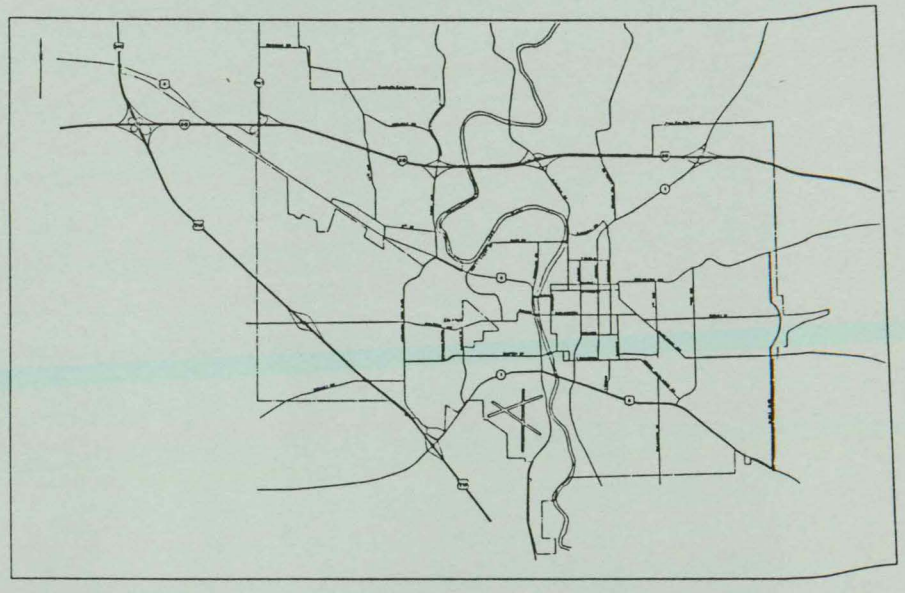
Arterial Street Plan



For the Iowa City Urbanized Area

February 1991

JCCOG

Johnson County Council of Governments
410 E. Washington St. Iowa City, Iowa 52240

Date: March 20, 1991

To: JCCOG Board of Directors

From: Jeff Davidson, Transportation Planner

Re: Arterial Street Plan for the Iowa City Urbanized Area

Attached for your consideration is an arterial street plan prepared by the JCCOG Transportation Planning Division. This plan is recommended to you for adoption by the JCCOG Technical Advisory Committee. This report is a culmination of several years' research by JCCOG into a suitable arterial street planning process for our community. It is intended to succeed the "Area Transportation Study" (ATS) of the early 1970's and to exclude those facets of the ATS which were clearly unacceptable: the assumption of high population growth combined with a rapid increase in vehicle miles of travel, and the focus on grandiose capital improvements which had no regard for the scale and integrity of the community.

The focus of this plan is on the identification of deficiencies in the arterial street network, both now and in the future. It is intended to provide a guide for the programming of capital improvements by the various local and state organizations responsible for arterial streets. In its current form the plan does not suggest specific improvements for specific locations. It is recognized that the communities of Iowa City, Coralville, and University Heights; the University of Iowa; and Iowa DOT will handle street deficiencies in different ways. No longer does the identification of a street capacity deficiency carry with it the assumption that the street will be widened. It is intended that the Transportation Planning Division will assist in the subsequent microscale analysis of specific problem areas, but that this not be an element of this document.

The scale of improvements. The traffic analysis model used in this report confirms what most of us would say is obvious: There are not significant traffic problems in Iowa City, certainly not on the scale of suburban congestion in major metropolitan areas. There is no technical justification for massive changes in the arterial system. With our slow growth rate and the heightened sensitivity towards neighborhoods which is part of life in this community, there will be no new grade separated overpasses or expressways cutting through established neighborhoods. Improvements will be on the same scale as existing streets.

Interjurisdictional Issues. Certainly JCCOG is the appropriate forum for arterial street issues which involve more than one JCCOG member agency. Interjurisdictional issues which currently exist include:

- Melrose Avenue through University Heights.
- Highway 6 between First Avenue and Rocky Shore Drive.
- The Melrose diagonal between Grand Avenue and Riverside Drive.
- The Market-Jefferson-Madison Street system through the University of Iowa east campus.
- Camp Cardinal Road.

None of these issues is of crisis proportion requiring immediate attention. Melrose Avenue is the most pressing and may be even more critical following the improvements which are programmed between University Heights and Byington Road over the next few years. Highway 6 between Coralville and Iowa City is also under consideration for improvements in the short-range future.

Recognizing the political sensitivity of interjurisdictional issues, this plan does not endorse specific courses of action at the present time. It is recognized that the political climate will change, and what is currently an acceptable technical solution may not be in the future. It is the intention of JCCOG staff to address these issues in detail on a case-by-case basis when the need for action is imminent. At that point staff can respond to whatever policy constraints are mandated by the JCCOG Board of Directors. In the interim, property development in these arterial corridors should acknowledge the pending capacity issues.

Following JCCOG Board adoption, this planning report will be distributed for use as a guide in programming capital improvements to the arterial street system in our community. The Transportation Planning Division will update this report as needed each year.

Note: This plan was adopted by the JCCOG Board of Directors at their March 19, 1991 meeting, on a vote of 9-0.

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Arterial Street Plan
For the Iowa City Urbanized Area

February 1991

The Johnson County Council of Governments
Transportation Planning Division

410 E. Washington Street
Iowa City, Iowa 52240

Jeff Davidson, Transportation Planner
Kevin L. Doyle, Asst. Transportation Planner
Dennis McKim, Graphics

Preparation of this report was financed
in part through a grant from the Federal
Highway Administration under a provision
of the 1962 Federal-Aid Highway Act

Table of Contents

Introduction

The Federal 3-C transportation planning process (comprehensive, coordinated, continuing) is conducted in the Iowa City Urbanized Area by the JCCOG Transportation Planning Division. Arterial street planning is one facet of the overall transportation planning process which encompasses all modes of transportation. Arterial street planning is best conducted on an urbanized area scale, since arterial streets do not terminate at municipal boundaries.

The objective of arterial street planning is to provide the information necessary for public officials to make decisions regarding improvements to the arterial system. Concerns at this level of the planning process pertain to generalized street alignment and street capacity considerations. Major structures such as bridges and culverts on the arterial system should also be considered. The ultimate goal is a program of capital improvements which can be programmed by individual JCCOG member agencies to ensure the continued adequacy of the arterial street system.

Capital improvements to arterial streets in the Iowa City Urbanized Area are not only a local concern. The Iowa Department of Transportation is responsible for the federal and state system of highways and expressways which are included on the local arterial system. These range from a major interstate highway (I-80), to facilities on the state primary system.

Scope

The arterial street system in the Iowa City Urbanized Area is shown in Figure 1. For the purposes of this plan the arterial street system also includes the expressway system, the highest functional class of street. A small number of collector streets are included in order to make the arterial system function in the modeling process which will be described later.

The urbanized area is defined as the contiguous city limits of Coralville, Iowa City, and University Heights. In addition to the three municipalities, certain streets under the jurisdiction of the University of Iowa are represented in the arterial system. Because arterial streets do not stop at municipal boundaries, consideration must be given to ties with the

