

ONONDAGA CITIZENS LEAGUE

Report #5

ONONDAGA COUNTY INFRASTRUCTURE:  
STATUS, FUNDING, AND RESPONSIBILITIES

Approved and Issued  
by  
Board of Directors  
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## Preface

From January to June 1983, members of the Onondaga Citizens League studied the subject "Onondaga County Infrastructure: Status, Funding, Responsibilities." During the year 1982-1983 public attention at the national, state, and local levels focused on infrastructure, a catch-all term used to refer to the underlying facilities and installations of any society or community. Foremost among these facilities are the roads, bridges, sewers, and waterworks that underpin the economy and provide not only the necessities but the amenities of life.

In decades of prosperity Americans built new public works and cut ribbons to inaugurate systems without equal. During the 1950s and 1960s spending on public facilities rose, as outlays more than kept pace with a growing population. By the 1970s, however, retrenchment had started and spending on public facilities showed a marked decline as the economic recession deepened. Signs of deterioration became inescapable. By 1982 national news magazines as well as political leaders referred dramatically to the "decaying of America" and described roads, bridges, sewers, and water systems as "nearing collapse."<sup>1</sup> After years of inadequate maintenance and over-use, repair and rebuilding were costing Americans dearly.

The OCL Study Committee has attempted to describe and assess the infrastructure in our community, identifying problems and policy recommendations. Although infrastructure is sometimes widely defined to include utilities, mass transit, reservoirs, jails, and parks, the Onondaga Citizens League Study Committee decided to focus on the four principal components: bridges; roads; sewer systems; and water systems.

<sup>1</sup>Newsweek, August 2, 1982

## THE ONONDAGA CITIZENS LEAGUE

In 1978 several members of University College's Thursday Morning Roundtable explored the need for, and the feasibility of establishing a broad-based citizen organization to study and make recommendations on long-range problems facing this county. The idea of such a citizens group was inspired by the successful 25-year history of the Minneapolis-St. Paul Citizens League which has been responsible for initiating many of the progressive developments in that metropolitan area.

After many discussions, 21 persons active in the community and interested in the concept were convened to develop plans for an Onondaga Citizens League. These individuals constituted an advisory board to establish guidelines for the organization, to promote membership, to select a topic for study by league members, to prepare and adopt by-laws for operation of the organization, and in general to oversee league functions during its early months.

The Onondaga Citizens League was incorporated in 1980 and received non-profit tax exempt status in 1981. The League's purpose is to encourage citizen education and involvement in public issues and problems. Members of the League study all aspects of selected public problems, determine the facts, make considered judgments on approaches and solutions, and develop recommendations presented to appropriate responsible persons or offices. The organization's objective is to forestall the development of problems into real crises, not to promote specific legislation or function as a lobby.

The Onondaga Citizens League is open to any resident of the county. While some choose to join to study a specific topic, others join and renew their membership in support of the principle of citizen study of issues of major concern to the community.

The League's first study was "Equality and Fairness in Property Assessment" (June 1979). The second dealt with "Young People in Trouble: How Can Our Services Be Organized and Delivered More Effectively?" (May 1981). The third report considered "The County Legislature: Its Functions, Size and Structure" (August 1981). The fourth analyzed "Declining School Enrollments: Opportunities for Cooperative Adaptations" (July 1982).

## ACKNOWLEDGEMENTS

The Board of Directors of the Onondaga Citizens League listed in Appendix I, wishes to acknowledge the important contributions made to this study by the following.

Members of the Study Committee, identified in Appendix II, dedicated many hours of study and discussion to the development of this report. Their sincere concern about the state of our local infrastructure and possible approaches to improving conditions has been a heartening example of the ideals of the Citizen League. Samuel P. Clemence, Professor of Civil Engineering at Syracuse University, served as chairperson of the Study Committee. The League is especially appreciative of the outstandingly effective work Professor Clemence provided to marshal resources and guide the committee in its deliberations.

Those who served as consultants to the study committee gave freely of their time and expertise to assist in clarifying the issues. Appendix IV lists these individuals.

University College provided staff support, office space, telephone and other forms of assistance as a public service to implement the work of the League. Jo-Anne Scammell served as secretary/typist for this project.

Jean Stinchcombe deserves special commendation as coordinator for this study. She also wrote initial and final drafts of this report.



## THE 1983 STUDY COMMITTEE

Members of the 1983 Study Committee on Onondaga County's infrastructure began weekly meetings on January 11, 1983. Professor Samuel Clemence, chairman of the department of civil engineering, Syracuse University, acted as chairman. Jean Stinchcombe served as coordinator and writer.

The Study Committee met every Tuesday through May 10. Speakers included a wide variety of specialists and public officials. In May a subcommittee began work to draft the conclusions and recommendations presented to the entire Study Committee in June. The appendices to this report include a list of speakers, members of the Study Committee, and members of the Subcommittee.

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ONONDAGA COUNTY INFRASTRUCTURE:  
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This study includes an analysis of the following subjects:

1. The condition of the infrastructure at the national level: policy directions.
2. New York State infrastructure and policy choices.
3. Onondaga County's infrastructure: what is the condition of our bridges, roads, sewer system, and water system?
4. General conclusions reached by the OCL Study Committee.
5. Specific recommendations concerning each part of the infrastructure: i.e., bridges; roads; sewers; and water system.

HIGHLIGHTS

Problems

1. Onondaga County is fortunate in having an infrastructure that remains in comparatively good condition; our public works systems are important local assets.
2. Maintenance is often deferred; repairs are made on a crisis-to-crisis basis that produces greater long-run expenditures.
3. Funds for the maintenance of infrastructure are often diverted to other purposes; the importance of maintenance goes unrecognized until a catastrophe occurs.
4. Decision-makers lack complete information and research to use in studying and appraising infrastructure; varying standards are applied.
5. Public spending decisions on infrastructure are often improvised on a year-to-year basis.
6. Federal and state aid is decreasing and not likely to return to former levels.

Solutions

1. Local officials at all levels-- county, city, town, village-- must practice careful monitoring and oversight if this quality is to continue.
2. Well-planned maintenance and replacement programs should be included in each year's budget.
3. Funds should be set aside for the critical needs of maintenance, rehabilitation, and cyclical replacement.
4. Governmental officials and specialists in the field should develop evaluation criteria for all major components of the infrastructure; and apply them to systems at all levels of government.
5. All levels of government should use 5- or 10- year capital budgets.
6. Local decision-makers, taxpayers, and rate-payers must assume increased responsibility to protect the quality of our infrastructure systems and preserve them for the future.

## Infrastructure: The National Level

In 1982-1983 national political leaders examined the deterioration of America's physical facilities and considered public policies to arrest a cycle of rust and ruin. Both public and private studies attempted to assess needs nationwide. The most influential study, America in Ruins, by Pat Choate and Susan Walter, enumerated catastrophic problems in several areas. Among other examples, these authors contend:

\*the 42,500-mile Interstate Highway System is deteriorating at a rate requiring reconstruction of 2,000 miles of road per year. Moreover, some 8,000 miles of this system and 13 per cent of its bridges must be completely rebuilt.

\*one of every five bridges in the United States requires "major rehabilitation or construction," a project that could cost as much as \$33 billion according to the Department of Transportation.

\*urban areas with populations of over 50,000 will require between \$75 billion and \$100 billion to maintain urban water systems in the next 20 years.

\*over 25 billion in government funds will be required during the next five years to meet existing water pollution standards.<sup>2</sup>

The total ten-year investment needed to meet these and other problems is estimated to amount to anything between \$500 billion and \$3 trillion, as reported by the Herald-Journal (May 16, 1983) and other publications.

Astronomical figures and horror stories of falling bridges, collapsing water mains, and corroding sewer lines have been used to highlight the needs of infrastructure and assert claims for public works relative to other purposes, such as defense, education, and social-welfare policies. Writers on infrastructure have dramatized the subject to ignite public interest. As Representative William Clinger (R., Pennsylvania) explained, "A lot of us take our surroundings for granted. We live in a generation that has never seen life without the ability to flush a toilet. Most of it [infrastructure] is so invisible. It never intrudes on people's consciousness. Unless it's backing up in their bathrooms or filling up in their cellars they don't worry about it."<sup>3</sup>

Commentators can easily exaggerate infrastructure as a national problem, however. Responsibility for the construction and maintenance of public facilities does not belong wholly to the federal government. The federal government's responsibility is most conspicuous, for example, in the funding of the interstate highway system and other aid programs for specific purposes.

<sup>2</sup>Pat Choate and Susan Walter, America in Ruins (Washington, D.C.: Council of State Planning Agencies, 1981), pp. 1-6.

<sup>3</sup>Herald-Journal, May 16, 1983

In addition to the state governments, some 3,000 counties and thousands of municipalities, local agencies, authorities, and special districts are involved in providing essential services such as roads, sewer systems, and water supply.

Titles such as Choate and Walter's America in Ruins and Newsweek's "The Decaying of America" highlight the problem but overstate it. Have Americans suddenly moved from outstanding facilities to a dramatic breakdown of those services essential to economic and social life? The answer is no. True, the system of interstate highways is now riddled with defects. Starting in 1956 the federal government subsidized 90 per cent of construction costs but not until 1978 were federal funds provided for resurfacing, restoration, and rehabilitation. For the interstate highway system as for much of the infrastructure, the critical problem is not an impending collapse but a "persistent failure of maintenance, ordinary repair, and routine replacement."<sup>4</sup> For many decades federal and state aid programs were primarily directed to new construction, not to operation and maintenance.

