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# LACKAWANNA



STATE OF NEW YORK THOMAS E. DEWEY, GOVERNOR

## REPORT ON STATE ARTERIAL HIGHWAYS IN THE LACKAWANNA URBAN AREA

THE DEPARTMENT OF PUBLIC WORKS

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1949

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### STATE OF NEW YORK DEPARTMENT OF PUBLIC WORKS ALBANY 1

February 3, 1949

Hon. John J. Janiga Mayor of the City of Lackawanna Lackawanna, New York

Hon. Roy R. Brockett, Chairman Erie County Board of Supervisors Buffalo, New York

Gentlemen:

It is a distinct pleasure for me to submit to you the accompanying Urban Area Report for the City of Lackawanna and its environs, recently completed by our Department. This presentation contains a recommended master plan for arterial route improvements within your urban area and describes in considerable detail the extensive traffic and planning studies upon which it has been predicated.

Although this phase of our Department's program is relatively new, having been authorized by Highway Law amendments enacted during 1944 and 1945, fifty-nine New York State cities have been surveyed to date and thirteen urban area reports have been presented since active work was undertaken early in 1946. The Lackawanna study, which is the fourteenth to be completed, was initiated with the urban

area traffic survey conducted during June, 1947. The subsequent detailed analysis of the resulting information disclosed the character and extent of the serious problems affecting both local and through travel over the major city thoroughfares.

The recommended master plan for arterial routes has been designed to meet these problems and additional traffic needs which may develop within a reasonable period of forecast. The importance of harmonizing new proposals with the existing physical structure of the community and its planned future development was fully recognized. It is believed the essential requirements in this respect have been satisfactorily met.

The total cost of the improvements set forth in the master plan is estimated at \$2,790,000. This total amount includes the estimated \$78,000 cost of the McKinley Parkway improvement, north of Ridge Road, recommended as a city undertaking. Right of way costs for state arterial routes within the city are estimated at \$330,000. Under the provision of the Arterial Law fifty per cent of these total right of way costs, amounting to \$165,000, would be assumed by the city, in the amount required for each individual project after its details are agreed upon and at the time each is scheduled to be undertaken.

A basic advantage accruing from the preparation and adoption of a master plan for arterial route improvements is the certainty that each unit project will, upon its advancement to completion, become a component part of a comprehen-

sive and agreed upon undertaking. This assurance will permit local, private and public enterprise to coordinate their proposals with the approved major route plan and advance their developments with greater confidence.

Local approvals are prerequisite to state legislative action incorporating the route descriptions into the Highway Law and until such legal designation is made detailed project construction plans involving routes not already incorporated in the Highway Law may not be advanced.

With these facts in mind and in recognition of the importance of prompt action in expediting state and city traffic movements within the urban areas, it would be appreciated if you and your associates will review the accompanying report at your early convenience and advise me if the recommendations contained therein meet with your general approval.

Respectfully submitted,

Superintendent of Public Works

#### ACKNOWLEDGMENTS

The assistance of the following agencies and their cooperation in furnishing material and information essential to the preparation of this report is sincerely appreciated and gratefully acknowledged.

CITY OF LACKAWANNA

Department of Engineering Department of Police City Treasurer's Office Public Library BUFFALO POLICE DEPARTMENT BETHLEHEM STEEL COMPANY NEW YORK STATE DIVISION OF POLICE

Acknowledgment is also made of important material and aid freely contributed by the Village of Blasdell, the towns contiguous to the City of Lackawanna and by the many public spirited organizations and residents of the area.

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## SUMMARY OF RECOMMENDATIONS

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#### SUMMARY OF RECOMMENDATIONS

The urban areas are the primary destinations of major volumes of state highway travel and by reason of the existing pattern of state routes almost all are traversed by through traffic as well. The combination of state and local vehicle movements over inadequate city streets results in traffic congestion and delays to the detriment of all forms of travel.

Obviously the conditions which presently exist will grow worse and new problems will develop as motor vehicle registration increases and added travel occurs. The recommendation of Governor Thomas E. Dewey that immediate steps should be taken to correct these interrelated state and city problems and the subsequent enactment of the Arterial Route Law by the State Legislature, have materialized in statewide investigations of urban area traffic conditions by the New York State Department of Public Works.

In general, the report which follows describes the major details of the traffic and planning studies conducted in the Lackawanna urban area. It sets forth the extent of the existing traffic problem, forecasts its probable increase and details a master plan of arterial routes designed to meet the anticipated traffic needs.

The Erie Thruway, a section of the high capacity expressway which will extend throughout the entire length of the state, is planned to pass through the sparsely

developed land in the southeastern area of Lackawanna. Upon completion it will siphon off a substantial percentage of the north-south traffic through the city and this factor has been considered in the development of the recommended master plan, the basic elements of which are as follows:

#### MCKINLEY PARKWAY ARTERIAL ROUTE



The recommended improvement of McKinley Parkway through Lackawanna would furnish a direct connection into the heart of the city from the Erie Thruway. It would extend from the inter-

change connection with the Thruway near the south city line northerly over the New York Central, Pennsylvania, Lehigh Valley and Baltimore & Ohio railroads and continue in a northwesterly direction on new right of way to an intersection with Ridge Road. This route, approximately 1.3 miles long, is planned as a divided four lane pavement. Provision is made for a surface connection at Martin Road.

#### RECOMMENDED CITY IMPROVEMENT

As an element of the overall system it is recommended that McKinley Parkway be extended from the Lackawanna-Buffalo city line at Dorrance Street, southerly over new right of way so as to connect with Ridge Road just east of the Baltimore and Ohio Railroad tracks. This short but

important section of highway, about 0.2 miles long should be designed as a four lane divided highway to correspond with the section planned to extend southerly to the Thruway.

HAMBURG TURNPIKE ARTERIAL ROUTE



In order to provide adequate capacity along Hamburg Turnpike, it is required that the present route be widened throughout its entire length within the city limits, a distance of about 1.90 miles.

Mall separated roadways are planned, each having two travel lanes. An additional lane for parking purposes is provided along the easterly or northbound section. The widening of the Turnpike would necessitate reconstruction of the South Buffalo Railroad Bridge located near the north city line.