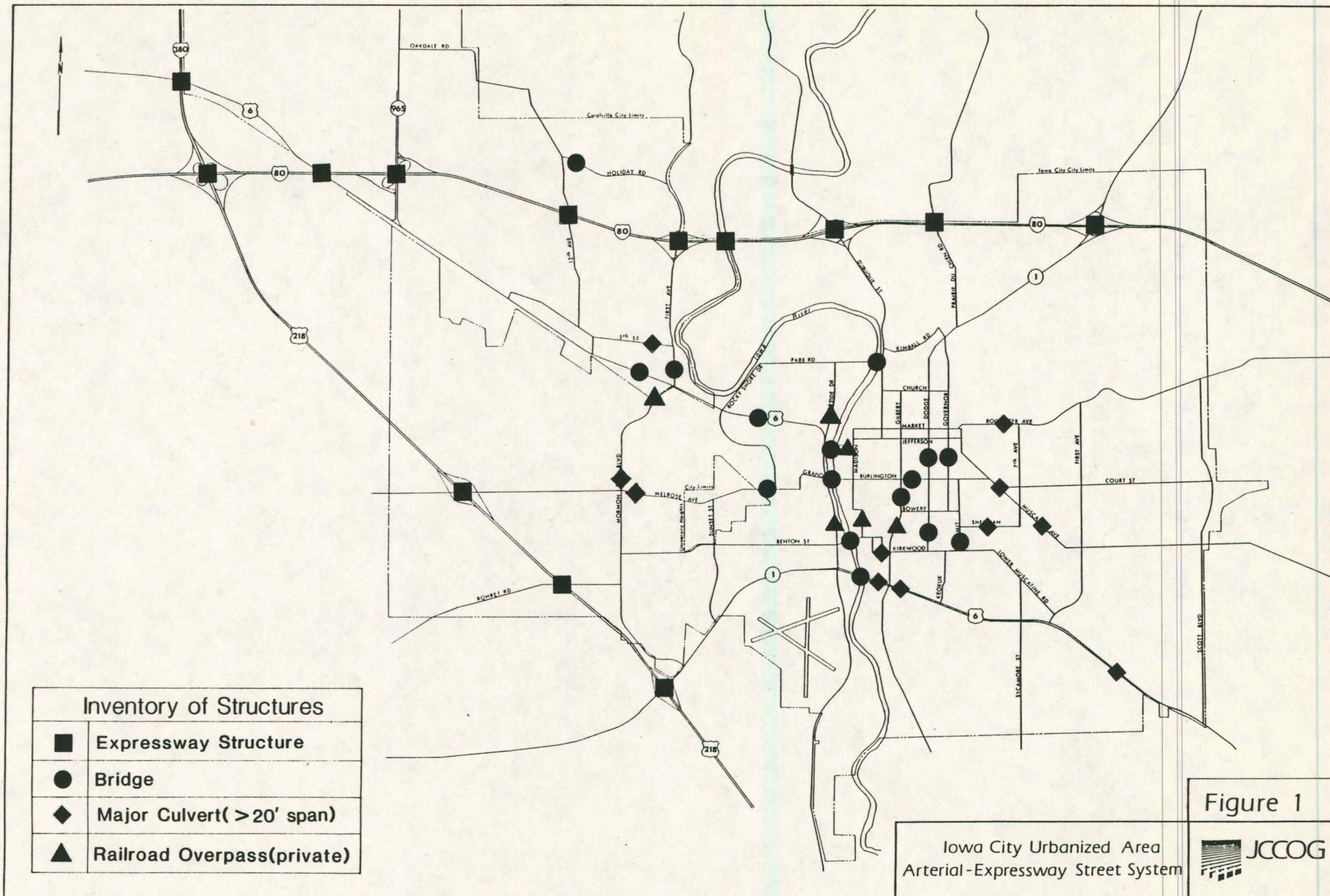


Figure 1

Iowa City Urbanized Area
Arterial-Expressway Street System

rural system in unincorporated areas of Johnson County. Many of these streets will eventually be included in the urbanized area arterial system as annexations occur.

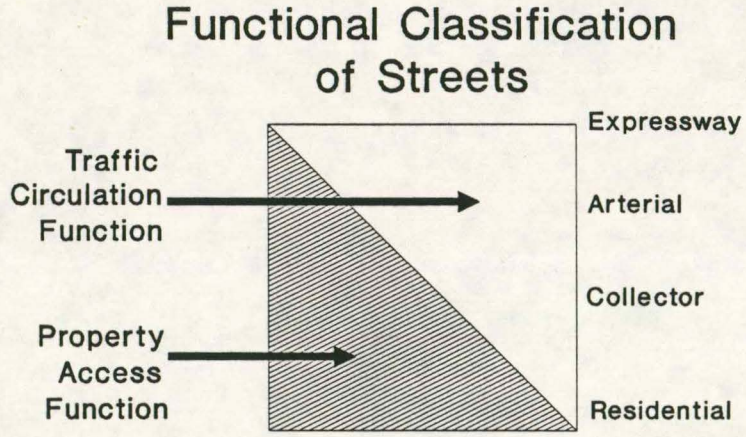
Arterial Street Function

Arterial streets are the network of streets in a community which facilitate the major movement of traffic. Arterials connect the principal traffic generators within a city and rural routes feeding into a city. The arterial street network is an important quality of life factor in a community. Roads which are underbuilt or substandard cause congestion and longer than necessary travel times. This can deter growth and undermine the promotion of commerce.

The design and function of arterial streets should facilitate the efficient movement of large amounts of traffic. In order to maximize safety and roadway capacity, arterial streets should minimize access to abutting property.

Design standards for arterial streets should include:

- The entire street width dedicated to traffic movement
- Vehicle design speed of 35 m.p.h. or greater
- Design volume of 2,500-30,000 ADT
- Peripheral location to neighborhoods; buffers if possible
- Continuous corridors
- Separated turning lanes
- Sidewalks
- ROW of at least 66 feet



Relationship Between Traffic and Access Functions

Evaluating Arterial Streets

Techniques for Evaluation

The evaluation of roadway traffic conditions is performed by calculating ***delay***, as expressed by Level of Service, and ***congestion***, as expressed by volume/capacity or V/C ratio. These techniques may be used to evaluate existing traffic conditions as well as plan future improvements. For example, if an analysis shows that existing or projected V/C on a street is approaching saturation, then a series of alternatives can be evaluated which will add capacity or reduce volume.

Level of Service. Level of Service (LOS) indicates delay and is expressed in values A through F. LOS A indicates free-flow, unconstrained traffic conditions. LOS F indicates complete congestion. LOS C is the typical design standard when assessing delay for a proposed facility. A higher delay level may be acceptable under certain conditions, such as on central business district streets.

Volume/Capacity Ratio. V/C is used for comprehensive assessments of street network capacity. For example, V/C can be used to determine whether or not a street should be reconstructed at two or four lanes. Capacity can be expressed within acceptable delay levels, e.g. capacity at Level of Service C.

Figure 2 shows the table used to calculate arterial street capacities. The determining factors are the number of lanes and amount of side friction. The lower table shows the generalized relationship between Level of Service and capacity. Figure 3 shows Level of Service C street capacities on the Iowa City Urbanized Area arterial system.

Other Techniques. Other criteria can be used to evaluate arterial street operation. If a street is identified as a high accident location, then reducing the accident rate is an appropriate evaluation tool for a proposed improvement. Pedestrian studies may use gap analyses. Improvement in air quality or increased economic development activity are other measures for evaluating street improvements which may be appropriate, depending on local priorities.

Neighborhood Concerns

Because of their obtrusive character, arterial streets are frequently perceived negatively by individual neighborhoods, especially in older areas. Arterial streets may be noisy, visually obtrusive, and barriers for pedestrians.

In newly developing areas, arterial streets can be designed to reduce negative impacts. Arterials can be located on the periphery of neighborhoods to define boundaries, building

Figure 2
Arterial Street Capacities
ADT at Level of Service "C"

Number of Lanes		Access Condition (side friction)			
		Minimal	Light (residential)	Moderate (mixed zoning)	Heavy
2 Lanes Undivided	Without turn lanes	8,000	7,000	6,000	5,000
	With left turn lanes	11,000	10,000	8,000	7,000
4 Lanes Undivided	Without turn lanes	20,000	19,000	18,000	17,000
	With left turn lanes	24,000	23,000	22,000	21,000
4 Lanes Divided	Without turn lanes	24,000	23,000	22,000	21,000
	With left turn lanes	28,000	27,000	26,000	25,000
	With left and right turn lanes	30,000	29,000	28,000	27,000
6 Lanes Divided	Without turn lanes	36,000	35,000	34,000	33,000
	With left turn lanes	40,000	39,000	38,000	37,000
	With left and right turn lanes	42,000	41,000	40,000	39,000
One-way Pair	Without turn lanes	16,000	15,000	14,000	13,000
4 Lane Freeway	Controlled Access	LOS C	LOS D	LOS E	
		46,500	55,900	67,000	
6 Lane Freeway	Controlled Access	LOS C	LOS D	LOS E	
		73,600	82,900	101,500	

