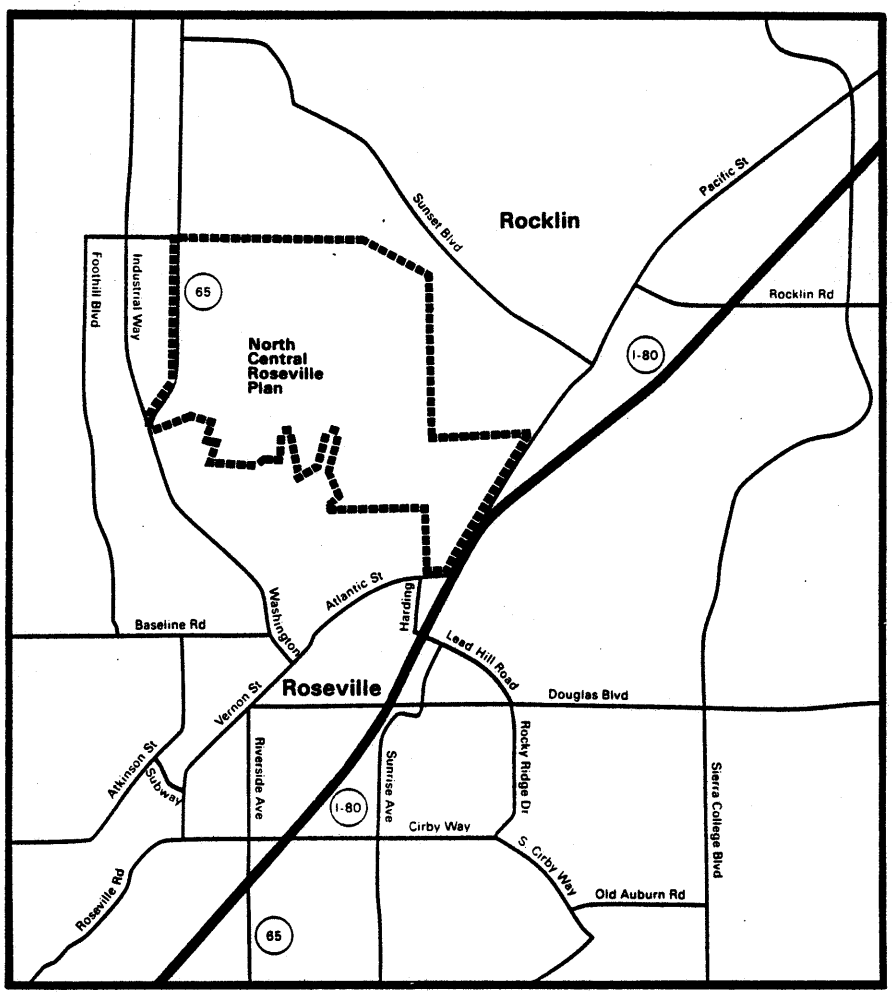
Transportation Impact Study for the North Central Roseville Specific Plan EIR

December 1986



Fehr & Peers Associates
Transportation Consultants

TRANSPORTATION IMPACT STUDY FOR NORTH CENTRAL ROSEVILLE SPECIFIC PLAN

TRAFFIC AND TRANSPORTATION SECTION OF THE DRAFT ENVIRONMENTAL IMPACT REPORT

December 1986
86-072

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I. TRANSPORTATION SETTING

Existing Roadway Facilities

Figure 1 shows the existing roadway facilities serving the North Central Roseville Specific Plan area. Because the site is located on the fringe of the urbanized area, roadway access is limited. Although the site is adjacent to I-80 and adjoins two existing freeway interchanges at Atlantic Street and Taylor Road, it has no direct freeway access, as both interchanges are separated from the site by the Santa Fe Pacific railroad right-of-way. The site's freeway access is currently provided via indirect travel to Washington Boulevard and Atlantic Street. The Route 65 Bypass, currently under construction through the northern portion of the site, will provide a direct link between the site and I-80 by about 1988.

I-80 is a six-lane interstate freeway in the vicinity of the site. I-80 widens to eight lanes at the Riverside Avenue interchange about two miles south of the project site.

The 65 Bypass will initially be constructed as a four-lane expressway.

Existing Route 65 (Washington Boulevard), Atlantic Street and Taylor Road are all two-lane arterials except for a four-lane segment of Washington from Baseline Road (Main Street) and Vernon Street.

Several two-lane residential collector streets currently connect the site with Washington Boulevard and Atlantic Street. These streets (not shown in Figure 1) include Diamond Oaks Road, Shasta Street, Yosemite Street and Berry Street.

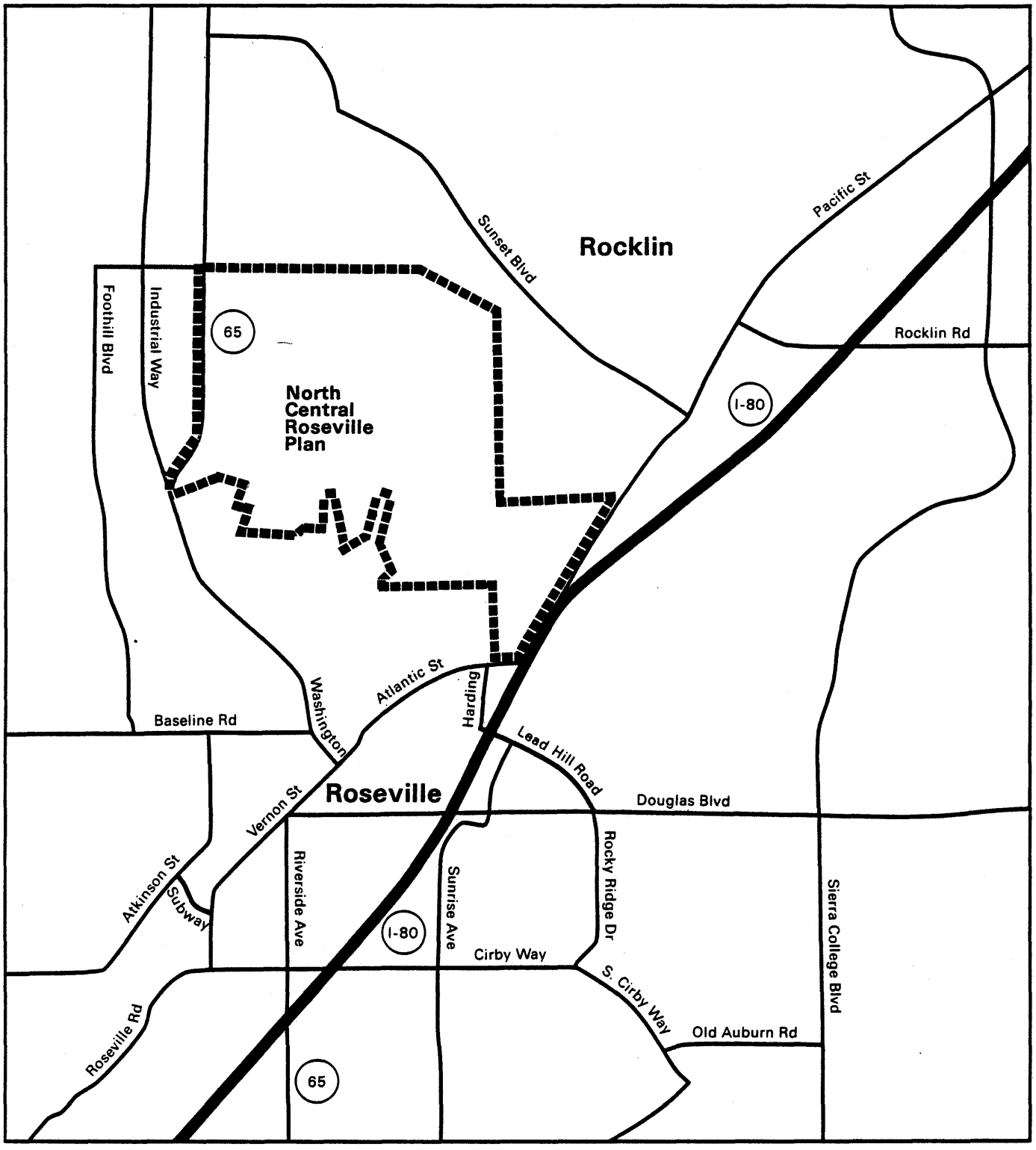

Figure 1
Project Location

Planned Roadway Improvements

Concurrent with development of the North Central Plan area, significant expansion of the existing roadway network is planned.

One set of improvements will be constructed as part of the Route 65 Bypass project. The Route 65 Bypass, initially a four-lane expressway, will be upgradable to a freeway with interchanges at major intersecting arterials. It will connect I-80 just east of the project site with the existing Route 65 near the Roseville/Rocklin City boundary. The 65 Bypass project also involves several key upgrades along I-80 itself, including new interchanges at Atlantic and Taylor, both with easterly access, and widening of I-80 to eight lanes from just north of Douglas and the new 65 Bypass interchange.

Augmenting the 65 Bypass improvements are a number of additional roadway network expansions planned as part of major Roseville and Rocklin development proposals. Figure 2 identifies these major development areas. They include the Northwest and North Industrial Specific Plan Areas in Roseville immediately adjacent to North Central Plan, as well as two major development areas east of I-80: the Northeast and Southeast Plan Areas. Other major development areas exist outside of Roseville. The Northwest Rocklin Plan, which includes the Stanford Ranch industrial area, is located just north of the Roseville city limits and abuts the North Central Roseville site.

Key roadway facilities that are to be constructed to support the major growth areas are illustrated in Figure 3. In addition to the 65 Bypass and its related freeway widening and interchange improvements, the key new facility connecting east and west Roseville is Roseville Parkway, a major expressway/arterial facility. Even with the Parkway and the 65 Bypass, however, access for North Central Roseville to and across I-80 will be

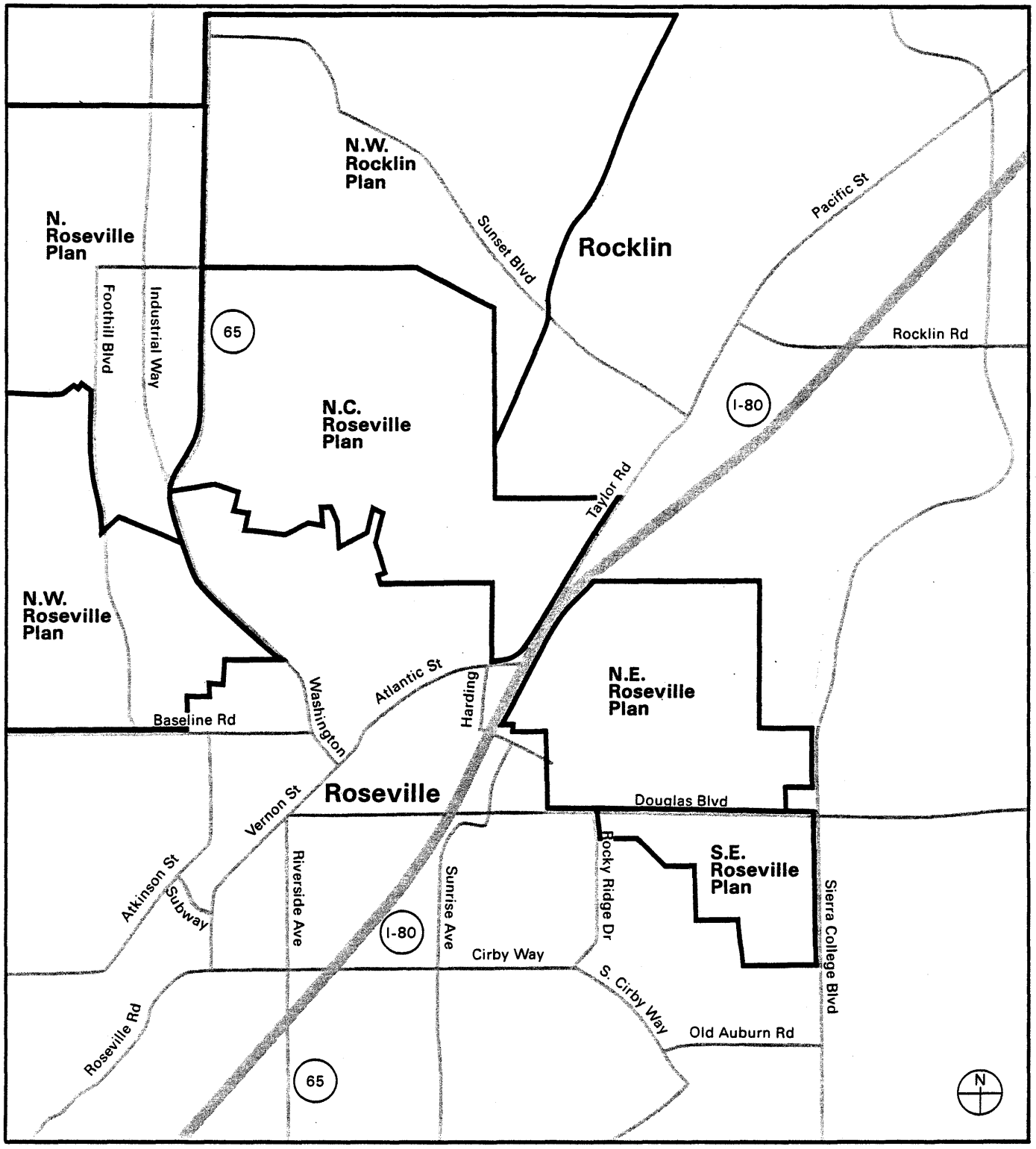

Figure 2
Regional Development Context

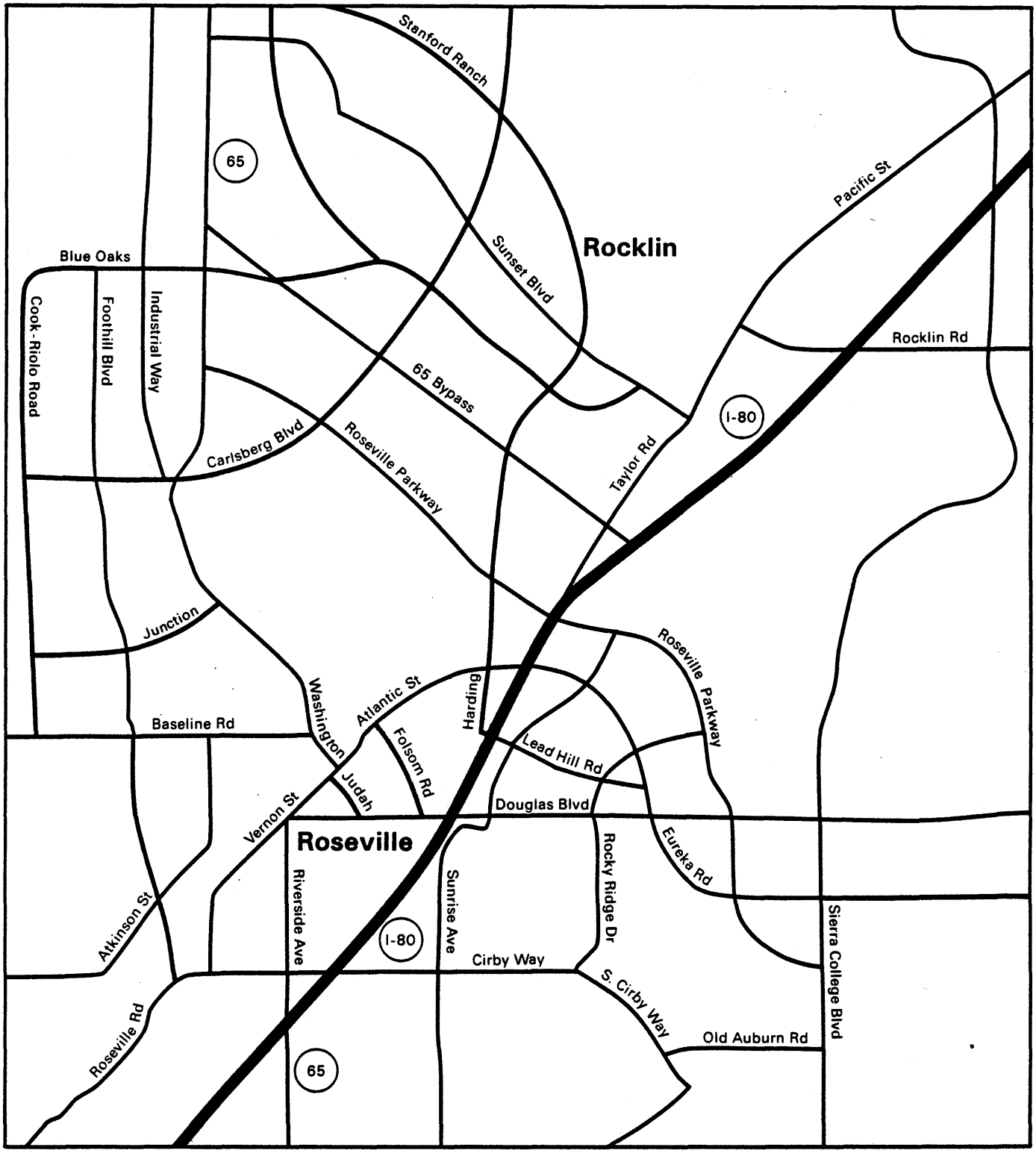

Figure 3
Expanded Regional Roadway Network

limited. Roseville Parkway is to extend through several of the major plan areas and cross I-80, but it will not have an interchange at I-80. Furthermore, the Route 65 Bypass will not extend east of I-80 (its I-80 interchange as presently constructed will serve only travel to/from the west). Therefore, the enlarged Atlantic Street interchange will serve as a primary access to and across I-80 for new development areas east and west of the freeway. The other components of the North Central Plan circulation system and its connections to I-80 are shown in Figure 4.

Two prospective facilities that are not shown in Figures 3 or 4 are the proposed beltline freeway and Legislative Route 102. Both facilities would travel north/south between South Placer and Sacramento County providing a bypass to I-80 for regional travel. However, specific alignments have not been determined and no time frame or funding committment to either facility currently exists. Therefore, this study does not include either facility in its quantitative analysis. The implications of the beltline facility and LR 102 on traffic impacts and mitigations in the area are discussed qualitatively.

Citywide and Local Traffic Analysis Techniques.

Because the North Central Plan is a part of significant sub-regional growth, this traffic analysis considers both the citywide and local traffic setting and impacts. The citywide analysis considers major travel corridors through the Roseville/Rocklin area. This analysis is based on existing and projected average daily traffic volumes (ADT) measured at key "screenlines" that intersect each travel corridor.

