOSE COOPERATION, STRONG LEADERSHIP KEY TO BALANCED TRANSPORTATION SYSTEM

Each deputy, as I believe they would have been called in Indiana, must not only know the intricate workings of his own area but those of his counterpart. He must understand that in order for his area to function at peak efficiency and be most effective, he needs the cooperation of each of his counterparts. The Transportation Planning Board which I previously mentioned existing in the New Jersey Department of Transportation meets each Friday morning and only under extreme circumstances are the principals represented by a subordinate. Therefore, each administrator of a major department function is kept abreast, at least weekly, as to the operations and workings of his counterparts. This provides for an excellent forum for discussion of problems that require close coordination and cooperation. This cooperation is achievable under the proper leadership. The attitude of management toward a balanced transportation system, I believe, is the key to the operation of a successful department of transportation.

CONCLUSION

Regardless of which organizational structure is chosen, you must realize from the beginning that your major problems are going to be people problems. Good, strong leadership and good communications up and down the line can go a long way to overcome these problems.