

CITY OF MILWAUKIE  
PLANNING COMMISSION MINUTES  
TUESDAY, APRIL 8, 1997

COMMISSIONERS PRESENT

Michael Smith, Chair  
Bryan Cosgrove  
Tim Havel  
Terry LaRocque  
Pat Lent  
Chuck Stoudt

COMMISSIONERS ABSENT

None

STAFF PRESENT

Maggie Collins,  
Com. Dev. Dir.  
Susan Heiser,  
Senior Planner  
Dan Pava,  
Senior Planner  
Stacy Lawson,  
Assist. Planner  
Shirley Richardson,  
Hearings Report  
OTHERS PRESENT  
Ransford McCourt,  
Consultant

1.0 CALL TO ORDER

The meeting was called to order at 6:40 p.m.

2.0 PROCEDURAL QUESTIONS -- None.

3.0 CONSENT AGENDA

3.1 Planning Commission Minutes -- March 25, 1997

**Bryan Cosgrove** moved to approve the minutes of March 11, 1997, as corrected. **Pat Lent** seconded. MOTION CARRIED 5-0 with 1 abstention. Chuck Stoudt was not at that meeting.

4.0 PUBLIC COMMENT -- None.

5.0 PUBLIC HEARINGS

- 5.1 Applicant: City of Milwaukie  
Property Owner: N/A  
Location: N/A  
Proposal: Lake Road Multimodal Connections Plan  
File Number: CPA-97-02

Chair Smith opened the public hearing on CPA-97-92, Lake Road Multimodal Plan. He then explained the hearing format. He asked if there were any conflicts of interest or ex-parte contacts to declare. There were none. He asked if any Commissioners visited the site; five hands were raised. None of the Commissioners who raised their hands noticed anything different from what is stated in the Staff Report for this Application. No one in the audience challenged the impartiality of any Commission member or the jurisdiction of the Planning Commission to hear this matter.

STAFF REPORT

Susan Heiser reviewed the Staff Report with the Commissioners. She explained that in February, 1996, the City received a Transportation Growth Management Grant from ODOT to develop a plan to address safety, circulation, and Multimodal accessibility needs within the Lake Road area. Over the last year, City Staff and Randy McCourt from DKS, Associates, have been working with the Lake Road Multimodal citizen's group to develop a plan which is now before the Commission. Adoption of the Lake Road Multimodal Connection Plan requires that the Planning Commission first hold a public hearing to receive comments and public testimony on the draft Plan. Second, to approve a final Lake Road Multimodal Plan, and third amend the City of Milwaukie Comprehensive Plan by adopting the Lake Road Multimodal Connections Plan as an ancillary document.

Lake Road is an arterial of local and regional significance. Through time it has served as a key east/west connector from areas west of Milwaukie to areas east of Milwaukie. With the completion of the Milwaukie Expressway, traffic levels have decreased; however, it continues to serve as a transit route and a primary link between the City's Regional Center, the Oak Grove Community, and commercial areas to the east of Milwaukie.

Historically, Lake Road has also been a residential neighborhood. There are numerous single-family residences, several schools and churches near or with frontage along Lake

Road. There are also emerging residential areas served by cul-de-sacs which rely on Lake Road as their primary route for local access. Lake Road's function as an east/west regional route directly conflicts with its residential setting. As a result, issues and concerns regarding pedestrian, bicyclist, and motorist safety have continually been identified by the Community.

The Plan recommends many immediate improvements which can be made within the next three years with little cost or planning. It also identifies long-range improvements, which will require a funding source for construction and Plan development. Access management and local road connectivity improvements are recommended which can be implemented during City review of individual developments.

The Plan has been reviewed by the Lake Road Neighborhood, the Technical Advisory Committee, and the Transportation and Traffic Safety Board. A majority of the comments received prior to the March 28th deadline, have been incorporated into the final draft Plan. The comments received after this date, have been summarized in Exhibit 4 of the Report. Some of the comments that are not shown are of editorial nature and they will be addressed in the final revised draft Plan.

Staff recommends that the Planning Commission review comments and determine if additional revisions should be made to the Plan. The Planning Commission must also decide on comprehensive amendment findings. The Lake Road Multimodal Plan has been reviewed for conformance with the Comprehensive Plan and found to comply with all relevant policies and objectives. Adoption of the Lake Road Plan will provide specific direction and project priorities for transportation improvements within the Lake Road area which will provide for improved access, circulation, and safety of roadways, improved transit facilities, a coordinated intergovernmental review, and improve pedestrian safety in residential areas.

Staff recommends that the above findings demonstrate that the proposed amendment meets the required criteria for amendments to the Comprehensive Plan. Further, following a determination on the Final Draft Plan, Staff suggests that the Planning Commission make a recommendation to City Council for adoption of the Lake Road Multimodal Connection Plan as an ancillary document of the Comprehensive Plan.

One additional comment was received by the public after the Staff Report had gone out. A copy of this comment was submitted to the Commission. **Susan Heiser** then reviewed some of the comments and responses in Exhibit 4.

Speaking: Randy McCourt, DKS & Associates

**Mr. McCourt** summarized the key elements of the Plan. These key elements are broken down in Chapter 6 of the Report by mode. They include the elements from bicycle, pedestrian, automobile, neighborhood traffic management, and provide background as the key elements of what was accomplished. The original goal set out for the project was to develop a safe and accessible route for all modes of transportation along Lake Road. To that end, particularly bicycle and pedestrian improvements, were called out.

First in terms of improvements, short-term projects associated with modifications to the street were identified. Then plan development over a longer period of time as funds become available. The purpose being to have a plan in place, ready to go when funds are available to design, and work in the details of the design. There is also the need to have the concepts in place, so there is an opportunity to work with individual developments as they come on-line.

Bicycles. Short term projects are signage, care and cleaning of the bike lanes as they exist today. In the long term, developing six-foot bike lanes that meet the standards of ODOT, Clackamas County, Metro, and all standards that are used for bicycle facilities in the metropolitan region.

Pedestrians. A series of improvements; coordinating with the school district on improving signage and different aspects of pedestrian crossings to the schools. Utilizing new traffic control equipment through the update of the manual on uniform traffic control devices and to work with the School District. Particularly in the southeastern corners link the neighborhood by an all-weather road that would allow people to traverse the area. Additionally, creating linkages near any new cul-de-sacs to the roadway. The key element is to make sure that sidewalks are provided as development occurs to Lake Road and make sure that the existing sidewalks emphasized for pedestrian accessibility.

Providing sidewalks on both sides of the street over the long term as the road is rebuilt such that the entire stretch from the downtown area to the eastern City limit will have sidewalks on each side of the street.

Transit. There are two elements, one is maintaining good service and trying to work with Tri-Met to improve service and off-peak times. On Plan development, making sure that all transit amenities (landing pads, transit shelters) are provided along the street at current bus stops to provide better services to transit users.

Street. There are several elements, some of which would be addressed in the short term that would have immediate impact. The speed zone requirements that was reviewed was where that transition occurs. Historically, the speed zone along Lake Road has developed over time, dating back 20-30 years when the roadway looked different than it does today and was being used different from today. These limits were consistent over the past years. The boundaries changed at the freeway ramp, not at Vernie Road where the existing 40 mile an hour changes. The Plan is recommending that the 30 miles an hour speed zone be moved further to the west.

Posting of Through Truck Restrictions. Many of the residents mentioned that in the past there has been truck restriction signs at Highway 224 heading west that have since disappeared, not maintained, or not in use. The intent is to reinstitute the signs consistent with the Transportation System Plan. One issue that came up with regard to safety is the sight distance at roads. Some of the cross-streets, just because of the slope and vegetation that has grown up within the public right-of-way, has blocked sight distance and the intent is to implement standards for sight distance triangles. No big trees will be planted that may have to come out later. The conditions will require adjustments for safety purposes.

Enforcement. This issue was raised at many of the meetings and it was believed that greater enforcement could be done. Staff spoke with Police Department, enforcement agencies, and the City about past practices. A level of enforcement change was practical not necessarily in the AM/PM peak hour, but on Saturdays and other times where people in the neighborhood and immediate vicinity are commonly encountering this roadway. Giving a greater knowledge within the community of the enforcement level on weekends was considered a priority in the next 12 months.

Plan Development. The original discussion was to come up with a roadway design that would be a three-lane roadway, continuously from downtown to the eastern City limits. After reviewing the operation of the street, the street could not be a continuous three-lane roadway. The warrants for left-turn lanes were not met. On the eastern section, the volumes would meet the requirement. As you move further to the east, many of the developments access many more roads where there was a higher need for

left-turns. The demarcation line where the absolute warrants were made was at Where Else Lane. If local access/circulation was provided in the area south of Lake Road, the left-turn lane would not have to be extended further to the west because people can get into the neighborhood via left-turn lane and then use the local streets within the neighborhood to gain access to their homes. If the interconnect was not provided, the three-lane section would have to be extended much further to the west to the school. One key concerns was keeping the cross-section of the roadway near Rowe Junior High as narrow as possible to keep the crossing distance for kids narrow and to keep emphasis on slow speeds in that area.

The end recommendation was for a two-lane roadway from the downtown area up to the Oatfield intersection. In the vicinity of the Oatfield Intersection, a three-lane roadway would be provided. From that point further to the east to Where Else Lane, it would narrow down to two lanes in front of Rowe Junior High and then open up to three lanes as it proceeds further east all the way down to Highway 224. In addition, at two locations along the roadway, at the eastern and western entrance, a median will be placed in the roadway, approximately 9-10 feet wide that would be used to break up the straight visual picture of the street as an open area. This will provide a tree canopy and narrow the perspective of the street to help to promote slower driving in the neighborhood area.

One of the things that came out of the TSP was the need for intersection improvements at Oatfield and Lake Road. The northbound right-turn movement is difficult. It is a sharp corner; sharp enough that the school buses are routed away from it. This curve was reviewed and found that it needed to be improved and a right-turn lane provided to assure that people can make that turn without cutting through the neighborhoods. This was included into the plan development of the project.

Neighborhood Traffic Management. It was determined that selected enforcement was an immediate area where improvements could be made. Plan development, over time, will allow for the use of 11 and 12 foot lanes in the design cross section, rather than 12 and 14 foot lanes. This is not intended to be a truck route; it is mostly for autos. These land widths are fully acceptable within ASTRO standards for the type of road that Lake Road will be.

For the long term, one concern was something that would keep people in line in terms of speed. It is obvious that the speed is well over the 40 miles an hour and 30 mile an hour posted speeds on a regular basis. With tests being done in terms of photo

enforcement, this is a perfect test case particularly in the vicinity of Oatfield Road and Lake Road. Photo enforcement and the blend between use of the technique for red-light runners and for speed enforcement on a permanent basis should alleviate the problem. The speed will not go down to 25 miles per hour, but there is no need to be going over 40 miles per hour.

Working over the next several years, the legislature is in the process of reviewing the photo enforcement demonstration projects. If those are extended, consideration can be given to a possible permanent placement and how that will be implemented working with the Milwaukie Police Department.

One key issue is that neighborhood traffic management went beyond Lake Road and looked at the neighborhoods. Along 32nd and 33rd Streets, concerns were raised next to 34th Avenue that there was through traffic in the neighborhood and future connectivity. The general perimeters under which that area would change over time were outlined, and in the next 20 years there will be changes to Highway 224 and the access to Highway 224 as modifications make this facility more access controlled than it is today. One option that might be considered is that the Oak Street access to 34th may be eliminated and exchanges put in place. The northern access to the neighborhood would be removed and other alternative access to the neighborhood.

Local Streets and Access Management. Two key areas were identified on local streets; one being south below Lake Road to the east of Rowe Junior High. Ways are also being reviewed to connect from Kuehn Road all the way over to Boss Lane. There are several driveways off of the roadway. To allow new driveways would create a lot of left-turning conflicts. The intent is to limit new driveways and uphold the standard of 300 foot spacing. The intent was also to look at opportunities in the future where new access was provided, to have it be to the cross street, not to the main line. Any new development would provide access to a side street rather than directly to Lake Road.

A rough cost estimate was prepared. This project could be phased and there could be elements that could be truncated in terms of length or in terms of the amount of elements in the project. To do all the things recommended through the Plan development stage would be \$2.5 - 3.0 million range. This is comparable to many of the road projects that are being undertaken. This is a mile long project and right in line with typical costs.

There were some other areas for further study identified, particularly in the short-term. The need for traffic control in certain locations (Freeman and possibly at the school); working to resolve the issues of the speed zone boundary changes; coordination with ODOT with regards to Highway 224 and its future planning and corridor work; and the need for other possible circulation elements within the neighborhood area and connections to other places further to the south as studies are developed.

**Mr. McCourt** then provided color photo simulations of what the roadway would look like in the future. Three cross-sections are identified: at Oatfield, Boss Lane; and by Kuehn road. These photos give a sense of what kind of subtle modifications can be made: routing sidewalks behind trees, where bus stops might go, and what a median might look like on the street.

**Terry LaRocque** asked if there is the possibility of using some type of letters/symbols in the bike lanes? **Mr. McCourt** stated that bike lanes generally get encroached on in the right lane. The roadway is 40 feet wide, small passing vehicles can pass on one lane. The vehicle code stipulates that encroachment in the bike lane is a moving violation. The Police are informed about this and they have caught a few people, but generally their focus is on speeding. The diamond designation by vehicle code makes this an exclusive lane for bikes; it cannot be used for autos.

**Tim Havel** asked if consideration was being given to raising the bike lane? **Mr. McCourt** stated that this was an issue raised in public comments. Generally speaking in bike lane design, usually they are kept flush to the street and there is no variation in height. In working with Light Rail, variations may be used for separation from vehicle use. It is less safe than a flat surface because when the bike is making a left turn and comes into contact with this raised section, they can hit off of it. The tendency is to get caught on the hump and it pulls you into the travel lane with the cars.

**Susan Heiser** reported that no additional comments have been received since the Staff Report.

TESTIMONY IN FAVOR OF THE APPLICATION -- None.

QUESTIONS OR COMMENTS ON THE APPLICATION

Speaking: Rick Phillips, 3236 SE Wister, Milwaukie

**Mr. Phillips** asked if 33rd will go through at this time other than as a pedestrian/bicycle access to Lake Road? **Susan Heiser** explained that the Plan indicates that it would not go through at this time. It would be contingent on any improvements to Highway 224 that would limit highway access.

TESTIMONY IN OPPOSITION -- None.

ADDITIONAL COMMENTS FROM STAFF -- None.

#### QUESTIONS FROM THE COMMISSIONERS

**Tim Havel** stated that there seems to be some resistance for connecting the neighborhood to the south of Lake Road. He asked Staff about the comments in the Staff Report and the comments made at the open house April 3, 1997. **Susan Heiser** stated that as stated on Exhibit 4, this needs to occur. There is no way of telling what kind of development might happen in that area in the future. A change in what the draft Plan shows and where it is located can occur, but it doesn't change the idea that there is a need to look at connectivity on an individual basis as each project comes along. A lot of people argued as to where the exact alignment is shown, and she tried to inform them that the location shown on the Plan does not necessarily reflect where it will happen in reality. This will be determined through the development process.

**Chair Smith** asked what concerns were raised in the neighborhood to the south and asked Staff to point out on the map the where this takes place? **Mr. McCourt** stated that the issue and concern was as Highway 224 become more access controlled, the signals will be taken out, interchanges may go in, one of the locations between Harrison and Oak Streets is a prime candidate that eventually would have that kind of facility. If an overcrossing or something of that nature were to go in. If that were to occur, all the impact coming from Oatfield down 34th Street, the concern was that people would come through the neighborhood. If an overcrossing is put in, all of that concern is eliminated. On fact, though, is that you lose the ability to get into the neighborhood for enforcement purposes, emergency purposes, or even for pedestrian/bicycle or other means. There are very few ways of getting in if this gets closed off.

Being aware that this may happen, the concern was to raise the issue early-on in the planning process so that work can be done with ODOT and eventual corridor planners

on other access into this neighborhood area. Particularly, because the roads/connections are nearly there. Pedestrian accessibility is already established, but the key concern would be for vehicle access in lieu losing this front area. That is why it is worded in the Plan, "...contingent upon Highway 224 issues."

#### DELIBERATION AMONG COMMISSIONERS

**Chair Smith** closed the public testimony portion of the hearing and opened it up to discussion among the Commissioners. Staff was commended on a job well done with this project.

**Tim Havel** moved to approve File Number CPA-97-02, Final Lake Road Multimodal Connections Plan as stated in the Staff Report and make recommendation to City Council for the adoption of the Lake Road Multimodal Connections Plan as an Ancillary Document to the Milwaukie Comprehensive Plan. **Pat Lent** seconded. MOTION CARRIED 6-0.

The motion was then amended by **Bryan Cosgrove** to include the findings for Comprehensive Plan Amendments on Pages 3 and 4 of the Staff Report. Further, to include Staff's recommendations in Exhibit 4 to the final draft that is forwarded to City Council for review and adoption. **Terry LaRocque** seconded. MOTION CARRIED 6-0.

Recess was taken at 7:30 p.m. and the meeting reconvened at 7:35 p.m.

#### 6.0 WORKSESSIONS

##### 6.1 Transportation System Plan Report

**Chair Smith** open discussion on the Transportation System Plan. **Dan Pava** updated the Commissioners on work-in-progress on the Transportation System Plan. Provided to the Commissioners was a copy of the schedule and some background information on the open house that was held on February 24, 1997.