The regional screenline locations are shown in Figure 5. They are the same as the screenlines used in the 1982 Roseville

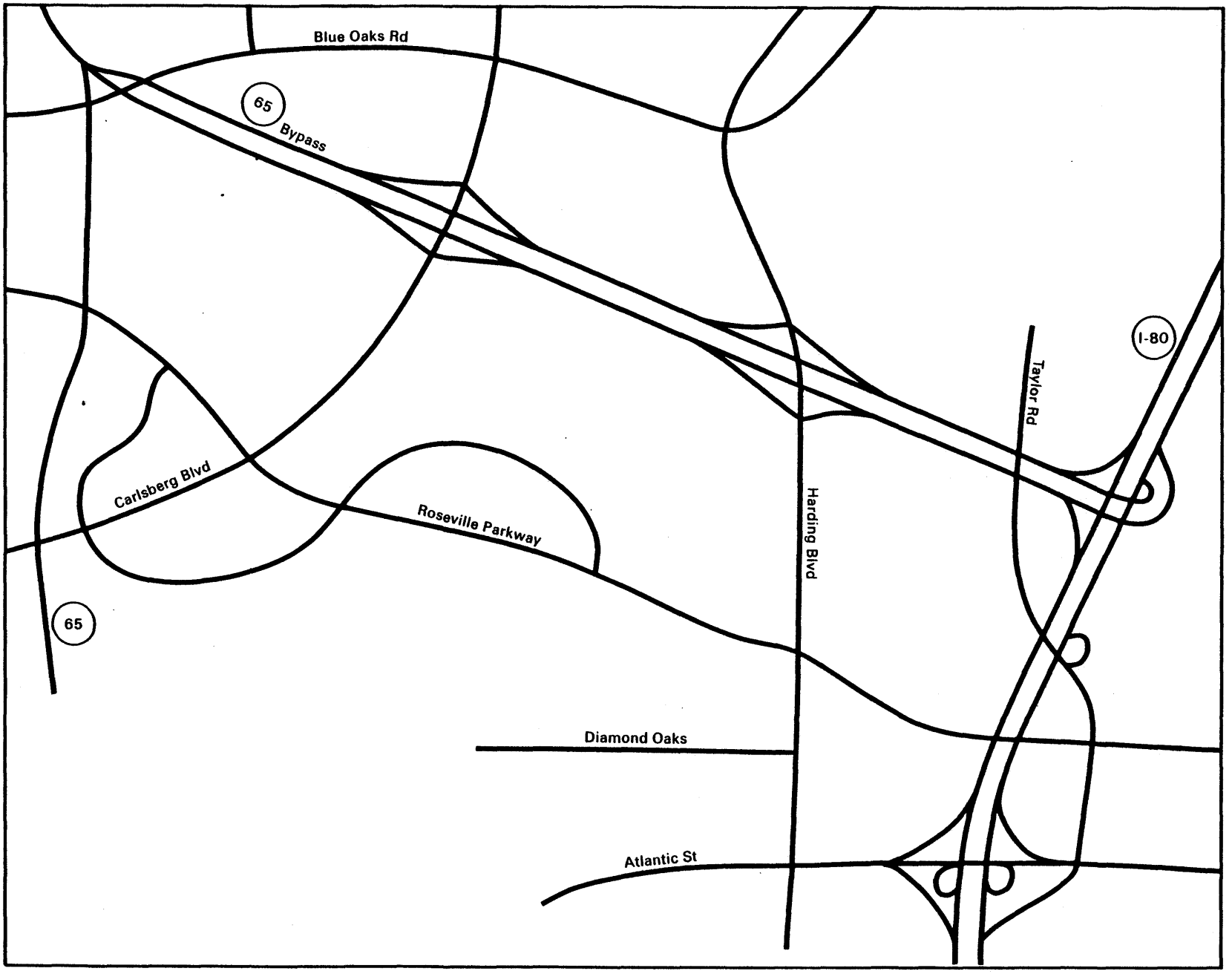

Figure 4
Circulation Plan

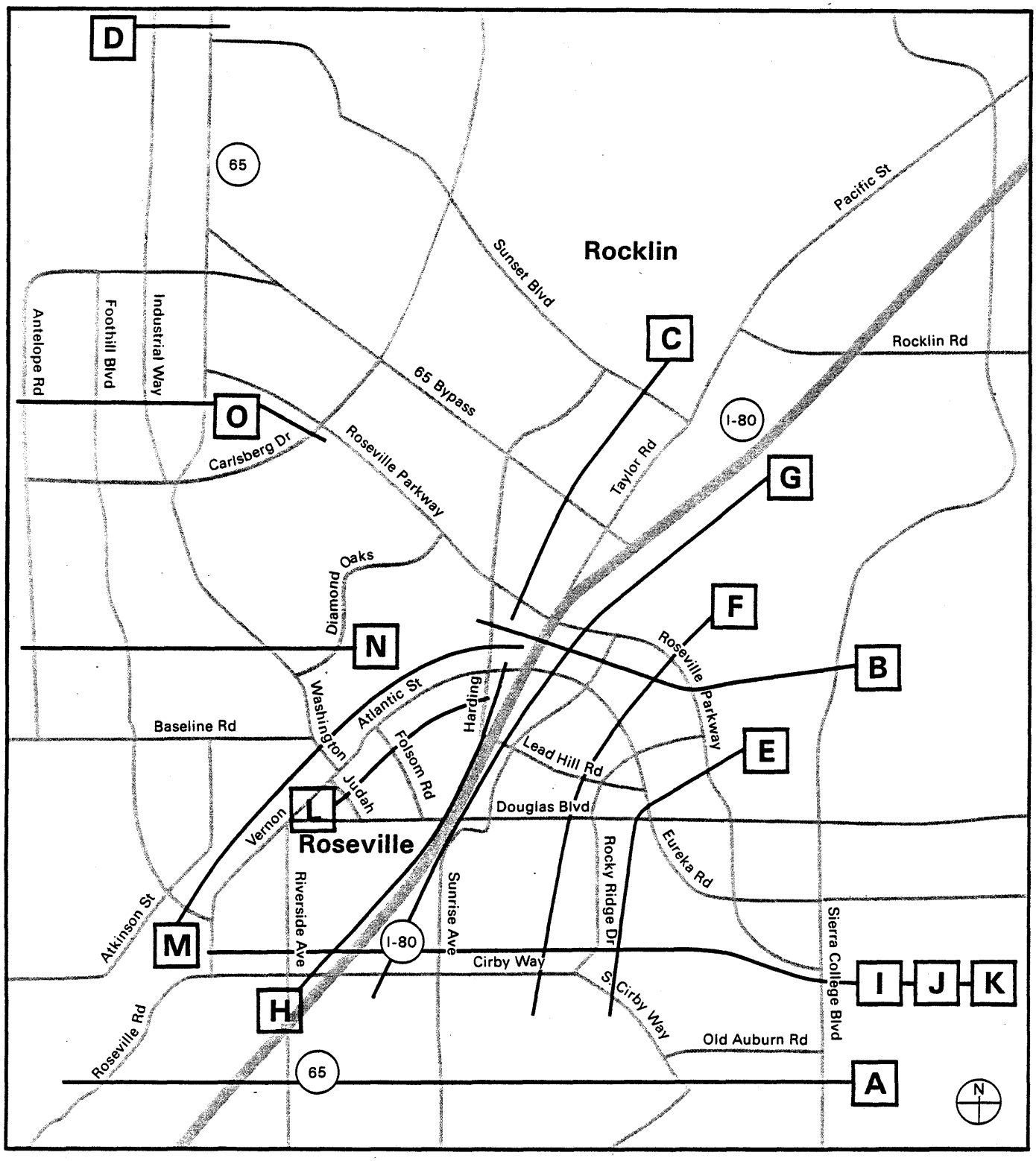

Figure 5
Key Travel Screenlines

Circulation Study, with certain minor modifications. For the current study, the original system has been extended to more fully cover the major development areas, and the alignment of several screenlines was altered slightly to correspond with the roadway network as currently planned. Key differences from the 1982 study are:

- Screenline A has been extended to the east to include Barton Road and Auburn Folsom Road.
- Screenline B has been extended further east in order to measure conditions on the Sunrise extension, Roseville Parkway and Sierra College Boulevard as well as I-80 and the Harding extension.
- Screenline E has been shifted to the west and extended north and easterly to include Eureka Road and Roseville Parkway as well as Douglas and Cirby.
- Screenline F was shifted to the west to avoid "bridging over" Rocky Ridge Drive and extended north to include Lead Hill, Eureka (Atlantic extension), and Roseville Parkway, as well as Douglas and Cirby.
- Screenline G was extended north to measure conditions on Roseville Parkway as well as Cirby, Douglas, Lead Hill and the Atlantic extension.
- Screenline O was extended to include Carlesberg Boulevard.

To ensure that these changes would not adversely affect the traffic forecasting model, the Roseville Circulation Study Model was re-calibrated and validated on the basis of 1980 and 1985 conditions.

Table 1 gives the daily traffic capacity for different classes of roadway in the study area. These capacity ratings are consistent with those used in the 1982 Roseville Circulation Study.

The second level of analysis considers the localized roadway network within and adjacent to the North Central Plan Area.

These facilities are analyzed individually, based on peak hour traffic volumes to determine the capacity requirements of specific roadway links, intersections and interchanges in the area. These peak-hour capacities are given in Table 1.

For both the regional and the local area analyses, traffic conditions are measured on the basis of the relationship between projected traffic volumes and the traffic facilities' "design" capacities. The design capacity of a facility is set at some percentage of its maximum capacity. The percentage is selected on the basis of desired operating condition, or Level of Service. Level of Service (LOS) is a rating system that grades a roadway or intersection on a scale of "A" through "F," based on its level of congestion and delay. An A Level of Service represents free flowing conditions, and F represents jammed conditions. Caltrans and most cities and counties generally consider LOS C or D to be the worst acceptable peak-hour operating conditions. Typical percentages used for establishing "design capacities" are, therefore, between 75% (Level of Service C) and 90% (Level of Service D/E).

Different jurisdictions use different standards for judging acceptable roadway operating conditions. Also, different Level of Service criteria are more suitable for regional screenline analyses than for individual streets and intersections. Therefore, this study uses a variety of relationships between "design" capacity and maximum capacity for different applications: 75% for citywide screenline analysis, 80% for analysis of specific local streets and freeway sections, and 85% for individual street intersections. Conservative measures should be used for analyzing screenline conditions so that variations on a screenline do not produce unacceptable conditions at individual locations, though individual intersections showed operate at mid-D LOS or better.

Table 1

ROADWAY CAPACITIES

Roadway Type	Number of Lanes	Daily Capacity (both directions)		Peak Hour Capacity (peak direction)	
		Design[1]	Maximum	Design[2]	Maximum
Minor Arterial	2	12,000	16,000	560	700
Major Arterial	4	24,000	32,000	1440	1800
	6	36,000	48,000	2160	2700
Expressway	4	39,000	52,000	1920	2400
	6	58,500	78,000	2800	3500
Freeway Mainline	6	97,200	108,000	4800	6000
	8	130,000	144,000	6400	8000
	10	150,000	200,000	8000	10,000
Freeway Ramp					
Loop	1	--	--	1300	1450
	2	--	--	2340	2600
Linear	1	--	--	1530	1700
	2	--	--	3060	3400

[1]Daily screenline design capacities are set at 75% of maximum capacity to maintain average screenline volume/capacity ratios at 0.75.

[2]Peak hour design capacities maintain volume/capacity ratios on individual links at 0.80 or better.

The daily and peak hour design capacities are translated into traffic Levels of Service in Table 2.

For street intersections, the evaluation criterion used in this study matches that recommended in the 1985 Highway Capacity Manual (HCM) for long-range planning analysis. The design volume of an intersection is set at the threshold between "under capacity" and "near capacity" conditions so that the intersection will always operate within its capacity. This represents about 85% of the HCM critical volume threshold of 1400 vehicles per hour. This was translated into total intersection throughput for various classes of intersecting streets on the basis of normal intersection design standards and traffic counts and surveys in the area. The assumed lane configuration for intersections built or expanded to the normal maximum standards are as follows:

Facility Type	Intsx. Type	Intersection Approach Lanes		
		Left	Thru	Right
6-lane arterial	Full	2	3	1
4-lane arterial	Full	1	2	1
2-lane arterial	Full	1	1	1
6-lane arterial	T	2	0	1
4-lane arterial	T	2	0	1
2-lane arterial	T	1	0	1

These lane configurations determine the percentage of total traffic approaching an intersection that is "critical" to the intersection's capacity. For a six-lane arterial, for example, about 20% of the volume approaching the intersection would be critical to the intersection's capacity.

Existing Traffic Volumes

Existing traffic volumes in the study area are shown in Figure 6. I-80 carries about 50,000 daily vehicles (ADT) in the vicinity of

Table 2

LEVEL OF SERVICE DESIGN STANDARDS

	City-wide Analysis (Avg. Screenline Conditions)		Local Area Analysis (Indiv. Sts. & Intsx.)	
	V/C Ratio	LOS	V/C Ratio	LOS
Arterials & Expways	.75	C	.80	C/D
Freeways	.75	C	.80	C/D
Intersections & Interchanges	---	---	.85	D

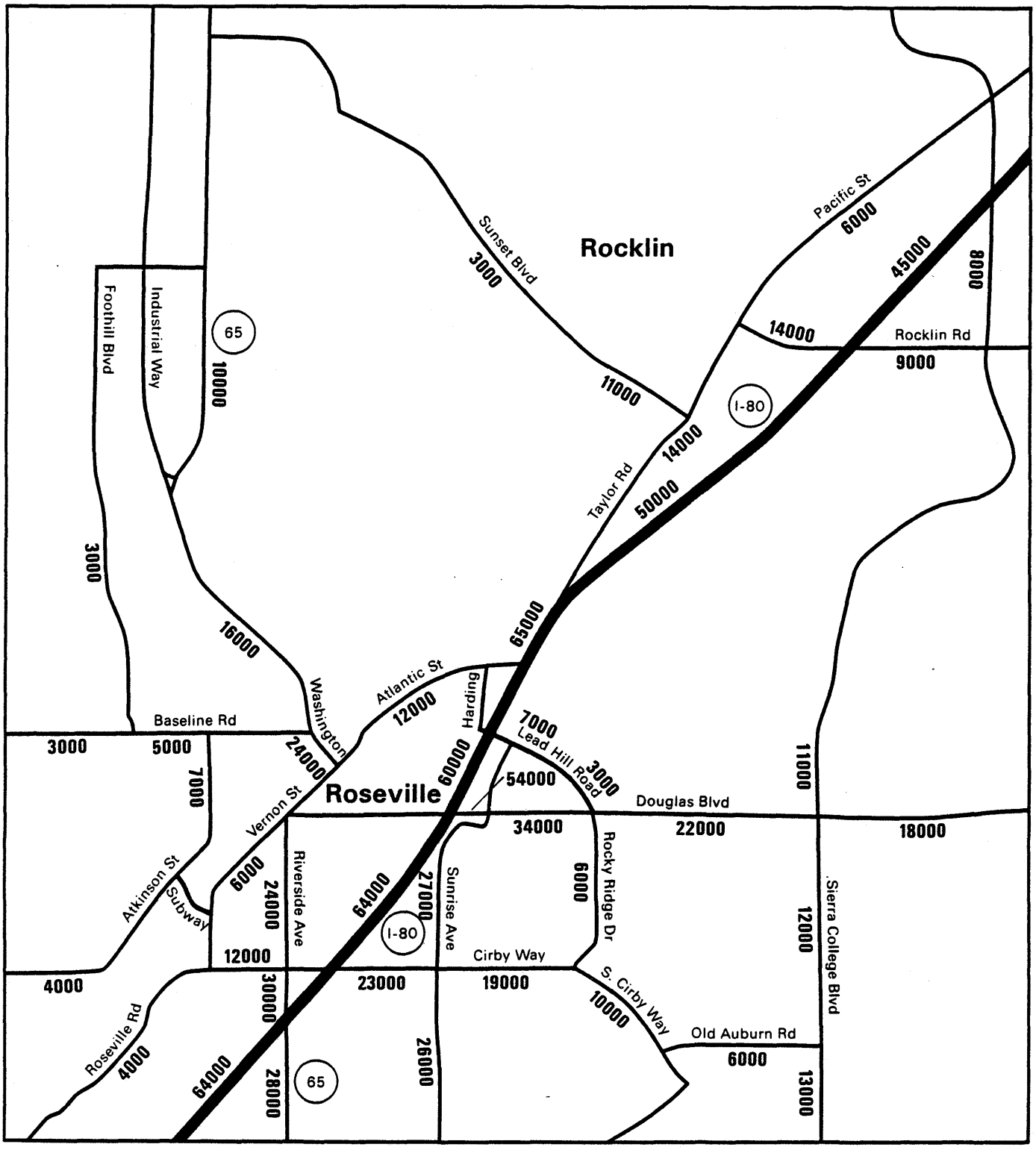

Figure 6
Existing Daily Traffic Volumes

the site. The most heavily used surface street in the area is Douglas Blvd.,with a volume of about 54,000 near the freeway and 20,000 near Sierra College. Most facilities in the area operate well within their maximum capacities (see Table 1), but key freeway access facilities, such as Douglas near Sunset and Riverside south of Cirby, operate above their design capacities. The implications of these conditions are discussed below.

Citywide Screenline Capacity

Table 3 presents the current screenline traffic volumes and capacity ratios in the study area for three "current" scenarios. The first set of volumes are based on mid-1985 traffic counts immediately before the opening of the Lead Hill Overcrossing. The second is for 1986 conditions, shortly after the opening of the Overcrossing. Before the overcrossing, the volumes on screenlines E, F, G and H exceeded their design capacities (but not their maximum capacities). The overcrossing increased the design capacity of both screenlines G and H by 24,000 ADT and screenline F by 12,000 ADT, giving each adequate capacity to meet the current traffic demand. In addition, the ongoing widening of Douglas boulevard at screenline E (east of Rocky Ridge) improves the capacity ratio for that screenline to acceptable levels.