Arterial Street V/C Ranges based on Level of Service C as Practical Capacity

Level of Service	V/C
A-C	≤1.00
D	1.01-1.13
E	1.14-1.25
F	1.26+

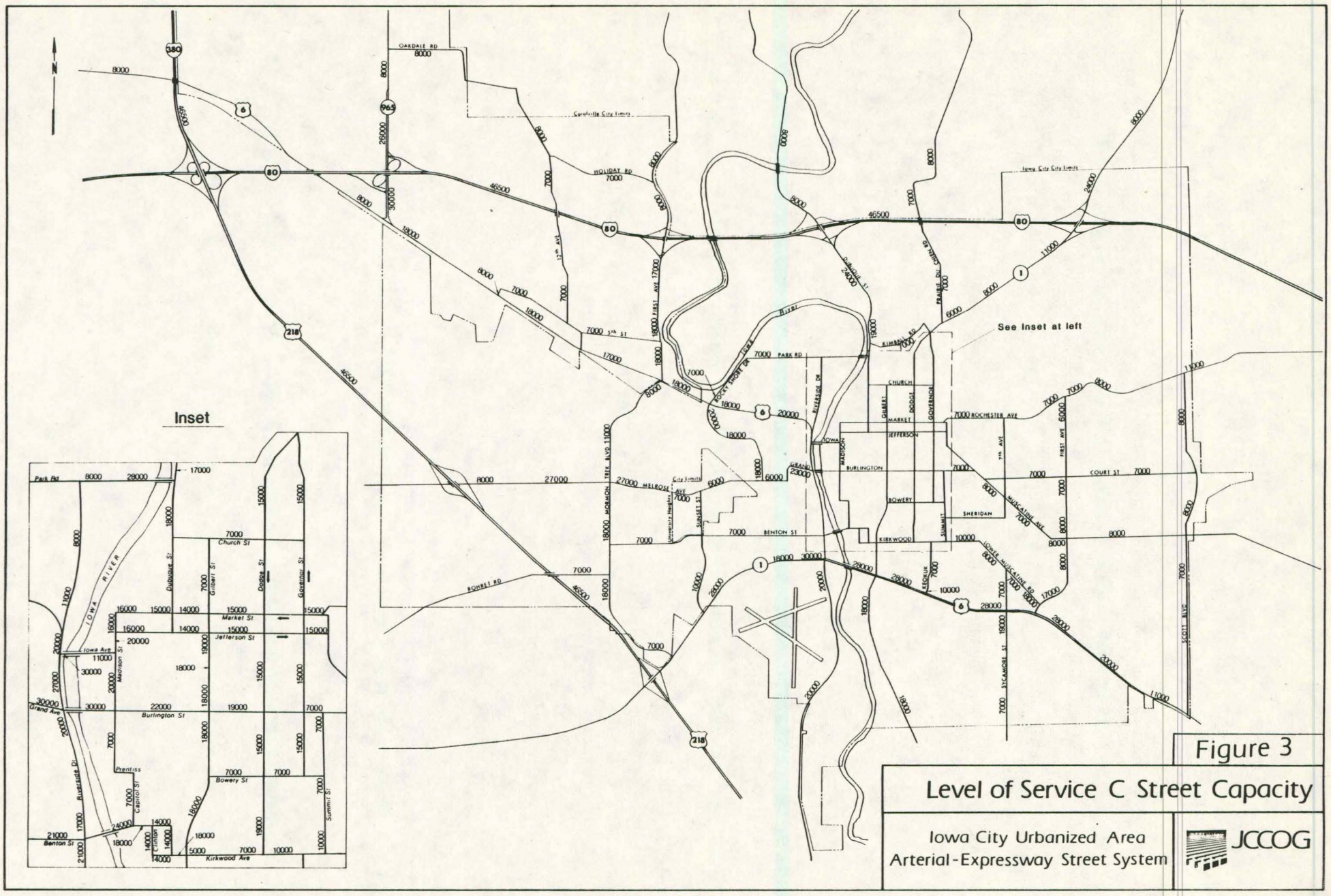


Figure 3

Level of Service C Street Capacity

Iowa City Urbanized Area
Arterial-Expressway Street System

JCCOG

setbacks can be increased and buffering provided, and individual lot access provided through interior streets only. Unfortunately these design elements are frequently not available in inner city areas where the arterial street network was superimposed on a street system which never envisioned the proliferation of the automobile.

Community Priorities

A crucial step in the arterial street planning process is reconciliation of the technical analysis with local community priorities. The purpose of a technical analysis is to identify existing and forecasted deficiencies in the arterial street system, based on the concepts of delay and V/C. If a decision is made to widen an existing street or relocate a street along a new alignment, there are standards governing lane width, curve alignment, and traffic control. These standards are established to ensure safe, efficient motor vehicle traffic flow.

Elected officials, however, will consider more than efficient traffic flow when planning capital improvements to the arterial street system. Other users of the street system should be considered, such as bicyclists and pedestrians. What will be the impact of an arterial street improvement on these secondary users? Are there compromise measures which can be taken to allow efficient vehicular traffic flow while ensuring pedestrian safety? This may be as simple as maintaining on-street parking and decreasing curve radii in order to slow vehicular traffic.

Community vision will change as different individuals are elected to policy-making positions. Certain individuals will give high priority to programming capital improvements based on technical analyses, while others will find increased delay and congestion acceptable if the only alternative is to negatively impact a neighborhood.

It is important to consider the arterial street plan as a dynamic document which can respond to these changes in public policy. For example, if a policy is established that a corridor is a capacity restricted link, that is, street widening will not occur under any circumstances, then the street plan can formulate projects to alleviate identified deficiencies within this policy constraint. Similarly, the street plan is predicated on existing mode splits being maintained, i.e., similar proportions of people driving, walking, taking the bus, etc. If changes in mode split occur over time, then the plan can be adjusted to reflect greater or lesser need for roadway improvements.

The update of the arterial street plan will be an annual work element for the JCCOG Transportation Planning Division. Through the updating process it is hoped the street plan will remain a useful planning and programming tool.

Traffic Modeling System

The travel forecasting model used in the analysis is Quick Response System II. QRS II is a microcomputer-based model which uses the "four-step" transportation planning process of trip generation, trip distribution, mode split, and traffic assignment. Data management is handled by the General Network Editor, a sophisticated system which allows elements of the street network to be opened up and manipulated.

Figure 4 shows the 66-zone traffic analysis network which was designed for the Iowa City Urbanized Area. Within each zone are data representing the characteristics of the zone. The four major data inputs are:

- Number of dwelling units
- Number of retail employees
- Number of non-retail employees
- Number of autos per dwelling unit

As with any travel forecasting model, a calibration process was necessary to validate the forecasting abilities of the model. The model parameters were manipulated until the model's link volumes replicated with an acceptable degree of accuracy existing ground counts at a series of cutlines. Recalibration of the model will be part of the annual update of the street plan.

The model's flexibility allows the arterial street network to be evaluated under a number of scenarios: existing street network, existing-plus-committed street network, 10-year (short-range) development forecast, and 30-year (long-range) development forecast. Streets can be added or deleted, travel speeds changed, and intersection delay modified to reflect actual traffic network conditions.

Limitations of the Modeling System

The trip assignments made by the modelling system provide a general indication of how travel patterns will change as development occurs over time. The model should not be construed as representing the exact conditions which will eventually occur on individual streets. No modelling procedure, no matter how sophisticated, can replicate all of the factors which affect the behavior of individual motorists.

The modelling process assumes all drivers will behave logically in selecting the most convenient travel route, with convenience measured by travel time. In reality, individual perceptions will cause some motorists to select a route other than the shortest path. An additional limitation of the model is that all trips to or from a particular traffic zone are loaded on the network from a single centroid. In reality, origins and destinations are distributed throughout the zone. In view of these limitations, the model trip assignments should be interpreted as general travel patterns, not exact conditions.

