

I-94 Interregional Corridor Plan



Prepared for:



Prepared by:

URS

**FINAL DRAFT REPORT
MARCH 2002**



I-94 IRC Study

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Mn/DOT

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Executive Summary

In January of 2000, the Minnesota Department of Transportation (Mn/DOT) adopted an Interregional Corridor System (IRC) as part of their State Transportation Plan. The goal of the IRC System is to enhance the economic vitality of the state by providing safe, timely, and efficient movement of goods and people. The emphasis of the system is on providing efficient connections between and among regional trade centers. The corridors tie the state together by connecting people with jobs, distributors with manufacturers, shoppers with retailers and tourists with recreational opportunities.

The purpose of this study was to develop a generalized land use and transportation plan for the I-94 IRC. The I-94 IRC extends approximately 60 miles from the I-94/494 interchange in Maple Grove to the township of Collegeville. This study provides direction to the Mn/DOT District 3, the Mn/DOT Metro Division and the ten cities and three counties through which the I-94 Corridor extends with regard to land development and access management.

A planning approach was developed to accomplish the following project goal:

Develop a generalized land use and access management plan for the I-94 Corridor that balances the needs of access, through traffic movement and appropriate adjacent land uses.

Supporting objectives of the goal include:

- Identification of existing and future urban and rural areas within the corridor and the supporting road network and interchange additions and improvements needed to accommodate planned development consistent with Mn/DOT's guidelines.
- Recommendation of physical improvements to I-94 and local supporting roadways that will be needed over a 25-year time frame.
- Identification of local land use policies and growth management strategies recommended for implementation by local units of government, including but not limited to modifications to local zoning and subdivision regulations.

The I-94 IRC Study area is classified as a High Priority Interregional Corridor and therefore has a performance target of at least 60 mph. It is important to recognize that the speed target represents the average speed of the study area from end to end and does not imply that *each segment in itself* can achieve the 60-mph target. Figure 1 shows the IRC System. The general I-94 IRC Study area is shown in the rectangular box.

The I-94 IRC Study followed a process outlined by Mn/DOT. The aim of the IRC is to develop an interregional corridor system that enhances the economic vitality of the state by providing safe, timely and efficient movement of people and goods to regional trade centers. Implementation of IRC policies occur at many staff and agency levels using a variety of activities or implementation strategies.

Mn/DOT IRC Policies and Goals

One of the key strategies that Mn/DOT developed to implement the IRC principles and policies was through the creation of a corridor management plan that incorporated a number planning approaches including:

- A performance-based evaluation;
- Large geographic scale or boundaries;
- Longer planning time horizon, and
- Ongoing corridor management teams.

As part of its vision and management approach, Mn/DOT established the following policies and goals (see Table 1) for IRC studies.

Table 1. IRC Policies and Goals

Policy	Goal
1. Corridor Plan Development	<ul style="list-style-type: none"> • To develop corridor visions and plans that preserve or improve corridor performance between regional trade centers.
2. Land Use Planning	<ul style="list-style-type: none"> • Encourage responsible land use, transportation, and access decisions through local long-range plans that preserve mobility of IRCs between regional trade centers.
3. Right-of-way Preservation	<ul style="list-style-type: none"> • Pursue timely right-of-way preservation and acquisition activities to positively benefit long-term corridor mobility and reduce community cost and community impacts.
4. Prioritization and Investments	<ul style="list-style-type: none"> • Develop a statewide process for investing in IRC corridors to preserve or improve corridor performance.
5. Uniformity of Performance	<ul style="list-style-type: none"> • Preserve and improve the mobility and performance of interregional corridors by consistently applying access controls and minimizing signal proliferation.
6. Safety Targets	<ul style="list-style-type: none"> • With the objective of improving safety on the IRC system, establish safety targets and a methodology for incorporating safety into the project selection process.
7. System Modification	<ul style="list-style-type: none"> • To provide a mechanism to update the Interregional Corridor System when significant changes in regional trade center designation and/or major changes in traffic patterns occur.

SOURCE: Mn/DOT

Public Involvement

Public involvement is a critical element of any planning process. It is meant to enhance the participation of the community by providing the means to have a direct impact on the study's decisions. The I-94 IRC study included numerous public activities which included:

- Citizen focus group workshops
- Policy Advisory Committee (PAC)
- Technical Advisory Committee (TAC)
- Open house

Existing Conditions

Land Use

The I-94 IRC Study area is characterized as a *high priority corridor* because of its importance in connecting two major national trade centers—Fargo-Moorhead and the Twin Cities—as well as serving regional trade centers in Monticello and St. Cloud. Within the study area, many types of land uses are represented including urban and rural residential, agricultural, commercial, industrial, forest/conservation/parks and institutional. The density of development is greatest along I-94 interchanges in the communities of Maple Grove, Rogers, St. Michael, Monticello, Clearwater, St. Augusta, St. Cloud and Waite Park. Anchors to the east and west, respectively, both Maple Grove and St. Cloud comprise numerous commercial and industrial properties as well as high-density housing. Land uses are rural or sparsely developed in the central portions of the study area except near major interchanges. Population within the I-94 IRC Study area increased by 38,589 people or 25 percent between 1990 and 2000. The City of Maple Grove increased the most rapidly adding more than 11,600 persons-- an increase of 30 percent from 1990.