To provide a baseline condition for analyzing the effects of the proposed North Central Plan Project, conditions were also evaluated for the point in time immediately following the opening of the 65 Bypass and related I-80 improvements. This analysis is also presented in Table 3. This information reflects conditions expected to prevail in about 1988 with completion of already committed roadway projects but without significant new development approvals. It indicates that significant improvements would occur on screenlines M, N and O as a result of traffic that would divert to the 65 Bypass rather than

Table 3

CURRENT SCREENLINE CAPACITY ANALYSIS

	1985 Conditions Before Lead Hill OC		1986 Conditions After Lead Hill OC		1988 Conditions** With 65 Bypass and Lead Hill OC	
Screenline	Volume	V/C Ratio	Volume	V/C Ratio	Volume	V/C Ratio
A	145,000	.53	153,000	.56	162,000	.59
B	75,000	.55	78,000	.57	95,000	.49
C	11,000	.69	11,000	.69	32,000	.32
D	11,000	.23	12,000	.25	13,000	.27
E	28,000	.88	32,000	.67	34,000	.70
F	37,000	.77*	56,000	.70	59,000	.74
G	67,000	.84*	84,000	.75	89,000	.79*
H	72,000	.90*	80,000	.71	79,000	.71
I,J,K	129,000	.52	154,000	.62	166,000	.67
M	30,000	.54	33,000	.60	29,000	.52
N	15,000	.31	19,000	.39	13,000	.28
O	13,000	.27	15,000	.31	10,000	.21

*Indicates volume in excess of design capacity (but within max. capacity)

*1988 volumes include 3% annual traffic growth

continuing to travel through central Roseville. On screenline H, the traffic diversion would offset other potential traffic growth. Screenlines B and C which would receive additional capacity due to the improvements would also experience increased traffic, diverting from slower routes. The net effect would be an improvement in their volume/capacity ratios with operating conditions remaining well within their design capacities.

By 1988, east/west travel between Rocky Ridge and I-80 in Eastern Roseville, (screenlines F and G) is expected to approach or exceed roadway capacities unless additional facility improvements are completed.

Levels of Service on Local Streets

The 1985 p.m. peak hour levels of service at local street intersections in the study are given in Figure 7. All intersections operate at service level C or better, with the exception of two: Douglas/Sunrise and Cirby/Riverside. These intersections both operated at service level D in mid-1985. However, in both cases street improvements have been made subsequent to mid-1985. The recent opening of the Lead Hill Overcrossing, by diverting traffic off Douglas Blvd., was expected to relieve the Douglas/Sunrise intersection. However, although a considerable amount of traffic diversion has taken place, the general growth in traffic in East Roseville has offset any congestion relief. The Sunrise/Douglas intersection is currently continuing to operate at LOS D or E. At Cirby/Riverside, intersection improvements are planned that would create dual left-turn lanes on Riverside Ave. This additional capacity is expected to raise the p.m. peak service level to C.

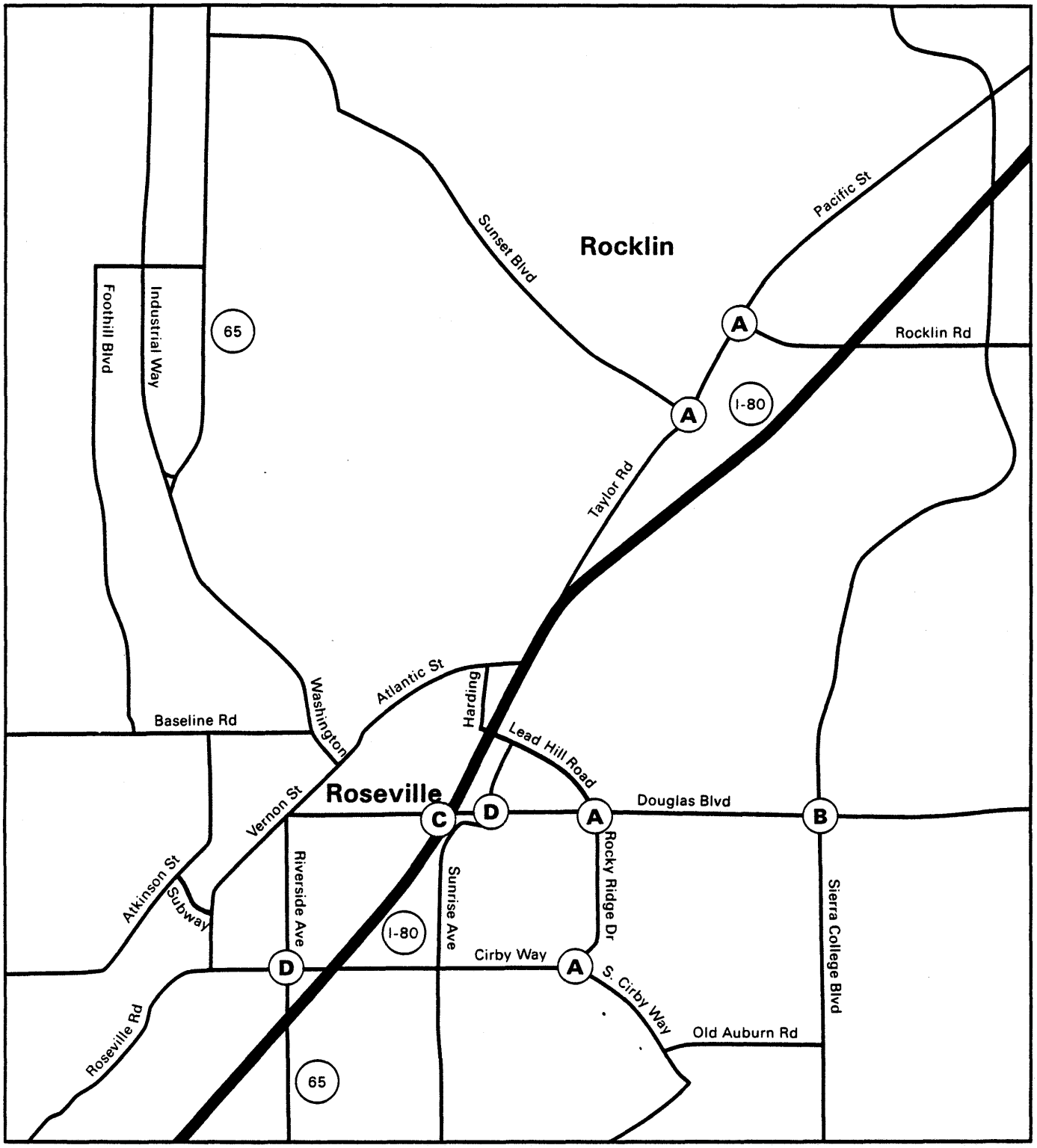

Figure 7
Existing Intersection Service Levels

II. TRAFFIC IMPACTS

The transportation impacts of the proposed North Central Roseville Specific Plan are evaluated under four scenarios. Three of the scenarios consider conditions in the year 2005, by which time about 60% to 70% of the proposed new development in Roseville and adjacent areas is expected to be complete.[1] The fourth considers conditions beyond 2005 when the City is fully built out. The four scenarios are:

1. Year 2005 without the project
2. Year 2005, with the expected 2005 development level within the North Central Plan (about 50% to 60% of Specific Plan buildout)
3. Year 2005 with full buildout of the project
4. Full buildout of entire City and adjacent areas.

The three year 2005 analyses are conducted at both the local and citywide levels, giving impacts on specific streets and intersections within and near the North Central Plan area and general screenline impacts at locations elsewhere in the City. The Full Buildout analysis is conducted at the screenline level only, giving general facility requirements throughout the City.

Land use forecasts for the year 2005 and the expected buildout of the region are based on projections prepared for the City of Roseville in May 1986 by McDonald and Associates, and on current information from the City of Rocklin and Placer County. The Rocklin data includes the Stanford Ranch EIR, covering cumulative development of the Northwest Rocklin Plan Area. The Northwest Rocklin Plan Area was assumed to develop at the same pace as the

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[1]McDonald Associates, Revised Roseville 2005 Forecasts for Public Facilities Financing Plan, May 1986.

major Roseville plan areas, with about two-thirds of the ultimate buildout reached by the year 2005. The development assumptions for Placer County include Treelake Village and other cumulative development in the southeastern part of the County, as well as projections by County staff on growth in other parts of the county.

North Central Plan Trip Generation

Trip generation rates used for the analysis of the North Central Area Plan are presented in Tables 4 and 5. They are based on research published by the Institute of Transportation Engineers (ITE) and Caltrans. This research indicates that, for residential developments, trip generation rates per dwelling unit decline as the dwelling unit density increases and that, for retail centers, trip rates per thousand square feet decrease as the overall size of the shopping center increases. The magnitudes of these variations are given in Table 5. The ITE research also indicates that a high proportion of the trips generated by retail businesses is secondary or diverted travel. This is travel that is already occurring on the local street system for other purposes, such as to travel home from work, which stops at the commercial use along the way. As such drop-in visits do not represent a net increase in the number of vehicles on the surrounding street system, they are discounted from the traffic generation estimates. The ITE research suggests that only about 35% of the traffic generated by retail centers represents true primary travel that should be included in the evaluation of impacts.

The retail trip rates given in Table 4 are based on the expected retail coverages projected for Roseville by McDonald Associates: 9,000 to 12,000 square feet per gross acre. The trip rates in

Table 4

TRIP GENERATION RATES
FOR RESIDENTIAL, COMMERCIAL, AND RECREATIONAL USES

Land Use Category	Description/Size	Trips per D.U.				
		ADT	AM Peak		PM Peak	
			In	Out	In	Out
Residential	RD-1 thru RD-5	10	.21	.55	.63	.37
	RD-6 thru RD-10	8.5	.14	.50	.55	.30
	RD-11 thru RD-15	7.0	.12	.40	.47	.23
	RD-16 thru RD-20	6.0	.10	.35	.40	.20

		Trips per Acre				
		ADT	AM Peak		PM Peak	
			In	Out	In	Out
Retail	<10 acres	738	11.2	10.4	34.0	36.2
	10-20 acres	600	8.1	7.2	25.7	27.4
	20-30 acres	455	3.6	1.8	21.0	22.0
	30-40 acres	377	14.4	6.3	24.5	25.0
	40-50 acres	497	3.3	1.7	24.0	25.0
	50-100 acres	409	4.0	2.6	17.0	17.1
	100 acres+	409	4.3	1.7	15.0	15.0

		Trips per Acre				
		ADT	AM Peak		PM Peak	
			In	Out	In	Out
Schools, Parks	School K-6	35	3.5	1.8	0.4	0.7
	High School	49	6.7	2.4	2.4	4.6
	Parks	6	0.2	0.2	0.3	0.3

Table 5

TRIP GENERATION RATES FOR BUSINESS USES
UNDER EXPECTED DEVELOPMENT DENSITIES

Land Use	Empl/ Acre	Trips/Empl.			Trips/Acre				
		ADT	AM	PM	ADT	AM		PM	
						In	Out	In	Out
BP/R & D	34	3.8	.54	.54	129	16.4	2.0	2.8	15.6
Gen. Ind.	4	3.0	.49	.57	12	1.8	0.2	0.3	2.0
LI	13	3.2	.67	.65	42	7.8	0.9	1.5	7.0

Table 5 for office, R&D and industrial uses are based on the expected employee densities: 34 per gross acre for business professional (BP) and R&D, 4 per acre for general industrial, and 13 per acre for light industrial (LI).

Table 6 summarizes the trip generation estimates for the North Central Plan Area for the year 2005 and at expected buildout. For the year 2005, total daily trip generation (as measured at the individual driveways of all of the respective parcels) would be about 91,000 vehicle trip ends. However, many of these would be the result of multiple-stop trips by same vehicles. The net traffic increase on the area's principal streets would be only about 54,000 primary vehicle trips. Total trip generation in the p.m. peak hour would be about 9,100 vehicles (about 10% of the daily amount), with about 6,600 of them being primary trips. Total trip generation in the a.m. peak hour would be about 4,700 vehicles. A detailed breakdown of 2005 North Central trip generation is given in Appendix A.

At expected buildout, the Proposed Plan would generate about 174,000 total vehicle trips daily, about 18,300 of them in the p.m. peak hour and about 10,100 of them in the a.m. peak. About 103,000 of the total daily trip ends generated would represent primary trips. These figures represent a doubling of the site's year 2005 generation. Detailed North Central Plan buildout trip generation data is given in Appendix A.

Cumulative Trip Generation

By the year 2005, development in all of Roseville's major plan areas is projected to reach about two-thirds of its full buildout levels. Roseville's population would reach about 75,200 and its employment level about 56,800. Assuming a labor force participation rate of 0.5 employed residents per capita,

Table 6

NORTH CENTRAL ROSEVILLE PLAN AREA
TRIP GENERATION

	Year 2005	Buildout
AM Peak Hour		
Primary Trips	4400	9000
Diverted Trips	300	1100
Total Trips	4700	10,100
PM Peak Hour		
Primary Trips	6600	13,200
Diverted Trips	2500	5,100
Total Trips	9,100	18,300
Daily (ADT)		
Primary Trips	54,000	103,000
Diverted Trips	37,000	71,000
Total Trips	91,000	174,000

Roseville would have about 37,600 employed residents. The result would be a jobs/labor force imbalance (with about 1.5 jobs for each employed resident) and a significant amount of in-commuting to Roseville from other areas.

Table 7 summarizes Roseville's citywide trip generation forecast for the year 2005. Total daily trip generation in Roseville would reach about 479,000 primary vehicle trips daily. This represents a more than three-fold increase over the City's existing total traffic generation. The North Central Plan would generate about 11% of the year 2005 citywide total traffic. It would generate about one-third as much traffic as is currently generated in the City as a whole. Of all of the City's plan areas, the North Industrial would generate the most traffic in the year 2005, about 20% of the City's total. The Northeast Plan Area would generate about 15%. Each of the other development areas would generate less than the North Central Plan.

By the time all of the Roseville major plan areas are built out and citywide infill reaches its expected maximum, the City's population is projected to reach about 91,000 and its employment level about 79,000.[2] The resulting jobs/labor force imbalance will be even more pronounced than in the year 2005, with about 1.7 jobs in the City for each employed resident. Roseville will continue to be a net importer of work commuters and shoppers, particularly from the north and south along the I-80 corridor.

As indicated in Table 7 citywide trip generation is projected to reach about 641,000 vehicle trips per day at buildout. This represents a 34% increase over the 2005 level, and a four-fold

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[2]Forecasts prepared by McDonald & Associates in May 1986 projected the City's buildout employment to be about 78,000. However, the current North Central Specific Plan calls for additional commercial development on the site, raising its expected total employment by 1000.

Table 7

FUTURE CITYWIDE TRIP GENERATION

	Year 2005 (Low Intensity)		Expected Buildout	
	ADT (000)	% of Total	ADT (000)	% of Total
Existing Development	145	30%	145	23%
Citywide Infill	44	9%	49	8%
North Central Plan Area	**54**	**11%**	**103**	**16%**
North Industrial Plan Area	93	20%	139	22%
Northwest Plan Area	39	8%	59	9%
Southeast Plan Area	31	7%	47	7%
Northeast Plan Area	73	15%	99	15%
Total	479	100%	641	100%

increase in the 1985 level. The 103,000 trips generated by the North Central Roseville Plan Area would represent about 16% of the citywide total. Other plan areas would generate between 47,000 and 139,000 trips each, with the North Industrial area generating the largest amount, about 23% of the citywide total.

Year 2005 Conditions Without the Project

The roadway system planned to support cumulative year 2005 development includes completion of the 65 Bypass as a four-lane expressway and completion of the facilities called for in the city of Roseville's current circulation plan, as well as roadways proposed as part of the specific plan proposals in North Central, Southeast, Northeast and Northwest Roseville and in Northwest Rocklin (as determined in the Stanford Ranch EIR). Within North Central Roseville, this includes the roadway facilities illustrated in Figure 4. It includes the Route 65 Bypass and associated I-80 improvements, Roseville Parkway both east and west of the freeway, the Atlantic extension east of I-80, the northerly extension of Harding Boulevard, and the construction of Carlesberg Blvd.

Under the "No-Project" alternative, however, many of the roadway connections through the North Central Area would not be constructed. Only the Harding Boulevard extension from Atlantic to the 65 Bypass is likely to be constructed under the No-Project case. Other facilities, including Roseville Parkway and its bridge across I-80 and Carlesberg Blvd. between existing Route 65 and the 65 Bypass, would only be constructed if warranted by development outside of the North Central area.

Table 8 summarizes the results of the screenline volume/capacity analysis for the year 2005 without any development in the North Central area. Given the expected development outside of the

Table 8

UNMITIGATED SCREENLINE CAPACITY ANALYSIS
YEAR 2005 WITHOUT THE PROJECT

Screenline	Daily Traffic Volume	Max. Capacity	V/C Ratio
A	263,000	320,000	.82*
B	153,000	272,000	.56
C	92,000	132,000	.70
D	85,000	80,000	1.06**
E	99,000	144,000	.69
F	112,000	192,000	.58
G	154,000	208,000	.74
H	132,000	144,000	.92*
I,J,K	271,000	296,000	.92*
M	126,000	124,000	1.02**
N	82,000	112,000	.73
O	79,000	128,000	.62

*Volume exceeds design capacity but not maximum capacity.

**Volume exceeds maximum capacity.

North Central Plan, several screenlines would exceed their design capacities in the year 2005. These include screenlines A, D, and IJK, which measure north/south travel near Roseville's north and south city limits and at locations between Cirby and Douglas. These impacts are due to increased travel interaction between Roseville's oversupply of jobs and nearby residential areas in Placer and Sacramento Counties. They are relatively unrelated to the availability or lack of roadway connections through the North Central Plan Area.

Significant corridor impacts would also occur at screenlines H and M, which measure travel through central Roseville between the freeway and the Santa Fe Pacific railroad. These impacts are due primarily to development in Northwest Rocklin, and North and Northwest Roseville. They are directly related to the lack of facilities through the North Central Plan Area, most significantly, Roseville Parkway, which could serve as a bypass to the downtown area for travel between east and west Roseville. These impacts suggest that further roadway improvements through the North Central Area would be necessary even if no development were to take place there. Such improvements could include: widen Harding Boulevard to more than the four lanes called for in the City's current circulation plan and/or the construction of West Roseville Parkway, including a new freeway overcrossing.

