

The Tentative
STREET PLAN



Bangor City Planning Board

The Tentative

STREET PLAN

THE CITY PLANNING BOARD

Bangor, Maine

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SUMMARY OF THE REPORT

This report on the Street Plan discusses:

- 1) the need for street planning.
- 2) the ideal street system and its comparison with Bangor.
- 3) the Tentative Street Plan for new streets, wider streets, and other street improvements.
- 4) the methods of supporting the Street Plan with an Official Map and Subdivision Regulations.

This report is condensed from a complete report on streets which is on file in the Planning Office.

The ideas put forth are those which the Planning Board are studying before adopting them as parts of the Master Plan. The criticism of the citizens of Bangor is invited.

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STREET PLANNING

Why plan streets?

Times have changed.

In the early days of Bangor's growth, making a new street was no problem at all. Survey a couple of straight lines over any kind of land, uphill or downhill; scrape out between the lines; perhaps throw back a little gravel, and the street was ready for business. As the city grew, more streets were laid out in the same way. It was a mechanical process, and the result was a mechanical system of straight streets intersected at right angles by other straight streets. Except for a period of Spring mud, this expanding, gridiron street system provided pretty decent roadways for the surreys, buckboards, and Bangor Buggies.

Times have changed. The leisurely pace of the surrey has given way to the speed and pounding of the automobile. The old street system just isn't built for the onrush of "traffic". Streets, which are natural traffic arteries, are in many cases too narrow to carry traffic efficiently. Too many intersections cut the efficiency still further, and cause too many accidents. More accidents are caused by the slippery grades of "up and down" streets.

'NO THRU TRAFFIC' signs are ineffectively trying to protect neighborhoods from speeding cars and trucks, which their old street systems encourage.

The same streets are sometimes wasteful; too much street space for too little useable land area. This surplus street space means money wasted on a gravel base, a hard surface, curbs, and catchbasins. It means more money for repairing, sweeping, tarring and plowing.

Planning has the best known remedies for these ills of a sickly street system. Street planning provides these Prescriptions.

- 1) A Street Plan to serve as a long range guide to modernizing the overall street pattern.

The plan may prescribe major operations, such as widening, for the existing street arteries, which will help relieve the congested flow of traffic. New arteries may be planned for additional traffic relief or to stop the flow of unnecessary traffic in residential parts of the city.

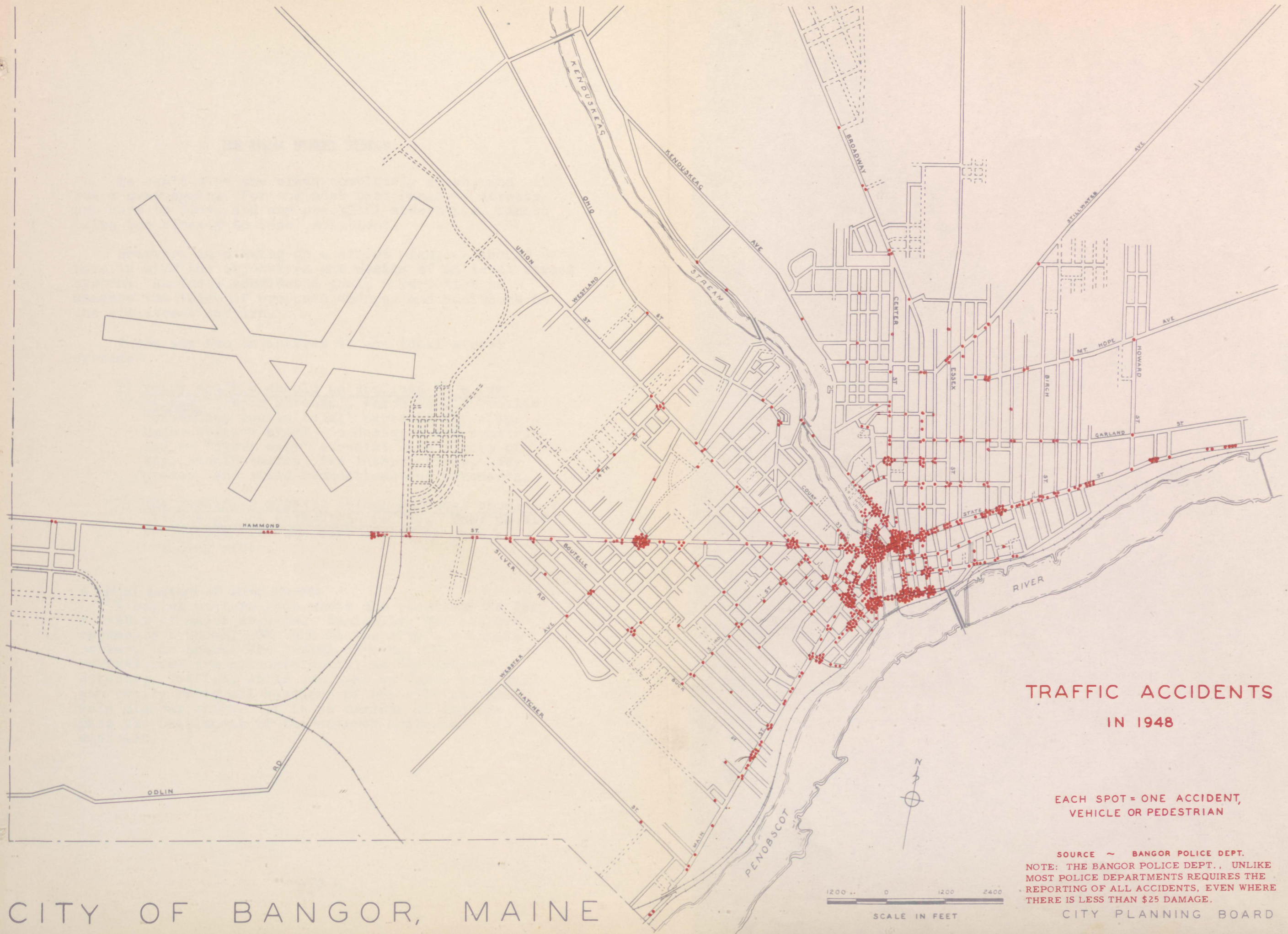
- 2) The adoption of an Official Map by the City Council.

In order to be effective the Street Plan must be backed up by the authority given by the State Statutes to the Official Map. The Official Map may be used to reserve land for future streets or street widenings until the city is ready to undertake the projects.

- 3) The planned addition of new streets to fill in the framework of the Street Plan.

Before a new street is laid out by a private owner, it should be designed as a functional part of the street system - either as a traffic street, or as a service street. Before a new street is constructed it should definitely be needed for city growth; the general taxpayers should not be asked to finance new street construction and maintenance if there are existing streets "going begging". The planned addition of new street is, by State Statute, the responsibility of the Planning Board. The Planning Board will adopt rules and regulations (Subdivision Regulations) to aid in this responsibility.

Our horse and buggy street system needs doctoring. New streets need preventative medicine. That's why we plan streets.