The infrastructure problem across the nation is not one of universally accelerating decay.<sup>5</sup> Time remains to make up for past omissions, to undertake necessary repairs and maintenance, without our localities' being left with the remnants of a once-great civilization that has "crumbled just like Rome's."<sup>6</sup> Nationwide, some trends are encouraging: water loss from most urban systems has remained steady or improved since the 1970s; in many communities bridge conditions have been greatly improved since the passage of the Federal Bridge Repair and Replacement Program (1978); sewer systems are operating at higher standards than ever before, and water quality has improved since the passage of the Clean Water Act (1972).

Infrastructure's underlying problems often relate both to age and to neglect. Writers for Business Week (October 26, 1981) and U.S. News and World Report (January 10, 1983) refer to the interstate highway system as having reached the end of its "design life" by the end of three decades. Similarly, others including the President's water policy task force have established the useful life of a pipe to be 75 years. Calculations that assume that all facilities above a certain "design life" must be replaced inflate project costs unrealistically. A reasonable goal is to prolong the design life rather than to identify replacement needs that cannot possibly be met. Even if the facilities that have reached the presumed end of their "design life" were replaced, a fundamental question would remain unanswered: how are federal, state, and local governments to provide for the necessary repair and maintenance to prolong the use of any facility?

Repair and maintenance hold the key to infrastructure policy both nationally and locally; replacement figures should be examined critically.

<sup>4</sup>George E. Peterson, Speech before the 1982 Convention of the American Society of Civil Engineers

<sup>5</sup>Ibid.

<sup>6</sup>Jack Anderson, writing March 10, 1983, Post-Standard

Certainly, American governments at all levels will not produce \$3 trillion, or \$550 billion, or any of the prescribed outlays to rebuild and renovate America. The Reagan Administration has cut aid to state and local governments, displaying little sympathy for their infrastructure needs. E. S. Savas, Assistant Secretary for Housing and Urban Development, states, "The fact that there are potholes all over America does not mean that it's time for the Federal government to pay for filling them."<sup>7</sup> Not only is the federal government sharply cutting aid to urban and secondary roads, as of 1984 the federal share of financing new sewage treatment plants will fall from 75 per cent to 50 per cent. Water systems receive no federal aid. Faced with high interest rates and stiff competition in the tax-exempt market, state and municipal governments have poor prospects in bonding for capital improvements.<sup>8</sup> Budget pressures have already impelled many municipal governments to divert revenue from water rates to other purposes and to curtail routine maintenance work.

The federal government has addressed the infrastructure problem by 1983 legislation providing for a 5¢ per gallon increase in the gasoline tax [from 4¢ to 9¢] a measure that will add \$5.5 billion to the \$11 billion included for highways and mass transit in the 1984 budget. Revenues from the new gas tax will be distributed as follows: \$800 million for the completion of 1,575 miles of the interstate highway system; \$1.7 billion for resurfacing and restoration of interstate highways; \$600 million for primary federal highways; \$600 million for miscellaneous roads; \$700 million for bridges; and \$1.1 billion to be used for bus purchases and capital expenditures for mass transit systems. Of the revenue for roads, highways, and bridges, one-half is to be spent on the interstate system, either in construction or repair. The states have discretion in how they use the remaining money, but the legislation requires them to spend at least 40 per cent of it on repair and restoration rather than new construction.<sup>9</sup>

States will receive revenue from the gas tax according to a complicated formula that includes population, land area, and readiness to use the funds, in addition to a guarantee that each state is to receive a minimum of 85 per cent of its contributions. The states must produce 10 per cent in matching funds to qualify for interstate projects and 25 per cent to qualify for projects on primary roads.

To pass the gas-tax legislation, Congress offered major concessions to the trucking industry by allowing tandem trailers access not only to the interstate system but to most of the primary federal and state roads. Tandem trailer weights up to 80,000 pounds and widths of 102 inches--an increase of 6 inches in many states--must now be accepted on the network of roads designated by the Federal Highway Administration. When the Federal Highway Administration announced the interim designation of 181,000 miles of highway to be opened to tandem trailers, transportation officials in many states

<sup>7</sup> Newsweek, August 2, 1982.

<sup>8</sup> Business Week, October 26, 1981.

<sup>9</sup> New York Times, January 10, 1983. The gasoline tax is not the only component in increased revenue provided by this legislation; increased truck fees and taxes on tires and oil will also produce additional monies.



resisted both in protests and in legal actions. In New York State, 1981 legislation allowed vehicle length and weight dimensions substantially the same as those provided in the 1983 federal legislation; federal legislation allowed for widths six inches wider, however, and the Federal Highway Administration opened an additional 1200 miles of highway in New York State to tandem trailers without any protest from state officials.<sup>10</sup> Some of these highways have since been withdrawn, and final designations will be made in October.

The new federal legislation is significant in the emphasis given to repair and restoration. In previous legislation, [1978], funding ratio for reconstruction was 75 per cent federal/25 per cent state, while the new legislation provides for a 90/10 ratio. The greater access granted to tandem trailers will reverse these gains. New multi-axle, heavier vehicles will move onto roads not built for such use. Many authorities have stated that pavement damage is related to axle loads, and heavy truck-use of the interstate system has accelerated its deterioration.<sup>11</sup> The impact of a tractor trailer on pavement is estimated to equal between 5,000 and 10,000 passenger cars, according to varying accounts. The American Automobile Association asserts that the equivalent single axle loads of the tandem trailer make it equal to 13,500 passenger cars.<sup>12</sup>

Will the new gas-tax revenues meet the problems often cited in the list of infrastructure catastrophes? No. Although the interstate system has been poorly maintained in many areas, it is newer and in better condition than many roads, and some states such as Massachusetts have had good repair programs. A survey of 809 cities conducted by the National League of Cities found that the new gas revenues will do little for major cities, barely offsetting the loss of federal aid in recent budget cuts. The Reagan Administration had originally intended to eliminate federal aid to urban highway systems entirely. Then in the compromises to pass the 1983 legislation, these funds were retained but not increased. The 1983 bill directs aid to specific kinds of roads, e.g., interstates and primary roads. Thus urban areas receive no significant gain for those city streets and highways that have the greatest wear and tear.<sup>13</sup>

Members of Congress have prodded the Reagan Administration to take a more comprehensive view of infrastructure, of which highways and bridges are only part. An annual capital budget to be included in each year's budget is a logical first step. Led by David A. Stockman, the Office of Management and Budget strongly resisted the idea of a budget containing an inventory of con-

<sup>10</sup>New York Times, May 6, 1983; Memo from Syracuse Metropolitan Transportation Council to Caryl Frawley, May 6, 1983: "Federal legislation allows for the vehicles to be six inches wider...and allows for 1200 miles more of highway than does the state system."

<sup>11</sup>Prof. Lynne Irwin, speaking to the OCL Study Committee, March 1, 1983; MacNeill-Lehrer Report, April 1, 1983.

<sup>12</sup>Prof. Lynne Irwin described a tractor trailer as equal to 5,000 cars, OCL meeting, March 1, 1983; the American Automobile Association quotes authorities who use higher figures. Arthur Gabriel, executive vice-president of the Syracuse unit of the AAA, provided figures to the OCL, April 26, 1983.

<sup>13</sup>New York Times, May 9, 1983.



struction and repair needs, seeing such a measure as putting the government "on the slippery slope of increased spending." After a two-year struggle, Representative Robert Edgar (D., Pennsylvania) and Representative William Clinger (R., Pennsylvania) secured Stockman's approval for a limited capital budget bill that will require an annual list of the nation's major public assets, their conditions, and their repair needs over a five-year period. The capital budget proposal has bipartisan support and is expected to pass.<sup>14</sup>

In the Senate, Daniel P. Moynihan (D., New York) has introduced "The Rebuilding of America Act of 1982," calling for an inventory of required improvements, followed by ten- and twenty-year plans for financing. Senator Pete Domenici (R., New Mexico) has proposed a \$10-billion state infrastructure bank to be used for subsidized loans to localities. The prospects for any large-scale federal commitment to repair and rebuilding appear remote.

## SUMMARY

Dropping expenditures for public works are a long-term trend that will be difficult, if not impossible, to reverse. During the recession-year 1982 public works expenditures fell by 10 per cent. In 1965 expenditures for public facilities accounted for 4.1 per cent of the gross national product, a figure that had declined to 1.7 per cent by 1980.<sup>15</sup> Staggering federal deficits as well as opposition by the Reagan Administration make any major aid commitment unlikely. A separate capital budget is at least a first step in establishing priorities for whatever federal spending is possible.

### 2. New York State and Infrastructure

Like many parts of the Northeast, New York State suffers from an aging and deteriorating infrastructure. In September 1981 a task force created by Assembly Speaker Stanley Fink began an investigation of this plant. Consisting of the Speaker and the chairmen of ten standing committees of the Assembly responsible for public works legislation, the Task Force conducted a series of public hearings as well as research on infrastructure. The Commission found that information on the subject is often incomplete, particularly in regard to sewage treatment and water systems. Information on state highways and bridges is more extensive, but in general "little good information is currently maintained by most governments on infrastructure needs."<sup>16</sup>

The Commission reported that in 1981 the State Department of Transportation conducted a survey of all state highways, finding the condition to be generally fair but declining. According to the survey, about 13 per cent of surface mileage needs repair or replacement as compared to 21 per cent of miles of highway base. Many bridges on the state system built in the 1930s

<sup>14</sup>New York Times, May 9, 1983; Herald-Journal, May 16, 1983

<sup>15</sup>New York Times, May 9, 1983; County News, September 6, 1982

<sup>16</sup>First Interim Report on New York's Infrastructure, p. 10.

present serious problems. Water systems in the state vary from modern to early nineteenth-century facilities. Some major cities lose more than 50 per cent in unaccounted water through leaks, unmetered connections, and fire hydrants. In the field of sewage treatment, the Department of Conservation estimates that \$18 billion worth of sewer construction must be undertaken if New York State is to meet federal goals for pollution control.