Figure 8 identifies the p.m. peak hour traffic volumes that would be found on the area's street system in 2005 if no development took place within the North Central Roseville Plan. Many of the streets surrounding the site would experience traffic demands in excess of the capacity of normal arterial streets, and would have to either be upgraded through the construction of expressway-type urban interchanges or augmented through the construction of additional parallel street facilities. For example, Atlantic street in the vicinity of I-80 would carry almost 5300 vehicles per hour. Unless the facility could be widened to eight lanes,

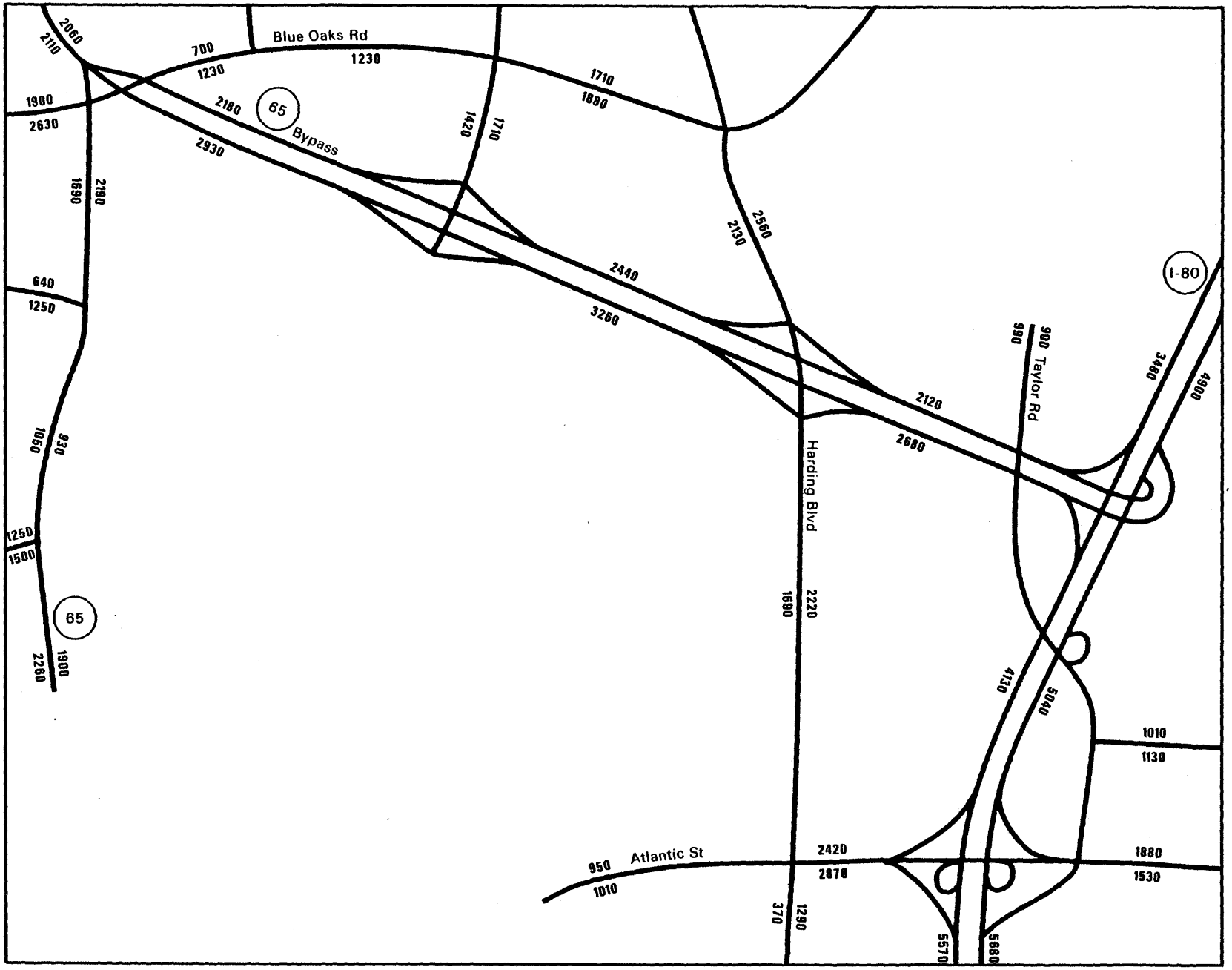

Figure 8
Year 2005 PM Peak Hour Traffic Without the Project

additional east/west capacity would be needed, such as the construction of an overcrossing to extend Roseville Parkway across the freeway.

As suggested in the screenline analysis, Harding Boulevard through the site, would need to be widened to six lanes even without development of the North Central Plan. Many other facilities in the area would also need to be six lanes wide, including existing Route 65 and the 65 Bypass. Figure 9 indicates the 2005 lane requirements in the area under the No Project alternative. It also identifies the locations of planned interchanges, including the expressway/freeway type interchanges along the 65 Bypass at Harding, Carlesberg and Blue Oaks, and the grade separation of Harding at Atlantic needed to elevate Harding above the railroad. The figure also shows the planned improvements along I-80 at Taylor and Atlantic.

Even with the planned improvements shown in Figure 9, several facilities in the north central area will operate at undesirable Levels of Service in 2005 without the Project. As shown in Figure 10, these include sections of the 65 Bypass and existing Route 65, as well as other planned surface streets in the Roseville North Industrial and Rocklin Northwest areas, as well as I-80 just north of the Bypass and the northbound off-ramp from I-80 at Atlantic. These conditions are within the range which could be mitigated through successful transportation systems management (TSM) programs or through intersection/interchange improvements.

Impacts of the Expected 2005 Project

Development of the North Central Roseville Specific Plan to its expected year 2005 development level (about 60% of buildout) would have several different types of traffic impacts. It would

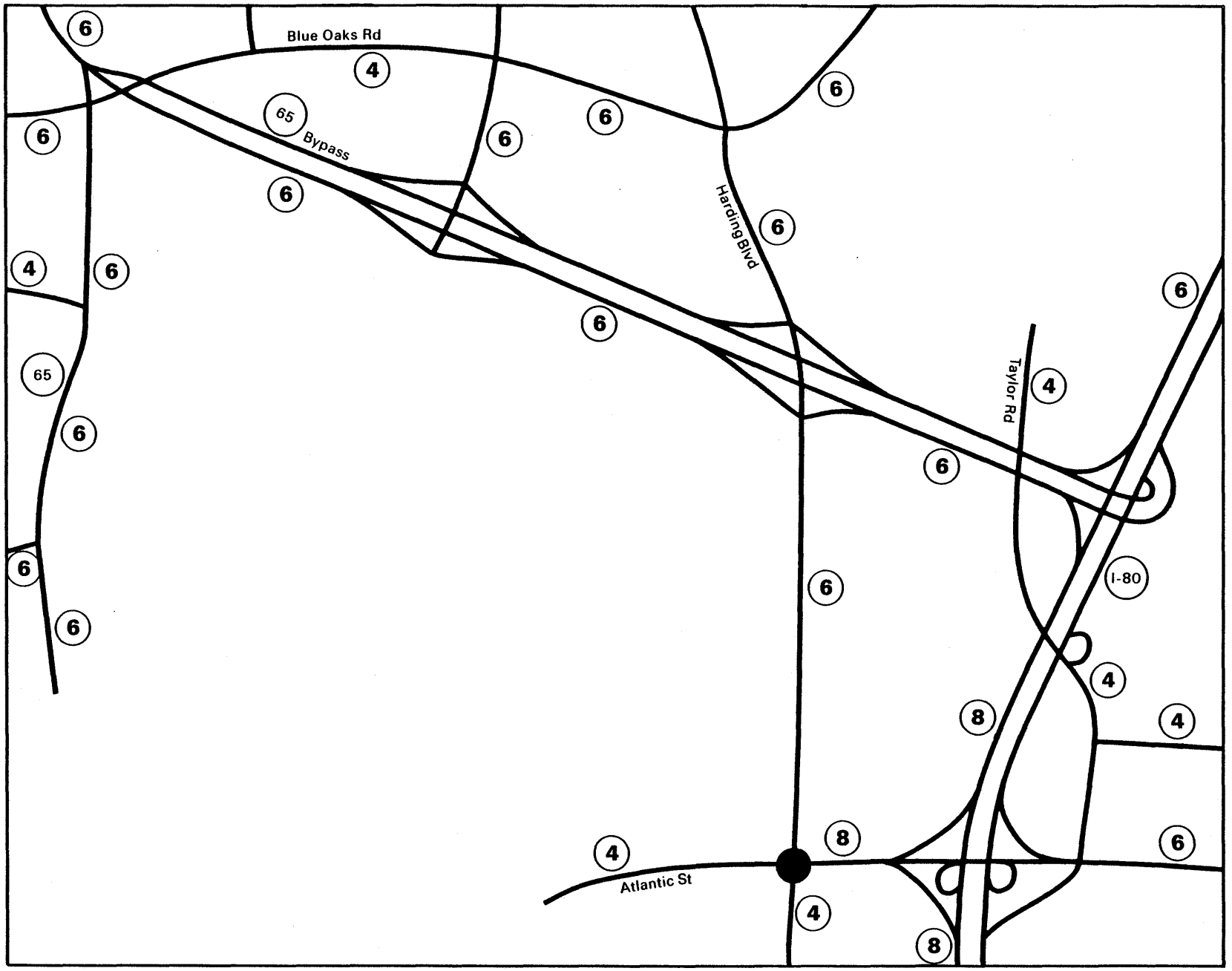

Figure 9
Year 2005 Facility Requirements Without the Project

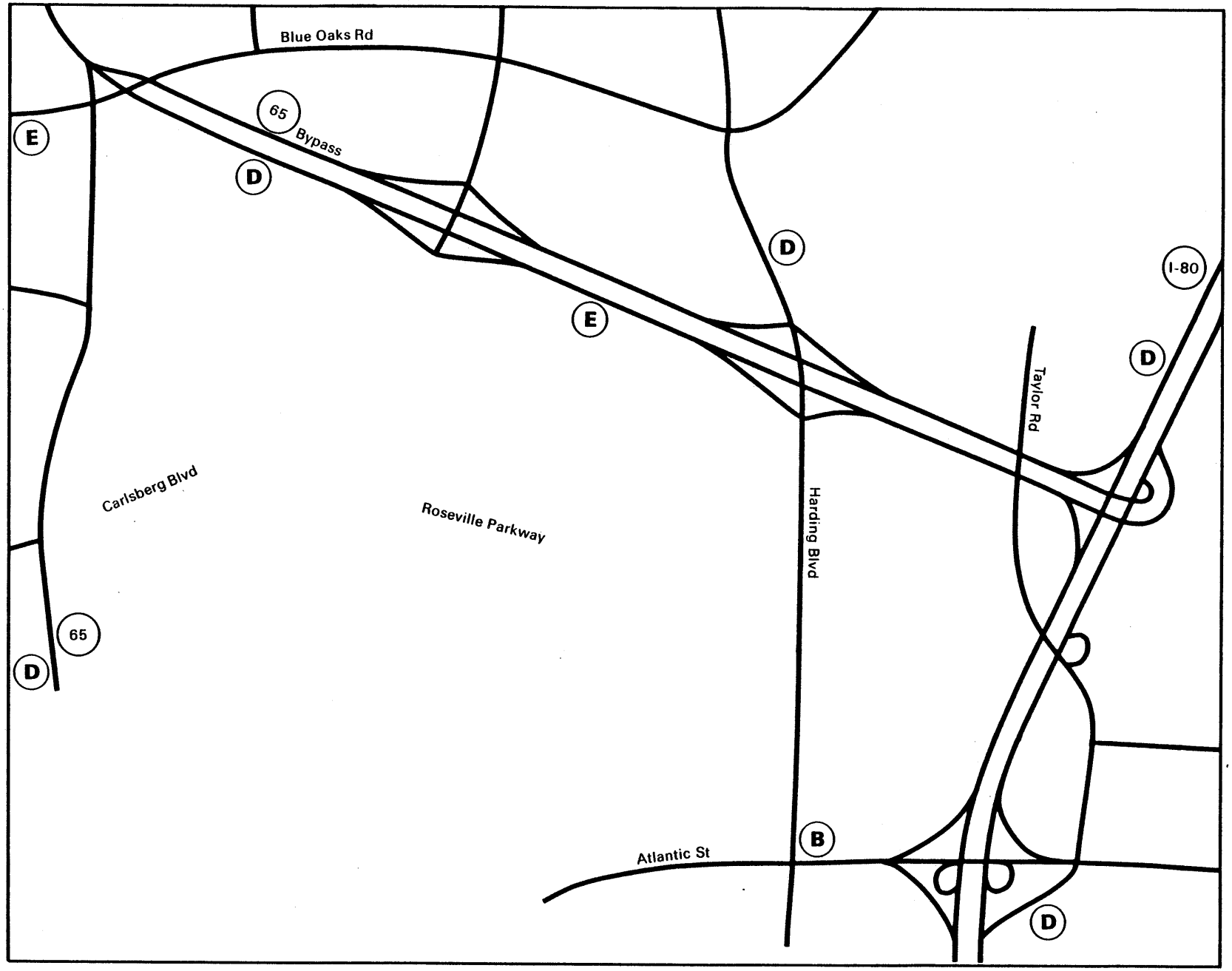

Figure 10
Year 2005 Peak Hour Service Levels Without the Project

significantly increase traffic volumes in the immediate vicinity of the Plan area. However, it would also provide significant additional roadway capacity through the site in the form of the Roseville Parkway and Carlesberg Boulevard. These alternative corridors would also help reduce volumes in other heavily congested areas.

As indicated above, the expected 2005 project would increase Roseville's citywide traffic generation by about 15%. The effects of this increase would be most significant on screenlines in the immediate vicinity of the site. As indicated in Table 9, traffic on screenline C (measuring travel between northwest Roseville/Rocklin and I-80) would increase by about 20% as a result of expected 2005 development on the site. Traffic in the north/south travel corridor between the site and central Roseville (measured by screenlines B and O) would increase by about 16% to 18%. Travel between the site and residential areas in southeast Roseville and Placer County (Screenlines E, F and G) would rise by 4% to 7%.

No other screenlines would experience measurable net increases. Some, like screenlines H and M, which measure traffic passing through the downtown and central Roseville areas, would benefit from the diversion of traffic to new facilities such as Roseville Parkway and Carlesberg Blvd.

As a result of cumulative development, including the project, several screenlines would exceed their design capacities in 2005. The unmitigated screenline capacity ratios for 2005 with the expected 2005 project are presented in Table 10. Comparison of Table 10 with Table 8 for the No Project alternative indicates that no screenlines that would exceed their design capacities without the project would experience further deterioration with the project. However, in either case, five screenlines would exceed their capacities. These include screenlines A, D, and

Table 9

IMPACTS ON YEAR 2005 SCREENLINE TRAFFIC
GENERATED BY EXPECTED 2005 PROJECT

Year 2005 Daily Traffic (thousands)

Screen-line	Without Project	With Expected 2005 Project	Percent Change
A	263	263	0%
B	153	177	16%
C	92	110	20%
D	85	85	0%
E	99	106	7%
F	112	117	4%
G	154	160	4%
H	132	122	-8%
I,J,K	271	267	-1%
M	126	121	-4%
N	82	77	-6%
O	79	93	18%

Table 10

UNMITIGATED SCREENLINE CAPACITY ANALYSIS
WITH EXPECTED 2005 PROJECT

Screenline	Daily Traffic Volume	Max. Capacity	V/C Ratio
A	263,000	320,000	.82*
B	177,000	272,000	.65
C	110,000	164,000	.67
D	85,000	80,000	1.06**
E	106,000	144,000	.70
F	117,000	192,000	.74
G	160,000	224,000	.71
H	122,000	144,000	.85*
I,J,K	267,000	296,000	.90*
M	121,000	124,000	.98*
N	77,000	112,000	.69
O	93,000	160,000	.58

*Volume exceeds design capacity but not maximum capacity.

**Volume exceeds maximum capacity.

IJK, which measure north/south travel at the Sacramento County line, and two other locations within and north of Roseville, and screenlines H and M, measuring travel through the downtown area. Other screenlines would be raised closer to their capacities, including several in east Roseville (screenlines E and F) and those within the North Central Plan Area (screenlines B and C).

Peak hour traffic volumes within the immediate vicinity of the North Central Plan are given in Figure 11. Compared with the No Project alternative (Figure 8), volumes would increase on most facilities by between 5% and 15%. One facility with a greater increase would be Carlesberg Boulevard west of existing Route 65, which would experience an increase of over 40%. This increase would be due, in part, to the North Central Plan's land use development and, in part, to the establishment of Carlesberg as a through route to the 65 Bypass.

Other facilities would benefit from the construction of Roseville Parkway through the North Central Plan area. Traffic on sections of the 65 Bypass and on the Atlantic crossing of I-80 would reduce significantly as a result of the additional cross-freeway connection. The reduced volumes would allow narrower widths on the Bypass and on the Atlantic overcrossing than would be possible otherwise. Figure 12 indicates the roadway width requirements and the locations requiring special intersection treatments. In addition to the interchanges along the 65 Bypass and the Harding overcrossing at Atlantic, an urban expressway interchange would be needed at the intersection of existing Route 65 and Carlesberg Boulevard. An interchange would also be required at Roseville Parkway and Harding Boulevard, particularly if turn restrictions are applied at mid-block locations on either side of the intersection to improve flows along the major streets. Precise interchange requirements at this location would be determined by the final access plans for the abutting land uses.