Roadway Characteristics

Level of Service

Table 2 displays the year 2000 I-94 mainline LOS based on the respective traffic volumes by corridor segment. In general, the existing traffic volumes indicate that the I-94 mainline operates at an acceptable level of service (LOS D). However, it is well documented that during certain periods, particularly on Friday's and Sunday's during the summer months, that traffic volumes can sometimes double during peak travel periods resulting in severe traffic congestion.

Table 2. I-94 Mainline LOS (Year 2000)

Segment	Reference Point 1	Reference Point 2	Weekday	
			LOS	Volume
1	Jct I-494	North Limit Maple Grove	D	91,000
2	North Limit Maple Grove	Just before TH 101 Interchange	C	77,900
3	Just before TH 101 Interchange	Wright - Hennepin County Line	D	60,000
4	Wright - Hennepin County Line	West Limit Monticello	C	50,000
5	West Limit Monticello	Just after TH 24 Interchange	C	45,000
6	Just after TH 24 Interchange	Just After TH 15 Interchange	B	33,700
7	Just after TH 15 Interchange	Under CR-159	B	26,400

SOURCE: URS Corporation.

T:\32707154\REPORTS Section\Interim Reports and memos\EXISTING CONDITIONS REPORT 9-01\Revised JAM Report Tables.xls\Mainline LOS (Daily)

Roadway Safety

Mn/DOT considers safety on state roads and highways a top priority. Crashes impose a cost to both drivers involved in the incident and the driving public as a whole and therefore it is a priority to minimize the overall number of incidents. The evaluation of the existing roadway safety for the I-94 IRC produced the following findings:

- Segments 1 and 2 recorded crashes increasing exceedingly faster than the traffic volume increase, indicating a very potential area for current and future safety concerns.
- Segments 1 and 2 recorded a few hot spot locations that rapidly increased and in some cases doubled in the total crashes during the 1990's.
- Segment 3 maintained a constant crash and severity rate during the 1990's, but it has been significantly higher than the statewide average.
- Crashes in the vicinity of the TH 101 interchange in Rogers (segment 3) has rapidly increased since the first three years of the decade, indicating an area of current and future safety concern.
- Segments 4, 5, 6 and 7 have crash and severity rates that remained constant or experienced a very slow increase over the past decade.

Future Year Transportation Needs

Projected Growth

Table 3 shows the projected growth in population, households, retail employment, and non-retail employment between the year 2000 and year 2025 within the I-94 corridor. The year 2025 socioeconomic data was entered into the travel demand-forecasting model that was developed using the Twin Cities Metropolitan Council’s model, the St. Cloud Area Planning Organization (APO) model and respective assumptions. The I-94 Corridor area network was created and attached to the Twin Cities model.

Table 3. Existing and Future Year Model Socioeconomic Data

Data	2000	2025	Difference	Percent Change
Population	186,278	302,750	116,472	63%
Households	60,868	123,138	62,270	102%
Retail Employment	17,951	54,798	36,847	205%
Non-Retail Employment	55,451	104,334	48,883	88%

Committed Projects

Several committed projects were identified for inclusion in the year 2025 model runs. All committed projects listed in the State Transportation Improvement Plan (STIP), Mn/DOT District 3 TIP, and Mn/DOT Metro Divisions 20-year long-range transportation plans were identified. The primary committed improvements, with respect to I-94’s operations, are described below.

- Expand I-694/94 to 6-lanes between Brooklyn Boulevard and Hemlock Lane (outside of corridor)
- Extend TH 610 freeway to I-94 (intersects I-94 at approximately 101st Avenue N. in Maple Grove)
- Expand I-94 to 6-lanes between Rogers and Monticello, extending the 6-lane cross-section from the I-494/694 split in Maple Grove to TH 25 in Monticello.
- New interchange (system to system) with TH 610 in Maple Grove.
- New interchange with TH 18 in Monticello. To accommodate this new full-access interchange, the existing partial interchange located at CSAH 75 could be eliminated.
- New full access interchange with CSAH 75 (south I-94 junction, near Industrial Park) in St. Cloud.

Year 2025 Projected Daily Traffic

The projected 2025 population and employment within the I-94 corridor model area translated into an increase (30%) in daily vehicle-miles traveled (VMT) and a substantial increase in vehicle-hours traveled (68%). The resulting impact on the average speed within the corridor is a decrease from 39.0 mph in 2000 to approximately 30.0 mph in 2025. While VMT and VHT are primary indicators of travel demand and mobility, a better indicator of impact on the roadway system is daily traffic volume. Table 4 shows the existing and projected daily traffic volumes for I-94 as divided by the study segments.