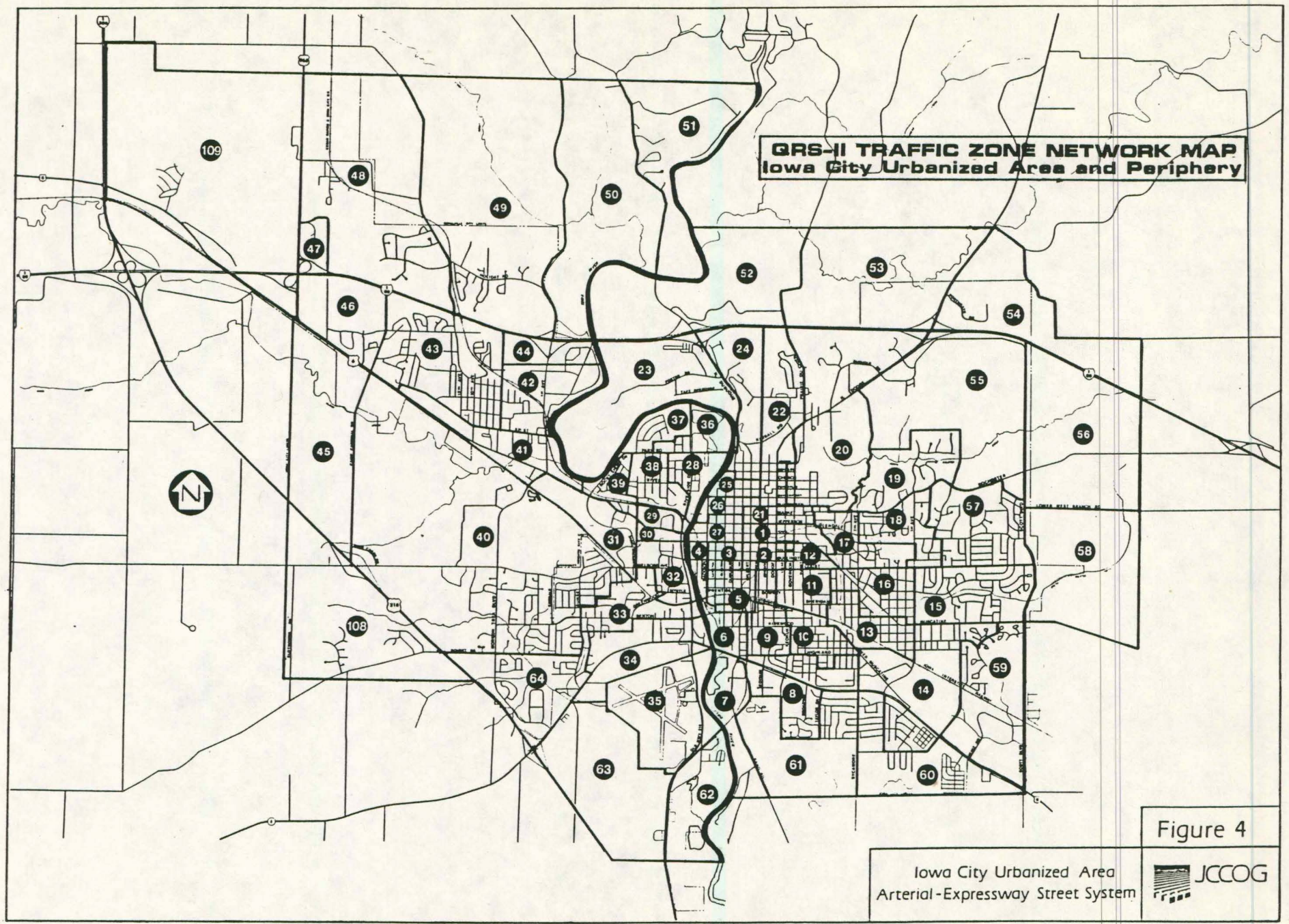

QRS-II TRAFFIC ZONE NETWORK MAP
Iowa City Urbanized Area and Periphery
N
Iowa City Urbanized Area
Arterial-Expressway Street System
JCCOG

Figure 4

Short-Range and Long-Range Development Forecasts

Through manipulation of the travel forecasting model, growth in residential, commercial, and industrial property can be simulated. The model uses the estimated pattern and intensity of development to project future traffic volumes and show the effect on the arterial street network. The forecast traffic volumes can be subjected to alternative street network designs, for example, the widening of a corridor or addition of a new alignment. This level of analysis does not establish the detailed location of new streets. It indicates general corridor alignment between major activity centers.

Figure 5 shows projected growth areas in the Iowa City Urbanized Area. Using as a guide the intensity of development permitted under existing zoning, estimates were made of the number of dwelling units, retail jobs, and non-retail jobs which can be expected.

Short Range Development Forecast

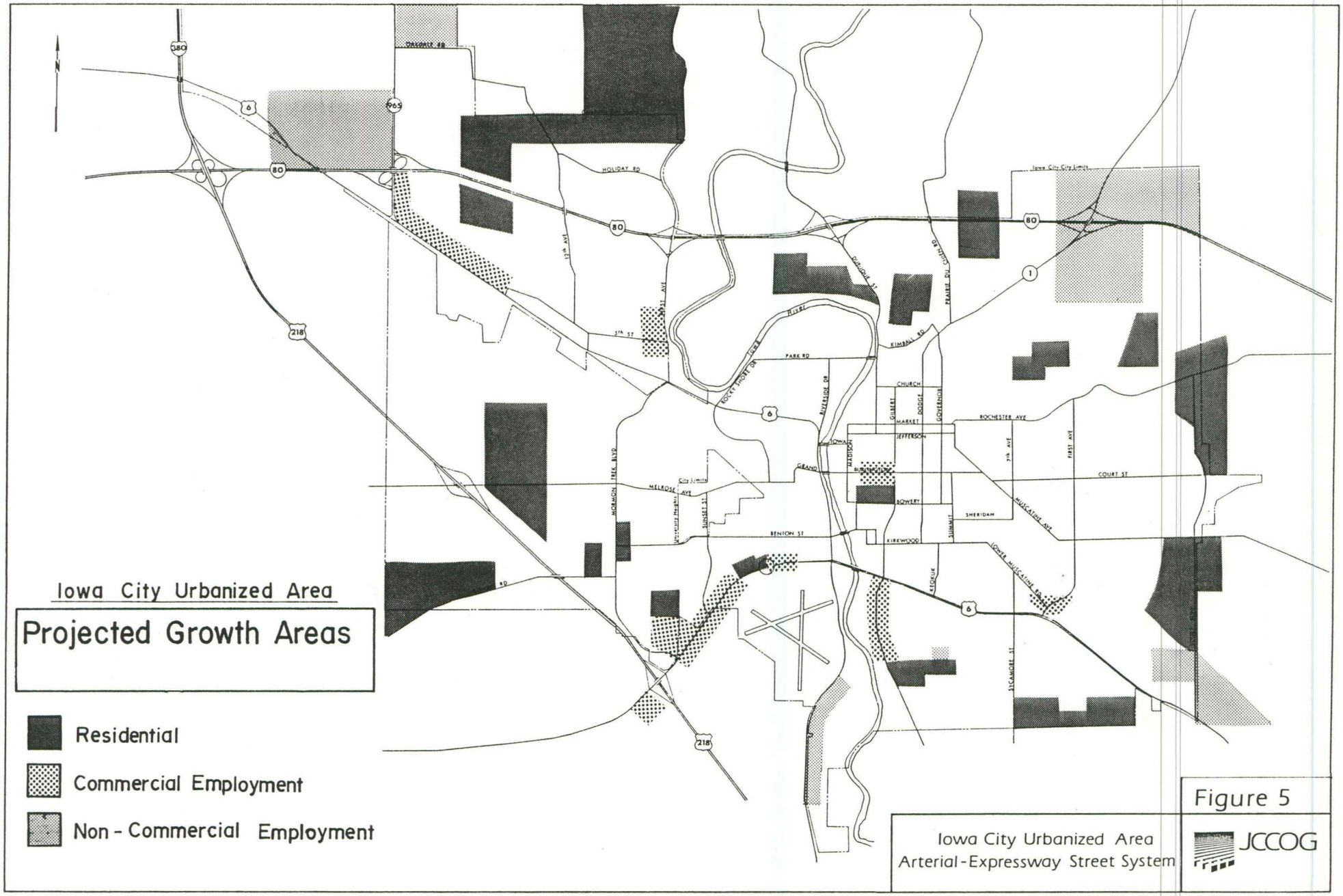
A short-range development forecast was established by estimating those areas in Figure 5 which are expected to develop within ten years. This required a series of assumptions which were formulated based on the following sources: the 1989 Iowa City Comprehensive Plan; the 1985 Coralville Community Study and Plan; 1980 U.S. Census data; Preliminary 1990 U.S. Census data; current federal transportation policies; an examination of existing residential, commercial, and industrial growth areas in the community; and a trend analysis of Iowa City and Coralville building permits for the past five years. The assumptions include:

- Residential, commercial, and industrial growth will not be haphazard, but will occur in identified growth areas of the community (Figure 5).