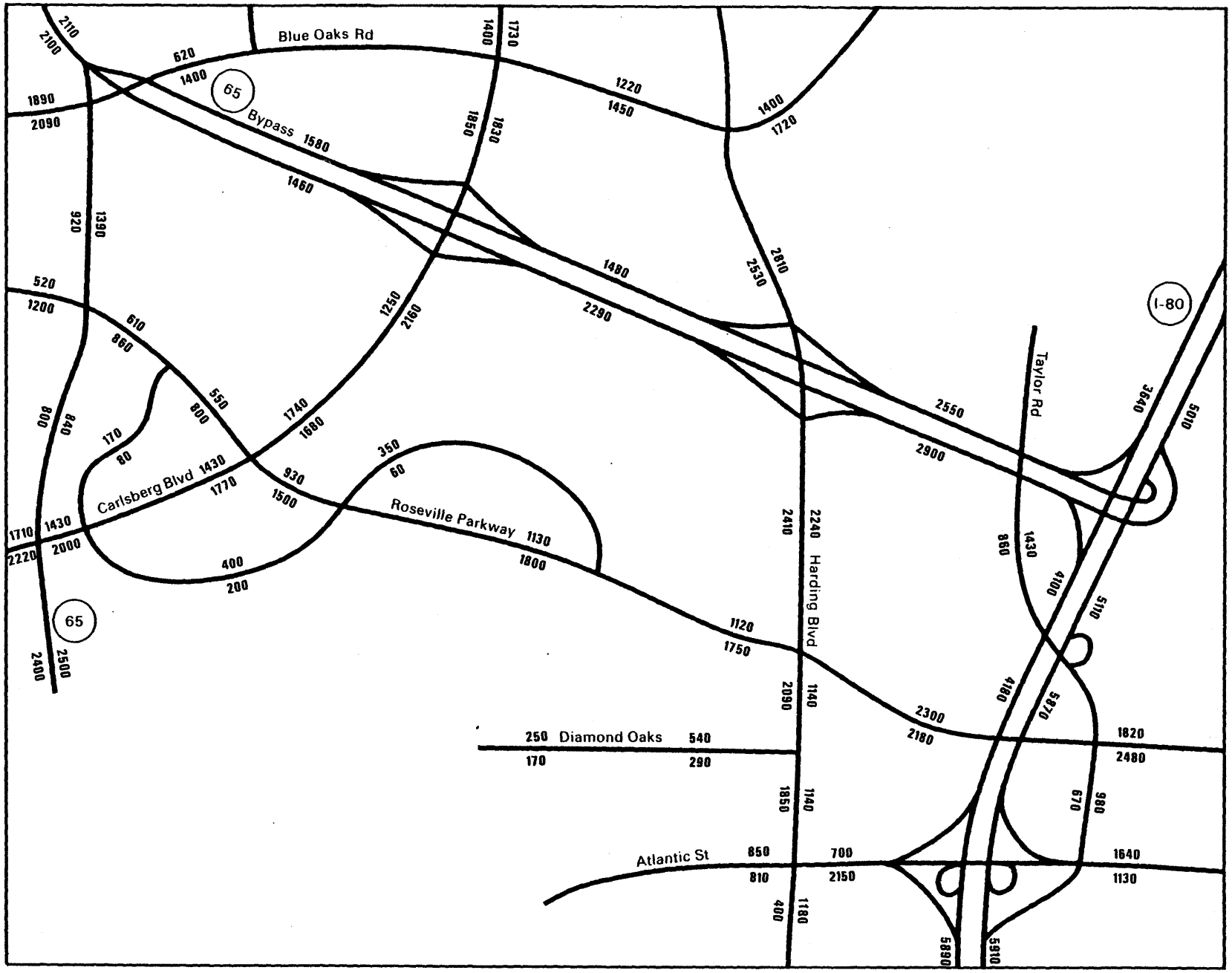

Figure 11
Year 2005 PM Peak Hour Traffic
With Expected 2005 Project

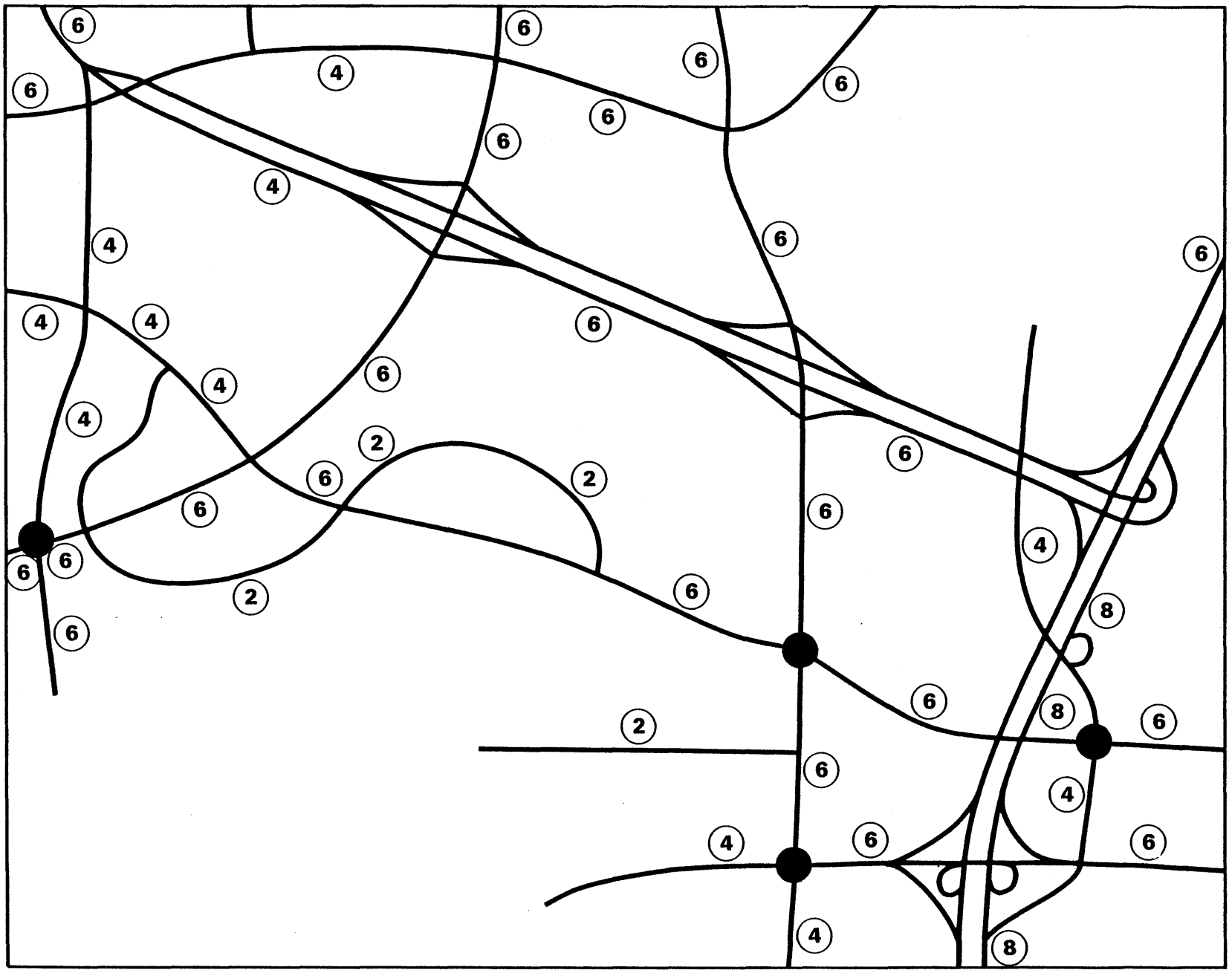

Figure 12
Year 2005 Facility Requirements With Expected 2005 Project

8 number of lanes required

expressway interchange required

Figure 13 presents the peak hour Levels of Service in the vicinity under expected 2005 development of the North Central Plan area. With the improvements indicated in Figure 12, most locations would operate at LOS C or better. Four locations would operate at LOS D, but in the favorable end of the D range, and within the respective facilities' design capacities. These are:

- The section of I-80 just north of the 65 Bypass (assuming the section remains six lanes wide).
- The intersection of the northbound I-80 off-ramp at Atlantic with Atlantic, Taylor and Eureka.
- The southern intersection at the Harding interchange with the 65 Bypass (assuming the two intersections within the diamond interchange are at least 400 feet apart and can operate independently).
- The intersection of Roseville Parkway and the existing Route 65 (assuming that both facilities are constructed to only four lanes in 2005).

All of these locations could be improved to LOS C through either additional widening, aggressive transportation systems management programs, or a combination of the two.

In addition, one location would operate at LOS E in the year 2005 with the expected 2005 development density at the North Central Plan and other cumulative projects. This is the southbound on-ramp to I-80 at Atlantic. To operate within its design capacity, this facility would need to be constructed as a two lane on-ramp.

Year 2005 Impacts of Full Project Buildout

At full buildout, the North Central Plan would generate almost twice as much traffic as at the expected year 2005 density. The impacts of this added traffic on corridor traffic flows throughout the Roseville area are exhibited in Table 11.

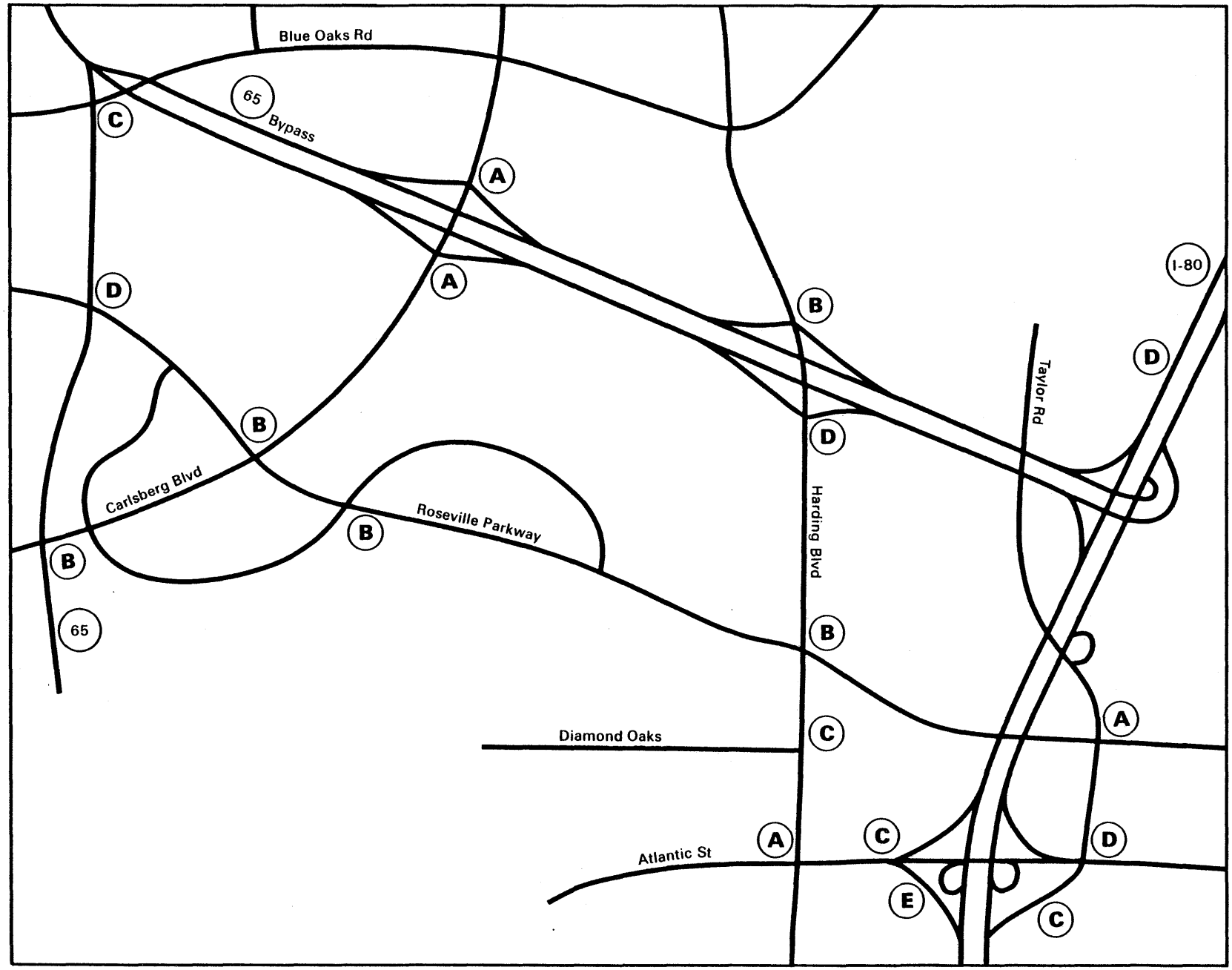

Figure 13
Year 2005 PM Peak Hour Service Levels With Expected 2005 Project

Table 11

IMPACTS ON YEAR 2005 SCREENLINE TRAFFIC
GENERATED BY FULL PROJECT

Year 2005 Daily Traffic (thousands)

Screen-line	Without Project	With Full Project	Percent Change
A	263	267	2%
B	153	186	22%
C	92	125	36%
D	85	86	1%
E	99	109	10%
F	112	121	8%
G	154	165	7%
H	132	123	-7%
I,J,K	271	271	0%
M	126	119	-6%
N	82	80	-2%
O	79	92	16%

Traffic across the Sacramento County line would increase by about 2% over 2005 conditions without the project. The most heavily impacted screenlines would be those within or adjacent to the North Central Plan Area. Screenlines B and O measuring north/south travel in the project area would experience traffic increases of 16% to 22% relative to the No Project alternative. Screenline C, measuring east/west travel, would grow by 36% over the No Project scenario. By comparison, the expected 2005 densities at the North Central Plan would increase the screenline C volumes by 20% (Table 9).

Development of the full North Central project in the year 2005 would increase east/west travel in east Roseville at screenlines E, F, and G by 7% to 10% compared with 2005 conditions without any development on the site. Volumes through central Roseville (screenlines H and M) would be reduced by 6% to 7% due primarily to the presence of Roseville Parkway and its I-80 overcrossing.

With full buildout of the North Central Plan, many of the City's travel corridors would exceed their design capacities unless mitigations were implemented. As indicated in Table 12, seven screenlines would be over capacity with the full project, compared with five screenlines with the expected 2005 project densities, and five under the No Project alternative. The additional screenlines would be screenline C in the immediate vicinity of the North Central Plan, and screenline E in east Roseville. These additional shortfalls suggest that additional widening of Roseville Parkway would be in order.

Peak hour traffic volumes on specific facilities within north central Roseville are indicated in Figure 14. On most facilities, these full buildout volumes are about 25% to 35% higher than for the expected 2005 project densities, although sections of Roseville Parkway through the center of the site would increase by 50% or more.

Table 12

UNMITIGATED 2005 SCREENLINE CAPACITY ANALYSIS
WITH FULL PROJECT

Screenline	Daily Traffic Volume	Maximum Capacity	V/C Ratio
A	267,000	320,000	.83*
B	186,000	272,000	.68
C	125,000	164,000	.76*
D	86,000	80,000	1.08**
E	109,000	144,000	.76*
F	121,000	192,000	.63
G	165,000	224,000	.74
H	123,000	144,000	.86*
I,J,K,	271,000	296,000	.92*
M	119,000	124,000	.96*
N	80,000	112,000	.71
O	92,000	160,000	.58

*Volume exceeds design capacity but not maximum capacity.

**Volume exceeds maximum capacity.

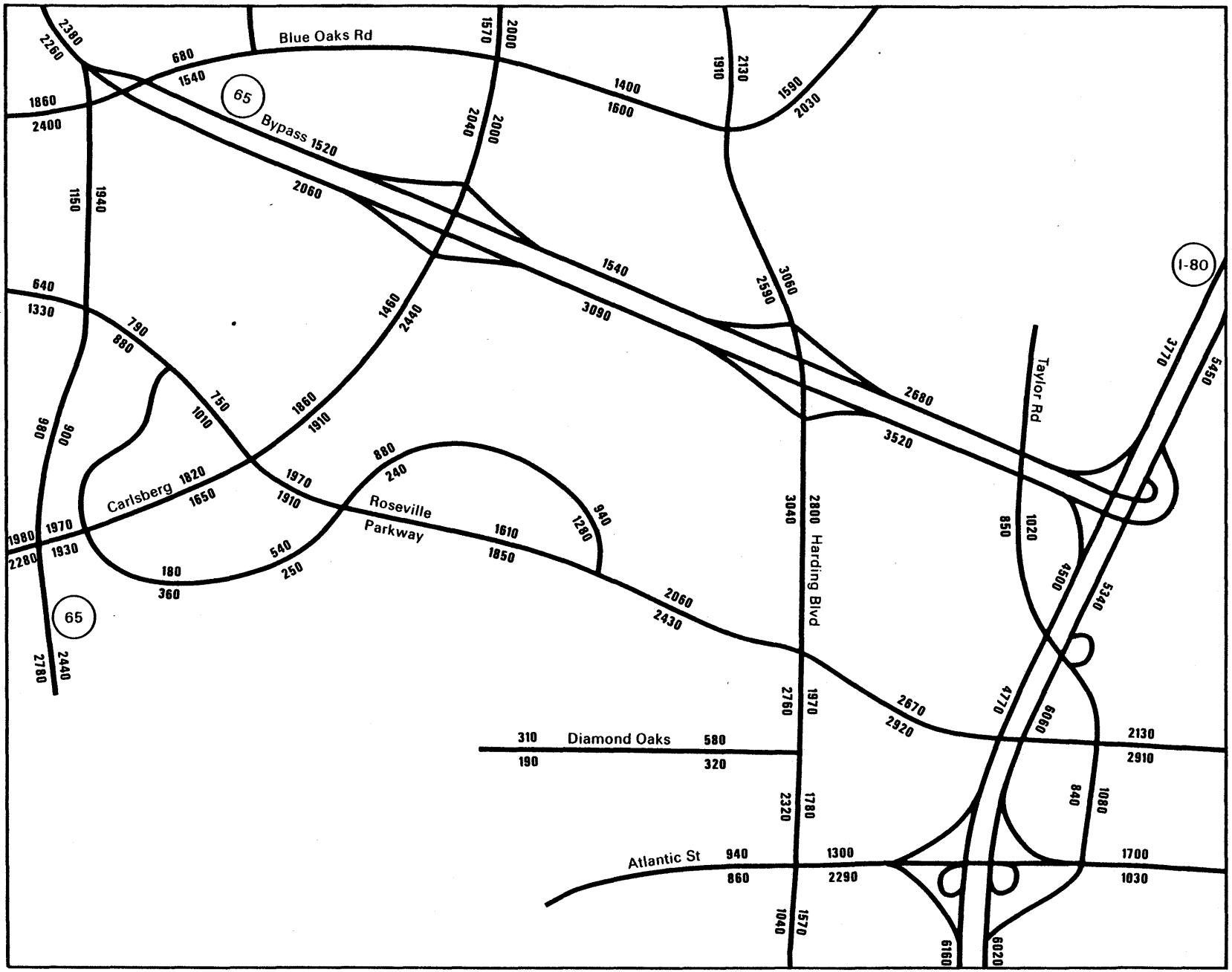

Figure 14
Year 2005 PM Peak Hour Traffic
With Full Project

Figure 15 illustrates the roadway widths and other facility requirements needed for cumulative traffic volumes under the Full Project scenario. Except for several internal roadways, the requirements would be quite similar to those under the Expected 2005 Project case. However, these roadways would operate at measurably worse Levels of Service than they would under the Expected 2005 case. As indicated in Figure 16, several locations would operate at LOS E with the Full Project in 2005. These include the section of I-80 north of the 65 Bypass, the southbound on-ramp at Atlantic, and the southern intersection at the Harding/Route 65 interchange. In addition, the intersection of Roseville Parkway and Carlesberg Boulevard would operate at a high D service, over its design capacity.

Full Citywide Buildout

At the point, beyond the year 2005, when full buildout of Roseville's Specific Plan Areas is complete, the City's total trip generation will equal approximately 641,000 ADT (see Table 7). This cumulative total trip generation represents a 342% increase over the City's existing level, and about 34% more traffic than expected in the year 2005.

Table 13 presents the impacts that the buildout traffic generation would have on the City's principal screenlines. Whereas the year 2005 impacts would result in traffic increases ranging from about 53% to about 900%, full buldout would increase traffic on the City's screenlines by between 71% and almost 1300 percent (a thirteen-fold increase). The most heavily affected screenlines would be those located in the northern and western parts of the City, screenlines C, D, N and O.