South of the south city line it is planned to widen the present highway (Route 5) for a distance of approximately 0.7 of a mile into the Hamlet of Woodlawn. Its northerly section would be built as a four lane divided highway and the remaining southerly portion widened to provide four travel lanes and two 8 foot parking lanes.

To the north of Lackawanna, Hamburg Turnpike continues as Fuhrman Boulevard in the City of Buffalo. The two lane lift bridge across the Union Canal in Buffalo located near the north city line of Lackawanna is narrow and retards the free flow of traffic. It is planned, as a part of the Buffalo Arterial Route Plan, to replace this bridge with a 4 lane structure having adequate clearance for the passage of tugs and small boats.

RIDGE ROAD ARTERIAL ROUTE



The master plan which is herein presented incorporates Ridge Road as part of the arterial route system by reason of its importance as a cross city artery. It is the only available thoroughfare in

Lackawanna that provides communication between the east and west sections of the city and which can serve as a connecting highway between routes 18, 62, 5 and the proposed Erie Thruway.

Although the traffic studies have indicated that lack of capacity during peak hours may be reached within the forecast period, present street widths are ample for immediate needs as long as existing travel lanes are kept open, and as far as possible interference to free movement eliminated.



#### PURPOSE AND POLICY

New York State's urban arterial highway program has been actively underway since 1946. The basic purpose of this program is the scientific development of a master plan of arterial highway routes for each urban area of the State which, when constructed, will serve to expedite State highway travel into and through cities, and to substantially relieve major urban traffic congestion as well. The findings and recommendations of each study are presented in comprehensive report form to the authorities of the urban area concerned.

Following review and local acceptance of the plan or a mutually agreed modification thereof, specific designation of the recommended arterial routes may be incorporated in the Highway Law by legislative amendment. Upon official designation, specific arterial routes may be selected and advanced to project design and construction stage, to the extent which prevailing state highway funds, federal aid highway allocations, and local financial programs will permit.

Under the governing provisions of the Highway Law the State assumes all costs of planning, design and construction of approved arterial route projects within its cities, as well as fifty per cent of the cost of right of way. Funds to cover the remaining one half of right of way costs are to be advanced by each city as individual projects are undertaken.

Local legislative approval of the master plan for

arterial routes as presented or as modified by mutual agreement, does not constitute a specific obligation of city funds. It does, however, indicate local approval of the general scope and arrangement of the recommended arterial system, and the procedures established for its advancement to final completion.

The planning of an arterial route system and its ultimate construction is certain to exert considerable influence on the future city pattern. For this reason the studies which are conducted by the Department give specific attention to the important phases of city planning which are most closely related to arterial route development. This process permits the development of an arterial system which, not only meets the traffic needs disclosed by the studies, but which is compatible with practical planning requirements as well. Official approval of the recommended arterial route system permits public and private enterprise to develop their undertakings in conformity with the established pattern of major thoroughfares.

Official approval of the recommended overall plan is requested from the city concerned before individual projects may be advanced. When the urban area plans are of material concern to the authorities of the county, towns and adjacent villages these officials are invited to review the proposals and indicate their comments or approval.

In accordance with the general policies stated above, this report presents the plan which has been developed for the Lackawanna urban area.





#### CHARACTERISTICS OF THE LACKAWANNA URBAN AREA

Lackawanna, located at the eastern end of Lake Erie and immediately south of the City of Buffalo, is one of the newer cities of New York State and an important steel production center.

The superior harbor facilities and availability of raw materials, together with the excellent rail and canal systems of the Niagara Frontier, attracted the Lackawanna Steel Company at the turn of the century to construct a large capacity steel plant within the city limits. The present plant, now owned by the Bethlehem Steel Company, employs approximately 15,000 workers and has a yearly output of some two and one half million tons of steel.

The establishment of the first units of the steel mills brought a sudden surge in population to the Town of West Seneca, principally in the communities of Roland, West Seneca and Limestone Hill. In 1909 after a disagreement concerning the distribution of the tax burden, a portion of the Town of West Seneca was detached and incorporated as the City of Lackawanna. The growth of the city since that time has paralleled the expansion of the steel plant.

Lackawanna is transected by the main lines and yards of seven major rail systems and lies astride the heavily traveled highways converging upon Buffalo from the south and southwest. The two main north-south arteries one east and the other west of the railroad yards are extensions of major streets from within the City of Buffalo. The east and west

sections of the city are connected by a single street, Ridge Road, which passes over the railroads on a long viaduct structure almost 1300 feet in length. It is the only connecting link between the two sections and is therefore subjected to heavy concentrations of traffic.

Within the western portion of the city, adjacent to the steel mills there is little vacant land for future development which restricts future expansion to the southeastern areas.

## BASIC PLANNING DATA

#### POPULATION GROWTH

The changes in population together with future increases in motor vehicle ownership and usage have a direct bearing on the design of an arterial route system.

The population of the City of Lackawanna increased steadily between 1910 and 1930. During the ten year low production period which followed there was little change from the 1930 total of about 24,000 persons. The new trend of gradual increase which developed after 1940 has increased the 1930 total approximately 10 percent.

The population changes which have occurred in Lackawanna and in Erie County since 1910 and a forecast of probable growth by 1960 are graphically illustrated on the accompanying plate. The prediction considers such factors as induced immigration, estimated natural population increases and the industrial expansion expected in the city and its surrounding area.

The graph indicates that the growth of the city will parallel that of the county as a whole with the expectation that by 1960 the population of the City of Lackawanna should reach 31,700 while that of the county including the city should approximate 940,000.



#### POPULATION TRENDS

The development of the automobile has had a marked effect in accelerating the growth of population in the urban areas immediately adjacent to Lackawanna. With the outlying areas becoming more readily accessible, suburban towns and villages have been expanding at a greater rate than that experienced by the parent city.

The extent and direction of population growth in the city and each of the contiguous communities is portrayed on the adjacent plate. The northern part of the Town of Hamburg, which includes the Village of Blasdell, the Hamlet of Woodlawn and a small part of the Town of West Seneca may be considered as a part of Lackawanna urban area.