The Commission gathered a wealth of information that need not be summarized here. The findings and recommendations include a number of general proposals that deserve emphasis. Like many states, New York lacks a sound, long-term capital planning process. Instead, expenditures are determined on a year-to-year basis. As a result capital expenditures have been made without defined objectives or standards by which to evaluate performance. The Commission recommends that New York State adopt "a sound, long-term capital planning process whereby capital expenditure priorities are outlined for a multi-year period." Secondly, in future public works investments state officials must be careful to see that "maintenance is properly carried out so that facilities do not deteriorate again."

The Commission endorsed Governor Mario Cuomo's proposal for a \$1.25 billion transportation bond issue. Bonds would be issued over five years and the proceeds spent according to the following categories: state highways and bridges and state parkways and bridges--\$560 million; non-state system highways and bridges--\$335 million; rail rapid transit, commuter rail and buses--\$75 million; airport and aviation capital facilities--\$25 million; and rail passenger and rail freight systems--\$110 million. The Governor's bond proposal has passed the legislature and will be presented to the voters in November 1983.

In supporting the bond proposal, the Commission on Infrastructure noted that the proposed list of projects as well as restrictions on interchanges among projects "all point to the need for approval of a capital plan and budget process which will assure both taxpayers and users of the infrastructure that this investment is well spent."<sup>17</sup> Yet the process that generated the allocation of aid under the bond issue is not clear in the admitted absence of long-term plans or capital budgets.

Comptroller Edward V. Regan has explicitly expressed his reservations about New York State's ability to use monies from the bond issue efficiently. Without a capital plan he sees the possibility that "politicians and special interests might engage in a free-for-all to obtain financing of their favorite projects. Regular repair and maintenance of the infrastructure might again be neglected."<sup>18</sup>

Because of an unprecedented state budget deficit and his own promise not to raise taxes, Governor Cuomo has chosen the bond issue as the practical way to raise large sums of money for infrastructure. Other states have already

<sup>17</sup>Ibid., P. 20.

<sup>18</sup>Post-Standard, December 6, 1982.

imposed their own gas tax. Writing in the Washington Post, Neal R. Peirce recommends that states and localities forsake bonding. "Borrowing at today's sky-high interest rates often costs more than 100 per cent of a project's principal costs. The obvious, painful alternative: pay as you go. The immediate costs would be quite high but the long-term savings immense."<sup>19</sup> New York State's existing deficits were such that state officials ruled out this policy choice.

Yet-another alternative has never been adopted in New York State: the dedication of state gas and highway user fees, including license fees and other motor vehicle charges, to roads, highways and bridges.

### 3. Infrastructure: Onondaga County

The OCL Study Committee has examined infrastructure by focusing on bridges, roads, sewer systems, and water systems. The subject is a complicated one: in addition to the city and county governments, 1 authority, 19 town governments, and fifteen villages provide essential services. Both federal and state agencies and aid programs significantly affect these services.

Among the more important federal programs are the following:

1. Community Development Block Grant: These funds can be used for public improvements including roads and water and sewer projects.

2. Environmental Protection Agency Grant: This program is primarily for construction of sewage treatment plants and transport of sewage. Since 1972 the federal government has paid 75 per cent of the cost of construction for sewage treatment plants, and the state has paid 12.5 per cent with the locality assuming the remainder. The federal share will be reduced to 50 per cent in October 1984, while the state share will not be increased.

3. Federal Aid to Urban Systems Highways Programs (FAUS): This aid is available for urban areas of populations of 200,000 and more. To be eligible for FAUS funds at a ratio of 75 per cent federal/25 per cent state a roadway must be designated as a Federal-Aid Urban System Highway, according to criteria including traffic volumes and access to major activity centers. Priorities for the expenditure of FAUS money are determined by the Syracuse Metropolitan Transportation Council, which is the designated Metropolitan Planning Organization (MPO) responsible for carrying out the urban transportation planning process in the Syracuse area. Officials of the City of Syracuse, Onondaga County, state agencies, regional agencies, and federal agencies serve on the Policy Committee of the SMTC. The SMTC produces a five-year program of highway and transit capital projects and transit operating assistance, and sets priorities not only for urban systems projects but for projects on the interstate system and urban extensions of primary and secondary roads.

<sup>19</sup>Washington Post, September 6, 1982.

4. Federal aid to interstate highways: funding is according to a ratio of 90 per cent federal/10 per cent state.

5. Federal aid to primary roads at a ratio of 75 per cent federal/25 per cent state.

6. 5¢ per gallon gasoline tax, as already described, including increased truck fees, taxes on tires and oil.

7. Highway and Bridge Repair and Replacement Program: funding is 80 per cent by the federal government and 20 per cent by the state and locality. Priorities for the expenditure of this money are established by Region 3, New York State Department of Transportation.

In the area of state programs, several are significant. The Environmental Water Quality Bond Issue (1982) provides aid for the construction of sewage treatment plants. For highways the Consolidated Highway Improvement [CHIPS] Act offers state aid both for the operation and maintenance of roads in addition to capital expenditures. Localities have used monies from the Energy Conservation Through Improved Transportation Bond Act (1975) to improve bridges.

The OCL Study Committee first examined funding, responsibilities, and conditions in regard to bridges.

#### BRIDGES

An examination of bridges must be broken down according to jurisdictions.

#### CITY OF SYRACUSE

Members of the Study Committee learned that until 1968 virtually nothing was done to repair bridges. By 1968 impending catastrophes were obvious, and the City hired Konski Engineers to study and classify all city bridges. According to their findings, 7 bridges were in such poor condition as to be considered dangerous, and 10 more caused serious concern. Of those bridges in the dangerous category, 5 are now reconstructed and 2 are closed. Of the ten additional bridges that caused concern, 6 are reconstructed, 3 are closed, and one will soon be closed.

Beginning in 1978 the Federal Bridge Repair and Replacement Program mandated inspection of local bridges by the state. The state's survey produced the results seen in Figure 1.

Figure 1. Condition of City Bridges

<u>classification</u>	<u># bridges</u>	<u>what is happening</u>
1. Very Poor Condition.....	4.....	3 closed; 4th will close
2. Poor Condition.....	8.....	all will be replaced
3. Major Structural Repairs or Replacement.....	2.....	all will probably be replaced
4. Structural Repairs.....	5	
5. Nonstructural Repairs.....	10	
6. Minor Repairs.....	13	
7. No Repairs.....	--	

The City of Syracuse has pursued an aggressive program of rehabilitation and reconstruction, having rebuilt 11 bridges since 1969. Yet the State Department of Transportation still describes 11 bridges as "structurally deficient."<sup>20</sup> Most of these bridges are 60'-80' in length and 30' in width, mainly spanning Onondaga Creek. Repair costs on bridges are estimated in excess of \$250,000 in some cases and as high as \$500,000 in others.

Syracuse has a five-year capital program to do most of the necessary work at an estimated cost of \$7,668,000, of which the city's share is close to 100 per cent. According to Ms. Linda Dombrow of City Hall's Office of Federal and State Aid Coordination, Syracuse could end up "short on money for bridges."<sup>21</sup> Federal aid programs are not directed to the needs of localities.

In contrast to the previous practice of neglect, city officials now give careful attention to the maintenance and painting of bridges. In new construction, self-weathering steel and new materials are used to prolong the life of a bridge.

#### COUNTY

In Onondaga County's jurisdiction, 9 of 102 bridges need repair, of which 3 require major reconstruction. In contrast to the City, the County has many newer bridges and bridges built in earlier decades are of superior quality. The County has maintained a bridge repair and replacement program for three decades, according to highway officials. "We're in good shape as far as the structural integrity of our bridges is concerned," says County Civil Engineer Jerry Holbrook.<sup>22</sup> Replacement costs for the three county bridges will vary between about \$2.5 million for two and \$9 million for the third.

#### TOWNS

In addition to City and County bridges, some thirty bridges fall under the jurisdiction of towns. Many of these are inadequate. The Town of Onondaga, for example, maintains three old bridges that are actually railroad cars open at either end.

#### STATE

As a result of increased funding from the 5¢ per gallon gas tax, funding for bridges has increased. Since 1978, the State Department of Transportation has had federal support for bridge work from the Bridge Repair and Replacement Program. The New York State Department of Transportation now has 15 major bridge replacement projects in Region 3 and 9 major rehabilitation projects. A large part of this work is in Onondaga County. Construction on 481-N in-

<sup>20</sup>For the classification of bridges, see Figure 2.

<sup>21</sup>Syracuse Business, February, 1982, p. 2.

<sup>22</sup>Herald-Journal, December 19, 1982.

