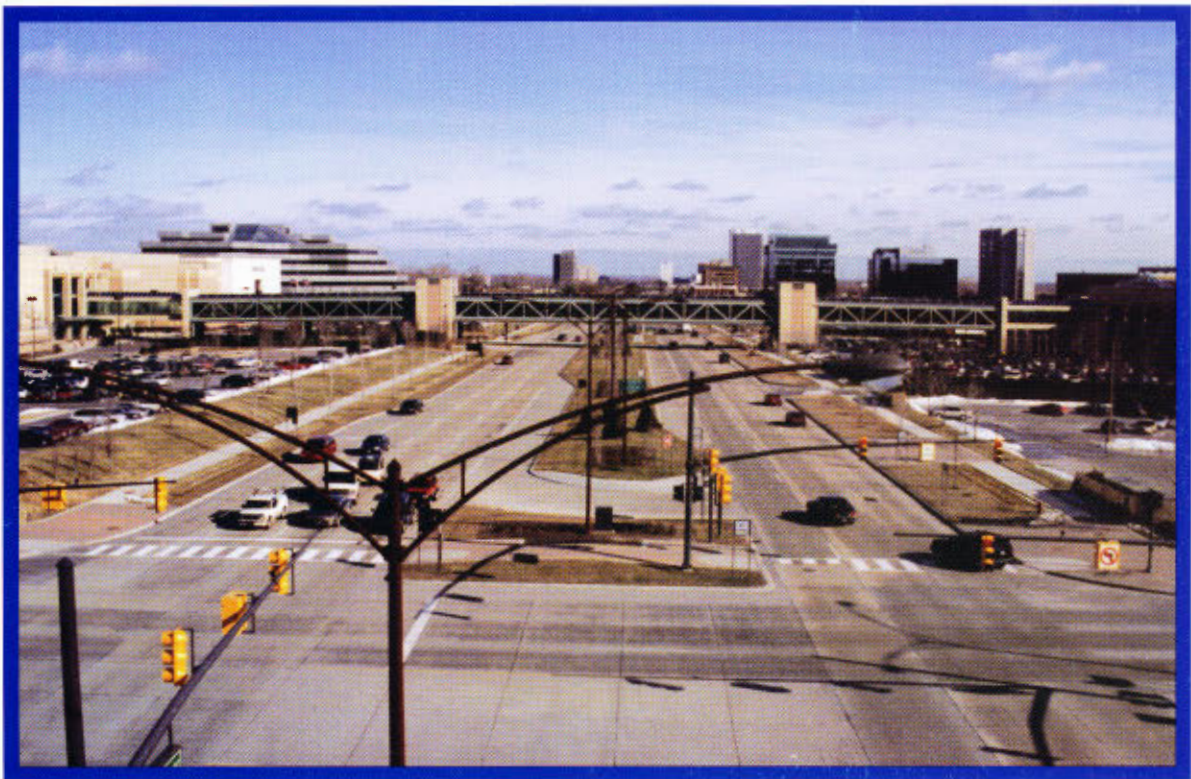


**REPORT OF THE
STRATEGIC PLANNING PROCESS
2000 - 2001
VOLUME I**



**Communities and Roads:
Changes and Challenges**

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EXECUTIVE SUMMARY

The Road Commission for Oakland County subscribes to the philosophy that the best way to understand the needs of the residents and communities it serves, is to meet face-to-face with the leaders of those communities. That is why, between late 2000 and early 2001, Deputy Managing Director/County Highway Engineer Gerald Holmberg and I met with the leaders of virtually every city, village and township in Oakland County. We refer to this biennial effort as the Road Commission's strategic planning process because these meetings provide us with some of the critical information we need to plot the agency's future.

This was the ninth time we have undertaken this process in 17 years, and we learned a lot. This two-volume report contains what we learned, both the broad themes and the specific details. Few other county road commissions undertake such an extensive effort to gain input from the communities they serve, and none produces such a comprehensive report of the "state of the roads." As in the past, the information in this report is helping us identify ways to improve our service to the communities and motorists, while also revealing the larger trends related to growth and development and their impacts on county roads. In other words, this report offers both a "macro" and a "micro" look at Oakland's roads and road-related issues.

Of all the information we gathered through this process, one item stands out as particularly sobering: The sheer magnitude of the needs on county roads.

For example, over the next 10 years (2000 to 2010), the projected needs on county roads as identified by community officials total nearly \$1.7 billion, or approximately \$100 million more than those identified in the last round of strategic planning meetings. As in the past, the problem is not just that this is a huge number, but that it is far greater than the available funding. That means that over the next 10 years, it is probable that we will continue to be unable to adequately address our road needs. We heard repeatedly that this circumstance is as frustrating to local officials and their constituents as it is to us. We are committed to doing everything possible to increase road funding for Oakland County. To that end, we are working with the county executive's office, state legislators, and others to seek at least a partial solution to this problem.

As in the past, capacity needs make up the largest portion of the road needs identified by Oakland communities, at approximately \$1.1 billion, or some 65 percent of the total needs. Clearly, that is a result of the county's continuing economic development success and the explosive growth in many townships, as revealed in the 2000 census.

In addition to helping us identify and prioritize the needs on county roads, this process is invaluable in helping us evaluate how well we are meeting our customers' needs in regard to maintaining the existing roads. Through these meetings, the community leaders provide unbiased evaluation of our performance that helps us to make specific improvements and make the best use of our budget.

Volume I of this report provides an overview of what the communities told us through this process. Volume II offers summaries of individual meetings with each community. I hope you find the report both informative and useful.



Brent O. Bair
Managing Director

ROAD COMMISSION for OAKLAND COUNTY

COMMUNITIES & ROADS – CHANGES & CHALLENGES

The Report of the Strategic Planning Process: 2000 / 2001

I. 1984 - 2001 OVERVIEW

It has been 17 years since the Road Commission for Oakland County (RCOC) began meeting biennially with the cities, villages and townships of Oakland County. Within the framework of these strategic planning meetings, frank and open conversations have been held with local officials to collect information on each community's road issues, needs, and transportation priorities. Equally important, local officials realistically assess how effective RCOC has been in meeting their community's needs and delivering the mix of services provided to the community.

Seventeen years ago this was considered a radical departure from a road agency's traditional method of doing business. Today, it is recognized as a model for inter-governmental cooperation and communication.

The principles on which the strategic planning process was based in 1984 continue to guide its efforts in the new millennium. They are:

- Effective Listening
- Assistance to Local Communities
- Commitment to Actions
- Organizational Adaptability

The result of RCOC's keeping faith with these principles has been nearly two decades of unparalleled trust, openness, and cooperation between RCOC and the local communities of Oakland County. All of which are conducted and bound within a framework of statutory regulation, resource limitation, financial constraint, and RCOC's obligation and commitment to operate in the best interests of the motoring public.

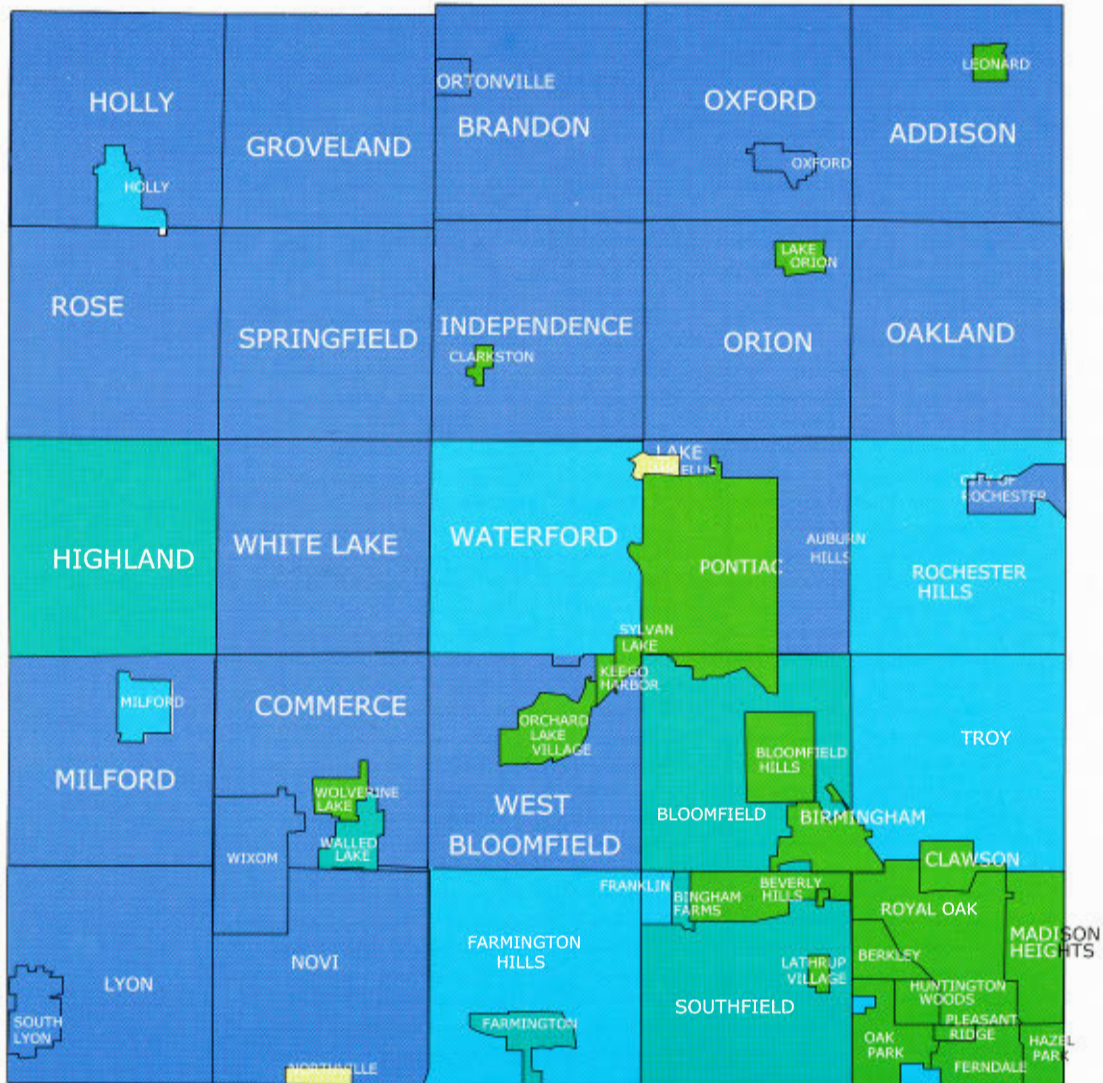
The changes Oakland County has experienced in the past 17 years are nothing short of dramatic. Preliminary census data shows that Oakland County has grown by over 180,000 in the last two decades and has added 109,000 people in the last 10 years alone. Table 1 shows the 1990 and 2000 census data, and Figure 1 provides a graphic overview of the population change by community.

Residential construction continues at its rapid pace. In 1999, the last year for which data is available, Oakland County led all counties in southeast Michigan with 5,272 new single-family building permits and 1,262 multi-family permits. Table 2 details this information by community.






As shown in Table 3, nonresidential development is keeping pace with residential development as the building boom continues in Oakland County. In 1999 the Southeast Michigan Council of Governments (SEMCOG) reported over 14 million square feet of nonresidential development projects completed or under construction in the county.

