

## THE "TOPICS" PROGRAM

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The population and economic growth of our nation has brought about tremendous traffic pressures in its cities. These pressures, as you well know, have resulted in traffic congestion, delays, increased travel time and increased accidents. TOPICS is intended to directly attack these ills.

TOPICS stands for the Traffic Operational Program to Improve Capacity and Safety. It was announced as a pilot program by the Federal Highway Administration on February 13, 1967. The Federal-aid Highway Act of 1968 expanded the program beyond the pilot category. It authorized the expenditure of \$200 million for TOPICS in urban areas of 5,000 population and greater for each of fiscal years 1970 and 1971. The Federal funds are matched on a 50-50 basis with State and/or local funds. Kentucky's apportionment for each of the two years is \$2,000,000, thus, with the matching State and/or local funds, we are talking in terms of a \$4,000,000 yearly program in Kentucky, a sizable program for traffic engineering.

As is true of other Federal-aid highway programs, the TOPICS program is administered through the State Highway Departments. The State Highway Department will be the contact for the various concerned urban areas. This is the procedure used on virtually all Federal-aid highway programs and has proven most effective in achieving this Nation's great highway network. In fact, it should be emphasized that procedures for the use of TOPICS funds and for TOPICS project administration are similar to those for normal Federal-aid urban programs. Thus, an advantage of administering the program through the Highway Department is that these people are already familiar with these procedures and will be able to assist you in this regard.

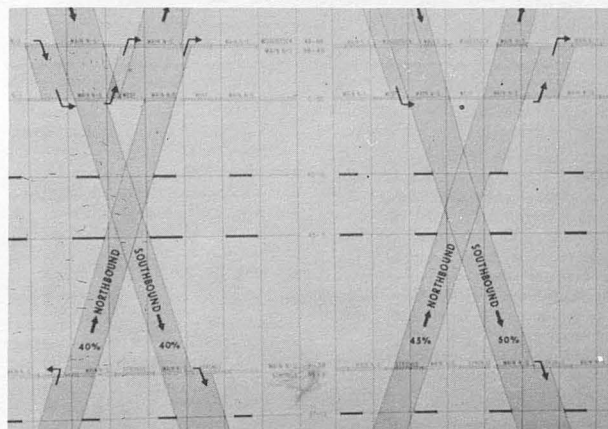
Let us take a closer look at several traffic problems and some typical TOPICS solutions.



This signal has just turned green. It can be seen that a large percentage of vehicles were stopped by the previous red signal. In other words, signal progression is poor. In addition to being annoying, such poor progression will result in increased travel time, increased pollution and increased vehicular operating costs. A major

number of accidents in urban areas occur at traffic signals. Good progression greatly reduces the numbers who are "caught" by the red lights, thus greatly reducing the accident potential at signals.

Progression can be obtained or improved by installation of signal interconnect systems and master control systems. The latter can be relatively simple systems controlled on a fixed schedule basis or they can be one of the more sophisticated new traffic responsive systems.



Often, an engineering analysis of a system will disclose adjustments in signal timing which can be accomplished to improve signal progression. Such studies may also indicate the need to move some signals from one location to another where minor streets are involved.



The end result of these improved systems and system adjustments can be happiness as defined by this sign.



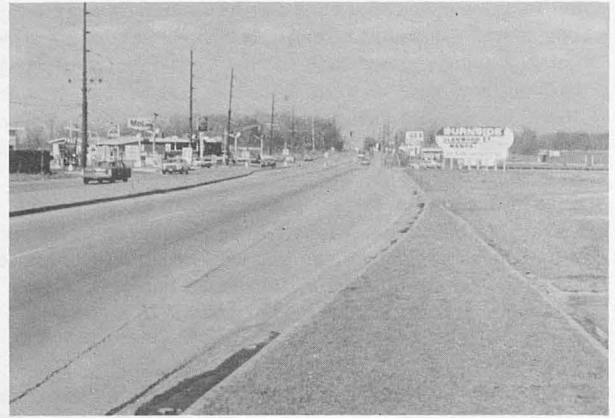
Attention should also be given to the installation of modern signal displays fully visible to the approaching motorist.



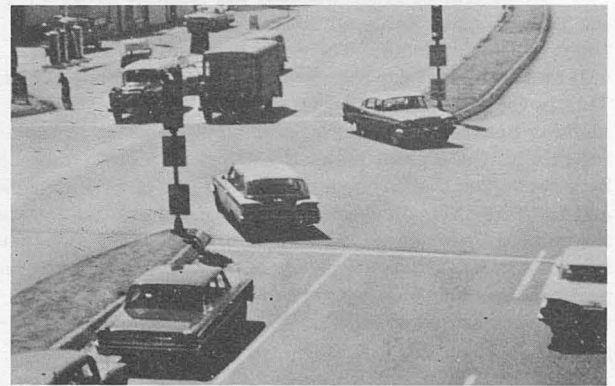
A series of studies in one city indicated an accident reduction from 400 accidents to 208 accidents at 20 intersections at which signal modernizations were accomplished.