TRAFFIC ACCIDENTS IN 1948

EACH SPOT = ONE ACCIDENT,
VEHICLE OR PEDESTRIAN

SOURCE ~ BANGOR POLICE DEPT.
NOTE: THE BANGOR POLICE DEPT., UNLIKE
MOST POLICE DEPARTMENTS REQUIRES THE
REPORTING OF ALL ACCIDENTS, EVEN WHERE
THERE IS LESS THAN \$25 DAMAGE.

CITY PLANNING BOARD

CITY OF BANGOR, MAINE

THE IDEAL STREET SYSTEM

We can't wipe the slate completely clean, and start over again. For the most part Bangor's streets are here to stay, and any practical street plan cannot cling too closely to ideal solutions.

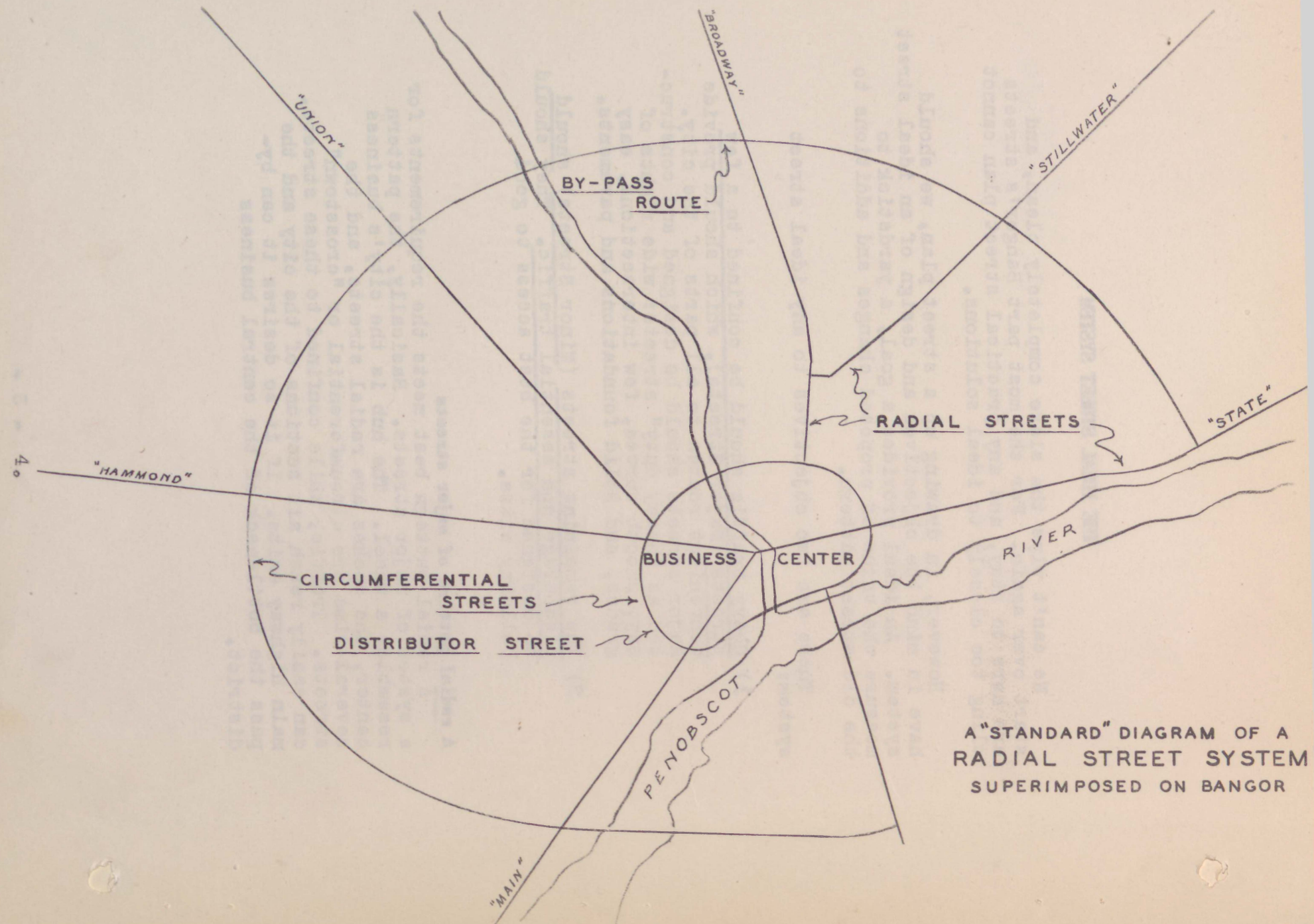
However, in drawing up a street plan, we should have in mind the objectives and design of an ideal street system. An ideal provides a goal, a yardstick to measure the value of proposed changes and additions to the old street pattern.

There are two objectives to any ideal street system:

- 1) Heavy traffic should be confined to a few streets (Major Streets), which should provide convenient routes to all parts of the city. Major streets should be designed and constructed as "heavy duty" streets: wide rights of way, smooth curves, few intersections, easy grades, and solid foundations and pavements.
- 2) The remaining streets (Minor Streets) should discourage non essential traffic. They should be designed for the best access to good building sites.

A radial pattern of major streets

A radial pattern best meets the requirements for a system of major streets. Basically, the pattern resembles a wheel. The hub is the city's business center, the spokes are radial streets, and the several rims are circumferential or "crosstown" streets. Traffic, while confined to these streets, can easily reach all sections of the city and the main highway exits. If it so desires it can bypass the bottleneck of the central business district.



Minor Streets

The radial pattern of major streets divides the city into segments. Within these segments the minor streets provide the access to residential or business property.

Perhaps, the word that best describes the ideal minor street system is "scrambled". Minor streets, designed to fit the land, may curve and wander; they may be narrow, even discontinuous. Scrambled streets discourage through traffic, and make poor speedways. Throw away the T Square and Triangle and you have a better chance for a good minor street system.