It is anticipated that these communities will experience an increase in population and as growing communities they are important in the overall pattern of urban area development. Their influence as traffic generators is a basic factor to be considered in the planning of an arterial route system.

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#### POPULATION DENSITY

The relative locations of the industrial and business centers in the urban area and the distribution of its population exert a definite influence upon the pattern and volume of traffic movements.

The various densities of population in unit areas within the City of Lackawanna and its environs are illustrated on the accompanying plate. The areas of high population density lie in the northerly and westerly portions of the city, adjacent to Ridge Road between Hamburg Turnpike and South Park Avenue. Abutting areas of lesser density extend toward the south on both sides of the railroad yards.

The probable future population distribution in the low density areas of the city and their geographical relationship to the city's major industrial center will have a bearing in the selection of advantageous route locations. These factors are given full consideration in arterial route design.



#### ZONED LAND USE

The pattern of future city development will be influenced to a major extent by the selected locations for arterial routes. It is desirable, therefore, before final route locations are determined that their impact upon the city planning processes be considered.

The present zoning of the City of Lackawanna and a portion of its immediate suburbs are illustrated on the adjacent plate. The extent to which these areas are developed in accordance with the zoning provisions is a factor which influences the pattern of major traffic movements.

The principal industrial site is established along the Lake Erie waterfront where one of the country's important steel plants has been built. Other industries extend along the railroad yards and spurs servicing the Lackawanna area. A scattered residential and business pattern is indicated in the north and west portions of the city while the area extending easterly to the city limits is primarily residential in character. The proximity of the large Buffalo central business area has discouraged large scale growth of local retail merchandising in Lackawanna.



#### ASSESSED LAND VALUES

An important factor in the determination of a new route location is the cost of necessary rights of way. When high value areas are also important traffic generators requiring new street facilities, the problem of obtaining satisfactory locations within reasonable cost limits necessitates detailed investigation and study.

The relative assessed land valuations of different areas in the City of Lackawanna are shown on the accompanying plate. The areas of highest unit value are marginal to Ridge Road where local stores and business establishments are located. The large industrial areas adjacent to the principal thoroughfares and railroad facilities west of South Park Avenue are next in land value.

The planning of arterial routes in such areas must take into consideration not only the relative land costs as indicated by the assessment records but recognize the probable value of the capital improvements as well.

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#### MOTOR VEHICLE REGISTRATION GROWTH

The data furnished by the Motor Vehicle Bureau were studied to determine the trend in motor vehicle registration in Erie County, from 1920 to 1946 inclusive. Within this period of time the total private and commercial registration increased over 350 percent as shown on the accompanying plate.

In 1920, the ratio of population to car ownership for Erie County was 10.6, by 1946 the ratio had dropped to 3.8 persons per car. It is anticipated that the upward trend in registration will continue more rapidly than the population increase and that by 1960 there will be 3.1 persons per vehicle.

A similar study was made for the City of Lackawanna and it is anticipated that the number of persons per vehicle will be 3.1 by 1960 as compared to one vehicle for each 4 persons in 1946. This indicates that for the City of Lackawanna there will be an increase in registration of nearly 57 percent above present levels, which will be brought about by the combined growth of urban population and increased individual vehicle ownership.

The population and motor vehicle registration forecasts provide factors for the expansion of present day traffic data to 1960 figures which have been adopted as the basis for design.



## THE TRAFFIC SURVEY
## DESCRIPTION OF THE SURVEY

The comprehensive traffic survey conducted in the Lackawanna urban area by the Department of Public Works consisted of three general parts, a volume census, an origin and destination survey and a speed and delay study.

## VOLUME CENSUS

The twelve hour traffic census, which followed the standard procedure used previously in other cities of the state, was conducted on June 17, 1947. The type and volume of vehicles traveling in each direction on the major streets were recorded at 17 key stations between the hours of 6:30 A.M. and 6:30 P.M. Two hour supplementary counts were also taken at eight additional stations.

## ORIGIN AND DESTINATION SURVEY

An origin and destination survey was conducted on June 24, 1947 to determine the travel habits of the motorists in the Lackawanna area. Stations were established on every major street and highway entering the city to form an outer cordon. An inner cordon of stations was also set up surrounding the central business district.

Traffic at the 14 key stations was controlled by State Police, Lackawanna city police and the Buffalo city police. During the twelve hour survey period from 6:30 A.M. to 6:30 P.M. over 22,700 questionnaire cards were distributed to motorists by 84 New York State employees.

Returns were obtained from 27% of the cards handed out. They were then coded to indicate the origin and destination of each trip and mechanically tabulated to obtain the origin and destination data included on the following plates and in the text of this report.

## SPEED AND DELAY STUDY

A vehicle speed and delay study forms another important part of the complete traffic survey. This field investigation, made by driving during peak hour traffic flows and recording total running time between designated points with the length and causes of delay enroute, is designed to determine the cause of congestion of major streets and to establish the overall elapsed travel time between points of origin and destination. When related to existing street capacities and future estimated volumes, speed and delay data supply additional basic information needed for the design of the new route system. They also serve as a measure of the planned efficiency of the designed routes by demonstrating the saving in travel time which will be possible following the construction of the new route system.

## 1947 12 HOUR TRAFFIC VOLUMES AND ESTIMATED 1960 INCREASES WITHOUT IMPROVEMENTS

The traffic volumes for 1947 and the increases expected by 1960 are graphically presented on the adjacent plate. Scale bands of varying widths are employed to show the relative volumes of vehicles using the principal city routes. The existing volumes are illustrated by the dark bands and the increases expected by 1960 are shown in yellow. The anticipated growth in motor vehicle registration and total population within the urban area were governing factors used in estimating the traffic increases.

The plate indicates the present heavy flow of traffic on the three principal north-south routes which carry through-traffic to and from Buffalo. The railroad yards acting as a north-south barrier divide the city, force all cross-city traffic to pass over the Ridge Road viaduct which is the only crossing for east-west travel within the city. The heaviest two directional traffic movements were observed on Hamburg Turnpike, which in addition to carrying the large volumes of through travel along State Route No. 5, serves the extensive abutting commercial and industrial developments.