- The overall population growth rate in the community is modest: 800 to 900 persons per year. The population may stabilize or decline if decreases in University of Iowa enrollment occur as projected.

- In spite of the low population growth rate, residential construction will continue at the rate of approximately 400 dwelling units per year. This is a result of the overall strength of the Iowa City-area economy, and a decrease in average household size.

- Commercial and industrial growth is extremely hard to project. In spite of local marketing efforts to attract commercial and industrial development, the overall health of the state and national economy will be the largest factor in determining growth in these areas. It is difficult to forecast if new commercial facilities will add to the existing activity base or replace existing businesses.


Iowa City Urbanized Area
Projected Growth Areas
Residential
Commercial Employment
Non - Commercial Employment
Figure 5
Iowa City Urbanized Area
Arterial - Expressway Street System
JCCOG

- The service/retail sector of the economy is growing at a faster rate than the office/manufacturing sector. A 7% growth in retail employees is projected for the ten year period, and a 3% growth in non-retail employees. This is a total increase of 1,619 jobs for the period 1991-2001.

- In spite of higher than average use of transit, bicycles, and walking, the automobile will remain the predominant form of transportation in the community. Existing mode splits will not change significantly. Average auto occupancy is assumed to remain at the existing level of approximately 1.15.

Long Range Development Forecast

In spite of the inaccuracies inherent in long-range forecasting, it is advisable to attempt a long-range development forecast when planning capital facilities such as streets and bridges with a lifespan exceeding 25 years. A 20-to-30 year development forecast was modeled which reflects full development of all property shown on Figure 5, including areas proposed for annexation.

The Committed Street Network

Included in the modeling of short- and long-range development forecasts are those portions of the arterial street network which are committed for construction or reconstruction between FY91 and FY96. "Committed" street improvements were defined as those programmed in the FY91 JCCOG Transportation Improvement Program (TIP) for the Iowa City Urbanized Area. The existing-plus-committed street network includes the following projects:

Coralville

1. Fifth Street including First Avenue intersection; reconstruct and widen.

Iowa City

2. Melrose Avenue bridge over IAIS RR; replace and widen.

3. Melrose Avenue, Byington to Hawkins; reconstruct and widen.

4. Summit Street Bridge; replace.

5. Kirkwood/Lower Muscatine corridor, Gilbert to DeForest; reconstruct and widen.

6. Intersection of Burlington and Gilbert streets; expand capacity.

Iowa DOT

7. U.S. Highway 6 between First Avenue and Rocky Shore Drive; reconstruct with improved access control.

University Heights

8. Intersection of Melrose and Koser; install traffic signal.

9. Melrose Avenue intersections at Grand and Stadium Park; reconstruct with improved geometrics.

10. South Grand Avenue; reconstruct and widen.

The Planned Street Network

In addition to the committed street network, long-range forecasting was conducted including extensions to the arterial street system which are planned 20 to 30 years in the future. These are highlighted on Figure 10 in the following section.

Identification of Roadway Deficiencies

Figures 6 through 10 show deficiencies in the arterial street network under the following scenarios:

Fig. 6 - Existing conditions
Fig. 7 - Short-range (10-year) forecast, existing street network
Fig. 8 - Short-range (10-year) forecast, existing-plus-committed street network
Fig. 9 - Long-range (20-30 year) forecast, existing-plus-committed street network
Fig.10 - Long-range (20-30 year) forecast, existing-plus-committed-plus-planned street network

"Deficiency" is defined according to V/C at Level of Service C.

Existing Conditions

Figure 6 indicates five corridors most severely impacted by inadequate street capacity:

- Dodge Street between Governor Street and Dubuque Road
- First Avenue (IC) between D Street and Bradford Drive
- Kirkwood Avenue between Gilbert Street and Dodge Street
- Benton Street between Greenwood Drive and Orchard Street
- Melrose Avenue (UH) between Sunset Street and the IAIS railroad

Kirkwood Avenue between Gilbert Street and Gilbert Court is the most severely congested street on the arterial system, with V/C greater than 2.0.

Short-Range (10 Year) Forecast

Existing Street Network. Figure 7 shows ten-year forecast traffic volumes with the existing street network. Existing areas of congestion (Figure 6) are expanded further:

- The entire North Dodge Street corridor between Governor Street and I-80 has V/C greater than 1.0.
- In addition to the First Avenue (IC) corridor, adjacent portions of Muscatine Avenue are at V/C greater than 1.0. V/C at the intersection of First Avenue and Muscatine Avenue is greater than 2.0.
- All of the Kirkwood Avenue corridor between Gilbert Street and Dodge Street has V/C greater than 2.0.
- In addition to Benton Street, a portion of Riverside Drive in the vicinity of Benton Street is also at V/C greater than 1.4.
- The entire Melrose Avenue corridor from Grand Avenue through University Heights has V/C greater than 1.4.

The ten-year forecast also shows the following new areas with V/C greater than 1.4:

- Muscatine Avenue between Burlington Street and Court Street

- Sycamore Street between Highway 6 and the Sycamore Mall entrance

Existing-Plus-Committed Street Network. As shown in Figure 8, the implementation of committed street improvements results in alleviation of congestion in two corridors: Kirkwood Avenue/Lower Muscatine Road, and Melrose Avenue between Grand Avenue and the IAIS railroad. Fifth Street Coralville V/C is improved from 1.07 to .78.

Long-Range (20-30 Year) Forecast

Figure 9 shows the effect of long-range forecast traffic volumes on the existing-plus-committed street network. There are substantial areas of congestion throughout the community, most notably the following with V/C greater than 2.0:

- Dodge Street between Governor Street and I-80

- Rochester Avenue between Seventh Avenue and Mt. Vernon Drive

- The intersection of First Avenue (IC) and Muscatine Avenue

- The intersection of First Avenue (IC) and Lower Muscatine Road

- Melrose Avenue through University Heights

- Holiday Road, Coralville

The First Avenue and Highway 6 corridors in Coralville are also heavily congested, although V/C is less than 2.0. This is significant because the First Avenue and Highway 6 corridors already have four travelled lanes. It is unlikely congestion in an existing four-lane commercial corridor will decrease significantly with additional through traffic lanes. Street capacity is diminished on First Avenue and Highway 6 by the lack of separated left turn lanes and the proliferation of individual driveway access points.

Figure 10 shows the addition of arterial street extensions to the existing-plus-committed street network. These are streets which are planned for the arterial system but not committed or programmed at the present time. There are three particularly significant traffic shifts associated with construction of the arterial street extensions shown in Figure 10:

Camp Cardinal Road. The construction of Camp Cardinal Road between Melrose Avenue and Highway 6 Coralville will reduce traffic on Highway 6 east of Tenth Avenue. It will, however, increase traffic on Highway 6 west of 22nd Avenue, and on Melrose Avenue in Iowa City. Melrose Avenue capacity is adequate for this traffic shift except for two links: between U.S. 218 and West High School, and through University Heights.

First Avenue (IC) and Scott Boulevard. The extension of First Avenue and Scott Boulevard north of their existing termini will divert traffic from the streets currently used to access north Iowa City: North Dodge Street, Rochester Avenue, and Muscatine Avenue. Significant congestion will be experienced in the First Avenue

corridor if it is not expanded from its existing two-lane configuration.

New South Bypass. With construction of a new bypass between Scott Boulevard and U.S. 218 in south Iowa City, traffic will diminish slightly on Highway 6. The traffic analysis model shows most existing Highway 6 traffic to be vehicles destined for origins and destination in the corridor, not through traffic. Therefore, the construction of the south bypass creates only a moderate diversion of traffic from Highway 6. It will, however, complete an east and south bypass around Iowa City which will remove through traffic from local city streets.