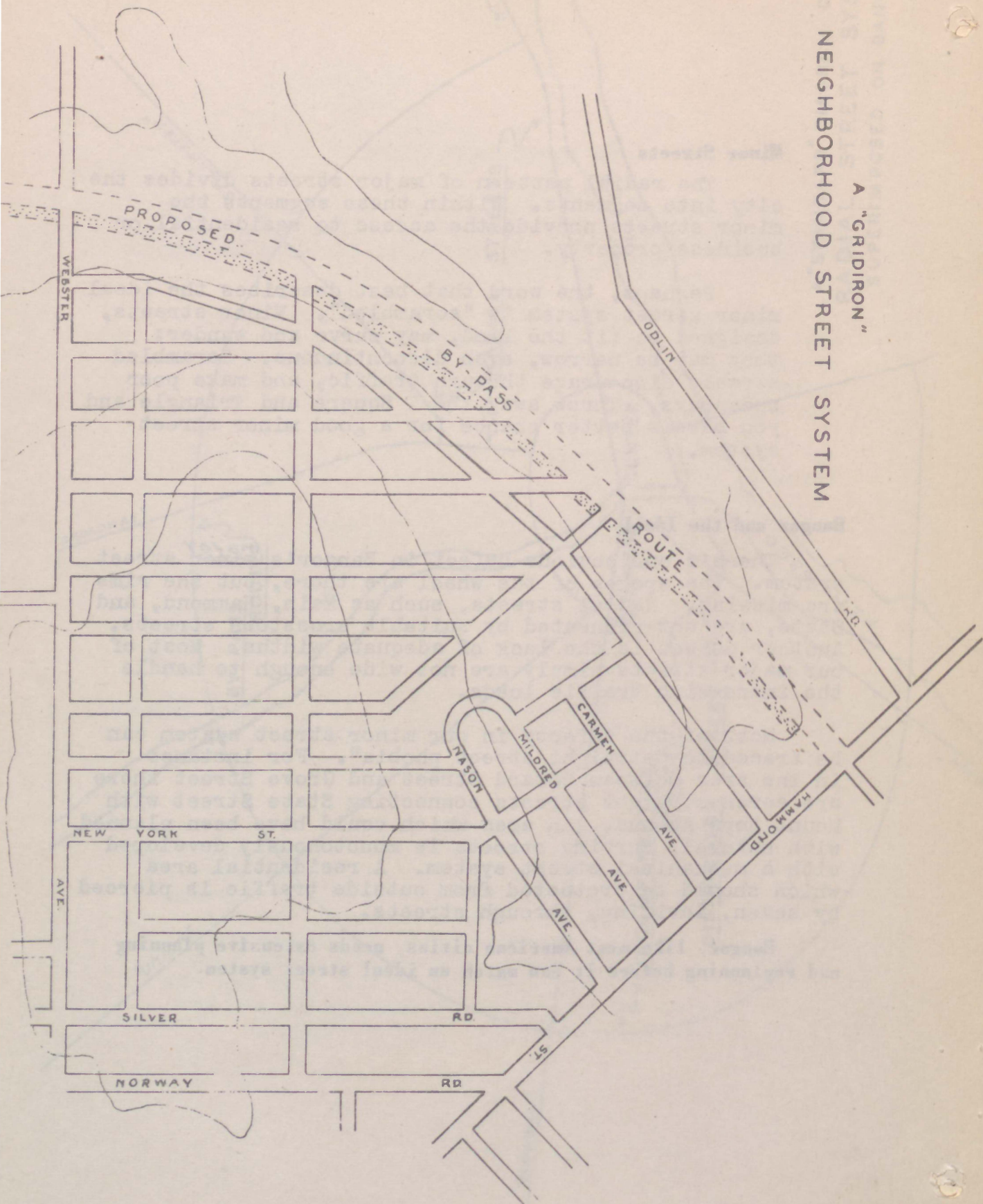
Bangor and the Ideal

There's one obvious defect in Bangor's ~~minor~~^{major} street system. The spokes of the wheel are there, but the rims are missing. Radial streets, such as Main, Hammond, and State, are not connected by suitable crosstown streets. Another defect is the lack of adequate widths. Most of our major streets simply are not wide enough to handle the increasing traffic loads.

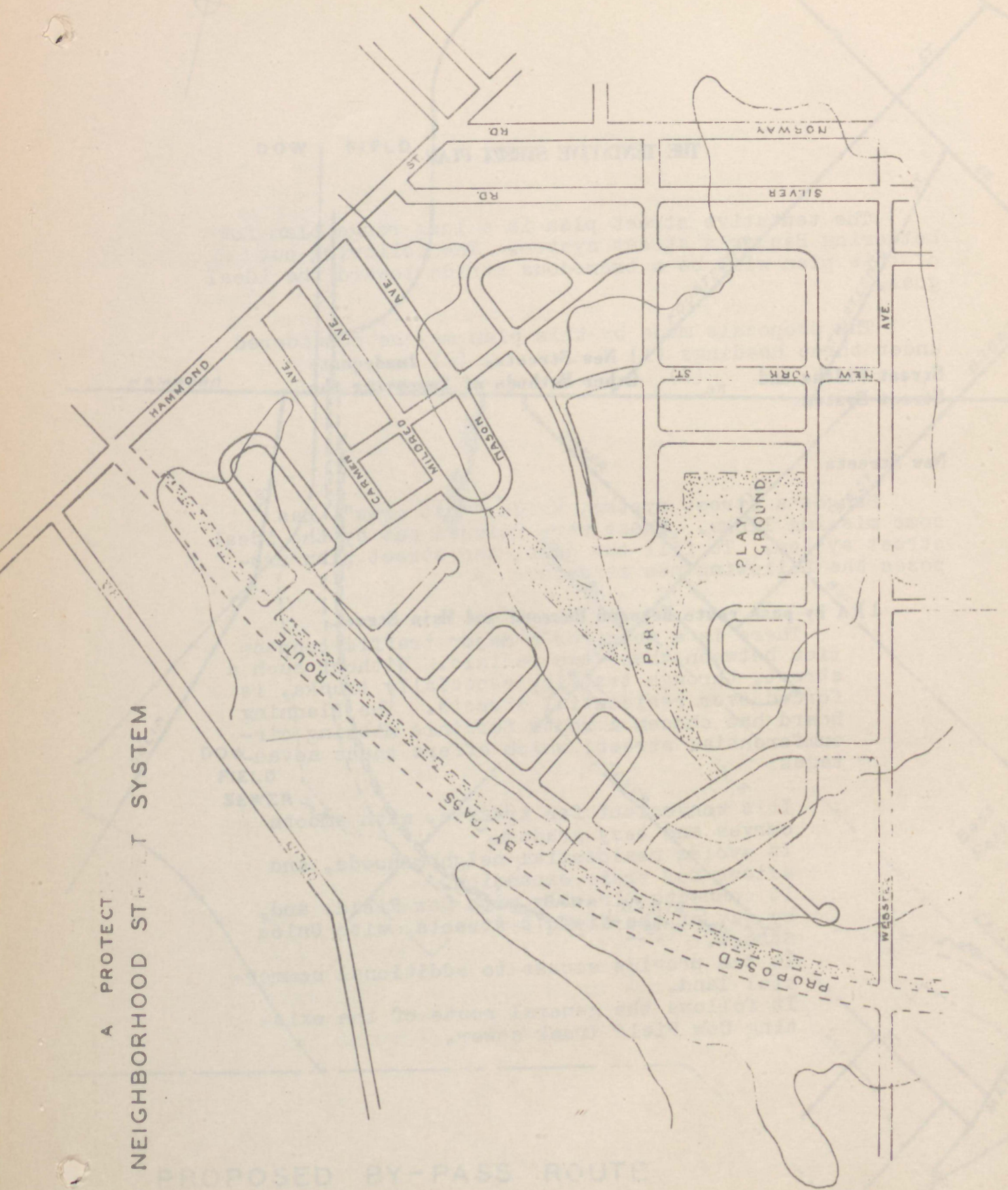
Most of the defects in our minor street system can be traced to "straight street phobia". For instance in the area between Howard Street and Grove Street there are seven straight streets connecting State Street with Mount Hope Avenue. An area which could have been planned with natural, curving streets is monotonously developed with a mechanical street system. A residential area which should be protected from outside traffic is pierced by seven, inviting, through streets.