# 1947 PEAK HOUR TRAFFIC VOLUMES WITH STREET CAPACITY

The previous data relative to twelve hour vehicle volumes are important in that they serve to illustrate the general pattern and composition of traffic upon existing major streets. The analysis of peak hour travel and its relationship to the traffic carrying capacity of these streets discloses the location and extent of deficiencies which presently exist.

The existing street capacity is based upon the free travel lanes available after deducting the street area set aside for vehicle parking from the total street width.

The accompanying plate illustrates present two way peak hour volumes in relation to present street capacities. Where added street capacity is needed to carry the present peak hour load the additional requirement is shown in red. Where the peak hour volumes are less than the available street capacity the surplus is indicated by the white band.

The plate indicates the extent to which Hamburg Turnpike is insufficient for present peak hour travel. It also shows that Ridge Road and South Park Avenue are approaching the limits of their capacity during peak periods.



# 1947 AND ESTIMATED 1960 TIME FLOW

The major traffic movements in the City of Lackawanna, along Hamburg Turnpike, South Park Avenue, Abbott Road and Ridge Road are hampered by curb parking, curb loading, heavy pedestrian crossings and other impediments to smooth flow.

In June 1947 a series of peak hour test runs were made to establish the time required to traverse the city over these major routes. The results are portrayed graphically on the accompanying plate by dashed white and green time bands. On the same plate the dashed white and red time bands show the estimated 1960 travel time between city lines over the identical routes.

A comparison of the time bands along Hamburg Turnpike indicates that in 1947 it took approximately 7 minutes to drive through the city, at an average speed of 17 M.P.H. By 1960 with no arterial improvements, this travel time would increase to 13 minutes and the average speed would be reduced to about 9 M.P.H. Comparable conditions are indicated for the other major city routes.



# DESTINATIONS OF TRAFFIC PASSING CITY LINE STATIONS

The pattern of the traffic flow into and through the City of Lackawanna entering through the outer cordon stations is shown on the accompanying plate.

Because of its geographical relationship to Buffalo, Lackawanna receives the full impact of that city's heavy north-south travel, the major portion of which enters and passes through Lackawanna over Hamburg Turnpike. Traffic movements of similar character but smaller in volume follow South Park Avenue and Abbott Road, important north-south thoroughfares located east of the railroad yards.

Minor traffic flows from outside the city to zones within Lackawanna are also portrayed. These smaller volumes are destined primarily to the business area along Ridge Road or to the Bethlehem Steel Plant located along Hamburg Turnpike.

The more detailed origin and destination data shown on the following plates further illustrate the extent to which the extensive north-south travel warrants major consideration in the development of an arterial route plan.













From the Digital Collections of the New York State Library.

# ORIGIN AND DESTINATION OF TRAFFIC ORIGINATING IN THE CITY OF LACKAWANNA

The amount of traffic originating within the City of Lackawanna is relatively small in comparison with the major traffic flows of external origin. The accompanying plate indicates that a large portion of this local traffic is destined to central and downtown Buffalo. Major intra-city travel is east-west, between residential areas and the primary industrial and commercial zones.

Although internal and external traffic combine to produce the heavy vehicle movements on the major thoroughfares, the predominating volumes of through traffic are primarily responsible for peak hour congestion and the subsequent delays and inconvenience.



## ACCUMULATION AND DISTRIBUTION OF TRAFFIC IN THE LACKAWANNA URBAN AREA

The substantial physical barrier created by the extensive railroad yards and the limitation of east-west travel to the Ridge Road crossing are primary reasons for the pattern of combined major internal and external traffic movements shown on the accompanying plate.

These composite data indicate the relative importance of local and through traffic volumes and provide essential information for the evaluation of the routes over which these movements occur.



# 1960 PEAK HOUR TRAFFIC VOLUMES WITHOUT IMPROVEMENTS

The accompanying plate illustrates the anticipated 1960 peak hour traffic volumes in relation to present street capacities.

The volume increases expected by 1960 will cause greater traffic deficiencies to occur on Hamburg Turnpike than presently exist. In 1947 the peak hour flow on South Park Avenue was nearly equal to its street capacity. The forecast indicates that by 1960 a substantial deficiency will occur on this street if no improvements are undertaken. Ridge Road, which presently has a small margin of capacity, may be expected to develop an overload during the period of peak hour travel.

As these potential conditions materialize both through and local travel over the major streets in the urban area will be subjected to added delays and inconvenience.



# THE PROBLEM

#### THE PROBLEM

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The City of Lackawanna, being contiguous to the southerly border of the City of Buffalo, is subjected to the heavy volumes of motor traffic passing to and from that city. As a result, traffic loads on the north-south thoroughfares of this community are considerably larger than those which would be normally generated by a city of 26000 population.

The traffic deficiencies which presently exist along Hamburg Turnpike are expected to increase and other deficiencies are expected to develop on major paralleling streets, indicating that supplemental north-south street capacity is necessary. In addition, the vehicular flow along Hamburg Turnpike is frequently impeded by numerous turning movements into and out of the Bethlehem Steel Plant which borders its entire length.

Ridge Road is the only continuous route that provides a connection between the east and west sections of the city. The foregoing traffic data have indicated that the present free lane capacity of this important artery will be insufficient to accommodate the estimated 1960 peak hour loads.

The extensive track network of the seven railroads traversing the urban area includes several main lines. Their location introduces the problem of expensive grade elimination structures in the consideration of new right of

way location for traffic relief facilities. Because of this cost element and the need for planning within reasonable economic limits, the possibility of using existing right of way must be carefully studied.

THE PLAN AND ITS BENEFITS







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## THE PLAN

The recommended plan of arterial routes within the Lackawanna urban area is presented on the opposite plate. It includes adequate provision for the increase of northsouth traffic expected to develop within the period of forecast and makes allowance for the changes in traffic movements that will follow the completion of the Erie Thruway. An analysis of the origin and destination data obtained from both the Lackawanna and Buffalo surveys has indicated that through traffic volumes, varying from 20% to over 40%, would be diverted from major city streets.