Staff is reviewing and compiling the draft Plan to incorporate final comments as appropriate. Public hearings will be held to adopt Chapter 8, Goals, as part of the Comprehensive Plan to replace the transportation element of the current Comprehensive

Plan. The entire Plan will be adopted as an ancillary document to the Comprehensive Plan.

The schedule is to have City Council review the Plan for consideration and adoption on June 17th. The Planning Commission will review the document and make their recommendation on May 27, 1997. On April 16, Staff will be meeting with the Land Use Committee Chairs. May 1st is the deadline for submittal comments from the Transportation Safety Traffic Board (TSTB) that has been working with Jim Brink in reviewing the draft Plan. Those comments will be integrated as appropriate into the Plan.

At the open house on February 24, 1997, 23 people were in attendance other than Staff. Notice was provided in the Pilot, as well as noticing many people who have been involved in the Transportation Systems planning process for the last year and a half. Many of those attending the open house thought that the Plan was a light rail plan. It was explained that high-capacity transit such as the light rail is just one element included and addressed in the Transportation System Plan and that this was a plan for all modes (automotive, pedestrian, bicycle, and transit). The focus of the Transportation System plan is to integrate planning for the various transportation modes so that when tax dollars are spent, it is done in a coordinated and efficient manner. He believes this message was successfully made to the people who attended the open house.

There will be continued interest in the Transportation Systems Plan because of Neighborhood District Association concerns about managing traffic. The Transportation Systems Plan will take a broader view than traffic management and include recommendations to complete and connect Milwaukie's walkway systems, bicycle systems, and improving transit service. Transportation demand management strategies will also be addressed.

**Chair Smith** asked what were main questions from open house? **Mr. Pava** stated that there were many questions asked about Light Rail alignments. People were referred to the South/North Light Rail contracts.

Comments were made about traffic calming. There were questions on what kind of devices would be used and where it would be appropriate to use traffic calming measures through Milwaukie's neighborhoods.

There were comments expressed about crossing Harmony to access North Clackamas Park. The Transportation System Plan shows Harmony improving to a wider cross-section. There has to be a way to safely convey local residents across Harmony Road without having to get into your car.

Another question raised was how the eventual connection between the Springwater Corridor and the riverfront trail would be made. There were also questions relating to Lake Road.

People spent time looking and discussing the information panels that were placed around the room. The biggest revelation was to realize that the City is being proactive by preparing a document that takes a more holistic look at transportation planning.

**Pat Lent** asked if notification was done through the Neighborhood Associations? **Dan Pava** stated that the land use committee chairs were notified by post cards as part of a targeted mailing.

**Pat Lent** asked if water travel is considered as a Multimodal use? **Dan Pava** stated that water travel it is not addressed directly. In the Riverfront Concept Plan it is addressed and provisions made. There are a number of possible sections of the document that could include the comments about water travel.

**Terry LaRocque** asked what other things could be done to supplement transportation; i.e., parking structures, etc. to take advantage of spending time in the core area. **Dan Pava** stated that the final revisions to the document will incorporate applicable references to the Regional Center Master Planning process as it deals with McLoughlin Boulevard and the Riverfront Concept Plan.

**Tim Havel** asked what kind of coordination effort is there with outlying jurisdictions and transportation? **Maggie Collins** stated that some of the elements of the Plan (chapters on bicycles, pedestrian, regional highway systems, etc.), were done using the entire North Clackamas area to I-205 as the planning area. Part of the coordination has already been done although the policies and conclusions may differ between Milwaukie and Clackamas County. The only policies and conclusions that can be implemented are the ones within the City limits. The underlying thought process about a sub-regional area and how to make systems work is very good. Milwaukie will think of the policies for the entire study area as appropriate and adopt them. Milwaukie has tried to look ahead and coordinate.

**Tim Havel** voiced concern that the bicycle treatment follow through from Milwaukie to surrounding County treatments. **Maggie Collins** stated that the County s bicycle planning is similar to Milwaukie s; the standards are very close. Some of the other issues are not so easy.

**Chuck Stoudt** stated that he worked on the traffic safety board and one of the concerns was that continuity and classification, traffic volume, and speed rates throughout Multnomah and Clackamas Counties. The Plan develops a procedure for adopting traffic calming devices and determining which ones are appropriate. **Dan Pava** noted that Jim Brink has been working with TSP. The Plan recommends at this point that the neighborhood designated streets, those streets that in a hierarchy above residential/local streets, but less than collector, are the most appropriate streets for traffic calming. The roadway manual that Public Works is putting together would include the traffic calming criteria. **Dan Pava** noted that one of the Regional Center Mater Plan policy recommendations from the working groups also addressed neighborhood traffic management and traffic calming. This would be referenced in the Transportation System Plan.

## 6.2 Mixed Use Zone Parameters

**Maggie Collins** invited the Commissioners to come down and sit around the conference table to review the preset materials and discussion on the Mixed Use Zone Parameters.

**Maggie Collins** explained that in the last couple of months Staff has been working to establish content and focus for mixed-use zones. The time has come to give specific direction to the Consultant for the Regional Center Master Plan so that it can be used for developing a mixed-use zone parameters. A document entitled "Image of Milwaukie in 1984" by the Planning Department was shown. This was a visual and sociological analysis of the City at that time. It is interesting to note that some of the ideas on this "Image" are some of the same ideas being discussed today; "no social identification," relates to our current "create a sense of place," "lack of social or recreational gathering places or activities in downtown," is our riverfront development, "...lack connection between town and river, restore physical linkage by slowing traffic and improving pedestrian access," etc.

**Maggie Collins** explained that this document was probably used as a tool for Goal Five inventory work. Staff thought there might be some interesting phrases in historical

information which could be used to determine what is needed to go forward. This gives justification for deciding that design and the physical environment needs a stronger focus.

A copy of the second draft parameters was handed out. The last worksession for this document was in December where things the Commission thought were important were noted. Lacking from the plans were a method of dealing with parking, stricter or more specific ideas about parking, structure requirements and structure design..

Planning Commission suggestions were: three design review processes went into things that that were suggested to help with design review (three, no more than five)

- informal meetings for design review evaluations
- reviews restricted to massing and site planning versus color and material
- bringing in infill creates a special need for design review

The Planning Commission discussed the possibility of a Design Review Board for residential review:

- Compatibility was identified as the most important issue
- Enforcement was identified as a problem for color and materials that could be easily changed.
- Setbacks were identified as one way to control placement and massing of structures on a lot

The Planning Commission later focused on the potential use of an Architectural Review Board, dealing with form, function and relationship to streets. This Architectural Review Board could be used in all commercial and industrial areas like the regional center and the King Road Center. Concerns concentrated around:

- Street treatment
- Architecture
- Site Design
- Colors

**Maggie Collins** expressed an opinion that Staff members should not be the design decision makers. The Planning Commission identified a need to have architectural review prior to submittal of a land-use application.

Residential and commercial review would each require their own guidelines. The parameters of the mixed use zone will have to include regulations for street treatment, parking, structure, and design.

The architectural review board would be incorporated into the review process for new development in specified zones.

**Pat Lent** asked if infill could be mixed use? **Maggie Collins** stated that it could because there is an existing mix of uses in neighborhoods. The Planning Commission asked what development has to go through architectural review? The following were considered:

- Infill - need for review for compatibility
- Transition - areas of transition between types or densities of use to be reviewed
- the 25% density change requirement in Section 400 was discussed to be removed at the next opportunity. Could be better addressed through architectural review

**Maggie Collins** asked the Commissioners if they believed residential design review was necessary. Residents are beginning to complain about design. Privacy and design review criteria for smaller lots is needed.

- Developers need examples of good infill
- Consider expanding Neighborhood review
- Member of Board could be a Neighborhood Assoc. member for that district (may not be unbiased)
- Architectural features are the focus
- Training is an important key

Architectural review for measuring and placement should be the focus of design review, rather than attention to colors and materials. Architectural diversity is important.

The Smart Development guidelines are too general. **Maggie Collins** asked for suggestions:

- Neighborhood commercial deficient areas could be augmented
- Mom/Pop stores should not be located near schools
- Compatibility of uses must be ensured

Specific standards are necessary for the mixed zone. Consider:

- Continuous sidewalks
- Direct paths between places and activities
- Easy and safe street crossings
- Pedestrian amenities
- Mix compatible with the area (commercial/residential, various mix)
- Short term bicycle parking visible
- Functional bike racks
- Well lit bicycle parking
- Bicycle parking near entrance

Parking structures are an essential component of mixed use. Parking is required for business uses. **Maggie Collins** asked the Commissioners what they would do if a developer came in with the perfect building with mixed use and cannot afford parking requirements?

- Cost shift where maybe the public can absorb increased cost
- Supply and demand will make the structure viable eventually
- A plan that would address this situation including mixing residential, commercial and office/service uses on the above site - reduced need for parking because it is shared

**Maggie Collins** stated that these concepts will help with the Regional Center Master Plan. The Regional Center opens up opportunities for interesting options for development. These guidelines will be used by developers to inform them of the designs and expectations that the City wants to see.

**Chair Smith** asked the difference between the mix-use architectural review procedure and a conditional use review? **Maggie Collins** stated that the conditional use procedure does not address the relationship of the amount of commercial, business or residential, transportation, or parking requirements.

**Maggie Collins** stated that she will redraft the document and send it out for comments.

## 7.0 DISCUSSION ITEMS

**Tim Havel** stated that he received a sample financial disclosure form for the State. He has not gotten the actual form. **Maggie Collins** asked Tim to call Community Development to get a copy.

8.0 OLD BUSINESS

8.1 Light Rail Study Update -- The meetings are set up for new alignments. The hearing will be held on May 6, 1997, at the Milwaukie Senior Center.

8.2 2040 Study Update -- No Report.

9.0 OTHER BUSINESS

9.1 **Historical Resources Commission Report** -- Bryan Cosgrove reported that there were two public hearings, on attractions to the City Hall building and to Mason's Temple. Both were approved.

9.2 **Town Center Area Task Force Report** -- Maggie Collins reported that the joint Happy Valley/Milwaukie meeting on Clackamas Regional Area Plan was last Tuesday. A presentation was made on land-use alternatives for Top of Scott.

9.3 **Community Development Report** -- No further report.

10.0 Next Meeting -- April 22, 1997

10.1 Mixed Use Zone Parameters

**Bryan Cosgrove** moved to adjourn the meeting of April 8, 1997. **Terry LaRocque** seconded. MOTION PASSED UNANIMOUSLY. The meeting adjourned at 9:15 p.m.



Michael Smith, Chair

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Shirley Richardson, Hearings Reporter



## **Milwaukie Planning Commission Statement**

The Planning Commission serves as an advisory body to, and a resource for, the City Council in land use matters. In this capacity, the mission of the Planning Commission is to articulate the Community's values and commitment to socially and environmentally responsible uses of its resources as reflected in the Comprehensive Plan

### **Public Hearing Procedure**

1. Staff Report
2. Correspondence
3. Applicant's presentation
4. Public testimony from others in support of application
5. Comments or questions from interested persons who are neither proponents nor opponents
6. Public testimony from those in opposition to the application
7. Questions from the Planning Commission
8. Rebuttal testimony from Applicant
9. Closing of public hearing
10. Commission discussion/action

**The Planning Commission's decision on these matters may be subject to further review or may be appealed to the City Council. For further information, contact the Milwaukie Community Development Department office at 786-7650.**

### **Milwaukie Planning Commission**

Michael Smith, Chair  
Bryan Cosgrove  
Tim Havel  
Terry LaRocque  
Pat Lent, Vice-Chair  
Chuck Stoudt

### **Community Development Department Staff**

Maggie Collins, Community Development Director  
Dan Pava, Senior Planner  
Susan Heiser, Senior Planner  
Stacy Lawson, Assistant Planner  
Diana Myrvang, Public Involvement Coordinator  
Jane Leeson, Public Involvement Coordinator  
Jeanne Garst, Office Assistant  
Marcia Hamley, Office Assistant  
Shirley Richardson, Recording Secretary



**\*\*\*MEMORANDUM\*\*\***

**COMMUNITY DEVELOPMENT DEPARTMENT**  
**April 8, 1997**

**TO: MILWAUKIE PLANNING COMMISSION**

**FROM: COMMUNITY DEVELOPMENT DEPARTMENT**

**RE: LAKE ROAD MULTIMODAL PLAN**

Attached is the Lake Road Multimodal Plan (CPA-97-02) for your review at the public hearing on April 8, 1997.

*Prepared  
for*



# *Lake Road Multi-modal Connection Study*



*prepared by*

**DKS Associates**

*March 1997*

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March 31, 1997

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**Subject: Lake Road Multi-Modal Connection Study**

P96198

Dear Susan:

DKS Associates is pleased to submit this final draft report of the Lake Road Multi-Modal Connection Study. This draft incorporates comments received from the Working Group, Planning Commission work session, technical advisory committee and general edits. It has been our pleasure working with you on this project and look forward to assisting you in the future.

Sincerely,

*DKS Associates*  
A Corporation

  
Ransford S. McCourt, P.E.  
Principal



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# 1 Introduction

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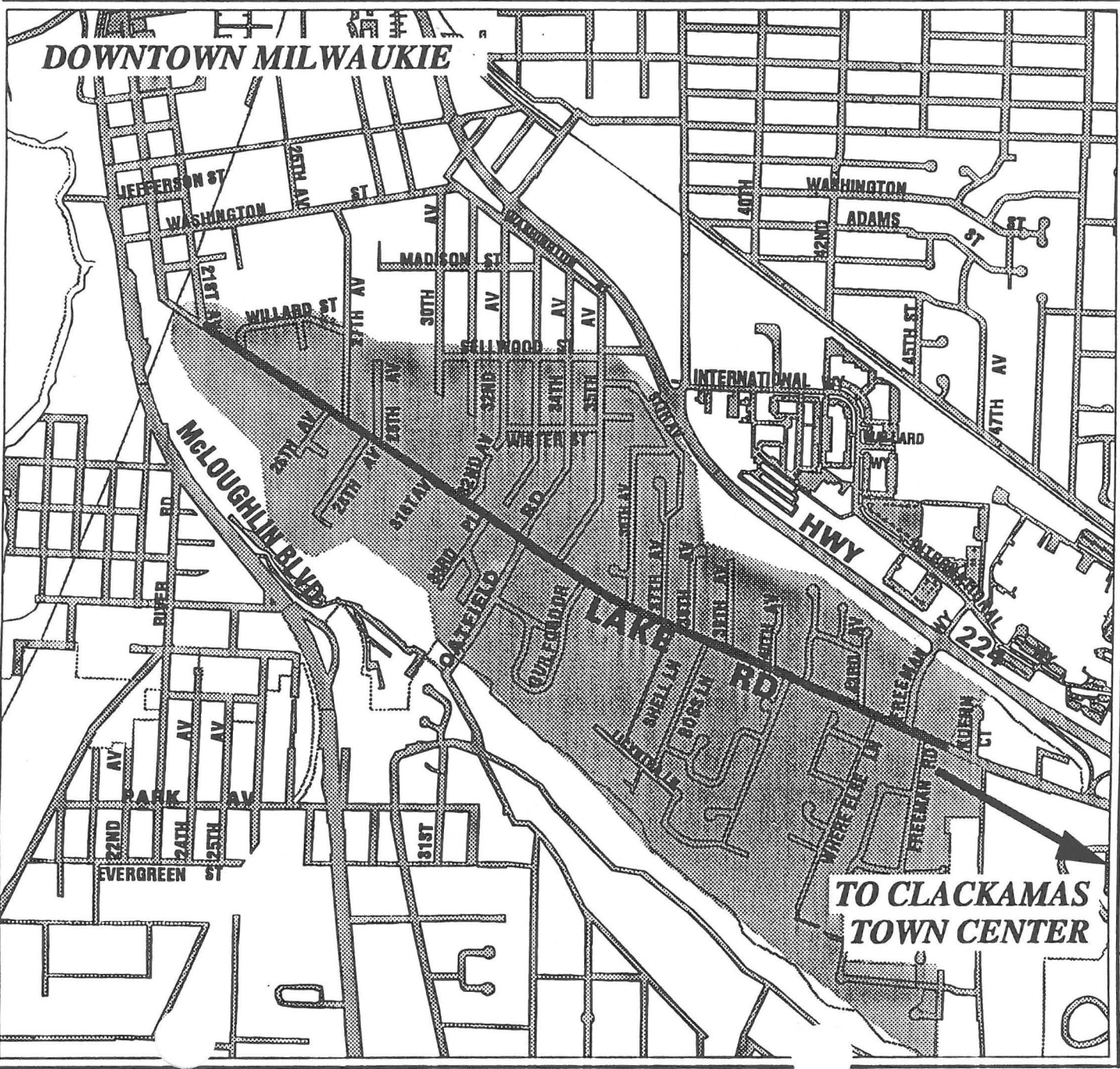
The City of Milwaukie received a grant from the State of Oregon to undertake a transportation study of Lake Road. Lake Road is an arterial of local and regional significance to the City of Milwaukie. It forms a link between Metro designated regional centers in downtown Milwaukie and Clackamas Town Center. Historically, it has served as a key east-west connector from western areas of Milwaukie, unincorporated areas such as Oak Grove, and McLoughlin Boulevard to eastern areas of Milwaukie, the Town Center area, 82nd Avenue, I-205, and Sunnyside Road. With the completion of Milwaukie Expressway over 25 years ago, traffic levels decreased as the new principal regional facility served more through traffic. However, over time Lake Road has continued to serve as the only link between Oak Grove and the commercial areas east of Milwaukie.