Figure 1

Oakland County Population Change
by Community
1990 - 2000



LEGEND

-  Large increase (greater than 15% gain)
-  Moderate increase (7% to 15 % gain)
-  Small increase (1% to 7% gain)
-  Little change (1% loss to 1% gain)
-  Decrease (greater than 1% loss)

Source: SEMCOG

Table 1**1990 to 2000 Oakland County
Population Change**

Community	Census 1990	Census 2000	Numeric Change	Percent Change
Addison Township	4,785	6,107	1,322	27.6%
City of Auburn Hills	17,076	19,837	2,761	16.2%
City Berkley	16,960	15,531	-1,429	-8.4%
Village of Beverly Hills	10,610	10,437	-173	-1.6%
Village of Bingham Farms	1,001	1,030	29	2.9%
City of Birmingham	19,997	19,291	-706	-3.5%
City of Bloomfield Hills	4,288	3,940	-348	-8.1%
Bloomfield Township	42,473	43,023	550	1.3%
Brandon Township	10,799	13,230	2,431	22.5%
City of the Village of Clarkston	N/A	962	962	N/A
City of Clawson	13,874	12,732	-1,142	-8.2%
Commerce Township	22,228	30,349	8,121	36.5%
City of Farmington	10,132	10,423	291	2.9%
City of Farmington Hills	74,652	82,111	7,459	10.0%
City of Ferndale	25,084	22,105	-2,979	-11.9%
Village of Franklin	2,626	2,937	311	11.8%
Groveland Township	4,705	6,150	1,445	30.7%
City of Hazel Park	20,051	18,963	-1,088	-5.4%
Highland Township	17,941	19,169	1,228	6.8%
Village of Holly	5,595	6,135	540	9.7%
Holly Township	3,257	3,902	645	19.8%
City of Huntington Woods	6,419	6,151	-268	-4.2%
Independence Township	24,722	32,581	7,859	31.8%
City of Keego Harbor	2,932	2,769	-163	-5.6%
City of Lake Angelus	328	326	-2	-0.6%
Village of Lake Orion	3,057	2,715	-342	-11.2%
City of Lathrup Village	4,329	4,236	-93	-2.1%
Village of Leonard	357	332	-25	-7.0%
Lyon Township	9,450	11,041	1,591	16.8%
City of Madison Heights	32,196	31,101	-1,095	-3.4%
Village of Milford	5,511	6,272	761	13.8%
Milford Township	6,610	8,999	2,389	36.1%
City of Northville	3,367	3,352	-15	-0.4%
City of Novi	32,998	47,386	14,388	43.6%
Novi Township	150	193	43	28.7%
City of Oak Park	30,462	29,793	-669	-2.2%
Oakland Township	8,227	13,071	4,844	58.9%
City of Orchard Lake Village	2,286	2,215	-71	-3.1%
Orion Township	21,019	30,748	9,729	46.3%
Village of Ortonville	1,252	1,535	283	22.6%
Village of Oxford	2,929	3,540	611	20.9%
Oxford Township	9,004	12,485	3,481	38.7%
City of Pleasant Ridge	2,775	2,594	-181	-6.5%
City of Pontiac	71,166	66,337	-4,829	-6.8%
City of Rochester	7,130	10,467	3,337	46.8%
City of Rochester Hills	61,766	68,825	7,059	11.4%
Rose Township	4,926	6,210	1,284	26.1%
City of Royal Oak	65,410	60,062	-5,348	-8.2%
Royal Oak Township	5,011	5,446	435	8.7%
City of South Lyon	5,857	10,036	4,179	71.4%
City of Southfield	75,728	78,296	2,568	3.4%
Southfield Township	18	26	8	44.4%
Springfield Township	9,927	13,338	3,411	34.4%
City of Sylvan Lake	1,884	1,735	-149	-7.9%
City of Troy	72,884	80,959	8,075	11.1%
City of Walled Lake	6,278	6,713	435	6.9%
Waterford Township	66,692	73,150	6,458	9.7%
West Bloomfield Township	54,516	64,860	10,344	19.0%
White Lake Township	22,608	28,219	5,611	24.8%
City of Wixom	8,550	13,263	4,713	55.1%
Village of Wolverine Lake	4,727	4,415	-312	-6.6%
Total	1,083,592	1,194,156	110,564	10.2%

Table 2

**Oakland County
Residential Building Permits Issued
1999**

Community	Single-Family Units	Two-Family Units	Multi-Family Units	Total New Units	Units Demolished	Net Total Units
Addison Township	45	0	0	45	0	45
City of Auburn Hills	131	0	126	257	15	242
City of Berkley	16	0	0	16	1	15
Village of Beverly Hills	17	0	0	17	3	14
Village of Bingham Farms	5	0	0	5	2	3
City of Birmingham	52	0	0	52	45	7
City of Bloomfield Hills	9	0	0	9	4	5
Bloomfield Township	72	0	0	72	30	42
Brandon Township	122	0	0	122	0	122
City of the Village of Clarkston	0	0	0	0	0	0
City of Clawson	1	0	0	1	3	-2
Commerce Township	312	8	0	320	8	312
City of Farmington	12	0	0	12	0	12
City of Farmington Hills	139	4	64	207	22	185
City of Ferndale	16	0	0	16	1	15
Village of Franklin	18	0	0	18	2	16
Groveland Township	42	0	0	42	0	42
City of Hazel Park	6	0	0	6	23	-17
Highland Township	183	0	4	187	3	184
Village of Holly	18	0	12	30	0	30
Holly Township	34	0	0	34	1	33
City of Huntington Woods	1	0	0	1	0	1
Independence Township	345	0	0	345	9	336
City of Keego Harbor	4	0	0	4	4	0
City of Lake Angelus	4	0	0	4	0	4
Village of Lake Orion	8	8	0	16	4	12
City of Lathrup Village	0	0	0	0	0	0
Lyon Township	99	0	14	113	3	110
City of Madison Heights	16	0	0	16	3	13
Village of Milford	15	0	39	54	1	53
Milford Township	76	0	0	76	0	76
City of Northville (part)	3	2	0	5	4	1
City of Novi	227	0	0	227	31	196
City of Oak Park	5	0	37	42	7	35
Oakland Township	166	0	0	166	5	161
City of Orchard Lake Village	20	0	0	20	5	15
Orion Township	332	46	0	378	11	367
Village of Ortonville	3	0	0	3	0	3
Village of Oxford	12	0	0	12	0	12
Oxford Township	247	0	4	251	0	251
City of Pleasant Ridge	0	0	0	0	0	0
City of Pontiac	182	0	0	182	0	182
City of Rochester	223	0	43	266	9	257
City of Rochester Hills	257	0	192	449	10	439
Rose Township	47	0	0	47	3	44
City of Royal Oak	12	0	11	23	7	16
Royal Oak Township	0	0	0	0	3	-3
City of South Lyon	102	0	60	162	1	161
City of Southfield	42	0	108	150	2	148
Springfield Township	110	0	0	110	6	104
City of Sylvan Lake	2	0	0	2	1	1
City of Troy	287	0	299	586	75	511
City of Walled Lake	5	0	5	10	1	9
Waterford Township	457	2	112	571	38	533
West Bloomfield Township	387	0	0	387	30	357
White Lake Township	155	0	37	192	14	178
City of Wixom	168	0	25	193	10	183
Village of Wolverine Lake	3	0	0	3	1	2
Total	5,272	70	1,192	6,534	461	6,073

Table 3

**Oakland County
Nonresidential Development Projects
1999**

Community	Project Name	Project Type	Size (Sq. Ft.)	Project Status
City of Auburn Hills	Auburn Hills Public Safety Bldg.	Institutional	53,670	Under Construction
City of Auburn Hills	Cambridge Court - Phase I	Office	177,500	Under Construction
City of Auburn Hills	Cooper Automation	Industrial/Research/Hi-Tech	81,500	Under Construction
City of Auburn Hills	DCX-Powertrain Test Center (Addition)	Industrial/Research/Hi-Tech	250,000	Completed
City of Auburn Hills	Mulligan's Golf Center	Entertainment/Rec	180,000	Completed
City of Auburn Hills	Oakland University (Addition)	Institutional	325,000	Under Construction
City of Auburn Hills	RPT Inc.	Industrial/Research/Hi-Tech	70,000	Completed
City of Auburn Hills	Sigma Stamping (Addition)	Industrial/Research/Hi-Tech	50,024	Completed
City of Auburn Hills	Stegner East Controls	Office	49,278	Under Construction
City of Auburn Hills	The Auburn Mile	Retail	650,000	Under Construction
City of Auburn Hills	Valeo Thermal Systems	Industrial/Research/Hi-Tech	119,000	Completed
City of Auburn Hills	Walter P. Chrysler Museum	Entertainment/Rec	55,000	Completed
City of Auburn Hills	Wellington Green Office Bldg. A	Office	125,000	Under Construction
Bloomfield Township	1900 Telegraph Rd. Office Bldg.	Office	77,400	Under Construction
Bloomfield Township	Franklin Pointe Office Centre	Office	93,150	Under Construction
Commerce Township	Homedics	Office	225,300	Completed
Commerce Township	Huron Valley Sinai Hospital (Addition)	Medical Facility	185,000	Completed
Commerce Township	Kroger	Retail	65,590	Completed
Commerce Township	Wal-Mart	Retail	127,192	Completed
City of Farmington Hills	37777 Interchange Dr.	Industrial/Research/Hi-Tech	66,331	Completed
City of Farmington Hills	Candlewood Suites	Hotel	62,000	Under Construction
City of Farmington Hills	Dana Corp.	Office	108,000	Under Construction
City of Farmington Hills	Lumonics	Office	58,000	Under Construction
City of Farmington Hills	Providence Medical Center (Addition)	Medical Facility	84,000	Completed
City of Farmington Hills	Q&K Commerce Inc. Motion Control	Industrial/Research/Hi-Tech	55,121	Completed
City of Farmington Hills	Robert Bosch Corp. (Addition II)	Industrial/Research/Hi-Tech	299,175	Completed
City of Farmington Hills	Rental	Office	38,570	Under Construction
City of Farmington Hills	The Orchards Corporate Center Bldg. 1	Office	113,740	Completed
City of Farmington Hills	The Orchards Corporate Center Bldg. 2	Office	113,740	Completed
City of Hazel Park	Viking Ice Arena & Entertainment Center	Entertainment/Rec	77,000	Completed
Highland Township	Alternative Self-Storage	Warehouse	56,600	Completed
Holly Township	Holly High School	Institutional	262,000	Completed
Independence Township	Clarkston Medical Campus	Medical Facility	294,550	Under Construction
Independence Township	Independence Elementary School	Institutional	68,700	Completed
Independence Township	PreMarc Corporation	Industrial/Research/Hi-Tech	57,050	Under Construction
City of Madison Heights	Home Depot	Retail	135,311	Completed
Milford Township	Milford Corporate Office Park Bldg. 1	Office	22,000	Completed
City of Novi	ADCO Office Park Bldgs. 1 & 2	Office	26,459	Completed
City of Novi	Art Van Furniture (Addition)	Retail	102,520	Completed
City of Novi	Brightmoor Tabernacle School	Institutional	60,000	Under Construction
City of Novi	Corrigan Moving Systems	Warehouse	106,000	Under Construction
City of Novi	Courtyard by Marriott	Hotel	68,000	Completed
City of Novi	Deerfield Elementary School	Institutional	85,000	Under Construction
City of Novi	FATA Automation Inc.	Industrial/Research/Hi-Tech	60,000	Under Construction
City of Novi	Haggerty Corridor Corporation Park Bldg. 1	Office	44,524	Completed
City of Novi	Husky Injection Molding Systems	Industrial/Research/Hi-Tech	90,610	Completed
City of Novi	Johnson Group Services	Office	24,973	Completed
City of Novi	Lifetime Fitness Center	Entertainment/Rec	90,956	Completed
City of Novi	Novi Middle School	Institutional	212,000	Completed
City of Novi	Novi Research Park Bldg. 1	Institutional	176,000	Completed
City of Novi	Pinnacle Office Bldg. I	Office	38,000	Under Construction
City of Novi	Providence Medical Center of Novi Office Bldg.	Office	45,000	Completed
City of Novi	Summit Pointe Office Complex - Phase I	Office	126,000	Completed
City of Novi	Summit Pointe Office Complex - Phase II	Office	150,000	Completed
City of Novi	West Market Square	Retail	306,991	Under Construction
Oakland Township	Country Creek Commons	Retail	175,100	Completed
Orion Township	Baldwin Commons	Retail	386,150	Completed
Orion Township	Englewood Resources	Industrial/Research/Hi-Tech	81,768	Under Construction
Orion Township	First Industrial Building	Industrial/Research/Hi-Tech	125,300	Completed
Orion Township	Kroger	Retail	56,640	Under Construction
Orion Township	Shops on Waldon Pond - Phase II	Retail	68,110	Under Construction
Village of Oxford	Oxford Market Place	Retail	77,740	Completed