However, it has been shown that the remaining through traffic movements in combination with vehicles having local origin and destination will acquire added north-south facilities. These are provided for by the recommended arterial routes planned along Hamburg Turnpike and McKinley Parkway.

The master plan which is herein presented incorporates Ridge Road as part of the arterial route system by reason of its importance as a cross city artery. It is the only available thoroughfare in Lackawanna that provides communication between the east and west sections of the city and which can serve as a connecting highway between routes 18, 62, 5 and the proposed Erie Thruway.

## ARTERIAL ROUTES

## MCKINLEY PARKWAY ARTERIAL ROUTE

McKinley Parkway, extending north and also to the

south of Lackawanna, has never been improved within the city. The completion of this section through Lackawanna would provide the easterly area of the city with the north-south traffic capacity that it is estimated will be required within the period of forecast. In addition, the new route would serve as an important Thruway connection and provide convenient access from the northern part of the Town of Hamburg and a considerable portion of south Buffalo.

The McKinley Parkway improvement would start at the planned Thruway interchange connection, just south of the New York Central Railroad tracks near the south city line. From this point it would extend in a northerly direction over new right of way, crossing the New York Central, Pennsylvania, Lehigh Valley and the Baltimore and Ohio railroad tracks to a junction with Ridge Road near the Holy Cross Cemetery. Separation structures are planned for the railroad crossings while intersections at relocated Martin Road, South Shore Drive and Ridge Road will be at grade.

This proposed route, approximately 1.30 miles in length, is planned for 2-24 foot travel lanes separated by a 4 foot center mall.

## MCKINLEY PARKWAY

FROM RIDGE ROAD TO LACKAWANNA NORTH CITY LINE

The short extension of 2-24 foot mall separated roadways from Ridge Road northerly over new right of way to meet existing McKinley Parkway at the Buffalo city line has been indicated as a desirable element of the overall plan.

However, it does not qualify as an arterial route under the law and, therefore, its improvement would of necessity be a local undertaking.

## HAMBURG TURNPIKE ARTERIAL ROUTE and Highway Connection

The Department's traffic studies not only revealed the extent to which Hamburg Turnpike is inadequate for present day peak hour volumes but also disclosed the added capacity which would be needed to accommodate the increases anticipated within the period of forecast.

Following detailed study and investigation it was concluded that the high cost of land acquisition precluded consideration of a route on new right of way and that Hamburg Turnpike should be reconstructed and widened throughout Lackawanna and in Woodlawn to the south.

The improvement within Lackawanna would provide for 2-24 foot travel lanes separated by a 4 foot mall. At required points, the roadway will be widened to allow for left turn lanes and bus turnouts. A consolidation of the several entrances to the Bethlehem Plant would reduce traffic conflict of plant shift periods. The easterly roadway would be provided with an 8 foot parking lane and a mountable curb along the west roadway would permit offpavement parking for disabled vehicles. The total paved width would be 60 feet.

The existing bridge carrying the South Buffalo railroad over the Hamburg Turnpike Arterial Route in the vicinity of Fourth Street would be reconstructed to

provide 14 foot overhead clearance, the necessary four travel lanes and two pedestrian passageways.

# HIGHWAY CONNECTION TO THE SOUTH

South of the city line, it is planned to improve the present highway (Route 5) for a distance of seven-tenths of a mile. The northerly portion of this highway would consist of 2-24 foot roadways with a 4 foot mall separation. The southerly remaining portion would be widened to 68 feet to provide a 52 foot pavement and two 8 foot parking lanes.

# RIDGE ROAD ARTERIAL ROUTE

Ridge Road is the only east-west artery connecting the east and west areas of the city. The traffic studies have indicated the deficiency in peak hour traffic capacity that may be anticipated on this route within the period of forecast.

Detailed investigation of the requirements for a parallel crosstown route, disclosed the many complications and high costs of any elimination structure over the extensive railroad yards. Consideration of these costs in relation to the estimated volume of traffic that would divert from Ridge Road fails to provide sufficient warrant for the inclusion of added cross city facilities in the recommended master plan.

It is suggested, however, that traffic control procedures along Ridge Road should be jointly studied with an objective of expediting traffic flow and promoting traffic safety through elimination of the primary causes of congestion and delay.

## VEHICLE ACCUMULATION AND PARKING CAPACITY IN THE CENTRAL BUSINESS AREA

Adequate terminal facilities at major traffic destination points are important to the overall operating efficiency of an urban transportation system. As part of the Lackawanna traffic survey information was obtained as to the hour by hour and total vehicle accumulation within the business district, between 7:00 A.M. and 7:00 P.M. on an average week-day.

These data showed a peak accumulation of 669 vehicles between II:00 A.M. and noon, which gives a measure of present parking demands.

A survey of available parking space within the designated business area indicates the existence of 1800 curb spaces and 350 spaces in parking lots. The total of 2150 spaces available are ample for present parking needs and the estimated additional requirement within the forecast period.

# THE PLAN RELATED TO BASIC PLANNING FEATURES

The accompanying plate shows the recommended plan of arterial routes in relation to basic planning features of the City of Lackawanna. The primary industrial and commercial areas which are also the areas of highest unit total valuation, the extensive railroad developments and the major residential areas, together with an indication of their density of population are indicated on this plate.

The location and extent of major industrial development, including the railroads, has established physical barriers which limit the areas that could be considered for possible new locations, not only from the standpoint of the problems of design and construction but also in consideration of potential costs of rights of way.

These controlling factors, together with the estimated requirements for additional north-south traffic capacity, both east and west of the railroads, and the need for adequate facilities convenient to major industrial and commercial traffic generators, governed the selection of the north-south arterial route locations. Likewise, the eastwest traffic needs and the consideration of city planning features, influenced the decision to recommend the designation of Ridge Road as the east-west connecting arterial route, with a recommended traffic operation study and the institution of appropriate traffic controls to assure satisfactory operating efficiency.



# 1960 PEAK HOUR TRAFFIC VOLUMES AND LANE CAPACITIES PLAN COMPLETED

The accompanying plate portrays the estimated 1960 two way peak hour traffic flow and its probable distribution over the arterial routes and principal streets upon the accomplishment of the recommendations set forth in the master plan.