Table 4. Existing and Preliminary Future Year (2025) Traffic Volumes

Segment	Description From	Description To	Existing Daily Traffic (2000)	Projected Daily Traffic (2025)	Percent Increase
1	I-494/694	TH 101 (Rogers)	84,000	169,100	101%
2	TH 101	TH 241 (St. Michael)	60,000	132,900	122%
3	TH 241	TH 25 (Monticello)	50,000	118,000	136%
4	TH 25	TH 24 (Clearwater)	45,000	79,400	76%
5	TH 24	TH 15 (St. Cloud)	33,700	56,400	67%
6	TH 15	CR 159 (Avon)	26,400	35,300	34%

SOURCE: MnDOT and URS Corporation.

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Alternative Improvements

The Existing + Committed (E+C) transportation improvement scenario serves as the basis for the future year (year 2025) baseline. In addition to the E+C improvement scenario are six new build transportation alternatives that were developed to address projected traffic demands. The six new build transportation alternatives evaluated for the I-94 IRC study include:

- **Alternative 1:** Improved Local Roadway Network
- **Alternative 2:** Expansion of I-94 to 8-lanes between I-494/694 and TH 241 (St. Michael)
- **Alternative 3:** Expansion of I-94 to 8-lanes between I-494/694 and TH 241 (St. Michael), in addition to an Improved Local Roadway Network
- **Alternative 4:** Expansion of I-94 to 8-lanes between I-494/694 and TH 25 (Monticello) and to 6-lanes to TH 24 (Clearwater)
- **Alternative 5:** Expansion of I-94 to 8-lanes between I-494/694 and TH 25 (Monticello) and to 6-lanes to TH 24 (Clearwater), in addition to an Improved Local Roadway Network
- **Alternative 6:** Expansion of I-94 to 10-lanes between I-494/694 and TH 25 (Monticello) and to 6-lanes to TH 24 (Clearwater), in addition to an Improved Local Roadway Network

Evaluation of Transportation Strategies

Throughout the study process, the PAC and TAC have reviewed study findings and provided recommendations on goals, objectives and ultimately improvement projects. Based on input from the PAC and TAC it was determined that any transportation strategy must address the following issues.

- The selected alternative must not preclude subsequent transportation improvements beyond the year 2025.
- Additional studies will be needed to resolve those questions remaining unanswered in the IRC corridor management plan (CMP) and to plan for implementation of CMP recommendations.
- The selected alternative must incorporate both improvements to I-94 and the local arterial system.
- New interchanges need supporting local roadway systems, and further studies will be necessary to demonstrate that local and mainline impacts are acceptable. Potential new interchange locations will be shown in the CMP.
- The TAC recommended that a new Alternative 6 be evaluated. It should include a ten-lane section between the I-494/I-694 split and TH 101, an eight-lane segment between TH 101 and TH 241, and the addition of three new interchanges (Nabor, Brockton and Orchard).
- The extent to which there are differences among the alternatives' abilities to accommodate recreational traffic along I-94 should be identified.

Traffic Volumes and Level of Service

Year 2025 projected traffic volumes were obtained for each alternative strategy. The projected daily traffic volumes were compared to capacity thresholds to arrive at the respective level of service by roadway segment (see Table 5).

Table 5. Projected 2025 Traffic Volumes and LOS

Year 2025		Segment					
		1	2	3	4	5	6
		I-494 to TH 101	TH 101 to TH 241	TH 241 to TH 25	TH 25 to TH 24	TH 24 to TH 15	TH 15 to CR 159
E + C	Projected Daily Traffic	169,100	132,900	118,000	79,400	56,400	35,300
	LOS	F	F	E	F	D	C
Alternative 1	Projected Daily Traffic	166,700	130,100	117,800	78,900	55,800	35,500
	LOS	F	F	E	F	D	C
Alternative 2	Projected Daily Traffic	180,300	140,600	118,400	78,900	55,000	35,400
	LOS	F	E	E	F	D	C
Alternative 3	Projected Daily Traffic	177,500	130,200	117,600	77,800	53,900	34,700
	LOS	F	D	E	D	D	C
Alternative 4	Projected Daily Traffic	179,400	146,500	122,300	86,100	57,600	35,300
	LOS	F	E	D	D	D	C
Alternative 5	Projected Daily Traffic	178,400	133,000	121,700	85,300	54,300	34,800
	LOS	F	D	D	D	D	C
Alternative 6	Projected Daily Traffic	185,700	134,600	123,800	85,400	54,300	34,800
	LOS	E	D	D	D	D	C

Transportation Network Scenario Descriptions:

2025 Existing (E) + Committed (C) Transportation Improvements: Transportation System Improvements (including interchanges)
- committed for implementation by Year 2025

Alternative 1: Improved local roadway system (no freeway improvements)