This regional context directly conflicts with the setting for Lake Road. Within the study area (defined to be between 21st Avenue and the eastern City Limit - near Kuehn Road, Figure 1), Lake Road has historically been a residential neighborhood. Many single family residences front onto Lake Road. There are schools (Milwaukie Elementary, Rowe Junior High, Milwaukie High and a private school) and churches near or with frontage along Lake Road. Additionally, due to the physical constraints of the neighborhood area (Kellogg Lake and Kellogg Creek to the south, ORE 224 to the north) there are small and emerging residential areas served by cul-de-sacs which rely on Lake Road as their primary route for local access.

The City of Milwaukie became aware of potential safety, circulation and multi-modal travel needs along Lake Road through development of its Transportation System Plan over the past two years. The Lake Road Multi-modal Connection Plan and Study objectives are to:

- Work with study area residents including Neighborhood District Associations and City staff to identify specific transportation problems in the Lake Road area;
- Develop design options for Lake Road to solve these problems;
- Address local circulation and access management issues along Lake Road; and
- Complete a plan for the future of Lake Road that defines a framework for multi-modal, safety, connectivity, and access management issues to be addressed over time.

# DOWNTOWN MILWAUKIE



## LAKE ROAD AREA MULTI-MODAL CONNECTIONS PLAN

### VICINITY MAP

- ..... CITY OF MILWAUKIE BOUNDARY
- LAKE ROAD CORRIDOR
- ▨ STUDY AREA

Figure 1  
MAP DATE : 04/25/96



Department of  
Community  
Development



This report outlines the public process used in the study, existing conditions along Lake Road, provides detail regarding future conditions based upon regional 2015 travel demand forecasts, identifies alternatives developed for Lake Road and provides a framework plan for future improvements along the Lake Road corridor.

## **PUBLIC PROCESS**

The Lake Road Area Multi-modal Plan draft has been prepared with extensive planning, engineering and public involvement. The process began with a widely advertised public open house to introduce the project and begin to obtain public feedback and participation on identifying transportation needs. A citizen questionnaire was mailed to residents in the Lake Road area and handed out the open house (results are discussed below). A Lake Road Area Citizens Working Group was formed to work with the consultant and City staff in developing a plan for multi-modal use of Lake Road. This committee met throughout the project process to review collected data, technical analysis, and provide public opinion on different modal needs, priorities, and plan recommendations. Additional public comment is planned through additional open houses and public hearings, to achieve a final Draft Lake Road Area Multi-modal Connection Plan for review and recommendation by the Milwaukie Planning Commission and adoption by the City Council for inclusion in the Comprehensive Plan.

## **CITIZEN QUESTIONNAIRE**

An early key element of the public process was to identify citizen concerns and needs. A questionnaire was mailed to over 1,100 properties in the study area and handed out at the initial open house on the project. Over 13 percent of the property owners/residents in the Lake Road study area felt it was important enough to take the time to complete the questionnaire and provide comment. Responses were provided related to all modes of transportation: automobile, transit, walking, bicycling, trucks. Results of the survey and its methodology are summarized in a separate working paper<sup>1</sup>. Overall there was widespread and, at times, conflicting opinions on many traffic issues. However, there are also commonly identified needs and solutions that have been considered in this planning effort. The questionnaire indicates:

- Most of the respondents walk in the neighborhood
- Many pedestrians have identified walking along and across Lake Road as a safety concern due to the lack of or limited pedestrian facilities

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<sup>1</sup> Lake Road Area Multi-modal Connections Plan, Citizen Questionnaire Results Report, City of Milwaukie, July 22, 1996.

- Half of the respondents bicycle and many more would do so if bikeways were provided
- Some of the respondents use public transit (bus) and many are satisfied with the current accommodations
- Covered bus shelters were the most popular improvement suggested
- One out of five respondents have been personally or know a family member who have been in a car accident along Lake Road
- Over half of the respondents find left turning vehicles along Lake Road to pose a safety problem. Key intersections of concern that were noted include: Freeman Way, Where Else Lane, 35th Avenue, 37th Avenue, 43rd Avenue, Oatfield Road and Rowe Junior High School.

The general comments section of the questionnaire provided a wealth of citizen input, again related to a variety of transportation system topics. While it is not easy to condense the breadth of these comments, there were some continual themes or consideration stated, including:

- Recognize that Lake Road is a residential area
- Discourage through traffic
- There is too much traffic, especially east of Oatfield Road
- Reduce travel speed and the number of speeding vehicles on Lake Road
- Provide better law enforcement especially for speeding vehicles and vehicles using the bicycle lanes to pass left turning vehicles
- Provide pedestrian improvements such as curbed sidewalks and crosswalks along and across Lake Road
- Consider neighborhood traffic management techniques to slow traffic and provide greater safety to other modes
- Provide bicycle lanes along Lake Road and in the study area to encourage greater bicycle use
- Discourage truck traffic on Lake Road in the study area

- Consider intersection improvements at key locations on Lake Road (e.g. Oatfield Road, Rowe Junior High, Freeman Way)
- Consider adding continuous left turn lanes or adding left turn lanes at key intersections along Lake Road
- Recognize that some residents believe Lake Road and the study area are not in need of any transportation system improvements
- Recognize that local street circulation within the study area functions well for local traffic

## WORKING GROUP

The Lake Road Area Multi-modal Plan Working Group consists of twenty-one Lake Road Area residents who volunteered at the first open house to serve on the committee. At the beginning of the Lake Road Area Multi-modal Plan Working Group process, the working group developed a mission statement which states:

*Produce a safe, livable, and accessible corridor area that better manages vehicle speed and volume and provides improved access for all modes; especially pedestrian, bicyclists, motorist, and transit.*

During subsequent meetings the working group outlined a series of concerns. Many of these mirror those found in the surveys.

- Demand of road exceeds desired function and intended capacity
- Safety/sight distance at Lake/Oatfield intersection needs improvement
- Pedestrian paths on Lake Road are inadequate, particularly for school children
- Accessibility to Freeman Way and Lake Road is restricted by volume
- Pedestrian safety on Lake Road
- Excessive speeds, especially near school zones
- Road conditions are a problem for bicyclists (puddles, uneven pavement, holes)
- Sight distance along Lake Road is restricted by vegetation in several locations
- Excessive vehicle speeds and through traffic

# 2 Existing Conditions

---

Using a combination of transportation data and public input, a clear picture of existing conditions can be developed for Lake Road. The following sections summarize key transportation conditions in the study area.

## Roadway Authority

Within the study area, the City of Milwaukie has operating and maintenance authority of Lake Road (speed zone changes must be approved by ODOT). East of Kuehn Road, Lake Road is under the authority of Clackamas County and the Oregon Department of Transportation (near the ORE 224 interchange).

## Functional Classification

Lake Road is classified as **minor arterial** in the Milwaukie Comprehensive Plan. The draft Transportation System Plan designates Lake Road as an **arterial**. These designations are consistent with Clackamas County's designations. The City also designates Lake Road as a **bikeway**, a **pedestrianway** and a **transit route**. Metro designates Lake Road as a **Multi-modal Minor Arterial** and part of the **regional bicycle network** as part of its functional classifications. As part of Metro's recent functional plan, Lake Road has been designated a **Community Street** which provides certain guidelines for street design.

Other streets in the study area with specific functional classifications include Oatfield Road (classified as an arterial) and 34th Avenue (classified as a collector). All other public streets in the study area are local streets, very few of which are not cul-de-sacs.

## Traffic Volumes

Based upon traffic counts conducted in 1994 and 1995, Table 1 provides a summary of current traffic volumes in the study area. Traffic volume on Lake Road changes significantly at Oatfield Road. Traffic goes down 57 percent from east of Oatfield Road to west of Oatfield Road. This demonstrates the strong linkage of the east/west movement between Oak Grove and areas east of Milwaukie.

**Table 1**  
**Existing Traffic Data**  
Two-way Volumes

Street	Daily Vehicles	PM Peak Hour Vehicles
<b>Lake Road</b>		
At 40th Avenue	11,618	1,146
At 28th Avenue	5,067	571
<b>Oatfield Road</b>		
At Kellogg Creek Bridge	12,448	1,200
<b>34th Avenue</b>		
North of Lake Road	3,364	348

SOURCE: City of Milwaukie, 1994, 1995.

### Through Traffic

Due to Lake Road's unique characteristic of serving both a regional and local function, the level of use of the street by through and local traffic was evaluated. Using the Metro Regional Travel Demand Forecast Model, specifically modified for Milwaukie (as part of the TSP), detailed select link analysis was performed on Lake Road and Oatfield Road. A select link analysis indicates where vehicle trips that use Lake Road (considering a point near Freeman Way) came from (origins) and end up (destinations). Table 2 summarizes the findings.

The majority of traffic using Lake Road could be considered through traffic. The largest trip combination is to and from Oak Grove and Harmony Road to the east. From a design perspective, it should be noted that a significant share of the traffic using Lake Road is local (nearly a third) and accommodations must be made to service this traffic. The small amount of traffic identified with the "Local Area East" is the result of the location of the roadway segment at Freeman Way (it is so far to the east of the study area there are few destinations in the study area east of Freeman Way).

### Traffic Control

Lake Road only has one signalized intersection at Oatfield Road. All other intersections are uncontrolled (no stop signs or traffic signals). To the east, the ramps with ORE 224 are signalized. A 30 mile per hour speed zone is in place on Lake Road from 21st Avenue to approximately 43rd Avenue. The speed zone changes to 40 miles per hour 250 feet east of Vernie Avenue. School zones are in place near Rowe Junior High and Milwaukie High School (20 miles per hour). Speed zones on all other public streets in the study are 25 miles per hour.

**Table 2**  
**Through Traffic Evaluation of Lake Road**  
**PM Peak Hour**

Eastbound Lake Road Percent of Traffic on Segment near Freeman Way	Areas	Westbound Lake Road Percent of Traffic on Segment near Freeman Way
<b>Origins</b>		<b>Destinations</b>
12%	Downtown Milwaukie/to North	3%
58%	Oak Grove	64%
3%	McLoughlin to South	2%
1%	34th to North	1%
26%	Local Area West	30%
<b>100%</b>	<b>TOTAL</b>	<b>100%</b>
<b>Destinations</b>		<b>Origins</b>
11%	Linwood/Railroad/to North	8%
44%	Harmony Road/to East	46%
25%	ORE 224/ to East	23%
5%	Areas just North of ORE 224	10%
9%	Areas near Rusk/Webster	8%
6%	Local Area East	5%
<b>100%</b>	<b>TOTAL</b>	<b>100%</b>

SOURCE: DKS Associates

Many drivers do not perceive a difference in roadway characteristics along Lake Road and continue to travel 40 miles per hour well into the 30 mph zone. Speed measurements on westbound Lake Road at 40th Avenue indicate the 85th percentile speed are about 40 mph. At 28th Avenue, 85th percentile speeds are about 39 mph westbound and 35 miles per hour eastbound<sup>2</sup>.

In 1996, roughly 177 traffic citations were issued along the study area of Lake Road. Of these, 67 were for speeding, 41 for no seat belts, and five for failing to obey traffic signals. The majority of the speeding citations were issued for exceeding the 30 mph speed zone limit. Generally for the citations issued, speed limits were exceeded by 18 to 20 mph.

### Roadway Geometry

Lake Road is primarily a two lane roadway within the study area. Left turn lanes are provided at Oatfield Road and at ORE 224. Bike lane/shoulder areas are provided

<sup>2</sup> City of Milwaukie data, October 1995. 85th percentile refers to the speed that 85 percent of the vehicles were traveling on the day of measurement.

from Oatfield Road to the eastern City limit. The segment west of Oatfield Road has curbs and sidewalks and the segment to the east has unimproved frontage (no curbs or sidewalks except in a few locations). A series of utility poles are located along the south edge of roadway, set back from the edge of pavement about five feet. Pavement condition is generally good to fair. Curbs on the western segment will need to be replaced in any reconstruction due to multiple overlays. Table 3 summarizes the pavement width in the study area.

**Table 3**  
**Lake Road Widths**

Location	Paved Width
West of ORE 224	60 feet
Kuehn Road	36 feet
Freeman Road	37 feet
Freeman Way	46 feet
Where Else Lane	38 feet
Vernie Avenue	38 feet
Boss Lane	40 feet
Rowe Junior High	38 feet
Guilford Drive	38 feet
Oatfield Road	36 to 38 feet
32nd Avenue	30 feet

### Traffic Operation

Traffic operation can be measured using the capacity analysis methodology outlined in the *1994 Highway Capacity Manual*<sup>3</sup> at signalized intersections. There is one signalized intersection at Lake Road and Oatfield Road that has been analyzed in the past (Table 4). Additionally, using criteria developed from the regional travel demand model in studying roadway links, the overall link capacity can be assessed<sup>4</sup>. In either consideration, there is little available capacity on Lake Road in the evening peak hour. The intersection of Lake/Oatfield already operates at level of service D and the link volumes represent 72 to 92 percent of capacity in the PM peak hour.

### Accidents

Between January 1992 and June 1994 there were 40 reported accidents involving automobiles in the study area. In addition, there were two reported accidents involving

<sup>3</sup> Refer to appendix for description of level of service.

<sup>4</sup> The Metro model establishes typical link capacities. A 700 to 900 vehicles per hour capacity (per direction) would be used for Lake Road.

**Table 4**  
**Existing Intersection Performance**

Intersection	LOS	Average Delay	Volume-Capacity Ratio
Lake Road/Oatfield Road	D	31.9	0.90

SOURCE: Milwaukie TSP, 1995.

pedestrians and one reported accident involving a bicyclist. Figure 2 provides a summary of the locations of accidents in the study area.

### Trucks

There are no regional truck routes in the study area. The draft Milwaukie Transportation Plan does not recommend any minor preferred truck routes in the study area. Counts at the intersection of Lake Road and Oatfield Road measured 1.5 percent trucks in the total traffic stream<sup>5</sup>. It is typical for arterial and collector streets in the Portland area carry between one and three percent trucks during comparable periods. If the Lake Road truck percentage is applied to the daily traffic on Lake Road it would represent about 200 daily trucks.

### Pedestrian

Sidewalks exist along Lake Road from 21st Avenue to Oatfield Road on both sides of the street. To the east of this point, sidewalk provision is sporadic along Lake Road. Most of the sidewalks in the eastern study area are located north of Lake Road, west of 37th Avenue and south of Lake Road along Freeman Road and Vernie Avenue leading to Lake Road (Figure 3). Pedestrian volumes along Lake Road vary depending upon the provision of sidewalks. West of Oatfield typical hourly volumes of pedestrians on Lake Road range from a dozen to two dozen an hour (east of Oatfield volumes are lower). Pedestrian volumes are highest at school times.

### Bicycle





Bicycle lanes exist on Lake Road east of Oatfield Road, on the highest vehicle volume segment of the corridor. Bicycle lanes also exist south of the Oatfield/Lake intersection. No bicycle lanes exist on Lake Road west of Oatfield Road. The current condition of the bicycle lanes on Lake Road would be considered poor in wet weather since significant ponding occurs. Clackamas County considers the riding experience on Lake Road as "good" on their bicycle map.

<sup>5</sup> Based upon available counts conducted in 1994 for the TSP between 4:00 PM and 6:00 PM.

