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James Hunter

Florida Dept. of Transportation

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PLANNING FLORIDA'S TRANSPORTATION
FOR THE SPACE AGE

James Hunter
Acting Director

Florida Department of Transportation

Planning Florida transportation for the Space Age is one of the most challenging and exciting programs facing State government today.

It is challenging because we are already in the Space Age and Florida is faced with the resultant transportation problems here and now. The excitement lies in the "Moonport" where thousands of Florida citizens are directly involved in the fascinating rocket launches into space.

The Problem

This dramatic activity along with a rapidly growing population, increasing tourist traffic and an expanded economy dictates casting aside the shackles of outmoded transportation systems and planning for the new. This point is brought into sharp focus right here at Cape Kennedy. Most people living in and around Brevard County are geared to high speed space vehicle concepts and they are suddenly plunged back to reality when they enter their automobiles to drive home in the late afternoon and face the perplexities and hazards of bumper to bumper traffic. This transportation problem exists right outside our front door whether the door is here in Cocoa Beach or in Miami, Tampa, Jacksonville, or Tallahassee. It is imperative, therefore, that a plan be devised for the development of the best, most efficient, economical and fastest systems conceivable for the movement of people and goods. Existing systems and facilities must be improved and new innovations encouraged to provide a balanced multimodal transportation network.

Florida now has 6 million residents and 19.5 million tourists with 9 million residents and 30 million tourists anticipated by 1975. With 2000 new residents every week, all requiring additional goods and services, the present modes of transportation are hard pressed to satisfy the demands. New highways and expressways are being constructed at an ever-increasing rate to alleviate immediate transportation problems but they frequently are obsolete before construction is completed. The highway construction program must be accelerated and planning horizons broadened to include all modes of transportation.

Social and personal issues arise at this point because automobiles are still the most preferred and convenient means of transport for the great majority of the population. This trend will continue until the roads and highways are so jammed that the cars become severely immobilized in traffic and the comfort and convenience factors practically eliminated.

Action By The State

The State of Florida is aware of the existing and developing problems connected with the movement of people and goods and has done something about it.

The first major step was taken by the 1967 Legislature when it created the Florida Department of Transportation. The State's leaders in their wisdom and foresight saw that traffic congestion, soaring highway fatalities and the general demands of people on the move strongly indicated the need to study and develop in harmony all forms of transportation. Air, rail, and water modes must be encouraged to complement highway vehicular travel.

In another forward step the State adopted a "Planning, Programming, Budget System" concept which places emphasis on planning and financing programs rather than specific agencies' activities. This will expedite efforts toward the culmination of a total transportation system.

Passage of the new Constitution last November called for consolidation of the more than 150 existing State agencies to 25 or less and assures the existence of a Florida Department of Transportation which should embody all transportation-related functions now assigned to more than half a dozen other State agencies. This reorganization is moving rapidly through legislative planning processes.

In these ways the State is moving ahead in transportation planning and much greater progress is expected from the 1969 Legislature.

The Florida Department of Transportation

Florida Statutes, Chapter 23.041, known as the Transportation Act of 1967, created the Transportation Commission consisting of the elected Cabinet with the Governor serving as Chairman. It also created the Department of Transportation. The statute specifically sets out the following purpose for the Department:

"It shall be the purpose and intent of this act to establish the means whereby the full resources of the state can be used and applied in a coordinated and integrated manner to solve or assist in the solution of the problems of transportation, to plan, program and promote an efficient, integrated and balanced transportation system for the state; to prepare and implement comprehensive plans and programs for transportation development in the state; and to coordinate the transportation activities of existing state agencies, commissions and boards in the state."

The law, however, did not carry a funding provision so the present agency exists in embryonic form (4 staff members) on monies transferred from other transportation-related agencies. The strategy of the authors of the bill was to channel monies presently earmarked for transportation planning into the new Department rather than create another little empire seeking additional taxpayers dollars. An effort is underway to fully implement the law which presently calls for five divisions of activity Administrative, Planning, Safety, Public Transportation and Commuter Operations. Many encouraging indicators of success have been observed.