Bangor, like most American cities, needs extensive planning and replanning before it can match an ideal street system.

A "GRIDIRON"
NEIGHBORHOOD STREET SYSTEM



A PROTECT NEIGHBORHOOD STREET SYSTEM



THE TENTATIVE STREET PLAN

The tentative street plan is a long range plan for bettering Bangor's street system. The following out of this plan will be a tremendous stride toward the ideal goal.

The proposals made by this plan may be considered under three headings (1) **New Streets**, (2) **Inadequate Street Widths and** (3) **Other Methods of Improving the Street System.**

New Streets

Bangor's street system, which "just grew", has some missing links. These were pointed out by the ideal street system. To fill the gaps, the street plan proposes the following new streets:

1) A by-pass route between Hammond and Main Street.

There is a need for a major traffic connection between these two radials. Without such a street, through traffic, especially trucks, is forced over residential streets. The Planning Board has chosen a route for this missing circumferential street, which offers these advantages:

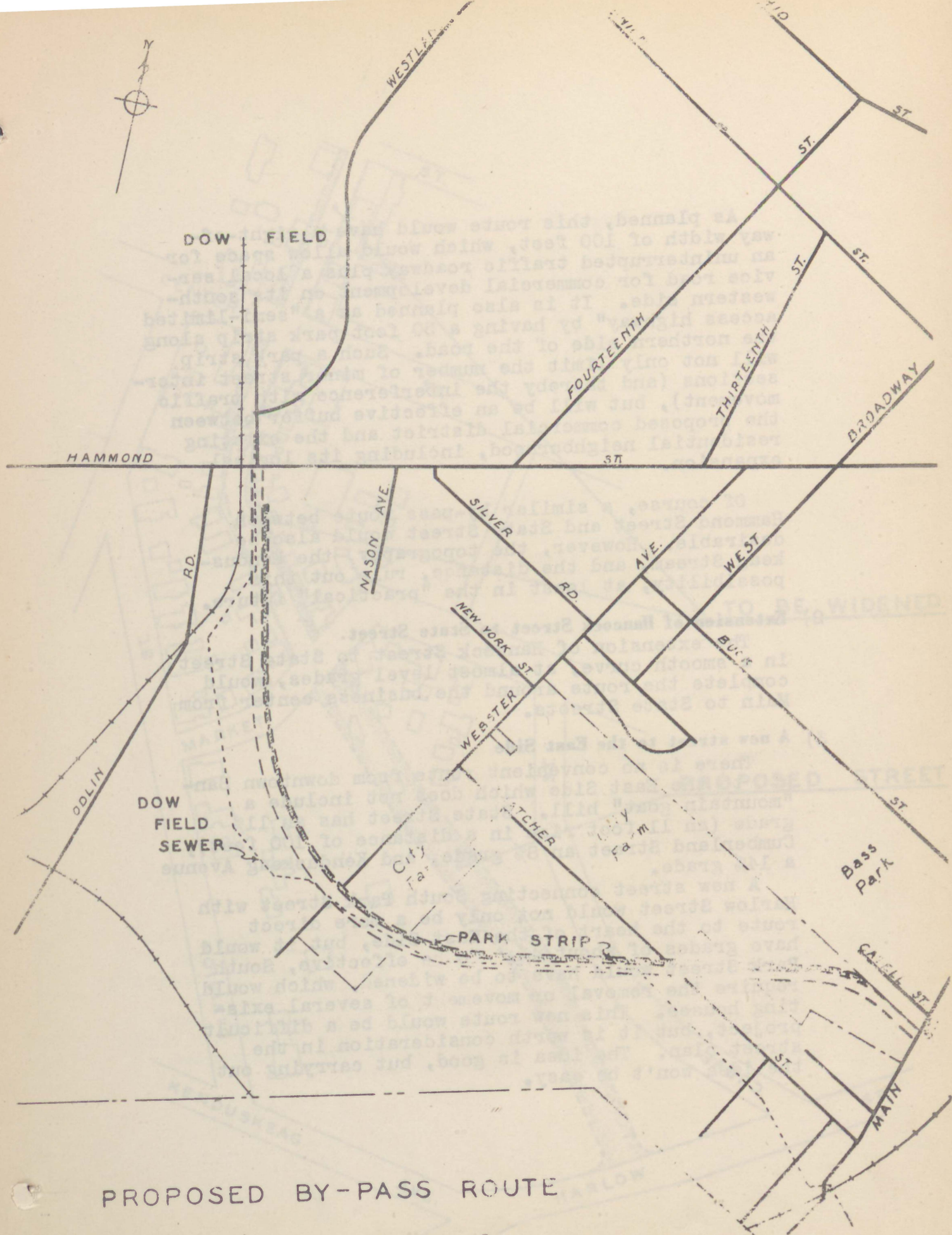
It's convenient for traffic, with smooth curves and easy grades.

It avoids residential neighborhoods, and allows for their expansion.

It connects directly with Dow Field, and, by way of the Field's streets, with Union Street.

It can provide access to additional commercial land.

It follows the general route of the existing Dow Field Trunk sewer.



PROPOSED BY-PASS ROUTE

As planned, this route would have a right-of-way width of 100 feet, which would allow space for an uninterrupted traffic roadway plus a local service road for commercial development on its southwestern side. It is also planned as a "semi-limited access highway" by having a 50 foot park strip along the northern side of the road. Such a park strip will not only limit the number of minor street intersections (and thereby the interference with traffic movement), but will be an effective buffer between the proposed commercial district and the existing residential neighborhood, including its logical expansion.

Of course, a similar by-pass route between Hammond Street and State Street would also be desirable. However, the topography, the Kenduskeag Stream, and the distance, rule out this possibility, at least in the "practical" future.

