The Jacksonville Police and Traffic Engineering Departments have demonstrated their ability to routinely implement the one-way operation well within the publicized time limits for conversion. Other than the diversion necessitated by the one-way operation, no additional adverse effects were identified either on the expressway or on the surface streets that provide access.

Perhaps the most significant aspect of the one-way operation is the newfound ability to maintain peak traffic flow across the St. Johns River during an incident on the Mathews Bridge. Previously, a stalled vehicle or accident on the bridge would have brought traffic to a standstill until the involved vehicles could be removed. The flexibility of the one-way plan, particularly in the morning, allows assignment of a large percentage of the traffic to either side of the barrier wall in response to an incident. This maintains traffic flow and allows authorities to reach and clear the incident more easily, thereby reducing its overall congestive effects.

Viewing the peak-period one-way operation in the broader sense of urban freeway management, it is significant to note the degree of cooperation and commitment exhibited by the various agencies involved. The city of Jacksonville must be recognized for developing a systematic strategy directed at reducing the recurring congestion experienced by a sizeable portion of its population. The plan could only be implemented successfully with the concerted efforts of the Jacksonville Police Department, which provided on-the-street traffic control, and the Toll Facilities Office of FDOT, which altered toll collection methods to accommodate contraflow traffic.

Following a review of the evaluation by state and local authorities, FDOT approved indefinite continuation of the one-way strategy. Accordingly, city officials appropriated the necessary funds for law enforcement personnel through FY 1982/83.

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I wish to express my gratitude to R. Henry Mock of the city of Jacksonville, who was instrumental in developing the one-way operational strategy, and to FDOT District II Traffic Operations personnel who participated in data collection activities. A special expression of gratitude is extended to Anton Huber, formerly of the FDOT Bureau of Traffic Operations, who coauthored the original evaluation report from which this paper was developed.

REFERENCE

1. Procedures for Estimating Highway User Costs, Fuel Consumption, and Air Pollution. FHWA, May 1980.

Publication of this paper sponsored by Committee on Freeway Operations.

Abridgment

Diary of a Traffic Management Team: The Houston Experience

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The traffic management team approach to solving transportation operational problems in a rapidly growing urban area—Houston, Texas—is discussed. The Houston Traffic Management Team, as it is referred to, is an interagency group that is composed of representatives from Harris County law enforcement agencies; city, state, and county transportation departments; and the Metropolitan Transit Authority. The team meets monthly to discuss such topics as the review of traffic control strategies for major urban rehabilitation projects, review and approval of proposed operational changes to existing facilities, and operational problems encountered by law enforcement officials. The most important result of the team's activities since its inaugural meeting in January 1981 is the communication links that have been established between all transportation-related agencies in Harris County. It is recommended that the traffic management team approach be applied when the successful operation of existing transportation facilities crosses jurisdictional boundaries, as in Harris County.

Urban traffic management solutions to freeway and city-street operational problems encountered in large metropolitan areas require the cooperation of all transportation-related agencies. Toward this goal, the District Office of the Texas State Department of Highways and Public Transportation (TSDHPT) in San Antonio formed the first corridor management team in October 1975 (1). Representatives from the San Antonio Department of Traffic and Transportation, the District Office of TSDHPT, the San Antonio Transit System, and the San Antonio Police Department were present at the inaugural meeting. It is important to note that no specific operational funds were allocated for team activities. The cost of the operational improvements discussed are borne by the member agencies as part of their normal responsibilities. Finally, the personnel involved in these meetings were people in authority at an operational level, not administrative heads who made major policy decisions. In subsequent meetings, items such as the following were discussed: traffic handling during special events, the effects of inclement weather conditions on arterial and freeway systems, high-accident-rate locations, traffic control plans, and coordination of research efforts. The success of these meetings led to the creation of traffic management teams in other Texas cities, including Beaumont, Corpus Christi, El Paso, Fort Worth, Houston, Lubbock, Midland-Odessa, and Wichita Falls.

Houston, Texas, is the principal city in Harris County. However, high population concentrations exist in other areas that are not within the Houston city limits. These areas are either self-governing municipalities, such as Baytown, Bellaire, and Pasadena, or areas that are within one of the four county precincts. Consequently, several municipal agencies are responsible for such public services as roadway maintenance, law enforcement, and traffic signal operations. For example, frontage road sig-

nal operations inside the Houston city limits are the responsibility of the City of Houston rather than that of TSDHPT.