The working agenda for the Department calls for considerable research and involvement in transportation planning with local, county and regional planners. A transportation inventory is also underway. The State Road Department has made exhaustive studies and developed considerable data on various forms of transportation planning and copies of this material have been requested. A transportation library and data bank have been started in a small way.

Many of the greatest advances in urban transportation lie in the areas of analysis and planning, operations and management, intergovernmental relations, and financing, and in greater understanding of the whole complex social context of urban travel. Efforts are being made to improve existing modes and vehicles to increase efficiency, convenience and safety to generate greater social acceptance and in general make the systems more "people oriented".

The most exciting and eye-catching opportunities for improvement in urban transportation lie with technological innovations. New vehicles dramatically utilizing advanced principles readily attract attention but legal and financial factors often impede their progress.

Monorails, air cushion vehicles, space-ships and even pneumatic modules make news readily and are always good conversation pieces. Technology alone, however, is not enough, practical approaches to land use and human needs must also be seriously considered.

To keep activities in proper perspective and provide a means of measurement the Florida Department of Transportation set the following goals:

- a. Evolve a system of transportation services balanced to meet the future needs of all segments of Florida industry and society.
- b. Develop all modes of transportation to function as integral parts of the coordinated total system which will most effectively serve industry, commerce, and the people of the State.
- c. Recognize the advisability of providing alternative services by the use of more than one mode of transportation and of utilizing "transportation corridors" where possible to improve efficiency and economy in land use.
- d. Coordinate community planning with transportation planning to provide aesthetic as well as utilitarian approaches to satisfy transportation and community requirements.
- e. Provide transportation facilities for those persons not now serviced by automobiles or by other modes of transportation.
- f. Provide transportation facilities not only for speed and efficiency of travel but also for convenience and enjoyment in shopping, school, cultural, and business pursuits, leisure time travel and pedestrian travel.
- g. Provide transportation facilities and equipment which are in all possible ways compatible with environmental goals.

Every effort will be made to solve existing problems and it is believed that by planning for the future many potential problem areas can be anticipated and avoided.

Bus Systems

Bus systems are now and will continue for sometime to be the most heavily patronized form of public urban transportation. Buses annually carry approximately 70% of all urban public transportation passengers. Most cities in the United States are entirely dependent on buses for public mass transportation and in many smaller cities transit companies are experiencing financial difficulties. Florida cities and towns need bus service and the Department's energies will be devoted to their successful continuation. Several bus system improvements and innovations are recommended:

1. Exclusive bus lanes on highways
2. Traffic flow control - people activated
3. Computer-assisted scheduling
4. Improved vehicle design
5. Dual Mode bus (rail-bus)
6. Articulated bus
7. Double Deck Bus
8. Dial-a-Bus system
9. Improved Steam propulsion
10. Gas turbines
11. Turboelectric Powerplants

Automobiles, Trucks

Automobiles, of course, are constantly being improved for personal safety and comfort and gaseous emission reduction equipment has been added to the 1969 models. Support system including automatic traffic control are being redesigned. Facilitated parking is being developed and utilized.

Trucks are being mechanically improved and expanded and offered in tandem arrangements.

Pedestrian Traffic

Pedestrian traffic and patterns are often overlooked in planning and operating urban transportation. This is especially true and conspicuous in airline, railroad and bus terminals. There is a great need for efficient and practical pedestrian walkways.

Railroads

Railroads helped pioneer this country more than a hundred years ago but in recent years - for several valid reasons - they have taken a back seat in further development. The time has come for railroad men to realign objectives and resume careful planning to alleviate the problem, and once again take the lead in mass passenger transportation. There is a definite need for railroads to move people and freight and they can be competitive with airlines in the passenger business for short distance travel. Fast trains traveling the east coast of Florida will appear - but only after overcoming socio-economic factors involving public acceptance, safety, governmental regulation and the required technological improvements.