**DOWNTOWN MILWAUKIE**

**LAKE ROAD AREA  
MULTI-MODAL  
CONNECTIONS PLAN**

**REPORTED ACCIDENTS  
1/92 - 6/94**

-  CITY OF MILWAUKIE BOUNDARY
-  STUDY AREA
-  PEDESTRIAN INVOLVED
-  MOTOR VEHICLE ACCIDENT

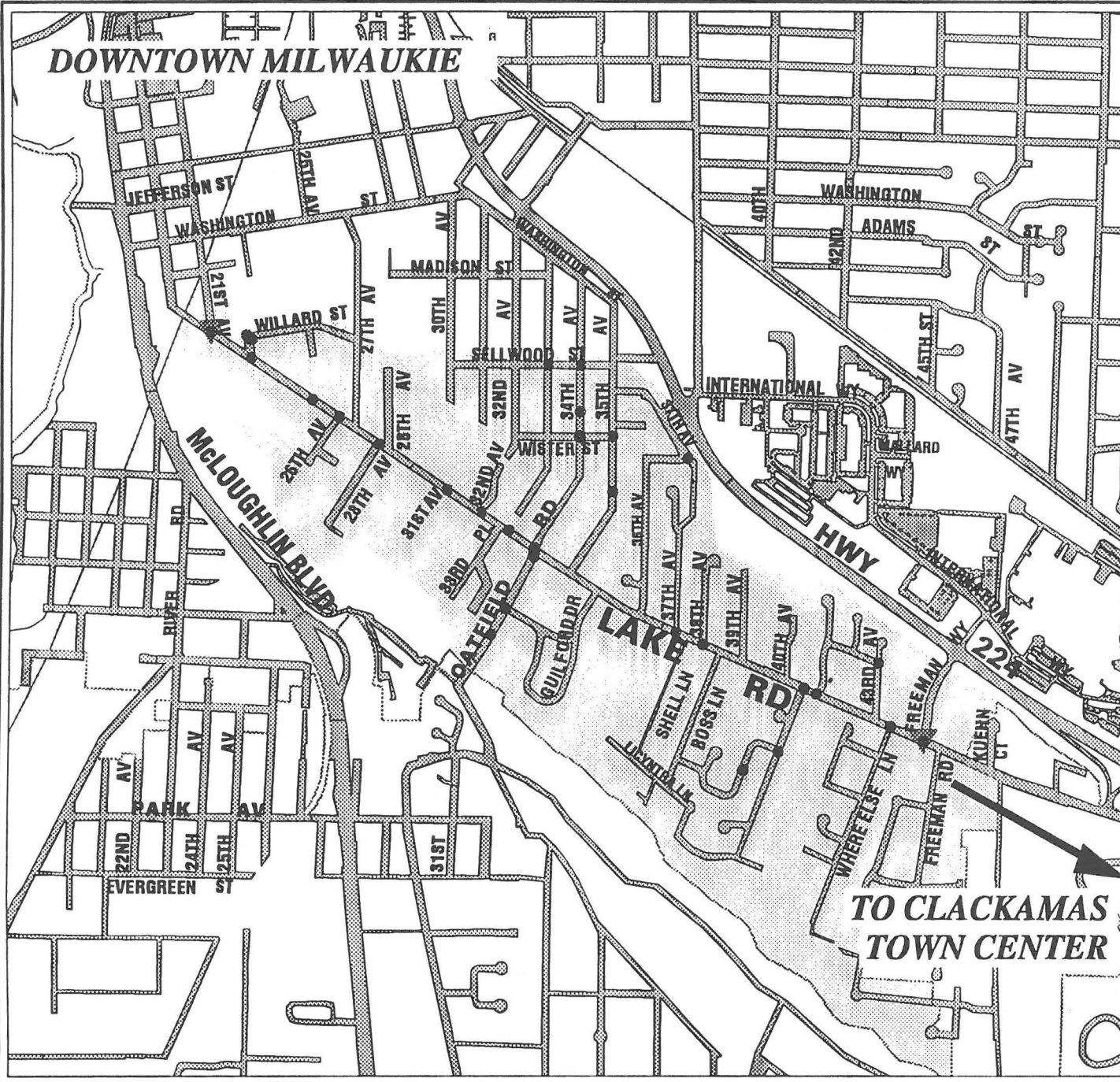


Figure 2

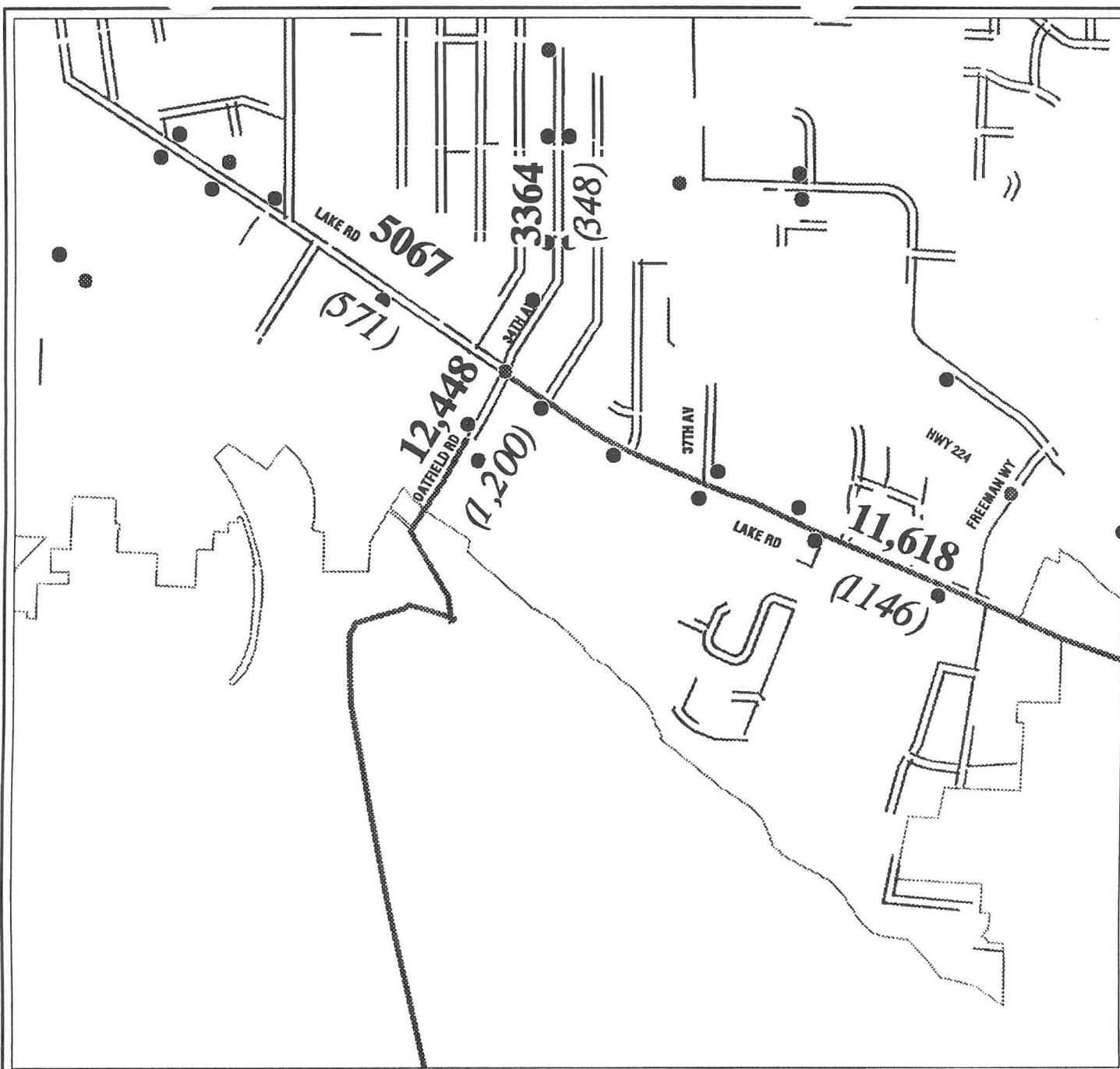
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Community  
Development  
Department



# LAKE ROAD AREA CONNECTIONS PLAN

*Existing Transportation Facilities  
And Key Activity Destinations*



- CITY OF MILWAUKIE BOUNDARY
- ..... EXISTING WALKWAYS
- ===== EXISTING BIKEWAYS
- BUS STOPS
- ⊗ TRAFFIC CONTROL SIGNALS

**0000** - Average Daily Traffic  
**(000)** - PM Peak Hour Volume

Source: Draft Milwaukie  
Transportation System  
Plan, April 1996.

Figure 3

MAP DATE: 01/15/97



Community  
Development  
Department



## Transit

Two Tri-Met buses serve the study area. Route 32 (Oatfield) travels on Oatfield Road and Lake Road to the west connecting to downtown Portland and the Oregon City Transit Center. Route 29 (Lake/Webster) travels on 34th Avenue and Lake Road east of Oatfield Road between Milwaukie and Clackamas Town Center Transit Centers. Bus stops exist along Lake Road, 34th Avenue and Oatfield Road. Data indicates these routes carry about 300 to 600 people a day in Milwaukie<sup>6</sup>.

## Other Studies

There are several other studies that provide information regarding the study area. The following list summarizes these studies.

***Milwaukie Regional Center.*** A study is currently underway that is evaluating the needs for the development of a regional center in downtown Milwaukie. Since Main Street and 21st Avenue link to Lake Road providing a connection to the regional center at Clackamas Town Center, findings from that work will need to incorporate Lake Road findings.

***Milwaukie TSP.*** The draft Milwaukie Transportation System Plan is going through final approval process. That document outlined the issues surrounding Lake Road and identified potential need for turn lanes, neighborhood traffic management and improved connections between McLoughlin Boulevard and ORE 224. Citizen working groups outlined resurfacing of Lake Road and reconstruction of bicycle lanes, and resurfacing of Oatfield Road shoulder areas as needed.

***34th Avenue Traffic Analysis.*** This study was completed in January 1994 to address citizen concerns with excessive through traffic volumes and speeds on 34th Avenue. A six hour survey revealed that 46 percent of the traffic on 34th Avenue was through traffic. A range of roadway and traffic control features were reviewed and traffic humps were installed in October 1994 by the City. This study followed a neighborhood task force document developed in 1992.

***Clackamas County Long-Term Capital Improvement Plan (1992-2010).*** The long range capital improvement plan recommended that the Oatfield Road/Park Avenue intersection be signalized with a left turn lane. It also recommended reconstruction of Lake Road east of the Milwaukie city limit to ORE 224, including turning lanes. Neither of these projects are on the five year CIP list.

***Milwaukie Public Facilities Plan 1988-2008.*** This study completed in 1988 by Kampe recommended improving the curves on Oatfield Road between Park Avenue and Lake

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<sup>6</sup> Draft Milwaukie TSP, Existing Conditions, Transit Services.

Road, upgrading ORE 224 from an expressway to a freeway, reconstructing Lake Road with a continuous left turn lane, and reconstruction of Sellwood Street/34th Avenue/Edison Street to ORE 224.

## LAND USE

The Lake Road study area is characterized by residential land uses. Current zoning provides for primarily single family and multi-family residential development. Other uses include churches and schools with little commercial activity at the east and west ends of the road. While much of the land area is already developed, there are areas of vacant land (especially in the eastern end of the study area) that have the potential to develop in the near future. These properties are mostly zoned for residential land use (R-7 and R-10). Because the lands adjacent to Lake Road are residential in nature (not commercial) they create different needs for the roadway design. For example, residential used (particularly at the density of current development) do not generate as many vehicle trips as commercial uses, lessening the need for left turn access. On the other hand, the residential uses are more impacted by the volume of traffic on Lake Road (noise, speed, etc.).

Land uses in the study area were inventoried using the Metro regional data base developed for the Milwaukie TSP. Metro's 2015 forecast for land use growth reflecting concentrations of development in regional centers. Table 5 summarizes the number of households and employees in the area. Relative to many areas in the Portland region, growth in this area is modest to low as forecasted for the next 20 years.

**Table 5**  
**Land Use Data for Study Area**

Year	Households	Employees
1994	1,183	872
2015	1,453	1,167
<b>Percentage Change</b>	<b>+23%</b>	<b>+34%</b>

The following sections discuss key elements relating land use with transportation on Lake Road.

### Access Management

Access management is a key roadway operational element that seeks to manage the conflicts created by land use access needs, thereby improving safety of the transportation system. Lake Road is characterized with several driveways and public streets accessing the traveled way. Between 21st Avenue near downtown Milwaukie to ORE 224 there are approximately 72 driveways and 29 public street access points.

Many of the public streets do align between the north and south side of Lake Road. The offset intersections create a unique operating environment. Because most of the public streets in the study area serve limited amounts of land use, left turning conflicts are limited. Left turn lanes would not be warranted on the segment of Lake Road west of Oatfield Road<sup>7</sup> due to the lower traffic volumes. At Oatfield Road and some of the intersections east of Oatfield, left turn lanes would be warranted. More data is necessary to evaluate specific intersections, but key intersections likely to warrant left turn lanes include Freeman Way, Kuehn Road, Where Else Lane and the ORE 224 ramps.

Private resident driveways along Lake Road provide another level of access conflict. The city conducted a review of properties with frontage to Lake Road and found very few opportunities to reconfigure access to a side street or shared access point to limit the number of access points. The localized impact of such actions would be significant in terms of property impact and would result in right-of-way damages and takings which would be difficult to balance with the benefits produced by limited driveway closure.

### **Local Street Connections**

The local street system is another key element that relates land use to transportation, since most uses gain access to local streets. As part of the Transportation System Plan and implementing ordinances of the Transportation Planning Rule enacted by the City of Milwaukie, it is the city's policy to increase the number of local connections that enhance pedestrian and bicycle movement, as well as reduce out of direction travel. The Lake Road study area is characterized by a significant number of cul-de-sacs, formed by the barriers created by the state highway (ORE 224) and environmentally (Kellogg Creek). These cul-de-sacs make it difficult to circulate within the neighborhood without first accessing a collector (34th Avenue) or arterial street (Lake Road). Because of these constraints, most of the local street system cannot be significantly changed.

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<sup>7</sup> Based upon 1994 and 1995 traffic data provided by the City of Milwaukie and Highway Research Board Record Number 211, 1967, page 9.

# 3 Future Conditions

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Future traffic conditions can be estimated using the regional travel demand forecast model. For the Milwaukie TSP, the Metro regional model was tailored to Milwaukie with more land use data developed within the City. The 2015 forecasts provide an indication of the potential growth in traffic and potential changes in travel patterns. This section summarizes the forecasted growth in traffic, the operating characteristics anticipated if improvements are not made to Lake Road as the rest of the region grows in the future and the potential changes in uses of Lake Road by through traffic.

## 2015 Traffic Growth

Based upon the forecasts conducted for the Milwaukie TSP, the travel demand model was run specifically for the Lake Road study. Table 6 summarizes the growth in traffic anticipated on study area streets in 2015 based upon planned land use growth in Milwaukie and the region. The forecast accounts for the potential congested conditions along Lake Road in assigning future traffic (in that, further growth in through traffic is constrained by future congestion and potentially seeks alternate routes).

**Table 6**  
**Change in Traffic with 2015 Conditions**  
PM Peak Hour

Location	Existing PM Peak Hour Vehicle Volume	Change to 2015
<b>Lake Road</b>		
At 40th Avenue	1,150	+14%
At 28th Avenue	570	
<b>Oatfield Road</b>		
South of Lake Road	1,200	+16%
<b>34th Avenue</b>		
North of Lake Road	350	+12%
<b>ORE 224</b>		
At Freeman Way	3100	+24%

## Traffic Operation

Based upon the Milwaukie TSP, intersection analysis was performed at the signalized intersection of Lake Road and Oatfield Road. Level of service degrades to E in 2015 with a demand to capacity ratio in excess of 1.0, indicating operating conditions are over capacity. Table 7 summarizes these findings. Additionally, the growth in traffic represented by the regional travel demand forecast would take the traffic volumes on segments of Lake Road from 82 to 105 percent of capacity during the peak period. Without improvement, this would result in congested conditions and extended delays to residents and through traffic.

**Table 7**  
**Future Intersection Level of Service<sup>8</sup>**

Intersection	Existing			Future 2015		
	LOS	Delay	V/C	LOS	Delay	D/C
Lake Road/Oatfield Road	D	31.9	0.90	E	52.8	>1.00

SOURCE: Milwaukie TSP.

## Through Traffic Changes

Performing the same select link analysis as discussed in Existing Conditions, the amount of through traffic was evaluated on Lake Road with 2015 conditions. The level of traffic destined/originating to/from Oak Grove and the Harmony Road area to the east, as a percentage of the future total Lake Road traffic, increases by a few percentage points, the local share stays about the same and the other non-local shares of traffic decrease slightly. Generally, the same characteristics exist as today, but with increasing demand for through traffic.

<sup>8</sup>Note that LOS = Level of Service, Delay = Average Stopped Vehicle Delay in seconds, V/C = Volume-to-Capacity ratio, D/C = Demand-to-Capacity ratio.

# 4 Strategies/Alternatives

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Working with the citizen advisory group, a series of strategies were outlined to address the future needs of the Lake Road area. The strategies are summarized by mode and action, including bicycle actions, pedestrian actions, transit actions, roadway actions, local street actions and access management actions. The roadway actions include a broad range of measures including enhancement to regional facilities to neighborhood traffic management measures. For each of the actions identified, a summary regarding its status is provided. This screening was done combining technical and public input. Through the review of this draft, revisions and input will be included in this document to refine the Lake Road Plan. This specifically includes the findings and status of various concepts. Status of the actions was grouped into actions rejected, actions to be considered further in the future, actions to be recommended.

## Bicycle Actions

Several options were developed to meet the needs identified in the study for bicyclists. Table 8 summarizes the various actions, findings and status.

**Table 8**  
**Bicycle Action Summary**

Action	Finding	Status
Do Nothing	<ul style="list-style-type: none"> <li>• Low cost/No residential impact on frontage</li> <li>• Does not meet City and regional policy</li> <li>• Results in less safe future condition for bicyclists</li> <li>• Does not link Regional Centers</li> </ul>	REJECTED
Rebuild Existing On-street Bike Lane Oatfield to the east	<ul style="list-style-type: none"> <li>• Key link in regional bikeway system</li> <li>• Safer conditions for bicyclists/Meets standards</li> <li>• Better provision for school linkage</li> </ul>	RECOMMENDED

Action	Finding	Status
Extend Bike Lane on-street west to Downtown	<ul style="list-style-type: none"> <li>• Key link in regional bikeway system</li> <li>• Safer conditions for bicyclists/Meets standards</li> <li>• Better provision for school linkage</li> <li>• Establishes link to Regional Center and Waterfront</li> </ul>	RECOMMENDED
Shared Sidewalk/Bike Lane	<ul style="list-style-type: none"> <li>• Less Right of Way impact</li> <li>• Greater impact to pedestrian safety</li> <li>• Street crossing safety problem</li> <li>• Not standard design</li> </ul>	REJECTED
Off-Street Bike Lane	<ul style="list-style-type: none"> <li>• Greater right of way impact</li> <li>• Street crossing safety concern</li> <li>• Free of conflicts with autos</li> <li>• Generally not as efficient for bicycle commuters</li> <li>• Greater cost</li> </ul>	REJECTED

### Pedestrian Actions

Pedestrian actions focused on improving safety and facilities to accommodate pedestrians. Table 9 reviews the concepts considered.