In summary, the above characteristics demonstrate how the experience in Houston represents a unique application of the traffic management team approach. The objective of this paper is to illustrate the function of such an "interagency team" in Houston, Texas, which is a rapidly growing major urban area where the operation of existing transportation facilities crosses jurisdictional boundaries. The agencies (and personnel) involved, the topics discussed, and some results of the team's meetings are presented. It is hoped that this paper will show examples of the benefits that could be derived by other major cities that might pursue the traffic management team approach.

PARTICIPATING AGENCIES

Participating agencies in the Houston Traffic Management Team are divided into permanent team members and "ex officio" members. The permanent team members are the Metropolitan Transit Authority (for Harris County), the Houston Department of Traffic and Transportation, the Houston Police Department, the Houston Fire Department, District and Houston urban offices of TSDHPT (the organizing agency), the Texas State Department of Public Safety, and the Harris County Sheriff's and Engineer's Offices. Representatives of these agencies regularly attend the monthly meetings.

Other agencies, such as the Houston Chamber of Commerce, railroad companies, the Texas Transportation Institute, and the Federal Highway Administration, have participated on an as-needed basis. These agencies will have greater roles as the team addresses the major incident response issue.

GENERAL TEAM GUIDELINES

At the inaugural meeting in January 1981, certain guidelines for the Traffic Management Team were established:

1. Although the team itself will not have any operational authority, it is necessary that each member should be able to make reasonable commitments within his or her normal authority based on team recommendations.
2. The team will meet every month; however, meetings could take place on an as-needed basis if special or emergency situations should arise.
3. The team should maintain a low profile.
4. The endeavors undertaken by the team members should not interfere with their present workload or make it excessively burdensome.
5. The team meetings should not concentrate on only one area.
6. Team meetings should be informal and allow for frequent attendance by additional representatives from the member organizations or other related agencies.
7. The District and Houston urban offices of TSDHPT will house the meetings since their offices are centrally located.
8. Press releases of the committee's activities (if needed) will be handled by the team chairman.
9. An agenda of the topics to be discussed will be prepared and distributed prior to each meeting.
10. A secretary will handle agenda preparation, schedule meetings, and prepare monthly reports on team activities.
11. A chairman will be elected by the team to run the monthly meetings.

TEAM FUNCTIONS

The following discussion focuses on some of the team activities. These activities are excerpts from the agendas and monthly reports of meetings of the Houston Traffic Management Team.

Traffic Control Strategies

The District and Houston urban offices of TSDHPT have presented the traffic control strategies to be used on major urban freeway rehabilitation projects. Detour routes have been discussed, and some signal modifications on the parallel routes have been made by the City of Houston. On one project, the team reviewed the traffic control plan for a major resurfacing and safety project on an Interstate highway in Houston that carries an average daily traffic of nearly 200 000 vehicles. The original plans called for each of three heavily traveled cross streets to be closed for 3 months during different phases of the project. However, a subcommittee of the Traffic Management Team identified an alternative that required closing only one cross street. In addition, signal modifications necessary on the parallel frontage roads would be made by the Houston Department of Traffic and Transportation.

Review and Approval of Proposed Operational Changes to Existing Facilities

Several of the agencies have presented plans for certain transportation system management improvements (use of narrow lanes, contraflow lanes, etc.). The team considered a proposal to restripe an extremely congested major thoroughfare from three 12-ft lanes in each direction to four 9-ft lanes in each direction. This arterial carries almost 80 000 vehicles/day. The team reviewed a videotape of traffic flow on this arterial during peak periods. The camera footage was taken by one of the member agencies. After reviewing this footage and considering the relatively insignificant level of bus and truck activity on this road, the team agreed that the proposal, though radical, was appropriate. The involved agencies then took the steps necessary to accomplish the restriping. The team continues to receive reports of the success of the restriping through law enforcement and traffic engineering team members. In addition, the team favorably reviewed some time-lapse photographic footage taken on this roadway (by another member agency) after the narrow lane operation was implemented. It was noted that bus and truck traffic was not adversely affecting traffic operations.

Discussion of Operational Problems Encountered by Law Enforcement Officials

Operational problems encountered by law enforcement officials are a regular agenda item. Through the three law enforcement agencies present at the meeting--the Houston Police Department, the Texas State Department of Public Safety, and the Harris County Sheriff's Office--operational problems are brought to the attention of other team members. Law enforcement personnel have noted problems such as signals that are not sufficiently visible to the public, locations where traffic is illegally using the freeway shoulder for travel lanes, and locations where speed zone information is needed. Where appropriate, the responsible agency has instituted measures such as additional signing and striping to correct the problems noted by law enforcement personnel.