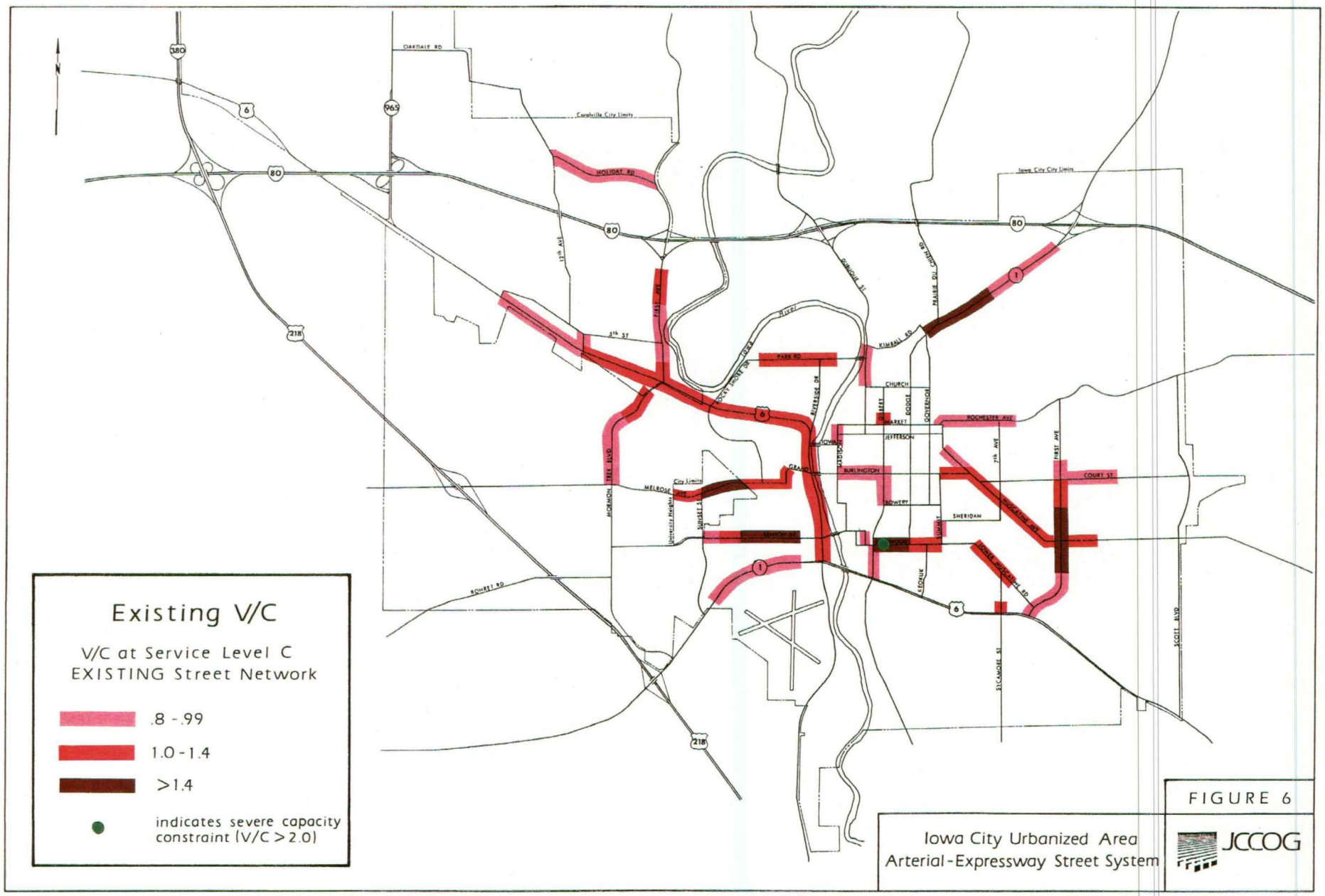


FIGURE 6

Iowa City Urbanized Area
Arterial-Expressway Street System

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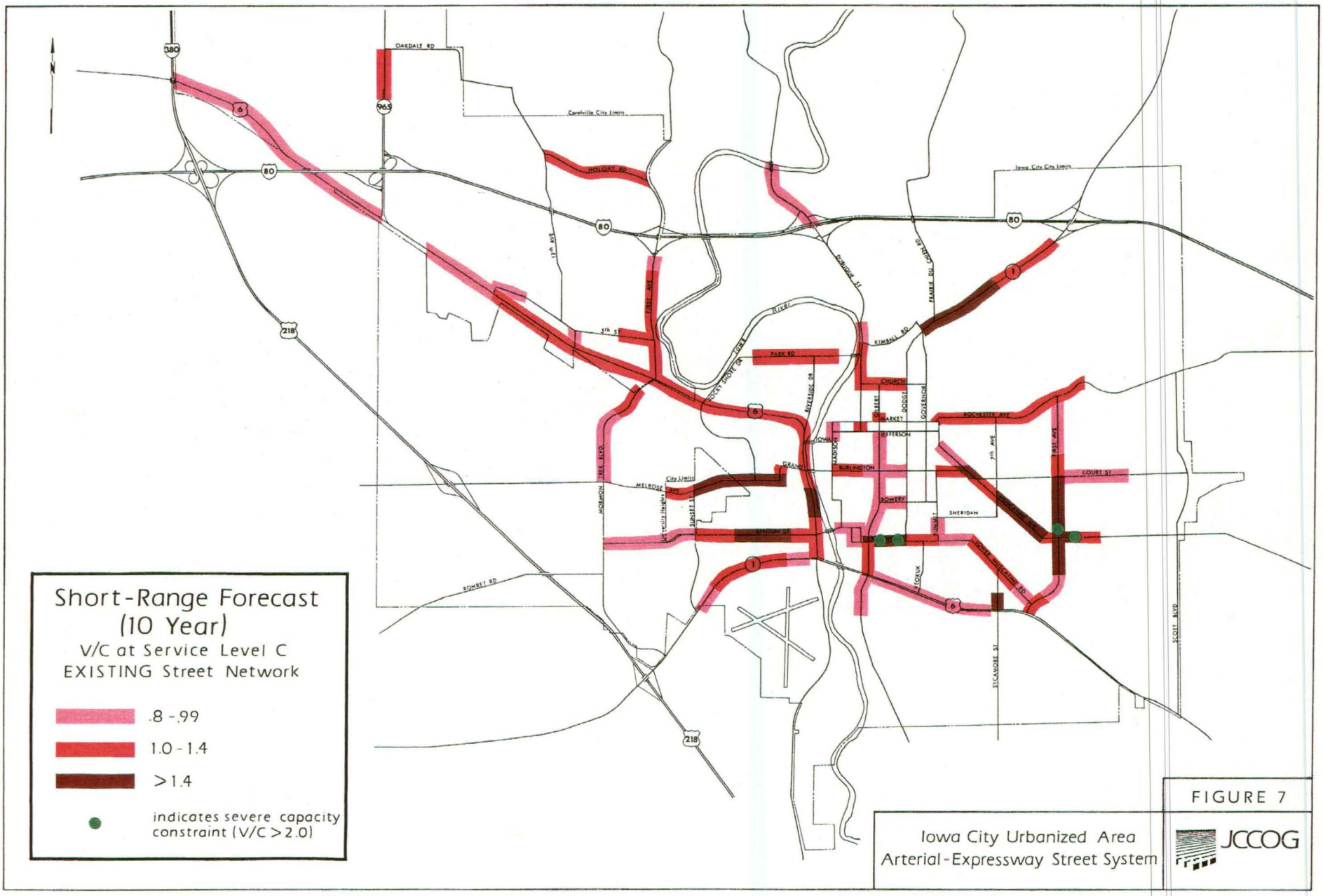