Table 3

**Oakland County
Nonresidential Development Projects
1999**

Community	Project Name	Project Type	Size (Sq. Ft.)	Project Status
City of Pontiac	Centrepoint Business Campus	Office	43,295	Completed
City of Pontiac	GM Truck Product Center North	Industrial/Research/Hi-Tech	635,000	Under Construction
City of Pontiac	Marriott Hotel	Hotel	205,000	Under Construction
City of Rochester	The Onyx Ice Arena	Entertainment/Rec	114,000	Completed
City of Rochester Hills	Accurate Gauge & Mfg., Inc.	Industrial/Research/Hi-Tech	64,208	Completed
City of Rochester Hills	Adams High School Auditorium (Addition)	Institutional	60,000	Under Construction
City of Rochester Hills	Gates Corporation	Industrial/Research/Hi-Tech	80,400	Completed
City of Rochester Hills	Hamlin Tool	Industrial/Research/Hi-Tech	105,836	Completed
City of Rochester Hills	Home Depot	Retail	111,847	Completed
City of Rochester Hills	Letica Corp.	Industrial/Research/Hi-Tech	90,000	Completed
City of Royal Oak	WBH Heart Center (Addition)	Medical Facility	85,700	Completed
City of Royal Oak	WBH Research Building (Addition)	Medical Facility	102,650	Under Construction
City of Royal Oak	WBH Rose Cancer Center (Addition)	Medical Facility	57,848	Under Construction
City of Southfield	American Commerce Centre	Office	569,000	Under Construction
City of Southfield	Detroit Federal Employees Credit Union	Office	27,584	Under Construction
City of Southfield	Homestead Village Hotel	Hotel	61,245	Under Construction
City of Southfield	Lawrence Tech Learning Complex	Institutional	84,000	Under Construction
City of Southfield	National Self Storage	Warehouse	103,000	Under Construction
City of Southfield	Nippondenso Ltd. (Addition)	Industrial/Research/Hi-Tech	85,613	Under Construction
City of Southfield	Oakland Commons Bldg. #1	Office	171,162	Completed
City of Southfield	Oxford Pointe	Office	88,755	Under Construction
City of Southfield	Providence Greenfield Strip Mall	Retail	112,085	Completed
City of Southfield	Public Storage	Warehouse	90,700	Under Construction
City of Southfield	Word of Faith Christian Center (Addition)	Institutional	83,000	Completed
City of Troy	Affiliated Troy Physicians	Medical Facility	90,000	Under Construction
City of Troy	Collins and Aickman Automotive Group	Industrial/Research/Hi-Tech	60,000	Under Construction
City of Troy	Columbia Center II	Office	266,000	Completed
City of Troy	Flagstar Bank	Office	381,750	Under Construction
City of Troy	Investment Drive Office Bldg.	Office	79,830	Completed
City of Troy	Kmart Data Center	Office	88,940	Under Construction
City of Troy	Kojaian Corp./McKechnie	Office	96,300	Completed
City of Troy	Long Lake Square Office	Office	23,464	Completed
City of Troy	Northfield Crossings	Office	112,000	Completed
City of Troy	Northfield East	Office	72,000	Completed
City of Troy	Northfield Plaza (#1) (Addition)	Office	27,000	Under Construction
City of Troy	Northfield Point Office Center	Office	84,660	Completed
City of Troy	Northfield West	Office	87,663	Under Construction
City of Troy	Sunset Corners	Office	22,000	Completed
City of Troy	Troy Corporate Center A	Office	195,598	Completed
City of Troy	Troy Corporate Center B	Office	195,998	Completed
City of Troy	Troy Market Place	Retail	241,507	Under Construction
City of Troy	Troy Officentre (E)	Office	146,000	Under Construction
City of Troy	U.S. Steel	Office	43,000	Completed
City of Troy	William Beaumont Medical Building (Addition)	Office	60,000	Completed
Waterford Township	Waterford Towne Centre	Retail	114,780	Completed
West Bloomfield Township	Bloomfield Avenue Shoppes	Retail	58,000	Completed
West Bloomfield Township	Gateway Center	Retail	273,500	Under Construction
White Lake Township	White Lake Marketplace	Retail	375,000	Under Construction
City of Wixom	Angelo Carlesimo Industrial Bldg.	Industrial/Research/Hi-Tech	85,000	Completed
City of Wixom	Durr Office Bldg.	Office	32,000	Completed
City of Wixom	Ind. Spec. Bldg. - Schonscheck Inc.	Industrial/Research/Hi-Tech	50,000	Completed
City of Wixom	Saturn	Industrial/Research/Hi-Tech	50,000	Under Construction

Big box retailers have constructed new stores in Bloomfield, Commerce, and White Lake townships, and in the cities of Madison Heights, Rochester Hills, and Troy. They have expressed interest in developing locations in Highland, Lyon, and Independence townships. Providence Hospital in Southfield and Beaumont Hospital in Royal Oak are undergoing major renovations and expansions. Beaumont Hospital is adding over 200,000 square feet alone. Oakland University and Lawrence Technological University are constructing major additions to their facilities in Auburn Hills and Southfield, respectively. Automobile and high-tech related suppliers and manufacturers such as General Motors in Milford, Robert Bosch Corporation in Farmington Hills, and Nippondenso in Southfield are expanding existing facilities or locating new facilities here. This serves to validate the fact that Oakland County is the home of "Automation Alley".

But all of this residential and nonresidential growth and economic expansion comes with a cost: an ever-increasing impact on an already overburdened, under funded road system. Residential areas expanding into formerly rural areas means more trips on a gravel road system that was never intended to carry high volumes of traffic. Expansion of the commercial-industrial-institutional base means more choices of more destinations in more locations, and increasing trip lengths. The prosperity in Oakland County means more cars, more traffic, and longer trip lengths.

It has long been recognized by local officials and RCOC that the road system should expand to keep pace with increases in traffic volumes. However, due to fiscal and practical limitations, it is not possible for the road network to expand to keep pace with increasing traffic volumes. The existing road infrastructure has shown the signs of deterioration that comes with age and high traffic volumes. In response to the priorities indicated by local officials during past strategic planning meetings system rehabilitation, preservation, and maintenance have been the focus of RCOC efforts. This is an example of tailoring RCOC services to meet the expressed needs of the communities of Oakland County.

II. WHAT THE COMMUNITIES TOLD US IN 2000/2001

A. Long-Range Transportation Needs Continue to Grow

Road and services needs have steadily increased since the last round of strategic planning meetings in 1998/1999. RCOC estimates that in the 2000/2001 meetings, local officials identified approximately \$1.7 billion in road and service needs on RCOC roads. This represents an increase of approximately \$100 million since the last round of strategic planning meetings in 1998/1999. Many communities also identified needs on city and village streets and state roads. When these needs are added, the estimate swells to over \$2.5 billion in countywide road and service needs.

The 10-year needs identified by local officials include the following categories:

- Capacity Improvements
- Gravel Roads
- Reconstruction/Resurfacing
- Spot Safety
- Maintenance
- Drainage
- Intelligent Transportation Systems.

Table 4 shows the estimated costs to satisfy the long-term transportation needs and services identified by local officials for roads under the jurisdiction of RCOC.

Table 5 includes improvements to roads not under RCOC jurisdiction as reported. It should be noted that this is not, nor is it intended to be, a definitive list of improvements needed on non-RCOC roads. Rather it is an illustrative example of the type and magnitude of needs on non-RCOC roads as reported by local community officials.

1. Capacity Improvements

Capacity improvements typically involve the construction of additional lanes to existing roads. These improvements are closely related to growth and development in an area served by the road and have historically required the largest share of available funds for RCOC to complete.

In the 2000/2001 round of strategic planning meetings, capacity needs identified by local officials on RCOC roads total \$1.1 billion, or 65 percent of the total road and service needs identified. Local officials also identified capacity needs on roads under city, village and state jurisdiction. These capacity needs together with RCOC capacity needs total \$1.7 billion. This figure represents a 225 percent increase in total capacity needs since the strategic planning meetings held in 1991/1992.

Since Oakland County's growth has gone beyond the southeast portion of the county and toward the north and west, capacity improvement needs have become widespread throughout the county. Specific examples of capacity improvements on RCOC roads that were requested during the 2000/2001 strategic planning meetings include:

- Opdyke Road - South Boulevard to Walton Boulevard
- Sashabaw Road - Dixie Highway to Waldon Road
- Novi Road - 10 Mile Road to Grand River Avenue
- 10 Mile Road - Inkster Road to Telegraph Road
- John R Road - Long Lake Road to South Boulevard
- South Commerce Road - Oakley Park Road to Commerce Road
- Hiller Road - Commerce Road to Cooley Lake Road
- Crescent Lake Road - M-59 to Hatchery Road
- Baldwin Road - Morgan Road to Waldon Road
- Maybee Road - Dixie Highway to Clintonville Road

Additional examples include capacity improvements along the Milford Road corridor, the Haggerty Road corridor, the Walton Boulevard corridor and the Williams Lake Road corridor. In addition to capacity improvements to existing roads, the need for construction of new roads was also identified by local communities. The City of Auburn Hills indicated the need for the extension of Dutton Road from M-24 to Bald Mountain Road. Commerce Township identified the need to extend Benstein Road from Sleeth Road to Bogie Lake Road, and Highland Township identified the need to extend Duck Lake Road north to White Lake Road.

Table 4

**2000-2001
10-Year Road Needs
for Oakland County
(RCOC Jurisdiction Only)**

Improvement Category	City/Village Total Cost	Township Total Cost	Grand Total
Capacity Improvements			
- capacity w/ grade separation	\$17,898,000	\$0	\$17,898,000
- capacity including bridge	\$70,349,400	\$0	\$70,349,400
- capacity only	\$511,153,839	\$434,497,772	\$945,651,611
- new roads	\$20,235,000	\$52,688,074	\$72,923,074
Subtotal: Capacity Improvements	\$619,636,239	\$487,185,846	\$1,106,822,085
Gravel Roads			
- improve gravel roads	\$4,741,000	\$9,550,400	\$14,291,400
- pave gravel roads	\$29,955,313	\$190,091,453	\$220,046,765
- pave intersection	\$0	\$1,627,000	\$1,627,000
Subtotal: Gravel Roads	\$34,696,313	\$201,268,853	\$235,965,165
Reconstruction			
- intersection	\$855,000	\$5,988,100	\$6,843,100
- segment	\$31,099,400	\$18,005,470	\$49,104,870
- culverts	\$975,000	\$25,030,000	\$26,005,000
- bridge	\$12,558,560	\$34,201,805	\$14,760,365
Subtotal: Reconstruction	\$45,487,960	\$83,225,375	\$96,713,335
Resurfacing			
- intersection	\$0	\$4,319,680	\$4,319,680
- segment	\$27,484,310	\$12,511,257	\$39,995,567
Subtotal: Resurfacing	\$27,484,310	\$16,830,937	\$44,315,247
Spot Safety			
- improve intersections	\$4,334,300	\$14,502,800	\$18,837,100
- signal improvements	\$1,512,500	\$2,435,000	\$3,947,500
- pave shoulders	\$491,291	\$5,785,209	\$6,276,500
- passing lanes	\$2,382,600	\$3,052,140	\$5,434,740
- turn lanes	\$4,587,000	\$2,750,000	\$7,337,000
- segment	\$0	\$4,627,000	\$4,627,000
Subtotal: Spot Safety	\$13,307,691	\$33,152,149	\$46,459,840
Maintenance			
- concrete repair	\$3,556,200	\$842,500	\$4,398,700
- snow removal	\$1,100,000	\$13,850,000	\$14,950,000
- crack sealing	\$1,325,000	\$435,000	\$1,760,000
- aesthetics	\$1,600,000	\$7,100,000	\$8,700,000
- overlays	\$1,500,000	\$28,500,000	\$30,000,000
- brushing	\$0	\$3,500,000	\$3,500,000
- ditching	\$0	\$2,200,000	\$2,200,000
Subtotal: Maintenance	\$9,081,200	\$56,427,500	\$65,508,700
Drainage	\$1,604,000	\$9,550,400	\$11,154,400
ITS	\$3,622,000	\$2,825,250	\$6,447,250
Non-motorized	\$3,549,000	\$6,062,500	\$9,611,500
Total	\$758,468,713	\$896,528,810	\$1,654,997,522

Table 5

**History of 10-Year Road Needs
for Oakland County
(All Jurisdictions as Reported)**

Improvement Category	Year				
	91-92	93-94	96-97	98-99	00-01
Capacity Improvements					
- capacity w/ grade separation	\$545.7	\$937.7	\$337.4	\$112.9	\$84.2
- capacity including bridge	\$0.0	\$0.0	\$60.4	\$89.1	\$80.8
- capacity (interchange)	\$58.9	\$75.2	\$77.7	\$97.3	\$91.5
- capacity only	\$0.0	\$0.0	\$589.5	\$997.8	\$1,389.2
- new roads	\$124.5	\$175.8	\$216.7	\$279.4	\$100.3
Subtotal: Capacity Improvements	\$729.1	\$1,188.7	\$1,281.7	\$1,576.5	\$1,746.0
Gravel Roads					
- improve gravel roads	\$0.0	\$3.6	\$3.9	\$7.2	\$14.3
- pave gravel roads	\$136.7	\$105.8	\$307.8	\$198.8	\$221.2
- pave intersection	\$0.0	\$0.0	\$0.0	\$0.6	\$1.6
Subtotal: Gravel Roads	\$136.7	\$109.4	\$311.7	\$206.6	\$237.1
Reconstruction					
- intersection	\$0.0	\$0.0	\$43.5	\$44.6	\$11.2
- segment	\$0.0	\$0.0	\$15.0	\$29.1	\$83.2
- culverts	\$0.0	\$11.9	\$21.4	\$13.2	\$26.9
- bridges	\$39.4	\$41.5	\$45.8	\$9.9	\$18.4
Subtotal: Reconstruction	\$39.4	\$53.4	\$125.7	\$96.8	\$139.7
Resurfacing					
- intersection	\$13.0	\$13.0	\$18.5	\$28.3	\$4.8
- segment	\$74.3	\$74.2	\$168.0	\$131.9	\$93.1
Subtotal: Resurfacing	\$87.3	\$87.2	\$186.5	\$160.2	\$97.9
Spot Safety					
- improve intersections	\$9.9	\$14.8	\$15.9	\$22.6	\$23.7
- signal improvements	\$6.5	\$9.6	\$11.8	\$12.7	\$4.0
- pave shoulders	\$6.2	\$7.6	\$9.3	\$3.9	\$6.3
- passing lanes	\$5.2	\$7.0	\$8.8	\$4.5	\$5.4
- turn lanes	\$2.7	\$3.9	\$5.9	\$5.1	\$7.6
- segment	\$7.0	\$9.0	\$16.3	\$17.0	\$4.6
Subtotal: Spot Safety	\$37.5	\$51.9	\$68.0	\$65.8	\$51.6
Maintenance					
- concrete repair	\$0.0	\$0.1	\$1.1	\$45.3	\$47.2
- snow removal	\$0.0	\$0.0	\$0.0	\$0.0	\$14.9
- crack sealing	\$0.0	\$0.1	\$0.4	\$1.0	\$1.9
- aesthetics	\$0.0	\$0.0	\$0.0	\$0.0	\$8.7
- overlays	\$0.0	\$0.2	\$3.0	\$24.5	\$31.3
- brushing	\$0.0	\$0.0	\$0.0	\$0.0	\$3.5
- ditching	\$0.0	\$0.0	\$0.0	\$0.0	\$2.7
Subtotal: Maintenance	\$0.0	\$0.4	\$4.5	\$70.8	\$110.2
Drainage	\$12.2	\$23.6	\$68.7	\$70.5	\$63.9
ITS	\$70.0	\$56.0	\$95.0	\$100.0	\$85.0
Non-motorized	\$0.0	\$0.0	\$4.9	\$13.3	\$14.1
Total	\$1,112.2	\$1,570.6	\$2,146.7	\$2,360.5	\$2,545.5

Appendix A includes maps and a table that summarize the location of capacity improvements requested by local officials during the 2000/2001 round of meetings.