Table 14 presents the screenline capacity analysis for full buildout conditions, assuming that facilities are built only to

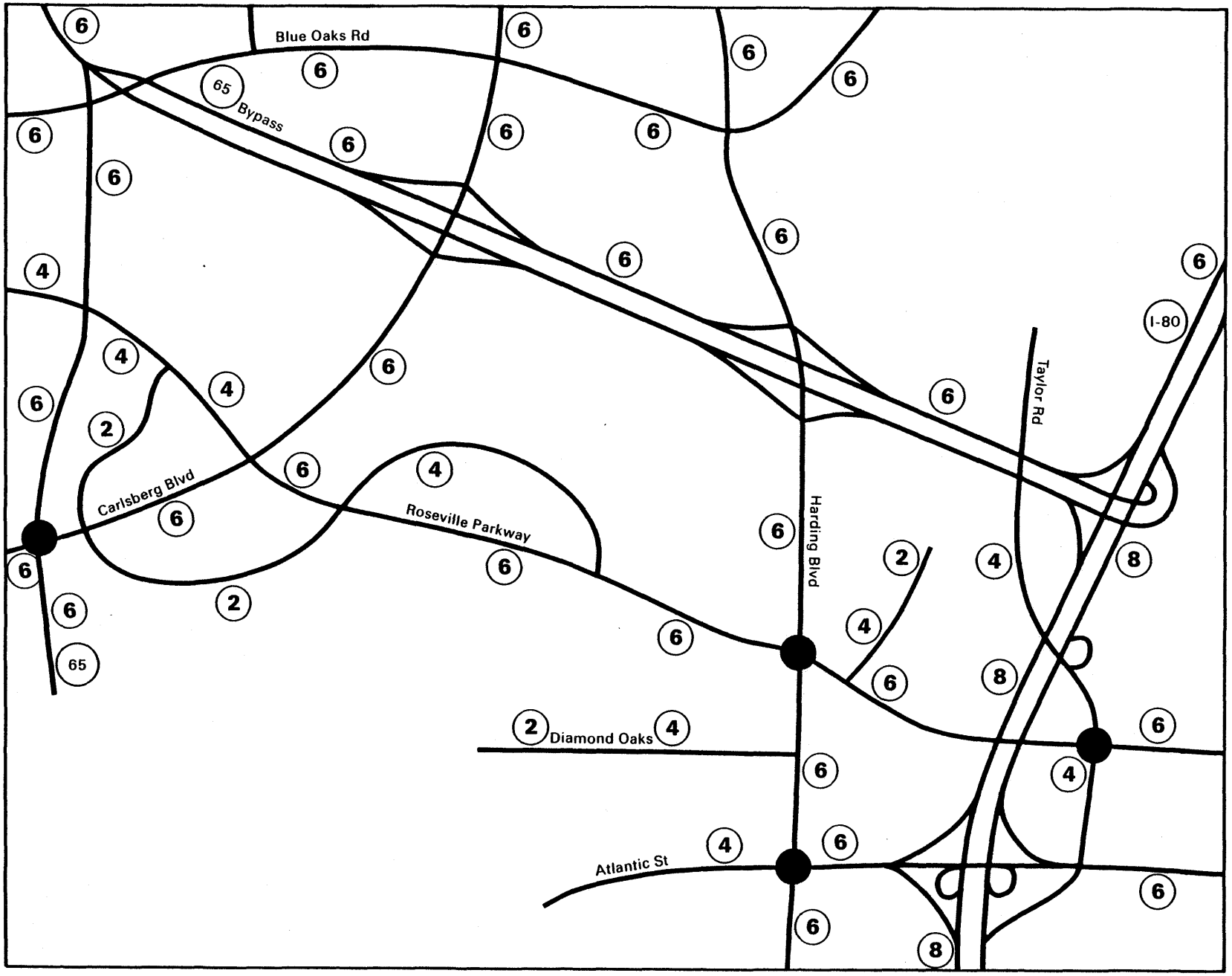

Figure 15
Year 2005 PM Peak Hour Traffic With Full Project

● **expressway interchange required**

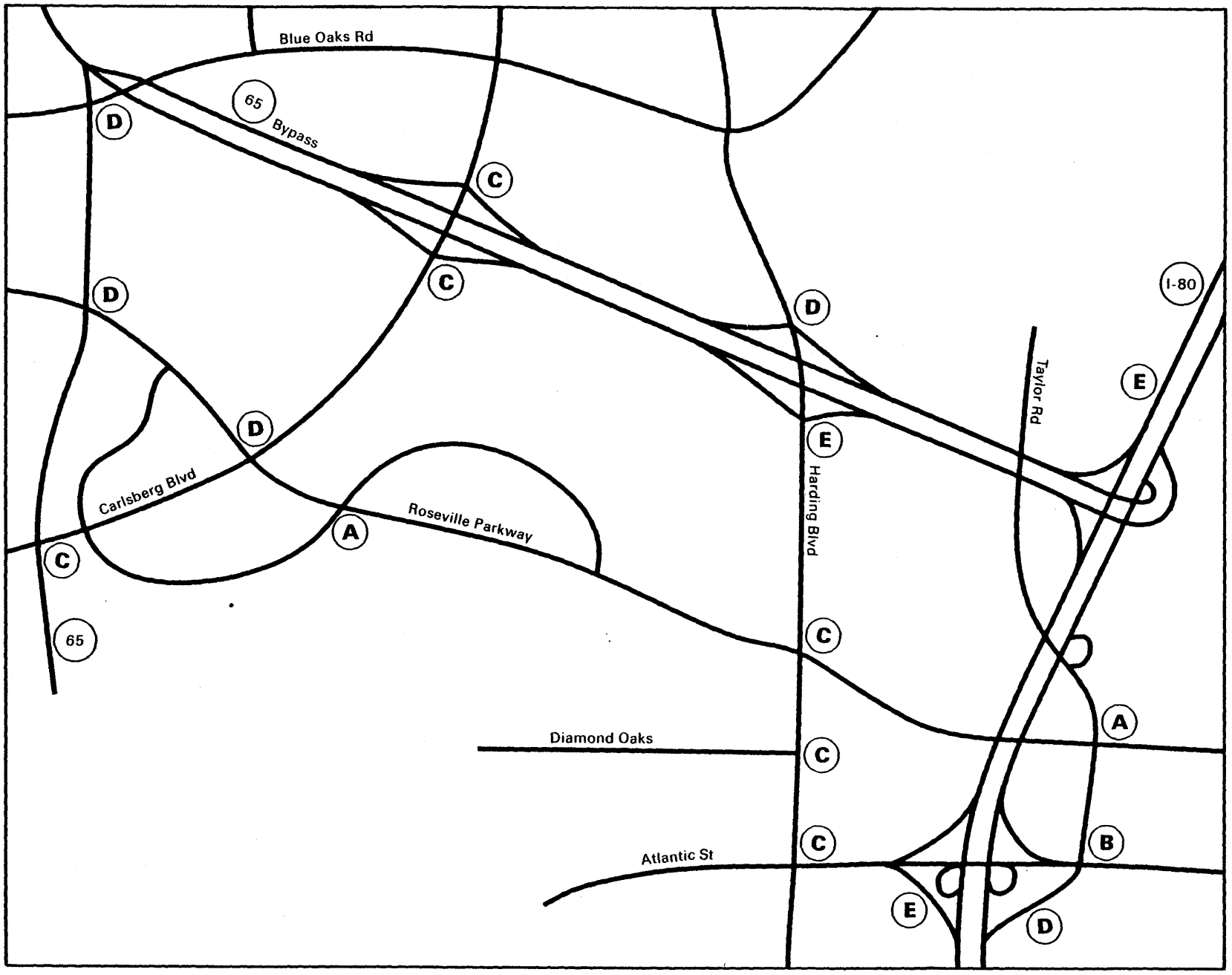

Figure 16
Year 2005 PM Peak Hour Service Levels
With Full Project

Table 13

INCREASES IN SCREENLINE TRAFFIC
AT 2005 AND EXPECTED CITYWIDE BUILDOUT

Average Daily Traffic (thousands)

Screen line	Existing (1986) Average Daily Volume	2005 with 2005 Project Volume	2005 with 2005 Project Increase*	Buildout with Buildout of Project Volume	Buildout with Buildout of Project Increase*
A	153	263	72%	275	80%
B	78	177	126%	208	167%
C	11	110	900%	151	1272%
D	12	85	608%	90	650%
E	32	106	230%	128	300%
F	56	117	109%	150	167%
G	84	160	90%	188	123%
H	80	122	53%	137	71%
I,J,K	154	267	73%	283	83%
M	33	121	267%	138	318%
N	19	77	305%	102	436%
O	15	93	520%	132	780%

*Percentage increase over 1986 volumes.

Table 14

UNMITIGATED 2005 SCREENLINE CAPACITY ANALYSIS
AT FULL CITYWIDE BUILDOUT

Screenline	Daily Traffic Volume	Maximum Capacity	V/C Ratio
A	275,000	320,000	.86*
B	208,000	272,000	.76*
C	151,000	164,000	.92*
D	90,000	80,000	1.13**
E	128,000	144,000	.89*
F	150,000	192,000	.78*
G	188,000	224,000	.84*
H	137,000	144,000	.95*
I,J,K,	283,000	296,000	.96*
M	138,000	124,000	1.11**
N	102,000	112,000	.91*
O	132,000	160,000	.83*

*Volume exceeds design capacity but not maximum capacity.

**Volume exceeds maximum capacity.

the levels needed to support expected year 2005 development. The analysis indicates that, unless roadway improvements continue to be made beyond 2005 in parallel with continuing development, all of the City's screenlines will exceed their design capacities by the time buildout of the Specific Plan Areas is reached.

III. MITIGATION MEASURES

Mitigating the traffic impacts of the proposed North Central Roseville Specific Plan and cumulative development in the area can include two types of measures: those which increase the capacity of the traffic circulation system, and those which reduce traffic generation. This section discusses both types of measures. The capacity-increasing measures, including street and highway improvements that would be needed to carry traffic at acceptable Levels of Service under the three development scenarios analyzed, are presented first. Secondly, the study discusses Transportation Systems Management (TSM) and transit measures that can be used to reduce traffic volumes.

The study has not initially discounted traffic volumes for TSM. By using this conservative approach to specifiying capacity mitigations, we have a safeguard if TSM programs are less effective than desired. If the TSM programs are successful, then the area's roadways would operate at better service levels than predicted.

Capacity Mitigations for No Project Alternative

To facilitate citywide traffic flow in the year 2005, a number of roadway improvements will be necessary within the north central Roseville, even if the proposed North Central Roseville Specific Plan is not implemented and the subject properties remain vacant. These facilities would be necessary to relieve congestion through the central part of the City by providing alternate routes north of downtown for east/west intra-City travel. Figure 9 illustrates one potential plan. It involves widening the Harding Boulevard extension to six lanes and constructing a full eight lanes on Atlantic at I-80. An alternative to widening Atlantic

would be to construct West Roseville Parkway including an I-80 overcrossing. In addition to reducing demand on the Atlantic/I-80 interchange, constructing West Roseville Parkway would have the added advantage of relieving conditions on the 65 Bypass, which would otherwise be rated at a D or E service level.

To relieve other LOS D and E conditions shown in Figure 10, it would be necessary to either build additional traffic lanes at such locations as I-80 north of 65 Bypass, the 65 Bypass itself between Carlesberg and Harding, and existing Route 65 south of Carlesberg, or to apply aggressive TSM measures to reduce traffic demands to within planned design capacities. If capacity increases alone are employed, the following measures would be necessary in the north central area:

- Widen Harding extension to six lanes.
- Widen Route 65 Bypass west of Harding and Blue Oaks Road west of existing Route 65 to eight lanes, or construct sections of West Roseville Parkway west of Harding.
- Widen Atlantic overcrossing to eight lanes, or add Roseville Parkway overcrossing at I-80.
- Widen I-80 north of Atlantic to eight lanes.

If citywide TSM measures are implemented that are capable of reducing peak hour traffic volumes by ten percent (comparable to a 25% to 30% reduction in drive-alone commuting), then the last measure, the I-80 widening, could be avoided.

Outside of north central Roseville, other capacity improvements would be needed even without development of the North Central Plan. Table 15 identifies the needed mitigations at the citywide level. In addition to those within the north central area, the following types of improvements would be required to handle year 2005 No Project traffic:

- Widen two north/south facilities crossing the

Table 15

MITIGATED SCREENLINE CAPACITY ANALYSIS
WITHOUT THE PROJECT

Screenline	Daily Traffic Volume	Max. Capacity	V/C Ratio
A	263,000	352,000[1]	.75
B	177,000[2]	272,000	.65
C	116,000[2]	158,000[3]	.73
D	85,000	128,000[4]	.66
E	99,000	144,000	.69
F	112,000	192,000	.58
G	154,000	208,000	.74
H	108,000	144,000	.75
I,J,K	271,000	376,000[5]	.72
M	102,000[2]	140,000[6]	.73
N	82,000	112,000	.73
O	79,000	128,000	.62

*Volume exceeds design capacity but not maximum capacity.

**Volume exceeds maximum capacity.

---

[1]Widen Antelope and either Barton or Auburn-Folsom by two lanes each.

[2]Divert 24,000 trips from screen lines H and M to screenlines B and C (from existing Route 65 to 65 Bypass).

[3]Widen 65 Bypass to six lanes.

[4]Widen Route 65 and Stanford Ranch Blvd. to six lanes each.

[5]Widen I-80 to ten lanes or widen to eight lanes and widen at least one north/south arterial by two lanes..

[6]Widen Harding to six lanes.

Sacramento County line (screenline A). One facility east of the freeway, such as Barton or Auburn-Folsom Road, should be widened to four lanes, as should one facility west of the freeway, Antelope Road.

- Widen at least one north/south facility between Douglas and Cirby (screenline IJK). This could include widening Sierra College to six lanes, widening either Auburn-Folsom, Barton, Roseville Road, Antelope Road, or I-80 itself by two lanes.

- Widen at least one north/south facility north of Placer Road (screenline D) by two lanes. This could include Route 65, or any facility extending north from the Stanford Ranch development area.

Mitigation for Year 2005 with North Central Roseville Plan at Expected 2005 Densities

Figure 12 identifies the roadway facilities within the north central area needed to mitigate the expected year 2005 North Central project. They include construction of West Roseville Parkway and Carlesberg Boulevard through the site, including an overcrossing at Roseville Parkway and I-80, and construction of urban interchanges at Roseville Parkway and Taylor, Roseville Parkway at Harding (if specific site access analysis justifies the need by the year 2005), and at Carlesberg Blvd/Existing Route 65. These improvements would eliminate the need for certain improvements that would be necessary under the No Project alternative, including widening the 65 Bypass to more than six lanes, and widening Atlantic near I-80 and Blue Oaks near Route 65 to eight lanes each.

Several other improvements that are not currently planned would also be needed in 2005 with the expected 2005 North Central densities. These include widening the southbound on-ramp to I-80 at Atlantic to two lanes, and widening I-80 itself north of the 65 Bypass to eight lanes. The latter improvement would be necessary even without the North Central project, and could be avoided if aggressive regional TSM programs are implemented.

Outside of the immediate project area, no additional roadway improvements would be necessary beyond those required under the No Project alternative. Table 16 identifies the screenline improvements needed and indicates the resulting capacity ratios.

Mitigations for Year 2005 with Full Project Buildout

Figure 15 illustrates the roadway network expected to be in place in the north central area in the year 2005 if the North Central Specific Plan were fully built out in that year. Aside for new or widened collector roadways within the North Central Plan itself, needed to access new development parcels, the network is almost identical to that required in 2005 with the expected 2005 level of North Central development (shown in Figure 15). However, with the Full Project, several facilities would operate at unacceptable levels of service unless additional mitigation measures are applied.

In addition to those specified above for the expected 2005 project, the Full Project alternative would requir: 1) widening of I-80 north of 65 Bypass even if TSM is employed, and 2) additional widening of the Harding interchange with the Route 65 Bypass unless citywide TSM is employed. The Full Project alternative would also require widening Harding Boulevard between Lead Hill and Atlantic to six lanes unless TSM is employed. Like the expected 2005 project, the Full Project Alternative would require widening of the southbound on-ramp to I-80 at Atlantic.

On a citywide level, buildout of the North Central Plan by 2005 would require the following improvements not needed if the project developed at expected 2005 densities:

Table 16

MITIGATED SCREENLINE CAPACITY ANALYSIS
WITH EXPECTED 2005 PROJECT

Screenline	Daily Traffic Volume	Max. Capacity	V/C Ratio
A	263,000	352,000[1]	.75
B	195,000[2]	272,000	.72
C	128,000[2]	190,000[3]	.67
D	85,000	128,000[4]	.66
E	106,000	144,000	.70
F	117,000	192,000	.74
G	160,000	224,000	.71
H	104,000[2]	144,000	.72
I,J,K	267,000	376,000[5]	.71
M	103,000[2]	140,000[6]	.74
N	77,000	112,000	.69
O	93,000	160,000	.58

[1]Widen Antelope and either Barton or Auburn-Folsom by 2 lanes each. (Same mitigations as No Project alternative.)

[2]Divert 18,000 trips from screenlines H and M to screenlines C and B (from existing Route 65 to Route 65 Bypass).

[3]Widen 65 Bypass to six lanes (Same as No Project alternative), and construct Roseville Parkway overcrossing.

[4]Widen Route 65 to six lanes (also needed for No Project Alternative), and widen Carlesberg extension and Stanford Ranch north by two lanes each. (Same as No Project alternatives.)

[5]Widen I-80 to ten lanes or widen to eight lanes and widen at least one arterial by two lanes. (Same as No Project alternative.)

[6]Widen Harding to six lanes (also needed for No-Project Alternative). (Same as No Project alternative.)

- Provide two additional lanes on I-80 at the Sacramento County line.
- Widen East Roseville Parkway at screenline E (near Douglas) to six lanes.

Table 17 presents a complete list of improvements needed at the citywide level for the Full Project buildout alternative.

Mitigations for Full Citywide Buildout

If roadway improvements do not continue to be made between year 2005 and the full buildout of the City's Specific Plan Areas, capacity shortages will occur at all major screenlines. To mitigate these impacts, expansion of the circulation system should continue beyond 2005 in parallel with increased development within each area. Table 18 identifies the required improvements. The major improvements include:

- Widening I-80 to ten lanes at the Sacramento County line (in addition to widening at least two parallel arterials)
- Upgrading 65 Bypass to freeway status
- Upgrading Roseville Parkway to expressway status

Sufficient right-of-way should be set aside, both at mid-block locations and at intersection interchanges to permit the ultimate widening indicated in Table 18 to suppport full Citywide buildout.