**Table 9**  
**Pedestrian Actions**

Action	Finding	Status
Do Nothing (retains existing sidewalks west of Oatfield)	<ul style="list-style-type: none"> <li>• Low capital cost</li> <li>• Significant impact to long term pedestrian safety with increased traffic</li> </ul>	REJECTED
Provide sidewalks on both sides of Lake Road east of Oatfield	<ul style="list-style-type: none"> <li>• Meets City and Regional policy</li> <li>• Establishes elements of linkage between regional centers</li> <li>• Improves pedestrian safety</li> <li>• Encourages pedestrian activity</li> <li>• Best for school access</li> <li>• High costs due to grades and driveway adjustments on southside of Lake</li> </ul>	RECOMMENDED

Action	Finding	Status
Provide sidewalks on north side of Lake, east of Oatfield	<ul style="list-style-type: none"> <li>Partially meets City and Regional policy</li> <li>Somewhat encourages pedestrian activity</li> <li>Improves pedestrian safety</li> <li>Reduces pedestrian convenience and increases pedestrian crossings of Lake Road</li> <li>Less safe for school access than south sidewalk</li> <li>Lower cost than two sides or south side sidewalk due to grade</li> </ul>	CONSIDERATION ONLY IN UNIMPROVED EASTERN END OF STUDY AREA
Provide sidewalks on south side of Lake, east of Oatfield	<ul style="list-style-type: none"> <li>Same as above, but higher cost due to grade/driveway problems and safer for school</li> </ul>	REJECTED
Pave pedestrian path to school from areas SE	<ul style="list-style-type: none"> <li>Shortens walking distance to Rowe Jr. High</li> <li>Presents security issues</li> </ul>	RECOMMENDED
Provide pedestrian links between cul-de-sacs	<ul style="list-style-type: none"> <li>Security issues</li> <li>Limited ROW available</li> </ul>	CONSIDER WITH ALL NEW DEVELOPMENT
Add traffic control at one or two crossings (pedestrian crossings, traffic signals, stop signs or other measures)	<ul style="list-style-type: none"> <li>Because of the steady stream of traffic, control would allow safer crossing</li> <li>Must meet warrants</li> <li>Freeman Way and Rowe Jr. High are sites</li> </ul>	FURTHER CONSIDERATION IF WARRANTED
Provide school crossing guards	<ul style="list-style-type: none"> <li>Proven to increase safety of school crossings</li> <li>Problem determining who pays</li> <li>Problem with recruiting staff</li> </ul>	FURTHER CONSIDERATION
Provide Enhanced School Traffic Control Strong Yellow Green signing Flashing Speed Zone	<ul style="list-style-type: none"> <li>MUTCD recommendations not final on signing</li> <li>Improved speed zone recognition</li> <li>Data indicates improved perception of safety</li> <li>Typically low cost</li> </ul>	RECOMMENDED
Provide flashing light for pedestrian crossings	Limited safety benefits Moderate cost compared to other measures Improves recognition of crossing	REJECTED

## Transit Actions

Few transit actions were identified. The working group generally felt that existing services were adequate in the Lake Road area. Table 10 reviews the transit actions.

**Table 10**  
**Transit Actions**

Action	Finding	Status
Maintain and Improve Existing Bus Service	<ul style="list-style-type: none"> <li>• Good transit coverage is provided to the area today</li> <li>• Service hours could be improved, particularly weekends/non-peak</li> </ul>	RECOMMENDED
Provide transit shelters at key stops	<ul style="list-style-type: none"> <li>• Transit passengers have little refuge today</li> <li>• Shelters cost about \$2,500</li> </ul>	RECOMMENDED

## ROADWAY ACTIONS

A broad series of roadway actions were developed at the working group level and considered for the Lake Road area. These measures generally fell into six groups: roadway safety/capacity, neighborhood traffic management and areawide circulation, other roadway concepts, access management and local streets. Each of these groups are outlined below reviewing the findings and status.

### A. Capacity/Safety

Existing and future traffic demand for Lake Road, along with accident records indicate needs for Lake Road. One immediate safety issue would be greater enforcement of passing on the right. This occurs frequently on Lake Road, where vehicles use the bicycle lane to pass left turning vehicles. Table 11 summarizes the capacity and safety strategies.

**Table 11**  
**Capacity/Safety Actions**

Action	Finding	Status
Do Nothing, just overlay street	<ul style="list-style-type: none"> <li>• Minimal change to existing neighborhood</li> <li>• Does not improve safety to pedestrian, bicyclists</li> <li>• Left turn conflicts continue on Lake Road</li> <li>• Unacceptable delays at Lake/Oatfield</li> </ul>	REJECTED
Widen Lake Road to three lanes throughout study area	<ul style="list-style-type: none"> <li>• Can be done within right of way</li> <li>• Safer, fewer left turn conflicts</li> <li>• Significant impact to fronting properties</li> <li>• Widens crossing distance for pedestrians (at schools)</li> <li>• Left turn lanes not warranted at all cross streets</li> </ul>	REJECTED
Selectively widen Lake Road to three lanes	<ul style="list-style-type: none"> <li>• Can be done within ROW</li> <li>• Safer, reduces left turn conflicts</li> <li>• Allows turn lanes to be added where most needed</li> <li>• Reduces width near school, traffic calming</li> <li>• Adds turn lanes at most of the warranted locations - combined with added local connections south of Lake Road, provides safe turning options</li> </ul>	RECOMMEND
Add turn lanes at Lake/Oatfield	<ul style="list-style-type: none"> <li>• Intersection operates at deficient level of service in future</li> <li>• Even when improved, still LOS D</li> <li>• Northbound right turn lane reconstruction would allow school buses to make turn</li> </ul>	RECOMMENDED
Seek to relocate the starting point for 30 MPH speed zone	<ul style="list-style-type: none"> <li>• West of ORE 224 residential frontage becomes common</li> <li>• Other arterial streets in area with similar characteristics have 30 MPH speed zones</li> </ul>	RECOMMENDED

	<ul style="list-style-type: none"> <li>• Freeway is better location for speed zone change than middle of neighborhood</li> <li>• Reconstruction of Lake Road will result in new design characteristics more suitable to 30 MPH</li> </ul>	
Seek to change speed zone to 25 MPH	<ul style="list-style-type: none"> <li>• Lake Road has residential frontage</li> <li>• Residents desire reduced speed zone</li> <li>• Traffic is observed traveling 35 to 40 MPH today</li> <li>• Lake Road is an arterial</li> </ul>	REJECTED
Improve sight distance by clearing corner obstructions (vegetation, cross street grades with reconstruction)	<ul style="list-style-type: none"> <li>• Most obstructions in ROW</li> <li>• Property owner landscaping in public ROW to be impacted</li> <li>• Most problem intersections can be significantly improved by clearing out sight distance triangle</li> <li>• Most cross streets sight distance improved with addition of sidewalks/bicycle lanes</li> </ul>	RECOMMENDED
Post through truck restriction on Lake Road west of ORE 224 ramps	<ul style="list-style-type: none"> <li>• Lake Road is not a designated truck route</li> <li>• Alternative arterial routes exist for truck use</li> <li>• Residential/school zone are not compatible with truck route</li> <li>• Lake Road is not multi-lane which is not as desirable for trucks</li> </ul>	RECOMMENDED

## B. Neighborhood Traffic Management

Neighborhood traffic management (NTM) refers to measures which can balance the need for traffic movement with neighborhood livability. Techniques include a wide range of activities from narrowing streets to traffic circles to on-street parking to speed

humps and more. Various measures were identified for Lake Road and reviewed. Table 12 summarizes the findings of this review.

**Table 12**  
**Neighborhood Traffic Management**

Action	Finding	Status
Narrowing Lane Width for Cars	<ul style="list-style-type: none"> <li>• Slows traffic by defining a more constricted driving area</li> <li>• Helps identify Lake as not a truck route</li> <li>• Meets City guidelines</li> <li>• Works within street design</li> <li>• Shortens pedestrian crossing</li> </ul>	RECOMMENDED
On-street Parking	<ul style="list-style-type: none"> <li>• Can slow traffic</li> <li>• Conflicts with bicycles</li> <li>• Reduces safety on roadway with Lake Road volume</li> <li>• Useful to abutting properties</li> </ul>	REJECTED
Traffic Circles	<ul style="list-style-type: none"> <li>• Can slow traffic</li> <li>• Adds landscaping</li> <li>• Requires significant ROW</li> <li>• Less appropriate for arterial</li> </ul>	REJECTED
Chokers (Narrow Points)	<ul style="list-style-type: none"> <li>• Shortens pedestrian crossing</li> <li>• Can slow traffic</li> <li>• Not effective with bicycle lanes</li> </ul>	REJECTED
Street Closure	<ul style="list-style-type: none"> <li>• Reduces traffic and vehicle speeds</li> <li>• Not consistent with Citywide function</li> <li>• Impacts other neighborhoods</li> </ul>	REJECTED
Selective Traffic Enforcement	<ul style="list-style-type: none"> <li>• Helps maintain uniform speed of vehicles</li> <li>• Not continuous over time; speeds go back up after police leave</li> <li>• Limited resources</li> <li>• Enforces traffic laws related to bikes</li> </ul>	RECOMMENDED
Median Treatment	<ul style="list-style-type: none"> <li>• Can slow traffic</li> <li>• Provides opportunity for enhanced landscape - neighborhood entry</li> <li>• Emergency service concern if too long with single lane</li> </ul>	RECOMMENDED

	<ul style="list-style-type: none"> <li>Useful on straight streets to break up wide, open view that results in speeding</li> </ul>	
Permanent Photo Radar Enforcement	<ul style="list-style-type: none"> <li>Not approved for statewide use</li> <li>Provides more constant level of enforcement</li> <li>Can also address red light running with technology</li> <li>Privacy issues</li> </ul>	STRONG FURTHER CONSIDERATION
Road realignment/curvy street	<ul style="list-style-type: none"> <li>Can slow traffic</li> <li>Significant impact to ROW</li> <li>Negative impact on safety for arterial</li> </ul>	REJECTED

### C. Areawide Roadway Concepts

Working with the citizen working group for the Lake Road project, several concepts were developed to test if traffic volumes could be reduced on Lake Road by other actions. Seven concepts were evaluated using the Metro regional travel demand forecast model that was developed for the Milwaukie TSP. Specific adjustments in the roadway network were tested to determine their effect on Lake Road traffic in the year 2015 evening peak hour, using the base conditions as evaluated in the Milwaukie TSP for 2015. All comparisons provided are for year 2015 conditions. The following sections provide brief summaries of the findings.

**1. Slow Down Lake Road:** Lake Road was tested with speeds 10 MPH slower than in the base 2015 model. This action resulted in a significant reduction in traffic volume on Lake Road (nearly 50 percent). Additionally, traffic on Oatfield Road is reduced by about 20 percent. However, the traffic redistributes to other roadways, including 34th Avenue which would experience a 65 percent increase in traffic. Both ORE 224 and McLoughlin Boulevard experience increases in traffic also (3 to 5 percent). While bringing vehicle speeds more in conformance with speed zones is desirable, reductions beyond this have substantial impact on other neighborhoods and place increased burden on regional facilities. **STATUS: Rejected.**

**2. ORE 224 Freeway with Washington Street Connection to ORE 99E:** This test included upgrading ORE 224 to freeway operating characteristics with a split diamond interchange (of some form) between Harrison Street and 37th Avenue. The interchange would provide an improved link between ORE 224 and ORE 99E via Washington Street (which is present today). This would reduce traffic on Lake Road, Oatfield Road and 34th Avenue by about 5 to 10 percent. The level of reduction on

34th Avenue would be highly dependent upon the interchange design and access configuration (less access to 34th Avenue, lower traffic). Washington Street has several schools nearby. The facility enhancement on ORE 224 increases its ability to handle traffic accommodating the future increase in volume on ORE 224 of 15%. However, traffic on Washington Street increases 70 percent in this scenario significantly impacting this corridor. The overall benefit of this concept merits further consideration and evaluation in the corridor study of ORE 224. **STATUS: Further Consideration.**

**3. High Speed Connector between ORE 224 and ORE 99E:** This test was to identify if creating a direct link between ORE 224 and ORE 99E would substantially reduce traffic levels on Lake Road compared to the previous option. While the high speed link would reduce Lake Road traffic by 10 percent compared to scenario 2 (noted above), this level of reduction does not justify such a major transportation investment. It would take the combination of scenario 2 plus scenario 3 to substantially benefit Lake Road (25 percent reduction) and Oatfield Road (30 percent reduction). However, the high speed connector would have substantial negative environmental impacts, rendering it nearly infeasible. **STATUS: Rejected.**

**4. Create New North/South Linkage from Lake Road to Hill Road via an Alignment near Kuehn Road:** This option would create a new two to three lane roadway from the intersection of ORE 224 eastbound off-ramps and Hill Road at View Acres Road, crossing Kellogg Creek and intersecting with Aldercrest Road. This roadway option has significant ability to reduce traffic on Lake Road and Oatfield Road (33 percent reduction). Additionally, traffic on Webster Road is reduced by 15 percent and on Thiessen Road by over 50 percent. This benefit comes directly from providing another surface street connection between the Oak Grove area, ORE 224 and the 82nd/Avenue Clackamas Town Center area. The impact is that traffic on Hill Road more than doubles. Additionally, the grades, neighborhood disruption and environmental impacts of this alignment would be significant, resulting in substantial costs. The large traffic reductions to Lake Road and other routes in the area cannot be achieved by any other improvement. While this project creates significant impacts, it may warrant further consideration by the County in their planning process. However, this would take ten to twenty years to develop as a project, even if consensus could be achieved. **STATUS: Further Consideration.**

#### **D. Other Roadway Concepts**

The Lake Road Working Group defined several additional concepts that were felt to significantly reduce traffic on Lake Road. Some of these concepts had been outlined in

earlier neighborhood efforts to reduce traffic in the area<sup>9</sup>, but without data to indicate the impacts of these actions. Each of these scenarios were tested in the same fashion as the scenarios above which focused more on using improved circulation to reduce traffic on Lake Road. The following concepts focused more on the reduction of circulation. Consistently, each of these scenarios significantly increases the amount of vehicle miles traveled due to out of direction travel, which is contrary to State policy to reduce vehicle miles traveled<sup>10</sup>.

**1. Close Oatfield Road south of Lake Road.** Closing of Oatfield Road would reduce traffic on Lake Road east of Oatfield Road (by 35 percent), but increase traffic west of Oatfield Road (by 47 percent). Traffic on Oatfield Road and 34th Avenue (45%) are also substantially reduced. The majority of traffic diverted due to the closure of Oatfield Road would use McLoughlin Boulevard, linking to the east via Washington Street and Harrison Street to reach destination formerly made via Oatfield, Lake and 34th. Additionally, other streets south of Lake Road would experience significant increases in traffic by this action: Aldercrest Road (over a tenfold increase), Hill Road (33 % increase), Thiessen Road (15% increase), Webster Road (79% increase), and the north end of River Road (13% increase). This closure is inconsistent with regional policy for connectivity and imposes substantial impacts to surrounding neighborhoods and streets. **STATUS: Rejected.**

**2. Close Oak Street at ORE 224.** This option has little impact to traffic on Lake Road or Oatfield Road (slight increases occur on Lake Road). Traffic is reduced on Oak Street and increased on 37th Avenue and Washington Street. The large reduction of traffic on the north end of 34th Avenue is not matched by comparable reductions on the south end (only a 22 percent reduction) due to cut through traffic from Edison Street. Substantial impact would occur on Edison, 35th, 36th and Wister. **STATUS: Rejected.**

**3. Close 34th Avenue north of Lake Road.** This option increases traffic on the west end of Lake Road prior to Oatfield Road by 38 percent, while traffic on the north end of 34th Avenue is reduced over 60 percent. Traffic on McLoughlin Boulevard, Washington Street and Harrison Street all would experience increased traffic as alternative routes to 34th Avenue. Lake Road traffic to the east of Oatfield Road would remain basically unchanged and Oatfield Road itself would experience a small reduction (8 percent). Increasing traffic on Lake Road was not an objective of this study. **STATUS: Rejected.**

**4. Install Turn Prohibitions at Lake/Oatfield that Eliminate Westbound Left and Northbound Right Turns.** This option would require enforcement to be as effective as what was analytically tested, since all other movements would remain at the

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<sup>9</sup> 34th Avenue Neighborhood Task Force: A Report to the Milwaukie Traffic Safety Commission, November 9, 1992.

<sup>10</sup> Transportation Planning Rule, OAR 660-012-045-3b.

intersection (it would be difficult to restrict just two turn movements with physical obstructions). The net effect is somewhat similar to closing Oatfield Road. Traffic on Oatfield Road and Lake Road east of Oatfield Road are reduced significantly (24 and 35 percent, respectively). However, several other routes are impacted with increased traffic including Lake Road west of Oatfield Road (69 percent increase), 34th Avenue (97 percent increase), Aldercrest Road (over a five fold increase), Hill Road (17 percent increase), Thiessen Road (6 percent increase) and Webster Road (38 percent increase). This would be contrary to regional policy regarding connectivity and reduced trip lengths. **STATUS: Rejected**

### **E. Access Management**

In discussion with the Lake Road Working Group, access management was viewed as a limited benefit, significant impact action. Even though reducing the number of access points reduces the level of conflicts with left turning traffic, driveway maneuvers and pedestrian/bicycle movement, the working group did not perceive the potential benefits as greater than the resulting impacts.