There are many necessary general improvements related to this form of mass transit. They include:

1. Automatic fare collection
2. Better trained management and operators
3. More information centers with easy-to-read maps, timetables and other customer information
4. Improved technology

The steel flange wheel on the dual steel track is still the most practical form of "guideway" although other types are being developed. The Japanese have been very successful with the monorail and the French with the tracked air cushion vehicle - but only after heavy financial investment. The Canadian National Railroad inaugurated a fast Turbotrain on the 360 mile run between Toronto and Montreal and the Penn Central Railroad commenced fast service between New York and Washington. These are the forerunners of the trains of the future and though conventional they are not without technological difficulties.

Pipelines

Pipelines are being utilized more for the transmission of essential fuels, water and other products. Their further use will be encouraged to better serve the public.

Water Transport

Containerization

Water transportation is still the most economical transportation mode for freight movement but with rising labor

costs and union demands new operating techniques are being probed by management. In the U. S., where port handling costs are the highest in the world, 60-70 per cent of the ship operating costs of a conventional cargo liner are incurred in port. Containerization provides the answer. By moving cargo in containers with properly designed ships, equipment, and terminals, costs can be cut dramatically. In 1955 when the container revolution started with an experimental cargo of boxes on a platform on a tanker sailing between New York and Houston, handling costs were cut from \$5.83 a ton to 15 cents a ton.

The cargo container is a simple aluminum or steel box with doors at one end measuring 8 feet high, 8 feet across in 10 foot lengths up to 40 feet. They are handled mechanically and are seeking to integrate road, rail, sea and air transport. The key to this through-transport system lies in the standardization of the containers, and more important, the standardization of the fixtures and fittings needed to carry and fasten the containers on each form of transport. The result is a radical reduction in transport costs and a big improvement in transit times. The impact of the cargo container is out of all proportion to the relative simplicity of the idea.

The Port of Jacksonville has taken action to develop the first Container Port in Florida. The Department of Transportation has offered assistance.

Air Cushion Hovercraft

Another type of water transport under surveillance for use in Florida is the British and French "Hovercraft". This vehicle traverses both water and land but is most utilitarian as a service vehicle on water. It operates on air cushions and is propelled by aircraft engines at speeds in excess of 50 knots. They are among the fastest water vehicles afloat and have seen many uses, primarily in England since 1966.

Airlines and Aircraft

The airlines and aircraft manufacturers have taken the most dramatic strides forward this decade and have contributed considerably to the present and future planning in Florida. More airplanes are moving more people profitably than ever before. The jumbo-jets will soon be in use and the

supersonic jets "SST's" will appear a few years later. Russia claims the TU 144 has flown, France is scheduled to fly the SST Concorde this month and the British version is scheduled for flight next month. These airplanes are designed to fly at Mach 2 or in excess of 1400 miles per hour.

Airports are being designed to accommodate the larger aircraft with both people-moving and luggage-moving devices being planned to provide a fast, convenient service commensurate with that provided by the aircraft itself. Automatic ticketing, rapid transit and staging areas are all being developed as part of the complex. Jacksonville has a new airport; Tampa and Orlando have them in early stages of construction; and of course, Dade County is building a "jetport" in the Everglades 45 miles west of Miami.

Feeder and third level airlines are progressively and effectively supplementing trunk line service around the State to the point where urbanized centers are being more closely and more frequently linked together.

Conclusion

All modes and technologies are being carefully studied by the Florida Department of Transportation because they will help determine the State's future in transportation. The framework for evaluating transportation plans must be as broad as possible and should include the goals of the community as well as those of the users and suppliers of transportation.

The State must take the lead in fostering the development and application of new technology in all areas of transportation.

Government, the transportation industry and users must make major investments to supply the facilities and services needed by a growing State. The State bears the responsibility for providing the leadership needed to attract the required resources and for coordinating efforts toward achieving an adequate and balanced transportation system.