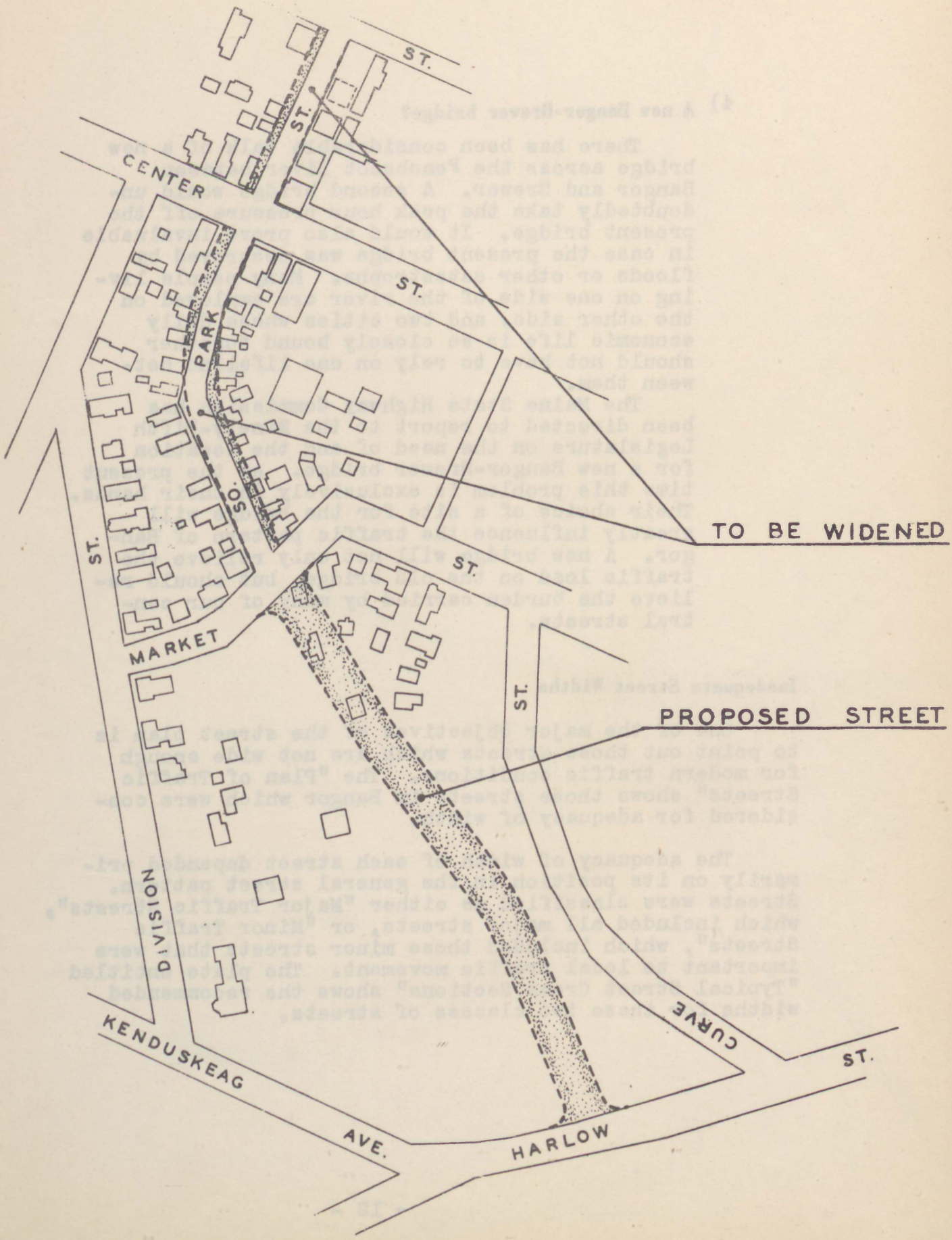
2) Extension of Hancock Street to State Street.

The extension of Hancock Street to State Street in a smooth curve, at almost level grades, would complete the route around the business center from Main to State Streets.

3) A new street to the East Side

There is no convenient route from downtown Bangor to the East Side which does not include a "mountain goat" hill. State Street has an 11% grade (an 11 foot rise in a distance of 100 feet), Cumberland Street an 8% grade, and Kenduskeag Avenue a 14% grade.

A new street connecting South Park Street with Harlow Street would not only be a more direct route to the heart of the East Side, but it would have grades of about 4%. To be effective, South Park Street would have to be widened, which would require the removal or movement of several existing houses. This new route would be a difficult project, but it is worth consideration in the street plan. The idea is good, but carrying out the idea won't be easy.



4) A new Bangor-Brewer bridge?

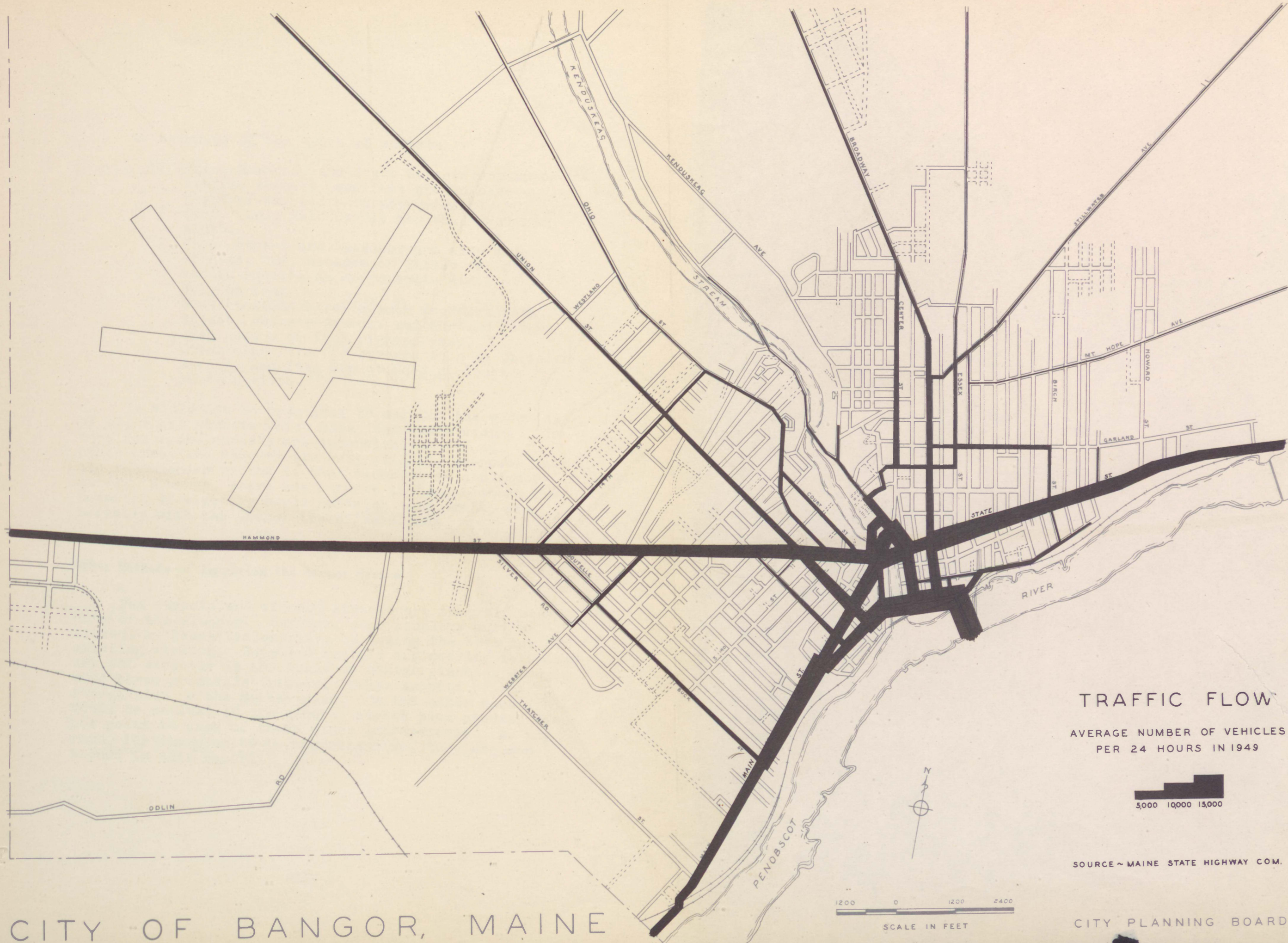
There has been considerable talk of a new bridge across the Penobscot River between Bangor and Brewer. A second bridge would undoubtedly take the peak hour pressure off the present bridge. It would also prove invaluable in case the present bridge was destroyed by floods or other catastrophe. Many people living on one side of the river are employed on the other side, and two cities whose daily economic life is so closely bound together should not have to rely on one lifeline between them.