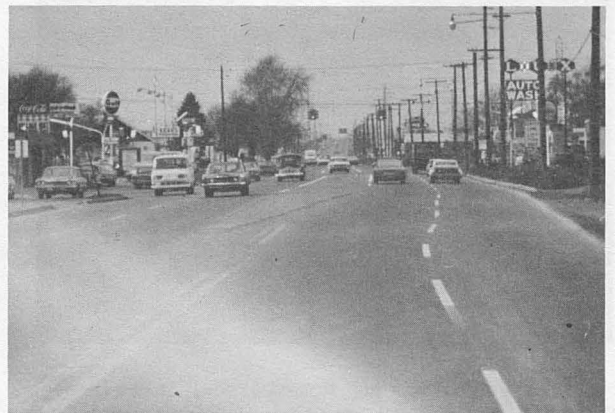
Another source of congestion, delay and accidents, is this typical left turn situation from a four lane undivided street. Vehicles stopped to turn left may be struck from the rear. If oncoming vehicles are also turning left, vision is often blocked. If thru vehicles are "trapped" behind a stopped vehicle they may try to swerve into the right lane with increased accident potential. Capacity will be greatly reduced where the left lane is blocked for extensive periods.



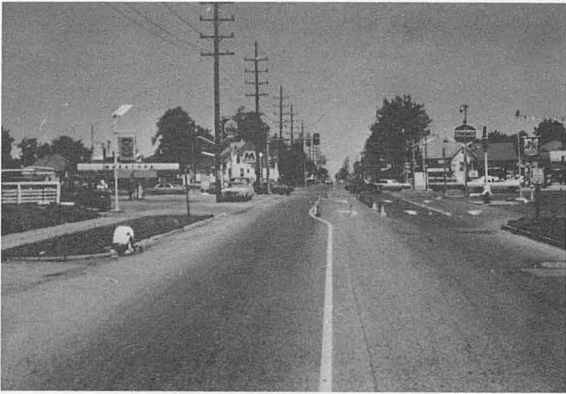
Many TOPICS projects, therefore, involve construction of left turn lanes. Here the left turn vehicle can be much safer as it is not required to stop in the through lane. Of course, capacity is also greatly increased. I would estimate the difference in capacity with and without left turn lanes might be in the order of 1400 to 800. If you add a right turn lane, as in this picture, the ratio is perhaps 1600 to 800. In other words by constructing these left turn lanes plus right turn lanes at key locations you can double your capacity along a critical four lane street.



With these slots visibility is greatly improved.



This project, which involves only pavement widening, will be quite effective and less costly. Accidents at this location were reduced from 79 in a one year before period to 47 in a one year after period.



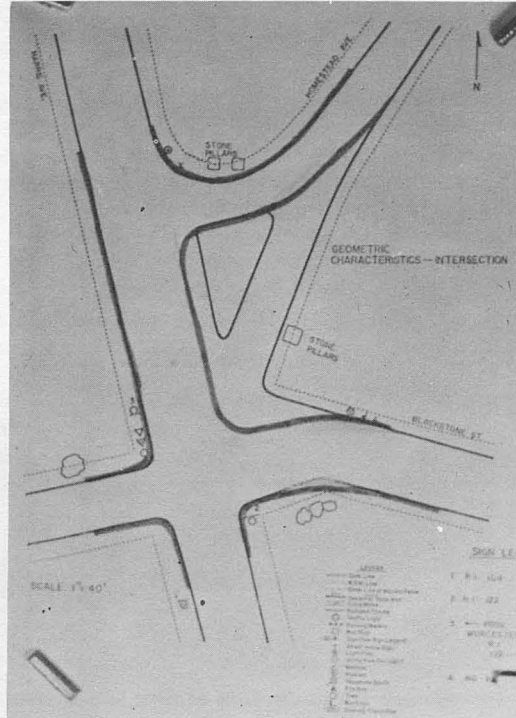
Sometimes results can be obtained merely by re-striping what is already there.



Here is a case where an existing 60 foot wide street had previously been utilized as four lanes plus a parking lane in each direction. There had been congestion and poor operation throughout the length of this business area. The situation had been poor for the thru motorist and for the motorist wishing to drive to the business area. Thus, the accessibility of the business area was also poor. As you see in the picture, street parking was prohibited, and the roadway striped to provide two lanes in each direction plus a continuous center left turn lane. During peak periods turns are prohibited from the center lane and it is operated as a reversible lane for the peak direction. The capacity bottlenecks and congestion have been eliminated. The thru motorist is better served and the potential customer can get into the area easier.