FIGURE 2

SUMMARY OF BRIDGE TYPE AND CONDITION  
BY JURISDICTION IN ONONDAGA COUNTY

Category	Number		
	State	Local	Total
Total Number of Bridges	343	174	517
General Condition			
1. Very Poor Condition	0	5	5
2. Poor Condition	9	11	20
3. Major Structural Repairs Required	14	9	23
4. Structural Repairs Required	61	35	96
5. Repairs Required	120	51	171
6. Minor Repairs Required	132	23	155
7. Good Condition	26	3	29
Traits			
1. Year Constructed			
Pre 1900	0	6	6
1900-1909	8	11	19
1910-1919	18	24	42
1920-1929	12	24	36
1930-1939	19	32	51
1940-1949	26	7	33
1950-1959	87	21	108
1960-1969	89	15	104
1970-1979	78	24	102
1980-Present	12	2	14
2. Length in Feet			
10-19	0	0	0
20-29	9	21	30
30-39	12	35	47
40-49	15	25	40
50-59	16	16	32
60-69	16	27	43
70-79	18	10	28
80-89	10	5	15
90-99	15	6	21
100-199	109	21	130
200-299	69	3	72
300-399	22	1	23
400-499	12	1	13
500 and longer	34	4	38

Information from New York State Department of Transportation

1981



volves the replacement of 11 bridges: 2 on the viaduct to Mattydale and North Syracuse; 3 to the Thruway; and 6 on the Liverpool interchanges. This work is estimated to cost about \$50 million. An expenditure of \$5 million is planned to resurface 11 bridges on I-81-S (the Onondaga interchange to E. Calthrop Avenue) with 2 inches of concrete overlay; and to paint 3 bridges in this area.

#### SUMMARY

Bridges present a serious problem, but information on their condition is complete. The state routinely inspects, judges, photographs, and classifies every bridge. A summary of bridge type and condition is seen in Figure 2. Work is underway to replace and repair inadequate bridges, aided by federal funds. Funding for bridge replacement in the City of Syracuse is a potential problem. Maintenance needs that were once neglected are now widely recognized and emphasized.

#### HIGHWAYS AND ROADS

The OCL Study Committee learned that the City of Syracuse maintains some 246 miles of paved roadway and 160 miles of unpaved streets. For 1983 the funding level is \$800,000 of which \$250,000 is for curbing and \$550,000 for resurfacing. Funding is entirely from the state's CHIPS program. Before 1983, however, this expenditure was financed by local revenues. Members of the Study Committee questioned the wisdom of the City's relying wholly on a state aid program to provide local service.

The City projects an expenditure of about \$4 million for streets and roads over the next five years, with repair cycles running in 15-20 year intervals. As in the care of bridges, more attention is now given to maintenance. Reducing the use of salt is part of this program: The City used only 16,000 tons of salt in the snowy winter of 1981-1982, down from 25,000 tons of salt used in earlier years. Syracuse is moving to the practice of spot-salting to reduce corrosive effects of salt on roads and bridges, not to mention cars. Members of the Study Committee took note that Rochester has eliminated the use of salt and seen a decrease in the city's accident rate.

#### COUNTY

Development of the system of county roads dates to 1911. Two major cycles of construction occurred: first in the 1930s and then, with suburban development, in the 1950s. The County's roadways include everything from small roads to Route 57. "Today's major problem is upgrading this system," Mr. William Southern, then of the Onondaga County Department of Transportation, told the Study Committee. In 1976, \$3 million was bonded for highway improvements and in 1982, \$7.5 million was bonded, of which a major part will go to Route 57. Onondaga County has a \$10 million annual transportation budget, and a six-year capital program calling for \$88 million of work on the highway system.

Although County officials want to upgrade the system, maintenance of some 1684 lane miles presents a serious problem. The maintenance department has lost positions, although the reduction is not as severe as that in the City. County officials say that the highway department is now spending \$1.5 million a year to resurface 30 miles, when actually 80 miles per year should be resurfaced. In the next six years the County plans to spend \$12.3 million on resurfacing non-rural roads.

Onondaga County is receiving \$2.6 million in CHIPS aid from the state, as well as assistance from the FAUS program for the reconstruction and widening of Route 57 as an urban arterial road.

### TOWNS

Officials in town governments face the same difficulties in road maintenance as the city and county officials. According to Ted Marsh of the Town of DeWitt Highway Department, "We are slipping again. The budget stays the same while material costs continue rising. So instead of blacktopping, we put on oil and stone, which will last 2-3 years, instead of 6-8."<sup>23</sup>

Another town official, Pat Di Domenico, Supervisor of the Town of Clay, told the Study Committee that "the condition of the roads is the area of concern." Many roads have had oil and stone treatments several times and some require major reconstruction. Supervisor Di Domenico and Supervisor Paul Wicker, Town of Onondaga, strongly protested the distribution of state aid according to the 1970 rather than the 1980 census.<sup>24</sup> For towns experiencing growth the use of the 1970 census to distribute state aid presents a notable inequity: continued use of 1970 figures is unjustifiable. Moreover, although the State of New York has reduced its CHIPS allocations to cities, it has even more drastically reduced the aid to towns.

Town governments are either bonding for new road construction, as in Clay, or requiring developers to build the roads according to town specifications and then having the roads dedicated to the town, as in the Town of Onondaga.

### Jurisdictional Problems in Local Road Systems

Members of the Study Committee noted that the assignment of roads to different governmental units is to a large degree arbitrary. The county government has assumed responsibility for some roads but not for others. During some periods such as the 1930s jurisdictional changes were more common than in other times. Accidents of politics and history, rather than a logical traffic plan, determine whether a road falls under town, city, county, or state jurisdiction.

<sup>23</sup>Syracuse Business, February 1982.

<sup>24</sup>Pat Di Domenico, speaking to OCL Study Committee, April 5, 1983; Paul Wicker, May 10, 1983.



A logical allocation would assign roads according to their traffic purposes. At present this is true only for state government, which has responsibility for interstate and primary roads. Below the state level, streets and roads should also be assigned according to the purpose of the thoroughfare and the resources of the governmental unit. Local streets and minor traffic collectors should fall appropriately to towns, while major traffic collectors and arterials should be the responsibility of county government. According to a 1981 study by the Syracuse-Onondaga County Planning Agency, only 67 per cent of major urban traffic collectors are under county jurisdiction. The SOCPA Study suggests that minor collectors under county jurisdiction and major collectors under local jurisdiction are potential candidates for jurisdictional transfer. Furthermore, commuter roads from the county become city responsibility once the boundary is crossed, although they truly serve a county-wide purpose.

Members of the Study Committee considered a more logical allocation of roads desirable. A shift of the sort described in SOCPA's study would be a step in the right direction. The present crazy-quilt system impedes coordination and makes a comprehensive view of traffic patterns almost impossible. The Study Committee concluded that responsibilities should be clarified, so that decision-makers could work toward a definition of transportation corridors as recommended by Prof. James Napoleon.<sup>25</sup> Mr. Napoleon insisted that the entire highway system should make sense; that the purposes of roadways should be defined and major traffic corridors selected; and that all planning and construction should preserve local neighborhoods and communities. These goals seem very distant.

#### STATE

The Study Committee learned that there are some 528 miles of state roads within Onondaga County. Each year state highway officials evaluate all roads, rating them for their surface condition and their structural adequacy (rupture/displacement level). The New York State Department of Transportation method of inspection consists of "observing signs of pavement deterioration" from within the car to reach a "windshield judgment" of the highway. "That image is compared to verbal and pictorial descriptions of ten grades of roads," and roads are then ranked from 10-1, 10 being the indication of highest quality. Members of the Study Committee questioned the reliability and efficiency of observing deterioration from behind a windshield and asked if more scientific methods are available. The answer from Professor Lynne Irwin, Cornell University Local Roads Program, is yes.<sup>26</sup>

According to the windshield test, in Onondaga County no state highway achieved a surface score of less than 6, and only one received a rupture score under six--a five. The Study Committee found these "windshield observations"

<sup>25</sup> Prof. James Napoleon speaking to the OCL Study Committee, April 19, 1983.

<sup>26</sup> According to Prof. Irwin, computer programs are available with which to assess repair rates, the impact of traffic on pavement, and the time at which resurfacing is more desirable than patching and replacement more desirable than resurfacing.

interesting but recommends that they be used to complement and provide data for the more sophisticated techniques described by Prof. Irwin.

The New York State Department of Transportation maintains a five-year plan for state roadwork. Federal aid is involved to a substantial degree. For work on state roads the federal government provides 75 per cent of the funding, and the state provides 25 per cent. For many years federal dollars went largely to new construction, but in recent years monies have been made available for repair and restoration.

#### FEDERAL GOVERNMENT

For the expenditure of federal funds, the Syracuse Metropolitan Transportation Council establishes priorities and sets out these priorities in a Transportation Improvement Program, a five-year program of highway capital projects and estimates of operating assistance requirements. The SMTC sets priorities by considering the severity of the problem as seen in accident rates, usage, and structural conditions on each highway; availability of funding; current stage of the project; the length of time the project has been considered and how long it would take to complete it; and, last, local community support.

Mr. Joseph Powers, retiring director of Region 3, New York State Department of Transportation, explained that an expenditure of \$126 million in federal aid and state matching dollars is forecast for Onondaga County in the next several years. A major project under the Federal Aid to Urban Systems Program is the renovation of Route 57, a project that could not have been fully financed without the restoration of the FAUS program. Because of the gasoline tax, funding for local interstate projects is substantially greater, and of these projects the total renovation of Interstate-81 from Hiawatha Boulevard to the Mattydale Oval is the most noteworthy. Costs vary between \$70,000 to \$2 million per mile depending on the extent of work done, according to Richard Lucas of the New York State Department of Transportation, Region 3.