2. Gravel Roads

The 2000 census data reinforces the northward and westward population shift in Oakland County. This population growth has propelled a dramatic increase in traffic volumes on gravel roads under the jurisdiction of RCOC. RCOC's gravel road system was never intended to handle traffic volumes of over 800 vehicles per day, yet in these rapidly developing areas of the county, traffic volumes above 2,000 vehicles per day are common. In these areas, the importance of gravel road paving is essentially equal to capacity improvements in the urban areas of the county.

To that end, RCOC developed a prioritization system for gravel road paving, and from this came the 2025 Gravel Road Paving Plan presented to communities during these strategic planning meetings.

In the 2000/2001 strategic planning meetings, gravel road paving needs identified by local officials on RCOC roads total \$220 million. This figure represents a 61 percent increase in total gravel road paving needs since the strategic planning meetings held in 1991/1992. The requested gravel road paving needs by local officials appear to be closely tied to population growth, as people continue to move northward and westward following development.

Paving requests appear as two types: short segments needed to complete corridors; and existing high-volume gravel road corridors which reflect the use of the road as a major route through a community. An example of a short segment identified by local officials is the half-mile segment of Hospital Road in Waterford Township. This would complete a paved primary road from Cooley Lake Road to M-59. Examples of high-volume corridors that local officials have requested be paved are: Lake George Road in Addison Township, Clyde Road and White Lake Road in Highland Township, and South Hill Road in Milford Township. Specific examples of gravel road paving needs on RCOC roads that were requested during the 2000/2001 strategic planning meetings include:

- Martindale Road – 10 Mile Road to 11 Mile Road
- Gallogly Road – Newark Avenue to Baldwin Road
- White Lake Road – Milford Road to Rose Center Road
- Rood Road – Falk Road to Grange Hall Road
- Snell Road – Orion Road to Rochester Road
- Drahner Road – Baldwin Road to Sanders Road
- Cedar Island Road – Bogie Lake Road to Ford Road
- Tindall Road – Davisburg Rod to East Holly Road

To assist in the need for paving gravel roads, the Oakland County Federal Aid Committee has increased its yearly allocation of federal funds to

\$1,000,000 for this purpose. Based on current construction estimates, this will be enough to pave one mile of gravel road per year.

Gravel road maintenance also remains a major topic of discussion during strategic planning meetings. Gravel road maintenance issues most frequently cited by local officials are:

- Drainage and ditching
- Ride quality
- Dust control and chloriding
- Plowing and sanding of hills and curves

Increasing population in the northern and western townships means increasing traffic volumes on gravel roads which, in turn, means greater gravel road maintenance needs. It has been determined in many studies that as traffic volumes climb to more than 800 vehicles per day (vpd), gravel road maintenance becomes increasingly difficult and less cost-effective. The opinions of local officials vary as to whether gravel roads should be paved or better maintained. From discussions during the development of the 2025 Gravel Road Paving Plan through this round of strategic planning meetings, it has been agreed that improving maintenance on RCOC's gravel road system will remain a priority.

Appendix B contains maps and a table which summarize the location of gravel road paving projects requested by local officials during the 2000/2001 round of meetings.

3. Reconstruction and Resurfacing

Local officials continue to express concern regarding the condition of the paved road system. The increased growth and development in Oakland County has resulted in a tremendous burden on the ride quality of the county road system. In the 2000/2001 round of strategic planning meetings, reconstruction and resurfacing needs identified by local officials on RCOC roads total \$141 million. Local officials also identified needs on roads under city, village and state jurisdiction. These needs together with RCOC needs total \$238 million. This figure represents an 88 percent increase in reconstruction and resurfacing needs since the strategic planning meetings held in 1991/1992. These projects continue to be focused in the central and southeastern portions of the county. However, since population growth is moving to the north and west, traffic volumes will continue to increase in these areas of the county leading to accelerated deterioration of pavement quality. Specific examples of reconstruction and resurfacing improvements on RCOC roads that were requested during the 2000/2001 strategic planning meetings include:

- Greenfield Road – 11 Mile Road to 13 Mile Road
- Maple Road – Crooks Road to Dequindre Road
- 8 Mile Road – Farmington Road to Grand River Avenue
- Grange Hall Road – West County Line to I-75
- Milford Road – 10 Mile Road to Pontiac Trail

Since the 1997 state gas tax increase, RCOC has dedicated \$5.5 million per year to pavement preservation. The annual outlay is \$3 million for reconstruction and resurfacing, \$2 million for preservation overlays and \$500,000 for concrete repair. Preservation overlays involve applying a 1.5-inch layer of new asphalt to a paved road that is in fair condition. This improvement averages \$70,000 per mile and generally extends the life of the pavement for about 10 years. A reconstruction and resurfacing project involves extensive preparation of the existing paved surface before a 3-inch layer of new asphalt is applied. Reconstruction and resurfacing projects generally cost \$500,000 per mile and add about 15 years to the life of the pavement.

In determining which reconstruction and resurfacing projects RCOC undertakes, many factors are considered. RCOC seeks community input as well as service requests from citizens (which have averaged nearly 19,000 annually for the last five years) and input from RCOC district superintendents. Most importantly, RCOC relies on the computerized Pavement Management System which objectively ranks road segments based on deterioration, ride, age, pavement type, traffic volume, and more.

4. Spot Safety

Spot safety projects include items such as intersection improvements (widening and signalization), guardrail installation, cutting hills and adding turn lanes, signage and traffic signals. Intersection improvements have proven to be a very cost-effective way for RCOC to reduce congestion and accidents. As traffic volumes have increased, requests for these projects have also increased.

In the 2000/2001 round of strategic planning meetings, spot safety improvement needs identified by local officials for RCOC roads total \$47 million. This figure represents a 24 percent increase in total spot safety needs since the strategic planning meetings held in 1991/1992. The requested spot safety needs identified by local officials appear to be closely tied to population growth, as people continue to move northward and westward following development. Specific examples of spot safety improvements on RCOC roads that were requested during the 2000/2001 strategic planning meetings include:

- Clarkston Road @ M-24 – Construct right-turn lane.
- Hickory Ridge Road @ Rose Center Road – Add traffic signal and center-turn lane.
- Martindale Road @ 10 Mile Road – Install traffic signal.
- Grange Hall Road @ Fish Lake Road – Install signage.
- Oakwood Road @ M-15 – Construct left-turn lane.
- Commerce Road @ Orchard Lake Road – Construct right-turn lane.
- Orchard Lake Road @ Cass Lake Road – Add turn lane.
- 13 Mile Road @ Bingham Road – Improve sight distance.

5. Maintenance

RCOC maintenance operations include, but are not limited to:

- Aesthetics (litter pickup, mowing, etc.)
- Concrete Repair
- Crack Sealing
- Sign Replacement
- Signal Maintenance
- Preservation Overlays
- Brushing and Clear-Vision Mowing
- Ditching
- Snow and Ice Removal

These services are very location dependent. In cities and villages, local officials most often request increased litter pickup, improved snow and ice removal on major roads and aesthetic mowing along freeways and state trunk lines. Most local officials acknowledge the limitations on mowing imposed by the funding provided by MDOT.

In the townships, the biggest single issue is improving snow and ice removal on subdivision streets. As in the past, the more rural townships request increased brushing operations, tree trimming, and swath mowing.

Based on the number of requests received during this round of meetings, RCOC is exploring the possibility of using a special brushing machine to trim brush and low-hanging limbs along gravel roads. The Maintenance Department has also committed to investigate methods for improving subdivision snow and ice removal.

6. Drainage

In many communities, local officials cite drainage as a major problem. In the more rural areas of northern and western Oakland County, drainage problems are a major cause of the deterioration of the gravel road system. In the urban areas of southeast Oakland County, it generally occurs during periods of exceptionally heavy rainfall when the ground is saturated. This can be exacerbated by melting snow, whether as a natural phenomena, or from snow removal operations. Much of the drainage problem in urban areas is due to overburdened storm sewers or, in some communities, combined sewers.

During the 2000-2001 round of strategic planning meetings, local officials identified over \$11 million in drainage improvements on the county road system and approximately \$64 million in drainage needs for all road jurisdictions. This does not include ditching, which is considered a maintenance item.

Examples of these needs include:

- The replacement of catch basins and the adjacent pavement in Royal Oak Township.
- Improving drainage and culvert replacement at the intersection of Jackson Road and Ormond Road in White Lake Township.
- Drainage improvements to the intersection of Grass Lake and Ormond Road in White Lake Township.
- Drainage improvements to four miles of road in the Village of Wolverine Lake.

7. FAST-TRAC SYSTEM

RCOC continues to be a worldwide leader in the application of Intelligent Transportation Systems (ITS) technologies, specifically the expansion of the FAST-TRAC signal system. FAST-TRAC is the largest deployment of adaptive signals in the U.S., and the largest use of video image vehicle detection technology in the world. FAST-TRAC is the "intelligent" signal system that uses either video imaging detection or pavement loops to monitor the flow of traffic through an intersection and adjust the signal timing to respond to real-time traffic demands. The video imaging detection system analyzes video images of the intersection to determine the presence of vehicles, and the computerized signal system then adjusts the signal based on this information. The loops are wires buried in the pavement that detect the presence of vehicles and feed this data to the computerized signal system.

During the 2000/2001 strategic planning meeting, RCOC received many positive comments about the FAST-TRAC system. The City of Auburn Hills complimented RCOC on the effectiveness of the FAST-TRAC signal system, particularly during events at the Palace of Auburn Hills. The FAST-TRAC system has also improved overall traffic flow in the city. The City of Novi reiterated that the system is working exceptionally well near the Novi Town Center and the Novi Expo Center during special events. Several communities, including Commerce Township, the City of Berkley, and the City of Madison Heights expressed interest in the FAST-TRAC system as well.

In the past, the FAST-TRAC system has been statistically proven to improve traffic flow and reduce accident severity. In 1997, Michigan State University discovered that the addition of FAST-TRAC to the Orchard Lake Road corridor resulted in a 9 percent reduction in travel time for southbound motorists during the morning rush hour, and a 20 percent reduction for northbound motorists during the same period. With the FAST-TRAC system being expanded throughout Oakland County, RCOC plans to continue to examine the results of these objective third-party studies to determine the effectiveness of the FAST-TRAC system.

B. Community Requests and Comments

During RCOC strategic planning meetings, local officials were encouraged to make requests for services, information, or other assistance and to comment on RCOC's performance. The requests and comments were recorded by RCOC and service requests were relayed to appropriate staff for action. A number of local officials noted improvements in communication between the communities and RCOC's maintenance districts as well as in RCOC response times. In general, there was a significant decrease in the number of specific requests made to RCOC. This continues a trend observed over the past several rounds of strategic planning meetings.

Most of the service requests received during these strategic planning meetings with the cities and villages were specific in nature, i.e., directed to an individual location, while the requests of meetings in townships were general, or system-wide, directed more at policies and practices. For example, townships requested a review of RCOC winter maintenance operations during extremely heavy snowfalls. This request was due to an unusually heavy snowfall for an extended duration during December 2000. In the more urban areas, congestion reduction was most often mentioned, followed by improving pavement preservation activities and winter maintenance. Some local officials added that the services provided by RCOC were good, but would like to see more of these services provided, such as increased plowing in subdivisions in townships, increased gravel road grading, increased litter pickup along freeways, etc.

Since the 1991-1992 round of strategic planning meetings, RCOC department heads and district superintendents have conducted regularly scheduled meetings with their respective counterparts in the local communities. District superintendents are required to meet at least monthly with local officials, and this has resulted in many of these requests being taken care of as they occur, meaning they are no longer topics at the strategic planning meetings.

Also, RCOC's commitment to responding to community requests is illustrated in this round of strategic planning meetings. RCOC's management team held a work-session to review the major snowstorm of December 2000, and the team developed a 34-point list of recommendations to better manage major snowstorms.