The Maine State Highway Commission has been directed to report to the Ninety-Fifth Legislature on the need of and the location for a new Bangor-Brewer bridge. At the present time this problem is exclusively in their hands. Their choice of a site for the bridge will greatly influence the traffic pattern of Bangor. A new bridge will not only relieve the traffic load on the old bridge, but should relieve the burden carried by many of our central streets.

Inadequate Street Widths

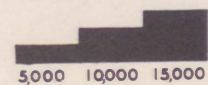
One of the major objectives of the street plan is to point out those streets which are not wide enough for modern traffic conditions. The "Plan of Traffic Streets" shows those streets in Bangor which were considered for adequacy of width.

The adequacy of width of each street depended primarily on its position in the general street pattern. Streets were classified as either "Major Traffic Streets", which included all major streets, or "Minor Traffic Streets", which included those minor streets that were important to local traffic movement. The plate entitled "Typical Street Cross Sections" shows the recommended widths for these two classes of streets.



TRAFFIC FLOW

AVERAGE NUMBER OF VEHICLES
PER 24 HOURS IN 1949



SOURCE ~ MAINE STATE HIGHWAY COM.

CITY PLANNING BOARD

CITY OF BANGOR, MAINE

As examples of the types of streets:

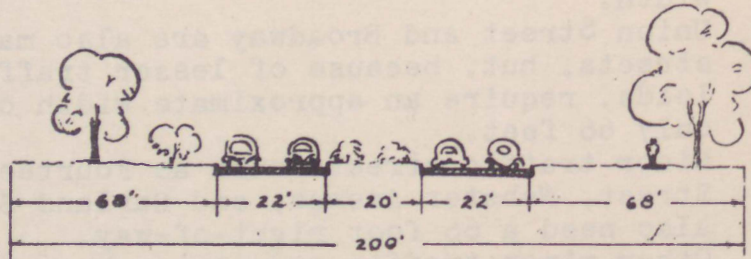
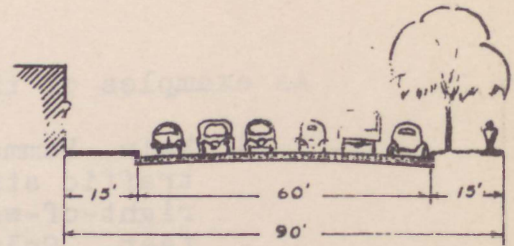
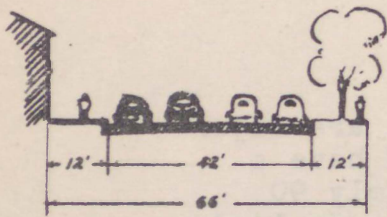
- 1) Main, Hammond, and State Streets are major traffic streets, and they should have a right-of-way width of approximately 90 feet. Only Main Street has this required width.
- 2) Union Street and Broadway are also major streets, but, because of lesser traffic loads, require an approximate width of only 66 feet.
- 3) Minor traffic streets such as Fourteenth Street, Webster Avenue, and Garland Street also need a 66 foot right-of-way.
- 4) Other minor traffic streets such as Division Street, and Pine Street need at least a 50 foot width.

It would not be practical to ask for the widening of all those streets which have inadequate widths. In some cases the streets are intensively built up. In other cases the streets are only slightly narrower than the recommended widths so that widening is not imperative. However, there are streets in Bangor where the benefits of widening would outweigh the costs, especially with the use of the official map.

Other Methods of Improving the Street System

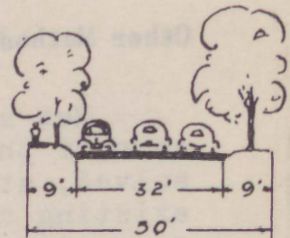
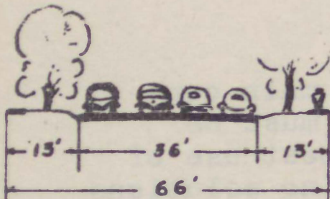
New streets and widened streets are the main concern of the planner. However, some problems must be solved, at least temporarily, by making the best use of existing streets. Detailed traffic engineering solutions are not strictly in the realm of master planning except when these proposals influence other aspects of the street plan or the master plan. On the other hand it would be unusual if the general street plan studies did not point to some of these minor improvements. At any rate, for the plan to be comprehensive, they are mentioned in this report.