FIGURE 7

Iowa City Urbanized Area
Arterial-Expressway Street System

JCCOG

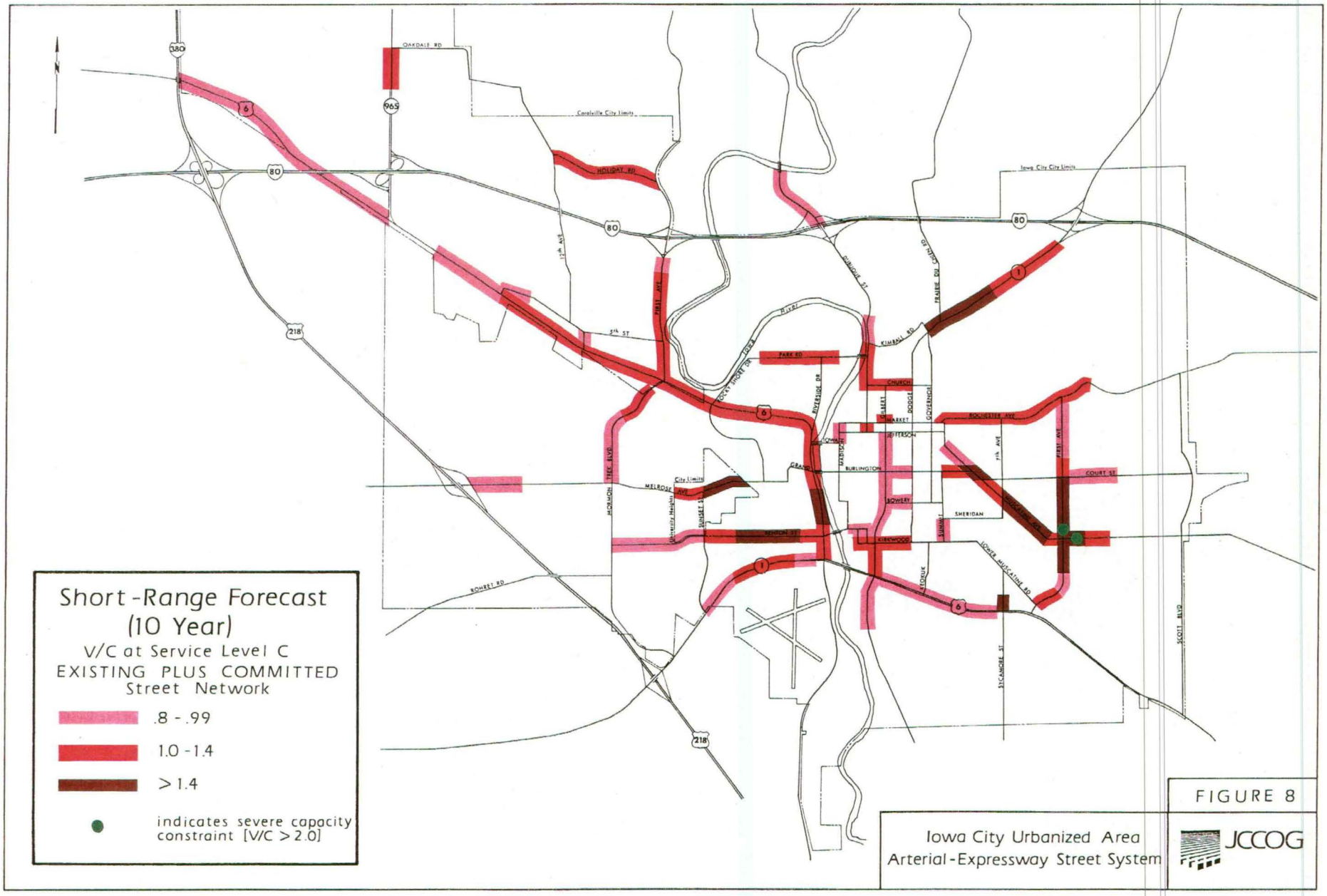
Short-Range Forecast
(10 Year)
V/C at Service Level C
EXISTING PLUS COMMITTED
Street Network
.8 - .99
1.0 - 1.4
> 1.4
indicates severe capacity constraint [V/C > 2.0]
Iowa City Urbanized Area
Arterial-Expressway Street System
JCCOG