As discussed in previous reports, local officials are increasingly aware of what is possible, given financial constraints. As a result, local officials seem to be limiting requests to what is perceived to be realistic or feasible.

III. STRATEGIES AND RECOMMENDATIONS

As a result of the 2000/2001 strategic planning meetings, RCOC will take several courses of action, as detailed below.

RCOC will continue to pursue additional funding for state and local roads in Oakland County by working with Oakland County's elected state and local officials.

RCOC will pursue an increase of federal funds to Oakland County by working with Oakland's elected federal officials. These efforts will focus on improving funding distributions for Michigan and Oakland County under TEA-21, the national highway policy act and its replacement when it sunsets in 2003.

RCOC will investigate innovative alternative funding strategies and alternative public and private funding sources to address the growing list of long-range transportation needs as identified by local officials.

RCOC will strive to improve operational efficiency by periodically revisiting its performance audit and implementing state-of-the-art technologies such as:

- FAST-TRAC - The largest single application of adaptive traffic signals in the U. S. controlling 450 intersections.
- Part of the first countywide signal retiming program for non-SCATS signals, never before done on this scale.
- SEMSIM - Southeastern Michigan Snow and Ice Management multi-jurisdictional project RCOC is spearheading that is bringing global positioning system technology to winter maintenance vehicles across southeast Michigan.
- GIS - A Geographic Information System.
- RoadView digital photography of the road system.
- Other new technologies as they arise.

RCOC has committed to improving its snow removal operations by evaluating changes to procedures during snowstorm emergencies.

RCOC will expand the development of its Pavement Management System (PMS) that evaluates the entire road network and predicts when each road segment will require repair or resurfacing. Part of the development process will be linking PMS to a Geographic Information System (GIS). The integration of these systems will provide the most reliable information for RCOC's 3-year financial planning and budgeting process. It will also help RCOC determine the amount of funds required in future years to maintain the road system.

RCOC will continue to expand the FAST-TRAC signal system at the rate of 25 to 30 intersections per year. Also, evaluation and monitoring information will continue to be shared with interested communities. Getting this information into the hands of community leaders will assist them in making informed decisions about implementing this congestion-management tool.

RCOC is committed to continuing open and frank discussions with the communities of Oakland County about road needs and ways to address those needs. This is accomplished through ongoing meetings between the RCOC staff and their counterparts in the communities.

RCOC will continue to work with state and local officials in cooperative ventures to address Oakland County's road needs such as:

- The "extension" of Northwestern Highway via 14 Mile, Maple, and Orchard Lake roads.
- The Williams Lake - Union Lake Corridor Improvement Study (the "Four Towns" study).
- The West Oakland Corridor Study for construction of a state trunk line linking I-96 to M-59.
- The widening of I-75.

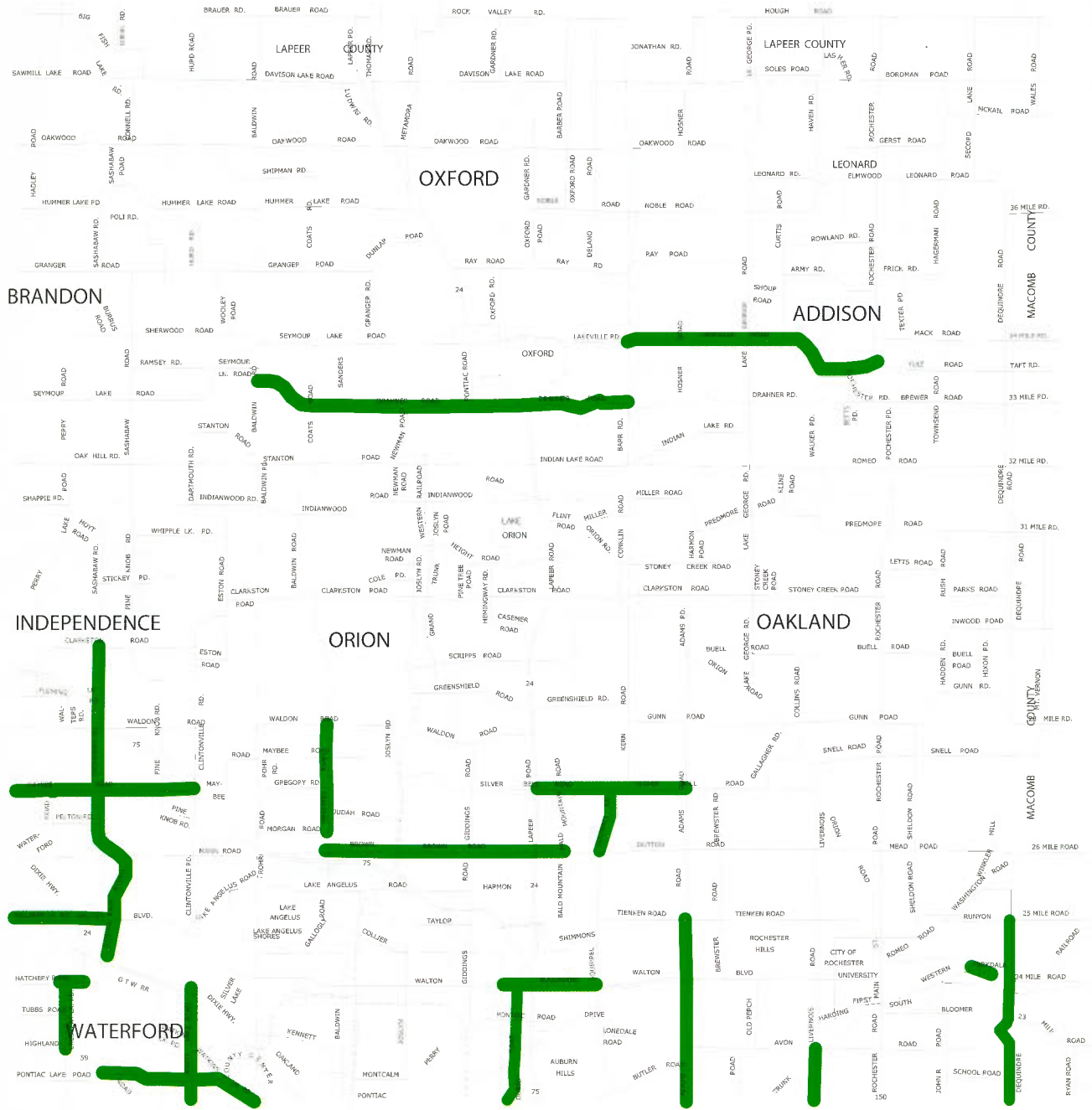
Based on very positive comments received from local officials, the Road Commission for Oakland County renews its commitment to continue the strategic planning process with local communities.

APPENDIX A

CAPACITY IMPROVEMENT NEEDS

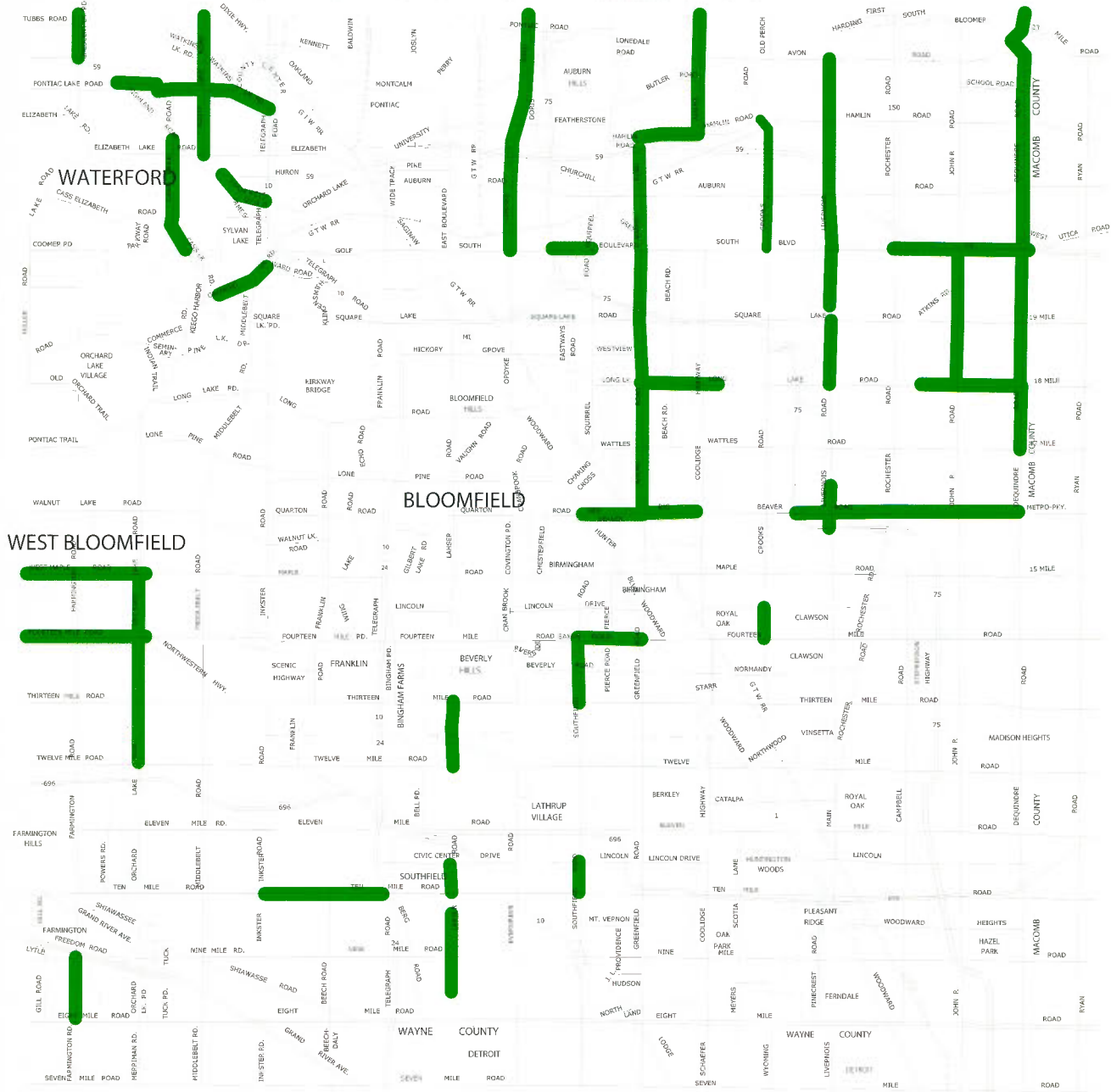
Figure A1	Oakland County	-	Capacity Improvement Needs Northeast Quadrant Map
Figure A2	Oakland County	-	Capacity Improvement Needs Southeast Quadrant Map
Figure A3	Oakland County	-	Capacity Improvement Needs Southwest Quadrant Map
Figure A4	Oakland County	-	Capacity Improvement Needs Northwest Quadrant Map
Table A1	Oakland County	-	Capacity Improvement Needs Cities & Villages from Strategic Planning Meetings (RCOC Jurisdiction Only)
Table A2	Oakland County	-	Capacity Improvement Needs Townships from Strategic Planning Meetings (RCOC Jurisdiction Only)

Figure A1
 CAPACITY IMPROVEMENT NEEDS
 NORTHEAST QUADRANT -- OAKLAND COUNTY



LEGEND
 - CAPACITY IMPROVEMENT (WIDENING)