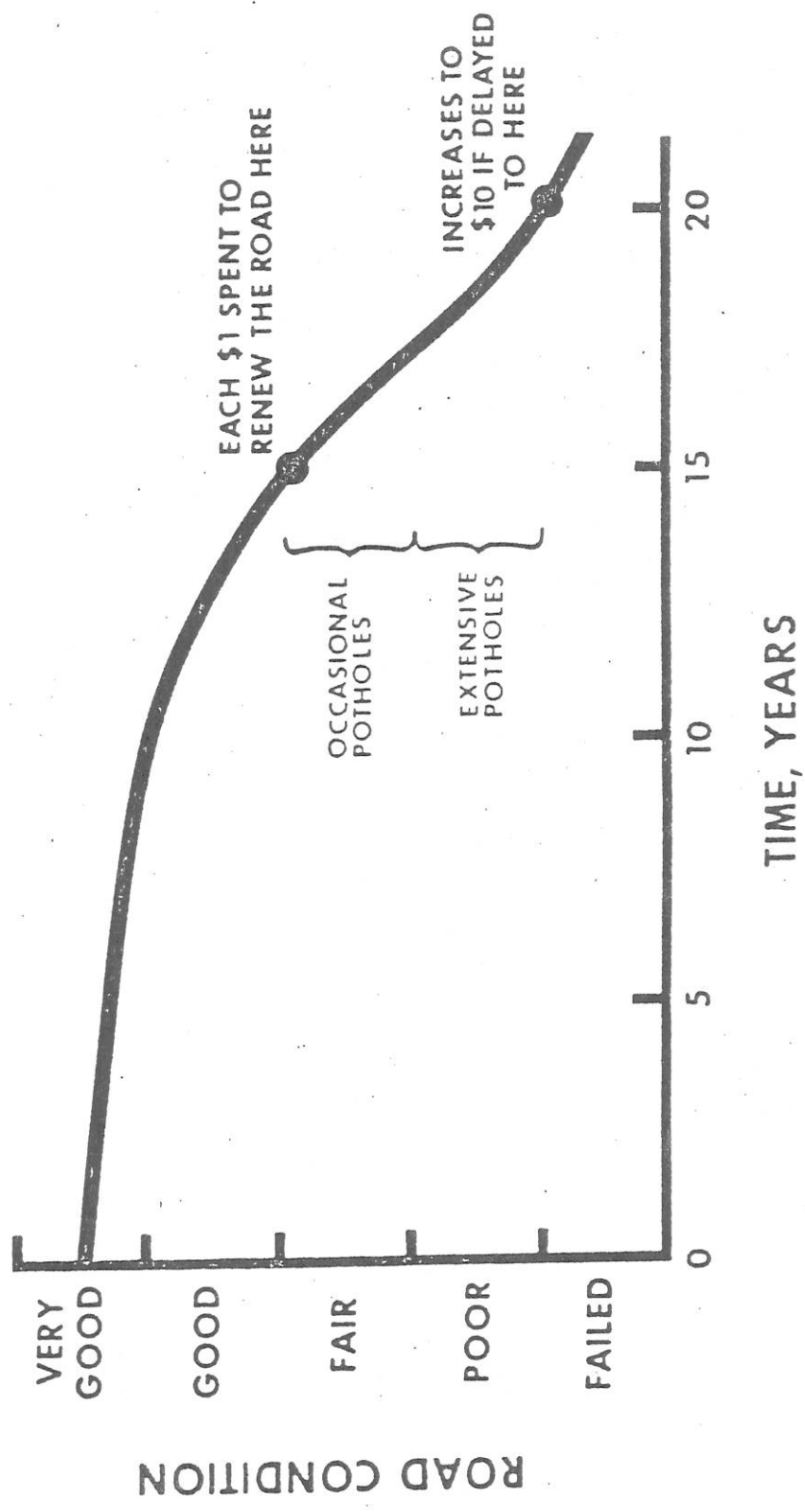
#### MAINTAINING OUR ROAD SYSTEM

Members of the Study Committee heard persuasive testimony that the practice of deferring road maintenance to save dollars produces drastically rising costs. Prof. Irwin, Cornell University, explained that if maintenance begins before the start of rapid deterioration, the cost of repair is \$65,000 for one mile to apply two and one-half inches of asphalt. When the opportunity to rehabilitate the road with overlay is passed, the pavement begins to deteriorate at an increasing rate. In the course of this deterioration, the surface becomes cracked and potholes are more common; because the surface is broken, the base is subjected to heavy stress and pushed into the subgrade of the road.<sup>27</sup> What results is the need to reconstruct the road at a cost of \$650,000 per mile. [See Figure 3: Cost to

<sup>27</sup> Prof. Lynne H. Irwin, to OCL, and in "Maintaining Community Public Investment," Cooperative Extension Association, Cornell University, p. 5.

# COST TO HIGHWAY DEPARTMENT

FIGURE 3



by Lynne H. Irwin

Highway Department]. Thus, timely rehabilitation is of paramount importance. Temporary expedients such as filling wet potholes or repeatedly patching a road allow moisture to penetrate the road structure and hasten the need for total reconstruction.

#### SUMMARY

Although roads in Onondaga County are generally in good condition, they will not stay this way without continued monitoring. Unless maintenance and repair receive greater emphasis--instead of being cut as at present in city, county, and town budgets--the eventual costs will be vastly greater.

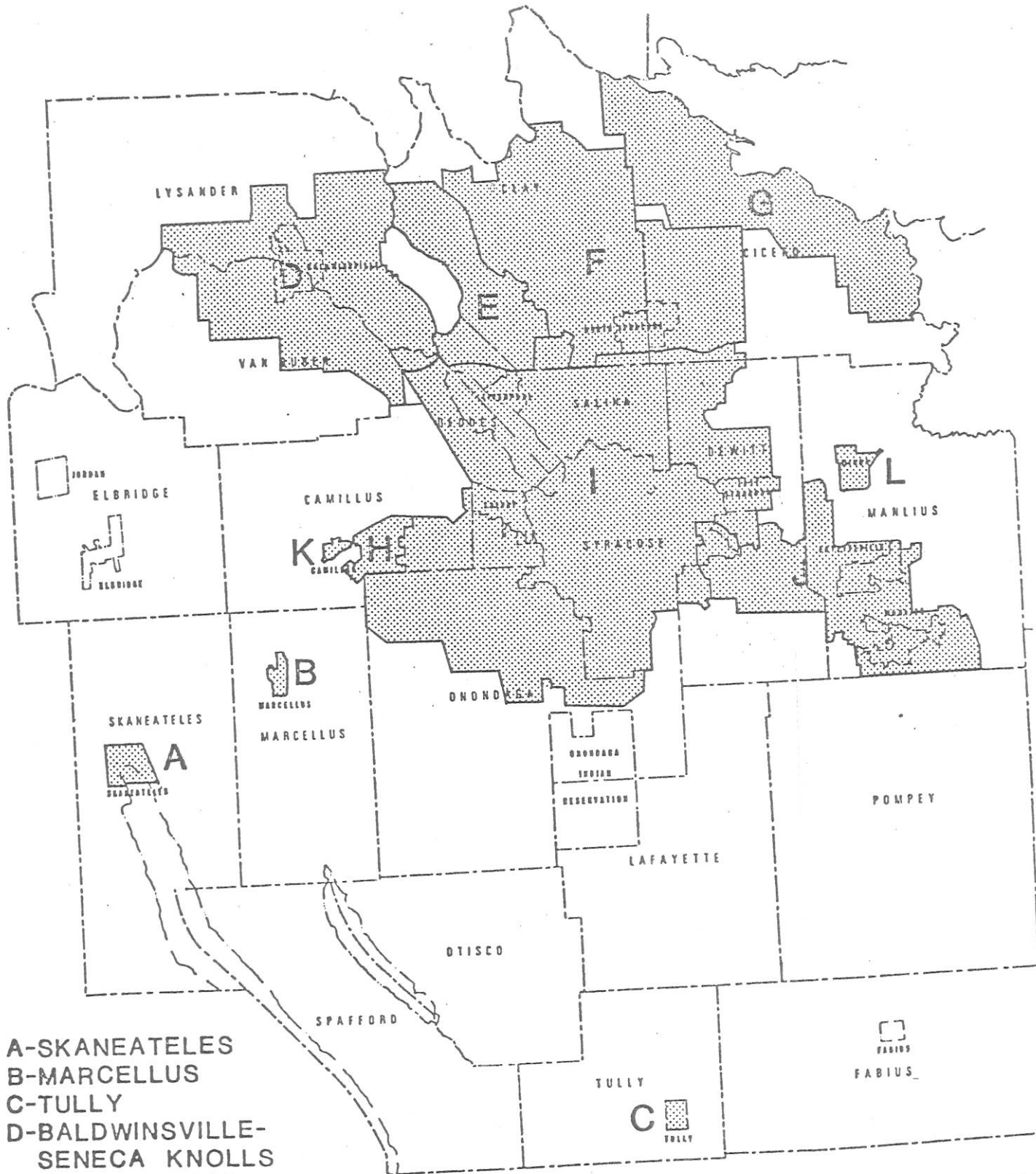
New techniques are available to assess road conditions and new materials available for road construction. More sophisticated techniques will help highway officials monitor road conditions without spending months driving over them. Asphalt reclamation as practiced in Syracuse and prestressed concrete produce more durable surfaces--a point that will be even more critical when tandem trailers start traveling additional miles.