Much of the frontage of Lake Road already has residential frontage. While access management can be applied to new development to control the number of access points on Lake Road it will be difficult to address the existing driveways which have evolved over time. Many of these driveways were approved at times in the past when traffic levels were lower and the level of conflict were much smaller than they are today. With current and future traffic levels, additional access to Lake Road will require significant documentation to support the safety of such driveways if they do not meet the recommended TSP spacing standard (300 feet to the nearest access point - driveway or street - in either direction on either side of the street).

The policy on Lake Road should be to not allow any new private driveway access points to fronting property. Over time, if redevelopment of properties occurs, access points should be consolidated or removed to private properties to the greatest extent possible. The Milwaukie TSP access management element calls for 300 foot spacing between access points. The following table summarizes the access management strategies considered in this study.

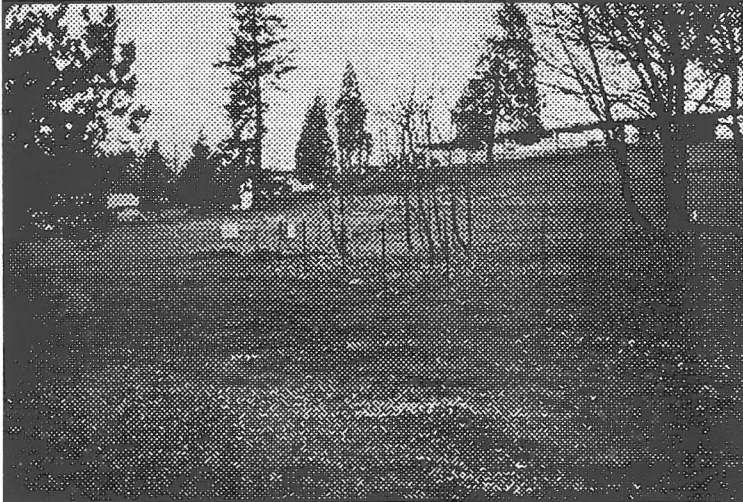
### **F. Local Street Connections**

There are three elements of the local street system that have the potential in the future to be interconnected, providing enhanced pedestrian, bicycle and auto circulation. These connections would only be developed over time as changes (development or redevelopment) in land use occur, allowing for construction. The Lake Road Plan would not pursue these connections, but would encourage them to occur in time (with the exception of the paved walking path to Rowe Junior High).

**Table 13  
Access Management**

Action	Finding	Status
Close Private Access Where Possible to Lake Road	<ul style="list-style-type: none"> <li>• Reduces left turn conflicts</li> <li>• Reduce parking maneuver conflicts</li> <li>• Improves safety</li> <li>• Reduces conflicts with bikes and pedestrians</li> <li>• Major property impact</li> </ul>	FOR CONSIDERATION WITH REDEVELOPMENT
Limit New Access Points onto Lake Road	<ul style="list-style-type: none"> <li>• Reduces conflicts</li> <li>• Relates to current traffic levels where left turns create conflicts</li> <li>• Requires consideration of common/consolidated access points to meet 300 foot spacing requirement</li> </ul>	RECOMMENDED
Left Turn Lanes west of Oatfield	<ul style="list-style-type: none"> <li>• Reduces left turn impacts</li> <li>• Major reconstruction impact since sidewalks and curb in place</li> <li>• Not warranted</li> </ul>	REJECTED
Left Turn Lanes (continuous) east of Oatfield	<ul style="list-style-type: none"> <li>• Reduces left turn impacts</li> <li>• Less reconstruction impact since unimproved frontage (no curbs and sidewalks)</li> <li>• Warranted</li> </ul>	RECOMMENDED East of Vernie Avenue if no local connections, east of Where Else Lane with local connections
Realign offset public street Intersections	<ul style="list-style-type: none"> <li>• Improves safety, reduces conflicts</li> <li>• ROW impacts</li> <li>• Property impacts</li> </ul>	FURTHER CONSIDERATION

**Local Pedestrian/Bicycle Path between Rowe Jr. High and Licynta Lane.** Presently there is a worn walking path at the western end of Licynta Lane connecting to Rowe Jr. High. This path allows for students to walk directly to school from areas south and east of the site without having to travel up the cul-de-sacs to Lake Road. While slopes along this path are significant, a paved trail would enhance the safe east-west movement of pedestrians and bicycles. Coordination will be needed between the residents, school district and city to determine the most effective connection points, width, lighting and alignment. **STATUS: Recommended.**



**Local East-West Connection: Licyntra Lane/Vernie Lane/Bowman/Brae Streets.**

The cul-de-sacs south of Lake Road mostly do not interconnect. This limits the ability to link neighborhoods together and allow people to walk to school. Since there is little threat of through traffic (due to Kellogg Creek) these local connections can improve the neighborhood's ability to serve walkers, bicyclists and people driving to neighbors homes without having to use Lake Road. The objective would be to link the Kuehn Road, Freeman Road, Where Else Lane, Vernie Avenue, Boss Lane and Rowe Jr. High through a series of local connections. Because the potential linkages of these roadways would mostly rest in undeveloped areas, the local street connections would need to be developed on an opportunity basis in the future (as land develops or redevelops). The linkages are critical to the design of Lake Road. Should these local connections not be made, the left turn lane cross section of Lake Road would need to be extended west to Vernie Avenue from Where Else Lane (for westbound left turns into neighborhood from Lake Road. **STATUS: Recommended.**

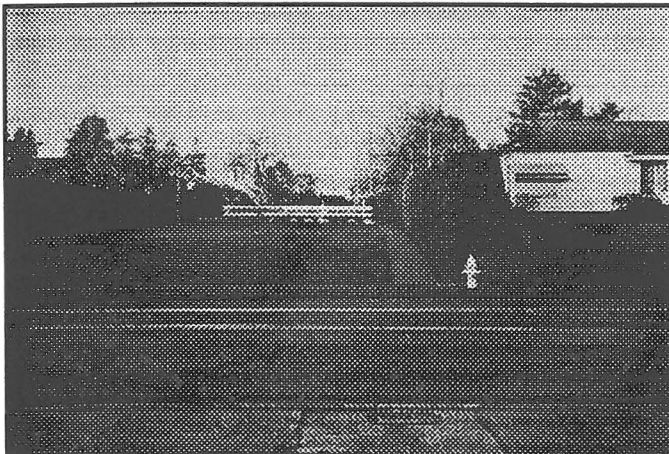
**32nd/33rd Avenue Connections to Lake Road.** Presently, the area northwest of the intersection of Lake Road/Oatfield Road/34th Avenue must use 34th Avenue to access Lake Road. This neighborhood area has two streets with right-of-way on record that link to Lake Road but are not built as roadways. There is a paved sidewalk that links 33rd Avenue to Lake Road. However, north of Lake Avenue there is no street connection (about 150 to 300 feet to the stub end of 33rd Avenue). On 32nd Avenue, there is a gap about 100 feet where there are no sidewalk or roadway improvements north of Lake Road. Presently, 34th Avenue is used by most through moving traffic between Lake Road and ORE 224. The neighborhood access to Lake Road adds to the 34th Avenue traffic.

There are two issues to address on 32nd and 33rd Avenue regarding connectivity. First, is creating improved bicycle/pedestrian connections from the neighborhood to Lake Road. This could be accomplished by creating a sidewalk connection on 32nd

Avenue (right-of-way conditions would need to be studied further) and widening the sidewalk connection along 33rd Avenue to better accommodate bicyclists. This would be a short term priority. The second issue would address vehicle access. While 34th Avenue is impacted by neighborhood traffic accessing Lake Road/Oatfield Road, there is substantial opposition to creating vehicle linkages on these two streets as long as Oak Street connects the neighborhood to ORE 224. With future reconstruction of ORE 224, changes in access may eliminate the existing northern access to the neighborhood from Oak Street. To allow neighborhood traffic (and emergency access) alternative access points and a means to disperse, linkages to Lake Road should be considered. However, this could result in some increase in traffic to 32nd and 33rd Avenues at certain segments. Because of the potential for traffic intrusion, neighborhood traffic management techniques (circles, humps, etc...) would be necessary (including possible turn restrictions at Lake Road). These vehicle linkages would only be considered together with future projects on ORE 224 which may restrict or eliminate ORE 224 access through this neighborhood. **STATUS: Recommend Improved Pedestrian and Bicycle Linkages in short term; Further Consideration of Vehicle Linkages contingent with ORE 224 Access Restrictions via Oak Street in long term.**



32nd Avenue looking north



33rd Avenue looking north

# 5 Design Considerations

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The design of improvements on Lake Road will include many features of the street. This chapter provides an outline to guide future designers of the Lake Road improvements. The following sections discuss key features of the street design.

## CROSS SECTION

Sample cross sections were developed for Lake Road (Figure 4). Key features include:

- Use of 11 foot travel lanes with 10 foot left turn lanes near Oatfield to keep cross section width to minimum.
- Use of 5 foot sidewalks. Vary between curb tight and setback walks where flexibility exists. For example, sidewalks set back from curb might be possible near Rowe Junior High.
- Six foot bicycle lanes. This allows maximum safety for bicyclists given heavy auto flows.
- Median applications would be limited to 100 to 300 foot lengths were possible, typically 10 feet wide.

## STREET FEATURES

The Lake Road Task Force discussed several features of the street design over its meetings. The following list provides some inputs:

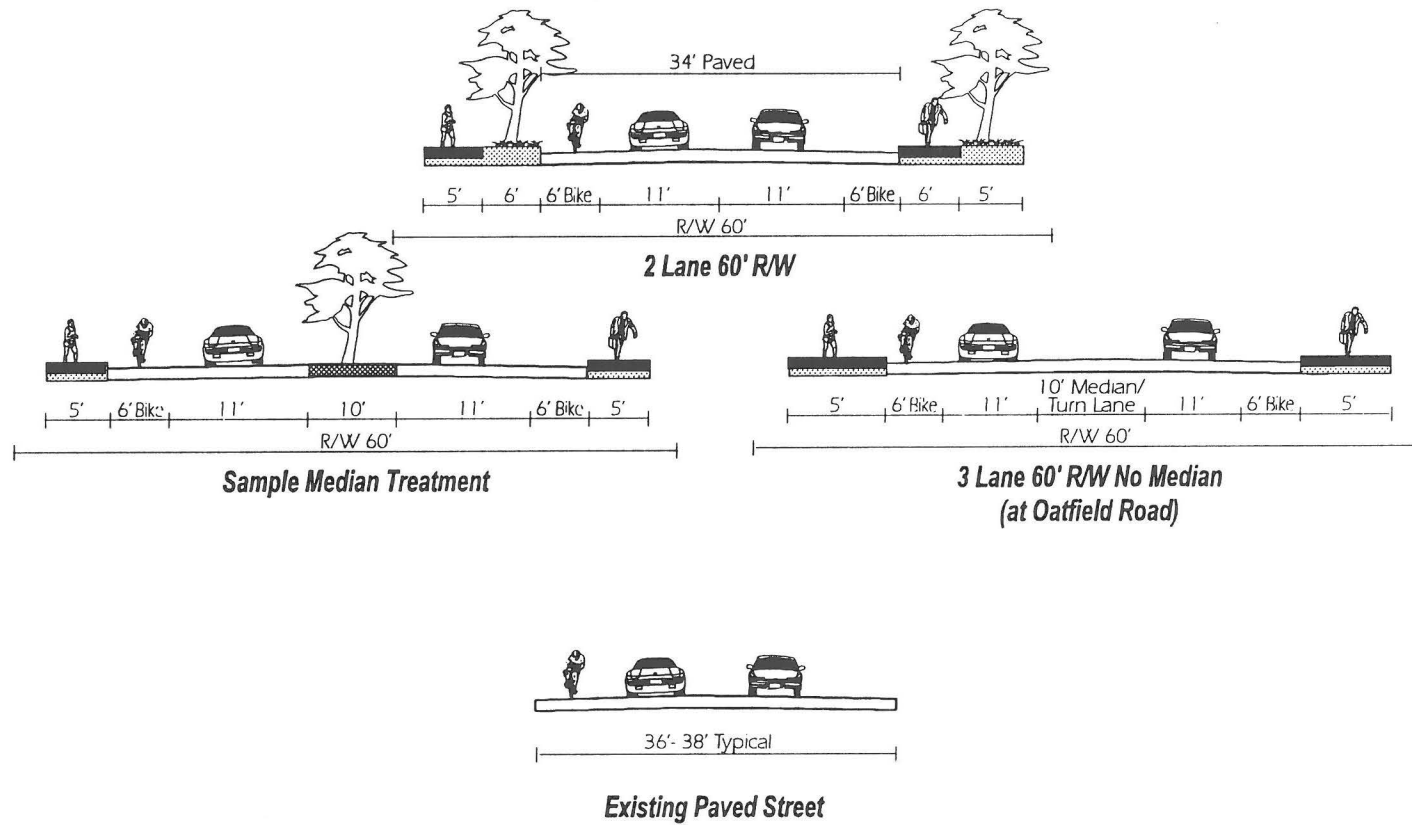
- Storm drain inlets should not extend into bicycle lanes. Curb inlets should be used.
- Where possible, place the planting strip between the sidewalk and the roadway.
- Larger street name signs or advance signs for key cross streets should be used.
- Bus shelters should be set behind sidewalks, to avoid intrusion into walking area.
- Street light and utility poles should be set behind sidewalk.
- Driveways for fronting residents should be wide enough to allow flexibility in street access.
- Concrete pavement, colored pavement and/or special textured pavement should be used in association with school crossing areas. Any texturing should minimize noise impacts.

- Street trees would be added as appropriate along Lake Road (preferably behind sidewalk or in planter strip).
- Sidewalks should continue around curb returns of each cross street before stopping or tying into existing sidewalks.
- Ramps (for ADA) with textured paving surface should be installed at intersection corners per ODOT standards.
- Consideration of underground utilities. Coordinate any utility work (sewer) prior to road construction.
- Place storm drains in locations to best avoid conflicts of water flow and pedestrian paths (at ADA ramps). Address current storm drainage problems on Lake Road.

## OPERATIONAL FEATURES

Some key operational features include:

- Traffic signal interconnect between Oatfield Road and any future signals to the east, linking to ORE 224.
- Traffic signal warrant analysis at Freeman Way and Rowe Junior High School.
- Use 8 inch white painted lines (not thermoplastic) to delineate bicycle lanes. Use ODOT standard bicycle lane markings.
- Use thermoplastic (or equivalent) for traffic pavement markings for greater durability (double yellow and left turn channelization).
- Use integral curb/gutter pan design to allow for more cost effective pavement maintenance/overlays.



**Figure 4**  
**Lake Road**  
**SAMPLE STREET CROSS SECTIONS**

# 6 The Plan

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Based upon the findings of this study and the input of the Lake Road Working Group, the recommended plan for Lake Road was developed. This chapter outlines the key recommendations and the priority (immediate action- within the next three years, and plan development - beyond three years). A rough order of magnitude cost estimate is provided and a series of further studies are called out.

## RECOMMENDATIONS

Figure 5 provides a summary of the key features of the Lake Road Multi-modal Connection Plan. Samples of what Lake Road will look like with the recommended improvements are also provided using visual simulations that show existing and proposed conditions. The key features by mode are summarized below.

### Bicycle

Better maintain bicycle lanes to clear debris and minimize standing water (Immediate)

Post bicycle signs on Lake Road (Immediate)

Six foot on-street bicycle lanes between ORE 224 and downtown Milwaukie (Plan Development)

### Pedestrian

Coordinate with school district to provide enhanced School Traffic Control, including new strong yellow green signs (in process of approval for use by MUTCD), flashing lights on school speed zone sign and school crossing guards, as appropriate. These elements require School District involvement (Immediate)

Work with school district to create paved pedestrian link from Licyntra Lane to Rowe Junior High (Immediate)

Create pedestrian linkages between any new cul-de-sac near Lake Road and adjacent roadways. These should focus on direct path to transit routes and school areas. In

particular, develop pedestrian/bicycle linkages from 32nd and 33rd Avenues to Lake Road (Immediate)

Provide sidewalks on both sides of Lake Road from east city limits to downtown Milwaukie (Plan Development)

### **Transit**

Maintain existing services levels and add bus shelters as funds are available (Immediate)

Integrate bus amenities into the design of Lake Road (Plan Development).

### **Street Design**

Seek modification of speed zone to 30 MPH west of ORE 224 (Immediate)

Post through truck restriction on Lake Road west of ORE 224 (Immediate)

Clear sight distance triangle at each cross street to Lake Road, trimming or removing vegetation (Immediate)

Greater enforcement of passing on the right regulation on Lake Road. Vehicles frequently use bicycle lane to pass left turning vehicles (Immediate)

Provide striping for channelization at the intersection of Lake Road and Freeman Way to better delineate stopping area for northbound vehicle, improving sight distance. Enforce long term parking regulation for vehicles parking on Lake Road at this intersection to eliminate sight distance constraint (Immediate)

Provide left turn lanes on east end of study area and at Oatfield Road. Start a three lane cross section for Lake Road at Vernie Avenue if local connections are not made or start at Where Else Lane if local connections are made - extend east to ORE 224 (Plan Development)

Add northbound right turn lane on Oatfield Road at Lake Road, specifically designed to accommodate bus movements. (Plan Development and TSP)

### **Neighborhood Traffic Management**

Support and enhance selective enforcement of Lake Road traffic conditions. This may include consideration of Saturday enforcement when many non-commuters are on the road (Immediate)

Design Lake Road with narrow lanes (11 foot through, 10 foot left turn lane) and medians with reconstruction (Plan Development)

Seek photo enforcement for Lake Road, potentially in a permanent installation with red light running enforcement at Oatfield Road (In future when possible)

Consider neighborhood traffic management on 32nd and 33rd Avenues in future if they are connected to Lake Road (potentially part of future ORE 224 reconstruction mitigation)

### Local Streets

Develop local street connectivity as development occurs in future between Kuehn Road, Freeman Road, Where Else Lane, Vernie Avenue, Boss Lane and Licyntra Lane. This does not need to be a continuous route, but allow connection without access to Lake Road (Plan Development, part of Development Review process)

### Access Management

No new or redeveloped access points that do not meet 300 foot spacing to adjacent access point (driveway or public street on either side of street) onto Lake Road without overriding evidence that access to cross street or shared access point is not feasible (Immediate, part of Development Review process)

### PRELIMINARY COSTS

Given the conceptual nature of the project, identifying detailed cost for the proposed project is premature at this time. However, given the general scope and nature of the recommended project and its elements a order of magnitude cost estimate was developed. To address the rebuilding of Lake Road from 21st Avenue to east of Kuehn Road would potentially require between \$2.5 and \$3.5 million. This is a rough estimate and subject to refinements (such as the need for storm drainage - which was included or utilities - which were not included).