Figure A2
 CAPACITY IMPROVEMENT NEEDS
 SOUTHEAST QUADRANT -- OAKLAND COUNTY

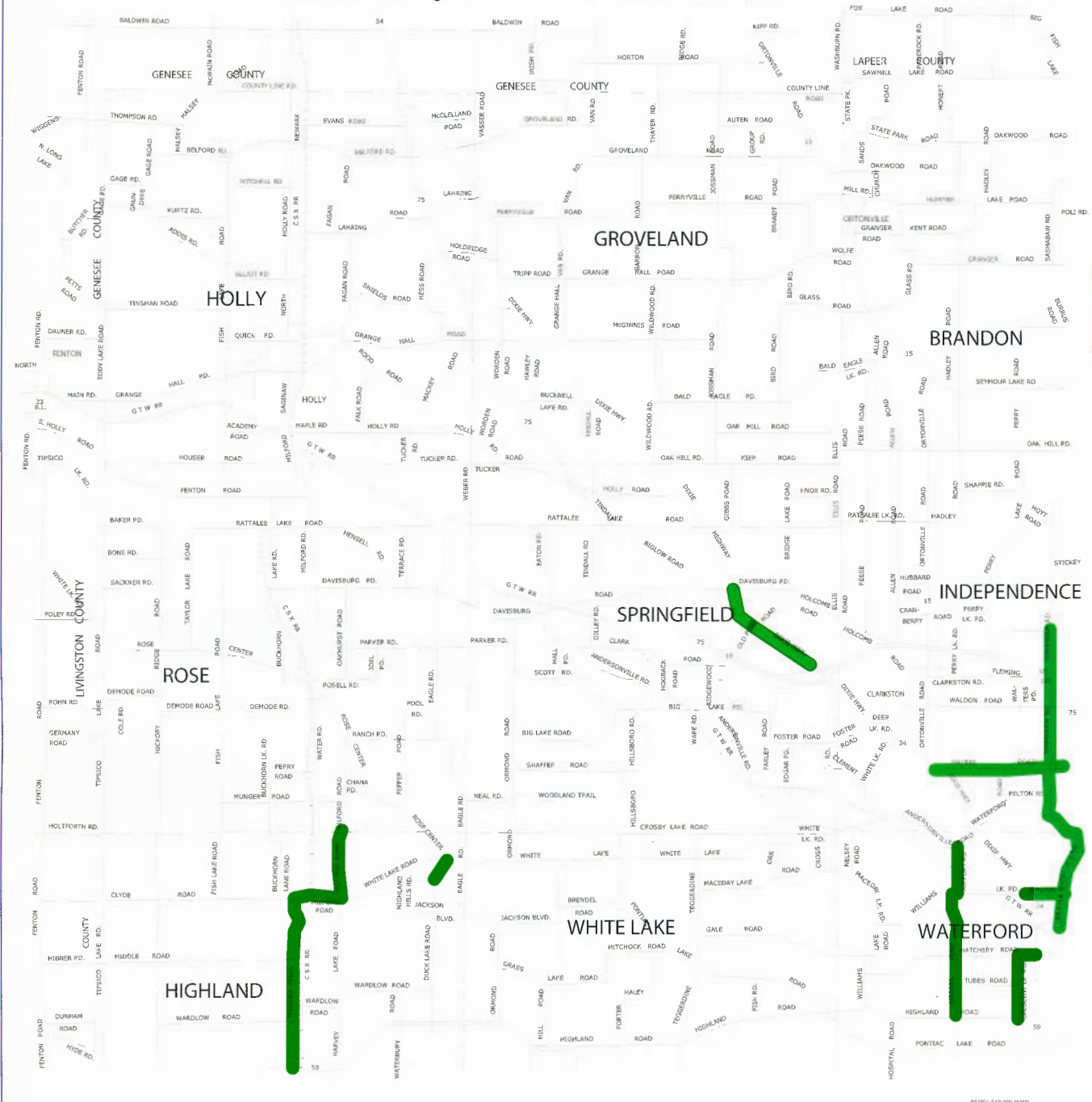


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LEGEND

 - CAPACITY IMPROVEMENT (WIDENINGS)

Figure A4
CAPACITY IMPROVEMENT NEEDS
NORTHWEST QUADRANT -- OAKLAND COUNTY



LEGEND

 - CAPACITY IMPROVEMENT (WIDENINGS)

**Capacity Needs-Cities and Villages
(RCOC Jurisdiction Only)**

Requesting Community	Improvement Category	Project Location	Improvement	00-01 Cost
Auburn Hills	Capacity	Walton Blvd. from Perry St. to Squirrel Rd.	Widen from 2 to 5 lanes	\$7,147,800
Auburn Hills	Capacity	Adams Rd. from South Blvd. to M-59	Widen from 2 to 5 lanes	\$9,530,400
Auburn Hills	Capacity	South Blvd. from I-75 overpass to Squirrel Rd.	Widen from 4 to 5 lanes	\$1,191,614
Auburn Hills	Capacity	Squirrel Rd. from Dutton Rd. to Sliverbell Rd.	Widen from 2 to 4 lanes	\$3,574,841
Auburn Hills	Capacity/Incl Bridge	Opdyke Rd. from South Blvd. To Walton Blvd.	Widen from 2 to 5 lanes	\$19,060,800
Auburn Hills	New Road	Dutton Rd. from M-24 to Bald Mountain Rd.	Construct Dutton Rd. extension	\$9,120,000
Beverly Hills	Capacity	14 Mile Rd. from Southfield Rd. to Greenfield Rd.	Widen from 2 to 3 lanes	\$1,588,818
Beverly Hills	Capacity	Southfield Rd. from 13 Mile Rd. to 14 Mile Rd.	Construct a 4 lane blvd.	\$3,705,000
Birmingham	Capacity	Quarton Rd. from Woodward Ave. to Adams Rd.	Widen from 2 to 5 lanes	\$4,765,200
Clarkston	Capacity	Sashabaw Rd. from Dixie Hwy. to Waldon Rd.	Widen from 2 to 5 lanes	\$19,060,800
Clawson	Capacity	Crooks Rd. from 14 Mile Rd. to Elmwood Ave.	Widen from 4 to 5 lanes	\$794,409
Farmington	Capacity	Farmington Rd. from 8 Mile Rd. to 9 Mile Rd.	Widen from 4 to 5 lanes	\$1,588,818
Farmington Hills	Capacity	Orchard Lake Rd. from 12 Mile Rd. to 14 Mile Rd.	Widen from 2 to 6 lane blvd.	\$19,750,500
Farmington Hills	Capacity	Extend Northwestern Hwy., Via 14 Mile Rd., Maple Rd., Orchard Lake Rd.	Improve capacity with intersection improvements	\$102,600,000
Northville	Capacity	8 Mile Rd. from Beck Rd. to Novi Rd.	Widen from 2 to 5 lanes	\$14,295,600
Novi	Capacity	Haggerty Rd. from 8 Mile Rd. to 14 Mile Rd.	Widen from 2 to 5 lanes	\$25,992,000
Novi	Capacity	Novi Rd. from 9 Mile Rd. to 10 Mile Rd.	Widen from 2 to 5 lanes	\$3,659,900
Novi	Capacity	12 Mile Rd from Dixon Rd. to Meadowbrook Rd.	Widen to boulevard	\$6,785,955
Novi	Capacity w/Grade Sep	Novi Rd. from 10 Mile Rd. to Grand River Ave.	Widen from 2 to 5 lanes with grade separation at the CSX Railroad	\$7,900,200
Novi	Capacity w/Grade Sep	12 Mile Rd. from Beck Rd. to Dixon Rd.	Widen from 2 to 5 lanes with grade separation at the CSX Railroad	\$9,997,800
Pontiac	Capacity	Voorheis Rd. from M-59 to Telegraph Rd.	Widen from 2 to 5 lanes	\$5,415,000
Rochester	Capacity/Incl Bridge	Bridge over Stony Creek on Parkdale Rd.	Re-align and widen curve	\$7,125,000
Rochester Hills	Capacity	Adams Rd. from Auburn Rd. to Tienken Rd.	Widen from 2 to 4 lane blvd.	\$30,096,000
Rochester Hills	Capacity/Incl Bridge	Livernois Rd. from South Blvd. to Avon Rd. (including bridge over M-59)	Widen from 2 to 5 lanes	\$16,575,600
Rochester Hills	Capacity	Dequindre Rd. from South Blvd. to Runyon Rd.	Widen from 2 to 5 lanes	\$23,826,000
Rochester Hills	Capacity/Incl Bridge	Crooks Rd. from South Blvd. to Hamlin Rd. (including M-59 interchange and bridge).	Widen from 2 to 4 lane blvd.	\$27,588,000
South Lyon	Capacity	Pontiac Trail from 8 Mile Rd. to 11 Mile Rd.	Widen from 2 to 5 lanes	\$14,295,600
South Lyon	Capacity	10 Mile Rd. from Dixboro Rd. to Martindale Rd.	Widen from 2 to 5 lanes	\$7,147,800
Southfield	Capacity	Lahser Rd. from 10 Mile Rd. to Civic Center Dr.	Widen from 2 to 5 lanes	\$2,382,600
Southfield	Capacity	Southfield Rd. from 10 Mile Rd. to Lincoln Dr.	Widen to 6 lane blvd.	\$7,524,000
Southfield	Capacity	Lahser Rd. from 8 1/2 Mile Rd. to 9 Mile Rd.	Widen from 2 to 5 lanes	\$2,382,600
Southfield	Capacity	Lahser Rd. from 9 Mile Rd. to Evans Branch.	Widen from 2 to 5 lanes	\$2,052,000
Southfield	Capacity	10 Mile Rd. from Inkster Rd. to Telegraph Rd.	Widen from 2 to 5 lanes	\$8,863,272
Southfield	Capacity	Lahser Rd. from 12 Mile Rd. to 13 Mile Rd.	Widen from 2 to 5 lanes	\$4,765,200
Sylvan Lake	Capacity	Orchard Lake Rd. from keego harbor city limits to Pontiac city limits	Widen from 4 to 5 lanes	\$2,270,994
Troy	Capacity	Big Beaver Rd. from I-75 to Rochester Rd.	Widen from 4 to 6 lane blvd.	\$7,524,000
Troy	Capacity	Big Beaver Rd. from Adams Rd. to west of Coolidge Hwy.	Widen from 4 to 5 lanes	\$1,588,818
Troy	Capacity	Crooks Rd. from Homestead Dr. to South Blvd.	Widen from 2 to 4 lane blvd.	\$7,524,000
Troy	Capacity	Long Lake Rd. from Carnaby St. to Dequindre Rd.	Widen from 2 to 5 lanes	\$8,148,492
Troy	Capacity	Dequindre Rd. from Wattles Rd. to Long Lake Rd.	Widen from 2 to 5 lanes	\$19,060,800
Troy	Capacity	Dequindre Rd. from Long Lake Rd. to South Blvd.	Widen from 2 to 5 lanes	\$9,630,000
Troy	Capacity	Big Beaver Rd. from Rochester Rd. to Dequindre Rd.	Widen from 4 to 6 lane blvd.	\$20,390,040
Troy	Capacity	Livernois Rd. from Wattles Rd. to Long Lake Rd.	Widen from 4 to 5 lanes	\$4,500,000
Troy	Capacity	Livernois Rd. from Long Lake Rd. to Square Lake Rd.	Widen from 2 to 5 lanes	\$14,295,600
Troy	Capacity	Livernois Rd. from Square Lake Rd. to South Blvd.	Widen from 5 to 6 lane blvd.	\$1,250,865
Troy	Capacity	Livernois Rd. from I-75 to Town Center Dr.	Widen from 5 to 6 lane blvd.	\$3,850,000
Troy	Capacity	Long Lake Rd. from Adams Rd. to east of Coolidge Hwy.	Widen from 2 to 5 lanes	\$8,339,100
Troy	Capacity	John R Rd. from Long Lake Rd. to South Blvd.	Widen from 2 to 5 lanes	\$9,530,400
Troy	Capacity	Adams Rd. from Big Beaver Rd. to South Blvd.	Widen from 2 to 5 lanes	\$19,060,800
Troy	Capacity	South Blvd. from Rochester Rd. to Dequindre Rd.	Widen from 2 to 5 lanes	\$27,209,292
Walled Lake	Capacity	West maple Rd. from Pontiac Trail to the east Walled Lake city limits	Widen from 2 to 5 lanes	\$3,383,292
Wixom	Capacity	Grand River Ave. from Napier Rd. to Wixom Rd.	Widen from 2 to 5 lanes	\$5,432,328
Wixom	New Road	Wixom Rd. from south of Pontiac Trail to north of Pontiac Trail	Construct new 5 lane underpass road	\$11,115,000
Wolverine Lake	Capacity	S. Commerce Rd. from Pontiac Trail to Wolverine Dr.	Widen from 2 to 5 lanes	\$3,383,292
Total				\$619,636,239