Lastly, planning for roads and highways is weak. The Study Committee found no comprehensive view of what is needed in different areas and which roads should receive emphasis. The only planning arm, the Syracuse Metropolitan Transportation Council, sets priorities according to what aid is available rather than what is most desirable, as SMTC director William Meadows explained to the Study Committee. (March 29) The SMTC Transportation Improvement Program is essentially a list of projects rather than an assessment of present and projected needs. Major construction has doubtless occurred simply because projects were eligible for aid. Members of the Study Committee took interest, for example, in Prof. Napoleon's contention that the Camillus Route 5 by-pass is underutilized and unnecessary. Still another questionable project is the Interstate-481 construction from the Thruway to Cicero, which was undertaken when money unexpectedly became available. The Study Committee would like to see the Syracuse Metropolitan Transportation Council strengthened as a vehicle for cooperation, discussion, and planning for what is needed in the area. To do so requires greater support for the planning staff and direct representation of the towns.

#### SEWER SYSTEMS

Sewage treatment for 90 per cent of Onondaga County is provided by the Onondaga County Department of Drainage and Sanitation through the consolidated Onondaga County Sanitary District. The villages of Skaneateles, Minoa, Tully and Marcellus operate their own treatment plants. See Figure 4, Sewage Treatment Plant Service Areas. The county's Sanitary District was created in 1979, when 23 separate sewer districts were consolidated. The county now operates 12 wastewater treatment plants, 65 pumping stations, and 3,000 miles of collection sewers. In addition, the County owns and maintains (since 1970) the City's 60 miles of combined flow sewer lines (sanitary and storm sewers) and provides sewer maintenance under contract to towns and villages.

FIGURE 4



- Village
- A-SKANEATELES
  - B-MARCELLUS
  - C-TULLY
  - D-BALDWINSVILLE-SENECA KNOLLS
  - E-WETZEL ROAD
  - F-OAK ORCHAR.
  - G-BREWERTON
  - \* H-NINE MILE
  - I-METROPOLITAN SYRACUSE.
  - J-MEADOWBROOK-LIMESTONE
  - \* K-CAMILLUS
  - Village L-MINOA

SEWAGE TREATMENT PLAN  
SERVICE AREAS

ONONDAGA COUNTY

SYRACUSE-ONONDAGA COUNTY PLANNING AGENCY

2 0 2 4 6  
SCALE IN MILES

NORTH  
1978



In recent years smaller treatment plants have been eliminated, and flows have been directed to new and more efficient facilities. Three additional plants will be closed in the mid-1980s. At most of the treatment plants actual flow is only about 50 per cent of capacity. Mr. John Karanik, deputy commissioner of the Onondaga County Department of Drainage and Sanitation, informed the Study Committee of two priorities: the expenditure of \$30 million for construction of the Wetzel Road wastewater treatment plant and \$10 million for the Meadowbrook-Limestone Treatment Plant.

A major problem is presented by the City's combined flow sewer system. Although this system now has only two dry-weather overflow points, during wet weather there are as many as 90 overflow points at which combined sewage and rainwater pour into Onondaga Creek and Harbor Brook, which empty into Lake Onondaga. In more than ten years the water quality objectives established in 1972 as part of the Water Pollution Control Act have not been met. To meet the pollution problem Onondaga County received substantial federal and state grants for construction of the Metropolitan Syracuse Treatment Plant, including completion of a tertiary treatment plant in 1979.

County officials first proposed to end continuing pollution by construction of treatment facilities at the sites of the two creeks. But in 1982-1983 attention focused instead on the Flow Balancing Method as a suitable alternative at only about one-fourth the cost of previously proposed treatment facilities. The Flow Balancing Method consists of a series of floating pontoons and polyethylene curtains arranged in compartments at the mouth of the stream. During rainstorms or spring run-off, sewage would collect in these traps to be disinfected or pumped to the Metropolitan Sewage Treatment Plant. On June 9, 1983, however, Commissioner Karanik testified to the county legislature that even with the Flow Balancing Method in place at Onondaga Creek and Harbor Brook, sewage entering the lake from Ley Creek and overflows from the Liverpool Pumping station would make the lake unsafe for swimming at least fifteen days a year.

Officials of the Department of Drainage and Sanitation contend that they have consistently told legislators that state and federal mandates would eventually require construction of systems to treat combined overflows from Harbor Creek and Onondaga Creek as well as infiltration in Ley Creek and the Liverpool Pumping Station.<sup>28</sup> But in the department's 1982 annual report, the Flow Balancing Method is described as an alternative to the construction of treatment facilities.<sup>29</sup>

Over the past decade \$260 million have been spent on new facilities for drainage and sanitation. During the year 1982 the department received federal and state grants amounting to a total of almost \$10 million. Despite numerous improvements, Syracuse's antiquated combined sewer system continues to present

<sup>28</sup> Herald Journal, June 9, 1983.

<sup>29</sup> Annual Report, 1982, Onondaga County Department of Drainage and Sanitation, pp. 1-6.

On July 5, 1983, the county legislature voted to spend \$50,000 studying pollution-abatement in Lake Onondaga by the Flow Balancing Method. Herald Journal, July 6, 1983.

problems. The First Interim Report on New York's Infrastructure has recommended that "more attention be given to the separation of sanitary and storm sewers," and this goal should be included in all long-range planning.<sup>30</sup>

#### CITY

The City of Syracuse owns 467 miles of sewer mains; the mean age of this system is 45 years. After years of neglect and a major sewer line collapse that closed Adams Street for three months in 1975, the City now carefully monitors these sewers. Television cameras are used to identify problem sites, and about 20 per cent of the system has now been videotaped. At one time the Environmental Protection Agency emphasized sewer rehabilitation as a means to improve water quality. Aided by EFA grants, the City solved the system's most serious problems. Today, however, the EPA gives little emphasis to sewer rehabilitation, and the grants that helped to finance city improvements are drastically diminished. "We want to continue maintaining. But we won't have that resource," according to city official Dennis Wittmer.<sup>31</sup>

Maintenance of the storm sewer system is also important to reduce overflows and flood damage. The City keeps a preventive maintenance list for all storm sewers but at present "hits only the worst areas."

#### TOWNS

Many suburban systems that date to 1940-1950 are now overloaded, leaky, and heavily infiltrated with groundwater. The County contracts with the towns and several villages to provide sewer maintenance and encourages localities that have their own facilities to maintain them. But there is no requirement or inducement for maintenance, and as a result many town systems need major improvements to reduce excessive flows during rainstorms.

Neighborhoods in a number of towns are on septic tanks, which fall under the jurisdiction of the County Health Department. Major residential sections of DeWitt, for example, continue on septic tanks, and if residents of a neighborhood want to connect to the sewer system they must agree and finance this action according to what Supervisor Burton Lowitz described to the Study Committee as the principle of "the people who benefit must pay." DeWitt residents have long rejected this choice. The Town of Onondaga has seen major sewer construction in recent years for public health reasons. Inadequate septic tanks serving small lots in the Nedrow area presented a health hazard as sewage literally boiled to the surfaces. The Cross-Town Sewer District was organized to include both Nedrow and Onondaga Hill. Other sewer needs in the Town of Onondaga will not be met because of the prohibitive cost and decreased federal aid.

<sup>30</sup> Interim Report, p. 46.

<sup>31</sup> Syracuse Business, February 1982.

## SUMMARY

The need for vigorous maintenance is recognized. A continuing program of care is extremely important to avert problems. Budgetary constraints will make it difficult, probably impossible, to sustain the progress achieved in recent years.

As stated earlier, federal and state funding will change as of October 1983. The state will not increase its share, although federal aid will fall from 75 to 50 per cent in financing new sewage treatment projects. In the critical area of operations and maintenance state aid has fallen from 33 per cent to 12 per cent, and Governor Cuomo has proposed that this aid be cut completely.

From 1980-1983, the county's budgeted expenses rose by 36 per cent, while unit charges increased by only 11 per cent. Sewer rates remain relatively modest: the Onondaga County Department of Drainage and Sanitation reported an average charge of \$75.00 per household annually. Although unpalatable to the public rate increases would not make the charges unreasonable.

## WATER SYSTEMS

In the field of water supply, Onondaga County has two major providers: the City of Syracuse Water Department, which serves a population of 170,105, in the city and part of the town of DeWitt, and the Onondaga County Water Authority, which serves a population of over 200,000. [See Figure 5, Public Water Supply, Onondaga County.]

### City of Syracuse

The City of Syracuse draws its water primarily from Skaneateles Lake. Three pipes, built in 1894, 1910, and 1927, bring water to the city reservoirs. In 1931, the State established a limit of 59 million gallons of water a day that Syracuse is permitted to draw from Skaneateles Lake, but the city has rarely approached this level. In 1982 consumption amounted to 46.4 million gallons from Skaneateles. As an auxiliary supply, Syracuse draws some 205,000 gallons from Lake Ontario under contract with the Metropolitan Water Board, which is the body charged with administering the Onondaga County Water District.

The City's water system is old but nevertheless in relatively good condition. The City Water Department constantly monitors leaks and has an excellent program of repair and replacement of valves, hydrants, and pipes, which helped raise the city's fire underwriting rating. Nevertheless, Syracuse is losing about 25 to 30 per cent of its total water supply each day. This loss rate is partly attributable to unmetered users, namely public school buildings. The loss per day squanders the economical Skaneateles water supply, drawn by gravity feed, and in times of drought could make the City more dependent upon Lake Ontario water. Although Syracuse's water loss is high, it compares favorably to cities such as Buffalo, Corning, and Poughkeepsie, which are losing about 50 per cent in unmetered water.<sup>32</sup>

<sup>32</sup>Interim Report, pp. 26-27.



The principal cause of water loss in Syracuse is simply a break occurring between two pipes, a condition that results from the inevitable expansion and contraction of pipes in response to temperature changes. Some writers have described the city's "water infrastructure" as "old and deteriorating," but the Study Committee did not reach the same general conclusion.<sup>33</sup> Although many pipes are old, evidence does not suggest that they must be replaced; in fact, some pipes dating to the early part of the century are in better condition than pipes of recent vintage.