Very adequate, free, off-street parking was developed by the City through an assessment process. Accessibility is excellent as a result of the traffic improvement shown in the previous picture and with the availability of parking. Business improved following the parking removal, new businesses have subsequently been developed and this area prospers despite the presence of several nearby shopping centers.



Here are some other typical TOPICS type improvements. This is an intersection where safety and capacity can be improved by a low cost improvement.



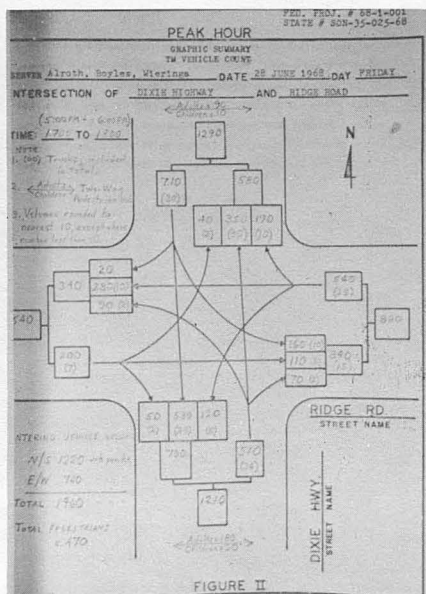
This parking area in front of these businesses becomes safer for the passing motorist. It also becomes safer and more efficient for the potential customer and makes the business facilities more attractive for the customers by eliminating clutter and confusion.



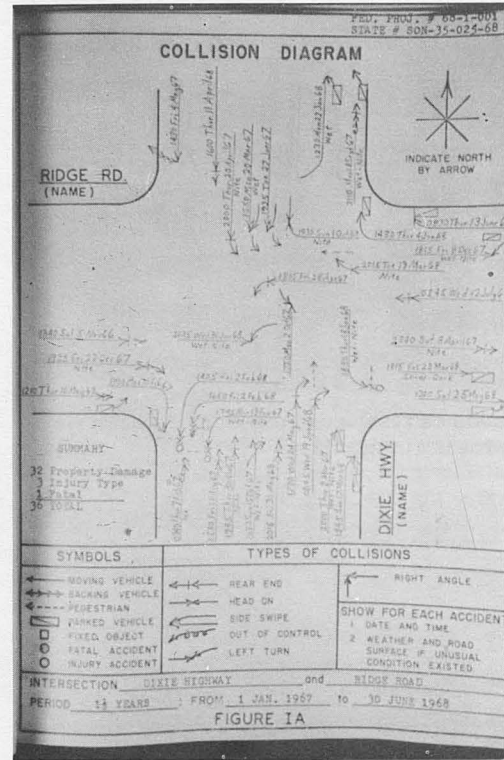
A picture of congestion near my office -- traffic is backed up from the signal - one block to the south.



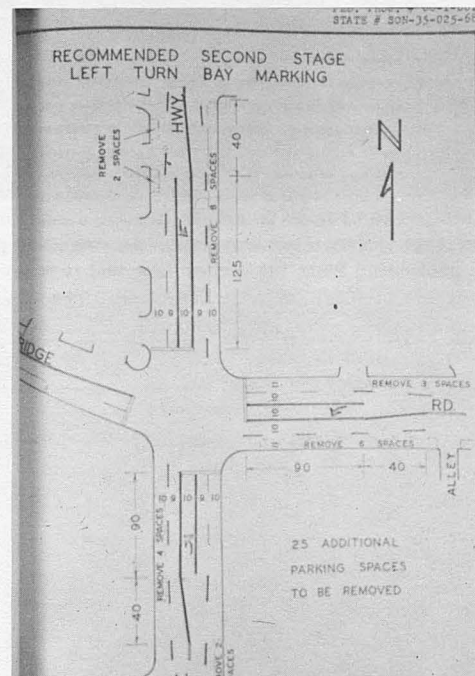
Left turns from the opposite direction block out thru traffic. We see that congestion affects not only passenger cars, it also results in delays to transit operations.



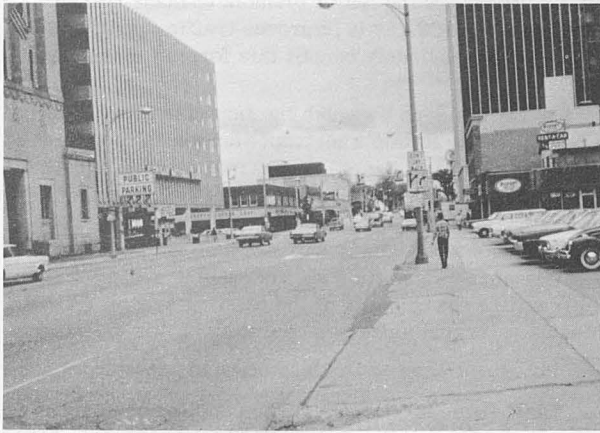
Traffic volumes were analyzed...