Table A2

**Capacity Needs-Townships
(RCOC Jurisdiction Only)**

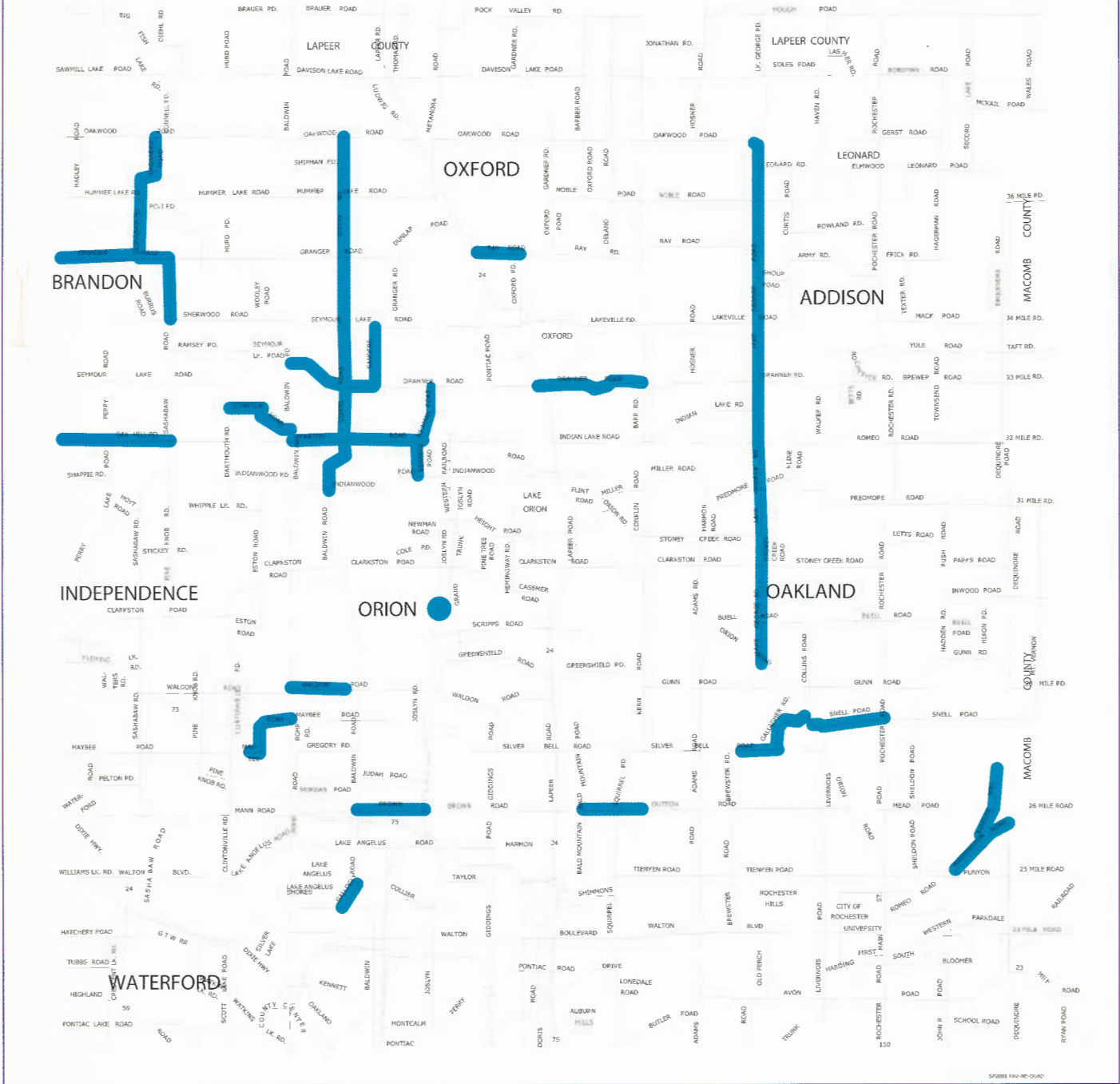
Requesting Community	Improvement Category	Project Location	Improvement	00-01 Cost
Addison	Capacity	Lakeville Rd. from Barr Rd. to Rochester Rd.	Widen from 2 to 5 lanes	\$27,913,730
Bloomfield	Capacity	Various segments	Widen from 2 to 5 lanes	\$24,583,674
Commerce	Capacity	Haggerty/Union Lake Rd. from 14 Mile Rd. to Cooley Lake Rd.	Widen from 2 to 5 lanes	\$28,955,800
Commerce	Capacity	Commerce Rd. from Carroll Lake Rd. to Wise to Bogie Lake to end of Commerce Rd.	Widen from 2 to 5 lanes	\$24,899,750
Commerce	Capacity	Maple Rd. from Beck Rd. to Ladd Rd.	Widen from 2 to 5 lanes	\$5,163,352
Commerce	Capacity	Pontiac Trail from city limits to Haggerty Rd.	Widen from 2 to 5 lanes	\$5,622,859
Commerce	Capacity	Commerce Rd. from Bogie Lake Rd. west to Duck Lake Rd.	Widen from 2 to 5 lanes	\$15,521,785
Commerce	Capacity	South Commerce Rd. from Oakley Park Rd. to Commerce Rd.	Widen from 2 to 5 lanes	\$7,285,424
Commerce	New Road	Extend Benstein Rd. from Sleeth Rd. to Bogie Lake Rd.	Construct Benstein extension	\$26,635,985
Highland	Capacity	Milford Rd. from Rowe Rd. to north township line	Add capacity and improve safety	\$37,416,160
Highland	New Road	Extend Duck Lake Rd. north to White Lake Rd.	Construct Duck Lake extension	\$26,052,089
Independence	Capacity	Sashabaw Rd. from Maybee Rd. to Clarkston Rd.	Widen from 2 to 5 lanes	\$13,912,920
Independence	Capacity	Maybee Rd. from Dixie Hwy. to Clintonville Rd.	Widen from 2 to 5 lanes	\$22,779,700
Milford	Capacity	Milford Rd. from Pontiac Trail to General Motors Rd.	Widen from 2 to 5 lanes	\$18,142,857
Milford	Capacity	Milford Rd. from north village limits to Rowe Rd.	Widen from 2 to 5 lanes	\$12,578,950
Oakland	Capacity	Silverbell Rd. from Adams Rd. to M-24	Widen from 2 to 5 lanes	\$14,662,900
Orion	Capacity	Baldwin Rd. from Morgan Rd. to Waldon Rd.	Widen to 4 lane blvd.	\$10,715,000
Orion	Capacity	Brown Rd. from Baldwin Rd. to M-24	Widen from 2 to 5 lanes	\$11,575,000
Oxford	Capacity	Drahner Rd. from west township line to east township line	Widen from 2 to 3 lanes	\$13,295,685
Springfield	Capacity	Dixie Hwy. from Davisburg Rd. to I-75	Widen/resurface w/ safety improvements	\$14,875,550
Waterford	Capacity	Walton Blvd. from Sashabaw Rd. to Dixie Hwy.	Widen from 2 to 5 lanes	\$4,826,952
Waterford	Capacity	Williams Lake Rd. from Maceday Drive to Dixie Hwy.	Widen from 2 to 5 lanes	\$6,693,541
Waterford	Capacity	Williams Lake Rd. from M-59 to Maceday Lake Rd.	Widen from 2 to 5 lanes	\$9,274,334
Waterford	Capacity	Cass Lake Rd. from township line to M-59	Widen from 2 to 5 lanes	\$12,685,000
Waterford	Capacity	Sashabaw Rd. from Dixie Hwy. to I-75	Widen from 2 to 5 lanes	\$13,377,827
Waterford	Capacity	Crescent Lake Rd. from M-59 to Hatchery Rd.	Widen from 2 to 5 lanes	\$8,754,659
Waterford	Capacity	Airport Rd. from M-59 to Andersonville Rd.	Widen from 2 to 5 lanes	\$20,205,684
Waterford	Capacity	Pontiac Lake Rd. from M-59 east	Widen from 2 to 5 lanes	\$13,941,526
Waterford	Capacity	Cooley Lake Rd. from Williams Lake Rd. to Lochaven Rd.	Widen from 2 to 5 lanes	\$10,736,820
Waterford	Capacity	Scott Lake Rd. from Elizabeth Lake Rd. to Dixie Hwy.	Widen from 2 to 5 lanes	\$16,464,807
Waterford	Capacity	Hatchery Rd. from Crescent Lake Rd. to Frembes Rd.	Widen from 2 to 5 lanes	\$2,924,963
West Bloomfield	Capacity	Hiller Rd. from Commerce Rd. to Cooley Lake Rd.	Widen from 2 to 3 lanes	\$4,710,563
Total				\$487,185,846

APPENDIX B

GRAVEL ROAD PAVING NEEDS

Figure B1	Oakland County	-	Gravel Road Paving Needs Northeast Quadrant Map
Figure B2	Oakland County	-	Gravel Road Paving Needs Southeast Quadrant Map
Figure B3	Oakland County	-	Gravel Road Paving Needs Southwest Quadrant Map
Figure B4	Oakland County	-	Gravel Road Paving Needs Northwest Quadrant Map
Table B1	Oakland County	-	Gravel Road Paving Needs Cities & Villages from Strategic Planning Meetings (RCOC Jurisdiction Only)
Table B2	Oakland County	-	Gravel Road Paving Needs Townships from Strategic Planning Meetings (RCOC Jurisdiction Only)