### FURTHER STUDY

The development of the Lake Road Multi-modal Connection Study pointed out certain areas where further analysis and investigation will be needed. These include:

- Traffic signal warrants on Lake Road
- Speed zone boundary modifications
- ORE 224 reconstruction impacts to the neighborhoods north of Lake Road
- Left turn warrant analysis on Lake Road
- Evaluation of possible feasibility of new north-south connection at east end of study area

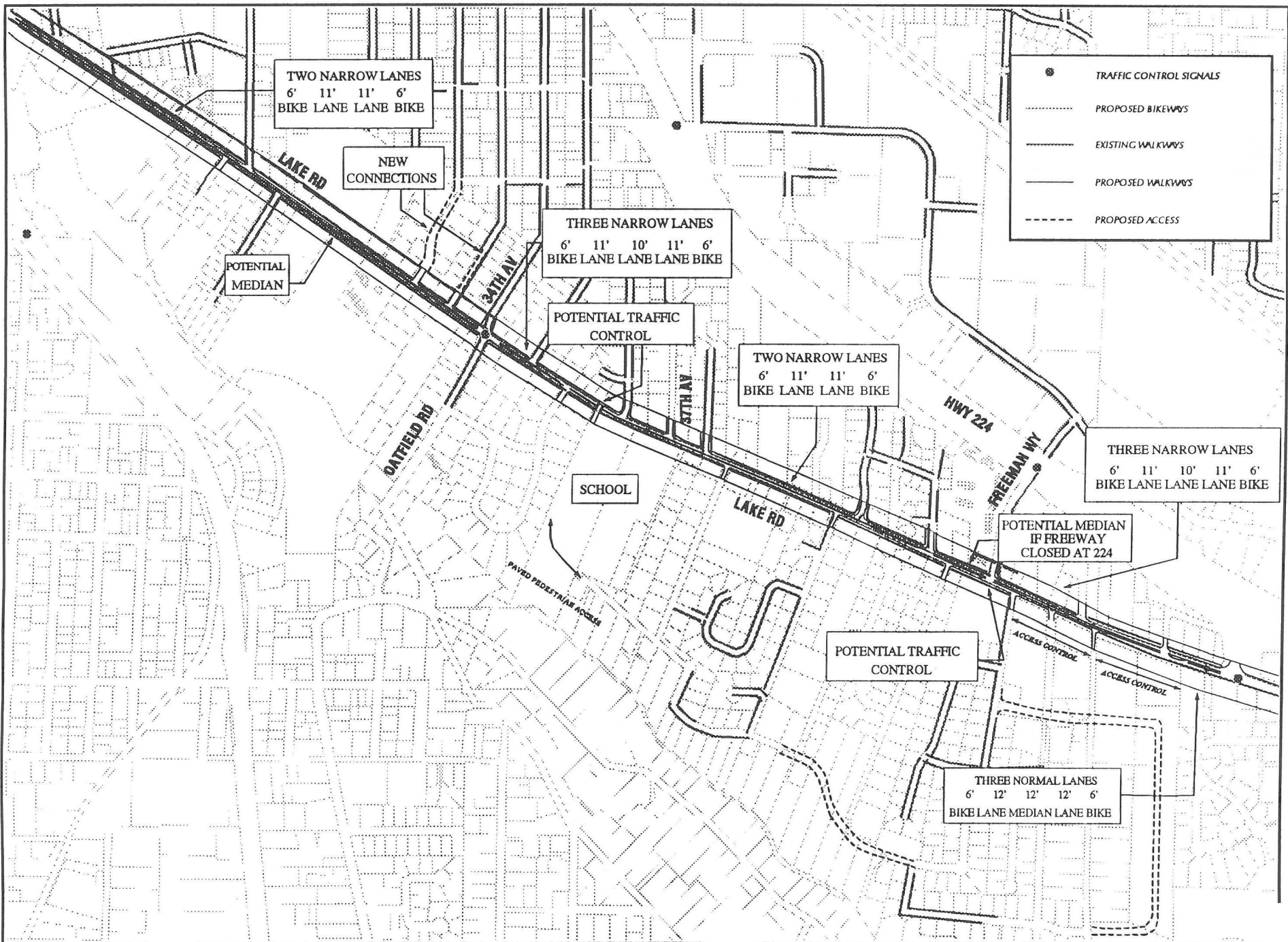


Figure 5

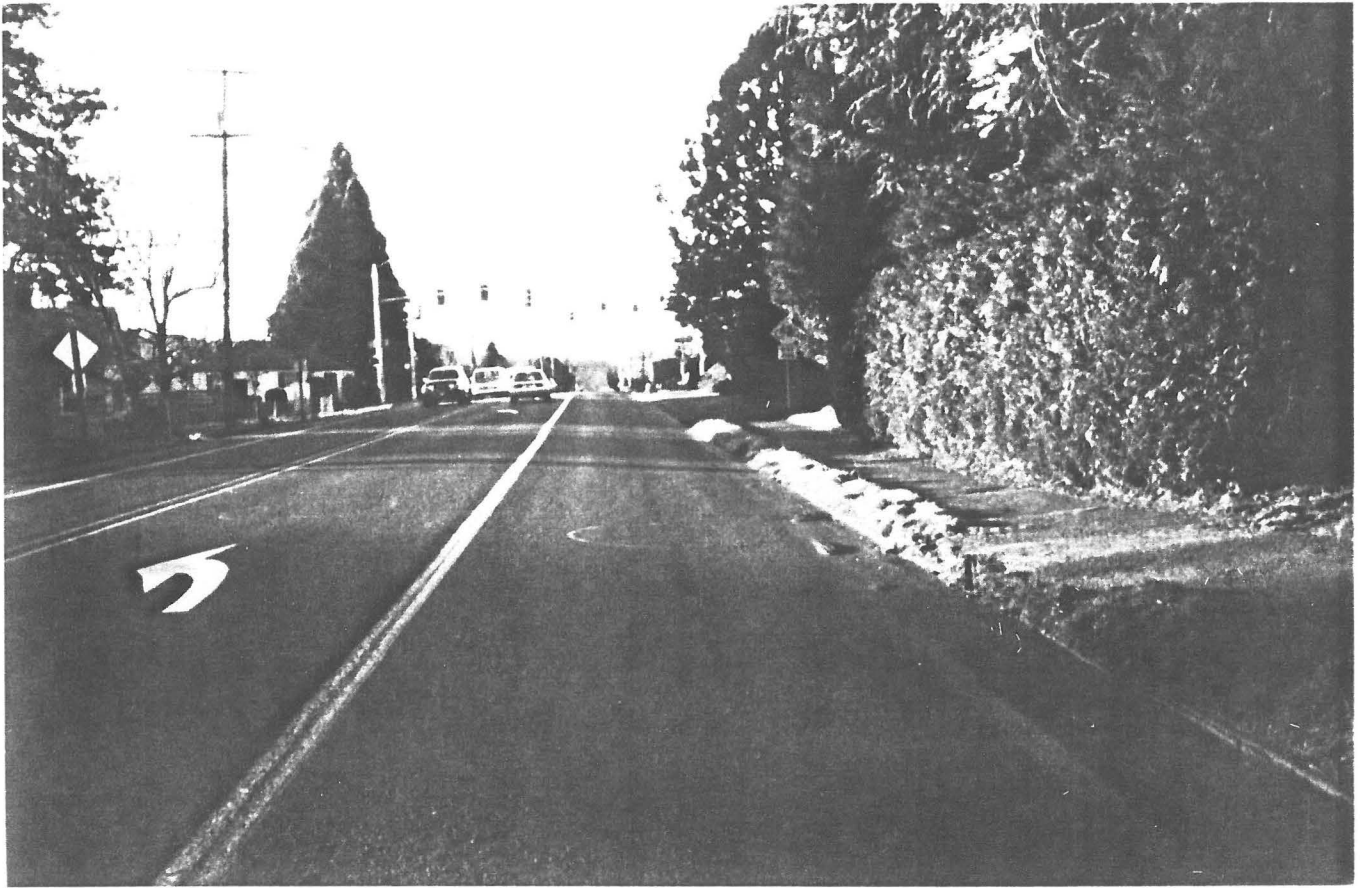


## Lake Road Area Multimodal Plan Working Group

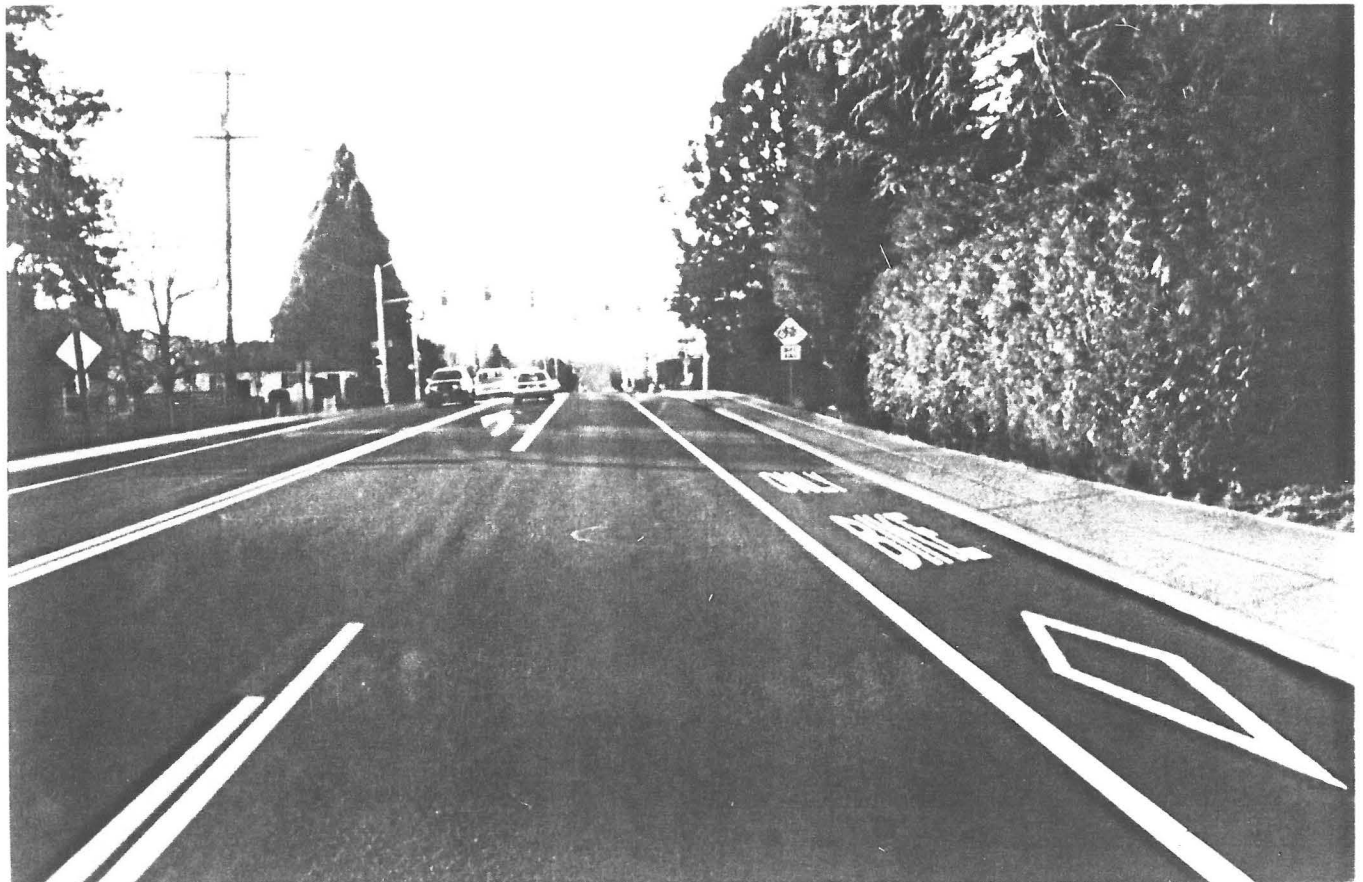
Ernest Bisio  
Bud Boyer  
Patti Casanova  
Ron Casanova  
Betty Chandler  
Geni Figini  
Jan Fisher  
Michael Gipson  
Norm Hoelzer  
Brad Jackman  
Jerry Jacobs  
Rob Kappa  
Nancy Kinnaman  
Don Leamy  
Chuck Martin  
Mary Martin  
Susanna Pai  
Melanie Phillips  
Athena Pogue  
Eileen Rose  
George Van Bergen  
Julie Wisner  
Patty Wisner

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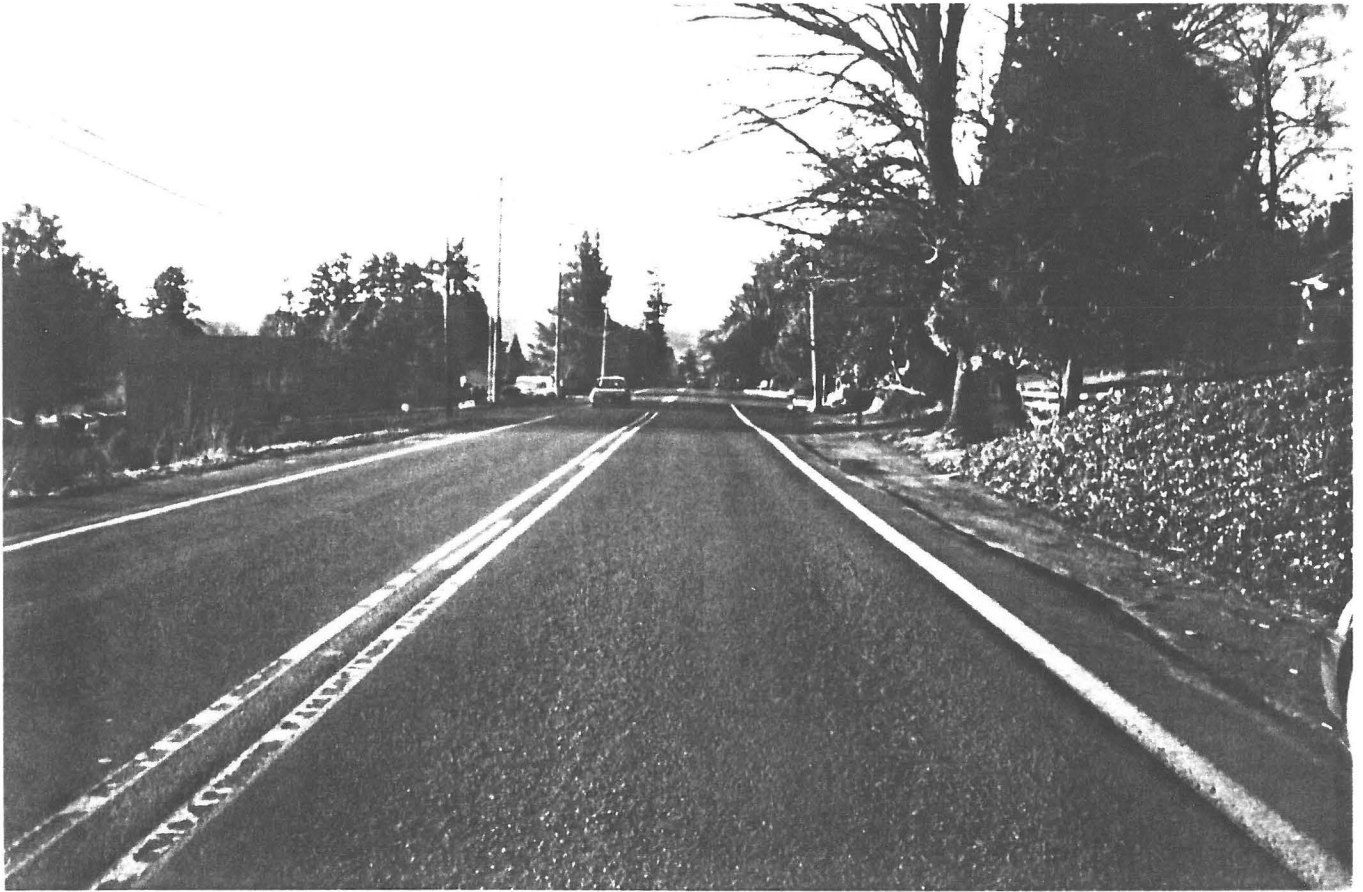
This project is partially funded by a grant from the Transportation and Growth Management (TGM) Program, a joint program of the Oregon Department of Transportation and the Oregon Department of Land Conservation and Development. TGM grants rely on federal Intermodal Surface Transportation Efficiency Act and Oregon Lottery funds. The contents of this document do not necessarily reflect the views of policies of the State of Oregon.