Alternative 2: Expansion of I-94 to 8-lanes between I-494/694 and TH 241 (segs 1 and 2)

Alternative 3: Expansion of I-94 to 8-lanes between I-494/694 and TH 241 plus local improvements

Alternative 4: Expansion of I-94 to 8-lanes between I-494/694 and TH 25 (segs 1,2,3) and to 6-lanes to TH 24 (seg 4)

Alternative 5: Expansion of I-94 to 8-lanes between I-494/694 and TH 25; to 6-lanes to TH 24 plus local improvements

Alternative 6: Expansion of I-94 to 10-lanes between I-494/694 and TH 101 (seg 1); 8-lanes to TH 25 (segs 2 and 3); and 6-lanes to TH 24 (seg 4) plus local improvements

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Travel Speed Impacts

Travel speeds are an important component of the IRC study. The IRC sets the target speed for the I-94 corridor at 60 mph. Projected travel speeds for the year 2025 are listed in Table 6 by corridor segment. Also shown are systemwide travel speeds as obtained from the travel demand-forecasting model. As Table 6 indicates alternatives 3 through 6 all meet the 60-mph goal for overall corridor travel speed.

Project Costs

Table 7 shows the construction cost for roadway improvements to I-94 by Alternative. The freeway improvement costs range from approximately \$24 million to for alternatives 2 and 3 to approximately \$126 million for alternative 6. The overall cost by alternatives is presented Table 8. A number of variables that were considered in the overall cost including:

- Local Roadway Improvements
- Freeway Improvements
- Noise Walls
- Interchange Construction
- Interchange Right-of-way
- Bridge Construction/Reconstruction
- Retaining Walls

Table 6. Projected 2025 Travel Speeds

Segment	From	To	Year 2025 Projected Travel Speeds (MPH)						
			E + C	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6
1	I-494	TH 101	38.9	39.4	48.6	49.4	48.8	49.1	59.0
2	TH 101	TH 241	49.4	50.5	62.3	67.3	59.8	65.9	65.1
3	TH 241	TH 25	55.7	55.8	55.5	55.9	71.6	72.0	70.8
4	TH 25	TH 24	55.2	55.5	55.5	56.3	73.0	73.0	73.0
5	TH 24	TH 15	73.0	73.0	73.0	73.0	73.0	73.0	73.0
6	TH 15	CR 159	73.0	73.0	73.0	73.0	73.0	73.0	73.0
I-94 Corridor Speeds			56.5	56.8	59.8	60.4	67.1	67.5	69.7
Systemwide Travel Speeds ¹			34.0	34.6	34.1	35.2	34.1	36.0	36.1

SOURCE: MnDOT, Met Council, St. Cloud APO and URS Corporation.

¹ System Attributes from Travel Demand Model (entire 1430 zone model)

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Table 7. Freeway Improvement Cost by Alternative

Segment	From	To	Miles	Upgrade		Alternative						Estimated Cost (2001)
				From	To	1	2	3	4	5	6	
1	I-494/694 (Maple Grove)	TH 101 (Rogers)	9.2	6-lanes	8-lanes		*	*	*	*		\$18,480,000
1 (Alt. 6 Option)	I-494/694 (Maple Grove)	TH 101 (Rogers)	9.2	6-lanes	10-lanes						*	\$36,960,000
2	TH 101 (Rogers)	TH 241 (St. Michael)	2.7	6-lanes	8-lanes		*	*	*	*	*	\$5,340,000
3	TH 241 (St. Michael)	TH 25 (Monticello)	11.6	6-lanes	8-lanes				*	*	*	\$23,200,000
4	TH 25 (Monticello)	TH 24 (Clearwater)	15.1	4-lanes	6-lanes				*	*	*	\$60,480,000
5	TH 24 (Clearwater)	TH 15 (St. Cloud)	11.8	none	none							\$0
6	TH 15 (St. Cloud)	CR 159 (Avon)	10.6	none	none							\$0
Alternative 1: Improved Local Roadway System (No Freeway Improvements)											\$0	
Alternative 2: 8-lanes between I-494/694 and TH 241 (segs 1 and 2)											\$23,820,000	
Alternative 3: 8-lanes between I-494/694 and TH 241 (segs 1 and 2) plus Local Improvements											\$23,820,000	
Alternative 4: 8-lanes between I-494/694 and TH 25 (segs 1,2,3) and to 6-lanes to TH 24 (seg 4)											\$107,500,000	
Alternative 5: 8-lanes between I-494/694 and TH 25 (segs 1,2,3); to 6-lanes to TH 24 (seg 4) plus Local improvements											\$107,500,000	
Alternative 6: 10-lanes between I-494/694 and TH 101 (seg. 1), 8-lanes to TH 25 (segs 2 and 3), to 6-lanes to TH 24 (seg 4) plus Local improvements											\$125,980,000	

SOURCE: URS Corporation

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Table 8. Cost by Alternatives