Figure B1
 GRAVEL ROAD PAVING NEEDS
 NORTHEAST QUADRANT -- OAKLAND COUNTY



LEGEND

- PAVE GRAVEL
- PAVE APPROACH

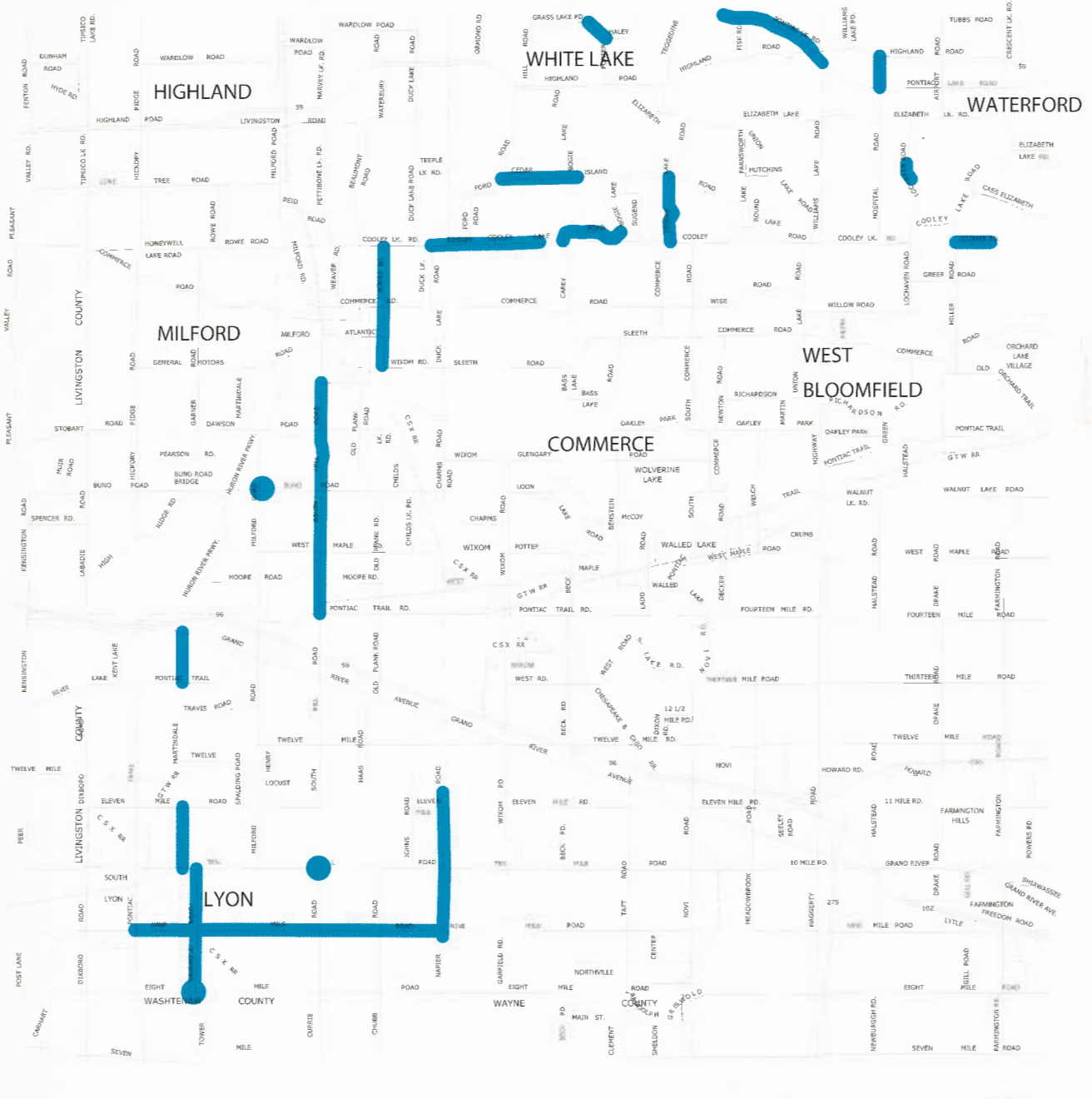
Figure B2
 GRAVEL ROAD PAVING NEEDS
 SOUTHEAST QUADRANT -- OAKLAND COUNTY



LEGEND

-  - PAVE GRAVEL
-  - PAVE APPROACH

Figure B3
 GRAVEL ROAD PAVING NEEDS
 SOUTHWEST QUADRANT -- OAKLAND COUNTY

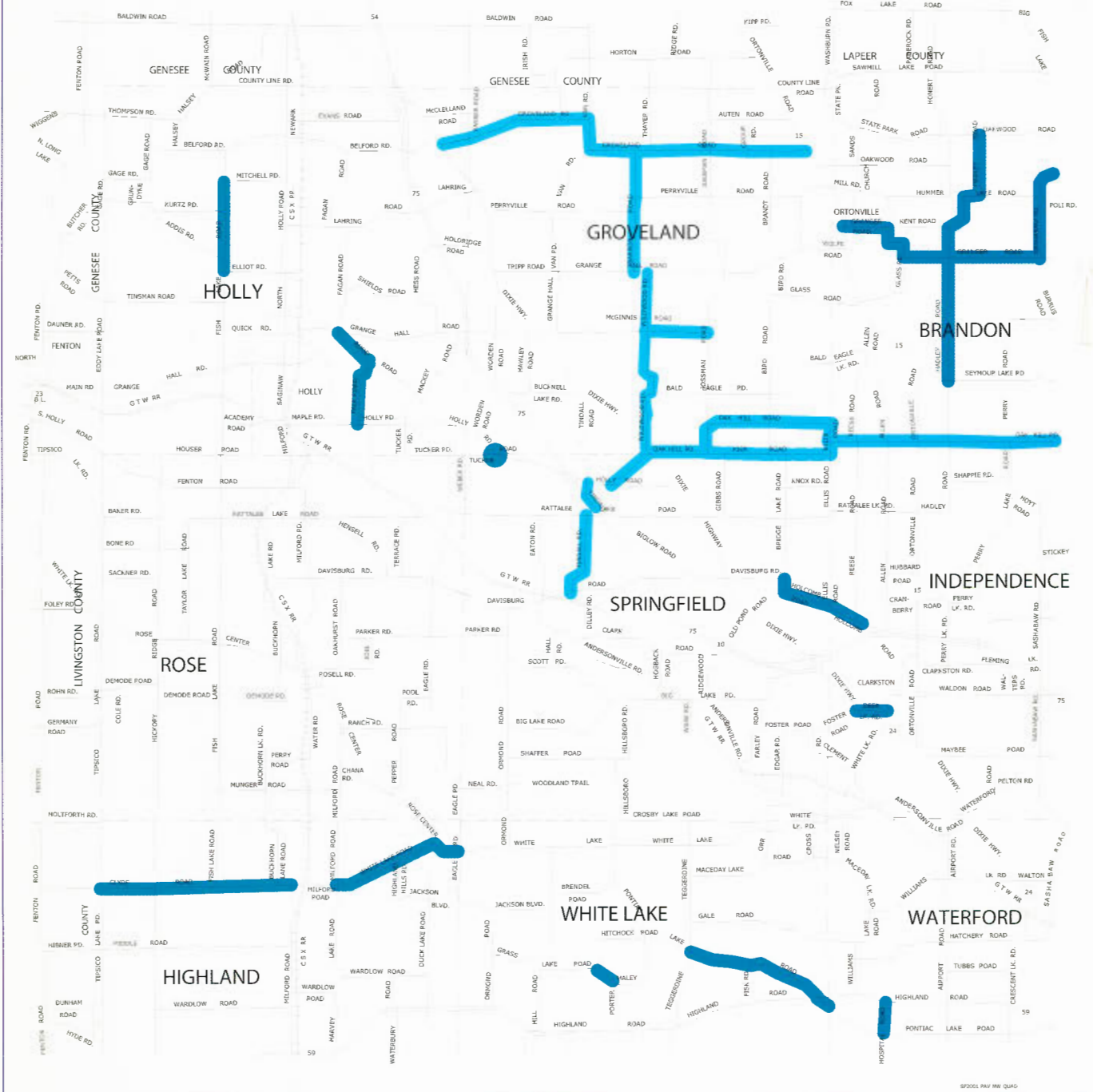


LEGEND

-  - PAVE GRAVEL
-  - PAVE APPROACH

10/2009 PAV 54/ QND

Figure B4
 GRAVEL ROAD PAVING NEEDS
 NORTHWEST QUADRANT -- OAKLAND COUNTY



LEGEND

- PAVE GRAVEL
- PAVE APPROACH

Table B1

**Gravel Road Paving Needs-Cities and Villages
(RCOC Jurisdiction Only)**

Requesting Community	Improvement Category	Project Location	Improvement	00-01 Cost
Milford	Pave gravel	South Hill Rd. from village limits to Pontiac Trail	Pave gravel	\$4,000,000
Oxford	Pave gravel	Coats Rd. from Baldwin Rd. to Oakwood Rd.	Pave gravel	\$5,011,875
Oxford	Pave gravel	Stanton Rd. from Baldwin Rd. to Newman Rd.	Pave gravel	\$2,361,250
Oxford	Pave gravel	Lake George Rd. from Orion Rd. to north county line	Pave gravel	\$8,250,000
Pontiac	Pave gravel	Gallogly Rd. from Newark Ave. to Baldwin Rd.	Pave gravel	\$732,188
Rochester Hills	Pave gravel	Various segments	Pave gravel	\$6,000,000
South Lyon	Pave gravel	9 Mile Rd. from Pontiac Trail to Griswold Rd.	Pave gravel	\$1,200,000
South Lyon	Pave gravel	Griswold Rd. from 8 Mile Rd. to 10 Mile Rd.	Pave gravel	\$2,400,000
Total				\$29,955,313

Table B2

**Gravel Road Paving Needs-Townships
(RCOC Jurisdiction Only)**

Requesting Community	Improvement Category	Project Location	Improvement	00-01 Cost
Addison	Pave Gravel	Lake George Rd. from Orion Rd. to north county line	Pave Gravel	\$15,555,645
Brandon	Pave Gravel	Sashabaw Rd. from Sherwood Rd. to Granger Rd.	Pave Gravel	\$19,591,738
Brandon	Pave Gravel	Granger Rd. from M-15 to Sashabaw Rd.	Pave Gravel	\$6,560,273
Brandon	Pave Gravel	Stanton Rd. from Dartmouth Rd. to Baldwin Rd.	Pave Gravel	\$1,937,750
Brandon	Pave Gravel	Hadley Rd. from Seymour Lake Rd. to Oakwood Rd.	Pave Gravel	\$1,708,038
Countywide	Pave Gravel	Various segments	Pave Gravel	\$10,000,000
Groveland	Pave Gravel	Oakhill Rd. from Holly Rd. to Jossman Rd.	Pave Gravel	\$5,974,250
Groveland	Pave Gravel	Groveland Rd. from Dixie Hwy. to M-15	Pave Gravel	\$9,265,435
Groveland	Pave Gravel	Wildwood Rd. from Oakhill Rd. to Grange Hall Rd.	Pave Gravel	\$4,959,375
Groveland	Pave Gravel	Barron Rd. from Grange Hall Rd. to Groveland Rd.	Pave Gravel	\$1,714,285
Groveland	Pave Gravel	McGuinness Rd from Grange Hall Rd. to Jossman Rd.	Pave Gravel	\$4,940,998
Highland	Pave Gravel	White Lake Rd. from Milford Rd. to Rose Center Rd.	Pave Gravel	\$3,178,025
Highland	Pave Gravel	Clyde Rd. from Livingston County line to Buckhorn Lake Rd.	Pave Gravel	\$5,061,438
Highland	Pave Gravel	All principal collectors	Pave Gravel	\$3,737,500
Holly	Pave Gravel	Fish Lake Rd. from Elliott Rd. to Mitchell Rd.	Pave Gravel	\$2,636,375
Holly	Pave Gravel	Falk Rd. from E. Holly Rd. to Rood Rd.	Pave Gravel	\$3,258,754
Holly	Pave Gravel	Rood Rd. from Falk Rd. to Grange Hall Rd.	Pave Gravel	\$3,360,520
Independence	Pave Gravel	Holcomb Rd. from I-75 to township line	Pave Gravel	\$1,434,050
Independence	Pave Gravel	Maybee Rd. from Clintonville Rd. to east township line	Pave Gravel	\$1,671,806
Independence	Pave Gravel	Deer Lake Rd. from Dixie Hwy. to White Lake Rd.	Pave Gravel	\$875,631
Independence	Pave Gravel	Oak Hill Rd. from west township line to Sashabaw Rd.	Pave Gravel	\$6,782,125
Lyon	Pave Gravel	Martindale Rd. from Grand River Ave. to Pontiac Trail	Pave Gravel	\$1,666,235
Lyon	Pave Gravel	Martindale Rd. from 10 Mile Rd. to 11 Mile Rd.	Pave Gravel	\$1,604,319
Lyon	Pave Gravel	Old Plank Rd. from Grand River Ave. to Pontiac Trail	Pave Gravel	\$647,445
Lyon	Pave Gravel	9 Mile Rd. from west township line to east township line	Pave Gravel	\$9,819,585
Lyon	Pave Gravel	Griswold Rd. @ 8 Mile Rd.	Pave Gravel	\$373,750
Lyon	Pave Gravel	Currie Rd. @ 10 Mile Rd.	Pave Gravel	\$345,000
Lyon	Pave Gravel	Various approaches	Pave Gravel	\$975,000
Milford	Pave Gravel	South Hill Rd. from Pontiac Trail to village limits	Pave Gravel	\$3,628,042
Milford	Pave Gravel	Burns Rd. from Wixom Rd. to Commerce Rd.	Pave Gravel	\$1,629,864
Milford	Pave Gravel	Burns Rd. from Commerce Rd. to Cooley Lake Rd.	Pave Gravel	\$2,205,946
Milford	Pave Gravel	Buno Rd. @ South Milford Rd.	Pave Gravel	\$420,000
Oakland	Pave Gravel	Silverbell Rd. from M-24 to Gallagher Rd.	Pave Gravel	\$6,467,898
Oakland	Pave Gravel	Snell Rd. from Orion Rd. to Rochester Rd.	Pave Gravel	\$5,758,200
Oakland	Pave Gravel	Gallagher Rd. from Silverbell Rd. to Orion Rd.	Pave Gravel	\$1,485,694
Orion	Pave Gravel	Brown Rd. from Baldwin Rd. to Joslyn Rd.	Pave Gravel	\$2,203,485
Orion	Pave Gravel	Dutton Rd. from Bald Mountain Rd. to east township line	Pave Gravel	\$1,803,585
Orion	Pave Gravel	Joslyn Rd. @ Marina Pointe Subdivision	Pave Gravel	\$100,000
Orion	Pave Gravel	Cocklin Rd. from south of Indian Lake Rd. to Stoney Creek Rd.	Pave Gravel	\$1,528,500
Orion	Pave Gravel	Waldon Rd. from west of Baldwin Rd. to township line	Pave Gravel	\$1,920,625
Orion	Pave Gravel	Maybee Rd. west of Baldwin Rd. to township line	Pave Gravel	\$1,525,000
Oxford	Pave Gravel	Sanders Rd. from Drahner Rd. to Seymour Lake Rd.	Pave Gravel	\$1,636,641
Oxford	Pave Gravel	Drahner Rd. from M-24 to east township line	Pave Gravel	\$1,542,857
Oxford	Pave Gravel	Drahner Rd. from Baldwin Rd. to Sanders Rd.	Pave Gravel	\$2,645,020
Oxford	Pave Gravel	Ray Rd. from M-24 to Oxford Rd.	Pave Gravel	\$1,532,635
Oxford	Pave Gravel	Newman Rd. from Indianwood Rd. to Drahner Rd.	Pave Gravel	\$1,574,511

Table B2

Gravel Road Paving Needs-Townships
(RCOC Jurisdiction Only)

Requesting Community	Improvement Category	Project Location	Improvement	00-01 Cost
Springfield	Pave Gravel	Holcomb Rd. from Bridge Lake Rd. to township line	Pave Gravel	\$1,584,897
Springfield	Pave Gravel	Tindall Rd. from Davisburg Rd. to East Holly Rd.	Pave Gravel	\$3,015,310
Springfield	Pave Gravel	Tucker Rd. @ East Holly Rd.	Pave approach	\$400,000
Waterford	Pave Gravel	Hospital Rd. from Pontiac Lake Rd. to M-59	Pave Gravel	\$1,189,527
Waterford	Pave Gravel	Remaining segment of Lochaven Rd.	Pave Gravel	\$602,545
Waterford	Pave Gravel	Coomer Rd. from Hiller Rd. east	Pave Gravel	\$1,269,850
White Lake	Pave Gravel	Oxbow Lake Rd. from Cedar Island Rd. to Cooley Lake Rd. and north to Teggerdine Rd.	Pave Gravel	\$3,778,524
White Lake	Pave Gravel	Cedar Island Rd. from Bogie Lake Rd. to Ford Rd.	Pave Gravel	\$2,100,561
White Lake	Pave Gravel	Cooley Lake Rd. from Rippleway Rd. to Towering Oaks	Pave Gravel	\$782,856
White Lake	Pave Gravel	Porter Rd. from Haley Rd. to Grass Lake Rd.	Pave Gravel	\$1,158,429
White Lake	Pave Gravel	Pontiac Lake Rd. from M-59 to Teggerdine Rd.	Pave Gravel	\$4,335,237
White Lake	Pave Gravel	Pontiac Lake Rd. from Williams Lake Rd. to M-59	Pave Gravel	\$629,870
Total				\$190,091,453

ROAD COMMISSION for OAKLAND COUNTY

DEPARTMENT DIRECTORS

David F. Allyn	Traffic/Safety
Brian L. Blaesing	Planning & Development
Thomas G. Blust	Engineering
Patrick J. Carty	Legal
James W. Dunleavy	Highway Maintenance
Dennis A. Lockhart	Finance
William M. McEntee	Permits & Environmental Concerns
Thomas H. Meszler	Central Operations
Michael E. Richardson	Citizen Services
Doris A. Webster	Human Resources



ROAD COMMISSION **for OAKLAND COUNTY**

**Larry P. Crake
Chairman**

**Richard G. Skarritt
Vice Chairman**

**Rudy D. Lozano
Commissioner**

Brent O. Bair - Managing Director

**Gerald M. Holmberg - Deputy Managing Director
County Highway Engineer**

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