...Together with accidents. Several accidents involved pedestrians.



The recommendation was to restripe the intersection approaches to provide for left turn lanes plus two thru lanes, and to install new signals, including pedestrian signals.



The bulk of traffic in most central business areas in larger cities is usually carried by one way streets. Sometimes we think of these as make-do facilities. However, the truth of the matter is that they provide for a much more efficient and a safer use of the street system in many situations.

Signal progression is more readily provided. Left turns are accomplished more efficiently and safely, overall capacity is increased, traffic suffers less delay with resultant economic benefits and with less air pollution.

One way streets are usually safer. This is because of improved progression, fewer conflicting movements at intersections, reduction in left turn accidents and because traffic moves in more defined queues. The result of the queuing of traffic is that there are better gaps for pedestrians and for traffic from side streets.

One way streets should, however, be developed as part of an overall comprehensive city plan as they will affect not only the arterial movement of traffic but development patterns of the community.

TOPICS, of course, can assist in the development of one way streets. This would include the initial signing costs, the costs of revising signal installations, etc. It would also include the cost, where applicable, of improved master control equipment and interconnect systems to facilitate full utilization of a one way street system's potential to improve signal progression.



TOPICS fund participation can also be used to construct a connection between two existing but non-connected streets so as to form a continuous one way or two way street.

That in short is TOPICS, a comprehensive program of such projects as we have described. Such programs should be designed to accomplish meaningful improvements in safety, capacity and operations in a community and should be based on a continuing comprehensive planning process in areas of less than 50,000 population.

Before undertaking projects, it is necessary there be what is termed an approved Areawide TOPICS Plan. The Areawide TOPICS Plan is simply a listing of projects in general order of priority. This listing can be based on the findings of a previously completed traffic engineering study, such as the traffic engineering portion of a transportation planning study.

Where an adequate traffic engineering analysis is not already available, the necessary study can be undertaken with TOPICS funds participation. Such studies should be tailored to suit the needs of each particular area and need not be extensive undertakings. They definitely should not be studies for studies sake. Detailed guidelines concerning TOPICS are set forth in the Federal Highway Administration's Policy and Procedures Memorandum 21-18. It should be reviewed by anyone contemplating use of TOPICS funds.

Once the Areawide Plan and other critical items are approved, TOPICS projects will be programmed like any other Federal-aid highway project.

However, it is not necessary to wait until the Areawide Plan is completed to undertake projects. There are projects whose need is well established and indeed projects which you already intend to do or would do immediately if the funds were available. These higher priority projects can be undertaken immediately once the TOPICS process is under way.

Let me summarize the basic TOPICS procedures involved for a particular area to undertake a TOPICS program.

1. Contact Highway Department for initial approval and guidance.
2. Develop Areawide TOPICS Plan -- This may be based on results of a previous traffic engineering study or may require a new study.
3. Selection and approval of TOPICS Federal-aid Routes -- we call this the Primary Type II system.
4. Approval of Areawide Plan by State and Federal Highway Administration.
5. Programming individual projects, approval by State and FHWA.
6. Develop plans, specifications and estimates, approval by State and FHWA.

7. Authorization of project by FHWA and State.

Thus, the TOPICS program can make needed funds available for traffic operational improvements in urban areas of more than 5,000 population. The program bears no magic wand. However, we must fight the battle against congestion on several fronts. I am sure that if this Nation is to continue to grow and prosper, we must find means to accommodate the additional travel needs such economic growth will generate. One of the means, I am certain, will be continued programs of highway construction. There are no developments within our present state of research, economy or technology which would indicate highways will not continue to play an important role in the transportation system of America.

A second means to accommodate these increased transportation needs is mass transit. We must work for a better balance between highway transportation and transportation via mass transit. For a number of the larger metropolitan areas, new or expanded rapid transit systems will be able to accommodate large numbers of people, especially during the peak hours. However, for the majority

of cities, buses are the major element of mass transit. By the way, TOPICS, as it improves traffic operations in our cities, will obviously benefit this form of mass transit.

The third means by which the increased travel needs can be met in the Nation's metropolitan areas is by the more efficient use of the existing street system. Indeed, when one considers the cost in terms of dollar expenditures, space requirements, and displacements of people, continued programs of highway expansion do not appear logical unless at the same time we are making greater efforts to fully utilize the capacity of the existing system and to achieve a safer and smoother operation of this existing system.

That, then, is TOPICS. When applied comprehensively, it has been estimated TOPICS improvements have the potential to improve the capacity of a given street system by as much as 25 percent. And so I commend the program to your attention, a program which holds the promise of reducing accidents on your streets, of reducing congestion, of making your area a more attractive place to live and in which to do business, a program which promises to make more efficient use of your street system.