The indicated 1960 volumes are based upon the assumption that the Erie Thruway will be completed and that volumes of through traffic ranging from 20 to 40 percent will be diverted from the major north-south thoroughfares to the new superhighway.

The recommended widening of Hamburg Turnpike and improvement of McKinley Parkway would provide ample street capacity for the remaining north-south through travel and would serve important local traffic movements as well.

Full realization of the estimated peak hour traffic increases will result in vehicle volumes somewhat in excess of the present lane capacity of Ridge Road, as indicated on the accompanying plate. As the estimated lack of capacity is relatively small, it has been concluded that the potential deficiency could be satisfactorily met by the institution of regulatory measures established to expedite peak hour traffic movement.


#### 1960 TIME FLOW PLAN COMPLETED

The estimated time which would be required to traverse the city when the recommended arterial routes are in effect is graphically portrayed on the accompanying plate.

Peak hour traffic congestion along Hamburg Turnpike destined to become more acute as the forecasted volume increases materialize, would be relieved by the reconstruction and widening of this important north-south thoroughfare. These betterments to traffic flow would reduce travel time between city lines below that presently required despite the anticipated increase in peak hour vehicle movement. Comparable benefits would be gained with respect to other principal north-south routes.

The effect of increased peak hour volumes along Ridge Road will be apparent in the added time required to traverse the city along this east-west route. It is concluded, however, that many of the factors which would contribute to peak hour congestion and delay could be eliminated by introducing proper traffic control procedures, in which event a reasonable and satisfactory traffic operating efficiency over the existing roadway could be expected.

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#### MASS TRANSPORTATION LOCAL BUS ROUTES

Mass transportation within the City of Lackawanna is provided by the Buffalo Transit Corporation and the International Railway Company. The accompanying plate shows the present franchised transit routes.

The proposed plan for arterial and highway improvements offers an opportunity for betterment in public transportation. A study of the present routes in relation to the time saving features afforded by the use of the new or improved thoroughfares for both local and express operations, should result in improved schedules.

In addition, provisions have been made in the designs for the construction of special bus turnouts and passenger loading zones on Hamburg Turnpike at the Bethlehem Steel Plant gates. These features should improve operating procedures and reduce the delays to all types of traffic presently occurring at these points.



# ESTIMATED COST ANALYSIS

#### COST ESTIMATE NOTES

The tabulations which follow present construction and right of way cost estimates for component parts of the master plan for arterial routes in the Lackawanna urban area.

The various projects have been listed in accordance with a desirable construction preference established after consideration of traffic needs, immediate usefulness, and availability of right of way.

The construction costs are based on current prices and right of way estimates are based on equalized current assessed land values increased by fifteen percent.

Scheduled construction of specific projects is subject to local approval of detailed design and the prevailing allocations of federal, state and city funds.

#### ARTERIAL ROUTES

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CONSTRUCTION WITHIN CITY LIMITS\*

NAME	LENGTH (In Miles)	DESCRIPTION						
MCKINLEY PARKWAY ARTERIAL ROUTE (2) FROM RIDGE ROAD TO A POINT SOUTH OF N.Y.C.R.R. TRACKS AND CONNECT WITH ERIE THRUWAY	1.35	BUILD NEW PAVEMENT 2-24' ROADWAYS WITH MALL SEPARATION. BUILD OVERPASSES AT PENNSYLVANIA, LEHIGH VALLEY, NEW YORK CENTRAL AND BALTIMORE & OHIO RAILROADS. ACQUIRE NEW RIGHT OF WAY.						
HAMBURG TURNPIKE ARTERIAL ROUTE (1) FROM SOUTH CITY LINE TO BUFFALO CITY LINE	1.90	BUILD NEW 32' PAVEMENT ON NORTHBOUND LANE AND 24' PAVEMENT ON SOUTHBOUND LANE WITH MALL SEPARATION. RECONSTRUCT SOUTH BUFFALO RAILROAD OVERHEAD STRUCTURE AT FOURTH STREET AND HIGHWAY BRIDGE OVER SMOKES CREEK.						
TOTAL FOR ARTERIAL ROUTES	3.25							
	IMPROVEMEN	T BY CITY						
MCKINLEY PARKWAY (2) FROM RIDGE ROAD TO MCKINLEY CIRCLE AT THE NORTH CITY LINE	0.25	BUILD NEW PAVEMENT 2-24' ROADWAYS WITH 4' MALL SEPARATION AND SHOULDERS.						
TOTAL FOR Improvement by City	0.25							
HIGHWA TO HAN	Y CONNECTION BURG TURNPIK	OUTSIDE OF CITY E ARTERIAL ROUTE						
HAMBURG TURNPIKE (1) FROM MILE STRIP ROAD TO SOUTH CITY LINE	0.70	BUILD NEW 68' PAVEMENT WITH PROVISION FOR 4' CENTER SAFETY ZONE AND 2-8' PARKING LANES, FROM MILE STRIP ROAD TO FIRST STREET IN WOODLAWN. CONTINUE TO SOUTH CITY LINE WITH 2-24' ROADWAYS WITH MALL SEPARATION AND SHOULDERS.						
TOTAL FOR IMPROVEMENT OUTSIDE CITY TO ARTERIAL ROUTE	0.70							
TOTAL FOR URBAN AREA	4.20							
* Cost of the Erie Thruway with	in the city a	not included.						

(Number in parenthesis) indicates construction preference.

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### ESTIMATED COSTS

CONSTRUCTION	RIGHT OF WAY	TOTAL COST	STATE SHARE	CITY SHARE
\$1,225,000	\$20,000	\$1,245,000	\$1,235,000	\$10,000
897,000	310,000	1,207,000	1,052,000	155,000
\$2,122,000	\$330,000	\$2,452,000	\$2,287,000	\$165,000
75,000	3,000	78,000	NONE	78,000
\$75,000	\$3,000	\$78,000	None	\$78,000
200,000	60,000	260,000	260,000	NONE
\$200,000	\$60,000	\$260,000	\$260,000	None
\$2,397,000	\$393,000	\$2,790,000	\$2,547,000	\$243,000

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# DETAILS OF THE PLAN

#### DETAILS OF THE PLAN

The following plates show the location of the recommended routes in relation to the adjacent street system, the character and extent of individual projects and the general right of way requirements.