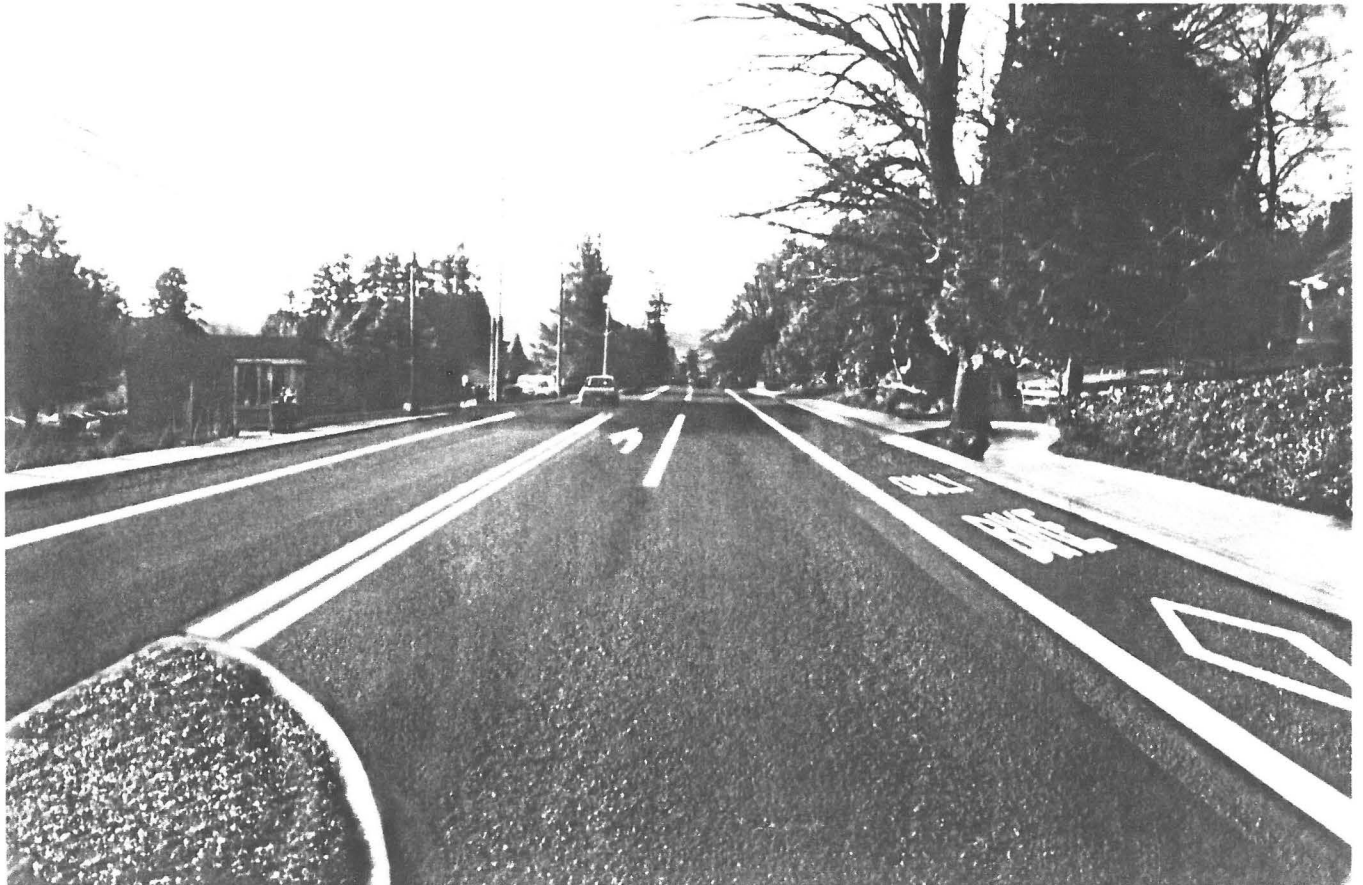
Existing



Proposed  
Lake Road at Oatfield Road

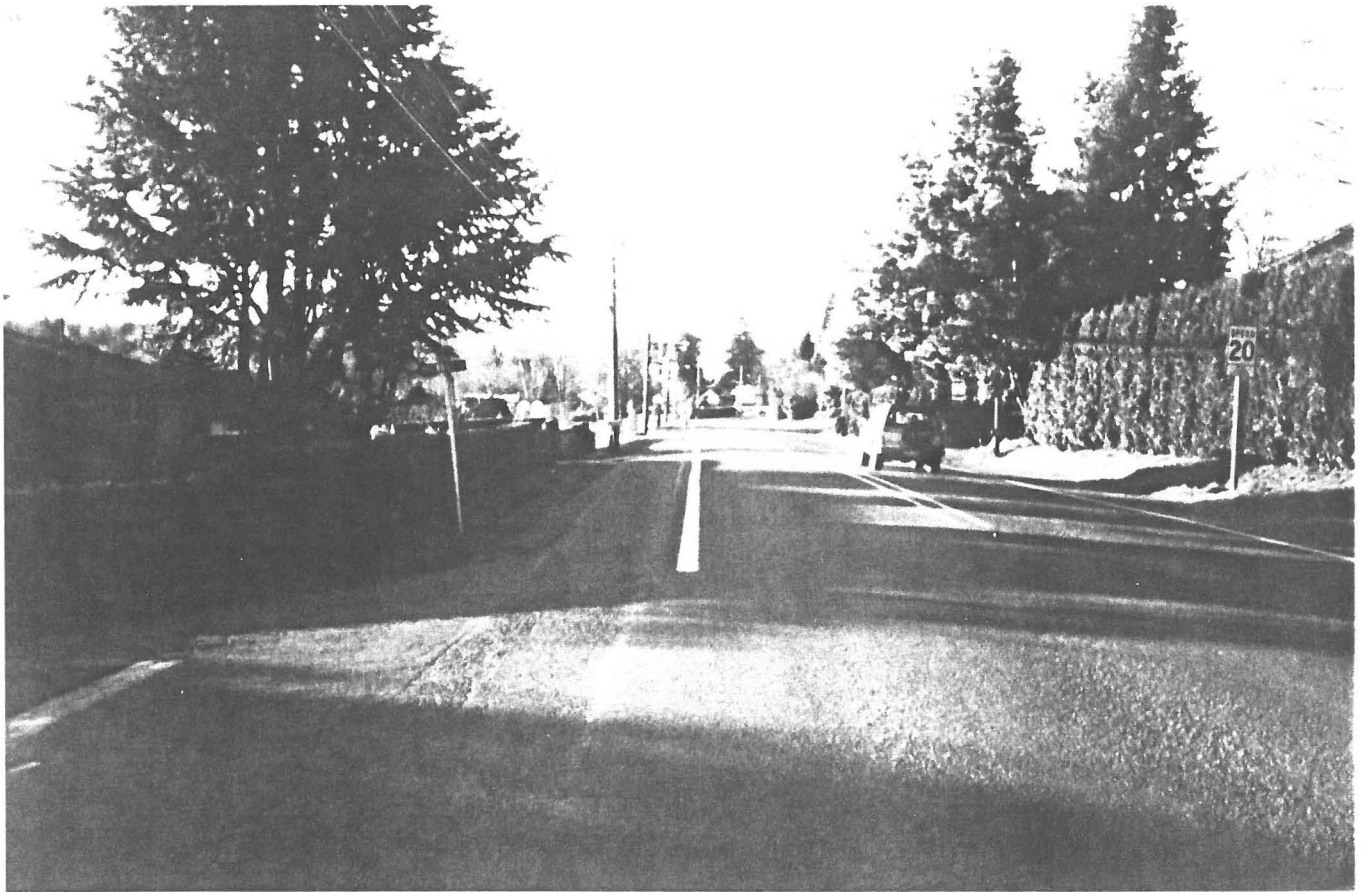


Existing

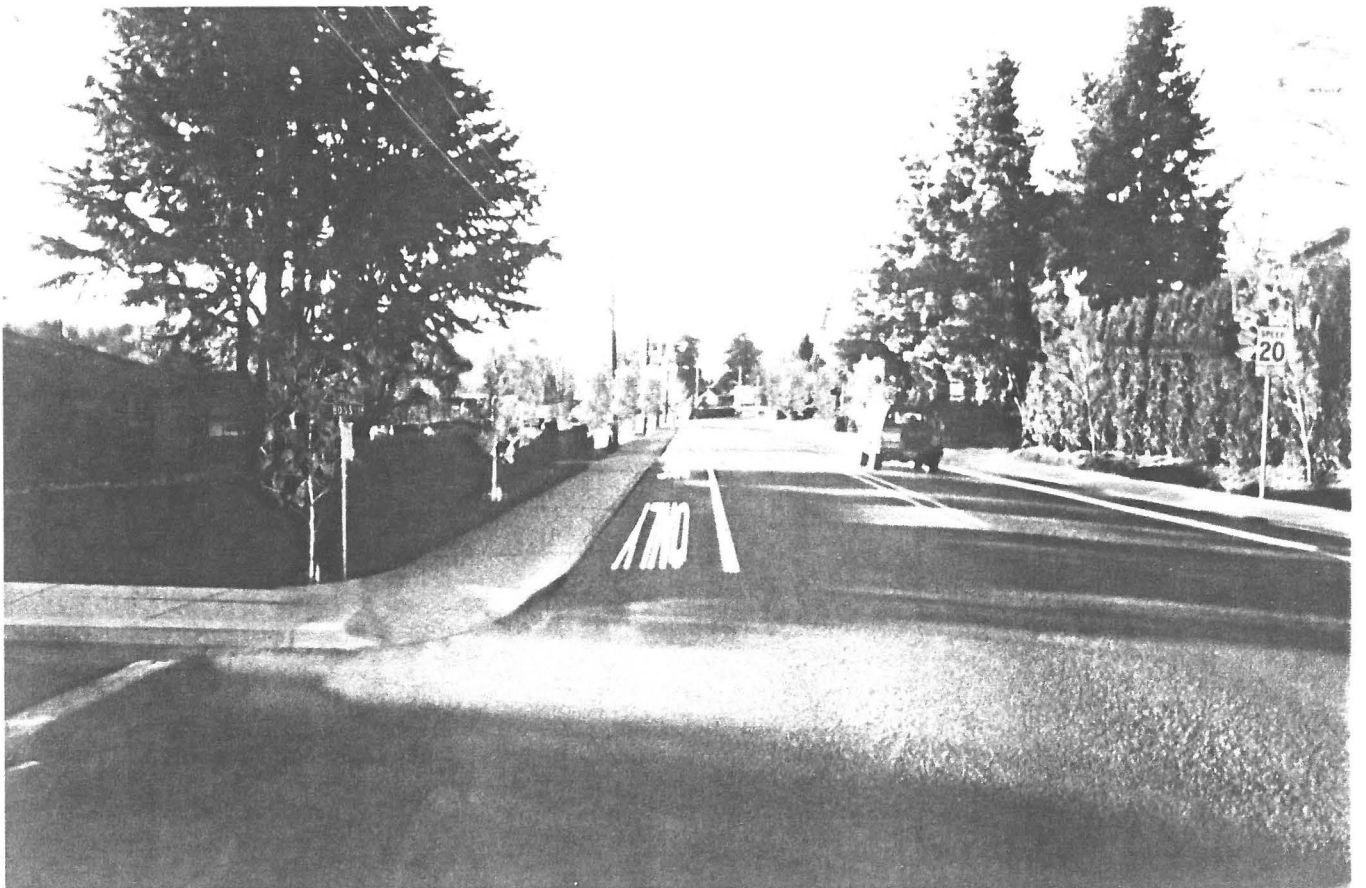


Proposed

Lake Road at Kuehn Road



Existing



Proposed  
Lake Road at Boss Lane

\*\*\*MEMORANDUM\*\*\*

COMMUNITY DEVELOPMENT DEPARTMENT

April 8, 1997

**To:** Planning Commission

**From:** Daniel Pava AICP, Senior Planner,  
Community Development Department

**Subject:** Transportation System Plan Work Session

Action Requested

No action is required since this is a project worksession.

Background

Community Development Department staff has been developing a Transportation System Plan (TSP) for Milwaukie since 1994. This implements the Transportation Planning Rule requirement for local governments to complete long-range multi-modal transportation plans. The City funded its TSP work with a Transportation and Growth Management Program grant from the Oregon Department of Transportation (ODOT) and the Department of Land Conservation and Development.

Discussion

A first draft of the TSP was delivered to ODOT on August 31, 1995 to meet grant requirements. A subsequent draft was given wide distribution in December 1995. Prior to leaving last June, Debbie Bischoff had reviewed, addressed and incorporated comments into this draft. The Traffic Safety and Transportation Board has also been reviewing the document with the guidance of City Engineer Jim Brink

A public open house was held on February 24, 1997, and copies of the revised draft were made available at that time. Many of the 23 people who attended were preoccupied with the issue of south/north light rail, but it was clear that they were pleased to learn that the TSP was looking at the whole system, not just light rail, and in particular preparing an implementation strategy that would optimize their construction dollar investment.

Transportation System Plan Work Session

4/8/97

Page Two

Generally, people were pleased about improving walking and biking facilities, somewhat confused about the automobile and functional classifications, and pleased to see that truck and freight routes were being integrated from the on-set. *Attached is a copy of the information summary distributed at the open house.*

A meeting with the Land Use Committee Chairs will be held on April 16. The planning commission public hearing will be held on May 27 on the Comprehensive Plan Amendment to replace the Transportation Element with the Goals, Objectives and Policies from the TSP, and to adopt the TSP as an ancillary document to the Comprehensive Plan. The City Council hearing is scheduled for June 17th. *A copy of the schedule is attached to this report.*

attachments

cc: Maggie Collins, Community Development Director

tsppc407.doc

# Transportation Systems Plan Public Open House

February 24, 1997

## *What is the Transportation Systems Plan and why is it important?*

The Transportation Systems Plan (TSP) will become part of the Milwaukie Comprehensive Plan. It is called a systems plan because it takes an inclusive approach to all the different transportation options and how they relate to create a complete system that works better for us, rather than solely focusing on automotive needs. The 1991 Oregon Transportation Planning Rule requires that every city in the state also include planning for pedestrian, bicycle, and transit needs. This way, we are planning to create an interconnected system of sidewalks, walkways, bicycle routes, truck routes that will foster the safe and efficient movement and transport of all people and goods to and through Milwaukie.

## **So what have we done so far?**

In June 1995, the Milwaukie City Council adopted a Vision Statement to guide an improved quality of life for residents into the year 2015. The Vision Statement was developed through a broad and inclusive public participation process and it identified several important transportation components as part of a high quality of life. Linking the neighborhoods and the expanded city center through safe and attractive walkways and bikeways was very important. Creating a pedestrian friendly atmosphere in the city center was also considered to be essential.

The TSP was prepared during a year of extensive planning, engineering and public involvement, and a draft was released for review in November 1995. The process began with a widely advertised public meeting, and then three citizen working groups were formed to address pedestrian/bicycle, roads, and transit needs. These groups met throughout the project process to review data collected and technical analyses and provide public opinions on different transportation modal needs, priorities, and recommendations.

**ATTACHMENT**

### **What happens now?**

The Council has asked that the Traffic Safety and Transportation Board review and comment on the plan draft. This process has already begun, however there also is an opportunity and need for additional public comment as the final draft plan is prepared. That is why we are holding this public open house tonight. The Plan is scheduled for City Council hearing in June 1997.

### **What will result?**

Once the Transportation Systems Plan is adopted by the City Council, it will be used to guide decisions about prioritizing all traffic, street, walkway, bicycle, and public transit improvement projects. The plan will make specific recommendations on the highest priority projects that should be completed within ten years; and other projects that should be done during the next 20 years.

These projects will include such things as safe and convenient walkways and bike routes, better transit facilities, improved access and roadway design, improved street maintenance, designating truck routes, rebuilding railroad crossings, and neighborhood traffic management to control traffic on local residential streets. Projects will be coordinated more maximum cost-effectiveness and to create a multi-modal system.

### **That sounds nice but what will it cost!?**

Frankly, a lot of money is required. The current draft plan estimates total project costs at over 85 million dollars for 23 identified action plan projects during the next 10 years. There may be a number of different ways to fund these projects, including federal and state sources. The only way to achieve success will be to prioritize and carefully plan the projects in a systematic and comprehensive way.

*We welcome and are interested in what you have to tell us. For further information please contact Dan Pava at Community Development at 786-7652.*

**Transportation System Plan (TSP)  
Final Draft Approval Schedule**

**Public Open House  
February 24, 1997**

<b>June 17, 1997</b>	<b>City Council public hearing <i>Adoption of TSP</i></b>
<b>May 27, 1997</b>	<b>Planning Commission public hearing</b>
<b>May 6, 1997</b>	<b>City Council Work Session</b>
<b>May 1, 1997</b>	<b>Traffic Safety and Transportation Board and Land Use Committee comments due to be included for May 27th Planning Commission report</b>
<b>April 8, 1997</b>	<b>Planning Commission Work Session</b>
<b>April 16, 1997</b>	<b>Meet with Land Use Committee Chairs</b>
<b>February 24, 1997</b>	<b>TSP Public Open House</b>