The City has a replacement program for valves, hydrants, and inadequate two-inch galvanized pipe dating to the 1920s. Furthermore, some fourteen gatehouses controlling water from Lake Skaneateles and three major reservoirs all need repairs at a cost of about \$300,000 each. Because of the system's age, maintenance and repair are especially important for the Syracuse water system.

In the past maintenance was often neglected. A 1943 state law permits water utilities to transfer to the general revenue fund what a private utility would pay in taxes. Up until 1976 the city water department transferred about \$500,000 to the general fund. Because the transmission system, storage reservoirs, and distribution systems were all paid for, revenues from water sales offered a tempting income source to the City. Syracuse is not using the water system for revenue at this time, and members of the Study Committee urged City officials to avoid temptation in the future. Revenue from water rates should be used for the water system alone.

#### Onondaga County Water Authority

In 1951 at the request of Onondaga County representatives the state legislature established the Onondaga County Water Authority. OCWA then purchased the privately owned New York Water Service Corporation, drawing its water from Otisco Lake, and began service in 1956. It was soon apparent that Skaneateles Lake, Otisco Lake, and springs and wells could not serve the growing needs of the metropolitan area. Officials and civic leaders from both the county and the city joined to develop a new plan--to tap Lake Ontario. The plan called for the creation of a Water District with the authority to levy taxes and sell bonds for a new Lake Ontario water system; a Metropolitan Water Board was to act as the governing body charged with selling Lake Ontario water wholesale. In July 1962 voters both in the city and in the county gave their support and approved a \$45 million capital expenditure for construction.<sup>34</sup>

Today the Metropolitan Water Board sells water to two customers, the City of Syracuse and the Onondaga County Water Authority. OCWA buys about 20 million gallons per day of water (filtered, fluoridated, and chlorinated) from Lake Ontario. Its other sources are Otisco Lake (fluoridated and chlorinated), 20 million gallons per day, and Skaneateles Lake (fluoridated and chlorinated), 1 million gallons per day. OCWA accounts for 85 per cent of

<sup>33</sup>John Wesche, "Metropolitan Water: The Onondaga County Water District," Essays on the Renaissance of Syracuse.

<sup>34</sup>An interesting story told in League of Women Voters. The Big Water Fight (Brattleboro, Vt.: 1966), pp. 10-16.

its water, a record that is excellent by comparison with other systems. About 4 million gallons daily are unaccountable, and a new leak detection program is underway.

Starting twenty years ago, OCWA began leasing many water systems from private districts, villages, and towns. Many of these systems have needed substantial improvement--some had lost as much as 55 per cent in unaccountable water--and OCWA has allocated \$225,000 per year for replacement of water mains, hydrants, and valves. Some 514 old hydrants within the system are believed to cause much of the system's leakage, and the estimated cost of their replacement is \$575,000. The replacement of valves dating to 1910 is estimated to cost \$1 million. In addition to these costs, the State has mandated construction of a treatment plant at Lake Otisco, at a cost of \$12-15 million.

Turbidity at Otisco exceeds State standards only about 6 times a year when rainstorms produce heavy runoff into the lake: because the lake is fairly shallow, algae affect the water's odor and taste during the summer. The cost of the new filtration plant will cause rates to rise by about 25 per cent.

Federal aid for major water projects has been proposed for several years, but passage of this legislation is unlikely. As a public benefit corporation, however, OCWA--unlike the City Water Department--is guaranteed the return of all its revenues. OCWA has used its revenues to improve facilities and provide for capital replacements in a very effective manner.

#### Towns and Villages

The Towns of Skaneateles and Spafford, the Village of Spafford, and two smaller water systems won a 1963 court case removing them from the Water District. Baldwinsville, Tully, and Marcellus are in the District and pay its taxes but have independent water systems. In some towns, including the Town of Onondaga, many areas are on wells. One section of the Town of Onondaga did create a water district, paid for the cost of the line, and leased it to OCWA. Other sections such as South Onondaga and Sentinel Heights, where the wells are dry, need the water line but the costs to residents would be prohibitive.

#### SUMMARY

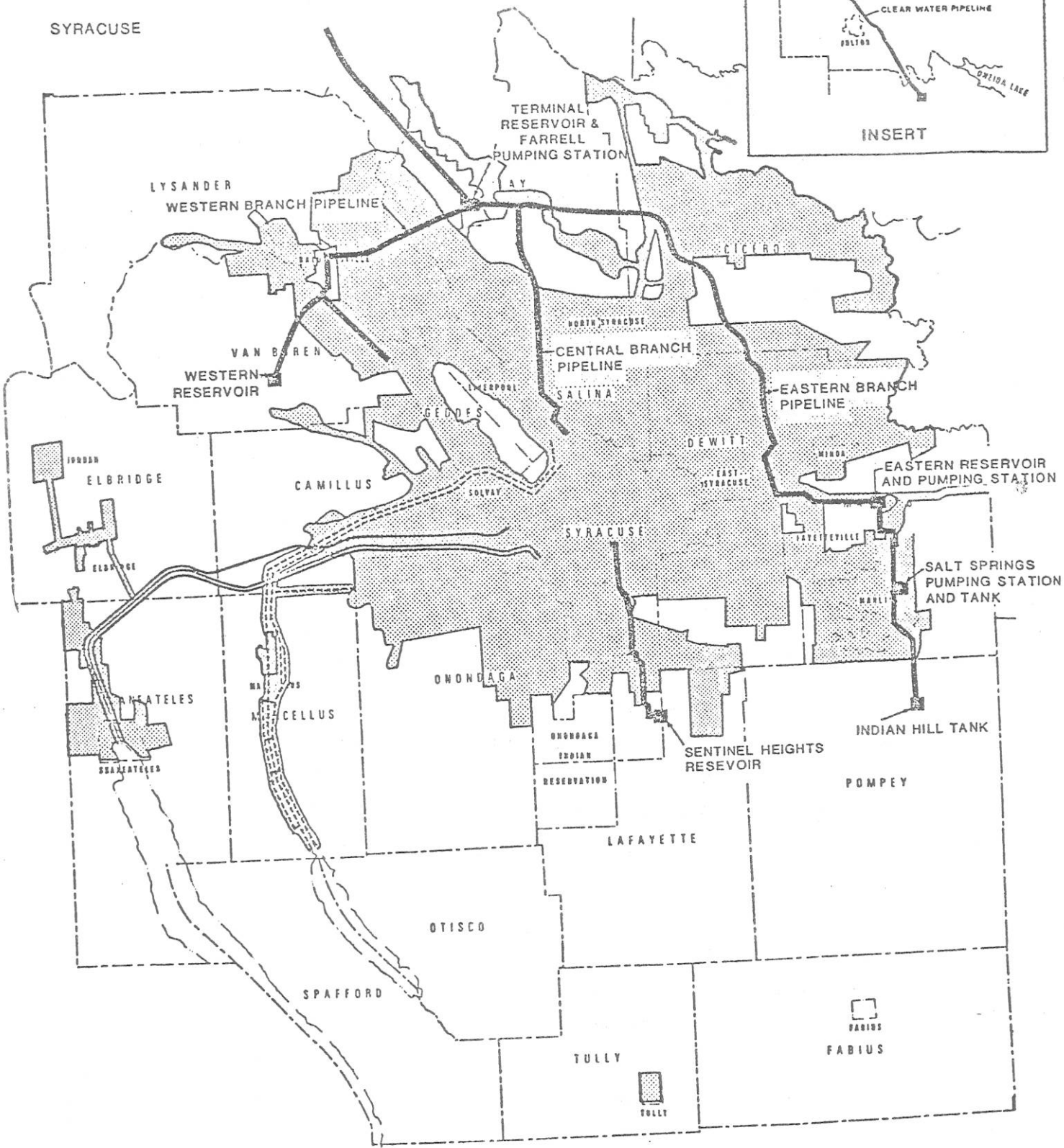
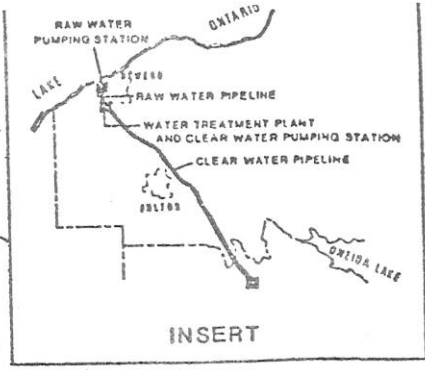
The local water systems are community assets. An abundant supply of clean water has attracted industry and made the whole area livable. The Metropolitan Water Board offers a means for city-county cooperation that has been useful in solving past problems and will be important in the future as water needs and usage change.

Officials in the City Water Department and OCWA are well aware of maintenance and replacement needs and their efforts in these areas should continue. Water rates in our area are low and water quality high. OCWA's average charge per household annually is under \$100; even the new filtration plant will bring the total only to \$125. The City of Syracuse recently increased water rates by 20 per cent, but the annual charge for a household of four is estimated at only \$60. Rate increases are reasonable when needed to finance necessary maintenance and improvements.