Alternative	Year 2001 Dollars								
	Local Roadway Improvements	Freeway Improvements	Noise Walls	Interchange		I-94 Bridges	Intersecting Bridges	Retaining Walls	Total
				Construction	Right-of-Way				
1	\$119,340,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$119,340,000
2	\$0	\$23,820,000	\$11,536,000	\$19,200,000	\$5,880,000	\$9,600,000	\$2,561,000	\$0	\$72,597,000
3	\$119,340,000	\$23,820,000	\$11,536,000	\$19,200,000	\$5,880,000	\$9,600,000	\$2,561,000	\$0	\$191,937,000
4	\$0	\$107,500,000	\$34,720,000	\$29,200,000	\$12,520,000	\$11,200,000	\$4,561,000	\$0	\$199,701,000
5	\$119,340,000	\$107,500,000	\$34,720,000	\$29,200,000	\$12,520,000	\$11,200,000	\$4,561,000	\$0	\$319,041,000
6	\$119,340,000	\$125,980,000	\$34,720,000	\$29,200,000	\$12,520,000	\$13,200,000	\$4,561,000	\$29,272,320	\$368,793,320

SOURCE: MnDOT and URS Corporation.

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Benefit-Cost Results

In the analysis of the six alternatives the discounted benefits and costs for each were calculated from which a benefit-cost (B/C) ratio was calculated. Table 9 summarizes the results of benefit-cost analysis.

Table 9. Benefit-Cost Analysis Summary

Benefit / Cost Analysis (discounted - Year 2025)						
	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5	Alternative 6
BENEFITS						
Travel Time Savings	\$ 767,564,903	\$ 162,051,150	\$ 1,763,132,932	\$ 323,614,282	\$ 3,176,055,433	\$ 3,385,367,721
Vehicle Operating Savings	\$ (129,739,046)	\$ 42,300,784	\$ (39,973,901)	\$ 162,001,813	\$ 317,539,110	\$ 331,719,697
SUBTOTAL	\$ 637,825,856	\$ 204,351,934	\$ 1,723,159,030	\$ 485,676,095	\$ 3,493,594,543	\$ 3,717,087,418
COSTS						
Capital (Roadway System)	\$ 100,073,911	\$ 19,974,531	\$ 120,048,442	\$ 90,145,344	\$ 190,219,255	\$ 205,715,869
Noise Walls	\$ -	\$ 9,673,644	\$ 9,673,644	\$ 29,114,850	\$ 29,114,850	\$ 29,114,850
Interchange Reconstruction	\$ -	\$ 16,100,378	\$ 16,100,378	\$ 24,485,991	\$ 24,485,991	\$ 24,485,991
Right of Way	\$ -	\$ 4,930,741	\$ 4,930,741	\$ 10,498,788	\$ 10,498,788	\$ 10,498,788
Bridges	\$ -	\$ 10,197,744	\$ 10,197,744	\$ 13,216,565	\$ 13,216,565	\$ 14,893,688
Retaining Walls	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 24,546,636
Remaining Capital	\$ 29,835,000	\$ 18,149,250	\$ 47,977,500	\$ 49,925,250	\$ 79,760,250	\$ 99,198,330
SUBTOTAL	\$ 70,238,911	\$ 42,727,788	\$ 112,973,449	\$ 117,536,289	\$ 187,775,200	\$ 217,057,492
BENEFIT/COST RESULTS						
Benefits	\$ 637,825,856	\$ 204,351,934	\$ 1,723,159,030	\$ 485,676,095	\$ 3,493,594,543	\$ 3,717,087,418
Costs	\$ 70,238,911	\$ 42,727,788	\$ 112,973,449	\$ 117,536,289	\$ 187,775,200	\$ 217,057,492
Benefit/Cost (BC) Ratio	9.1	4.8	15.3	4.1	18.6	17.1