The estimated right of way requirements are shown in green, and traffic lanes and interchange pavements are shown in yellow.

PROPOSED MCKINLEY PARKWAY ARTERIAL ROUTE









PROPOSED IMPROVEMENT OF HAMBURG TURNPIKE ARTERIAL ROUTE

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From the Digital Collections of the New York State Library.

MATCH LINE A

ERIE THRUWAY WILLETT ROAD TO RIDGE ROAD







APPENDIX - A TRAFFIC TABULATIONS







## SUMMARY OF ORIGINS & DESTINATIONS

### LACKAWANNA URBAN AREA REPORT

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# LACKAWANNA

KEY MAP SHOWING LOCATION OF ORIGIN AND DESTINATION AREAS STATE OF NEW YORK, ERIE COUNTY CITY OF LACKAWANNA

STATE OF NEW YORK DEPARTMENT OF PUBLIC WORKS LACKAWANNA URBAN AREA REPORT

# APPENDIX - B The Arterial Law

#### ARTICLE XII-B OF THE HIGHWAY LAW

(Chapter 543, Laws of 1944 as amended)

STATE ARTERIAL HIGHWAYS PASSING THROUGH CITIES Section 349-b. Declaration of Policy

349-c. Design, construction and payment of costs

349-b Declaration of policy. The modernization and the construction of arterial highways which are to pass through cities, will contribute greatly to post-war reemployment and to the stimulation of industrial recovery. The resources and the technical skills that are available to the state for these purposes should be used for the benefit of the cities upon the principle that the construction of such arterial highways is a matter of state concern. However, it is the manifest intention of the state to recognize and to preserve the powers or rights heretofore conferred upon or delegated to any city to regulate the property, affairs or government thereof, in the modernization and the construction of such arterial highways. The integration of such arterial highways in the system of state highways throughout the state contemplates an expenditure of public funds to pay the costs that are attendant upon the fulfillment of a program of the work of modernization and construction as herein mentioned, as well as of the maintenance of such public ways It is hereby declared to be the purpose of this act to initiate the procedure that is prerequisite to any project of the magnitude herein provided, to the end that orderly progress and equitable distribution of effort and monies may be observed in the administration of this article, and, from time to time, when expressly authorized by the legislature,

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any section of such arterial highways may be constituted, constructed, reconstructed, improved and maintained as a part of the state highway system.

349-c Design, construction, and payment of costs. 1. Notwithstanding the provisions of any general, special or local law, the superintendent of public works is authorized and empowered to prepare designs, plans, specifications and estimates for the construction, reconstruction or improvement (1) of any extension or continuation of any highway or route which is now or which shall hereafter be authorized by sections three hundred forty and three hundred forty-one of this chapter, upon any public street or streets in any city outside of the city of New York, which are now or which shall hereafter be designated in this article, and (2) of any existing or proposed main routes or thoroughfares in the city of New York; all of which are designated in this article. Such designs, plans, specifications and estimates may be prepared (a) by the department of public works; (b) by any city herein named, if the preparation of such designs, plans, specifications and estimates are authorized in advance by the superintendent of public works and then upon such terms and conditions as may be agreed by and between such city and the superintendent of public works; (c) subject to the approval of the director of the budget, by the employment of private engineers or engineering firms; or '(d) by a combination of such methods. The superintendent of public works may, in his discretion, provide or direct that there be provided in such designs, plans, specifications and estimates, such roadside and landscape development, including such sanitary and other facilities as may be deemed reasonably necessary to accommodate the public; provided, however, that such development is within the bounds of any property acquired for purposes connected with the highway system of the State of New York pursuant to this chapter, and any adjacent publicly owned or controlled recreational areas of limited size and with provision for convenient and safe access thereto by pedestrian and vehicular traffic. All references hereinafter contained in this article to the construction of facilities and appurtenances of state highways, or to a section or sections of the arterial system, may be deemed to include the development and facilities mentioned in this paragraph.

2. With relation to any city named in this article, but not including the city of New York:

2.1 The superintendent of public works is authorized to provide in such designs, plans, specifications and estimates for bridges, culverts, drainage, shoulders, gutters, curbs, sidewalks and any other facilities and appurtenances as he may determine.

2.2 The superintendent of public works shall construct, reconstruct or improve such extensions or continuations, including said facilities and appurtenances, in the same manner as other state highways, facilities and appurtenances are constructed, reconstructed and improved pursuant to this chapter. For all the purposes of this section, the jurisdiction of the superintendent of public works shall extend over the entire property affected by the provisions hereof, as such jurisdiction has been obtained, or as such jurisdiction may hereafter be obtained pursuant to the provisions of this chapter. Such sidewalks, facilities and appurtenances shall be maintained or shall be continued to be maintained, as the case may be, by the city in which they are located, or by the agency or unit owning or having control and jurisdiction thereof.

2.3 The governing body of any city named in section three hundred forty-nine-e of this article may apply to the superintendent of public works for a change in such designation of a public street or streets within the boundaries of such city, and the superintendent of public works may grant such application, and in case such application is granted, the additional costs and expenses of the acquisition of property and legal damages caused thereby, and the additional costs and expenses of construction, reconstruction or improvement of the public street or streets as requested in such application shall, pursuant to written agreement, be paid by such city to the state. The monies so required shall be raised by tax or pursuant to the local finance law or in accordance with any local charter or law, as the case may be, and such funds shall be deposited and be subject to requisition in the manner as herein provided in case a greater width or different type of construction is desired by such city.