Demand Reduction through TSM

The City of Roseville`s TSM ordinance defines a series of

Table 17

MITIGATED SCREENLINE CAPACITY ANALYSIS
WITH FULL PROJECT BUILDOUT

Screenline	Daily Traffic Volume	Maximum Capacity	V/C Ratio
A	267,000	392,000[1]	.68
B	204,000[2]	272,000	.75
C	143,000[2]	206,000[3]	.69
D	86,000	128,000[2]	.67
E	109,000	160,000[4]	.68
F	121,000	192,000	.63
G	165,000	224,000	.74
H	105,000[2]	144,000	.73
I,J,K,	271,000	376,000[2]	.72
M	101,000[2]	140,000[2]	.72
N	80,000	112,000	.71
O	92,000	160,000	.58

---

[1]Mitigations:
a) Widen Barton or Auburn-Folsom by 2 lanes, and
b) Widen I-80 by 2 lanes, and
c) Widen Antelope by 2 lanes.

[2]Same mitigations as for Expected 2005 Project (Table 14).

[3]Widen 65 Bypass and Roseville Parkway to six lanes.

[4]Widen Roseville Parkway to six lanes.

measures which are to be applied at new non-residential developments to reduce commute traffic in peak hours. Measures include transit and rideshare promotion, flexible work-hour programs and amenities to encourage bicycling and walking. The ordinance also includes a monitoring program and attempts to guarantee that performance standards will be met by conditioning subsequent development. Details of the ordinance are contained in Appendix B. This ordinance, in itself, represents a significant traffic mitigation measure that will be attached to the proposed project and to approvals in the other Roseville Specific Plan Areas.

Many local jurisdictions and transportation agencies have TSM programs and ordinances that go beyond Roseville's programs. Some specify site design features that should be used to promote use of and improve the efficiency of non-auto travel modes. Sacramento Regional Transit and Caltrans' rideshare program, for example, request that bus turnouts and shelters be provided along primary streets in new development areas, that building siting make bus-stop access convenient, that pedestrian and bikeways be provided, and that buildings contain showers and lockers, that strategic parcels be set aside. even in residential developments, for park-and-ride lots. Regional Transit also requests direct subsidies in some cases, in order to help offset the cost of providing service to new areas.
A list of site planning features and institutional measures that help reduce traffic generation are presented in Appendix B.

Jurisdiocitons with aggressive TSM ordinances often set performance standards, and devise monitoring and enforcement plans to be sure the standards are met. Sacramento County, for example, encourages office/industrial developments to achieve a 30% reduction in peak hour vehicular travel relative to the amount of travel that would occur if all employees travelled in single-occupant automobiles. This represents a 10% reduction in

Table 18

MITIGATED SCREENLINE CAPACITY ANALYSIS
AT FULL CITYWIDE BUILDOUT

Screenline	Daily Traffic Volume	Maximum Capacity	V/C Ratio
A	275,000	392,000[1]	.70
B	241,000[2]	336,000[3]	.72
C	184,000[2]	246,000[4]	.75
D	90,000	128,000[5]	.70
E	128,000	206,000[6]	.62
F	150,000	222,000[6]	.68
G	188,000	262,000[6]	.72
H	104,000[2]	144,000	.72
I,J,K,	283,000	376,000[7]	.75
M	105,000[2]	140,000[8]	.75
N	102,000	136,000[9]	.75
O	132,000	184,000[10]	.72

---

[1] Mitigations:
a) Widen Barton or Auburn-Folsom by 2 lanes, and
b) Widen I-80 by 2 lanes, and
c) Widen Antelope by 2 lanes.

[2] Divert 33,000 trips from screenlines H and M to screenlines B and C.

[3] Widen Sunrise Avenue and East Roseville Parkway to six lanes.

[4] Upgrade 65 Bypass to freeway status.

[5] Widen Route 65 and Stanford Ranch Blvd. to six lanes each.

[6] Upgrade East Roseville Parkway to expressway status.

[7] Widen I-80 to eight lanes and at least one north/south arterial by two lanes.

[8] Widen Harding to six lanes.

[9] Widen Route 65 to six lanes.

[10] Widen Carlesberg Blvd. to six lanes.

traffic generation below the "ambient" conditions. (Under circumstances where there is no special TSM in effect, about 20% of commuters travel in carpools, by transit, or in non-peak times.)

If the developers, and the eventual building owners and tenants, are encouraged to support Roseville's current TSM ordinance, performance levels equal to or greater than those specified by Sacramento County could be attainable. If such programs are extended to affect all employers in the City, a citywide reduction in peak hour traffic of at least 10% would be possible. The result of this group of mitigation measures would be to improve the levels of service given in Figures 10, 13, and 16 by one grade each. This would be that any one of the following to take place:

- Roseville's streets and intersections would operate at Service level C or better even in peak hours through the year 2005.
- Some of the prescribed capacity improvements would not be necessary, as discussed in the preceding sections of this chapter.

Appendix A

NORTH CENTRAL PLAN
DETAILED TRIP GENERATION

Table A-1
North Central Plan, Trip Generation
Expected Year 2005 level of Development

Land Use Description/ ategory Size	Number of Units	Trips per unit					Total Trips				
			AM Peak		PM Peak			AM Peak		PM Peak	
		ADT	In	Out	In	Out	ADT	In	Out	In	Out
esidential											
RD1 - RD5	427	10.00	0.21	0.55	0.63	0.37	4270.00	89.67	234.85	269.01	157.99
RD6 - RD10	1824	8.50	0.14	0.50	0.55	0.30	15504.00	255.36	912.00	1003.20	547.20
RD11 - RD15	210	7.00	0.12	0.40	0.47	0.23	1470.00	25.20	84.00	98.70	48.30
RD16 - RD20	0	6.00	0.10	0.35	0.40	0.20	0.00	0.00	0.00	0.00	0.00
					Residential totals:		21244.00	370.23	1230.85	1370.91	753.49
Commercial											
10 - 20 acre	12.50	600.00	8.10	7.20	25.70	27.40	7500.00	101.25	90.00	321.25	342.50
20 - 30 acre	26.50	455.00	3.60	1.80	21.00	22.00	12057.50	95.40	47.70	556.50	583.00
30 - 40 acre	0.00	377.00	14.40	6.30	24.50	25.00	0.00	0.00	0.00	0.00	0.00
40 - 50 acre	0.00	497.00	3.30	1.70	24.00	25.00	0.00	0.00	0.00	0.00	0.00
50 - 100 acr	90.00	409.00	4.00	2.60	17.00	17.10	36810.00	360.00	234.00	1530.00	1539.00
100 acres +	0.00	409.00	4.30	1.70	15.00	15.00	0.00	0.00	0.00	0.00	0.00
					Commercial totals:		56367.5	556.65	371.70	2407.75	2464.50
usiness Park	65.00	129.00	16.40	2.00	2.80	15.60	8385.00	1066.00	130.00	182.00	1014.00
ight Industrial	100.00	42.00	7.80	0.90	1.50	7.00	4200.00	780.00	90.00	150.00	700.00
					BP/LI totals:		12585.00	1846.00	220.00	332.00	1714.00
K-6	16.00	35.00	3.50	1.75	0.35	0.70	560.00	56.00	28.00	5.60	11.20
igh School	0.00	49.00	6.65	2.45	2.45	4.55	0.00	0.00	0.00	0.00	0.00
					School totals:		560.00	56.00	28.00	5.60	11.20
Park	0	6.00	0.20	0.20	0.30	0.30	0.00	0.00	0.00	0.00	0.00
pen Space	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ommunity Park	21	6.00	0.20	0.20	0.30	0.30	126.00	4.20	4.20	6.30	6.30
					Park totals:		126.00	4.20	4.20	6.30	6.30
					All uses totals:		90882.5	2833.08	1854.75	4122.56	4949.49

Table A-2
North Central Plan, Trip Generation
At Full Buildout

Land Use Description/ ategory Size	Number of Units	Trips per unit					Total Trips				
			AM Peak		PM Peak			AM Peak		PM Peak	
		ADT	In	Out	In	Out	ADT	In	Out	In	Out
esidential											
RD1 - RD5	627	10.00	0.21	0.55	0.63	0.37	6270.00	131.67	344.85	395.01	231.99
RD6 - RD10	2033	8.50	0.14	0.50	0.55	0.30	17280.50	284.62	1016.50	1118.15	609.90
RD11 - RD15	1248	7.00	0.12	0.40	0.47	0.23	8736.00	149.76	499.20	586.56	287.04
RD16 - RD20	320	6.00	0.10	0.35	0.40	0.20	1920.00	32.00	112.00	128.00	64.00
					Residential totals:		34206.50	598.05	1972.55	2227.72	1192.93
Commercial											
10 - 20 acre	27.50	600.00	8.10	7.20	25.70	27.40	16500.00	222.75	198.00	706.75	753.50
20 - 30 acre	26.50	455.00	3.60	1.80	21.00	22.00	12057.50	95.40	47.70	556.50	583.00
30 - 40 acre	36.00	377.00	14.40	6.30	24.50	25.00	13572.00	518.40	226.80	882.00	900.00
40 - 50 acre	0.00	497.00	3.30	1.70	24.00	25.00	0.00	0.00	0.00	0.00	0.00
50 - 100 acr	162.00	409.00	4.00	2.60	17.00	17.10	66258.00	648.00	421.20	2754.00	2770.20
100 acres +	0.00	409.00	4.30	1.70	15.00	15.00	0.00	0.00	0.00	0.00	0.00
					Commercial totals:		108387.5	1484.55	893.70	4899.25	5006.70
usiness Park	158.00	129.00	16.40	2.00	2.80	15.60	20382.00	2591.20	316.00	442.40	2464.80
ight Industrial	220.00	42.00	7.80	0.90	1.50	7.00	9240.00	1716.00	198.00	330.00	1540.00
					BP/LI totals:		29622.00	4307.20	514.00	772.40	4004.80
K-6	16.00	35.00	3.50	1.75	0.35	0.70	560.00	56.00	28.00	5.60	11.20
igh School	20.00	49.00	6.65	2.45	2.45	4.55	980.00	133.00	49.00	49.00	91.00
					School totals:		1540.00	189.00	77.00	54.60	102.20
Park	24	6.00	0.20	0.20	0.30	0.30	144.00	4.80	4.80	7.20	7.20
pen Space	40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ommunity Park	21	6.00	0.20	0.20	0.30	0.30	126.00	4.20	4.20	6.30	6.30
					Park totals:		270.00	9.00	9.00	13.50	13.50
					All uses totals:		174026.0	6587.80	3466.25	7967.47	10320.13

Appendix B

NORTH CENTRAL ROSEVILLE SPECIFIC PLAN
TRANSIT AND TSM CONSIDERATIONS

NORTH CENTRAL ROSEVILLE SPECIFIC PLAN
TRANSIT AND TSM CONSIDERATIONS

The traffic impacts of the North Central Roseville Plan and cumulative development can be reduced through measures that divert residents and employees to non-automobile modes of travel and which encourage them to travel at times outside of the normal daily peaks. These measures include the provision and promotion of transit services, and the implementation of other Transportation Systems Management (TSM) programs such as ridesharing and variable work hour programs.

Transit

A variety of transit services are currently available in Roseville, but there is presently only limited regular service east of I-80 in the immediate vicinity of the project site.

Regional Transit (RT) operates two lines on Douglas Boulevard, as far east as Sunrise Avenue. RT lines 100 and 103 both provide commute-hour service to downtown Sacramento via I-80, with a total of four runs southbound each morning and four northbound each afternoon.

Placer County Transit provides service between Roseville and Auburn with stops at Sierra College, Rocklin and other intermediate points. There are nine northbound and nine southbound runs daily, including several commuter express runs. Most of the non-commute runs are of the "fixed route deviation" type, which allow the bus to deviate up to one mile from its normal route to pick up passengers. Placer County Transit also operates two bus trips daily each way between Roseville and the Granite Bay area.

Roseville Area Dial-a-Ride (RADAR) provides demand-responsive bus service within the City. The service operates from 6 a.m. and 6 p.m. on weekdays and from 9 a.m. to 3 p.m. on Saturdays. In addition to on-call dial-a-ride service, subscription service is available for regularly scheduled pick-ups.

Roseville Urban Shuttle (RUSH) operates two fixed-route shuttles through the City. Route A provides service to downtown and the majority of the western part of the City. Route B travels through most of southeast and southwest Roseville and downtown. Buses run one hour apart on each route.

All of the above transit systems operate under funding

constraints. For most, providing service to the North Central Plan site, even if it were done simply by extending existing routes, would increase operating expenses and equipment needs for the transit operators.

For systems such as RT, whose funding is determined under the State and federal formulae for operating subsidies, the cost of serving a new area is related to the ability to generate fare-box revenues in that area. The development density and trip generation potential in the North Central Plan area are as high as in many areas currently served by RT, and the area could probably be served without significantly affecting the system-wide fare-box recovery ratio. However, to the extent that new capital expenditures are required and operating performance reduced, serving the area could represent a net deficit to the transit operating agencies. RT has generally maintained the position that it cannot provide service in new areas without jeopardizing its ability to fund service in existing areas. As a result, RT has been considering various new revenue generating mechanisms, including assessment districts and transit impact fees. Depending on the strategy RT ultimately selects, one such mechanism might be applied in the project area as development takes place. While it would raise development costs, it would also insure that a reasonable amount of transit service would be provided through the site and would help reduce traffic impacts.

For the RUSH and RADAR systems, additional tax revenues that the proposed project would generate for the City of Roseville would probably make it possible to expand service to cover the site. If not, other means of funding additional service would have to be identified.

Assuring that at least basic transit service is provided through the North Central Plan site would be an important part of a TSM-based traffic mitigation program. With basic transit service alone (quarter-hour frequencies in peak hours, half-hour off-peak), and no special TSM promotions, about two percent of the trips generated on the site would be made via transit. This reduction in automobile trip generation is already reflected in the trip rates used in the body of this report. Under this scenario, about 1100 transit trips would be generated daily in year 2005, under expected North Central densities, about 150 of them in the peak hour.

Providing higher levels of transit service along with effective TSM measures could increase transit use considerably, to up to 10 percent in peak hours. There would be about 5500 transit riders daily, including about 600 in peak hours. This would reduce traffic generation levels by about five to ten percent, improving intersection service levels by between one-half and one full service level with respect to those cited in the body of this report.

TSM

To help make the transit service effective and to promote other forms of non-auto travel, a TSM plan will be required under an existing City ridesharing ordinance. Such a program, along with good transit service, could reduce traffic impacts considerably, as described in the preceding paragraph.

Roseville's TSM ordinance is attached. It calls for a variety of measures, including posting transit information, carpool matching, and preferential parking, and requires annual performance reports. It is designed to reduce traffic generation by 20% to 30% below the amount that would occur if everyone drove alone. This would represent a traffic decrease of up to ten percent relative to expected no-TSM conditions.

Additional measures that go beyond Roseville's TSM ordinance might be considered by the project developers. The attached checklist of measures has been suggested by the local Caltrans rideshare branch as means to potentially achieve 40% reductions in drive-alone travel, or a 20% to 25% reduction in traffic relative to typical no-TSM situations. If all such measures were applied and were as successful as suggested, traffic service levels on the North Central Plan site could be improved by up to two grades relative to those given in the body of this report.

ORDINANCE NO. 1695

ORDINANCE OF THE COUNCIL OF THE CITY OF ROSEVILLE ADDING ARTICLE 37 TO ORDINANCE 802, THE ZONING ORDINANCE, RELATING TO RIDESHARING.

THE CITY OF ROSEVILLE ORDAINS:

SECTION 1. Article 37 is hereby added to Ordinance 802, the Zoning Ordinance of the City of Roseville, to read as follows:

ARTICLE 37 RIDESHARING

37.01 Findings

The City Council of the City of Roseville hereby finds and determines that:

A. A significant level of increase in new employment opportunities is anticipated in the South Placer region, including the City of Roseville, over the coming two decades.

B. Ridesharing among employees for home to work trips is a simple, inexpensive and effective means of reducing peak hour, single occupant motor vehicle trips. A reduction in such trips can be expected to result in a reduction in the potential air quality, traffic circulation, and energy consumption impacts relating to the anticipated growth in new jobs.

C. The anticipated level of employment growth in the South Placer region, including the City of Roseville, relative to the existing employment base provides an unusual opportunity to establish ridesharing as a common commuting practice.

D. Ridesharing is one of a number of measures and programs to be implemented under the South Placer Transportation Systems Management (TSM) Program in which the City of Roseville is a participant.

E. Implementation of a ridesharing program is required by the public health, safety and welfare.

37.02 Establishment of Ridesharing Program and Purpose

The City of Roseville Ridesharing Program is hereby established. The purpose and intent of the Ridesharing Program is to:

A. Reduce total vehicle emissions in the South Placer region and in the City of Roseville by reducing the number of vehicular trips that might otherwise be generated by home-to-work commuting.

B. Reduce peak hour traffic circulation in the South Placer region and in the City of Roseville by reducing both the number of vehicular trips and the vehicular miles of travel that might otherwise be generated by home-to-work commuting.

37.03 Ridesharing Program Objectives

The fundamental objective of the ridesharing program as established by this Article is to reduce the average number of vehicular trips for home-to-work commuting to 25% fewer trips than would occur if all such trips were made in single occupant motor vehicles. Large employment facilities will be expected to accomplish a higher percentage of this reduction than small employment centers in recognition of the greater opportunity for rideshare matches or large employment and educational facilities.

37.04 Ridesharing Program Requirement Nonexclusive

The requirements of this Article are nonexclusive. No section or provision of this article shall preclude application of any other development standards, requirements, or conditions of approval that may be imposed in the project review and approval procedures of the City.

37.05 Definitions

As used in this Article, the following terms shall be given the meaning ascribed to them in this section.

A. Applicant. An applicant for a conditional use permit, zoning change, or tentative subdivision map for a use or uses which, individually or collectively, may generate employment for fifty (50) or more employees at a common work location.

B. Carpool. A motor vehicle occupied by two or more persons regularly or habitually traveling together.

C. Common Work Location or Employment Facility. Either a single building or a group of buildings or work locations at a common site.

D. Commuter. An employee who travels regularly or habitually to and from an employment facility three or more days a week.

E. Commuter Matching Service. Any system for mapping and matching home and work locations of interested commuters to identify prospects for ridesharing.

F. Major Project Controller. The Lessor or manager of a common work location whose tenants, individually or collectively, employ fifty (50) or more employees, or an employer who employs fifty (50) or more persons.