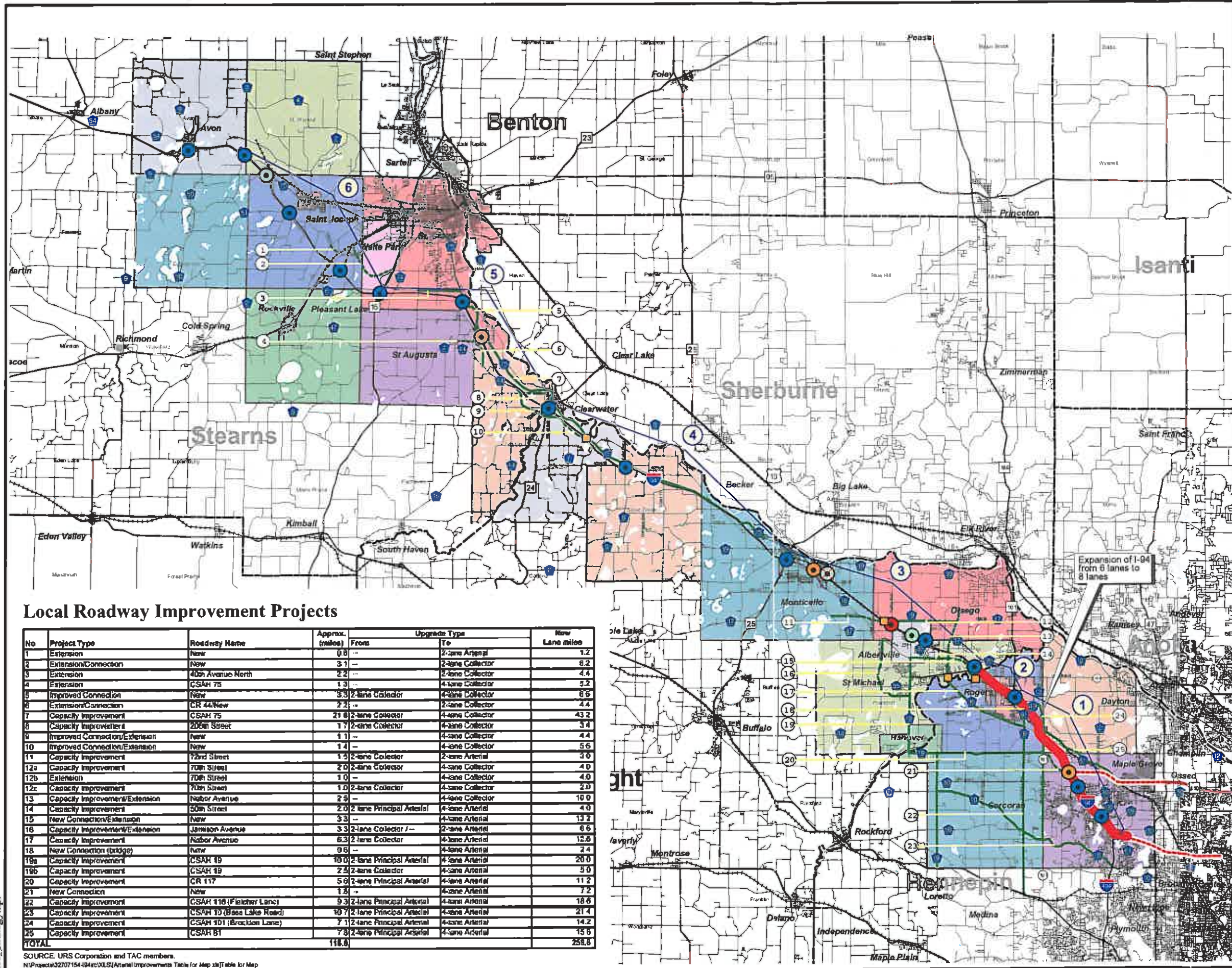
SOURCE: URS Corporation
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The analysis determined that the alternative that would provide the greatest benefits when compared to costs was alternative 5, which is the expansion of I-94 to plus the improvement of the local roadway network. This alternative has a B/C ratio of 18.6. The lowest performing alternative was 4 with a B/C ratio of 4.1. Other alternatives that performed well were alternative 6 (similar to alternative 6 but with 10-lanes between I-494/684 and TH 101) with a B/C of 17.1 and alternative 3 with a B/C of 15.3 (alternative 3 is a combination of freeway expansion and local roadway network improvements).

Preferred Strategy

Six transportation improvement scenarios were defined based on comments received from the I-94 Partners. These alternatives were ultimately created to address the projected traffic volumes for the year 2025 and included a variety of improvements ranging from local roadway improvements to major freeway construction/reconstruction. Overall, Alternative 5 performed the best with the highest benefit/cost ratio and average speed on I-94. It is also a very expensive strategy coming in at approximately \$319 million (excluding remaining capital value). Alternative 3, which is less expensive at approximately \$192 million (excluding remaining capital value) has a comparable benefit-cost ratio, and meets the IRC speed target. While Alternative 3 meets the IRC speed target, it would not satisfy the local government partners desire for additional interchanges. It was determined in the analysis that additional interchanges would result in a decrease in speed, which would preclude achieving the speed target.

Noteworthy is the common element in Alternatives 3, 5, and 6. In each of these alternatives there was an important need for improvements to both the local roadway network and to I-94. Perhaps, one of the strongest results of this study is the overwhelming need for an improved arterial transportation network to support I-94, especially if additional interchanges are constructed. With that said, Alternative 3 is the strategy necessary for implementation to meet IRC speed criteria in the year 2025. However other improvements would be necessary to allow additional interchanges to be constructed. Figure 2 graphically displays the Preferred Strategy.