2.4 A state highway may be constructed or reconstructed through any such city, of such width and type of construction as the superintendent of public works shall deem proper, unless a greater width or different type of construction is desired by such city, in which case the governing body of such city may apply to the superintendent of public works to

provide the width and type of construction desired. The superintendent of public works may grant such application, if he deems the filing of such application to be timely, and the additional cost and expenses of such width and type of construction, or either of them, shall, pursuant to written agreement, be paid by such city to the state. Whenever the superintendent of public works shall have granted such an application, the designs, plans, specifications and estimates of costs, together with an estimate showing the additional costs and expenses to be borne by such city, to provide for the greater width or different type of construction or both, shall be submitted to the governing body of such city which, if it approves such designs, plans, specifications and estimate of cost, shall by resolution appropriate funds necessary to provide for the portion of the costs and expenses of construction to be borne by such city. Such funds shall, prior to the advertisement for bids for or including the said greater width or different type of construction, be deposited by such city with the state comptroller subject to the draft or requisition of the superintendent of public works, and a certified copy of such resolution shall be filed with the state comptroller and with the superintendent of public works. The monies so required shall be raised by tax or pursuant to the local finance law or in accordance with any local charter or law, as the case may be. Upon the completion of a highway within such city where a portion of the costs and expenses are borne by the city the superintendent of public works shall transmit to the governing body of such city a statement showing the

actual costs and expenses of the additional width or changed construction including a proportionate charge for engineering, and shall notify the city clerk that he will accept the work within twenty days from the date of such notice, unless protest in writing against the acceptance shall be filed by such clerk with the superintendent of public works. In case a protest is filed the superintendent of public works shall hear the same and if it is sustained the superintendent of public works shall delay the acceptance of the highway or section thereof until the same be properly completed. If no protest is filed the highway or section thereof shall at the expiration of the said twenty days be deemed finally completed and accepted on behalf of such city and the state. The provisions of any general or special laws relative to the pavement or improvement of streets and the assessment and payment of the cost thereof shall apply, as far as may be. to such additional construction and the assessment and payment of the cost thereof, except that the provisions of any general or local act affecting the pavement or improvement of streets or avenues in any such city and requiring the owners, or any of the owners, of the frontage on a street to consent to the improvement or pavement thereof, or requiring a hearing to be given to the persons whose premises are subject to assessment, upon the question of doing such paving or making such improvement shall not apply to the portion of the improvement or pavement of a state highway the expense for which is required to be paid by such city to the state.

2.5 Whenever the superintendent of public works deems it necessary to acquire property for the purpose of widening

any such designated street, he shall, before filing the description and the original tracing of any map, or proceeding with the acquisition of such property or the work of construction, reconstruction or improvement, transmit the designs, plans, specifications and estimates of cost for the construction, reconstruction or improvement of the extension or continuation upon said street to the governing body of such city in which such designated street or any portion thereof is located. The governing body of such city, after the receipt of such designs, plans, specifications and estimates of cost, may conduct a public hearing or hearings upon such notice as such governing body shall deem reasonable, but not less than ten days, to the superintendent of public works and to such other party or parties, deemed by said governing body to be interested in the project. In any event and within sixty days or within such other period of time as may be provided by the provisions of the charter of such city, after the receipt of the designs, plans, specifications and estimates of cost, the said governing body shall, by resolution, duly adopted by its members, approve, disapprove or recommend modifications in such designs, plans, specifications and estimates of cost as the public interest shall require. Within ten days after the adoption of the resolution, the clerk of such governing body shall mail a certified copy thereof to the superintendent of public works. The form of the resolution shall be prescribed by the superintendent of public works. In case such governing body shall disapprove the designs, plans, specifications, and estimates of cost, without proposing modifications, the

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superintendent of public works may, in his discretion prepare and submit to such governing body for approval other designs, plans, specifications and estimates of cost, for the construction, reconstruction or improvement of the extension or continuation within the bounds of such city or in his discretion he may proceed with the work of construction. reconstruction or improvement within and confined to the existing width of the pavement of said designated street in the affected location. In case such governing body shall disapprove the designs, plans, specifications and estimates of cost, and shall recommend modifications, the superintendent of public works may approve the designs, plans, specifications and estimates of cost, so modified, or recommend other modifications for approval, and said extension or continuation shall be constructed, reconstructed or improved in accordance with such designs, plans, specifications and estimates of cost, as finally approved. When the designs, plans, specifications and estimates of cost for construction. reconstruction or improvement of an extension or continuation as aforesaid have finally been approved as hereunder provided, no resolution thereafter adopted by the governing body of such city shall rescind, annul or modify such prior resolution either directly or indirectly excepting upon the advice and with the consent of the superintendent of public works. Upon the failure or omission of the governing body of any such city to act within the time and manner herein required, the said designs, plans, specifications and estimates of costs shall be deemed to be approved so far as such governing body is concerned.

2.6 Any property which is deemed by the superintendent of public works to be necessary to carry out the provisions of this section, shall be acquired by him pursuant to section thirty of this chapter. The costs and expenses of such acquisition of property and any liability incurred by reason thereof, including legal damages caused by such acquisition and by the work of constructing, reconstructing or improving such extensions and continuations, including legal damages caused by such work of construction, reconstruction or improving, all as provided in section thirty of this chapter, shall be paid by the state in the first instance and shall be borne as follows: Fifty percentum by the state and fifty percentum by such city affected thereby.

2.7 Before property shall be so acquired in such city for the purpose of this section, the superintendent of public works shall transmit to the governing body of such city an estimate showing the proportionate costs and expenses of such acquisition as such costs and expenses are specified in section thirty of this chapter, whereupon and within ninety days after the transmittal of said estimate such city shall (a) by resolution, appropriate the funds as shown in said estimate, (b) deposit such funds with the state comptroller subject to the draft or requisition of the superintendent of public works, and (c) file a copy of the resolution with the state comptroller and with the superintendent of public works. Upon the completion of a highway within such city where a portion of the costs and expenses of the acquisition of the property are borne by the city, the superintendent of public works shall transmit to the governing body of such

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city a statement showing the actual costs and expenses of such acquisition as hereinbefore mentioned, and shall notify the city clerk of the amount due from or to be returned to the city, as the case may be. Any sum due the state shall be paid by such city within sixty days after the date of the transmittal of said statement and the funds therefor shall be raised by tax or pursuant to the local finance law, or in accordance with any local charter or law, as the case may be