Development of Interagency Technical Teams

At the monthly meetings, several issues are discussed that require an ongoing effort by a subcommittee of the team. The most notable of these issues is the better management of emergency incidents. In some cases, freeways that carry more than 200 000 vehicles/day have been closed for more than four hours due to incidents such as overturned trucks. A subcommittee of the team was formed to investigate means of improving traffic handling during such emergencies. At present, the subcommittee is considering the manpower and equipment requirements needed to create a major incident response team (MIRT). This special team might operate as a modified version of the MIRT currently operated by the California Department of Transportation. It could, for example, detour traffic upstream of a traffic-blocking incident to alternative routes. The team could temporarily modify signal operations, provide route information to the traveling public, close freeway entrance ramps immediately upstream of the incident, etc.

Other issues for which the team has set up interagency subcommittees are a review of freeway access violations, the joint application of recognized computer models to freeways and major thoroughfares, and a review of major accident locations. The participants in these subcommittees do not have to be designated team representatives. They can be, and are encouraged to be, other appropriate individuals from the member organizations.

OVERALL EVALUATION OF TEAM ACTIVITIES

Although it is very difficult for a group of individuals to evaluate the effectiveness of their efforts objectively, there are some noticeable signs of the positive impact that the team has had on the operation of existing transportation facilities in Harris County:

1. Team attendance, participation, and interest are at their highest level. This increased participation has developed as more rapport between the member agencies has been established and the "rolled-up-sleeve" atmosphere of the monthly meetings has unfolded.
2. The foundation of interagency cooperation created by the team has cut through the normal red tape typically involved in handling issues that involve more than one agency. For example, individuals with the highway agency now know whom to contact in the law enforcement agencies to ask for increased enforcement in highway construction areas when major problems arise. The law enforcement officials have called on other team members for their advice when traffic engineering expertise was needed to examine a particular problem.
3. Most important, the communication links among all transportation-related operational agencies in Harris County that have been established through the Houston Traffic Management Team will continue irrespective of actual representation on the team. This has led to an increased awareness of ongoing and proposed projects sponsored by each agency. An essential output of this is that different projects that affect the same traffic corridor can be handled so as not to work against each other. At each team meeting, project progress and potential conflicts are discussed so that appropriate adjustments can be made in a timely manner.

CONCLUSIONS

At the time this paper was written, the Houston Traffic Management Team had been meeting for more than a year and a half. It has successfully dealt with operational problems in existing transportation facilities. These problems include, but are not limited to, the evaluation of traffic control strategies for major urban freeway rehabilitation projects, the review of proposed operational improvements in existing transportation facilities, the operational problems encountered by law enforcement officials, and emergency incident management strategies. The participating agencies include representatives from TSDHPT, the Houston Traffic and Transportation Department, the Houston Fire Department, law enforcement agencies in Harris County, the Metropolitan Transit Authority, and the Texas Transportation Institute. It should be emphasized that participants act only to the extent of the operational authority they have within their own organizations--that the "team" does not "approve" anything.

RECOMMENDATIONS

We acknowledge that the approach of the Houston Traffic Management Team may not be appropriate for all major urban areas. It is suggested that such an approach be applied when the successful operation of existing transportation facilities crosses jurisdictional boundaries, as in Harris County. As this paper indicates, three law enforcement agencies have separate jurisdictions in Harris County: the City of Houston, Harris County, and the State of Texas. All have traffic enforcement responsibilities on the roadways in the Houston metropolitan area. In addition, although the Metropolitan Transit Authority has sole responsibility for all public transportation operations in Harris County, it must work closely with all of the above agencies to maintain an adequate level of service.

The primary role of the Houston Traffic Management Team, as stated previously, is to serve as an informal communication link between all transportation-related operational agencies in Harris County. This role will continue irrespective of the people now involved. Consequently, based on the success in Houston, this approach is recommended where a jurisdictional situation similar to that in the Houston metropolitan area exists.

REFERENCE

1. G. Sparks. San Antonio TSM Corridor Management Paper. Presented at 59th Annual Meeting, TRB, 1980.

Publication of this paper sponsored by Committee on Freeway Operations.