MAJOR STREETS



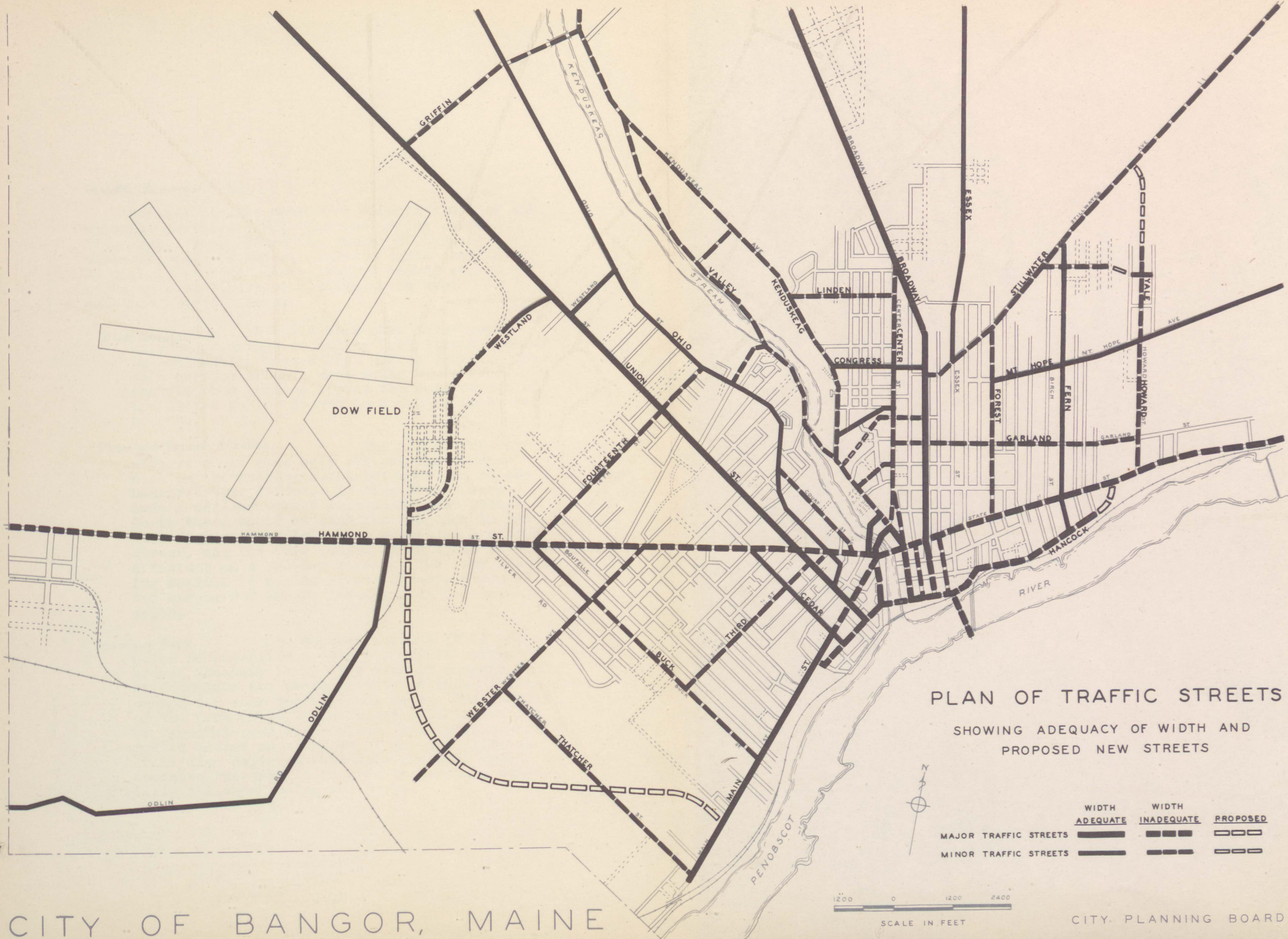
LIMITED ACCESS HIGHWAY

MINOR STREETS



TYPICAL STREET CROSS SECTIONS

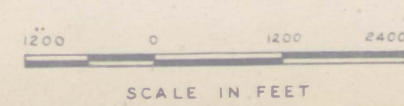
BANGOR, MAINE



PLAN OF TRAFFIC STREETS

SHOWING ADEQUACY OF WIDTH AND
PROPOSED NEW STREETS

	WIDTH ADEQUATE	WIDTH INADEQUATE	PROPOSED
MAJOR TRAFFIC STREETS			
MINOR TRAFFIC STREETS			



One-Way Streets

One-way streets make more effective use of the existing street system, thus postponing street widenings. They reduce the number of turning movements and are safer. In some cases they may be used to provide rotary traffic around public parks or even blocks of buildings, to avoid multiple intersections.

Park Street. It would seem that there would be some advantage in making Park Street one-way in a direction toward Post Office Square. The main purpose of this move would be to keep traffic from cutting across the main stream of traffic on Harlow Street in order to go up Park Street.

Pine and French Streets. The use of one-way streets would also help relieve the bottleneck on the Washington Street approach to the Bangor-Brewer bridge. If Pine Street were made a one-way street from Washington Street north there would be less interruption in the main flow of traffic. Pine Street is a narrow street, and for this reason alone would be more efficient as a one-way street. The same reasoning applies to making French Street, which is too narrow for smooth two-way traffic, one-way south.

Broadway Park. For another purpose it is proposed to establish a rotary or split system around Broadway Park. The park at present is divided into two parts neither of which is large enough for some recreational uses. The utility of the park would be increased if this section of Broadway were discontinued and traffic were routed around on a system of one-way streets. It is also believed that this proposal would decrease the traffic hazards to persons, especially children, using the park.

ONE-WAY STREETS

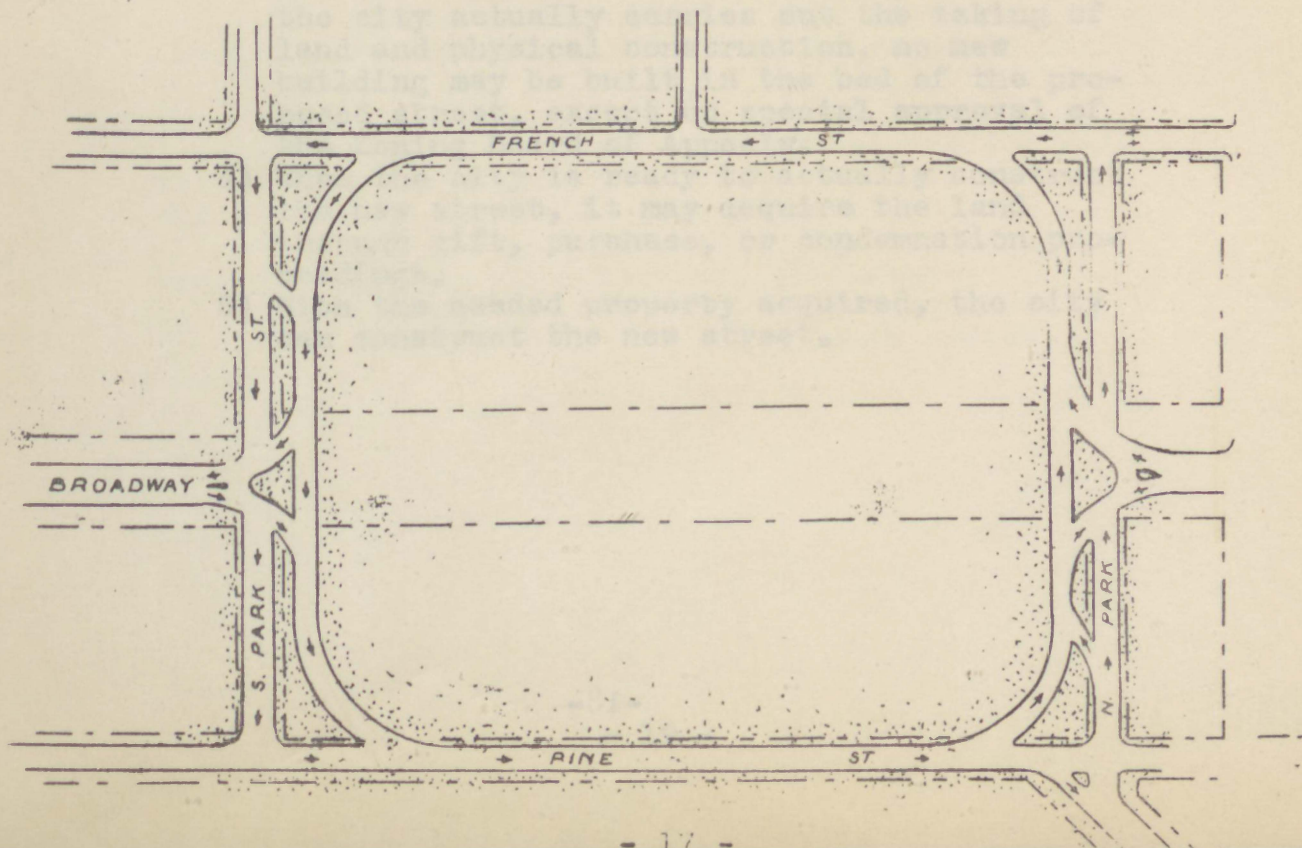
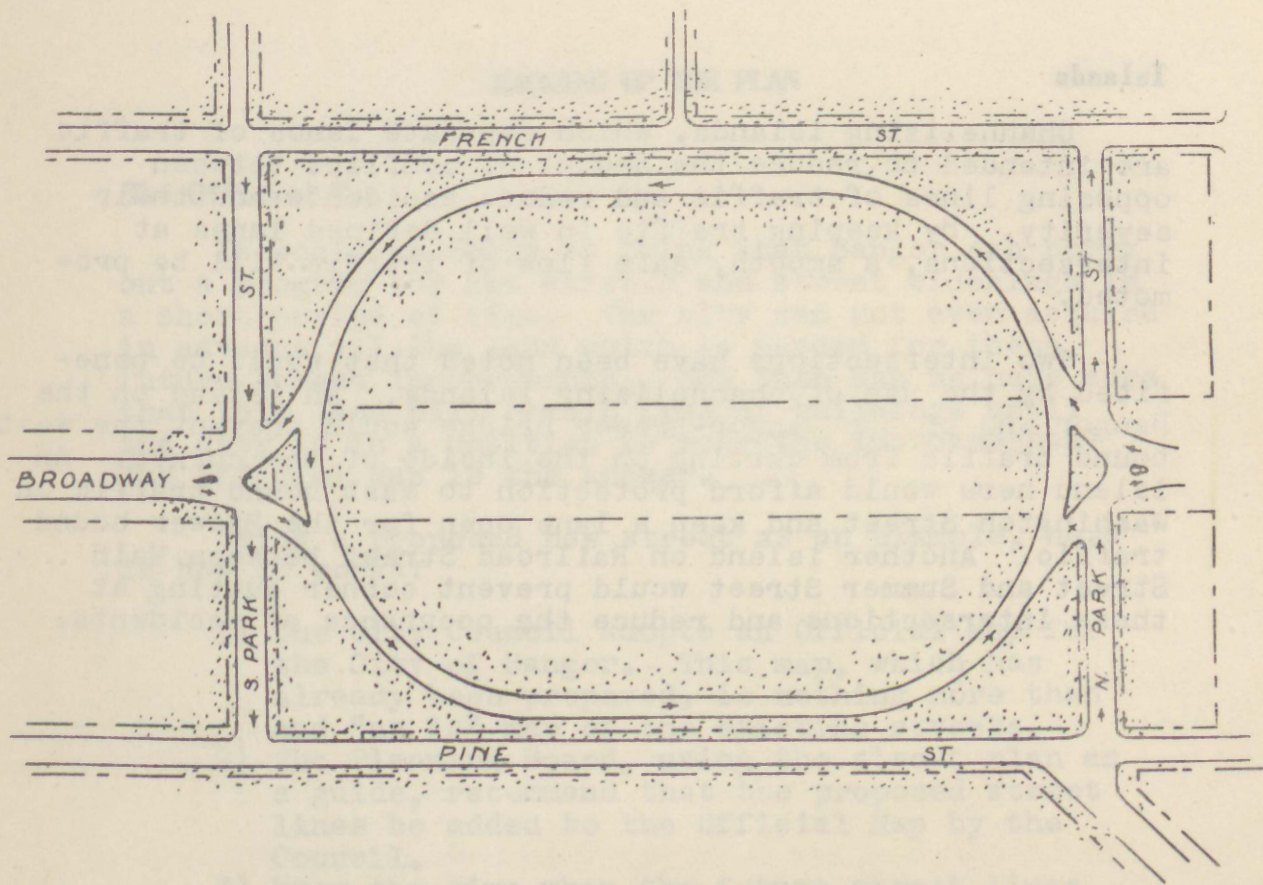
EXISTING
PROPOSED