FIGURE 8

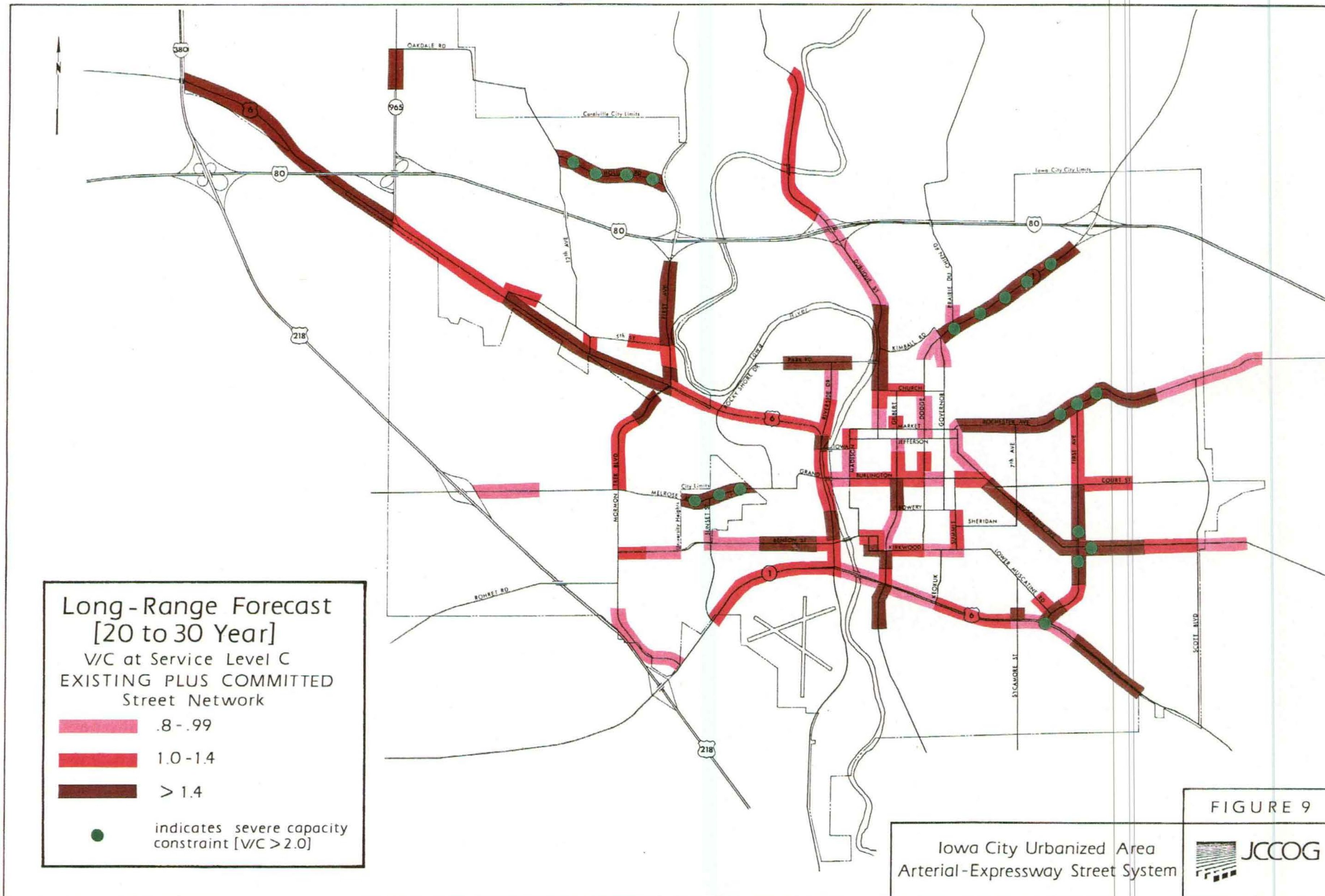

FIGURE 9

Iowa City Urbanized Area
Arterial-Expressway Street System

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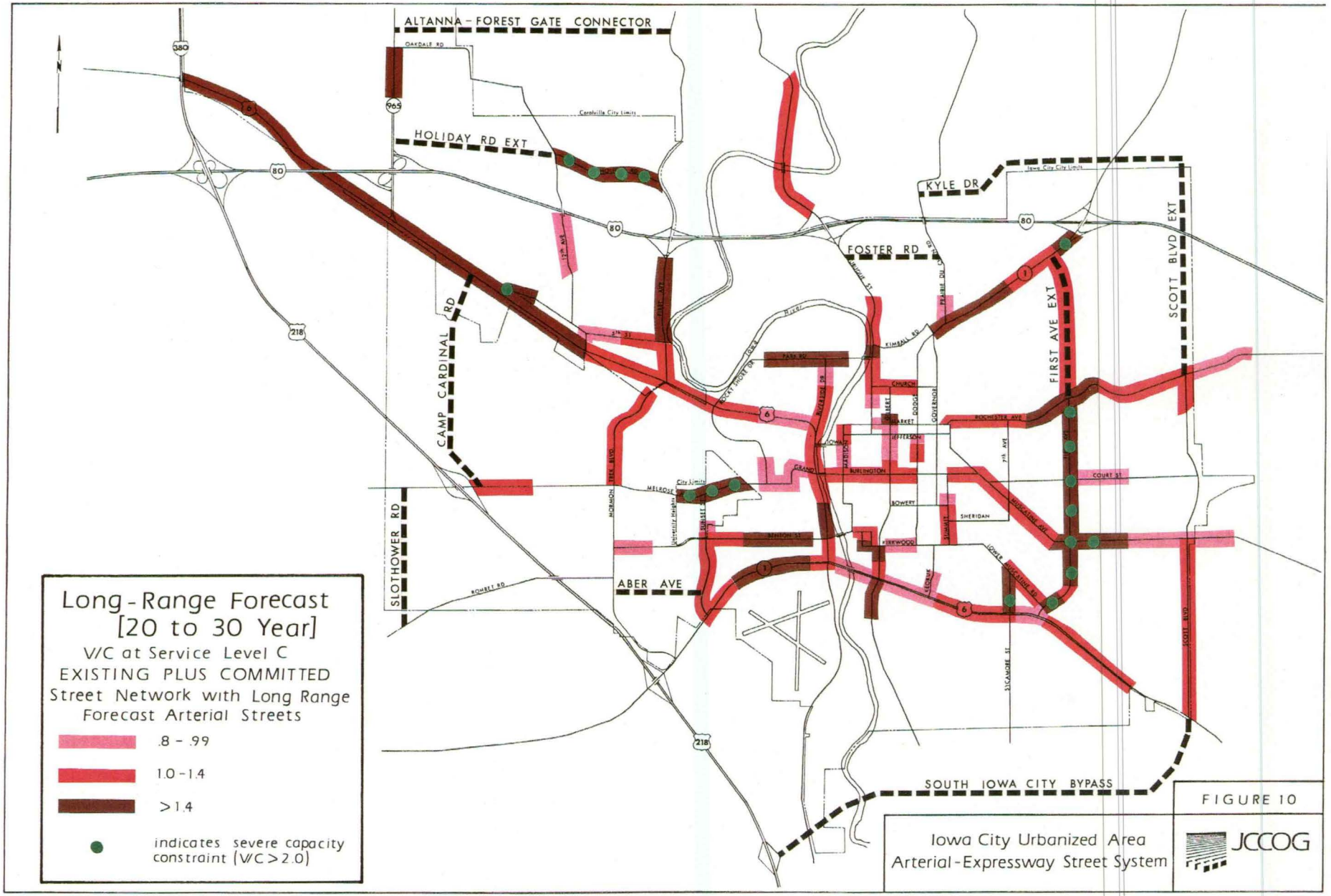
ALTANNA - FOREST GATE CONNECTOR
HOLIDAY RD EXT
KYLE DR
FOSTER RD
SCOTT BLVD EXT
FIRST AVE EXT
CAMP CARDINAL RD
SLOTHOWER RD
ABER AVE
SOUTH IOWA CITY BYPASS
Long - Range Forecast
[20 to 30 Year]
V/C at Service Level C
EXISTING PLUS COMMITTED
Street Network with Long Range
Forecast Arterial Streets
.8 - .99
1.0 - 1.4
>1.4
indicates severe capacity
constraint (V/C > 2.0)
FIGURE 10
Iowa City Urbanized Area
Arterial - Expressway Street System
JCCOG

Appendix

Summary
Existing and Short-Term Forecast
Capacity Deficiencies

Location: Dodge Street between Governor Street and I-80, Iowa City

Jurisdiction: Iowa DOT (State Highway 1)

Improvement Programmed?: No

Issues: Corridor will be a strong area of non-commercial employment growth, including office and research park development. Dodge Street is a major north-south link to I-80. The extension of First Avenue north to Dodge Street will favorably impact congested conditions, but a street capacity expansion will still be necessary to reduce V/C below 1.4 in the corridor between Governor Street and Dubuque Road.

Summary
Existing and Short-Term Forecast
Capacity Deficiencies

Location:	Muscatine Avenue between Burlington Street and Court Street
Jurisdiction:	City of Iowa City
Improvement Programmed?:	No
Issues:	Inadequate street capacity in one block area where traffic is mixed from Burlington Street, Court Street and Muscatine Avenue. Historically significant properties on east side of street may constrain capacity expansion. Pedestrian (elementary school) use of Muscatine/Court intersection.

Summary
Existing and Short-Term Forecast
Capacity Deficiencies

Location: First Avenue between D Street and Bradford Drive, Iowa City

Jurisdiction: City of Iowa City

Improvement Programmed?: No

Issues: Includes major intersection with Muscatine Avenue. First Avenue is on a major travel desire line for residential, commercial, recreational, and school trips. Right-of-way constraint present in Bradford Drive area. Many commercial and residential driveway access points reduce street capacity. Significant increase in First Avenue traffic volume when it is extended north to Dodge Street.

Summary
Existing and Short-Term Forecast
Capacity Deficiencies

Location: Sycamore Street between Highway 6 and Sycamore Mall Entrance Drive

Jurisdiction: City of Iowa City

Improvement Programmed?: No

Issues: Increased use of Sycamore Street corridor as development occurs south of Highway 6. Traffic generated from private commercial property may justify impact fee for eventual improvement.

Summary
Existing and Short-Term Forecast
Capacity Deficiencies

Location:	Kirkwood Avenue between Gilbert Street and Dodge Street
Jurisdiction:	City of Iowa City
Improvement Programmed?:	Yes, reconstruction and widening beginning in FY92.
Issues:	Arterial-level traffic volume in predominantly residential area. Use of Highway 6 as alternate route.

Summary
Existing and Short-Term Forecast
Capacity Deficiencies

Location: Riverside Drive between Myrtle Avenue and Benton Street

Jurisdiction: Iowa DOT (State Highway 1, U.S. Highway 6)

Improvement Programmed?: No

Issues: Strip-style commercial corridor with four traveled lanes. Capacity constrained from proliferation of driveways and no turning separation north of Benton Street intersection.

Summary
Existing and Short-Term Forecast
Capacity Deficiencies

Location: Benton Street between Greenwood Drive and Orchard Street

Jurisdiction: City of Iowa City

Improvement Programmed?: No

Issues: Recent improvements (Benton Street Bridge) and programmed improvements (Kirkwood Avenue/Lower Muscatine Road corridor) will lead to increased use of Benton Street. Proposed traffic signals on Highway 1 West may lead to increased use of Benton Street. Miller Avenue traffic signal at Highway 1 will increase traffic at Benton/Miller intersection. Steep hill between Miller Avenue and Greenwood Drive is a constraint to arterial street function.

Summary
Existing and Short-Term Forecast
Capacity Deficiencies

Location: Melrose Avenue between Byington Road and west city limits of University Heights

Jurisdiction: City of Iowa City, City of University Heights, University of Iowa

Improvement Programmed?: Yes. Reconstruction and widening of Melrose Avenue between Byington and Hawkins Drive beginning in FY93 (Iowa City). Reconstruction and widening of South Grand Avenue (University). Reconstruction of intersections at Grand Avenue and Stadium Park Road with improved geometrics (University).

Issues: Interjurisdictional issue: University Heights disagreement on Melrose Avenue street function will result in street capacity constraint through University Heights following programmed improvements by Iowa City and University. Residential development forecast for area west of Mormon Trek Boulevard will create slow growth in Melrose Avenue traffic volumes until Camp Cardinal Road is extended north to Highway 6. Extension of Camp Cardinal Road north to Highway 6 will create a significant increase in Melrose Avenue traffic.