FIGURE 5

SEE INSERT FOR M.W.B. SOURCE IN OSWEGO

SYRACUSE



TRANSMISSION MAINS

- CITY OF SYRACUSE
- - - - ONONDAGA COUNTY WATER AUTHORITY
- METROPOLITAN WATER BOARD

▭ AREAS SERVED

PUBLIC WATER SUPPLY

	ONONDAGA COUNTY
	SYRACUSE-ONONDAGA COUNTY PLANNING AGENCY

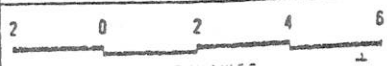


FIGURE 6

MUNICIPAL WATER SUPPLY  
BY PURVEYOR AND SOURCE  
ONONDAGA COUNTY

<u>MUNICIPALITY</u>	<u>PURVEYOR</u>	<u>SOURCE</u>
CAMILLUS	OCWA	OTISCO
CICERO	OCWA	ONTARIO
BREWERTON	OCWA	ONTARIO
CLAY	OCWA-METROPOLITAN WATER BOARD	ONTARIO
DEWITT	OCWA-SYRACUSE	OTISCO-SKANEATELES
E. SYRACUSE	OCWA & OWN RESERVOIR	
ELBRIDGE	CITY OF SYRACUSE	SKANEATELES
FABIUS	NO TOWN SUPPLY	
GEDDES	OCWA	OTISCO
LAFAYETTE	NO TOWN SUPPLY	
LYSANDER	OCWA-BALDWINVILLE-PHOENIX	ONTARIO-WELLS
MANLIUS	OCWA	ONTARIO
MARCELLUS	OCWA-TOWN RESERVOIR	OTISCO-LOCAL SPRINGS
ONONDAGA	OCWA-CITY OF SYRACUSE	OTISCO-SKANEATELES
OTISCO	NO TOWN SUPPLY	
POMPEY	NO TOWN SUPPLY	
SALINA	OCWA	OTISCO
SKANEATELES	CITY OF SYRACUSE	SKANEATELES
SPAFFORD	NO TOWN SUPPLY	
TULLY	TOWN WELLS	LOCAL WELLS
VAN BUREN	OCWA-BALDWINVILLE	ONTARIO-WELLS
CITY OF SYRACUSE	CITY SUPPLIED, MWB	SKANEATELES

After reviewing each area, the OCL Study Committee reached general conclusions and recommendations about the condition of the infrastructure and funding as well as specific recommendations for bridges, roads, sewer systems and water systems.

## CONCLUSIONS AND RECOMMENDATIONS

### I. Conditions

1. The condition of the Onondaga County infrastructure is comparatively good but requires careful monitoring and maintenance if the present quality is to continue.

2. Present maintenance of the infrastructure is often carried out on a crisis-to-crisis basis. Both an evaluation system and a well-planned maintenance program are critical for all of the facilities that make up the infrastructure.

3. Evaluation criteria should be developed for all major components of the infrastructure and applied to systems at all levels of government. Decision-makers have only limited research and information available to evaluate the different public works systems in our infrastructure.

### II. Funding

1. Because of reductions in federal and state aid, local communities must assume a larger burden in financing public works systems; local governments (local governments include village, town, city and county administrations) should develop capital budgets that identify needs and project costs for five- and ten-year periods.

2. Local officials should dedicate monies for specific maintenance and repair purposes; dollars earmarked for maintenance and repair should not be diverted to other areas.

3. It is possible according to State law for cities, towns and villages to retain funds from one year to the next for specific purposes. Localities should be encouraged to develop such capital reserve funds from which to meet repair or replacement costs.

4. The authority device has great advantages in that dollars can be retained and set aside for maintenance and replacement purposes. Because it is self-financing and relies on user-fees rather than taxes, the authority has autonomy that municipal departments lack; efficient operations are encouraged. For water and sewer systems, the authority device is appropriate. The disadvantage of many authorities is that they are one stage removed from public scrutiny and carry no sunset provision.

5. The trend toward greater flexibility in the distribution of state and federal aid is positive. Still greater local control in allocating these dollars is needed. In the area of highways and roads, federal and state programs restrict eligibility and limit the degree of choice at the local level. As a result funds are not always spent for the greatest needs.

6. Although federal aid is diminishing, the gasoline tax offers new revenue. Despite the severe drawbacks of bonding at present, New York State now has only one means to secure the matching funds for the federal gasoline tax: passage of the state transportation bond proposal.

### III. Bridges (page 9 to 12)

1. All bridges have now been rated; funding for the immediate repair of structurally deficient bridges must be provided.

2. Wholly inadequate bridges that are not essential should be closed.

3. Localities should develop capital programs for replacement and rebuilding of bridges.

4. New bridge construction should exploit materials and techniques that will keep maintenance needs to a minimum.

#### IV. Roads (page 12 to 17)

1. A complete evaluation of existing conditions is needed using the same standards to evaluate all roads and highways.

2. Criteria should be developed for the appropriate designation of roads according to jurisdictions, i.e., county, town, village. Where does the responsibility lie and where does the road fit in the system?

3. Reconstruction should be a mandated part of highway budgets; dollars should be allotted for replacement instead of for improvised, partial solutions that lead only to greater long-run costs.

4. Existing roads should be reviewed for appropriate use and traffic control signals; different standards of construction and maintenance are appropriate for different sorts of roads; e.g., crushed stone surfaces are acceptable on little-used roads.

5. Innovative techniques in evaluating roads and judging repair needs should be encouraged; personnel should be trained to use the most recent technology available if financially possible. Likewise, new materials and techniques for road construction should be used when affordable.

6. Local officials should continually assess policies for the development of roads that meet required standards, whether by bonding or subdivision regulation, and review the advantages and disadvantages of financing methods for their community. Every effort should be made to coordinate local



development and transportation policies, particularly in cases where several municipalities or jurisdictions are involved.

7. The Syracuse Metropolitan Transportation Council (SMTC) should be strengthened so a better overall view of conditions and needs in the field of transportation can be achieved. The SMTC role could be enhanced by representation of towns and villages and a planning staff charged with examining overall transportation problems rather than concentrating on projects that may be eligible for aid.

8. Onondaga County officials should vigorously resist Federal Highway Administration listings that will open several sections of local highways to tandem trailers. Although Routes 5, 13 and 20 have been removed from the list, non-interstate segments of the following will still be open to tandem trailers unless action is taken: Route 690, from I-90, Lakeland, to Route 370, Baldwinsville; Route 481, from I-81, North Syracuse, to Route 104, Oswego; Route 298, from I-690 to I-81 (Bear Street arterial), Syracuse.

#### V. Sewage System (page 17 to 21)

1. Funds for cyclical replacement and rehabilitation are highly important; it is essential that money be set aside for adequate maintenance.

2. Long-term planning should consider separation of the city's storm and sanitary sewers; wherever feasible segments of this system should be separated.

3. The problem of combined sewer overflows must still be addressed and resolved. This action is imperative to stop pollution and to achieve full use of our water resources.



4. Stormwater systems need continuing repair and replacement to protect against flooding and other damage from overflows.

5. Town and village systems need improvement. Officials at the town and village level need to pursue dollars energetically, raise taxes, or seek solutions at the county level. Extension of Onondaga County Sewer District's jurisdiction over portions of town and village systems should be evaluated.

#### VI. Water Systems (page 21 to 25)

1. Water-selling agencies should meter all users.

2. Major capital expenditures to improve gatehouses and reservoirs in the city system should be made.

3. Aggressive leak-detection policies should be followed.

4. Communities should continually re-evaluate water pricing policies; water rates should reflect the cost of capital improvements and replacements.

5. State law should be revised to impose a mandate on cities and villages that water supply revenues must be dedicated to water supply purposes alone and not diverted to any other use.

APPENDIX I

THE ONONDAGA CITIZENS LEAGUE BOARD OF DIRECTORS  
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APPENDIX II

ONONDAGA CITIZENS LEAGUE STUDY COMMITTEE  
MEMBERSHIP LIST, 1983

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Neil T. Buske  
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APPENDIX III

OCL Subcommittee to Draft  
Initial Statement of Recommendations

Samuel Clemence

Robert Hennigan

John Kramer

Stephen Martin

Peter Moffa

Jean Reeve

Harry Rook

Jean Stinchcombe

Deborah Williams

APPENDIX IV

List of Speakers to the OCL Study Committee

Pat Di Domenico, Supervisor, Town of Clay

David Dolly, Commissioner of Public Works, City of Syracuse

Linda Dombrow, Office of Federal and State Aid Coordination, City of Syracuse

John R. Easterly, Executive Engineer, Onondaga County Water Authority

Donald A. Fahey, Superintendent of Maintenance and Operations, City of  
Syracuse Water Department

Arthur Gabriel, Executive Vice President of the Syracuse unit of the American  
Automobile Association

Robert Hennigan, SUNY-ESF

Barbara Humphries, Office of Federal and State Aid Coordination, City of  
Syracuse

Lynne H. Irwin, Department of Agricultural Engineering, Cornell University  
Local Roads Program

John Karanik, Deputy Commissioner, Onondaga County Department of Drainage and  
Sanitation

Willard Ketchum, Regional Design Engineer, New York State Department of  
Transportation

Richard Kunder, Division Engineer, Water Department, City of Syracuse

Willard Lipe, Onondaga County Legislature

John Loveland, President, O'Brien and Gere Engineers, Inc.

Burton Lowitz, Supervisor, Town of DeWitt

Stephen Martin, Sewer Maintenance Supervisor, Onondaga County Department of  
Drainage and Sanitation

William Meadows, Director, Syracuse Metropolitan Transportation Council

James Napoleon, traffic consultant; adjunct professor of engineering, Syracuse  
University

Joseph Powers, Regional Director, New York State Department of Transportation

Harry E. Rook, City Engineer, City of Syracuse

William Southern, Onondaga County Department of Transportation

Paul Wicker, Supervisor, Town of Onondaga