

It may be stated that the railroad lands could be put to some other use, such as residential, in which case the presence of an improved highway in front of the property would be quite beneficial. That is true if there is any possibility that such a *change* is to take place. However, the use for railroad purposes is permanent, or at least as permanent as any use. Certainly, it is just as permanent as the highway.

In working as a railroad engineer over a long period of years, I have noted a general improvement in methods of spreading special assessments. Much more thought is being given to the matter of actual benefits derived by property from public improvements than was previously given. Men with better training and more engineering knowledge are charged with the duty of spreading such assessments than were those who were doing this most important work several years ago. Meetings, such as you are holding here today, where the views of all concerned may be set out and discussed have added materially to the character of such work, and for that reason remonstrances, injunctions, and other proceedings are instituted by dissatisfied property owners much more infrequently than in the past.

I hope that this general understanding continues and that more opportunities may be had for an exchange of views on this subject.

PLANNING CITY CONSTRUCTION PROJECTS

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The very mention of planning is abhorrent to some people, as they look upon it as "controlled economy" affecting our democratic mode of life. Such is not the interpretation I will place upon the word, but I will use it only as it applies to the engineer's work. There are different conceptions of what planning really is, and many steps must be taken and many interests considered before results can be expected. It is easier for the city planner to start from scratch and plan a new city, where no interests but his own are concerned, than to revamp an existing city where the interests of several thousand citizens must be considered. This latter case is our problem.

At least three phases of orderly procedure should be followed in the development of city projects.

First is the long-time planning to take care of the future growth of the city and also the revamping of existing facilities to meet changed and more modern conditions. This function can be handled best by a group of citizens who are really inter-

ested in the orderly growth of the city and the development of such resources or natural assets as the city may possess. Fortunately for Indiana cities, the State has provided the machinery for organizing such a group by the passage of the enabling act, which permits the establishment of City Plan Commissions. This act, which no doubt is familiar to all of you, was passed in 1921 and a number of cities have taken advantage of it. In our case, such a commission was formed in 1922 and has functioned actively ever since, at small expense to the city. A local plan commission had existed since 1919.

The Enabling Act of 1921 sets forth the duties of the City Plan Commission as follows: "to make surveys, studies, maps, plans or charts of the whole or any portion of such city and of any land outside such city, which in the opinion of the Commission bears relation to the plan of the city respecting the location, width and arrangement of streets and alleys, ways, subways, viaducts, bridges, docks, wharves, parkways, boulevards and the location of parks, playgrounds, community centers or any other public buildings, grounds or improvements and the removal, relocation, widening or extension of such public works then existing, the platting of grounds into lots or parcels, streets and alleys, and the location or relocation and development, routing or re-routing of the transit lines, transportation lines or other facilities of communication."

In fact, the plan commission has authority over practically everything affecting "the health, safety, comfort, morals, convenience and general welfare of the community."

In 1935 the act was amended to require the plan commission "to adopt a master plan for the physical development of the city, including the contiguous territory within the five-mile limit. It is also its duty to prepare a long-term development program of all major improvement projects. These duties are advisory only, the plan commission having no administrative powers as concerns construction work.

FIRST STEP

The first essential step, on the part of the engineer, in this planning phase is the preparation of a plan or plans of the whole city and contiguous territory showing thereon such projects as may be suggested and are decided upon by the plan commission as being desirable for consideration. Such plans must be very flexible and lend themselves to revision as changes in conditions occur or as the plan commission may dictate. For our general purpose use, a map was prepared to the scale of one thousand feet to the inch of the entire territory under the jurisdiction of the City Plan Commission. The main advantage of having such a map is that on it may be laid out projects beyond the corporate limits which have a bearing

upon city projects and which must be coordinated with them. Another map, having a scale of five hundred feet to one inch, was prepared of the city proper and immediately adjoining territory. On these maps is shown each project as it is conceived and approved for consideration by the City Plan Commission. I have shown on these maps, in red, the projects developed and completed since 1930, some of which, however, were conceived before that date. In green are shown projects conceived but not under construction.

In the preparation of more recent maps, as well as in the revision of older ones, we have, to a considerable extent, made use of aerial surveys. Original photographs were taken from a height of about 3,800 feet, the prints from such being to a scale of about 500 feet to the inch. The central portion of each small photograph was enlarged to a scale of 100 feet to one inch, resulting in plans that were surprisingly accurate.