Preferred Strategy

- Full Interchange (Existing)
- Full Interchange (Committed)
- Partial Interchange (Existing)
- Potential New, Existing and Committed Interchange
- Partial Interchange (Eliminated)
- New or Improved Bridge Crossing
- Roadway Capacity Improvement
- Roadway Extension / New Connection
- Freeway Expansion (committed)
- 8 - Lanes
- Major highways
- Highways and Roadways
- Railroad
- County Boundary
- Municipal Boundary
- Water

Local Roadway Improvement Projects

No	Project Type	Roadway Name	Approx. (miles)	From	Upgrade Type	To	New Lane miles
1	Extension	New	0.8	--	2-lane Arterial	2-lane Arterial	1.2
2	Extension/Connection	New	3.1	--	2-lane Collector	2-lane Collector	6.2
3	Extension	40th Avenue North	2.2	--	2-lane Collector	2-lane Collector	4.4
4	Extension	CSAH 75	1.3	--	4-lane Collector	4-lane Collector	5.2
5	Improved Connection	New	3.3	2-lane Collector	4-lane Collector	6.6	
6	Extension/Connection	CR 44/New	2.2	--	2-lane Collector	2-lane Collector	4.4
7	Capacity Improvement	CSAH 75	21.8	2-lane Collector	4-lane Collector	43.2	
8	Capacity Improvement	20th Street	1.7	2-lane Collector	4-lane Collector	3.4	
9	Improved Connection/Extension	New	1.1	--	4-lane Collector	4-lane Collector	4.4
10	Improved Connection/Extension	New	1.4	--	4-lane Collector	4-lane Collector	5.6
11	Capacity Improvement	72nd Street	1.5	2-lane Collector	2-lane Arterial	3.0	
12a	Capacity Improvement	70th Street	2.0	2-lane Collector	4-lane Collector	4.0	
12b	Extension	70th Street	1.0	--	4-lane Collector	4-lane Collector	4.0
12c	Capacity Improvement	70th Street	1.0	2-lane Collector	4-lane Collector	2.0	
13	Capacity Improvement/Extension	Nabor Avenue	2.5	--	4-lane Collector	4-lane Collector	10.0
14	Capacity Improvement	50th Street	2.0	2-lane Principal Arterial	4-lane Arterial	4.0	
15	New Connection/Extension	New	3.3	--	4-lane Arterial	4-lane Arterial	13.2
16	Capacity Improvement/Extension	Jannison Avenue	3.3	2-lane Collector / --	2-lane Arterial	6.6	
17	Capacity Improvement	Nabor Avenue	6.3	2-lane Collector	4-lane Arterial	12.6	
18	New Connection (bridge)	New	0.6	--	4-lane Arterial	4-lane Arterial	2.4
18a	Capacity Improvement	CSAH 19	10.0	2-lane Principal Arterial	4-lane Arterial	20.0	
18b	Capacity Improvement	CSAH 19	2.5	2-lane Collector	4-lane Arterial	5.0	
20	Capacity Improvement	CR 117	5.9	2-lane Principal Arterial	4-lane Arterial	11.2	
21	New Connection	New	1.8	--	4-lane Arterial	4-lane Arterial	7.2
22	Capacity Improvement	CSAH 116 (Fletcher Lane)	9.3	2-lane Principal Arterial	4-lane Arterial	18.6	
23	Capacity Improvement	CSAH 10 (Bea Lake Road)	10.7	2-lane Principal Arterial	4-lane Arterial	21.4	
24	Capacity Improvement	CSAH 101 (Brook Lane)	7.1	2-lane Principal Arterial	4-lane Arterial	14.2	
25	Capacity Improvement	CSAH 81	7.8	2-lane Principal Arterial	4-lane Arterial	15.6	
TOTAL			118.8			258.8	

SOURCE: URS Corporation and TAC members.
 N:\Project\32707154\94corridor\GIS\ArterialImprovementsTableForMap.xls Table for Map

0 2.5 5
Miles

Map Source: Mn/DOT, Mn/DOT BaseMap



Figure 2

Alternative 3 Staging

Implementation of the preferred strategy is purposed in four stages. As previously stated the expansion of I-94 to 8-lanes between I-494/694 and TH 241 (plus local roadway improvements) serves as the base scenario, or stage 1.

The final staging for the overall recommended transportation strategy (Strategy 3) is as follows.

- Stage 1: Expansion of I-94 to 8-lanes between I-494/694 and TH 241 plus local roadway improvements
- Stage 2: Expansion of I-94 to 8-lanes between TH 241 and TH 25
- Stage 3: Expansion of I-94 to 6-lanes between TH 25 and TH 24
- Stage 4: Expansion of I-94 to 10-lanes between I-494/694 and TH 101

Figure 3 shows the results of the staging process.