SCALE ~ 1" = 400'



ALTERNATE DESIGNS FOR
ONE-WAY TRAFFIC AT BROADWAY PARK



Islands

Channelizing islands, which separate lanes of traffic are intended to reduce the amount of conflict between opposing lines of traffic and reduce accidents and their severity. By keeping traffic in well defined lanes at intersections, a smooth, safe flow of traffic will be promoted.

Two intersections have been noted that would be benefited by the use of channelizing islands. An island on the Bangor end of the Bangor-Brewer bridge would prevent the west bound traffic from cutting on the inside of the corner. An island here would afford protection to east bound traffic on Washington Street and keep a lane open for the Brewer bound traffic. Another island on Railroad Street between Main Street and Summer Street would prevent corner cutting at these intersections and reduce the occurrence of accidents.

BACKING UP THE PLAN

The Official Map

It would be folly to think that Bangor can carry out a program for new streets and street widenings in a short period of time. The city can not even acquire in advance all the land which is needed for these future street improvements. How then can we make sure that this land will remain free of buildings until the city is in a position to make the improvements? The Official Map is the answer.

Using a proposed new street as an example, here is how it works:

- 1) The City Council adopts an Official Map for the City of Bangor. This map, which has already been prepared, is nothing more than an "as is" map of the existing streets.
- 2) The Planning Board, using the street plan as a guide, recommends that the proposed street lines be added to the Official Map by the Council.
- 3) From the time when the future street lines are established on the Official Map until the city actually carries out the taking of land and physical construction, no new building may be built in the bed of the proposed street, except on special approval of the Zoning Board of Appeals.
- 4) When the city is ready to actually construct the new street, it may acquire the land through gift, purchase, or condemnation proceedings.
- 5) With the needed property acquired, the city can construct the new street.

The same process can be used for street widenings.

If the ideas of a planned system of major streets are to be more than just ideas then we need this effective legal tool- the Official Map

Subdivision Control

The Street Plan is mainly concerned with major streets. What about minor streets? Are we to allow their haphazard growth within the framework of planned major streets?

The State Planning Statute says not. Under this statute the City Council must approve all new "subdivision plats", which show new streets. The Bangor Planning Ordinance requires the Planning Board's report and recommendation on all plats. These laws give the Planning Board a chance to make suggestions to private developers of new streets. They give the Board a chance to coordinate the interests of the developer with those of the city.

The Board has drawn up a tentative set of "Subdivision Regulations" which will govern their decision on approving plats and will serve as a guide to the developer in conforming to acceptable standards. The following are some of the major points in these regulations:

- 1) The developer will submit a preliminary plat to the Planning Board. On the basis of this plat all important aspects of layout can be considered and agreed upon.
- 2) In general the proposed subdivision shall conform to the Official Map of Bangor and the Master Plan.

- 3) The street grades, widths, and intersections shall conform to acceptable standards.
- 4) A final plat shall be drawn upon tracing cloth. It shall contain sufficient data to determine readily the location, angles, and length of every street line, and the length of every lot line and boundary line, and natural drainage courses.
- 5) Before the Board will approve a final plat, the developer will be required to complete, or assure, by filling a performance bond, the following improvements:
 - a) Roadways shall be graded to a subgrade of not less than 18-24 inches as specified by the City Engineer.
 - b) One-half the gravel required for the roadway shall be furnished and put in place at the expense of the developer.
 - c) Necessary drainage will be provided for by the developer.

In the short run these regulations will stop the addition of muddy, muddled cart tracks to Bangor's street system. In the long run they will bring about the planned expansion of Bangor's undeveloped land.