SECOND PHASE

The second phase, and to me the one which most concerns the city engineer, is that of selecting and working out the details of those projects which should be undertaken at any particular time. This phase is governed mainly by the order of importance and the ability of the taxing unit to finance. In Richmond it had been the practice to concentrate on street construction work where the cost could be charged against the property through improvement assessments. However, in 1930-31 it became apparent that little further could be done under the Barrett Law. It was felt, though, that some construction work should be initiated to give a measure of relief to what was thought to be a temporary unemployment situation. A number of major projects were on our program, but the citizens generally were not in the frame of mind to submit to the large, general-obligation bond issues which would be necessary in the execution of such projects. Some of our projects were even too large to be financed under the two percent constitutional bond limit. One such was our sewage treatment works, the most urgently needed. One sewer project, known as the South B Street Relief Sewer, was selected as a possible work relief job. This was undertaken and carried through, as a contract job, in 1931 with a moderate bond issue of \$95,000, detail plans and specifications having been prepared and held in readiness.

TYPICAL EXAMPLES

As you know, however, 1931 did not end the so-called depression. In the fall of 1932, when the unemployment situation was critical, our plan became a godsend. When the Civil Works Administration was formed and we were told to get busy over night, we simply "reached into the hat" and picked

out those projects which could be started at once and at the least cost to the city. Naturally, most of these consisted of improving the unimproved streets. Several miles of streets were thus improved which in the natural course of events would have taken many years to achieve.

After the first shock was over, it became evident that more imposing projects should and could be undertaken. These required plans in more detail. When a decision was reached by the plan commission as to starting a particular project, the engineer would then have prepared these detail plans.

As time passed with still no end of the depression in sight and the federal government had set up the Public Works Administration, projects of greater importance were selected from our list. The most important of these, as far as the civil city was concerned, was the sewage treatment works. This project had been in the making for several years, starting in an order, or possibly a request, from the State Board of Health that the pollution of the Whitewater River be stopped. However, public sentiment was strong against the project because of the heavy tax burden and excessively large bond issue; so no action could be had. When the Public Works Administration came into the picture and made a grant offer in an amount of \$140,000, provided the city would issue bonds for \$360,000, the opposition was broken down. Because the preliminary work had been done in our long-term planning, it was comparatively easy to complete the project, once the public was satisfied.

One of the most interesting projects from the standpoint of planning as well as construction was the Senior High School and Public Auditorium plant. The public generally admitted the need for a new plant, which was on the long-term program, but the proper site was the bone of contention. Each residential section felt that its location was the logical site. When due consideration was given to the trend of city growth and the various suggested sites were shown on our map, it was fairly easy for an intelligent commission to agree on the best location.

At the present time we have finished all authorized construction projects with the exception of a few isolated street and alley jobs being done under the WPA. We hope to have these completed by the time that relief agency is liquidated.

AIRPORT PROJECT

The big project now confronting us is the municipal airport. This project illustrates the desirability of having a flexible plan. For the past several years it had been assumed that the city would some day purchase the small airport west of the city, as shown on the plan, and a development plan had been prepared toward this end. Negotiations to purchase had even been entered into with the landowner. Now the Civil Aero-

navitics Administration has entered the picture and says that that site does not meet the requirements of a modern airport; it would not approve of, nor lend its support to, its development. The Department of Commerce, of which the Civil Aeronautics Administration is a part, as well as the War Department, desired an airport in the southeastern section of Indiana and offered to construct a modern layout at a cost of \$945,000 provided the city would furnish a satisfactory site of at least 640 acres and such as would meet governmental approval. Arrangements were made for some of our local aviators to fly over the district and spot six sites which looked promising from the air. Plats and tentative layouts were made for each possible port and submitted to the C.A.A. Specialists from that administration then investigated, in various details, each site and selected the one southeast of the city. This site contains 652 acres and will cost the city about \$180,000, including damage to contiguous property.

A third phase of planning is that of programming the various steps to be followed in construction after the work has actually started. This is one that primarily concerns the construction superintendent, who may or may not be the city engineer. In either case the engineer, especially if he has prepared the plans, can be of material help in seeing that orderly procedure is followed. I need not elaborate on this phase of planning, as you all, no doubt, have had this experience and I am sure I could not add to your knowledge.

PUBLIC WORKS CONSTRUCTION

As you all know, the WPA aid is soon to be out of the picture. Some of those who have had the handling of the various projects under this organization may not have been in wholehearted sympathy with it and will no doubt breathe a sigh of relief when liquidation occurs. Yet the fact remains that, as far as Richmond is concerned, much good was accomplished, several million dollars of new money was brought into the community, and many a small business saved. Something, sooner or later and let us hope better, will have to be set up in its place. I think all will agree that public works construction has a place in relief work or in helping to control the unemployment situation. The experienced engineer should be particularly well fitted to help solve this problem. It therefore behooves all of us to get prepared by working out in as much detail as possible sensible projects which can be started on short notice and yet in an orderly manner. The value of far-sighted planning has been proved by past experience. The city with well-thought-out plans, which can be placed under construction in a short time, will be in the best position to take advantage of any assistance which may be forthcoming from any other agency. I am sure many cities will need such assistance.