Funding Sources

A number of Federal and Local funding options are available for the I-94 corridor improvements. Among the Federal Funds that might be used for these improvements are the following:

- High Priority Project Funding (HPP)
- Surface Transportation Program (STP)
- Transportation Enhancement
- Advance Construction (AC)
- 100% Federal Share for Safety ("G" Matching Ratio)
- Transportation Community and System Preservation Pilot Program

State and Local Funding Options include:

- Interregional Corridor Funding
- Minnesota Trunk Highway Bonds (20 year maximum term)
- Minnesota General Obligation Bonds
- Revolving Loan Funds
- Municipal Bonds
- County Bonds

Additional Interchanges

A primary goal of this study was to identify needed improvements that would maintain a high level of mobility throughout the entire corridor, in particular the I-94 mainline. A further goal of the study was to address the desire of local governments to have additional access to I-94. As the need arises for new interchanges, it will be important for the local communities and Mn/DOT to work together in partnership to assure the highest level of traffic operations are maintained from both a regional and local perspective.

The first step to accomplish this is to implement the I-94 mainline and local road improvements set forth in this study. When the mainline traffic operations are such that additional interchanges are possible without adverse impact to I-94, both the local communities and Mn/DOT should work together to address the local communities desire for additional access. Furthermore, any additional interchanges to I-94 would need to meet FHWA criteria for a break-in access to be approved.

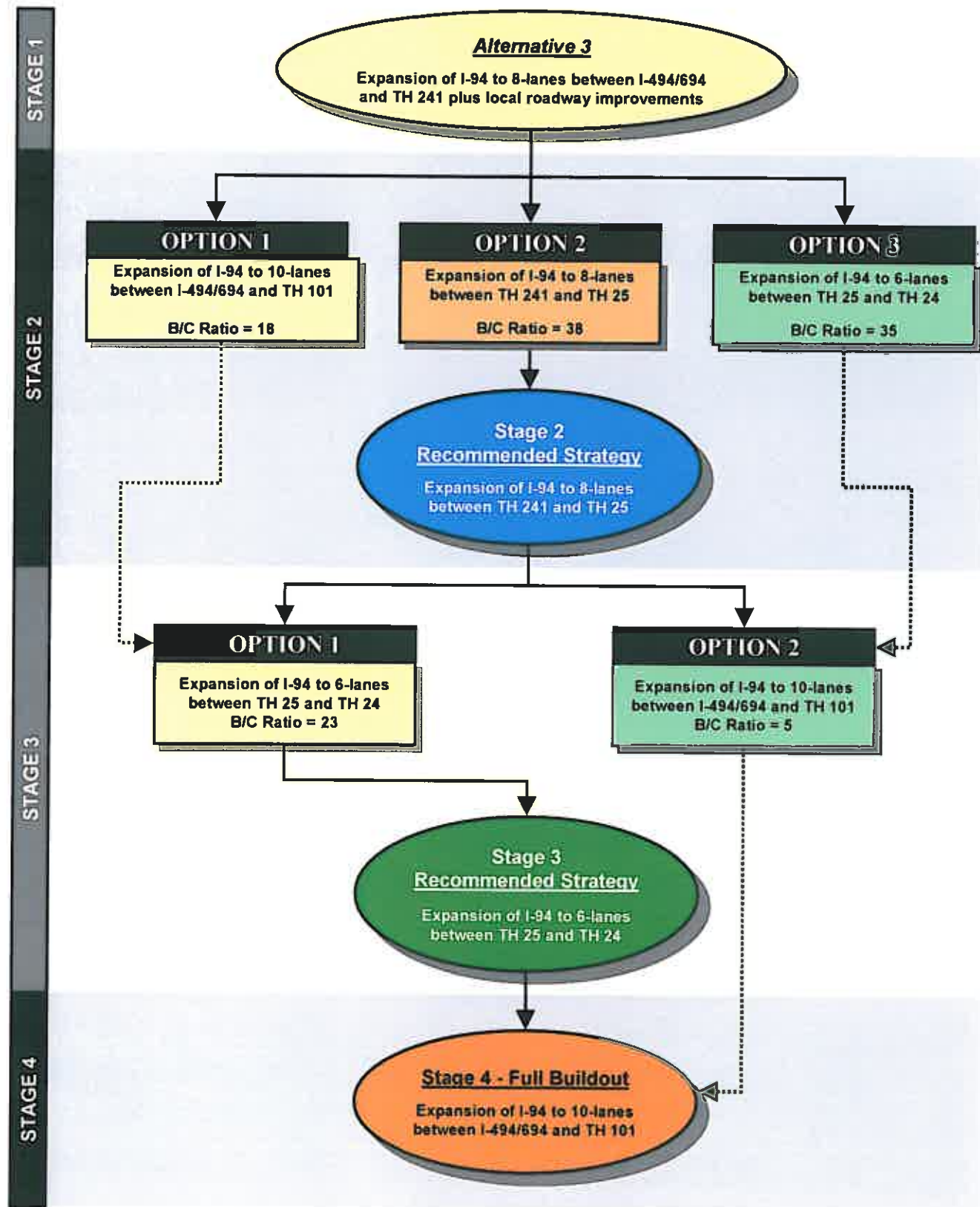


Figure 3. Staging of the Recommended Transportation Improvements