G. Peak Hour Commuter. A commuter who regularly or habitually arrives at or departs from an employment facility during the morning hours of 7:30 a.m. to 8:30 a.m. or the evening hours of 4:30 p.m. to 5:30 p.m.

H. Project Controller. The Lessor or manager of a common work location whose tenants, individually or collectively, employs ten (10) or more but less than fifty (50) employees, or an employer who employs ten (10) or more but less than fifty (50) employees.

I. Ridesharer. Any employee who commutes by any mode other than single occupancy light or medium duty vehicle, motorcycle or moped.

J. Sacramento Rideshare Program. The commuter matching service and commuter information service operated by the CALTRANS-Sacramento Ridesharing Project.

K. Shift of Employment. Any group of employees who work at a common work location and who arrive and depart from work in a common time interval not greater than one hour.

L. South Placer Transporation Coordinator or Transportation.

Coordinator. The coordinator of transportation information and transportation plans, as established by the Coordination Agreement for the South Placer Task Force Relating to Highway 65, a joint powers agreement entered into by the County of Placer and the Cities of Roseville, Rocklin, and Lincoln, as it now exists and as it may hereafter be amended.

M. Transporation Plan. The plan submitted by an applicant and approved by the City pursuant to this Article.

37.06 Project Requirements

Every project controller and major project controller shall encourage ridesharing for tenants and employees by providing the following incentives to ridesharing:

A. Posting: Posting in a conspicuous place or places informational materials provided by the Transportation Coordinator to encourage ridesharing. Such informational materials may include but are not limited to:

1. Current schedules, rates (including procedures for obtaining transit passes), and routes of mass transit service to the common work location or employment facility.

2. The location of all bicycle routes within at least a five-mile radius of the common work location or employment facility.

3. Posters or flyers encouraging the use of ridesharing and referrals to sources of information concerning ridesharing.

B. Commuter Matching Service. Disseminating annually to all tenants and employees, to new tenants and to new employees when hired, written information provided by the Transportation Coordinator regarding an areawide commuter ridesharing matching service.

37.07 Facilitation

Every new major project controller and any existing major project controller that expands by 20% or more at any one time or cumulatively overtime, from the effective date of this Article, shall facilitate the tenants' or employees' use of an areawide ridesharing program by:

A. Ridesharing Coordinator. Designating an employee or other appropriate person to serve as a ridesharing coordinator. The ridesharing coordinator's responsibilities shall include:

1. Publicizing the availability of public transporation.

2. Communicating employee or tenant transportation needs to the Transportation Coordinator.

3. Assisting employees or tenants in forming carpools or vanpools.

4. Performing, semi-annually, an employee or tenant transportation profile showing the distribution of employees and tenants by transportation mode.

B. Sacramento Rideshare Program. Using the Sacramento Rideshare Program, or an equivalent independent matching service.

C. Parking Facilities. Establishing preferential parking facilities for carpools and vanpools, and provide parking for bicycles as follows:

1. Preferential Parking. If a major project controller provides or subsidizes off-street parking facilities or spaces to any employee or tenant, for the parking of motor vehicles used primarily for commuting between place of residence and the common work location, or employment facility, such major project controller shall provide guaranteed parking spaces for each carpool and vanpool in which its tenants or employees participate, under more favorable terms and conditions than are afforded to parking of single occupant motor vehicles. Parking spaces assigned to exclusive carpool or vanpool use shall be so designated with appropriate signing or pavement markings. Such parking shall be made available on request of any carpool or vanpool to the major project controller's ridesharing coordinator.

2. Bicycle Parking Facilities. Bicycle parking facilities which will accommodate the parking and securing of bicycles shall be made available at the request of any tenant or employee whose primary mode of commuting is by bicycle, made to the major project controller's ridesharing coordinator.

37.08 Transporation Plan Required

With every application for a conditional use permit, zoning change, tentative subdivision map, or building permit by a new major project controller, or existing major project controller having over 200 employees at one common work location, the applicant shall submit, along with any other required information, a Transportation Plan for the project. The Transportation Plan shall include the following:

A. Description. A description of the activity and operating characteristics of the proposed project (e.g., business hours and peak hours of traffic generation).

B. Estimate. An estimate of the commuting characteristics of the tenants and/or employees anticipated at the project site (e.g., travel distance and mode).

C. Mitigation Measures. Mitigation measures designed to achieve a reduction in the number of vehicle trips that would occur if all home-to-work trips by the anticipated tenants or employees were made in single occupant vehicles. Where the project may generate 50 to 200 tenants and/or employees, the applicant shall design a program to achieve a 20% reduction in vehicle trips. Where the project may generate 201 or more tenants and/or employees, the applicant shall design a program to achieve a 30% reduction in vehicle trips. Reduction in vehicle trips are due twelve (12) months from the time employee thresholds are reached. Such mitigation measures shall be selected by the applicant and may include, but are not limited to, the following:

1. Payment of subsidies or provision of other incentives to carpoolers or vanpoolers.

2. Payment of parking charges or absorption of vanpool operation expense for ridesharers.

3. Payment of subsidies or provision of incentives for the use of transit or transportation by other than single occupancy motor vehicles.

4. Provision of amenities, such as bicycle lockers, transit shelters, shuttle buses, etc., designed to enhance the use of other than single occupancy motor vehicles.

5. An adequate number of shower and personal locker facilities for regular bicycle commuters.

6. A vanpool program consisting of a continuously outstanding offer to acquire a van or vans (by purchase, lease, or otherwise), to obtain insurance and to make available to any group of at least eight (8) employees a van for their use in a vanpool.

7. Provisions for shifting of vehicle trips from the peak hour to the nonpeak hours. A reduction in vehicle trips per day required by this section shall be permitted and calculated in the following manner: the number of trips taken out of the peak hour, divided by the estimated total trips times 25% would equal the percent reduction of vehicle trips per day allowed.

8. Any other program the applicant may devise.

37.09 Review of Transportation Plan

A. The Transportation Plan shall be referred to the Transportation Coordinator for review and evaluation of the proposed mitigation measures and for recommendation to the Planning Commission or the City Council.

B. The Planning Commission or City Council, as the case may be, shall review and evaluate the Transportation Plan and shall approve, or disapprove the Transportation Plan as part of the review and approval process for the application under submission. No project application subject to the provisions of this Article shall be approved without approval of the Transportation Plan. A Transportation Plan shall not be approved unless it is found to meet the trip reduction objectives established in this Article.

37.10 Compliance with Transportation Plan a Condition of Approval

Compliance with the approved Transportation Plan shall be included as a condition of approval for conditional use permits and tentative subdivision maps, and may be included as a term of any development agreement between the City and the project applicant.

37.11 Transportation Plan Agreement

As a condition of approval of the project, the City may require the applicant to enter into a written agreement with the City obligating the applicant to comply with the Transportation Plan. Such agreement shall be made to run with the land and bind all successors in interest of the applicant and shall constitute an equitable servitude on the property. Where appropriate, the City may require the agreement to include a provision for a penalty, in the event of breach by the applicant or a successor in interest, and, where the applicant is required to construct physical improvements on the project site, to include a provision for improvement security for said construction in a form approved by the City Attorney.

37.12 Credit for Project Requirements

Actions required by Section 37.06, Project Requirements, may be referred to in the Transportation Plan and credited for their potential contribution to trip reduction objectives required by this Article.

37.13 Parking Space Credit

Parking space requirements for tenant or employee parking may be reduced below the prevailing parking standard for projects that submit a Transportation Plan. The total number of spaces required may be reduced by the equivalent of the percentage of trip reduction that is to be achieved by the programs specified in the Transportation Plan. In no case shall parking spaces allowed exceed the prevailing parking standards.

A. Legal Assurance Against Failure

A performance bond or a covenant to run with the land may be made a part of the site development requirement to guarantee that enough land to accomodate the reduction in parking spaces be set aside and held in reserve for a period of four years. After four years, if the Transportation Plans have achieved the anticipated reduction in vehicle trips, the land may be released from the set aside.

B. Monitoring System

The Transportation Coordinator will compute actual achievement in reduction of vehicle trips annually. In the case of failure to meet the required reduction in vehicle trips, the use of the reserved land under this section may be invoked or other actions as are necessary to offset the degree of failure.

C. On-Street Parking Restrictions

On-street parking adjacent to the project may be restricted to facilitate the parking space reduction measure if it is deemed necessary or if adverse impacts on adjacent land uses are taking place.

37.14 Annual Report Required

Each major project controller subject to the requirements of Section 37.08 of this Article, and all successors in interest of said applicant obligated to carry out the Transportation Plan or any part thereof, shall submit to the Transportation Coordinator a report by March 1 every year describing the transportation program. The report shall contain at a minimum the following information:

A. Description. A description of the measures taken to comply with this Article, including an accounting of the resources expended on rideshare promotion activities.

B. Use. The average number of tenants and/or employees regularly arriving at and leaving the employment facility for the reporting period by each of the following methods of transportation:

1. Single passenger motor vehicles (including mopeds).

2. Carpools. (Survey to include number of vehicles and number of occupants per vehicle.)

3. Van-type vehicles with eight or more commuters.

4. Mass transit.

5. Bicycles.

6. All others.

C. Numbers. The total number of tenants and/or employees by work shifts, at the employment facility, shall be included in the report.

37.15 Compliance with Requirements

The Transportation Coordinator shall periodically review compliance with the requirements under this Article by on-site checks at the common work location or employment facility. In the event of noncompliance, the Transportation Coordinator shall report to the City Planning Director who shall enforce the requirements of this Article.

37.16 Penalty

In the event of failure to comply with the requirements of this Article or with the terms of a Transportation Plan required pursuant to this Chapter, the City may impose the following penalties in addition to any other remedy provided by law:

A. Any penalty which may be imposed under the Zoning Code.

B. Any penalty as set forth in the Transportation Plan Agreement, if any.

The penalties set forth in this section are nonexclusive.

37.17 Effect on Existing Facilities

All existing project controllers and major project controllers within the City of Roseville shall comply with the provisions of this Article immediately upon the effective date of this Ordinance.

SECTION 2. This Ordinance shall be effective at the expiration of thirty (30) days from the date of its adoption.

SECTION 3. The City Clerk is hereby directed to cause this Ordinance to be published once after its final passage in a newspaper of general circulation of the City of Roseville.

PASSED AND ADOPTED by the Council of the City of Roseville this 16th day of February, 1983, at the following vote on roll call:

AYES COUNCILMEMBERS: Harry Crabb, Jr., June Wanish, George A. Buljan Martha Riley, Richard Roccucci

NOES COUNCILMEMBERS: None

ABSENT COUNCILMEMBERS: None

ATTEST:

Richard Roccucci
Mayor

Pauline Brooks
City Clerk

CHECKLIST OF TSM MEASURES*

1. City Responsibilities

   a. Adopt appropriate policies that involve developers property managers, employers, workers, and residents in traffic mitigation.

   b. Adopt city performance standards of expected peak hour trip reduction (e.g., 40% commute trip reduction and level of service C).

   c. Develop and implement effective city procedures for monitoring and adjusting Trip Reduction strategies to gain maximum results in traffic mitigation.

   d. Fund and establish a City Transportation Coordinator who:

      (1) Coordinates TSM activities among city businesses, employers and property managers

      (2) Advocates and implements city Trip Reduction programs and actions

      (3) Trains, assists and coordinates activities of community and Employer Transportation Coordinators

*Source: Caltrans District 3 - Rideshare Branch.

(4) Assists in the design of on-site Trip Reduction programs at developments, companies, businesses and residential locations.

(5) Represents and coordinates the city TSM efforts or needs with transportation providers or agencies (local transit, Regional Transit, Sacramento Rideshare)

(6) Conducts, evaluates, and monitors results of annual Trip Reduction surveys; prepares issues and recommendations for the community or city

(7) The city will provide necessary office space and support for the city Transportation Coordinator.

e. Require the creation and maintenance in perpetuity of a "Business and Community Association". The Association should act as a forum for transportation issues and as catalyst for action.

2. Recommended actions which will provide a physical transportation facility and environment that will be supportive and conducive to multiple occupant vehicles, bicycle, and pedestrian circulation:

a. Neighborhood and business streets and sidewalks designed to accomodate bus, carpool, vanpool, bicycle and walking commuters.

b. Provide commuter parking spaces (Park and Ride) at major arterial intersections with state highways and each other, and at shopping centers. The Park and Ride lots should be designed, constructed, landscaped and deeded to the City, County, or State along with necessary streets, sidewalks, etc. The City will maintain the Park and Ride lots deeded to it.

c. Provide bus turnouts (and shelters at shopping centers and Park and Ride lots) for passenger waiting and loading onto transit, carpools, vanpools and shuttles.

d. Provide bicycle paths and lanes for intra- and inter-community circulation, connecting residential to jobs and services. Provide secure bicycle parking (lockers or stanchions) at Park and Ride lots, major transit stops, employment and shopping centers.

e. Integrate as many traffic operational improvements as feasible to expedite traffic flow and increase capacity. Examples are:

(1) Synchronized traffic signals

(2) Turn lane installations

(3) Bicycle paths, lanes

(4) Expressway design on major arterials

(5) Off-street loading zones

(6) Frontage roads along expressways in lieu of direct access of adjacent properties

(7) Shuttle service for intra-development circulation and connection with transit service modes.

f. Community design should provide childcare, shopping, banking and food services near work to minimize mid-day auto trips.

g. Design and construct employment and shopping centers to minimize vehicular trips within the developments. Building clustering, multi-story construction, attractive all-weather pedestrian malls, bicycle paths/lanes, and pedestrian connectors between adjacent high density land uses.

h. Reduce the number of employee parking spaces provided at employment centers to 75% of planned employment.

i. Physically separate employee parking where feasible from visitor and service delivery parking to discourage parking misuse.

j. Provide bicycle parking stanchions or lockers for 8% of employees and personal lockers/showers for 4% of employees (2% male + 2% female) at major employment buildings.

k. At employment and shopping centers prohibit on-street parking at peak commute hours on arterials.

l. Utilize arterial curb (parking) lanes for buses, carpools and vanpools during peak commute hours.

m. Place at strategic locations, "Rideshare Information, Call 445-POOL" signs.

n. Establish and fund a Community Transportation Coordinator:

(1) Coordinates TSM activities among local businesses, employers, property managers and residents

(2) Advocates and assists in implementing and monitoring Community, City, County and Regional Trip Reduction programs and actions

(3) Trains, assists and coordinates activities of Employer Transportation Coordinators

(4) Assists in the design of on-site Trip Reduction programs at developments, companies, businesses and residential locations

(5) Represents and coordinates the community and employer TSM efforts or needs with transportation providers or agencies (local transit, Regional Transit, Sacramento Rideshare)

(6) Conducts and monitors results of annual Trip Reduction surveys, prepare issues and recommendations by the community or city

(7) The city or community shall provide necessary office space and support for the Community Transportation Coordinator

3. Recommended actions at each employment center which adopt, implement and maintain comprehensive, equitable traffic mitigation programs:

a. Seek comparable city, county and regional trip reduction programs to avoid market disadvantage to City, developers, employers and property managers.

b. Establish, adopt and maintain equitable incremental trip reduction standards and goals for community employers:

(1) Employers of 49 or fewer workers participate in annual transportation surveys, post alternative transportation information and distribute promotional material to employees

(2) Employers of 50 through 99 workers perform the above plus provide reserved carpool parking as demand

warrants, bicycle lockers or stanchions for eight percent of the employees, provide all new employees with alternative transportation information, and participate in annual efforts to encourage all employees to carpool, vanpool, bus or bicycle commute.

(3) Employers of 100 or more workers perform both of the above plus assign a staff person, entitled "Employer Transportation Coordinator" (ETC) to represent the company in community trip reduction efforts, liaison with neighboring employers, community, city and county Transportation Coordinators, liaison with transportation service or information providers, and oversee the company employee parking program. The ETC shall present the employee needs to management, and convey employer transportation policy to employees. ETC will encourage alternative work hours, on-site bus pass sales, vanpool formation and telecommuting within the needs of the employer.

(4) Qualifying employers, to the extent possible, advocate and accomodate adjustable work hours (flextime, staggered work shifts), provide preferential placement and assignment of parking spaces to carpools and vanpools, support employer or community based shuttles, provide on-site sales of bus passes, offer or arrange for assistance in forming car or vanpools, manage employee parking to encourage multi-occupant commuter vehicles.

(5) Qualifying employers develop and update biannually a Transportation Management Plan which reports performance against previous goals and state goals and strategies for the next plan cycle. Annual evaluations will be conducted congruent with the community evaluation.

(6) Landlords or property managers assume the responsibilities for equivalent employer actions based on worker population. Responsibility would become effective when 25% or more of the work force in the building is comprised of employers with less than 50 employees.

(7) Trip Reduction goals to be incremental:

(a) Employers of 49 or fewer employees have an ultimate goal of 30% trip reductions. First

year goal under the Trip Reduction program will be 15% and increasing 5% per year thereafter until the 30% is reached.

(b) Employers with 50 or more employees have an ultimate goal of 40% trip reductions. First year goal under the Trip Reduction program shall be 15% and increasing by 5% per year thereafter until the 40% goal is reached.

(c) Annual reports shall monitor achievement and sustenance of goals...

c. Through cooperative efforts, the City, Community and Employer Transportation Coordinators monitor progress towards trip reduction and level of service goals and prepare strategies for full compliance or reasonable further progress. Employers and qualifying property managers commit to aggressive pursuit of such goals so as to ensure high levels of quality of life factors such as ease of circulation, attractive business, residential, and employment environments, and competitiveness in the marketplace due a quality community.

4. Recommended actions to provide funds necessary for successful implementation, monitoring, and maintaining of the TSM/Trip Reduction program:

a. The City Transportation Coordinator to be funded by the City as a commitment to continuity and independence in authority of the program.

b. The Community Transportation Coordinator should be funded by a permanent local source (e.g., Business Association or Fee or Assesment Districts) to ensure continuity and pursuit of community interests.

c. Employer Transportation Coordinators will be funded by the respective qualifying employers and property managers to ensure focus on company or landlord interests and continuity of services and responsibility.

d. Monitoring efforts will include: survey design, conduct, analysis and evaluation to be joint efforts with specific responsibilities to the employer, community and city coordinators.

e. The capital costs of transportation infrastructure will probably be primarily borne by the developers, with city, state and federal funds as available.

f. Costs incurred by transportation-providers and information agencies demand may be funded equitably by users, fees, or assesments.

5. We suggest placing conditions on development and construction programs to specific phased approvals based on performance standards. This will allow partial development and financial return to investors to fund necessary improvements and programs.

6. As a control mechanism and to inform all future interests, we suggest covenants, conditions and restrictions placed on land titles to ensure continuity of programs by future land or lease holders.